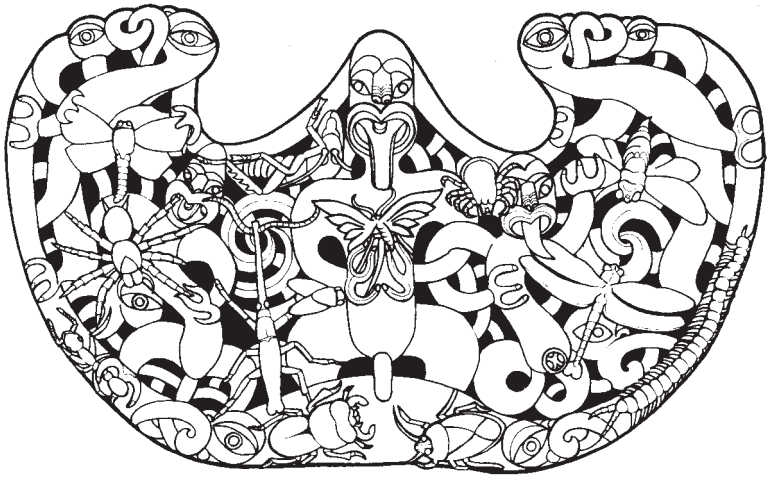

Fauna of New Zealand

Ko te Aitanga Pepeke o Aotearoa

Fauna of New Zealand
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Number / Nama 76

Phthiraptera
(Insecta)
A catalogue of parasitic lice from New Zealand

by
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Auckland, New Zealand
2017

Cataloguing in publication

Palma, Ricardo L.

Phthiraptera (Insecta) : a catalogue of parasitic lice from New Zealand / by Ricardo L. Palma. -- Lincoln, N.Z. : Landcare Research NZ , 2017.

1 online resource

(Fauna of New Zealand, ISSN 1179-7193 (online) ; no. 76 = Ko te Aitanga Pepeke o Aotearoa ; nama 76)

ISBN 978-0-947525-18-7 (online)

ISBN 978-0-947525-19-4 (print)

1.Lice -- New Zealand. I. Title. II. Landcare Research New Zealand Ltd.

UDC 595.751(931)

Suggested citation:

Palma, RL. 2017. Phthiraptera (Insecta): a catalogue of parasitic lice from New Zealand. Lincoln, N.Z. : Landcare Research.

https://doi.org/10.7931/J2/FNZ.76

Prepared for publication by Zhi-Qiang Zhang and the authors using computer-based text processing, layout, and printing at Landcare Research, Private Bag 92170, Auckland, New Zealand.

To access on-line extracts from this series visit:

http://fnz.landcareresearch.co.nz/

Published by Landcare Research, P.O. Box 40, Lincoln, Canterbury, N.Z.

Website: http://www.landcareresearch.co.nz/

Printed by 3A

Cover design: Birgit Rhode

Date of publication 30 September 2017

Publication of the Fauna of New Zealand series is supported by Core funding for Crown Research Institutes from the Ministry of Business, Innovation and Employment's Science and Innovation Group, for the Defining New Zealand's Land Biota research programme.

POPULAR SUMMARY

Class **Insecta**

Order **Phthiraptera**

Lice

The simple mention of words like “lice” or “nits” is enough to bring strong feelings of revulsion from most people, reminding them of unpleasant childhood memories when they were subjected to uncomfortable treatments to get rid of the infestation. However, those feelings were caused mainly by only one kind of louse: head lice, which—together with its relatives: body and pubic lice—live exclusively on human beings. Unfortunately, the majority of the human population is unaware of the great number of other lice living permanently on almost all birds and most mammals, which cause no harm to humans and very little to their animal hosts. At present, there are about 5,500 species of parasitic lice described and named from many birds and mammals, which are as relevant to the world biodiversity as their hosts. Also, most people are unaware of the vast diversity of body shapes, sizes and colours exhibited by lice. Examples of this morphological diversity can be appreciated from the photographs included in this book. Parasitic lice are wingless, small, flat-bodied insects, grouped in what scientists call an “Order”, and are subdivided in about 20 “families” depending on their body features. According to their feeding habits—either eating feathers and other solid matter or taking liquid blood—two major groups have been named as “chewing” and “sucking” lice, respectively. However, these two groups are not recognised as scientifically accurate because the chewing lice are represented by different morphological types which are not genetically closely related.

The many birds and the few native and introduced mammals which live in New Zealand are hosts to over 400 species of lice, which are listed and annotated in this catalogue. Most of these species parasitise seabirds and shorebirds with wide geographic distributions over the world oceans. There is also a number of lice living exclusively on New Zealand terrestrial birds, in particular kiwis, parrots, pigeons and some perching birds. The fact that most louse species live only on one host species, or on a small number of closely related hosts, allows the identification of the host from the identity of its lice, without even examining the host. This characteristic has been successfully used to identify partial remains of bird bodies found in beaches, on roads, or in the forest. Also, some bird species that are difficult to distinguish from each other by their own features, kiwis for example, have been shown to be different by studying their distinct lice.

The plight for the survival of endangered bird species is well publicised and known in New Zealand, but people do not realise that the unique lice living on those birds are also endangered and need to be conserved as much as their hosts, especially when birds are managed and handled for their reproduction in captivity. There are overseas examples, such as the case of the Californian condor, where the management of an endangered bird to ensure its survival has caused the extinction of its unique lice, a situation that should be avoided because those lice are also part of world biodiversity.

Kutu

Mā te whakahuatia noa o te kupu "kutu" o te kupu "riha" rānei e pupū ake ai te anuanu i te nuinga o te tangata, me te hoki anō o ngā mahara ki te tamarikitanga i wetiweti ai rātou ki ngā mahi patu i te hanga e mui ana i te māhunga. Heoi rā, kotahi anō te momo kutu nāna i pupū ake ai te anuanu i te tangata: ko te kutu i te māhunga. Engari he hoa anō ō te kutu nei ko te tinana tangata anō tōna kāinga, ko te kutu piri tinana, me tērā momo ka kitea i ngā huruhuru o raro. Ko te mate kē ia, kāore te nuinga o te tāngata e mōhio arā noa atu ngā momo kutu e rarau ana te noho i te nuinga o te manu me te nuinga o te whāngote, ka mutu kāore ō rātou pānga kino ki te tangata, he iti rānei te pānga kino ki te kararehe e noho ana hei piringa mō rātou. I tēnei wā kei tōna 5,500 ngā momo kutu pirinoa e mōhiotia ana, kua whakaingoatia hoki, e noho ana i te manu me te whāngote, ka mutu e rite ana tō rātou hāngaitanga ki te kanorau koiora o te ao pērā i ō rātou kaiatawhai. Waihoki e noho kūare ana te nuinga o te tangata ki te rerekē o te āhua, o te rahi me ngā tae o ngā momo kutu katoa. Ka kitea he tauira o ngā rerekētanga nei i ngā whakaahua e takoto mai ana ki te pukapuka nei. Kāore he parirau o te kutu pirinoa, he hanga iti, he papatahi te tinana, ka mutu kua whakarōpūhia e ngā kaipūtaiao ki te "Pūtoi", kua wehewehea hoki ki ētahi whānau e 20 nei. Kei te āhua tonu o ngā tinana. Kei te āhua anō o tā rātou i kai ai—he kai hurumanu rānei me ētahi atu kai mārō, he kai toto rānei—e rua ngā rōpū matua kua kīia he kutu "ngaungau", he kutu "momi" rānei. Heoi anō, kāore e kīia ngā rōpū e rua nei he

rōpū tika ā-pūtaiao nei i te mea he āhua kē, he āhua kē tō ngā kutu ngaungau, ka mutu kāore e noho whanaunga tata ana ā-ira nei.

E noho ana te tini manu me ngā whāngote taketake o Āotearoa, tae atu ki ērā i haria mai i whenua kē hei kaiatawhai mō ētahi momo kutu e 400 neke atu, ka mutu kua whakarārangihia, kua tautuhia ēnei ki te pukapuka nei. Ko te nuinga e piri ana ki te manu moana, ki te manu tahatika, ngā manu e tāwhai ana ki ngā moana o te ao. Arā anō ētahi momo kutu ka piri noa ki ngā manu whenua o Aotearoa, ngā manu pērā i te kiwi, i te kākā, i te kūkū me ētahi manu noho pae. I te mea ka kitea noatia te nuinga o ngā momo kutu i tētahi momo kaiatawhai kotahi, i ētahi kaiatawhai rānei e noho whanaunga tata ana, ka taea te tautuhi te kaiatawhai mā te tautuhi i te kutu. Ehara i te mea me āta mātai te kaiatawhai. E whakamahia ana tēnei āhuatanga ki te tautuhi i ngā toenga tinana manu ka kitea i tātahi, i ngā huarahi, i te ngahere rānei. Ka mutu ko ētahi momo manu e uaua ana te wehe tētahi i tētahi nā runga i ngā huruhuru, pērā i te kiwi, ka kitea te motuhaketanga o tētahi momo kiwi i tētahi atu mā te mātai i ō rātou kutu.

Kua puta whānui te rongo mō ngā raruraru e pā ana ki te whakarauora i ngā manu e noho mōrearea ana i Aotearoa nei, engari kāore te tangata e mōhio mō te noho mōrearea anō o ngā kutu motuhake e atawhaitia ana e aua manu. Me āta tiaki anō ngā kutu nei pērā i ō rātou kaiatawhai. E hāngai ana tēnei kōrero ki ngā manu e tiakina ana, e atawhaitia ana i ngā whare manu kia puta ai he hua e ora tonu ai tōna momo. Kei tāwāhi ngā tauira pērā i te condor o Karapōnia, e tiakina ana te manu noho mōrearea kia ora tonu ai tōna momo, ko te hua o tēnei ko te wharengaro o ana kutu motuhake. Kia kaha te karo i tēnei āhuatanga, inā rā, he wāhanga nui tonu aua kutu rā o te kanorau koiora o te ao.

Contributor Ricardo L. Palma was born in Argentina. He attended the University of Buenos Aires, where he completed a Master's Degree in Biological Sciences, majoring in Entomology, in January 1971. After finishing compulsory military service, he left his native country to work at the University of Concepción, Chile, lecturing on entomology and researching the taxonomy of the family Mydidae (Diptera). Following the September 11 military coup in 1973, he left Chile as a political refugee and was given permanent residence in New Zealand, where he obtained a research assistant position under the direction of Professor Robert L.C. Pilgrim at the University of Canterbury, Christchurch, in May 1974. After two years in Canterbury, he was successful in attaining the position of Scientist (Entomology) in the then National Museum of New Zealand, now Te Papa, where he was promoted to Curator of Entomology in 1991—position he held until his retirement in May 2016 after working at the museum for 40 years. He has published over 130 peer-reviewed papers, several book chapters and two books dealing mainly with parasitic lice (Phthiraptera), together with a great numbers of co-authors from many countries. Other animal groups covered in his publications are flies, beetles, feather mites, ticks and birds. His study of lice from kiwis indicated the existence of a previously unrecognised kiwi species, of which he became one of the authors of its original description. He is currently the editor of *Zootaxa* for Phthiraptera papers, member of the *Fauna of New Zealand* Series Editorial board and of several overseas editorial boards, as well as member of the Checklist Committee of the Ornithological Society of New Zealand, and is the New Zealand representative to the international Working Group on Avian Nomenclature. Although not officially employed, Te Papa has given him the position of Honorary Research Associate, which entitles him to pursue his research and editorial work at the museum two to three days per week, when he is not travelling overseas.

I whānau mai te kaituhi, a Ricardo L. Palma ki Āketina. I haere ia ki te Whare Wānanga o Buenos Aires, i reira nei ia e whakatutuki ana i tana Tohu Paerua Pūtaiao Koiora i te Kohitātea o te tau 1971. Ka mutu tana haere hei hoia i raro i te ture, ka wehe atu ia i tana kāinga taketake ake ki te mahi i te Whare Wānanga o Concepción i Hiri, ki te kauhau mō te mātaitanga pepeke me te rangahau i te pūnaha whakarōpūtanga o te whānau Mydidae (Diptera). Whai muri mai i te tukipoto taua o te 11 o Mahuru i te tau 1973, ka rere ia i Hiri hei rerenga tōrangapū, ka whakaaehia tana noho tūturu ki Aotearoa. Ka noho ia hei kaiāwhina rangahau i raro i ngā tohutohu a Ahorangi Robert L.C. Pilgrim i te Whare Wānanga o Ōtautahi i te Haratua 1974. Ka pau te rua tau ki Ōtautahi, ka whiwhi ia i te tūranga Kaipūtaiao (Mātai Pepeke) i te Whare Taonga o Aotearoa o taua wā, e mōhiotia nei ko Te Papa. I reira ka whakapikia ia ki te tūranga o te Kaitiaki Mātai Pepeke i te tau 1991—he tūranga mau tonu ā eke rawa ia ki te ahungarua i te Haratua 2016, ka 40 tau ia e mahi ana i te Te Papa. Neke atu i te 130 ngā pepa, i āta arotakea e ōna anō tāngata pūtaiao, kua tāia, ka hia nei ngā upoko pukapuka me ētahi pukapuka e rua e pā ana ki te kutu pirinoa (Phthiraptera) i tuhia nei e rātou ko ētahi atu o ētahi whenua maha tonu. Kua whai wāhi atu anō ia ki ētahi atu tānga mō ētahi atu kāhui pepeke pērā i te rango, i te pītara, i ngā kutu hurumanu i te kutu wae waru me te manu. I ana mātaitanga i ngā kutu i te kiwi, ka kitea e ia tētahi momo kiwi hou, ā, ko ia tētahi o ngā kaituhi e whakamārama ana i tōna āhua ake. I tēnei wā ko ia te ētita o te Zootaxa mō ngā pepa e pā ana ki te Phthiraptera, he mema anō ia o te poari mō te Raupapa Tānga mō Ngāi Kīrehe o Aotearoa me ētahi atu poari ētita o te ao, me tana noho anō hei mema o te Komiti Rārangi Hihira o te Hunga Mātai Manu o Aotearoa, ko ia anō te māngai o Aotearoa ki te Rōpū Mahi mō te Whakaingoa Manu o te ao. Ehara ia i te kaimahi tūturu, heoi anō kua tohua ia e Te Papa ki tana tūnga hei Hoa Rangahau Hōnore, ka mutu nā konei ia i āhei ai ki te rangahau tonu i āna kaupapa, ki te whai tonu i āna mahi ētita i te whare taonga mō te rua ki te toru rā i te wiki, mēnā kāore ia e haere ana i tāwāhi.

Māori translation by Te Haumihiata Mason

ABSTRACT

The parasitic lice (Insecta: Phthiraptera) from the New Zealand Subregion are all listed and annotated with data from both literature records and collections. The current scientific name, its taxonomic history, data on type material, type host, other hosts, geographic distribution within New Zealand and elsewhere, New Zealand literature references and other significant references are given for each species or subspecies. The louse fauna comprises 424 species/subspecies distributed in 101 genera, 14 families and three suborders. Among them, 381 species/subspecies (90%) are from birds, of which 58 taxa are introduced by human agency, and 43 species (10%) are from mammals, of which 37 have been introduced by humans. The total number of species/subspecies includes 22 new records of louse taxa for this country. Six species/subspecies deleted from the New Zealand louse fauna are listed and discussed. A host-parasite list of all the hosts known to harbour lice in the New Zealand Subregion, including 18 new host-louse associations, and a list of bird species which breed in the Subregion but with no lice collected from them yet, are given. Citations to literature references for every publication known to include a record or a mention of a louse from the New Zealand Subregion, and other significant publications dealing with various aspects of louse taxonomy, biology, ecology, phylogeny and evolution are also given.

The New Zealand louse fauna is characterised by (1) low endemicity, with only 11% at species level and 2% at generic level, (2) a high proportion (22.5%) of species introduced by human agency, (3) a very low number of species from native mammals (six or 1.8% of the total fauna), and (4) a greater number of species from seabirds and shorebirds (213 or 56%) than from terrestrial birds (168 or 44%).

Keywords: Insecta, Phthiraptera, Amblycera, Ischnocera, Anoplura, parasitic lice, catalogue, New Zealand Subregion, synonymies, primary types, type hosts, New Zealand localities, geographic distribution, references, endemic, native, introduced, new records, new host-louse associations, hosts, birds, mammals, Aves, Mammalia.

urn:lsid:zoobank.org:pub:A2DB72BC-A954-47BF-86F2-74655475BD4C

Accepted by Zhi-Qiang Zhang: 1 April 2017; published: 30 September 2017

CHECKLIST OF TAXA

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INTRODUCTION

The insect order Phthiraptera includes all the lice exclusively parasitic on birds and mammals. Historically, these lice were placed in two orders, the Mallophaga or chewing lice and the Anoplura or sucking lice. However, phylogenetic research based on morphology (Clay 1970; Lyal 1985b) showed that the "Mallophaga" was not a monophyletic unit. Therefore, this group was rejected, the Anoplura was demoted to a suborder, and the single order Phthiraptera was adopted and subdivided in four suborders: Amblycera, Ischnocera, Rhynchophthirina and Anoplura. More recently, phylogenetic research based on molecular evidence (Yoshizawa & Johnson 2003, 2010) and morphology of the male genitalia (Yoshizawa & Johnson 2006) has shown the Amblycera to be more closely related to the suborder of the Psocoptera containing the "booklice" than to the other three suborders of parasitic lice. Hence, Yoshizawa & Johnson (2006: 358) proposed that the single order Psocodea should be recognised to include all parasitic, bark and book lice, rejecting the order Phthiraptera as a valid group. Notwithstanding that position, the practical advantages of grouping together all parasitic lice in a single unit cannot be ignored and, therefore, I recognise the Phthiraptera as a useful group for the purpose of this faunistic catalogue.

Parasitic lice are wingless, small (adult length range 1–12 mm), dorso-ventrally compressed insects living permanently on warm-blooded vertebrates (Marshall 1981). They evolved from psocodean ancestors, probably living in nests, during the early to mid Cretaceous, 115–130 million years ago (Rózsa & Vas 2015a: 215). Most species of birds and mammals have lice (Price *et al*. 2003; Durden & Musser 1994b) living among their plumage or pelage, where they shelter, feed, reproduce and die. Most species of lice are highly host-specific (Clayton *et al.* 2015: 25), with one louse species per host species but, more frequently, one louse species parasitises two or more closely related hosts and, in a few exceptional cases, one species may be found on a wide range of host species belonging to several families (see *Menacanthus eurysternus* below). The geographical distribution of lice is, with some exceptions, that of their hosts (Clay 1964b, 1976b). Parasitic lice have developed morphological, behavioural and physiological adaptations to survive on their hosts. Similarly, because lice are detrimental to host health and fitness, hosts have developed adaptations to control their lice populations. This reciprocal natural selection pressure has led to the coevolution of hosts and lice (Johnson & Clayton 2003; Clayton *et al*. 2015). Thus, the phylogenetic relationships of lice often parallel those of their hosts and may help both to elucidate the relationships of the latter (e.g. Hughes *et al*. 2007; Hammer *et al*. 2010) and to distinguish closely related host taxa, which are otherwise poorly defined (e.g. Melville 1985; Palma 1991a; Whiteman *et al*. 2009).

Wise (1977: 55) was the first to compile a list of the species and subspecies of Phthiraptera recorded in the literature from New Zealand birds and mammals, including them in the suborders "Mallophaga" and Anoplura. Pilgrim & Palma (1982) augmented that list considerably but only for the chewing lice from birds, and in the form of a host-parasite list, which was amended and added to by Palma (1999). Due to the relatively high number of records listed at the generic level in those latter lists—i.e. without species identifications—it was then decided not to prepare a proper systematic catalogue of the louse species. However, subsequent taxonomic publications and further identification work on available collections have reduced considerably those '*Genus* only' entries, to the extent that a more comprehensive catalogue is now a feasible option.

The sucking lice (suborder Anoplura) recorded in the literature from New Zealand were first listed by Wise (1977: 66), who included 19 species and subspecies from both native and introduced mammal hosts. In the revision of their 1981 checklist of ectoparasites of terrestrial mammals from New Zealand, Tenquist & Charleston (2001) included 35 introduced species of chewing and sucking lice. For a summary of species and subspecies of lice listed from New Zealand since Wise (1977), see Table 1.

This catalogue includes all the species and subspecies of parasitic lice recorded in the literature from New Zealand as well as 22 new records, of which 15 are the result of identifications of material previously published as "*Genus* sp.", and seven are the result of identifications of newly collected samples, although three of the latter are identified to genus level only due to a lack of adequate material (see below). Also, this catalogue includes 18 new host-louse associations for New Zealand.

According to the status of their hosts, I have subdivided the 424 species/subspecies of lice included in this catalogue in four categories as defined in Tables 2 and 3, as follows: "Endemic", "Native", "Introduced" and "Uncertain". The 27 species of uncertain status are determined according to three criteria:

1. Lack of adequate material to obtain a species identification. This condition applies to 19 species, listed as "*Genus* species", e.g. *Forficuloecus* species.

2. The origins of their hosts are uncertain because they are regarded as both introduced by humans and self-introduced. This condition applies to seven louse species: four from the black swan (*Cygnus atratus*) and three from the sulphur-crested cockatoo (*Cacatua galerita*) (see details below).

3. One species is regarded as a "*nomen dubium*": *Austrogoniodes strutheus* Harrison, 1915 (see below).

TABLE 1. Numbers of species and subspecies of lice from New Zealand in published lists.

	Amblycera		Ischnocera		Anoplura	TOTALS
	ex birds	ex mammals	ex birds	ex mammals	ex mammals	
Wise 1977	29	0	95	11	19	154
Pilgrim & Palma 1982*	72	–	195	–	–	267
Palma 1999*	20	–	39	–	–	59
Tenquist & Charleston 2001	–	4	–	14	17	35
Palma 2010*	78	4	230	14	22	348
This catalogue*	87	4	268	15	24	398

* Numbers do not include '*Genus* only' entries

In addition to the 19 species of uncertain status listed as "*Genus* species", there are a further nine endemic or native species also listed as "*Genus* species". However, these latter species are represented by extensive samples of both sexes which need to be formally described and named (e.g. *Trabeculus* species 1) or which need revisional studies to identify them (e.g. *Longimenopon* species).

Phthiraptera are generally the least endemic group among insects, due to the fact that most genera are represented in all continents. The New Zealand louse fauna is not an exception, with no endemic family, and only two genera (*Apterygon*, *Melibrueelia*) and two subgenera of *Rallicola* (*Aptericola*, *Huiacola*) endemic to this country. These endemic genera and subgenera are from endemic terrestrial hosts: kiwis and passerines. There is also a number of endemic species of lice parasitic on other endemic hosts —such as the takahe, the blue duck, several parrots, plovers, and several passerines (see below under "Host-parasite list" and Table 3)—but they belong to non-endemic louse genera.

Total numbers and percentages of the four categories of lice according to the status of their hosts are given in Table 2. Several louse species parasitise hosts that breed in New Zealand only but have extensive geographic ranges reaching other countries, and they cannot be considered as truly endemic to New Zealand. There are many examples of this category among lice from petrels and albatrosses.

TABLE 2. Numbers of species and subspecies of lice recorded from New Zealand in this catalogue.

	Amblycera		Ischnocera		Anoplura	TOTALS	%
	ex birds	ex mammals	ex birds	ex mammals	ex mammals		
Endemic	11	–	35	–	–	46	11
Native	65	–	185	–	6	256	60.5
Introduced	13	4	45	15	18	95	22.5
Uncertain	9	–	18	–	–	27	6
TOTALS	98	4	283	15	24	424	100

Endemic: Louse species/subspecies recorded exclusively from the New Zealand Subregion

Native: Louse species/subspecies recorded from the New Zealand Subregion and other parts of the world, from host species present in the Subregion by their own means.

Introduced: Louse species/subspecies recorded from the New Zealand Subregion and other parts of the world, from host species introduced to the Subregion by human agency.

Uncertain: Louse species/subspecies which either are unidentified due to lack of adequate material, or have been recorded from hosts of unconfirmed origins.

TABLE 3. List of louse genera with numbers of species/subspecies recorded from New Zealand under various categories.

Genus	TOTAL number of species & subspecies	ENDEMIC species & subspecies	NATIVE species & subspecies	INTRODUCED species & subspecies	Species & subspecies of UNCERTAIN status	NEW RECORDS
Acidoproctus	2	1	1	-	-	1
Actornithophilus	11	-	11	-	-	1
Alcedoecus	2	-	2	-	-	1
Amyrsidea	2	-	-	2	-	-
Anaticola	5	-	3	1	1	-
Anatoecus	5	-	2	1	2	-
Ancistrona	1	-	1	-	-	-
Antarctophthirus	5	-	5	-	-	-
Apterygon	4	4	-	-	-	-
Aquanirmus	2	1	1	-	-	1
Ardeicola	6	-	6	-	-	-
Austrogoniodes	10	1	8	-	1	-
Austromenopon	27	-	26	-	1	1
Bedfordiella	1	-	1	-	-	-
Bonomiella	1	-	-	1	-	-
Boopia	1	-	-	1	-	-
Bovicola	7	-	-	7	-	-
Brueelia	12	1	-	10	1	3
Campanulotes	1	-	-	1	-	-
Capraiella	1	-	-	-	1	-
Carduiceps	3	-	3	-	-	-
Chelopistes	1	-	-	1	-	-
Ciconiphilus	2	-	1	1	-	-
Coloceras	5	4	-	1	-	1
Colpocephalum	7	1	4	2	-	-
Columbicola	1	-	-	1	-	-
Cuclotogaster	2	-	-	2	-	-
Cuculicola	2	1	1	-	-	-
Cuculiphilus	2	-	2	-	-	-
Degeeriella	2	-	2	-	-	-
Dennyus	1	-	-	-	1	1
Docophoroides	4	-	4	-	-	-
Eidmanniella	4	-	4	-	-	-
Emersoniella	1	-	-	1	-	1
Episbates	1	-	1	-	-	-
Eucolpocephalum	1	-	1	-	-	-
Felicola	1	-	-	1	-	-
Forficuloecus	3	2	-	-	1	1
Franciscoloa	1	-	-	-	1	

..... continued on the next page

TABLE 3 (continued)

Genus	TOTAL number of species & subspecies	ENDEMIC species & subspecies	NATIVE species & subspecies	INTRODUCED species & subspecies	Species & subspecies of UNCERTAIN status	NEW RECORDS
Fulicoffula	2	-	2	-	-	1
Gliricola	1	-	-	1	-	-
Goniocotes	3	-	-	3	-	-
Goniodes	7	-	-	7	-	-
Gyropus	1	-	-	1	-	-
Haematopinus	3	-	-	3	-	-
Haemodipsus	2	-	-	2	-	-
Haffneria	1	-	1	-	-	-
Halipeurus	23	-	23	-	-	-
Harrisoniella	2	-	2	-	-	-
Heterodoxus	1	-	-	1	-	-
Heteromenopon	2	1	-	-	1	-
Hohorstiella	2	-	1	1	-	1
Holomenopon	4	1	2	-	1	-
Hoplopleura	1	-	-	1	-	-
Ibidoecus	3	-	3	-	-	-
Incidifrons	2	-	2	-	-	1
Kurodaia	1	-	1	-	-	-
Laemobothrion	1	-	1	-	-	-
Lagopoecus	1	-	-	1	-	-
Lepidophthirus	1	-	1	-	-	-
Linognathus	5	-	-	5	-	-
Lipeurus	2	-	-	2	-	-
Longimenopon	2	-	2	-	-	-
Lunaceps	8	-	8	-	-	-
Melibrueelia	1	1	-	-	-	-
Menacanthus	5	1	1	2	1	-
Menopon	1	-	-	1	-	-
Myrsidea	6	2	-	3	1	-
Naubates	9	-	9	-	-	-
Neopsittaconirmus	2	1	-	-	1	-
Nesiotinus	1	-	1	-	-	-
Nosopon	1	-	1	-	-	-
Ornithobius	3	-	-	2	1	-
Oxylipeurus	4	-	-	4	-	-
Paraclisis	4	-	4	-	-	-
Pectinopygus	13	3	9	-	1	-
Pediculus	2	-	-	2	-	-
Pelmatocerandra	1	-	1	-	-	-
Penenirmus	1	-	-	-	1	-

..... *continued on the next page*

TABLE 3 (continued)

Genus	TOTAL number of species & subspecies	ENDEMIC species & subspecies	NATIVE species & subspecies	INTRODUCED species & subspecies	Species & subspecies of UNCERTAIN status	NEW RECORDS
Perineus	4	-	4	-	-	-
Philoceanus	3	-	3	-	-	-
Philopteroides	5	5	-	-	-	-
Philopterus	7	1	-	5	1	3
Plegadiphilus	2	-	2	-	-	-
Polyplax	2	-	-	2	-	-
Pseudomenopon	4	1	3	-	-	-
Pseudonirmus	3	-	3	-	-	-
Psittoecus	1	-	-	-	1	-
Pthirus	1	-	-	1	-	-
Quadraceps	28	3	24	-	1	1
Rallicola	12	8	4	-	-	-
Ricinus	1	-	-	-	1	-
Saemundssonia	39	1	36	-	2	3
Solenopotes	2	-	-	2	-	-
Strigiphilus	4	-	2	1	1	-
Sturnidoecus	2	-	-	1	1	-
Trabeculus	10	1	9	-	-	-
Trichodectes	3	-	-	3	-	-
Tricholipeurus	2	-	-	2	-	-
Trinoton	2	-	1	-	1	-
Werneckiella	2	-	-	2	-	-
101 genera	**424**	**46**	**256**	**95**	**27**	**22**

Endemic: Louse species/subspecies recorded exclusively from the New Zealand Subregion

Native: Louse species/subspecies recorded from the New Zealand Subregion and other parts of the world, from host species present in the Subregion by their own means.

Introduced: Louse species/subspecies recorded from the New Zealand Subregion and other parts of the world, from host species introduced to the Subregion by human agency.

Uncertain: Louse species/subspecies which either are unidentified due to lack of adequate material, or have been recorded from hosts of unconfirmed origins.

New records: Louse species/subspecies recorded in this Catalogue for the first time from New Zealand.

At the species level, according to the statistics given in Price *et al*. (2003: 3), the chewing louse fauna of New Zealand comprises about 9% of the world fauna. The sucking lice represent only about 4.5% of the world fauna (see Durden & Musser 1994a: 4 for world data) but, if the introduced species are excluded, that percentage is just above 1%. This is a direct reflection of New Zealand's lack of native terrestrial mammals (King 2005). The paucity of New Zealand mammal lice is also shown by the statistics within this country, with 381 (90%) species from birds against 43 (10%) from mammals, including introduced species (see Table 2). However, if introduced species are excluded from both host groups, the difference is even greater, with an overwhelming 323 (98.2%) species of bird lice against six (1.8%) of mammal lice from native seals and sea lions.

Another feature of the New Zealand bird louse fauna is the greater number of species from seabirds and shorebirds (213 or 56%) than those from terrestrial birds (168 or 44%). Again, that difference is much greater if the 58 species of lice from introduced terrestrial birds are excluded, with 213 species (66%) from seabirds and shorebirds against 110 (34%) from terrestrial birds. This difference is a characteristic shared with louse faunas from

other oceanic archipelagos, such as the Galápagos (Palma & Peck 2013), the Faroes (Palma & Jensen 2005), and Tristan da Cunha (Hänel & Palma 2007).

Considering the taxonomy of the hosts, the New Zealand louse fauna is characterised by all the species parasitic on some endemic bird families (e.g. Apterygidae: kiwis; Strigopidae: parrots; Callaeidae: wattlebirds; Notiomystidae: stichbird), and an exceptionally high proportion of species/subspecies from the avian orders Procellariiformes (albatrosses and petrels), Sphenisciformes (penguins), Pelecaniformes (shags, gannets and pelicans), and Charadriiformes (plovers, shorebirds, waders, gulls, etc.). Numbers of lice from these eight host groups combined add up to 229 species/subspecies, or 60% of the total louse fauna parasitising New Zealand birds.

The total New Zealand louse fauna is much greater than the figures given in Table 2. In addition to the species of uncertain status and the need of some generic revisions discussed above, there are still 18 bird species which breed in New Zealand without lice recorded from them in this country: six are rare endemics, six are native, and six are introduced by humans, but all of them are seldom available to search for lice (see list below). Also, there is a great number of regular and occasional migratory birds as well as rare stragglers (see Checklist Committee 2010) known to harbour lice outside this country, but with no lice collected from them in New Zealand yet.

Considering the high number of species of birds and mammals introduced to New Zealand by human agency (Checklist Committee 2010; King 2005), there could have been an even greater number of louse taxa in this country, if the so-called sorting events, such as "missing the boat", "drowning on arrival" and others (Paterson *et al.* 2003; Johnson & Clayton 2004; MacLeod *et al*. 2010) had not prevented a considerable number of lice from becoming established in New Zealand. Paterson *et al*. (1999: 219) list 18 species of birds introduced by humans with the lice recorded from them in their home countries and the lice recorded from them in New Zealand. With one exception, all hosts harbour fewer louse species in New Zealand than in their home ranges. Extreme examples are: the peafowl (*Pavo cristatus*) with only three louse species established in New Zealand out of nine in its home range, and the dunnock or hedge sparrow (*Prunella modularis*) plus the rook (*Corvus frugilegus*) each with only one species established in New Zealand out of five in their home ranges (Paterson *et al*. 1999: 220–221; but six according to Price *et al*. 2003: 338, 354).

A number of bird species have gone extinct in New Zealand since Europeans settled this country in 1840 (Checklist Committee 2010), and their host-specific lice also went extinct before any could be collected. However, preserved specimens of some of those extinct birds have been kept in museum collections around the world, and they have been the source of louse samples that have been described and named as different species. At least five extinct louse species have been found, described and named from New Zealand endemic birds of the genera *Apteryx* (kiwis), *Hemiphaga* (endemic pigeons), *Heteralocha* (huia) and *Xenicus* (endemic wrens) (Rózsa & Vas 2015b; see below). A louse species from *Sceloglaux albifacies*, an extinct endemic owl, has not been described yet because of lack of adequate material (see below under *Strigiphilus* sp.).

Lice together with all other parasites constitute a significant, perhaps the largest, part of the world biodiversity (Price 1980; Zimmer 2000), but they are becoming extinct together with their hosts in a process known as "coextinction" (Stork & Lyal 1993; Koh *et al*. 2004; Dunn *et al*. 2009). Therefore, it has been argued that parasites have the same rights as their hosts to be conserved and protected (Windsor 1995), but this concept has created a great dilemma with complex consequences which are difficult to resolve (Pérez *et al*. 2013).

History of collections, research and publications on New Zealand lice

The first record of lice from New Zealand was made by Banks (1769: 186), referring to the lice he observed on the hair of some Maori people in Poverty Bay. Subsequently, there were several reports of both human head and body lice from this country during pre-European times, summarised and discussed by Andrews (1976a,b). The first citation of a louse by its scientific name was by Polack (1838: 320) who named human lice as "*pediculus humanus*". This record was also included by White & Doubleday (1843: 283) in their list of New Zealand "Annulose animals", inserted in Dieffenbach's *Travels in New Zealand*. Since this book, there appears to be no more published records of lice from New Zealand until Hutton (1904) who, in his classic *Index Faunæ Novæ Zealandiæ*, listed four species of sucking lice: one native from the New Zealand sea lion and three "naturalised" species, the short-nosed cattle louse, and head and body lice from humans.

The first papers recording and naming actual specimens of parasitic lice collected from hosts in New Zealand were published by Neumann (1907b) and by Kellogg (1907). Henry C. Wilkie, a New Zealand government

veterinarian, collected an undisclosed number of specimens from a sheep and sent them to L.-G. Neumann, a French parasitologist resident in Toulouse, France. Neumann (1907b) described and named those lice as "*Haematopinus ovillus*", together with a sample collected from Scottish sheep by William Evans in Edinburgh. This louse species is now placed in the genus *Linognathus* and is commonly known as the "sheep face louse" (Murray 1955a). In the same year, Vernon L. Kellogg, a professor at Stanford University, California, recorded three different feather lice—two as new "varieties" and one as a described species—from a sample collected on a kea and sent to him by Mr D.L. van Dine of Hawaii (Kellogg 1907). Those lice are now regarded as three full species exclusive to the kea (see below).

A few years later, Johnston & Harrison (1912) published a report on the lice collected from birds and goats on the Kermadec Islands by W.L. Wallace, as member of an expedition of New Zealand naturalists guided by Tom Iredale and W.R.B. Oliver, during 1907–1908. The lice were sent to Australia, where the authors resided, by Augustus Hamilton, the curator of the Dominion Museum (now Museum of New Zealand Te Papa Tongarewa = MONZ), who received the samples from W.R.B. Oliver. This was the first paper on lice published in a New Zealand scientific journal—the *Transactions of the New Zealand Institute*—and deals with 16 species of chewing lice of which seven are described and named as new. However, only three of the seven new species are still regarded as valid, although the type specimens of all seven are extant and kept in the MONZ collection (Palma *et al*. 1989).

Harrison (1915b) published the first paper dealing with kiwi lice, describing the new subgenus *Aptericola* to include the species of *Rallicola* exclusive to kiwis, and three new species: *R.* (*A.*) *gadowi* from the South Island brown kiwi, *R.* (*A.*) *novaezealandiae* from the Stewart Island brown kiwi and *R.* (*A.*) *gracilis* from the great spotted kiwi. The latter species was later renamed as *R.* (*A.*) *gracilentus* by Clay (1953) as the name "*gracilis*" proved to be preoccupied.

From the late 1920s to the 1960s, several genera and many species of lice which parasitise New Zealand seabirds were described and/or revised by Bedford (1929, 1930), Thompson (1935c, 1936, 1937b, 1940b, 1948c), Edwards (1961), and especially Timmermann (1936, 1951a–c, 1952a–d, 1953a–b, 1954a–f, 1957a–b, 1959a–c, 1960, 1961a–d, 1963, 1965, 1966). However, the original descriptions were based on material from other countries, with only a few exceptions: e.g. *Trabeculus flemingi* Timmermann, 1959; *Halipeurus consimilis* Timmermann, 1960; *Halipeurus falsus pacificus* Edwards, 1961; *Austromenopon stammeri* Timmermann, 1963.

The first louse species described from a New Zealand bird by an entomologist resident in this country was *Rallicola* (*Rallicola*) *takahe* Holloway, 1956. The original type series was collected from the South Island takahe, a flightless rail that had been regarded as extinct until rediscovered by G.B. Orbell in November 1948 (Checklist Committee 2010: 189). The author of the takahe louse, Beverley A. Holloway, was then a member of the Dominion Museum (now MONZ) staff. However, that was her only publication on lice as she then changed her research interest to other insect groups.

During the mid-1950s, Robert L.C. Pilgrim, Professor of Zoology at the University of Canterbury, (Christchurch, New Zealand) began collecting New Zealand lice and established contact with louse specialists of that time, in particular Dr Theresa Clay at the British Museum of Natural history (now Natural History Museum), Dr Kary C. Emerson in Oklahoma State University (Stillwater, Oklahoma, U.S.A.) and Professor Roger D. Price at the University of Minnesota (Minneapolis, U.S.A.). These useful connections provided Pilgrim with a reference collection properly prepared and identified, as well as several new louse species from endemic New Zealand birds (e.g. *Rallicola* (*Rallicola*) *harrisoni* Emerson, 1955 and *Pseudomenopon pilgrimi* Price 1974 from wekas; *Rallicola* (*Aptericola*) *pilgrimi* Clay, 1972 from the little spotted kiwi; *Colpocephalum pilgrimi* Price 1967 from the kea; and *Austromenopon bulleri* Price & Clay 1972 from Buller's albatross).

Other new species of lice from New Zealand birds described by foreign entomologists during the 1960s and 1970s were: *Pectinopygus punctatus* Timmermann, 1964, *Pectinopygus varius* Timmermann, 1964, *Ardeicola pilgrimi* Tandan, 1972, and *Patellinirmus novaeseelandiae* Tendeiro, 1972. The primary types of these species as well as those of *Austromenopon bulleri*, *Colpocephalum pilgrimi*, *Pseudomenopon pilgrimi*, and *Trabeculus flemingi* are held in the collection of the Canterbury Museum (Nicholls *et al.* 1998: 30).

Also, during the 1970s, a group of scientists based at the then New Zealand Ministry of Agriculture began research on the epidemiology and control of the lice introduced with domestic mammals into New Zealand, in particular those from sheep and cattle. Under the leadership of Peter R. Kettle and Allen C.G. Heath, they published

over 25 papers on mammal lice (see References below), as well as descriptions of two new species of lice from native birds: *Aquanirmus australis* Kettle, 1974 from the New Zealand dabchick, and *Cuculicola kui* Kettle, 1980 from the shining cuckoo.

Professor Pilgrim continued to build his collection and, from 1974 to 1976, I worked with him on bird lice, which had been the subject of my MSc degree thesis at the Universidad de Buenos Aires in Argentina (Palma 2011a). In April 1976, I was appointed as a research entomologist at the National Museum (now MONZ) and was able to continue with research on bird lice. In 1985, the "R.L.C. Pilgrim Collection", then the largest and most comprehensive collection of New Zealand lice, was transferred to the National Museum of New Zealand (now MONZ). It was combined with the museum's louse collection, which had been growing steadily since my appointment. Other institutions holding considerable numbers of New Zealand lice in their collections are: the Natural History Museum (NHML, London, England), the Auckland Museum (Auckland, New Zealand), Landcare Research Ltd (NZAC, Auckland, New Zealand) and the Canterbury Museum (CMNZ, Christchurch, New Zealand).

Thus, from 1974 until the present, I have been working on the louse fauna of New Zealand, building up a national collection at MONZ, and publishing papers on various genera, especially those from seabirds, as well as faunistic accounts from several oceanic islands. My work has been both facilitated and enriched by having collaborated with a great number of colleagues whose expertise greatly increased the quality of the resulting publications. All their names are listed as my coauthors in the References section below, but some deserve an especial mention. They are: the late Robert L.C. Pilgrim, the late M. Durno Murray, Roger D. Price (Arkansas, U.S.A.), Donald S. Horning (New South Wales, Australia), Terry D. Galloway (Winnipeg, Manitoba, Canada), Oldřich Sychra (Brno, Czech Republic), Michel P. Valim (Brazil), Jens-Kjeld Jensen (Nólsoy, Faroe Islands), and Adrian M. Paterson (Lincoln, Canterbury, New Zealand).

Although morphological descriptions of new species and generic revisions of New Zealand lice have continued into the 3rd Millennium (e.g. Palma & Pilgrim 2002; Palma & Price 2000, 2004, 2005;Valim & Palma 2013, 2015), the history of phthirapteran research is now characterised by molecular and phylogenetic studies of genera and generic complexes. Not surprisingly, several studies have dealt with lice from New Zealand seabirds, partly as a consequence of the comprehensive collections held in MONZ and also thanks to a group of young scientists who have taken the new techniques with great interest. Thus, several papers on the following genera have so far been published: Page *et al*. (2004) on the *Philoceanus* complex, Banks *et al*. (2006) on *Austrogoniodes*, Hughes *et al*. (2007) on the *Pectinopygus* complex, Hammer *et al*. (2010) on *Halipeurus*, and Bush *et al*. (2015, 2016) on the *Brueelia* complex.

Regarding the history of faunistic accounts of New Zealand lice, the first checklist was published by Wise (1977), who listed a total of 154 species and subspecies, but omitted the hosts. In 1982, Pilgrim & Palma published a list of lice from New Zealand birds in the format of a "host-louse list", including 267 named species and subspecies; this list was updated by Palma (1999). Tenquist & Charleston (2001) listed all the lice recorded in New Zealand from introduced mammals, with a total of 35 species. The latest complete list of New Zealand lice from both birds and mammals—comprising 347 species and subspecies— was assembled by Palma (2010), and was included in a comprehensive inventory of the biodiversity of this country (Gordon 2010). A summary with statistics taken from the five abovementioned lists is shown in Table 1.

Although the main subject of this historical section is New Zealand, readers interested in information about louse researchers, collections and faunistic accounts in the rest of the world will find the following publications useful: Emerson (1967, 1972a,b, 1979), Lakshminarayana (1979), Ledger (1980), Złotorzycka & Modrzejewska (1988), Cocker (1989), Carriker (2001), Powell (2001), Mey (2003), Garfield (2007), Mey *et al*. (2007), and Martín-Mateo (2002, 2009).

METHODS AND CONVENTIONS

In the Checklist, all taxa are listed in alphabetical order: families within each suborder, genera within each family, and species within each genus. Taxonomy and nomenclature of chewing lice follow Price *et al.* (2003), except where indicated; those of sucking lice follow Durden & Musser (1994a). Species qualified as "*sensu lato*" (14 in total) refer to populations either (1) with a range of measurements and morphological variation at present

considered different from the named species but not sufficiently distinct to warrant the erection of separate taxa (Pilgrim & Palma 1982: 2), or (2) without detailed systematic revisions available.

Synonymies and references for genera and species of lice are listed in chronological order but are not comprehensive. They include original citations, different generic combinations, and most of the references relevant to the New Zealand louse fauna. In the species synonymies, quotation marks " " around species or subspecies names indicate misidentifications made by the author(s) cited immediately after the names.

The geographic coverage of this Checklist is the same as that in the *Checklist of the Birds of New Zealand* (Checklist Committee 2010: 497, 500), with localities given as area codes taken from Crosby *et al*. (1976, 1998) and sequenced approximately from north to south, followed by outer island groups, and Antarctica. Since Crosby *et al*. (1976, 1998) do not include Norfolk and Macquarie Islands, these localities are given in full. Details of punctual localities are not relevant in the case of parasites living on highly mobile hosts. It should be noted that louse species recorded from Norfolk Island are now included in this catalogue following the inclusion of this island in the New Zealand Subregion (Checklist Committee 2010: 2).

This catalogue is primarily based on published articles and books, with additional data taken from collections held in the Museum of New Zealand Te Papa Tongarewa (MONZ) and in the New Zealand Arthropod Collection (NZAC). Several other institutions are included as repositories of primary types (see below). The material examined of new hitherto unpublished records, and published records from New Zealand localities given under each louse species refer to specimens collected from natural and regular hosts only. Specimens, localities and host records resulting from contaminations or straggling have been excluded (see Pilgrim & Palma 1982: 2). Voucher specimens of newly recorded species and of those identified to genus only have been slide-mounted in Canada balsam following the technique published by Palma (1978) and are held in the MONZ insect collection.

An attempt was made to include all literature citations to all references and records of all the lice known from New Zealand, with the exception of newspaper articles; however, involuntary omissions can be expected. Under "Significant references", those publications that were deemed to be useful for various reasons are included.

Taxonomy, nomenclature, vernacular English names, and sequence of New Zealand bird taxa follow Checklist Committee (2010), those for other bird species and subspecies follow Dickinson (2003). In cases of nomenclatorial disagreement between these two latter sources, the Checklist Committee (2010) is followed. Taxonomy, nomenclature, vernacular English names, and sequence of New Zealand mammals follow King (2005).

The pattern used for *species/subspecies* entries is:

Name of *species/subspecies* author/s, date of publication

Original *genus* and *species* author/s, date: page number, figs.

Combinations of *species/subspecies* with other *genera*, date: page number, figs.

Synonymies relevant to New Zealand, date: page number, figs.

Current *genus* and *species/subspecies* date: page number, figs.

Primary type status, sex, and repository institution (Reference/s, if data differ from or were not given in the original description).

Type host/s:

Other host/s:

New Zealand host/s:

New Zealand locality/ies: [listed as area codes proposed by Crosby *et al*. 1976, 1998]

Geographic distribution: [given as those of the hosts, not from actual louse records]

New Zealand reference/s: [in chronological order]

Other significant reference/s: [in chronological order]

Material examined and repository/ies: [only given for new records]

Remarks: [additional data on: louse taxonomy, host status, host distribution, misidentifications, new records, ecology, etc.]

Primary type specimens

Repository institutions of primary type specimens (holotypes, lectotypes, syntypes, neotypes) are given for most species, except in a few cases where there is no information available. Several colleagues provided information

about primary types under their care, and their names are given as a "pers. comm." where relevant. Dr Karla Schneider (MLUH) has kindly searched for many of the type specimens of species described by Nitzsch (1818), Burmeister (1838a), Nitzsch (in Giebel 1861; 1866), Rudow (1866; 1869; 1870), Giebel (1874), and Taschenberg (1882)—originally deposited in the Zoological Museum of Halle University—without success. With the exception of a few lectotypes and neotypes erected subsequently, all those types are listed here as "presumed lost" with references to relevant papers, in particular Clay (1949a: 1) and Palma & Pilgrim (1984: 150).

In his eight parts comprising "*The Piaget Collection of Mallophaga*", Thompson (1937–1939) does not specifically mention the words "holotype", "lectotype" or "syntypes". Therefore, with the exception of those taxa where Piaget had a single specimen for his description (the holotype) and those which had a lectotype subsequently designated, I regard the specimens listed by Thompson (1937–1939) are syntypes.

Abbreviations for institutions holding primary types

AMNH	American Museum of Natural History, New York, U.S.A.
AMSA	Australian Museum, Sydney, Australia.
ANIC	Australian National Insect Collection, CSIRO, Canberra ACT, Australia.
BPBM	Bernice P. Bishop Museum, Honolulu, Hawaii, U.S.A.
CENPAT	Centro Nacional Patagónico, Puerto Madryn, Chubut, Argentina.
CZLP	Centro de Zoologia, Lisboa, Portugal.
CMNZ	Canterbury Museum, Christchurch, New Zealand.
CUIC	Cornell University Insect Collection, Department of Entomology, Cornell University, Ithaca, New York, U.S.A.
EMEC	Essig Museum, Division of Entomology, University of California, Berkeley, California, U.S.A.
FMLA	Fundación Miguel Lilllo, Tucumán, Argentina.
GNHS	Göteborg Natural History Museum, Göteborg, Sweden.
MCZC	Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts, U.S.A.
MLUH	Institut für Zoologie und Zoologische Sammlungen, Martin-Luther-Universität Halle-Wittenberg, Halle (Saale), Germany.
MNHN	Muséum National d'Histoire Naturelle, Paris, France.
MNHW	Museum of Natural History, University of Wrocław, Wrocław, Poland.
MONZ	Museum of New Zealand Te Papa Tongarewa, Wellington, New Zealand (formerly Dominion Museum 1907–1973, and National Museum of New Zealand 1973–1992).
MZUSP	Museu de Zoologia da Universidade de São Paulo, São Paulo, Brazil.
NHML	Natural History Museum, London, England.
NHMR	Naturhistorisches Museum im Thüringer, Rudolstadt, Germany.
NSMJ	National Science Museum, Tokyo, Japan.
NZAC	New Zealand Arthropod Collection, Landcare Research Ltd, Auckland, New Zealand (formerly Entomology Division Collection, DSIR).
OSUM	Ohio State University Museum, Columbus, Ohio, U.S.A.
SAIM	South African Institute for Medical Research, Johannesburg, South Africa.
SAMS	South African Museum, Cape Town, South Africa.
SDEI	Senckenberg Deutsches Entomologisches Institut, Muencheberg, Germany.
SMDV	Spencer Entomological Collection, Beaty Biodiversity Museum, Faculty of Science, The University of British Columbia, Vancouver, British Columbia, Canada.
USNM	United States National Museum of Natural History, Smithsonian Institution, Washington, D.C., U.S.A.
ZMAS	Zoological Institute of the Russian Academy of Sciences, Saint Petersburg, Russia.
ZMHG	Zoologisches Institut und Zoologisches Museum, Hamburg, Germany.
ZMHU	Museum für Naturkunde, Leibniz Institut, Humboldt-Universität zu Berlin, Germany.

THE CHECKLIST

Order PHTHIRAPTERA Haeckel, 1896

Phthiraptera Haeckel 1896. *Systemat. Phylog.*: 703.

Suborder AMBLYCERA Kellogg, 1896

Amblycera Kellogg, 1896a. *Proc. Calif. Acad. Sci. 6*: 68.

Family BOOPIIDAE Mjöberg, 1910

Boopiidae Mjöberg, 1910a. *Arkiv Zool. 6*(13): 21. Type genus: *Boopia* Piaget, 1880.

Genus *Boopia* Piaget, 1880

Boopia Piaget, 1880. *Pédiculines*: 599. Type species: *Boopia tarsata* Piaget, 1880 (by monotypy).

Boopia notafusca Le Souëf, 1902

Figs 1–2

Boopia nota-fusca Le Souëf, 1902a: 50, fig. 1.
Boopia notafusca Le Souëf, 1902; Kéler 1971: 31, fig. 90H.
Boopia notafusca Le Souëf, 1902; Palma 1996a: 162.
Boopia notafusca Le Souëf, 1902; Price *et al*. 2003: 73.
Boopia notafusca Le Souëf, 1902; Palma 2010: 407.

Lectotype ♂ in NHML (Barker 1996: 94).

Type host: *Wallabia bicolor* (Desmarest, 1804).

New Zealand host: *Petrogale penicillata* (J.E. Gray, 1825).

Other hosts: *Macropus robustus* Gould, 1841 and *Macropus giganteus* Shaw, 1790, but both need confirmation (Kéler 1971: 33).

New Zealand locality: AK (Kawau Island).

Geographic distribution: Australasia.

New Zealand references: Palma (1996a); Tenquist & Charleston (2001: 486); King (2005: 52); Palma (2010); Vermeulen *et al*. (2016: 71).

Other significant references: Tillyard (1926: 134, fig. O1); Kéler (1971); Murray & Calaby (1971: 83); Barker (1996: 94); Price *et al*. (2003).

Remarks: *Boopia notafusca* is native to Australia, and was introduced to New Zealand, probably with its type host, by human agency (King 2005: 50). The New Zealand record represents a host-association not yet recorded in Australia.

Genus *Heterodoxus* Le Souëf & Bullen, 1902

Heterodoxus Le Souëf & Bullen, 1902b. *Vict. Naturalist 18*: 159. Type species: *Heterodoxus macropus* Le Souëf & Bullen, 1902b (by monotypy).

Heterodoxus ampullatus Kéler, 1971

Figs 3–4

Heterodoxus ampullatus Kéler, 1971: 52, figs 34–38, 115G, 116P, 123.
Heterodoxus ampullatus Kéler, 1971; Palma 1996a: 161.
Heterodoxus ampullatus Kéler, 1971; Price *et al*. 2003: 74.
Heterodoxus ampullatus Kéler, 1971; Palma 2010: 407.

Holotype ♂ in ANIC (Barker 1996: 95).

Type host: *Petrogale penicillata* (J.E. Gray, 1825).

New Zealand host: *Petrogale penicillata* (J.E. Gray, 1825).

Other hosts: None.

New Zealand locality: AK (Kawau Island).

Geographic distribution: Australasia.

New Zealand references: Palma (1996a); Tenquist & Charleston (2001: 504); King (2005: 52); Palma (2010); Vermeulen *et al*. (2016: 71).

Other significant references: Murray & Calaby (1971: 84); Clay (1981a: 65, map 1); Barker & Close (1990: 1082, fig. 2); Barker (1996: 95); Price *et al*. (2003).

Remarks: *Heterodoxus ampullatus* is native to Australia, and was introduced to New Zealand with brush-tailed rock wallabies by human agency (King 2005: 50).

Family GYROPIDAE Kellogg, 1896

Gyropidae Kellogg, 1896a. *Proc. Calif. Acad. Sci. 6*: 68. Type genus: *Gyropus* Nitzsch, 1818.

Genus *Gliricola* Mjöberg, 1910

Subgenus *Gliricola* Mjöberg, 1910

Gliricola Mjöberg, 1910b. *Zool. Anz. 35*: 292. Type species: *Gyropus gracilis* (Nitzsch, 1818) = *Gliricola porcelli* (Schrank, 1781) (by monotypy).

Gliricola (*Gliricola*) *porcelli* (Schrank, 1781)

Figs 5–6

Pediculus porcelli Schrank, 1781: 500, pl. 1: fig. 1.

Gyropus gracilis Nitzsch, 1818: 304. Unnecessary *nomen novum* for *Pediculus porcelli* Schrank, 1781.

Gyropus gracilis Nitzsch, 1818; Mjöberg 1910b: 292, figs 7, 10–14.

Gliricola porcelli (Schrank, 1781); Hopkins & Clay 1952: 145.

Gliricola porcelli (Schrank, 1781); Tenquist & Charleston 2001: 500.

Gliricola (*Gliricola*) *porcelli* (Schrank, 1781); Price *et al*. 2003: 76.

Gliricola porcelli (Schrank, 1781); Palma 2010: 407.

Neotype ♂ in NHML (Clay & Hopkins 1954: 254).

Type host: *Cavia porcellus* (Linnaeus, 1758).

New Zealand host: *Cavia porcellus* (Linnaeus, 1758).

Other hosts: *Cavia aperea* Erxleben, 1777; *Cavia fulgida* Wagler, 1831; *Cavia tschudii* Fitzinger, 1857.

New Zealand localities: AK, NN, MC.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Tenquist & Charleston (1981: 265); Tenquist & Charleston (2001); Palma (2010).

Other significant references: Mjöberg (1910b); Werneck (1936: 397, figs 1–9); Séguy (1944: 53, figs 40–43); Webb (1946: 52); Symmons (1952: 379, fig. 25); Clay & Hopkins (1954: 254); Kéler (1957c: 97, figs 3b, 11, 13, 41, 42a); Emerson & Price (1975: 13, figs 23–26); Price (1987: 219); Barker (1996: 105); Martín-Mateo (2002: 140); Price *et al*. (2003); Palma & Jensen (2005: 50, 69).

Remarks: *Gliricola* (*Gliricola*) *porcelli* is native to South America and was introduced to New Zealand and other countries with guinea pigs by human agency (King 2005: 9).

Genus *Gyropus* Nitzsch, 1818

Gyropus Nitzsch, 1818. *Germar's Mag. Entomol. 3*: 303. Type species: *Gyropus ovalis* Burmeister, 1838a (by subsequent designation).

Gyropus ovalis Burmeister, 1838

Figs 7–8

Gyropus ovalis Burmeister, 1838a: 443.

Gyropus ovalis Burmeister, 1838; Hopkins & Clay 1952: 161.

Gyropus ovalis Burmeister, 1838; Tenquist & Charleston 2001: 501.

Gyropus ovalis Burmeister, 1838; Price *et al*. 2003: 77.

Gyropus ovalis Burmeister, 1838; Palma 2010: 407.

Status, sex and repository of types unknown, presumed lost. See Clay (1949a: 1) and Palma & Pilgrim (1984: 150).

Type host: *Cavia porcellus* (Linnaeus, 1758).

New Zealand host: *Cavia porcellus* (Linnaeus, 1758).

Other hosts: *Cavia aperea* Erxleben, 1777; *Cavia fulgida* Wagler, 1831; *Cavia tschudii* Fitzinger, 1857.

New Zealand localities: AK, WN, NN, MC.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Tenquist & Charleston (1981: 266); Tenquist & Charleston (2001); Palma (2010).

Other significant references: Werneck (1936: 419, figs 34–39); Séguy (1944: 52, figs 37–39); Werneck (1948: 39); Webb (1946: 52); Symmons (1952: 379, figs 20–24); Kéler (1957c: 97, figs 3e, 20a, 42b,c); Emerson & Price (1975: 28, figs 71–74); Price (1987: 219); Barker (1996: 105); Martín-Mateo (2002: 139); Price *et al*. (2003); Bartlow *et al*. (2016: 222).

Remarks: *Gyropus ovalis* is native to South America and was introduced to New Zealand and other countries with guinea pigs by human agency (King 2005: 9).

Family LAEMOBOTHRIIDAE Mjöberg, 1910

Laemobothriidae Mjöberg, 1910a. *Arkiv Zool.* *6*(13): 53. Type genus: *Laemobothrion* Nitzsch, 1818.

Genus *Laemobothrion* Nitzsch, 1818

Subgenus *Laemobothrion* Nitzsch, 1818

Laemobothrion Nitzsch, 1818. *Germar's Mag. Entomol.* *3*: 301. Type species: *Laemobothrion maximum* (Scopoli, 1763) (by subsequent designation).

Laemobothrion (*Laemobothrion*) *tinnunculi* (Linnaeus, 1758)

Fig. 9

Pediculus tinnunculi Linnaeus, 1758: 612.

Ricinus tinnunculi (Linnaeus, 1758); Latreille 1804: 104.

Laemobothrion tinnunculi (Linnaeus, 1758); Hopkins & Clay 1952: 186.

Laemobothrion tinnunculi (Linnaeus, 1758); Nelson & Price 1965: 253, figs 4–5, 9, 11, 15.

Laemobothrion tinnunculi (Linnaeus, 1758); Pilgrim & Palma 1982: 17.

Laemobothrion (*Laemobothrion*) *tinnunculi* (Linnaeus, 1758); Murray *et al.* 1993: 960.

Laemobothrion tinnunculi (Linnaeus, 1758); Palma 2010: 407.

Neotype ♀ in NHML (Clay & Hopkins 1950: 230, pl. 1: fig. 1).

Type host: *Falco tinnunculus* Linnaeus, 1758.

New Zealand host: *Falco cenchroides cenchroides* Vigors & Horsfield, 1827.

Other hosts: At least 15 other species of *Falco* (see Price *et al*. 2003: 82).

New Zealand locality: WN.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1993); Palma (2010).

Other significant references: Clay & Hopkins (1950: 228, figs 1–5, pl. 1: fig. 1); Nelson & Price (1965); Lakshminarayana (1970: 132, figs 2c, 4d); Butler & O'Connor (1994: 451); Palma (1996b: 107); Martín-Mateo (2002: 136, fig. 43B,D,I); Price *et al*. (2003: 82).

Remarks: *Falco cenchroides cenchroides* breeds in Australia and is an infrequent straggler to New Zealand (Checklist Committee 2010: 174). Only one small sample of *Laemobothrion* (*Laemobothrion*) *tinnunculi* has been collected from one nankeen kestrel in New Zealand (voucher specimens in MONZ).

Family MENOPONIDAE Mjöberg, 1910

Menoponidae Mjöberg, 1910a. *Arkiv Zool.* *6*(13): 26. Type genus: *Menopon* Nitzsch, 1818.

Genus *Actornithophilus* Ferris, 1916

Actornithophilus Ferris, 1916a. *Canad. Entomol. 48*: 303. Type species: *Colpocephalum uniseriatum* Piaget, 1880 = *Actornithophilus uniseriatus* (Piaget, 1880) (by original designation).

Clypeodon Timmermann, 1954c. *Ann. Mag. Nat. Hist.* (Ser. 12) *7*: 830. Type species: *Colpocephalum incisum* Piaget, 1880 = *Actornithophilus incisus* (Piaget, 1880) (by original designation).

***Actornithophilus bicolor* (Piaget, 1880)**

Colpocephalum bicolor Piaget, 1880: 561, pl. 47: fig. 1.

Actornithophilus bicolor (Piaget, 1880); Hopkins & Clay 1952: 21.

Actornithophilus bicolor (Piaget, 1880); Clay 1962: 239, 242, pl. 11: fig. 3.

Actornithophilus bicolor (Piaget, 1880); Pilgrim & Palma 1982: 21.

Actornithophilus bicolor (Piaget, 1880); Murray *et al.* 2006a: 1964.

Actornithophilus bicolor (Piaget, 1880); Palma 2010: 407.

Syntypes ♂♀, lost (Clay 1951a: 176).

Type host: *Arenaria interpres* (Linnaeus, 1758).

New Zealand host: *Arenaria interpres* (Linnaeus, 1758).

Other hosts: *Arenaria melanocephala* (Vigors, 1829).

New Zealand locality: MC.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (2006a); Palma (2010).

Other significant references: Emerson & Ward (1958: 50); Clay (1962); Hackman & Nyholm (1968: 75); Amerson & Emerson (1971: 14, 27); Butler & O'Connor (1994: 450); Price *et al*. (2003: 83); Martín-Mateo (2002: 71); Palma & Jensen (2005: 51, 64); Palma & Peck (2013: 9).

Remarks: Although the ruddy turnstone is a very common summer visitor to New Zealand (Checklist Committee 2010: 207), there are only two records of *Actornithophilus bicolor* from this country.

***Actornithophilus ceruleus* (Timmermann, 1954)**

Figs 10–11

Clypeodon ceruleus Timmermann, 1954c: 830, pl. 26: fig. c.

Actornithophilus (*Clypeodon*) *ceruleus* (Timmermann, 1954c): 832, figs 2cd.

Clypeodon ceruleus Timmermann, 1954; Timmermann 1957a: 111, fig. 84b, pl. 15: fig. b.

Actornithophilus ceruleus (Timmermann, 1954); Clay 1962: 201, 237.

Actornithophilus ceruleus (Timmermann, 1954); Nelson 1969: 199.

Actornithophilus ceruleus (Timmermann, 1954); Watt 1971: 233, 243, fig. 1.

Actornithophilus ceruleus (Timmermann, 1954); Wise 1977: 56.

Actornithophilus ceruleus (Timmermann, 1954); Pilgrim & Palma 1982: 23.

Actornithophilus ceruleus (Timmermann, 1954) *s. l.*; Pilgrim & Palma 1982: 23.

Actornithophilus ceruleus (Timmermann, 1954); Murray *et al.* 2006a: 1965.

Actornithophilus ceruleus (Timmermann, 1954); Palma 2010: 407.

Holotype ♂ in NHML (Timmermann 1954c: pl. 26: fig. c).

Type host: *Procelsterna cerulea cerulea* (Bennett, 1840).

New Zealand hosts: *Procelsterna cerulea albivitta* Bonaparte, 1856; *Anous minutus minutus* Boie, 1844.

Other hosts: *Anous tenuirostris* (Temminck, 1823); *Anous minutus melanogenys* Peters, 1934.

New Zealand localities: ND, BP, MC, KE, Norfolk Island.

Geographic distribution: Tropical and subtropical regions of the Atlantic, Indian and Pacific Oceans.

New Zealand references: Nelson (1969); Watt (1971); Wise (1977); Pilgrim & Palma (1982); Murray *et al.* (2006a); Palma (2010).

Other significant references: Timmermann (1957a); Clay (1962); Amerson & Emerson (1971: 19, 27); Palma (1996b: 110); Price *et al*. (2003: 83); Silva *et al*. (2014: 942).

Remarks: The main New Zealand population of *Actornithophilus ceruleus* is in the Kermadec Islands, where the New Zealand hosts breed. Pilgrim & Palma (1982: 23) regarded the population of *Actornithophilus ceruleus* from *Anous*

minutus minutus as somewhat different from that of the type host, and qualified it as *sensu lato*; however, my examination of more samples shows that making such difference is not warranted.

***Actornithophilus grandiceps* (Piaget, 1880)**

Colpocephalum grandiceps Piaget, 1880: 558, pl. 46: fig. 7.
Actornithophilus grandiceps (Piaget, 1880); Hopkins & Clay 1952: 21.
Actornithophilus grandiceps (Piaget, 1880); Clay 1962: 226, 239, fig. 66.
Actornithophilus grandiceps; Baker 1974: 20.
Actornithophilus grandiceps (Piaget, 1880); Pilgrim & Palma 1982: 19.
Actornithophilus grandiceps (Piaget, 1880); Murray *et al.* 1993: 961.
Actornithophilus grandiceps (Piaget, 1880); Palma 2010: 407.

Lectotype ♂ in NHML (Clay 1951a: 182).

Type host: *Haematopus ostralegus* Linnaeus, 1758.

New Zealand hosts: *Haematopus finschi* Martens, 1897; *Haematopus unicolor* J.R. Forster, 1844; *Haematopus chathamensis* Hartert, 1927.

Other hosts: *Haematopus ater* Vieillot & Oudart, 1825; *Haematopus bachmani* Audubon, 1838; *Haematopus fuliginosus* Gould, 1845; *Haematopus longirostris* Vieillot, 1817; *Ibidorhyncha struthersii* Vigors, 1832.

New Zealand localities: ND, AK, SD, MB, NN, NC, MC, SC, WD, CO, DN, SL, CH.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Baker (1974); Pilgrim & Palma (1982); Murray *et al.* (1993); Paterson *et al.* (1999: 223); Palma (2010).

Other significant references: Clay (1962); Green & Palma (1991: 4, 32); Forrester *et al.* (1995: 25); Palma (1996b: 110); Price *et al*. (2003: 83); Palma & Jensen (2005: 51, 63); Palma & Peck (2013: 10).

Remarks: *Actornithophilus grandiceps* is widespread on most species of oystercatchers, and found in large numbers per host.

Actornithophilus hoplopteri* (Mjöberg, 1910) *sensu lato

Colpocephalum hoplopteri Mjöberg, 1910a: 40, fig. 24, pl. 5: fig. 3.
Actornithophilus hoplopteri (Mjöberg, 1910); Hopkins & Clay 1952: 21.
Actornithophilus hoplopteri (Mjöberg, 1910) *s. l.*; Clay 1962: 202, 238, 240, fig. 1, pl. 7: fig. 1, pl. 9: fig. 4.
Actornithophilus hoplopteri (Mjöberg, 1910) *s. l.*; Pilgrim & Palma 1982: 20.
Actornithophilus hoplopteri (Mjöberg, 1910); Murray *et al.* 1993: 962.
Actornithophilus hoplopteri (Mjöberg, 1910); Palma 2010: 407.

Syntypes ♀♀, probably lost (Daniel Gustafsson pers. comm. August 2012).

Type host: *Vanellus spinosus* (Linnaeus, 1758).

New Zealand host: *Vanellus miles novaehollandiae* Stephens, 1819.

Other hosts: *Charadrius vociferus* Linnaeus, 1758; and 10 other species of *Vanellus* (see Price *et al*. 2003: 83).

New Zealand localities: NN, NC, MC, SC, WD, CO, DN, SL.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1993); Paterson *et al.* (1999: 221); Palma (2010).

Other significant references: Clay (1962); Green & Palma (1991: 4, 32); Forrester *et al.* (1995: 25); Palma (1996b: 110); Price *et al*. (2003: 83).

Remarks: *Actornithophilus hoplopteri* is a widespread and frequently collected species, showing some morphological variability among populations from different hosts (Clay 1962: 203, fig. 1); hence, I regard the New Zealand population as "*sensu lato*".

***Actornithophilus limosae* (Kellogg, 1908)**

"*Colpocephalum ochraceum*" Grube, 1851: 490 (not *Colpocephalum ochraceum* Nitzsch, 1818).
Colpocephalum limosae Kellogg, 1908: 56. *Nomen novum* for *Colpocephalum ochraceum* Grube, 1951.
Actornithophilus limosae (Kellogg, 1908); Hopkins & Clay 1952: 22.
Actornithophilus limosae (Kellogg, 1908); Clay (1962: 224, 239, fig. 68, pl. 8: figs 1–2.

Actornithophilus limosae (Kellogg, 1908); Watt 1971: 233, 243.
Actornithophilus limosae (Kellogg, 1908); Wise 1977: 56.
Actornithophilus limosae (Kellogg, 1908); Pilgrim & Palma 1982: 21.
Actornithophilus limosae (Kellogg, 1908); Murray *et al.* 2006a: 1964.
Actornithophilus limosae (Kellogg, 1908); Palma 2010: 407.

Status, sex and repository of types unknown.

Type host: *Limosa lapponica lapponica* (Linnaeus, 1758).

New Zealand host: *Limosa lapponica baueri* Naumann, 1836.

Other hosts: *Limosa fedoa* (Linnaeus, 1758); *Limosa haemastica* (Linnaeus, 1758).

New Zealand localities: ND, SD, MB, WD, SL, KE, SN, CA.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Watt (1971); Wise (1977); Pilgrim & Palma (1982); Murray *et al.* (2006a); Palma (2010).

Other significant references: Clay (1962); Amerson & Emerson (1971: 14, 27); Price *et al*. (2003: 84).

Remarks: *Actornithophilus limosae* is a relatively widespread species, but found in small numbers per host. The eastern bar-tailed godwit is the most numerous wader that visits New Zealand every year (Checklist Committee 2010: 203).

Actornithophilus ochraceus (Nitzsch, 1818) *sensu lato*

"Pulex avis pluvialis" Redi, 1668: pl. 2: upper fig.
Liotheum (*Colpocephalum*) *ochraceum* Nitzsch, 1818: 299. *Nomen novum* for "Pulex avis pluvialis" Redi, 1668.
Colpocephalum timidum Kellogg, 1896a: 145, pl. 12: fig. 6.
Colpocephalum timidum Kellogg, 1896; Johnston & Harrison 1912: 364.
Actornithophilus timidus (Kellogg, 1896); Thompson 1938a: 208.
Actornithophilus ochraceus (Nitzsch, 1818); Hopkins & Clay 1952: 22.
Actornithophilus timidus (Kellogg, 1896); Hopkins & Clay 1952: 24.
Actornithophilus ochraceus (Nitzsch, 1818); Clay 1962: 203, 240, figs 1–2, 25–28, 55–56, 63, pl. 9: fig. 2, pl. 10: fig. 3.
Actornithophilus timidus (Kellogg, 1896); Watt 1971: 233, 243.
Actornithophilus timidus (Kellogg, 1896); Wise 1977: 56.
Actornithophilus ochraceus (Nitzsch, 1818) *s. l.*; Pilgrim & Palma 1982: 20.
Actornithophilus ochraceus (Nitzsch, 1818); Murray *et al.* 1993: 962.
Actornithophilus ochraceus (Nitzsch, 1818); Palma 2010: 407.

Neotype ♂ in NHML (Clay 1962: 204).

Type host: *Pluvialis apricaria* (Linnaeus, 1758).

New Zealand hosts: *Pluvialis fulva* (J.F. Gmelin, 1789); *Charadrius obscurus obscurus* (J.F. Gmelin, 1789); *Charadrius obscurus aquilonius* Dowding, 1994.

Other hosts: *Pluvialis dominicus* (Statius Müller, 1776); *Pluvialis squatarola* (Linnaeus, 1758); at least 14 other species of *Charadrius* (see Price *et al*. 2003: 84).

New Zealand localities: ND, AK, SL, KE.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Johnston & Harrison (1912: 363); Thompson (1938a); Watt (1971); Wise (1977); Pilgrim & Palma (1982); Murray *et al.* (1993); Palma (2010).

Other significant references: Clay (1958c: 144); Clay & Hopkins (1960: 45); Clay (1962); Amerson & Emerson (1971: 13, 27); Moreby (1976: 93); Palma (1996b: 111); Price *et al*. (2003: 84); Palma & Jensen (2005: 51, 63).

Remarks: *Actornithophilus ochraceus* is a widespread and frequently collected species, showing some morphological variability among populations from different hosts (Clay 1962: 202, fig. 1); hence, I regard the New Zealand population as "*sensu lato*". *Charadrius obscurus aquilonius* is a new host record for *Actornithophilus ochraceus* (voucher specimens in MONZ).

Actornithophilus pediculoides (Mjöberg, 1910)

Colpocephalum pediculoides Mjöberg, 1910a: 44, pl. 2: fig. 6.
Rediella pediculoides (Mjöberg, 1910); Hopkins & Clay 1952: 322.

Longimenopon pediculoides (Mjöberg, 1910); Emerson 1956b: 296, figs 1–4.
Actornithophilus pediculoides (Mjöberg, 1910); Clay 1962: 191, 238.
Actornithophilus pediculoides (Mjöberg, 1910); Pilgrim & Palma 1982: 21.
Actornithophilus pediculoides (Mjöberg, 1910); Murray *et al.* 2006a: 1964.
Actornithophilus pediculoides (Mjöberg, 1910); Palma 2010: 407.

Syntypes ♂♀ in GNHS (Daniel Gustafsson pers. comm. August 2012).

Type host: *Arenaria interpres* (Linnaeus, 1758).

New Zealand host: *Arenaria interpres* (Linnaeus, 1758).

Other hosts: None.

New Zealand locality: MC.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (2006a); Palma (2010).

Other significant references: Emerson (1956b); Emerson & Ward (1958: 51); Clay (1962); Price *et al*. (2003: 84).

Remarks: *Actornithophilus pediculoides* lives mainly inside the rachis of primary wing feathers of the ruddy turnstone, its only host (see Clay 1962: 192). Although *Arenaria interpres* is a very common summer visitor to New Zealand (Checklist Committee 2010: 207), there is only a single record of *Actornithophilus pediculoides* from this country.

Actornithophilus piceus lari (Packard, 1870)

Colpocephalum lari Packard, 1870: 96, pl. 1: fig. 1.
Actornithophilus lari (Packard, 1870); Hopkins & Clay 1952: 22.
Actornithophilus piceus lari (Packard, 1870); Timmermann 1954c: 839.
Actornithophilus piceus (Denny, 1842) *sens. lat.*; Clay 1962: 201, 237.
Actornithophilus piceus (Denny, 1842) *sens. lat.*; Clay & Moreby 1967: 158, 169, figs 53, 62.
Actornithophilus piceus (Denny, 1842) *s. l.*; Pilgrim & Palma 1982: 22.
Actornithophilus piceus lari (Packard, 1870); Palma 1996b: 112.
Actornithophilus piceus lari (Packard, 1870); Palma & Horning 2002: 5, 17.
Actornithophilus piceus lari (Packard, 1870); Price *et al*. 2003: 84.
Actornithophilus piceus lari (Packard, 1870); Murray *et al.* 2006a: 1965.
"*Actornithophilus piceus* (Packard, 1870)"; Palma 2010: 407. Error for *Actornithophilus piceus lari* (Packard, 1870).

Status, sex and repository of types unknown.

Type host: *Larus marinus* Linnaeus, 1758.

New Zealand hosts: *Larus dominicanus dominicanus* Lichtenstein, 1823; *Larus novaehollandiae scopulinus* J.R. Forster, 1843.

Other hosts: At least 23 other species of *Larus* (see Price *et al*. 2003: 84); *Pagophila eburnea* (Phipps, 1774); *Rhodostethia rosea* (Macgillivray, 1924); *Rissa brevirostris* (Bruch, 1853); *Rissa tridactyla* (Linnaeus, 1758); *Xema sabini* (Sabine, 1819).

New Zealand localities: AK, WN, NC, MC, SC, SL, Macquarie Island.

Geographic distribution: Cosmopolitan.

New Zealand references: Pilgrim & Palma (1982); Palma (1996b); Palma & Horning (2002); Murray *et al.* (2006a); Palma (2010).

Other significant references: Timmermann (1954c); Kéler (1957c: fig. 21a); Timmermann (1957a: 102, pl. 14: fig. d); Clay (1962); Clay & Moreby (1967); Green & Palma (1991: 4, 33); Forrester *et al.* (1995: 29); Palma (1996b: 112); Price *et al*. (2003); González-Acuña *et al*. (2011: 300).

Remarks: Although widespread on many host species, *Actornithophilus piceus lari* has a low prevalence of infestation on New Zealand gulls.

Actornithophilus sedes Eichler, 1944 **New Record**

Actornithophilus sedes Eichler, 1944a: 56.
Actornithophilus sedes Eichler, 1944; Clay 1962: 197, 240, fig. 64, pl. 4: fig. 4, pl. 11: fig. 2.
Actornithophilus sp.: Pilgrim & Palma 1982: 22.
Actornithophilus sedes Eichler, 1944; Price *et al*. 2003: 85.

Actornithophilus sp.: Murray *et al.* 2006a: 1964.

Holotype, probably ♀, repository unknown.

Type host: *Glareola pratincola* (Linnaeus, 1766).

New Zealand host: *Glareola maldivarum* J.R. Forster, 1795.

Other hosts: None.

New Zealand locality: NN.

Geographic distribution: Eurasia; Africa; Australasia.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (2006a).

Other significant references: Clay (1962); Price *et al*. (2003).

Material examined and repository: 1♀ (1 sample, MONZ).

Remarks: This is the first record of *Actornithophilus sedes* for New Zealand, because the New Zealand references cited above reported this louse as "*Actornithophilus* sp." only. Its host, the oriental pratincole is a rare visitor to New Zealand (Checklist Committee 2010: 223)

***Actornithophilus spinulosus* (Piaget, 1880)**

Colpocephalum spinulosum Piaget, 1880: 563, pl. 47: fig. 3.

Actornithophilus spinulosus (Piaget, 1880); Hopkins & Clay 1952: 23.

Actornithophilus spinulosus (Piaget, 1880); Clay 1962: 224, 243, fig. 67, pl. 8: fig. 3.

Actornithophilus spinulosus (Piaget, 1880); Pilgrim & Palma 1982: 20.

Actornithophilus spinulosus (Piaget, 1880); Murray *et al.* 2006a: 1964.

Actornithophilus spinulosus (Piaget, 1880); Palma 2010: 407.

Lectotype ♂ in NHML (Clay 1953b: 653).

Type host: *Limosa limosa limosa* (Linnaeus, 1758).

New Zealand host: *Limosa limosa melanuroides* Gould, 1846.

Other hosts: None.

New Zealand locality: AU.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (2006a); Palma (2010).

Other significant references: Clay (1962); Price *et al*. (2003: 85); Adam (2007: 165).

Remarks: Despite the widespread distribution of its hosts, *Actornithophilus spinulosus* has been recorded from only a few localities around the world. The Asiatic black-tailed godwit is an uncommon annual visitor to New Zealand (Checklist Committee 2010: 203).

***Actornithophilus umbrinus* (Burmeister, 1838)**

Colpocephalum umbrinum Burmeister, 1838a: 438.

Colpocephalum umbrinum Piaget, 1880: 556, pl. 46: fig. 6. Preoccupied by *Colpocephalum umbrinum* Burmeister, 1838.

Colpocephalum umbrosum Harrison, 1916: 56. Unnecessary *nomen novum* for *Colpocephalum umbrinum* Piaget, 1880.

Actornithophilus umbrinus (Burmeister, 1838); Hopkins & Clay 1952: 24.

Actornithophilus umbrosus (Harrison, 1916); Hopkins & Clay 1952: 24.

Actornithophilus umbrinus (Burmeister, 1838); Clay 1962: 212, figs 6, 19, 57, 69, pl. 6: figs 4–6, pl. 10: fig. 1.

Actornithophilus umbrinus (Burmeister, 1838) *s. l.*; Pilgrim & Palma 1982: 21.

Actornithophilus umbrinus (Burmeister, 1838); Palma 1999: 380.

Actornithophilus umbrinus (Burmeister, 1838); Murray *et al.* 2006a: 1964.

Actornithophilus umbrinus (Burmeister, 1838); Palma 2010: 407.

Status, sex and repository of types unknown, presumed lost. See Clay (1949a: 1) and Palma & Pilgrim (1984: 150).

Type host: *Calidris ferruginea* (Pontoppidan, 1763).

New Zealand hosts: *Calidris canutus rogersi* (Mathews, 1913); *Calidris acuminata* (Horsfield, 1821).

Other hosts: At least 16 other species of *Calidris* (see Price *et al*. 2003: 85); *Tringa macularia* Linnaeus, 1766; *Phalaropus fulicarius* (Linnaeus, 1758); *Phalaropus lobatus* (Linnaeus, 1758); *Phalaropus tricolor* (Vieillot, 1819); *Tryngites subruficollis* (Vieillot, 1819).

New Zealand localities: NC, MC, SC, KE, CA.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Pilgrim & Palma (1982); Palma (1999); Murray *et al.* (2006a); Palma (2010).

Other significant references: Clay (1962); Hackman & Nyholm (1968: 75); Amerson & Emerson (1971: 15, 28); Green & Palma (1991: 4, 33); Hunter & Colwell (1994: 402); Forrester *et al.* (1995: 26); Palma (1996b: 112); Price *et al*. (2003: 85); Palma & Jensen (2005: 51, 63).

Remarks: *Actornithophilus umbrinus* is a frequently collected species widespread on many species of waders. Pilgrim & Palma (1982: 23) regarded the population of *Actornithophilus umbrinus* from *Calidris canutus* as somewhat different from that of the type host, and qualified it as *sensu lato*; however, my examination of more samples shows that making such difference is not warranted.

Genus *Amyrsidea* Ewing, 1927

Amyrsidea Ewing, 1927. *Jour. Wash. Acad. Sci. 17*: 90. Type species: *Menopon ventrale* Nitzsch [*in* Giebel], 1866 = *Amyrsidea* (*Amyrsidea*) *ventralis* (Nitzsch [*in* Giebel], 1866) (by original designation).

Subgenus *Argimenopon* Eichler, 1947

Argimenopon Eichler, 1947. *Arch. Zool. 39A*(2): 5. Type species: *Argimenopon polytrichum* Eichler, 1947 = *Amyrsidea* (*Argimenopon*) *polytrichum* Eichler, 1947 (by original designation).

Amyrsidea (*Argimenopon*) *minuta* Emerson, 1961

Figs 12–13

Amyrsidea minuta Emerson, 1961a: 117, figs 1–3.
Amyrsidea minuta Emerson, 1961; Pilgrim & Palma 1982: 18.
Amyrsidea (*Argimenopon*) *minuta* Emerson, 1961; Scharf & Price 1983: 447, figs 18, 20.
Amyrsidea minuta Emerson, 1961; Murray *et al.* 1993: 960.
Amyrsidea (*Argimenopon*) *minuta* Emerson, 1961; Palma 2010: 407.

Holotype ♂ in SMDV (Karen Needham pers. comm. November 2014).

Type host: *Pavo cristatus* Linnaeus, 1758.

New Zealand host: *Pavo cristatus* Linnaeus, 1758.

Other host: *Pavo muticus* Linnaeus, 1766.

New Zealand localities: WA, NC, MC, SC.

Geographic distribution: Eurasia; North America; Australasia.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1993); Paterson *et al.* (1999: 219); Palma (2010).

Other significant references: Scharf & Price (1983); Palma (1996b: 113); Price *et al*. (2003: 87); Adam (2007: 157, figs 2a,b).

Remarks: *Amyrsidea* (*Argimenopon*) *minuta* is native to Asia, and was introduced to New Zealand and other countries with peafowl by human agency (Checklist Committee 2010: 28).

Amyrsidea (*Argimenopon*) *perdicis* (Denny, 1842)

Liotheum (*Menopon*) *perdicis* Denny, 1842: 200, 225, pl. 21: fig. 9.
Menopon megalosomum Overgaard, 1943: 13, figs 5–6.
Amyrsidea megalosoma (Overgaard, 1943); Hopkins & Clay 1952: 28.
Amyrsidea perdicis (Denny, 1842); Hopkins & Clay 1952: 29.
Amyrsidea perdicis (Denny, 1842); Pilgrim & Palma 1982: 18.
Amyrsidea (*Argimenopon*) *perdicis* (Denny, 1842); Scharf & Price 1983: 445, figs 14, 16.
Amyrsidea perdicis (Denny, 1842); Murray *et al.* 1993: 960.
Amyrsidea (*A.*) *perdicis* (Denny, 1842); Palma 2010: 407.

Syntypes ♀♀ in NHML (Clay 1949b: 902).

Type host: *Perdix perdix perdix* (Linnaeus, 1758).

New Zealand hosts: *Perdix perdix perdix* (Linnaeus, 1758); *Phasianus colchicus* Linnaeus, 1758.

Other hosts: *Alectoris rufa* (Linnaeus, 1758); *Francolinus capensis* (J.F. Gmelin, 1789); *Syrmaticus reevesii* (J.E. Gray, 1829); *Bonasa umbellus* (Linnaeus, 1766); *Tympanuchus cupido* (Linnaeus, 1758); *Tympanuchus pallidicinctus* (Ridgway, 1873); *Tympanuchus phasianellus* (Linnaeus, 1758).

New Zealand localities: BP, HB, RI, WN, NC, MC, SC.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1993); Paterson *et al.* (1999: 219); Palma (2010).

Other significant references: Scharf & Price (1983); Modrzejewska & Złotorzycka (1987: 659, figs 1, 8); Kopociński *et al*. (1998: 81); Price *et al*. (2003: 87); Adam (2007: 158, figs 2c,d, 3a).

Remarks: *Amyrsidea* (*Argimenopon*) *perdicis* was introduced to New Zealand and other countries with grey partridges by human agency, but this bird species appears to have died out in New Zealand (Checklist Committee 2010: 348). However, *Amyrsidea* (*A.*) *perdicis* has spread onto a number of adventive hosts —including the common pheasant in New Zealand— due to the human practice of mixing various species of game birds in captivity (Scharf & Price 1983: 446).

Genus *Ancistrona* Westwood, 1874

Ancistrona Westwood, 1874. *Thesaurus Entomol. Oxon.*: 197. Type species: *Ancistrona procellariae* Westwood, 1874 = *Ancistrona vagelli* (J.C. Fabricius, 1787) (by monotypy).

Ancistrona vagelli (J.C. Fabricius, 1787)

Figs 14–15

Pediculus vagelli J.C. Fabricius, 1787: 369.
Ancistrona procellariae Westwood, 1874: 197, pl. 37: fig. 4.
Ancistrona gigas Piaget, 1883: 152, pl. 9: fig. 1.
Ancistrona procellariae Westwood, 1874; Johnston & Harrison 1912: 364.
Ancistrona vagelli (J.C. Fabricius, 1787); Harrison 1937: 14.
Ancistrona vagelli (J.C. Fabricius, 1787); Hopkins & Clay 1952: 36.
Ancistrona vagelli (J.C. Fabricius, 1787); Timmermann 1965: 177, figs 114, 122.
Ancistrona sp.; Watson 1967: 70.
Ancistrona sp.?; Clay & Moreby 1967: 158, 168, fig. 59.
Ancistrona procellariae; Clay & Moreby 1967: 177, fig. 52.
Ancistrona sp.; Clay & Moreby 1970: 217, 218.
Ancistrona procellariae Westwood, 1874; Watt 1971: 233, 243.
Ancistrona sp.; Watt 1971: 233, 242.
Ancistrona procellariae Westwood, 1874; Wise 1977: 56.
Ancistrona vagelli (J.C. Fabricius, 1787); Wise 1977: 56.
Ancistrona sp.; Horning *et al.* 1980: 4, 9.
Ancistrona sp.; Pilgrim & Palma 1982: 7–13, 30, notes 17–18.
Ancistrona sp.; Murray *et al.* 1990: 1369–1372.
Ancistrona vagelli (J.C. Fabricius, 1787); Palma 1999: 375–378.
Ancistrona vagelli (J.C. Fabricius, 1787); Palma & Horning 2002: 2 (figs), 5, 16.
Ancistrona vagelli (J.C. Fabricius, 1787); Palma 2010: 407.

Neotype ♂ in NHML (Clay & Hopkins 1960: 6).

Type host: *Fulmarus glacialis glacialis* (Linnaeus, 1758).

New Zealand hosts: *Fulmarus glacialoides* (A. Smith, 1840); *Thalassoica antarctica* (J.F. Gmelin, 1789); *Daption capense capense* (Linnaeus, 1758); *Daption capense australe* Mathews, 1913; *Lugensa brevirostris* (Lesson, 1833); *Pterodroma macroptera gouldi* (Hutton, 1869); *Pterodroma lessonii* (Garnot, 1826); *Pterodroma magentae* (Giglioli & Salvadori, 1869); *Pterodroma inexpectata* (J.R. Forster, 1844); *Pterodroma cervicalis* (Salvin, 1891); *Pterodroma nigripennis* (Rothschild, 1893); *Pterodroma cookii* (G.R. Gray, 1843); *Pterodroma longirostris* (Stejneger, 1888); *Halobaena caerulea* (J.F. Gmelin, 1789); *Pachyptila vittata* (G. Forster, 1777); *Pachyptila salvini salvini* (Mathews, 1912); *Pachyptila desolata* (J.F. Gmelin, 1789); *Pachyptila belcheri* (Mathews, 1912); *Pachyptila turtur* (Kuhl, 1820); *Pachyptila crassirostris crassirostris* (Mathews, 1912); *Pachyptila crassirostris*

pyramidalis Fleming, 1939; *Procellaria aequinoctialis* Linnaeus, 1758; *Procellaria westlandica* Falla, 1946; *Procellaria parkinsoni* G.R. Gray, 1862; *Procellaria cinerea* J.F. Gmelin, 1789; *Puffinus pacificus pacificus* (J.F. Gmelin, 1789); *Puffinus bulleri* Salvin, 1888; *Puffinus carneipes* Gould, 1844; *Puffinus griseus* (J.F. Gmelin, 1789); *Puffinus tenuirostris* (Temminck, 1835); *Puffinus huttoni* Mathews, 1912; *Puffinus assimilis kermadecensis* Murphy, 1927; *Puffinus assimilis haurakiensis* Fleming & Serventy, 1943; *Pelagodroma albiclunis* Murphy & Irving, 1951.

Other hosts: *Pterodroma arminjoniana* (Giglioli & Salvadori, 1869); *Pterodroma externa* (Salvin, 1875); *Pterodroma hypoleuca* (Salvin, 1888); *Pterodroma incerta* (Schlegel, 1863); *Pterodroma mollis* (Gould, 1844); *Pterodroma phaeopygia* (Salvin, 1876); *Puffinus creatopus* Coues, 1864; *Puffinus gravis* (O'Reilly, 1818); *Puffinus opisthomelas* Coues, 1864; *Puffinus puffinus* (Brünnich, 1764); *Pseudobulweria rostrata* (Peale, 1848); *Pelagodroma marina* (Latham, 1790); *Oceanites oceanicus* (Kuhl, 1820).

New Zealand localities: ND, CL, BP, WO, HB, TK, WI, WN, SD, MB, NN, NC, MC, SC, WD, CO, DN, SL, KE, CH, SI, BO, SN, AN, Macquarie Island.

Geographic distribution: Cosmopolitan.

New Zealand references: Johnston & Harrison (1912: 363); Harrison (1937); Thompson (1939: 15); Watson (1967); Clay & Moreby (1970); Gressitt (1970: 326); Watt (1971); Wise (1977); Horning *et al.* (1980); Pilgrim & Palma (1982); Palma & Pilgrim (1983: 148); Murray *et al.* (1990); Palma (1996b: 114); Paterson *et al.* (1999: 222); Palma (1999); Marris (2000: 188); Palma & Imber (2000: 229); Palma & Horning (2002); Greenslade (2006: figs 20.1–20.2); Palma (2010).

Other significant references: Kellogg (1908: 75, fig. 24); Kellogg (1914: 89); Eichler (1941a: 362, fig. 27); Séguy (1944: 159, figs 212); Kéler (1952: 209, figs 4–5); Symmons (1952: 371, figs 12–13); Séguy (1953: 599, figs 57–58); Clay & Hopkins (1955: 51); Kéler (1957c: figs 10, 34b); Tendeiro (1958: 448, pl. 4: figs 7–8); Clay & Hopkins (1960: 4, figs 1–6); Timmermann (1965); Clay & Moreby (1967); Bourgeois & Threlfall (1979: 1356); Fowler & Shaw (1990: 15); Green & Palma (1991: 4, 25); Forrester *et al.* (1995: 5); Foster *et al*. (1996: 85); Palma (1996b: 114); Furness & Palma (1992: 35, 39); Price *et al*. (2003: 89); Palma & Jensen (2005: 51, 60); Jensen & Palma (2005: 228); Hänel & Palma (2007: 112, 121, 130); Palma & Peck (2013: 11).

Remarks: *Ancistrona vagelli* is a monotypic louse species, recorded from a great number of petrel species but not abundant on any particular host. Although populations from different hosts show some variation in size, there are no significant features that would justify subdividing this species into more than one taxon.

Genus *Apterygon* Clay, 1961

Apterygon Clay, 1961. *Ann. Mag. Nat. Hist.* (*13*) *3*(33): 571. Type species: *Apterygon mirum* Clay, 1961 (by monotypy). Endemic to New Zealand.

Apterygon dumosum Tandan, 1972

Apterygon dumosum Tandan, 1972a: 54, figs 1, 4, 5, 11–15, 20–30.
Apterygon sp. *incertae sedis*; Tandan 1972: 68.
Apterygon dumosum Tandan, 1972; Pilgrim & Palma 1982: 3.
Apterygon dumosum Tandan, 1972 *s. l.*; Pilgrim & Palma 1982: 3.
Apterygon dumosum Tandan, 1972; Murray *et al.* 1990: 1367.
Apterygon dumosum Tandan, 1972; Palma & Price 2004: 70, 73.
Apterygon dumosum Tandan, 1972; Palma 2010: 407.

Holotype ♀ in NZAC.

Type host: *Apteryx australis lawryi* Rothschild, 1893.

New Zealand hosts: *Apteryx australis australis* Shaw, 1813; *Apteryx australis lawryi* Rothschild, 1893; *Apteryx owenii* Gould, 1847.

Other hosts: None.

New Zealand localities: WN, MB, FD, SI.

Geographic distribution: New Zealand.

New Zealand references: Tandan (1972a); Reid & Williams (1975: 324); Wise (1977: 56); Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (1991a: 318); Baker *et al.* (1995: 8256); Burbidge *et al.* (2003: 174); Palma & Price (2004); Sales (2005: 15); Heath (2010: 151); Palma (2010); Buckley *et al.* (2012: App. 2).

Other significant reference: Price *et al*. (2003: 89).

Remarks: *Apterygon dumosum* is an endemic and "at risk" species (Buckley *et al.* 2012). Pilgrim & Palma (1982: 3) regarded the populations of *Apterygon dumosum* from *Apteryx australis australis* and *Ap. owenii* as somewhat different from that of the type host, and qualified them as *sensu lato*; however, my examination of more samples shows that making such difference is not warranted. Furthermore, it is likely that the population of *Ap. dumosum* from *Apteryx owenii* was introduced to Kapiti Island from the South Island with its host by human agency (Checklist Committee 2010: 22), and may also be the result of a host switch from *Apteryx australis australis*.

Apterygon hintoni Clay, 1966

Apterygon hintoni Clay, 1966a: 292, figs 1–3, pl. 5: fig. 2, pl. 6: figs 2, 4.
Apterygon hintoni Clay, 1966; Tandan 1972a: 59, figs 2, 6–10, 16–18.
Apterygon hintoni Clay, 1966; Pilgrim & Palma 1982: 3.
Apterygon hintoni Clay, 1966; Murray *et al.* 1990: 1367.
Apterygon hintoni Clay, 1966; Palma 2010: 407.

Holotype ♂ in NZAC (Tandan 1972a: 64).

Type host: *Apteryx haastii* Potts, 1872.

New Zealand host: *Apteryx haastii* Potts, 1872.

Other hosts: None.

New Zealand localities: NN, WD, BR.

Geographic distribution: South Island, New Zealand.

New Zealand references: Clay (1966a: 292); Pilgrim (1970: 75); Tandan (1972a); Reid & Williams (1975: 324); Wise (1977: 56); Pilgrim & Palma (1982); Murray *et al.* (1990); Baker *et al.* (1995: 8256); Burbidge *et al.* (2003: 174); Palma & Price (2004: 70, 73); Sales (2005: 15); Heath (2010: 151); Palma (2010); Buckley *et al.* (2012: App. 2).

Other significant reference: Price *et al*. (2003: 89).

Remarks: *Apterygon hintoni* is an endemic and vulnerable species (Buckley *et al.* 2012), exclusively parasitic on great spotted kiwis.

Apterygon mirum Clay, 1961

Apterygon mirum Clay, 1961: 574, figs 1–8, pl. 9: figs 1–3.
Apterygon mirum Clay, 1961; Clay 1966a: 292, pl. 5: fig. 1, pl. 6: figs 1, 3.
Apterygon mirum Clay, 1961; Tandan 1972a: 65, figs 3, 19, 31–42.
Apterygon mirum Clay, 1961; Pilgrim & Palma 1982: 3.
Apterygon mirum Clay, 1961; Murray *et al.* 1990: 1367.
Apterygon mirum Clay, 1961; Palma 2010: 407.

Holotype ♂ in NHML.

Type host: *Apteryx mantelli* Bartlett, 1852.

New Zealand host: *Apteryx mantelli* Bartlett, 1852.

Other hosts: None

New Zealand localities: ND, CL, BP, GB, TK, WA (captive).

Geographic distribution: North Island, New Zealand.

New Zealand references: Clay (1961); Clay (1966a); Pilgrim (1970: 74); Tandan (1972a); Reid & Williams (1975: 324); Wise (1977: 56); Pilgrim & Palma (1982); Murray *et al.* (1990); Baker *et al.* (1995: 8256); Burbidge *et al.* (2003: 174); Palma & Price (2004: 70, 73); Sales (2005: 15); Heath (2010: 151); Palma (2010: 407); Buckley *et al.* (2012: App. 2).

Other significant reference: Price *et al*. (2003: 89).

Remarks: *Apterygon mirum* is an endemic and vulnerable species (Buckley *et al.* 2012), exclusively parasitic on North Island brown kiwis.

***Apterygon okarito* Palma & Price, 2004**

Figs 16–17

Apterygon sp.; Pilgrim & Palma 1982: 3.
Apterygon sp.; Murray *et al.* 1990: 1367.
Apterygon new species; Baker *et al.* 1995: 8256.
Apterygon new species; Burbidge *et al.* 2003: 172, 174.
Apterygon okarito Palma & Price, 2004: 68, figs 1–4.
Apterygon okarito Palma & Price, 2004; Palma 2010: lower fig. p. 295, 407.

Holotype ♂ in MONZ.

Type host: *Apteryx rowi* Tennyson, Palma, Robertson, Worthy & Gill, 2003.

New Zealand host: *Apteryx rowi* Tennyson, Palma, Robertson, Worthy & Gill, 2003.

Other hosts: None.

New Zealand locality: WD (Okarito).

Geographic distribution: Westland, South Island, New Zealand.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990); Baker *et al.* (1995); Burbidge *et al.* (2003); Palma & Price (2004: 73); Sales (2005: 15); Checklist Committee (2010: 20); Heath (2010: 151); Palma (2010); Buckley *et al.* (2012: 137, App. 2).

Other significant references: None.

Remarks: *Apterygon okarito* is an endemic and critically threatened species (Buckley *et al.* 2012), exclusively parasitic on Okarito brown kiwis.

Genus *Austromenopon* Bedford, 1939

Austromenopon Bedford, 1939. *Onderstepoort Jour. Vet. Sci. Animal Ind. 12*(1): 122. Type species: *Menopon crocatum* Nitzsch [*in* Giebel], 1866 = *Austromenopon crocatum* (Nitzsch [*in* Giebel], 1866) (by original designation).
Procellariphaga Eichler, 1949a. *Boll. Soc. Entomol. Italiana 79*: 12. Type species: *Procellariphaga ossifragae* Eichler, 1949a = *Austromenopon ossifragae* (Eichler, 1949) (by original designation).

Austromenopon aegialitidis* (Durrant, 1906) *sensu lato

Menopon aegialitidis Durrant, 1906: 529, fig. 1c.
Austromenopon aegialitidis (Durrant, 1906); Hopkins & Clay 1952: 46.
Austromenopon aegialitidis (Durrant, 1906) *s. l.*; Pilgrim & Palma 1982: 20.
Austromenopon aegialitidis (Durrant, 1906); Murray *et al.* 1993: 962.
Austromenopon aegialitidis (Durrant, 1906); Palma 1999: 380.
Austromenopon aegialitidis (Durrant, 1906); Palma 2010: 407.

Holotype ♀ in OSUM, probably (Palma 1996b: 114).

Type host: *Charadrius vociferus* Linnaeus, 1758.

New Zealand hosts: *Vanellus miles novaehollandiae* Stephens, 1819; *Charadrius bicinctus exilis* Falla, 1978.

Other hosts: *Vanellus vanellus* (Linnaeus, 1758); *Vanellus coronatus* (Boddaert, 1783); at least 9 other species of *Charadrius* (see Price *et al*. 2003: 90).

New Zealand localities: NC, MC, SC, WD, AU.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1993); Paterson *et al.* (1999: 221); Palma (1999); Palma (2010).

Other significant references: Clay (1959: 164, fig. 7); Mester (1971: 115, fig. 4); Green & Palma (1991: 4, 32); Forrester *et al.* (1995: 25); Palma (1996b: 114); Price *et al*. (2003: 90).

Remarks: *Austromenopon aegialitidis* is a morphologically variable species from a wide range of hosts and in need of a detailed systematic study. Therefore, I regard the New Zealand populations as "*sensu lato*". *Charadrius bicinctus exilis* is a new host record for *A. aegialitidis* (voucher specimens in MONZ).

***Austromenopon affine* (Piaget, 1890)**

Menopon affine Piaget, 1890a: 248, pl. 10: fig. 3.

Procellariphaga affinis (Piaget, 1890); Eichler 1949b: 346.
Procellariphaga affinis (Piaget, 1890); Hopkins & Clay 1952: 298.
Austromenopon affine (Piaget, 1890); Timmermann 1965: 166.
Austromenopon affine (Piaget, 1890); Clay & Moreby 1967: 159, 168, figs 72, 74.
Austromenopon affine (Piaget, 1890); Price & Clay 1972: 488, figs 1–9.
Austromenopon affine (Piaget, 1890); Pilgrim & Palma 1982: 5.
Austromenopon affine (Piaget, 1890); Murray *et al.* 1990: 1368.
Austromenopon affine (Piaget, 1890); Palma 2010: 407.

Lectotype ♀ in NHML (Clay 1949b: 816).

Type host: *Diomedea exulans* Linnaeus, 1758.

New Zealand hosts: *Diomedea exulans* Linnaeus, 1758; *Diomedea antipodensis antipodensis* Robertson & Warham, 1992; *Diomedea epomophora* Lesson, 1825; *Diomedea sanfordi* Murphy, 1917.

Other hosts: None.

New Zealand localities: WA, WN, SD, MB, NC, MC, SC, WD, CO, DN, CH, AN, CA.

Geographic distribution: Southern Hemisphere.

New Zealand references: Clay (1964a: 230); Gressitt (1964: 538); Price & Clay (1972); Wise (1977: 56); Pilgrim & Palma (1982); Murray *et al.* (1990: 1368); Marris (2000: 188); Palma (2001: 66, fig. 3); Palma (2010).

Other significant references: Timmermann (1965); Clay & Moreby (1967); Palma (1996b: 114); Price *et al*. (2003: 90).

Remarks: *Austromenopon affine* is a small species, exclusively parasitic on the larger albatross of the genus *Diomedea*.

***Austromenopon atrofulvum* (Piaget, 1880)**

Menopon atrofulvum Piaget, 1880: 483, pl. 39: fig. 2.
Austromenopon atrofulvum (Piaget, 1880); Hopkins & Clay 1952: 47.
Austromenopon atrofulvum (Piaget, 1880); Watt 1971: 233, 243.
Austromenopon sp.; Watt 1971: 233, 243.
Austromenopon atrofulvum (Piaget, 1880) *s. l.*; Horning *et al*. 1980: 4, 11.
Austromenopon atrofulvum (Piaget, 1880) *s. l.*; Pilgrim & Palma 1982: 22–23.
Austromenopon atrofulvum (Piaget, 1880); Murray *et al.* 2006a: 1965.
Austromenopon atrofulvum (Piaget, 1880); Palma 2010: 407.

Lectotype ♂ in NHML (Clay 1949b: 819).

Type host: "*Platalea leucorodia*", in error (see Hopkins & Clay 1952: 47).

New Zealand hosts: *Procelsterna cerulea albivitta* Bonaparte, 1856; *Anous minutus minutus* Boie, 1844; *Hydroprogne caspia* (Pallas, 1770); *Onychoprion fuscatus serratus* (J.R. Forster, 1830); *Sterna vittata bethunei* Buller, 1896; *Sterna paradisaea* Pontoppidan, 1763; *Sterna striata* J.F. Gmelin, 1789.

Other hosts: *Anous tenuirostris* (Temminck, 1823); *Anous stolidus* (Linnaeus, 1758); *Gelochelidon nilotica* (J.F. Gmelin, 1789); three species of *Chlidonias*; at least 10 other species of *Sterna*, and five species of *Thalasseus* (see Price *et al*. 2003: 90).

New Zealand localities: AK, WN, NC, MC, SC, WD, CO, DN, KE, CH, SN.

Geographic distribution: Cosmopolitan.

New Zealand references: Watt (1971); Wise (1977: 56); Horning *et al*. (1980); Pilgrim & Palma (1982); Murray *et al.* (2006a); Palma (2010).

Other significant references: Clay (1949b: 819); Clay (1959: 163, figs 6, 35); Clay & Moreby (1967: 158, fig. 67); Amerson & Emerson (1971: 17, 28); Moreby (1976: 93); Green & Palma (1991: 4, 33); Forrester *et al.* (1995: 30); Palma (1996b: 115); Price *et al*. (2003: 90); Palma & Peck (2013: 12); Silva *et al*. (2014: 942).

Remarks: *Austromenopon atrofulvum* is the only species of *Austromenopon* parasitic on members of the Sternidae. Horning *et al.* (1980) and Pilgrim & Palma (1982) regarded the populations of *Austromenopon atrofulvum* from all New Zealand hosts as *sensu lato*; however, my examination of more samples, including some from other host species, shows that such qualification is not warranted. *Sterna paradisaea* is a new host record for this louse species in New Zealand (voucher specimens in MONZ).

***Austromenopon beckii* (Kellogg, 1906)**

Menopon beckii Kellogg, 1906: 322.
Menopon beckii Kellogg, 1906; Thompson 1938c: 460, figs 2, 3a,c.
Austromenopon becki [sic] (Kellogg, 1906); Hopkins & Clay 1952: 47.
Austromenopon becki [sic] (Kellogg, 1906); Watt 1971: 233, 243, fig. 2.
Austromenopon beckii (Kellogg, 1906); Wise 1977: 56.
Austromenopon becki [sic] (Kellogg, 1906) *s. l.*; Pilgrim & Palma 1982: 14.
Austromenopon becki [sic] (Kellogg, 1906); Murray *et al.* 1990: 1373.
Austromenopon beckii (Kellogg, 1906); Price *et al*. 2003: 90.
Austromenopon beckii (Kellogg, 1906); Palma 2010: 407.

Holotype ♀ in EMEC.

Type host: *Phaethon aethereus mesonauta* Peters, 1930.

New Zealand hosts: *Phaethon rubricauda* Boddaert, 1783; *Phaethon lepturus dorotheae* Mathews, 1913.

Other hosts: *Phaethon aethereus aethereus* Linnaeus, 1758; *Phaethon lepturus lepturus* Daudin, 1802; *Phaethon lepturus fulvus* J.F. Brandt, 1838.

New Zealand localities: ND, KE.

Geographic distribution: Tropical and subtropical regions of the Atlantic, Indian and Pacific Oceans.

New Zealand references: Watt (1971); Wise (1977); Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (2010).

Other significant references: Thompson (1938c); Carriker (1949: 18); Timmermann (1954d: 198, fig. 4); Palma (1996b: 115); Price *et al*. (2003); Palma & Peck (2013: 12).

Remarks: *Austromenopon beckii* is the only species of *Austromenopon* parasitic on members of the Phaethontiformes. Pilgrim & Palma (1982: 14) regarded the population of *A. beckii* from *Phaethon rubricauda* as somewhat different from that of the type host, and qualified it as *sensu lato*; however, my examination of samples from four additional hosts shows that making such difference is not warranted. A sample of *A. beckii* from *Phaethon lepturus dorotheae* from Northland is a new host record for this louse in New Zealand (voucher specimens in MONZ).

***Austromenopon brevifimbriatum* (Piaget, 1880)**

Menopon brevifimbriatum Piaget, 1880: 499, pl. 41: fig. 1.
Menopon numerosum Kellogg, 1896a: 159, pl. 15: fig. 5.
Procellariphaga daptionis Eichler, 1949b: 344, figs 21–23.
Procellariphaga brevifimbriata (Piaget, 1880); Eichler 1949b: 346.
Procellariphaga numerosa [sic] (Kellogg, 1896); Eichler 1949b: 346.
Procellariphaga brevifimbriata (Piaget, 1880); Hopkins & Clay 1952: 298.
Procellariphaga numerosus [sic] (Kellogg, 1896); Hopkins & Clay 1952: 299.
Austromenopon brevifimbriatum (Piaget, 1880); Timmermann 1963: 410, fig. 5.
Austromenopon daptionis (Eichler, 1949); Timmermann 1963: 411.
Austromenopon oschei Timmermann, 1963: 412, fig. 6.
Austromenopon brevifimbriatum (Piaget, 1880); Timmermann 1965: 165, 169, fig. 105.
Austromenopon daptionis (Eichler, 1949); Timmermann 1965: 170.
Austromenopon oschei Timmermann, 1963; Timmermann 1965: 170, fig. 106.
Austromenopon ?daptionis (Eichler, 1949); Clay & Moreby 1967: 159, 168.
Austromenopon oschei Timmermann, 1963; Clay & Moreby 1967: 159, 168, figs 69, 71.
Austromenopon brevifimbriatum (Piaget, 1880); Price & Clay 1972: 494, figs 25–26, 28–33.
Austromenopon brevifimbriatum (Piaget, 1880); Pilgrim & Palma 1982: 7.
Austromenopon brevifimbriatum (Piaget, 1880); Murray *et al.* 1990: 1369.
Austromenopon brevifimbriatum (Piaget, 1880); Palma 2010: 407.

Lectotype ♂ in NHML (Clay 1949b: 820).

Type host: *Fulmarus glacialis* (Linnaeus, 1758).

New Zealand hosts: *Fulmarus glacialoides* (A. Smith, 1840); *Thalassoica antarctica* (J.F. Gmelin, 1789); *Daption capense capense* (Linnaeus, 1758).

Other host: *Pagodroma nivea* (G. Forster, 1777).

New Zealand localities: ND, AK, TK, WI, WN, SD, MB, NN, NC, MC, SC, CO, DN, SL, Macquarie Island.

Geographic distribution: All oceans at high latitudes. Subarctic Islands; north-west Europe; Greenland; Iceland; Australasia; Subantarctic Islands; Antarctica.

New Zealand references: Pilgrim & Palma (1982: 7); Murray *et al.* (1990); Palma (1996b: 115); Paterson *et al.* (1999: 222); Palma & Horning (2002: 5, 16); Palma (2010).

Other significant references: Timmermann (1963; 1965); Clay & Moreby (1967); Price & Clay (1972); Green & Palma (1991: 4, 26); Price *et al*. (2003: 90); Palma & Jensen (2005: 51, 60).

Remarks: *Austromenopon brevifimbriatum* is highly prevalent on all its hosts, except on *Pagodroma nivea*. Both *Fulmarus glacialoides* and *Thalassoica antarctica* breed on the coast of Antarctica and are stragglers to New Zealand seas (Checklist Committee 2010: 80, 82).

Austromenopon bulweriae Timmermann, 1963

Austromenopon bulweriae Timmermann, 1963: 420, fig. 10.
Austromenopon bulweriae Timmermann, 1963; Timmermann 1965: 174, fig. 109.
Austromenopon bulweriae Timmermann, 1963; Price & Clay 1972: 493, figs 22–23.
Austromenopon bulweriae Timmermann, 1963; Palma 1999: 376, 383, note 3.
Austromenopon bulweriae Timmermann, 1963; Price *et al*. 2003: 90.
Austromenopon bulweriae Timmermann, 1963; Palma 2010: 407.

Holotype ♂ in NHML.

Type host: *Bulweria bulwerii* (Jardine & Selby, 1828).

New Zealand host: *Bulweria bulwerii* (Jardine & Selby, 1828).

Other hosts: None.

New Zealand locality: WN.

Geographic distribution: Atlantic and Pacific Oceans.

New Zealand references: Palma (1999); Palma (2010).

Other significant references: Timmermann (1965); Price & Clay (1972); Price *et al*. (2003).

Remarks: *Austromenopon bulweriae* is exclusively parasitic on Bulwer's petrels. This host, with a single record until 2013, is considered as a very rare straggler to New Zealand (Checklist Committee 2010: 107). A second record occurred in Canterbury in January 2014, but no *Austromenopon bulweriae*, was found on it.

Austromenopon cursorium (Giebel, 1874) **New Record**

Menopon cursorius Giebel, 1874: 296.
Austromenopon cursorius [sic] (Giebel, 1874); Hopkins & Clay 1952: 47.
Austromenopon cursorius [sic] (Giebel, 1874); Clay 1959: 162, 167, fig. 4.
Austromenopon sp.: Pilgrim & Palma 1982: 22.
Austromenopon cursorium (Giebel, 1874); Price *et al*. 2003: 90.
Austromenopon sp.: Murray *et al.* 2006a: 1964.

Status, sex and repository of types unknown, presumed lost. See Clay (1949a: 1) and Palma & Pilgrim (1984: 150).

Type host: *Cursorius cursor* (Latham, 1787).

New Zealand host: *Glareola maldivarum* J.R. Forster, 1795.

Other host: *Cursorius coromandelicus* (J.F. Gmelin, 1789).

New Zealand locality: NN.

Geographic distribution: Asia; Australasia; Africa; Atlantic Ocean.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (2006a).

Other significant references: Timmermann (1954d: 198, fig. 5, pl. 1: figs c, d); Clay (1959); Price *et al*. (2003).

Material examined and repository: 1♂, 3♀ (1 sample, MONZ).

Remarks: This is the first record of *Austromenopon cursorium* for New Zealand, because the New Zealand references cited above reported this louse as "*Austromenopon* sp." only. Its host, the oriental pratincole is a rare visitor to New Zealand (Checklist Committee 2010: 223)

***Austromenopon elliotti* Timmermann, 1954**

Austromenopon elliotti Timmermann, 1954d: 205, fig. 19, pl. 1: figs e,f.
Austromenopon elliotti Timmermann, 1954; Clay 1964a: 230.
Austromenopon elliotti Timmermann, 1954; Timmermann 1965: 177.
Austromenopon elliotti Timmermann, 1954; Price & Clay 1972: 496, figs 39–41.
Austromenopon elliotti Timmermann, 1954; Wise 1977: 56.
Austromenopon elliotti Timmermann, 1954; Pilgrim & Palma 1982: 13.
Austromenopon elliotti Timmermann, 1954; Murray *et al.* 1990: 1372.
Austromenopon elliotti Timmermann, 1954; Palma 2010: 407.

Holotype ♂ in NHML.

Type host: *Pelecanoides urinatrix* (J.F. Gmelin, 1789).

New Zealand hosts: *Pelecanoides urinatrix urinatrix* (J.F. Gmelin, 1789); *Pelecanoides urinatrix chathamensis* Murphy & Harper, 1916; *Pelecanoides urinatrix exsul* Salvin, 1896; *Pelecanoides georgicus* Murphy & Harper, 1916.

Other hosts: *Pelecanoides urinatrix dacunhae* Nicholl, 1906.

New Zealand localities: ND, CL, BP, GB, TO, WI, WA, WN, SD, MB, NC, MC, SC, CH, SI, SN, AN, CA.

Geographic distribution: Southern Hemisphere.

New Zealand references: Clay (1964a); Gressitt (1964: 538); Price & Clay (1972); Wise (1977); Horning *et al.* (1980: 4, 10); Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (2010).

Other significant references: Timmermann (1965); Payne & Prince (1979: 316); Green & Palma (1991: 4, 27); Furness & Palma (1992: 35, 42); Palma (1996b: 116); Price *et al*. (2003: 91); Hänel & Palma (2007: 112, 121, 131).

Remarks: *Austromenopon elliotti* is naturally and frequently found on diving petrels only. A record of this louse species from *Pterodroma inexpectata* in New Zealand (Price & Clay 1972: 497) is the result of natural straggling or contamination by human agency.

***Austromenopon enigki* Timmermann, 1963**

Austromenopon enigki Timmermann, 1963: 425, fig. 14.
Austromenopon enigki Timmermann, 1963; Timmermann 1965: 177, fig. 113.
Austromenopon enigki Timmermann, 1963; Price & Clay 1972: 493, fig. 27.
Austromenopon enigki Timmermann, 1963; Pilgrim & Palma 1982: 13.
Austromenopon sp.; Pilgrim & Palma 1982: 13.
Austromenopon enigki Timmermann, 1963; Murray *et al.* 1990: 1372.
Austromenopon sp.; Murray *et al.* 1990: 1372.
Austromenopon species 1; Marris 2000: 188.
Austromenopon enigki Timmermann, 1963; Price *et al*. 2003: 91.
Austromenopon enigki Timmermann, 1963; Palma 2010: 407.

Holotype ♂ in NHML.

Type host: *Pelagodroma marina* (Latham, 1790).

New Zealand hosts: *Pelagodroma marina dulciae* Mathews, 1912; *Pelagodroma marina maoriana* Mathews, 1912; *Fregetta tropica* (Gould, 1844); *Pealeornis maoriana* Mathews, 1932.

Other hosts: *Pelagodroma marina marina* (Latham, 1790); *Oceanites oceanicus exasperatus* Mathews, 1912; *Oceanites pincoyae* Harrison *et al*., 2013; *Fregetta grallaria* (Vieillot, 1817).

New Zealand localities: ND, CL, WN, CH, AN.

Geographic distribution: Antarctica; Pacific, Atlantic and Indian Oceans.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990); Paterson *et al.* (1999: 222); Marris (2000); Palma (2010).

Other significant references: Timmermann (1965); Price & Clay (1972); Green & Palma (1991: 5, 27); Palma (1996b: 116); Price *et al*. (2003); Harrison *et al*. (2013: 186).

Remarks: Records of *Austromenopon enigki* from *Fregetta tropica* (Antipodes Islands, New Zealand), *Fregetta grallaria* (Gough Island; Juan Fernández Islands), *Pealeornis maoriana* (Hauraki Gulf, New Zealand), and *Oceanites oceanicus exasperatus* (South Orkney Islands) represent new host-louse associations (voucher specimens in MONZ).

***Austromenopon fuscofasciatum* (Piaget, 1880)**

Menopon fuscofasciatum Piaget, 1880: 492, pl. 40: fig. 9.
Austromenopon fuscofasciatum (Piaget, 1880); Hopkins & Clay 1952: 47.
Austromenopon fuscofasciatum (Piaget, 1880); Clay 1959: 161, 164, 167, figs 16, 22.
Austromenopon fuscofasciatum (Piaget, 1880); Pilgrim & Palma 1982: 22.
Austromenopon fuscofasciatum; Crossland 1993: 305.
Austromenopon fuscofasciatum (Piaget, 1880); Palma 1999: 380.
Austromenopon fuscofasciatum (Piaget, 1880); Murray *et al.* 2006a: 1965.
Austromenopon fuscofasciatum (Piaget, 1880); Palma 2010: 407.

Lectotype ♀ in NHML (Clay 1949b: 829).

Type host: *Coprotheres pomarinus* (Temminck, 1815).

New Zealand hosts: *Catharacta antarctica lonnbergi* Mathews, 1912; *Catharacta maccormicki* (Saunders, 1893); *Stercorarius parasiticus* (Linnaeus, 1758); *Stercorarius longicaudus* Vieillot, 1819.

Other hosts: *Catharacta antarctica hamiltoni* Hagen, 1952; *Catharacta chilensis* (Bonaparte, 1857).

New Zealand localities: ND, WO, WI, WN, SD, MB, NC, MC, SC, CH, Macquarie Island, RO.

Geographic distribution: Cosmopolitan.

New Zealand references: Pilgrim & Palma (1982); Crossland (1993); Palma (1996b: 116); Palma (1999); Palma & Horning (2002: 5, 17); Murray *et al.* (2006a); Palma (2010).

Other significant references: Clay (1949b: 829); Clay (1959); Clay & Moreby (1967: 158, fig. 66); Hackman & Nyholm (1968: 75); Furness & Palma (1992: 35, 42); Cohen *et al*. (1997: 186); Price *et al*. (2003: 91); Palma & Jensen (2005: 51, 64); Hänel & Palma (2007: 112, 121, 131).

Remarks: *Austromenopon fuscofasciatum* is exclusively parasitic on members of the family Stercorariidae.

***Austromenopon haematopi* Timmermann, 1954**

Austromenopon haematopi Timmermann, 1954d: 199, fig. 6.
Austromenopon haematopi Timmermann, 1954; Clay 1959: 163, 165, 167, figs 10, 25, 34.
Austromenopon haematopi Timmermann, 1954; Palma 1999: 380.
Austromenopon haematopi Timmermann, 1954; Price *et al*. 2003: 91.
Austromenopon haematopi Timmermann, 1954; Palma 2010: 407.

Holotype ♂ in NHML.

Type host: *Haematopus moquini* Bonaparte, 1856.

New Zealand host: *Haematopus finschi* Martens, 1897.

Other hosts: *Haematopus ostralegus* Linnaeus, 1758; *Haematopus bachmani* Audubon, 1838.

New Zealand locality: Auckland.

Geographic distribution: Eurasia; North America; Africa; New Zealand.

New Zealand references: Palma (1999); Palma (2010).

Other significant references: Timmermann (1957a: 94, fig. 67a); Clay (1959); Price *et al*. (2003); Palma & Jensen (2005: 51, 63).

Remarks: *Austromenopon haematopi* is restricted to oystercatchers, but infrequently collected.

***Austromenopon himantopi* Timmermann, 1954**

Austromenopon himantopi Timmermann, 1954d: 199, fig. 6a.
Austromenopon himantopi Timmermann, 1954; Clay 1959: 163, 167, figs 24, 28, 33.
Austromenopon himantopi Timmermann, 1954; Pilgrim & Palma 1982: 21.
Austromenopon himantopi Timmermann, 1954; Murray *et al.* 1993: 962.
Austromenopon himantopi Timmermann, 1954; Palma 2010: 407.

Holotype ♂ in ZMHG.

Type host: *Himantopus himantopus himantopus* (Linnaeus, 1758).

New Zealand host: *Himantopus himantopus leucocephalus* Gould, 1837.

Other host: *Himantopus himantopus mexicanus* (Statius Müller, 1776).

New Zealand localities: BP, SD, MB, NC, MC, SC, WD.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1993); Paterson *et al.* (1999: 221, 223); Palma (2010).

Other significant references: Timmermann (1957a: 94, fig. 67b); Clay (1959); Hinojos & Canaris (1988: 328); Palma (1996b: 116); Martín-Mateo (2002: 63, figs 18E,G); Price *et al*. (2003: 91).

Remarks: *Austromenopon himantopi* has been found only on stilts, but infrequently collected.

Austromenopon limosae Timmermann, 1954

Austromenopon limosae Timmermann, 1954d: 202, fig. 10.
Austromenopon limosae Timmermann, 1954; Clay 1959: 163, 167, figs 30, 44.
Austromenopon limosae Timmermann, 1954; Pilgrim & Palma 1982: 20.
Austromenopon limosae Timmermann, 1954; Murray *et al.* 2006a: 1964.
Austromenopon limosae Timmermann, 1954; Palma 2010: 407.

Holotype ♂ in NHML.

Type host: *Limosa limosa limosa* (Linnaeus, 1758).

New Zealand host: *Limosa limosa melanuroides* Gould, 1846.

Other hosts: *Limosa fedoa* (Linnaeus, 1758).

New Zealand locality: AU.

Geographic distribution: Eurasia; Americas; Australasia.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (2006a); Palma (2010).

Other significant references: Timmermann (1957a: 95, fig. 69); Clay (1959); Price *et al*. (2003: 91).

Remarks: *Austromenopon limosae* appears to be restricted to two species of *Limosa*. Another *Austromenopon* species parasitises *Limosa lapponica* (see below). The Asiatic black-tailed godwit is an uncommon annual visitor to New Zealand (Checklist Committee 2010: 203).

Austromenopon longithoracicum (Piaget, 1880)

Menopon longithoracicum Piaget, 1880: 500, pl. 41: fig. 5.
Procellariphaga longithoracica (Piaget, 1880); Eichler 1949b: 346.
Procellariphaga longithoracica (Piaget, 1880); Hopkins & Clay 1952: 298.
Austromenopon longithoracicum (Piaget, 1880); Timmermann 1963: 418, figs 2–3.
Austromenopon longithoracicum (Piaget, 1880); Timmermann 1965: 165, 174, pl. 11: figs 1–2.
Austromenopon longithoracicum (Piaget, 1880); Price & Clay 1972: 497, figs 42–46.
Austromenopon longithoracicum (Piaget, 1880); Price *et al*. 2003: 91.
Austromenopon longithoracicum (Piaget, 1880); Scofield *et al.* 2011: 213.

Lectotype ♂ in NHML (Clay 1949b: 836).

Type host: "*Procellaria cinerea*", in error (see Price & Clay 1972: 497).

New Zealand host: *Calonectris leucomelas* (Temminck, 1836).

Other hosts: None.

New Zealand locality: WO.

Geographic distribution: Japan; Korea; eastern China; Pacific Ocean.

New Zealand reference: Scofield *et al.* (2011).

Other significant references: Eichler (1949b); Timmermann (1963; 1965); Price & Clay (1972); Price *et al*. (2003); Palma (2011b: 21).

Remarks: *Austromenopon longithoracicum* is exclusively parasitic on the streaked shearwater, a host recorded only once in New Zealand (Checklist Committee 2010: 111; Scofield *et al.* 2011).

Austromenopon lutescens lutescens (Burmeister, 1838)

Menopon lutescens Burmeister, 1838a: 440.
Austromenopon lutescens (Burmeister, 1838); Hopkins & Clay 1952: 47.
Austromenopon lutescens (Burmeister, 1838); Clay 1959: 163, 167, fig. 43.
Austromenopon lutescens (Burmeister, 1838) *s. l.*; Pilgrim & Palma 1982: 21.
Austromenopon lutescens (Burmeister, 1838); Price *et al*. 2003: 91.

Austromenopon lutescens lutescens (Burmeister, 1838); Palma & Jensen 2005: 51, 63.
Austromenopon lutescens (Burmeister, 1838); Murray *et al.* 2006a: 1964.
Austromenopon lutescens (Burmeister, 1838); Palma 2010: 407.

Types presumed lost. See Clay (1949b: 837).

Type host: *Philomachus pugnax* (Linnaeus, 1758).

New Zealand hosts: *Arenaria interpres* (Linnaeus, 1758); *Calidris canutus rogersi* (Mathews, 1913).

Other hosts: *Calidris alpina* (Linnaeus, 1758); *Calidris alba* (Pallas, 1764); *Tringa totanus* (Linnaeus, 1758); *Tringa cinerea* (Güldenstaedt, 1774); *Tringa glareola* Linnaeus, 1758; *Tringa brevipes* (Vieillot, 1816).

New Zealand localities: WN, NC, MC, SC, CA.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (2006a); Palma (2010).

Other significant references: Timmermann (1957a: 95); Clay (1959); Brelih & Tovornik (1962: 93); Cabot (1975: 146); Butler & O'Connor (1994: 450); Forrester *et al.* (1995: 27); Martín-Mateo (2002: 63); Price *et al*. (2003); Palma & Jensen (2005).

Remarks: In agreement with Palma & Jensen (2005: 51) and contrary to Price *et al*. (2003: 91) and Palma (2010: 407), I find the subdivision of *Austromenopon lutescens* into subspecies to better fit the morphological variability exhibited by this taxon.

Austromenopon meyeri (Giebel, 1874)

Menopon Meyeri Giebel, 1874: 296.
Austromenopon meyeri (Giebel, 1874); Hopkins & Clay 1952: 48.
Austromenopon meyeri (Giebel, 1874); Clay 1959: 163, 167, fig. 42.
Austromenopon meyeri (Giebel, 1874); Watt 1971: 233, 243.
Austromenopon meyeri (Giebel, 1874); Wise 1977: 56.
Austromenopon meyeri (Giebel, 1874); Pilgrim & Palma 1982: 21.
Austromenopon meyeri (Giebel, 1874); Murray *et al.* 2006a: 1964.
Austromenopon meyeri (Giebel, 1874); Palma 2010: 407.

Holotype ♀, presumed lost. See Clay (1949a: 1) and Palma & Pilgrim (1984: 150).

Type host: *Limosa lapponica lapponica* (Linnaeus, 1758).

New Zealand host: *Limosa lapponica baueri* Naumann, 1836.

Other hosts: None.

New Zealand localities: SD, MB, WD, KE, SN.

Geographic distribution: Eurasia; Australasia; Pacific Ocean.

New Zealand references: Watt (1971); Wise (1977); Pilgrim & Palma (1982); Murray *et al.* (2006a); Palma (2010).

Other significant references: Timmermann (1954d: 202, fig. 9); Clay (1959); Price *et al*. (2003: 91).

Remarks: *Austromenopon meyeri* appears to be restricted to *Limosa lapponica*. Another *Austromenopon* species parasitises two other species of *Limosa* (see above). The eastern bar-tailed godwit is the most numerous wader that visits New Zealand every year (Checklist Committee 2010: 203).

Austromenopon navigans (Kellogg, 1896)

Figs 18–19

Menopon navigans Kellogg, 1896a: 156, pl. 14: figs 4–5.
Procellariphaga navigans (Kellogg, 1896); Hopkins & Clay 1952: 299.
Austromenopon sp.; Timmermann 1954d: fig. 20.
Austromenopon navigans (Kellogg, 1896); Timmermann 1965: 166.
Austromenopon navigans (Kellogg, 1896); Price & Clay 1972: 490, figs 13–15, 17.
Austromenopon bulleri Price & Clay 1972: 491, fig. 16.
Austromenopon bulleri Price & Clay 1972; Wise 1977: 56.
Austromenopon bulleri Price & Clay 1972; Horning *et al.* 1980: 4, 9.
Austromenopon navigans (Kellogg, 1896); Horning *et al.* 1980: 4, 9.
Austromenopon bulleri Price & Clay 1972; Pilgrim & Palma 1982: 6.

Austromenopon navigans (Kellogg, 1896); Pilgrim & Palma 1982: 6.
Austromenopon bulleri Price & Clay 1972; Murray *et al.* 1990: 1368.
Austromenopon navigans (Kellogg, 1896); Murray *et al.* 1990: 1368–1369.
Austromenopon navigans (Kellogg, 1896); Palma 1994a: 64.
Austromenopon navigans (Kellogg, 1896); Price *et al*. 2003: 91.
Austromenopon navigans (Kellogg, 1896); Palma 2010: 407.

Syntypes ♂♀, lost (Price & Clay 1972: 491). Holotype ♀ of *Austromenopon bulleri* in CMNZ (Nicholls *et al.* 1998: 30).

Type host: *Phoebastria albatrus* (Pallas, 1769).

New Zealand hosts: *Thalassarche chrysostoma* (J.R. Forster, 1785); *Thalassarche melanophris* (Temminck, 1828); *Thalassarche bulleri bulleri* (Rothschild, 1893); *Thalassarche bulleri platei* (Reichenow, 1898); *Thalassarche cauta steadi* Falla, 1933; *Thalassarche eremita* Murphy, 1930; *Thalassarche salvini* (Rothschild, 1893).

Other hosts: *Thalassarche chlororhynchos* (J.F. Gmelin, 1789); *Thalassarche cauta cauta* (Gould, 1841).

New Zealand localities: ND, HB, WI, WN, SD, MB, NC, MC, SC, CH, SN.

Geographic distribution: Southern Hemisphere and North Pacific Ocean.

New Zealand references: Price & Clay (1972); Wise (1977); Horning *et al.* (1980); Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (1994a); Nicholls *et al.* (1998: 30); Palma (1999: 375, 384, note B); Palma (2010).

Other significant references: Timmermann (1965); Green & Palma (1991: 5, 25); Palma (1996b: 117); Price *et al*. (2003); Palma & Peck (2013: 14).

Remarks: *Austromenopon navigans* is one of two species of *Austromenopon* parasitic on the smaller albatrosses. *Austromenopon bulleri* was described from the New Zealand endemic Buller's albatross, but later synonymised under *A. navigans* by Palma (1994a: 64).

Austromenopon ossifragae (Eichler, 1949)

Procellariphaga ossifragae Eichler, 1949a: 12.
Procellariphaga ossifragae Eichler, 1949b: 345, figs 24–27.
Austromenopon ossifragae (Eichler, 1949); Timmermann 1963: 409, fig. 4.
Austromenopon ossifragae (Eichler, 1949); Timmermann 1965: 167, fig. 104.
Austromenopon ossifragae (Eichler, 1949); Price & Clay 1972: 491, figs 18–20.
Austromenopon ossifragae (Eichler, 1949); Wise 1977: 56.
Austromenopon ossifragae (Eichler, 1949); Pilgrim & Palma 1982: 7.
Austromenopon ossifragae (Eichler, 1949); Murray *et al.* 1990: 1369.
Austromenopon ossifragae (Eichler, 1949); Palma 2010: 407.

Syntypes ♀♀ in ZMHG (Weidner 1966: 261).

Type host: *Macronectes giganteus* (J.F. Gmelin, 1789).

New Zealand hosts: *Macronectes giganteus* (J.F. Gmelin, 1789); *Macronectes halli* Mathews, 1912.

Other hosts: None.

New Zealand localities: ND, AK, BP, TK, WA, WN, MB.

Geographic distribution: Southern Hemisphere.

New Zealand references: Clay (1964a: 230); Gressitt (1964: 538); Wise (1977); Pilgrim & Palma (1982); Murray *et al.* (1990: 1369); Paterson *et al.* (1999: 222); Palma (2010).

Other significant references: Timmermann (1963; 1965); Clay & Moreby (1967: 158, 168, figs 68, 70, 75); Price & Clay (1972); Green & Palma (1991: 5, 25); Palma (1996b: 117); Price *et al*. (2003: 92).

Remarks: *Austromenopon ossifragae* is exclusively parasitic on giant petrels. Eichler (1949a,b) described this louse as a new species twice.

Austromenopon paululum (Kellogg & Chapman, 1899)

Menopon paululum Kellogg & Chapman, 1899: 119, pl. 8: fig. 2.
Procellariphaga paulula (Kellogg & Chapman, 1899); Eichler 1949b: 346.
Procellariphaga paulula (Kellogg & Chapman, 1899); Hopkins & Clay 1952: 299.
Austromenopon spec.; Timmermann 1963: 414, fig. 8a.
Austromenopon paululum (Kellogg & Chapman, 1899); Timmermann 1963: 416.

Austromenopon piekarskii Timmermann, 1963: 417, fig. 9.
Austromenopon paululum (Kellogg & Chapman, 1899); Timmermann 1965: 171.
Austromenopon piekarskii Timmermann, 1963; Timmermann 1965: 173, fig. 108.
Austromenopon sp.; Watt 1971: 233, 243.
Austromenopon paululum (Kellogg & Chapman, 1899); Price & Clay 1972: 494, fig. 34.
Austromenopon paululum (Kellogg & Chapman, 1899); Horning *et al.* 1980: 4, 10.
Austromenopon paululum (Kellogg & Chapman, 1899); Pilgrim & Palma 1982: 11.
Austromenopon paululum (Kellogg & Chapman, 1899); Palma 1999: 376, 383, note 2.
Austromenopon paululum (Kellogg & Chapman, 1899); Palma 2010: 407.

Lectotype ♀ in EMEC (Price & Clay 1972: 496).

Type host: *Puffinus opisthomelas* Coues, 1864.

New Zealand hosts: *Puffinus pacificus pacificus* (J.F. Gmelin, 1789); *Puffinus pacificus chlororhynchus* Lesson, 1831; *Puffinus bulleri* Salvin, 1888; *Puffinus carneipes* Gould, 1844; *Puffinus griseus* (J.F. Gmelin, 1789); *Puffinus tenuirostris* (Temminck, 1835); *Puffinus newelli* Henshaw, 1900; *Puffinus puffinus* (Brünnich, 1764); *Puffinus gavia* (J.R. Forster, 1844); *Puffinus huttoni* Mathews, 1912; *Puffinus assimilis kermadecensis* Murphy, 1927; *Puffinus assimilis haurakiensis* Fleming & Serventy, 1943; *Puffinus elegans* Giglioli & Salvadori, 1869.

Other hosts: *Puffinus gravis* (O'Reilly, 1818); *Puffinus creatopus* Coues, 1864; *Puffinus yelkouan* (Acerbi, 1827); *Puffinus mauretanicus* Lowe, 1921; *Puffinus nativitatis* Streets, 1877; *Puffinus lherminieri* Lesson, 1839; *Puffinus auricularis* Townsend, 1890; *Puffinus assimilis boydi* Mathews, 1912; *Puffinus assimilis tunneyi* Mathews, 1912.

New Zealand localities: ND, CL, AK, BP, WI, WA, WN, SD, MB, NN, NC, MC, SC, WD, CO, DN, KE, CH, SI, SN, AN.

Geographic distribution: Pacific, Atlantic and Indian Oceans.

New Zealand references: Watt (1971); Price & Clay (1972: 496); Horning *et al.* (1980); Pilgrim & Palma (1982); Murray *et al.* (1990: 1371); Paterson *et al.* (1999: 222); Palma (1999); Galloway (2005: 16); Palma (2010).

Other significant references: Eichler (1949b); Timmermann (1963); Timmermann (1965); Bourgeois & Threlfall (1979: 1356); Fowler & Shaw (1990: 15); Green & Palma (1991: 5, 27); Forrester *et al.* (1995: 5); Foster *et al.* (1996: 85); Palma (1996b: 117); Martín-Mateo (2002: 62, figs 18B,I, 19D); Price *et al.* (2003: 92); Palma & Jensen (2005: 51, 60); Hänel & Palma (2007: 112, 121, 130); Palma & Peck (2013: 14).

Remarks: *Austromenopon paululum* parasitises most species of the genus *Puffinus*. The Manx shearwater, *Puffinus puffinus*, is a new host record for *Austromenopon paululum* in New Zealand (voucher specimens in MONZ).

Austromenopon phaeopodis (Schrank, 1802)

Pediculus phaeopodis Schrank, 1802: 361.
Austromenopon phaeopodis (Schrank, 1802); Hopkins & Clay 1952: 48.
Austromenopon phaeopodis (Schrank, 1802); Timmermann 1954d: 203, fig. 12.
Austromenopon phaeopodis (Schrank, 1802); Clay 1959: 157, 162, 165–167, figs 1–2, 14, 18, 20, 29, 36–37, 40.
Austromenopon phaeopodis (Schrank, 1802); Pilgrim & Palma 1982: 20.
Austromenopon phaeopodis (Schrank, 1802); Murray *et al.* 2006a: 1964.
Austromenopon phaeopodis (Schrank, 1802); Palma 2010: 407.

Neotype ♂ in NHML (Clay 1959: 166).

Type host: *Numenius phaeopus phaeopus* (Linnaeus, 1758).

New Zealand host: *Numenius phaeopus variegatus* (Scopoli, 1786).

Other host: *Numenius tahitiensis* (J.F. Gmelin, 1789).

New Zealand localities: TK, KE.

Geographic distribution: Eurasia; Americas; Australasia; Pacific Ocean.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (2006a); Palma (2010).

Other significant references: Timmermann (1954d); Timmermann (1957a: 96, fig. 70); Emerson & Ward (1958: 50); Clay (1959); Clay & Hopkins (1960: 10); Moreby (1976: 93); Price *et al.* (2003: 92); Palma & Jensen (2005: 52, 64).

Remarks: *Austromenopon phaeopodis* appears to be restricted to species of *Numenius*. Although the Asiatic whimbrel is a frequent visitor to New Zealand (Checklist Committee 2010: 201), its lice have been infrequently collected in this country.

***Austromenopon pinguis* (Kellogg, 1896)**

Colpocephalum pingue Kellogg, 1896a: 144, pl. 12: fig. 5.
Procellariphaga pinguis (Kellogg, 1896); Eichler 1949b: 346.
Procellariphaga pinguis (Kellogg, 1896); Hopkins & Clay 1952: 299.
Austromenopon pingue (Kellogg, 1896); Timmermann 1965: 166.
Austromenopon pinguis (Kellogg, 1896); Price & Clay 1972: 490, figs 10–12.
Austromenopon pinguis (Kellogg, 1896); Horning *et al.* 1980: 4, 9.
Austromenopon pinguis (Kellogg, 1896); Pilgrim & Palma 1982: 6.
Austromenopon pinguis (Kellogg, 1896); Murray *et al.* 1990: 1368–1369.
Austromenopon pinguis (Kellogg, 1896); Palma 2010: 407.

Lectotype ♀ in EMEC (Price & Clay 1972: 490).

Type host: *Phoebastria albatrus* (Pallas, 1769).

New Zealand hosts: *Thalassarche chrysostoma* (J.R. Forster, 1785); *Thalassarche melanophris* (Temminck, 1828); *Thalassarche impavida* Mathews, 1912; *Thalassarche bulleri bulleri* (Rothschild, 1893); *Thalassarche bulleri platei* (Reichenow, 1898); *Thalassarche cauta steadi* Falla, 1933; *Thalassarche salvini* (Rothschild, 1893); *Phoebetria palpebrata* (J.R. Forster, 1785).

Other hosts: *Phoebastria nigripes* (Audubon, 1839); *Phoebastria immutabilis* (Rothschild, 1893); *Thalassarche chlororhynchos* (J.F. Gmelin, 1789); *Thalassarche cauta cauta* (Gould, 1841); *Phoebetria fusca* (Hilsenberg, 1822).

New Zealand localities: ND, AK, BP, HB, WI, WA, WN, NN, NC, MC, SC, CO, DN, SI, CH, BO, SN, AU, CA.

Geographic distribution: Southern Hemisphere and north Pacific Ocean.

New Zealand references: Price & Clay (1972); Horning *et al.* (1980); Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (2010).

Other significant references: Timmermann (1965); Green & Palma (1991: 5, 25); Palma (1996b: 118); Price *et al*. (2003: 92); Hänel & Palma (2007: 112, 121, 129); Palma & Peck (2013: 15).

Remarks: *Austromenopon pinguis* is the smallest of the two species of *Austromenopon* parasitic on the smaller albatrosses.

***Austromenopon popellus* (Piaget, 1890)**

Menopon popellus Piaget, 1890a: 251, pl. 10; fig. 5.
Procellariphaga popellus (Piaget, 1890); Hopkins & Clay 1952: 299.
Austromenopon spec.; Timmermann 1963: 402, 413, figs 1, 7.
Austromenopon popellus (Piaget, 1890); Timmermann 1963: 413.
Austromenopon spec.; Timmermann 1965: 169, fig. 107, pl. 11: fig. 3.
Austromenopon popellus (Piaget, 1890); Timmermann 1965: 170.
Austromenopon popellus (Piaget, 1890); Price & Clay 1972: 491, fig. 24.
Austromenopon popellus (Piaget, 1890); Pilgrim & Palma 1982: 8, 11.
Austromenopon popellus (Piaget, 1890) *s. l.*; Pilgrim & Palma 1982: 8.
Austromenopon popellus (Piaget, 1890); Murray *et al.* 1990: 1369, 1371.
Austromenopon popellus (Piaget, 1890); Palma 2010: 407.

Holotype ♂ in NHML (Clay 1949b: 908).

Type host: "*Podica senegalensis*" in error (see Hopkins & Clay 1952: 299).

New Zealand hosts: *Lugensa brevirostris* (Lesson, 1833); *Pterodroma macroptera gouldi* (Hutton, 1869); *Pterodroma lessonii* (Garnot, 1826); *Pterodroma magentae* (Giglioli & Salvadori, 1869); *Pterodroma neglecta neglecta* (Schlegel, 1863); *Pterodroma mollis* (Gould, 1844); *Pterodroma externa* (Salvin, 1875); *Pterodroma cervicalis* (Salvin, 1891); *Procellaria aequinoctialis* Linnaeus, 1758; *Procellaria westlandica* Falla, 1946; *Procellaria parkinsoni* G.R. Gray, 1862; *Procellaria cinerea* J.F. Gmelin, 1789.

Other hosts: *Pterodroma incerta* (Schlegel, 1863); *Pterodroma solandri* (Gould, 1844); *Pterodroma ultima* Murphy, 1949; *Pterodroma hasitata hasitata* (Kuhl, 1820); *Pterodroma occulta* Imber & Tennyson, 2001; *Pterodroma arminjoniana* (Giglioli & Salvadori, 1869); *Pterodroma heraldica* (Salvin, 1888); *Pterodroma atrata* (Mathews, 1912); *Pterodroma phaeopygia* (Salvin, 1876); *Pterodroma hypoleuca* (Salvin, 1888); *Pseudobulweria rostrata* (Peale, 1848).

New Zealand localities: ND, AK, CL, BP, WO, TK, WI, WA, WN, NN, NC, MC, SC, WD, SL, KE, Norfolk Island, CH, SI, AN.

Geographic distribution: Pacific, Atlantic and Indian Oceans.

New Zealand references: Price & Clay (1972: 493); Pilgrim & Palma (1982); Palma & Pilgrim (1983: 148); Murray *et al.* (1990: 1369, 1371); Marris (2000: 188); Palma & Imber (2000: 229); Palma (2010).

Other significant references: Timmermann (1963; 1965); Price & Clay (1972); Green & Palma (1991: 5, 26); Zonfrillo (1993: 327); Forrester *et al.* (1995: 5); Furness & Palma (1992: 35, 40); Palma (1996b: 118); Price *et al*. (2003: 92); Hänel & Palma (2007: 112, 121, 130); Palma & Peck (2013: 15).

Remarks: *Austromenopon popellus* is a widespread species on most species of *Pterodroma*. Pilgrim & Palma (1982: 8–9) regarded the population of *A. popellus* from *Lugensa brevirostris* and *Pt. magentae* as somewhat different from those from several other hosts, and qualified them as *sensu lato*; however, my examination of more samples shows that making such difference is not warranted.

Records of *A. popellus* from *Pterodroma cookii* (G.R. Gray, 1843) and *Pterodroma leucoptera* (Gould, 1844) in Price *et al*. (2003: 92), and from *Pterodroma pycrofti* Falla, 1933 in Pilgrim & Palma (1982: 9) are erroneous. The species of *Austromenopon* from these hosts and other related *Pterodroma* species is undescribed (see below under ***Austromenopon* species 1**).

Furthermore, only two specimens of *A. popellus* —one female reported by Price & Clay (1972: 493) and one male by Pilgrim & Palma (1982: 8)— have been recorded from *Pterodroma inexpectata* (J.R. Forster, 1844), and both are most likely stragglers because a different species represented by several samples from various localities has also been recorded from *Pt. inexpectata* (see below under ***Austromenopon* species 2**).

Austromenopon stammeri Timmermann, 1963

Austromenopon stammeri Timmermann, 1963: 421, fig. 12.
Austromenopon stammeri Timmermann, 1963; Timmermann 1965: 175, fig. 111.
Austromenopon stammeri Timmermann, 1963; Price & Clay 1972: 496, figs 35–38.
Austromenopon stammeri Timmermann, 1963; Wise 1977: 56.
Austromenopon stammeri Timmermann, 1963; Horning *et al*. 1980: 4, 10.
Austromenopon stammeri Timmermann, 1963; Pilgrim & Palma 1982: 9.
Austromenopon stammeri Timmermann, 1963; Murray *et al.* 1990: 1370.
Austromenopon stammeri Timmermann, 1963; Palma 2010: 407.

Holotype ♂ in NHML.

Type host: *Pachyptila turtur* (Kuhl, 1820).

New Zealand hosts: *Halobaena caerulea* (J.F. Gmelin, 1789); *Pachyptila vittata* (G. Forster, 1777); *Pachyptila salvini salvini* (Mathews, 1912); *Pachyptila desolata* (J.F. Gmelin, 1789); *Pachyptila belcheri* (Mathews, 1912); *Pachyptila turtur* (Kuhl, 1820); *Pachyptila crassirostris crassirostris* (Mathews, 1912); *Pachyptila crassirostris pyramidalis* C.A. Fleming, 1939.

Other hosts: None.

New Zealand localities: AK, TK, WI, WA, WN, NC, MC, SC, WD, CH, SI, BO, SN, AN.

Geographic distribution: Southern Hemisphere.

New Zealand references: Timmermann (1963); Pilgrim (1970: 74); Price & Clay (1972); Wise (1977); Horning *et al.* (1980); Pilgrim & Palma (1982); Murray *et al.* (1990); Paterson *et al.* (1999: 222); Marris (2000: 188); Hänel & Palma (2007: 112, 121, 130); Palma (2010).

Other significant references: Timmermann (1965); Green & Palma (1991: 5, 26); Furness & Palma (1992: 35, 39); Palma (1996b: 118); Price *et al*. (2003: 92).

Remarks: *Austromenopon stammeri* is a prevalent and abundant species on all species and subspecies of prions.

***Austromenopon transversum* (Denny, 1842)**

Liotheum (*Menopon*) *transversum* Denny, 1842: 201.
Liotheum (*Menopon*) *ridibundis* [sic] Denny, 1842: 201.
Liotheum (*Menopon*) *transversus* [sic] Denny, 1842: 226, pl. 21; fig. 7.
Liotheum (*Menopon*) *ridibundus* [sic] Denny, 1842: 227, pl. 20: fig. 3.
Menopon transversum Denny, 1842 [sic]; Harrison 1916: 46 (as junior synonym of *Menopon ridibundum* Denny, 1842 [sic]).
Austromenopon ridibundus [sic] (Denny, 1842); Hopkins & Clay 1952: 48.
Austromenopon transversum (Denny, 1842); Hopkins & Clay 1952: 48.
Austromenopon transversum (Denny, 1842); Clay 1959: 161, 164, 166, figs 15, 19, 21.
Austromenopon transversum (Denny, 1842); Clay & Moreby 1967: 158, 169, figs 63, 73.
Austromenopon transversum (Denny, 1842); Pilgrim & Palma 1982: 22.
Austromenopon transversum (Denny, 1842); Murray *et al.* 2006a: 1965.
Austromenopon transversum (Denny, 1842); Palma 2010: 407.

Lectotype ♀ in NHML (Clay 1959: 166).

Type host: *Rissa tridactyla* (Linnaeus, 1758).

New Zealand hosts: *Larus dominicanus* Lichtenstein, 1823; *Larus novaehollandiae scopulinus* J.R. Forster, 1844; *Larus bulleri* Hutton, 1871.

Other hosts: *Pagophila eburnea* (Phipps, 1774); *Rhodostethia rosea* (Macgillivray, 1924); *Rissa brevirostris* (Bruch, 1853); *Xema sabini* (Sabine, 1819); *Creagrus furcatus* (Néboux, 1842) and at least 19 other species of *Larus* (see Price *et al*. 2003: 93).

New Zealand localities: WN, SD, MB, NN, NC, MC, SC, WD, SL, CA.

Geographic distribution: Cosmopolitan.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (2006a); Palma (2010).

Other significant references: Timmermann (1954d: 204, figs 15–16); Timmermann (1957a: 97, figs 73–74); Clay (1959); Clay & Moreby (1967); Choe & Kim (1987: 3000; 1988: 988); Green & Palma (1991: 5, 33); Butler & O'Connor (1994: 450); Forrester *et al.* (1995: 29); Palma (1996b: 119); Martín-Mateo (2002: 59, figs 18D,F, 19C, 20); Price *et al*. (2003: 93); Palma & Jensen (2005: 52, 65); González-Acuña *et al*. (2011: 300); Palma & Peck (2013: 16).

Remarks: This species is the only *Austromenopon* known from all species of gulls (Price *et al*. 2003: 93, 290).

***Austromenopon* species 1**

"*Austromenopon popellus*" Pilgrim & Palma, 1982: 9 (not *Menopon popellus* Piaget, 1890a).
Austromenopon sp.: Pilgrim & Palma 1982: 9.
Austromenopon sp.: Murray *et al.* 1990: 1370.
"*Austromenopon popellus*" Murray *et al.*, 1990: 1370 (not *Menopon popellus* Piaget, 1890a).
Austromenopon sp.: Palma 1999: 377.
Austromenopon spp.: Palma 2010: 407.

New Zealand hosts: *Pterodroma nigripennis* (Rothschild, 1893); *Pterodroma cookii* (G.R. Gray, 1843); *Pterodroma longirostris* (Stejneger, 1888); *Pterodroma pycrofti* Falla, 1933; *Pterodroma leucoptera caledonica* Imber & Jenkins, 1981.

Other host: *Pterodroma brevipes* (Peale, 1848).

New Zealand localities: ND, CL, WO, BP, GB, KE.

Geographic distribution: New Zealand; New Caledonia; Cook Islands.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (1999); Palma (2010).

Other significant references: None.

Remarks: These records of *Austromenopon* from small species of *Pterodroma* represent an undescribed, unnamed species, although male lice are needed from *Pt. longirostris* and *Pt. pycrofti* to confirm their taxonomic status. Records of *A. popellus* from *Pterodroma pycrofti* in Pilgrim & Palma (1982: 9) and in Murray *et al.* (1990: 1370) are erroneous.

***Austromenopon* species 2**

Austromenopon sp.: Horning *et al.* 1980: 4, 9.

Austromenopon sp.: Pilgrim & Palma 1982: 8.
Austrmenopon [sic] sp.: Murray *et al.* 1990: 1370.
Austromenopon spp.: Palma 2010: 407.

New Zealand host: *Pterodroma inexpectata* (J.R. Forster, 1844).

Other hosts: None.

New Zealand localities: AK, WN, SI, SN.

Geographic distribution: New Zealand.

New Zealand references: Horning *et al.* (1980); Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (2010).

Other significant references: None.

Remarks: This undescribed, unnamed species of *Austromenopon* is exclusively parasitic on the mottled petrel, a host species which only breeds in New Zealand but ranges widely over the Pacific Ocean (Checklist Committee 2010: 93).

Austromenopon species 3

Austromenopon sp.: Pilgrim & Palma 1982: 21.
Austromenopon species 2: Marris 2000: 188.
Austromenopon sp.: Murray *et al.* 2006a: 1964.
Austromenopon spp.: Palma 2010: 407.

New Zealand hosts: *Coenocorypha aucklandica meinertzhagenae* Rothschild, 1927; *Coenocorypha aucklandica aucklandica* (G.R. Gray, 1845).

Other hosts: None.

New Zealand localities: AN, AU.

Geographic distribution: Subantarctic Islands of New Zealand.

New Zealand references: Pilgrim & Palma (1982); Marris (2000); Murray *et al.* (2006a); Palma (2010).

Other significant references: None.

Remarks: These records of *Austromenopon* from two New Zealand Subantarctic snipes comprise three samples totalling 11 females only (voucher specimens in MONZ), and may represent an undescribed endemic taxon (Theresa Clay pers. comm. 1971). Males are needed to confirm the taxonomic status of these lice.

Genus *Bonomiella* Conci, 1942

Bonomiella Conci, 1942a. *Studi Trentini Scienze Naturali 23*(2): 124. Type species: *Bonomiella insolitunguicolata* Conci, 1942a (by original designation).

Bonomiella columbae Emerson, 1957

Figs 20–21

Bonomiella columbae Emerson, 1957: 63, figs 1–3.
Bonomiella; Pilgrim 1970: 76.
Bonomiella columbae Emerson, 1957; Pilgrim 1976: 162, figs 4–5.
Bonomiella columbae Emerson, 1957; Wise 1977: 56.
Bonomiella columbae Emerson, 1957; Pilgrim & Palma 1982: 23.
Bonomiella columbae Emerson, 1957; Price *et al*. 2003: 93.
Bonomiella columbae Emerson, 1957; Murray *et al.* 2006a: 1965.
Bonomiella columbae Emerson, 1957; Palma 2010: 407.

Holotype ♂ in USNM.

Type host: "domestic pigeon" = *Columba livia domestica* J.F. Gmelin, 1789.

New Zealand host: *Columba livia* J.F. Gmelin, 1789.

Other hosts: *Zenaida macroura* (Linnaeus, 1758).

New Zealand localities: WN, MC.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Pilgrim (1970); Pilgrim (1976); Wise (1977); Hill & Tuff (1978: 316, 324); Pilgrim & Palma (1982); Paterson *et al.* (1999: 220); Murray *et al.* (2006a); Palma (2010).

Other significant references: Złotorzycka & Lucińska (1967: 341, figs 1–5); Selim *et al.* (1968: 79, fig. 7); Ribbeck (1972: 129, figs 1–5); Conti & Forrester (1981: 531); Selva *et al.* (1987: 246, 249); Price *et al*. (2003); Cicchino & González-Acuña (2012: 49, figs 1, 3, 5).

Remarks: *Bonomiella columbae* was introduced to New Zealand and other countries with rock pigeons by human agency (Checklist Committee 2010: 245).

Genus *Ciconiphilus* Bedford, 1939

Ciconiphilus Bedford, 1939. *Onderstepoort Jour. Vet. Sci. 12*(1): 141. Type species: *Colpocephalum quadripustulatus* Nitzsch [sic] = *Ciconiphilus quadripustulatus* (Burmeister, 1838) (by original designation).

Anseriphilus Eichler, 1944a. *Deutsch. Entomol. Zeit. 1943*: 57. Type species: *Colpocephalum pectiniventre* Harrison, 1916 = *Ciconiphilus pectiniventris* (Harrison, 1916) (by original designation).

Ciconiphilus decimfasciatus (Boisduval & Lacordaire, 1835)

Figs 22–23

Liotheum (*Colpocephalum*) *10-fasciatum* Boisduval & Lacordaire, 1835: 123.

Colpocephalum decimfasciatum Boisduval & Lacordaire, 1835 [sic]; Harrison 1916: 48.

Pseudocolpocephalum doriabagla Ansari, 1951: 154, fig. 11.

Ciconiphilus decimfasciatus (Boisduval & Lacordaire, 1835); Hopkins & Clay 1952: 71.

Ciconiphilus doriabagla (Ansari, 1951); Hopkins & Clay 1953: 436.

Ciconiphilus decimfasciatus (Boisduval & Lacordaire, 1835); Price & Beer 1965a: 661, figs 10–12.

Ciconiphilus decimfasciatus (Boisduval & Lacordaire, 1835); Pilgrim & Palma 1982: 15.

Ciconiphilus decimfasciatus (Boisduval & Lacordaire, 1835); Murray *et al.* 1990: 1373.

Ciconiphilus decimfasciatus (Boisduval & Lacordaire, 1835); Palma 2010: 407.

Status, sex and repository of types unknown, probably lost (Palma 1996b: 119).

Type host: *Ardea cinerea cinerea* Linnaeus, 1758.

New Zealand hosts: *Ardea modesta* J.E. Gray, 1831; *Ardea ibis coromanda* (Boddaert, 1783); *Egretta garzetta immaculata* (Gould, 1846); *Egretta novaehollandiae novaehollandiae* (Latham, 1790); *Egretta sacra sacra* (J.F. Gmelin, 1789); *Botaurus poiciloptilus* (Wagler, 1827).

Other hosts: Over 25 species in the genera *Agamia*, *Ardea*, *Ardeola*, *Botaurus*, *Butorides*, *Egretta*, *Ixobrychus*, *Nycticorax*, *Pilherodius*, and *Tigrisoma* (see Price *et al*. 2003: 95).

New Zealand localities: ND, BP, HB, WA, SD, MB, NN, NC, MC, SC, WD, CO, DN, KE, AU.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990); Paterson *et al.* (1999: 221); Palma (1999: 379); Palma (2010).

Other significant references: Ansari (1951); Price & Beer (1965a); Price & Emerson (1966: 432); Price & Emerson (1967: 249); Moreby (1976: 92); Clay (1976b: 537); Butler & O'Connor (1994: 450); Forrester *et al*. (1995: 9); Palma (1996b: 119); Martín-Mateo (2002: 84); Price *et al*. (2003: 94); Palma & Jensen (2005: 52, 61); Adam (2007: 168).

Remarks: *Ciconiphilus decimfasciatus* is a widespread species on many members of the family Ardeidae, usually found in large numbers per host.

Ciconiphilus pectiniventris (Harrison, 1916)

Menopon pectinatum Neumann, 1912b: 368, fig. 15.

Colpocephalum pectinatum Neumann, 1912 [sic]; Harrison 1916: 53. Preoccupied by *Colpocephalum pectinatum* Osborn, 1902: 201.

Colpocephalum pectiniventre Harrison, 1916: 53. *Nomen novum* for *Colpocephalum pectinatum* (Neumann, 1912).

Ciconiphilus pectiniventris (Harrison, 1916); Hopkins & Clay 1952: 72.

Ciconiphilus pectiniventris (Harrison, 1916); Price & Beer 1965a: 664.

Ciconiphilus pectiniventris (Harrison, 1916); Pilgrim & Palma 1982: 16.

Ciconiphilus pectiniventris (Harrison, 1916); Murray *et al.* 1990: 1374.

Ciconiphilus pectiniventris (Harrison, 1916); Palma 1999: 379, 383, note 4.

Ciconiphilus pectiniventris (Harrison, 1916); Palma 2010: 407.

Syntypes ♂♀, repository not confirmed, probably in the Ecole Vétérinaire de Toulouse, France.

Type host: *Anser anser domesticus* (Linnaeus, 1758).

New Zealand hosts: *Anser anser* (Linnaeus, 1758); *Branta canadensis maxima* Delacour, 1951; *Cygnus atratus* (Latham, 1790).

Other hosts: Seven other species of *Anser* and two other species of *Branta* (see Price *et al*. 2003: 95).

New Zealand localities: BP, WO, WA, SD, MB, MC.

Geographic distribution: North America; Eurasia; Australasia.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990); Paterson *et al.* (1999: 219); Palma (1999); Palma (2010).

Other significant references: Price & Beer (1965a); Palma (1996b: 119); Price *et al*. (2003: 95); Palma & Jensen (2005: 52, 61).

Remarks: *Ciconiphilus pectiniventris* was introduced to New Zealand with geese by human agency (Checklist Committee 2010: 35). The association of *C. pectiniventris* with *Cygnus atratus* is likely to be the result of a natural host-switch from one or both goose species living in New Zealand.

Genus *Colpocephalum* Nitzsch, 1818

Colpocephalum Nitzsch, 1818. *Germar's Mag. Entomol. 3*: 298. Type species: *Colpocephalum zebra* Burmeister, 1838a (by subsequent designation).

Ferrisia Uchida, 1926. *Jour. Coll. Agric. Tokyo 9*: 43. Type species: *Colpocephalum turbinatum* Denny, 1842 (by original designation). Preoccupied by *Ferrisia* Fullaway, 1923.

Neocolpocephalum Ewing, 1933. *Jour. Parasit. 20*: 65. *Nomen novum* for *Ferrisia* Uchida, 1926.

Corvocolpocephalum Conci, 1942b. *Boll. Soc. Entomol. Italiana 74*: 30. Type species: *Colpocephalum subaequale* "Nitzsch in Burm. 1838" = *Colpocephalum fregili* Denny, 1842 (by original designation).

Liothella Eichler, 1947. *Arkiv Zool. 39A*(2): 15. Type species: *Colpocephalum leptopygos* Nitzsch [*in* Giebel], 1874 (by original designation).

Pelecanigogus Eichler, 1949a. *Boll. Soc. Entomol. Italiana 79*: 12. Type species: *Colpocephalum eucarenum* "Ntz i. Brm." (by original designation).

Galliferrisia Ansari, 1951. *Proc. Nat. Inst. Sci. India 17*: 150. Type species: *Galliferrisia tausi* Ansari, 1951 = *Colpocephalum tausi* (Ansari, 1951) (by original designation).

Colpocephalum eucarenum Burmeister, 1838

Colpocephalum eucarenum Burmeister, 1838a: 439.

Colpocephalum eucarenum Burmeister, 1838; Hopkins & Clay 1952: 78.

Colpocephalum eucarenum Burmeister, 1838; Price 1967a: 274, figs 1–7.

Colpocephalum eucarenum Burmeister, 1838; Pilgrim & Palma 1982: 14.

Colpocephalum eucarenum Burmeister, 1838; Murray *et al.* 1990: 1372.

Colpocephalum eucarenum Burmeister, 1838; Price *et al*. 2003: 98.

Colpocephalum eucarenum Burmeister, 1838; Palma 2010: 407.

Status, sex and repository of types unknown, presumed lost. See Clay (1949a: 1) and Palma & Pilgrim (1984: 150).

Type host: *Pelecanus onocrotalus* Linnaeus, 1758.

New Zealand host: *Pelecanus conspicillatus* Temminck, 1824.

Other hosts: *Pelecanus rufescens* J.F. Gmelin, 1789; *Pelecanus philippensis* J.F. Gmelin, 1789.

New Zealand locality: SL.

Geographic distribution: Eurasia; Africa; Australasia.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (2010).

Other significant references: Price (1967a); Moreby (1976: 91); Green & Palma (1991: 5, 28); Palma (1996b: 121); Price *et al*. (2003).

Remarks: *Pelecanus conspicillatus* breeds in Australia and is a straggler to New Zealand (Checklist Committee (2010: 138), with only one record of *Colpocephalum eucarenum* from this country.

***Colpocephalum fregili* Denny, 1842**

"*Colpocephalum subaequale*" Burmeister, 1838a: 438 (not *Liotheum* (*Colpocephalum*) *subaequale* Haan, 1829).
Liotheum (*Colpocephalum*) *fregili* Denny, 1842: 198, 208, pl. 20: fig. 4.
Corvocolpocephalum subaequale (Nitzsch [in Burmeister], 1838); Conci 1942b: 30.
Colpocephalum fregili Denny, 1842; Hopkins & Clay 1952: 79.
Colpocephalum fregili Denny, 1842; Price & Beer 1965b: 7, figs 1–4.
Colpocephalum fregili Denny, 1842; Pilgrim & Palma 1982: 28.
Colpocephalum fregili Denny, 1842; Murray *et al.* 2006b: 1957.
Colpocephalum fregili Denny, 1842; Palma 2010: 407.

Syntypes in NHML (Palma 1996b: 121).

Type host: *Pyrrhocorax pyrrhocorax pyrrhocorax* (Linnaeus, 1758).

New Zealand host: *Corvus frugilegus* Linnaeus, 1758.

Other hosts: *Pyrrhocorax graculus* (Linnaeus, 1766); *Cyanopica cyanus* (Pallas, 1776); 18 other species of *Corvus* (see Price *et al*. 2003: 98).

New Zealand localities: HB, WA, NC, MC, SC, CH.

Geographic distribution: Eurasia; Africa; North America; Australasia.

New Zealand references: Pilgrim & Palma (1982); Paterson *et al.* (1999: 221); Murray *et al.* (2006b); Palma (2010).

Other significant references: Price & Beer (1965b); Clay (1976b: 537); Green & Palma (1991: 5, 41); Butler & O'Connor (1994: 450); Palma (1996b: 121); Price *et al*. (2003: 98); Palma & Jensen (2005: 52, 68).

Remarks: *Colpocephalum fregili* was introduced to New Zealand with rooks by human agency (Checklist Committee 2010: 300). It is remarkable that, from a complement of six louse species known to parasitise *Corvus frugilegus* in its home range (Price *et al*. 2003: 338), only *C. fregili* became established on the New Zealand rook populations.

***Colpocephalum leptopygos* Nitzsch [*in* Giebel], 1874**

Colpocephalum leptopygos Nitzsch [*in* Giebel], 1874: 273.
Liothella leptopygos (Nitzsch [*in* Giebel], 1874); Eichler 1947: 15.
Colpocephalum leptopygos Nitzsch [*in* Giebel], 1874; Hopkins & Clay 1952: 80.
Colpocephalum leptopygos Nitzsch [*in* Giebel], 1874; Price & Beer 1965c: 122, figs 58–60.
Colpocephalum leptopygos Nitzsch, 1874 [sic]; Pilgrim & Palma 1982: 16.
Colpocephalum leptopygos Nitzsch, 1866 [sic]; Murray *et al.* 1990: 1373.
Colpocephalum leptopygos Nitzsch [*in* Giebel], 1874; Price *et al*. 2003: 100.
Colpocephalum leptopygos Nitzsch [*in* Giebel], 1874; Palma 2010: 407.

Syntypes NN presumed lost. See Clay (1949a: 1), Palma & Pilgrim (1984: 150) and Palma (1996b: 122).

Type host: *Plegadis falcinellus* (Linnaeus, 1766).

New Zealand host: *Plegadis falcinellus* (Linnaeus, 1766).

Other hosts: *Plegadis chihi* (Vieillot, 1817); *Plegadis ridgwayi* (Allen, 1876).

New Zealand localities: WI, SL.

Geographic distribution: Eurasia; Africa; Americas; Australasia.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (2010).

Other significant references: Price & Beer (1965c); Forrester *et al*. (1995: 12); Palma (1996b: 122); Price *et al*. (2003).

Remarks: Although the glossy ibis is a regular vagrant to New Zealand (Checklist Committee 2010: 166), there are only two records of *Colpocephalum leptopygos* from this country.

***Colpocephalum pilgrimi* Price, 1967**

Figs 24–25

"*Colpocephalum setosum*" Kellogg, 1907: 122 (not *Colpocephalum setosum* Piaget, 1880).
Colpocephalum pilgrimi Price, 1967b: 11, figs 1–3.
Colpocephalum pilgrimi Price, 1967; Wise 1977: 56.
Colpocephalum pilgrimi Price, 1967; Pilgrim & Palma 1982: 24.
Colpocephalum pilgrimi Price, 1967; Murray *et al.* 1999: 1241.
Colpocephalum pilgrimi Price, 1967; Price *et al*. 2003: 101.
Colpocephalum pilgrimi Price, 1967; Palma 2010: 407.

Holotype ♀ in CMNZ (Nicholls *et al.* 1998: 30).
Type host: *Nestor notabilis* Gould, 1856.
New Zealand host: *Nestor notabilis* Gould, 1856.
Other hosts: None.
New Zealand localities: NN, NC, MC, WD.
Geographic distribution: South Island, New Zealand.
New Zealand references: Kellogg (1907); Price (1967b); Pilgrim (1970: 75); Wise (1977); Pilgrim & Palma (1982); Nicholls *et al.* (1998: 30); Murray *et al.* (1999); Palma (2010); Buckley *et al.* (2012: App. 2).
Other significant reference: Price *et al*. (2003).
Remarks: *Colpocephalum pilgrimi* is an endemic and "at risk" species (Buckley *et al.* 2012), exclusively parasitic on the endemic kea.

***Colpocephalum subzerafae* Tendeiro, 1988**

"*Colpocephalum zerafae* Ansari, ?1955 *sen. lat*." Price & Beer 1963a: 758, fig. 55. In part.
"*Colpocephalum zerafae*" Pilgrim & Palma, 1982: 17 (not *Colpocephalum zerafae* Ansari, 1955).
Colpocephalum subzerafae subzerafae Tendeiro, 1988: 88, figs 4–6, 16–19.
Colpocephalum subzerafae Tendeiro, 1988; Murray *et al.* 1993: 960.
Colpocephalum subzerafae Tendeiro, 1988; Palma 1999: 384, note D.
Colpocephalum subzerafae Tendeiro, 1988; Price *et al.* 2003: 102.
Colpocephalum subzerafae Tendeiro, 1988; Palma 2010: 407.

Holotype ♂ in NHML.
Type host: *Falco naumanni naumanni* Fleischer, 1818.
New Zealand host: *Falco cenchroides cenchroides* Vigors & Horsfield, 1827.
Other hosts: Nine species of *Falco* (see Price *et al.* 2003: 102).
New Zealand locality: WN.
Geographic distribution: All continents, except Antarctica.
New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1993); Palma (1999); Palma (2010).
Other significant references: Price & Beer (1963a); Palma (1996b: 122); Price *et al*. (2003).
Remarks: *Falco cenchroides cenchroides* breeds in Australia and is an infrequent straggler to New Zealand (Checklist Committee 2010: 174), with only one sample of *Colpocephalum subzerafae* collected from a nankeen kestrel in this country (voucher specimens in MONZ).

***Colpocephalum tausi* (Ansari, 1951)**

Galliferrisia tausi Ansari, 1951: 151, fig. 10.
Colpocephalum tausi (Ansari, 1951); Hopkins & Clay 1953: 436.
Colpocephalum tausi (Ansari, 1951); Price & Beer 1964: 394, figs 12–14.
Colpocephalum tausi (Ansari, 1951); Pilgrim & Palma 1982: 18.
Colpocephalum tausi (Ansari, 1951); Murray *et al.* 1993: 960.
Colpocephalum tausi (Ansari, 1951); Palma 2010: 407.

Holotype ♀ in NHML (Vincent S. Smith pers. comm. December 2014).
Type host: *Pavo cristatus* Linnaeus, 1758.
New Zealand host: *Pavo cristatus* Linnaeus, 1758.
Other host: *Meleagris gallopavo* Linnaeus, 1758.
New Zealand locality: WA.
Geographic distribution: Eurasia; Americas; Australasia.
New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1993); Paterson *et al.* (1999: 219); Palma (2010).
Other significant references: Price & Beer (1964); Price *et al*. (2003: 102).
Remarks: *Colpocephalum tausi* was introduced to New Zealand and other countries with its primary host (the peafowl) by human agency (Checklist Committee 2010: 28).

***Colpocephalum turbinatum* Denny, 1842**

Liotheum (*Colpocephalum*) *turbinatum* Denny, 1842: 198, 209, pl. 21: fig. 1.
Colpocephalum turbinatum Denny, 1842; Hopkins & Clay 1952: 85.
Colpocephalum turbinatum Denny, 1842, *sens. lat.*; Price & Beer 1963a: 754, figs 49, 53, 57.
Colpocephalum turbinatum Denny, 1842; Nelson & Murray 1971: 23, 25, figs 2, 5.
Colpocephalum turbinatum Denny, 1842; Pilgrim 1976: 160, figs 6–7.
Colpocephalum turbinatum Denny, 1842; Pilgrim & Palma 1982: 17, 23.
Colpocephalum turbinatum Denny, 1842; Murray *et al.* 1993: 960.
Colpocephalum turbinatum Denny, 1842; Palma 2010: 407.

Syntypes ♀♀ in NHML (Price & Beer 1963a: 756).

Type host: *Columba livia domestica* J.F. Gmelin, 1789.

New Zealand hosts: *Columba livia* J.F. Gmelin, 1789; *Circus approximans* Peale, 1848.

Other hosts: Over 50 species in the orders Columbiformes, Falconiformes and Strigiformes (see Price *et al*. 2003: 102).

New Zealand localities: WO, HB, WN, SD, MB, NN, NC, MC, SC, NN, WD, CH.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Price & Beer (1963a: 757); Pilgrim (1976); Wise (1977: 56); Pilgrim & Palma (1982); Murray *et al.* (1993); Paterson *et al.* (1999: 220); Galloway (2005: 17); Murray *et al.* (2006a: 1965); Palma (2010).

Other significant references: Emerson (1957: 64); Nelson & Murray (1971); Moreby (1976: 92); Clay (1976b: 537); Palma (1996b: 123); Price *et al*. (2003: 102); Palma & Peck (2013: 18).

Remarks: *Colpocephalum turbinatum* is exceptional among lice in regard to its wide range of host associations, including many species of pigeons, eagles, hawks, harriers, vultures, osprey and owls (see Price *et al*. 2003: 102).

Genus *Cuculiphilus* Uchida, 1926

Subgenus *Cuculiphilus* Uchida, 1926

Cuculiphilus Uchida, 1926. *Jour. Coll. Agric. Tokyo 9*: 47. Type species: *Pediculus fasciatus* Scopoli, 1763 = *Cuculiphilus* (*Cuculiphilus*) *fasciatus* (Scopoli, 1763) (by original designation).

***Cuculiphilus* (*Cuculiphilus*) *fasciativentris* Carriker, 1955**

Figs 26–27

Cuculiphilus fasciativentris Carriker, 1955: 11.
Cuculiphilus (*Cuculiphilus*) *fasciativentris* Carriker, 1955; Scharf & Price 1965: 551, figs 19, 36.
Cuculiphilus (*Cuculiphilus*) *fasciativentris* Carriker, 1955; Palma 1999: 381.
Cuculiphilus (*Cuculiphilus*) *fasciativentris* Carriker, 1955; Price *et al*. 2003: 104.
Cuculiphilus (*Cuculiphilus*) *fasciativentris* Carriker, 1955; Palma 2010: 408 (incorrectly listed under "Philopteridae").

Holotype ♂ in Pablo Anduze's private collection, Caracas, Venezuela (see Emerson 1967: 76)

Type host: *Piaya cayana mehleri* Bonaparte, 1850.

New Zealand host: *Eudynamys taitensis* (Sparrman, 1787).

Other hosts: *Eudynamys scolopacea* (Linnaeus, 1758); *Rhopodytes sumatranus* (Raffles, 1822).

New Zealand locality: WN.

Geographic distribution: Central and South America; Asia; Indonesia; Australasia.

New Zealand references: Palma (1999); Palma (2010).

Other significant references: Scharf & Price (1965); Price *et al*. (2003).

Remarks: *Cuculiphilus* (*Cuculiphilus*) *fasciativentris* is an infrequently collected species (see Scharf & Price 1965: 551). Only one small sample of this louse species has been collected from over 50 long-tailed cuckoos searched for lice in New Zealand (voucher specimens in MONZ).

***Cuculiphilus* (*Cuculiphilus*) *platygaster* (Giebel, 1874)**

Menopon platygaster Giebel, 1874: 290.
Cuculiphilus platygaster (Giebel, 1874); Hopkins & Clay 1952: 99.
Cuculiphilus (*Cuculiphilus*) *platygaster* (Giebel, 1874); Scharf & Price 1965: 547, figs 7, 14.
Cuculiphilus cuculiphilus [sic] *platygaster*; Tennyson & Brackenbury 1998: 225.

Cuculiphilus (*Cuculiphilus*) *platygaster* (Giebel, 1874); Palma 1999: 381.

Cuculiphilus (*Cuculiphilus*) *platygaster* (Giebel, 1874); Price *et al.* 2003: 105.

Cuculiphilus (*C.*) *platygaster* (Giebel, 1874); Palma 2010: 408 (incorrectly listed under "Philopteridae").

Holotype ♀, presumed lost. See Clay (1949a: 1) and Palma & Pilgrim (1984: 150).

Type host: *Scythrops novaehollandiae* Latham, 1790.

New Zealand host: *Scythrops novaehollandiae* Latham, 1790.

Other hosts: None.

New Zealand locality: WO.

Geographic distribution: Indonesia; Australasia.

New Zealand references: Tennyson & Brackenbury (1998); Palma (1999); Palma (2010).

Other significant references: Scharf & Price (1965); Palma (1996b: 124); Price *et al.* (2003).

Remarks: *Scythrops novaehollandiae* is an infrequent straggler to New Zealand, with only six birds recorded from 1924 to 2002 (Checklist Committee 2010: 263). Only one small sample of *Cuculiphilus* (*Cuculiphilus*) *platygaster* has been collected from a channel-billed cuckoo in New Zealand (voucher specimens in MONZ).

Genus *Dennyus* Neumann, 1906

Nitzschia Denny, 1842. *Mon. Anopl. Brit.*: 230. Type species: *Nitzchia burmeisteri* Denny, 1842 = *Dennyus* (*Dennyus*) *hirundinis* (Linnaeus, 1761) (by monotypy). Preoccupied by *Nitzschia* Baer, 1827. As a subgenus of *Liotheum* Nitzsch.

Dennyus Neumann, 1906. *Bull. Soc. Zool. France 31*: 60. *Nomen novum* for *Nitzschia* Denny, 1842.

Subgenus *Takamatsuia* Uchida, 1926

Takamatsuia Uchida, 1926. *Jour. Coll. Agric. Tokyo 9*: 32. Type species: *Takamatsuia major* Uchida, 1926 = *Dennyus* (*Takamatsuia*) *major* (Uchida, 1926) (by original designation).

Dennyus (*Takamatsuia*) species — New Record

Fig. 28

New Zealand host: *Hirundapus caudacutus caudacutus* (Latham, 1802).

New Zealand locality: WN.

Geographic distribution: Asia; Australasia; Oceania.

New Zealand reference: This paper.

Other significant references: Uchida (1926: 32, figs 10–11); Nakagawa (1959b: 23); Emerson & Price (1968: 87, fig. 5); Price *et al.* (2003: 105).

Material examined and repository: 1 pharate, 1 nymph (1 sample, MONZ).

Remarks: *Hirundapus caudacutus caudacutus* is a straggler to New Zealand (Checklist Committee 2010: 270), but birds are seldom available for collecting lice. The subgenus *Takamatsuia* includes two species (Price *et al.* 2003: 106) of which, *Dennyus* (*Takamatsuia*) *major* (Uchida, 1926) has been recorded in Japan by Uchida (1926) and Nakagawa (1959b). It is likely that the single New Zealand sample belongs to this species but, in the absence of an adult specimen, this record should remain at the subgeneric level only.

Genus *Eidmanniella* Kéler, 1938

Eidmanniella Kéler, 1938b. *Ann. Mus. Zool. Polon. 13*: 81. Type species: *Menopon brevipalpe* Piaget, 1880 = *Eidmanniella pellucida* (Rudow, 1869a) (by original designation).

Eidmanniella albescens (Piaget, 1880)

Menopon albescens Piaget, 1880: 491, pl. 41: fig. 4.

Menopon singularis Kellogg & Kuwana, 1902: 485, pl. 31: fig. 1.

Eidmanniella albescens (Piaget, 1880); Hopkins & Clay 1952: 129.

Eidmanniella sula Tendeiro 1958: 443, figs 1–2, photos 1–4.

Eidmanniella albescens (Piaget, 1880); Ryan & Price 1969: 822, figs 5, 13, 26, 29.

Eidmanniella albescens (Piaget, 1880); Pilgrim & Palma 1982: 14.

Eidmanniella albescens (Piaget, 1880); Murray *et al.* 1990: 1372.

Eidmanniella albescens (Piaget, 1880); Palma 2010: 407.

Lectotype ♂ in NHML (Clay 1949b: 816).

Type host: "*Morus serratus*", in error (see Ryan & Price 1969: 822).

New Zealand hosts: *Sula leucogaster plotus* (J.R. Forster, 1844); *Sula dactylatra tasmani* van Tets, *et al.* 1988.

Other hosts: *Sula sula* (Linnaeus, 1766); *Sula variegata* (Tschudi, 1843); *Sula granti* Rothschild, 1902; *Sula nebouxii excisa* Todd, 1948; *Papasula abbotti* (Ridgway, 1893).

New Zealand localities: ND, AK, WO, Westland, KE.

Geographic distribution: Tropical and subtropical regions of the Atlantic, Indian and Pacific Oceans.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (1999: 378); Palma (2010).

Other significant references: Tendeiro (1958); Ryan & Price (1969: 823); Amerson & Emerson (1971: 10, 29); Moreby (1976: 91); Forrester *et al.* (1995: 6); Palma (1996b: 124); Price *et al*. (2003: 107); Palma & Peck (2013: 19); Rivera-Parra *et al*. (2014: 571); Silva *et al*. (2014: 942); Rivera-Parra *et al*. (2015: 3267).

Remarks: *Eidmanniella albescens* is a frequently collected louse restricted to several species of boobies.

Eidmanniella eurygaster (Nitzsch [*in* Giebel], 1866)

Figs 29–30

Menopon eurygaster Nitzsch [*in* Giebel], 1866: 393.
Menopon subrotundum Piaget, 1880: 453, pl. 35: fig. 2.
Eidmanniella eurygaster (Nitzsch, 1866) [sic]; Guimarães 1943: 424.
Eidmanniella eurygaster (Nitzsch, 1866) [sic]; Hopkins & Clay 1952: 129.
Eidmanniella subrotunda (Piaget, 1880); Hopkins & Clay 1952: 130.
Eidmanniella subrotunda (Piaget, 1880); Ryan & Price 1969: 820, figs 18–19, 22, 27–28.
Eidmanniella eurygaster (Nitzsch, 1866) [sic]; Ryan & Price 1969: 820.
Eidmanniella subrotunda (Piaget, 1880); Pilgrim & Palma 1982: 14.
Eidmanniella subrotunda (Piaget, 1880); Murray *et al.* 1990: 1372–1373.
Eidmanniella subrotunda (Piaget, 1880); Green & Palma 1991: 6, 28.
Eidmanniella subrotunda (Piaget, 1880); Palma 1996b: 125.
Eidmanniella eurygaster (Nitzsch, 1866) [sic]; Castro & Cicchino 1996: 139.
Eidmanniella eurygaster (Nitzsch [*in* Giebel], 1866); Price *et al*. 2003: 107.
Eidmanniella subrotunda (Piaget, 1880); Palma 2010: 407.

Status, sex and repository of types unknown, presumed lost. See Clay (1949a: 1) and Palma & Pilgrim (1984: 150). Lectotype ♂ of *Menopon subrotundum* in NHML (Palma 1996b: 125).

Type host: *Phalacrocorax brasilianus* (J.F. Gmelin, 1789).

New Zealand hosts: *Phalacrocorax melanoleucos brevirostris* Gould, 1837; *Phalacrocorax sulcirostris* (J.F. Brandt, 1837).

Other hosts: *Phalacrocorax africanus* (J.F. Gmelin, 1789); *Phalacrocorax fuscicollis* Stephens, 1826; *Phalacrocorax niger* (Vieillot, 1817).

New Zealand localities: BP, WO, WA, NC, WD.

Geographic distribution: Americas; Asia; Africa; Australasia; Pacific Islands.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (2010).

Other significant references: Guimarães (1943); Ryan & Price (1969); Green & Palma (1991); Castro & Cicchino (1996); Palma (1996b); Price *et al*. (2003).

Remarks: This is the first publication where the species name *Eidmanniella eurygaster* is applied to the New Zealand populations of this louse. *Eidmanniella subrotunda* was synonymised under *E. eurygaster* by Castro & Cicchino (1996: 139), but Palma (2010: 407) overlooked that synonymy.

Eidmanniella pellucida (Rudow, 1869)

Menopon pellucidum Rudow, 1869a: 400.
Menopon brevipalpis Piaget, 1880: 498, pl. 40: fig. 5.
Menopon sigmoidalis Picaglia, 1885: 87.
Menopon kuwani Kellogg & Chapman, 1902: 26, pl. 3: fig. 4.

Eidmanniella brevipalpis (Piaget, 1880); Hopkins & Clay 1952: 129.
Eidmanniella kuwani (Kellogg & Chapman, 1902); Hopkins & Clay 1952: 129.
Eidmanniella pellucida (Rudow, 1869); Hopkins & Clay 1952: 129.
Eidmanniella pellucida (Rudow, 1869); Ryan & Price 1969: 819, figs 1–2, 4, 6, 14–15, 21, 24, 31, 33.
Eidmanniella pellucida (Rudow, 1869); Wise 1977: 57.
Eidmanniella pellucida (Rudow, 1869); Pilgrim & Palma 1982: 14.
Eidmanniella pellucida (Rudow, 1869); Murray *et al.* 1990: 1372.
Eidmanniella pellucida (Rudow, 1869); Palma 2010: 407.

Neotype ♀ in NHML (Ryan & Price 1969: 820).

Type host: *Phalacrocorax capensis* (Sparrman, 1788).

New Zealand hosts: *Phalacrocorax varius varius* (J.F. Gmelin, 1789); *Phalacrocorax carbo novaehollandiae* Stephens, 1826; *Leucocarbo carunculatus* (J.F. Gmelin, 1789); *Leucocarbo chalconotus* (G.R. Gray, 1845); *Stictocarbo punctatus punctatus* (Sparrman, 1786); *Stictocarbo punctatus oliveri* Mathews, 1930; *Stictocarbo featherstoni* (Buller, 1873).

Other hosts: *Leucocarbo albiventer* (Lesson, 1831); *Leucocarbo bougainvillii* (Lesson, 1837); *Phalacrocorax aristotelis* (Linnaeus, 1761); *Phalacrocorax auritus* (Lesson, 1831); *Phalacrocorax fuscescens* (Vieillot, 1817); *Phalacrocorax gaimardi* (Lesson & Garnot, 1828); *Phalacrocorax magellanicus* (J.F. Gmelin, 1789); *Phalacrocorax pelagicus* Pallas, 1811; *Phalacrocorax penicillatus* (J.F. Brandt, 1837).

New Zealand localities: AK, HB, WN, SD, MB, KA, NC, MC, SC, CO, DN, CH, SI.

Geographic distribution: Europe; Africa; North & South America; Australasia.

New Zealand references: Ryan & Price (1969: 820); Wise (1977); Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (1999: 378); Paterson *et al.* (1999: 222); Galloway (2005: 17); Palma (2010).

Other significant references: Clay (1976b: 537); Green & Palma (1991: 6, 28); Forrester *et al*. (1995: 8); Palma (1996b: 125); Price *et al*. (2003: 107); Palma & Jensen (2005: 52, 61).

Remarks: *Eidmanniella pellucida* is a widespread species and highly prevalent on its New Zealand hosts.

Eidmanniella pustulosa (Nitzsch [*in* Giebel], 1866)

Menopon pustulosum Nitzsch [*in* Giebel], 1866: 393.
Eidmanniella pustulosa (Nitzsch, 1866) [sic]; Hopkins & Clay 1952: 129.
Eidmanniella pustulosa (Nitzsch, 1866) [sic]; Ryan & Price 1969: 821, figs 7, 16–17, 20, 23, 32.
Eidmanniella pustulosa (Nitzsch, 1866) [sic]; Wise 1977: 57.
Eidmanniella pustulosa (Nitzsch, 1866) [sic]; Pilgrim & Palma 1982: 14.
Eidmanniella pustulosa (Nitzsch [*in* Giebel], 1866); Murray *et al.* 1990: 1372.
Eidmanniella pustulosa (Nitzsch, 1866) [sic]; Palma 2010: 407.

Neotype ♂ in NHML (Ryan & Price 1969: 822).

Type host: *Morus bassanus* (Linnaeus, 1758).

New Zealand host: *Morus serrator* (G.R. Gray, 1843).

Other host: *Morus capensis* (Lichtenstein, 1823).

New Zealand localities: AK, BP, HB, TK, WN, SD, MB, NC, MC, SC, CO, DN.

Geographic distribution: Europe; Africa; Australasia.

New Zealand references: Ryan & Price (1969: 822); Wise (1977); Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (2010).

Other significant references: Tendeiro (1958: 446, pl. 3: figs 5–6); Green & Palma (1991: 6, 28); Martín-Mateo (1992a: 40, figs 4–9); Forrester *et al.* (1995: 7); Palma (1996b: 125); Martín-Mateo (2002: 51, figs 14–15); Price *et al*. (2003: 108); Palma & Jensen (2005: 52, 61).

Remarks: *Eidmanniella pustulosa* is highly prevalent on the Australasian gannet, and exclusively parasitic on all species of gannets.

Genus *Eucolpocephalum* Bedford, 1930

Eucolpocephalum Bedford, 1930. *16th Report Director Vet. Services Animal Ind. Union of South Africa*: 161. Type species: *Eucolpocephalum robustum* Bedford, 1930 = *Eucolpocephalum femorale* (Piaget, 1880) (by original designation).

***Eucolpocephalum femorale* (Piaget, 1880)**

Figs 31–32

Menopon femorale Piaget, 1880: 484, pl. 39: fig. 8.
Eucolpocephalum robustum Bedford, 1930: 161: fig. 6.
Eucolpocephalum femorale (Piaget, 1880); Hopkins & Clay 1952: 133.
Eucolpocephalum femorale (Piaget, 1880); Pilgrim & Palma 1982: 16.
Eucolpocephalum femorale (Piaget, 1880); Murray *et al.* 1990: 1373.
Eucolpocephalum femorale (Piaget, 1880); Martín-Mateo 1994: 110, figs 1c,d, 2c.
Eucolpocephalum femorale (Piaget, 1880); Price *et al*. 2003: 108.
Eucolpocephalum femorale (Piaget, 1880); Palma 2010: 408.

Lectotype ♂ in NHML (Clay 1949b: 828).

Type host: *Platalea leucorodia* Linnaeus, 1758.

New Zealand host: *Platalea regia* Gould, 1838.

Other hosts: *Platalea alba* Scopoli, 1786; *Ajaia ajaja* (Linnaeus, 1758); *Phimosus infuscatus berlepschi* Hellmayr, 1903.

New Zealand locality: Unknown.

Geographic distribution: Eurasia; Africa; Americas; Australasia.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (2010).

Other significant references: Tuff (1966: 379, figs 1–3); Palma (1996b: 126); Martín-Mateo (1994; 2002: 48, figs 12–13); Price *et al*. (2003).

Remarks: *Eucolpocephalum femorale* is a monotypic louse species parasitic on spoonbills and ibises. Since the first record of the royal spoonbill in New Zealand in 1861, this host has become well established with many breeding localities in this country (Checklist Committee 2010: 167). However, there is only one sample of *E. femorale* from this country, without collection data other than the host name.

Genus *Franciscoloa* Conci, 1942

Subgenus *Franciscoloa* Conci, 1942

Franciscoloa Conci, 1942c. *Boll. Soc. Entomol. Italiana 74*: 35. Type species: *Franciscoloa cacatuae* Conci, 1942c = *Franciscoloa pallida* (Piaget, 1880) (by original designation).

***Franciscoloa* (*Franciscoloa*) *pallida* (Piaget, 1880)**

Figs 33–34

Colpocephalum pallidum Piaget, 1880: 526, pl. 43: fig. 9.
Franciscoloa cacatuae Conci, 1942c: 35, figs 5–12.
Psittacomenopon pallidum (Piaget, 1880): Hopkins & Clay 1952: 305.
Franciscoloa pallida (Piaget, 1880); Price & Beer 1966: 636, figs 5–8, 10–12, 19.
Franciscoloa (*Franciscoloa*) *pallida* (Piaget, 1880); Price 1967c: 511.
Franciscoloa (*Franciscoloa*) *pallida* (Piaget, 1880); Palma 1999: 381.
Franciscoloa (*Franciscoloa*) *pallida* (Piaget, 1880); Price *et al*. 2003: 109.
Franciscoloa (*Franciscoloa*) *pallida* (Piaget, 1880); Palma 2010: 408.

Lectotype ♂ in NHML (Palma 1996b: 127).

Type host: *Cacatua moluccensis* (J.F. Gmelin, 1788).

New Zealand host: *Cacatua galerita* (Latham, 1790).

Other host: *Cacatua ducorpsii* Pucheran, 1853.

New Zealand locality: WI.

Geographic distribution: Australasia.

New Zealand references: Palma (1999); Palma (2010).

Other significant references: Price & Beer (1966); Price (1967c); Green & Palma (1991: 6, 34); Palma (1996b: 127); Price *et al*. (2003).

Remarks: It is not possible to assert if *Franciscoloa* (*Franciscoloa*) *pallida* was introduced to New Zealand with sulphur-crested cockatoos by human agency, or if it was self-introduced with its host (Checklist Committee 2010: 252).

Genus *Heteromenopon* Carriker, 1954

Heteromenopon Carriker, 1954. *Rev. Bras. Entomol. 2*: 170. Type species: *Heteromenopon sincipitalis* Carriker, 1954 (by original designation).

Subgenus *Keamenopon* Price & Beer, 1967

Keamenopon Price & Beer, 1967. *Ann. Entomol. Soc. America 60*: 335. Type species: *Heteromenopon kea* (Kellogg, 1907) (by original designation).

Heteromenopon (*Keamenopon*) *kea* (Kellogg, 1907)

Figs 35–36

Menopon fulvofasciatum var. *kea* Kellogg, 1907: 122.
Menopon fulvofasciatum kea Kellogg, 1907; Harrison 1916: 39.
Menopon kea Kellogg, 1907; Conci 1942c: 36.
Psittacomenopon kea (Kellogg, 1907); Hopkins & Clay 1952: 305.
Heteromenopon (*Keamenopon*) *kea* (Kellogg, 1907); Price & Beer 1967: 336, figs 12, 25, 32.
Psittacomenopon kea; Miller 1971: 132.
Heteromenopon kea (Kellogg, 1907); Wise 1977: 57.
Heteromenopon (*Keamenopon*) *kea* (Kellogg, 1907); Pilgrim & Palma 1982: 24.
Heteromenopon (*Keamenopon*) *kea* (Kellogg, 1907); Murray *et al.* 1999: 1241.
Heteromenopon (*Keamenopon*) *kea* (Kellogg, 1907); Palma 2010: 408.

Lectotype ♂ in EMEC (Price & Beer, 1967: 337).

Type host: *Nestor notabilis* Gould, 1856.

New Zealand hosts: *Strigops habroptilus* G.R. Gray, 1845; *Nestor meridionalis septentrionalis* Lorenz, 1896; *Nestor meridionalis meridionalis* (J.F. Gmelin, 1788); *Nestor notabilis* Gould, 1856.

Other hosts: None.

New Zealand localities: ND, CL, HB, WN, NN, NC, MC, WD, SI.

Geographic distribution: New Zealand.

New Zealand references: Kellogg (1907); Conci (1942c); Price & Beer (1967: 337); Pilgrim (1970: 75); Miller (1971: 132); Wise (1977); Pilgrim & Palma (1982); Murray *et al.* (1999); Palma (2010); Buckley *et al.* (2012: App. 2).

Other significant references: Price *et al.* (2003: 110).

Remarks: *Heteromenopon* (*Keamenopon*) *kea* is an endemic and "at risk" species (Buckley *et al.* 2012), exclusively parasitic on members of the parrot family Strigopidae (*sensu* Checklist Committee 2010: 249).

Heteromenopon (*Keamenopon*) species

Heteromenopon (*Keamenopon*) sp.; Pilgrim & Palma 1982: 24.
Heteromenopon (*Keamenopon*) sp.; Murray *et al.* 1999: 1241.
Heteromenopon (*Keamenopon*) species: Marris 2000: 188.

New Zealand host: *Cyanoramphus unicolor* (Lear, 1831).

Other hosts: None.

New Zealand locality: AN.

Geographic distribution: Antipodes Islands, New Zealand.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1999); Marris (2000).

Other significant references: Price & Beer (1967: 335); Price (1969).

Remarks: The single record of this louse (voucher specimens in MONZ) could not be identified beyond the subgenus due to the poor condition of the only two available specimens which does not allow an identification of the species.

Genus *Hohorstiella* Eichler, 1940

Hohorstiella Eichler, 1940. *Zentralbl. Bakter. Parasitenkd. Infekt. 145*: 362. Type species: *Menopon latum* Piaget, 1880 = *Hohorstiella lata* (Piaget, 1880) (by original designation).

***Hohorstiella lata* (Piaget, 1880)**

Menopon latum Piaget, 1880: 457, pl. 37: fig. 1.
Menopon latum Piaget, 1880; Harrison 1916: 39 (as junior synonym of *Menopon giganteum* Denny, 1842).
Hohorstiella lata (Piaget, 1880); Hopkins & Clay 1952: 173.
Hohorstiella lata (Piaget, 1880); Pilgrim 1976: 160, fig. 3.
Hohorstiella lata (Piaget, 1880); Wise 1977: 57.
Hohorstiella lata (Piaget, 1880); Pilgrim & Palma 1982: 23.
Hohorstiella lata (Piaget, 1880); Murray *et al*. 2006a: 1965.
Hohorstiella lata (Piaget, 1880); Palma 2010: 408.

Lectotype ♂ in NHML (Clay 1949b: 835).

Type host: *Columba livia domestica* Linnaeus, 1758.

New Zealand host: *Columba livia* J.F. Gmelin, 1789.

Other hosts: None.

New Zealand locality: MC, SC.

Geographic distribution: Eurasia; north Africa; Americas; Australasia.

New Zealand references: Pilgrim (1970: 76); Pilgrim (1976); Wise (1977); Pilgrim & Palma (1982); Paterson *et al.* (1999: 220); Martín-Mateo (2002: 105); Murray *et al*. (2006a); Palma (2010).

Other significant references: Emerson (1972b: 64); Nelson & Murray (1971: 22, 25 figs 1, 6); Hill & Tuff (1978: 310); Palma (1996b: 129); Price *et al*. (2003: 111); Galloway & Lamb (2014: 445; 2015: 715).

Remarks: *Hohorstiella lata* was introduced to New Zealand and other countries with rock pigeons by human agency (Checklist Committee 2010: 245). Notwithstanding the abundance of rock pigeons in New Zealand, and unlike other lice from these hosts, records of *H. lata* are few and only from one region.

***Hohorstiella timorensis* Tendeiro, 1980** **New Record**

Figs 37–38

Hohorstiella timorensis Tendeiro, 1980: 9, figs 3–4, 7–8, photos 2–3.
Hohorstiella sp.; Pilgrim & Palma 1982: 25.
Hohorstiella sp.; Paterson *et al.* 1999: 223.
Hohorstiella sp.; Murray *et al.* 2006a: 1966.
Hohorstiella sp.; Palma 2010: 408.

Holotype ♂ in CZLP.

Type host: *Ducula cineracea* (Temminck, 1835).

New Zealand host: *Hemiphaga novaeseelandiae* (J.F. Gmelin, 1789).

Other hosts: None.

New Zealand localities: ND, AK, HB, TK, WN, MB.

Geographic distribution: Timor & Wetar Islands (Indonesia); New Zealand.

New Zealand references: Pilgrim & Palma (1982); Paterson *et al.* (1999: 223); Murray *et al.* (2006a), Palma (2010).

Other significant reference: Price *et al*. (2003: 111).

Material examined and repository: 69♂, 72♀ (13 samples, MONZ).

Remarks: This is the first record of *Hohorstiella timorensis* for New Zealand because the New Zealand references cited above reported this louse as "*Hohorstiella* sp." only. The type host of *H. timorensis* is endangered (Trainor 2002: 10). However, the New Zealand pigeon is common and widespread (Checklist Committee 2010: 247).

Genus *Holomenopon* Eichler, 1941

Holomenopon Eichler, 1941c. *Stettin. Entomol. Zeit. 102*: 125. Type species: *Menopon albofasciatum* Piaget, 1880 = *Holomenopon leucoxanthum* (Burmeister, 1838) (by original designation).

***Holomenopon leucoxanthum* (Burmeister, 1838)**

Menopon leucoxanthum Burmeister, 1838a: 440.
Menopon leucoxanthum Nitzsch [in Burmeister], 1838; Séguy 1944: 92, figs 109–111.
Holomenopon leucoxanthum (Burmeister, 1838); Hopkins & Clay 1952: 174.

Holomenopon leucoxanthum (Burmeister, 1838); Price 1971: 635, figs 2–13.
Holomenopon leucoxanthum (Burmeister, 1838); Pilgrim & Palma 1982: 16–17.
Holomenopon leucoxanthum (Burmeister, 1838); Palma 1999: 379.
Holomenopon leucoxanthum (Burmeister, 1838); Palma 2010: 408.

Neotype ♀ in USNM (Price 1971: 635).

Type host: *Anas crecca crecca* Linnaeus, 1758.

New Zealand hosts: *Dendrocygna eytoni* (Eyton, 1838); *Cygnus atratus* (Latham, 1790); *Branta canadensis maxima* Delacour, 1951; *Anas gracilis* Buller, 1869; *Anas aucklandica* (G.R. Gray, 1849); *Anas platyrhynchos platyrhynchos* Linnaeus, 1758.

Other hosts: Nine other species of *Anas*; seven species of *Aythya*; four other species of *Dendrocygna*; two species of *Netta*; two species of *Tadorna*; *Anser anser* (Linnaeus, 1758); *Bucephala albeola* (Linnaeus, 1758); *Cairina moschata* (Linnaeus, 1758); *Clangula hyemalis* (Linnaeus, 1758); *Melanitta nigra* (Linnaeus, 1758); *Nettapus cormandelianus* (J.F. Gmelin, 1789); *Oxyura jamaicensis* (J.F. Gmelin, 1789); *Sarkidiornis melanotos* (Pennant, 1769) (see Price *et al*. 2003: 112).

New Zealand localities: ND, AK, BP, WO, HB, TK, WA, CH, AU.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990: 1374); Paterson *et al.* (1999: 219); Palma (1999); Palma (2010).

Other significant references: Price (1971); Humphreys (1975: 96); Moreby (1976: 92); Clay (1976b: 537); Green & Palma (1991: 6, 29); Forrester *et al*. (1995: 14); Palma (1996b: 130); Martín-Mateo (2002: 54, figs 16B,D, 17); Price *et al*. (2003: 112); Palma & Jensen (2005: 52, 62); Ahmad *et al*. (2015: 568).

Remarks: *Dendrocygna eytoni* is a straggler to New Zealand, recorded occasionally since 1871 (Checklist Committee 2010: 31), and is a new host record for *Holomenopon leucoxanthum* in New Zealand (voucher specimens in MONZ).

Holomenopon tadornae (Gervais, 1844)

Figs 39–40

Philopterus tadornae Gervais, 1844: 323, pl. 49: fig. 6.
Menopon tadornae Gervais, 1844 [sic]; Harrison 1916: 45.
Holomenopon tadornae (Gervais, 1844); Hopkins & Clay 1952: 175.
Holomenopon tadornae (Gervais, 1844) sensu lato; Price 1971: 640, figs 17–18.
Holomenopon tadornae (Gervais, 1844); Pilgrim & Palma 1982: 16.
Holomenopon tadornae (Gervais, 1844); Palma 1999: 379.
Holomenopon tadornae (Gervais, 1844); Palma 2010: 408.

Status, sex and repository of types unknown.

Type host: *Tadorna tadorna* (Linnaeus, 1758).

New Zealand hosts: *Tadorna variegata* (J.F. Gmelin, 1789); *Tadorna tadornoides* (Jardine & Selby, 1828).

Other hosts: *Branta bernicla* (Linnaeus, 1758); *Alopochen aegyptiaca* (Linnaeus; 1766); *Chloephaga melanoptera* (Eyton, 1838); *Tadorna ferruginea* (Pallas).

New Zealand localities: HB, NN, NC, MC, SC, FD.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Pilgrim & Palma (1982); Murray *et al*. (1990: 1374); Palma (1999); Palma (2010).

Other significant references: Price (1971); Price *et al*. (2003: 113).

Remarks: *Holomenopon tadornae* appears to be restricted to species of the tribe Tadornini.

Holomenopon species 1

"*Holomenopon clypeilargum*" Price, 1971: 643 (not *Holomenopon clypeilargum* Eichler, 1943).
"*Holomenopon clypeilargum*" Wise, 1977: 57 (not *Holomenopon clypeilargum* Eichler, 1943).
Holomenopon sp.; Pilgrim & Palma 1982: 17, 30, note 19.
Holomenopon sp.; Murray *et al.* 1990: 1374.
Holomenopon clypeilargum Eichler, 1943; Price *et al.* 2003: 112, 279. In part.

Holomenopon sp.; Palma 2010: 408.

New Zealand host: *Aythya novaeseelandiae* (J.F. Gmelin, 1789).

New Zealand locality: BP.

Geographic distribution: New Zealand.

New Zealand references: Price (1971); Wise (1977); Pilgrim & Palma (1982); Murray *et al.* (1990); Price *et al.* (2003: 112, 279); Palma (2010).

Other significant references: None.

Remarks: This entry represents an undescribed and unnamed endemic species, but more samples are needed before a proper description of the species can be prepared and published. Price (1971: 643) misidentified a female from *Aythya novaeseelandiae* as "*Holomenopon clypeilargum*", establishing an incorrect host-louse association which was adopted by Wise (1977: 57) and Price *et al*. (2003: 279). Therefore, the host listed as "*A. novaeseelandiae* (Gmelin)" under *Holomenopon clypeilargum* in Price *et al.* (2003: 112) is incorrect. See also "Species & subspecies deleted from the New Zealand louse fauna" below.

Holomenopon species 2

Holomenopon sp.; Pilgrim & Palma 1982: 17.

Holomenopon sp.; Mourik & Norman 1985: 2.

Holomenopon sp.; Murray *et al.* 1990: 1374.

Holomenopon sp.; Palma 2010: 408.

New Zealand host: *Anas rhynchotis* Latham, 1802.

New Zealand locality: MC.

Geographic distribution: Australasia.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (2010).

Other significant reference: Mourik & Norman (1985).

Remarks: This entry represents an undescribed and unnamed species, but the material available is insufficient to publish a formal description.

Genus *Kurodaia* Uchida, 1926

Kurodaia Uchida, 1926. *Jour. Coll. Agric. Tokyo 9*: 50. Type species: *Colpocephalum haliaeeti* Denny, 1842 = *Kurodaia* (*Kurodaia*) *haliaeeti* (Denny, 1842) (by original designation).

Subgenus *Conciella* Eichler, 1949

Conciella Eichler, Eichler, 1949a. *Boll. Soc. Entomol. Italiana 79*: 11. Type species: *Colpocephalum painei* McGregor, 1912 = *Kurodaia* (*Conciella*) *painei* (McGregor, 1912) (by original designation).

Kurodaia (*Conciella*) *cryptostigmatia* (Nitzsch [*in* Giebel], 1861)

Figs 41–42

Menopon cryptostigmation Nitzsch [*in* Giebel], 1861a: 529.

Conciella cryptostigmation; Eichler 1949a: 11.

Kurodaia cryptostigmatia (Nitzsch, 1861) [sic]; Hopkins & Clay 1952: 181.

Kurodaia cryptostigmatia (Nitzsch, 1861) [sic]; Price & Beer 1963b: 850, 1–4, 10B.

Kurodaia cryptostigmatia (Nitzsch, 1861) [sic]; Pilgrim & Palma 1982: 25.

Kurodaia cryptostigmatia (Nitzsch, 1861) [sic]; Murray *et al.* 1999: 1241.

Kurodaia (*Conciella*) *cryptostigmatia* (Nitzsch [*in* Giebel], 1861); Price *et al.* 2003: 114.

Kurodaia cryptostigmatia (Nitzsch, 1861) [sic]; Palma 2010: 408.

Status, sex and repository of types unknown, presumed lost. See Clay (1949a: 1) and Palma & Pilgrim (1984: 150).

Type host: *Athene noctua* (Scopoli, 1769).

New Zealand host: *Ninox novaeseelandiae novaeseelandiae* (J.F. Gmelin, 1788).

Other hosts: *Otus senegalensis* (Swainson, 1837); *Otus scops* (Linnaeus, 1758); *Otus rutilus* (Pucheran, 1849); *Otus cooperi* (Ridgway, 1878); *Strix aluco* Linnaeus, 1758; *Glaucidium capense* (A. Smith, 1834); *Glaucidium passerinum* (Linnaeus, 1758); *Aegolius funereus* (Linnaeus, 1758); *Asio madagascariensis* (A. Smith, 1834).

New Zealand localities: AK, BP, BP, TO, TK, WN, SD, MB, WD.

Geographic distribution: Eurasia; Africa; Central America; Australasia.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1999); Palma (2010).

Other significant references: Price & Beer (1963b); Green & Palma (1991: 6, 36); Palma (1996b: 131); Martín-Mateo (2002: 83, fig. 27C); Price *et al*. (2003).

Remarks: *Kurodaia* (*C.*) *cryptostigmatia* has not yet been found on the New Zealand population of *Athene noctua*, which was originally introduced by humans in 1906–1911 (Checklist Committee 2010: 267).

Genus *Longimenopon* Thompson, 1948

"New genus F" Clay, 1947. *Proc. Zool. Soc. London 117*: 466, 473.

Longimenopon Thompson, 1948d. *Occ. Pap. Bishop Mus. Honolulu 19*: 197. Type species: *Longimenopon puffinus* Thompson, 1948 (by original designation).

Longimenopon galeatum Timmermann, 1957

Longimenopon galeatum Timmermann, 1957b: 9, figs 2c, 7–8.

Longimenopon galeatum Timmermann, 1957; Timmermann 1965: 182, fig. 117c, pl. 12: fig. 5.

Longimenopon galeatum Timmermann, 1957; Clay & Moreby 1967: 159, 168, fig. 54.

Longimenopon galeatum Timmermann, 1957; Watson 1967: 72.

Longimenopon galeatum Timmermann, 1957; Clay & Moreby 1970: 218.

Longimenopon galeatum Timmermann, 1957; Wise 1977: 57.

Longimenopon galeatum Timmermann, 1957; Palma & Horning 2002: 6, 16.

Longimenopon galeatum Timmermann, 1957; Palma 2010: 408.

Holotype ♂ in NHML.

Type host: *Pelagodroma marina* (Latham, 1790).

New Zealand host: *Pachyptila desolata* (J.F. Gmelin, 1789).

Other host: *Lugensa brevirostris* (Lesson, 1833).

New Zealand localities: AU, Macquarie Island.

Geographic distribution: Atlantic and Pacific Oceans.

New Zealand references: Timmermann (1957b: 12); Watson (1967); Clay & Moreby (1970); Gressitt (1970: 326); Wise (1977); Palma (1996b: 132); Palma & Horning (2002); Palma (2010).

Other significant references: Timmermann (1965); Clay & Moreby (1967); Price *et al*. (2003: 115); Hänel & Palma (2007: 112, 122, 130).

Remarks: I have included *Longimenopon galeatum* following records from New Zealand by Timmermann (1957b), Watson (1967) and others (see above). However, until a complete revision of the genus *Longimenopon* becomes available, I am not able to specifically name with confidence any sample of this genus from any host (see below).

Longimenopon species

Figs 43–44

Longimenopon sp.; Nelson 1969: 199.

Longimenopon sp.; Watt 1971: 233, 242.

Longimenopon sp.; Palma & Pilgrim 1977: 290.

Longimenopon sp.; Horning *et al.* 1980: 4, 9.

Longimenopon sp.; Pilgrim & Palma 1982: 8–11, 13.

Longimenopon sp.; Murray *et al.* 1990: 1369–1370, 1372.

Longimenopon sp.; Paterson *et al.* 1999: 222.

Longimenopon sp.; Palma 1999: 376.

New Zealand hosts: *Lugensa brevirostris* (Lesson, 1833); *Pterodroma magentae* (Giglioli & Salvadori, 1869); *Pterodroma neglecta neglecta* (Schlegel, 1863); *Pterodroma inexpectata* (J.R. Forster, 1844); *Pterodroma nigripennis* (Rothschild, 1893); *Pterodroma cookii* (G.R. Gray, 1843); *Pterodroma longirostris* (Stejneger, 1888); *Pterodroma pycrofti* Falla, 1933; *Halobaena caerulea* (J.F. Gmelin, 1789); *Pachyptila vittata* (G. Forster, 1777); *Pachyptila salvini salvini* (Mathews, 1912); *Pachyptila desolata* (J.F. Gmelin, 1789); *Pachyptila belcheri*

(Mathews, 1912); *Pachyptila turtur* (Kuhl, 1820); *Pachyptila crassirostris pyramidalis* Fleming, 1939; *Pelagodroma marina maoriana* Mathews, 1912.

Other host: *Pterodroma mollis* (Gould, 1844).

New Zealand localities: ND, CL, AK, BP, GB, WI, WN, NN, NC, MC, SC, WD, SL, KE, Norfolk Island, CH, SI, SN, Macquarie Island.

Geographic distribution: Atlantic, Indian and Pacific Oceans.

New Zealand references: Nelson (1969); Watt (1971); Palma & Pilgrim (1977); Horning *et al.* (1980); Pilgrim & Palma (1982); Palma & Pilgrim (1983: 148); Murray *et al.* (1990); Paterson *et al.* (1999); Palma (1999); Palma & Imber (2000: 230); Buckley *et al.* (2012: App. 2).

Other significant references: Séguy (1953: 590, fig. 47); Timmermann (1965: 179, figs 116–117, pl. 12: figs 1–4); Green & Palma (1991: 7, 27); Zonfrillo (1993: 327); Furness & Palma (1992: 35, 41); Jensen & Palma (2005: 228).

Remarks: A complete systematic revision of the six species of *Longimenopon* currently accepted as valid (see Price *et al*. 2003: 115), including type material and samples available from many other hosts, needs to be made before any specimen can be confidently named (Pilgrim & Palma 1982: 2). A preliminary examination of many specimens from all the hosts listed above from New Zealand has shown a remarkably uniform morphology, especially regarding chaetotaxy, male genitalia and head shape. Timmermann (1957b: 8) expressed difficulty in deciding where to draw the limits between species, and proceeded to separate the five species he recognised as valid by the shape of the head and overall size. However, both these characters are liable to change significantly during the slide-mounting process, especially because of the very soft exoskeleton of these lice. I have examined specimens from the *same* sample that show a range of variation in head shape —due to the different levels of pressure exerted by the cover-slip— equivalent to that depicted by Timmermann (1957b: 10, fig. 2) for three different species!

Genus *Menacanthus* Neumann 1912

Menopon (*Menacanthus*) Neumann, 1912a. *Arch. Parasitol., Paris 15*(3): 354. Type species: *Menopon robustum* Kellogg, 1896b = *Menacanthus robustus* (Kellogg, 1896) (by original designation).

Eomenacanthus Uchida, 1926. *Jour. Coll. Agric. Tokyo 9*: 30. Type species: "*Eomenacanthus biseriatum* (Piaget)" = *Menacanthus stramineus* (Nitzsch, 1818) (by original designation).

Menacanthus eurysternus (Burmeister, 1838)

Menopon eurysternum Burmeister, 1838a: 439.

Menopon sp.; Johnston & Harrison 1912: 364.

Menacanthus mutabilis Blagoveshtchensky, 1940: 31, 78, fig. 5.

Menacanthus eurysternum [sic] (Burmeister, 1838); Hopkins & Clay 1952: 210.

Menacanthus mutabilis Blagoveshtchensky, 1940; Watt 1971: 233, 244, fig. 3.

Menacanthus sp.; Watt 1971: 233, 244.

Menacanthus eurysternus (Burmeister, 1838); Price 1975: 617, figs 1–9.

Menacanthus eurysternus (Burmeister, 1838); Wise 1977: 57.

Menacanthus eurysternus (Burmeister, 1838); Pilgrim & Palma 1982: 26.

Menacanthus eurysternus (Burmeister, 1838); Murray *et al.* 2001: 1263.

Menacanthus eurysternus (Burmeister, 1838); Palma 2010: 408.

Status, sex and repository of types unknown, presumed lost. See Clay (1949a: 1), Palma & Pilgrim (1984: 150) and Palma (1996b: 133).

Type host: *Pica pica pica* (Linnaeus, 1758).

New Zealand hosts: *Anthornis melanura melanura* (Sparrman, 1786); *Prosthemadera novaeseelandiae novaeseelandiae* (Gmelin, 1788); *Petroica* (*Miro*) *australis australis* (Sparrman, 1788); *Zosterops lateralis lateralis* (Latham, 1802); *Turdus merula merula* Linnaeus, 1758; *Turdus philomelos* Brehm, 1831; *Sturnus vulgaris vulgaris* Linnaeus, 1758; *Acridotheres tristis* (Linnaeus, 1766); *Passer domesticus domesticus* (Linnaeus, 1758); *Anthus novaeseelandiae novaeseelandiae* (Gmelin, 1789); *Carduelis chloris* (Linnaeus, 1758); *Serinus canaria* (Linnaeus, 1758) captive.

Other hosts: Over 150 species of the order Passeriformes and seven species of the order Piciformes (see Price *et al*. 2003: 119, 364).

New Zealand localities: ND, CL, AK, HB, TK, WI, WN, KA, NC, MC, SC, WD, CO, DN, KE, CH, SI, SN.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Johnston & Harrison (1912); Watt (1971); Price (1975: 621); Wise (1977); Horning *et al.* (1980: 4, 12); Pilgrim & Palma (1982); Paterson *et al.* (1999: 220); Palma (1999: 381); Murray *et al.* (2001); Murray *et al.* (2002: 1216); Galloway (2005: 14, 16); Murray *et al.* (2006b: 1958, 1960); Palma (2010).

Other significant references: Price (1977: 219); Castro & Cicchino (1978: 78); Kettle (1983: 403); Green & Palma (1991: 7, 38); Palma (1996b: 133); Palma *et al*. (1998: 311, 317); Martín-Mateo (2002: 108); Price *et al*. (2003: 119); Palma & Jensen (2005: 52, 68); Adam (2007: 161, figs 5d, 6a); Martinů *et al*. (2015: 64).

Remarks: *Menacanthus eurysternus* is the louse species with the largest number of hosts among all Phthiraptera, with over 170 host species, belonging to more than 20 families in two orders (Price 1975: 620; Price *et al*. 2003: 119). *Carduelis chloris* is a new host record for this louse species in New Zealand (voucher specimens in MONZ). Also, *Serinus canaria* is only a cage bird in New Zealand.

Menacanthus pallidulus (Neumann, 1912)

Figs 45–46

Menopon (*Menacanthus*) *pallidulum* Neumann, 1912a: 361, figs 7–9.
Menacanthus pallidulus (Neumann, 1912); Hopkins & Clay 1952: 213.
Menacanthus sp.; Pilgrim & Palma 1982: 18.
Menacanthus sp.; Murray *et al.* 1993: 960.
Menacanthus sp.; Paterson *et al.* 1999: 219.
Menacanthus pallidulus Neumann, 1912 [sic]; Palma 1999: 380, 383, note 5.
Menacanthus pallidulus (Neumann, 1912); Price *et al.* 2003: 124.
Menacanthus pallidulus Neumann, 1912 [sic]; Palma 2010: 408.

Syntypes ♂♀, repository not confirmed, probably in the Ecole Vétérinaire de Toulouse, France.

Type host: *Gallus gallus* (Linnaeus, 1758).

New Zealand hosts: *Gallus gallus gallus* (Linnaeus, 1758); *Phasianus colchicus* Linnaeus, 1758.

Other hosts: *Bambusicola thoracicus* (Temminck, 1815); *Gallus sonneratii* Temminck, 1813.

New Zealand locality: WO, WN, NC, MC, SC.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1993); Paterson *et al.* (1999); Palma (1999); Palma (2010).

Other significant references: Emerson (1956a: 77, pl. 8); Emerson & Ward (1958: 52); Marconcini & Macchioni (1975: 108, figs 9–10); Forrester *et al*. (1995: 20); Martín-Mateo (2002: 110); Price *et al*. (2003).

Remarks: *Menacanthus pallidulus* was introduced to New Zealand and other countries with chickens by human agency (Checklist Committee 2010: 27). Records of this louse from *Phasianus colchicus* may be due to the human practice of using chickens to incubate pheasant eggs in captivity.

Gallus gallus gallus has been listed for the first time in the latest edition of the New Zealand Checklist of Birds (Checklist Committee 2010: 27; see also Palma 1999: 383, note 5).

Menacanthus rhipidurae Palma & Price, 2005

Menacanthus sp.; Pilgrim & Palma 1982: 26.
Menacanthus sp.; Paterson *et al.* 1999: 221.
Menacanthus sp.; Galloway 2005: 17.
Menacanthus rhipidurae Palma & Price, 2005: 112, figs 1–5.
Menacanthus rhipidurae Palma & Price, 2005; Murray *et al.* 2006b: 1956.
Menacanthus rhipidurae Palma & Price, 2005; Palma 2010: 408.

Holotype ♂ in MONZ.

Type host: *Rhipidura fuliginosa fuliginosa* (Sparrman, 1787).

New Zealand host: *Rhipidura fuliginosa fuliginosa* (Sparrman, 1787).

Other hosts: None.

New Zealand localities: NN, NC, WD.

Geographic distribution: New Zealand.

New Zealand references: Pilgrim & Palma (1982); Paterson *et al.* (1999); Galloway (2005); Palma & Price (2005); Murray *et al.* (2006b); Palma (2010).

Other significant references: None.

Remarks: *Menacanthus rhipidurae* is an endemic species, although it is likely that some Australian species of *Rhipidura* closely related to *Rhipidura fuliginosa* (see Checklist Committee 2010: 298) may harbour this species of *Menacanthus* as well.

Menacanthus stramineus (Nitzsch, 1818)

Pediculus meleagridis Panzer, 1793: 51, fig. 20. Preoccupied by *Pediculus meleagridis* Linnaeus, 1758: 613.
Liotheum (*Menopon*) *stramineum* Nitzsch, 1818: 300. *Nomen novum* for *Pediculus meleagridis* Panzer, 1793.
Menopon biseriatum Piaget, 1880: 469, pl. 37: fig. 2.
Menopon stramineum Nitzsch [*in* Giebel], 1874 [sic]; Harrison 1916: 45.
Menopon biseriatim [sic] Nitzsch [sic]; Thomson 1922: 270.
Menacanthus stramineus (Nitzsch, 1818); Hopkins & Clay 1952: 215.
Eomenacanthus stramineus (Nitzsch); Neuffer 1954: 452, figs 5, 8, 19, 28, 33, 42, 44.
Eomenocanthus [sic] *stramineus*; Helson 1956: 13.
Menacanthus stramineus (Nitzsch); Whitten 1971: 383.
Menacanthus stramineus (Nitzsch, 1818); Wise 1977: 57.
Menacanthus stramineus (Nitzsch, 1818); Pilgrim & Palma 1982: 18.
Menacanthus stramineus (Nitzsch, 1818); Murray *et al.* 1993: 960.
Menacanthus stramineus (Nitzsch, 1818); Palma 1999: 384, note G.
Menacanthus stramineus (Nitzsch, 1818); Palma 2010: 408.

Neotype ♂ in NHML (Clay & Hopkins 1960: 48).

Type host: *Meleagris gallopavo* Linnaeus, 1758.

New Zealand hosts: *Meleagris gallopavo* Linnaeus, 1758; *Gallus gallus gallus* (Linnaeus, 1758).

Other hosts: *Numida meleagris* (Linnaeus, 1758); *Tragopan satyra* (Linnaeus, 1758); *Lophura leucomelanos* (Latham, 1790); *Phasianus colchicus* Linnaeus, 1758; *Pavo cristatus* Linnaeus, 1758.

New Zealand localities: BP, WO, HB, WN, NC, MC, SC, CO, DN, KE.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Thomson (1922); Helson (1956); Whitten (1971); Watt (1971: 233); Pilgrim (1974: 1035, fig. 6); Wise (1977); Pilgrim & Palma (1982); Murray *et al.* (1993); Paterson *et al.* (1999: 220); Palma (1999); Palma (2010).

Other significant references: Webb (1946: 51); Neuffer (1954); Emerson (1956a: 77, pl. 9); Clay & Hopkins (1960: 47, figs 73–74); Emerson (1962: 196, figs 1–3); Forrester *et al*. (1995: 21); Palma (1996b: 135); Martín-Mateo (2002: 112, fig. 36); Price *et al*. (2003: 125); Palma & Jensen (2005: 53, 62); Adam (2007: 163, figs 6d, 7a).

Remarks: *Menacanthus stramineus* was introduced to New Zealand and other countries with chickens or turkeys by human agency. This louse has spread onto a number of adventive hosts due to the human practice of mixing various species of game birds in captivity. *Menacanthus stramineus* is haematophagous (Wilson 1933); consequently, it is a serious pest of captive birds by causing anaemia and transmitting microorganisms that cause disease (Derylo 1970, 1977).

Gallus gallus gallus has been listed for the first time in the latest edition of the New Zealand Checklist of Birds (Checklist Committee 2010: 27; see also Palma 1999: 383, note 5).

Menacanthus species

Menacanthus sp.; Pilgrim & Palma 1982: 25.
Menacanthus sp.; Murray *et al*. 2001: 1262.

New Zealand host: *Acanthisitta chloris chloris* (Sparrman, 1787).

Other hosts: None.

New Zealand localities: NN, FD.

Geographic distribution: New Zealand: South Island.

New Zealand references: Pilgrim & Palma (1982); Murray et al. (2001).

Other significant reference: Price (1977).

Remarks: The two available records of *Menacanthus* from the South Island rifleman could not be identified to species because the samples contain females only (voucher specimens in MONZ).

Genus *Menopon* Nitzsch, 1818

Menopon Nitzsch, 1818. *Germar's Mag. Entomol. 3*: 299. Type species: *Menopon gallinae* (Linnaeus, 1758) (by subsequent designation).

Menopon gallinae (Linnaeus, 1758)

Figs 47–48

Pediculus gallinae Linnaeus, 1758: 613.
Ricinus gallinae (Linnaeus, 1758); Latreille 1804: 109.
Liotheum (*Menopon*) *pallidum* Nitzsch, 1818: 299.
Menopon pallidum Nitzsch; Thomson 1922: 269.
Menopon gallinae (Linnaeus, 1758); Hopkins & Clay 1952: 219.
Menopon gallinae (L.); Helson 1956: 13, 17.
Menopon gallinae (Linnaeus, 1758); Watt 1971: 233, 243.
Menopon gallinae (Linnaeus, 1758); Wise 1977: 57.
Menopon gallinae (Linnaeus, 1758); Palma 1999: 384, note G.
Menopon gallinae (Linnaeus, 1758); Price *et al.* 2003: 126.
Menopon gallinae (Linnaeus, 1758); Palma 2010: 408.

Neotype ♂ in NHML (Clay & Hopkins 1950: 262).

Type host: *Gallus gallus* (Linnaeus, 1758).

New Zealand hosts: *Gallus gallus gallus* (Linnaeus, 1758); *Numida meleagris* (Linnaeus, 1758) captive.

Other hosts: *Meleagris gallopavo* Linnaeus, 1758; *Caloperdix oculeus* (Temminck, 1815); *Tragopan satyra* (Linnaeus, 1758); *Gallus sonneratii* Temminck, 1813; *Gallus lafayettii* Lesson, 1831; *Syrmaticus mikado* (Ogilvie-Grant, 1906) and seven species of *Lophura* (see Price *et al*. 2003: 126).

New Zealand localities: AK, TO, WI, WN, NC, MC, SC, KE.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Thomson (1922); Tillyard (1926: 134); Helson (1956); Miller (1971: 131); Whitten (1971: 383); Watt (1971); Wise (1977); Palma (1999); Palma (2010).

Other significant references: Ferris (1924: 57, fig. 1); Clay & Hopkins (1950: 262, fig. 56); Emerson (1954: 225, fig. 8); Emerson (1956a: 77, pl. 10); Emerson & Ward (1958: 54); Rudolph (1983: 16); Price (1987: 218, figs 22.2, 22.8, 22.11–22.13); Palma (1996b: 136); Martín-Mateo (2002: 103, fig. 34); Adam (2007: 158, figs 4a,b); Price *et al*. (2003: 126); Palma & Jensen (2005: 53, 62); Palma & Peck (2013: 21).

Remarks: *Menopon gallinae* was introduced to New Zealand and other countries with chickens by human agency. *Gallus gallus gallus* has been listed for the first time in the latest edition of the New Zealand Checklist of Birds (Checklist Committee 2010: 27; see also Palma 1999: 383, note 5).

Genus *Myrsidea* Waterston, 1915

Myrsidea Waterston, 1915. *Entomol. Month. Mag. 51*: 12. Type species: *Myrsidea victrix* Waterston, 1915 (by original designation).

Myrsidea hihi Sychra, Kolencik & Palma, 2016

Myrsidea sp.; Pilgrim & Palma 1982: 27.
Myrsidea sp.; Murray *et al*. 2001: 1263.
Myrsidea sp.; Palma 2010: 408.
Myrsidea hihi Sychra, Kolencik & Palma, 2016: 405, figs 12–13, 22, 29–30.

Holotype ♀ in MONZ.

Type host: *Notiomystis cincta* (du Bus de Gisignies, 1839).
New Zealand host: *Notiomystis cincta* (du Bus de Gisignies, 1839).
Other hosts: None.
New Zealand localities: CL, WA (captive).
Geographic distribution: New Zealand.
New Zealand references: Pilgrim & Palma (1982); Murray *et al*. (2001); Palma (2010); Sychra *et al.* (2016).
Other significant references: None.
Remarks: Both *Myrsidea hihi* and its single host, the stitchbird, are endemic to New Zealand and regarded as vulnerable species (Robertson *et al*. 2013: 11).

***Myrsidea ivanliteraki* Sychra, Kolencik & Palma, 2016**

Myrsidea sp.; Pilgrim & Palma 1982: 28.
Myrsidea sp.; Murray *et al*. 2006b: 1957.
Myrsidea sp.; Palma 2010: 408.
Myrsidea ivanliteraki Sychra, Kolencik & Palma, 2016: 399, figs 1–6, 14–16, 25–26.

Holotype ♀ in MONZ.
Type host: *Gymnorhina tibicen* (Latham, 1802).
New Zealand host: *Gymnorhina tibicen* (Latham, 1802).
Other hosts: None.
New Zealand localities: ND, CL, BP, GB, TK, WN.
Geographic distribution: Australasia.
New Zealand references: Pilgrim & Palma (1982); Paterson *et al.* (1999: 221, 223); Murray *et al*. (2006b); Palma (2010); Sychra *et al.* (2016).
Other significant references: None
Remarks: *Myrsidea ivanliteraki* is native to Australia, and was introduced to New Zealand with Australian magpies by human agency (Checklist Committee 2010: 297).

***Myrsidea novaeseelandiae* Sychra, Kolencik & Palma, 2016**

Myrsidea sp.; Pilgrim & Palma 1982: 27.
Myrsidea sp.; Murray *et al*. 2001: 1263.
Myrsidea sp.; Palma 2010: 408.
Myrsidea novaeseelandiae Sychra, Kolencik & Palma, 2016: 401, figs 9–11, 19–21, 27–28.

Holotype ♀ in MONZ.
Type host: *Anthornis melanura oneho* Bartle & Sagar, 1987.
New Zealand hosts: *Anthornis melanura obscura* Falla, 1948; *Anthornis melanura melanura* (Sparrman, 1786); *Prosthemadera novaeseelandiae novaeseelandiae* (J.F. Gmelin, 1788).
Other hosts: None.
New Zealand localities: AK, ND, CL, BP, WN, NN, NC, MC, SC, WD, CO, DN, TH, AU.
Geographic distribution: New Zealand.
New Zealand references: Pilgrim & Palma (1982); Murray *et al*. (2001); Palma (2010); Sychra *et al.* (2016).
Other significant references: None.
Remarks: Together with its hosts, *Myrsidea novaeseelandiae* is endemic to New Zealand. Notwithstanding the large number of species placed in the bird family Meliphagidae (Dickinson 2003: 431), and some records of "*Myrsidea* sp." from Australian meliphagids in Murray *et al*. (2001: 1262), *Myrsidea novaeseelandiae* is so far the only described and named species of *Myrsidea* from that host family.

***Myrsidea serini* (Séguy, 1944)**

Menopon serini Séguy 1944: 80, fig. 84a,b,c.
Myrsidea serini (Séguy, 1944); Hopkins & Clay 1952: 233.
Myrsidea sp.; Pilgrim & Palma 1982: 27.

Myrsidea serini (Séguy, 1944); Klockenhoff 1984: 18, figs 1–4.
Myrsidea serini (Séguy, 1944); Palma 1999: 382.
Myrsidea serini (Séguy, 1944); Murray *et al*. 2006b: 1959.
Myrsidea serini (Séguy, 1944); Palma 2010: 407.

Lectotype ♂ in MNHN (Klockenhoff 1984: 20).

Type host: *Serinus serinus* (Linnaeus, 1766).

New Zealand hosts: *Carduelis chloris* (Linnaeus, 1758); *Carduelis carduelis britannica* (Hartert, 1903); *Emberiza citrinella* Linnaeus, 1758; *Serinus canaria* (Linnaeus, 1758) captive.

Other hosts: *Carduelis barbata* (Molina, 1782); *Chrysomus thilius petersii* (Laubmann, 1934); *Agelaioides badius badius* (Vieillot, 1819).

New Zealand localities: WN, MC, KE.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Pilgrim & Palma (1982); Klockenhoff (1984); Palma (1999); Murray *et al*. (2006b); Price & Dalgleish (2007: 13, fig. 39); Palma (2010); Cicchino & Valim (2015: 240, figs 1–33); Sychra *et al.* (2016: 397, 409).

Other significant references: Price *et al*. (2003: 131).

Remarks: *Myrsidea serini* was introduced to New Zealand with its hosts by human agency (Checklist Committee 2010: 320, 322). In New Zealand, *Serinus canaria* is only a cage bird, and releases to establish it in the wild were unsuccessful (Checklist Committee 2010: 346).

Myrsidea thoracica (Giebel, 1874)

Figs 49–50

Menopon thoracicum Giebel, 1874: 287.
Myrsidea thoracica (Giebel, 1874); Hopkins & Clay 1952: 234.
Myrsidea thoracica (Giebel, 1874); Clay 1966c: 342, figs 1, 5–8, 25–27, 64, pl. 1: figs1, 5, 6.
Myrsidea thoracica (Giebel, 1874); Pilgrim & Palma 1982: 26.
Myrsidea thoracica (Giebel, 1874); Price *et al*. 2003: 132.
Myrsidea thoracica (Giebel, 1874); Murray *et al*. 2006b: 1959.
Myrsidea thoracica (Giebel, 1874); Palma 2010: 408.

Syntypes ♂♀, presumed lost. See Clay (1949a: 1) and Palma & Pilgrim (1984: 150).

Type host: *Turdus viscivorus* Linnaeus, 1758.

New Zealand host: *Turdus merula merula* Linnaeus, 1758.

Other hosts: *Zoothera sibirica* (Pallas, 1776); *Turdus boulboul* (Latham, 1790); *Turdus obscurus* J.F. Gmelin, 1789; *Turdus pallidus* J.F. Gmelin, 1789; *Turdus chrysolaus* Temminck, 1832; *Turdus ruficollis* Pallas, 1776.

New Zealand localities: AK, WN, CH.

Geographic distribution: Eurasia; Australasia.

New Zealand references: Pilgrim & Palma (1982); Paterson *et al.* (1999: 220); Murray *et al*. (2006b); Palma (2010); Sychra *et al.* (2016: 397, 409).

Other significant references: Clay (1966c); Baum (1968: 143, fig. 4); Martín-Mateo (2002: 120); Price *et al*. (2003).

Remarks: *Myrsidea thoracica* was introduced to New Zealand with Eurasian blackbirds by human agency (Checklist Committee 2010: 313).

Myrsidea species

Myrsidea sp.; Pilgrim & Palma 1982: 26.
Myrsidea sp.; Palma 1999: 381.
Myrsidea sp.; Murray *et al*. 2002: 1215.
Myrsidea sp.; Murray *et al.* 2006b: 1959.
Myrsidea sp.; Palma 2010: 408.

New Zealand hosts: *Gerygone igata* (Quoy & Gaymard, 1830); *Mohoua albicilla* (Lesson, 1830); *Anthus novaeseelandiae novaeseelandiae* (J.F. Gmelin, 1789).

New Zealand localities: BP, GB, WN.

Geographic distribution: New Zealand.

New Zealand references: Pilgrim & Palma (1982); Palma (1999); Murray *et al*. (2002); Palma (2010); Sychra *et al.* (2016: 409).

Other significant references: None.

Remarks: The available samples of *Myrsidea* from the three hosts listed above cannot be identified to species because they contain nymphs only (voucher specimens in MONZ).

Genus *Nosopon* Hopkins, 1950

Nosopon Hopkins, 1950. *Ann. Mag. Nat. Hist.* (Ser. 12) *3*: 239. Type species: *Menopon* "*fulvofasciatum* var." *minor* Piaget, 1880 = *Nosopon lucidum* (Rudow, 1869) (by original designation).

Nosopon lucidum (Rudow, 1869)

Figs 51–52

Menopon lucidum Rudow, 1869a: 34, 402.
Menopon fulvofasciatum var. *minor* Piaget, 1880: 418.
Nosopon lucidum (Rudow, 1869); Hopkins & Clay 1952: 249.
Nosopon minus (Piaget, 1880); Hopkins & Clay 1952: 249.
Nosopon lucidum lucidum (Rudow, 1869); Tendeiro 1959: 194, figs 1–5.
Nosopon lucidum (Rudow, 1869); Pilgrim & Palma 1982: 17.
Nosopon sp.; Pilgrim & Palma 1982: 17.
Nosopon lucidum (Rudow, 1869); Murray *et al.* 1993: 960.
Nosopon sp.; Murray *et al.* 1993: 960.
Nosopon lucidum (Rudow, 1869); Palma 1999: 379.
Nosopon lucidum (Rudow, 1869); Palma 2010: 408.

Lectotype ♂ in ZMHG (Clay & Hopkins 1955: 51; Weidner 1966: 259).

Type host: *Falco vespertinus* Linnaeus, 1766.

New Zealand hosts: *Circus approximans* Peale, 1848; *Falco novaeseelandiae* J.F. Gmelin, 1788.

Other hosts:, *Accipiter gentilis* (Linnaeus, 1758); *Accipiter nisus* (Linnaeus, 1758); *Elanus caeruleus* (Desfontaines, 1789); *Lophaetus occipitalis* (Daudin, 1800), three other species of *Circus* and five other species of *Falco* (see Price *et al*. 2003: 133).

New Zealand localities: TK, WN, SD, MB, NC, MC, SC, WD.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1993); Palma (1999); Paterson *et al.* (1999: 221); Palma (2010).

Other significant references: Tendeiro (1959); Green & Palma (1991: 8, 30); Palma (1996b: 140); Martín-Mateo (2002: 100, fig. 33A); Price *et al*. (2003: 133); Palma & Jensen (2005: 53, 62).

Remarks: *Nosopon lucidum* is widespread on many host species, but not frequently collected.

Genus *Plegadiphilus* Bedford, 1939

Plegadiphilus Bedford, 1939. *Onderstepoort Jour. Vet. Sci. Animal Ind. 12*(1): 138. Type species: *Plegadiphilus threskiornis* Bedford, 1939 (by original designation).

Plegadiphilus plegadis (Dubinin, 1938)

Figs 53–54

Menopon plegadis Dubinin, 1938: 178, fig. 12.
Plegadiphilus plegadis (Dubinin, 1938); Hopkins & Clay 1952: 295.
Plegadiphilus plegadis (Dubinin, 1938); Pilgrim & Palma 1982: 16.
Plegadiphilus plegadis (Dubinin, 1938); Murray *et al*. 1990: 1373.
Plegadiphilus plegadis (Dubinin, 1938); Price *et al*. 2003: 135.
Plegadiphilus plegadis (Dubinin, 1938); Palma 2010: 408.

Syntypes ♂♀, repository unknown.

Type host: *Plegadis falcinellus* (Linnaeus, 1766).
New Zealand host: *Plegadis falcinellus* (Linnaeus, 1766).
Other hosts: *Plegadis chihi* (Vieillot, 1817).
New Zealand localities: WI, SL.
Geographic distribution: Eurasia; Africa; Americas; Australasia.
New Zealand references: Pilgrim & Palma (1982); Murray *et al*. (1990); Palma (2010).
Other significant references: Forrester *et al*. (1995: 12); Palma (1996b: 140); Price *et al*. (2003).
Remarks: Although the glossy ibis is a regular vagrant to New Zealand (Checklist Committee 2010: 166), there are only two records of *Plegadiphilus plegadis* from this country.

Plegadiphilus threskiornis Bedford, 1939

Plegadiphilus threskiornis Bedford, 1939: 139, figs 7–8.
Plegadiphilus threskiornis Bedford, 1939; Hopkins & Clay 1952: 295.
Plegadiphilus threskiornis Bedford, 1939; Pilgrim & Palma 1982: 16.
Plegadiphilus threskiornis Bedford, 1939; Murray *et al*. 1990: 1373.
Plegadiphilus threskiornis Bedford, 1939; Price *et al*. 2003: 135.
Plegadiphilus threskiornis Bedford, 1939; Palma 2010: 408.

Holotype ♀, probably in SAIM.
Type host: *Threskiornis aethiopicus* (Latham, 1790).
New Zealand host: *Threskiornis molucca strictipennis* (Gould, 1838).
Other hosts: *Threskiornis melanocephalus* (Latham, 1790); *Threskiornis molucca pygmaeus* Mayr, 1931; *Threskiornis spinicollis* (Jameson, 1835); *Bostrychia hagedash* (Latham, 1790).
New Zealand locality: SL.
Geographic distribution: Asia; Africa; Australasia.
New Zealand references: Pilgrim & Palma (1982); Murray *et al*. (1990); Palma (2010).
Other significant references: Clay (1958c: 144); Moreby (1976: 92); Palma (1996b: 141); Price *et al*. (2003).
Remarks: The Australian white ibis is an occasional visitor to New Zealand (Checklist Committee 2010: 166), with only a single record of *Plegadiphilus threskiornis* from this country.

Genus *Pseudomenopon* Mjöberg, 1910

Pseudomenopon Mjöberg, 1910a. *Arkiv Zool.* *6*(13): 50. Type species *Menopon tridens* "N." = *Pseudomenopon pilosum* (Scopoli, 1763) (by original designation).

Pseudomenopon concretum (Piaget, 1880)

Menopon concretum Piaget, 1880: 481, pl. 38: fig. 9.
Pseudomenopon concretum (Piaget, 1880); Hopkins & Clay 1952: 302.
Pseudomenopon concretum (Piaget, 1880); Price 1974: 78, fig. 32.
Pseudomenopon concretum (Piaget, 1880); Pilgrim & Palma 1982: 19.
Pseudomenopon concretum (Piaget, 1880); Murray *et al.* 1993: 961.
Pseudomenopon concretum (Piaget, 1880); Price *et al*. 2003: 135.
Pseudomenopon concretum (Piaget, 1880); Palma 2010: 408.

Lectotype ♀ in NHML (Clay 1949b: 824).
Type host: *Porphyrio melanotus melanopterus* Bonaparte, 1856.
New Zealand host: *Porphyrio melanotus melanotus* Temminck, 1820.
Other hosts: *Porphyrio porphyrio* (Linnaeus, 1758); *Porphyrio poliocephalus* (Latham, 1802); *Porphyrio madagascariensis* (Latham, 1802); *Megacrex inepta* D'Albertis & Salvadori, 1879.
New Zealand localities: AK, BP, SD, MB, NC, MC, SC, WD.
Geographic distribution: Eurasia; Africa; Australasia.
New Zealand references: Price (1974); Pilgrim & Palma (1982); Murray *et al.* (1993); Paterson *et al.* (1999: 221, 223); Palma (2010).

Other significant references: Clay (1949b); Tendeiro (1965d: 29, photos 10–11, 26, 36, 49, 56); Lakshminarayana (1977: 54); Green & Palma (1991: 8, 32); Palma (1996b: 141); Price *et al*. (2003: 135).

Remarks: *Pseudomenopon concretum* has been frequently collected from pukekos in New Zealand.

***Pseudomenopon pilgrimi* Price, 1974**

Figs 55–56

Pseudomenopon pilgrimi Price, 1974: 81, fig. 29.
Pseudomenopon pilgrimi Price, 1974; Pilgrim & Palma 1982: 18–19.
Pseudomenopon pilgrimi Price, 1974; Murray *et al.* 1993: 961.
Pseudomenopon pilgrimi Price, 1974; Price *et al*. 2003: 135.
Pseudomenopon pilgrimi Price, 1974; Palma 2010: 408.

Holotype ♂ in CMNZ (Nicholls *et al.* 1998: 30).

Type host: *Gallirallus australis australis* (Sparrman, 1786).

New Zealand hosts: *Gallirallus australis greyi* (Buller, 1888); *Gallirallus australis hectori* (Hutton, 1873).

Other hosts: None.

New Zealand localities: HB, SD, MB, NN, WD, CH.

Geographic distribution: New Zealand.

New Zealand references: Price (1974); Pilgrim & Palma (1982); Murray *et al.* (1993); Nicholls *et al.* (1998: 30); Paterson *et al.* (1999: 223); Palma (2010).

Other significant references: Lakshminarayana (1977: 54); Price *et al*. (2003: 131).

Remarks: *Pseudomenopon pilgrimi* is an endemic species, exclusively parasitic on wekas but not frequently collected.

***Pseudomenopon pilosum* (Scopoli, 1763)**

Pediculus pilosus Scopoli, 1763: 384.
Menopon tridens Burmeister, 1838a: 440.
Pseudomenopon tridens (Nitzsch) [sic]; Ferris 1924: 63, fig. 4.
Pseudomenopon pilosum (Scopoli, 1763); Hopkins & Clay 1952: 302.
Pseudomenopon pilosum (Scopoli, 1763); Price 1974: 73, figs 1–6, 11, 18, 21, 22.
Pseudomenopon pilosum (Scopoli, 1763); Pilgrim & Palma 1982: 19.
Pseudomenopon pilosum (Scopoli, 1763); Murray *et al.* 1993: 961.
Pseudomenopon pilosum (Scopoli, 1763); Price *et al*. 2003: 135.
Pseudomenopon pilosum (Scopoli, 1763); Palma 2010: 408.

Neotype ♂ in NHML (Clay & Hopkins 1951: 19).

Type host: *Fulica atra* Linnaeus, 1758.

New Zealand host: *Fulica atra australis* Gould, 1845.

Other hosts: *Hydrophasianus chirurgus* (Scopoli, 1786); *Podica senegalensis* (Vieillot, 1817); five species of *Gallinula*; and six species of *Fulica* (see Price *et al*. 2003: 136).

New Zealand localities: NC, MC, SC, CO, DN.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1993); Palma (2010).

Other significant references: Ferris (1924); Clay & Hopkins (1951: 19); Tendeiro (1965d: 19, photos 2–3, 22, 32, 43, 52); Price (1974); Lakshminarayana (1977: 56); Benoit (1976: 235); Green & Palma (1991: 8, 32); Butler & O'Connor (1994: 451); Forrester *et al*. (1995: 23); Palma (1996b: 142); Martín-Mateo (2002: 42, figs 9–10); Price *et al*. (2003); Palma & Jensen (2005: 53, 63); Adam (2007: 166, fig. 9).

Remarks: *Pseudomenopon pilosum* is widespread on many host species and frequently collected.

***Pseudomenopon scopulacorne* (Denny, 1842)**

Liotheum (*Menopon*) *scopulacorne* Denny, 1842: 200, 221, pl. 18: fig. 9.
Pseudomenopon scopulacorne Denny, 1842 [sic]; Harrison 1916: 63 (as junior synonym of *Pseudomenopon tridens* Nitzsch [in Burmeister]).
Pseudomenopon scopulacorne (Denny, 1842); Hopkins & Clay 1952: 303.

Pseudomenopon scopulacorne (Denny, 1842); Price 1974: 75, figs 10, 12, 20, 25.
Pseudomenopon scopulacorne (Denny, 1842); Pilgrim & Palma 1982: 18.
Pseudomenopon scopulacorne (Denny, 1842); Murray *et al.* 1993: 961.
Pseudomenopon scopulacorne (Denny, 1842); Price *et al*. 2003: 136.
Pseudomenopon scopulacorne (Denny, 1842); Palma 2010: 408.

Syntypes ♀♀ in NHML (Thompson 1937a: 76; Palma 1996b: 142).

Type host: *Rallus aquaticus aquaticus* Linnaeus, 1758.

New Zealand host: *Gallirallus philippensis assimilis* (G.R. Gray, 1843).

Other hosts: *Atlantisia rogersi* P.R. Lowe, 1923; *Rallina eurizonoides* (Lafresnaye, 1845); four species of *Laterallus*; three species of *Porzana*; and five species of *Rallus* (see Price *et al*. 2003: 136).

New Zealand locality: BP.

Geographic distribution: Eurasia; Americas; Australasia; Oceania.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1993); Palma (2010).

Other significant references: Thompson (1937a: 76); Price (1974); Lakshminarayana (1977: 56); Forrester *et al*. (1995: 23); Green & Palma (1991: 8, 31); Palma (1996b: 142); Price *et al*. (2003); Palma & Jensen (2005: 53, 63); Palma & Peck (2013: 25).

Remarks: Although *Pseudomenopon scopulacorne* is widespread on many host species, it has only been found twice on banded rails in New Zealand.

Genus *Trinoton* Nitzsch, 1818

Trinoton Nitzsch, 1818. *Germar's Mag. Entomol. 3*: 300. Type species: *Liotheum* (*Trinoton*) *conspurcatum* Nitzsch, 1818 = *Trinoton anserinum* (J.C. Fabricius, 1805) (by monotypy).
Trinotum Burmeister, 1838a. *Handb. Entomol. 2*(1): 440. Invalid emendation.

Trinoton nigrum Le Souëf, 1902

Figs 57–58

Triniton [sic] *niger* [sic] Le Souëf, 1902b: 90.
Trinoton nigrum Le Souëf, 1902; Harrison 1916: 62. Emendation.
Trinoton nigrum Le Souëf, 1902; Hopkins & Clay 1952: 358.
Trinoton nigrum Le Souëf, 1902; Pilgrim & Palma 1982: 16.
Trinoton nigrum Le Souëf, 1902; Murray *et al*. 1990: 1374.
Trinoton nigrum Le Souëf, 1902; Palma 2010: 408.

Holotype ♀ in SAMA (Palma 1996b: 143).

Type host: *Cygnus atratus* (Latham, 1790).

New Zealand host: *Cygnus atratus* (Latham, 1790).

Other hosts: None.

New Zealand localities: AK, WO, BP, WA, WN, NC, MC, SC, CH.

Geographic distribution: Australasia.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (2010).

Other significant references: Eichler & Vasjukova (1981: 35); Green & Palma (1991: 8, 29); Palma (1996b: 143); Price *et al*. (2003: 139).

Remarks: The population of black swans living in New Zealand is probably the result of a mixture of self-introduced birds and others introduced by human agency (Checklist Committee 2010: 33). Therefore, it is not possible to determine if *Trinoton nigrum* is a native or an introduced species.

Trinoton querquedulae (Linnaeus, 1758)

Pediculus querquedulae Linnaeus, 1758: 612.
Trinotum lituratum Burmeister, 1838a: 441.
Trinotum luridum Burmeister, 1838a: 441.
Trinoton querquedulae (Linnaeus, 1758); Hopkins & Clay 1952: 358.
Trinoton querquedulae (Linnaeus, 1758); Watt 1971: 233, 243.

Trinoton querquedulae (Linnaeus, 1758); Wise 1977: 57.
Trinoton querquedulae querquedulae (Linnaeus, 1758); Eichler & Vasjukova 1981: 37, figs 12, 22, 25, 33, 40, 41, pl. 2: fig. 1, pl. 4: fig. 2, pl. 7: fig. 2, pl. 8: fig. 2.
Trinoton querquedulae (Linnaeus, 1758) *s. l.*; Pilgrim & Palma 1982: 16–17.
Trinoton querquedulae (Linnaeus, 1758); Murray *et al*. 1990: 1374.
Trinoton querquedulae (Linnaeus, 1758); Palma 2010: 408.

Neotype ♀ in NHML (Clay & Hopkins 1950: 244, pl. 2: fig. 2).

Type host: *Anas crecca crecca* Linnaeus, 1758.

New Zealand hosts: *Branta canadensis maxima* Delacour, 1951; *Tadorna variegata* (J.F. Gmelin, 1789); *Anas gracilis* Buller, 1869; *Anas chlorotis* G.R. Gray, 1845; *Anas platyrhynchos platyrhynchos* Linnaeus, 1758; *Anas superciliosa* J.F. Gmelin, 1789; *Anas rhynchotis* Latham, 1802; *Aythya novaeseelandiae* (J.F. Gmelin, 1789).

Other hosts: Twenty-two other species of *Anas*, nine other species of *Aythya*, two species of *Aix*, three species of *Bucephala*, three species of *Melanitta*, four species of *Mergus*, two species of *Netta*, three species of *Oxyura*, three species of *Somateria*, two species of *Tadorna* and over 10 species of other genera (see Price *et al*. 2003: 139).

New Zealand localities: ND, AK, BP, WO, BP, HB, TK, WA, WN, NN, NC, MC, SC, CO, DN, KE.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Watt (1971); Wise (1977); Pilgrim & Palma (1982); Murray *et al*. (1990); Paterson *et al.* (1999: 219); Galloway (2005: 16); Palma (2010); Buckley *et al.* (2012: App. 2).

Other significant references: Clay & Hopkins (1950: 243, figs 26–28, pl. 2: fig. 2); Kéler (1957c: fig. 34a); Eichler & Vasjukova (1981); Rudolph (1983: 16); Price (1987: 218, fig. 22.14); Green & Palma (1991: 8, 29); Butler & O'Connor (1994: 451); Forrester *et al*. (1995: 15); Palma (1996b: 143); Martín-Mateo (2002: 39, figs 7f,g,h,i, 8); Price *et al*. (2003: 139); Palma & Jensen (2005: 53, 62); Adam (2007: 167); Palma & Peck (2013: 25).

Remarks: *Trinoton querquedulae* is an extremely widespread species with some morphological variability. Pilgrim & Palma (1982: 16–17) regarded the populations of *T. querquedulae* from seven host species somewhat different from that of the type host, and qualified them as *sensu lato*; however, my examination of more samples, including one from the type host, shows that making such difference is not warranted. *Anas chlorotis* is a new host record for *Trinoton querquedulae* in New Zealand (voucher specimens in MONZ).

Family RICINIDAE Neumann, 1890

Ricinidae Neumann, 1890. *Bull. Soc. d'Hist. Nat., Toulouse 24*: 55. Type genus: *Ricinus* De Geer, 1778b.

Genus *Ricinus* De Geer, 1778

Ricinus De Geer, 1778b. *Mém. Hist. Ins. 7*: 69. Type species: *Ricinus fringillae* De Geer, 1778 (by subsequent designation).
Physostomum Nitzsch, 1818. *Germar's Mag. Entomol. 3*: 302. Type species: *Ricinus nitidissimus* Nitzsch, 1818 = *Ricinus fringillae* De Geer, 1778 (by subsequent designation).

Ricinus species

Fig. 59

Ricinus sp.; Gill 1980: 246
Ricinus sp.; Pilgrim & Palma 1982: 26.
Ricinus sp.; Murray *et al.* 2002: 1215.

New Zealand host: *Gerygone igata* (Quoy & Gaymard, 1830).

New Zealand localities: KA, SI.

Geographic distribution: New Zealand.

New Zealand references: Gill (1980); Pilgrim & Palma (1982); Murray *et al.* (2002).

Other significant references: Rheinwald (1968); Nelson (1972); Price *et al.* (2003: 246).

Remarks: The only two available records of *Ricinus* from New Zealand could not be identified to species because the samples contain females only (voucher specimens in MONZ).

Suborder ISCHNOCERA Kellogg, 1896

Ischnocera Kellogg, 1896a. *Proc. Calif. Acad. Sci. 6*: 63.

Family PHILOPTERIDAE Burmeister, 1838

Philopteridae Burmeister, 1838a. *Handb. Entomol. 2*(1): 422.

Genus *Acidoproctus* Piaget, 1878

Acidoproctus Piaget, 1878. *Tijdschrift Entomologie 21*: 178. Type species: *Acidoproctus marginatus* Piaget, 1878 = *Acidoproctus rostratus* (Rudow, 1866b) (by subsequent designation).

Acidoproctus emersoni Timmermann, 1962 New Record

Acidoproctus emersoni Timmermann, 1962b: 145, figs 11, 14.
Acidoproctus emersoni Timmermann, 1962; Price *et al*. 2003: 140.
Acidoproctus emersoni Timmermann, 1962; Arnold 2006: 278, 281, figs 13, 21.

Holotype ♂ in NHML (Palma 1996b: 151).
Type host: *Dendrocygna javanica* (Horsfield, 1821).
New Zealand host: *Dendrocygna eytoni* (Eyton, 1838).
Other hosts: *Dendrocygna arcuata* (Horsfield, 1824); *Dendrocygna guttata* Schlegel, 1866.
New Zealand locality: ND.
Geographic distribution: Asia; Australasia.
New Zealand reference: This paper.
Other significant references: Palma (1996b: 151); Price *et al*. (2003); Arnold (2006).
Material examined and repository: 7♂, 5♀ (1 sample, MONZ).
Remarks: *Acidoproctus emersoni* is a new louse species for New Zealand. *Dendrocygna eytoni* is a straggler to New Zealand, recorded occasionally since 1871 (Checklist Committee 2010: 31).

Acidoproctus gottwaldhirschi Eichler, 1958

Figs 60–61

Acidoproctus gottwaldhirschi Eichler, 1958: 60, figs 1–2.
Acidoproctus gottwaldhirschi Eichler, 1958; Pilgrim & Palma 1982: 17.
Acidoproctus gottwaldhirschi Eichler, 1958; Murray *et al.* 1990: 1374.
Acidoproctus gottwaldhirschi Eichler, 1958; Arnold 2006: 280, figs 4, 17, 25.
Acidoproctus gottwaldhirschi Eichler, 1958; Palma 2010: 408.

Holotype ♂, presumed lost. Eichler collected it from a mounted bird in the Zoologischen Museum der Universität Göttingen, but the holotype of *A. gottwaldhirschi* has not be located in that museum (Gert Tröster pers. comm. October 2013).
Type host: *Hymenolaimus malacorhynchos* (J.F. Gmelin, 1789).
New Zealand host: *Hymenolaimus malacorhynchos* (J.F. Gmelin, 1789).
Other hosts: None.
New Zealand localities: BP, GB, HB, WN, NC.
Geographic distribution: New Zealand.
New Zealand references: Eichler (1958); Pilgrim & Palma (1982); Murray *et al.* (1990); Arnold (2006); Palma (2010); Buckley *et al.* (2012: App. 2).
Other significant reference: Price *et al*. (2003: 140).
Remarks: *Acidoproctus gottwaldhirschi* is an endemic and vulnerable species (Buckley *et al.* 2012), exclusively parasitic on blue ducks.

Genus *Alcedoecus* Clay & Meinertzhagen, 1939

Alcedoecus Clay & Meinertzhagen, 1939a. *Entomologist 72*: 162. Type species: *Philopterus capistratus* Neumann, 1912b = *Alcedoecus capistratus* (Neumann, 1912) (by original designation).

Halcyonicola Uchida 1948. *Japan. Med. Jour. 1*: 312. Type species: *Docophorus alatoclypeatus* Piaget, 1885 = *Alcedoecus alatoclypeatus* (Piaget, 1885) (by original designation).

Alcedoecus alatoclypeatus (Piaget, 1885)

Figs 62–63

Docophorus alatoclypeatus Piaget, 1885: 10, pl. 1: fig. 11.
Philopterus alatoclypeatus Piaget, 1885 [sic]; Harrison 1916: 87.
Philopterus alatoclypeatus (Piaget, 1885); Séguy 1944: 235, fig. 347.
Halcyonicola alatoclypeatus (Piaget, 1885); Uchida 1948: 312.
Alcedoecus alatoclypeatus (Piaget, 1885); Hopkins & Clay 1952: 25.
Alcedoecus alatoclypeatus (Piaget, 1885); Tendeiro 1965c: 44, photos 23–25.
Alcedoecus sp.; Nelson 1969: 199.
Alcedoecus sp.; Watt 1971: 235, 244.
Alcedoecus alatoclypeatus (Piaget, 1885) *s. l.*; Pilgrim & Palma 1982: 25.
Alcedoecus alatoclypeatus (Piaget, 1885); Murray *et al.* 1999: 1242.
Alcedoecus alatoclypeatus (Piaget, 1885); Palma 2010: 408.

Lectotype ♂ in NHML (Palma 1996b: 152).

Type host: *Halcyon malimbica* (Shaw, 1811).

New Zealand hosts: *Todiramphus sanctus vagans* (Lesson, 1828); *Todiramphus sanctus norfolkiensis* (Tristram, 1885).

Other hosts: *Todiramphus sanctus sanctus* Vigors & Horsfield, 1827.

New Zealand localities: BP, HB, TK, WI, WA, WN, NN, NC, MC, SC, WD, KE, Norfolk Island.

Geographic distribution: Australasia.

New Zealand references: Nelson (1969); Watt (1971); Pilgrim & Palma (1982); Murray *et al.* (1999); Paterson *et al.* (1999: 221); Palma (2010).

Other significant references: Séguy (1944); Uchida (1948); Tendeiro (1965c); Palma (1996b: 152); Price *et al*. (2003: 141).

Remarks: Pilgrim & Palma (1982: 25) regarded the population of *Alcedoecus alatoclypeatus* from *Todiramphus sanctus vagans* (as *Halcyon sancta vagans*) as somewhat different from that of the type host, and qualified it as *sensu lato*; however, my examination of samples from other hosts shows that making such difference is not warranted.

Alcedoecus delphax (Nitzsch [*in* Giebel], 1866) **New Record**

Docophorus delphax Nitzsch [*in* Giebel], 1866: 360
Philopterus delphax Nitzsch [*in* Giebel], 1866 [sic]; Harrison 1916: 92.
Halcyonicola delphax (Nitzsch) [sic]; Uchida 1948: 312.
Alcedoecus delphax (Nitzsch [*in* Giebel], 1866); Hopkins & Clay 1952: 26.
Alcedoecus delphax (Nitzsch [*in* Giebel], 1866); Palma 1996b: 152.
Alcedoecus delphax (Nitzsch [*in* Giebel], 1866); Price *et al*. 2003: 141.

Status, sex and repository of types unknown, presumed lost. See Clay (1949a: 1), Palma & Pilgrim (1984: 150) and Palma (1996b: 152).

Type host: *Dacelo novaeguineae* (Hermann, 1783).

New Zealand host: *Dacelo novaeguineae novaeguineae* (Hermann, 1783).

Other hosts: None.

New Zealand locality: ND.

Geographic distribution: Australasia.

New Zealand reference: This paper.

Other significant references: Uchida (1948); Green & Palma (1991: 10, 36); Palma (1996b); Price *et al*. (2003).

Material examined and repository: 4♂, 4♀ (1 sample, MONZ).

Remarks: *Alcedoecus delphax* is a new louse species for New Zealand, introduced to this country from Australia with laughing kookaburras by human agency (Checklist Committee 2010: 272).

Genus *Anaticola* Clay, 1936

Anaticola Clay, 1936. *Proc. Zool. Soc. London* [no volume number]: 617. Type species: *Esthiopterum crassicorne* (Scopoli, 1763) = *Anaticola crassicornis* (Scopoli, 1763) (by original designation).

***Anaticola anseris* (Linnaeus, 1758)**

"Pollini del oca reale" Redi, 1668: pl. 11.

Pediculus anseris Linnaeus, 1758: 612. *Nomen novum* for "Pollini del oca reale" Redi, 1668.

Ricinus anseris (Linnaeus, 1758); Latreille 1804: 106.

Esthiopterum anseris Linnaeus, 1758 [sic]; Harrison 1916: 130.

Anaticola anseris (Linnaeus, 1758); Clay & Hopkins 1950: 239, figs 18–21, pl. 2: fig. 1.

Anaticola anseris (Linnaeus, 1758); Hopkins & Clay 1952: 31.

Anaticola anseris anseris (Linnaeus, 1758); Eichler & Vasjukova 1980: 341, pl. 17: figs 5–8.

Anaticola anseris (Linnaeus, 1758); Palma 1999: 379, 383, note 4.

Anaticola anseris (Linnaeus, 1758); Palma 2010: 408.

Neotype ♂ in NHML (Clay & Hopkins 1950: 239).

Type host: *Anser anser* (Linnaeus, 1758).

New Zealand hosts: *Anser anser* (Linnaeus, 1758); *Branta canadensis maxima* Delacour, 1951.

Other hosts: Six other species of *Anser*; *Branta leucopsis* (Bechstein, 1803); *Branta sandvicensis* (Vigors, 1833).

New Zealand localities: SD, MB, MC.

Geographic distribution: Eurasia; North America; Australasia.

New Zealand references: Palma (1999); Palma (2010).

Other significant references: Wundrig (1936: 84, figs 49–51); Clay & Hopkins (1950); Hackman & Nyholm (1968: 80); Butler & O'Connor (1994: 452); Palma (1996b: 152); Price *et al*. (2003: 142); Palma & Jensen (2005: 53, 61); Martín-Mateo (2009: 227, fig. 46); Escalante *et al*. (2016: 203).

Remarks: *Anaticola anseris* was introduced to New Zealand with greylag geese and Canada geese by human agency (Checklist Committee 2010: 35).

***Anaticola crassicornis* (Scopoli, 1763)**

Pediculus crassicornis Scopoli, 1763: 383.

Esthiopterum crassicorne Scopoli, 1763 [sic]; Harrison 1916: 132.

Anaticola crassicorne [sic] (Scopoli, 1763); Séguy 1944: 361, figs 536–538.

Anaticola crassicornis (Scopoli, 1763); Hopkins & Clay 1952: 32.

Anaticola crassicornis (Scopoli, 1763); Watt 1971: 235, 243.

Anaticola crassicornis (Scopoli, 1763) *s. l.*; Horning *et al.* 1980: 4, 11.

Anaticola crassicornis crassicornis (Scopoli, 1763); Eichler & Vasjukova 1980: 345, figs 2b, 37–42, pl. 21: figs 43–46, pl. 22: figs 57–58.

Anaticola crassicornis (Scopoli, 1763); Pilgrim & Palma 1982: 16.

Anaticola crassicornis (Scopoli, 1763) *s. l.*; Pilgrim & Palma 1982: 17.

Anaticola crassicornis (Scopoli, 1763); Murray *et al.* 1990: 1374

Anaticola crassicornis (Scopoli, 1763); Palma 2010: 408.

Neotype ♂ in NHML (Clay & Hopkins 1951: 19).

Type host: *Anas platyrhynchos platyrhynchos* Linnaeus, 1758.

New Zealand hosts: *Anas gracilis* Buller, 1869; *Anas platyrhynchos platyrhynchos* Linnaeus, 1758; *Anas superciliosa* J.F. Gmelin, 1789; *Anas rhynchotis* Latham, 1802; *Aythya novaeseelandiae* (J.F. Gmelin, 1789).

Other hosts: Twenty other species of *Anas* (see Price *et al*. 2003: 143); *Cygnus cygnus* (Linnaeus, 1758); *Oxyura jamaicensis* (J.F. Gmelin, 1789); *Somateria spectabilis* (Linnaeus, 1758).

New Zealand localities: ND, WO, BP, HB, TK, WI, WA, WN, SD, MB, NN, NC, MC, SC, CO, DN, KE, SN.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Watt (1971); Wise (1977: 58); Horning *et al.* (1980); Pilgrim & Palma (1982); Murray *et al.* (1990); Paterson *et al.* (1999: 219); Palma (2010).

Other significant references: Clay & Hopkins (1951: 17, figs 23–24); Eichler & Vasjukova (1980); Rudolph (1983: 16); Mey (1986: 37, fig. 6); Green & Palma (1991: 10, 29); Butler & O'Connor (1994: 452); Forrester *et al*. (1995: 14);

Palma (1996b: 153); Price *et al*. (2003: 143); Palma & Jensen (2005: 54, 61); Martín-Mateo (2009: 225, figs 44–45); Palma & Peck (2013: 27); Ahmad *et al*. (2015: 568); Escalante *et al*. (2016: 203).

Remarks: *Anaticola crassicornis* is a very widespread species with some morphological variability. Pilgrim & Palma (1982: 17) regarded the populations of *A. crassicornis* from four host species as somewhat different from that of the type host, and qualified them as *sensu lato*; however, my examination of more samples from those and other hosts shows that making such difference is not warranted. Price *et al*. (2003: 143, 279) incorrectly identified the population from *Aythya novaeseelandiae* as "*Anaticola mergiserrati* (De Geer, 1778)" (see Escalante *et al*. 2016: 205, fig. 1).

Anaticola magnificus Ansari, 1955

Figs 64–65

Anaticola magnificus Ansari, 1955b: 51.

Anaticola magnificus Ansari, 1955; Pilgrim & Palma 1982: 16.

Anaticola magnificus Ansari, 1955; Murray *et al.* 1990: 1374.

Anaticola magnificus Ansari, 1955; Palma 1999: 379.

Anaticola magnificus Ansari, 1955; Palma 2010: 408.

Holotype ♂, repository unknown (see Remarks).

Type host: *Tadorna ferruginea* (Pallas, 1764).

New Zealand hosts: *Tadorna variegata* (J.F. Gmelin, 1789); *Tadorna tadornoides* (Jardine & Selby, 1828).

Other hosts: None.

New Zealand localities: HB, WI, WA, SD, MB, NN, NC, MC, SC, WD, FD.

Geographic distribution: Eurasia; Africa; Australasia.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (1999); Palma (2010).

Other significant references: Price *et al*. (2003: 143); Escalante *et al*. (2016: fig. 1).

Remarks: The holotype ♂ of *Anaticola magnificus* is not in the collection of the NHML (Vincent S. Smith pers. comm. December 2014).

Anaticola species

Anaticola sp.; Pilgrim & Palma 1982: 17.

Anaticola sp.; Murray *et al.* 1990: 1374.

Anaticola sp.; Palma 1999: 379.

New Zealand hosts: *Chenonetta jubata* (Latham, 1802); *Anas chlorotis* G.R. Gray, 1845.

Other hosts: None.

New Zealand localities: ND, CL, MB.

Geographic distribution: Australasia.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (1999); Buckley *et al.* (2012: App. 2).

Other significant references: None.

Remarks: These records possibly represent undescribed, unnamed species, especially those from *Chenonetta jubata* (see Escalante *et al*. 2016: 203, fig. 1), but available samples are not adequate for proper descriptions of the taxa involved. The population from *Anas chlorotis* is regarded "at risk" (Buckley *et al.* 2012).

Genus *Anatoecus* Cummings, 1916

Anatoecus Cummings, 1916b. *Proc. Zool. Soc. London 1916*: 653. Type species: *Anatoecus icterodes* (Nitzsch, 1818) (by original designation).

Benatoecus Złotorzycka, 1970. *Polskie Pismo Entomol. 40*(1): 10. Type species: *Anatoecus dentatus* (Scopoli, 1763) (by original designation).

Anatoecus dentatus (Scopoli, 1763) *sensu lato*

Pediculus dentatus Scopoli, 1763: 383.

Philopterus dentatus Scopoli, 1763 [sic]; Harrison 1916: 93.

Anatoecus dentatus (Scopoli, 1763); Hopkins & Clay 1952: 35.

Anatoecus dentatus dentatus (Scopoli, 1763); Kéler 1960a: 305, figs 6, 10(A), 15, 22, 34.
Anatoecus (*Benatoecus*) *dentatus dentatus* (Scopoli, 1763); Złotorzycka 1970: 13, figs 3–4.
Anatoecus dentatus (Scopoli, 1763); Watt 1971: 235, 243.
Anatoecus dentatus (Scopoli, 1763); Wise 1977: 58.
Anatoecus dentatus (Scopoli, 1763) *s. l.*; Pilgrim & Palma 1982: 16.
Anatoecus dentatus (Scopoli, 1763); Pilgrim & Palma 1982: 16.
Anatoecus dentatus dentatus (Scopoli, 1763); Palma 1999: 379.
Anatoecus dentatus dentatus (Scopoli, 1763); Palma & Horning 2002: 6, 17.
Anatoecus dentatus (Scopoli, 1763); Price *et al*. 2003: 144.
Anatoecus dentatus dentatus (Scopoli, 1763); Palma 2010: 408.

Neotype ♂ in NHML (Clay & Hopkins 1951: 17).

Type host: *Anas platyrhynchos platyrhynchos* Linnaeus, 1758.

New Zealand hosts: *Tadorna variegata* (J.F. Gmelin, 1789); *Chenonetta jubata* (Latham, 1802); *Anas gracilis* Buller, 1869; *Anas chlorotis* G.R. Gray, 1845; *Anas platyrhynchos platyrhynchos* Linnaeus, 1758; *Anas superciliosa* J.F. Gmelin, 1789; *Aythya novaeseelandiae* (J.F. Gmelin, 1789).

Other hosts: Two species of *Aix*; *Alopochen aegyptiaca* (Linnaeus; 1766); 14 other species of *Anas*; six species of *Anser*; nine other species of *Aythya*; three species of *Branta*; three species of *Bucephala*; *Clangula hyemalis* (Linnaeus, 1758); *Coscoroba coscoroba* (Molina, 1782); two species of *Dendrocygna*; three species of *Melanitta*; four species of *Mergus*; *Netta rufina* (Pallas, 1776); two species of *Oxyura*; *Polysticta stelleri* (Pallas, 1769); *Sarkidiornis melanotos* (Pennant, 1769); two species of *Somateria*; *Tadorna tadorna* (Linnaeus, 1758); *Thalassornis leuconotus* Eyton, 1838 (see Price *et al*. 2003: 144).

New Zealand localities: AK, BP, TK, WA, WN, SD, MB, NN, NC, MC, SC, KE, Macquarie Island.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Gressitt (1970: 326); Watt (1971); Wise (1977); Pilgrim & Palma (1982); Murray *et al.* (1990: 1374); Palma (1999); Paterson *et al.* (1999: 219); Palma & Horning (2002); Galloway (2005: 16); Palma (2010); Buckley *et al.* (2012: App. 2).

Other significant references: Clay & Hopkins (1951: 15, figs 21–22); Kéler (1960a); Złotorzycka (1970); Moreby (1976: 92); Rudolph (1983: 16); Green & Palma (1991: 10, 29); Forrester *et al*. (1995: 14); Palma (1996b: 154); Price *et al*. (2003); Palma & Jensen (2005: 54, 61); Martín-Mateo (2009: 211, fig. 41); Palma & Peck (2013: 28); Grossi *et al.* (2014); Ahmad *et al*. (2015: 568).

Remarks: Many subspecies of *Anatoecus dentatus* have been described (see Price *et al.* 2003: 145) but, with a few exceptions, their type hosts are not New Zealand hosts. Therefore, until a detailed revision of the New Zealand populations of *A. dentatus* is available, I regard them as "*sensu lato*", except for one subspecies (see below). *Anas chlorotis* is a new host record for *Anatoecus dentatus sensu lato* in New Zealand (voucher specimens in MONZ).

Anatoecus dentatus magnicornutus Złotorzycka, 1970

Anatoecus (*Benatoecus*) *dentatus magnicornutus* Złotorzycka, 1970: 52, figs 53–54, photo 11.
Anatoecus dentatus magnicornutus Złotorzycka, 1970; Pilgrim & Palma 1982: 16.
Anatoecus dentatus magnicornutus Złotorzycka, 1970; Murray *et al.* 1990: 1374.
Anatoecus dentatus magnicornutus Złotorzycka, 1970; Palma 2010: 408.

Holotype ♂ in MNHW (Palma 1996b: 155; Jałoszyński *et al.* 2014: 654).

Type host: *Cygnus olor* (J.F. Gmelin, 1789).

New Zealand host: *Cygnus atratus* (Latham, 1790).

Other hosts: None.

New Zealand locality: WO.

Geographic distribution: Eurasia; Australasia.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (2010); Palma (2015a: 146).

Other significant references: Palma (1996b: 155).

Remarks: Contrary to Price *et al.* (2003: 145), I recognise *Anatoecus dentatus magnicornutus* as a valid taxon. It is not possible to determine if this louse was introduced to New Zealand with mute swans by human agency (Checklist Committee 2010: 32) or with black swans, because the New Zealand population of black swans is probably the

result of a mixture of self-introduced birds and others introduced by humans (Checklist Committee 2010: 33). Therefore, it is uncertain if *Anatoecus d. magnicornutus* is a native or an introduced louse.

Anatoecus icterodes (Nitzsch, 1818) *sensu lato*

Philopterus (*Docophorus*) *icterodes* Nitzsch, 1818: 290.
Philopterus icterodes Nitzsch, 1818; Harrison 1916: 96 (as junior synonym of *Philopterus dentatus* (Scopoli, 1763)).
Anatoecus icterodes Nitzsch, 1818 [sic]; Cummings 1916b: 655, figs 7B, 10, 12.
Anatoecus icterodes (Nitzsch, 1818); Hopkins & Clay 1952: 35.
Anatoecus icterodes knechteli Kéler, 1960a: 247.
Anatoecus icterodes icterodes (Nitzsch, 1818); Kéler 1960a: 299, figs 1, 2, 12(1), 30, 42, 48.
A. icteroides [sic] (Nitzsch, 1818); Gressitt 1970: 327.
Anatoecus (*Anatoecus*) *icterodes icterodes* (Nitzsch, 1818); Złotorzycka 1970: 58, figs 56–59.
Anatoecus icterodes (Nitzsch, 1818); Wise 1977: 58.
Anatoecus icterodes (Nitzsch, 1818) s. *l.*; Pilgrim & Palma 1982: 16–17.
Anatoecus icterodes (Nitzsch, 1818); Palma 1999: 379.
Anatoecus icterodes icterodes (Nitzsch, 1818); Palma & Horning 2002: 6.
Anatoecus icterodes (Nitzsch, 1818); Price *et al*. 2003: 145.
Anatoecus icterodes icterodes (Nitzsch, 1818); Palma 2010: 408.

Neotype ♂ in NHML (Clay & Hopkins 1960: 39, pl. 2: fig. 3).

Type host: *Mergus serrator* Linnaeus, 1758.

New Zealand hosts: *Tadorna variegata* (J.F. Gmelin, 1789); *Tadorna tadornoides* (Jardine & Selby, 1828); *Hymenolaimus malacorhynchos* (J.F. Gmelin, 1789); *Anas gracilis* Buller, 1869; *Anas chlorotis* G.R. Gray, 1845; *Anas platyrhynchos platyrhynchos* Linnaeus, 1758; *Anas superciliosa* J.F. Gmelin, 1789; *Anas rhynchotis* Latham, 1802; *Aythya novaeseelandiae* (J.F. Gmelin, 1789).

Other hosts: Two species of *Aix*; *Alopochen aegyptiaca* (Linnaeus; 1766); 13 other species of *Anas*; five species of *Anser*; 10 other species of *Aythya*; *Biziura lobata* (Shaw, 1796); four species of *Branta*; two species of *Bucephala*; *Clangula hyemalis* (Linnaeus, 1758); two species of *Dendrocygna*; three species of *Melanitta*; three species of *Mergus*; two species of *Netta*; three species of *Oxyura*; *Plectropterus gambensis* (Linnaeus, 1766); *Sarkidiornis melanotos* (Pennant, 1769); two species of *Somateria*; *Tadorna tadorna* (Linnaeus, 1758); *Thalassornis leuconotus* Eyton, 1838 (see Price *et al*. 2003: 145).

New Zealand localities: ND, CL, AK, WO, BP, TK, WA, WN, NN, NC, MC, SC, FD, Macquarie Island.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Kéler (1960a: 247); Gressitt (1970); Wise (1977); Pilgrim & Palma (1982); Murray *et al.* (1990: 1374); Paterson *et al.* (1999: 219); Palma (1999); Palma & Horning (2002); Galloway (2005: 16); Palma (2010).

Other significant references: Cummings (1916b); Clay & Hopkins (1960: 37, figs 59–61); Kéler (1960a); Złotorzycka (1970); Moreby (1976: 92); Green & Palma (1991: 10, 29); Palma (1996b: 155); Price *et al*. (2003); Palma & Jensen (2005: 54, 61); Adam (2007: 176); Martín-Mateo (2009: 213); Palma & Peck (2013: 28); Grossi *et al.* (2014).

Remarks: Many subspecies of *Anatoecus icterodes* have been described (see Price *et al.* 2003: 146) but, with a few exceptions, their type hosts are not New Zealand hosts. Therefore, until a detailed revision of the New Zealand populations of *A. icterodes* is available, I regard them as "*sensu lato*", except for one subspecies (see below).

Anatoecus icterodes oloris Złotorzycka, 1970

Figs 66–67

Anatoecus icterodes ssp. ?; Kéler 1960a: 234.
Anatoecus (*Anatoecus*) *icterodes oloris* Złotorzycka, 1970: 50, fig. 48, photo 10.
Anatoecus icterodes oloris Złotorzycka, 1970; Pilgrim & Palma 1982: 16.
Anatoecus icterodes oloris Złotorzycka, 1970; Murray *et al.* 1990: 1374.
Anatoecus i. oloris Złotorzycka, 1970; Palma 2010: 408.

Holotype ♂ in MNHW (Palma 1996b: 155; Jałoszyński *et al.* 2014: 655).

Type host: *Cygnus olor* (J.F. Gmelin, 1789).

New Zealand hosts: *Cygnus olor* (J.F. Gmelin, 1789); *Cygnus atratus* (Latham, 1790).

Other hosts: None.

New Zealand localities: WO, WA, MC.

Geographic distribution: Eurasia; Australasia.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990); Paterson *et al.* (1999: 219); Palma (2010); Palma (2015a: 146).

Other significant references: Kéler (1960a); Palma (1996b: 155).

Remarks: Contrary to Price *et al.* (2003: 146), I recognise *Anatoecus icterodes oloris* as a valid taxon. This louse was introduced to New Zealand with mute swans by human agency (Checklist Committee 2010: 32). However, the population of black swans living in New Zealand is probably the result of a mixture of self-introduced birds and others introduced by human agency (Checklist Committee 2010: 33).

Anatoecus singhi Palma, 2015

Anatoecus sp.; Pilgrim & Palma 1982: 16.

Anatoecus sp.; Murray *et al.* 1990: 1374.

Anatoecus singhi Palma, 2015a: 143, figs 1–4.

Holotype ♂ in MONZ.

Type host: *Cygnus atratus* (Latham, 1790).

New Zealand host: *Cygnus atratus* (Latham, 1790).

Other hosts: None.

New Zealand localities: WO, BP, WA, MB, NC, MC.

Geographic distribution: Australasia.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (2015a).

Other significant references: None.

Remarks: The population of black swans living in New Zealand is probably the result of a mixture of self-introduced birds and others introduced by human agency (Checklist Committee 2010: 33). Therefore, it is not possible to determine if *Anatoecus singhi* is a native or an introduced species.

Genus *Aquanirmus* Clay & Meinertzhagen, 1939

Aquanirmus Clay & Meinertzhagen, 1939a. *Entomologist 72*: 163. Type species: *Degeeriella runcinata* (Nitzsch [*in* Giebel], 1866) = *Aquanirmus runcinatus* (Nitzsch [*in* Giebel], 1866) (by original designation).

Aquanirmus australis Kettle, 1974

Figs 68–69

Aquanirmus australis Kettle, 1974b: 337, figs 1–2.

Aquanirmus australis Kettle, 1974; Wise 1977: 58.

Aquanirmus australis Kettle, 1974; Pilgrim & Palma 1982: 5.

Aquanirmus australis Kettle, 1974; Murray *et al.* 1990: 1367.

Aquanirmus australis Kettle, 1974; Palma 2010: 408.

Holotype ♂ in NZAC.

Type host: *Poliocephalus rufopectus* (G.R. Gray, 1843).

New Zealand host: *Poliocephalus rufopectus* (G.R. Gray, 1843).

Other hosts: None.

New Zealand localities: AK, HB, TK, WA.

Geographic distribution: New Zealand.

New Zealand references: Kettle (1974b); Wise (1977); Pilgrim & Palma (1982); Murray *et al.* (1990: 1367); Storer (2000: 37); Palma (2010).

Other significant references: Price *et al*. (2003: 147).

Remarks: *Aquanirmus australis* is an endemic species, exclusively parasitic on the New Zealand dabchick.

***Aquanirmus podicepis* (Denny, 1842)** **New Record**

Philopterus (*Nirmus*) *podicepis* Denny, 1842: 53, 142, pl. 10: fig. 9.
Degeeriella podicipis [sic] Denny, 1842 [sic]; Harrison 1916: 121.
Aquanirmus podicipis [sic] (Denny, 1842); Hopkins & Clay 1952: 37.
Aquanirmus podicipis [sic] (Denny, 1842); Edwards 1965: 929, figs 2, 4, 6.
Aquanirmus sp.; Pilgrim & Palma 1982: 5.
Aquanirmus sp.; Murray *et al.* 1990: 1367.
Aquanirmus podicepis (Denny, 1842); Price *et al*. 2003: 147.
Aquanirmus sp.; Palma 2010: 408.

Lectotype ♀ in NHML (Edwards 1965: 930).

Type host: *Podiceps cristatus cristatus* (Linnaeus, 1758)

New Zealand host: *Podiceps cristatus australis* Gould, 1844.

Other host: *Podiceps cristatus infuscatus* Salvadori, 1844.

New Zealand localities: MC, OL, FD.

Geographic distribution: Eurasia; Africa; Australasia.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (2010).

Other significant references: Edwards (1965); Clay (1976b: 543); Storer (2000: 37); Price *et al*. (2003).

Material examined and repository: 39♂, 33♀, 6N (4 samples, MONZ).

Remarks: This is the first record of *Aquanirmus podicepis* for New Zealand, because the New Zealand references cited above reported this louse as "*Aquanirmus* sp." only. Also, *Podiceps cristatus australis* is a new host record for *A. podicepis* (voucher specimens in MONZ).

Genus *Ardeicola* Clay, 1936

Ardeicola Clay, 1936. *Proc. Zool. Soc. London* [no volume number]: 615. Type species: *Esthiopterum ardeae* (Linnaeus, 1758) = *Ardeicola ardeae* (Linnaeus, 1758) (by original designation).

***Ardeicola expallidus* Blagoveshtchensky, 1940**

Ardeicola expallida [sic] Blagoveshtchensky, 1940: 69, 89, fig. 21.
Ardeicola gaibagla Ansari, 1947: 256, fig. 1.
Ardeicola albulus Eichler, 1948; 107, figs 2–3.
Ardeicola albulus Eichler, 1948; Hopkins & Clay 1952: 38.
Ardeicola expallidus Blagoveshtchensky, 1940; Hopkins & Clay 1952: 39. Emendation.
Ardeicola gaibagla Ansari, 1947; Hopkins & Clay 1952: 39.
Ardeicola gaibagla Ansari, 1947; Tuff 1967: 251, figs 17–19.
Ardeicola expallida Blagoveshtchensky, 1940; Tuff 1970: 484.
Ardeicola expallidus Blagoveshtchensky, 1940; Pilgrim & Palma 1982: 15.
Ardeicola expallidus Blagoveshtchensky, 1940; Murray *et al*. 1990: 1373.
Ardeicola albulus Eichler, 1948; Mey 1994: 33, figs 15–16.
Ardeicola expallidus Blagoveshtchensky, 1940; Forrester *et al*. 1995: 9.
Ardeicola expallidus Blagoveshtchensky, 1940; Palma 1999: 379.
Ardeicola expallidus Blagoveshtchensky, 1940; Palma 2010: 408.

Syntypes ♂♀, repository unknown (Palma 1996b: 156), but probably in ZMAS.

Type host: *Egretta garzetta garzetta* (Linnaeus, 1766).

New Zealand hosts: *Ardea modesta* J.E. Gray, 1831; *Ardea ibis coromanda* (Boddaert, 1783); *Egretta garzetta immaculata* (Gould, 1846).

Other hosts: *Ardea alba* Linnaeus, 1758; *Ardea ibis ibis* Linnaeus, 1758; *Egretta garzetta garzetta* (Linnaeus, 1766); *Egreta thula* (Molina, 1782).

New Zealand localities: HB, NN, NC, MC, SC, WD, CO, DN.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Pilgrim & Palma (1982); Murray *et al*. (1990); Paterson *et al.* (1999: 221); Palma (1999); Palma (2010).

Other significant references: Tuff (1967); Tuff (1970); Green & Palma (1991: 11, 29); Mey (1994); Forrester *et al*. (1995); Palma (1996b: 156); Price *et al*. (2003: 148); Palma & Jensen (2005: 54, 61); Ahmad *et al*. (2013).

Remarks: *Ardeicola expallidus* is widespread on a number of heron species, it but has been collected infrequently in New Zealand.

Ardeicola neopallidus Price, Hellenthal & Palma, 2003

Figs 70–71

Lipeurus signatus var. *pallida* Piaget, 1880: 312. Preoccupied by *Lipeurus pallidus* Giebel, 1874: 219.
Esthiopterum pallidum Piaget, 1880 [sic]; Harrison 1916: 139.
Ardeicola pallidus (Piaget, 1880) "*nec L. pallidus* Giebel, 1866" [sic]; Hopkins & Clay 1952: 40.
Ardeicola pallidus (Piaget, 1880); Palma 1999: 379.
Ardeicola neopallidus Price, Hellenthal & Palma, 2003: 149. *Nomen novum* for *Lipeurus pallidus* Piaget, 1880: 312.
Ardeicola neopallidus Price, Hellenthal & Palma, 2003; Palma 2010: 408.

Syntypes ♂♀ in NHML (Thompson 1937–1939: 342).

Type host: *Egretta sacra* (J.F. Gmelin, 1789).

New Zealand host: *Egretta sacra sacra* (J.F. Gmelin, 1789).

Other hosts: None.

New Zealand localities: AK, WN.

Geographic distribution: Asia, Australasia and tropical Pacific Islands.

New Zealand references: Palma (1999); Palma (2010).

Other significant reference: Price *et al*. (2003: 149).

Remarks: The reef heron has been searched for lice in very few occasions in New Zealand, resulting in only two records of *Ardeicola neopallidus*.

Ardeicola pilgrimi Tandan, 1972

Ardeicola pilgrimi Tandan, 1972b: 52, figs 1–9.
Ardeicola pilgrimi Tandan, 1972; Wise 1977: 58.
Ardeicola pilgrimi Tandan, 1972; Horning *et al.* 1980: 5, 11.
Ardeicola pilgrimi Tandan, 1972; Pilgrim & Palma 1982: 15.
Ardeicola pilgrimi Tandan, 1972; Murray *et al*. 1990: 1373.
Ardeicola pilgrimi Tandan, 1972; Palma 2010: 408.

Holotype ♂ in CMNZ (Nicholls *et al.* 1998: 30).

Type host: *Egretta novaehollandiae novaehollandiae* (Latham, 1790).

New Zealand host: *Egretta novaehollandiae novaehollandiae* (Latham, 1790).

Other hosts: None.

New Zealand localities: WA, WN, NN, KA, NC, MC, SC, KE, SN.

Geographic distribution: Australasia.

New Zealand references: Tandan (1972); Wise (1977); Horning *et al.* (1980); Pilgrim & Palma (1982); Murray *et al*. (1990); Nicholls *et al.* (1998: 30); Paterson *et al.* (1999: 221); Palma (2010).

Other significant references: Green & Palma (1991: 11, 28); Palma (1996b: 157); Price *et al*. (2003: 149).

Remarks: Although the white-faced heron has become established in New Zealand from Australia in relatively recent times (Checklist Committee 2010: 161), *Ardeicola pilgrimi* was first described from New Zealand material.

Ardeicola plataleae (Linnaeus, 1758)

Pediculus plataleae Linnaeus, 1758: 613.
Esthiopterum plataleae Linnaeus, 1758 [sic]; Harrison 1916: 139.
Ardeicola plataleae (Linnaeus, 1758); Clay & Hopkins 1950: 245, figs 29–33, pl. 1: fig. 5.
Ardeicola plataleae (Linnaeus, 1758); Pilgrim & Palma 1982: 16.
Ardeicola plataleae (Linnaeus, 1758); Murray *et al*. 1990: 1373.
Ardeicola plataleae (Linnaeus, 1758); Price *et al*. 2003: 149.
Ardeicola plataleae (Linnaeus, 1758); Palma 2010: 408.

Neotype ♀ in NHML (Clay & Hopkins 1950: 246, pl. 1: fig. 5).
Type host: *Platalea leucorodia* Linnaeus, 1758.
New Zealand host: *Platalea regia* Gould, 1838.
Other hosts: None.
New Zealand localities: HB, WD.
Geographic distribution: Eurasia; Africa; Australasia.
New Zealand references: Pilgrim & Palma (1982); Murray *et al*. (1990); Palma (2010).
Other significant references: Séguy (1944: 356, figs 529–530); Clay & Hopkins (1950); Moreby (1976: 92); Martín-Mateo (1994: 110, figs 1e, 3a,b); Palma (1996b: 157); Price *et al*. (2003); Martín-Mateo (2009: 231, fig. 47).
Remarks: Since the first record of the royal spoonbill in New Zealand in 1861, this host has become well established with many breeding localities in this country (Checklist Committee 2010: 167). However, *Ardeicola plataleae* has been collected only twice in this country.

***Ardeicola rhaphidius* (Nitzsch [*in* Giebel], 1866)**

Lipeurus rhaphidius Nitzsch [*in* Giebel], 1866; 384.
Esthiopterum rhaphidium Nitzsch [*in* Giebel], 1866 [sic]; Harrison 1916: 141.
Ardeicola rhaphidius (Nitzsch [*in* Giebel], 1866); Hopkins & Clay 1952: 41.
Ardeicola rhaphidius (Nitzsch, 1866) [sic]; Pilgrim & Palma 1982: 16.
Ardeicola rhaphidius (Nitzsch, 1866) [sic]; Murray *et al*. 1990: 1373.
Ardeicola rhaphidius (Nitzsch [*in* Giebel], 1866); Price *et al*. 2003: 149.
Ardeicola rhaphidius (Nitzsch [*in* Giebel], 1866); Palma 2010: 408.

Status, sex and repository of types unknown, presumed lost. See Clay (1949a: 1), Palma & Pilgrim (1984: 150) and Palma (1996b: 157).
Type host: *Plegadis falcinellus* (Linnaeus, 1766).
New Zealand host: *Plegadis falcinellus* (Linnaeus, 1766).
Other host: *Plegadis chihi* (Vieillot, 1817).
New Zealand localities: WI.
Geographic distribution: Eurasia; Africa; Americas; Australasia.
New Zealand references: Pilgrim & Palma (1982); Murray *et al*. (1990); Palma (2010).
Other significant references: Dubinin (1938: fig. 15); Séguy (1944: 356, figs 531–532); Butler & O'Connor (1994: 453); Forrester *et al*. (1995: 12); Palma (1996b: 157); Price *et al*. (2003).
Remarks: Although the glossy ibis is a regular vagrant to New Zealand (Checklist Committee 2010: 166), there is only one record of *Ardeicola rhaphidius* from this country.

***Ardeicola stellaris* (Denny, 1842)**

Philopterus (*Lipeurus*) *stellaris* Denny, 1842: 59, 178, pl. 15: fig. 3.
Esthiopterum stellare Denny, 1842; [sic]; Harrison 1916: 142.
Ardeicola stellaris (Denny, 1842); Hopkins & Clay 1952: 41.
Ardeicola stellaris (Denny, 1842) *s. l.*; Pilgrim & Palma 1982: 15.
Ardeicola stellaris (Denny, 1842); Murray *et al*. 1990: 1373.
Ardeicola stellaris (Denny, 1842); Price *et al*. 2003: 149.
Ardeicola stellaris (Denny, 1842); Palma 2010: 408.

Syntypes ♂♀ in NHML (Palma 1996b: 157).
Type host: *Botaurus stellaris* (Linnaeus, 1758).
New Zealand host: *Botaurus poiciloptilus* (Wagler, 1827).
Other hosts: None.
New Zealand localities: ND, BP, HB, NN.
Geographic distribution: Eurasia; Africa; Australasia.
New Zealand references: Pilgrim & Palma (1982); Murray *et al*. (1990: 1373); Paterson *et al.* (1999: 221); Palma (2010).
Other significant references: Séguy (1944: 357, figs 533–534); Green & Palma (1991: 11, 29); Palma (1996b: 157); Price *et al*. (2003: 149).

Remarks: Pilgrim & Palma (1982: 15) regarded the population of *Ardeicola stellaris* from the Australasian bittern as somewhat different from that of the type host, and qualified it as *sensu lato*; however, my examination of more samples, including one from the type host, shows that making such difference is not warranted.

Genus *Austrogoniodes* Harrison, 1915

Austrogoniodes Harrison, 1915a. *Parasitology 7*: 398. Type species: *Goniocotes waterstoni* Cummings, 1914 = *Austrogoniodes waterstoni* (Cummings, 1914) (by original designation).

Cesareus Kéler, 1952. *Jour. Entomol. Soc. Southern Africa 15*: 221. Type species: *Cesareus concii* Kéler, 1952 = *Austrogoniodes concii* (Kéler, 1952) (by original designation).

Austrogoniodes antarcticus Harrison, 1937

Austrogoniodes antarcticus Harrison, 1937: 20, pl. 1: figs 6–7.
Austrogoniodes antarcticus Harrison, 1937; Clay 1967: 149, figs 1–2, 6, 8–9, 16, 18–20, 28.
Austrogoniodes antarcticus Harrison, 1937; Clay & Moreby 1967: 161, 167.
Austrogoniodes antarcticus Harrison, 1937; Pilgrim & Palma 1982: 4.
Austrogoniodes antarcticus Harrison, 1937; Murray *et al.* 1990: 1368.
Austrogoniodes antarcticus Harrison, 1937; Banks & Paterson 2004: 94, figs 3a, 5, 7d, 9–11.
Austrogoniodes antarcticus Harrison, 1937; Palma 2010: 408.

Holotype ♂ in AMSA (Palma 1996b: 158).

Type host: *Pygoscelis adeliae* (Hombron & Jacquinot, 1841).

New Zealand host: *Pygoscelis adeliae* (Hombron & Jacquinot, 1841).

Other hosts: None.

New Zealand localities: RO.

Geographic distribution: Antarctica; Southern Oceans.

New Zealand references: Clay (1967: 150); Clay & Moreby (1967); Pilgrim & Palma (1982); Murray *et al.* (1990); Banks & Paterson (2004; 2005: 744); Banks *et al.* (2006: 158); Palma (2010).

Other significant references: Kéler (1952: 221); Palma (1996b: 158); Price *et al*. (2003: 151).

Remarks: Collections of *Austrogoniodes antarcticus* from the Ross Dependency (Antarctica) show that this louse species has both low abundance and low prevalence of infestation.

Austrogoniodes concii (Kéler, 1952)

Cesareus concii Kéler, 1952: 223, figs 14–19.
Austrogoniodes concii (Kéler, 1952); Hopkins & Clay 1953: 435.
Austrogoniodes conci [sic] (Kéler, 1952); Clay 1967: 151, 154, figs 29, 36.
Austrogoniodes concii (Kéler, 1952); Wise 1977: 59.
Austrogoniodes concii (Kéler, 1952) *s. l.*; Horning *et al.* 1980: 5, 8.
Austrogoniodes concii (Kéler, 1952) *s. l.*; Pilgrim & Palma 1982: 4.
Austrogoniodes concii (Kéler, 1952); Murray *et al.* 1990: 1368.
Austrogoniodes concii (Kéler, 1952); Banks & Paterson 2004: 93, figs 4a, 9–11.
Austrogoniodes concii (Kéler, 1952); Palma 2010: 409.

Holotype ♂ in SAIM (Palma 1996b: 159).

Type host: *Eudyptes moseleyi* Mathews & Iredale, 1921.

New Zealand hosts: *Eudyptes pachyrhynchus* G.R. Gray, 1845; *Eudyptes robustus* Oliver, 1953; *Eudyptes sclateri* Buller, 1888; *Megadyptes antipodes* (Hombron & Jacquinot, 1841).

Other hosts: None.

New Zealand localities: HB, WN, KA, NC, MC, SC, WD, FD, SN, AN, CA.

Geographic distribution: Australasia; Antarctica; Subantarctic Islands; Southern Oceans.

New Zealand references: Gressitt (1964: 538); Clay (1967); Wise (1977); Horning *et al.* (1980); Pilgrim & Palma (1982); Pérez (1985: 160); Murray *et al.* (1990); Marris (2000: 187); Banks & Paterson (2004; 2005: 744); Banks *et al.* (2006: 158); Palma (2010).

Other significant references: Séguy (1953: 558, figs 1–2); Green & Palma (1991: 11, 24); Palma (1996b: 159); Price *et al*. (2003: 151); Hänel & Palma (2007: 112, 122, 131).

Remarks: Pilgrim & Palma (1982: 4–5) regarded the populations of *Austrogoniodes concii* from four penguin species as somewhat different from that of the type host, and qualified them as *sensu lato*; however, my examination of more samples shows that making such difference is not warranted.

The type locality of *Austrogoniodes concii* is Tristan da Cunha, and its type host has been referred to as *Eudyptes chrysocome* (J.R. Forster, 1781) or as its junior synonym *Eudyptes crestatus* Miller, 1784 in most publications. However, the species *E. chrysocome* is now restricted to the population of rockhopper penguins breeding in southern South America (Checklist Committee 2010: 56). Therefore, the type host of *A. concii* is the population of rockhopper penguins from Tristan da Cunha, i.e. *Eudyptes moseleyi* (Checklist Committee 2010: 57).

The record of *Austrogoniodes concii* on *Eudyptes crestatus* (= *chrysocome*) from "New Zealand–Christchurch" in Clay (1967: 154) is erroneous (see Pilgrim & Palma 1982: 4, 29, Note 3).

Austrogoniodes cristati Kéler, 1952

"*Austrogoniodes strutheus*" Harrison, 1937: 15 (not *Austrogoniodes strutheus* Harrison, 1915a).

"*Austrogoniodes waterstoni*" Harrison, 1937: 15 (not *Goniocotes waterstoni* Cummings, 1914).

Austrogoniodes cristati Kéler, 1952: 230, figs 20–22.

Austrogoniodes cristati Kéler, 1952; Hopkins & Clay 1953: 435.

Austrogoniodes cristati Kéler, 1952; Clay 1967: 152, 154, figs 42, 48.

Austrogoniodes cristati Kéler, 1952; Wise 1977: 59.

Austrogoniodes cristati Kéler, 1952; Horning *et al.* (1980: 5, 8.

Austrogoniodes cristati Kéler, 1952; Pilgrim & Palma 1982: 4, 29, note 6.

Austrogoniodes cristati Kéler, 1952; Murray *et al.* 1990: 1368.

Austrogoniodes cristati Kéler, 1952; Banks & Paterson 2004: 92, figs 9–11.

Austrogoniodes cristati Kéler, 1952; Palma 2010: 408.

Holotype ♂ in SAIM (Palma 1996b: 159).

Type host: *Eudyptes moseleyi* Mathews & Iredale, 1921.

New Zealand hosts: *Eudyptes filholi* Hutton, 1879; *Eudyptes pachyrhynchus* G.R. Gray, 1845; *Eudyptes robustus* Oliver, 1953; *Eudyptes sclateri* Buller, 1888; *Eudyptes chrysolophus* (Brandt, 1837); *Eudyptes schlegeli* Finsch, 1876.

Other hosts: None.

New Zealand localities: HB, KA, NC, MC, SC, WD, CO, DN, FD, SN, AN, CA, Macquarie Island.

Geographic distribution: Australasia; Antarctica; Subantarctic Islands; Southern Oceans.

New Zealand references: Kéler (1954: 58); Clay (1964a: 230); Gressitt (1964: 538); Clay (1967); Watson (1967: 71); Clay & Moreby (1970: 216); Gressitt (1970: 327); Wise (1977); Horning *et al.* (1980); Pilgrim & Palma (1982); Pérez (1985: 160); Murray *et al.* (1990); Palma (1996b: 159); Palma (1999: 384, note E); Marris (2000: 187); Palma & Horning (2002: 6, 17); Banks & Paterson (2004; 2005: 744); Banks *et al.* (2006: 158); Palma (2010).

Other significant references: Clay & Moreby (1967: 161, 167); Green & Palma (1991: 11, 24); Price *et al*. (2003: 151); Hänel & Palma (2007: 112, 122, 131).

Remarks: The two misidentifications listed above from Harrison (1937: 15) have been clarified by Palma & Horning (2002: 6, 20, notes 1–2). The type locality of *Austrogoniodes cristati* is Tristan da Cunha, and its type host has been referred to as *Eudyptes chrysocome* (J.R. Forster, 1781) or as its junior synonym *Eudyptes crestatus* Miller, 1784 in most publications. However, the species *E. chrysocome* is now restricted to the population of rockhopper penguins breeding in southern South America (Checklist Committee 2010: 56). Therefore, the type host of *A. cristati* is the population of rockhopper penguins from Tristan da Cunha, i.e. *Eudyptes moseleyi* (Checklist Committee 2010: 57).

Austrogoniodes hamiltoni Harrison, 1937

Figs 72–73

Austrogoniodes hamiltoni Harrison, 1937: 18, pl. 1: figs 8–9, pl. 2: figs 1–2.

Cesareus hamiltoni (Harrison, 1937); Kéler 1952: 237.

Cesareus hamiltoni (Harrison, 1937); Kéler 1954: 54, figs 4–7.

? *Austrogoniodes hamiltoni* Harrison, 1937; Clay 1940a: 297.
Austrogoniodes hamiltoni Harrison, 1937; Clay 1967: 152, 154, figs 15, 23, 30, 35, 44.
Austrogoniodes hamiltoni Harrison, 1937; Wise 1977: 59.
Austrogoniodes hamiltoni Harrison, 1937; Pilgrim & Palma 1982: 4, 29, notes 5, 7.
Austrogoniodes hamiltoni Harrison, 1937; Murray *et al.* 1990: 1368.
Austrogoniodes hamiltoni Harrison, 1937; Banks & Paterson 2004: 93, figs 9–11.
Austrogoniodes hamiltoni Harrison, 1937; Palma 2010: 408.

Holotype ♂ in AMSA (Palma 1996b: 159)

Type host: *Eudyptes filholi* Hutton, 1879.

New Zealand hosts: *Eudyptes filholi* Hutton, 1879; *Eudyptes schlegeli* Finsch, 1876.

Other hosts: None.

New Zealand localities: CO, DN, AN, CA, Macquarie Island.

Geographic distribution: Australasia; Antarctica; Subantarctic Islands; Southern Oceans.

New Zealand references: Harrison (1937); Kéler (1954); Clay (1967: 154); Watson (1967: 71); Clay & Moreby (1970: 216); Gressitt (1970: 327); Wise (1977); Pilgrim & Palma (1982); Pérez (1985: 161); Murray *et al.* (1990); Palma (1996b: 159); Marris (2000: 187); Palma & Horning (2002: 7, 17); Banks & Paterson (2004; 2005: 745); Banks *et al.* (2006: 158); Palma (2010).

Other significant references: Kéler (1952); Clay (1940a); Clay & Moreby (1967: 180, fig. 79); Green & Palma (1991: 11, 24); Price *et al*. (2003: 151).

Remarks: The type locality of *Austrogoniodes hamiltoni* is Macquarie Island, and its type host has been referred to as *Eudyptes chrysocome* (J.R. Forster, 1781) or as its junior synonym *Eudyptes crestatus* Miller, 1784 in most publications. However, the species *E. chrysocome* is now restricted to the population of rockhopper penguins breeding in southern South America (Checklist Committee 2010: 56). Therefore, the type host of *A. hamiltoni* is the population of rockhopper penguins from Macquarie Island, i.e. *Eudyptes filholi* Hutton, 1879 (Checklist Committee 2010: 56).

Records of *Austrogoniodes hamiltoni* on *Eudyptes pachyrhynchus* from "Macquarie I." and on *Eudyptes sclateri* from "Antipodes Is" in Clay (1967: 154) are the result of straggling or contaminations (see Pilgrim & Palma 1982: 4–5, 29, notes 4–5, 7; Palma 1999: 383, note A).

Austrogoniodes macquariensis Harrison, 1937

Austrogoniodes macquariensis Harrison, 1937: 17, pl. 1: figs 4–5.
Austrogoniodes macquariensis Harrison, 1937; Clay 1967: 154.
Austrogoniodes macquariensis Harrison, 1937; Watson 1967: 71.
Austrogoniodes macquariensis Harrison, 1937; Wise 1977: 59.
Austrogoniodes macquariensis Harrison, 1937; Pilgrim & Palma 1982: 4, 29, note 5.
Austrogoniodes macquariensis Harrison, 1937; Murray *et al.* 1990: 1368.
Austrogoniodes macquariensis Harrison, 1937; Palma & Horning 2002: 7, 17.
Austrogoniodes macquariensis Harrison, 1937; Banks & Paterson 2004: 94, figs 3c, 9–11. In part.
Austrogoniodes macquariensis Harrison, 1937; Palma 2010: 408.

Holotype ♂ in AMSA (Palma 1996b: 159).

Type host: *Eudyptes filholi* Hutton, 1879.

New Zealand hosts: *Eudyptes filholi* Hutton, 1879; *Eudyptes schlegeli* Finsch, 1876.

Other hosts: None.

New Zealand localities: WA, CO, DN, SN, AN, CA, Macquarie Island.

Geographic distribution: Australasia; Antarctica; Subantarctic Islands; Southern Oceans.

New Zealand references: Harrison (1937); Kéler (1952: 221); Clay (1967); Watson (1967); Clay & Moreby (1970: 216); Gressitt (1970: 326); Wise (1977); Lowry *et al.* (1978: 138); Pilgrim & Palma (1982); Pérez (1985: 163); Murray *et al.* (1990); Palma (1996b: 159); Marris (2000: 187); Palma & Horning (2002: 7, 17); Banks & Paterson (2004); Banks *et al.* (2006: 158); Palma (2010).

Other significant references: Price *et al*. (2003: 151).

Remarks: The type locality of *Austrogoniodes macquariensis* is Macquarie Island, and its type host has been referred to as *Eudyptes chrysocome* (J.R. Forster, 1781) or as its junior synonym *Eudyptes crestatus* Miller, 1784 in most publications. However, the species name *E. chrysocome* is now restricted to the population of rockhopper penguins breeding in southern South America (Checklist Committee 2010: 56). Therefore, the type host of *A. macquariensis* is the population of rockhopper penguins from Macquarie Island, i.e. *Eudyptes filholi* Hutton, 1879 (Checklist Committee 2010: 56). Also, see "Remarks" below, under *Austrogoniodes macquariensis* Harrison, 1937 *sensu lato*.

Austrogoniodes macquariensis Harrison, 1937 *sensu lato*

Cesareus macquariensis (Harrison, 1937); Kéler 1954: 50, figs 2–3.
Austrogoniodes macquariensis Harrison, 1937; Clay 1967: 152, 154, figs 31, 34, 47.
Austrogoniodes macquariensis Harrison, 1937; Horning *et al.* 1980: 5, 8.
Austrogoniodes sp.; Horning *et al.* 1980: 5, 8.
Austrogoniodes macquariensis Harrison, 1937 s. *l.*; Pilgrim & Palma 1982: 4.
Austrogoniodes sp.; Pilgrim & Palma 1982: 4.
Austrogoniodes sp.; Murray *et al.* 1990: 1368.
Austrogoniodes macquariensis Harrison, 1937; Banks & Paterson 2004: 94, figs 3c, 9–11. In part.

New Zealand host: *Eudyptes chrysolophus* (J.F. Brandt, 1837).
Other host: *Eudyptes chrysocome* (J.R. Forster, 1781).
New Zealand locality: SN.
Geographic distribution: Australasia; Antarctica; Subantarctic Islands; Southern Oceans.
New Zealand references: Horning *et al.* (1980); Pilgrim & Palma (1982); Murray *et al.* (1990); Banks & Paterson (2004).
Other significant references: Kéler (1954); Clay (1967); Clay & Moreby (1967: 161, 167).
Remarks: I regard the populations of *Austrogoniodes macquariensis* from *Eudyptes chrysocome* and *E. chrysolophus* as "*sensu lato*" because the males show subtle but consistent differences from those parasitising *Eudyptes filholi* and *E. schlegeli*.

Records of *Austrogoniodes macquariensis* from other penguin species listed in Clay (1967: 154) and from two species of *Pygoscelis* in Price *et al*. (2003: 151) are cases of either straggling or contaminations (see Pilgrim & Palma 1982: 4–5, 29, notes 4–5; Banks & Paterson 2004: 100).

Austrogoniodes mawsoni Harrison, 1937

Austrogoniodes mawsoni Harrison, 1937: 15, pl. 1: figs 2–3.
Cesareus mawsoni (Harrison, 1937); Kéler 1952: 237.
Austrogoniodes mawsoni Harrison, 1937: Clay 1967: 151, 154, figs 13, 27, 40–41, 45.
Austrogoniodes mawsoni Harrison, 1937; Pilgrim & Palma 1982: 4.
Austrogoniodes mawsoni Harrison, 1937; Murray *et al.* 1990: 1367.
Austrogoniodes mawsoni Harrison, 1937; Banks & Paterson 2004: 93, figs 3d, 9–11.
Austrogoniodes mawsoni Harrison, 1937; Palma 2010: 408.

Holotype ♂ in AMSA (Palma 1996b: 160).
Type host: *Aptenodytes forsteri* G.R. Gray, 1844.
New Zealand host: *Aptenodytes forsteri* G.R. Gray, 1844.
Other hosts: None.
New Zealand locality: RO.
Geographic distribution: Antarctica; Southern Oceans.
New Zealand references: Clay (1967: 154); Clay & Moreby (1967: 161, 167); Pilgrim & Palma (1982); Murray *et al.* (1990); Banks & Paterson (2004; 2005: 744); Banks *et al.* (2006: 158); Palma (2010).
Other significant references: Kéler (1952: 221); Palma (1996b: 160); Price *et al*. (2003: 151).
Remarks: Collections of *Austrogoniodes mawsoni* from the Ross Dependency (Antarctica) show that this louse species has both low abundance and low prevalence of infestation.

Austrogoniodes strutheus* Harrison, 1915 *nomen dubium

Austrogoniodes strutheus Harrison, 1915a: 399, fig. 2, pl. 27: fig. 15.
Austrogoniodes strutheus Harrison, 1915; Guimarães 1938: 43 (as junior synonym of *A. bifasciatus* (Piaget, 1885))
Austrogoniodes strutheus Harrison, 1915; Kéler 1952: 220, 231, 236.
Austrogoniodes strutheus Harrison, 1915; Clay 1967: 153.
Austrogoniodes ?*strutheus* Harrison, 1915; Clay & Moreby 1970: 216.
Austrogoniodes ?*strutheus* Harrison, 1915; Gressitt 1970: 327.
Austrogoniodes strutheus Harrison, 1915 *nom. dub*.; Banks & Paterson 2004: 90.
Austrogoniodes strutheus Harrison, 1915; Pilgrim & Palma 1982: 5, 29, note 7.
Austrogoniodes strutheus Harrison, 1915; Murray *et al.* 1990: 1368.
Austrogoniodes strutheus Harrison, 1915; Palma 2010: 408.

Syntypes ♂♀, presumed lost. See Clay (1967: 153).
Type host: *Eudyptes sclateri* Buller, 1888.
New Zealand host: *Eudyptes sclateri* Buller, 1888.
Other hosts: None.
New Zealand locality: "Probably from one of the southern islands of New Zealand" (Harrison, 1915a: 402)
Geographic distribution: New Zealand.
New Zealand references: Harrison (1915a); Harrison (1937); Clay (1967); Clay & Moreby (1970); Gressitt (1970); Wise (1977: 59); Pilgrim & Palma (1982); Murray *et al.* (1990); Palma & Horning (2002: 20, note 1); Palma (2010); Buckley *et al.* (2012: App. 2).
Other significant references: Guimarães (1938); Kéler (1952); Price *et al*. (2003: 151); Banks & Paterson (2004).
Remarks: In agreement with Banks & Paterson (2004: 90), I regard this species as a *nomen dubium* following the discussion on its uncertain taxonomic status in Clay (1967: 153).

***Austrogoniodes vanalphenae* Banks & Palma, 2003**

Austrogoniodes sp.; Pilgrim & Palma 1982: 4.
Austrogoniodes sp.; Murray *et al.* 1990: 1368.
Austrogoniodes vanalphenae Banks & Palma, 2003: 69, figs 1, 3–7A, 8–9.
Austrogoniodes vanalphenae Banks & Palma, 2003; Banks & Paterson 2004: 92 figs 1, 3b, 4b, 6, 7c.
Austrogoniodes vanalphenae Banks & Palma, 2003; Palma 2010: 408.

Holotype ♀ in MONZ.
Type host: *Megadyptes antipodes* (Hombron & Jacquinot, 1841).
New Zealand host: *Megadyptes antipodes* (Hombron & Jacquinot, 1841).
Other hosts: None.
New Zealand localities: WN, KA, MC, SC, DN, AU.
Geographic distribution: New Zealand.
New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990); Banks & Palma (2003); Banks & Paterson (2004; 2005: 744); Banks *et al.* (2006: 158); Palma (2010); Buckley *et al.* (2012: App. 2).
Other significant references: None.
Remarks: *Austrogoniodes vanalphenae* is an endemic and vulnerable species (Buckley *et al.* 2012), exclusively parasitic on yellow-eyed penguins.

***Austrogoniodes waterstoni* (Cummings, 1914)**

Goniocotes waterstoni Cummings, 1914: 173, fig. 8.
Austrogoniodes waterstoni (Cummings, 1914); Harrison 1915a: 399.
Cesareus waterstoni (Cummings, 1914); Kéler 1952: 237.
Austrogoniodes waterstoni (Cummings, 1914); Clay 1967: 152, 155, figs 14, 39.
Austrogoniodes waterstoni (Cummings, 1914); Wise 1977: 59.
Austrogoniodes waterstoni (Cummings, 1914); Horning *et al.* 1980: 5, 8.
Austrogoniodes waterstoni (Cummings, 1914); Pilgrim & Palma 1982: 4.
Austrogoniodes waterstoni (Cummings, 1914); Murray *et al*. 1990: 1368.
Austrogoniodes waterstoni (Cummings, 1914); Banks & Paterson 2004: 94, figs 9–11.

Austrogoniodes waterstoni (Cummings, 1914); Palma 2010: 408.

Syntypes ♂♀ in NHML (Palma 1996b: 160).

Type host: *Eudyptula minor* (J.R. Forster, 1781).

New Zealand host: *Eudyptula minor* (J.R. Forster, 1781).

Other hosts: None.

New Zealand localities: AK, BP, TK, WN, SD, MB, NN, KA, NC, MC, SC, WD, CH, SI, SN.

Geographic distribution: Australasia.

New Zealand references: Kéler (1952: 220); Clay (1967); Gressitt (1970: 327); Pilgrim (1974: 1035, fig. 5); Wise (1977); Horning *et al.* (1980); Pilgrim & Palma (1982); Murray *et al*. (1990); Banks & Paterson (2004); Banks *et al.* (2006: 158); Palma (2010).

Other significant references: Harrison (1915a); Thompson (1940b: 498, pl. 10: figs 3–4); Green & Palma (1991: 11, 24); Palma (1996b: 160); Price *et al*. (2003: 151).

Remarks: Checklist Committee (2010: 61) do not recognise any subspecies within *Eudyptula minor*. However, the type host of *Austrogoniodes waterstoni* is from the Australian population, sometimes referred to as *Eudyptula minor novaehollandiae* (Stephens, 1826).

Genus *Bedfordiella* Thompson, 1937

Bedfordiella Thompson, 1937b. *Ann. Mag. Nat. Hist.* (Ser. 10) *20*: 434. Type species: *Bedfordiella unica* Thompson, 1937b (by original designation).

Bedfordiella unica Thompson, 1937

Figs 74–75

Bedfordiella unica Thompson, 1937b: 434, figs 1–2.
Bedfordiella unica Thompson, 1937; Hopkins & Clay 1952: 50.
Bedfordiella unica Thompson, 1937; Séguy 1953: 562, figs 6–8.
Bedfordiella unica Thompson, 1937; Timmermann 1961c: 38, figs 7, 9–10.
Bedfordiella simsi Timmermann, 1961c: 39, figs 8, 11.
Bedfordiella unica Thompson, 1937; Timmermann 1965: 126, figs 64–65, pl. 8: fig. 4.
Bedfordiella simsi Timmermann, 1961; Timmermann 1965: 126, fig. 66, pl. 9: fig. 1.
Bedfordiella simsi Timmermann, 1961; Clay & Moreby 1967: 160, figs 134, 142.
Bedfordiella unica Thompson, 1937; Pilgrim & Palma 1982: 8.
Bedfordiella unica Thompson, 1937; Palma & Pilgrim 1983: 145, figs 1a,b.
Bedfordiella unica Thompson, 1937; Murray *et al*. 1990: 1369.
Bedfordiella unica Thompson, 1937; Palma 2010: 408.

Holotype ♀ in NHML. Holotype ♂ of *Bedfordiella simsi* in NHML (Palma & Pilgrim 1983: 146).

Type host: *Lugensa brevirostris* (Lesson, 1833).

New Zealand host: *Lugensa brevirostris* (Lesson, 1833).

Other hosts: None.

New Zealand localities: ND, AK, BP, WI, WN, WD, SL, SI.

Geographic distribution: Southern Oceans; Atlantic, Indian and Pacific Oceans.

New Zealand references: Pilgrim & Palma (1982); Palma & Pilgrim (1983); Murray *et al*. (1990: 1369); Page *et al.* (2004: 639, 650); Palma (2010).

Other significant references: Séguy (1953); Timmermann (1961c; 1965); Clay & Moreby (1967); Ledger (1980: 114, fig. 135); Green & Palma (1991: 11, 26); Palma (1996b: 160); Furness & Palma (1992: 35, 39); Price *et al*. (2003: 152); Hänel & Palma (2007: 112, 123, 130).

Remarks: The two sexes of this louse were described as two different species, and later synonymised by Palma & Pilgrim (1983: 145). Timmermann (1961c) described the male as *Bedfordiella simsi*, unaware that Séguy (1953: 563, figs 7–8) had already recorded, described and figured the main differences between the male and the female of *Bedfordiella unica*.

Genus *Brueelia* Kéler, 1936

Brüelia Kéler, 1936. *Arb. Morph. tax. Entomol. Berlin-Dahlem 3*: 257. Type species: *Brüelia rossittensis* Kéler, 1936 = *Brueelia brachythorax* (Giebel, 1874) (by original designation).

Allobrüelia Eichler, 1951a. *Bedeutung der Vogelwelt in Forschung und Praxis*, Berlin: 36. Type species: *Allobrüelia amsel* Eichler, 1951a = *Brueelia amsel* (Eichler, 1951) (by original designation.

Turdinirmus Eichler, 1951a. *Bedeutung der Vogelwelt in Forschung und Praxis*, Berlin: 41. Type species: *Philopterus* (*Nirmus*) *merulensis* Denny, 1842= *Brueelia merulensis* (Denny, 1842) (by original designation.

Bruelia Kéler, 1936; Ansari 1956: 102. Invalid emendation (see Palma 1996b: 162).

Brueelia Kéler, 1936; Złotorzycka 1964a: 252. Emendation.

***Brueelia amsel* (Eichler, 1951)**

Allobruëlia amsel Eichler, 1951a: 37, fig. 8.

Allobrüelia amsel Eichler, 1952b: 74, fig. 1.

Brüelia amsel (Eichler, 1951); Hopkins & Clay 1953: 435.

Bruelia amsel (Eichler, 1951); Ansari 1956: 135, figs 86–92.

Allobrueelia amsel Eichler, 1952; Złotorzycka 1964a: 265, fig. 7b.

Brueelia sp.; Pilgrim & Palma 1982: 26.

Brueelia amsel (Eichler, 1951); Palma 1999: 382.

Brueelia amsel (Eichler, 1951); Price *et al*. 2003: 153.

Brueelia amsel (Eichler, 1951); Murray *et al*. 2006b: 1959.

Brueelia amsel (Eichler, 1951); Palma 2010: 408.

Holotype ♂ in ZMHU (Jürgen Deckert pers. comm. November 2013).

Type host: *Turdus merula merula* Linnaeus, 1758.

New Zealand host: *Turdus merula merula* Linnaeus, 1758.

Other hosts: None

New Zealand locality: KE.

Geographic distribution: Eurasia; New Zealand.

New Zealand references: Pilgrim & Palma (1982); Palma (1999); Paterson *et al.* (1999: 220); Murray *et al*. (2006b); Palma (2010).

Other significant references: Ansari (1956); Złotorzycka (1964a); Baum (1968: 143, fig. 8); Price *et al*. (2003); Martín-Mateo (2009: 198).

Remarks: *Brueelia amsel* was introduced to New Zealand with blackbirds by human agency (Checklist Committee 2010: 313). Eichler (1951a; 1952b) described "*Allobruëlia amsel*" as a new species twice.

***Brueelia breueri* Balát, 1955** **New Record**

Brüelia breueri Balát, 1955: 505, pl. 1: fig. 2, pl. 2: fig. 2.

Brueelia breueri Balát, 1955; Złotorzycka 1964a: 255, fig. 4c.

Brueelia sp.; Pilgrim & Palma 1982: 27.

Brueelia breueri Balát, 1955; Price *et al.* 2003: 153.

Brueelia sp.; Murray *et al*. 2006b: 1958.

Brueelia sp.; Palma 2010: 408.

Syntypes ♂♀ in Moravian Museum, Brno, Czech Republic (Oldřich Sychra pers. comm. December 2014).

Type host: *Carduelis chloris chloris* (Linnaeus, 1758).

New Zealand host: *Carduelis chloris* (Linnaeus, 1758).

Other hosts: None.

New Zealand localities: WN, MC, SL.

Geographic distribution: Eurasia; New Zealand.

New Zealand references: Pilgrim & Palma (1982); Murray *et al*. (2006b); Palma (2010).

Other significant references: Złotorzycka (1964a); Price *et al.* (2003).

Material examined and repository: 22♂, 34♀ (7 samples, MONZ).

Remarks: This is the first record of *Brueelia breueri* for New Zealand because the New Zealand references cited above reported this louse as "*Brueelia* sp." only. *Brueelia breueri* was introduced to New Zealand with European greenfinches by human agency (Checklist Committee 2010: 320).

***Brueelia callaeincola* Valim & Palma, 2015**

Brueelia sp.; Pilgrim & Palma 1982: 28.
Brueelia sp.; Murray *et al.* 2006b: 1958.
Brueelia sp.; Palma 2010: 408.
Brueelia sp.; Buckley *et al*. 2012: App. 2.
Brueelia callaeincola Valim & Palma, 2015: 490, figs 4, 5, 6d, 7c,d.

Holotype ♂ in MONZ.

Type host: *Philesturnus carunculatus* (J.F. Gmelin, 1788).

New Zealand hosts: *Callaeas wilsoni* (Bonaparte, 1851); *Callaeas cinerea* (J.F. Gmelin, 1788); *Philesturnus rufusater* (Lesson, 1828); *Philesturnus carunculatus* (J.F. Gmelin, 1789).

Other hosts: None.

New Zealand localities: ND, CL, AK, FD.

Geographic distribution: New Zealand.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (2006b); Palma (2010); Buckley *et al*. (2012); Valim & Palma (2015).

Other significant references: none.

Remarks: *Brueelia callaeincola* is an endemic and vulnerable species (Buckley *et al*. 2012), exclusively parasitic on members of the endemic bird family Callaeidae (Checklist Committee 2010: 280).

***Brueelia cyclothorax* (Burmeister, 1838)**

Nirmus cyclothorax Burmeister, 1838a: 429.
Degeeriella cyclothorax Nitzsch in Burmeister, 1838 [sic]; Harrison 1916: 111.
Bruëlia cyclothorax (Burmeister, 1838); Hopkins & Clay 1952: 55.
Brueelia cyclothorax (Burmeister, 1838); Złotorzycka 1964a: 255, fig. 4d.
Brueelia cyclothorax (Burmeister, 1838); Horning *et al.* 1980: 5, 12.
Brueelia cyclothorax (Burmeister, 1838); Pilgrim & Palma 1982: 27.
Brueelia cyclothorax (Burmeister, 1838); Murray *et al*. 2006b: 1958.
Brueelia cyclothorax (Burmeister, 1838); Palma 2010: 408.

Status, sex and repository of types unknown, presumed lost. See Clay (1949a: 1) and Palma & Pilgrim (1984: 150).

Type host: *Passer domesticus domesticus* (Linnaeus, 1758).

New Zealand host: *Passer domesticus domesticus* (Linnaeus, 1758).

Other host: *Passer montanus* (Linnaeus, 1758).

New Zealand localities: HB, WN, NC, MC, SC, WD, SN.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Horning *et al.* (1980); Pilgrim & Palma (1982); Paterson *et al.* (1999: 220); Galloway (2005: 16); Murray *et al*. (2006b); Palma (2010).

Other significant references: Złotorzycka (1964a); Price *et al*. (2003: 154); Palma & Jensen (2005: 54, 68); Adam (2007: 182).

Remarks: *Brueelia cyclothorax* was introduced to New Zealand with house sparrows by human agency (Checklist Committee 2010: 316).

***Brueelia delicata* (Nitzsch [*in* Giebel], 1866)**

Nirmus delicatus Nitzsch [*in* Giebel], 1866: 368.
Degeeriella delicata Nitzsch [*in* Giebel], 1866 [sic]; Harrison 1916: 111.
Bruëlia delicata (Nitzsch [*in* Giebel], 1866); Hopkins & Clay 1952: 55.
Brueelia delicata (Nitzsch, 1866) [sic]; Złotorzycka 1964a: 256.
Brueelia delicata (Nitzsch, 1866) [sic]; Pilgrim & Palma 1982: 27.

Brueelia delicata (Nitzsch [*in* Giebel], 1866); Price *et al*. 2003: 154.
Brueelia delicata (Nitzsch [*in* Giebel], 1866); Murray *et al*. 2006b: 1959.
Brueelia delicata (Nitzsch [*in* Giebel], 1866); Palma 2010: 408.

Status, sex and repository of types unknown, presumed lost. See Clay (1949a: 1) and Palma & Pilgrim (1984: 150).

Type host: *Emberiza citrinella* Linnaeus, 1758.

New Zealand host: *Emberiza citrinella* Linnaeus, 1758.

Other hosts: *Emberiza leucocephalos* S.G. Gmelin, 1771; *Emberiza rustica* Pallas, 1776.

New Zealand localities: WN, MB, MC, KE.

Geographic distribution: Eurasia; New Zealand.

New Zealand references: Pilgrim & Palma (1982); Galloway (2005: 17); Murray *et al*. (2006b); Palma (2010).

Other significant references: Złotorzycka (1964a); Mey (1982: 171, fig. 18); Soler-Cruz *et al*. (1982: 256, figs 1, 5b,e,g); Price *et al*. (2003); Martín-Mateo (2009: 192).

Remarks: *Brueelia delicata* was introduced to New Zealand with yellowhammers by human agency (Checklist Committee 2010: 322).

Brueelia densilimba (Nitzsch [*in* Giebel], 1866) **New Record**

Nirmus densilimbus Nitzsch [*in* Giebel], 1866: 368.
Degeeriella densilimba Nitzsch [*in* Giebel], 1866 [sic]; Harrison 1916: 111
Bruëlia densilimba (Nitzsch [*in* Giebel], 1866); Hopkins & Clay 1952: 55.
Brueelia sp.; Pilgrim & Palma 1982: 27.
Brueelia densilimba (Nitzsch [*in* Giebel], 1866); Rékási & Kiss 1984: 107, 111.
Brueelia densilimba (Nitzsch [*in* Giebel], 1866); Price *et al.* 2003: 154.
Brueelia sp.; Murray *et al.* 2006b: 1959.
Brueelia sp.; Palma 2010: 408.

Status, sex and repository of types unknown, presumed lost. See Clay (1949a: 1) and Palma & Pilgrim (1984: 150).

Type host: *Carduelis carduelis* (Linnaeus, 1758).

New Zealand host: *Carduelis carduelis britannica* (Hartert, 1903).

Other hosts: None.

New Zealand locality: WD.

Geographic distribution: Eurasia; New Zealand.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (2006b); Palma (2010).

Other significant references: Soler-Cruz & Guevara-Benítez (1981: 275, figs 1–2); Price *et al.* (2003); Martín-Mateo (2009: 191).

Material examined and repository: 2♂, 10♀ (1 sample, MONZ).

Remarks: This is the first record of *Brueelia densilimba* for New Zealand because the New Zealand references cited above reported this louse as "*Brueelia* sp." only. *Brueelia densilimba* was introduced to New Zealand with European goldfinches by human agency (Checklist Committee 2010: 320).

Brueelia merulensis (Denny, 1842)

Philopterus (*Nirmus*) *merulensis* Denny, 1842: 51, 128, pl. 7: fig. 1.
Degeeriella merulensis Denny, 1842 [sic]; Harrison 1916: 118.
Turdinirmus merulensis Denny [sic]; Eichler 1952b: 78, fig. 3.
Bruëlia merulensis (Denny, 1842); Hopkins & Clay 1952: 58.
Bruelia merulensis (Denny, 1842); Ansari 1956: 119, figs 35–42.
Turdinirmus merulensis (Denny, 1842); Złotorzycka 1964a: 267, figs 8a,b.
Brueelia merulensis (Denny, 1842); Tendeiro 1965c: 73, figs 48–51.
Brueelia merulensis (Denny, 1842); Watt 1971: 235, 244, fig. 8.
Brueelia merulensis (Denny, 1842); Horning *et al.* 1980: 5, 12.
Brueelia merulensis (Denny, 1842); Pilgrim & Palma 1982: 26.
Brueelia merulensis (Denny, 1842); Murray *et al.* 2006b: 1959.
Brueelia merulensis (Denny, 1842); Palma 2010: 408.

Syntypes ♂♀ in NHML (Vincent S. Smith pers. comm. December 2014).

Type host: *Turdus merula* Linnaeus, 1758.

New Zealand host: *Turdus merula merula* Linnaeus, 1758.

Other hosts: *Turdus merula syriacus* Hemprich & Ehrenberg, 1833; *Turdus philomelos* Brehm, 1831.

New Zealand localities: WN, KE, CH, SN.

Geographic distribution: Eurasia; New Zealand.

New Zealand references: Watt (1971); Wise (1977: 59); Horning *et al.* (1980); Pilgrim & Palma (1982); Paterson *et al.* (1999: 220); Murray *et al.* (2006b); Palma (2010).

Other significant references: Clay (1951b: 188, figs 22–23, 25); Ansari (1956); Złotorzycka (1964a); Tendeiro (1965c); Baum (1968: 143, fig. 9); Rékási & Kiss (1984: 107, 111); Soler-Cruz *et al*. (1985: 108, fig. 1); Price *et al*. (2003: 156); Palma & Jensen (2005: 54, 67); Adam (2007: 182); Martín-Mateo (2009: 200); Bartlow *et al*. (2016: 222).

Remarks: *Brueelia merulensis* was introduced to New Zealand with blackbirds by human agency (Checklist Committee 2010: 313).

Brueelia nebulosa (Burmeister, 1838)

Nirmus nebulosus Burmeister, 1838a: 429.
Degeeriella nebulosa Burmeister [sic]; Johnston & Harrison 1912: 368.
Degeeriella nebulosa (Burmeister, 1838); Thompson 1939: 120.
Bruëlia nebulosa (Burmeister, 1838); Hopkins & Clay 1952: 59.
Brueelia nebulosa (Burmeister, 1838); Watt 1971: 235, 244, fig. 7.
Brueelia nebulosa (Burmeister, 1838); Pilgrim & Palma 1982: 27.
Brueelia nebulosa (Burmeister, 1838); Murray *et al.* 2006b: 1960.
Brueelia nebulosa (Burmeister, 1838); Palma 2010: 408.

Status, sex and repository of types unknown, presumed lost. See Clay (1949a: 1), Palma & Pilgrim (1984: 150) and Palma (1996b: 162).

Type host: *Sturnus vulgaris* Linnaeus, 1758.

New Zealand host: *Sturnus vulgaris vulgaris* Linnaeus, 1758.

Other hosts: None.

New Zealand localities: HB, WI, WN, KA, NC, MC, SC, WD, KE.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Johnston & Harrison (1912); Watt (1971); Wise (1977: 59); Pilgrim & Palma (1982); Paterson *et al.* (1999: 220); Murray *et al.* (2006b); Palma (2010).

Other significant references: Thompson (1939); Kettle (1983: 403); Green & Palma (1991: 11, 41); Butler & O'Connor (1994: 453); Palma (1996b: 162); Price *et al*. (2003: 157); Palma & Jensen (2005: 54, 68); Adam (2007: 183); Martín-Mateo (2009: 189).

Remarks: *Brueelia nebulosa* was introduced to New Zealand with starlings by human agency (Checklist Committee 2010: 315).

Brueelia parviguttata (Blagoveshtchensky, 1940) **New record**

Degeeriella parviguttata Blagoveshtchensky, 1940: 62, 86, fig. 17.
Bruëlia parviguttata (Blagoveshtchensky, 1940); Hopkins & Clay 1952: 60.
Brueelia sp.; Pilgrim & Palma 1982: 25.
Brueelia parviguttata (Blagoveshtchensky, 1940); Price *et al*. 2003: 157.
Brueelia sp.; Murray *et al.* 2006b: 1958.

Syntypes ♂♀, repository unknown.

Type host: *Alauda arvensis cantarella* Bonaparte, 1850.

New Zealand host: *Alauda arvensis* Linnaeus, 1758.

Other host: *Galerida cristata* (Linnaeus, 1758).

New Zealand locality: MC.

Geographic distribution: Eurasia; Africa; Australasia.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (2006b).

Other significant references: Balát (1955: 502); Soler-Cruz *et al*. (1979: 165); Price *et al*. (2003).

Material examined and repository: 2♂, 11♀ (2 samples, MONZ).

Remarks: This is the first record of *Brueelia parviguttata* for New Zealand, because the New Zealand references cited above reported this louse as "*Brueelia* sp." only. *Brueelia parviguttata* was introduced to New Zealand with Eurasian skylarks by human agency (Checklist Committee 2010: 306).

Brueelia semiannulata (Piaget, 1883)

Figs 76–77

Nirmus semiannulatus Piaget, 1883: 156, pl. 9: fig. 3.
Degeeriella semiannulata Piaget, 1883 [sic]; Harrison 1916: 123.
Bruëlia semiannulata (Piaget, 1883); Hopkins & Clay 1952: 61.
Bruelia elegans Ansari, 1957: 122, figs 1–25.
Brueelia semiannulata (Piaget, 1883); Pilgrim & Palma 1982: 28.
Brueelia semiannulata (Piaget, 1883); Murray *et al.* 2006b: 1957.
Brueelia semiannulata (Piaget, 1883); Palma 2010: 408.

Syntypes ♀♀ in NHML (Palma 1996b: 162). Holotype ♂ of *Brueelia elegans* in NHML (Palma 1996b: 162).

Type host: *Gymnorhina tibicen leuconota* Gould, 1844.

New Zealand host: *Gymnorhina tibicen* (Latham, 1802).

Other host: *Gymnorhina tibicen hypoleuca* (Gould, 1837).

New Zealand localities: ND, CL, HB, WN, NC, MC, SC.

Geographic distribution: Australasia.

New Zealand references: Pilgrim & Palma (1982); Paterson *et al.* (1999: 221); Galloway (2005: 17); Murray *et al.* (2006b); Palma (2010).

Other significant references: Ansari (1957); Hughes (1984a: 459); Hughes (1984b: 467); Palma (1996b: 162); Price *et al*. (2003: 158); Toon & Hughes (2008: 128).

Remarks: *Brueelia semiannulata* was introduced to New Zealand with Australian magpies by human agency (Checklist Committee 2010: 296).

Brueelia turdinulae Ansari, 1956

Brueelia turdinulae Ansari, 1956: 126, figs 59–65.
Brueelia turdinulae eternitatus Ansari, 1956: 129, figs 66–71.
Brueelia sp.; Watt 1971: 235, 244.
Brueelia turdinulae eternitatus Ansari, 1956; Jiménez-González *et al.* 1980: 212, figs 15–20.
Brueelia sp.; Pilgrim & Palma 1982: 26.
Brueelia turdinulae Ansari, 1956; Palma 1999: 382.
Brueelia turdinulae Ansari, 1956; Murray *et al.* 2006b: 1959.
Brueelia turdinulae Ansari, 1956; Palma 2010: 408.

Holotype ♂ in NHML. Holotype ♂ of *Brueelia turdinulae eternitatus* in NHML.

Type host: *Turdus philomelos philomelos* Brehm, 1831.

New Zealand host: *Turdus philomelos* Brehm, 1831.

Other host: *Turdus philomelos clarkei* Hartert, 1909.

New Zealand localities: WD, KE.

Geographic distribution: Eurasia; Africa; New Zealand.

New Zealand references: Watt (1971); Pilgrim & Palma (1982); Palma (1999); Paterson *et al.* (1999: 220); Murray *et al.* (2006b); Palma (2010).

Other significant references: Jiménez-González *et al.* (1980); Price *et al*. (2003: 159); Palma & Jensen (2005: 54, 67); Adam (2007: 183); Martín-Mateo (2009: 197); Bartlow *et al*. (2016: 222).

Remarks: *Brueelia turdinulae* was introduced to New Zealand with song thrushes by human agency (Checklist Committee 2010: 313).

***Brueelia* species**

Brueelia sp.; Tennyson 1997: 268.
Brueelia sp.; Palma 1999: 382, 383 note 6.
Brueelia sp.; Murray *et al.* 2002: 1216.
Brueelia sp.; Murray *et al.* 2006b: 1956, 1958.
Brueelia sp.; Palma 2010: 408.

New Zealand hosts: *Turnagra capensis capensis* (Sparrman, 1787); *Mohoua albicilla* (Lesson, 1830); *Monarcha melanopsis* (Vieillot, 1818).

New Zealand localities: ND, CL, TK, South Island.

Geographic distribution: Australasia.

New Zealand references: Tennyson (1997); Paterson *et al.* (1999: 223); Palma (1999); Murray *et al.* (2002; 2006b); Palma (2010); Buckley *et al.* (2012: App. 2).

Other significant references: None.

Remarks: The samples of *Brueelia* from the three hosts listed above may represent different species which are not identifiable at present because the available material contain females only (voucher specimens in MONZ).

Genus *Campanulotes* Kéler, 1939

Campanulotes Kéler, 1939. *Nova Acta Leop.-Carol.* (*N.F.*) *8*: 157. Type species: *Goniocotes compar* "(Nitzsch)" = *Campanulotes bidentatus compar* (Burmeister, 1838) (by original designation).

***Campanulotes bidentatus compar* (Burmeister, 1838)**

Figs 78–79

Goniocotes compar Burmeister, 1838a: 431.
Philopterus (*Goniocotes*) *compar* Burmeister, 1838 [sic]; Denny 1842: 152, pl. 13: fig. 2.
Goniocotes compar Nitzsch [in Giebel], 1874 [sic]; Kellogg 1908: 32, fig. 4.
Campanulotes compar (Nitzsch, 1818) [sic]; Kéler 1939: 157, figs 89–91.
Campanulotes compar (Burmeister, 1838); Hopkins & Clay 1952: 64.
"*Campanulotes bidentatus*" Pilgrim 1970: 76 (not *Pediculus bidentatus* Scopoli, 1763).
"*Goniocotes gallinae*" Heath *et al.*, 1971: 91 (not *Ricinus gallinae* De Geer, 1778b).
Campanulotes bidentatus compar (Burmeister, 1838); Pilgrim 1976: 162, fig. 2.
Campanulotes bidentatus compar (Burmeister, 1838); Wise 1977: 59.
Campanulotes bidentatus compar (Burmeister, 1838); Pilgrim & Palma 1982: 23.
Campanulotes compar (Burmeister, 1838); Price *et al*. 2003: 160.
Campanulotes bidentatus compar (Burmeister, 1838); Murray *et al.* 2006a: 1965.
Campanulotes bidentatus compar (Burmeister, 1838); Palma 2010: 408.

Status, sex and repository of types unknown, presumed lost. See Clay (1949a: 1), Palma & Pilgrim (1984: 150) and Palma (1996b: 163).

Type host: *Columba livia* J.F. Gmelin, 1789.

New Zealand host: *Columba livia* J.F. Gmelin, 1789.

Other hosts: None.

New Zealand localities: WN, SD, MB, NC, MC, SC.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Pilgrim (1970); Heath *et al.* (1971); Pilgrim (1976); Wise (1977); Tendeiro (1978: 117); Pilgrim & Palma (1982); Paterson *et al.* (1999: 220); Murray *et al.* (2006a); Palma (2010).

Other significant references: Emerson (1957: 64); Kéler (1939); Nelson & Murray (1971: 22, 25); Rudolph (1983: 16); Forrester *et al.* (1995: 32); Palma (1996b: 163); Price *et al*. (2003); Palma & Jensen (2005: 55, 66); Martín-Mateo (2009: 30, fig. 6); Galloway & Lamb (2014: 445; 2015: 715).

Remarks: *Campanulotes bidentatus compar* was introduced to New Zealand and other countries with rock pigeons by human agency (Checklist Committee 2010: 245). In agreement with Pilgrim & Palma (1982: 23) but contrary to Price *et al*. (2003: 160), I regard this louse taxon as a subspecies of *Campanulotes bidentatus* (Scopoli, 1763).

Genus *Capraiella* Conci, 1941

Capraiella Conci, 1941. *Boll. Soc. Entomol. Italiana 73*: 126. Type species: "*Degeeriella subcuspidata* Nitzsch in Burm. 1838" = *Capraiella subcuspidata* (Burmeister, 1838a) (by original designation).

Capraiella species

Fig. 80

Capraiella sp.; Pilgrim & Palma 1982: 25.
Capraiella sp.; Murray *et al.* 1999: 1242.
Capraiella sp.; Catanach & Johnson 2015: 839.

New Zealand host: *Eurystomus orientalis pacificus* (Latham, 1802).

New Zealand locality: NN.

Geographic distribution: Indonesia; Australasia.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1999).

Other significant references: Hopkins & Clay (1952: 65); Ansari (1955a: 46); Tandan (1955: 425, figs 13–16); Ledger (1980: 170, fig. 178); Price *et al.* (2003: 160); Catanach & Johnson (2015: 839).

Remarks: *Eurystomus orientalis pacificus* is a frequent straggler to New Zealand (Checklist Committee 2010: 274). The single available New Zealand record of *Capraiella* could not be identified to species because the sample contains females only (voucher specimens in MONZ). Furthermore, the Australian record in Catanach & Johnson (2015: 839) also refers to females only (Therese A. Catanach pers. comm. September 2015).

Genus *Carduiceps* Clay & Meinertzhagen, 1939

Carduiceps Clay & Meinertzhagen, 1939b. *Ann. Mag. Nat. Hist.* (Ser. 11) *4*: 451. Type species: *Degeeriella complexiva* (Kellogg & Chapman, 1899) = *Carduiceps complexivus* (Kellogg & Chapman, 1899) (by original designation).

Carduiceps cingulatus cingulatus (Denny, 1842)

Figs 81–82

Philopterus (*Nirmus*) *cingulatus* Denny, 1842: 54, 146, pl. 11: fig. 3.
Degeeriella cingulata Nitzsch in Denny, 1842 [sic]; Harrison 1916: 110.
Carduiceps cingulatus (Denny, 1842); Hopkins & Clay 1952: 65.
Carduiceps cingulatus cingulatus (Denny, 1842); Emerson 1972a: 37.
Carduiceps cingulatus (Denny, 1842); Wise 1977: 59.
Carduiceps cingulatus (Denny, 1842); Pilgrim & Palma 1982: 20.
Carduiceps cingulatus (Denny, 1842); Murray *et al.* 2006a: 1964. In part.
Carduiceps cingulatus (Denny, 1842); Palma 2010: 408. In part.

Neotype ♂ in NHML (Timmermann 1955: 529).

Type host: *Limosa limosa limosa* (Linnaeus, 1758).

New Zealand host: *Limosa limosa melanuroides* Gould, 1846.

Other hosts: *Limnodromus griseus* (J.F. Gmelin, 1789); *Limnodromus scolopaceus* (Say, 1823).

New Zealand locality: AU.

Geographic distribution: Eurasia; Americas; Australasia.

New Zealand references: Wise (1977); Pilgrim & Palma (1982); Murray *et al.* (2006a); Palma (2010).

Other significant references: Timmermann (1954a: 40, figs 2–3); Timmermann (1955: 527); Emerson (1972a); Hunter & Colwell (1994: 402); Price *et al.* (2003: 161).

Remarks: In agreement with Emerson (1972a: 37) and contrary to Price *et al.* (2003: 161), I regard this louse taxon as a subspecies. The Asiatic black-tailed godwit is an uncommon annual visitor to New Zealand (Checklist Committee 2010: 203).

Carduiceps cingulatus lapponicus Emerson, 1953

Carduiceps lapponicus Emerson, 1953: 209, fig. 2.
Carduiceps cingulatus (Denny, 1842); Timmermann 1955: 529. In part.

Carduiceps cingulatus lapponicus Emerson, 1953; Watt 1971: 236, 243.
Carduiceps cingulatus lapponicus Emerson, 1953; Emerson 1972a: 37.
Carduiceps cingulatus lapponicus Emerson, 1953; Wise 1977: 59.
Carduiceps cingulatus (Denny, 1842) *s. l.*; Pilgrim & Palma 1982: 21.
Carduiceps lapponicus Emerson, 1953; Price *et al.* 2003: 161.
Carduiceps cingulatus (Denny, 1842); Murray *et al.* 2006a: 1964. In part.
Carduiceps cingulatus (Denny, 1842); Palma 2010: 408. In part.

Holotype ♂ in USNM.

Type host: *Limosa lapponica lapponica* (Linnaeus, 1758).

New Zealand host: *Limosa lapponica baueri* Naumann, 1836.

Other hosts: None.

New Zealand localities: SD, MB, NC, MC, SC, WD, SL, KE, SN, CA.

Geographic distribution: Eurasia; Australasia.

New Zealand references: Watt (1971); Wise (1977); Pilgrim & Palma (1982); Murray *et al.* (2006a); Palma (2010).

Other significant references: Emerson (1972a); Price *et al.* (2003).

Remarks: In agreement with Emerson (1972a: 37) and Wise (1977: 59), and contrary to Price *et al.* (2003: 161), I regard this louse taxon as a subspecies of *Carduiceps cingulatus*. The eastern bar-tailed godwit is the most numerous wader that visits New Zealand every year (Checklist Committee 2010: 203).

Carduiceps zonarius (Nitzsch [*in* Giebel], 1866)

Nirmus zonarius Nitzsch [*in* Giebel], 1866: 374.
Degeeriella zonaria Nitzsch [*in* Giebel], 1866 [sic]; Harrison 1916: 126.
Carduiceps zonarius (Nitzsch, 1866) [sic]; Hopkins & Clay 1952: 66.
Carduiceps zonarius (Nitzsch [*in* Giebel], 1866); Timmermann 1954a: 44, fig. 6a.
Carduiceps zonarius (Nitzsch, 1866) [sic] *s. l.*; Pilgrim & Palma 1982: 21.
Carduiceps zonarius (Nitzsch [*in* Giebel], 1866); Palma 1999: 380.
Carduiceps zonarius (Nitzsch [*in* Giebel], 1866); Murray *et al.* 2006a: 1964.
Carduiceps zonarius (Nitzsch [*in* Giebel], 1866); Palma 2010: 408.

Neotype ♂ in NHML (Timmermann 1954a: 45; Palma 1996b: 164).

Type host: *Calidris minuta* (Leisler, 1812) (see Timmermann 1954a: 44).

New Zealand hosts: *Calidris canutus rogersi* Mathews, 1913; *Calidris acuminata* (Horsfield, 1821).

Other hosts: *Eurynorhynchus pygmaeus* (Linnaeus, 1758); *Tryngites subruficollis* (Vieillot, 1819) and 12 other species of *Calidris* (see Price *et al*. 2003: 161).

New Zealand localities: WN, NC, MC, SC, KE, CA.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Pilgrim & Palma (1982); Palma (1999); Murray *et al.* (2006a); Palma (2010).

Other significant references: Timmermann (1954a); Hackman & Nyholm (1968: 79); Amerson & Emerson (1971: 15, 22); Green & Palma (1991: 12, 33); Hunter & Colwell (1994: 402); Forrester *et al.* (1995: 27); Palma (1996b: 164); Price *et al*. (2003: 161); Palma & Jensen (2005: 55, 63).

Remarks: Pilgrim & Palma (1982: 21) regarded the population of *Carduiceps zonarius* from *Calidris canutus* as somewhat different from that of the type host, and qualified it as *sensu lato*; however, my examination of more samples shows that making such difference is not warranted.

Genus *Chelopistes* Kéler, 1939

Chelopistes Kéler, 1939. *Nova Acta Leop.-Carol.* (*N.F.*) *8*: 180. Type species: *Rhopaloceras stylifer* (Nitzsch, 1818) = *Chelopistes meleagridis* (Linnaeus, 1758) (by original designation).

Virgula Clay, 1941. *Parasitology 33*: 119. Type species: *Goniodes meleagridis* (Linnaeus, 1758) = *Chelopistes meleagridis* (Linnaeus, 1758) (by original designation).

***Chelopistes meleagridis* (Linnaeus, 1758)**

Figs 83–84

Pediculus meleagridis Linnaeus, 1758: 613.
Ricinus melagridis (Linnaeus, 1758); Latreille 1804: 108.
Philopterus (*Goniodes*) *stylifer* Nitzsch, 1818: 294. *Nomen novum* for *Pediculus meleagridis* Schrank, 1781.
Rhopaloceras styliferum Nitzsch [sic]; Taschenberg 1882: 47. Emendation.
Rhopaloceras stylifer (Nitzsch, 1818); Kéler 1939: 180.
Chelopistes meleagridis (Linnaeus, 1758); Kéler 1939: 181, figs 103–104.
Virgula meleagridis (Linnaeus, 1758); Clay 1941: 120, figs 1–4.
Goniodes meleagridis (Linnaeus, 1758); Séguy 1944: 170, fig. 243.
Chelopistes meleagridis (Linnaeus, 1758); Hopkins & Clay 1952: 69.
Chelopistes meleagridis (Linnaeus, 1758); Pilgrim & Palma 1982: 18.
Chelopistes meleagridis (Linnaeus, 1758); Murray *et al.* 1993: 960.
Chelopistes meleagridis (Linnaeus, 1758); Palma 2010: 408.

Neotype ♂ in NHML (Clay 1941: 124).

Type host: *Meleagris gallopavo* Linnaeus, 1758.

New Zealand host: *Meleagris gallopavo gallopavo* Linnaeus, 1758.

Other host: *Meleagris ocellata* Cuvier, 1820.

New Zealand localities: WO, HB, WA, WN.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1993); Paterson *et al.* (1999: 220); Palma (2010).

Other significant references: Kéler (1939); Clay (1941); Séguy (1944); Clay & Hopkins (1950: 261); Emerson (1962: 198, figs 4–6); Price (1987: 220, fig. 22.25); Butler & O'Connor (1994: 453); Forrester *et al*. (1995: 21); Palma (1996b: 164); Price *et al*. (2003: 162); Martín-Mateo (2009: 40, figs 5d, 10); Maturano & Daemon (2014).

Remarks: *Chelopistes meleagridis* was introduced to New Zealand and other countries with turkeys by human agency (Checklist Committee 2010: 29).

Genus *Coloceras* Taschenberg, 1882

Coloceras Taschenberg, 1882. *Nova Acta Leop.-Carol. 44*: 42. Type species: *Goniodes damicornis* Nitzsch, 1866 = *Coloceras damicorne* (Nitzsch, 1866) (by subsequent designation).
Nitzschiella Kéler, 1939. *Nova Acta Leop.-Carol.* (*N.F.*) *8*: 67. Type species: *Goniocotes menadensis* Piaget, 1880 = *Coloceras menadense* (Piaget, 1880) (by original designation).
Patellinirmus Tendeiro, 1972b. *Rev. Ciênc. Vet.* (*Lourenço Marques*) (Series A) *5*: 63. Type species: *Patellinirmus novaeseelandiae* Tendeiro, 1972b = *Coloceras novaeseelandiae* (Tendeiro, 1972) (by original designation).

***Coloceras chinense* (Kellogg & Chapman, 1902)** **New Record**

Goniocotes chinensis Kellogg & Chapman, 1902: 160, pl. 13: fig. 5.
Coloceras chinense (Kellogg & Chapman, 1902); Hopkins & Clay 1952: 74.
Coloceras chinense (Kellogg & Chapman, 1902); Palma 1996b: 166.
Coloceras chinense (Kellogg & Chapman, 1902); Price *et al*. 2003: 164.

Holotype ♀ in EMEC (Palma 1996b: 166).

Type host: *Streptopelia chinensis chinensis* (Scopoli, 1786).

New Zealand host: *Streptopelia chinensis tigrina* (Temminck, 1810).

Other hosts: *Gallicolumba luzonica* (Scopoli, 1786); *Leptotila rufaxilla* (Richard & Bernard, 1792); *Macropygia unchall* (Wagler, 1827);14 other species of *Streptopelia*, and five species of *Turtur* (see Price *et al*. 2003: 164).

New Zealand locality: AK.

Geographic distribution: Eurasia; Africa; South America; Pacific Ocean.

New Zealand reference: This paper.

Other significant references: Tendeiro (1973: 353, figs 34–36, photos 91–101, 188–189, 221–222); Green & Palma (1991: 12, 34); Palma (1996b); Price *et al*. (2003).

Material examined and repository: 1♂, 2♀, 8 nymphs (1 sample, MONZ).

Remarks: *Coloceras chinense* is a new louse species for New Zealand, introduced to this country with spotted doves by human agency (Checklist Committee 2010: 245).

***Coloceras harrisoni* (Tendeiro, 1972)**

Patellinirmus harrisoni Tendeiro, 1972b: 74, fig. 3, photos 10–17, 24–25.
Patellinirmus harrisoni Tendeiro, 1972; Pilgrim & Palma 1982: 23.
Coloceras harrisoni (Tendeiro, 1972); Price *et al*. 2003: 164.
Coloceras harrisoni (Tendeiro, 1972); Murray *et al.* 2006a: 1966.
Coloceras harrisoni (Tendeiro, 1972); Palma 2010: 408.

Holotype ♂ in NHML.

Type host: *Hemiphaga chathamensis* (Rothschild, 1891).

New Zealand host: *Hemiphaga chathamensis* (Rothschild, 1891).

Other hosts: None.

New Zealand localities: CH.

Geographic distribution: Chatham Islands, New Zealand.

New Zealand references: Tendeiro (1972b); Pilgrim & Palma (1982); Paterson *et al.* (1999: 223); Murray *et al.* (2006a); Palma (2010); Buckley *et al.* (2012: 137, App. 2).

Other significant references: Price *et al*. (2003).

Remarks: *Coloceras harrisoni* is an endemic and critically threatened species (Buckley *et al.* 2012), exclusively parasitic on Chatham Island pigeons.

***Coloceras hemiphagae* (Tendeiro, 1972)**

Nitzschiella hemiphagae Tendeiro, 1972a: 2, figs 1–3.
Coloceras hemiphagae (Tendeiro, 1972); Palma 1996b: 166.
Coloceras hemiphagae (Tendeiro, 1972); Price *et al*. 2003: 164.
Nitzschiella hemiphagae Tendeiro, 1972; Mey 2005: 213.
Coloceras hemiphagae (Tendeiro, 1972); Murray *et al.* 2006a: 1966.

Holotype ♀ in NHML.

Type host: *Hemiphaga spadicea* (Latham, 1802).

New Zealand host: *Hemiphaga spadicea* (Latham, 1802).

Other hosts: None

New Zealand localities: Norfolk Island.

Geographic distribution: Norfolk Island.

New Zealand references: Tendeiro (1972a); Palma (1996b); Mey (2005); Murray *et al.* (2006a); Rózsa & Vas (2015b: 108).

Other significant references: Price *et al*. (2003).

Remarks: *Coloceras hemiphagae* is known from the holotype only. Its host, *Hemiphaga spadicea*, was endemic to Norfolk Island, but it is now extinct (Checklist Committee 2010: 248). Considering that there is no other known host for *Coloceras hemiphagae*, this species is also regarded as extinct (Rózsa & Vas 2015b: 108).

***Coloceras novaeseelandiae* (Tendeiro, 1972)**

Figs 85–86

Patellinirmus novaeseelandiae Tendeiro, 1972b: 63, figs 1–2, photos 1–9, 23.
Patellinirmus novaeseelandiae Tendeiro, 1972; Pilgrim & Palma 1982: 23.
Coloceras novaeseelandiae (Tendeiro, 1972); Price *et al*. 2003: 165.
Coloceras novaeseelandiae (Tendeiro, 1972); Murray *et al.* 2006a: 1966.
Coloceras novaeseelandiae (Tendeiro, 1972); Palma 2010: 408.

Holotype ♂ in CMNZ (Nicholls *et al.* 1998: 30).

Type host: *Hemiphaga novaeseelandiae* (J.F. Gmelin, 1789).

New Zealand host: *Hemiphaga novaeseelandiae* (J.F. Gmelin, 1789).

Other hosts: None.

New Zealand localities: ND, CL, AK, HB, TK, WI, WA, WN, SD, MB, NN, NC, MC, SC, WD, CO, DN.

Geographic distribution: New Zealand.

New Zealand references: Tendeiro (1972b); Pilgrim & Palma (1982); Nicholls *et al.* (1998: 30); Paterson *et al.* (1999: 223); Murray *et al.* (2006a); Palma (2010).

Other significant references: Price *et al*. (2003: 165).

Remarks: *Coloceras novaeseelandiae* is an endemic species exclusively parasitic on the New Zealand pigeon, with a relatively high prevalence of infestation.

Coloceras restinctum (Tendeiro, 1972)

Patellinirmus restinctus Tendeiro, 1972b: 81, fig. 4, photos 18–21, 26.
Coloceras restinctum (Tendeiro, 1972); Palma 1996b: 167.
Coloceras restinctus [sic] (Tendeiro, 1972); Price *et al*. 2003: 165.
Patellinirmus restinctus Tendeiro, 1972; Mey 2005: 213.
Coloceras restinctum (Tendeiro, 1972); Murray *et al.* 2006a: 1966.

Holotype ♀ in NHML.

Type host: *Hemiphaga spadicea* (Latham, 1802).

New Zealand host: *Hemiphaga spadicea* (Latham, 1802).

Other hosts: None

New Zealand localities: Norfolk Island.

Geographic distribution: Norfolk Island.

New Zealand references: Tendeiro (1972b); Palma (1996b); Mey (2005); Murray *et al.* (2006a); Rózsa & Vas (2015b: 108).

Other significant references: Price *et al*. (2003).

Remarks: *Coloceras restinctum* is known from the holotype only. Its host, *Hemiphaga spadicea*, was endemic to Norfolk Island, but it is now extinct (Checklist Committee 2010: 248). Considering that there is no other known host for *Coloceras restinctum*, this species is also regarded as extinct (Rózsa & Vas 2015b: 108).

Genus *Columbicola* Ewing, 1929

Columbicola Ewing, 1929. *Manual External Parasites*: 112, 190. Type species: *Esthiopterum columbae* (Linnaeus, 1758) = *Columbicola columbae* (Linnaeus, 1758) (by original designation).

Columbicola columbae columbae (Linnaeus, 1758)

Figs 87–88

"Pollino del piccion grosso" Redi, 1668: pl. 2.
Pediculus columbae Linnaeus, 1758: 614. *Nomen novum* for "Pollino del piccion grosso" Redi, 1668.
Ricinus columbae (Linnaeus, 1758); Latreille 1804: 110.
Philopterus (*Lipeurus*) *baculus* Nitzsch, 1818: 293.
Philopterus (*Lipeurus*) *baculus* (Nitzsch, 1818); Denny 1842: 172, pl. 14: fig. 3.
Lipeurus columbae (Linnaeus, 1758); Séguy 1924: 40.
Esthiopterum columbae Linnaeus, 1758 [sic]; Harrison 1916: 132.
Columbicola columbae (Linnaeus, 1758); Hopkins & Clay 1952: 86.
Columbicola columbae columbae (Linnaeus, 1758); Tendeiro 1965a: 77, figs 1–12, photos 1–6, 189–190.
Columbicola columbae (Linnaeus, 1758); Pilgrim 1976: 162, fig. 1.
Columbicola columbae columbae (Linnaeus, 1758); Wise 1977: 59.
Columbicola columbae columbae (Linnaeus, 1758); Pilgrim & Palma 1982: 23.
Columbicola columbae (Linnaeus, 1758); Price *et al.* 2003: 166.
Columbicola columbae (Linnaeus, 1758); Murray *et al.* 2006a: 1965.
Columbicola columbae columbae (Linnaeus, 1758); Palma 2010: 408.

Neotype ♂ in NHML (Clay & Hopkins 1950: 265).

Type host: *Columba livia* J.F. Gmelin, 1789.

New Zealand hosts: *Columba livia* J.F. Gmelin, 1789; *Streptopelia chinensis tigrina* (Temminck, 1810).

Other hosts: *Columba eversmanni* Bonaparte, 1856; *Columba guinea* Linnaeus, 1758; *Columba oenas* Linnaeus, 1758.

New Zealand localities: AK, WN, NN, NC, MC, SC.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Pilgrim (1970: 76); Heath *et al.* (1971: 91); Pilgrim (1976); Wise (1977); Pilgrim & Palma (1982); Paterson *et al.* (1999: 220); Murray *et al.* (2006a); Palma (2010).

Other significant references: Wigglesworth (1932: 365); Martin (1934: 6, figs 1–6); Clay & Hopkins (1950: 264, figs 57–59); Conci (1956: 47); Stenram (1956: 170, figs 1–7); Emerson (1957: 64); Tendeiro (1965a); Nelson & Murray (1971: 22, 25, fig. 4); Rudolph (1983: 16); Green & Palma (1991: 12, 34); Butler & O'Connor (1994: 453); Forrester *et al.* (1995: 32); Palma (1996b: 167); Price *et al.* (2003); Palma & Jensen (2005: 55, 66); Adams *et al.* (2005: 3548, figs 1, 7–10); Adam (2007: 178); Martín-Mateo (2009: 216, fig. 42); Galloway & Lamb (2014: 445; 2015: 715); Bartlow *et al*. (2016: 222).

Remarks: *Columbicola columbae columbae* was introduced to New Zealand with its primary host (*Columba livia*) by human agency (Checklist Committee 2010: 245). Contrary to Price *et al*. (2003: 166), I regard this louse taxon as a subspecies. The New Zealand record of *Columbicola columbae* from *Streptopelia chinensis tigrina* is based on a large sample (37 specimens) from two individual hosts, which is unlikely to be the result of contamination or accidental straggling from *Columba livia*. Instead, it is likely that *Columbicola columbae* host-switched and has become established on *Streptopelia chinensis tigrina* in New Zealand.

Genus *Cuclotogaster* Carriker, 1936

Cuclotogaster Carriker, 1936. *Proc. Acad. Nat. Sci. Philad*: *88*: 67. Type species: *Cuclotogaster laticorpus* Carriker, 1936 = *Cuclotogaster heterographus* (Nitzsch [*in* Giebel], 1866) (by original designation).

Gallipeurus Clay, 1938. *Proc. Zool. Soc. London 108*: 135. Type species: *Lipeurus heterographus* Giebel, 1866 [sic] = *Cuclotogaster heterographus* (Nitzsch [*in* Giebel], 1866) (by original designation).

Cuclotogaster heterographus (Nitzsch [*in* Giebel], 1866)

Lipeurus heterographus Nitzsch [*in* Giebel], 1866: 381.

Lipeurus heterographus Nitzsch [*in* Giebel], 1866; Harrison 1916: 84.

Gallipeurus heterographus heterographus Giebel, 1866 [sic]; Clay 1938: 136, 15–17, 18a.

Lipeurus (*Gallipeurus*) *heterographus* Nitzsch [*in* Giebel], 1866; Séguy 1944: 185, figs 268–269.

Lipeurus heterographus Nitz. [sic]; Helson 1956: 13, 17.

Cuclotogaster heterographus (Nitzsch, 1866) [sic]; Hopkins & Clay 1952: 95.

Cuclotogaster heterographus heterographus (Nitzsch, 1866) [sic]; Emerson 1956a: 64, pl. 1.

Cuclotogaster heterographus; Whitten 1971: 383.

Cuclotogaster heterographus (Nitzsch, 1866) [sic]; Wise 1977: 60.

Cuclotogaster heterographus (Nitzsch, 1866) [sic]; Pilgrim & Palma 1982: 18.

Cuclotogaster heterographus (Nitzsch, 1866) [sic]; Murray *et al*. 1993: 960.

Cuclotogaster heterographus (Nitzsch [*in* Giebel], 1866); Palma 1999: 384, note G.

Cuclotogaster heterographus (Nitzsch [*in* Giebel], 1866); Palma 2010: 408.

Syntypes probably lost (Palma 1996b: 170).

Type host: *Gallus gallus* (Linnaeus, 1758).

New Zealand hosts: *Alectoris chukar* (J.E. Gray, 1830); *Gallus gallus gallus* (Linnaeus, 1758).

Other host: *Phasianus colchicus* Linnaeus, 1758.

New Zealand localities: NC, MC, SC, CO, DN.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Helson (1956); Whitten (1971); Wise (1977); Pilgrim & Palma (1982), Murray *et al*. (1993); Palma (1999); Palma (2010).

Other significant references: Webb (1946: 54); Conci (1952: 17); Emerson (1956a); Price (1987: 220, fig. 22.23); Martín-Mateo (1990: 180, figs 4–6); Palma (1996b: 170); Price *et al*. (2003: 171); Martín-Mateo (2009: 70, fig. 16); Dik *et al.* (2015: 796, figs 3–5).

Remarks: *Cuclotogaster heterographus* was introduced to New Zealand and other countries with its hosts by human agency. *Gallus gallus gallus* has been listed for the first time in the latest edition of the New Zealand Checklist of Birds (Checklist Committee 2010: 27; see also Palma 1999: 383, note 5).

***Cuclotogaster synoicus* (Clay, 1938)**

Figs 89–90

Gallipeurus synoicus Clay, 1938: 150, figs 23c, 24a, pl. 7: fig. 3.
Cuclotogaster synoicus (Clay, 1938); Hopkins & Clay 1952: 96.
Cuclotogaster synoicus (Clay, 1938); Pilgrim & Palma 1982: 18.
Cuclotogaster synoicus (Clay, 1938); Murray *et al.* 1993: 961.
Cuclotogaster synoicus (Clay, 1938); Palma 2010: 408.

Holotype ♂ in NHML.

Type host: *Coturnix ypsilophora australis* (Latham, 1802).

New Zealand host: *Coturnix ypsilophora australis* (Latham, 1802).

Other hosts: None.

New Zealand localities: BP, HB.

Geographic distribution: Australasia.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1993); Paterson *et al.* (1999: 219); Palma (2010).

Other significant references: Green & Palma (1991: 13, 31); Palma (1996b: 170); Price *et al*. (2003: 171).

Remarks: *Cuclotogaster synoicus* and its host are native to Australia, and were introduced to New Zealand by human agency (Checklist Committee 2010: 27).

Genus *Cuculicola* Clay & Meinertzhagen, 1939.

Cuculicola Clay & Meinertzhagen, 1939a. *Entomologist 72*: 165. Type species: *Degeeriella latirostris* (Burmeister, 1838a) = *Cuculicola latirostris* (Burmeister, 1838a) (by original designation).

***Cuculicola kui* Kettle, 1980**

Figs 91–92

Cuculicola kui Kettle, 1980: 89, figs 1–3a.
Cuculicola kui Kettle, 1980; Pilgrim & Palma 1982: 25.
Cuculicola kui Kettle, 1980; Murray *et al.* 1999: 1241.
Cuculicola kui Kettle, 1980; Palma 2010: 408.

Holotype ♂ in MONZ (Palma *et al.* 1989: 45).

Type host: *Chrysococcyx lucidus lucidus* (J.F. Gmelin, 1788).

New Zealand host: *Chrysococcyx lucidus lucidus* (J.F. Gmelin, 1788).

Other hosts: None.

New Zealand localities: BP, BP, WA, WN, NN, NC, MC, SC, WD, CO, DN.

Geographic distribution: Australasia.

New Zealand references: Kettle (1980); Pilgrim & Palma (1982); Palma *et al.* (1989: 45); Murray *et al.* (1999); Palma (2010).

Other significant references: Palma (1996b: 171); Price *et al*. (2003: 172).

Remarks: *Cuculicola kui* is currently known from New Zealand records only, but its host has a much wider geographical distribution (Checklist Committee 2010: 261). Therefore, although at present this louse is regarded as endemic to New Zealand, it may prove to be native if collected elsewhere in the future.

***Cuculicola latirostris* (Burmeister, 1838)**

Nirmus latirostris Burmeister, 1838a: 429.
Degeeriella latirostris Burmeister, 1838 [sic]; Harrison 1916: 116.
Cuculicola latirostris (Burmeister, 1838); Hopkins & Clay 1952: 97.
Cuculicola latirostris (Burmeister, 1838); Palma 1999: 381.
Cuculicola latirostris (Burmeister, 1838); Palma 2010: 408.

Status, sex and repository of types unknown, presumed lost. See Clay (1949a: 1) and Palma & Pilgrim (1984: 150).

Type host: *Cuculus canorus* Linnaeus, 1758.

New Zealand host: *Cuculus optatus* Gould, 1845.

Other host: *Cuculus saturatus* Blyth, 1843.

New Zealand localities: ND, WD.

Geographic distribution: Eurasia, Australasia.

New Zealand references: Palma (1999); Palma (2010).

Other significant references: Clay & Meinertzhagen (1939a: 165, fig. 5); Séguy (1944: 306, fig. 466); Tendeiro (1961: 300, pl. 8: photo 17); Kettle (1980: 89, fig. 3b); Rékasi (1986: 123, figs 16–17); Brooke & Nakamura (1998: 168); Price *et al*. (2003: 172).

Remarks: The taxonomic nomenclature of the hosts of *Cuculicola latirostris* is unstable (Checklist Committee 2010: 259).

Genus *Degeeriella* Neumann, 1906

Nirmus Nitzsch, 1818. *Germar's Mag. Entomol. 3*: 291. Type species: "*Degeeriella discocephalus* N." = *Degeeriella discocephalus* (Burmeister, 1838a) (by subsequent designation). Preoccupied by *Nirmus* Hermann, 1804.

Degeeriella Neumann, 1906. *Bull. Soc. Zool. France 31*: 59. *Nomen novum* for *Nirmus* Nitzsch, 1818.

Degeeriella fusca (Denny, 1842)

Figs 93–94

Philopterus (*Nirmus*) *fuscus* ? [sic] Denny, 1842: 48, 118, pl. 9: fig. 8.

Nirmus fuscus N. [sic]; Piaget 1880: 130, pl. 10: fig. 9.

Degeeriella fusca Nitzsch [in Denny], 1842 [sic]; Harrison 1916: 113.

Degeeriella fusca (Denny, 1842); Hopkins & Clay 1952: 112.

Degeeriella fusca (Denny, 1842); Clay 1958: 162, figs 3, 30, 48, pl. 4: fig. 3, pl. 8: fig. 6.

Degeeriella fusca (Denny, 1842); Pilgrim & Palma 1982: 17.

Degeeriella fusca (Denny, 1842); Murray *et al.* 1993: 960.

Degeeriella fuscus [sic] (Denny, 1842); Galloway 2005: 17.

Degeeriella fusca (Denny, 1842); Palma 2010: 408.

Lectotype ♀ in NHML (Clay 1958: 164).

Type host: *Circus aeruginosus aeruginosus* (Linnaeus, 1758).

New Zealand host: *Circus approximans* Peale, 1848.

Other hosts: *Accipiter fasciatus* (Vigors & Horsfield, 1827) and five other species of *Circus* (see Price *et al*. 2003: 174)

New Zealand localities: AK, WO, HB, SD, MB, NN, NC, MC, SC, WD, CO, DN, CH.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1993); Galloway (2005); Palma (2010).

Other significant references: Séguy (1944: 271, figs 411–413); Clay (1958); Green & Palma (1991: 13, 30); Palma (1996b: 173); Price *et al*. (2003: 174); Martín-Mateo (2009: 92, fig. 20I); Catanach & Johnson (2015: 839).

Remarks: *Degeeriella fusca* is frequently collected from New Zealand swamp harriers.

Degeeriella rufa rufa (Burmeister, 1838)

Nirmus rufus Burmeister, 1838a: 430.

Degeeriella rufa Nitzsch [in Burmeister], 1838 [sic]; Harrison 1916: 122.

Degeeriella rufa (Burmeister, 1838); Hopkins & Clay 1952: 113.

Degeeriella rufa rufa (Burmeister, 1838); Clay 1958: 180, figs 5, 10, 18–22, 38, 55, 75, 95, 104, 107, 111, 120, 129, 139–164, pl. 6: fig. 3, pl. 8: fig. 7.

Degeeriella rufa rufa (Burmeister, 1838); Pilgrim & Palma 1982: 17.

Degeeriella rufa rufa (Burmeister, 1838); Murray *et al.* 1993: 960.

Degeeriella rufa (Burmeister, 1838); Price *et al*. 2003: 175.

Degeeriella rufa rufa (Burmeister, 1838); Palma 2010: 408.

Status, sex and repository of types unknown, presumed lost. See Clay (1949a: 1), Palma & Pilgrim (1984: 150) and Palma (1996b: 174).

Type host: *Falco tinnunculus* Linaneus, 1758.

New Zealand host: *Falco novaeseelandiae* J.F. Gmelin, 1788.

Other hosts: *Polihierax insignis* Walden, 1872 and over twenty other species of *Falco* (Price *et al*. 2003: 175).

New Zealand localities: TK, WA, WN, SD, MB, NC, MC, SC, WD.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1993); Paterson *et al.* (1999: 221); Palma (2010).

Other significant references: Clay (1958); Rékasi (1986: 124, figs 22–23); Green & Palma (1991: 13, 31); Butler & O'Connor (1994: 454); Palma (1996b: 174); Price *et al*. (2003); Palma & Jensen (2005: 55, 62); Martín-Mateo (2009: 87, fig. 20C); Catanach & Johnson (2015: 839).

Remarks: *Degeeriella rufa* is a morphologically variable species (Clay 1958: 181). Contrary to Price *et al*. (2003: 175), I regard some subspecies of *Degeeriella rufa* as valid taxa.

Genus *Docophoroides* Giglioli, 1864

Docophoroides "Denny MSS" Giglioli, 1864. *Quart. Jour. Sci. 4*: 21. Type species: *Philopterus brevis* Dufour, 1835 = *Docophoroides brevis* (Dufour, 1835) (by monotypy).

Eurymetopus Taschenberg, 1882. *Nova Acat Leop.-Carol. 44*: 182. Type species: *Lipeurus taurus* Nitzsch [*in* Giebel], 1866 = *Docophoroides brevis* (Dufour, 1835) (by subsequent designation). Preoccupied by *Eurymetopus* Schönherr, 1840.

Docophoroides brevis (Dufour, 1835)

Philopterus brevis Dufour, 1835: 674, pl. 21: fig. 3.

Docophoroides brevis; Giglioli 1864: 21, pl. 1: figs 3–4.

Lipeurus taurus Nitzsch [*in* Giebel], 1866: 385.

Docophoroides brevis Dufour, 1835 [sic]; Harrison 1937: 40, pl. 3: fig. 6a.

Docophoroides sp. n.; Eichler 1941a: 354, fig. 16.

Docophoroides brevis (Dufour, 1834) [sic]; Séguy 1944: 382, figs 571–572.

Docophoroides brevis (Dufour, 1835); Hopkins & Clay 1952: 117.

Docophoroides brevis (Dufour, 1835); Timmermann 1959c: 59, figs 2a, 3, 7c.

Docophoroides brevis (Dufour, 1835); Clay 1964a: 232.

Docophoroides brevis (Dufour, 1835); Timmermann 1965: 83, figs 19, 24c, 26a.

Docophoroides brevis (Dufour, 1835); Wise 1977: 60.

Docophoroides brevis (Dufour, 1835); Pilgrim & Palma 1982: 5.

Docophoroides brevis (Dufour, 1835); Palma 2010: 408.

Syntypes ♂♀, repository unknown (Palma 1996b: 174), probably lost.

Type host: *Diomedea exulans* Linnaeus, 1758.

New Zealand hosts: *Diomedea exulans* Linnaeus, 1758; *Diomedea antipodensis antipodensis* Robertson & Warham, 1992; *Diomedea antipodensis gibsoni* Robertson & Warham, 1992; *Diomedea epomophora* Lesson, 1825; *Diomedea sanfordi* Murphy, 1917.

Other hosts: *Diomedea amsterdamensis* Roux *et al*. 1983; *Diomedea dabbenena* Mathews, 1929.

New Zealand localities: ND, AK, BP, HB, TK, WA, WN, KA, NC, MC, SC, WD, CO, DN, CH, AU, AN, Macquarie Island.

Geographic distribution: Southern Hemisphere.

New Zealand references: Harrison (1937); Clay (1940a: 298); Clay (1964a); Gressitt (1964: 538); Watson (1967: 71); Clay & Moreby (1970: 217); Gressitt (1970: 327); Wise (1977); Pilgrim & Palma (1982); Murray *et al.* (1990: 1368); Palma (1996b: 174); Marris (2000: 187); Palma & Horning (2002: 7, 15); Page *et al.* (2004: 637, 650); Palma (2010).

Other significant references: Séguy (1944); Séguy (1953: 585, fig. 43); Timmermann (1959c; 1965); Clay & Moreby (1967: 161, 168, figs 108, 111–112); Green & Palma (1991: 13, 25); Furness & Palma (1992: 35, 38); Green & Turner (2003b: 77); Price *et al*. (2003: 176); Hänel & Palma (2007: 112, 123, 129).

Remarks: *Docophoroides brevis* is a highly prevalent species, mostly found on the head and neck of large albatrosses.

Docophoroides harrisoni Waterston, 1917

Docophoroides harrisoni Waterston, 1917: 99, fig.

Docophoroides harrisoni Waterston, 1917; Harrison 1937: 41, pl. 3: figs 1, 6f.

Docophoroides harrisoni Waterston, 1917; Hopkins & Clay 1952: 118.

Docophoroides harrisoni Waterston, 1917; Timmermann 1959c: 62, figs 1, 6.
Docophoroides harrisoni Waterston, 1917; Timmermann 1965: 85, figs 20, pl. 3: fig. 1.
Docophoroides harrisoni Waterston, 1917; Horning *et al.* 1980: 5, 9.
Docophoroides harrisoni Waterston, 1917; Pilgrim & Palma 1982: 6.
Docophoroides harrisoni Waterston, 1917; Murray *et al.* 1990: 1368–1369.
Docophoroides harrisoni Waterston, 1917; Palma 2010: 408.

Holotype ♂ in SAMS (Palma 1996b: 174).

Type host: *Thalassarche melanophris* (Temminck, 1828).

New Zealand hosts: *Thalassarche melanophris* (Temminck, 1828); *Thalassarche bulleri bulleri* (Rothschild, 1893); *Thalassarche bulleri platei* (Reichenow, 1898); *Thalassarche cauta steadi* Falla, 1933; *Thalassarche eremita* Murphy, 1930; *Thalassarche salvini* (Rothschild, 1893).

Other host: *Thalassarche cauta cauta* (Gould, 1841).

New Zealand localities: ND, AK, BP, HB, WI, WA, WN, NN, KA, NC, MC, SC, WD, CO, DN, SL, CH, SI, BO, SN, AU.

Geographic distribution: Southern Hemisphere.

New Zealand references: Horning *et al.* (1980); Pilgrim & Palma (1982); Murray *et al.* (1990); Page *et al.* (2004: 637, 650); Palma (2010).

Other significant references: Harrison (1937); Timmermann (1959c; 1965); Clay & Moreby (1967: 161, 168, fig. 106); Green & Palma (1991: 13, 25); Palma (1996b: 174); Price *et al*. (2003: 176).

Remarks: *Docophoroides harrisoni* is a highly prevalent species, mostly found on the head and neck of small albatrosses, also known as mollymawks.

***Docophoroides murphyi* (Kellogg, 1914)**

Eurymetopus murphyi Kellogg, 1914: 87, pl. 16: figs 4–5.
Docophoroides murphyi Kellogg, 1914 [sic]; Harrison 1916: 144.
Docophoroides hunteri Harrison, 1937: 42, pl. 3: figs 3–6c.
Docophoroides hunteri Harrison, 1937; Hopkins & Clay 1952: 118.
Docophoroides murphyi (Kellogg, 1914); Hopkins & Clay 1952: 118.
Docophoroides hunteri Harrison, 1937; Timmermann 1959c: 67.
Docophoroides murphyi (Kellogg, 1914); Timmermann 1959c: 68.
Docophoroides murphyi (Kellogg, 1914); Clay 1964a: 232.
Docophoroides hunteri Harrison, 1937; Timmermann 1965: 88.
Docophoroides murphyi (Kellogg, 1914); Clay & Moreby 1967: 161, 168, figs 107, 109, 113.
Docophoroides murphyi (Kellogg, 1914); Wise 1977: 60.
Docophoroides murphyi (Kellogg, 1914); Pilgrim & Palma 1982: 7.
Docophoroides murphyi (Kellogg, 1914); Palma 2010: 408.

Lectotype ♂ in USNM (Emerson 1961b: 250). Holotype ♂ of *Docophoroides hunteri* in AMSA (Palma 1996b: 175).

Type host: *Macronectes giganteus* (J.F. Gmelin, 1789) (see Emerson 1961b: 250).

New Zealand hosts: *Macronectes giganteus* (J.F. Gmelin, 1789); *Macronectes halli* Mathews, 1912.

Other hosts: None.

New Zealand localities: ND, AK, BP, WO, TK, WA, WN, KA, NC, MC, SC, WD, SN, AN, Macquarie Island.

Geographic distribution: Southern Hemisphere.

New Zealand references: Harrison (1937); Clay (1964a); Gressitt (1964: 539); Watson (1967: 71); Clay & Moreby (1970: 217); Gressitt (1970: 327); Wise (1977); Pilgrim & Palma (1982); Horning *et al.* (1980: 5, 9); Murray *et al*. (1990: 1369); Palma (1996b: 174); Paterson *et al.* (1999: 222); Marris (2000: 187); Palma (2001: 65, fig. 2); Palma & Horning (2002: 7, 16); Palma (2010).

Other significant references: Timmermann (1959c); Emerson (1961b: 250); Timmermann (1965); Clay & Moreby (1967); Green & Palma (1991: 13, 25); Price *et al*. (2003: 176); Hänel & Palma (2007: 112, 123, 129).

Remarks: *Docophoroides murphyi* is a highly prevalent species, mostly found on the head and neck of giant petrels.

***Docophoroides simplex* (Waterston, 1914)**

Figs 95–96

Eurymetopus simplex Waterston, 1914: 302, fig. 2.
Docophoroides simplex Waterston, 1914 [sic]; Harrison 1937: 41, pl. 3: figs 2, 6b.
Docophoroides simplex (Waterston, 1914); Hopkins & Clay 1952: 118.
Docophoroides simplex (Waterston, 1914); Timmermann 1959c: 66, figs 2c, 5, 7b.
Docophoroides simplex (Waterston, 1914); Timmermann 1965: 87, figs 23, 24b, 26c, pl. 3: fig. 2.
Docophoroides simplex (Waterston, 1914); Clay & Moreby 1967: 161, 168, figs 110, 114.
Docophoroides simplex (Waterston, 1914); Pilgrim & Palma 1982: 6.
Docophoroides simplex (Waterston, 1914) *s. l.*; Pilgrim & Palma 1982: 6.
Docophoroides simplex (Waterston, 1914); Murray *et al.* 1990: 1368–1369.
Docophoroides simplex (Waterston, 1914); Palma 2010: 408.

Syntypes ♂♀ in SAMS (Palma 1996b: 175).

Type host: *Thalassarche melanophris* (Temminck, 1828).

New Zealand hosts: *Thalassarche chrysostoma* (J.R. Forster, 1785); *Thalassarche melanophris* (Temminck, 1828); *Thalassarche impavida* Mathews, 1912; *Phoebetria palpebrata* (J.R. Forster, 1785).

Other host: *Thalassarche chlororhynchos* (J.F. Gmelin, 1789).

New Zealand localities: ND, AK, WI, WN, NN, NC, MC, SC, SL, CH, CA, Macquarie Island.

Geographic distribution: Southern Hemisphere.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (1996b: 175); Palma & Horning (2002: 8, 15); Palma (2010).

Other significant references: Timmermann (1959c; 1965); Clay & Moreby (1967); Green & Palma (1991: 13, 25); Price *et al*. (2003: 176); Page *et al.* (2004: 647); Hänel & Palma (2007: 112, 123, 129).

Remarks: Pilgrim & Palma (1982: 6) regarded the populations of *Docophoroides simplex* from *Thalassarche chrysostoma* and *Phoebetria palpebrata* as somewhat different from that of the type host, and qualified them as *sensu lato*; however, my examination of more samples shows that making such difference is not warranted. *Docophoroides simplex* is mostly found on the head and neck of small albatrosses.

Genus *Emersoniella* Tendeiro, 1965

Emersoniella Tendeiro, 1965c. *Revista Estudos Gerais Universitários Moçambique 2* (Série 4): 69. Type species: *Emersoniella halcyonis* Tendeiro, 1965c (by original designation).

***Emersoniella bracteata* (Nitzsch [*in* Giebel], 1866)** **New Record**

Figs 97–98

Nirmus bracteatus Nitzsch [*in* Giebel], 1866: 369.
Nirmus bracteatus Nitzsch, 1866 [sic]; Hopkins & Clay 1952: 241.
Emersoniella bracteata (Nitzsch, 1866) [sic]; Clay 1971: 45.
Brueelia [sic] *bracteata* (Nitzsch, 1866) [sic]; Clay 1971: figs 1–2.
Emersoniella bracteata (Nitzsch [*in* Giebel], 1866); Palma 1996b: 176.
Emersoniella bracteata (Nitzsch [*in* Giebel], 1866); Price *et al.* 2003: 177.

Syntypes ♂♀, presumed lost. See Clay (1949a: 1), Palma & Pilgrim (1984: 150) and Palma (1996b: 176).

Type host: *Dacelo novaeguineae* (Hermann, 1783).

New Zealand host: *Dacelo novaeguineae novaeguineae* (Hermann, 1783).

Other hosts: None.

New Zealand localities: ND, AK.

Geographic distribution: Australasia.

New Zealand reference: This paper.

Other significant references: Clay (1971); Palma (1996b); Price *et al*. (2003); Gustafsson & Bush (2014: 528, 543).

Material examined and repository: 4♂, 7♀, 5 nymphs (2 samples, MONZ).

Remarks: *Emersoniella bracteata* is a new louse species for New Zealand, introduced to this country with kookaburras from Australia by human agency (Checklist Committee 2010: 272). Also, *Emersoniella* is a new genus record for New Zealand.

Genus *Episbates* Thompson, 1935

Episbates Thompson, 1935c. *Ann. Mag. Nat. Hist.* (Ser. 10) *16*: 485. Type species: *Philopterus pederiformis* Dufour, 1835 = *Episbates pederiformis* (Dufour, 1835) (by original designation).

Episbates pederiformis (Dufour, 1835)

Figs 99–100

Philopterus pederiformis Dufour, 1835: 676, pl. 21: fig. 4.
Nirmus angulicollis Giebel, 1876: 388.
Lipeurus macilhennyi Kellogg & Kuwana, 1901: 155, pl. 7: fig. 3.
Esthiopterum pederiforme Dufour, 1835 [sic]; Harrison 1916: 139.
Episbates pederiformis (Dufour, 1835); Thompson 1935c: 486, fig. 1.
Episbates pederiformis (Dufour, 1835); Thompson 1948c: 662, figs 1–8, pl. 19: figs, 1–3.
Episbates macilhennyi (Kellogg & Kuwana, 1901); Hopkins & Clay 1952: 131.
Episbates pederiformis (Dufour, 1835); Hopkins & Clay 1952: 131.
Episbates pederiformis (Dufour, 1835); Timmermann 1961c: 44, figs 12–13.
Episbates pederiformis (Dufour, 1835); Timmermann 1965: 105, fig. 41, pl. 10: fig. 4.
Episbates pederiformis (Dufour, 1835); Pilgrim & Palma 1982: 5.
Episbates pederiformis (Dufour, 1835); Palma 2010: 408.

Status, sex and repository of types unknown (Palma 1996b: 176), probably lost.

Type host: *Diomedea exulans* Linnaeus, 1758.

New Zealand hosts: *Diomedea exulans* Linnaeus, 1758; *Diomedea antipodensis antipodensis* Robertson & Warham, 1992; *Diomedea antipodensis gibsoni* Robertson & Warham, 1992; *Diomedea epomophora* Lesson, 1825; *Diomedea sanfordi* Murphy, 1917.

Other hosts: *Phoebastria albatrus* (Pallas, 1769); *Phoebastria nigripes* (Audubon, 1839); *Phoebastria irrorata* (Salvin, 1883); *Phoebastria immutabilis* (Rothschild, 1893).

New Zealand localities: AK, WN, KA, WD, CO, DN, CH, AU, AN, Macquarie Island.

Geographic distribution: Southern Hemisphere and north Pacific Ocean.

New Zealand references: Harrison (1937: 27, fig. 3); Pilgrim & Palma (1982); Murray *et al.* (1990: 1368); Marris (2000: 187); Palma (2001: 66, fig. 4); Page *et al.* (2004: 638, 648); Palma (2010).

Other significant references: Thompson (1935c); Clay (1940a: 298); Séguy (1944: 369, figs 548–549); Thompson (1948c); Hopkins & Clay (1952); Séguy (1953: 595, figs 51–52); Clay (1958a: 251); Timmermann (1961c; 1965); Clay & Moreby (1967: 159, fig. 81); Amerson & Emerson (1971: 2, 23); Palma (1996b: 176); Price *et al*. (2003: 178); Palma & Peck (2013: 36).

Remarks: *Episbates pederiformis* is a monotypic louse species parasitic on a wide range of albatross species. Thompson's (1948c: 667) designation of "… a male and a female of the British Museum specimens as neotypes …" is invalid because the neotype has to be a single specimen, which needs to be clearly identifiable (see Palma 1996b: 176).

Genus *Forficuloecus* Conci, 1941

Forficuloecus Conci, 1941. *Boll. Soc. Entomol. Italiana 73*: 126. Type species: *Philopterus forficula* Piaget, 1871 = *Forficuloecus forficula* (Piaget, 1871) (by original designation).

Forficuloecus meinertzhageni Guimarães, 1974

Forficuloecus meinertzhageni Guimarães, 1974b: 177, figs 25–29.
Forficuloecus meinertzhageni Guimarães, 1974; Wise 1977: 60.
Forficuloecus meinertzhageni Guimarães, 1974; Pilgrim & Palma 1982: 24.

Forficuloecus meinertzhageni Guimarães, 1974 *s. l.*; Pilgrim & Palma 1982: 24.
Forficuloecus meinertzhageni Guimarães, 1974; Guimarães 1985: 41, figs 1, 9.
Forficuloecus meinertzhageni Guimarães, 1974; Murray *et al.* 1999: 1241.
Forficuloecus meinertzhageni Guimarães, 1974; Price *et al.* 2008: 53, fig. 6.
Forficuloecus meinertzhageni Guimarães, 1974; Palma 2010: 408.

Holotype ♂ in NHML.

Type host: *Nestor meridionalis* (J.F. Gmelin, 1788).

New Zealand hosts: *Nestor meridionalis septentrionalis* Lorenz, 1896; *Nestor meridionalis meridionalis* (J.F. Gmelin, 1788); *Nestor notabilis* Gould, 1856.

Other hosts: None.

New Zealand localities: HB, WN, NC, MC, WD.

Geographic distribution: New Zealand.

New Zealand references: Guimarães (1974b); Wise (1977); Pilgrim & Palma (1982); Guimarães (1985); Murray *et al.* (1999); Price *et al.* (2008); Palma (2010); Buckley *et al.* (2012: App. 2).

Other significant references: Price *et al*. (2003: 176).

Remarks: *Forficuloecus meinertzhageni* is an endemic and "at risk" species (Buckley *et al.* 2012), exclusively parasitic on the kea and on both kaka subspecies. Pilgrim & Palma (1982: 24) regarded the population of *Forficuloecus meinertzhageni* from the kea as somewhat different from that of the type host, the kaka, and qualified it as *sensu lato*; however, my examination of more samples shows that making such difference is not warranted

Forficuloecus pilgrimi Guimarães, 1985

Figs 101–102

Forficuloecus sp.; Pilgrim & Palma 1982: 24.
Forficuloecus pilgrimi Guimarães, 1985: 43, figs 3, 7, 11, 15.
Forficuloecus pilgrimi Guimarães, 1985; Murray *et al.* 1999: 1241.
Forficuloecus pilgrimi Guimarães, 1985; Palma 1999: 381.
Forficuloecus pilgrimi Guimarães, 1985; Price *et al.* 2008: 53, figs 7–8.
Forficuloecus pilgrimi Guimarães, 1985; Palma 2010: 408.

Holotype ♂ in MONZ (Palma *et al.* 1989: 45).

Type host: *Cyanoramphus novaezelandiae chathamensis* Oliver, 1930.

New Zealand hosts: *Cyanoramphus novaezelandiae novaezelandiae* (Sparrman, 1787); *Cyanoramphus novaezelandiae chathamensis* Oliver, 1930; *Cyanoramphus auriceps* (Kuhl, 1820); *Cyanoramphus malherbi* Souancé, 1857; *Cyanoramphus forbesi* Rothschild, 1893; *Cyanoramphus unicolor* (Lear, 1831); *Cyanoramphus hochstetteri* (Reischek, 1889).

Other hosts: None.

New Zealand localities: CL, BP, WN, NN, NC, MC, SC, FD, CH, AN.

Geographic distribution: New Zealand.

New Zealand references: Pilgrim & Palma (1982); Guimarães (1985); Palma *et al.* (1989: 45); Murray *et al.* (1999); Palma (1999); Marris (2000: 187); Price *et al.* (2008); Palma (2010); Buckley *et al.* (2012: App. 2).

Other significant references: Price *et al*. (2003: 180).

Remarks: *Forficuloecus pilgrimi* is an endemic and "at risk" species (Buckley *et al.* 2012), exclusively parasitic on several species and subspecies of New Zealand parakeets.

Forficuloecus species **New Record**

New Zealand host: *Platycercus eximius* (Shaw, 1792).

New Zealand locality: WN.

New Zealand reference: This paper.

Material examined and repository: 3 nymphs (1 sample, MONZ).

Remarks: The natural and regular species of *Forficuloecus* parasitising *Platycercus eximius* in Australia is *F. forficula* (Piaget, 1871) (see Price *et al*. 2003: 179). However, the single and first New Zealand record of this louse could not be identified to species because the sample contains nymphs only.

Genus *Fulicoffula* Clay & Meinertzhagen, 1938

Fulicoffula Clay & Meinertzhagen, 1938b. *Entomologist 71*: 279. Type species: *Esthiopterum luridum* (Denny) [sic] = *Fulicoffula lurida* (Nitzsch, 1818) (by original designation).

Fulicoffula lurida (Nitzsch, 1818)

"Pollino della folaga" Redi, 1668: pl. 4: fig. 2.
Philopterus (*Lipeurus*) *luridus* Nitzsch, 1818: 292. *Nomen novum* for "Pollino della folaga" Redi, 1668: pl. 4: fig. 2.
Lipeurus luridus Nitzsch, 1818; Giebel 1874: 230, pl. 16: fig. 4.
Esthiopterum luridum Nitzsch in Denny, 1842 [sic]; Harrison 1916: 137.
Esthiopterum luridum (Denny) [sic]; Clay & Meinertzhagen, 1938b: 279.
Fulicoffula lurida (Nitzsch, 1818); Hopkins 1940: 425.
Fulicoffula lurida (Nitzsch, 1818); Hopkins & Clay 1952: 141.
Fulicoffula lurida (Nitzsch, 1818); Clay & Hopkins 1960: 40, figs 63–71, pl. 6: figs 1–2.
Fulicoffula lurida (Nitzsch, 1818); Tendeiro 1963: 86, photos 69–70, 74, 76.
Fulicoffula lurida (Nitzsch, 1818); Pilgrim & Palma 1982: 19.
Fulicoffula lurida (Nitzsch, 1818); Murray *et al.* 1993: 961.
Fulicoffula lurida (Nitzsch, 1818); Palma 2010: 408.

Neotype ♂ in NHML (Clay & Hopkins 1960: 43, pl. 6: fig. 1).
Type host: *Fulica atra* Linnaeus, 1758.
New Zealand host: *Fulica atra australis* Gould, 1845.
Other hosts: *Fulica cristata* J.F. Gmelin, 1789; *Fulica leucoptera* Vieillot, 1817.
New Zealand localities: WO, SD, MB, NC, MC, SC, CO, DN.
Geographic distribution: Africa; Eurasia; Australasia; South America.
New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1993); Palma (2010).
Other significant references: Hopkins (1940); Clay & Hopkins (1960); Tendeiro (1963); Palma (1996b: 178); Green & Palma (1991: 14, 32); Butler & O'Connor (1994: 455); Price *et al*. (2003: 181); Palma & Jensen (2005: 55, 63); Adam (2007: 175); Martín-Mateo (2009: 234).
Remarks: Hopkins (1940: 421) gives a complete account of the early taxonomic confusion among several species of lice described from *Fulica atra*, including a clarification of the synonymy of *Fulicoffula lurida*.

Fulicoffula stammeri Eichler, 1958 **New Record**

Figs 103–104

Fulicoffula stammeri Eichler, 1958: 61, fig. 3.
Fulicoffula sp.; Pilgrim & Palma 1982: 19.
Fulicoffula sp.; Murray *et al.* 1993: 961.
Fulicoffula stammeri Eichler, 1958; Price *et al*. 2003: 181.

Holotype ♂, probably in the University of Erlangen-Nuremberg, Germany (Jürgen Schmidl pers. comm. July 2012).
Type host: *Porzana porzana* (Linnaeus, 1766).
New Zealand hosts: *Porzana pusilla affinis* (J.E. Gray, 1845); *Porzana tabuensis tabuensis* (J.F. Gmelin, 1789).
Other hosts: None.
New Zealand localities: ND, AK, WO, TO, HB, RI, SD, MB, NC, MC, SC, WD, SL, FD, AN.
Geographic distribution: Eurasia; Africa; New Zealand.
New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1993).
Other significant references: Price *et al*. (2003).
Material examined and repository: 36♂, 54♀, 5 nymphs (22 samples, MONZ).
Remarks: This is the first record of *Fulicoffula stammeri* for New Zealand because the New Zealand references cited above reported this louse as "*Fulicoffula* sp." only.

Genus *Goniocotes* Burmeister, 1838

Goniocotes Burmeister, 1838a. *Handb. Entomol. 2*(1): 431. Type species: *Goniocotes gallinae* (De Geer, 1778b) (by subsequent designation).

***Goniocotes chrysocephalus* Giebel, 1874**

Goniocotes chrysocephalus Giebel, 1874: 189.
Goniocotes chrysocephalus Giebel, 1874; Kéler 1939: 152, fig. 85.
Goniocotes chrysocephalus Giebel, 1874; Hopkins & Clay 1952: 147.
Goniocotes chrysocephalus Giebel, 1874; Pilgrim & Palma 1982: 18.
Goniocotes chrysocephalus Giebel, 1874; Murray *et al.* 1993: 960.
Goniocotes chrysocephalus Giebel, 1874; Palma 2010: 408.

Type material: one nymph of doubtful status in MLUH (Karla Schneider pers. comm. May 2014).

Type host: *Phasianus colchicus* Linnaeus, 1758.

New Zealand host: *Phasianus colchicus* Linnaeus, 1758.

Other host: *Bonasa umbellus* (Linnaeus, 1766).

New Zealand localities: RI, WI.

Geographic distribution: Eurasia; Australasia.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1993); Paterson *et al.* (1999: 219); Palma (2010).

Other significant references: Kéler (1939); Marconcini & Macchioni (1975: 105, figs 3–4); Modrzejewska & Złotorzycka (1987: 661, fig. 3); Kopociński *et al*. (1998: 81); Price *et al*. (2003: 181); Adam (2007: 171); Martín-Mateo (2009: 36).

Remarks: *Goniocotes chrysocephalus* was introduced to New Zealand and other countries with common pheasants by human agency (Checklist Committee 2010: 28).

***Goniocotes gallinae* (De Geer, 1778)**

Ricinus gallinae De Geer, 1778b: 79, pl. 4: fig. 15.
Philopterus (*Goniodes*) *hologaster* Nitzsch, 1818: 294. Unnecessary *nomen novum* for *Ricinus gallinae* De Geer, 1778.
Goniocotes gallinae De Geer, 1778 [sic]; Harrison 1916: 81 (as junior synonym of *Goniocotes hologaster* Nitzsch).
Goniocotes hologaster (Nitzsch, 1818); Kéler 1939: 135, figs 72–73.
Goniocotes gallinae (De Geer, 1778); Hopkins & Clay 1952: 147.
Goniocotes gallinae; Whitten 1971: 383.
Goniocotes gallinae (De Geer, 1778); Murray *et al*. 1993: 960.
Goniocotes gallinae (De Geer, 1778); Palma 1999: 384, note G.
Goniocotes gallinae (De Geer, 1778); Palma 2010: 408.

Neotype ♂ in NHML (Clay & Hopkins 1954: 242).

Type host: *Gallus gallus* (Linnaeus, 1758).

New Zealand host: *Gallus gallus gallus* (Linnaeus, 1758).

Other hosts: *Caloperdix oculeus* (Temminck, 1815); *Meleagris gallopavo* Linnaeus, 1758.

New Zealand localities: WI, WN, NC, MC, SC, KE.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Whitten (1971: 383); Murray *et al*. (1993); Palma (1999); Palma (2010).

Other significant references: Kéler (1939); Clay & Hopkins (1954: 242, figs 29–31); Emerson (1956a: 67, pl. 2); Emerson & Ward (1958: 56); Price (1987: 220, fig. 22.24); Palma (1996b: 179); Price *et al*. (2003: 181); Palma & Jensen (2005: 55, 62); Martín-Mateo (2009: 32, figs 5b, 7).

Remarks: *Goniocotes gallinae* was introduced to New Zealand and other countries with chickens by human agency. *Gallus gallus gallus* has been listed for the first time in the latest edition of the New Zealand Checklist of Birds (Checklist Committee 2010: 27; see also Palma 1999: 383, note 5).

***Goniocotes pusillus* (Nitzsch [*in* Giebel], 1866)**

Figs 105–106

Goniodes pusillus Nitzsch [*in* Giebel], 1866: 387.

Goniocotes pusillus Nitzsch [*in* Giebel], 1874 [sic]; Harrison 1916: 82.
Goniocotes pusillus Nitzsch in Burmeister, 1838a [sic]; Kéler 1939: 149, fig. 83.
Goniocotes pusillus (Nitzsch, 1866) [sic]; Hopkins & Clay 1952: 149.
Goniocotes pusillus (Nitzsch, 1866) [sic]; Pilgrim & Palma 1982: 18.
Goniocotes pusillus (Nitzsch, 1866) [sic]; Murray *et al*. 1993: 961.
Goniocotes pusillus (Nitzsch [*in* Giebel], 1866); Price *et al*. 2003: 182.
Goniocotes pusillus (Nitzsch [*in* Giebel], 1866); Palma 2010: 408.

Status, sex and repository of types unknown, presumed lost. See Clay (1949a: 1) and Palma & Pilgrim (1984: 150).

Type host: *Alectoris barbara* (Bonnaterre, 1792).

New Zealand host: *Alectoris chukar* (J.E. Gray, 1830).

Other hosts: None.

New Zealand locality: CO, DN.

Geographic distribution: Eurasia; Africa, New Zealand.

New Zealand references: Pilgrim & Palma (1982); Murray *et al*. (1993); Paterson *et al.* (1999: 219); Palma (2010).

Other significant references: Kéler (1939); Price *et al*. (2003).

Remarks: *Goniocotes pusillus* was introduced to New Zealand with chukors by human agency (Checklist Committee 2010: 26).

Genus *Goniodes* Nitzsch, 1818

Goniodes Nitzsch, 1818. *Germar's Mag. Entomol. 3*: 293. Type species: *Goniodes pavonis* (Linnaeus, 1758) (by subsequent designation).

Gonocephalus "Nitzsch" *in* Kéler, 1937. *Arb. Morph. tax. Entomol. Berlin-Dahlem 4*: 130. Type species: *Goniodes chelicornis* "Nitzsch" = *Goniodes bituberculatus* Rudow, 1869b (by original designation).

Oulocrepis Kéler, 1939. *Nova Acta Leop.-Carol.* (*N.F.*) *8*: 97. Type species: *Goniodes dissimilis* Nitzsch [sic] = *Goniodes dissimilis* (Denny, 1842) (by original designation).

Solenodes Kéler, 1939. *Nova Acta Leop.-Carol.* (*N.F.*) *8*: 101. Type species: *Goniodes dispar* Nitzsch [sic] = *Goniodes dispar* Burmeister, 1838a (by original designation).

Goniodes colchici (Denny, 1842)

Philopterus (*Goniodes*) *colchici* Denny, 1842: 56, 158, pl. 12: fig. 4.
Gonocephalus colchici (Denny, 1842); Kéler 1939: 94, figs 49–50.
Goniodes colchici Denny, 1842 [sic]; Clay 1940b: 50, figs 32, 34b.
Goniodes colchici Denny, 1842 [sic]; Hopkins & Clay 1952: 152.
Goniodes colchici Denny, 1842 [sic]; Pilgrim & Palma 1982: 18.
Goniodes colchici Denny, 1842 [sic]; Murray *et al.* 1993: 960.
Goniodes colchici Denny, 1842 [sic]; Palma 2010: 408.

Lectotype ♂ in NHML (Clay 1940b: 50).

Type host: *Phasianus colchicus* Linnaeus, 1758.

New Zealand host: *Phasianus colchicus* Linnaeus, 1758.

Other hosts: None.

New Zealand localities: WI, WN, NC, MC, SC.

Geographic distribution: Americas; Eurasia; Australasia.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1993); Paterson *et al.* (1999: 219); Palma (2010).

Other significant references: Kéler (1939); Clay (1940b); Williams (1970a,b; 1971); Marconcini & Macchioni (1975: 104, figs 1–2); Rudolph (1983: 16); Modrzejewska & Złotorzycka (1987: 662, fig. 4); Butler & O'Connor (1994: 455); Palma (1996b: 180); Kopociński *et al*. (1998: 81); Price *et al*. (2003: 183); Martín-Mateo (2009: 49, fig. 11C,F).

Remarks: *Goniodes colchici* was introduced to New Zealand and other countries with common pheasants by human agency (Checklist Committee 2010: 28). Denny (1842: 155) clearly regarded *Goniodes* as a subgenus of *Philopterus*. However, subsequent authors ignored that fact and did not add parentheses around author and date when *Goniodes* is used at generic level.

***Goniodes dispar* Burmeister, 1838**

Goniodes dispar Burmeister, 1838a: 432.
Solenodes dispar (Nitzsch) [sic]; Kéler 1939: 102, fig. 53.
Goniodes dispar Burmeister, 1838; Clay 1940b: 87, fig. 60a.
Goniodes dispar Burmeister, 1838; Hopkins & Clay 1952: 153.
Goniodes dispar Burmeister, 1838; Pilgrim & Palma 1982: 18.
Goniodes dispar Burmeister, 1838; Murray *et al*. 1993: 961.
Goniodes dispar Burmeister, 1838; Palma 2010: 408.

Status, sex and repository of types unknown, presumed lost. See Clay (1949a: 1) and Palma & Pilgrim (1984: 150).

Type host: *Perdix perdix perdix* (Linnaeus, 1758).

New Zealand host: *Alectoris chukar* (J.E. Gray, 1830).

Other hosts: *Alectoris graeca* (Mesiner, 1804); *Alectoris rufa* (Linnaeus, 1758).

New Zealand locality: CO, DN.

Geographic distribution: Eurasia; New Zealand.

New Zealand references: Pilgrim & Palma (1982); Murray *et al*. (1993); Paterson *et al.* (1999: 219); Palma (2010).

Other significant references: Clay (1940b); Price *et al*. (2003: 184); Millán *et al*. (2004: 79); Martín-Mateo (2009: 48, fig. 11B).

Remarks: *Goniodes dispar* was introduced to New Zealand with chukors by human agency (Checklist Committee 2010: 26).

***Goniodes dissimilis* (Denny, 1842)**

Philopterus (*Goniodes*) *dissimilis* Denny, 1842: 57, 162, pl. 12: fig. 6.
Goniodes dissimilis Nitzsch [sic]; Thomson 1922: 269.
Oulocrepis dissimilis (Nitzsch) [sic]; Kéler 1939: 98, figs 51–52.
Goniodes dissimilis Denny, 1842 [sic]; Clay 1940b: 62, figs 41–43.
Goniodes dissimilis Denny, 1842 [sic]; Hopkins & Clay 1952: 153.
Goniodes dissimilis; Whitten 1971: 383.
Goniodes dissimilis Denny, 1842 [sic]; Palma 1999: 384, note G.
Goniodes dissimilis Denny, 1842 [sic]; Murray *et al*. 1993: 960.
Goniodes dissimilis Denny, 1842 [sic]; Palma 2010: 408.

Neotype ♀ in NHML (Clay 1940b: 65).

Type host: *Gallus gallus* (Linnaeus, 1758).

New Zealand host: *Gallus gallus gallus* (Linnaeus, 1758).

Other hosts: *Gallus sonneratii* Temminck, 1813; *Gallus lafayettii* Lesson, 1831.

New Zealand localities: AK, WN, CO, DN.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Thomson (1922); Kéler (1939); Whitten (1971); Murray *et al*. (1993); Palma (1999); Palma (2010).

Other significant references: Clay (1940b); Emerson (1956a: 69, pl. 3); Emerson & Ward (1958: 56); Palma (1996b: 181); Price *et al*. (2003: 184); Martín-Mateo (2009: 49, fig. 11E); Palma & Peck (2013: 37).

Remarks: *Goniodes dissimilis* was introduced to New Zealand and other countries with chickens by human agency. *Gallus gallus gallus* has been listed for the first time in the latest edition of the New Zealand Checklist of Birds (Checklist Committee 2010: 27; see also Palma 1999: 383, note 5).

Denny (1842: 155) clearly regarded *Goniodes* as a subgenus of *Philopterus*. However, subsequent authors ignored that fact and did not add parentheses around author and date when *Goniodes* is used at generic level.

***Goniodes ortygis* (Denny, 1842)**

Philopterus (*Goniodes*) *ortygis* Denny, 1842: 56, 158, pl. 13: fig. 6.
Goniodes ortygis Denny, 1842 [sic]; Clay 1940b: 91, fig. 62.
Goniodes ortygis Denny, 1842 [sic]; Hopkins & Clay 1952: 157.
Goniodes sp.; Pilgrim & Palma 1982: 18.
Goniodes ortygis Denny, 1842 [sic]; Palma 1999: 379.

Goniodes ortygis Denny, 1842 [sic]; Palma 2010: 408.

Lectotype ♂ in NHML (Clay 1940: 93).

Type host: *Colinus virginianus* (Linnaeus, 1758).

New Zealand host: *Colinus virginianus taylori* Lincoln, 1915.

Other hosts: *Colinus virginianus virginianus* (Linnaeus, 1758); *Colinus virginianus floridanus* (Coues, 1872); *Colinus virginianus texanus* (Lawrence, 1853).

New Zealand locality: WN.

Geographic distribution: North and Central America.

New Zealand references: Pilgrim & Palma (1982); Palma (1999); Palma (2010).

Other significant references: Clay (1940b); Forrester *et al*. (1995: 22); Price *et al*. (2003: 185).

Remarks: *Goniodes ortygis* was introduced to New Zealand with bobwhite quails by human agency, but these quails appear to have died out in New Zealand (Checklist Committee 2010: 349). Denny (1842: 155) clearly regarded *Goniodes* as a subgenus of *Philopterus*. However, subsequent authors ignored that fact and did not add parentheses around author and date when *Goniodes* is used at generic level.

Goniodes pavonis (Linnaeus, 1758)

Pediculus pavonis Linnaeus, 1758: 613.

Ricinus pavonis (Linnaeus, 1758); Latreille 1804: 103.

Goniodes pavonis Linnaeus, 1758 [sic]; Harrison 1916: 78.

Goniodes pavonis (Linnaeus, 1758); Kéler 1939: 39, figs 11, 13–15.

Goniodes pavonis (Linnaeus, 1758); Clay 1940b: 5, figs 1a, 3, 4a, 5, 9a.

Goniodes pavonis (Linnaeus, 1758); Hopkins & Clay 1952: 157.

Goniodes pavonis (Linnaeus, 1758); Pigrim & Palma 1982: 18.

Goniodes pavonis (Linnaeus, 1758); Murray *et al*. 1993: 960.

Goniodes pavonis (Linnaeus, 1758); Palma 2010: 408.

Neotype ♂ in NHML (Clay 1940b: 7).

Type host: *Pavo cristatus* Linnaeus, 1758.

New Zealand host: *Pavo cristatus* Linnaeus, 1758.

Other host: *Pavo muticus* Linnaeus, 1766.

New Zealand localities: ND, WA, WN, NC, MC, SC.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Pigrim & Palma (1982); Murray *et al*. (1993); Paterson *et al.* (1999: 220); Palma (2010).

Other significant references: Kéler (1939); Clay (1940b); Clay & Hopkins (1950: 261); Green & Palma (1991: 14, 31); Butler & O'Connor (1994: 455); Palma (1996b: 182); Price *et al*. (2003: 185); Adam (2007: 171); Martín-Mateo (2009: 46, figs 5e, 12).

Remarks: *Goniodes pavonis* is native to Asia, and was was introduced to New Zealand and other countries with peafowl by human agency (Checklist Committee 2010: 28).

Goniodes retractus Le Souëf, 1902

Figs 107–108

Gonoides [sic] *retractus* Le Souëf, 1902b: 90.

Goniodes retractus Le Souëf, 1902; Clay 1940b: 98, fig. 67.

Goniodes retractus Le Souëf, 1902; Hopkins & Clay 1952: 158.

Goniodes retractus Le Souëf, 1902; Pigrim & Palma 1982: 18.

Goniodes retractus Le Souëf, 1902; Murray *et al*. 1993: 961.

Goniodes retractus Le Souëf, 1902; Palma 2010: 408.

Holotype ♀, repository unknown (Palma 1996b: 183).

Type host: *Coturnix ypsilophora australis* (Latham, 1802).

New Zealand host: *Coturnix ypsilophora australis* (Latham, 1802).

Other hosts: None.

New Zealand localities: BP, HB.

Geographic distribution: Australasia.

New Zealand references: Pigrim & Palma (1982); Murray *et al*. (1993); Paterson *et al.* (1999: 219); Palma (2010).

Other significant references: Clay (1940b); Green & Palma (1991: 14, 31); Palma (1996b: 182); Price *et al*. (2003: 186).

Remarks: *Goniodes retractus* and its host are native to Australia, and were introduced to New Zealand by human agency (Checklist Committee 2010: 27).

Goniodes stefani Clay & Hopkins, 1955

"*Goniodes mamillatus*" Taschenberg, 1882: 25, pl. 1: figs 1a,b (not *Goniodes mamillatus* Rudow, 1870: 483).

"*Goniodes mammillatus* [sic]" Kellogg, 1896: 509, pl. 69: fig. 2 (not *Goniodes mamillatus* Rudow, 1870: 483).

"*Gonocephalus mamillatus*" Kéler, 1939: 88, figs 45–46 (not *Goniodes mamillatus* Rudow, 1870: 483).

Goniodes stefani Clay & Hopkins 1955: 57. *Nomen novum* for "*Goniodes*" *mamillatus* Kéler, 1939.

Goniodes stefani Clay & Hopkins 1955; Pilgrim & Palma 1982: 18.

Goniodes stefani Clay & Hopkins 1955; Murray *et al.* 1993: 960.

Goniodes stefani Clay & Hopkins 1955; Palma 2010: 408.

Syntypes ♂♀ in ZMHG (Clay & Hopkins 1955: 57).

Type host: *Callipepla californica* (Shaw, 1798).

New Zealand host: *Callipepla californica brunnescens* (Ridgway, 1884).

Other hosts: None.

New Zealand localities: AK, BP, TK, SD, MB, NN, NC, MC, SC, CO, DN.

Geographic distribution: North & South America; Europe; Australasia, Hawaiian Islands.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1993); Palma (2010).

Other significant references: Clay & Hopkins (1955); Price *et al*. (2003: 186).

Remarks: *Goniodes stefani* was introduced to New Zealand and other countries with California quails by human agency (Checklist Committee 2010: 25).

Genus *Haffneria* Timmermann, 1966

Haffneria Timmermann, 1966. *Mitt. Hamburg. Zool. Mus. Inst. 63*: 87. Type species: *Perineus piratae* Timmermann, 1955 (by original designation).

Haffneria grandis (Piaget, 1880)

Figs 109–110

Lipeurus grandis Piaget, 1880: 323, pl. 26: fig. 7.

Lipeurus laculatus Kellogg & Chapman, 1899: 93, pl. 7: fig. 1.

Esthiopterum grande Piaget, 1880 [sic]; Harrison 1916: 135 (as junior synonym of *Esthiopterum modestum* Giebel, 1874).

"*Perineus modestus*" Séguy, 1944: 365, figs 544–545 (not *Lipeurus modestus* Giebel, 1874).

Perineus grandis (Piaget, 1880); Hopkins & Clay 1952: 277.

Perineus piratae Timmermann, 1955: 532, fig. 16.

Perineus laculatus (Kellogg & Chapman, 1899); Timmermann 1955: 532.

Diomedicola grandis (Piaget, 1880); Kéler 1957b: 509, figs 1d, 2a,b, 5, 11–12.

Perineus antarcticus Carriker, 1958: 186, fig. 7.

Harrisoniella grandis (Piaget, 1880); Clay 1964a: 231.

H. grandis (Piaget, 1880); Gressitt 1964: 538.

Haffneria grandis (Piaget, 1880); Timmermann 1966: 86, figs 1a, 3.

Haffneria piratae (Timmermann, 1955); Timmermann 1966: 87, fig. 2a.

Haffneria grandis (Piaget, 1880); Clay & Moreby 1967: 161, 169, figs 82–83.

Haffneria grandis (Piaget, 1880); Clay & Moreby 1970: 220.

"*H.*" *grandis* (Piaget, 1880); Gressitt 1970: 327.

Haffneria grandis (Piaget, 1880); Wise 1977: 60.

Haffneria grandis (Piaget, 1880) *s. l.*; Pilgrim & Palma 1982: 22.

Haffneria grandis (Piaget, 1880); Murray *et al.* 2006a: 1964.

Haffneria grandis (Piaget, 1880); Palma 2010: 408.

Lectotype ♂ in NHML (Timmermann, 1955: 534). Holotype nymph of *Perineus antarcticus* in FMLA.

Type host: "*Hydrobates pelagicus*", in error (see Hopkins & Clay 1952: 277).

New Zealand hosts: *Catharacta antarctica lonnbergi* Mathews, 1912; *Catharacta maccormicki* (Saunders, 1893); *Stercorarius parasiticus* (Linnaeus, 1758).

Other hosts: *Catharacta antarctica hamiltoni* Hagen, 1952; *Catharacta chilensis* (Bonaparte, 1857); *Catharacta skua* Brünnich, 1764; *Coprotheres pomarinus* (Temminck, 1815); *Stercorarius longicaudus* Vieillot, 1819.

New Zealand localities: ND, WI, CH, SI, SN, AU, CA, Macquarie Island, RO.

Geographic distribution: Cosmopolitan.

New Zealand references: Clay (1964a); Gressitt (1964); Watson (1967: 72); Clay & Moreby (1967; 1970); Gressitt (1970); Spellerberg (1971: 19); Schaefer & Strandtmann (1971: 16); Wise (1977); Horning *et al.* (1980: 5, 11); Pilgrim & Palma (1982); Palma (1996b: 183); Palma & Horning (2002: 8, 17); Murray *et al.* (2006a); Palma (2010).

Other significant references: Hopkins (1942b: 100); Séguy (1944); Hopkins & Clay (1952); Séguy (1953: 568, figs 18–20); Kéler (1957b); Timmermann (1966); Furness & Palma (1992: 35, 42); Cohen *et al*. (1997: 186); Ramli *et al*. (2000: 71); Price *et al*. (2003: 186); Page *et al.* (2004: 648, 650); Palma & Jensen (2005: 55, 64); Hänel & Palma (2007: 112, 124, 131).

Remarks: Pilgrim & Palma (1982: 22) regarded the populations of *Haffneria grandis* from the three New Zealand hosts listed above as somewhat different from the lectotype, and qualified them as *sensu lato*. However, my examination of more samples, including some from non-New Zealand hosts, shows that making such difference is not warranted.

Genus *Halipeurus* Thompson, 1936

Halipeurus Thompson, 1936. *Ann. Mag. Nat. Hist.* (Ser. 10) *18*: 40. Type species: *Lipeurus angusticeps* Piaget, 1880 (by original designation).

Synnautes Thompson, 1936. *Ann. Mag. Nat. Hist.* (Ser. 10) *18*: 43. Type species: *Lipeurus pelagicus* Denny, 1842 (by original designation).

Anamias Timmermann, 1965. *Abhandl. Verhandl. Naturwiss. Vereins Hamburg*, *N.F*. 8 (*Supplement*): 155. Type species: *Halipeurus raphanus* Timmermann, 1961a (by original designation).

Halipeurus Thompson, 1936; Palma 2011b: 16. Synonymy.

Halipeurus angusticeps (Piaget, 1880)

Lipeurus angusticeps Piaget, 1880: 306, pl. 25: fig. 4.

Esthiopterum angusticeps Piaget, 1880 [sic]; Harrison 1916: 130.

Halipeurus angusticeps (Piaget, 1880); Hopkins & Clay 1952: 163.

Halipeurus sawadai Nakagawa, 1959a: 384, figs 1a,b,c, 2b,d.

Halipeurus (*Halipeurus*) *angusticeps angusticeps* (Piaget, 1880); Edwards 1961: 135, figs 3a–7a.

Halipeurus (*Halipeurus*) *angusticeps fosteri* Edwards, 1961: 137, figs 3b–7b.

Halipeurus (*Halipeurus*) *angusticeps* (Piaget, 1880); Timmermann 1965: 139.

Halipeurus (*Halipeurus*) *sawadai* Nakagawa, 1959; Price *et al.* 2003: 188.

Halipeurus angusticeps (Piaget, 1880); Scofield *et al.* 2011: 214.

Halipeurus angusticeps (Piaget, 1880); Palma 2011b: 19, figs 38–40, 62.

Lectotype in NHML (Palma 2011b: 19).

Type host: "*Procellaria cinerea*", in error (see Palma 2011b: 21).

New Zealand host: *Calonectris leucomelas* (Temminck, 1836).

Other hosts: None.

New Zealand locality: WO.

Geographic distribution: Japan; Korea; eastern China; Pacific Ocean.

New Zealand references: Scofield *et al.* (2011); Palma (2011b).

Other significant references: Timmermann (1961a: 402); Edwards (1961); Timmermann (1965); Tsurumi (1989: 281); Price *et al*. (2003: 187).

Remarks: *Halipeurus angusticeps* is a "wing" louse exclusively parasitic on the streaked shearwater, *Calonectris leucomelas*, a host recorded only once in New Zealand (Checklist Committee 2010: 111; Scofield *et al.* 2011). Wise (1977: 60) listed "*Halipeurus* (*Halipeurus*) *angusticeps*" from Macquarie Island, but Pilgrim & Palma (1982: 30, note 16) showed that it was a misidentification of *H. procellariae* (see below).

Halipeurus bulweriae Timmermann, 1960

Halipeurus sp.; Clay 1940a: 309.
Naubates sp.; Clay 1940a: pl. 1: fig. 3.
Halipeurus bulweriae Timmermann, 1960: 328, figs 11, 15a.
Halipeurus (*Halipeurus*) *bulweriae* Edwards, 1961: 145, figs 3h–7h.
Halipeurus (*Halipeurus*) *bulweriae* Timmermann, 1960; Timmermann 1965: 149, fig. 90.
Halipeurus (*Halipeurus*) *bulweriae* Timmermann, 1960; Palma 1999: 376, 383, note 3.
Halipeurus (*Halipeurus*) *bulweriae* Timmermann, 1960; Palma 2010: 408.
Halipeurus bulweriae Timmermann, 1960; Palma 2011b: 17.

Holotype ♂ in NHML.

Type host: *Bulweria bulwerii* (Jardine & Selby, 1828).

New Zealand host: *Bulweria bulwerii* (Jardine & Selby, 1828).

Other hosts: None.

New Zealand localities: WN, MC.

Geographic distribution: Temperate and tropical regions of the Atlantic, Indian and Pacific Oceans.

New Zealand references: Palma (1999); Palma (2010); Palma (2011b).

Other significant references: Clay (1940a); Edwards (1961); Timmermann (1965); Amerson & Emerson (1971: 5, 23); Price *et al.* (2003: 187).

Remarks: *Halipeurus bulweriae* is is a "wing" louse exclusively parasitic on Bulwer's petrel, a host which, with a single record until 2013, is regarded as a very rare straggler to New Zealand (Checklist Committee 2010: 107). A second record occurred in North Brighton, Canterbury, in January 2014. Both specimens were parasitised by *Halipeurus bulweriae*.

Halipeurus confusus Palma, 2011

Figs 111–112

Halipeurus (*Halipeurus*) *accentor* Edwards, 1961: 151, figs 3r–7r. In part.
"*Halipeurus accentor*" Nelson, 1969: 199 (not *Halipeurus accentor* Edwards, 1961).
"*Halipeurus leucophryna*" Watt, 1971: 236, 242 (not *Halipeurus leucophryna* Timmermann, 1960).
"*Halipeurus* (*Halipeurus*) *leucophryna*" Wise, 1977: 61 (not *Halipeurus leucophryna* Timmermann, 1960).
Halipeurus (*Halipeurus*) sp.; Pilgrim & Palma 1982: 9, 30.
Halipeurus (*Halipeurus*) sp.; Murray *et al.* 1990: 1370.
Halipeurus sp.; Palma 2010: 408.
Halipeurus confusus Palma, 2011b: 3, figs 1–3, 28, 43, 57.

Holotype ♂ in MONZ.

Type host: *Pterodroma nigripennis* (Rothschild, 1893).

New Zealand host: *Pterodroma nigripennis* (Rothschild, 1893).

Other hosts: None.

New Zealand localities: ND, AK, BP, GB, NC, MC, SC, KE, Norfolk Island, CH.

Geographic distribution: Pacific Ocean.

New Zealand references: Nelson (1969); Watt (1971); Wise (1977); Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (2010); Palma (2011b).

Other significant reference: Edwards (1961).

Remarks: *Halipeurus confusus* is a "wing" louse exclusively parasitic on black-winged petrels. This *Halipeurus* species was initially misidentified by Edwards (1961) and confused with other species by several authors for many years (see Palma 2011b: 3, 6).

***Halipeurus consimilis* Timmermann, 1960**

Halipeurus consimilis Timmermann, 1960: 326, fig. 9.
Halipeurus (*Halipeurus*) *consimilis* Timmermann, 1960; Timmermann 1965: 147, fig. 88.
Halipeurus (*Halipeurus*) *consimilis* Timmermann, 1960; Palma & Pilgrim 1977: 290, figs 1–6.
Halipeurus consimilis Timmermann, 1960; Horning *et al.* 1980: 5, 9.
Halipeurus (*Halipeurus*) *consimilis* Timmermann, 1960; Pilgrim & Palma 1982: 8.
Halipeurus (*H.*) *consimilis* Timmermann, 1960; Palma 2010: 408.

Holotype ♂ in NHML.

Type host: *Pterodroma inexpectata* (J.R. Forster, 1844).

New Zealand host: *Pterodroma inexpectata* (J.R. Forster, 1844).

Other hosts: None.

New Zealand localities: ND, AK, WN, NC, MC, SC, WD, SL, SI, SN.

Geographic distribution: Pacific Ocean.

New Zealand references: Timmermann (1960); Horning *et al.* (1980); Palma & Pilgrim (1977); Pilgrim & Palma (1982); Murray *et al.* (1990: 1370); Page *et al.* (2004: 643, 648); Palma (2010).

Other significant references: Timmermann (1965); Palma (1996b: 184); Price *et al.* (2003: 187); Hammer *et al.* (2010: 1113).

Remarks: *Halipeurus consimilis* is a "wing" louse exclusively parasitic on the mottled petrel, a host which only breeds in New Zealand but which ranges widely over the Pacific Ocean (Checklist Committee 2010: 93).

***Halipeurus diversus* (Kellogg, 1896)**

Lipeurus diversus Kellogg, 1896a: 123, pl. 8: figs 3–4.
Lipeurus limitatus Kellogg, 1896a: 124, pl. 8: fig. 5, 6.
Esthiopterum diversum Kellogg, 1896 [sic]; Harrison 1916: 133.
Esthiopterum constrictiventre Pessôa & Guimarães, 1935a: 313, fig. 6, 7.
Halipeurus diversus (Kellogg, 1896); Hopkins & Clay 1952: 163.
Halipeurus hanáki [sic] Balát, 1958: 415.
Halipeurus diversus (Kellogg, 1896); Timmermann 1961a: 408, fig. 6.
Halipeurus (*Halipeurus*) *diversus* (Kellogg, 1896); Edwards, 1961: 142, figs 3f–7f.
Halipeurus sp.; Clay 1964a: 231.
Halipeurus sp.; Gressitt 1964: 538.
Halipeurus (*Halipeurus*) *diversus* Timmermann, 1965: 142, fig. 83.
Halipeurus diversus hanáki [sic] Balát, 1958; Timmermann 1965: 142.
"*Halipeurus turtur*" Watson, 1967: 72 (not *Halipeurus turtur* Edwards, 1961).
"*Halipeurus turtur*" Gressitt, 1970: 327 (not *Halipeurus turtur* Edwards, 1961).
Halipeurus (*Halipeurus*) *diversus* (Kellogg, 1896); Wise 1977: 60.
Halipeurus diversus (Kellogg, 1896); Horning *et al.* 1980: 5, 10.
Halipeurus (*Halipeurus*) *diversus* (Kellogg, 1896); Pilgrim & Palma 1982: 12.
Halipeurus (*Halipeurus*) *diversus* (Kellogg, 1896); Palma & Horning 2002: 8, 15, 20.
Halipeurus (*H.*) *diversus* (Kellogg, 1896); Palma 2010: 408.
Halipeurus diversus (Kellogg, 1896); Palma 2011b: 32.

Syntypes ♂♀ in USNM and EMEC (Emerson 1961b: 251; Palma 2011b: 32).

Type host: "*Puffinus opisthomelas*", in error (see Hopkins & Clay 1952: 163).

New Zealand hosts: *Puffinus griseus* (J.F. Gmelin, 1789); *Puffinus tenuirostris* (Temminck, 1835); *Puffinus puffinus* (Brünnich, 1764).

Other hosts: *Puffinus yelkouan* (Acerbi, 1827); *Puffinus mauretanicus* Lowe, 1921; *Puffinus assimilis baroli* (Bonaparte, 1857); *Puffinus assimilis boydi* Mathews, 1912.

New Zealand localities: AK, BP, WI, WA, WN, NC, MC, SC, WD, CO, DN, CH, SI, SN, AN, Macquarie Island.

Geographic distribution: Atlantic and Pacific Oceans.

New Zealand references: Edwards (1961); Clay (1964a); Gressitt (1964); Watson (1967); Clay & Moreby (1970: 218); Gressitt (1970); Wise (1977); Horning *et al.* (1980); Pilgrim & Palma (1982); Tennyson (1986: 60); Murray *et al.*

(1990: 1371); Palma (1996b: 184); Palma (1999: 384); Palma & Horning (2002); Page *et al.* (2004: 643, 648); Palma (2010); Hammer *et al*. (2010: 1113); Palma (2011b).

Other significant references: Timmermann (1961a; 1965); Fowler & Miller (1984: 24, 27, fig. 1); Fowler & Shaw (1990: 15); Green & Palma (1991: 14, 27); Price *et al.* (2003: 187); Palma & Jensen (2005: 56, 60); Palma & Peck (2013: 38).

Remarks: *Halipeurus diversus* is is a "wing" louse with a range of variable dimensions, a feature congruent with having a large number of host species. However, size differences only do not justify subdividing it into more than one taxon. The record of "*Halipeurus turtur* Edwards, 1961" in Watson (1967: 72), repeated in subsequent publications, is a misidentification of *H. diversus* (see Palma 1999: 384, note F).

Halipeurus falsus pacificus Edwards, 1961

Halipeurus (*Halipeurus*) *falsus pacificus* Edwards, 1961: 147, figs 3J2–7J2.
Halipeurus (*Halipeurus*) *falsus pacificus* Edwards, 1961: Timmermann 1965: 144, fig. 85.
Halipeurus falsus pacificus Edwards, 1961; Pilgrim 1970: 75.
Halipeurus falsus pacificus Edwards, 1961; Horning *et al.* 1980: 6, 11.
Halipeurus (*Halipeurus*) *falsus pacificus* Edwards, 1961; Pilgrim & Palma 1982: 13.
Halipeurus (*Halipeurus*) *falsus pacificus* Edwards, 1961; Murray *et al.* 1990: 1372.
Halipeurus (*H.*) *falsus pacificus* Edwards, 1961; Palma 2010: 408.

Holotype ♂ in AMNH (Palma 1996b: 185).

Type host: *Pelecanoides urinatrix* (J.F. Gmelin, 1789).

New Zealand hosts: *Pelecanoides urinatrix urinatrix* (J.F. Gmelin, 1789); *Pelecanoides urinatrix chathamensis* Murphy & Harper, 1916; *Pelecanoides urinatrix exsul* Salvin, 1896.

Other hosts: *Pelecanoides urinatrix dacunhae* Nicholl, 1906; *Pelecanoides magellani* (Mathews, 1912).

New Zealand localities: ND, CL, BP, GB, TO, WI, WA, WN, NC, MC, SC, WD, CO, DN, FD, CH, SN, AN.

Geographic distribution: South Atlantic and Pacific Oceans.

New Zealand references: Edwards (1961: 147); Pilgrim (1970); Wise (1977: 60); Horning *et al.* (1980); Pilgrim & Palma (1982); Murray *et al.* (1990); Marris (2000: 187); Palma (2010).

Other significant references: Timmermann (1965); Green & Palma (1991: 14, 28); Furness & Palma (1992: 35, 41); Palma (1996b: 185); Price *et al*. (2003: 187); Page *et al.* (2004: 638, 648); Hänel & Palma (2007: 112, 124, 131).

Remarks: Both subspecies of *Halipeurus falsus* are "wing" lice and the smallest members of the genus, exclusively parasitic on diving petrels (Family Pelecanoididae).

Halipeurus gravis priapulus Timmermann, 1961

Halipeurus priapulus Timmermann, 1961a: 406, fig. 3.
Halipeurus (*Halipeurus*) *micariproctus* Edwards, 1961: 148, figs 3l–7l.
? *Halipeurus priapulus* Timmermann, 1961; Timmermann 1965: 141 (as a questionable junior synonym of *Halipeurus* (*H.*) *gravis* Timmermann, 1961a).
"*Halipeurus* (*Halipeurus*) *gravis*" Wise, 1977: 60 (not *Halipeurus gravis gravis* Timmermann, 1961a).
Halipeurus (*Halipeurus*) *gravis priapulus* Timmermann, 1961; Pilgrim & Palma 1982: 11.
Halipeurus (*Halipeurus*) *gravis priapulus* Timmermann, 1961; Murray *et al*. 1990: 1371.
Halipeurus (*Halipeurus*) *priapulus* Timmermann, 1961; Price *et al.* 2003: 188.
Halipeurus (*H.*) *gravis priapulus* Timmermann, 1961; Palma 2010: 408.

Holotype ♂ in NHML. Holotype ♂ of *Halipeurus* (*Halipeurus*) *micariproctus* in AMNH (Palma 1996b: 185).

Type host: *Puffinus carneipes* Gould, 1844.

New Zealand host: *Puffinus carneipes* Gould, 1844.

Other host: *Puffinus creatopus* Coues, 1864.

New Zealand localities: ND, AK, CL, BP, WN.

Geographic distribution: Pacific Ocean.

New Zealand references: Edwards (1961); Wise (1977); Pilgrim & Palma (1982); Murray *et al*. (1990); Page *et al.* (2004: 648, 650); Palma (2010).

Other significant references: Timmermann (1965); Palma (1996b: 185); Price *et al.* (2003); Hammer *et al*. (2010: 1113).

Remarks: Contrary to Price *et al*. (2003: 188), I regard this louse taxon as a subspecies. The two subspecies of *Halipeurus gravis* are "wing" lice and morphologically extremely similar: females are identical, and males only differ in the shape of the mesosomal sclerite of the genitalia ("Hakensklerit" in Timmermann 1961a: figs 2–3).

***Halipeurus kermadecensis* (Johnston & Harrison, 1912)**

Lipeurus kermadecensis Johnston & Harrison, 1912: 365, fig. 1.
Lipeurus diversus var. *excavatus* Johnston & Harrison, 1912: 366, fig. 2.
Esthiopterum excavatum Johnston & Harrison, 1912 [sic]; Harrison 1916: 133 (as junior synonym of *Esthiopterum kermadecense* Johnston & Harrison, 1912 [sic]).
Esthiopterum kermadecense Johnston & Harrison, 1912 [sic]; Harrison 1916: 136.
Halipeurus kermadecense [sic] (Johnston & Harrison, 1912); Thompson 1938d: 488.
Halipeurus kermadecensis (Johnston & Harrison, 1912); Hopkins & Clay 1952: 164.
Halipeurus kermadecensis (Johnston & Harrison, 1912); Timmermann 1960: 327, fig. 8.
Halipeurus (*Halipeurus*) *kermadecense* [sic] (Johnston & Harrison, 1912); Edwards, 1961: 150, figs 3q–7q.
Halipeurus (*Halipeurus*) *kermadecensis* (Johnston & Harrison, 1912); Timmermann 1965: 137, fig. 87.
Halipeurus kermadecensis (Johnston & Harrison, 1912); Watt 1971: 236, 242, fig. 5.
Halipeurus (*Halipeurus*) *kermadecensis* (Johnston & Harrison, 1912) *s. l.*; Pilgrim & Palma 1982: 8.
Halipeurus (*Halipeurus*) *kermadecensis* (Johnston & Harrison, 1912); Pilgrim & Palma 1982: 9.
Halipeurus (*H.*) *kermadecensis* (Johnston & Harrison, 1912); Palma 2010: 408.
Halipeurus kermadecensis (Johnston & Harrison, 1912); Palma 2011b: 29.

Holotype nymph in MONZ (Palma *et al.* 1989: 45). Syntypes ♂♀ of *Lipeurus diversus excavatus* in MONZ (Palma *et al.* 1989: 45).

Type host: *Pterodroma neglecta neglecta* (Schlegel, 1863).

New Zealand hosts: *Pterodroma externa* (Salvin, 1875); *Pterodroma neglecta neglecta* (Schlegel, 1863).

Other hosts: *Pterodroma neglecta juana* Mathews, 1935; *Pterodroma arminjoniana arminjoniana* (Giglioli & Salvadori, 1869); *Pterodroma sandwichensis* (Ridgway, 1884).

New Zealand localities: ND, AK, CL, KE.

Geographic distribution: Atlantic and Pacific Oceans.

New Zealand references: Johnston & Harrison (1912); Thompson (1938d); Thompson (1939: 123); Pilgrim (1970: 75); Watt (1971); Wise (1977: 60); Pilgrim & Palma (1982); Palma *et al.* (1989: 45); Murray *et al.* (1990: 1369); Palma (2001: 67, fig. 8); Palma (2010); Palma (2011b).

Other significant references: Thompson (1938d); Timmermann (1960; 1965); Edwards (1961); Timmermann (1965); Price *et al*. (2003: 187); Hammer *et al*. (2010: 1113).

Remarks: *Halipeurus kermadecensis* is a "wing" louse parasitic on several gadfly petrel species. The main New Zealand population of *H. kermadecensis* is in the Kermadec Islands, where the type host breeds. Records of *H. kermadecensis* from *Pterodroma externa* were qualified as *sensu lato* by Pilgrim & Palma (1982: 8); however, my examination of more samples from that and three other host species (see above) showed that such qualification is not warranted.

***Halipeurus leucophryna* Timmermann, 1960**

Halipeurus leucophryna Timmermann, 1960: 327, fig. 10.
Halipeurus (*Halipeurus*) *accentor* Edwards, 1961: 151.
Halipeurus (*Halipeurus*) *leucophryna* Timmermann, 1960; Timmermann 1965: 148, fig. 89.
Halipeurus (*Halipeurus*) *leucophryna* Timmermann, 1960; Pilgrim & Palma 1982: 9.
Halipeurus (*Halipeurus*) *leucophryna* Timmermann, 1960; Murray *et al*. 1990: 1370.
Halipeurus (*H.*) *leucophryna* Timmermann, 1960; Palma 2010: 408.

Holotype ♂ in NHML.

Type host: *Pterodroma longirostris* (Stejneger, 1888).

New Zealand hosts: *Pterodroma longirostris* (Stejneger, 1888); *Pterodroma pycrofti* Falla, 1933.

Other host: *Pterodroma defilippiana* (Giglioli & Salvadori, 1869).

New Zealand localities: ND, CL, AK, BP.

Geographic distribution: Pacific Ocean.

New Zealand references: Pilgrim & Palma (1982); Murray *et al*. (1990); Palma (2010).

Other significant references: Timmermann (1965); Ward & Downey (1973: 394); Price *et al*. (2003: 187); Palma (2011b: 6).

Remarks: *Halipeurus leucophryna* is a "wing" louse parasitic on several gadfly petrel species. Records of "*Halipeurus leucophryna*" in Watt (1971: 236) and "*Halipeurus* (*Halipeurus*) *leucophryna*" in Wise (1977: 61) are misidentifications. See above under *Halipeurus confusus* Palma, 2011.

Halipeurus marquesanus (Ferris, 1932)

Esthiopterum marquesanum Ferris, 1932a: 62, figs 14a,b, 15a,b,c,d,e,f.
Halipeurus marquesanus (Ferris, 1932); Thompson 1936: 41.
Halipeurus marquesanus (Ferris, 1932); Hopkins & Clay 1952: 164.
Halipeurus marquesanus (Ferris, 1932); Timmermann 1960: 329, fig. 6a.
Halipeurus (*Halipeurus*) *marquesanus* (Ferris, 1932); Edwards 1961: 152, figs 3t–7t.
Halipeurus (*Halipeurus*) *marquesanus* (Ferris, 1932); Timmermann 1965: 151, fig. 77b.
Halipeurus (*Halipeurus*) *marquesanus* (Ferris, 1932); Palma 1999: 376.
Halipeurus (*H.*) *marquesanus* (Ferris, 1932); Palma 2010: 408.

Holotype ♀ in EMEC (Peter T. Oboyski pers. comm. October 2014).

Type host: *Pseudobulweria rostrata* (Peale, 1848).

New Zealand host: *Pseudobulweria rostrata* (Peale, 1848).

Other hosts: None.

New Zealand locality: ND.

Geographic distribution: South Pacific Ocean.

New Zealand references: Palma (1999); Palma (2010).

Other significant references: Thompson (1936); Timmermann (1960; 1965); Edwards (1961); Timmermann (1965); Price *et al*. (2003: 187).

Remarks: *Halipeurus marquesanus* is a "wing" louse exclusively parasitic on the Tahiti petrel. *Pseudobulweria rostrata* is a rare vagrant to New Zealand (Checklist Committee 2010: 110), with a single record of *H. marquesanus* from this country.

Halipeurus mirabilis Thompson, 1940

Halipeurus mirabilis Thompson, 1940b: 499, text figs 1–5, pl. 10: figs 1–2.
Halipeurus (*Halipeurus*) *mirabilis* Thompson, 1940; Timmermann 1961a: 407, fig. 4.
Halipeurus (*Halipeurus*) *mirabilis* Thompson, 1940; Edwards 1961: 139, figs 3d–7d.
Halipeurus (*Halipeurus*) *mirabilis* Thompson, 1940; Timmermann 1965: 141, fig. 82.
Halipeurus mirabilis Thompson, 1940; Watt 1971: 236, 243.
Halipeurus (*Halipeurus*) *mirabilis* Thompson, 1940; Wise 1977: 61.
Halipeurus (*Halipeurus*) *mirabilis* Thompson, 1940; Pilgrim & Palma 1982: 11.
Halipeurus (*Halipeurus*) *mirabilis* Thompson, 1940; Murray *et al*. 1990: 1371.
Halipeurus (*H.*) *mirabilis* Thompson, 1940; Palma 2010: 408.

Syntypes ♂♀ in NHML (Vincent S. Smith pers. comm. July 2014).

Type host: *Puffinus pacificus chlororhynchus* Lesson, 1831.

New Zealand hosts: *Puffinus pacificus pacificus* (J.F. Gmelin, 1789); *Puffinus pacificus chlororhynchus* Lesson, 1831.

Other hosts: None.

New Zealand localities: ND, WI, WN, KE.

Geographic distribution: Indian and Pacific Oceans.

New Zealand references: Edwards (1961); Watt (1971); Wise (1977); Pilgrim & Palma (1982); Murray *et al*. (1990); Paterson *et al*. (1999: 222); Palma (2010).

Other significant references: Timmermann (1961a; 1965); Amerson & Emerson (1971: 6, 23); Ward & Downey (1973: 394); Palma (1996b: 185); Price *et al*. (2003: 187).

Remarks: *Halipeurus mirabilis* is a "wing" louse parasitic on all subspecies of the wedge-tailed shearwater. Palma (1996b: 185) assumed incorrectly that there was a holotype designated by Thompson (1940b: 499), but the latter author failed to make such a designation. In his original description of *H. mirabilis*, Thompson (1940b: 499) only stated "♀ and ♂ types off the type host …" and then proceeded to designate 18 "paratypes", but without mentioning either a "holotype" or a single "type".

Halipeurus mundae Edwards, 1961

Halipeurus (*Halipeurus*) *mundae* Edwards, 1961: 149, figs 3n–7n.
Halipeurus (*Halipeurus*) *mundae* Edwards, 1961; Timmermann 1965: 146.
Halipeurus (*Halipeurus*) *mundae* Edwards, 1961; Pilgrim & Palma 1982: 12.
Halipeurus (*Halipeurus*) *mundae* Edwards, 1961; Murray *et al*. 1990: 1371.
Halipeurus (*Halipeurus*) *mundae* Edwards, 1961; Marris 2000: 187.
Halipeurus (*H.*) *mundae* Edwards, 1961; Palma 2010: 408.

Holotype ♂ in AMNH.

Type host: *Puffinus elegans* Giglioli & Salvadori, 1869.

New Zealand hosts: *Puffinus assimilis haurakiensis* Fleming & Serventy, 1943; *Puffinus elegans* Giglioli & Salvadori, 1869.

Other hosts: None.

New Zealand localities: ND, AK, CL, BP, WD, CH, AN.

Geographic distribution: Southern Pacific, Atlantic and Indian Oceans.

New Zealand references: Pilgrim & Palma (1982); Murray *et al*. (1990); Marris (2000); Palma (2010).

Other significant references: Timmermann (1965); Furness & Palma (1992: 35, 39); Price *et al*. (2003: 187); Hänel & Palma (2007: 112, 124, 129).

Remarks: *Halipeurus mundae* is a "wing" louse parasitic on some of the smaller shearwater species. Both *H. mundae* and *H. placodus* (see below) are useful "diagnostic" species to confirm the identity of hosts, especially juveniles and beach-wrecked remains of specimens belonging to the *Puffinus assimilis* species complex (see Holdaway *et al*. 2001: 127).

Halipeurus noctivagus Timmermann, 1960

"*Lipeurus diversus* var. *major*" Kellogg & Kuwana, 1902: 477 (not *Lipeurus major* Piaget, 1880).
Halipeurus noctivagus Timmermann, 1960: 331, fig. 13, 16b.
Halipeurus (*Halipeurus*) *intermedius* Edwards, 1961: 151, figs 3s–7s.
Halipeurus (*Halipeurus*) *noctivagus* Timmermann, 1960; Timmermann 1965: 151, fig. 92.
Halipeurus (*Halipeurus*) *noctivagus* Timmermann, 1960; Wise 1977: 61.
Halipeurus (*Halipeurus*) *noctivagus* Timmermann, 1960; Pilgrim & Palma 1982: 8.
Halipeurus (*Halipeurus*) *noctivagus* Timmermann, 1960; Price *et al.* 2003: 188.
Halipeurus (*H.*) *noctivagus* Timmermann, 1960; Palma 2010: 408.
Halipeurus noctivagus Timmermann, 1960; Palma 2011b: 41, fig. 53.

Holotype ♂ in NHML.

Type host: *Pterodroma phaeopygia* (Salvin, 1876).

New Zealand host: *Pterodroma cervicalis* (Salvin, 1891).

Other host: *Pterodroma occulta* Imber & Tennyson, 2001.

New Zealand localities: AK, KE.

Geographic distribution: Pacific Ocean.

New Zealand references: Edwards (1961: 152); Wise (1977); Pilgrim & Palma (1982); Murray *et al.* (1990: 1370); Palma (2010: 408); Palma (2011b: 42).

Other significant references: Timmermann (1965); Imber & Tennyson (2001: 125); Price *et al.* (2003); Palma & Peck (2013: 38).

Remarks: *Halipeurus noctivagus* is a "wing" louse parasitic on several gadfly petrel species. There is now sufficient evidence, both genetic (Browne *et al*. 1997) and parasitological (Palma 2011b: 30), to treat *Pterodroma phaeopygia*—the type host of *H. noctivagus*—as a full species.

***Halipeurus pelagicus* (Denny, 1842)**

Philopterus (*Lipeurus*) *pelagicus* Denny, 1842: 58, 173, pl. 14: fig. 2.
Lipeurus subangusticeps Piaget, 1880: 308, pl. 25: fig. 5.
Lipeurus languidus Kellogg & Kuwana, 1902: 475, pl. 29: fig. 8.
Lipeurus exiguus Kellogg & Kuwana, 1902: 479, pl. 30: fig. 2.
Esthiopterum pelagicum Denny, 1842 [sic]; Harrison 1916: 139.
Synnautes pelagicus (Denny, 1842); Thompson 1939: 209.
Halipeurus languidus (Kellogg & Kuwana, 1902); Hopkins & Clay 1952: 164.
Halipeurus pelagicus (Denny, 1842); Hopkins & Clay 1952: 164.
Halipeurus subangusticeps (Piaget, 1880); Hopkins & Clay 1952: 164.
Halipeurus pelagicus (Denny, 1842); Timmermann 1961a: 413, figs 9–10. In part.
Halipeurus (*Synnautes*) *pelagicus* (Denny, 1842); Edwards, 1961: 155, figs 2b, 3v–7v. In part.
Halipeurus (*Synnautes*) *pelagicus* (Denny, 1842); Timmermann 1965: 153, fig. 94, pl. 7: figs 3–4.
Halipeurus (*Synnautes*) *pelagicus* (Denny, 1842) *s. l.*; Pilgrim & Palma 1982: 13. In part.
Halipeurus (*Synnautes*) *pelagicus* (Denny, 1842); Murray *et al.* 1990: 1372. In part.
Halipeurus (*Synnautes*) *pelagicus* (Denny, 1842); Marris 2000: 187.
Halipeurus (*Synnautes*) *pelagicus* (Denny, 1842); Palma 2010: 408. In part.
Halipeurus pelagicus (Denny, 1842); Palma 2011b: 27, figs 7, 23, 25, 33, 48.

Lectotype ♀ in NHML (Palma 2011b: 29).

Type host: *Hydrobates pelagicus* (Linnaeus, 1758).

New Zealand hosts: *Fregetta grallaria* (Vieillot, 1817); *Fregetta tropica* (Gould, 1844); *Oceanodroma leucorhoa* (Vieillot, 1817).

Other hosts: *Oceanites oceanicus oceanicus* (Kuhl, 1820); *Oceanites gracilis gracilis* (Elliot, 1859); eight other species of *Oceanodroma* (see Edwards 1961: 156; Palma 2011b: 28).

New Zealand localities: ND, CL, KE, AN.

Geographic distribution: Cosmopolitan.

New Zealand references: Thompson (1939: 210); Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (1999: 378); Marris (2000); Palma (2010); Palma (2011b: 28).

Other significant references: Séguy (1953: 576, figs 36–37); Edwards (1961); Timmermann (1961a; 1965); Clay & Moreby (1967: 160, 169, fig. 87); Fowler *et al.* (1984: 126, figs 1–2); Benoit (1976: 234); Fowler & Miller (1984: 24, figs 1–2a); Fowler & Price (1987: 44); Fowler & Hodson (1988: 48); Forrester *et al.* (1995: 6); Palma (1996b: 186); Furness & Palma (1992: 35, 41); Price *et al.* (2003: 188); Page *et al.* (2004: 648, 650); Palma & Jensen (2005: 56, 60); Hänel & Palma (2007: 112, 124, 130); Hammer *et al*. (2010: 1113); Palma & Peck (2013: 39).

Remarks: *Halipeurus pelagicus* is a "wing" louse parasitic on many storm petrel species. *Halipeurus pelagicus* was placed in the subgenus *Synnautes* Thompson, 1936 in many publications, but Palma (2011b: 16) formally synonymised this subgenus under the genus *Halipeurus*.

***Halipeurus pelagodromae* Palma, 2011**

"*Lipeurus languidus*" Johnston & Harrison, 1912: 367 (not *Lipeurus languidus* Kellogg & Kuwana, 1902).
"*Lipeurus exiguus*" Johnston & Harrison, 1912: 367 (not *Lipeurus exiguus* Kellogg & Kuwana, 1902).
Halipeurus pelagicus (Denny, 1842); Timmermann 1961a: 413. In part.
Halipeurus (*Synnautes*) *pelagicus* (Denny, 1842); Edwards 1961: 155. In part.
"*Halipeurus pelagicus*" Watt, 1971: 236, 243 (not *Philopterus* (*Lipeurus*) *pelagicus* Denny, 1842).
"*Halipeurus* (*Synnautes*) *pelagicus*" Wise, 1977: 61 (not *Philopterus* (*Lipeurus*) *pelagicus* Denny, 1842).
Halipeurus (*Synnautes*) *pelagicus* (Denny, 1842) *s. l.*; Pilgrim & Palma 1982: 13. In part.
Halipeurus (*Synnautes*) *pelagicus* (Denny, 1842); Murray *et al.* 1990: 1372. In part.
"*H.* (*Synnautes*) *pelagicus*" Green & Palma, 1991: 14 (not *Philopterus* (*Lipeurus*) *pelagicus* Denny, 1842).
"*Halipeurus pelagicus*" Paterson *et al.*, 1999: 222 (not *Philopterus* (*Lipeurus*) *pelagicus* Denny, 1842).
Halipeurus (*Synnautes*) *pelagicus* (Denny, 1842); Palma 2010: 408. In part.
Halipeurus pelagodromae Palma, 2011b: 11, figs 6, 22, 24, 26–27, 32, 47, 63.

Holotype in MONZ.

Type host: *Pelagodroma marina maoriana* Mathews, 1912.

New Zealand hosts: *Pelagodroma marina maoriana* Mathews, 1912; *Pelagodroma marina dulciae* Mathews, 1912; *Pelagodroma albiclunis* Murphy & Irving, 1951.

Other hosts: *Pelagodroma marina marina* (Latham, 1790); *Pelagodroma marina hypoleuca* (Moquin-Tandon, 1841; *Pelagodroma marina eadesi* Bourne, 1953.

New Zealand localities: ND, CL, WA, KE, CH, AU.

Geographic distribution: Pacific and Atlantic Oceans.

New Zealand references: Johnston & Harrison (1912); Edwards (1961); Watt (1971); Wise (1977); Pilgrim & Palma (1982); Murray *et al.* (1990); Paterson *et al.* (1999); Palma (2010); Palma (2011b: 15).

Other significant references: Green & Palma (1991); Furness & Palma (1992: 35, 42); Palma (1996b: 186); Page *et al.* (2004: 648, 650); Hänel & Palma (2007: 112, 124, 130); Hammer *et al*. (2010: 1113); Palma & Peck (2013: 40).

Remarks: *Halipeurus pelagodromae* is a "wing" louse parasitic on all the subspecies of the white-faced storm petrel. This louse was recorded as "*Halipeurus* (*Synnautes*) *pelagicus*", or "*Halipeurus* (*Synnautes*) *pelagicus s. l.*", or "*Halipeurus pelagicus*" in papers published until 2010.

Halipeurus placodus Edwards, 1961

Halipeurus (*Halipeurus*) *placodus* Edwards, 1961: 141, figs 3e–7e.
Halipeurus (*Halipeurus*) *placodus* Edwards, 1961; Timmermann 1965: 144.
Halipeurus placodus Edwards, 1961; Watt, 1971: 236, 243.
Halipeurus (*Halipeurus*) *placodus* Edwards, 1961; Wise, 1977: 61
Halipeurus (*Halipeurus*) *placodus* Edwards, 1961; Pilgrim & Palma 1982: 12.
Halipeurus (*Halipeurus*) *placodus* Edwards, 1961; Palma 1999: 376, 383, note 2.
Halipeurus (*H.*) *placodus* Edwards, 1961; Palma 2010: 408

Holotype ♂ in MCZC (Palma 1996b: 186).

Type host: *Puffinus assimilis tunneyi* Mathews, 1912.

New Zealand hosts: *Puffinus newelli* Henshaw, 1900; *Puffinus assimilis kermadecensis* Murphy, 1927.

Other hosts: *Puffinus auricularis* Townsend, 1890; *Puffinus lherminieri gunax* Mathews, 1930; *Puffinus assimilis assimilis* Gould, 1838.

New Zealand localities: ND, AK, WI, WA, WN, KE.

Geographic distribution: Pacific Ocean.

New Zealand references: Edwards (1961); Watt (1971); Wise (1977); Pilgrim & Palma (1982); Murray *et al*. (1990: 1371); Palma (1999); Palma (2010).

Other significant references: Timmermann (1965); Palma (1996b: 186); Price *et al*. (2003: 188).

Remarks: *Halipeurus placodus* is a "wing" louse parasitic on several species of small shearwaters. Both *H. placodus* and *H. mundae* (see above) are useful species to confirm the identity of the hosts, especially juveniles and beach-wrecked remains of specimens belonging to the *Puffinus assimilis* species complex (see Holdaway *et al*. 2001: 127).

Halipeurus pricei Palma, 2011

Halipeurus (*Halipeurus*) sp.; Pilgrim & Palma 1982: 9.
Halipeurus (*Halipeurus*) sp.; Murray *et al.* 1990: 1370.
Halipeurus sp.; Palma 2010: 408.
Halipeurus pricei Palma, 2011b: 7, figs 4, 13–15, 29, 44, 65.

Holotype ♂ in MONZ.

Type host: *Pterodroma brevipes brevipes* (Peale, 1848).

New Zealand host: *Pterodroma leucoptera caledonica* Imber & Jenkins, 1981.

Other hosts: *Pterodroma brevipes magnificens* Bretagnolle & Shirihai, 2010; *Pterodroma leucoptera leucoptera* (Gould, 1844).

New Zealand localities: WI, WN.

Geographic distribution: Pacific Ocean.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (2010); Palma (2011b: 9).

Other significant references: None.

Remarks: *Halipeurus pricei* is a "wing" louse parasitic on two gadfly petrel species. Pilgrim & Palma (1982: 9) listed "*Halipeurus* (*Halipeurus*) sp." (now = *Halipeurus pricei*) under the host "*Pterodroma leucoptera* subspecies", a petrel now known as *Pterodroma leucoptera caledonica* (see Palma & Tennyson 2005).

***Halipeurus procellariae* (J.C. Fabricius, 1775)**

Pediculus procellariae J.C. Fabricius, 1775: 808.
Ricinus procellariae (J.C. Fabricius, 1775); Latreille 1804: 107.
Esthiopterum procellariae J.C. Fabricius, 1775 [sic]; Harrison 1916: 140 (as "Not recognisable").
"*Halipeurus angusticeps*" Harrison, 1937: 31 (not *Lipeurus angusticeps* Piaget, 1880).
Halipeurus procellariae (J.C. Fabricius, 1775); Hopkins & Clay 1952: 164.
Halipeurus procellariae (J.C. Fabricius, 1775); Timmermann 1960: 325, figs 1–2, 4a, 5, 7.
Halipeurus (*Halipeurus*) *procellariae* (J.C. Fabricius, 1775); Edwards 1961: 149, figs 3p–7p.
Halipeurus (*Halipeurus*) *procellariae* (J.C. Fabricius, 1775); Timmermann 1965: 147, figs 75, 77a, 78a, 86, pl. 7: figs 1–2.
Halipeurus procellariae (J.C. Fabricius, 1775); Clay & Moreby 1970: 218.
"*Halipeurus* (*Halipeurus*) *angusticeps*" Wise, 1977: 60 (not *Lipeurus angusticeps* Piaget, 1880).
Halipeurus (*Halipeurus*) *procellariae* (J.C. Fabricius, 1775); Wise 1977: 61.
Halipeurus sp.; Lowry *et al.* 1978: 138.
Halipeurus (*Halipeurus*) *procellariae* (J.C. Fabricius, 1775); Pilgrim & Palma 1982: 8, 30.
Halipeurus (*Halipeurus*) *procellariae* (J.C. Fabricius, 1775) *s. l.*; Pilgrim & Palma 1982: 8.
Halipeurus (*Halipeurus*) *procellariae* (J.C. Fabricius, 1775); Marris 2000: 187.
Halipeurus (*H.*) *procellariae* (J.C. Fabricius, 1775); Palma 2010: 408.

Type/s lost. A neotype has not been designated (see Clay & Hopkins 1951: 34 and Edwards, 1961: 150).

Type host: "Brasiliae procellaris" = *Pterodroma macroptera macroptera* (Smith, 1840) (see Clay & Hopkins 1951: 34; Edwards, 1961: 150).

New Zealand hosts: *Pterodroma macroptera gouldi* (Hutton, 1869); *Pterodroma lessonii* (Garnot, 1826); *Pterodroma magentae* (Giglioli & Salvadori, 1869); *Pterodroma mollis* (Gould, 1844).

Other host: *Pterodroma incerta* (Schlegel, 1863).

New Zealand localities: ND, AK, CL, BP, WO, TK, WI, WN, NC, MC, SC, WD, CH, AN, Macquarie Island.

Geographic distribution: Atlantic, Indian and Pacific Oceans.

New Zealand references: Harrison (1937); Edwards (1961: 150); Watson (1967: 72); Clay & Moreby (1970); Gressitt (1970: 327); Pilgrim (1974: 1034, fig. 3); Wise (1977); Lowry *et al.* (1978); Pilgrim & Palma (1982); Murray *et al*. (1990: 1369); Marris (2000); Palma & Imber (2000: 229); Palma & Horning (2002: 8, 16); Page *et al.* (2004: 643, 648); Palma (2010).

Other significant references: Clay & Hopkins (1951: 34); Timmermann (1960; 1965); Green & Palma (1991: 14, 26); Palma (1996b: 186); Furness & Palma (1992: 35, 40); Price *et al*. (2003: 188); Hänel & Palma (2007: 113, 124, 130); Hammer *et al*. (2010: 1113).

Remarks: *Halipeurus procellariae* is a "wing" louse parasitic on several species of large gadfly petrels. Pilgrim & Palma (1982: 8) regarded the population of *Halipeurus procellariae* from *Pterodroma mollis* as somewhat different from that of the type host, and qualified it as *sensu lato*; however, my examination of more samples of this species shows that making such difference is not warranted. Harrison's (1937: 31) record of "*Halipeurus angusticeps*" from Macquarie Island —repeated by Wise (1977: 60)—is a misidentification of *H. procellariae* (see Pilgrim & Palma 1982: 30, note 16).

***Halipeurus spadix spadix* Timmermann, 1961**

Halipeurus spadix Timmermann, 1961a: 409, fig. 7.
Halipeurus intestatus Timmermann, 1961a: 410.
Halipeurus (*Halipeurus*) *taxosetus* Edwards, 1961: 145, figs 2a, 3i–7i.
Halipeurus (*Halipeurus*) *spadix* Timmermann, 1961; Timmermann 1965: 142, fig. 84.
Halipeurus spadex [sic] Timmermann, 1961; Pilgrim 1970: 74.
Halipeurus (*Halipeurus*) *spadix* Timmermann, 1961; Wise 1977: 61.
Halipeurus (*Halipeurus*) *spadix* Timmermann, 1961; Pilgrim & Palma 1982: 12. In part.

Halipeurus (*Halipeurus*) *spadix* Timmermann, 1961; Murray *et al.* 1990: 1371. In part.
Halipeurus (*H.*) *spadix* Timmermann, 1961; Palma 2010: 408. In part.
Halipeurus spadix spadix Timmermann, 1961; Palma 2011b: 22.

Holotype ♂ in NHML.

Type host: *Puffinus opisthomelas* Coues, 1864.

New Zealand host: *Puffinus huttoni* Mathews, 1912.

Other hosts: *Puffinus nativitatis* Streets, 1877; *Puffinus lherminieri lherminieri* Lesson, 1839; *Puffinus lherminieri bannermani* Mathews & Iredale, 1915.

New Zealand localities: AK, WN, KA, NC, MC, SC.

Geographic distribution: Pacific and Atlantic Oceans.

New Zealand references: Pilgrim (1970: 75); Wise (1977); Pilgrim & Palma (1982); Murray *et al.* (1990); Page *et al.* (2004: 643, 648); Galloway (2005: 16); Palma (2010); Palma (2011b).

Other significant references: Edwards (1961); Timmermann (1965); Amerson & Emerson (1971: 8, 24); Ward & Downey (1973: 394); Palma (1996b: 186); Price *et al*. (2003: 188); Hammer *et al*. (2010: 1113).

Remarks: *Halipeurus spadix spadix* is a "wing" louse parasitic on several shearwater species. All New Zealand references, except for Palma (2011b), refer to this taxon as "*Halipeurus* (*Halipeurus*) *spadix* Timmermann, 1961".

Halipeurus spadix subclavus Timmermann, 1961

Halipeurus subclavus Timmermann, 1961a: 411.
Halipeurus (*Halipeurus*) *subclavus* Timmermann, 1961; Timmermann 1965: 144.
Halipeurus (*Halipeurus*) *spadix* Timmermann, 1961; Pilgrim & Palma 1982: 12. In part.
Halipeurus (*Halipeurus*) *spadix* Timmermann, 1961; Murray *et al.* 1990: 1371. In part.
"*Halipeurus* (*Halipeurus*) *spadix*" Green & Palma 1991: 14, 27 (not *Halipeurus spadix* Timmermann, 1961).
Halipeurus (*Halipeurus*) *subclavus* Timmermann, 1961; Price *et al*. 2003: 188.
Halipeurus (*H.*) *spadix* Timmermann, 1961; Palma 2010: 408. In part.
Halipeurus spadix subclavus Timmermann, 1961; Palma 2011b: 23, figs 9, 30, 45, 64, 66–67.

Holotype ♂ in NMHL.

Type host: *Puffinus lherminieri* (?*persicus* Hume, 1873).

New Zealand host: *Puffinus gavia* (J.R. Forster, 1844).

Other hosts: *Puffinus lherminieri bailloni* (Bonaparte, 1857); *Puffinus lherminieri nicolae* Jouanin, 1971.

New Zealand localities: CL, BP, GB, WN, SD, MB, NN.

Geographic distribution: Indian Ocean and Australasia.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (2010); Palma (2011b).

Other significant references: Green & Palma (1991); Timmermann (1965); Price *et al*. (2003).

Remarks: *Halipeurus spadix subclavus* is a "wing" louse parasitic on several shearwater species. All New Zealand references, except for Palma (2011b), refer to this taxon as "*Halipeurus* (*Halipeurus*) *spadix* Timmermann, 1961".

Halipeurus theresae Timmermann, 1969

Halipeurus theresae Timmermann, 1969b: 249, figs 4–5.
"*Halipeurus leucophryna*" Ward & Downey, 1973: 394 (not *Halipeurus leucophryna* Timmermann, 1960).
Halipeurus (*Halipeurus*) *theresae* Timmermann, 1969; Pilgrim & Palma 1982: 9.
Halipeurus (*Halipeurus*) *theresae* Timmermann, 1969; Palma 1999: 378.
Halipeurus (*H.*) *theresae* Timmermann, 1969; Palma 2010: 408.

Holotype ♂ in BPBM (Tenorio 1979: 13).

Type host: *Pterodroma hypoleuca* (Salvin, 1888).

New Zealand hosts: *Pterodroma magentae* (Giglioli & Salvadori, 1869); *Pterodroma axillaris* (Salvin, 1893).

Other hosts: *Pterodroma hasitata hasitata* (Kuhl, 1820); *Pterodroma hasitata caribbaea* Carte, 1866; *Pterodroma feae* (Salvadori, 1899); *Pterodroma deserta* Mathews, 1934.

New Zealand locality: CH.

Geographic distribution: Atlantic and Pacific Oceans.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990: 1370); Palma (1999); Palma & Imber (2000: 230); Palma (2010).

Other significant references: Tenorio (1979: 13); Zonfrillo (1993: 327); Monteiro & Furness (1995: 10); Forrester *et al.* (1995: 5); Price *et al.* (2003: 188); Page *et al.* (2004: 643, 648); Boieiro *et al.* (2008: 268, 297); Hammer *et al*. (2010: 1113); Palma (2011b: 16).

Remarks: *Halipeurus theresae* is a "wing" louse parasitic on many gadfly petrels. The host given above as *Pterodroma deserta* has been variously referred to as "*Pterodroma feae*" (e.g. Monteiro & Furness 1995, from the Azores Islands) or as "*Pterodroma feae deserta*" (e.g. Zonfrillo 1993, from the Madeira Archipelago). However, the host named here as *Pterodroma feae* is from the Cape Verde Islands, and represents a new host record and locality record for *Halipeurus theresae* (voucher specimens in MONZ).

I have examined 4 males and 6 females of *Halipeurus theresae* misidentified by Ward & Downey (1973: 394) as "*Halipeurus leucophryna*", and deposited in the USNM and BPBM.

Halipeurus thompsoni Edwards, 1961

Halipeurus (*Halipeurus*) *thompsoni* Edwards, 1961: 147, figs 3k–7k.
Halipeurus (*Halipeurus*) *thompsoni* Edwards, 1961; Timmermann 1965: 145.
Halipeurus thompsoni Edwards, 1961; Pilgrim 1970: 75.
Halipeurus (*Halipeurus*) *thompsoni* Edwards, 1961; Wise 1977: 61.
Halipeurus (*Halipeurus*) *thompsoni* Edwards, 1961; Pilgrim & Palma 1982: 12.
Halipeurus (*H.*) *thompsoni* Edwards, 1961; Palma 2010: 408.

Holotype ♂ in AMNH.

Type host: *Puffinus bulleri* Salvin, 1888.

New Zealand host: *Puffinus bulleri* Salvin, 1888.

Other hosts: None.

New Zealand localities: ND, AK, CL, BP, WI, WN, NC, MC, SC, CH.

Geographic distribution: Pacific Ocean.

New Zealand references: Pilgrim (1970); Wise (1977); Pilgrim & Palma (1982); Murray *et al*. (1990: 1371); Palma (2010).

Other significant references: Timmermann (1965); Palma (1996b: 186); Price *et al*. (2003: 188).

Remarks: *Halipeurus thompsoni* is a distinct "wing" louse species, exclusively parasitic on Buller's shearwater, a host endemic to New Zealand, but which ranges widely over the Pacific Ocean (Checklist Committee 2010: 114).

Halipeurus turtur Edwards, 1961

Halipeurus (*Halipeurus*) *turtur* Edwards, 1961: 149, figs 3o–7o.
Halipeurus (*Halipeurus*) *turtur* Edwards, 1961; Timmermann 1965: 149.
Halipeurus turtur Edwards, 1961; Pilgrim 1970: 75.
Halipeurus (*Halipeurus*) *turtur* Edwards, 1961; Wise 1977: 61.
Halipeurus (*Halipeurus*) *turtur* Edwards, 1961; Pilgrim & Palma 1982: 9, 30, note 15.
Halipeurus (*H.*) *turtur* Edwards, 1961; Palma 2010: 408.

Holotype ♂ in AMNH (Pilgrim 1970: 75).

Type host: "*Pachyptila turtur*", in error (see Palma & Horning 2002: 20, note 4).

New Zealand host: *Pterodroma cookii* (G.R. Gray, 1843).

Other hosts: None.

New Zealand localities: ND, CL, AK, KA, SI.

Geographic distribution: Pacific Ocean.

New Zealand references: Pilgrim (1970); Wise (1977); Pilgrim & Palma (1982); Murray *et al*. (1990: 1370); Palma (1999: 384); Page *et al.* (2004: 643, 648); Palma (2010).

Other significant references: Clay & Moreby (1967: 160, fig. 148); Timmermann (1965); Price *et al*. (2003: 188); Hammer *et al*. (2010: 1113).

Remarks: *Halipeurus turtur* is a "wing" louse exclusively parasitic on Cook's petrel, a host endemic to New Zealand, but which ranges widely over the Pacific Ocean (Checklist Committee 2010: 96).

The record of "*Halipeurus turtur* Edwards, 1961" in Watson (1967: 72) —repeated in subsequent publications— is a misidentification of *H. diversus* (see Palma (1999: 384, note F). Furthermore, a record of "*Halipeurus turtur* Edwards, 1961" in Emerson (1971: 360) is a misidentification of *Naubates prioni* (Enderlein, 1908) (see Palma & Pilgrim 2002: 42).

Genus *Harrisoniella* Bedford, 1929

Harrisoniella Bedford, 1929. *15th Annual Rep. Director Veterinary Services*: 529. Type species: *Lipeurus ferox* Giebel, 1867 = *Harrisoniella ferox* (Giebel, 1867) (by subsequent designation).

Diomedicola Kéler, 1957b. *Beitr. zur Entomol. 7*(3/4): 496. Type species: *Lipeurus ferox* Giebel, 1867 = *Harrisoniella ferox* (Giebel, 1867) (by original designation).

Harrisoniella ferox (Giebel, 1867)

Figs 113–114

Lipeurus ferox Giebel, 1867: 195.

Esthiopterum ferox Giebel, 1867 [sic]; Harrison 1916: 134.

Perineus ferox (Giebel, 1867); Harrison 1937: 29.

Harrisoniella ferox (Giebel, 1867); Hopkins & Clay 1952; 165.

Diomedicola ferox (Giebel, 1867); Kéler 1957b: 502, figs 1a, 4, 8, 9.

Diomedicola irroratae Kéler, 1957b: 508, figs 3c, 10c.

Harrisoniella chilensis Carriker, 1964: 6, figs 4–7, 7a.

Harrisoniella ferox (Giebel, 1867); Timmermann 1965: 94, figs 27, 28a.

Harrisoniella irroratae (Kéler, 1957); Timmermann 1965: 95, figs 29c, 30c.

Harrisoniella ferox (Giebel, 1867); Pilgrim & Palma 1982: 6.

Harrisoniella ferox (Giebel, 1867); Palma & Pilgrim 1984: 149, figs 1–3, 7, 11, 15, 23.

Harrisoniella ferox (Giebel, 1867); Murray *et al.* 1990: 1368–1369.

Harrisoniella ferox (Giebel, 1867); Palma 2010: 408.

Neotype ♂ in SAIM (Palma & Pilgrim 1984: 150).

Type host: *Thalassarche melanophris* (Temminck, 1828).

New Zealand hosts: *Thalassarche melanophris* (Temminck, 1828); *Thalassarche impavida* Mathews, 1912; *Thalassarche bulleri bulleri* (Rothschild, 1893); *Thalassarche bulleri platei* (Reichenow, 1898); *Thalassarche cauta* (Gould, 1841); *Thalassarche cauta steadi* Falla, 1933; *Thalassarche eremita* Murphy, 1930; *Thalassarche salvini* (Rothschild, 1893).

Other hosts: *Thalassarche chlororhynchos* (J.F. Gmelin, 1789); *Phoebastria irrorata* (Salvin, 1883).

New Zealand localities: BP, WO, HB, WI, WN, KA, NC, MC, SC, WD, CH, SI, BO, AU, CA.

Geographic distribution: Southern Hemisphere.

New Zealand references: Pilgrim & Palma (1982); Palma & Pilgrim (1984: 150); Murray *et al.* (1990); Palma (1999: 375); Palma (2010).

Other significant references: Kéler (1957b); Timmermann (1965); Green & Palma (1991: 15, 25); Palma (1996b: 187); Price *et al*. (2003: 188); Page *et al.* (2004: 642, 648); Hänel & Palma (2007: 113, 124, 129); Palma & Peck (2013: 40).

Remarks: *Harrisoniella ferox* is mostly found under the wings of small albatrosses. Palma & Pilgrim (1984: 149) included a complete synonymy for *H. ferox*, which was misidentified for many years due to lack of type material.

Harrisoniella hopkinsi Eichler, 1952

"*Philopterus diomedeae*" Dufour, 1835: 671, pl. 21: figs 1–2 (not *Pediculus diomedeae* J.C. Fabricius, 1775).

"*Lipeurus ferox*" Taschenberg, 1882: 145, pl. 5: figs 1, 1a (not *Lipeurus ferox* Giebel, 1867).

"*Lipeurus diomedeae*" Osborn in Howard, 1890: 189 (not *Pediculus diomedeae* J.C. Fabricius, 1775).

"*Lipeurus densus*" Waterston, 1914: 311 (not *Lipeurus densus* Kellogg, 1896).

"*Esthiopterum diomedeae*" Harrison, 1916: 133 (not *Pediculus diomedeae* J.C. Fabricius, 1775).

"*Perineus diomedeae*" Harrison, 1937: 29 (not *Pediculus diomedeae* J.C. Fabricius, 1775).
"*Harrisoniella diomedeae*" Thompson, 1938b: 5, pl. 1 (not *Pediculus diomedeae* J.C. Fabricius, 1775).
"? *Harrisioniella* [sic] *ferox*" Clay, 1940a: 298 (not *Lipeurus ferox* Giebel, 1867).
Harrisoniella hopkinsi Eichler, 1952a: 40, fig. 1.
Harrisoniella thompsoni Eichler, 1952a: 41, fig. 4.
Harrisoniella hopkinsi Eichler, 1952; Hopkins & Clay 1953: 438.
Harrisoniella thompsoni Eichler, 1952; Hopkins & Clay 1953: 438.
Diomedicola hopkinsi (Eichler, 1952); Kéler 1957b: 504, figs 1b, 3a,b, 7, 10b.
Harrisoniella hopkinsi Eichler, 1952; Timmermann 1965: 94, figs 28b, 29a,b, 30a,b, 31.
Harrisoniella sp.; Watson 1967: 72.
Harrisoniella hopkinsi Eichler, 1952; Wise 1977: 61.
Harrisoniella hopkinsi Eichler, 1952; Pilgrim & Palma 1982: 5.
Harrisoniella hopkinsi Eichler, 1952; Palma & Pilgrim 1984: 156, figs 5, 9, 13, 17, 21, 25, 27.
Harrisoniella hopkinsi Eichler, 1952; Palma 2001: 67, fig. 7.
Harrisoniella hopkinsi Eichler, 1952; Palma 2010: 408.

Holotype ♂ in ZMHU (Göllner-Scheiding 1973: 35). Holotype ♂ of *Harrisoniella thompsoni* in NHML (Palma & Pilgrim 1984: 156).

Type host: *Diomedea exulans* Linnaeus, 1758.

New Zealand hosts: *Diomedea exulans* Linnaeus, 1758; *Diomedea antipodensis antipodensis* Robertson & Warham, 1992; *Diomedea epomophora* Lesson, 1825; *Diomedea sanfordi* Murphy, 1917.

Other host: *Diomedea dabbenena* Mathews, 1929.

New Zealand localities: ND, HB, TK, WA, WN, SD, MB, KA, NC, MC, SC, WD, CO, DN, CH, AN, AU, CA, Macquarie Island.

Geographic distribution: Southern Hemisphere.

New Zealand references: Harrison (1937); Clay (1964a: 231); Gressitt (1964: 538); Watson (1967); Pilgrim (1974: 1035, fig. 4); Wise (1977); Pilgrim & Palma (1982); Palma & Pilgrim (1984); Murray *et al*. (1990: 1368); Marris (2000: 187); Palma (2001: 67, fig. 7); Palma & Horning (2002: 8, 15); Page *et al.* (2004: 642, 648); Palma (2010).

Other significant references: Thompson (1938b); Séguy (1944: 33, fig. 24); Séguy (1953: 595, figs 53–54); Kéler (1957b); Timmermann (1965; 1966: 86, figs 1c, 2b); Clay & Moreby (1967: 162, figs 84, 116, 126); Green & Palma (1991: 15, 25); Palma (1991c: 239); Palma (1996b: 187); Price *et al*. (2003: 188); Hänel & Palma (2007: 107, 113, 125, fig. 2a).

Remarks: *Harrisoniella hopkinsi* is mostly found under the wings of large albatrosses. Palma & Pilgrim (1984: 156) included a complete synonymy for *H. hopkinsi*, which was misidentified for 117 years, since Dufour (1835) until it was recognised as a different species by Eichler (1952a).

Genus *Ibidoecus* Cummings, 1916

Ibidoecus Cummings, 1916b. *Proc. Zool. Soc. London 1916*: 663. Type species: *Philopterus plataleae* Denny, 1842 = *Ibidoecus plataleae* (Denny, 1842) (by original designation).

Ibidoecus bisignatus (Nitzsch [*in* Giebel], 1866)

Docophorus bisignatus Nitzsch [*in* Giebel], 1866: 362.
Docophorus bisignatus Nitzsch [*in* Giebel], 1874 [sic]; Piaget 1885: 11, pl. 2: fig. 1.
Philopterus bisignatus Nitzsch [*in* Giebel], 1866 [sic]; Harrison 1916: 89.
Ibidoecus bisignatus (Nitzsch, 1866) [sic]; Cummings 1916b: 663.
Ibidoecus bisignatus (Nitzsch [*in* Giebel], 1866); Hopkins & Clay 1952: 176.
Ibidoecus bisignatus (Nitzsch, 1866) [sic]; Tandan 1958b: 403, figs 6, 10, 19–21.
Ibidoecus bisignatus (Nitzsch, 1866) [sic]; Pilgrim & Palma 1982: 16.
Ibidoecus bisignatus (Nitzsch, 1866) [sic]; Murray *et al*. 1990: 1373.
Ibidoecus bisignatus (Nitzsch [*in* Giebel], 1866); Price *et al*. 2003: 191.
Ibidoecus bisignatus (Nitzsch [*in* Giebel], 1866); Palma 2010: 408.

Status, sex and repository of types unknown, presumed lost. See Clay (1949a: 1) and Palma & Pilgrim (1984: 150).

Type host: *Plegadis falcinellus* (Linnaeus, 1766).

New Zealand host: *Plegadis falcinellus* (Linnaeus, 1766).
Other host: *Plegadis chihi* (Vieillot, 1817).
New Zealand localities: MB, SL.
Geographic distribution: Eurasia; Africa; Americas; Australasia.
New Zealand references: Pilgrim & Palma (1982); Murray *et al*. (1990); Palma (2010).
Other significant references: Cummings (1916b); Dubinin (1938: fig. 15); Carriker (1947: 114); Tandan (1958b); Forrester *et al*. (1995: 12); Palma (1996b: 188); Price *et al*. (2003).
Remarks: *Ibidoecus bisignatus* lives mostly on the head and neck of the host. Although the glossy ibis is a regular vagrant to New Zealand (Checklist Committee 2010: 166), there are only two records of *I. bisignatus* from this country.

Ibidoecus dianae Tandan, 1958

Figs 115–116

Ibidoecus dianae Tandan, 1958a: 151, figs 1–6.
Ibidoecus dianae Tandan, 1958; Pilgrim & Palma 1982: 16.
Ibidoecus dianae Tandan, 1958; Murray *et al*. 1990: 1373.
Ibidoecus dianae Tandan, 1958; Price *et al*. 2003: 191.
Ibidoecus dianae Tandan, 1958; Palma 2010: 408.

Holotype ♂ in NHML.
Type host: *Threskiornis molucca pygmaeus* Mayr, 1931.
New Zealand host: *Threskiornis molucca strictipennis* (Gould, 1838).
Other hosts: None.
New Zealand locality: SL.
Geographic distribution: Australasia; Melanesia.
New Zealand references: Pilgrim & Palma (1982); Murray *et al*. (1990); Palma (2010).
Other significant references: Moreby (1976: 92); Clay (1976a: 5); Palma (1996b: 188); Price *et al*. (2003: 191).
Remarks: *Ibidoecus dianae* lives mostly on the head and neck of the host. The Australian white ibis is an occasional visitor to New Zealand (Checklist Committee 2010: 166), with only one record of *I. dianae* from this country.

Ibidoecus plataleae (Denny, 1842)

Philopterus (*Docophorus*) *plataleae* Denny, 1842: 46, 100, pl. 4: fig. 9.
Philopterus plataleae Denny, 1842 [sic]; Harrison 1916: 102.
Ibidoecus plataleae (Denny, 1842); Cummings 1916b: 664, figs 15, 21.1.
Ibidoecus plataleae (Denny, 1842); Hopkins & Clay 1952: 177.
Ibidoecus plataleae (Denny, 1842); Tandan 1958b: 406, figs 5, 9, 22–26.
Ibidoecus plataleae (Denny, 1842); Pilgrim & Palma 1982: 16.
Ibidoecus plataleae (Denny, 1842); Murray *et al*. 1990: 1373.
Ibidoecus plataleae (Denny, 1842); Price *et al*. 2003: 191.
Ibidoecus plataleae (Denny, 1842); Palma 2010: 408.

Syntypes ♂♀ in NHML (Cummings 1916b: 663).
Type host: *Platalea leucorodia* Linnaeus, 1758.
New Zealand host: *Platalea regia* Gould, 1838.
Other hosts: None.
New Zealand localities: AK, HB, NN, WD.
Geographic distribution: Eurasia; Africa; Australasia; Melanesia.
New Zealand references: Pilgrim & Palma (1982); Murray *et al*. (1990); Palma (2010).
Other significant references: Cummings (1916b); Séguy (1944: 263, figs 398–400); Carriker (1947: 117); Tandan (1958b); Moreby (1976: 92); Butler & O'Connor (1994: 455); Martín-Mateo (1994: 114, figs 1f, 3c,d); Palma (1996b: 188); Price *et al*. (2003: 191); Martín-Mateo (2009: 219).

Remarks: Since the first record of the royal spoonbill in New Zealand in 1861, this host has become well established with many breeding localities in this country (Checklist Committee 2010: 167). *Ibidoecus plataleae* lives mostly on the head and neck of the host and is the most frequently collected louse species from New Zealand spoonbills.

Genus *Incidifrons* Ewing, 1929

Incidifrons Ewing, 1929. *Manual External Parasites*: 111, 189. Type species: *Philopterus pertusus* Nitzsch [sic] = *Incidifrons fulicae* (Linnaeus, 1758) (by original designation).

Incidifrons fulicae (Linnaeus, 1758)

"Pollino della folaga" Redi, 1668: pl. 4: fig. 3.
Pediculus fulicae Linnaeus, 1758: 613. *Nomen novum* for Redi's "Pollino della folaga" Redi, 1668: pl. 4: fig. 3.
Docophorus pertusus Burmeister, 1838a: 436.
Docophorus pertusus Nitzsch [in Giebel], 1874: 108, pl. 11: figs 3, 12.
Incidifrons pertusus (Nitzsch) [sic]; Ewing, 1929: 190.
Incidifrons fulicae (Linnaeus, 1758); Hopkins 1940: 425.
Incidifrons fulicae (Linnaeus, 1758); Hopkins & Clay 1952: 178.
Incidifrons fulicae (Linnaeus, 1758); Pilgrim & Palma 1982: 19.
Incidifrons fulicae (Linnaeus, 1758); Murray *et al.* 1993: 961.
Incidifrons fulicae (Linnaeus, 1758); Palma 2010: 408.

Neotype ♂ in NHML (Clay & Hopkins 1950: 257).
Type host: *Fulica atra* Linnaeus, 1758.
New Zealand host: *Fulica atra australis* Gould, 1845.
Other host: *Fulica cristata* J.F. Gmelin, 1789.
New Zealand locality: CO, DN.
Geographic distribution: Africa; Eurasia; Australasia.
New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1993); Palma (2010).
Other significant references: Hopkins (1940); Clay & Hopkins (1950: 255, figs 48–51); Ledger (1980: 146); Castro & Cicchino (1983: 274, figs 4, 12, 16, 23, 27); Rékasi (1986: 124, figs 26–27); Green & Palma (1991: 15, 32); Palma (1996b: 189); Price *et al*. (2003: 192); Palma & Jensen (2005: 56, 63); Adam (2007: 181); Martín-Mateo (2009: 110, fig. 27).
Remarks: Hopkins (1940: 421) gives a complete account of the early taxonomic confusion among several species of lice described from *Fulica atra*, including a clarification of the synonymy of *Incidifrons fulicae*. Although the Australian coot is now widespread and increasing its range in New Zealand (Checklist Committee 2010: 190), there is only one record of *I. fulicae* from this country.

Incidifrons porzanae Blagoveshtchensky, 1951 — New Record

Figs 117–118

Incidifrons pertusus porzanae Blagoveshtchensky, 1951: 294, fig. 10.
Incidifrons porzanae Blagoveshtchensky, 1951; Hopkins & Clay 1953: 439.
Incidifrons sp.; Pilgrim & Palma 1982: 19.
Incidifrons sp.; Murray *et al.* 1993: 961.
Incidifrons porzanae Blagoveshtchensky, 1951; Price *et al.* 2003: 192.

Holotype ♂, repository unknown.
Type host: *Porzana parva* (Scopoli, 1769).
New Zealand host: *Porzana pusilla affinis* (J.E. Gray, 1845).
Other hosts: None.
New Zealand localities: ND, WO, MC, SC, CO, SL.
Geographic distribution: Asia; New Zealand.
New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1993).
Other significant references: Hopkins & Clay (1953); Price *et al.* (2003).
Material examined and repository: 12♂, 25♀, 12N (7 samples, MONZ).

Remarks: This is the first record of *Incidifrons porzanae* for New Zealand, because the New Zealand references cited above reported this louse as "*Incidifrons* sp." only.

Genus *Lagopoecus* Waterston, 1922

Lagopoecus Waterston, 1922. *Entomol. Month. Mag. 58*: 159. Type species: *Nirmus cameratus* "Lyonet, (1830)" [sic] = *Lagopoecus lyrurus* Clay, 1938 (by original designation).

Colinicola Carriker, 1945b. *Rev. Acad. Colomb. Ciencias Exactas, Físicas y Naturales 6*: 360. Type species: *Goniodes numidianus* Denny, 1842 = *Lagopoecus numidianus* (Denny, 1842) (by original designation).

Lagopoecus docophoroides (Piaget, 1880)

Figs 119–120

Lipeurus docophoroides Piaget, 1880: 357, pl. 28: fig. 9.
Lipeurus docophoroides Piaget, 1880; Harrison 1916: 83.
Lagopoecus docophoroides (Piaget, 1880); Clay 1938: 195: fig. 43d.
Lagopoecus docophoroides (Piaget, 1880); Hopkins & Clay 1952: 187.
Lagopoecus docophoroides (Piaget, 1880); Pilgrim & Palma 1982: 18.
Lagopoecus docophoroides (Piaget, 1880); Murray *et al.* 1993: 960.
Colinicola docophoroides (Piaget, 1880); Price *et al*. 2003: 163.
Lagopoecus docophoroides (Piaget, 1880); Palma 2010: 408.

Syntypes ♂♀ in NHML (Clay 1938: 195).

Type host: *Callipepla californica californica* (Shaw, 1798).

New Zealand host: *Callipepla californica brunnescens* (Ridgway, 1884).

Other hosts: None

New Zealand localities: SD, MB, NN, NC, MC, SC, CO, DN.

Geographic distribution: North & South America; Europe; Australasia, Hawaiian Islands.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1993); Palma (2010).

Other significant references: Emerson (1949: 117, fig. 1); Price *et al.* (2003).

Remarks: *Lagopoecus docophoroides* was introduced to New Zealand and other countries with California quails by human agency (Checklist Committee 2010: 25). In agreement with Hopkins & Clay (1952: 73) and contrary to Price *et al.* (2003: 163), I do not recognise the genus *Colinicola* as separable from *Lagopoecus*.

Genus *Lipeurus* Nitzsch, 1818

Lipeurus Nitzsch, 1818. *Germar's Mag. Entomol. 3*: 292. Type species: *Pediculus caponis* Linnaeus, 1758 = *Lipeurus caponis* (Linnaeus, 1758) (by subsequent designation).

Lipeurus caponis (Linnaeus, 1758)

Pediculus caponis Linnaeus, 1758: 614.
Ricinus caponis (Linnaeus, 1758); Latreille 1804: 110.
Lipeurus caponis (Linnaeus, 1758); Clay 1938: 111, figs 1, 2a,b, 3a.
Lipeurus (*Lipeurus*) *caponis* (Linnaeus, 1758); Séguy 1944: 193, figs 278–281.
Lipeurus caponis (Linnaeus, 1758); Hopkins & Clay 1952: 192.
Lipeurus caponis (L.); Helson 1956: 13, 17.
Lipeurus caponis; Whitten 1971: 383.
Lipeurus caponis (Linnaeus, 1758); Wise 1977: 61.
Lipeurus caponis (Linnaeus, 1758); Murray *et al.* 1993: 960.
Lipeurus caponis (Linnaeus, 1758); Palma 1999: 384, note G.
Lipeurus caponis (Linnaeus, 1758); Palma 2010: 408.

Neotype ♂ in NHML (Clay & Hopkins 1950: 263).

Type host: *Gallus gallus* (Linnaeus, 1758).

New Zealand hosts: *Gallus gallus gallus* (Linnaeus, 1758); *Meleagris gallopavo* Linnaeus, 1758; *Numida meleagris* (Linnaeus, 1758) captive.

Other hosts: *Colinus virginianus* (Linnaeus, 1758); *Gallus sonneratii* Temminck, 1813; *Gallus lafayettii* Lesson, 1831; *Gallus varius* (Shaw, 1798); *Phasianus colchicus* Linnaeus, 1758.

New Zealand localities: AK, TO, WN, MB.

Geographic distribution: Eurasia; Americas; Australasia.

New Zealand references: Helson (1956); Whitten (1971); Wise (1977); Murray *et al.* (1993); Palma (1999); Palma (2010).

Other significant references: Clay (1938); Séguy (1944); Clay & Hopkins (1950: 263); Emerson (1956a: 69, pl. 5); Emerson & Ward (1958: 57); Mey (1986: 36, fig. 5, photo 3); Price (1987: 220, fig. 22.21); Palma (1996b: 190); Price *et al*. (2003: 194); Martín-Mateo (2009: 73, fig. 17); Palma & Peck (2013: 40).

Remarks: *Lipeurus caponis* was introduced to New Zealand and other countries with chickens by human agency. This louse species has spread onto a number of adventive hosts due to the human practice of mixing various species of game birds in captivity. *Gallus gallus gallus* has been listed for the first time in the latest edition of the New Zealand Checklist of Birds (Checklist Committee 2010: 27; see also Palma 1999: 383, note 5).

Lipeurus maculosus maculosus Clay, 1938

Figs 121–122

Lipeurus maculosus maculosus Clay, 1938: 116, figs 5a, 6a, pl. 1: fig. 2.
Lipeurus (*Lipeurus*) *maculosus* Clay, 1938; Séguy 1944: 193, fig. 282.
Lipeurus maculosus Clay, 1938; Hopkins & Clay 1952: 196.
Lipeurus maculosus maculosus Clay, 1938; Pilgrim & Palma 1982: 18.
Lipeurus m. maculosus Clay, 1938; Murray *et al.* 1993: 960.
Lipeurus maculosus maculosus Clay, 1938; Palma 2010: 408.

Holotype ♂ in NHML.

Type host: *Phasianus colchicus* Linnaeus, 1758.

New Zealand hosts: *Phasianus colchicus* Linnaeus, 1758; *Perdix perdix perdix* (Linnaeus, 1758).

Other hosts: None.

New Zealand localities: HB, WI, WN, NC, MC, SC.

Geographic distribution: Eurasia; Australasia.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1993); Paterson *et al.* (1999: 219); Palma (2010).

Other significant references: Séguy (1944); Marconcini & Macchioni (1975: 106, figs 5–6); Rékasi (1986: 125, fig. 28); Modrzejewska & Złotorzycka (1987: 663, figs 5, 9); Kopociński *et al*. (1998: 81); Price *et al*. (2003: 195).

Remarks: *Lipeurus maculosus maculosus* was introduced to New Zealand with its primary host (pheasants) by human agency (Checklist Committee 2010: 28). *Perdix perdix perdix* appears to have died out in New Zealand (Checklist Committee 2010: 348).

Genus *Lunaceps* Clay & Meinertzhagen, 1939

Lunaceps Clay & Meinertzhagen, 1939b. *Ann. Mag. Nat. Hist.* (Ser. 11) *4*: 450. Type species: *Degeeriella actophila* (Kellogg & Chapman, 1899) = *Lunaceps actophilus* (Kellogg & Chapman, 1899) (by original designation).

Lunaceps actophilus (Kellogg & Chapman, 1899)

Nirmus actophilus Kellogg & Chapman, 1899: 78, pl. 6: fig. 4.
Degeeriella actophila Kellogg & Chapman, 1899 [sic]; Harrison 1916: 107.
Lunaceps actophilus (Kellogg & Chapman, 1899); Hopkins & Clay 1952: 201.
Lunaceps actophilus (Kellogg & Chapman, 1899); Timmermann 1954b: 628.
Lunaceps actophilus (Kellogg & Chapman, 1899); Pilgrim & Palma 1982: 21.
Lunaceps actophilus (Kellogg & Chapman, 1899); Murray *et al.* 2006a: 1964.
Lunaceps actophilus (Kellogg & Chapman, 1899); Palma 2010: 408.
Lunaceps actophilus (Kellogg & Chapman, 1899); Gustafsson & Olsson 2012b: 11, figs 6a,b,c,d.

Lectotype ♀ in EMEC (Carriker 1957: 99; Emerson 1965: 49).

Type host: *Calidris alba* (Pallas, 1764).

New Zealand host: *Calidris alba* (Pallas, 1764).

Other hosts: None.

New Zealand locality: NC.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (2006a); Palma (2010); Gustafsson & Olsson (2012b: 16).

Other significant references: Hackman & Nyholm (1968: 80); Forrester *et al.* (1995: 27); Price *et al*. (2003: 196); Palma & Jensen (2005: 56, 63); Gustafsson & Olsson (2012a: 94, 96, figs 1–2).

Remarks: The sanderling is an uncommon visitor to New Zealand (Checklist Committee 2010: 195), with a single record of *Lunaceps actophilus* from this country. The dunlin —*Calidris alpina* (Linnaeus, 1758)— previously regarded as a host of *Lunaceps actophilus* is now host to *Lunaceps schismatus* Gustafsson & Olsson, 2012b: 68.

Lunaceps drosti Timmermann, 1954

Lunaceps drosti Timmermann, 1954b: 627, fig. 1b.

Lunaceps drosti Timmermann, 1954; Pilgrim & Palma 1982: 21.

Lunaceps drosti Timmermann, 1954; Murray *et al.* 2006a: 1964.

Lunaceps drosti Timmermann, 1954; Palma 2010: 408.

Lunaceps drosti Timmermann, 1954; Gustafsson & Olsson 2012b: 19, figs 8a,b,c,d.

Holotype ♂ in NHML.

Type host: *Calidris canutus canutus* (Linnaeus, 1758).

New Zealand host: *Calidris canutus rogersi* (Mathews, 1913).

Other hosts: *Calidris canutus rufus* (Wilson, 1813); *Aphriza virgata* (J.F. Gmelin, 1789).

New Zealand localities: WN, MC, CA.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (2006a); Palma (2010); Gustafsson & Olsson (2012b: 21).

Other significant references: Forrester *et al.* (1995: 27); Palma (1996b: 191); Price *et al*. (2003: 196); Palma & Jensen (2005: 56, 63); Gustafsson & Olsson (2012a: 94, 96, figs 1–2).

Remarks: *Calidris canutus rogersi* is a regular and numerous annual visitor to New Zealand (Checklist Committee 2010: 195). The great knot —*Calidris tenuirostris* (Horsfield, 1821), previously regarded as a host of *Lunaceps drosti*— is now host to *Lunaceps mintoni* Gustafsson & Olsson, 2012b: 47.

Lunaceps falcinellus Timmermann, 1954

Lunaceps falcinellus Timmermann, 1954b: 627.

"*Lunaceps incoenis s. l.*" Pilgrim & Palma, 1982: 21 (not *Nirmus incoenis* Kellogg & Chapman, 1899).

Lunaceps sp.; Palma 1999: 380.

Lunaceps sp.; Murray *et al.* 2006a: 1964.

"*Lunaceps incoenis*" Murray *et al.*, 2006a: 1964 (not *Nirmus incoenis* Kellogg & Chapman, 1899).

"*Lunaceps incoenis*" Palma, 2010: 408 (not *Nirmus incoenis* Kellogg & Chapman, 1899).

Lunaceps falcinellus Timmermann, 1954; Gustafsson & Olsson 2012b: 24, figs 10a,b,c,d.

Holotype ♂ in NHML.

Type host: *Limicola falcinellus falcinellus* (Pontoppidan, 1763).

New Zealand hosts: *Calidris ferruginea* (Pontoppidan, 1763); *Calidris ruficollis* (Pallas, 1776).

Other hosts: *Calidris minuta* (Leisler, 1812); *Limicola falcinellus sibirica* Dresser, 1876.

New Zealand localities: WI, MC.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Pilgrim & Palma (1982); Palma (1999); Murray *et al.* (2006a); Palma (2010); Gustafsson & Olsson (2012b: 27).

Other significant references: Price *et al*. (2003: 196); Gustafsson & Olsson (2012a: 94, 96, figs 1–2).

Remarks: Timmermann (1954b: 627) and Price *et al*. (2003: 196) listed *Tryngites subruficollis* (Vieillot, 1819) as a host for *Lunaceps falcinellus*, but Gustafsson & Olsson (2012b: 66) separated the population of *Lunaceps* from that host as the new species *L. rothkoi* Gustafsson & Olsson, 2012b: 66.

Lunaceps limosae Bechet, 1968

Lunaceps limosella Timmermann, 1954b: 629. In part.
Lunaceps limosella limosae Bechet, 1968: 127, fig. 5.
"*Lunaceps limosella*" Pilgrim & Palma, 1982: 20 (not *Lunaceps limosella* Timmermann, 1954).
Lunaceps limosella Timmermann, 1954; Price *et al.* 2003: 196. In part.
Lunaceps limosella Timmermann, 1954; Murray *et al.* 2006a: 1964. In part.
Lunaceps limosae Bechet, 1968; Gustafsson & Olsson 2012b: 40, figs 16 a,b,c,d.

Syntypes ♂♀ in Ion Bechet's personal collection, Cluj-Napoca, Romania (Costica Adam pers. comm. July 2012).
Type host: *Limosa limosa limosa* (Linnaeus, 1758).
New Zealand host: *Limosa limosa melanuroides* Gould, 1846.
Other hosts: None.
New Zealand locality: AU.
Geographic distribution: Eurasia; Australasia.
New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (2006a); Gustafsson & Olsson (2012b: 42).
Other significant references: Ledger (1980: 169); Butler & O'Connor (1994: 455); Price *et al.* (2003); Adam (2007: 180, figs 13b,c).
Remarks: *Lunaceps limosae* is an additional species to the New Zealand fauna because, with the exception of the original description by Bechet (1968), it had been regarded as a junior synonym of *L. limosella* in all subsequent publications until its resurrection by Gustafsson & Olsson (2012b: 40). The Asiatic black-tailed godwit is an uncommon annual visitor to New Zealand (Checklist Committee 2010: 203).

Lunaceps limosella Timmermann, 1954

Lunaceps limosella Timmermann, 1954b: 629. In part.
Lunaceps limosella Timmermann, 1954; Pilgrim & Palma 1982: 21.
Lunaceps limosella Timmermann, 1954; Murray *et al.* 2006a: 1964. In part.
Lunaceps limosella Timmermann, 1954; Palma 2010: 408.
Lunaceps limosella Timmermann, 1954; Gustafsson & Olsson 2012b: 42, figs 17 a,b,c,d.

Holotype ♂ in NHML.
Type host: *Limosa lapponica lapponica* (Linnaeus, 1758).
New Zealand host: *Limosa lapponica baueri* Naumann, 1836.
Other host: *Limosa lapponica menzbieri* Portenko, 1936.
New Zealand localities: NN, MB, KA, BR, MC, SL, SN, CA.
Geographic distribution: All continents, except the Americas and Antarctica.
New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (2006a); Palma (2010); Gustafsson & Olsson (2012b: 45).
Other significant reference: Price *et al*. (2003: 196).
Remarks: Records of *Lunaceps limosella* from *Limosa limosa* are now referred to *Lunaceps limosae* (see above). The eastern bar-tailed godwit is the most numerous wader that visits New Zealand every year (Checklist Committee 2010: 203).

Lunaceps numenii madagascariensis Gustafsson & Olsson, 2012

Figs 123–124

Lunaceps numenii (Denny, 1842); Timmermann 1954: 631, fig. 5c. In part.
"*Lunaceps numenii numenii*" Pilgrim & Palma, 1982: 20 (not *Philopterus* (*Nirmus*) *numenii* Denny, 1842).
"*Lunaceps numenii numenii*" Price *et al*. 2003: 196 (not *Philopterus* (*Nirmus*) *numenii* Denny, 1842).
"*Lunaceps numenii numenii*" Murray *et al.* 2006a: 1964 (not *Philopterus* (*Nirmus*) *numenii* Denny, 1842).
"*Lunaceps numenii numenii*" Palma, 2010: 408 (not *Philopterus* (*Nirmus*) *numenii* Denny, 1842).

Lunaceps numenii madagascariensis Gustafsson & Olsson, 2012b: 55, figs 22a,b,c,d.

Holotype ♂ in NHML.

Type host: *Numenius madagascariensis* (Linnaeus, 1766).

New Zealand host: *Numenius madagascariensis* (Linnaeus, 1766).

Other hosts: None.

New Zealand localities: WD, SI.

Geographic distribution: Asia; Australasia.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (2006a); Palma (2010); Gustafsson & Olsson (2012b).

Other significant references: Timmermann (1954); Price *et al*. (2003).

Remarks: Although the eastern curlew is a regular annual visitor to New Zealand (Checklist Committee 2010: 200), there are only two records of *Lunaceps numenii madagascariensis* from this country.

Lunaceps numenii oliveri (Johnston & Harrison, 1912)

Degeeriella oliveri Johnston & Harrison, 1912: 367, fig. 3.

Degeeriella oliveri Johnston & Harrison, 1912; Thompson 1939: 120.

Lunaceps phaeopi (Denny, 1842); Hopkins & Clay 1952: 202. In part.

"*Lunaceps phaeopi*" Emerson & Ward 1958: 57 (not *Philopterus* (*Nirmus*) *phaeopi* Denny, 1842).

"*Lunaceps phaeopi*" Watt, 1971: 236, 243 (not *Philopterus* (*Nirmus*) *phaeopi* Denny, 1842).

"*Lunaceps numenii phaeopi*" Wise, 1977: 61 (not *Philopterus* (*Nirmus*) *phaeopi* Denny, 1842).

Lunaceps numenii oliveri (Johnston & Harrison, 1912); Pilgrim & Palma 1982: 20, 31, note 22.

Lunaceps numenii oliveri (Johnston & Harrison, 1912); Price *et al.* 2003: 196.

Lunaceps numenii oliveri (Johnston & Harrison, 1912); Murray *et al.* 2006a: 1964.

Lunaceps n. oliveri (Johnston & Harrison, 1912); Palma 2010: 408.

Lunaceps oliveri (Johnston & Harrison, 1912) ("Clade 9"); Gustafsson & Olsson 2012a: 94, 96, figs 1–2.

Lunaceps numenii phaeopi (Denny, 1842); Gustafsson & Olsson 2012b: 57, figs 23a,b,c,d. In part.

Syntypes ♂♀ in MONZ (Palma *et al.* 1989: 45).

Type host: *Numenius phaeopus variegatus* (Scopoli, 1786).

New Zealand host: *Numenius phaeopus variegatus* (Scopoli, 1786).

Other hosts: None.

New Zealand localities: TK, KE.

Geographic distribution: Asia; Australasia.

New Zealand references: Johnston & Harrison (1912); Thompson (1939); Pilgrim (1970: 75); Wise (1977); Pilgrim & Palma (1982); Palma *et al.* (1989: 45); Murray *et al.* (2006a); Palma (2010); Gustafsson & Olsson (2012b: 60).

Other significant references: Emerson & Ward (1958); Moreby (1976: 93); Price *et al.* (2003); Gustafsson & Olsson (2012a).

Remarks: Contrary to Gustafsson & Olsson (2012b: 57, 59), I regard *Degeeriella oliveri* as a valid subspecies of *Lunaceps numenii*. Although the Asiatic whimbrel is a frequent visitor to New Zealand (Checklist Committee 2010: 201), its lice have been infrequently collected.

Lunaceps superciliosus Gustafsson & Olsson, 2012

Lunaceps sp.; Palma 1999: 380.

Lunaceps incoenis (Kellogg & Chapman, 1899); Price *et al*. 2003: 196. In part.

Lunaceps sp.; Murray *et al.* 2006a: 1964.

Lunaceps incoenis (Kellogg & Chapman, 1899) ("Clade 3"); Gustafsson & Olsson 2012a: 94, 96, figs 1–2.

Lunaceps sp. ("Clade 3"); Gustafsson & Olsson 2012a: 94, 96, figs 1–2.

Lunaceps superciliosus Gustafsson & Olsson, 2012b: 71, figs 29a,b,c,d.

Holotype ♂ in MONZ.

Type host: *Calidris acuminata* (Horsfield, 1821).

New Zealand host: *Calidris acuminata* (Horsfield, 1821).

Other host: *Calidris subminuta* (Middendorff, 1853).

New Zealand localities: MC, KE.

Geographic distribution: Asia; Australasia.

New Zealand references: Palma (1999); Murray *et al.* (2006a); Gustafsson & Olsson (2012b: 73).

Other significant references: Price *et al*. (2003); Gustafsson & Olsson (2012a).

Remarks: Although the sharp-tailed sandpiper is a regular annual visitor to New Zealand (Checklist Committee 2010: 196), there are only two records of *Lunaceps superciliosus* from this country.

Genus *Melibrueelia* Valim & Palma, 2015

Melibrueelia Valim & Palma, 2015. *Zootaxa*: 3926: 483. Type species: *Melibrueelia novaeseelandiae* Valim & Palma, 2015 (by original designation). Endemic to New Zealand, but see Remarks below.

Melibrueelia novaeseelandiae Valim & Palma, 2015

Figs 125–126

Brueelia sp. nov.; Watt 1971: 235, 244.

Brueelia sp.; Pilgrim & Palma 1982: 27.

Brueelia sp.; Murray *et al.* 2001: 1263.

Brueelia sp.; Palma 2010: 408.

Melibrueelia novaeseelandiae Valim & Palma, 2015: 484, figs 1–3, 6a,b,c, 7a,b.

Holotype ♂ in MONZ.

Type host: *Prosthemadera novaeseelandiae novaeseelandiae* (J.F. Gmelin, 1788).

New Zealand hosts: *Anthornis melanura obscura* Falla, 1948; *Anthornis melanura oneho* Bartle & Sagar, 1987; *Anthornis melanura melanura* (Sparrman, 1786); *Prosthemadera novaeseelandiae novaeseelandiae* (J.F. Gmelin, 1788).

Other hosts: None.

New Zealand localities: ND, AK, CL, BP, WN, BR, WD, KE, AU.

Geographic distribution: New Zealand.

New Zealand references: Watt (1971); Pilgrim & Palma (1982); Murray *et al.* (2001); Palma (2010); Valim & Palma (2015).

Other significant references: None.

Remarks: *Melibrueelia novaeseelandiae* is an endemic species parasitic on members of the bird family Meliphagidae, the honeyeaters (Checklist Committee 2010: 288). Although *Melibrueelia* is at present endemic to New Zealand, there is a probability that species of this genus will be found on Australian species of honeyeaters.

Genus *Naubates* Bedford, 1930

Subgenus *Guenterion* Palma & Pilgrim, 2002

Naubates Harrison, 1937. *Sci. Rep., Australasian Ant. Exped. 1911–14, series C, Zool. Bot.*: 30. Type species: *Naubates heteroproctus* Harrison, 1937 = *Naubates* (*Guenterion*) *heteroproctus* Harrison, 1937 (by original designation). Preoccupied by *Naubates* Bedford, 1930.

Guenterion Palma & Pilgrim, 2002. *Jour. Roy. Soc. New Zealand 32*: 29. Type species: *Lipeurus clypeatus* Giebel, 1874 = *Naubates* (*Guenterion*) *clypeatus* (Giebel, 1874) (by original designation).

Naubates (*Guenterion*) *clypeatus* (Giebel, 1874)

Lipeurus clypeatus Giebel, 1874: 236.

Esthiopterum clypeatum Giebel, 1874 [sic]; Harrison 1916: 132.

Naubates clypeatus (Giebel, 1874); Hopkins & Clay 1952: 234.

Naubates clypeatus (Giebel, 1874); Timmermann 1961d: 187, fig. 7.

Naubates clypeatus (Giebel, 1874); Timmermann 1965: 123, fig. 61.

Naubates clypeatus (Giebel, 1874); Wise 1977: 62.

Naubates sp.; Lowry *et al.* 1978: 138.

Naubates clypeatus (Giebel, 1874); Pilgrim & Palma 1982: 9.

Naubates (*Guenterion*) *clypeatus* (Giebel, 1874); Palma & Pilgrim 2002: 31, figs 5–6, 10, 17, 24, 40, 45, 52, 63.

Naubates (*Guenterion*) *clypeatus* (Giebel, 1874); Palma 2010: 408.

Syntypes ♂♀, presumed lost. See Palma & Pilgrim (2002: 31).
Type host: *Halobaena caerulea* (J.F. Gmelin, 1789).
New Zealand host: *Halobaena caerulea* (J.F. Gmelin, 1789).
Other hosts: None.
New Zealand localities: AK, BP, TK, WI, WN, NC, MC, SC, Macquarie Island.
Geographic distribution: Antarctica; Southern Oceans.
New Zealand references: Wise (1977); Lowry *et al.* (1978); Pilgrim & Palma (1982); Palma (1996b: 191); Murray *et al.* (1990: 1370); Palma & Horning (2002: 9, 16); Palma & Pilgrim (2002); Palma (2010).
Other significant references: Giebel (1876: 389); Thompson (1935c: 487); Timmermann (1961d; 1965); Green & Palma (1991: 15, 26); Price *et al*. (2003: 199).
Remarks: *Naubates* (*Guenterion*) *clypeatus* is frequently collected from the wings of blue petrels. As discussed by Palma & Pilgrim (2002: 35, 42), *Naubates* (*Guenterion*) *clypeatus* has been reported from species of *Pachyptila*, but those records are likely to be misidentifications of *N.* (*G.*) *prioni* (see below).

Naubates (*Guenterion*) *damma* Timmermann, 1961

Naubates damma Timmermann, 1961d: 185, fig. 6, 9 (bottom).
Naubates pterodromi Bedford, 1930; Timmermann 1961d: 183. In part.
Naubates damma Timmermann, 1961; Timmermann 1965: 123, fig. 60.
Naubates damma Timmermann, 1961; Pilgrim & Palma 1982: 9.
Naubates (*Guenterion*) *damma* Timmermann, 1961; Palma & Pilgrim 2002: 42, figs 3, 11, 18, 25, 42, 47, 53, 62, 66, 68–69.
Naubates (*G.*) *damma* Timmermann, 1961; Palma 2010: 408.

Holotype ♂ in NHML (Palma & Pilgrim 2002: 43).
Type host: *Pterodroma leucoptera* (Gould, 1844).
New Zealand hosts: *Pterodroma cervicalis* (Salvin, 1891); *Pterodroma cookii* (G.R. Gray, 1843); *Pterodroma leucoptera caledonica* Imber & Jenkins, 1981.
Other hosts: *Pterodroma externa* (Salvin, 1875); *Pterodroma arminjoniana* (Giglioli & Salvadori, 1869); *Pterodroma phaeopygia* (Salvin, 1876); *Pterodroma sandwichensis* (Ridgway, 1884); *Pterodroma hypoleuca* (Salvin, 1888).
New Zealand localities: ND, AK, CL, WI, KE, SI.
Geographic distribution: Atlantic and Pacific Oceans.
New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990: 1370); Palma & Pilgrim (2002); Palma (2010).
Other significant references: Timmermann (1965); Amerson & Emerson (1971: 4, 24); Palma (1996b: 192); Price *et al*. (2003: 199).
Remarks: *Naubates* (*Guenterion*) *damma* is frequently collected from the wings of its hosts, and it is morphologically intermediate bewteen the two *Naubates* species from *Pachyptila* + *Halobaena*, and those from species of *Pterodroma* (see Palma & Pilgrim 2002: 44).

Naubates (*Guenterion*) *heteroproctus* Harrison, 1937

Naubates heteroproctus Harrison, 1937: 30, pl. 2: figs 4–7.
Naubates heteroproctus Harrison, 1937; Hopkins & Clay 1952: 235.
Naubates heteroproctus Harrison, 1937; Timmermann 1961d: 184, fig. 9 (upper).
Naubates heteroproctus Harrison, 1937; Timmermann 1965: 122, fig. 63b, pl. 3: fig. 4.
Naubates heteroproctus Harrison, 1937; Wise 1977: 62.
Naubates heteroproctus Harrison, 1937; Pilgrim & Palma 1982: 8, 29.
Naubates (*Guenterion*) *heteroproctus* Harrison, 1937; Palma & Pilgrim 2002: 51, figs 55, 59.
Naubates (*G.*) *heteroproctus* Harrison, 1937; Palma 2010: 408.

Syntypes ♂♀ & nymph, presumed lost. See Palma & Pilgrim (2002: 52).
Type host: "*Pterodroma lessonii*", in error (see Palma & Pilgrim 2002: 52).
New Zealand host: *Pterodroma macroptera gouldi* (Hutton, 1869).
Other hosts: *Pterodroma macroptera* (A. Smith, 1840).
New Zealand localities: ND, AK, CL, BP, WN, NC, MC, SC, SL, Macquarie Island.
Geographic distribution: Atlantic, Indian and Pacific Oceans.

New Zealand references: Harrison (1937); Thompson (1938d: 487); Gressitt (1970: 328); Wise (1977); Pilgrim & Palma (1982); Murray *et al.* (1990: 1369); Palma & Horning (2002: 9, 20); Palma & Pilgrim (2002); Page *et al.* (2004: 638, 649); Palma (2010).

Other significant references: Séguy (1953: 572, figs 24–25); Timmermann (1961d; 1965); Green & Palma (1991: 15, 26); Palma (1996b: 192); Price *et al*. (2003: 199); Hänel & Palma (2007: 113, 125, 130).

Remarks: *Naubates* (*Guenterion*) *heteroproctus* is frequently collected from the wings of grey-faced petrels. At present, females of *N.* (*G.*) *heteroproctus* are indistinguishable from those of *N*. (*G*.) *pterodromi* and *N*. (*G*.) *lessonii* (see Palma & Pilgrim 2002: 31, 48).

Naubates (*Guenterion*) *lessonii* Palma & Pilgrim, 2002

Figs 127–128

"*Naubates heteroproctus*" Watson, 1967: 72 (not *Naubates heteroproctus* Harrison, 1937).
"*Naubates fuliginosus*" Clay & Moreby, 1970: 217 (not *Lipeurus fuliginosus* Taschenberg, 1882).
"*Naubates heteroproctus*" Clay & Moreby, 1970: 218 (not *Naubates heteroproctus* Harrison, 1937).
Naubates sp.; Pilgrim & Palma 1982: 8, 30.
Naubates sp.; Murray *et al.* 1990: 1369.
Naubates pterodromi sensu lato; Green & Palma 1991: 15, 26.
Naubates pterodromi; Palma 1996b: 193. In part.
Naubates pterodromi Bedford, 1930 *sensu lato*; Palma & Horning 2002: 9, 16, 21.
Naubates (*Guenterion*) *lessonii* Palma & Pilgrim, 2002: 50, figs 43, 58, 70–71.
Naubates (*G.*) *lessonii* Palma & Pilgrim, 2002; Palma 2010: 408.

Holotype ♂ in MONZ.

Type host: *Pterodroma lessonii* (Garnot, 1826).

New Zealand host: *Pterodroma lessonii* (Garnot, 1826).

Other hosts: None.

New Zealand localities: AK, TK, WI, WN, WD, AU, Macquarie Island.

Geographic distribution: Southern Oceans.

New Zealand references: Watson (1967); Clay & Moreby (1970); Gressitt (1970: 327); Wise (1977: 62); Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (1996b); Palma & Horning (2002); Palma & Pilgrim (2002); Palma (2010).

Other significant references: Green & Palma (1991); Price *et al*. (2003: 199).

Remarks: *Naubates* (*Guenterion*) *lessonii* is frequently collected from the wings of white-headed petrels. At present, females of *N*. (*G*.) *lessonii* are indistinguishable from those of *N*. (*G*.) *pterodromi* and *N*. (*G*.) *heteroproctus* (see Palma & Pilgrim 2002: 31, 48).

Naubates (*Guenterion*) *prioni* (Enderlein, 1908)

Lipeurus prioni Enderlein, 1908: 454, figs 194, 196–199.
Esthiopterum clypeatum Enderlein, 1908 [sic]; Harrison 1916: 140. In part.
"*Naubates* (*Micronaubates*) *clypeatus*" Pessôa & Guimarães, 1935: 112, fig. 12 (not *Lipeurus clypeatus* Giebel, 1874).
"*Naubates clypeatus*" Harrison, 1937: 31 (not *Lipeurus clypeatus* Giebel, 1874).
Naubates prioni (Enderlein, 1908); Hopkins & Clay 1952: 235.
Naubates prioni (Enderlein, 1908); Timmermann 1961d: 187, fig. 8.
Naubates prioni (Enderlein, 1908); Timmermann 1965: 123, figs 62a,b, pl. 3: fig. 3.
Naubates prioni (Enderlein, 1908); Watson 1967: 72.
Naubates sp.; Watson 1967: 72.
Naubates prioni (Enderlein, 1908); Wise 1977: 62.
Naubates prioni (Enderlein, 1908); Horning *et al.* 1980: 6, 10.
Naubates prioni (Enderlein, 1908); Pilgrim & Palma 1982: 10.
Naubates prioni (Enderlein, 1908); Mey 1994: 24, figs 9–10.
Naubates (*Guenterion*) *prioni* (Enderlein, 1908); Palma & Pilgrim 2002: 35, figs 16, 23, 41, 46, 51, 64.
Naubates (*G.*) *prioni* (Enderlein, 1908); Palma 2010: 408.

Lectotype ♂ in ZMHU (Göllner-Scheiding 1973: 41; Palma & Pilgrim 2002: 42).

Type host: *Pachyptila desolata* (J.F. Gmelin, 1789).

New Zealand hosts: *Pachyptila vittata* (G. Forster, 1777); *Pachyptila salvini salvini* (Mathews, 1912); *Pachyptila desolata* (J.F. Gmelin, 1789); *Pachyptila belcheri* (Mathews, 1912); *Pachyptila turtur* (Kuhl, 1820); *Pachyptila crassirostris crassirostris* (Mathews, 1912); *Pachyptila crassirostris pyramidalis* Fleming, 1939; *Pachyptila crassirostris flemingi* Tennyson & Bartle, 2005.

Other hosts: None.

New Zealand localities: ND, AK, CL, BP, WO, HB, TK, WI, WA, WN, SD, MB, NN, NC, MC, SC, WD, DN, SL, KE, CH, SI, BO, SN, AN, AU, Macquarie Island.

Geographic distribution: Southerm Hemisphere.

New Zealand references: Harrison (1937); Watson (1967); Clay & Moreby (1970: 218); Gressitt (1970: 328); Wise (1977); Horning *et al.* (1980); Pilgrim & Palma (1982); Murray *et al.* (1990: 1370); Palma (1996b: 193); Paterson *et al.* (1999: 222); Marris (2000: 187); Palma & Horning (2002: 9, 16, 20); Palma & Pilgrim (2002); Page *et al.* (2004: 638, 649); Palma (2010).

Other significant references: Séguy (1953: 569, figs 21–23); Timmermann (1961d; 1965); Clay & Moreby (1967: 162, 168, fig. 89); Green & Palma (1991: 15, 26); Furness & Palma (1992: 35, 39); Mey (1994); Price *et al*. (2003: 199); Hänel & Palma (2007: 113, 125, 130).

Remarks: *Naubates* (*Guenterion*) *prioni* is both highly prevalent and abundant on all its hosts, and predominantly found on their wings. Records of *Naubates* (*Guenterion*) *clypeatus* from species of *Pachyptila* are likely to be misidentifications of *N.* (*G.*) *prioni* (see Palma & Pilgrim 2002: 35, 42).

Naubates (*Guenterion*) *pterodromi* Bedford, 1930

Naubates pterodromi Bedford, 1930: 170, figs 10, 13; *sensu* Kéler 1952.
Naubates pterodromi Bedford, 1930; Kéler 1952: 213, figs 6–10.
Naubates pterodromi Bedford, 1930; Timmermann 1961d: 183, figs 2, 5, 9 (middle), pl. 1: figs c,d. In part.
Naubates pterodromi Bedford, 1930; Timmermann 1965: 121, figs 54, 57, 59, 63, pl. 4: figs 3–4.
Naubates pterodromi Bedford, 1930; Palma & Pilgrim 1977: 290.
Naubates pterodromi Bedford, 1930; Horning *et al.* 1980: 6, 9.
Naubates pterodromi Bedford, 1930; Pilgrim & Palma 1982: 8, 30.
Naubates (*Guenterion*) *pterodromi* Bedford, 1930; Palma & Pilgrim 2002: 45, figs 4, 13, 15, 22, 49, 54, 57, 65.
Naubates (*G.*) *pterodromi* Bedford, 1930; Palma 2010: 408.

Holotype ♀ in SAMS, unidentifiable (Palma & Pilgrim 2002: 49). Pragmatype ♂ in SAIM (see Palma & Pilgrim 2002: 50)

Type host: "*Pterodroma macroptera*", in error (see Palma & Pilgrim 2002: 48).

New Zealand hosts: *Pterodroma mollis* (Gould, 1844); *Pterodroma inexpectata* (J.R. Forster, 1844).

Other host: *Pterodroma incerta* (Schlegel, 1863).

New Zealand localities: ND, AK, WN, NC, MC, SC, SL, SI, SN, AN.

Geographic distribution: Atlantic, Indian and Pacific Oceans.

New Zealand references: Palma & Pilgrim (1977); Horning *et al.* (1980); Pilgrim & Palma (1982); Murray *et al.* (1990: 1370); Palma (1999: 378); Marris (2000: 187); Palma & Pilgrim (2002); Page *et al.* (2004: 638, 649); Palma (2010).

Other significant references: Kéler (1952); Timmermann (1961d; 1965); Green & Palma (1991: 15, 26); Furness & Palma (1992: 35, 40); Zonfrillo (1993: 327); Palma (1996b: 193); Price *et al*. (2003: 199); Hänel & Palma (2007: 113, 125, 130).

Remarks: *Naubates* (*Guenterion*) *pterodromi* is frequently collected from the wings of its hosts. Palma & Pilgrim (2002: 48) discussed the problems arising from the original concept of *N*. (*G*.) *pterodromi* based on females only, which are at present indistinguishable from those of *N*. (*G*.) *heteroproctus* and *N*. (*G*.) *lessonii* (see Palma & Pilgrim 2002: 31).

Subgenus *Naubates* Bedford, 1930

Naubates Bedford, 1930. *16th Report Director Vet. Services Animal Ind. Union of South Africa*: 167. Type species: *Esthiopterum fuliginosum* (Taschenberg, 1882) = *Naubates* (*Naubates*) *fuliginosus* (Taschenberg, 1882) (by original designation).

Naubates (*Naubates*) *fuliginosus* (Taschenberg, 1882)

Lipeurus fuliginosus Taschenberg, 1882: 156, pl. 4: fig. 3.
Esthiopterum fuliginosum Taschenberg, 1882 [sic]; Harrison 1916: 134.
Naubates fuliginosus (Taschenberg, 1882); Bedford 1930: 168, figs 9, 11, 15, 16a.
Naubates fuliginosus (Taschenberg, 1882); Hopkins & Clay 1952: 235.
Naubates fuliginosus (Taschenberg, 1882); Timmermann 1961d: 177, figs 1, 3, pl. 1: figs a,b.
Naubates fuliginosus (Taschenberg, 1882); Timmermann 1965: 118, figs 53, 55, pl. 4: figs 1–2.
Naubates fuliginosus (Taschenberg, 1882); Wise 1977: 62.
Naubates fuliginosus (Taschenberg, 1882); Pilgrim & Palma 1982: 11.
Naubates (*Naubates*) *fuliginosus* (Taschenberg, 1882); Palma & Pilgrim 2002: 12, figs 7–8, 19, 26, 29, 31, 35.
Naubates (*Naubates*) *fuliginosus* (Taschenberg, 1882); Palma 2010: 408.

Syntypes ♂♀, presumed lost. See Palma & Pilgrim (2002: 12).

Type hosts: *Diomedea exulans* Linnaeus, 1758 & *Thalassarche chlororhynchos* (J.F. Gmelin, 1789), both in error (see Palma & Pilgrim 2002: 18).

New Zealand hosts: *Procellaria aequinoctialis* Linnaeus, 1758; *Procellaria westlandica* Falla, 1946; *Procellaria parkinsoni* G.R. Gray, 1862; *Procellaria cinerea* J.F. Gmelin, 1789.

Other hosts: None.

New Zealand localities: ND, AK, CL, BP, WI, WN, NC, MC, SC, WD, SN, AN, AU, CA, Macquarie Island.

Geographic distribution: Southern Oceans.

New Zealand references: Gressitt (1970: 327); Wise (1977); Pilgrim & Palma (1982); Murray *et al.* (1990: 1371); Palma (1996b: 192); Marris (2000: 187); Palma & Horning (2002: 9, 16); Palma & Pilgrim (2002); Page *et al.* (2004: 638, 648); Palma (2010).

Other significant references: Bedford (1930); Kéler (1957c: fig. 23b); Timmermann (1961d; 1965); Clay & Moreby (1967: 162, 168, fig. 88); Price *et al*. (2003: 199).

Remarks: *Naubates* (*Naubates*) *fuliginosus* is both highly prevalent and abundant on all its hosts, and predominantly found on their wings.

Naubates (*Naubates*) *harrisoni* Bedford, 1930

Naubates harrisoni Bedford, 1930: 168, figs 12, 14, 16b.
Naubates harrisoni Bedford, 1930; Hopkins & Clay 1952: 235.
Naubates harrisoni Bedford, 1930; Timmermann 1961d: 180, fig. 4.
Naubates harrisoni Bedford, 1930; Timmermann 1965: 119, figs 56, 58.
Naubates harrisoni Bedford, 1930; Watt 1971: 236, 243, fig. 6.
Naubates harrisoni Bedford, 1930; Pilgrim & Palma 1982: 11.
Naubates harrisoni Bedford, 1930 *s. l.*; Pilgrim & Palma 1982: 12.
Naubates (*Naubates*) *harrisoni* Bedford, 1930; Palma & Pilgrim 2002: 20, figs 1–2, 20, 27, 30, 32, 36, 38.
Naubates (*N.*) *harrisoni* Bedford, 1930; Palma 2010: 408.

Holotype ♂ in SAMS (Palma & Pilgrim 2002: 20).

Type host: *Puffinus gravis* (O'Reilly, 1818).

New Zealand hosts: *Puffinus pacificus pacificus* (J.F. Gmelin, 1789); *Puffinus pacificus chlororhynchus* Lesson, 1831; *Puffinus bulleri* Salvin, 1888; *Puffinus carneipes* Gould, 1844; *Puffinus huttoni* Mathews, 1912.

Other hosts: *Puffinus nativitatis* Streets, 1877; *Puffinus puffinus* (Brünnich, 1764); *Puffinus opisthomelas* Coues, 1864; *Puffinus lherminieri lherminieri* Lesson, 1839; *Puffinus assimilis baroli* (Bonaparte, 1857); *Puffinus assimilis boydi* Mathews, 1912; *Puffinus assimilis tunneyi* Mathews, 1912; *Puffinus tenuirostris* (Temminck, 1835); *Puffinus creatopus* Coues, 1864.

New Zealand localities: ND, AK, CL, BP, WN, SD, MB, KA, NC, MC, SC, WD, CH, KE.

Geographic distribution: Atlantic, Indian and Pacific Oceans.

New Zealand references: Watt (1971); Wise (1977: 62); Pilgrim & Palma (1982); Murray *et al.* (1990: 1371); Paterson *et al.* (1999: 222); Palma & Pilgrim (2002); Galloway (2005: 16); Palma (2010).

Other significant references: Timmermann (1961d; 1965); Amerson & Emerson (1971: 6, 8, 24); Ward & Downey (1973: 394); Bourgeois & Threlfall (1979: 1356); Fowler & Shaw (1990: 15); Forrester *et al.* (1995: 6); Foster *et al*. (1996: 85); Palma (1996b: 192); Furness & Palma (1992: 35, 38); Price *et al*. (2003: 199); Page *et al.* (2004: 638, 648, 650); Hänel & Palma (2007: 113, 125, 130); Martín-Mateo (2009: 103, fig. 26).

Remarks: Pilgrim & Palma (1982: 12) regarded the population of *Naubates* (*Naubates*) *harrisoni* from *Puffinus huttoni* as somewhat different from those from several other hosts, and qualified it as *sensu lato*; however, my examination of more samples from all hosts shows that making such difference is not warranted (see also Palma & Pilgrim 2002: 20, 24). *Naubates* (*N.*) *harrisoni* is an infrequently collected species from all its hosts, and predominantly found on their wings.

Naubates (*Naubates*) *thieli* Timmermann, 1965

Figs 129–130

Naubates thieli Timmermann, 1965: 121.

Naubates thieli Timmermann, 1965; Palma 1999: 378.

Naubates (*Naubates*) *thieli* Timmermann, 1965; Palma & Pilgrim 2002: 27, figs 9, 28, 33–34, 37, 39.

Naubates (*N.*) *thieli* Timmermann, 1965; Palma 2010: upper fig. p. 295, 408.

Holotype ♂ in ANIC (Palma & Pilgrim 2002: 27, 29).

Type host: *Pterodroma solandri* (Gould, 1844).

New Zealand host: *Pterodroma solandri* (Gould, 1844).

Other hosts: None.

New Zealand locality: ND.

Geographic distribution: Pacific Ocean.

New Zealand references: Palma (1999); Palma & Pilgrim (2002); Palma (2010).

Other significant references: Spratt (1983: 58); Palma (1996b: 193); Price *et al*. (2003: 199).

Remarks: *Pterodroma solandri* is an Australian petrel regarded as a "straggler to the northern North Island" by the Checklist Committee (2010: 89). *Naubates* (*Naubates*) *thieli* is a "wing" species and likely to be the result of a host-switch of *N*. (*N.*) *harrisoni*, or its ancestor, from a species of *Puffinus* onto *Pterodroma solandri* (see Palma & Pilgrim 2002: 28).

Genus *Neopsittaconirmus* Conci, 1942

Neopsittaconirmus Conci, 1942c [20 May]. *Boll. Soc. Entomol. Italiana 74*: 37. Type species: *Neopsittaconirmus borgiolii* Conci, 1942c (by original designation).

Psittacicola Guimarães, 1942 [28 November]. *Papéis Avulsos Dept. Zool.* (*São Paulo*) *2*: 80. Type species: *Esthiopterum kea* (Kellogg, 1907) = *Neopsittaconirmus kea* (Kellogg, 1907) (by original designation).

Neopsittaconirmus albus (Le Souëf & Bullen, 1902)

Lipeurus albus Le Souëf & Bullen, 1902a: 157, fig. 4.

Esthiopterum album Le Souëf & Bullen, 1902 [sic]; Harrison 1916: 130 (as junior synonym of *Esthiopterum capreolum* Gervais, 1847).

Neopsittaconirmus albus (Le Souëf & Bullen, 1902); Hopkins & Clay 1952: 237.

Lipeurus albus Le Souëf & Bullen, 1902; Guimarães 1974a: 187 (as "Species inquirendae").

Neopsittaconirmus albus (Le Souëf & Bullen, 1902); Price & Emerson 1978: 33, figs 1–8.

Neopsittaconirmus albus (Le Souëf & Bullen, 1902); Palma 1999: 381.

Neopsittaconirmus albus (Le Souëf & Bullen, 1902); Palma 2010: 408.

Syntypes ♂♀, presumed lost. See Palma (1996b: 194).

Type host: *Cacatua galerita* (Latham, 1790).

New Zealand host: *Cacatua galerita* (Latham, 1790).

Other hosts: None.

New Zealand locality: WI.

Geographic distribution: Australasia.

New Zealand references: Palma (1999); Palma (2010).

Other significant references: Guimarães (1974a); Price & Emerson (1978); Green & Palma (1991: 15, 34); Palma (1996b: 194); Price *et al*. (2003: 200).

Remarks: It is not possible to assert if *Neopsittaconirmus albus* was introduced to New Zealand with sulphur-crested cockatoos by human agency, or if it was self-introduced with its host (Checklist Committee 2010: 252).

Neopsittaconirmus kea (Kellogg, 1907)

Figs 131–132

Lipeurus circumfasciatus var. *kea* Kellogg, 1907: 122.
Esthiopterum kea Kellogg, 1907 [sic]; Harrison 1916: 136.
Neopsittaconirmus kea (Kellogg, 1907); Conci 1942c: 37.
Psittacicola kea (Kellogg, 1907); Guimarães 1942: 81, figs 1–5.
Neopsittaconirmus kea (Kellogg, 1907); Hopkins & Clay 1952: 238.
Neopsittaconirmus kea (Kellogg, 1907); Pilgrim 1970: 75.
Neopsittaconirmus kea; Miller 1971: 132.
Neopsittaconirmus kea (Kellogg, 1907); Guimarães 1974a: 181, figs 123–126.
Neopsittaconirmus kea (Kellogg, 1907); Wise 1977: 62.
Neopsittaconirmus kea (Kellogg, 1907); Pilgrim & Palma 1982: 24.
Neopsittaconirmus kea (Kellogg, 1907); Murray *et al.* 1999: 1241.
Neopsittaconirmus kea (Kellogg, 1907); Palma 2010: 408.

Syntypes ♂♀ in EMEC (Peter T. Oboyski pers. comm. October 2014).

Type host: *Nestor notabilis* Gould, 1856.

New Zealand hosts: *Nestor meridionalis septentrionalis* Lorenz, 1896; *Nestor meridionalis meridionalis* (J.F. Gmelin, 1788); *Nestor notabilis* Gould, 1856.

Other hosts: None.

New Zealand localities: ND, CL, HB, WA, WN, NN, NC, MC, WD, SI.

Geographic distribution: New Zealand.

New Zealand references: Kellogg (1907); Guimarães (1942: 83); Pilgrim (1970); Miller (1971: 132); Guimarães (1974a); Wise (1977); Pilgrim & Palma (1982); Murray *et al.* (1999); Palma (2010); Buckley *et al.* (2012: App. 2).

Other significant references: Conci (1942c); Price *et al*. (2003: 200); Sychra (2006: 65, fig. 8).

Remarks: *Neopsittaconirmus kea* is an endemic and "at risk" species (Buckley *et al.* 2012), exclusively parasitic on members of the parrot genus *Nestor*.

Genus *Nesiotinus* Kellogg, 1903

Nesiotinus Kellogg, 1903. *Biol. Bull. Wood's Hole 5*(2): 89. Type species: *Nesiotinus demersa* [sic] Kellogg, 1903 = *Nesiotinus demersus* Kellogg, 1903 (by monotypy).

Nesiotinus demersus Kellogg, 1903

Figs 133–134

Nesiotinus demersa [sic] Kellogg, 1903: 90, fig. 3.
Nesiotinus demersus Kellogg, 1903; Harrison 1916: 74. Emendation.
Nesiotinus demersus Kellogg, 1903; Hopkins & Clay 1952: 239.
Nesiotinus demersus Kellogg, 1903; Clay & Moreby 1967: 159, figs 76–77, 94–95.
Nesiotinus demersus Kellogg, 1903; Watson 1967: 72.
Nesiotinus demersus Kellogg, 1903; Wise 1977: 62.
Nesiotinus sp.; Lowry *et al.* 1978: 137.
Nesiotinus demersus Kellogg, 1903; Pilgrim & Palma 1982: 4.
Nesiotinus demersus Kellogg, 1903; Murray *et al.* 1990: 1367.
Nesiotinus demersus Kellogg, 1903; Banks & Paterson 2004: 96, figs 3e, 7a, 9–11.

Nesiotinus demersus Kellogg, 1903; Palma 2010: 408.

Holotype ♀ in EMEC.

Type host: *Aptenodytes patagonicus* Miller, 1778.

New Zealand host: *Aptenodytes patagonicus* Miller, 1778.

Other hosts: None.

New Zealand locality: Macquarie Island.

Geographic distribution: Southern Hemisphere.

New Zealand references: Watson (1967); Gressitt (1970: 328); Wise (1977); Lowry *et al.* (1978); Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (1996b: 195); Palma & Horning (2002: 9, 17); Banks & Paterson (2004); Banks *et al.* (2006: 158); Palma (2010).

Other significant references: Cummings (1916c: 172); Kéler (1960b: 177, figs 1–6); Eichler (1941a: 361, fig. 26); Clay & Moreby (1967); Price *et al*. (2003: 200); Mey (2011: 79, figs 7, 11, 14, 16, 18–19, 22–23, 25–28).

Remarks: A second species of *Nesiotinus* described by Mey (2011) based on a single female louse from a Subantarctic diving petrel (*Pelecanoides urinatrix exsul* Salvin, 1896) needs confirmation of both its identity and its host association.

Genus *Ornithobius* Denny, 1842

Ornithobius Denny, 1842. *Mon. Anopl. Brit.*: 183. Type species: *Ornithobius cygni* (Linnaeus, 1758) (by subsequent designation). As a subgenus of *Philopterus*.

Ornithobius bucephalus (Giebel, 1874)

Lipeurus bucephalus Giebel, 1874: 239.

Ornithobius bucephalus Giebel, 1874 [sic]; Harrison 1916: 128 (as junior synonym of *Ornithobius cygni* (Linnaeus, 1758)).

Ornithobius bucephalus (Giebel, 1874); Hopkins & Clay 1952: 253.

Ornithobius bucephalus bucephalus (Giebel, 1874); Timmermann 1962b: 136, fig. 5a.

Ornithobius bucephalus tribulis Timmermann, 1962b: 136, figs 1, 5b.

Ornithobius bucephalus (Giebel, 1874); Pilgrim & Palma 1982: 16.

Ornithobius bucephalus (Giebel, 1874); Murray *et al*. 1990: 1374.

Ornithobius bucephalus (Giebel, 1874); Arnold 2005: 159, figs 4, 12.

Ornithobius bucephalus (Giebel, 1874); Palma 2010: 408.

Holotype ♀, probably lost (Palma 1996b: 195).

Type host: *Cygnus olor* (J.F. Gmelin, 1789).

New Zealand host: *Cygnus olor* (J.F. Gmelin, 1789).

Other host: *Cygnus melancoryphus* (Molina, 1782).

New Zealand localities: WN, MC.

Geographic distribution: Eurasia; Africa; South America, New Zealand.

New Zealand references: Pilgrim & Palma (1982); Murray *et al*. (1990); Paterson *et al.* (1999: 219); Palma (2010).

Other significant references: Timmermann (1962b); Palma (1996b: 195); Price *et al*. (2003: 202); Arnold (2005).

Remarks: *Ornithobius bucephalus* was introduced to New Zealand with mute swans by human agency (Checklist Committee 2010: 32).

Ornithobius fuscus Le Souëf, 1902

Figs 135–136

Ornithobius fuscus Le Souëf, 1902b: 91.

Ornithobius fuscus Le Souëf, 1902; Hopkins & Clay 1952: 253.

Ornithobius fuscus Le Souëf, 1902; Timmermann 1962b: 137, figs 4, 5c.

Ornithobius fuscus Le Souëf, 1902; Pilgrim & Palma 1982: 16.

Ornithobius fuscus Le Souëf, 1902; Murray *et al*. 1990: 1374.

Ornithobius fuscus Le Souëf, 1902; Arnold 2005: 162, figs 7, 15, 23.

Ornithobius fuscus Le Souëf, 1902; Palma 2010: 408.

Holotype ♀, probably lost (Palma 1996b: 196).

Type host: *Cygnus atratus* (Latham, 1790).

New Zealand host: *Cygnus atratus* (Latham, 1790).

Other hosts: none.

New Zealand localities: AK, WO, WA, WN, SD, MB, NC, MC, SC.

Geographic distribution: Australasia.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990); Arnold (2005: 163); Palma (2010).

Other significant references: Timmermann (1962b); Green & Palma (1991: 16, 29); Palma (1996b: 196); Price *et al*. (2003: 202).

Remarks: The population of black swans living in New Zealand is probably the result of a mixture of self-introduced birds and others introduced by human agency (Checklist Committee 2010: 33). Therefore, it is not possible to determine if *Ornithobius fuscus* is a native or an introduced species.

Ornithobius goniopleurus (Denny, 1842)

Philopterus (*Ornithobius*) *gonioplurus* [sic] Denny, 1842: 60, 184, pl. 23: fig. 2.
Ornithobius goniopleurus Denny, 1842 [sic]; Harrison 1916: 129. Emendation.
Ornithobius goniopleurus Denny, 1842 [sic]; Hopkins & Clay 1952: 253.
Ornithobius goniopleurus Denny, 1842 [sic]; Pilgrim & Palma 1982: 16.
Ornithobius goniopleurus Denny, 1842 [sic]; Murray *et al*. 1990: 1374.
Ornithobius goniopleurus Denny, 1842 [sic]; Arnold 2005: 163, figs 1, 3, 8, 16, 24–25.
Ornithobius goniopleurus Denny, 1842 [sic]; Palma 2010: 408.

Syntypes ♂♀ in NHML (Vincent S. Smith pers. comm. December 2014).

Type host: *Branta canadensis* (Linnaeus, 1758).

New Zealand host: *Branta canadensis maxima* Delacour, 1951.

Other hosts: *Anser rossii* Cassin, 1861; *Branta canadensis hutchinsii* (Richardson, 1832); *Branta leucopsis* (Bechstein, 1803).

New Zealand localities: BP, MC.

Geographic distribution: North America; Europe; north-east Asia; New Zealand.

New Zealand references: Pilgrim & Palma (1982); Murray *et al*. (1990); Paterson *et al.* (1999: 219); Palma (2010).

Other significant references: Séguy (1944: 336, figs 502–504); Balát (1974: 3, 5, figs 1d, 2b, 3c, 4b); Price *et al*. (2003: 202); Arnold (2005).

Remarks: *Ornithobius goniopleurus* was introduced to New Zealand with Canada geese by human agency (Checklist Committee 2010: 36). Records of this louse species from *Anas strepera* Linnaeus, 1758 and *Cygnus atratus* in Arnold (2005: 164) are regarded as stragglers or contaminants.

Denny (1842: 183) clearly regarded *Ornithobius* as a subgenus of *Philopterus*. However, subsequent authors ignored that fact and did not add parentheses around author and date when *Ornithobius* was used at the generic level.

Genus *Oxylipeurus* Mjöberg, 1910

Oxylipeurus Mjöberg, 1910a. *Arkiv Zool. 6*(13): 91. Type species: *Lipeurus inaequalis* Piaget, 1880 = *Oxylipeurus inaequalis* (Piaget, 1880) (by original designation).

Epicolinus Carriker, 1945a. *Rev. Bras. Entomol. 5*(1): 104. Type species: *Lipeurus clavatus* McGregor, 1917 = *Oxylipeurus clavatus* (McGregor, 1917) (by original designation).

Oxylipeurus clavatus (McGregor, 1917)

Lipeurus clavatus McGregor, 1917: 115, pl. 7: fig. 3
Oxylipeurus clavatus (McGregor, 1917); Clay 1938: 168, pl. 9: fig. 5.
Epicolinus clavatus (McGregor, 1917); Carriker 1945a: 105, figs 30–34.
Oxylipeurus clavatus (McGregor, 1917); Hopkins & Clay 1952: 256.
Epicolinus clavatus (McGregor, 1917); Kéler 1958b: 319, 321, figs 9–10.
Oxylipeurus clavatus (McGregor, 1917); Pilgrim & Palma 1982: 18.
Oxylipeurus clavatus (McGregor, 1917); Palma 2010: 408.

Holotype ♀ in USNM.
Type host: *Colinus virginianus texanus* (Lawrence, 1853).
New Zealand host: *Colinus virginianus taylori* Lincoln, 1915.
Other hosts: *Colinus virginianus virginianus* (Linnaeus, 1758); *Colinus virginianus floridanus* (Coues, 1872).
New Zealand locality: WN.
Geographic distribution: Central and North America.
New Zealand references: Pilgrim & Palma (1982); Palma (2010).
Other significant references: Clay (1938); Carriker (1945a); Kéler (1958b); Forrester *et al*. (1995: 22); Price *et al*. (2003: 203).
Remarks: *Oxylipeurus clavatus* was introduced to New Zealand with its host by human agency, but *Colinus virginianus* appears to have died out in New Zealand (Checklist Committee 2010: 349).

***Oxylipeurus ellipticus* (Kéler, 1958)**

Epicolinus ellipticus Kéler, 1958b: 322, figs 55–56.
Oxylipeurus ellipticus (Kéler, 1958); Pilgrim & Palma 1982: 18.
Oxylipeurus ellipticus (Kéler, 1958); Murray *et al.* 1993: 960.
Oxylipeurus ellipticus (Kéler, 1958); Palma 2010: 408.

Holotype ♂ in NHML.
Type host: *Callipepla gambelii* (Gambel, 1843).
New Zealand host: *Callipepla californica brunnescens* (Ridgway, 1884).
Other hosts: None.
New Zealand localities: AK, BP, SD, MB, NN, NC, MC, SC, CO, DN.
Geographic distribution: North & South America; Europe; Australasia, Hawaiian Islands.
New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1993); Galloway (2005: 17); Palma (2010).
Other significant references: Price *et al*. (2003: 203).
Remarks: *Oxylipeurus ellipticus* was introduced to New Zealand with California quails by human agency (Checklist Committee 2010: 25).

***Oxylipeurus mesopelios colchicus* Clay, 1938**

Oxylipeurus mesopelios colchicus Clay, 1938: 177, pl. 11: fig. 3.
Oxylipeurus colchicus Clay, 1938; Hopkins & Clay 1952: 256.
Oxylipeurus mesopelios (ex *Phasianus colchicus*); Kéler 1958b: 327, 331, figs 3, 32.
Oxylipeurus mesopelios colchicus Clay, 1938; Pilgrim & Palma 1982: 18.
Oxylipeurus mesopelios colchicus Clay, 1938; Murray *et al.* 1993: 961.
Oxylipeurus colchicus Clay, 1938; Price *et al*. 2003: 203.
Oxylipeurus mesopelios colchicus Clay, 1938; Palma 2010: 408.

Holotype ♂ in NHML.
Type host: *Phasianus colchicus* Linnaeus, 1758.
New Zealand host: *Phasianus colchicus* Linnaeus, 1758.
Other hosts: None.
New Zealand localities: RI, WI, WN.
Geographic distribution: Eurasia; Australasia.
New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1993); Paterson *et al.* (1999: 219); Palma (2010).
Other significant references: Kéler (1958b); Modrzejewska & Złotorzycka (1987: 665, fig. 6); Kopociński *et al*. (1998: 82); Price *et al*. (2003).
Remarks: *Oxylipeurus mesopelios colchicus* was introduced to New Zealand and other countries with common pheasants by human agency (Checklist Committee 2010: 28). In agreement with Clay (1938: 177) and contrary to Price *et al.* (2003: 203), I regard this louse taxon as a subspecies.

***Oxylipeurus polytrapezius polytrapezius* (Burmeister, 1838)**

Figs 137–138

Lipeurus polytrapezius Burmeister, 1838a: 434.

Oxylipeurus polytrapezius polytrapezius (Burmeister, 1838); Clay 1938: 181, figs 37a,c, 39b, pl. 12: fig. 4.

Lipeurus (*Oxylipeurus*) *polytrapezius* (Nitzsch, 1818) [sic]; Séguy 1944: 189, figs 272–274.

Oxylipeurus polytrapezius (Burmeister, 1838); Hopkins & Clay 1952: 259.

Oxylipeurus polytrapezius (Burmeister, 1838); Kéler 1958b: 327, 330, figs 35–36, 47–49.

Oxylipeurus polytrapezius polytrapezius (Burmeister, 1838); Pilgrim & Palma 1982: 18.

Oxylipeurus p. polytrapezius (Burmeister, 1838); Murray *et al.* 1993: 960.

Oxylipeurus polytrapezius polytrapezius (Burmeister, 1838); Palma 2010: 408.

Status, sex and repository of types unknown, presumed lost. See Clay (1949a: 1) and Palma & Pilgrim (1984: 150).

Type host: *Meleagris gallopavo* Linnaeus, 1758.

New Zealand host: *Meleagris gallopavo* Linnaeus, 1758.

Other hosts: None.

New Zealand localities: WO, HB, WA, WN.

Geographic distribution: North America; Australasia.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1993); Paterson *et al.* (1999: 220); Palma (2010).

Other significant references: Clay (1938); Séguy (1944); Emerson (1962: 201, figs 10–12); Forrester *et al*. (1995: 21); Palma (1996b: 196); Price *et al*. (2003: 204); Martín-Mateo (2009: 76).

Remarks: *Oxylipeurus polytrapezius polytrapezius* was introduced to New Zealand and other countries with turkeys by human agency (Checklist Committee 2010: 28). In agreement with Clay (1938: 181) and contrary to Price *et al.* (2003: 204), I regard this louse taxon as a subspecies.

Genus *Paraclisis* Timmermann, 1965

Paraclisis Timmermann, 1965. *Abhandl. Verhandl. Naturwiss. Ver. Hamburg*, *N.F. 8* (*Supplement*): 96. Type species: *Pediculus diomedeae* J.C. Fabricius, 1775 = *Paraclisis diomedeae* (J.C. Fabricius, 1775) (by original designation).

"*Harrisoniella* Kéler, 1956": 521 (not *Harrisoniella* Bedford, 1930) See Clay & Hopkins (1961); I.C.Z.N. (1963).

***Paraclisis diomedeae* (J.C. Fabricius, 1775)**

Pediculus diomedeae J.C. Fabricius, 1775: 808.

Ricinus diomedeae (Linnaeus, 1758); Latreille 1804: 107.

Lipeurus lepturus Enderlein, 1908: 453, figs 200–202, 209.

Esthiopterum diomedeae J.C. Fabricius, 1775 [sic]; Harrison 1916: 133.

Perineus diomedeae (J.C. Fabricius, 1775); Clay 1940a: 299, figs, 1–2, 4a, 5a, 6a.

Perineus diomedeae diomedeae (J.C. Fabricius, 1775); Eichler, 1949b: 340.

Perineus diomedeae enderleini Eichler, 1949b: 342, figs 8–10.

Perineus diomedeae (J.C. Fabricius, 1775); Hopkins & Clay 1952: 277.

Perineus enderleini Eichler, 1949; Hopkins & Clay 1952: 277.

Perineus diomedeae lepturus (Enderlein, 1908); Séguy 1953: 567, fig. 16.

Harrisoniella diomedeae (J.C. Fabricius, 1775); Kéler 1956: 522, figs 1–3a.

Harrisoniella diomedeae (J.C. Fabricius, 1775); Kéler 1957a: 285, figs 1d, 2a, 3, 9.

Perineus (s. l.) *diomedeae* (J.C. Fabricius, 1775); Clay 1964a: 231, fig. 1.

Perineus (s. l.) sp.; Clay 1964a: 231.

Perineus diomedeae (J.C. Fabricius, 1775); Gressitt 1964: 538.

Paraclisis diomedeae (J.C. Fabricius, 1775); Timmermann 1965: 100, figs 32, 33a, 34a, 37a, 38, 39a, pl. 5: figs 1–2.

Paraclisis diomedeae (J.C. Fabricius, 1775); Clay & Moreby 1967: 162, 168, figs 117–119, 122, 143.

Paraclisis diomedeae (J.C. Fabricius, 1775); Wise 1977: 62.

Paraclisis diomedeae (J.C. Fabricius, 1775); Horning *et al.* 1980: 6, 9.

Paraclisis diomedeae (J.C. Fabricius, 1775); Pilgrim & Palma 1982: 6.

Paraclisis diomedeae (J.C. Fabricius, 1775) *s. l.*; Pilgrim & Palma 1982: 7.

Paraclisis diomedeae (J.C. Fabricius, 1775); Palma 2010: 408.

Neotype ♂ in NHML (Clay 1940a: 302).

Type host: "In Brasiliae diomedeis" = *Thalassarche melanophris* (Temminck, 1828) (see Clay 1940a: 299).

New Zealand hosts: *Thalassarche chlororhynchos* (J.F. Gmelin, 1789); *Thalassarche chrysostoma* (J.R. Forster, 1785); *Thalassarche melanophris* (Temminck, 1828); *Thalassarche impavida* Mathews, 1912; *Thalassarche bulleri bulleri* (Rothschild, 1893); *Thalassarche bulleri platei* (Reichenow, 1898); *Thalassarche cauta steadi* Falla, 1933; *Thalassarche eremita* Murphy, 1930; *Thalassarche salvini* (Rothschild, 1893); *Phoebetria palpebrata* (J.R. Forster, 1785).

Other hosts: *Thalassarche cauta cauta* (Gould, 1841); *Phoebetria fusca* (Hilsenberg, 1822).

New Zealand localities: ND, AK, BP, GB, HB, TK, WI, WA, WN, NN, KA, NC, MC, SC, WD, CO, DN, SL, SI, CH, BO, SN, AN, AU, CA, Macquarie Island.

Geographic distribution: Atlantic, Pacific, Indian and Southern Oceans.

New Zealand references: Clay (1964a); Gressitt (1964); Watson (1967: 73); Clay & Moreby (1970: 217); Gressitt (1970: 328); Wise (1977); Horning *et al.* (1980); Pilgrim & Palma (1982); Murray *et al.* (1990: 1368–1369); Palma (1996b: 197); Marris (2000: 187); Palma (2001: 67, fig. 6); Palma & Horning (2002: 10, 15); Page *et al.* (2004: 641, 649); Palma (2010).

Other significant references: Clay (1940a); Clay & Hopkins (1951: 34); Séguy (1953: 565, figs 11–15); Timmermann (1965); Clay & Moreby (1967); Green & Palma (1991: 16, 25); Price *et al*. (2003: 205); Palma & Jensen (2005: 56, 60); Hänel & Palma (2007: 113, 126, 129).

Remarks: Pilgrim & Palma (1982: 7) regarded the population of *Paraclisis diomedeae* from *Phoebetria palpebrata* as somewhat different from that of the type host, and qualified it as *sensu lato*; however, my examination of more samples shows that making such difference is not warranted. *Thalassarche chlororhynchos* is a new host record for *P. diomedeae* in New Zealand (voucher specimens in MONZ). *Paraclisis diomedeae* is a "wing" louse species and the most prevalent among all lice parasitic on small albatrosses.

***Paraclisis hyalina* (Neumann, 1911)**

Lipeurus hyalinus Neumann, 1911: 21, pl. 2: figs 1a,d.
Esthiopterum hyalinum Neumann, 1911 [sic]; Harrison 1916: 136.
Perineus hyalinus (Neumann, 1911); Clay 1940a: 305, figs 3c, 4b, 5d, 6c.
Perineus hyalinus (Neumann, 1911); Hopkins & Clay 1952: 277.
Harrisoniella hyalina (Neumann, 1911); Kéler 1957a: 290, figs 2e, 5–7.
Harrisoniella hyalina (Neumann, 1911); Kéler 1958a: 380.
Paraclisis hyalina (Neumann, 1911); Timmermann 1965: 103, figs 33e, 34c, 37b, 39d, 40, pl. 6: fig. 1.
Paraclisis hyalina (Neumann, 1911); Clay & Moreby 1967: 162, 168, figs 85, 120, 124–125, 144.
Perineus hyalinus; Watson 1967: 73.
Paraclisis hyalina (Neumann, 1911); Wise 1977: 62.
Paraclisis hyalina (Neumann, 1911); Pilgrim & Palma 1982: 5.
Paraclisis hyalina (Neumann, 1911); Palma 2010: 408.

Syntypes ♂♀, repository unknown (Palma 1996b: 197).

Type host: *Diomedea exulans* Linnaeus, 1758.

New Zealand hosts: *Diomedea exulans* Linnaeus, 1758; *Diomedea antipodensis antipodensis* Robertson & Warham, 1992; *Diomedea antipodensis gibsoni* Robertson & Warham, 1992; *Diomedea epomophora* Lesson, 1825; *Diomedea sanfordi* Murphy, 1917.

Other host: *Diomedea dabbenena* Mathews, 1929.

New Zealand localities: HB, WA, WN, SD, MB, NC, MC, SC, WD, AN, AU, CA, Macquarie Island.

Geographic distribution: Southern Hemisphere.

New Zealand references: Kéler (1957a: 291); Kéler (1958a: 381); Watson (1967); Clay & Moreby (1970: 217); Gressitt (1970: 328); Wise (1977); Pilgrim & Palma (1982); Murray *et al*. (1990: 1368); Palma (1996b: 197); Marris (2000: 187); Palma & Horning (2002: 10, 15); Page *et al.* (2004: 641, 649); Palma (2010).

Other significant references: Clay (1940a); Timmermann (1965); Clay & Moreby (1967); Price *et al*. (2003: 205); Hänel & Palma (2007: 113, 126, 129).

Remarks: *Paraclisis hyalina* is a "wing" louse species, highly prevalent among the lice parasitic on large albatrosses.

***Paraclisis miriceps* (Kellogg & Kuwana, 1902)**

Figs 139–140

Lipeurus miriceps Kellogg & Kuwana, 1902: 480, pl. 30: fig. 4.

Esthiopterum miriceps Kellogg & Kuwana, 1902 [sic]; Harrison 1916: 138 (as junior synonym of *Esthiopterum giganticola* (Kellogg, 1896a)).

Perineus miriceps (Kellogg & Kuwana, 1902); Clay 1940a: 304, figs 3b, 5c, 6b.

Perineus miriceps (Kellogg & Kuwana, 1902); Hopkins & Clay 1952: 278.

Harrisoniella miriceps (Kellogg & Kuwana, 1902); Kéler 1957a: 290, figs 2d, 4.

Paraclisis miriceps (Kellogg & Kuwana, 1902); Timmermann 1965: 103, figs 33d, 34b, 36, 39c.

Paraclisis miriceps (Kellogg & Kuwana, 1902) *s. l.*; Pilgrim & Palma 1982: 7.

Paraclisis miriceps (Kellogg & Kuwana, 1902); Price *et al.* 2003: 205.

Paraclisis miriceps (Kellogg & Kuwana, 1902); Palma 2010: 408.

Holotype ♂, presumed lost. See Palma & Peck (2013: 41).

Type host: "*Geospiza fuliginosa*", in error (see Hopkins & Clay 1952: 278).

New Zealand host: *Macronectes giganteus* (J.F. Gmelin, 1789).

Other host: *Phoebastria irrorata* (Salvin, 1883).

New Zealand localities: TK, NN, MC.

Geographic distribution: Pacific Ocean.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990: 1369); Paterson *et al.* (1999: 222); Palma (2010).

Other significant references: Clay (1940a); Kéler (1957a); Timmermann (1965); Price *et al*. (2003); Page *et al.* (2004: 641, 649); Palma & Peck (2013: 41).

Remarks: The primary host of *P. miriceps* is *Phoebastria irrorata*, the Galápagos albatross (Palma & Peck 2013: 41). Although *Macronectes giganteus* is regularly parasitised by *Paraclisis obscura* (see below), there is a population of *P. miriceps* also living on *M. giganteus*, but with a much reduced prevalence of infestation. Pilgrim & Palma (1982: 7) qualified that population as *sensu lato* due to the absence of comparison material from the primary host; however, my examination of extensive samples from *Phoebastria irrorata* shows that that qualification is not warranted.

***Paraclisis obscura* (Rudow, 1869)**

Lipeurus obscurus Rudow, 1869b: 30.

Esthiopterum obscurum Rudow, 1870 [sic]; Harrison 1916: 139.

Perineus obscurus Rudow, 1870 [sic]; Harrison 1937: 29.

Perineus obscurus (Rudow, 1869); Clay 1940a: 307, figs, 3d, 4d, 5c, 6d.

Perineus obscurus (Rudow, 1869); Hopkins & Clay 1952: 278.

Harrisoniella obscura (Rudow, 1869); Kéler 1957a: 281, figs 1a,b,c, 2b.

Perineus (s. l.) *obscurus* (Rudow, 1869); Clay 1964a: 231.

Perineus obscurus (Rudow, 1869); Gressitt 1964: 538.

Paraclisis obscura (Rudow, 1869); Timmermann 1965: 100, figs 33b, 34d, 35, 37d, 39e, pl. 5: figs 3–4.

Paraclisis obscura (Rudow, 1869); Clay & Moreby 1967: 162, 168, figs 121, 123, 127, 153.

Paraclisis obscura (Rudow, 1869); Wise 1977: 62.

Paraclisis obscura (Rudow, 1869); Horning *et al.* 1980: 6, 9.

Paraclisis obscura (Rudow, 1869); Pilgrim & Palma 1982: 6.

Paraclisis obscura (Rudow, 1869); Murray *et al.* 1990: 1369.

Paraclisis obscura (Rudow, 1869); Palma 2010: 408.

Neotype ♂ in NHML (Clay 1940a: 308).

Type host: *Macronectes giganteus* (J.F. Gmelin, 1789).

New Zealand hosts: *Macronectes giganteus* (J.F. Gmelin, 1789); *Macronectes halli* Mathews, 1912.

Other hosts: None.

New Zealand localities: ND, BP, WO, TK, WA, WN, NN, KA, NC, MC, SC, WD, CH, SN, AN, Macquarie Island.

Geographic distribution: Southern Hemisphere.

New Zealand references: Clay (1964a); Gressitt (1964); Watson (1967: 73); Clay & Moreby (1970: 217); Gressitt (1970: 328); Wise (1977); Lowry *et al.* (1978: 138); Horning *et al.* (1980); Pilgrim & Palma (1982); Murray *et al.* (1990);

Palma (1996b: 197); Paterson *et al.* (1999: 222); Marris (2000: 187); Palma & Horning (2002: 10, 16); Palma (2010).

Other significant references: Clay (1940a); Kéler (1957a); Timmermann (1965); Clay & Moreby (1967); Green & Palma (1991: 16, 25); Price *et al*. (2003: 205); Page *et al.* (2004: 641, 649); Hänel & Palma (2007: 113, 126, 129).

Remarks: *Paraclisis obscura* is a "wing" louse species, highly prevalent among the lice parasitic on giant petrels.

Genus *Pectinopygus* Mjöberg, 1910

Pectinopygus Mjöberg, 1910a. *Arkiv Zool.* 6(13): 95. Type species *Lipeurus pullatus* Nitzsch [*in* Giebel], 1866 = *Pectinopygus bassani* (O. Fabricius, 1780) (by original designation).

Epipelicanus Thompson, 1935b. *Ann. Mag. Nat. Hist.* (Ser. 10) *16*: 149. Type species: *Lipeurus forficulatus* Nitzsch [*in* Giebel], 1866 = *Pectinopygus forficulatus* (Nitzsch [*in* Giebel], 1866) (by original designation).

Epifregata Thompson, 1935b. *Ann. Mag. Nat. Hist.* (Ser. 10) *16*: 150. Type species: *Lipeurus gracilicornis* Piaget, 1880 = *Pectinopygus gracilicornis* (Piaget, 1880) (by original designation).

Philichthyophaga Thompson, 1935b. *Ann. Mag. Nat. Hist.* (Ser. 10) *16*: 150. Type species: *Lipeurus brevicornis* (Denny, 1842) = *Pectinopygus brevicornis* (Denny, 1842) (by original designation).

Pectinopygus annulatus (Piaget, 1880)

Lipeurus annulatus Piaget, 1880: 340, pl. 27: fig. 10.

Lipeurus potens Kellogg & Kuwana, 1902: 477, pl. 30: fig. 1.

Esthiopterum annulatum Piaget, 1880 [sic]; Harrison 1916: 130.

Pectinopygus jamaicensis Thompson, 1948b: 348, figs 1–8.

Pectinopygus annulatus (Piaget, 1880); Hopkins & Clay 1952: 268.

Pectinopygus potens (Kellogg & Kuwana, 1902); Hopkins & Clay 1952: 270.

Pectinopygus annulatus (Piaget, 1880); Watt 1971: 236, 243.

Pectinopygus annulatus (Piaget, 1880); Pilgrim & Palma 1982: 14.

Pectinopygus annulatus (Piaget, 1880); Murray *et al*. 1990: 1372.

Pectinopygus annulatus (Piaget, 1880); Palma 2010: 408.

Lectotype ♂ in NHML (Clay 1973: 219).

Type host: *Sula leucogaster* (Boddaert, 1783).

New Zealand hosts: *Sula leucogaster plotus* (J.R. Forster, 1844); *Sula dactylatra tasmani* van Tets, *et al.* 1988.

Other hosts: *Sula variegata* (Tschudi, 1843); *Sula granti* Rothschild, 1902.

New Zealand localities: ND, WO, WD, KE.

Geographic distribution: Tropical and subtropical regions of the Atlantic, Indian and Pacific Oceans.

New Zealand references: Watt (1971); Wise (1977: 62); Pilgrim & Palma (1982); Murray *et al*. (1990); Palma (1999: 378); Palma (2010).

Other significant references: Thompson (1948b); Clay (1964b: 15, fig. 1); Amerson & Emerson (1971: 10, 24); Ward & Downey (1973: 394); Clay (1973: 219); Moreby (1976: 92); Forrester *et al.* (1995: 6); Palma (1996b: 198); Price *et al*. (2003: 207); Hughes *et al*. (2007: 238, 249); Palma & Peck (2013: 41); Rivera-Parra *et al*. (2014: 571).

Remarks: *Pectinopygus annulatus* is a "wing" louse species, highly prevalent among the lice parasitic on boobies.

Pectinopygus australis Thompson, 1948

Pectinopygus (*Epipelicanus*) *australis* Thompson, 1948a: 323, figs 10–15, pl. 10: figs 1–2.

Pectinopygus australis Thompson, 1948; Pilgrim & Palma 1982: 14.

Pectinopygus australis Thompson, 1948; Murray *et al.* 1990: 1372.

Pectinopygus australis Thompson, 1948; Price *et al.* 2003: 207.

Pectinopygus australis Thompson, 1948; Palma 2010: 408.

Holotype ♀ in NHML (Palma 1996b: 198, in error as "♂").

Type host: *Pelecanus conspicillatus* Temminck, 1824.

New Zealand host: *Pelecanus conspicillatus* Temminck, 1824.

Other hosts: None.

New Zealand locality: SL.

Geographic distribution: Australasia.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (2010).

Other significant references: Moreby (1976: 91); Green & Palma (1991: 16, 28); Palma (1996b: 198); Price *et al*. (2003).

Remarks: *Pelecanus conspicillatus* breeds in Australia and is a straggler to New Zealand (Checklist Committee (2010: 138), with only one record of *Pectinopygus australis* from this country.

Pectinopygus bassani (O. Fabricius, 1780)

Pediculus bassani O. Fabricius, 1780: 218.
Pectinopygus bassanae [sic] O. Fabricius, 1780 [sic]; Harrison 1916: 143.
Pectinopygus (*Pectinopygus*) *bassanae* [sic] O. Fabricius, 1780 [sic]; Harrison 1937: 32.
Pectinopygus (*Pectinopygus*) *bassani* (O. Fabricius, 1780); Thompson 1940a: 372, figs 1–9, pl. 8.
Pectinopygus (*Pectinopygus*) *bassani serrator* Thompson, 1940a: 381.
Pectinopygus (*Pectinopygus*) *bassanae* [sic] serrator Thompson, 1940; Thompson 1940b: 498.
Pectinopygus (*Pectinopygus*) *bassanus* [sic] (O. Fabricius, 1780); Séguy 1944: 379, figs 557–562.
Pectinopygus bassani (O. Fabricius, 1780); Hopkins & Clay 1952: 268.
Pectinopygus bassani (O. Fabricius, 1780); Pilgrim & Palma 1982: 14.
Pectinopygus bassani (O. Fabricius, 1780); Murray *et al*. 1990: 1372.
Pectinopygus bassani (O. Fabricius, 1780); Palma 2010: 408.

Neotype ♂ in NHML (Thompson 1940a: 380). Syntypes ♂♀ of *Pectinopygus* (*Pectinopygus*) *bassani serrator* in NHML.

Type host: *Morus bassanus* (Linnaeus, 1758).

New Zealand host: *Morus serrator* (G.R. Gray, 1843).

Other host: *Morus capensis* (Lichtenstein, 1823).

New Zealand localities: ND, AK, CL, WO, BP, HB, TK, WN, SD, MB, NC, MC, SC, CO, DN.

Geographic distribution: North Atlantic Ocean; Indian Ocean; Pacific Ocean; eastern North America; western Europe; southern Africa; Australasia.

New Zealand references: Pilgrim & Palma (1982); Murray *et al*. (1990); Hughes *et al.* (2007: 238, 249); Palma (2010).

Other significant references: Harrison (1937); Thompson (1940a; 1940b); Séguy (1944); Clay & Hopkins (1954: 247); Clay (1973: 217); Green & Palma (1991: 16, 28); Butler & O'Connor (1994: 455); Forrester *et al.* (1995: 7); Martín-Mateo (1992a: 43, figs 10–16); Palma (1996b: 198); Price *et al*. (2003: 207); Martín-Mateo (2009: 99, fig. 24).

Remarks: *Pectinopygus bassani* is a "wing" louse species, highly prevalent among the lice parasitic on gannets.

Pectinopygus carunculatus Timmermann, 1964

Pectinopygus carunculatus Timmermann, 1964: 280, fig. 6, pl. 9: figs 2–3.
Pectinopygus carunculatus Timmermann, 1964; Wise 1977: 62.
Pectinopygus carunculatus Timmermann, 1964; Pilgrim & Palma 1982: 15.
Pectinopygus carunculatus Timmermann, 1964; Murray *et al.* 1990: 1373.
Pectinopygus carunculatus Timmermann, 1964; Palma 2010: 408.

Holotype in NHML.

Type host: *Leucocarbo colensoi* (Buller, 1888).

New Zealand host: *Leucocarbo colensoi* (Buller, 1888).

Other hosts: None.

New Zealand locality: AU.

Geographic distribution: New Zealand.

New Zealand references: Timmermann (1964); Pilgrim (1970: 74); Weidner (1977: 102); Pilgrim & Palma (1982); Wise (1977); Murray *et al.*(1990); Palma (2010).

Other significant references: Price *et al*. (2003: 208).

Remarks: *Pectinopygus carunculatus* is an endemic but infrequently collected species. Although Timmermann (1964: 280) regarded the population of *Pectinopygus* from *Leucocarbo campbelli* as conspecific with that from

Leucocarbo colensoi, I regard the former —together with other *Pectinopygus* populations from other species of *Leucocarbo*— as *P. carunculatus sensu lato* (see below).

Pectinopygus carunculatus* Timmermann, 1964 *sensu lato

Pectinopygus spp.; Gressitt 1964: 539.
Pectinopygus carunculatus Timmermann, 1964: 280. In part.
Pectinopygus sp.; Pilgrim & Palma 1982: 14–15.
Pectinopygus carunculatus Timmermann, 1964 *s. l.*; Pilgrim & Palma 1982: 15.
Pectinopygus sp.; Murray *et al.* 1990: 1373.

New Zealand hosts: *Leucocarbo carunculatus* (J.F. Gmelin, 1789); *Leucocarbo chalconotus* (G.R. Gray, 1845); *Leucocarbo onslowi* Forbes, 1893; *Leucocarbo ranfurlyi* (Ogilvie-Grant, 1901); *Leucocarbo campbelli* (Filhol, 1888).

Other hosts: None.

New Zealand localities: SD, MB, KA, SC, DN, SL, CH, BO, CA.

Geographic distribution: New Zealand.

New Zealand references: Gressitt (1964); Timmermann (1964); Pilgrim & Palma (1982); Murray *et al.* (1990); Paterson *et al.* (1999: 222).

Other significant references: None.

Remarks: The endemic populations of *Pectinopygus* from the hosts listed above are morphologically close to *Pectinopygus carunculatus sensu stricto*. However, they exhibit subtle but consistent differences which may warrant treating them as separate taxa. Detailed morphological and molecular studies of all these populations are needed to determine their correct taxonomic position.

***Pectinopygus dispar* (Piaget, 1880)**

Nirmus dispar Piaget, 1880: 174, pl. 14: fig. 7.
Lipeurus subsetosus Piaget, 1880: 336, pl. 27: fig. 5.
Esthiopterum dispar Piaget, 1880 [sic]; Harrison 1916: 133 (as junior synonym of *Esthiopterum acutifrons* (Rudow, 1869)).
Pectinopygus dispar (Piaget, 1880); Hopkins & Clay 1952: 269.
Pectinopygus subsetosus (Piaget, 1880); Hopkins & Clay 1952: 270.
Pectinopygus dispar (Piaget, 1880); Clay 1973: 219, fig. 6, pl. 1: fig. 1, pl. 2: fig. 7, pl. 3: fig. 20.
Pectinopygus subsetosus (Piaget, 1880); Moreby 1976: 92.
Pectinopygus dispar (Piaget, 1880); Horning *et al.* 1980: 6, 11.
Pectinopygus dispar (Piaget, 1880); Pilgrim & Palma 1982: 14.
Pectinopygus dispar (Piaget, 1880); Murray *et al.* 1990: 1373.
Pectinopygus dispar (Piaget, 1880); Palma 2010: 408.

Lectotype ♀ in NHML (Clay 1973: 219).

Type host: "*Phalacrocorax sulcirostris*", in error (see Clay 1973: 220).

New Zealand host: *Phalacrocorax melanoleucos brevirostris* Gould, 1837.

Other hosts: *Phalacrocorax melanoleucos melanoleucos* (Vieillot, 1817); *Phalacrocorax melanoleucos brevicauda* Mayr, 1931.

New Zealand localities: AK, BP, WO, WA, WN, NC, MC, SC, CO, DN, SN.

Geographic distribution: Southeast Asia; Australasia; western Pacific Ocean.

New Zealand references: Clay (1958c: 145); Clay (1973: 207); Horning *et al.* (1980); Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (2010).

Other significant references: Moreby (1976); Green & Palma (1991: 16, 28); Palma (1996b: 199); Price *et al.* (2003: 208).

Remarks: *Pectinopygus dispar* is a "wing" louse species, frequently found on the New Zealand little shag.

***Pectinopygus garbei* (Pessôa & Guimarães, 1935)**

Naubates (*Micronaubates*) *garbei* Pessôa & Guimarães, 1935b: 109, figs 6–11.
Naubates garbei Pessôa & Guimarães, 1935; Thompson 1938b: 486.

Pectinopygus (*Pectinopygus*) *garbei* (Pessôa & Guimarães, 1935); Guimarães 1945: 184, figs 6–13.
Pectinopygus garbei (Pessôa & Guimarães, 1935); Hopkins & Clay 1952: 269.
Pectinopygus garbei (Pessôa & Guimarães, 1935); Pilgrim & Palma 1982: 14.
Pectinopygus garbei (Pessôa & Guimarães, 1935); Murray *et al.* 1990: 1372.
Pectinopygus garbei (Pessôa & Guimarães, 1935); Palma 2010: 408.

Holotype ♂ in Laboratório de Parasitologia, Faculdade de Medicina da Universidade de São Paulo, Brazil (Michel P. Valim pers. comm. December 2014).

Type host: *Sula leucogaster leucogaster* (Boddaert, 1783) (see Guimarães 1945: 184).

New Zealand host: *Sula leucogaster plotus* (J.R. Forster, 1844).

Other host: *Sula sula* (Linnaeus, 1766).

New Zealand locality: KE.

Geographic distribution: Tropical Central and South America; Africa; Asia; Australasia.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (2010).

Other significant references: Clay (1940a: 310); Guimarães (1945); Clay (1964b: 15, fig. 1); Clay (1976b: 540); Palma (1996b: 199); Price *et al*. (2003: 208); Silva *et al*. (2014: 942).

Remarks: Palma (1996b: 199) incorrectly stated "MZUSP" as the repository of the holotype of *Pectinopygus garbei*, but only paratypes are held at that museum (Valim 2009: 208). *Sula leucogaster plotus* is a vagrant to New Zealand (Checklist Committee 2010: 141), with a single record of *Pectinopygus garbei* from this country.

Pectinopygus gyricornis (Denny, 1842)

Philopterus (*Lipeurus*) *gyricornis* Denny, 1842: 58, 167, pl. 15: fig. 1.
Esthiopterum gyricorne Denny, 1842 [sic]; Harrison 1916: 135.
Pectinopygus (*Philichthyophaga*) *gyricornis* (Denny, 1842); Séguy 1944: 375, fig. 553.
Pectinopygus gyricornis (Denny, 1842); Hopkins & Clay 1952: 269.
Pectinopygus gyricornis (Denny, 1842); Timmermann 1964: 273, fig. 1.
Pectinopygus gyricornis (Denny, 1842); Horning *et al.* 1980: 6, 11.
Pectinopygus gyricornis (Denny, 1842); Pilgrim & Palma 1982: 14.
Pectinopygus gyricornis (Denny, 1842); Murray *et al.* 1990: 1372.
Philichthyophaga gyricornis (Denny, 1842); Mey 1994: 27: figs 11–12.
Pectinopygus gyricornis (Denny, 1842); Palma 2010: 408.

Holotype ♂ in NHML (Clay 1973: 221).

Type host: "*Sterna hirundo*", in error (see Hopkins & Clay 1952: 269).

New Zealand host: *Phalacrocorax carbo novaehollandiae* Stephens, 1826.

Other hosts: *Phalacrocorax carbo carbo* (Linnaeus, 1758); *Phalacrocorax carbo sinensis* (Blumenbach, 1798).

New Zealand localities: WA, WN, SD, MB, NN, NC, MC, SC, CO, DN, SN.

Geographic distribution: Eurasia; Africa; North America; Australasia.

New Zealand references: Horning *et al.* (1980); Pilgrim & Palma (1982); Murray *et al.* (1990); Galloway (2005: 17); Palma (2010).

Other significant references: Séguy (1944); Brelih & Tovornik (1961: 104); Timmermann (1964); Clay (1973: 215, 221); Green & Palma (1991: 16, 28); Mey (1994); Butler & O'Connor (1994: 455); Palma (1996b: 200); Price *et al*. (2003: 208); Adam (2007: 174); Hughes *et al*. (2007: 238, 249).

Remarks: *Pectinopygus gyricornis* is a "wing" louse species, frequently found on all its hosts.

Pectinopygus punctatus Timmermann, 1964

Pectinopygus punctatus Timmermann, 1964: 277, fig. 5.
Pectinopygus punctatus Timmermann, 1964; Wise 1977: 62.
Pectinopygus punctatus Timmermann, 1964; Pilgrim & Palma 1982: 15.
Pectinopygus punctatus Timmermann, 1964 *s. l.*; Pilgrim & Palma 1982: 15.
Pectinopygus punctatus Timmermann, 1964; Murray *et al.* 1990: 1372.
Pectinopygus punctatus Timmermann, 1964; Palma 2010: 408.

Holotype ♂ in CMNZ (Nicholls *et al.* 1998: 30).

Type host: *Stictocarbo punctatus punctatus* (Sparrman, 1786).
New Zealand hosts: *Stictocarbo punctatus punctatus* (Sparrman, 1786); *Stictocarbo punctatus oliveri* Mathews, 1931.
Other hosts: None.
New Zealand localities: HB, WI, WN, KA, NN, MC, BR, DN.
Geographic distribution: New Zealand.
New Zealand references: Timmermann (1964); Pilgrim (1970: 75); Wise (1977); Pilgrim & Palma (1982); Murray *et al.* (1990); Nicholls *et al.* (1998: 30); Paterson *et al.* (1999: 223); Hughes *et al.* (2007: 238, 249); Palma (2010).
Other significant references: Clay (1973: 215); Price *et al*. (2003: 208).
Remarks: *Pectinopygus punctatus* is an endemic species, exclusively parasitic on spotted and blue shags. Pilgrim & Palma (1982: 15) regarded the population of *Pectinopygus punctatus* from *Stictocarbo punctatus oliveri* (as *Stictocarbo punctatus steadi*) as somewhat different from that of the type host, and qualified it as *sensu lato*; however, my examination of more samples shows that making such difference is not warranted.

***Pectinopygus setosus* (Piaget, 1880)**

Lipeurus setosus Piaget, 1880: 335, pl. 27: fig. 4.
Esthiopterum setosum Piaget, 1880 [sic]; Harrison 1916: 141.
Pectinopygus setosus (Piaget, 1880); Hopkins & Clay 1952: 270.
Pectinopygus setosus (Piaget, 1880); Timmermann 1964: 278.
Pectinopygus setosus (Piaget, 1880); Clay 1973: 215, 217, 221.
Pectinopygus setosus (Piaget, 1880); Pilgrim & Palma 1982: 14.
Pectinopygus setosus (Piaget, 1880); Murray *et al.* 1990: 1372.
Pectinopygus setosus (Piaget, 1880); Palma 2010: 408.

Lectotype ♂ in NHML (Clay 1973: 221).
Type host: *Phalacrocorax sulcirostris* (J.F. Brandt, 1837).
New Zealand host: *Phalacrocorax sulcirostris* (J.F. Brandt, 1837).
Other hosts: None
New Zealand localities: BP, HB, WA, WN.
Geographic distribution: Australasia; Indonesia.
New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990); Hughes *et al.* (2007: 238, 249); Palma (2010).
Other significant references: Kéler (1957c: fig. 22b); Timmermann (1964); Clay (1973); Green & Palma (1991: 16, 28); Palma (1996b: 200); Price *et al*. (2003: 208).
Remarks: *Pectinopygus setosus* is a frequently found "wing" louse species on all its hosts.

***Pectinopygus turbinatus* (Piaget, 1890)**

Oncophorus turbinatus Piaget, 1890a: 233, pl. 8: fig. 10.
Pectinopygus (*Philichthyophaga*) *macquariensis* Harrison, 1937: 34, fig. 6.
Pectinopygus macquariensis Harrison, 1937; Hopkins & Clay 1952: 269.
Pectinopygus turbinatus (Piaget, 1890); Hopkins & Clay 1952: 270.
Pectinopygus turbinatus (Piaget, 1890); Timmermann 1964: 280, fig. 7, pl. 9: fig. 4.
Pectinopygus turbinatus (Piaget, 1890); Clay & Moreby 1967: 162, 169, figs 78, 115.
Pectinopygus turbinatus (Piaget, 1890); Wise 1977: 62.
Pectinopygus turbinatus (Piaget, 1890); Pilgrim & Palma 1982: 15.
Pectinopygus turbinatus (Piaget, 1890); Murray *et al.* 1990: 1373.
Pectinopygus turbinatus (Piaget, 1890); Palma 2010: 408.

Holotype ♂ in NHML (Clay 1973: 222). Holotype ♀ of *Pectinopygus* (*Philichthyophaga*) *macquariensis* in AMSA (Palma 1996b: 200).
Type host: "*Mycteria senegalensis*", in error (see Hopkins & Clay 1952: 270; Clay 1973: 222).
New Zealand host: *Leucocarbo purpurascens* (J.F. Brandt, 1837).
Other hosts: *Leucocarbo atriceps* (King, 1828); *Leucocarbo albiventer* (Lesson, 1831).
New Zealand locality: Macquarie Island.
Geographic distribution: Pacific, Atlantic and Indian Oceans; South America; Antarctica.

New Zealand references: Harrison (1937); Watson (1967: 73); Gressitt (1970: 328); Wise (1977); Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (1996b: 200); Paterson *et al.* (1999: 222); Palma & Horning (2002: 10, 17); Palma (2010).

Other significant references: Timmermann (1964); Clay & Moreby (1967); Clay (1973: 217, 222); Price *et al*. (2003: 209).

Remarks: *Pectinopygus macquariensis* was described from the endemic Macquarie Island shag, *Leucocarbo purpurascens*, but later synonymised under *P. turbinatus* by Timmermann (1964: 280).

Pectinopygus varius Timmermann, 1964

Figs 141–142

Pectinopygus varius Timmermann, 1964: 273, fig. 2.
Pectinopygus varius Timmermann, 1964; Clay 1973: 215, fig. 2, pl. 2: figs 8–9, pl. 3: figs 13–14
Pectinopygus varius Timmermann, 1964; Wise 1977: 63.
Pectinopygus varius Timmermann, 1964; Pilgrim & Palma 1982: 14.
Pectinopygus varius Timmermann, 1964; Murray *et al.* 1990: 1372.
Pectinopygus varius Timmermann, 1964; Palma 2010: 408.

Holotype ♂ in CMNZ (Nicholls *et al.* 1998: 30).

Type host: *Phalacrocorax varius varius* (J.F. Gmelin, 1789).

New Zealand host: *Phalacrocorax varius varius* (J.F. Gmelin, 1789).

Other host: *Phalacrocorax varius hypoleucos* (J.F. Brandt, 1837).

New Zealand localities: ND, AK, CL, BP, GB, SD, MB, SI.

Geographic distribution: Australasia.

New Zealand references: Timmermann (1964); Pilgrim (1970: 75); Wise (1977); Pilgrim & Palma (1982); Murray *et al.* (1990); Nicholls *et al.* (1998: 30); Palma (2010).

Other significant references: Clay (1973); Palma (1996b: 201); Price *et al*. (2003: 209); Hughes *et al*. (2007: 238, 249).

Remarks: *Pectinopygus varius* is a "wing" louse species, frequently found on both subspecies of the pied shag.

Pectinopygus species

Pectinopygus sp.; Pilgrim & Palma 1982: 15.
Pectinopygus sp.; Murray *et al.* 1990: 1372.

New Zealand host: *Stictocarbo featherstoni* (Buller, 1873).

Other hosts: None.

New Zealand locality: CH.

Geographic distribution: Chatham Islands, New Zealand.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990).

Other significant references: None.

Remarks: At present, this endemic population of *Pectinopygus* is not identifiable because the available samples are inadequate.

Genus *Pelmatocerandra* Enderlein, 1908

Pelmatocerandra Enderlein, 1908. *Deutsche Südpolar-Exped. 10* (*Zoologie*) *2*: 449. Type species: *Pelmatocerandra setosa* (Giebel, 1876) (by monotypy).

Pelmatocerandra setosa (Giebel, 1876)

Figs 143–144

Nirmus setosus Giebel, 1876: 388.
Lipeurus setosus (Giebel, 1876); Kellogg 1914: 81, 87.
Lipeurus eatoni Kellogg, 1914: 81, 86. Unnecessary *nomen novum* for *Nirmus setosus* Giebel, 1876 on transfer to *Lipeurus*.
Pelmatocerandra eatoni Kellogg, 1914 [sic]; Harrison 1916: 144 (as junior synonym of *P. setosa* Giebel, 1876)
Pelmatocerandra setosa Giebel, 1876 [sic]; Harrison 1916: 144.

Pelmatocerandra setosa (Giebel, 1876); Hopkins & Clay 1952: 274.
Pelmatocerandra setosa (Giebel, 1876); Clay 1958a: 252, figs 1, 4, 7, pl. 4: fig. 1.
Pelmatocerandra setosa (Giebel, 1876); Timmermann 1965: 162, figs 99–100, 102, pl. 9: figs 2–3.
Pelmatocerandra setosa (Giebel, 1876); Wise 1977: 63.
Pelmatocerandra setosa (Giebel, 1876); Horning *et al.* 1980: 6, 11.
Pelmatocerandra setosa (Giebel, 1876); Pilgrim & Palma 1982: 13.
Pelmatocerandra setosa (Giebel, 1876); Murray *et al.* 1990: 1372.
Pelmatocerandra setosa (Giebel, 1876); Palma 2010: 408.

Lectotype ♂ in NHML (Clay 1958a: 252).

Type host: *Pelecanoides urinatrix* (J.F. Gmelin, 1789).

New Zealand hosts: *Pelecanoides urinatrix urinatrix* (J.F. Gmelin, 1789); *Pelecanoides urinatrix chathamensis* Murphy & Harper, 1916; *Pelecanoides urinatrix exsul* Salvin, 1896; *Pelecanoides georgicus* Murphy & Harper, 1916.

Other host: *Pelecanoides urinatrix dacunhae* Nicholl, 1906.

New Zealand localities: ND, CL, BP, GB, TO, WO, WI, WA, WN, WD, CO, DN, CH, SI, SN, AN, AU, CA, Macquarie Island.

Geographic distribution: Southern Hemisphere.

New Zealand references: Clay (1958a); Clay (1964a: 232); Gressitt (1964: 538); Watson (1967: 73); Clay & Moreby (1970: 219); Gressitt (1970: 328); Wise (1977); Horning *et al.* (1980); Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (1996b: 201); Marris (2000: 187); Palma & Horning (2002: 11, 15); Palma (2010).

Other significant references: Thompson (1940c: 104, figs 1–10, pl. 2); Kéler (1952: 216, figs 11–13); Paulian (1953: 199); Séguy (1953: 559, figs 3–4); Timmermann (1965); Clay & Moreby (1967: 160, fig. 147); Payne & Prince (1979: 316); Green & Palma (1991: 16, 28); Furness & Palma (1992: 35, 42); Price *et al*. (2003: 209); Page *et al.* (2004: 638, 649); Hänel & Palma (2007: 113, 126, 131).

Remarks: The natural, regular species of *Pelmatocerandra* parasitic on *Pelecanoides georgicus* in the Atlantic and Indian Oceans is *Pelmatocerandra enderleini* Eichler, 1949b. However, from the evidence of two independent samples taken in 1978 and 2003 respectively, the New Zealand population of the South Georgian diving petrel appears to be regularly parasitised by *Pelmatocerandra setosa*.

Genus *Penenirmus* Clay & Meinertzhagen, 1938

Penenirmus Clay & Meinertzhagen, 1938a. *Entomologist 71*: 73. Type species: *Pediculus albiventris* Scopoli, 1763 = *Penenirmus albiventris* (Scopoli, 1763) (by original designation).

Penenirmus species

Fig. 145

Penenirmus sp.; Palma 1999: 382.
Penenirmus sp.; Murray *et al.* 2006b: 1959.

New Zealand host: *Bowdleria punctata wilsoni* Stead, 1936.

New Zealand locality: SI.

Geographic distribution: Codfish Island, Stewart Islands, New Zealand.

New Zealand references: Palma (1999); Murray *et al.* (2006b); Buckley *et al.* (2012: App. 2).

Other significant references: Emerson & Johnson (1961); Dalgleish (1972); Price *et al.* (2003: 209).

Remarks: The single available record of *Penenirmus* could not be identified to species because the sample contains females only (voucher specimens in MONZ).

Genus *Perineus* Thompson, 1936

Perineus Thompson, 1936. *Ann. Mag. Nat. Hist.* (Ser. 10) *18*: 41. Type species: *Lipeurus nigrolimbatus* Giebel, 1874 = *Perineus nigrolimbatus* (Giebel, 1874) (by original designation).

Perineus circumfasciatus Kéler, 1957

"*Perineus concinnus*" Harrison, 1937: 29 (not *Lipeurus concinnus* Kellogg & Chapman, 1899).

Perineus circumfasciatus Kéler, 1957b: 525, figs 29–30.
Perineus sens. str.; Clay 1964a: 231. In part.
Perineus sp.; Gressitt 1964: 538. In part.
Perineus circumfasciatus Kéler, 1957; Timmermann 1965: 107, fig. 46.
Perineus circumfasciatus Kéler, 1957; Watson 1967: 73.
Perineus sp.; Watson 1967: 73.
Perineus circumfasciatus Kéler, 1957; Wise 1977: 63. In part.
"*Perineus concinnus*" Wise, 1977: 63 (not *Lipeurus concinnus* Kellogg & Chapman, 1899).
Perineus circumfasciatus Kéler, 1957; Horning *et al.* 1980: 6, 9.
Perineus circumfasciatus Kéler, 1957; Pilgrim & Palma 1982: 6.
Perineus circumfasciatus Kéler, 1957; Palma & Pilgrim 1988: 580, figs 7, 14, 22, 27, 35, 41, 48, 52, 54.
Perineus circumfasciatus Kéler, 1957; Palma 2010: 408.

Holotype ♂ in NHML (Palma & Pilgrim 1988: 580).

Type host: *Thalassarche melanophris* (Temminck, 1828).

New Zealand hosts: *Thalassarche chlororhynchos* (J.F. Gmelin, 1789); *Thalassarche chrysostoma* (J.R. Forster, 1785); *Thalassarche melanophris* (Temminck, 1828); *Thalassarche impavida* Mathews, 1912; *Thalassarche bulleri bulleri* (Rothschild, 1893); *Thalassarche bulleri platei* (Reichenow, 1898); *Thalassarche cauta steadi* Falla, 1933; *Thalassarche eremita* Murphy, 1930; *Thalassarche salvini* (Rothschild, 1893); *Phoebetria fusca* (Hilsenberg, 1822); *Phoebetria palpebrata* (J.R. Forster, 1785).

Other host: *Thalassarche cauta cauta* (Gould, 1841).

New Zealand localities: AK, BP, HB, WA, WN, KA, NC, MC, SC, SL, CH, BO, SN, AU, CA, Macquarie Island.

Geographic distribution: Southern Hemisphere.

New Zealand references: Harrison (1937); Clay (1964a); Gressitt (1964); Watson (1967); Gressitt (1970: 328); Pilgrim (1970: 74); Wise (1977); Pilgrim & Palma (1979: 177); Horning *et al.* (1980); Pilgrim & Palma (1982); Palma & Pilgrim (1988); Murray *et al.* (1990: 1368–1369); Green & Palma (1991: 16, 25); Palma (1996b: 201); Palma (1999: 375, 383, note 1); Marris (2000: 188); Palma & Horning (2002: 11, 15); Page *et al.* (2004: 642, 649); Palma (2010).

Other significant references: Timmermann (1965); Clay & Moreby (1967: 163, 168, fig. 129); Price *et al*. (2003: 211); Hänel & Palma (2007: 113, 126, 129).

Remarks: *Perineus circumfasciatus* is a "wing" louse species frequently collected from small albatrosses.

***Perineus concinnoides* Kéler, 1957**

Figs 146–147

Perineus concinnoides Kéler, 1957b: 521, fig. 26.
Perineus sens. str.; Clay 1964a: 231. In part.
Perineus sp.; Gressitt 1964: 538. In part.
Perineus concinnoides Kéler, 1957; Timmermann 1965: 109, fig. 48.
Perineus concinnoides Kéler, 1957; Wise 1977: 63.
Perineus concinnoides Kéler, 1957; Pilgrim & Palma 1982: 5.
Perineus concinnoides Kéler, 1957; Palma & Pilgrim 1988: 578, figs 3, 10, 20, 26, 29, 36, 42, 44.
Perineus concinnoides Kéler, 1957; Palma 2010: 408.

Holotype ♂ in NHML (Palma & Pilgrim 1988: 579).

Type host: *Diomedea exulans* Linnaeus, 1758.

New Zealand hosts: *Diomedea exulans* Linnaeus, 1758; *Diomedea epomophora* Lesson, 1825; *Diomedea sanfordi* Murphy, 1917.

Other host: *Diomedea dabbenena* Mathews, 1929.

New Zealand localities: WA, KA, NC, MC, SC, WD, CO, DN, CH.

Geographic distribution: Southern Hemisphere.

New Zealand references: Pilgrim (1970: 74); Wise (1977); Pilgrim & Palma (1982); Palma & Pilgrim (1988); Murray *et al.* (1990: 1368); Palma (2010).

Other significant references: Timmermann (1965); Clay & Moreby (1967: 162, 168, fig. 130); Green & Palma (1991: 16, 25); Palma (1996b: 202); Page *et al.* (2004: 642, 649); Price *et al*. (2003: 211).

Remarks: *Perineus concinnoides* is a"wing" louse species infrequently collected from large albatrosses.

***Perineus macronecti* Palma & Pilgrim, 1988**

Perineus circumfasciatus Kéler, 1957b: 525. In part.
Perineus sp. nov.; Watson 1967: 73.
"*Perineus circumfasciatus*" Clay & Moreby, 1970: 217 (not *Perineus circumfasciatus* Kéler, 1957).
Perineus circumfasciatus Kéler, 1957; Wise 1977: 63. In part.
Perineus sp.; Horning *et al.* 1980: 6, 9.
Perineus sp.; Pilgrim & Palma 1982: 7.
Perineus macronecti Palma & Pilgrim, 1988: 584, figs 5, 12, 21, 28, 30, 37, 43, 49, 53, 55.
Perineus macronecti Palma & Pilgrim, 1988; Palma 1999: 377.
Perineus macronecti Palma & Pilgrim, 1988; Palma 2010: 408.

Holotype ♂ in MONZ (Palma *et al.* 1989: 45).

Type host: *Macronectes halli* Mathews, 1912.

New Zealand hosts: *Macronectes giganteus* (J.F. Gmelin, 1789); *Macronectes halli* Mathews, 1912.

Other hosts: None.

New Zealand localities: ND, TK, WN, KA, MC, SN, AN, Macquarie Island.

Geographic distribution: Southern Hemisphere.

New Zealand references: Watson (1967); Clay & Moreby (1970); Gressitt (1970: 328); Wise (1977); Horning *et al.* (1980); Pilgrim & Palma (1982); Palma & Pilgrim (1988); Palma *et al.* (1989: 45); Murray *et al.* (1990: 1369); Palma (1996b: 202); Palma (1999); Paterson *et al.* (1999: 222); Marris (2000: 188); Palma & Horning (2002: 11, 16); Palma (2010).

Other significant references: Price *et al*. (2003: 212); Hänel & Palma (2007: 113, 126, 129).

Remarks: *Perineus macronecti* is a "wing" louse species infrequently collected from giant petrels.

***Perineus nigrolimbatus* (Giebel, 1874)**

Lipeurus nigrolimbatus Giebel, 1874: 233.
Esthiopterum nigrolimbatum Giebel, 1874 [sic]; Harrison 1916: 138.
Perineus nigrolimbatus (Giebel, 1874); Hopkins & Clay 1952: 278.
Perineus nigrolimbatus (Giebel, 1874); Kéler 1957b: 512, figs 13–25.
Perineus nigrolimbatus (Giebel, 1874); Timmermann 1965: 108, figs 42–45, pl. 9: fig. 4.
Perineus nigrolimbatus (Giebel, 1874); Clay & Moreby 1967: 163, 168, fig. 128.
Perineus nigrolimbatus (Giebel, 1874); Pilgrim & Palma 1982: 7.
Perineus nigrolimbatus (Giebel, 1874); Palma & Pilgrim 1988: 569, figs 1–2, 8–9, 15–17, 25, 31, 33, 40, 45.
Perineus nigrolimbatus (Giebel, 1874); Murray *et al.* 1990: 1369.
Perineus nigrolimbatus (Giebel, 1874); Palma 2010: 408.

Neotype ♂ in SDEI (Kéler 1957b: 517).

Type host: *Fulmarus glacialis glacialis* (Linnaeus, 1761).

New Zealand host: *Fulmarus glacialoides* (A. Smith, 1840).

Other hosts: *Fulmarus glacialis audubonii* Bonaparte, 1857; *Fulmarus glacialis rodgersii* Cassin, 1862.

New Zealand localities: AK, TK, WI, WN, NN, KA, NC, MC, SC, SI, Macquarie Island, RO.

Geographic distribution: Northern Pacific and Atlantic Oceans; Southern Oceans.

New Zealand references: Pilgrim & Palma (1982); Palma & Pilgrim (1988); Murray *et al.* (1990); Palma (1996b: 202); Palma (2001: 66, fig. 5); Palma & Horning (2002: 11, 16); Palma (2010).

Other significant references: Thompson (1936: 42); Harrison (1937: 30); Clay (1940a: 299); Séguy (1944: 367, figs 546); Kéler (1957b); Timmermann (1965); Clay & Moreby (1967); Hackman & Nyholm (1968: 80); Fowler & Miller (1984: 24, figs 1–2c); Green & Palma (1991: 17, 26); Butler & O'Connor (1994: 455); Price *et al*. (2003: 212); Page *et al.* (2004: 642, 649, 650); Palma & Jensen (2005: 56, 60).

Remarks: *Perineus nigrolimbatus* is a highly prevalent "wing" louse species on all its hosts. *Fulmarus glacialoides* breeds on the coast of Antarctica and is a regular straggler to New Zealand seas (Checklist Committee 2010: 80).

Genus *Philoceanus* Kellogg, 1903

Philoceanus Kellogg, 1903. *Biol. Bull. Wood's Hole* 5(2): 87. Type species: *Philoceanus becki* Kellogg, 1903 (by monotypy).

Philoceanus fasciatus (Carriker, 1958)

Figs 148–149

Naubates fasciatus Carriker, 1958: 184, figs 1–6.
Philoceanus wolfherrei Timmermann, 1961b: 534.
Philoceanus fasciatus (Carriker, 1958); Timmermann 1965: 159.
Philoceanus fasciatus (Carriker, 1958); Clay & Moreby 1967: 163, 169, fig. 86.
Philoceanus fasciatus (Carriker, 1958); Pilgrim & Palma 1982: 13.
Philoceanus fasciatus (Carriker, 1958); Murray *et al.* 1990: 1372.
Philoceanus fasciatus (Carriker, 1958); Palma 1999: 378.
Philoceanus fasciatus (Carriker, 1958); Palma 2010: 408.

Holotype ♂ in FMLA. Holotype ♀ of *Philoceanus wolfherrei* in NHML.

Type host: "*Oceanites oceanicus oceanicus*", in error (see Clay & Moreby 1967: 163).

New Zealand hosts: *Pealeornis maoriana* Mathews, 1932; *Fregetta tropica* (Gould, 1844); *Fregetta grallaria* (Vieillot, 1817).

Other hosts: None.

New Zealand localities: ND, CL, KE, AN, AU, CA.

Geographic distribution: Southern Hemisphere.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (1999); Marris (2000: 188); Stephenson *et al*. (2009: 198, 201, fig. 5); Palma (2010).

Other significant references: Timmermann (1961b; 1965); Clay & Moreby (1967); Furness & Palma (1992: 35, 41); Price *et al*. (2003: 212); Hänel & Palma (2007: 113, 126, 130).

Remarks: *Philoceanus fasciatus* is a "wing" louse species infrequently collected from storm petrels. *Philoceanus wolfherrei* was described from *Fregetta tropica*, but later synonymised under *Ph. fasciatus* by Clay & Moreby (1967: 163).

Philoceanus garrodiae (Clay, 1940)

Naubates garrodiae Clay, 1940a: 310, figs 7, 8, 9a,d, 11a.
Philoceanus garrodiae (Clay, 1940); Hopkins & Clay 1952: 279.
Philoceanus garrodiae (Clay, 1940); Timmermann 1961b: 532, fig. 1.
Philoceanus garrodiae (Clay, 1940); Clay 1964a: 231.
Philoceanus garrodiae (Clay, 1940); Timmermann 1965: 157, pl. 8: figs 1–2.
Philoceanus garrodiae (Clay, 1940); Wise 1977: 63
Philoceanus garrodiae (Clay, 1940); Pilgrim & Palma 1982: 13.
Philoceanus garrodiae (Clay, 1940); Murray *et al*. 1990: 1372.
Philoceanus garrodiae (Clay, 1940); Palma 2010: 408.

Holotype ♂ in NHML.

Type host: *Garrodia nereis* (Gould, 1841).

New Zealand host: *Garrodia nereis* (Gould, 1841).

Other hosts: None.

New Zealand localities: WN, NC, MC, SC, WD, CO, DN, CH, AN, AU, CA.

Geographic distribution: Southern Oceans.

New Zealand references: Clay (1964a); Gressitt (1964: 538); Wise (1977); Pilgrim & Palma (1982); Murray *et al*. (1990); Marris (2000: 188); Page *et al.* (2004: 638, 650); Palma (2010).

Other significant references: Timmermann (1961b; 1965); Green & Palma (1991: 17, 27); Palma (1996b: 203); Price *et al*. (2003: 212).

Remarks: *Philoceanus garrodiae* is a highly prevalent "wing" louse species, known from the grey-backed storm petrel only.

***Philoceanus robertsi* (Clay, 1940)**

Naubates robertsi Clay, 1940a: 313, figs 9c, 10a, 11b.
Philoceanus robertsi (Clay, 1940); Hopkins & Clay 1952: 279.
Philoceanus robertsi (Clay, 1940); Timmermann 1961b: 533, fig. 4.
Philoceanus robertsi (Clay, 1940); Timmermann 1965: 158, fig. 97.
Philoceanus robertsi (Clay, 1940); Clay & Moreby 1967: 163, 169, fig. 149.
Philoceanus robertsi (Clay, 1940); Pilgrim & Palma 1982: 13.
Philoceanus robertsi (Clay, 1940); Murray *et al*. 1990: 1372.
Philoceanus robertsi (Clay, 1940); Palma 2010: 408.

Holotype ♂ in NHML.

Type host: *Oceanites oceanicus exasperatus* Mathews, 1912.

New Zealand host: *Oceanites oceanicus exasperatus* Mathews, 1912.

Other hosts: *Oceanites oceanicus oceanicus* (Kuhl, 1820); *Oceanites pincoyae* Harrison *et al*., 2013; *Hydrobates pelagicus* (Linnaeus, 1758).

New Zealand localities: ND, RO.

Geographic distribution: Antarctica; Southern Oceans.

New Zealand references: Pilgrim & Palma (1982); Murray *et al*. (1990); Palma (2010).

Other significant references: Séguy (1953: 572, figs 26–29); Timmermann (1961b; 1965); Clay & Moreby (1967); Fowler & Miller (1984: 24); Fowler & Price (1987: 44, fig. 1); Palma (1996b: 203); Price *et al*. (2003: 212); Page *et al.* (2004: 638, 650); Harrison *et al*. (2013: 186).

Remarks: *Philoceanus robertsi* is an infrequently collected "wing" louse species.

Genus *Philopteroides* Mey, 2004

Philopteroides Mey, 2004. *Ornithol. Anz. 43*: 173. Type species: *Philopteroides novaezelandiae* Mey, 2004 (by original designation).

***Philopteroides fuliginosus* Valim & Palma, 2013**

Figs 150–151

Philopterus sp.; Pilgrim & Palma 1982: 26.
Philopterus sp.; Paterson *et al.* 1999: 221.
Philopterus sp.; Galloway 2005: 17.
Philopterus sp.; Murray *et al.* 2006b: 1956.
Philopteroides fuliginosus Valim & Palma, 2013: 81, figs 5–6, 11, 21–24, 34–35.

Holotype ♀ in MONZ.

Type host: *Rhipidura fuliginosa placabilis* Bangs, 1921.

New Zealand hosts: *Rhipidura fuliginosa fuliginosa* (Sparrman, 1787); *Rhipidura fuliginosa placabilis* Bangs, 1921.

Other hosts: None.

New Zealand localities: CL, WN, NN, MC, WD.

Geographic distribution: New Zealand.

New Zealand references: Pilgrim & Palma (1982); Paterson *et al.* (1999); Galloway (2005); Murray *et al.* (2006b); Valim & Palma (2013); Najer *et al*. (2016: 527).

Other significant reference: Mey (2004).

Remarks: *Philopteroides fuliginosus* is an endemic species, although it is possible that some Australian species of *Rhipidura* closely related to *Rhipidura fuliginosa* (see Checklist Committee 2010: 298) may harbour this species of *Philopteroides*.

***Philopteroides macrocephalus* Valim & Palma, 2013**

Philopterus sp.; Horning *et al.* 1980: 6, 12.
Philopterus sp.; Pilgrim & Palma 1982: 26.
Philopterus sp.; Murray *et al.* 2002: 1216.
Philopteroides macrocephalus Valim & Palma, 2013: 83, figs 7–8, 12, 25–28, 36–37.

Holotype ♀ in MONZ.

Type host: *Petroica macrocephala macrocephala* (J.F. Gmelin, 1789).

New Zealand hosts: *Petroica macrocephala toitoi* (Lesson, 1828); *Petroica macrocephala macrocephala* (J.F. Gmelin, 1789); *Petroica macrocephala dannefaerdi* (Rothschild, 1894).

Other hosts: None.

New Zealand localities: WN, BR, WD, CH, SN.

Geographic distribution: New Zealand.

New Zealand references: Horning *et al.* (1980); Pilgrim & Palma (1982); Murray *et al.* (2002); Valim & Palma (2013); Najer *et al*. (2016: 527).

Other significant reference: Mey (2004).

Remarks: *Philopteroides macrocephalus* is an endemic species, exclusively parasitic on New Zealand tomtits.

***Philopteroides novaezelandiae* Mey, 2004**

Philopteroides novaezelandiae Mey, 2004: 174, figs 21, 22c,d.
Philopteroides novaezelandiae Mey, 2004; Palma 2010: 408.
Philopteroides novaezelandiae Mey, 2004; Valim & Palma, 2013: 80.

Holotype ♂ in NHMR.

Type host: *Acanthisitta chloris chloris* (Sparrman, 1787).

New Zealand host: *Acanthisitta chloris chloris* (Sparrman, 1787).

Other hosts: None.

New Zealand locality: WD.

Geographic distribution: South Island, New Zealand.

New Zealand references: Mey (2004); Palma (2010); Buckley *et al.* (2012: App. 2); Valim & Palma (2013); Najer *et al*. (2016: 527).

Other significant references: None.

Remarks: *Philopteroides novaezelandiae* is an endemic species, known from the two type specimens only (Mey 2004: 174).

***Philopteroides pilgrimi* Valim & Palma, 2013**

Philopterus sp.; Gill 1980: 246.
Philopterus sp.; Pilgrim & Palma 1982: 26.
Philopterus sp.; Murray *et al.* 2002: 1215.
Philopteroides pilgrimi Valim & Palma, 2013: 77, figs 3–4, 10, 17–20, 32–33.

Holotype ♀ in MONZ.

Type host: *Gerygone igata* (Quoy & Gaimard, 1830).

New Zealand host: *Gerygone igata* (Quoy & Gaimard, 1830).

Other hosts: None.

New Zealand localities: WN, KA.

Geographic distribution: New Zealand.

New Zealand references: Gill (1980); Pilgrim & Palma (1982); Murray *et al.* (2002); Valim & Palma (2013); Najer *et al*. (2016: 527, 540).

Other significant reference: Mey (2004).

Remarks: *Philopteroides pilgrimi* is an endemic species, exclusively parasitic on New Zealand grey warblers.

***Philopteroides xenicus* Mey, 2004**

Philopteroides xenicus Mey, 2004: 176, figs 22a,b,e.
Philopteroides xenicus Mey, 2004; Mey 2005: 214.
Philopteroides xenicus Mey, 2004; Palma 2010: 408.
Philopteroides xenicus Mey, 2004; Valim & Palma, 2013: 80.

Holotype ♂ in NHMR.

Type host: *Xenicus longipes longipes* (J.F. Gmelin, 1789).

New Zealand host: *Xenicus longipes longipes* (J.F. Gmelin, 1789).

Other hosts: None.

New Zealand locality: WD.

Geographic distribution: New Zealand: South Island.

New Zealand references: Mey (2004; 2005); Palma (2010); Buckley *et al.* (2012: 140); Valim & Palma (2013); Rózsa & Vas (2015b: 108); Najer *et al*. (2016: 527).

Other significant references: None.

Remarks: *Philopteroides xenicus* is an endemic species, known from the holotype only. Considering that the host of this louse —the South Island bush wren— is extinct (Checklist Committee 2010: 277), its louse is also regarded as extinct (Buckley *et al.* 2012; Rózsa & Vas 2015b: 108).

Genus *Philopterus* Nitzsch, 1818

Philopterus Nitzsch, 1818. *Germar's Mag. Entomol. 3*: 281, 288. Type species: *Philopterus* (*Docophorus*) *ocellatus* "Nitzsch" = *Philopterus ocellatus* (Scopoli, 1763) (by subsequent designation).

Docophorus Nitzsch, 1818. *Germar's Mag. Entomol. 3*: 289. Type species: *Philopterus* (*Docophorus*) *ocellatus* (Scopoli, 1763) (by subsequent designation).

Docophorulus Eichler, 1944b. *Stettin. Entomol. Zeit. 105*: 80. Type species: *Docophorus communis* Nitzsch var. *passeris* Piaget, 1880 = *Philopterus fringillae* (Scopoli, 1772) (by original designation).

***Philopterus irkutensis* Fedorenko, 1985** **New Record**

Philopterus sp.; Pilgrim & Palma 1982: 25.
Philopterus irkutensis Fedorenko, 1985: 14, fig. 3.
Philopterus sp.; Paterson *et al.* 1999: 223.
Philopterus species; Marris 2000: 188.
Philopterus irkutensis Fedorenko, 1985; Price *et al.* 2003: 214.
Philopterus sp.; Murray *et al.* 2006b: 1959.

Syntypes ♂♀ in the Schmalhausen Institute of Zoology, Kiev, Ukraine (Fedorenko 1985: 15).

Type host: *Anthus richardi* Vieillot, 1818.

New Zealand hosts: *Anthus novaeseelandiae novaeseelandiae* (J.F. Gmelin, 1789); *Anthus novaeseelandiae steindachneri* Reischek, 1889.

Other host: *Anthus richardi* Vieillot, 1818.

New Zealand localities: GB, MC, WD, AN.

Geographic distribution: Eurasia; Australasia.

New Zealand references: Pilgrim & Palma (1982); Paterson *et al.* (1999); Marris (2000); Murray *et al.* (2006b).

Other significant reference: Price *et al*. (2003).

Material examined and repository: 22♂, 25♀ (6 samples, MONZ).

Remarks: This is the first record of *Philopterus irkutensis* for New Zealand because the New Zealand references cited above reported this louse as "*Philopterus* sp." only.

***Philopterus modularis* Denny, 1842** **New Record**

Philopterus (*Docophorus*) *modularis* Denny, 1842: 47, 107, pl. 3: fig. 3.
Philopterus modularis Denny, 1842; Harrison 1916: 99.
Philopterus modularis (Denny, 1842) [sic]; Hopkins & Clay 1952: 286.
Docophorulus modularis (Denny, 1842); Złotorzycka 1964b: 417, fig. 5c.

Philopterus sp.; Pilgrim & Palma 1982: 26.
Philopterus sp.; Paterson *et al.* 1999: 220.
Philopterus sp.; Murray *et al.* 2006b: 1958.
Philopterus modularis (Denny, 1842) [sic]; Price *et al*. 2003: 215.

Syntypes ♀♀ in NHML (Vincent S. Smith pers. comm. December 2014).
Type host: *Prunella modularis occidentalis* (Hartert, 1910).
New Zealand host: *Prunella modularis* (Linnaeus, 1758).
Other hosts: None.
New Zealand localities: WN, MC, WD, CH, CA.
Geographic distribution: Europe, Eastern Asia.
New Zealand references: Pilgrim & Palma (1982); Paterson *et al.* (1999); Murray *et al.* (2006b).
Other significant references: Złotorzycka (1964b); Price *et al*. (2003).
Material examined and repository: 11♂, 18♀ (7 samples, MONZ).
Remarks: This is the first record of *Philopterus modularis* for New Zealand, because the New Zealand references cited above reported this louse as "*Philopterus* sp." only. *Philopterus modularis* was introduced to New Zealand with dunnocks by human agency (Checklist Committee 2010: 318), and it is the only species that has become established from a total of six species which parasitise dunnocks in their home range (Price *et al*. 2003: 354).
Denny (1842: 63) included *Docophorus* as a subgenus of *Philopterus*; therefore, there is no reason to place author and date within parentheses when this species is combined with the genus *Philopterus*, as in Hopkins & Clay (1952: 286) and other authors who followed them.

Philopterus novaezealandiae Palma & Price, 2000

Figs 152–153

Philopterus sp.; Pilgrim & Palma 1982: 28.
Philopterus novaezealandiae Palma & Price, 2000: 293, figs 1–4.
Philopterus novaezealandiae Palma & Price, 2000; Murray *et al.* 2006b: 1958.
Philopterus novaezealandiae Palma & Price, 2000; Palma 2010: 408.

Holotype ♂ in MONZ.
Type host: *Callaeas wilsoni* (Bonaparte, 1851).
New Zealand hosts: *Callaeas wilsoni* (Bonaparte, 1851); *Callaeas cinerea* (J.F. Gmelin, 1788).
Other hosts: None.
New Zealand localities: BP, WI, WN, FD.
Geographic distribution: New Zealand.
New Zealand references: Pilgrim & Palma (1982); Palma & Price (2000); Price *et al*. (2003: 215); Murray *et al.* (2006b); Palma (2010); Buckley *et al.* (2012: App. 2).
Other significant references: None.
Remarks: *Philopterus novaezealandiae* is an endemic and vulnerable species (Buckley *et al.* 2012), exclusively parasitic on the two species of kokako.

Philopterus stadleri (Eichler, 1959) **New record**

Docophorulus stadleri Eichler, 1959: 1173, fig. 3.
Philopterus stadleri (Eichler, 1959); Fedorenko 1978: 57.
Philopterus sp.; Pilgrim & Palma 1982: 25.
Philopterus stadleri (Eichler, 1959); Price *et al*. 2003: 216.
Philopterus sp.; Murray *et al*. 2006b: 1958.

Holotype ♀, repository unknown.
Type host: *Alauda arvensis arvensis* Linnaeus, 1758.
New Zealand host: *Alauda arvensis* Linnaeus, 1758.
Other hosts: None.
New Zealand localities: BR, MC.
Geographic distribution: Eurasia; Australasia.

New Zealand references: Pilgrim & Palma (1982); Murray *et al*. (2006b).

Other significant references: Fedorenko (1978); Price *et al*. (2003).

Material examined and repository: 1♂, 2♀, 4N (3 samples, MONZ).

Remarks: This is the first record of *Philopterus stadleri* for New Zealand, because the New Zealand references cited above reported this louse as "*Philopterus* sp." only. *Philopterus stadleri* was introduced to New Zealand with skylarks by human agency (Checklist Committee 2010: 306).

Philopterus turdi Denny, 1842

Philopterus (*Docophorus*) *turdi* Denny, 1842: 43, 76, pl. 4: fig. 5.
Philopterus (*Docophorus*) *merulae* Denny, 1842: 47, 106, pl. 3: fig. 1.
Philopterus turdi Denny, 1842; Harrison 1916: 106.
Philopterus merulae (Denny, 1842) [sic]; Hopkins & Clay 1952: 286.
Philopterus turdi (Denny, 1842) [sic]; Hopkins & Clay 1952: 289.
Docophorulus merulae (Denny, 1842); Złotorzycka 1964b: 415, figs 5a, 6a.
Docophorulus turdi (Denny, 1842); Złotorzycka 1964b: 423, figs 5l, 8a.
Philopterus merulae (Denny, 1842); Baum 1968: 143, fig. 7.
Philopterus turdi (Denny, 1842) [sic]; Nelson 1969: 199.
Philopterus turdi (Denny, 1842) [sic]; Watt 1971: 238, 244.
Philopterus turdi (Denny, 1842) [sic]; Wise 1977: 63.
Philopterus turdi (Denny, 1842) [sic]; Horning *et al.* 1980: 6, 12.
Philopterus turdi (Denny, 1842) [sic]; Pilgrim & Palma 1982: 26.
Philopterus turdi (Denny, 1842) [sic]; Murray *et al*. 2006b: 1959.
Philopterus turdi (Denny, 1842) [sic]; Palma 2010: 408.

Syntypes ♀♀ in NHML (Palma 1996b: 204).

Type host: *Turdus philomelos* Brehm, 1831.

New Zealand hosts: *Turdus merula merula* Linnaeus, 1758; *Turdus philomelos* Brehm, 1831.

Other hosts: None.

New Zealand localities: TK, WI, WN, NN, KA, BR, NC, MC, SC, WD, CO, DN, KE, Norfolk Island, CH, SN.

Geographic distribution: Eurasia; north Africa; Australasia.

New Zealand references: Nelson (1969); Watt (1971); Wise (1977); Horning *et al.* (1980); Pilgrim & Palma (1982); Paterson *et al.* (1999: 220); Galloway (2005: 15); Murray *et al*. (2006b); Palma (2010).

Other significant references: Złotorzycka (1964b); Baum (1968); Jiménez-González *et al.* (1980: 213, figs 21–25); Palma (1996b: 204); Price *et al*. (2003: 217); Palma & Jensen (2005: 57, 67); Martín-Mateo (2009: 148).

Remarks: *Philopterus turdi* was introduced to New Zealand with blackbirds and song thrushes by human agency (Checklist Committee 2010: 313). Denny (1842: 63) included *Docophorus* as a subgenus of *Philopterus*; therefore, there is no reason to place author and date within parentheses when this species is combined with the genus *Philopterus*, as in Hopkins & Clay (1952: 289) and other authors who followed them.

Philopterus species 1

Philopterus sp.; Pilgrim & Palma 1982: 28.
Philopterus sp.; Hughes 1984a: 459.
Philopterus sp.; Paterson *et al.* 1999: 221.
Philopterus sp.; Murray *et al.* 2006b: 1957.

New Zealand host: *Gymnorhina tibicen* (Latham, 1802).

Other hosts: None.

New Zealand localities: BP, GB, HB.

Geographic distribution: Australasia.

New Zealand references: Pilgrim & Palma (1982); Paterson *et al.* (1999: 221); Murray *et al.* (2006b).

Other significant references: Hughes (1984a); Hughes (1984b: 467); Toon & Hughes (2008: 128).

Remarks: This unidentified and probably new species of *Philopterus* was introduced to New Zealand with Australian magpies by human agency (Checklist Committee 201: 297).

***Philopterus* species 2**

Philopterus sp.; Pilgrim & Palma 1982: 26.

Philopterus sp.; Murray *et al.* 2002: 1216.

New Zealand host: *Mohoua albicilla* (Lesson, 1830).

Other hosts: None.

New Zealand locality: WN.

Geographic distribution: New Zealand.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (2002).

Other significant references: None.

Remarks: The available sample of *Philopterus* from *Mohoua albicilla* is not identifiable at present because it contains a single nymph (voucher specimen in MONZ).

Genus *Pseudonirmus* Mjöberg, 1910

Pseudonirmus Mjöberg, 1910a. *Arkiv Zool.* 6(13): 149. Type species: *Degeeriella charcoti* Neumann, 1907a = *Pseudonirmus charcoti* (Neumann, 1907) (by original designation).

***Pseudonirmus charcoti* (Neumann, 1907)**

Degeeriella charcoti Neumann, 1907a: 15, figs 2–3.

Ricinus charcoti (Neumann, 1907); Enderlein 1908: 477.

Nirmus antarcticus Valette, 1913: 298, pl. 5: figs 1–5.

Esthiopterum charcoti Neumann, 1907 [sic]; Harrison 1916: 132.

Pseudonirmus charcoti (Neumann, 1907); Hopkins & Clay 1952: 303.

Pseudonirmus antarcticus (Valette, 1913); Hopkins & Clay 1955: 186 (as a junior synonym).

Pseudonirmus charcoti (Neumann, 1907); Timmermann 1961c: 33, figs 1, 5a, 6.

Pseudonirmus charcoti (Neumann, 1907); Timmermann 1965: 113, figs 51, 52a, pl. 10: fig. 1.

Pseudonirmus charcoti (Neumann, 1907); Clay & Moreby 1967: 163, 168, figs 131, 135, 138.

Pseudonirmus charcoti (Neumann, 1907); Pilgrim & Palma 1982: 8.

Pseudonirmus charcoti (Neumann, 1907); Murray *et al.* 1990: 1369.

Pseudonirmus charcoti (Neumann, 1907); Palma 2010: 408.

Syntypes ♂♀, repository unknown (Palma 1996b: 206), probably in the Ecole Vétérinaire de Toulouse, France.

Type host: *Pagodroma nivea* (G. Forster, 1777).

New Zealand hosts: *Pagodroma nivea nivea* (G. Forster, 1777); *Pagodroma nivea major* (Schlegel, 1863).

Other hosts: None.

New Zealand locality: RO.

Geographic distribution: Antarctica; Southern Oceans.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990); Paterson *et al.* (1999: 222); Palma (2010).

Other significant references: Thompson (1935a: 555, 557); Harrison (1937: 26, fig. 2c); Timmermann (1961c; 1965); Clay & Moreby (1967); Steele *et al*. (1997: 292); Price *et al*. (2003: 221).

Remarks: *Pseudonirmus charcoti* is an infrequently collected "wing" louse species, exclusively parasitic on snow petrels.

***Pseudonirmus gurlti* (Taschenberg, 1882)**

Lipeurus gurlti Taschenberg, 1882: 151, pl. 5: fig. 6.

Esthiopterum gurlti Taschenberg, 1882 [sic]; Harrison 1916: 135.

Pseudonirmus gurlti (Taschenberg, 1882); Hopkins & Clay 1952: 303.

Pseudonirmus gurlti (Taschenberg, 1882); Timmermann 1961c: 35, figs 3, 5c.

Pseudonirmus gurlti (Taschenberg, 1882); Timmermann 1965: 115, fig. 52c, pl. 10: fig. 3.

Pseudonirmus gurlti (Taschenberg, 1882); Clay & Moreby 1967: 163, 168, figs 133, 137, 140.

Pseudonirmus gurlti (Taschenberg, 1882); Horning *et al.* 1980: 7, 9.

Pseudonirmus gurlti (Taschenberg, 1882); Pilgrim & Palma 1982: 7.

Pseudonirmus gurlti (Taschenberg, 1882); Murray *et al.* 1990: 1369.

Pseudonirmus gurlti (Taschenberg, 1882); Palma & Horning 2002: 4 (figs), 11, 16.

Pseudonirmus gurlti (Taschenberg, 1882); Palma 2010: 408.

Syntypes ♂♀, repository unknown, presumed lost. See Palma (1996b: 206).

Type host: *Daption capense* (Linnaeus, 1758).

New Zealand hosts: *Daption capense capense* (Linnaeus, 1758); *Daption capense australe* Mathews, 1913.

Other hosts: None.

New Zealand localities: ND, AK, HB, TK, WI, WN, NC, MC, SC, WD, SL, SI, BO, SN, Macquarie Island, RO.

Geographic distribution: Antarctica; Southern Oceans.

New Zealand references: Watson (1967: 73); Gressitt (1970: 328); Wise (1977: 63); Horning *et al.* (1980); Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (1996b: 206); Paterson *et al.* (1999: 222); Palma & Horning (2002); Greenslade (2006: figs 20.3–20.4); Palma (2010).

Other significant references: Thompson (1935c: 486, fig. 2); Harrison (1937: 26, fig. 2a); Clay (1940a: 298); Guimarães (1943: 425, fig. 1); Séguy (1953: 563, figs 9–10); Timmermann (1961c; 1965); Clay & Moreby (1967); Green & Palma (1991: 17, 26); Price *et al*. (2003: 221); Page *et al.* (2004: 638, 650).

Remarks: *Pseudonirmus gurlti* is a frequently collected "wing" louse species, exclusively parasitic on Cape petrels.

Pseudonirmus lugubris (Taschenberg, 1882)

Figs 154–155

Lipeurus lugubris Taschenberg, 1882: 153, pl. 6: fig. 9.

Esthiopterum lugubre Taschenberg, 1882 [sic]; Harrison 1916: 137 (as junior synonym of *Esthiopterum gurlti* Taschenberg, 1882 [sic]).

Pseudonirmus antarcticus Harrison, 1937: 26, fig. 2b. Preoccupied by *Pseudonirmus antarcticus* (Valette, 1913).

Pseudonirmus antarcticus Harrison, 1937; Hopkins & Clay 1952: 303.

Pseudonirmus lugubris (Taschenberg, 1882); Hopkins & Clay 1952: 303 (as junior synonym of *Pseudonirmus gurlti* (Taschenberg, 1882)).

Pseudonirmus lugubris (Taschenberg, 1882); Clay & Hopkins 1955: 65.

Pseudonirmus antarcticus Harrison, 1937; Timmermann 1961c: 34, figs 2, 5b.

Pseudonirmus lugubris (Taschenberg, 1882); Timmermann 1965: 113, figs 50, 52b, pl. 10: fig. 2.

Pseudonirmus lugubris (Taschenberg, 1882); Clay & Moreby 1967: 163, 168, figs 132, 136, 139.

Pseudonirmus lugubris (Taschenberg, 1882); Pilgrim & Palma 1982: 7.

Pseudonirmus lugubris (Taschenberg, 1882); Murray *et al.* 1990: 1369.

Pseudonirmus lugubris (Taschenberg, 1882); Palma 2010: 408.

Lectotype ♂ in ZMHG (Clay & Hopkins 1955: 65; Weidner 1966: 258). Holotype ♂of *Pseudonirmus antarcticus* in AMSA (Palma 1996b: 207).

Type host: *Thalassoica antarctica* (J.F. Gmelin, 1789).

New Zealand host: *Thalassoica antarctica* (J.F. Gmelin, 1789).

Other hosts: None.

New Zealand localities: ND, AK, WI, RO.

Geographic distribution: Antarctica; Southern Oceans.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (2010).

Other significant references: Harrison (1937); Clay & Hopkins (1955); Timmermann (1961c; 1965); Weidner (1966); Clay & Moreby (1967); Palma (1996b: 206); Price *et al*. (2003: 221).

Remarks: *Pseudonirmus lugubris* is a "wing" louse species, exclusively parasitic on Antarctic petrels. *Thalassoica antarctica* breeds on the coast of Antarctica and straggles to New Zealand seas (Checklist Committee 2010: 82).

Genus *Psittoecus* Conci, 1942

Psittoecus Conci, 1942c. *Boll. Soc. Entomol. Italiana 74*: 40. Type species: *Philopterus waterstoni* Fresca, 1923 = *Psittoecus waterstoni* (Fresca, 1923) (by original designation).

Psittoecus vanzolinii Guimarães, 1974

Figs 156–157

Psittoecus vanzolinii Guimarães, 1974b: 168, figs 9–11.

Psittoecus vanzolinii Guimarães, 1974; Palma 1999: 381.
Psittoecus vanzolinii Guimarães, 1974; Price *et al*. 2003: 222.
Psittoecus vanzolinii Guimarães, 1974; Palma 2010: 408.

Holotype ♂ in NHML.

Type host: *Cacatua galerita* (Latham, 1790).

New Zealand host: *Cacatua galerita* (Latham, 1790).

Other hosts: None.

New Zealand locality: WI.

Geographic distribution: Australasia.

New Zealand references: Palma (1999; 2010).

Other significant references: Green & Palma (1991: 18, 34); Palma (1996b: 208); Price *et al*. (2003).

Remarks: It is not possible to assert if *Psittoecus vanzolinii* was introduced to New Zealand with sulphur-crested cockatoos by human agency, or if it was self-introduced with its host (Checklist Committee 2010: 252).

Genus *Quadraceps* Clay & Meinertzhagen, 1939

Quadraceps Clay & Meinertzhagen, 1939b. *Ann. Mag. Nat. Hist.* (Ser. 11) *4*: 453. Type species: *Degeeriella vanelli* (Denny, 1842) = *Quadraceps charadrii hospes* (Nitzsch [*in* Giebel], 1866) (by original designation).

Koeniginirmus Eichler, 1940b. *Zool. Anz. 130*: 101. Type species: "*Koeniginirmus punctatus* (Nitzsch in Burmeister, 1838a)" = *Quadraceps punctatus* (Burmeister, 1838a) (by original designation).

Glareolites Eichler, 1944b. *Stettin. Entomol. Zeit. 105*: 80. Type species: *Nirmus ellipticus* Nitzsch [*in* Giebel], 1866 = *Quadraceps ellipticus* (Nitzsch [*in* Giebel], 1866) (by original designation).

Haematophagus Timmermann, 1950. *Fauna Islandica 2*: 1, 2. Type species: *Quadraceps haematopi* (Denny, 1842 = *Quadraceps auratus* (Haan, 1829) (by original designation).

Proneptis Timmermann, 1953a. *Bombus 78/79*: 331. Type species: *Proneptis semifissa* (Nitzsch [*in* Giebel], 1866) = *Quadraceps semifissus* (Nitzsch [*in* Giebel], 1866) (by original designation).

Chadraceps Złotorzycka, 1967. *Polskie Pismo Entomol. 37*(4): 728. Type species: *Pediculus hiaticulae* O. Fabricius, 1780 = *Quadraceps hiaticulae* (O. Fabricius, 1780) (by original designation).

Anousceps Złotorzycka, 1967. *Polskie Pismo Entomol. 37*(4): 730. Type species: *Nirmus separatus* Kellogg & Kuwana, 1902 = *Quadraceps separatus* (Kellogg & Kuwana, 1902) (by original designation).

Himantophagus Złotorzycka, 1967. *Polskie Pismo Entomol. 37*(4): 733. Type species: *Nirmus hemichrous* Nitzsch [*in* Giebel], 1866 = *Quadraceps hemichrous* (Nitzsch [*in* Giebel], 1866) (by original designation).

Laminonirmus Złotorzycka, 1967. *Polskie Pismo Entomol. 37*(4): 754. Type species: *Koeniginirmus ornatus* (Grube, 1851) = *Quadraceps ornatus ornatus* (Grube, 1851) (by original designation). As subgenus of *Koeniginirmus* Eichler, 1940.

Quadraceps assimilis (Piaget, 1890)

Nirmus assimilis Piaget, 1890b: xxiii, fig. 1.
Degeeriella assimilis Piaget, 1890 [sic]; Harrison 1916: 108.
Quadraceps assimilis (Piaget, 1890); Hopkins & Clay 1952: 308.
Quadraceps assimilis assimilis (Piaget, 1890); Timmermann 1953b: 179.
Quadraceps assimilis assimilis (Piaget, 1890); Timmermann 1969b: 250.
Quadraceps assimilis (Piaget, 1890); Palma 1999: 380.
Quadraceps assimilis (Piaget, 1890); Palma 2010: 408.

Syntypes ♂♀, repository unknown.

Type host: *Charadrius asiaticus* Pallas, 1773.

New Zealand host: *Charadrius veredus* Gould, 1848.

Other hosts: *Charadrius peronii* (Schlegel, 1865); *Charadrius montanus* Townsend, 1837.

New Zealand locality: KE.

Geographic distribution: Eurasia; Africa; North America; Australasia.

New Zealand references: Palma (1999; 2010).

Other significant references: Timmermann (1953b; 1957a: 147; 1969); Price *et al*. (2003: 223).

Remarks: The oriental dotterel is a rare visitor to New Zealand (Checklist Committee 2010: 219), with only a single record of *Quadraceps assimilis* from this country.

***Quadraceps auratus* (Haan, 1829)**

Philopterus (*Docophorus*) *auratus* Haan, 1829: 310, pl. 5: fig. 9.
Degeeriella aurata Lyonet [sic], 1829 [sic]; Harrison 1916: 109.
Quadraceps auratus (Haan, 1829); Hopkins 1949a: 29, pl. 1: figs 1–2.
Quadraceps auratus (Haan, 1829); Hopkins & Clay 1952: 309.
Haematophagus auratus (Haan, 1829); Złotorzycka 1967: 748, pl. 10: figs 1–4.
Quadraceps auratus; Baker 1974: 20.
Quadraceps auratus (Haan, 1829); Clay 1981b: 936, figs 4, 12, 14, 17–18, 20, 22.
Quadraceps auratus (Haan, 1829); Pilgrim & Palma 1982: 19.
Cummingsiella auratus (de Haan, 1829) [sic]; Butler & O'Connor 1994: 454.
Quadraceps auratus (Haan, 1829); Murray *et al.* 1993: 961.
Quadraceps auratus (Haan, 1829); Palma 2010: 408.

Neotype ♀ in NHML (Hopkins 1949a: 31, pl 1, fig. 2).

Type host: *Haematopus ostralegus* Linnaeus, 1758.

New Zealand hosts: *Haematopus finschi* Martens, 1897; *Haematopus unicolor* J.R. Forster, 1844; *Haematopus chathamensis* Hartert, 1927.

Other hosts: *Haematopus ater* Vieillot & Oudart, 1825; *Haematopus bachmani* Audubon, 1838; *Haematopus palliatus* Temminck, 1820; *Haematopus moquini* Bonaparte, 1856; *Haematopus longirostris* Vieillot, 1817; *Haematopus fuliginosus* Gould, 1845.

New Zealand localities: AK, WI, SD, MB, NN, NC, MC, SC, WD, CO, DN, SL, CH.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Baker (1974); Pilgrim & Palma (1982); Murray *et al.* (1993); Paterson *et al.* (1999: 223); Palma (2010).

Other significant references: Hopkins (1949a); Złotorzycka (1967); Clay (1981b); Green & Palma (1991: 18, 32); Butler & O'Connor (1994); Forrester *et al.* (1995: 25); Palma (1995: 219); Palma (1996b: 209); Price *et al*. (2003: 223); Palma & Peck (2013: 49).

Remarks: *Quadraceps auratus* is the most widespread and frequently collected species of *Quadraceps* from oystercatchers.

***Quadraceps birostris* (Giebel, 1874)**

Nirmus birostris Giebel, 1874: 174.
Nirmus gloriosus Kellogg & Kuwana, 1902: 467, pl. 29: fig. 1.
Degeeriella birostris Giebel, 1874 [sic]; Harrison 1916: 109.
Degeeriella gloriosa Kellogg & Kuwana, 1902 [sic]; Harrison 1916: 114.
Degeeriella gloriosa (Kellogg & Kuwana, 1902); Ferris 1932a: 68, figs 18a,b,c,d,e.
Koeniginirmus nychthemerus birostris Giebel, 1874 [sic]; Eichler 1951b: 127.
Quadraceps birostris (Giebel, 1874); Hopkins & Clay 1952: 309.
Quadraceps birostris (Giebel, 1874); Timmermann 1952a: 76, figs 4–5.
Quadraceps birostris (Giebel, 1874); Timmermann 1957a: 71, pl. 9: figs a,b.
Koeniginirmus (*Laminonirmus*) *nychthemerus birostris* (Giebel, 1874); Złotorzycka 1967: 761.
Quadraceps birostris (Giebel, 1874); Nelson 1969: 199.
Quadraceps birostris (Giebel, 1874); Watt 1971: 238, 243.
Quadraceps birostris (Giebel, 1874); Pilgrim & Palma 1982: 23.
Quadraceps birostris (Giebel, 1874); Murray *et al.* 2006a: 1965.
Quadraceps birostris (Giebel, 1874); Palma 2010: 408.

Syntypes ♂♂ presumed lost. See Clay (1949a: 1) and Palma & Pilgrim (1984: 150).

Type host: "*Sterna* n. sp. probably *Sterna fuliginosa*" [= *Onychoprion fuscatus* (Linnaeus, 1766)] (Hopkins & Clay 1952: 309).

New Zealand host: *Onychoprion fuscatus serratus* (J.R. Forster, 1830).

Other hosts: *Onychoprion fuscatus fuscatus* (Linnaeus, 1766); *Onychoprion fuscatus oahuensis* Bloxham, 1826; *Onychoprion fuscatus crissalis* (Lawrence, 1872).

New Zealand localities: WO, KE, Norfolk Island.

Geographic distribution: Tropical and subtropical regions of the Atlantic, Indian and Pacific Oceans.

New Zealand references: Nelson (1969); Watt (1971); Wise (1977: 63); Pilgrim & Palma (1982); Palma (1994b: 268); Murray *et al.* (2006a); Palma (2010).

Other significant references: Ferris (1932a); Eichler (1951b); Timmermann (1952a; 1957a); Carriker (1957: 100); Złotorzycka (1967); Amerson & Emerson (1971: 17, 25); Ward & Downey (1973: 394); Forrester *et al.* (1995: 31); Palma (1996b: 210); Price *et al*. (2003: 223); Palma & Peck (2013: 50).

Remarks: *Quadraceps birostris* appears to be restricted to the subspecies of the sooty tern.

Quadraceps caspius (Giebel, 1874)

Figs 158–159

Nirmus caspius Giebel, 1874: 174.
Degeeriella caspia Giebel, 1866 [sic]; Harrison 1916: 110.
Koeniginirmus sellatus caspius Giebel, 1874 [sic]; Eichler 1951b: 134.
Quadraceps caspius (Giebel, 1874); Timmermann 1952a: 83.
Quadraceps caspius (Giebel, 1874); Hopkins & Clay 1952: 309.
Quadraceps caspius (Giebel, 1874); Timmermann 1957a: 72, pl. 11: figs a,b.
Koeniginirmus (*Laminonirmus*) *caspius caspius* (Giebel, 1874); Złotorzycka 1967: 756, pl. 17: fig. 3.
Quadraceps caspius (Giebel, 1874); Pilgrim & Palma 1982: 22.
Quadraceps caspius (Giebel, 1874); Murray *et al.* 2006a: 1965.
Quadraceps caspius (Giebel, 1874); Palma 2010: 408.

Syntypes ♂♀, presumed lost. See Clay (1949a: 1) and Palma & Pilgrim (1984: 150).

Type host: *Hydroprogne caspia* (Pallas, 1770).

New Zealand host: *Hydroprogne caspia* (Pallas, 1770).

Other hosts: None.

New Zealand localities: ND, AK, SC.

Geographic distribution: Eurasia; Africa; North America; Australasia.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (2006a); Palma (2010).

Other significant references: Eichler (1951b); Timmermann (1952a; 1957a); Złotorzycka (1967); Forrester *et al.* (1995: 30); Price *et al*. (2003: 223).

Remarks: *Quadraceps caspius* is frequently collected from Caspian terns.

Quadraceps cedemajori Timmermann, 1969

Quadraceps assimilis cedemajori Timmermann, 1969b: 250, fig. 6b.
Quadraceps assimilis cedemajori Timmermann, 1969; Wise 1977: 63.
Quadraceps cedemajori Timmermann, 1969; Martens & Palma 1981: 83.
Quadraceps cedemajori Timmermann, 1969; Pilgrim & Palma 1982: 20.
Quadraceps cedemajori Timmermann, 1969; Murray *et al.* 1993: 962.
Quadraceps cedemajori Timmermann, 1969; Palma 2010: 407.

Holotype ♂ in BPBM (Tenorio 1979: 12).

Type host: *Charadrius bicinctus* Jardine & Selby, 1827.

New Zealand hosts: *Charadrius bicinctus bicinctus* Jardine & Selby, 1827; *Charadrius bicinctus exilis* Falla, 1978; *Anarhynchus frontalis* Quoy & Gaimard, 1830.

Other hosts: None

New Zealand localities: AK, CL, TK, WN, NN, KA, MC, WD, OL, CH, AU.

Geographic distribution: Australasia; Oceania.

New Zealand references: Wise (1977); Weidner (1977: 102); Martens & Palma (1981); Pilgrim & Palma (1982); Murray *et al.* (1993); Davies (1995: 46); Paterson *et al.* (1999: 223); Palma (2010).

Other significant reference: Price *et al*. (2003: 223).

Remarks: Remarks: *Quadraceps cedemajori* has an unusual host distribution on three New Zealand endemic plovers (Martens & Palma 1981: 84).

***Quadraceps charadrii orarius* (Kellogg, 1896)**

Nirmus orarius Kellogg, 1896a: 104, pl. 5: fig. 5.
Degeeriella oraria Kellogg [sic]; Johnston & Harrison 1912: 368.
Degeeriella oraria (Kellogg, 1896); Thompson 1939: 120.
Quadraceps orarius (Kellogg, 1896); Hopkins & Clay 1952: 314.
Quadraceps charadrii orarius (Kellogg, 1896); Timmermann 1953b: 184.
Quadraceps orarius (Kellogg, 1896); Złotorzycka 1967: 720.
Quadraceps charadrii orarius (Kellogg, 1896); Emerson 1972a: 137.
Quadraceps orarius (Kellogg, 1896); Wise 1977: 64.
"*Quadraceps charadrii*" Pilgrim & Palma, 1982: 20, 31, note 21 (not *Pediculus charadrii* Linnaeus, 1758).
"*Quadraceps charadrii*" Murray *et al.*, 1993: 962 (not *Pediculus charadrii* Linnaeus, 1758).
Quadraceps orarius (Kellogg, 1896); Price *et al*. 2003: 226.
"*Quadraceps charadrii charadrii*" Palma, 2010: 408 (not *Pediculus charadrii* Linnaeus, 1758).

Holotype ♀ in EMEC (Carriker 1957: 101).

Type host: *Pluvialis dominicus* (Statius Müller, 1776).

New Zealand host: *Pluvialis fulva* (J.F. Gmelin, 1789).

Other hosts: None.

New Zealand localities: AK, KE.

Geographic distribution: Americas; Asia; Australasia; Pacific Ocean.

New Zealand references: Johnston & Harrison (1912); Wise (1977); Pilgrim & Palma (1982); Murray *et al.* (1993); Palma (2010).

Other significant references: Thompson (1939); Timmermann (1953b); Carriker (1957: 101); Złotorzycka (1967); Amerson & Emerson (1971: 13, 25); Emerson (1972a); Moreby (1976: 93); Price *et al*. (2003).

Remarks: In agreement with Timmermann (1953b: 184) and contrary to Price *et al.* (2003: 226), I regard this louse taxon as a subspecies of *Quadraceps charadrii* (Linnaeus, 1758). I also regard these taxa as subspecies: *Q. charadrii hospes* (Nitzsch [*in* Giebel], 1866) and *Q. charadrii punctifer* Hopkins, 1949c (see Timmermann 1953b: 183; Emerson 1972a: 136).

***Quadraceps coenocoryphae* Timmermann, 1955**

Quadraceps coenocoryphae Timmermann, 1955: 523, fig. 9.
Quadraceps coenocoryphae Timmermann, 1955; Złotorzycka 1967: 713.
Quadraceps coenocoryphae Timmermann, 1955; Wise 1977: 63.
Quadraceps coenocoryphae Timmermann, 1955; Horning *et al.* 1980: 7, 11.
Quadraceps coenocoryphae Timmermann, 1955; Pilgrim & Palma 1982: 21.
Quadraceps coenocoryphae Timmermann, 1955; Murray *et al.* 2006a: 1964.
Quadraceps coenocoryphae Timmermann, 1955; Palma 2010: 408.

Holotype ♂ in NHML.

Type host: *Coenocorypha aucklandica aucklandica* (G.R. Gray, 1845).

New Zealand hosts: *Coenocorypha pusilla* (Buller, 1869); *Coenocorypha huegeli* (Tristram, 1893); *Coenocorypha aucklandica aucklandica* (G.R. Gray, 1845); *Coenocorypha aucklandica perseverance* Miskelly & Baker, 2010.

Other hosts: None.

New Zealand localities: CH, SN, AU, CA.

Geographic distribution: New Zealand.

New Zealand references: Timmermann (1955); Złotorzycka (1967); Pilgrim (1970: 74); Wise (1977); Horning *et al.* (1980); Pilgrim & Palma (1982); Murray *et al.* (2006a); Palma (2010); Buckley *et al.* (2012: App. 2).

Other significant reference: Price *et al*. (2003: 223).

Remarks: *Quadraceps coenocoryphae* is an endemic and "at risk" species (Buckley *et al.* 2012), exclusively parasitic on several species and subspecies of New Zealand snipes. *Coenocorypha aucklandica perseverance* is a new host record for *Quadraceps coenocoryphae* (voucher specimens in MONZ).

***Quadraceps dominella* Timmermann, 1953**

Quadraceps dominella Timmermann, 1953b: 186.
Quadraceps dominella Timmermann, 1953; Hopkins & Clay 1955: 186.
Quadraceps dominella Timmermann, 1953; Wise 1977: 63.
Quadraceps dominella Timmermann, 1953; Martens 1980: 350, figs 1–2.
Quadraceps dominella Timmermann, 1953; Martens & Palma 1981: 83.
Quadraceps dominella Timmermann, 1953; Pilgrim & Palma 1982: 20.
Quadraceps dominella Timmermann, 1953; Murray *et al.* 1993: 962.
Quadraceps dominella Timmermann, 1953; Palma 2010: 408.

Holotype ♀ in NHML.

Type host: *Charadrius obscurus obscurus* (J.F. Gmelin, 1789).

New Zealand hosts: *Charadrius obscurus obscurus* (J.F. Gmelin, 1789); *Charadrius obscurus aquilonius* Dowding, 1994.

Other hosts: None.

New Zealand localities: ND, AK, MC, SI.

Geographic distribution: New Zealand.

New Zealand references: Timmermann (1953b); Złotorzycka (1967: 714); Pilgrim (1970: 74); Wise (1977); Martens (1980); Martens & Palma (1981); Pilgrim & Palma (1982); Murray *et al.* (1993); Palma (2010); Buckley *et al.* (2012: App. 2).

Other significant reference: Price *et al*. (2003: 224).

Remarks: *Quadraceps dominella* is an endemic and vulnerable species (Buckley *et al.* 2012), exclusively parasitic on New Zealand dotterels. *Charadrius obscurus aquilonius* is a new host record for *Quadraceps dominella* (voucher specimens in MONZ).

Quadraceps ellipticus* (Nitzsch [*in* Giebel], 1866) *sensu lato

Nirmus ellipticus Nitzsch [*in* Giebel], 1866: 371.
Degeeriella elliptica Nitzsch [*in* Giebel], 1866 [sic]; Harrison 1916: 112.
Glareolites ellipticus Nitzsch [*in* Giebel], 1866 [sic]; Eichler 1944b: 80, fig. 1.
Quadraceps ellipticus (Nitzsch [*in* Giebel], 1866); Timmermann 1952d: 1030.
Glareolites ellipticus (Nitzsch, 1866) [sic]; Złotorzycka 1967: 741.
Quadraceps ellipticus (Nitzsch, 1866) [sic] *s. l.*; Pilgrim & Palma 1982: 22.
Quadraceps ellipticus (Nitzsch [*in* Giebel], 1866); Martín-Mateo 1992b: 410, figs 1–3, 7, 12, 17.
Quadraceps ellipticus (Nitzsch [*in* Giebel], 1866); Murray *et al.* 2006a: 1964
Quadraceps ellipticus (Nitzsch [*in* Giebel], 1866); Palma 2010: 408.

Status, sex and repository of types unknown, presumed lost. See Clay (1949a: 1) and Palma & Pilgrim (1984: 150).

Type host: *Glareola pratincola* (Linnaeus, 1766).

New Zealand host: *Glareola maldivarum* J.R. Forster, 1795.

Other host: *Glareola lactea* Temminck, 1820.

New Zealand locality: NN.

Geographic distribution: Eurasia; Africa; Australasia.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (2006a); Palma (2010).

Other significant references: Eichler (1944b); Timmermann (1952d); Tendeiro (1964: 201, fig. 19, pl. 10: fig. 30, pl. 11: fig. 32, pl. 12: fig. 34); Złotorzycka (1967); Martín-Mateo (1992b); Price *et al*. (2003: 224).

Remarks: In agreement with Pilgrim & Palma (1982: 22), I regard the population of *Quadraceps ellipticus* from *Glareola maldivarum* as not completely identical to that from the type host, but not sufficiently distinct to warrant its taxonomic separation. The oriental pratincole is a rare visitor to New Zealand (Checklist Committee 2010: 223), with only a single record of *Quadraceps ellipticus* from this country.

***Quadraceps hemichrous* (Nitzsch [*in* Giebel], 1866)**

Nirmus hemichrous Nitzsch [*in* Giebel], 1866: 372.
Degeeriella hemichroa Nitzsch [*in* Giebel], 1866 [sic]; Harrison 1916: 114.

Quadraceps hemichrous (Nitzsch [*in* Giebel], 1866); Hopkins & Clay 1952: 311.
Quadraceps hemichrous (Nitzsch [*in* Giebel], 1866); Timmermann 1954f: 169, fig. 8.
Himantophagus hemichrous (Nitzsch [*in* Giebel], 1866); Złotorzycka 1967: 734.
Quadraceps hemichrous (Nitzsch, 1866) [sic]; Pilgrim & Palma 1982: 21.
Quadraceps hemichrous (Nitzsch, 1866) [sic]; Murray *et al.* 1993: 962.
Quadraceps hemichrous (Nitzsch *in* Giebel, 1866); Palma 2010: 408.

Neotype ♂ in NHML (Timmermann 1954f: 170).

Type host: *Himantopus himantopus himantopus* (Linnaeus, 1758).

New Zealand hosts: *Himantopus himantopus leucocephalus* Gould, 1837; *Himantopus novaezelandiae* Gould, 1841.

Other host: *Himantopus himantopus mexicanus* (Statius Müller, 1776).

New Zealand localities: AK, BP, HB, WI, WN, KA, NC, MC, SC, WD.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Timmermann (1954f: 170); Pilgrim & Palma (1982); Murray *et al.* (1993); Paterson *et al.* (1999: 221, 223); Palma (2010).

Other significant references: Timmermann (1957a: 65); Złotorzycka (1967); Hinojos & Canaris (1988: 328); Palma (1995: 219); Forrester *et al.* (1995: 26); Palma (1996b: 211); Price *et al*. (2003: 224); Palma & Peck (2013: 51).

Remarks: In adition to *Quadraceps hemichrous*, the species of the host genus *Himantopus* are parasitised by *Quadraceps semifissus* (see below).

Quadraceps hopkinsi apophoretus Timmermann, 1969

Quadraceps hopkinsi apophoretus Timmermann, 1969c: 198, fig. 4b.
"*Quadraceps hopkinsi*" Nelson, 1969: 199 (not *Quadraceps hopkinsi* Timmermann, 1952a).
Quadraceps hopkinsi apophoretus Timmermann, 1969; Watt 1971: 238, 243, fig. 9.
Quadraceps hopkinsi apophoretus Timmermann, 1969; Pilgrim & Palma 1982: 23.
Quadraceps apophoretus Timmermann, 1969; Price *et al*. 2003: 223.
Quadraceps hopkinsi apophoretus Timmermann, 1969; Murray *et al.* 2006a: 1965.
Quadraceps hopkinsi apophoretus Timmermann, 1969; Palma 2010: 408.

Holotype ♂ in NZAC.

Type host: *Procelsterna cerulea albivitta* Bonaparte, 1856.

New Zealand host: *Procelsterna cerulea albivitta* Bonaparte, 1856.

Other host: *Procelsterna cerulea cerulea* (Bennett, 1840).

New Zealand localities: ND, BP, MC, KE, Norfolk Island.

Geographic distribution: Oceania; New Zealand.

New Zealand references: Timmermann (1969c: 200); Nelson (1969); Watt (1971); Wise (1977: 63); Pilgrim & Palma (1982); Murray *et al.* (2006a); Palma (2010).

Other significant references: Palma (1996b: 212); Price *et al*. (2003: 223).

Remarks: In agreement with Timmermann (1969c: 198) and contrary to Price *et al*. (2003: 223), I regard this louse taxon as a subspecies of *Quadraceps hopkinsi* Timmermann, 1952 (see below).

Quadraceps hopkinsi hopkinsi Timmermann, 1952

Quadraceps hopkinsi Timmermann, 1952a: 74, figs 1–3.
Quadraceps hopkinsi Timmermann, 1952; Hopkins & Clay 1953: 443.
Anouscеps hopkinsi (Timmermann, 1952); Złotorzycka 1967: 730.
Quadraceps hopkinsi hopkinsi Timmermann, 1952; Timmermann 1969c: 198, fig. 4a.
Quadraceps hopkinsi hopkinsi Timmermann, 1952; Watt 1971: 238, 243.
Quadraceps hopkinsi hopkinsi Timmermann, 1952; Pilgrim & Palma 1982: 23.
Quadraceps hopkinsi Timmermann, 1952; Price *et al*. 2003: 224.
Quadraceps hopkinsi hopkinsi Timmermann, 1952; Murray *et al.* 2006a: 1965.
Quadraceps h. hopkinsi Timmermann, 1952; Palma 2010: 408.

Holotype ♂ in NHML.

Type host: *Anous minutus melanogenys* G.R. Gray, 1846.

New Zealand host: *Anous minutus minutus* Boie, 1844.

Other hosts: *Anous tenuirostris* (Temminck, 1823); *Anous minutus atlanticus* (Mathews, 1912).

New Zealand locality: KE.

Geographic distribution: Australasia; Oceania; Central & South America.

New Zealand references: Watt (1971); Wise (1977: 63); Pilgrim & Palma (1982); Palma (1994b: 268); Murray *et al.* (2006a); Palma (2010).

Other significant references: Złotorzycka (1967); Timmermann (1969c); Amerson & Emerson (1971: 19, 25); Ward & Downey (1973: 394); Benoit (1976: 233); Moyer & Wagenbach (1995: 1073); Palma (1996b: 211); Price *et al*. (2003: 224); Silva *et al*. (2014: 942).

Remarks: In agreement with Timmermann (1969c: 198) and contrary to Price *et al*. (2003: 224), I regard this louse taxon as a subspecies (see above).

Quadraceps normifer alpha (Kellogg, 1914)

Nirmus triangulatus Nitzsch, var. *alpha* Kellogg, 1914: 84.
Degeeriella alpha Kellogg, 1914 [sic]; Harrison 1916: 107.
Koeniginirmus normifer alpha Kellogg, 1914 [sic]; Eichler 1951b: 127.
Quadraceps alpha (Kellogg, 1914); Hopkins & Clay 1952: 308.
Quadraceps alpha (Kellogg, 1914); Clay & Moreby 1967: 164, 169, fig. 93.
Koeniginirmus (*Laminonirmus*) *normifer alpha* (Kellogg, 1914); Złotorzycka 1967: 759.
Quadraceps normifer alpha (Kellogg, 1914); Emerson 1972a: 141.
Quadraceps alpha (Kellogg, 1914); Pilgrim & Palma 1982: 22.
Quadraceps alpha (Kellogg, 1914); Price *et al*. 2003: 223.
Quadraceps alpha (Kellogg, 1914); Murray *et al.* 2006a: 1965.
Quadraceps normifer alpha (Kellogg, 1914); Palma 2010: 408.
Quadraceps normifer alpha (Kellogg, 1914); Palma 2015b: 153, figs 1–3.

Lectotype ♂ in EMEC (Palma 2015b: 151, figs 1, 3).

Type host: *Catharacta chilensis* (Bonaparte**,** 1857) (see Palma 2015b: 151).

New Zealand host: *Catharacta maccormicki* (Saunders, 1893).

Other host: *Catharacta antarctica antarctica* (Lesson, 1831) (not confirmed, see Palma 2015b: 154).

New Zealand localities: RO.

Geographic distribution: South America; Subantarctic Islands; Antarctica; southern Atlantic, Indian and Pacific Oceans.

New Zealand references: Clay & Moreby (1967); Złotorzycka (1967); Pilgrim & Palma (1982); Murray *et al.* (2006a); Palma (2010); Palma (2015b: 153).

Other significant references: Eichler (1951b); Emerson (1972a); Cohen *et al*. (1997: 186); Price *et al*. (2003).

Remarks: In agreement with Eichler (1951b: 127) and Emerson (1972a: 141), and contrary to Pilgrim & Palma (1982: 22) and Price *et al*. (2003: 223), I regard this louse taxon as a subspecies of *Quadraceps normifer* (Grube, 1851). Palma (2015b) summarised the taxonomic history and host records of *Quadraceps normifer alpha*, clarified the identity of the type host, and designated a lectotype.

Quadraceps normifer normifer (Grube, 1851)

Nirmus normifer Grube, 1851: 478, pl. 31: fig. 8.
Degeeriella normifer Grube, 1851 [sic]; Harrison 1916: 119.
Koeniginirmus normifer (Grube, 1851); Timmermann 1949b: 88, fig. 3.
Koeniginirmus normifer normifer Grube, 1851 [sic]; Eichler 1951b: 126.
Quadraceps normifer (Grube, 1851); Hopkins & Clay 1952: 313.
Koeniginirmus (*Laminonirmus*) *normifer normifer* (Grube, 1851); Złotorzycka 1967: 760, pl. 15: fig. 1.
Quadraceps normifer normifer (Grube, 1851); Emerson 1972a: 141.
Quadraceps normifer (Grube, 1851); Pilgrim & Palma 1982: 22.
Quadraceps normifer normifer; Crossland 1993: 305.
Quadraceps normifer (Grube, 1851); Price *et al*. 2003: 225.
Quadraceps normifer normifer (Grube, 1851); Murray *et al.* 2006a: 1965.
Quadraceps n. normifer (Grube, 1851); Palma 2010: 408.

Syntypes ♂♀, repository unknown.
Type host: *Stercorarius parasiticus* (Linnaeus, 1758).
New Zealand host: *Stercorarius parasiticus* (Linnaeus, 1758).
Other hosts: None.
New Zealand localities: HB, WN, KA, MC.
Geographic distribution: Arctic Region; South America; South Africa; Atlantic, Indian and Pacific Oceans.
New Zealand references: Pilgrim & Palma (1982); Crossland (1993); Murray *et al.* (2006a); Palma (2010).
Other significant references: Timmermann (1949b); Eichler (1951b); Złotorzycka (1967); Hackman & Nyholm (1968: 79); Emerson (1972a); Cohen *et al*. (1997: 186); Price *et al*. (2003); Palma & Jensen (2005: 57, 64).
Remarks: In agreement with Eichler (1951b: 126) and Emerson (1972a: 141), and contrary to Pilgrim & Palma (1982: 22) and Price *et al*. (2003: 225), I regard this louse taxon as a subspecies.

Quadraceps normifer parvopallidus (Eichler, 1951)

Nirmus triangulatus variety Piaget, 1880: 202.
Koeniginirmus normifer parvopallidus Eichler, 1951b: 127. *Nomen novum* for *Nirmus triangulatus* variety Piaget, 1880: 202.
Quadraceps parvopallidus (Eichler, 1951); Hopkins & Clay 1953: 444.
Koeniginirmus (*Laminonirmus*) *normifer parvopallidus* Eichler, 1951; Złotorzycka 1967: 760.
Quadraceps normifer parvopallidus (Eichler, 1951); Emerson 1972a: 142.
Quadraceps sp.; Melville 1985: 67.
Quadraceps normifer parvopallidus (Eichler, 1951); Palma 1999: 380.
Quadraceps parvopallidus (Eichler, 1951); Price *et al*. 2003: 226.
Quadraceps normifer parvopallidus (Eichler, 1951); Murray *et al.* 2006a: 1965.
Quadraceps n. parvopallidus (Eichler, 1951); Palma 2010: 408.

Syntypes ♂♀ in NHML (Thompson 1937–1939: 421).
Type host: *Stercorarius longicaudus* Vieillot, 1819.
New Zealand host: *Stercorarius longicaudus* Vieillot, 1819.
Other hosts: None.
New Zealand localities: ND, WO, WI, WN.
Geographic distribution: Cold and temperate regions of the Atlantic, Indian and Pacific Oceans.
New Zealand references: Melville (1985); Palma (1999); Murray *et al.* (2006a); Palma (2010).
Other significant references: Złotorzycka (1967); Emerson (1972a); Cohen *et al*. (1997: 186); Price *et al*. (2003); Palma & Jensen (2005: 57, 64).
Remarks: In agreement with Eichler (1951b: 127) and Emerson (1972a: 142), and contrary to Price *et al*. (2003: 226), I regard this louse taxon as a subspecies of *Quadraceps normifer*.

Quadraceps novaeseelandiae Timmermann, 1953

Quadraceps novaeseelandiae Timmermann, 1953b: 185, fig. 1.
Quadraceps novaeseelandiae Timmermann, 1953; Hopkins & Clay 1955: 187.
Quadraceps novaeseelandiae Timmermann, 1953; Wise 1977: 63.
Quadraceps novaeseelandiae Timmermann, 1953; Martens 1980: 351, figs 3–4.
Quadraceps novaeseelandiae Timmermann, 1953; Martens & Palma 1981: 83.
Quadraceps novaeseelandiae Timmermann, 1953; Pilgrim & Palma 1982: 20.
Quadraceps novaeseelandiae Timmermann, 1953; Murray *et al.* 1993: 962.
Quadraceps novaeseelandiae Timmermann, 1953; Palma 2010: 407.

Holotype ♂ in NHML.
Type host: *Thinornis novaeseelandiae* (J.F. Gmelin, 1789).
New Zealand hosts: *Charadrius bicinctus exilis* Falla, 1978; *Thinornis novaeseelandiae* (J.F. Gmelin, 1789).
Other hosts: None.
New Zealand localities: CH, AU.
Geographic distribution: New Zealand.

New Zealand references: Timmermann (1953b); Pilgrim (1970: 74); Wise (1977); Martens (1980); Martens & Palma (1981); Pilgrim & Palma (1982); Murray *et al.* (1993); Palma (2010); Buckley *et al.* (2012, App. 2).

Other significant reference: Price *et al*. (2003: 225).

Remarks: *Quadraceps novaeseelandiae* is an endemic and "at risk" species (Buckley *et al.* 2012), with an unusual host distribution on two species of New Zealand endemic plovers (Martens & Palma 1981: 84).

***Quadraceps nycthemerus* (Burmeister, 1838)**

Nirmus nycthemerus Burmeister, 1838a: 428.

Degeeriella nycthemera Nitzsch in Burmeister, 1838 [sic]; Harrison 1916: 119.

Koeniginirmus nychthemerus nychthemerus Nitzsch in Burmeister, 1838 [sic]; Eichler 1951b: 127. Unjustified emendation.

Quadraceps nycthemerus (Burmeister, 1838); Timmermann 1952a: 78, fig. 6 left.

Quadraceps nychthemerus (Burmeister, 1838); Hopkins & Clay 1952: 313. Unjustified emendation.

Quadraceps nycthemerus (Burmeister, 1838); Timmermann 1957a: 71, pl. 8: figs a,b.

Koeniginirmus (*Laminonirmus*) *nychthemerus nychthemerus* (Burmeister, 1838); Złotorzycka 1967: 762, pl. 17: fig. 4. Unjustified emendation.

Quadraceps nychthemerus (Burmeister, 1838); Pilgrim & Palma 1982: 23. Unjustified emendation.

Quadraceps nycthemerus (Burmeister, 1838); Price *et al*. 2003: 225.

Quadraceps nychthemerus (Burmeister, 1838); Murray *et al.* 2006a: 1965. Unjustified emendation.

Quadraceps nychthemerus (Burmeister, 1838); Palma 2010: 408. Unjustified emendation.

Neotype ♂ in NHML (Timmermann 1952a: 78).

Type host: *Sternula albifrons albifrons* (Pallas, 1764).

New Zealand host: *Sternula albifrons sinensis* (J.F. Gmelin, 1789).

Other host: *Sterna nereis* Gould, 1843.

New Zealand locality: ND.

Geographic distribution: Eurasia; Africa; Australasia.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (2006a); Palma (2010).

Other significant references: Séguy (1944: 289, fig. 439); Eichler (1951b); Timmermann (1952a); Timmermann (1952d: 1033); Timmermann (1957a); Złotorzycka (1967); Palma (1996b: 213); Price *et al*. (2003).

Remarks: I agree with Timmermann (1952a: 78) and Price *et al*. (2003: 225) in that there is no valid reason to change Burmeister's (1838) original spelling of the species epithet "*nycthemerus*", as done by Hopkins & Clay (1952: 313) and several other authors who followed them (see synonymy above).

***Quadraceps ornatus fuscolaminulatus* (Enderlein, 1908)**

Ricinus fuscolaminulatus Enderlein, 1908: 447, figs 193, 195.

Degeeriella fuscolaminulata Enderlein, 1908 [sic]; Harrison 1916: 113.

Koeniginirmus ornatus fuscolaminulatus Enderlein, 1908 [sic]; Eichler 1951b: 130.

Quadraceps ornatus fuscolaminulatus (Enderlein, 1908); Timmermann 1952b: 218.

Koeniginirmus fuscolaminulatus (Enderlein, 1908); Séguy 1953: 580, figs 39–40.

Quadraceps fuscolaminulatus (Enderlein, 1908); Clay 1964a: 232.

Koeniginirmus (*Laminonirmus*) *ornatus fuscolaminulatus* (Enderlein, 1908); Złotorzycka 1967: 764.

Quadraceps ornatus fuscolaminulatus (Enderlein, 1908); Wise 1977: 64.

Quadraceps ornatus fuscolaminulatus (Enderlein, 1908); Pilgrim & Palma 1982: 22.

Quadraceps ornatus fuscolaminulatus (Enderlein, 1908); Murray *et al.* 2006a: 1965.

Quadraceps ornatus fuscolaminulatus (Enderlein, 1908); Palma 2010: 408.

Holotype ♀ in ZMHU (Göllner-Scheiding 1973: 35).

Type host: *Larus dominicanus* Lichtenstein, 1823

New Zealand host: *Larus dominicanus dominicanus* Lichtenstein, 1823

Other hosts: None.

New Zealand localities: CA, Macquarie Island.

Geographic distribution: Southern Oceans.

New Zealand references: Clay (1964a); Gressitt (1964: 539); Clay & Moreby (1970: 220); Gressitt (1970: 328); Wise (1977); Pilgrim & Palma (1982); Palma (1996b: 213); Palma & Horning (2002: 12, 17); Murray *et al.* (2006a); Palma (2010).

Other significant references: Eichler (1951b); Timmermann (1952b,c); Séguy (1953); Clay & Moreby (1967: 164, 169, fig. 91); Timmermann (1971: 143, fig. 1); Price *et al*. (2003: 226); Yamagishi *et al*. (2014: 384).

Remarks: Within the New Zealand Subregion, *Quadraceps ornatus fuscolaminulatus* is the only species/subspecies of *Quadraceps* parasitising the Subantarctic populations of *Larus dominicanus* (also see below under *Quadraceps punctatus sublingulatus*).

***Quadraceps punctatus lingulatus* (Waterston, 1914)**

Nirmus punctatus lingulatus Waterston, 1914: 285.
Degeeriella lingulata Waterston, 1914 [sic]; Harrison 1916: 116.
Koeniginirmus lingulatus Waterston, 1914 [sic]; Eichler 1951b: 126.
Quadraceps lingulatus (Waterston, 1914); Hopkins & Clay 1952: 313.
Quadraceps punctatus lingulatus (Waterston, 1914); Timmermann 1952b: 214, fig. 2c.
Quadraceps lingulatus (Waterston, 1914); Clay 1964a: 232.
Koeniginirmus (*Koeniginirmus*) *lingulatus lingulatus* (Waterston, 1914); Złotorzycka 1967: 750.
Quadraceps lingulatus (Waterston, 1914); Wise 1977: 63.
Quadraceps punctatus (Burmeister, 1838a) *s. l.*; Horning *et al.* 1980: 7, 11.
Quadraceps punctatus (Burmeister, 1838) *s. l.*; Pilgrim & Palma 1982: 22. In part.
Quadraceps punctatus lingulatus (Waterston, 1914); Price *et al.* 2003: 227.
Quadraceps punctatus lingulatus (Waterston, 1914); Murray *et al.* 2006a: 1965.
Quadraceps punctatus (Burmeister, 1838) *sensu lato*; Murray *et al.* 2006a: 1965. In part.
Quadraceps punctatus (Burmeister, 1838); Palma 2010: 408. In part.

Syntypes ♂♀ in SAMS (Palma 1996b: 213).

Type host: *Larus hartlaubii* Bruch, 1853.

New Zealand hosts: *Larus novaehollandiae scopulinus* J.R. Forster, 1843; *Larus bulleri* Hutton, 1871.

Other hosts: *Larus belcheri* Vigors, 1829; *Larus modestus* Tschudi, 1843; *Larus novaehollandiae novaehollandiae* Stephens, 1826; *Larus pipixcan* Wagler, 1831.

New Zealand localities: AK, HB, WN, SD, MB, NC, MC, SC, WD, SI, SN, AU.

Geographic distribution: Americas; Australasia.

New Zealand references: Clay (1964a); Gressitt (1964: 539); Wise (1977); Horning *et al.* (1980); Pilgrim & Palma (1982); Galloway (2005: 17); Murray *et al.* (2006a); Palma (2010).

Other significant references: Timmermann (1952b,c); Timmermann (1971: 143, fig. 1); Palma (1995: 220); Palma (1996b: 213); Price *et al*. (2003); Palma & Peck (2013: 53).

Remarks: Price *et al.* (2003: 227, 291) incorrectly listed *Larus bulleri* as a host of *Quadraceps punctatus punctatus* (Burmeister, 1838a).

***Quadraceps punctatus sublingulatus* Timmermann, 1952** **New Record**

Quadraceps punctatus sublingulatus Timmermann, 1952b: 215.
Quadraceps sublingulatus Timmermann, 1952; Hopkins & Clay 1953: 444.
Quadraceps punctatus sublingulatus Timmermann, 1952; Clay & Moreby 1967: 164, 169, fig. 90.
Koeniginirmus (*Koeniginirmus*) *lingulatus sublingulatus* (Timmermann, 1952); Złotorzycka 1967: 750.
Quadraceps punctatus (Burmeister, 1838a) *s. l.*; Pilgrim & Palma 1982: 22. In part.
Quadraceps punctatus sublingulatus Timmermann, 1952; Price *et al.* 2003: 227.
Quadraceps punctatus (Burmeister, 1838) *sensu lato*; Murray *et al.* 2006a: 1965. In part.
Quadraceps punctatus (Burmeister, 1838); Palma 2010: 408. In part.

Holotype ♂ in NHML.

Type host: *Larus delawarensis* Ord, 1815.

New Zealand host: *Larus dominicanus dominicanus* Lichtenstein, 1823.

Other hosts: *Larus californicus* Lawrence, 1854; *Larus occidentalis* Audubon, 1839; *Larus cirrocephalus* Vieillot, 1818; *Larus philadelphia* (Ord, 1815).

New Zealand localities: AK, WN, NC, MC, SC, WD.

Geographic distribution: Americas; Australasia.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (2006a); Palma (2010).

Other significant references: Timmermann (1952b,c); Clay & Moreby (1967); Złotorzycka (1967); Timmermann (1971: 143, fig. 1); Forrester *et al.* (1995: 29); Price *et al*. (2003: 227); González-Acuña *et al*. (2011: 300); Yamagishi *et al*. (2014: 384).

Material examined and repository: 57♂, 60♀ (15 samples, MONZ).

Remarks: This is the first record of *Quadraceps punctatus sublingulatus* for New Zealand, because the New Zealand references cited above reported this louse as "*Quadraceps punctatus* (Burmeister, 1838) *sensu lato*" or as "*Quadraceps punctatus* (Burmeister, 1838)". Within the New Zealand Subregion, *Quadraceps punctatus sublingulatus* is the only species/subspecies of *Quadraceps* parasitising the mainland populations of *Larus dominicanus* (also see above under *Quadraceps ornatus fuscolaminulatus*).

Quadraceps renschi Timmermann, 1954

Quadraceps renschi Timmermann, 1954e: 206, fig. 13.
Quadraceps renschi Timmermann, 1954; Hopkins & Clay 1955: 187.
Quadraceps renschi Timmermann, 1954; Wise 1977: 64.
Quadraceps renschi Timmermann, 1954; Pilgrim & Palma 1982: 20.
Quadraceps renschi Timmermann, 1954; Murray *et al.* 1993: 962.
Quadraceps renschi Timmermann, 1954; Palma 2010: 408.

Holotype ♂ in NHML.

Type host: *Vanellus miles novaehollandiae* Stephens, 1819.

New Zealand host: *Vanellus miles novaehollandiae* Stephens, 1819.

Other hosts: None.

New Zealand localities: NN, BR, MC, SC, DN, SL.

Geographic distribution: Australasia.

New Zealand references: Pilgrim (1970: 75); Wise (1977); Pilgrim & Palma (1982); Murray *et al.* (1993); Paterson *et al.* (1999: 221); Palma (2010).

Other significant references: Złotorzycka (1967: 722); Green & Palma (1991: 18, 32); Palma (1996b: 214); Price *et al*. (2003: 227).

Remarks: *Quadraceps renschi* is a frequently collected "wing" louse species from spur-winged plovers.

Quadraceps ridgwayi (Kellogg, 1906)

Nirmus ridgwayi Kellogg, 1906: 317.
Degeeriella ridgwayi Kellogg, 1906 [sic]; Harrison 1916: 122.
Quadraceps ridgwayi (Kellogg, 1906); Hopkins & Clay 1952: 316.
Quadraceps ridgwayi; Baker 1974: 20.
Quadraceps ridgwayi (Kellogg, 1906); Clay 1976b: 540, 546.
Quadraceps ridgwayi (Kellogg, 1906); Clay 1981b: 936, 938.
Quadraceps ridgwayi (Kellogg, 1906); Pilgrim & Palma 1982: 19.
Quadraceps ridgwayi (Kellogg, 1906); Murray *et al*. 1993: 961.
Quadraceps ridgwayi (Kellogg, 1906); Palma 2010: 408.

Lectotype ♂ in EMEC (Palma 1996b: 214).

Type host: *Haematopus palliatus galapagensis* Ridgway, 1886.

New Zealand host: *Haematopus unicolor* J.R. Forster, 1844.

Other hosts: *Haematopus ater* Vieillot & Oudart, 1825; *Haematopus longirostris* Vieillot, 1817; *Haematopus fuliginosus* Gould, 1845.

New Zealand localities: AK, WD, SL.

Geographic distribution: North and South America; Australasia; Oceania.

New Zealand references: Baker (1974); Pilgrim & Palma (1982); Murray *et al*. (1993); Palma (2010).

Other significant references: Złotorzycka (1967: 748); Timmermann (1971: 158); Clay (1976b; 1981b); Green & Palma (1991: 18, 32); Palma (1996b: 214); Price *et al*. (2003: 227); Palma & Peck (2013: 55).

Remarks: *Quadraceps ridgwayi* has a reduced host distribution (Clay 1981: 938, table 1), if compared with the other species of *Quadraceps* parasitic on oystercatchers, i.e. *Q. auratus* (see above).

Quadraceps sellatus houri Hopkins, 1949

Quadraceps houri Hopkins, 1949d: 52, pl. 3: figs 9–10.
Quadraceps houri Hopkins, 1949; Hopkins 1951a: 373.
Quadraceps sellatus houri Hopkins, 1949; Timmermann 1952a: 79.
Quadraceps houri Hopkins, 1949; Hopkins & Clay 1952: 312.
Quadraceps houri Hopkins, 1949; Timmermann 1957a: 71, pl. 7: figs a,b.
Koeniginirmus (*Laminonirmus*) *houri* (Hopkins, 1949); Złotorzycka 1967: 758.
Quadraceps houri Hopkins, 1949; Clay & Moreby 1967: 164, 169, fig. 146.
Quadraceps houri Hopkins, 1949; Pilgrim & Palma 1982: 23.
Quadraceps houri Hopkins, 1949; Palma 1999: 380.
Quadraceps houri Hopkins, 1949; Murray *et al.* 2006a: 1965.
Quadraceps houri Hopkins, 1949; Palma 2010: 408.

Holotype ♀ in NHML.

Type host: *Sterna paradisaea* Pontoppidan, 1763.

New Zealand hosts: *Sterna paradisaea* Pontoppidan, 1763; *Sterna vittata bethunei* Buller, 1896.

Other host: *Sterna vittata vittata* J.F. Gmelin, 1789.

New Zealand localities: WN, SL, SI, Macquarie Island.

Geographic distribution: Arctic and Subantarctic regions; Atlantic and Pacific Oceans.

New Zealand references: Pilgrim & Palma (1982); Palma (1996b: 212); Palma (1999); Palma & Horning (2002: 12, 18); Murray *et al.* (2006a); Palma (2010).

Other significant references: Hopkins (1951a); Timmermann (1952a; 1957a); Clay & Moreby (1967); Złotorzycka (1967); Price *et al*. (2003: 224); Palma & Jensen (2005: 57, 65); Hänel & Palma (2007: 113, 127, 131).

Remarks: In agreement with Timmermann (1952a: 79), and contrary to Pilgrim & Palma (1982: 23), Price *et al*. (2003: 224) and Palma (2010: 408), I regard this louse taxon as a subspecies of *Quadraceps sellatus*. The population of *Sterna vittata bethunei* from Macquarie Island is parasitised by *Quadraceps sellatus houri*, while the population of the same host from the Snares Islands is parasitised by *Quadraceps sellatus sellatus* (see below).

Quadraceps sellatus sellatus (Burmeister, 1838)

Nirmus sellatus Burmeister, 1838a: 428.
Degeeriella sellata Burmeister, 1838 [sic]; Harrison 1916: 122.
Koeniginirmus sellatus (Burmeister, 1838); Timmermann 1949b: 87, fig. 2.
Quadraceps sellatus (Burmeister, 1838); Hopkins 1949d: 52, pl. 3: figs 11–12.
Koeniginirmus sellatus sellatus Burmeister, 1838 [sic]; Eichler 1951b: 134.
Quadraceps sellatus sellatus (Burmeister, 1838); Timmermann 1952a: 80.
Koeniginirmus sellatus (Burmeister, 1839) [sic]; Séguy 1953: 581, fig. 41.
Quadraceps sellatus (Burmeister, 1838); Timmermann 1957a: 71, pl. 7: figs c,d.
Koeniginirmus (*Laminonirmus*) *sellatus sellatus* (Burmeister, 1838); Złotorzycka 1967: 767.
Quadraceps sellatus (Burmeister, 1838); Clay & Moreby 1967: 164, 169, fig. 145.
Quadraceps sellatus (Burmeister, 1838) *s. l.*; Horning *et al.* 1980: 7, 11.
Quadraceps sellatus (Burmeister, 1838) *s. l.*; Pilgrim & Palma 1982: 23.
Quadraceps sellatus (Burmeister, 1838); Price *et al*. 2003: 227.
Quadraceps sellatus (Burmeister, 1838); Murray *et al*. 2006a: 1965.
Quadraceps sellatus (Burmeister, 1838); Palma 2010: 408.

Neotype ♂ in NHML (Hopkins 1949d: 52; Palma 1996b: 214).

Type host: *Sterna hirundo hirundo* Linnaeus, 1758.

New Zealand hosts: *Sterna striata* J.F. Gmelin, 1789; *Sterna vittata bethunei* Buller, 1896.

Other hosts: *Sterna bergii* Lichtenstein, 1823; *Sterna bengalensis* Lesson, 1831.

New Zealand localities: AK, KA, NC, MC, SC, WD, CO, DN, SL, SN, AU.

Geographic distribution: Cosmopolitan.

New Zealand references: Horning *et al.* (1980); Pilgrim & Palma (1982); Murray *et al*. (2006a); Palma (2010).

Other significant references: Hopkins (1949d); Timmermann (1949b; 1952a; 1957a); Eichler (1951b); Séguy (1953); Złotorzycka (1967); Clay & Moreby (1967); Moreby (1976: 94); Green & Palma (1991: 18, 33); Forrester *et al.* (1995: 30); Palma (1996b: 214); Price *et al*. (2003).

Remarks: In agreement with Timmermann (1952a: 80), and contrary to Price *et al*. (2003: 227) and Palma (2010: 408), I regard this louse taxon as a subspecies. The population of *Sterna vittata bethunei* from Snares Islands is parasitised by *Quadraceps sellatus sellatus*, while the population of the same host from Macquarie Island is parasitised by *Quadraceps sellatus houri* (see above).

***Quadraceps semifissus* (Nitzsch [*in* Giebel], 1866)**

Nirmus semifissus Nitzsch [*in* Giebel], 1866: 372.
Degeeriella semifissa Nitzsch *in* Giebel, 1866 [sic]; Harrison 1916: 123.
Quadraceps semifissa mexicana [sic] Carriker, 1944: 99, pl. 5: figs 8–9.
Quadraceps mexicanus Carriker, 1944; Hopkins & Clay 1952: 313. Emendation.
Quadraceps semifissus (Nitzsch [*in* Giebel], 1866); Hopkins & Clay 1952: 316.
Proneptis semifissa (Nitzsch [*in* Giebel], 1866); Timmermann 1953a: 333, fig. right.
Proneptis semifissa (Nitzsch [*in* Giebel], 1866); Timmermann 1954f: 166, figs 3–5.
Proneptis semifissa mexicana (Carriker, 1944); Złotorzycka 1967: 732.
Proneptis semifissa semifissa (Nitzsch [*in* Giebel], 1866); Złotorzycka 1967: 733, pl. 7: figs 1, 3, pl. 8: fig. 1.
Quadraceps semifissus (Nitzsch, 1866) [sic]; Pilgrim & Palma 1982: 21.
Quadraceps semifissus mexicanus Carriker, 1944; Hinojos & Canaris 1988: 328.
Quadraceps semifissus (Nitzsch, 1866) [sic]; Murray *et al.* 1993: 962.
Quadraceps semifissus (Nitzsch [*in* Giebel], 1866); Palma 1999: 380.
Quadraceps semifissus (Nitzsch [*in* Giebel], 1866); Palma 2010: 408.

Syntypes ♂♀, presumed lost. See Clay (1949a: 1), Palma & Pilgrim (1984: 150) and Palma (1996b: 215).

Type host: *Himantopus himantopus himantopus* (Linnaeus, 1758).

New Zealand hosts: *Himantopus himantopus leucocephalus* Gould, 1837; *Himantopus novaezelandiae* Gould, 1841.

Other hosts: *Himantopus himantopus mexicanus* (Statius Müller, 1776); *Recurvirostra americana* J.F. Gmelin, 1789; *Recurvirostra andina* Philippi & Landbeck, 1861; *Recurvirostra avosetta* Linnaeus, 1758; *Recurvirostra novaehollandiae* Vieillot, 1816.

New Zealand localities: AK, BP, HB, WI, WN, NN, KA, NC, MC, SC, CO, DN.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Pilgrim & Palma (1982); Palma (1999); Murray *et al.* (1993); Paterson *et al.* (1999: 221, 223); Palma (2010).

Other significant references: Timmermann (1953a; 1954f); Timmermann (1957a: 76, figs 48–50); Złotorzycka (1967); Timmermann (1971: 165, fig. 10); Hinojos & Canaris (1988); Palma (1995: 220); Forrester *et al.* (1995: 26); Palma (1996b: 215); Price *et al*. (2003: 227); Martín-Mateo (2009: 131); Palma & Peck (2013: 55).

Remarks: In adition to *Quadraceps semifissus*, the species of the host genus *Himantopus* are parasitised by *Quadraceps hemichrous* (see above).

***Quadraceps separatus* (Kellogg & Kuwana, 1902)**

Nirmus separatus Kellogg & Kuwana, 1902: 472, pl. 29: fig. 6.
Nirmus gloriosus emarginatus Kellogg & Chapman, 1902: 159.
Degeeriella emarginata Kellogg & Chapman, 1902 [sic]; Harrison 1916: 112.
Degeeriella separata Kellogg & Kuwana, 1902 [sic]; Harrison 1916: 123.
Quadraceps separatus (Kellogg & Kuwana, 1902); Hopkins & Clay 1952: 316.
Quadraceps separatus (Kellogg & Kuwana, 1902); Timmermann 1952a: 73, figs 1–2.
Anousceps separatus (Kellogg & Kuwana, 1902); Złotorzycka 1967: 731.

Quadraceps separatus (Kellogg & Kuwana, 1902); Palma 1994b: 268.
Quadraceps separatus (Kellogg & Kuwana, 1902); Palma 1999: 380.
Quadraceps separatus (Kellogg & Kuwana, 1902); Murray *et al*. 2006a: 1965.
Quadraceps separatus (Kellogg & Kuwana, 1902); Palma 2010: 408.

Lectotype ♂ in EMEC (Palma 1996b: 215).

Type host: "*Geospiza conirostris*", in error (see Palma 1994b: 270).

New Zealand host: *Anous stolidus pileatus* (Scopoli, 1786).

Other host: *Anous stolidus galapagensis* Sharpe, 1879.

New Zealand locality: KE.

Geographic distribution: Tropical and subtropical regions of the Atlantic, Indian and Pacific Oceans.

New Zealand references: Palma (1994b); Palma (1999); Murray *et al*. (2006a); Palma (2010).

Other significant references: Ferris (1932a: 69, figs 19a,b,c,d,e); Timmermann (1952a); Timmermann (1957a: 70, pl. 9: figs c,d); Złotorzycka (1967); Amerson & Emerson (1971: 18, 25); Ward & Downey (1973: 395); Moreby (1976: 94); Forrester *et al.* (1995: 32); Palma (1994b; 1996b: 215); Price *et al*. (2003: 227); Palma & Peck (2013: 55); Silva *et al*. (2014: 942).

Remarks: Within the New Zealand Subregion, *Anous stolidus pileatus* breeds on Norfolk island and, more recently, on Curtis Island at the Kermadec Islands (Checklist Committee 2010: 231), with only one record of *Q. separatus* from this country.

Quadraceps strepsilaris (Denny, 1842)

Philopterus (*Nirmus*) *strepsilaris* Denny, 1842: 52, 135, pl. 11: fig. 4.
Nirmus lepidus Kellogg & Kuwana, 1902: 473, pl. 29: fig. 7.
Degeeriella lepida Kellogg & Kuwana, 1902 [sic]; Harrison 1916: 116.
Degeeriella strepsilaris Denny, 1842 [sic]; Harrison 1916: 124.
Quadraceps strepsilaris (Denny, 1842); Timmermann 1950: 2, fig. 2.
Quadraceps lepidus (Kellogg & Kuwana, 1902); Hopkins & Clay 1952: 312.
Quadraceps strepsilaris (Denny, 1842); Hopkins & Clay 1952: 317.
Quadraceps strepsilaris (Denny, 1842); Złotorzycka 1967: 724, pl. 1: fig. 3, pl. 2: fig. 2, pl. 3: fig. 4.
Quadraceps strepsilaris (Denny, 1842); Pilgrim & Palma 1982: 21.
Quadraceps strepsilaris (Denny, 1842); Palma 1994b: 269.
Cummingsiella strepsilaris (Denny, 1842); Butler & O'Connor 1994: 454.
Quadraceps strepsilaris (Denny, 1842); Price *et al*. 2003: 228.
Quadraceps strepsilaris (Denny, 1842); Murray *et al.* 2006a: 1964.
Quadraceps strepsilaris (Denny, 1842); Palma 2010: 408.

Holotype ♀ in NHML (Thompson 1937a: 80).

Type host: *Arenaria interpres* (Linnaeus, 1758).

New Zealand host: *Arenaria interpres* (Linnaeus, 1758).

Other host: *Arenaria melanocephala* (Vigors, 1829).

New Zealand localities: AK, MC, KE.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Pilgrim & Palma (1982); Palma (1994b); Murray *et al*. (2006a); Palma (2010).

Other significant references: Timmermann (1950); Emerson & Ward (1958: 58); Złotorzycka (1967); Hackman & Nyholm (1968: 79); Amerson & Emerson (1971: 15, 20); Butler & O'Connor (1994); Hunter & Colwell (1994: 402); Forrester *et al.* (1995: 26); Price *et al*. (2003); Palma & Jensen (2005: 58, 64); Palma & Peck (2013: 56).

Remarks: The ruddy turnstone is a very common summer visitor to New Zealand (Checklist Committee 2010: 207).

Quadraceps species

Quadraceps sp.; Pilgrim & Palma 1982: 22.
Quadraceps sp.; Murray *et al.* 2006a: 1965.

New Zealand host: *Chlidonias albostriatus* (G.R. Gray, 1845).

New Zealand locality: MC.

Geographic distribution: New Zealand.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (2006a).

Other significant references: Timmermann (1952a-d); Price *et al.* (2003: 22).

Remarks: The two available samples of *Quadraceps* from *Chlidonias albostriatus* could not be identified to species because each contains one female only (voucher specimens in MONZ).

Genus *Rallicola* Johnston & Harrison, 1911

Rallicola Johnston & Harrison, 1911. *Proc. Linn. Soc. New South Wales 36*(2): 324. Type species: *Oncophorus attenuatus* N. [sic] = *Rallicola* (*Rallicola*) *ortygometrae* (Schrank, 1781) (by original designation).

Subgenus *Aptericola* Harrison, 1915

Aptericola Harrison, 1915b. *Parasitology* 8: 90. Type species: *Rallicola* (*Aptericola*) *gadowi* Harrison, 1915b (by original designation).

Rallicola (*Aptericola*) *gadowi* Harrison, 1915

Rallicola (*Aptericola*) *gadowi* Harrison, 1915b: 90, figs 1–2.
Aptericola gadowi (Harrison, 1915); Tillyard 1926: 134, fig. O2.
Rallicola gadowi Harrison, 1915; Hopkins & Clay 1952: 319.
Rallicola gadowi Harrison, 1915; Clay 1953a: 568, figs 9–11, 45–46.
Aptericola gadowi; Miller 1971: 132.
Rallicola gadowi Harrison, 1915; Clay 1972: 71, figs 1–3, 5–7, 10, 13. In part.
Rallicola gadowi Harrison, 1915; Wise 1977: 64. In part.
Rallicola (*Aptericola*) *gadowi* Harrison, 1915; Pilgrim & Palma 1982: 3.
Rallicola (*Aptericola*) *gadowi* Harrison, 1915; Palma 2010: 409.

Lectotype ♀ in NHML (Clay 1972: 72).

Type host: *Apteryx australis australis* Shaw, 1813.

New Zealand host: *Apteryx australis australis* Shaw, 1813.

Other hosts: None.

New Zealand localities: WD, FD.

Geographic distribution: New Zealand.

New Zealand references: Harrison (1915); Tillyard (1926); Clay (1953a); Miller (1971); Clay (1972); Reid & Williams (1975: 324); Wise (1977); Pilgrim & Palma (1982); Murray *et al.* (1990: 1367); Palma (1991a: 317); Mey (1994: 21, figs 7–8); Baker *et al.* (1995: 8256); Burbidge *et al.* (2003: 174); Sales (2005: 15); Heath (2010: 151); Palma (2010); Buckley *et al.* (2012: App. 2).

Other significant references: Hopkins & Clay (1952); Price *et al*. (2003: 229).

Remarks: *Rallicola* (*Aptericola*) *gadowi* is an endemic and "at risk" species (Buckley *et al.* 2012). Samples published by Clay (1972: 73) as originating from "*Apteryx australis mantelli*" are actually from *Apteryx australis australis* (see Palma 1991a: 317). Also, see below under Remarks for *Rallicola* (*Aptericola*) *gadowi* Harrison, 1915 *sensu lato*.

Rallicola (*Aptericola*) *gadowi* Harrison, 1915 *sensu lato*

Rallicola (*Aptericola*) *novae-zealandiae* Harrison, 1915b: 92, figs 3–5.
Rallicola novaezealandiae Harrison, 1915; Clay 1953a: 579, figs 47–48.
Rallicola gadowi Harrison, 1915; Clay 1972: 71, figs 1–3, 5–7, 10, 13. In part.
Rallicola gadowi Harrison, 1915; Wise 1977: 64. In part.
Rallicola (*Aptericola*) *gadowi* Harrison, 1915 *s. l.*; Pilgrim & Palma 1982: 3.
Aptericola gadowi ssp.; Mey 1994: 21: figs 7–8.
Rallicola (*Aptericola*) *gadowi* Harrison, 1915 *sensu lato*; Palma & Price 2004: 71.

Lectotype of *Rallicola* (*Aptericola*) *novaezealandiae* Harrison, 1915: ♀ in NHML (Clay 1972: 72).

New Zealand hosts: *Apteryx australis lawryi* Rothschild, 1893; *Apteryx owenii* Gould, 1847; *Apteryx rowi* Tennyson *et al.* 2003.

Other hosts: None.

New Zealand localities: WN (Kapiti Island), WD, SI.

Geographic distribution: New Zealand.

New Zealand references: Harrison (1915); Clay (1953a); Clay (1972); Wise (1977); Pilgrim & Palma (1982); Murray *et al.* (1990: 1367); Mey (1994); Palma & Price (2004); Heath (2010: 151).

Other significant references: Clay (1951b: 188, fig. 12); Hopkins & Clay (1952); Price *et al*. (2003: 229).

Remarks: The populations of *Rallicola* (*Aptericola*) *gadowi* from its four hosts show a remarkable degree of morphological variability, both among and within populations, and especially those from the subspecies of *Apteryx australis*, within which I have identified several male and female morphs. Clay (1972: 73) concluded that the best option was to consider them as one species under one name. However, the material she had for study was limited in number of samples and of specimens. I have examined over 2,000 specimens from all four hosts and from all the localities where kiwis occur today, and conclude that a molecular study is necessary to attempt to elucidate the complex morphology shown by these lice (see Palma & Price 2004: 71).

Rallicola (*Aptericola*) *gracilentus* Clay, 1953

Rallicola (*Aptericola*) *gracilis* Harrison, 1915b: 93, fig. 6. Preoccupied by *Docophorus gracilis* Piaget, 1871: 120 = *Rallicola gracilis* (Piaget, 1871).

Rallicola gracilentus Clay, 1953a: 584, figs 43–44. *Nomen novum* for *Rallicola gracilis* Harrison, 1915.

Rallicola gracilentus Clay, 1953; Hopkins & Clay 1955: 187.

Rallicola gracilentus Clay, 1953; Clay 1972: 73, figs 8, 11, 14.

Rallicola gracilentus Clay, 1953; Wise 1977: 64.

Rallicola (*Aptericola*) *gracilentus* Clay, 1953; Pilgrim & Palma 1982: 3.

Rallicola (*A.*) *gracilentus* Clay, 1953; Palma 2010: 409.

Lectotype ♀ in NHML (Clay 1972: 74).

Type host: *Apteryx haastii* Potts, 1872.

New Zealand host: *Apteryx haastii* Potts, 1872.

Other hosts: None, but see Remarks, below.

New Zealand localities: NN, BR, WD.

Geographic distribution: South Island, New Zealand.

New Zealand references: Harrison (1915); Clay (1953a); Pilgrim (1970: 75); Clay (1972); Reid & Williams (1975: 324); Wise (1977); Pilgrim & Palma (1982); Murray *et al.* (1990: 1367); Baker *et al.* (1995: 8256); Burbidge *et al.* (2003: 174); Green & Turner (2003a: 97); Sales (2005: 15); Heath (2010: 151); Palma (2010); Buckley *et al.* (2012: App. 2).

Other significant references: Hopkins & Clay (1955); Price *et al.* (2003: 229).

Remarks: *Rallicola* (*Aptericola*) *gracilentus* is an endemic and vulnerable species (Buckley *et al.* 2012), exclusively parasitic on great spotted kiwis. Samples of *Rallicola* (*Aptericola*) from some kiwis identified as possible hybrids between *Apteryx owenii* and *Apteryx haastii* collected in the South Island during the past 60 years (Shepherd *et al.* 2012: 7) are *R.* (*Aptericola*) *gracilentus*.

Rallicola (*Aptericola*) *pilgrimi* Clay, 1972

Rallicola pilgrimi Clay, 1972: 74, figs 9, 12, 15.

Rallicola pilgrimi Clay, 1972; Wise 1977: 64.

Rallicola (*Aptericola*) *pilgrimi* Clay, 1972; Pilgrim & Palma 1982: 3.

Rallicola (*A.*) *pilgrimi* Clay, 1972; Palma 2010: 409.

Holotype ♀ in NHML.

Type host: *Apteryx owenii* Gould, 1847.

New Zealand host: *Apteryx owenii* Gould, 1847.

Other hosts: None.

New Zealand localities: WA, NN.

Geographic distribution: New Zealand.

New Zealand references: Clay (1972); Reid & Williams (1975: 324); Wise (1977); Pilgrim & Palma (1982); Murray *et al.* (1990: 1367); Baker *et al.* (1995: 8256); Burbidge *et al.* (2003: 174); Sales (2005: 15); Heath (2010: 151); Palma (2010); Buckley *et al.* (2012: 140); Rózsa & Vas (2015b: 109).

Other significant reference: Price *et al*. (2003: 230).

Remarks: Although there is a viable population of *Apteryx owenii* on Kapiti Island (Checklist Committee 2010: 22), *Rallicola* (*Aptericola*) *pilgrimi* has not been found there yet. All records of this louse are from mainland North and South Islands and, considering that *A. owenii* is almost certainly extinct on those islands (Checklist Committee 2010: 22), *Rallicola* (*Aptericola*) *pilgrimi* is also regarded as extinct (Buckley *et al.* 2012; Rózsa & Vas 2015b: 109).

Rallicola (*Aptericola*) *rodericki* Palma, 1991

Figs 160–161

Rallicola (*Aptericola*) sp.; Pilgrim & Palma 1982: 3.
Rallicola (*Aptericola*) sp.; Murray *et al.* 1990: 1367.
Rallicola (*Aptericola*) *rodericki* Palma, 1991a: 314, figs 1–4.
Rallicola (*A.*) *rodericki* Palma, 1991; Palma 2010: 409.

Holotype ♂ in MONZ.

Type host: *Apteryx mantelli* Bartlett, 1852.

New Zealand host: *Apteryx mantelli* Bartlett, 1852.

Other hosts: None.

New Zealand localities: AK (Ponui Island), CL (Little Barrier Island).

Geographic distribution: Hauraki Gulf, New Zealand.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (1991a); Baker *et al.* (1995: 8257); Palma (1999: 375); Sales (2005: 15); Heath (2010: 151); Palma (2010) Buckley *et al.* (2012: App. 2).

Other significant reference: Price *et al*. (2003: 231).

Remarks: *Rallicola* (*Aptericola*) *rodericki* is an endemic and "at risk" species (Buckley *et al.* 2012), exclusively parasitic on North Island brown kiwis. Despite a search for lice on over 100 dead and live specimens of *Apteryx mantelli* from all the mainland populations of North Island kiwi (Palma 1991a: 316), *Rallicola* (*Aptericola*) *rodericki* has not been found on mainland kiwis.

Subgenus *Huiacola* Mey, 1990

Huiacola Mey, 1990. *Zool. Anz. 224*: 52. Type species: *Huiacola extinctus* Mey, 1990 = *Rallicola* (*Huiacola*) *extinctus* (Mey, 1990) (by original designation).

Rallicola (*Huiacola*) *extinctus* (Mey, 1990)

Figs 162–163

Rallicola sp.; Pilgrim & Palma 1982: 28.
Huiacola extinctus Mey, 1990: 54, figs 2–13.
Rallicola (*Huiacola*) *extinctus* (Mey, 1990); Palma 1999: 382.
Rallicola (*Huiacola*) *extinctus* (Mey, 1990); Murray *et al*. 2006b: 1958.
Rallicola (*Huiacola*) *extinctus* (Mey, 1990); Palma 2010: 409.

Holotype ♂ in NHMR.

Type host: *Heteralocha acutirostris* (Gould, 1837).

New Zealand host: *Heteralocha acutirostris* (Gould, 1837).

Other hosts: None.

New Zealand localities: WA, WN.

Geographic distribution: North Island, New Zealand.

New Zealand references: Mason (1921: 359); Pilgrim & Palma (1982); Mey (1990); Palma (1999); Mey (2005: 213); Murray *et al*. (2006b); Palma (2010: 295); Buckley *et al.* (2012: 140); Mey (2014: 98, fig. right); Rózsa & Vas (2015b: 109).

Other significant reference: Price *et al*. (2003: 229).

Remarks: *Rallicola* (*Huiacola*) *extinctus* is an endemic and extinct species (Buckley *et al.* 2012; Rózsa & Vas 2015b: 109), because its only host is extinct (Checklist Committee 2010: 283).

Subgenus *Rallicola* Johnston & Harrison, 1911

Rallicola Johnston & Harrison, 1911. *Proc. Linn. Soc. New South Wales 36*(2): 324. Type species: *Oncophorus attenuatus* N. [sic] = *Rallicola* (*Rallicola*) *ortygometrae* (Schrank, 1781) (by original designation).

Rallicola (*Rallicola*) *fulicae* (Denny, 1842)

Philopterus (*Nirmus*) *fulicae* Denny, 1842: 50, 125, pl. 9: fig. 2.
Rallicola fulicae Denny, 1842 [sic]; Harrison 1916: 126 (as junior synonym of *Rallicola cuspidata* Scopoli).
Rallicola fulicae (Denny, 1842); Hopkins 1940: 425.
Rallicola fulicae (Denny, 1842); Hopkins & Clay 1952: 319.
Rallicola fulicae (Denny, 1842); Clay 1953a: 573, figs 18, 25.
Rallicola fulicae (Denny, 1842); Pilgrim & Palma 1982: 19.
Rallicola fulicae (Denny, 1842); Murray *et al*. 1993: 961.
Rallicola (*Rallicola*) *fulicae* (Denny, 1842); Price *et al.* 2003: 229.
Rallicola (*Rallicola*) *fulicae* (Denny, 1842); Palma 2010: 408.

Holotype ♂ in NHML (Palma 1996b: 216).

Type host: *Fulica atra* Linnaeus, 1758.

New Zealand host: *Fulica atra australis* Gould, 1845.

Other host: *Fulica cristata* J.F. Gmelin, 1789.

New Zealand localities: SD, MB, NC, MC, SC, CO, DN.

Geographic distribution: Africa; Eurasia; Australasia.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1993); Palma (2010).

Other significant references: Hopkins (1940); Clay (1953a); Emerson (1955: 285, fig. 1); Tendeiro (1965b: 114); Green & Palma (1991: 18, 32); Palma (1996b: 216); Price *et al*. (2003); Palma & Jensen (2005: 58, 63); Adam (2007: 178); Martín-Mateo (2009: 109).

Remarks: Hopkins (1940: 421) gives a complete account of the early taxonomic confusion among several species of lice described from *Fulica atra*, including a clarification of the synonymy of *Rallicola* (*R.*) *fulicae.*

Rallicola (*Rallicola*) *harrisoni* Emerson, 1955

Rallicola harrisoni Emerson, 1955: 288, figs 29–30.
Rallicola harrisoni Emerson, 1955; Wise 1977: 64.
Rallicola sp.; Lowry *et al.* 1978: 139.
Rallicola harrisoni Emerson, 1955; Pilgrim & Palma 1982: 18.
Rallicola harrisoni Emerson, 1955 *s. l.*; Pilgrim & Palma 1982: 19.
Rallicola harrisoni Emerson, 1955; Murray *et al*. 1993: 961.
Rallicola harrisoni Emerson, 1955; Palma & Horning 2002: 12, 17.
Rallicola (*Rallicola*) *harrisoni* Emerson, 1955; Price *et al*. 2003: 229.
Rallicola (*R.*) *harrisoni* Emerson, 1955; Palma 2010: 408.

Holotype ♂, originally in the M.A. Carriker Collection, now deposited in USNM.

Type host: *Gallirallus australis australis* (Sparrman, 1786).

New Zealand hosts: *Gallirallus australis greyi* (Buller, 1888); *Gallirallus australis hectori* (Hutton, 1873); *Gallirallus australis scotti* (Ogilvie-Grant, 1905).

Other hosts: None.

New Zealand localities: HB, NN, BR, WD, CH, SI, Macquarie Island.

Geographic distribution: New Zealand.

New Zealand references: Emerson (1955); Pilgrim (1970: 75); Wise (1977: 64); Lowry *et al.* (1978); Pilgrim & Palma (1982); Murray *et al*. (1993); Palma (1996b: 216); Paterson *et al.* (1999: 223); Palma & Horning (2002); Palma (2010).

Other significant reference: Price *et al*. (2003: 229).

Remarks: *Rallicola* (*Rallicola*) *harrisoni* is an endemic species, exclusively parasitic on wekas, and frequently collected. Pilgrim & Palma (1982: 19) regarded the population of *R. harrisoni* from *Gallirallus australis scotti* as somewhat different from that of the type host, and qualified it as *sensu lato*; however, my examination of more samples shows that making such difference is not warranted.

Rallicola (*Rallicola*) *lugens* (Giebel, 1874)

Nirmus lugens Giebel, 1874: 170.
Oncophorus fallax Piaget, 1880: 220, pl. 18: fig. 6.
Rallicola lugens Giebel, 1874 [sic]; Harrison 1916: 127.
Rallicola fallax (Piaget, 1880); Hopkins & Clay 1952: 319.
Rallicola lugens (Giebel, 1874); Hopkins & Clay 1952: 320.
Rallicola lugens (Giebel, 1874); Clay 1953a: 570, figs 14, 20, 41.
Rallicola lugens (Giebel, 1874); Watt 1971: 238, 243.
Rallicola lugens (Giebel, 1874); Pilgrim & Palma 1982: 19.
Rallicola lugens (Giebel, 1874); Murray *et al*. 1993: 961.
Rallicola (*Rallicola*) *lugens* (Giebel, 1874); Price *et al*. 2003: 230.
Rallicola (*R.*) *lugens* (Giebel, 1874); Palma 2010: 408.

Syntypes ♂♀, presumed lost. See Clay (1949a: 1) and Palma & Pilgrim (1984: 150). Syntypes of *Oncophorus fallax* in NHML (Palma 1996b: 217).

Type host: *Porphyrio poliocephalus* (Latham, 1802).

New Zealand host: *Porphyrio melanotus melanotus* Temminck, 1820.

Other hosts: *Porphyrio melanotus bellus* Gould, 1841; *Porphyrio porphyrio* (Linnaeus, 1758); *Porphyrio indicus* Horsfield, 1821.

New Zealand localities: AK, BP, TK, SD, MB, NC, MC, SC, WD, KE.

Geographic distribution: Eurasia; Africa; Australasia.

New Zealand references: Watt (1971); Wise (1977: 64); Pilgrim & Palma (1982); Murray *et al*. (1993); Paterson *et al.* (1999: 221, 223); Palma (2010).

Other significant references: Clay (1953a); Emerson (1955: 296, fig. 24); Tendeiro (1965b: 132, figs 79–81); Green & Palma (1991: 18, 32); Palma (1996b: 217); Price *et al*. (2003).

Remarks: *Rallicola* (*R.*) *lugens* is a widespread louse species, frequently collected from New Zealand pukekos.

Rallicola (*Rallicola*) *ortygometrae philippensis* Emerson, 1966

Rallicola ortygometrae philippensis Emerson, 1966: 337.
Rallicola ortygometrae (Schrank, 1781) *s. l.*; Pilgrim & Palma 1982: 18.
Rallicola ortygometrae philippensis Emerson, 1966; Murray *et al*. 1993: 961.
Rallicola (*Rallicola*) *philippensis* Emerson, 1966; Price *et al*. 2003: 230.
"*Rallicola* (*R.*) *ortygometrae*"; Palma 2010: 408 (not *Pediculus ortygometrae* Schrank, 1781).

Holotype ♂ in NHML.

Type host: *Gallirallus philippensis philippensis* (Linnaeus, 1766).

New Zealand host: *Gallirallus philippensis assimilis* (G.R. Gray, 1843).

Other hosts: *Gallirallus philippensis mellori* (Mathews, 1912); *Gallirallus philippensis lesouefi* (Mathews, 1911).

New Zealand localities: ND, AK, BP, GB, SD, NN.

Geographic distribution: Australasia; Oceania.

New Zealand references: Pilgrim & Palma (1982); Murray *et al*. (1993); Palma (2010).

Other significant references: Palma (1996b: 218); Price *et al*. (2003).

Remarks: In agreement with Emerson (1966: 337), and contrary to Price *et al*. (2003: 230) and Palma (2010: 408), I regard this louse taxon as a subspecies of *Rallicola ortygometrae*.

***Rallicola* (*Rallicola*) *tabuensis* Emerson, 1966**

Figs 164–165

Rallicola tabuensis Emerson, 1966: 336, fig. 1.
Rallicola sp.; Pilgrim & Palma 1982: 19.
Rallicola tabuensis Emerson, 1966; Pilgrim & Palma 1982: 19.
Rallicola sp.; Murray *et al.* 1993: 961.
Rallicola tabuensis Emerson, 1966; Murray *et al.* 1993: 961.
Rallicola (*Rallicola*) *tabuensis* Emerson, 1966; Price *et al*. 2003: 231.
Rallicola (*R.*) *tabuensis* Emerson, 1966; Palma 2010: 409.

Holotype ♂ in BPBM (Tenorio 1979: 13).

Type host: *Porzana tabuensis tabuensis* (J.F. Gmelin, 1789).

New Zealand hosts: *Porzana pusilla affinis* (J.E. Gray, 1845); *Porzana tabuensis tabuensis* (J.F. Gmelin, 1789).

Other hosts: None.

New Zealand localities: ND, BP, TH, CH.

Geographic distribution: Oceania.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1993); Palma (2010).

Other significant references: Clay (1953a: 572); Moreby (1976: 93); Tenorio (1979: 13); Green & Palma (1991: 19, 31); Palma (1996b: 218); Price *et al*. (2003).

Remarks: This is the first record of *Rallicola* (*R.*) *tabuensis* from *Porzana pusilla affinis* because the references cited above reported this louse under that host as "*Rallicola* sp." only.

The illustration of the male genitalia of *Rallicola* (*R.*) *tabuensis* in Emerson (1966: 336, fig. 1) is highly inaccurate. Besides the basal plate and the parameres, it shows a "Y" shaped median structure which is the result of an misinterpreted fusion of the internal mesosomal ring with the external and heavily pigmented distal process arising from the last ventral abdominal segment (see Clay 1953a: 572). Secondly, Emerson' figure (1966: 336, fig. 1) shows thin, pointed parameres when, in fact, each paramere has a triangular, hyaline lateral expansion with a wide distal end.

***Rallicola* (*Rallicola*) *takahe* Holloway, 1956**

Rallicola takahe Holloway, 1956: 113, figs 1–5.
Rallicola takahe; Miller 1971: 132, fig. 346.
Rallicola takahe Holloway, 1956; Wise 1977: 64.
Rallicola takahe Holloway, 1956; Pilgrim & Palma 1982: 19.
Rallicola takahe Holloway, 1956; Murray *et al.* 1993: 961.
Rallicola (*Rallicola*) *takahe* Holloway, 1956; Price *et al*. 2003: 231.
Rallicola (*R.*) *takahe* Holloway, 1956; Palma 2010: 409.

Holotype ♂ in MONZ (Palma *et al.* 1989: 45).

Type host: *Porphyrio hochstetteri* (A.B. Meyer, 1883).

New Zealand host: *Porphyrio hochstetteri* (A.B. Meyer, 1883).

Other hosts: None.

New Zealand localities: WA, WN, FD.

Geographic distribution: New Zealand.

New Zealand references: Holloway (1956); Pilgrim (1970: 75); Miller (1971: 132); Wise (1977); Pilgrim & Palma (1982); Palma *et al.* (1989: 45); Murray *et al.* (1993); Palma (2010); Buckley *et al.* (2012: 137, App. 2).

Other significant reference: Price *et al*. (2003).

Remarks: *Rallicola takahe* is an endemic and critically threatened species (Buckley *et al.* 2012), exclusively parasitic on the South Island takahe, *Porphyrio hochstetteri*. The name of the type host used in the original description of this louse is "*Notornis mantelli* Owen, 1848". However, the present name of this bird species is *Porphyrio hochstetteri* (A.B. Meyer, 1883), the South Island takahe, while the name *Porphyrio mantelli* (Owen, 1848) is now applied to the extinct North Island takahe (Checklist Committee 2010: 188).

Genus *Saemundssonia* Timmermann, 1936

Saemundssonia Timmermann, 1936 [April]. *Zool. Anz. 114*: 97. Type species: *Philopterus gonothorax* (Giebel, 1874) = *Saemundssonia* (*Saemundssonia*) *lari* (O. Fabricius, 1780) (by original designation).

Subgenus *Puffinoecus* Eichler, 1949

Puffinoecus Eichler, 1949a. *Boll. Soc. Entomol. Italiana 79*: 12. Type species: *Puffinoecus peusi* Eichler, 1949a = *Saemundssonia* (*Puffinoecus*) *peusi* (Eichler, 1949) (by original designation).

Saemundssonia (*Puffinoecus*) *enderleini* (Eichler, 1949)

Figs 166–167

"*Docophorus Schillingi*" Enderlein, 1908: 444, figs 192, 213 (not *Trabeculus schillingi* Rudow, 1866b).
Puffinoecus enderleini Eichler, 1949a: 13. *Nomen novum* for *Docophorus schillingi* Enderlein, 1908.
Saemundssonia enderleini (Eichler, 1949); Hopkins & Clay 1952: 330.
Puffinoecus Enderleini Eichler, 1946 [sic]; Séguy 1953: 598, figs 55–56.
Saemundssonia enderleini (Eichler, 1949); Timmermann 1965: 81.
Saemundssonia sp. [ex *Pterodroma lessonii*]; Watson 1967: 74.
Saemundssonia sp.; Clay & Moreby 1970: 218.
Saemundssonia sp.; Gressitt 1970: 329.
Saemundssonia sp.; Pilgrim & Palma 1982: 8.
Saemundssonia sp.; Murray *et al.* 1990: 1369.
Saemundssonia (*Puffinoecus*) sp.; Green & Palma 1991: 20, 26.
Puffinoecus enderleini Eichler, 1949; Martín-Mateo 1996: 61.
Saemundssonia (*Puffinoecus*) *enderleini* (Eichler, 1949); Palma 1999: 378.
Saemundssonia (*Puffinoecus*) species; Marris 2000: 188.
Saemundssonia (*Puffinoecus*) sp.; Palma & Horning 2002: 13, 16.
Saemundssonia (*Puffinoecus*) *enderleini* (Eichler, 1949); Price *et al*. 2003: 233.
Saemundssonia (*Puffinoecus*) *enderleini* (Eichler, 1949); Palma 2010: 409.

Syntypes ♂♀ in ZMHU, but syntypes ♂ now lost (Jürgen Deckert pers. comm. September 2013).

Type host: *Pterodroma mollis* (Gould, 1844).

New Zealand hosts: *Pterodroma macroptera gouldi* (Hutton, 1869); *Pterodroma lessonii* (Garnot, 1826); *Pterodroma mollis* (Gould, 1844).

Other hosts: None.

New Zealand localities: AK, BP, TK, WN, MC, CH, AN, Macquarie Island.

Geographic distribution: Atlantic, Indian and Pacific Oceans.

New Zealand references: Clay & Moreby (1970); Gressitt (1970); Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (1999); Marris (2000); Palma & Horning (2002); Palma (2010).

Other significant references: Séguy (1953); Timmermann (1965); Martín-Mateo (1996); Price *et al*. (2003).

Remarks: *Saemundssonia* (*P.*) *enderleini* is a frequently collected "head & neck" louse parasitic on three gadfly petrel species.

Saemundssonia (*Puffinoecus*) *jamaicensis* Timmermann, 1962 **New Record**

Saemundssonia jamaicensis Timmermann, 1962a: 430.
Saemundssonia jamaicensis Timmermann, 1962; Timmermann 1965: 80.
Puffinoecus jamaicensis Timmermann, 1961 [sic]; Martín-Mateo 1996: 51, figs 1c, 3d–5d, 6a.
Saemundssonia (*Puffinoecus*) sp.; Palma 1999: 376.
Saemundssonia (*Puffinoecus*) *jamaicensis* Timmermann, 1962; Price *et al.* 2003: 234.

Holotype ♂ in NHML.

Type host: *Pterodroma hasitata caribbaea* Carte, 1866.

New Zealand host: *Pseudobulweria rostrata* (Peale, 1848).

Other host: *Pterodroma hasitata hasitata* (Kuhl, 1820).

New Zealand locality: ND.

Geographic distribution: Pacific and Atlantic Oceans.

New Zealand reference: Palma (1999).

Other significant references: Timmermann (1965); Zonfrillo (1993: 327); Forrester *et al.* (1995: 5); Martín-Mateo (1996); Price *et al.* (2003).

Material examined and repository: 4♂, 3♀, 1N (1 sample, MONZ).

Remarks: *Saemundssonia* (*P.*) *jamaicensis* is an infrequently collected "head & neck" louse parasitic on gadfly petrels. Also, it is a new louse species for New Zealand because the New Zealand reference cited above reported this louse as "*Saemundssonia* (*Puffinoecus*) sp." only. *Pseudobulweria rostrata* is a rare vagrant to New Zealand (Checklist Committee 2010: 110), and a new host record for *S.* (*P.*) *jamaicensis* (voucher specimens in MONZ).

Saemundssonia (*Puffinoecus*) *orientalis* (Uchida, 1949)

Philopterus validus var *orientalis* Uchida, 1949: 541, fig. 11.
Saemundssonia orientalis (Uchida, 1949); Hopkins & Clay 1952: 334.
Saemundssonia orientalis (Uchida, 1948) [sic]; Timmermann 1965: 80.
Puffinoecus orientalis (Uchida, 1948) [sic]; Martín-Mateo 1996: 55, figs 1d, 3c–5c, 6d.
Saemundssonia (*Puffinoecus*) *orientalis* (Uchida, 1949); Price *et al*. 2003: 236.
Saemundssonia (*Puffinoecus*) *orientalis* (Uchida, 1949); Scofield *et al.* 2011: 214.

Syntypes ♂♀, not located in NSMJ (Takuya Kiyoshi pers. comm. May 2013).

Type host: *Calonectris leucomelas* (Temminck, 1836).

New Zealand host: *Calonectris leucomelas* (Temminck, 1836).

Other hosts: None.

New Zealand locality: WO.

Geographic distribution: Japan; Korea; eastern China; Pacific Ocean.

New Zealand reference: Scofield *et al.* (2011).

Other significant references: Timmermann (1965); Martín-Mateo (1996); Price *et al*. (2003).

Remarks: *Saemundssonia* (*P.*) *orientalis* is an infrequently collected "head & neck" louse exclusively parasitic on streaked shearwaters. *Calonectris leucomelas* has been recorded only once in New Zealand (Checklist Committee 2010: 111; Scofield *et al.* 2011).

Saemundssonia (*Puffinoecus*) *puellula* Timmermann, 1965

Saemundssonia puellula Timmermann, 1965: 82.
Saemundssonia puellula Timmermann, 1965; Watt 1971: 238, 243.
Saemundssonia puellula Timmermann, 1965; Pilgrim & Palma 1982: 11.
Puffinoecus nadleri Mey, 1989: 54, figs 1–3.
Saemundssonia puellula Timmermann, 1965; Murray *et al.* 1990: 1371.
Saemundssonia (*Puffinoecus*) *puellula* Timmermann, 1965; Palma 1994a: 67.
Puffinoecus puellulus (Timmermann, 1965); Martín-Mateo 1996: 59, figs 1e,f, 3g–5g, 6f, 8.
Saemundssonia (*Puffinoecus*) *puellula* Timmermann, 1965; Price *et al*. 2003: 237.
Saemundssonia (*P.*) *puellula* Timmermann, 1965; Palma 2010: 409.

Holotype ♂ in NHML.

Type host: *Puffinus pacificus cuneatus* Salvin, 1888.

New Zealand host: *Puffinus pacificus pacificus* (J.F. Gmelin, 1789).

Other hosts: *Puffinus creatopus* Coues, 1864; *Puffinus gravis* (O'Reilly, 1818).

New Zealand locality: KE.

Geographic distribution: Atlantic and Pacific Oceans.

New Zealand references: Watt (1971); Wise (1977: 65); Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (1994a); Paterson *et al.* (1999: 222); Palma (2010).

Other significant references: Amerson & Emerson (1971: 7, 26); Mey (1989); Martín-Mateo (1996); Palma (1996b: 227); Price *et al*. (2003).

Remarks: *Saemundssonia* (*P.*) *puellula* is an infrequently collected "head & neck" louse parasitic on the larger species of sheawaters.

***Saemundssonia* (*Puffinoecus*) *valida* (Kellogg & Chapman, 1899)**

Docophorus validus Kellogg & Chapman, 1899: 56, pl. 5: fig. 2.
Philopterus validus Kellogg & Chapman, 1899 [sic]; Harrison 1916: 106.
Saemundssonia valida (Kellogg & Chapman, 1899); Hopkins & Clay 1952: 336.
Saemundssonia valida (Kellogg & Chapman, 1899); Timmermann 1965: 81.
Saemundssonia sp.; Pilgrim & Palma 1982: 12.
Saemundssonia sp.; Murray *et al.* 1990: 1371.
Puffinoecus validus (Kellogg & Chapman, 1899); Martín-Mateo 1996: 61.
Saemundssonia (*Puffinoecus*) *valida* (Kellogg & Chapman, 1899); Palma 1999: 376.
Saemundssonia (*Puffinoecus*) *valida* (Kellogg & Chapman, 1899); Price *et al*. 2003: 238.
Saemundssonia (*P.*) *valida* (Kellogg & Chapman, 1899); Palma 2010: 409.

Holotype ♀ in EMEC (Carriker 1957: 99; Palma 1996b: 227).

Type host: *Puffinus opisthomelas* Coues, 1864.

New Zealand host: *Puffinus gavia* (J.R. Forster, 1844).

Other hosts: None.

New Zealand localities: AK, CL, WN, NN, TH.

Geographic distribution: Pacific Ocean.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (1999); Palma (2010).

Other significant references: Kellogg & Kuwana (1902: 461); Uchida (1949: 541); Timmermann (1965); Martín-Mateo (1996); Palma (1996b: 227); Price *et al*. (2003).

Remarks: *Saemundssonia* (*P.*) *valida* is a frequently collected "head & neck" louse parasitic on the smaller species of sheawaters. Kellogg & Kuwana (1902: 461) and Uchida (1949: 541) stated that the type host of *Docophorus validus* Kellogg & Chapman, 1899 was *Puffinus gavia*. However, that statement is incorrect, as clarified by Timmermann (1965: 81).

***Saemundssonia* (*Puffinoecus*) species**

Saemundssonia sp.; Pilgrim & Palma 1982: 11.
Saemundssonia sp.; Murray *et al.* 1990: 1371.
Saemundssonia (*Puffinoecus*) sp.; Palma 1999: 378.
Saemundssonia (*Puffinoecus*) sp.; Palma & Imber 2000: 230.

New Zealand hosts: *Pterodroma magentae* (Giglioli & Salvadori, 1869); *Puffinus carneipes* Gould, 1844.

New Zealand localities: ND, CL, BP, CH.

Geographic distribution: Pacific Ocean.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (1999); Palma & Imber (2000); Palma (2010); Buckley *et al.* (2012: App. 2).

Other significant reference: Martín-Mateo (1996).

Remarks: Available records of *Saemundssonia* (*Puffinoecus*) from the two hosts listed above could not be identified to species because the samples contain females only (voucher specimens in MONZ) (see Palma 2000: 127).

Subgenus *Saemundssonia* Timmermann, 1936

Saemundssonia Timmermann, 1936 [April]. *Zool. Anz. 114*: 97. Type species: *Philopterus gonothorax* (Giebel, 1874) = *Saemundssonia* (*Saemundssonia*) *lari* (O. Fabricius, 1780) (by original designation).
Hastaephorus Kéler, 1936 [November]. *Arb. Morph. tax. Entomol. Berlin-Dahlem 3*: 261. Type species: *Docophorus alpinus* Giebel, 1874 = *Saemundssonia* (*Saemundssonia*) *tringae* (O. Fabricius, 1780) (by original designation).

***Saemundssonia* (*Saemundssonia*) *albatrossa* Palma, 2012**

Figs 168–169

Saemundssonia sp.; Pilgrim & Palma 1982: 6.
Saemundssonia sp.; Murray *et al.* 1990: 1368–1369.
Saemundssonia (*Saemundssonia*) species 2; Marris 2000: 188.
Saemundssonia sp. M; Palma 2010: 409.
Saemundssonia (*Saemundssonia*) *albatrossa* Palma, 2012: 39, figs 1–4, 11, 18.

Holotype ♂ in MONZ.

Type host: *Phoebetria palpebrata* (J.R. Forster, 1785).

New Zealand hosts: *Phoebetria palpebrata* (J.R. Forster, 1785); *Thalassarche chrysostoma* (J.R. Forster, 1785); *Thalassarche impavida* Mathews, 1912.

Other hosts: None.

New Zealand localities: ND, AK, TK, WI, CA.

Geographic distribution: Southern Oceans.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990); Marris (2000); Palma (2010; 2012).

Other significant references: None.

Remarks: *Saemundssonia* (*S.*) *albatrossa* is an infrequently collected "head & neck" louse parasitic on small albatrosses.

***Saemundssonia* (*Saemundssonia*) *albemarlensis* (Kellogg & Kuwana, 1902)**

Docophorus albemarlensis Kellogg & Kuwana, 1902: 465, pl. 28: fig. 5.

Philopterus albemarlensis Kellogg & Kuwana, 1902 [sic]; Harrison 1916: 87.

Saemundssonia albemarlensis (Kellogg & Kuwana, 1902); Hopkins & Clay 1952: 329 (as junior synonym of *Saemundssonia phaetona* (Osborn, 1890)).

Saemundssonia petersi Ward, 1955: 90, figs 1b,d,f.

Saemundssonia albemarlensis (Kellogg & Kuwana, 1902); Emerson 1972a: 154.

Saemundssonia albemarlensis (Kellogg & Kuwana, 1902); Pilgrim & Palma 1982: 23.

Saemundssonia (*Saemundssonia*) *albemarlensis* (Kellogg & Kuwana, 1902); Price *et al.* 2003: 232.

Saemundssonia (*Saemundssonia*) *albemarlensis* (Kellogg & Kuwana, 1902); Murray *et al.* 2006a: 1965.

Saemundssonia (*Saemundssonia*) *albemarlensis* (Kellogg & Kuwana, 1902); Palma 2010: 409.

Lectotype ♂ in EMEC (Palma & Peck 2013: 58).

Type host: "*Camarhynchus psittacula affinis*", in error (see Emerson 1972a: 154).

New Zealand host: *Onychoprion fuscatus serratus* (J.R. Forster [*in* Wagler], 1830).

Other hosts: *Onychoprion fuscatus fuscatus* (Linnaeus, 1766); *Onychoprion fuscatus oahuensis* (Bloxham, 1826); *Onychoprion fuscatus crissalis* (Lawrence, 1872).

New Zealand localities: WO, KE.

Geographic distribution: Pacific, Atlantic and Indian Oceans.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (2006a); Palma (2010).

Other significant references: Ward (1955: 90); Amerson & Emerson (1971: 17, 26); Emerson (1972a); Ward & Downey (1973: 395); Forrester *et al.* (1995: 31); Price *et al*. (2003: 232); Palma & Peck (2013: 57).

Remarks: *Saemundssonia* (*S.*) *albemarlensis* is an infrequently collected "head & neck" louse parasitic on sooty terns. *Saemundssonia petersi* Ward, 1955 was demoted to a junior synonym of *S.* (*S.*) *albemarlensis* by Emerson (1972a: 154).

***Saemundssonia* (*Saemundssonia*) *antarctica* (Wood, 1937)**

"*Philopterus melanocephalus*" Neumann, 1907a: 14 (not *Docophorus melanocephalus* Burmeister, 1838).

Philopterus antarcticus Wood, 1937 *in* Harrison, 1937: 22, fig. 1.

Saemundssonia antarctica (Wood, 1937); Hopkins & Clay 1952: 329.

Saemundssonia nivea Timmermann, 1956: 190, fig. 5.

Saemundssonia nivea Timmermann, 1956; Timmermann 1959a: 150, fig. 1.

Saemundssonia nivea Timmermann, 1956; Timmermann 1965: 76, fig. 14.

Saemundssonia antarctica (Wood, 1937); Timmermann 1965: 77.

"*Saemundssonia lari*" Clay & Moreby, 1967: 164 (not *Pediculus lari* O. Fabricius, 1780).

Saemundssonia nivea Timmermann, 1956; Clay & Moreby 1967: 165, 168, figs 154, 159, 175.

Saemundssonia antarctica (Wood, 1937); Pilgrim & Palma 1982: 7.

Saemundssonia (*Saemundssonia*) *antarctica* (Wood, 1937); Pilgrim & Palma 1994: 241, figs 1–3.

Saemundssonia (*S.*) *antarctica* (Wood, 1937); Palma 2010: 409.

Holotype ♂ in AMSA (Pilgrim & Palma 1994: 241). Holotype ♂ of *Saemundssonia nivea* Timmermann, 1956 in NHML (Pilgrim & Palma 1994: 241).

Type host: *Pagodroma nivea nivea* (G. Forster, 1777).

New Zealand hosts: *Thalassoica antarctica* (J.F. Gmelin, 1789); *Pagodroma nivea major* (Schlegel, 1863).

Other hosts: None.

New Zealand localities: ND, AK, WI, RO.

Geographic distribution: Antarctica; Southern Oceans.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990: 1369); Pilgrim & Palma (1994); Paterson *et al.* (1999: 222); Palma (2010).

Other significant references: Harrison (1937); Timmermann (1956; 1959a; 1965); Clay & Moreby (1967); Steele *et al*. (1997: 292); Price *et al*. (2003: 232).

Remarks: The record of *Saemundssonia* (*S.*) *antarctica* from Macquarie Island in Palma (1996b: 219) and in Palma & Horning (2002: 12, 16) is not included here because it is the result of straggling or contamination (see Pilgrim & Palma 1994: 242). The record of this louse species from *Pagodroma nivea nivea* in Pilgrim & Palma (1982: 8) is erroneous; it is actually from *Pagodroma nivea major*, due to a confusion on the identity of the host (Checklist Committee 2010: 84).

Saemundssonia (*Saemundssonia*) *bicolor* (Rudow, 1870)

Docophorus bicolor Rudow, 1870: 459.
? *Philopterus bicolor* (Rudow, 1870); Clay 1940a: 297.
Saemundssonia bicolor (Rudow, 1870); Hopkins & Clay 1952: 329.
Saemundssonia creatopae Carriker, 1964: 14, figs 11–13.
Docophorus bicolor Rudow, 1870; Timmermann 1965: 76 (as a *nomen dubium*).
Saemundssonia bicolor (Rudow, 1870); Clay & Moreby 1967: 165, 168, figs 161, 178.
Saemundssonia sp.; Lowry *et al.* 1978: 139.
Saemundssonia bicolor (Rudow, 1870); Pilgrim & Palma 1982: 7.
Saemundssonia bicolor (Rudow, 1870); Murray *et al.* 1990: 1369.
Saemundssonia (*Saemundssonia*) *bicolor* (Rudow, 1870); Palma 1994a: 67.
Saemundssonia (*S.*) *bicolor* (Rudow, 1870); Palma 2010: 409.

Status, sex and repository of types unknown, presumed lost. See Clay (1949a: 1) and Palma (1994a: 67).

Type host: *Fulmarus glacialoides* (A. Smith, 1840).

New Zealand host: *Fulmarus glacialoides* (A. Smith, 1840).

Other hosts: None.

New Zealand localities: AK, TK, WI, WN, NN, KA, NC, MC, SC, CO, DN, SL, Macquarie Island.

Geographic distribution: Antarctica; Southern Oceans.

New Zealand references: Lowry *et al.* (1978); Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (1996b: 219); Palma & Horning (2002: 12, 16); Palma (2010).

Other significant references: Clay (1940a); Carriker (1964); Clay & Moreby (1967); Green & Palma (1991: 19, 26); Palma (1994a); Price *et al*. (2003: 233).

Remarks: *Saemundssonia* (*S.*) *bicolor* is a frequently collected "head & neck" louse parasitic on Antarctic fulmars. *Fulmarus glacialoides* breeds on the coast of Antarctica and is a regular straggler to New Zealand seas (Checklist Committee 2010: 80).

Saemundssonia (*Saemundssonia*) *cephalus* (Denny, 1842)

Philopterus (*Docophorus*) *cephalus* Denny, 1842: 44, 81, pl. 2: fig. 8.
Docophorus pustulosus Nitzsch [*in* Giebel], 1866: 363.
Docophorus lari magna Piaget, 1880: 112.
Docophorus atlanticus Kellogg, 1914: 81, pl. 16: fig. 1.
Philopterus cephalus Denny, 1842; Harrison 1916: 91.
Saemundssonia pustulosa (Nitzsch in Giebel), 1866 [sic]; Timmermann 1949a: 10, figs 4, 6.
Saemundssonia cephalus (Denny, 1842); Hopkins & Clay 1952: 330.
Saemundssonia cephalus (Denny, 1842); Pilgrim & Palma 1982: 22.
Saemundssonia (*Saemundssonia*) *cephalus* (Denny, 1842); Palma 2000: 122, fig. 1.

Saemundssonia (*Saemundssonia*) *cephalus* (Denny, 1842); Murray *et al.* 2006a: 1965.
Saemundssonia (*S.*) *cephalus* (Denny, 1842); Palma 2010: 409.

Lectotype ♀ in NHML (Palma 2000: 122). Lectotype ♂ of *Docophorus atlanticus* in USNM (Palma 2004: 16, fig. 1).

Type host: *Stercorarius parasiticus* (Linnaeus, 1758).

New Zealand host: *Stercorarius parasiticus* (Linnaeus, 1758).

Other hosts: None.

New Zealand localities: HB, KA, MC.

Geographic distribution: Eurasia; North America; southern South America, southern Africa; Australasia.

New Zealand references: Pilgrim & Palma (1982); Palma (2000); Murray *et al.* (2006a); Palma (2010).

Other significant references: Timmermann (1949a; 1957a: 47); Hackman & Nyholm (1968: 77); Cohen *et al*. (1997: 186); Ramli *et al*. (2000: 71); Price *et al*. (2003: 233); Palma (2004: 13); Palma & Jensen (2005: 58, 64).

Remarks: *Saemundssonia* (*S.*) *cephalus* is an infrequently collected "head & neck" louse parasitic on Arctic skuas. *Stercorarius parasiticus* is a summer migrant to New Zealand (Checklist Committee 2010: 226), with only two records of *Saemundssonia* (*S.*) *cephalus* from this country.

Saemundssonia (*Saemundssonia*) *chathamensis* Timmermann, 1977

Saemundssonia chathamensis Timmermann, 1977: 135.
Saemundssonia chathamensis Timmermann, 1977; Pilgrim & Palma 1982: 20.
Saemundssonia chathamensis Timmermann, 1977; Murray *et al.* 1993: 962.
Saemundssonia (*Saemundssonia*) *chathamensis* Timmermann, 1977; Price *et al*. 2003: 233.
Saemundssonia (*S.*) *chathamensis* Timmermann, 1977; Palma 2010: 409.

Holotype ♂ in NZAC.

Type host: *Thinornis novaeseelandiae* (J.F. Gmelin, 1789).

New Zealand host: *Thinornis novaeseelandiae* (J.F. Gmelin, 1789).

Other hosts: None.

New Zealand locality: CH.

Geographic distribution: Chatham Islands, New Zealand.

New Zealand references: Timmermann (1977); Pilgrim & Palma (1982); Murray *et al.* (1993); Palma (2010); Buckley *et al.* (2012: 137, App. 2).

Other significant reference: Price *et al*. (2003).

Remarks: *Saemundssonia* (*S.*) *chathamensis* is an infrequently collected "head & neck" louse parasitic on New Zealand shore birds. Both the host and *Saemundssonia* (*S.*) *chathamensis* are endemic and critically threatened species (Buckley *et al.* 2012).

Saemundssonia (*Saemundssonia*) *conica conica* (Denny, 1842)

Philopterus (*Docophorus*) *conicus* Denny, 1842: 45, 90, pl. 5: fig. 2.
Docophorus fuliginosus hawaiiensis Kellogg & Chapman, 1902: 157.
Philopterus wallacei Johnston & Harrison, 1912: 369, figs 5–6.
Philopterus numeniicola Johnston & Harrison, 1912: 372, figs 11–12.
Philopterus conicus (Denny, 1842) [sic]; Thompson 1939: 16.
Saemundssonia conica (Denny, 1842); Timmermann 1949a: 18, figs 10–11.
Saemundssonia conica (Denny, 1842); Hopkins & Clay 1952: 330.
Saemundssonia hawaiiensis (Kellogg & Chapman, 1902); Hopkins & Clay 1952: 332.
Saemundssonia numeniicola (Johnston & Harrison, 1912); Hopkins & Clay 1952: 334.
Saemundssonia hawaiiensis (Kellogg & Chapman, 1902); Pilgrim 1970: 75.
Saemundssonia numeniicola (Johnston & Harrison, 1912); Pilgrim 1970: 75.
Saemundssonia hawaiiensis (Kellogg & Chapman, 1902); Watt 1971: 238, 243.
Saemundssonia numeniicola (Johnston & Harrison, 1912); Watt 1971: 238, 243.
Saemundssonia conica conica (Denny, 1842); Emerson 1972a: 155.
Saemundssonia conica conica (Denny, 1842); Wise 1977: 64.
Saemundssonia conica conica (Denny, 1842); Pilgrim & Palma 1982: 20.
Saemundssonia conica conica (Denny, 1842); Murray *et al.* 1993: 962.

Saemundssonia (*Saemundssonia*) *conica conica* (Denny, 1842); Price *et al*. 2003: 233.
Saemundssonia (*S.*) *conica conica* (Denny, 1842); Palma 2010: 409.

Holotype nymph, probably lost (Vincent S. Smith pers. comm. December 2014). Both, the holotype ♂ of *Philopterus wallacei* and the lectotype ♀ of *Philopterus numeniicola* in MONZ (Palma *et al*. 1989: 45; Palma 1996b: 220).

Type host: *Pluvialis apricaria* (Linnaeus, 1758).

New Zealand host: *Pluvialis fulva* (J.F. Gmelin, 1789).

Other hosts: *Pluvialis dominicus* (Statius Müller, 1776); *Charadrius vociferus* Linnaeus, 1758.

New Zealand localities: AK, SL, KE.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Johnston & Harrison (1912); Thompson (1939: 71); Pilgrim (1970); Watt (1971); Wise (1977); Pilgrim & Palma (1982); Palma *et al.* (1989: 45); Murray *et al.* (1993); Palma (1996b: 220); Palma (2010).

Other significant references: Timmermann (1949a; 1951c: 401); Amerson & Emerson (1971: 13, 26); Emerson (1972a); Moreby (1976: 93); Timmermann (1977: 137); Forrester *et al.* (1995: 25); Price *et al*. (2003).

Remarks: *Saemundssonia* (*S.*) *conica conica* is an infrequently collected "head & neck" louse parasitic on several plover species.

Saemundssonia (*Saemundssonia*) *desolata* Timmermann, 1959

Saemundssonia desolata Timmermann, 1959a: 151, figs 3, 3a.
Saemundssonia desolata Timmermann, 1959; Timmermann 1965: 73, fig. 8.
Saemundssonia desolata Timmermann, 1959; Clay & Moreby 1967: 165, 168, figs 156–157.
Saemundssonia desolata Timmermann, 1959; Horning *et al.* 1980: 7, 10.
Saemundssonia desolata Timmermann, 1959; Pilgrim & Palma 1982: 10.
Saemundssonia (*Saemundssonia*) *desolata* Timmermann, 1959; Price *et al*. 2003: 233.
Saemundssonia (*S.*) *desolata* Timmermann, 1959; Palma 2010: 409.

Holotype ♂ in NHML.

Type host: *Pachyptila desolata* (J.F. Gmelin, 1789).

New Zealand hosts: *Pachyptila vittata* (G. Forster, 1777); *Pachyptila salvini salvini* (Mathews, 1912); *Pachyptila desolata* (J.F. Gmelin, 1789); *Pachyptila belcheri* (Mathews, 1912); *Pachyptila turtur* (Kuhl, 1820); *Pachyptila crassirostris crassirostris* (Mathews, 1912); *Pachyptila crassirostris pyramidalis* Fleming, 1939.

Other hosts: None.

New Zealand localities: ND, AK, BP, HB, WI, WA, WN, NN, NC, MC, SC, WD, CH, BO, SN, AN.

Geographic distribution: Southern Hemisphere.

New Zealand references: Horning *et al.* (1980); Pilgrim & Palma (1982); Murray *et al.* (1990: 1370); Paterson *et al.* (1999: 222); Marris (2000: 188); Palma (2010).

Other significant references: Timmermann (1965); Clay & Moreby (1967); Green & Palma (1991: 19, 26); Palma (1996b: 220); Furness & Palma (1992: 35, 39); Price *et al*. (2003); Hänel & Palma (2007: 113, 127, 130).

Remarks: *Saemundssonia* (*S.*) *desolata* is a frequently collected "head & neck" louse parasitic on all the species and subspecies of prions.

Saemundssonia (*Saemundssonia*) *euryrhyncha* (Giebel, 1874)

Docophorus euryrhynchus Giebel, 1874: 112.
Philopterus euryrhynchus Giebel, 1874 [sic]; Harrison 1916: 93 (as junior synonym of *Philopterus pustulosus* (Nitzsch, [*in* Giebel], 1866)).
Saemundssonia stresemanni Timmermann, 1949: 13, fig. 7, 9.
Saemundssonia euryrhyncha (Giebel, 1874); Hopkins & Clay 1952: 330.
Saemundssonia stresemanni Timmermann, 1949; Hopkins & Clay 1952: 336.
Saemundssonia stresemanni Timmermann, 1949; Timmermann 1957a: 47, fig. 19.
Saemundssonia stresemanni Timmermann, 1949; Clay 1964a: 232.
Saemundssonia sp. [ex "*Catharacta skua lonnbergi*"]; Watson 1967: 74.
Saemundssonia stresemanni Timmermann, 1949; Clay & Moreby 1967: 165, 169, fig. 162.
Saemundssonia stresemanni Timmermann, 1949; Spellerberg 1971: 19.

Saemundssonia stresemanni Timmermann, 1949; Wise 1977: 65.
Saemundssonia stresemanni Timmermann, 1949; Horning *et al.* 1980: 7, 11.
Saemundssonia stresemanni Timmermann, 1949; Pilgrim & Palma 1982: 22.
Saemundssonia stresemanni ssp.; Mey 1994: 41, figs 20–21.
Saemundssonia euryrhyncha (Giebel, 1874); Butler & O'Connor 1994: 456.
Saemundssonia (*Saemundssonia*) *stresemanni* Timmermann, 1949; Palma 1996b: 225.
Saemundssonia stresemanni Timmermann, 1949; Cohen *et al*. 1997: 186.
Saemundssonia (*Saemundssonia*) *euryrhyncha* (Giebel, 1874); Palma 2000: 124, fig. 2.
Saemundssonia (*Saemundssonia*) *euryrhyncha* (Giebel, 1874); Palma & Horning 2002: 12, 17, 22.
Saemundssonia (*Saemundssonia*) *euryrhyncha* (Giebel, 1874); Murray *et al.* 2006a: 1965.
Saemundssonia (*S.*) *euryrhyncha* (Giebel, 1874); Palma 2010: 409.

Syntypes ♂♀, presumed lost. See Palma (2000: 124). Holotype ♂ of *Saemundssonia stresemanni* in NHML (Palma 2000: 124).

Type host: *Coprotheres pomarinus* (Temminck, 1815).

New Zealand hosts: *Catharacta antarctica lonnbergi* Mathews, 1912; *Catharacta maccormicki* (Saunders, 1893).

Other hosts: *Catharacta antarctica antarctica* (Lesson, 1831); *Catharacta skua* Brünnich, 1764; *Catharacta chilensis* (Bonaparte, 1857); *Catharacta hamiltoni* Hagen, 1952.

New Zealand localities: SD, MB, SI, CH, SN, AU, CA, Macquarie Island, RO.

Geographic distribution: Antarctica; Atlantic, Indian and Pacific Oceans.

New Zealand references: Clay (1964a); Gressitt (1964: 539); Clay & Moreby (1967); Watson (1967); Gressitt (1970: 329); Schaefer & Strandtmann (1971: 16); Spellerberg (1971); Wise (1977); Horning *et al.* (1980); Pilgrim & Palma (1982); Palma (1996b); Palma (2000); Palma & Horning (2002); Murray *et al.* (2006a); Palma (2010).

Other significant references: Timmermann (1949a; 1957a); Amerson & Emerson (1971: 15, 26); Butler & O'Connor (1994); Mey (1994); Cohen *et al*. (1997); Ramli *et al*. (2000: 71); Price *et al*. (2003: 233); Palma & Jensen (2005: 58, 64); Hänel & Palma (2007: 113, 127, 131).

Remarks: *Saemundssonia* (*S.*) *euryrhyncha* is a frequently collected "head & neck" louse parasitic on large skuas. Records of *Saemundssonia* from species of *Catharacta* published before Palma (2000) are given as *S. stresemanni*.

Saemundssonia (*Saemundssonia*) *gaini* (Neumann, 1913)

Philopterus gaini Neumann, 1913: 189, figs 1–3.
Philopterus gaini Neumann, 1913; Harrison 1916: 95.
Saemundssonia gaini (Neumann, 1913); Hopkins & Clay 1952: 331.
Saemundssonia gaini (Neumann, 1913); Timmermann 1962a: 435.
Saemundssonia gaini (Neumann, 1913); Timmermann 1965: 75, fig. 12, pl. 1: fig. 4.
Saemundssonia gaini (Neumann, 1913); Clay & Moreby 1967: 165, 168, figs 160, 177.
Saemundssonia gaini (Neumann, 1913); Horning *et al.* 1980: 7, 9.
Saemundssonia gaini (Neumann, 1913); Pilgrim & Palma 1982: 7.
Saemundssonia (*Saemundssonia*) *gaini* (Neumann, 1913); Price *et al*. 2003: 234.
Saemundssonia (*S.*) *gaini* (Neumann, 1913); Palma 2010: 409.
Saemundssonia (*Saemundssonia*) *gaini* (Neumann, 1913); Palma 2012: 40, figs 5–6, 12.

Lectotype ♂ in NHML (Timmermann 1962a: 435).

Type host: *Macronectes giganteus* (J.F. Gmelin, 1789).

New Zealand hosts: *Macronectes giganteus* (J.F. Gmelin, 1789); *Macronectes halli* Mathews, 1912.

Other hosts: None.

New Zealand localities: WN, SN.

Geographic distribution: Southern Hemisphere.

New Zealand references: Horning *et al.* (1980); Pilgrim & Palma (1982); Murray *et al.* (1990: 1369); Paterson *et al.* (1999: 222); Palma (2010; 2012).

Other significant references: Timmermann (1962a; 1965); Green & Palma (1991: 19, 25); Palma (1996b: 221); Price *et al*. (2003).

Remarks: *Saemundssonia gaini* is an infrequently collected "head & neck" louse parasitic on both giant petrel species.

***Saemundssonia* (*Saemundssonia*) *gygisa* Palma, 2012**

Saemundssonia sp.; Nelson 1969: 199.
Saemundssonia sp.; Amerson & Emerson 1971: 19, 27.
Saemundssonia (*Saemundssonia*) sp.; Palma 1999: 381.
Saemundssonia (*Saemundssonia*) sp.; Murray *et al.* 2006a: 1965.
Saemundssonia sp. M; Palma 2010: 409.
Saemundssonia (*Saemundssonia*) *gygisa* Palma, 2012: 44, figs 8, 15–17, 20.

Holotype ♂ in MONZ.

Type host: *Gygis alba candida* (J.F. Gmelin, 1789).

New Zealand host: *Gygis alba candida* (J.F. Gmelin, 1789).

Other hosts: None.

New Zealand localities: AK, WN, KE, Norfolk Island.

Geographic distribution: Tropical Pacific Ocean.

New Zealand references: Nelson (1969); Palma (1999); Murray *et al.* (2006a); Palma (2010); Palma (2012).

Other significant reference: Amerson & Emerson (1971).

Remarks: *Saemundssonia* (*S.*) *gygisa* is an infrequently collected "head & neck" louse parasitic on white terns only.

***Saemundssonia* (*Saemundssonia*) *haematopi* (Linnaeus, 1758)**

Pediculus haematopi Linnaeus, 1758: 613.
Ricinus haematopi (Linnaeus, 1758); Latreille 1804: 108.
Docophorus acanthus Giebel, 1874: 101.
Philopterus acanthus (Giebel, 1874); Cummings 1916b: 677, fig. 24.
Hastaephorus acanthus Giebel [sic]; Kéler 1936: 263, figs 2b,d.
Saemundssonia haematopi (Linnaeus, 1758); Hopkins & Clay 1952: 331.
Saemundssonia haematopi; Baker 1974: 20.
Saemundssonia haematopi (Linnaeus, 1758); Clay 1981b: 933, figs 2, 6, 8, 10.
Saemundssonia haematopi (Linnaeus, 1758); Pilgrim & Palma 1982: 19.
Saemundssonia haematopi (Linnaeus, 1758); Murray *et al.* 1993: 961.
Saemundssonia (*Saemundssonia*) *haematopi* (Linnaeus, 1758); Price *et al.* 2003: 234.
Saemundssonia (*S.*) *haematopi* (Linnaeus, 1758); Palma 2010: 409.

Neotype ♂ in NHML (Clay & Hopkins 1950: 260).

Type host: *Haematopus ostralegus ostralegus* Linnaeus, 1758.

New Zealand hosts: *Haematopus finschi* Martens, 1897; *Haematopus unicolor* J.R. Forster, 1844.

Other hosts: *Haematopus ater* Vieillot & Oudart, 1825; *Haematopus bachmani* Audubon, 1838; *Haematopus palliatus* Temminck, 1820; *Haematopus moquini* Bonaparte, 1856; *Haematopus longirostris* Vieillot, 1817; *Haematopus fuliginosus* Gould, 1845.

New Zealand localities: WI, WN, NN, KA, NC, MC, SC, WD, CO, DN, SL.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Baker (1974); Pilgrim & Palma (1982); Murray *et al.* (1993); Paterson *et al.* (1999: 223); Palma (2010).

Other significant references: Cummings (1916b); Kéler (1936); Timmermann (1949a: 23, fig. 14 right); Clay & Hopkins (1950: 259); Timmermann (1957a: 36, fig. 5); Timmermann (1971: 158); Clay (1981b); Green & Palma (1991: 19, 32); Forrester *et al.* (1995: 26); Palma (1996b: 221); Price *et al.* (2003); Palma & Jensen (2005: 58, 63); Palma & Peck (2013: 59).

Remarks: *Saemundssonia* (*Saemundssonia*) *haematopi* is a frequently collected "head & neck" louse parasitic on most species of oystercatchers (Clay 1981b: 938).

***Saemundssonia* (*Saemundssonia*) *hexagona* (Giebel, 1874)**

Docophorus hexagonus (Giebel, 1874): 116.
Saemundssonia hexagonus [sic] (Giebel, 1874); Thompson 1938c: 461, figs 1, 3b.
Saemundssonia hexagona (Giebel, 1874); Hopkins & Clay 1952: 332.
Saemundssonia hexagona (Giebel, 1874); Timmermann 1955: 516.

Saemundssonia hexagona (Giebel, 1874); Watt 1971: 238, 243, fig. 10.
Saemundssonia hexagona (Giebel, 1874); Pilgrim & Palma 1982: 14.
Saemundssonia (*Saemundssonia*) *hexagona* (Giebel, 1874); Price *et al*. 2003: 234.
Saemundssonia (*S.*) *hexagona* (Giebel, 1874); Palma 2010: 409.

Holotype probably ♀, presumed lost. See Clay (1949a: 1) and Palma & Pilgrim (1984: 150).

Type host: *Phaethon rubricauda* Boddaert, 1783.

New Zealand host: *Phaethon rubricauda* Boddaert, 1783.

Other hosts: None.

New Zealand localities: ND, AK, KE.

Geographic distribution: Tropical Pacific and Indian Oceans.

New Zealand references: Watt (1971); Wise (1977: 64); Pilgrim & Palma (1982); Murray *et al*. (1990: 1373); Miller & Miller (1986: 50); Palma (2010).

Other significant references: Thompson (1938c); Timmermann (1955); Amerson & Emerson (1971: 9, 26); Ward & Downey (1973: 395); Palma (1996b: 221); Price *et al*. (2003).

Remarks: *Saemundssonia* (*S.*) *hexagona* is an infrequently collected "head & neck" louse parasitic on red-tailed tropicbirds.

Saemundssonia (*Saemundssonia*) *inexspectata* Timmermann, 1951

Saemundssonia inexspectata Timmermann, 1951a: 9, fig. 1.
Saemundssonia inexspectata Timmermann, 1951; Hopkins & Clay 1953: 445.
Saemundssonia inexspectata Timmermann, 1951; Timmermann 1957a: 44, 47, fig. 14.
Saemundssonia sp.; Melville 1985: 67.
Saemundssonia (*Saemundssonia*) *inexspectata* Timmermann, 1951; Palma 1999: 380.
Saemundssonia (*Saemundssonia*) *inexspectata* Timmermann, 1951; Palma 2000: 125, fig. 3.
Saemundssonia (*Saemundssonia*) *inexspectata* Timmermann, 1951; Murray *et al.* 2006a: 1965.
Saemundssonia (*S.*) *inexspectata* Timmermann, 1951; Palma 2010: 409.

Holotype ♂ in NHML (Palma 2000: 125).

Type host: "*Larus minutus*", in error (see Palma 2000: 126).

New Zealand host: *Stercorarius longicaudus* Vieillot, 1819.

Other hosts: None

New Zealand localities: WN, WI.

Geographic distribution: Cold and temperate regions of the Atlantic, Indian and Pacific Oceans.

New Zealand references: Melville (1985); Palma (1999); Palma (2000); Murray *et al.* (2006a); Palma (2010).

Other significant references: Timmermann (1957a); Cohen *et al*. (1997: 186); Ramli *et al*. (2000: 71); Price *et al*. (2003: 234); Palma & Jensen (2005: 58, 64).

Remarks: *Saemundssonia* (*S.*) *inexspectata* is an infrequently collected "head & neck" louse parasitic on long-tailed skuas. *Stercorarius longicaudus* is a rare visitor to New Zealand (Checklist Committee 2010: 226), with only two records of *Saemundssonia* (*S.*) *inexspectata* from this country.

Saemundssonia (*Saemundssonia*) *lari* (O. Fabricius, 1780) *sensu lato*

Pediculus lari O. Fabricius, 1780: 219.
Docophorus gonothorax Giebel, 1874: 450.
Philopterus lari O. Fabricius, 1780 [sic]; Harrison 1916: 97 (as junior synonym of *Philopterus gonothorax* Giebel, 1871 [sic]).
Philopterus gonothorax Giebel, 1871 [sic]; Harrison 1937: 21.
Saemundssonia gonothorax Giebel, 1871 [sic]; Timmermann 1949a: 4, figs 1–3.
Saemundssonia lari fallai Timmermann, 1951a: 7.
Saemundssonia lari gonothorax (Giebel, 1874); Timmermann 1951a: 7.
Saemundssonia gonothorax (Giebel, 1874); Hopkins & Clay 1952: 331.
Saemundssonia lari (O. Fabricius, 1780); Hopkins & Clay 1952: 332.
Saemundssonia fallai Timmermann, 1951; Hopkins & Clay 1953: 445.
Saemundssonia lari lari (O. Fabricius, 1780); Clay & Hopkins 1954: 249, figs 37–39.
Saemundssonia lari (O. Fabricius, 1780); Clay 1964a: 232.

Saemundssonia sp. [ex "*Larus dominicanus*"]; Watson 1967: 74.
Saemundssonia fallai Timmermann, 1951; Pilgrim 1970: 75.
Saemundssonia lari (O. Fabricius, 1780); Wise 1977: 64.
Saemundssonia lari fallai Timmermann, 1951; Wise 1977: 64.
Saemundssonia lari gonothorax (Giebel, 1874); Wise 1977: 65.
Saemundssonia lari (O. Fabricius, 1780) s. *l.*; Horning *et al.* 1980: 7, 11.
Saemundssonia lari (O. Fabricius, 1780) s. *l.*; Pilgrim & Palma 1982: 22.
Saemundssonia (*Saemundssonia*) *lari* (O. Fabricius, 1780); Murray *et al.* 2006a: 1965.
Saemundssonia (*S.*) *lari* (O. Fabricius, 1780); Palma 2010: 409.

Neotype ♂ in NHML (Clay & Hopkins 1954: 249, pl. 11: fig. 5). Holotype ♂ of *Saemundssonia lari fallai* in NHML.

Type host: *Larus hyperboreus* Gunnerus, 1767.

New Zealand hosts: *Larus dominicanus* Lichtenstein, 1823; *Larus novaehollandiae scopulinus* J.R. Forster, 1844; *Larus bulleri* Hutton, 1871.

Other hosts: At least 28 other species of *Larus* (see Price *et al*. 2003: 234); *Gabianus pacificus* (Latham, 1802); *Pagophila eburnea* (Phipps, 1774); *Rissa brevirostris* (Bruch, 1853); *Rissa tridactyla* (Linnaeus, 1758); *Xema sabini* (Sabine, 1819).

New Zealand localities: AK, HB, WA, WN, SD, MB, NN, KA, NC, MC, SC, WD, CO, DN, SL, SI, CH, SN, AU, CA, Macquarie Island.

Geographic distribution: Cosmopolitan.

New Zealand references: Harrison (1937); Clay (1964a); Gressitt (1964: 539); Watson (1967); Pilgrim (1970); Gressitt (1970: 329); Wise (1977); Weidner (1977: 103); Horning *et al.* (1980); Pilgrim & Palma (1982); Palma (1996b: 222); Palma & Horning (2002: 13, 18); Galloway (2005: 17); Murray *et al.* (2006a); Palma (2010; 2012: 44, fig. 14).

Other significant references: Timmermann (1949a); Timmermann (1951a); Timmermann (1957a: 42, figs 9, 12); Clay & Hopkins (1954); Clay & Moreby (1967: 165, 169, figs 163–167); Choe & Kim (1987: 3000; 1988: 988); Green & Palma (1991: 19, 33); Forrester *et al.* (1995: 29); Price *et al*. (2003: 234); Palma & Jensen (2005: 58, 64); Adam (2007: 179); Martín-Mateo (2009: 117, fig. 29); González-Acuña *et al*. (2011: 300); Palma & Peck (2013: 60); Yamagishi *et al*. (2014: 384).

Remarks: *Saemundssonia* (*Saemundssonia*) *lari* is a morphologically variable "head & neck" louse frequently collected from many species of gulls. Timmermann (1949a; 1951) subdivided this taxon into several subspecies which, without justification, have not been recognised as valid by Price *et al*. (2003: 238). Therefore, I qualify this louse species as "*sensu lato*", recognising that, while it shows a range of intraspecific variation, it needs a detailed study to determine the validity of subdividing it into subspecies.

***Saemundssonia* (*Saemundssonia*) *limosae* (Denny, 1842)**

Philopterus (*Docophorus*) *limosae* Denny, 1842: 44, 86, pl. 4: fig. 2.
Philopterus limosae Denny, 1842; Harrison 1916: 98.
Saemundssonia limosae (Denny, 1842); Timmermann 1951c: 395, figs 3–4, 7 upper.
Saemundssonia limosae (Denny, 1842); Hopkins & Clay 1952: 333.
Saemundssonia limosae (Denny, 1842); Watt 1971: 238, 243, fig. 10.
Saemundssonia limosae (Denny, 1842); Pilgrim & Palma 1982: 21.
Saemundssonia (*Saemundssonia*) *limosae* (Denny, 1842); Murray *et al.* 2006a: 1964.
Saemundssonia (*S.*) *limosae* (Denny, 1842); Palma 2010: 409.

Holotype ♀ in NHML (Vincent S. Smith pers. comm. December 2014).

Type host: *Limosa lapponica lapponica* (Linnaeus, 1758).

New Zealand host: *Limosa lapponica baueri* Naumann, 1836.

Other hosts: None.

New Zealand localities: ND, NN, KA, KE.

Geographic distribution: Eurasia; North America; Australasia.

New Zealand references: Watt (1971); Wise (1977: 65); Pilgrim & Palma (1982); Murray *et al.* (2006a); Palma (2010).

Other significant references: Timmermann (1951c); Price *et al*. (2003: 235).

Remarks: *Saemundssonia* (*S.*) *limosae* is an infrequently collected "head & neck" louse parasitic on bar-tailed godwits. The eastern bar-tailed godwit is the most numerous wader that visits New Zealand every year (Checklist Committee 2010: 203).

Saemundssonia (*Saemundssonia*) *lockleyi* Clay, 1949

"*Philopterus melanocephalus*" Harrison, 1937: 22 (not *Docophorus melanocephalus* Burmeister, 1838a).
Saemundssonia lockleyi Clay, 1949a: 11, figs 17, 24–25.
Saemundssonia sp.; Clay 1964a: 232.
Saemundssonia sp. [ex *Sterna vittata bethunei*]; Watson 1967: 74.
Saemundssonia lockleyi Clay, 1949; Clay & Moreby 1967: 165, 169, figs 170, 173–174.
"*Saemundssonia melanocephalus*" Wise, 1977: 65 (not *Docophorus melanocephalus* Burmeister, 1838).
Saemundssonia lockleyi Clay, 1949 *s. l.*; Horning *et al.* 1980: 7, 12.
Saemundssonia lockleyi Clay, 1949 *s. l.*; Pilgrim & Palma 1982: 23, 31, note 24.
Saemundssonia (*Saemundssonia*) *lockleyi* Clay, 1949; Palma & Horning 2002: 13, 18, 21.
Saemundssonia (*Saemundssonia*) *lockleyi* Clay, 1949; Murray *et al.* 2006a: 1965.
Saemundssonia (*S.*) *lockleyi* (O. Fabricius, 1780); Palma 2010: 409.

Holotype ♂ in NHML.

Type host: *Sterna vittata georgiae* Reichenow, 1904.

New Zealand hosts: *Chlidonias albostriatus* (G.R. Gray, 1845); *Sterna vittata bethunei* Travers, 1896; *Sterna paradisaea* Pontoppidan, 1763.

Other hosts: *Onychoprion anaethetus* (Scopoli, 1786); *Sterna virgata* Cabanis, 1875.

New Zealand localities: WN, CO, DN, SL, SN, AU, CA, Macquarie Island.

Geographic distribution: Cosmopolitan.

New Zealand references: Harrison (1937); Clay (1949a); Ward (1955: 87); Clay (1964a); Gressitt (1964: 539); Watson (1967); Wise (1977); Horning *et al.* (1980); Pilgrim & Palma (1982); Palma (1996b: 223); Palma & Horning (2002); Murray *et al.* (2006a); Palma (2010).

Other significant references: Clay & Moreby (1967; 1970: 220); Moreby (1976: 93); Forrester *et al.* (1995: 31); Price *et al*. (2003: 235); Palma & Jensen (2005: 59, 65); Hänel & Palma (2007: 113, 127, 131).

Remarks: *Saemundssonia* (*S.*) *lockleyi* is a frequently collected "head & neck" louse parasitic on several tern species. Horning *et al.* (1980) and Pilgrim & Palma (1982) regarded the populations of *Saemundssonia* (*S.*) *lockleyi* from *Sterna vittata bethunei* and *St. paradisaea* as somewhat different from that of the type host, and qualified them as *sensu lato*; however, my examination of more samples shows that making such difference is not warranted. *Chlidonias albostriatus* is a new host record for *S.* (*S.*) *lockleyi* (voucher specimens in MONZ).

Saemundssonia (*Saemundssonia*) *marina* Timmermann, 1956

Saemundssonia marina Timmermann, 1956: 191, fig. 6.
Saemundssonia marina Timmermann, 1956; Timmermann 1965: 73, fig. 10.
Saemundssonia marina Timmermann, 1956; Pilgrim & Palma 1982: 13.
Saemundssonia marina Timmermann, 1956; Murray *et al.* 1990: 1372.
Saemundssonia (*Saemundssonia*) *marina* Timmermann, 1956; Palma 1996b: 223.
Saemundssonia (*Saemundssonia*) *marina* Timmermann, 1956; Hänel & Palma 2007: 107, 113, 127, 130, fig. 2b.
Saemundssonia (*S.*) *marina* Timmermann, 1956; Palma 2010: 409.

Holotype ♂ in NHML (Palma 1996b: 223; Vincent S. Smith pers. comm. February 2015).

Type host: *Pelagodroma marina* (Latham, 1790).

New Zealand host: *Pelagodroma marina maoriana* Mathews, 1912.

Other hosts: *Pelagodroma marina marina* (Latham, 1790); *Pelagodroma marina hypoleuca* (Moquin-Tandon, 1841); *Pelagodroma marina dulciae* Mathews, 1912.

New Zealand localities: ND, WA, NC, DN, CH, SN.

Geographic distribution: Australasia; Atlantic and Pacific Oceans.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990); Paterson *et al.* (1999: 222); Palma (2010).

Other significant references: Timmermann (1965); Furness & Palma (1992: 35, 42); Palma (1996b); Price *et al*. (2003: 235); Hänel & Palma (2007).

Remarks: *Saemundssonia* (*S.*) *marina* is a frequently collected "head & neck" louse parasitic on white-faced storm petrels. *Pelagodroma marina hypoleuca* and *P. m. dulciae* are new host records for *Saemundssonia* (*S.*) *marina* (voucher specimens in NHML and in MONZ, respectively).

***Saemundssonia* (*Saemundssonia*) *melanocephalus* (Burmeister, 1838)**

Docophorus melanocephalus Burmeister, 1838a: 426.
Philopterus melanocephalus Nitzsch, in Burmeister [sic], 1838a; Harrison 1916: 99.
Saemundssonia melanocephalus (Burmeister, 1838); Clay 1949a: 11, figs 8, 11, 19, 28–29.
Saemundssonia melanocephalus (Burmeister, 1838); Hopkins & Clay 1952: 333.
Saemundssonia melanocephalus (Burmeister, 1838); Timmermann 1957a: 44, 46, fig. 16a, pl. 10: fig. b.
Saemundssonia melanocephalus (Burmeister, 1838); Pilgrim & Palma 1982: 23.
Saemundssonia (*Saemundssonia*) *melanocephalus* (Burmeister, 1838); Murray *et al.* 2006a: 1965.
Saemundssonia (*S.*) *melanocephalus* (Burmeister, 1838); Palma 2010: 409.

Status, sex and repository of types unknown, presumed lost. See Clay (1949a: 1) and Palma & Pilgrim (1984: 150).

Type host: *Sternula albifrons albifrons* (Pallas, 1764) (see Clay 1949a: 11).

New Zealand host: *Sternula albifrons sinensis* (J.F. Gmelin, 1789).

Other host: *Sternula nereis nereis* Gould, 1843.

New Zealand localities: WI, WN.

Geographic distribution: Eurasia; Africa; Australasia.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (2006a); Palma (2010).

Other significant references: Clay (1949a); Ward (1955: 87); Timmermann (1957a); Forrester *et al.* (1995: 31); Palma (1996b: 223); Price *et al*. (2003: 235); Martín-Mateo (2009: 116).

Remarks: *Saemundssonia* (*S.*) *melanocephalus* is an infrequently collected "head & neck" louse parasitic on small terns. Wise (1977: 65) listed "*Saemundssonia melanocephalus* (Burmeister, 1838)" for New Zealand, following Harrison's (1937: 22) record of "*Philopterus melanocephalus*" from Macquarie Island, which is a misidentification of *Saemundssonia* (*Saemundssonia*) *lockleyi* Clay, 1949 (see above).

***Saemundssonia* (*Saemundssonia*) *nereis* Timmermann, 1956**

"? *Philopterus platycephalus*" Clay, 1940a: 298 (not *Docophorus platycephalus* Kellogg & Kuwana, 1902).
Saemundssonia nereis Timmermann, 1956: 189, fig. 4.
Saemundssonia nereis Timmermann, 1956; Timmermann 1965: 75, fig. 11.
Saemundssonia nereis Timmermann, 1956; Pilgrim & Palma 1982: 13.
Saemundssonia nereis Timmermann, 1956; Murray *et al.* 1990: 1372.
Saemundssonia (*Saemundssonia*) *nereis* Timmermann, 1956; Price *et al*. 2003: 235.
Saemundssonia (*S.*) *nereis* Timmermann, 1956; Palma 2010: 409.

Holotype ♂ in NHML.

Type host: *Garrodia nereis* (Gould, 1841).

New Zealand host: *Garrodia nereis* (Gould, 1841).

Other hosts: None.

New Zealand localities: WN, MC, CH, AN, AU.

Geographic distribution: Subantarctic Islands; Southern Oceans.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990); Marris (2000: 188); Palma (2010).

Other significant references: Timmermann (1965); Price *et al*. (2003).

Remarks: *Saemundssonia* (*S.*) *nereis* is a frequently collected "head & neck" louse exclusively parasitic on grey-backed storm petrels.

***Saemundssonia* (*Saemundssonia*) *platycephalus* (Kellogg & Kuwana, 1902)** **New Record**

Docophorus platycephalus Kellogg & Kuwana, 1902: 461, pl. 28: fig. 1.
Philopterus platycephalus Kellogg & Kuwana, 1902 [sic]; Harrison 1916: 102.

Saemundssonia platycephalus (Kellogg & Kuwana, 1902); Hopkins & Clay 1952: 335.
Saemundssonia platycephalus (Kellogg & Kuwana, 1902); Timmermann 1965: 73, fig. 9.
Saemundssonia platycephalus (Kellogg & Kuwana, 1902); Clay *in* Linsley & Usinger 1966: 132.
"*Saemundssonia ?marina*" Clay & Moreby, 1967: 165, fig. 158 (not *Saemundssonia marina* Timmermann, 1956).
Saemundssonia sp.; Pilgrim & Palma 1982: 13.
"*Saemundssonia ?marina*" Murray *et al.* 1990: 1372 (not *Saemundssonia marina* Timmermann, 1956).
Saemundssonia sp.; Murray *et al.* 1990: 1372.
Saemundssonia (*Saemundssonia*) species 1; Marris 2000: 188.
Saemundssonia (*Saemundssonia*) *platycephalus* (Kellogg & Kuwana, 1902); Price *et al.* 2003: 236.
Saemundssonia (*Saemundssonia*) *platycephalus* (Kellogg & Kuwana, 1902); Palma & Peck 2013: 60.

Lectotype ♂ in EMEC (Palma & Peck 2013: 61).

Type host: *Oceanites gracilis galapagoensis* Lowe, 1921.

New Zealand host: *Fregetta tropica* (Gould, 1844).

Other hosts: *Oceanites oceanicus oceanicus* (Kuhl, 1820); *Oceanites oceanicus exasperatus* Mathews, 1912; *Oceanites gracilis gracilis* (Elliot, 1859).

New Zealand locality: AN.

Geographic distribution: Antarctica; Southern Oceans; Pacific Ocean.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990); Marris (2000).

Other significant references: Timmermann (1965); Clay & Moreby (1967); Price *et al*. (2003); Palma & Peck (2013).

Material examined and repository: 1♂, 2♀ (1 sample, MONZ).

Remarks: *Saemundssonia* (*S.*) *platycephalus* is an infrequently collected "head & neck" louse parasitic on several storm petrel species. This is the first record of *Saemundssonia* (*S.*) *platycephalus* for New Zealand because the New Zealand references cited above reported this louse as "*Saemundssonia* sp." only. Furthermore, *Fregetta tropica* is new host record for *Saemundssonia* (*S.*) *platycephalus* (voucher specimens in MONZ).

Saemundssonia (*Saemundssonia*) *platygaster* (Denny, 1842) *sensu lato*

Philopterus (*Docophorus*) *platygaster* Denny, 1842: 44, 83, pl. 2: fig. 5.
Philopterus platygaster Denny, 1842; Harrison 1916: 102.
Saemundssonia platygaster (Denny, 1842); Hopkins & Clay 1952: 335.
Saemundssonia platygaster (Denny, 1842) *s. l.*; Pilgrim & Palma 1982: 21.
Saemundssonia platygaster (Denny, 1842); Murray *et al.* 1993: 962. In part.
Saemundssonia platygaster (Denny, 1842); Paterson *et al.* 1999: 221, 223.
Saemundssonia (*Saemundssonia*) *platygaster* (Denny, 1842) *sensu lato*; Palma 1999: 380.
Saemundssonia (*Saemundssonia*) *platygaster* (Denny, 1842); Price *et al.* 2003: 236.
Saemundssonia (*S.*) *platygaster* (Denny, 1842) *s. l.*; Palma 2010: 409.

Syntypes ♀♀, probably lost (Thompson 1937a: 78).

Type host: *Charadrius hiaticula* Linnaeus, 1758.

New Zealand hosts: *Tringa incana* (J.F. Gmelin, 1789); *Himantopus himantopus leucocephalus* Gould, 1837; *Himantopus novaezelandiae* Gould, 1841; *Charadrius obscurus aquilonius* Dowding, 1994; *Charadrius obscurus obscurus* (J.F. Gmelin, 1789).

Other hosts: *Tringa cinerea* (Güldenstaedt, 1774); *Charadrius dubius* Scopoli, 1786; *Charadrius marginatus* Vieillot, 1818.

New Zealand localities: AK, WI, NN, NC, MC, SC, CO, DN, SL, SI.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1993); Paterson *et al.* (1999); Palma (1999); Palma (2010).

Other significant references: Timmermann (1969a: 233); Green & Palma (1991: 19, 33); Palma (1996b: 224); Price *et al*. (2003: 236); Martín-Mateo (2009: 120); Palma & Peck (2013: 61).

Remarks: *Saemundssonia* (*Saemundssonia*) *platygaster* is a morphologically variable and frequently collected "head & neck" louse parasitic on a large range of shore birds. Timmermann (1969a: 240) subdivided it into several subspecies, which are recognised as valid by Price *et al*. (2003: 236). The only subspecies recorded in New

Zealand is *S.* (*S.*) *platygaster balati* from *Charadrius bicinctus* (see below). However, I regard all samples from other New Zealand hosts as *S.* (*S.*) *platygaster sensu lato* until a thorough revision of these populations is made. *Tringa incana*, *Himantopus novaezelandiae* and *Charadrius obscurus aquilonius* are new host records for *S.* (*S.*) *platygaster s. l.* in New Zealand (voucher specimens in MONZ).

Saemundssonia (*Saemundssonia*) *platygaster balati* Timmermann, 1969

Saemundssonia (*Saemundssonia*) *platygaster baláti* [sic] Timmermann, 1969a: 241.
Saemundssonia platygaster (Denny, 1842) *s. l.*; Pilgrim & Palma 1982: 20.
Saemundssonia platygaster (Denny, 1842); Murray *et al.* 1993: 962. In part.
Saemundssonia (*Saemundssonia*) *platygaster balati* Timmermann, 1969; Palma 1999: 380.
Saemundssonia (*Saemundssonia*) *platygaster balati* Timmermann, 1969; Price *et al*. 2003: 236.
Saemundssonia (*S.*) *p. balati* Timmermann, 1969; Palma 2010: 409.

Holotype ♂ in ANIC (Palma 1996b: 224).

Type host: *Charadrius bicinctus bicinctus* Jardine & Selby, 1827.

New Zealand host: *Charadrius bicinctus bicinctus* Jardine & Selby, 1827.

Other hosts: None.

New Zealand localities: AK, MC.

Geographic distribution: Australasia.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1993); Palma (1999); Palma (2010).

Other significant references: Palma (1996b: 224); Price *et al*. (2003).

Remarks: Although the type host of *Saemundssonia* (*Saemundssonia*) *platygaster balati* only breeds in New Zealand, the type locality of this louse species is in Australia (Palma 1996b: 224), where most birds migrate to in winter (Checklist Committee 2010: 217).

Saemundssonia (*Saemundssonia*) *pterodromae* Timmermann, 1959

Saemundssonia pterodromae Timmermann, 1959a: 153, fig. 4.
Saemundssonia halobaenae Timmermann, 1965: 77. New synonymy.
Saemundssonia pterodromae Timmermann, 1959; Timmermann 1965: 78, fig. 16.
Saemundssonia pterodromae Timmermann, 1959; Wise 1977: 65.
Saemundssonia pterodromae Timmermann, 1959; Pilgrim & Palma 1982: 8.
Saemundssonia pterodromae Timmermann, 1959; Palma & Pilgrim 1983: 149.
Saemundssonia (*Saemundssonia*) *pterodromae* Timmermann, 1959; Palma & Horning 2002: 13, 16.
Saemundssonia (*S.*) *pterodromae* Timmermann, 1959; Palma 2010: 409.

Holotype ♂ in NHML.

Type host: *Lugensa brevirostris* (Lesson, 1833).

New Zealand hosts: *Lugensa brevirostris* (Lesson, 1833); *Halobaena caerulea* (J.F. Gmelin, 1789).

Other hosts: None.

New Zealand localities: AK, TK, WI, WN, NC, MC, SC, WD, Macquarie Island.

Geographic distribution: Southern Oceans; Atlantic, Indian and Pacific Oceans.

New Zealand references: Clay & Moreby (1970: 217); Gressitt (1970: 328); Wise (1977); Pilgrim & Palma (1982); Palma & Pilgrim (1983); Murray *et al.* (1990: 1369–1370); Palma (1996b: 225); Palma & Horning (2002); Palma (2010).

Other significant references: Timmermann (1965); Green & Palma (1991: 19, 26); Price *et al*. (2003: 237).

Remarks: *Saemundssonia* (*S.*) *pterodromae* is a frequently collected "head & neck" louse parasitic on two quite distinct petrel species. Timmermann (1965: 77) recorded "*Saemundssonia halobaenae* Edwards (MS)", with *Halobaena caerulea* as the type host, and included a brief description of the louse. To the best of my knowledge, Edwards has not published any description of such species; therefore, the authorship must be given to Timmermann. Furthermore, the *Saemundssonia* population from *Halobaena caerulea* belongs to the species *Saemundssonia* (*S.*) *pterodromae* (see Pilgrim & Palma 1982: 9; Palma & Pilgrim 1983: 149), hence *Saemundssonia halobaenae* becomes a junior synomym of the former species.

***Saemundssonia* (*Saemundssonia*) *remota* Timmermann, 1951**

Saemundssonia lobaticeps remota Timmermann, 1951b: 142.
Saemundssonia remota Timmermann, 1951; Hopkins & Clay 1953: 445.
Saemundssonia remota Timmermann, 1951; Ward & Downey 1973: 395.
Saemundssonia lobaticeps remota Timmermann, 1951; Pilgrim & Palma 1982: 23.
Saemundssonia (*Saemundssonia*) *remota* Timmermann, 1951; Price *et al.* 2003: 237.
Saemundssonia (*Saemundssonia*) *lobaticeps remota* Timmermann, 1951; Murray *et al.* 2006a: 1965.
Saemundssonia (*S.*) *lobaticeps remota* Timmermann, 1951; Palma 2010: 409.
Saemundssonia (*Saemundssonia*) *remota* Timmermann, 1951; Palma & Peck 2013: 61.

Holotype ♂ in NHML.

Type host: *Anous stolidus stolidus* (Linnaeus, 1758).

New Zealand host: *Anous minutus minutus* Boie, 1844.

Other hosts: None.

New Zealand locality: KE.

Geographic distribution: Temperate and tropical regions of the Atlantic, Indian and Pacific Oceans.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (2006a); Palma (2010).

Other significant references: Amerson & Emerson (1971: 19, 26); Ward & Downey (1973); Moreby (1976: 94); Forrester *et al.* (1995: 32); Palma (1996b: 223); Price *et al*. (2003); Palma & Peck (2013); Silva *et al*. (2014: 942).

Remarks: *Saemundssonia* (*S.*) *remota* is an infrequently collected "head & neck" louse parasitic on noddies. In agreement with Ward & Downey (1973: 395) and Price *et al.* (2003: 237), and contrary to Pilgrim & Palma (1982: 23) and Palma (2010: 409), I regard the populations of *Saemundssonia* from species of *Anous* as a full species, distinct from *Saemundssonia* (*S.*) *lobaticeps* (Giebel, 1874), a louse parasitic on species of *Chlidonias*.

***Saemundssonia* (*Saemundssonia*) *scolopacisphaeopodis scolopacisphaeopodis* (Schrank, 1803)**

Pediculus scolopacis phaeopodis Schrank, 1803: 191.
Philopterus armatus Johnston & Harrison, 1912: 370, figs 7–10.
Pediculus scolopacisphaeopodis Schrank, 1803; Harrison 1916: 18 (as junior synonym of "*Docophorus rotundatus* Nitzsch" [sic])
Saemundssonia scolopacis-phaeopodis (Schrank, 1803); Timmermann 1949a: 20, figs 12–14.
Saemundssonia sc.-ph. scolopacis-phaeopodis (Schrank, 1803); Timmermann 1951c: 392, figs 1–2.
Saemundssonia scolopacisphaeopodis (Schrank, 1803); Hopkins & Clay 1952: 335.
Saemundssonia scolopacisphaeopodis (Schrank, 1803); Clay & Hopkins 1960: 15, figs 19–26, pl. 3: figs 1, 3.
Saemundssonia scolopacis-phaeopodis scolopacis-phaeopodis (Schrank, 1803); Timmermann 1969a: 233, fig. 1b.
Saemundssonia scolopacisphaeopodis (Schrank, 1803); Watt 1971: 238, 243.
Saemundssonia scolopacisphaeopodis (Schrank, 1803); Wise 1977: 65.
Saemundssonia scolopacisphaeopodis scolopacisphaeopodis (Schrank, 1803); Pilgrim & Palma 1982: 20.
Saemundssonia (*Saemundssonia*) *scolopacisphaeopodis scolopacisphaeopodis* (Schrank, 1803); Murray *et al.* 2006a: 1964.
Saemundssonia (*S.*) *scolopacisphaeopodis scolopacisphaeopodis* (Schrank, 1803); Palma 2010: 409.

Neotype ♂ in NHML (Clay & Hopkins 1960: 18, pl. 3: fig. 1). Syntypes ♂♀ of *Philopterus armatus* in MONZ (Palma *et al.* 1989: 45).

Type host: *Numenius phaeopus phaeopus* (Linnaeus, 1758).

New Zealand host: *Numenius phaeopus variegatus* (Scopoli, 1786).

Other host: *Numenius borealis* (J.R. Forster, 1772).

New Zealand localities: TK, KE.

Geographic distribution: Eurasia; Africa; Australasia.

New Zealand references: Johnston & Harrison (1912); Thompson (1939: 16); Watt (1971); Wise (1977); Pilgrim (1970: 75); Pilgrim & Palma (1982); Palma *et al.* (1989: 45); Murray *et al.* (2006a); Palma (2010).

Other significant references: Timmermann (1949a; 1951c); Emerson & Ward (1958: 59); Clay & Hopkins (1960); Hackman & Nyholm (1968: 77); Timmermann (1969a; 1971: 139); Ward & Downey (1973: 395); Moreby (1976: 93); Forrester *et al.* (1995: 26); Price *et al*. (2003: 237); Palma & Jensen (2005: 59, 64); Martín-Mateo (2009: 119).

Remarks: *Saemundssonia* (*S.*) *scolopacisphaeopodis scolopacisphaeopodis* is an infrequently collected "head & neck" louse parasitic on curlews and whimbrels. Clay & Hopkins (1960: 16) discussed the status of some possible junior

synonyms of *Saemundssonia* (*S.*) *scolopacisphaeopodis scolopacisphaeopodis*. Although the Asiatic whimbrel is a frequent visitor to New Zealand (Checklist Committee 2010: 201), its lice have been infrequently collected.

***Saemundssonia* (*Saemundssonia*) *stammeri* Timmermann, 1959**

Saemundssonia stammeri Timmermann, 1959a: 149, fig. 2.
Saemundssonia stammeri Timmermann, 1959; Timmermann 1965: 77, fig. 15.
Saemundssonia stammeri Timmermann, 1959; Clay & Moreby 1967: 165, 168, figs 155, 176.
Saemundssonia stammeri Timmermann, 1959; Horning *et al.* 1980: 7, 9.
Saemundssonia stammeri Timmermann, 1959; Pilgrim & Palma 1982: 7.
Saemundssonia (*Saemundssonia*) *stammeri* Timmermann, 1959; Price *et al*. 2003: 237.
Saemundssonia (*S.*) *stammeri* Timmermann, 1959; Palma 2010: 409.

Holotype ♂ in NHML.

Type host: *Daption capense* (Linnaeus, 1758).

New Zealand hosts: *Daption capense capense* (Linnaeus, 1758); *Daption capense australe* Mathews, 1913.

Other hosts: None.

New Zealand localities: ND, AK, HB, TK, WI, WN, NC, MC, SC, WD, SL, SN, AN.

Geographic distribution: Antarctica; Subantarctic Islands; Southern Oceans.

New Zealand references: Horning *et al.* (1980); Pilgrim & Palma (1982); Murray *et al.* (1990: 1369); Paterson *et al.* (1999: 222); Palma (2010).

Other significant references: Timmermann (1965); Clay & Moreby (1967); Green & Palma (1991: 19, 26); Palma (1996b: 225); Price *et al*. (2003).

Remarks: *Saemundssonia* (*S.*) *stammeri* is a frequently collected "head & neck" louse exclusively parasitic on Cape petrels.

***Saemundssonia* (*Saemundssonia*) *sternae* (Linnaeus, 1758)**

Pediculus sternae Linnaeus, 1758: 612.
Ricinus sternae (Linnaeus, 1758); Latreille 1804: 107.
Philopterus sternae Linnaeus, 1758 [sic]; Harrison 1916: 104 (qualified as "Identity uncertain").
Saemundssonia sternae (Linnaeus, 1758); Clay 1949a: 4, figs 1–6, 16, 22–23.
Saemundssonia sternae (Linnaeus, 1758); Hopkins & Clay 1952: 336.
Saemundssonia sternae (Linnaeus, 1758); Clay & Moreby 1967: 164, figs 168–169, 171–172.
Saemundssonia sternae (Linnaeus, 1758); Pilgrim & Palma 1982: 23.
Saemundssonia (*Saemundssonia*) *sternae* (Linnaeus, 1758); Price *et al*. 2003: 237.
Saemundssonia (*Saemundssonia*) *sternae* (Linnaeus, 1758); Murray *et al.* 2006a: 1965.
Saemundssonia (*S.*) *sternae* (Linnaeus, 1758); Palma 2010: 409.

Neotype ♂ in NHML (Clay 1949a: 10).

Type host: *Sterna hirundo hirundo* Linnaeus, 1758.

New Zealand host: *Sterna striata* J.F. Gmelin, 1789.

Other hosts: *Sterna dougallii* Montagu, 1813; *Sterna vittata* J.F. Gmelin, 1789.

New Zealand localities: AK, WN, NN, KA, NC, MC, SC, WD, CO, DN, SL.

Geographic distribution: Eurasia; Africa; North America; Australasia; Southern Oceans.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (2006a); Palma (2010).

Other significant references: Clay (1949a); Clay & Hopkins (1950: 245); Ward (1955: 85); Clay & Moreby (1967); Hackman & Nyholm (1968: 78); Green & Palma (1991: 19, 33); Forrester *et al.* (1995: 31); Palma (1996b: 225); Price *et al*. (2003); Hänel & Palma (2007: 113, 127, 131); Martín-Mateo (2009: 117).

Remarks: *Saemundssonia* (*S.*) *sternae* is a frequently collected "head & neck" louse parasitic on several tern species.

***Saemundssonia* (*Saemundssonia*) *thalassidromae incisa* Timmermann, 1950**

Saemundssonia incisa Timmermann, 1950: 7.
Saemundssonia incisa Timmermann, 1950; Timmermann 1951b: 142, fig. 1, right.
Saemundssonia incisa Timmermann, 1950; Hopkins & Clay 1952: 332.

Saemundssonia incisa Timmermann, 1950; Timmermann 1957a: 52, fig. 25.
Saemundssonia incisa Timmermann, 1950; Timmermann 1965: 73, fig. 7.
Saemundssonia incisa Timmermann, 1950; Palma 1999: 378.
Saemundssonia (*Saemundssonia*) *incisa* Timmermann, 1950; Price *et al*. 2003: 234.
Saemundssonia (*Saemundssonia*) *thalassidromae incisa* Timmermann, 1950; Palma & Jensen 2005: 59, 61.
Saemundssonia (*S.*) *incisa* Timmermann, 1950; Palma 2010: 409.

Holotype ♂ in NHML (Vincent S. Smith pers. comm. February 2015).

Type host: *Oceanodroma leucorhoa* (Vieillot, 1818).

New Zealand host: *Oceanodroma leucorhoa leucorhoa* (Vieillot, 1818).

Other host: *Oceanodroma tethys* (Bonaparte, 1852).

New Zealand locality: ND.

Geographic distribution: Atlantic and Pacific Oceans.

New Zealand references: Palma (1999); Palma (2010).

Other significant references: Timmermann (1951b; 1957a; 1965); Fowler & Hodson (1988: 47); Price *et al*. (2003); Palma & Jensen (2005: 59, 61).

Remarks: *Saemundssonia* (*S.*) *incisa* is an infrequently collected "head & neck" louse parasitic on some storm petrels. In agreement with Palma & Jensen (2005: 59) and contrary to Palma (1999: 378) and Price *et al.* (2003: 234), I regard this louse taxon as a subspecies of *Saemundssonia* (*Saemundssonia*) *thalassidromae*.

Saemundssonia (*Saemundssonia*) *thompsoni* Timmermann, 1951

Saemundssonia thompsoni Timmermann, 1951c: 396, figs 5–7 below.
Saemundssonia thompsoni Timmermann, 1951; Hopkins & Clay 1953: 445.
Saemundssonia thompsoni Timmermann, 1951; Tendeiro 1963: 96, photos 77–79.
Saemundssonia thompsoni Timmermann, 1951; Pilgrim & Palma 1982: 20.
Saemundssonia (*Saemundssonia*) *thompsoni* Timmermann, 1951; Price *et al.* 2003: 237.
Saemundssonia (*Saemundssonia*) *thompsoni* Timmermann, 1951; Murray *et al*. 2006a: 1964.
Saemundssonia (*S.*) *thompsoni* Timmermann, 1951; Palma 2010: 409.

Holotype ♂ in NHML (originally in the Thompson Collection, see George 1981: 88).

Type host: *Limosa limosa* (Linnaeus, 1758).

New Zealand host: *Limosa limosa melanuroides* Gould, 1846.

Other host: *Limosa limosa limosa* (Linnaeus, 1758).

New Zealand locality: AU.

Geographic distribution: Eurasia; Australasia.

New Zealand references: Pilgrim & Palma (1982); Murray *et al*. (2006a); Palma (2010).

Other significant references: Tendeiro (1963); Price *et al*. (2003); Adam (2007: 180).

Remarks: *Saemundssonia* (*S.*) *thompsoni* is an infrequently collected "head & neck" louse parasitic on black-tailed godwits. *Limosa limosa melanuroides* is an uncommon annual visitor to New Zealand (Checklist Committee 2010: 203), with only a single record of *Saemundssonia* (*S.*) *thompsoni* from this country.

Saemundssonia (*Saemundssonia*) *tringae* (O. Fabricius, 1780) *sensu lato*

Pediculus tringae O. Fabricius, 1780: 219.
Philopterus (*Docophorus*) *variabilis* Denny, 1842: 42, 71, pl. 3: fig. 4.
Docophorus alpinus Giebel, 1874: 105.
Pediculus tringae O. Fabricius, 1780; Harrison 1916: 19 (as "Not recognisable").
Hastaephorus alpinus Giebel [sic]; Kéler 1936: 262, figs 2a,c.
"*Philopterus limosae*" Harrison, 1937: 21, 46 (not *Philopterus* (*Docophorus*) *limosae* Denny, 1842).
Saemundssonia tringae (O. Fabricius, 1780); Hopkins & Clay 1952: 336.
Saemundssonia variabilis (Denny, 1842); Hopkins & Clay 1952: 336.
Saemundssonia tringae (O. Fabricius, 1780); Clay & Hopkins 1954: 249, figs 40–44.
Saemundssonia sp. [ex *Calidris canutus rogersi*]; Watson 1967: 74.
Saemundssonia sp.; Gressit 1970: 329.
"*Saemundssonia limosae*" Wise, 1977: 65 (not *Philopterus* (*Docophorus*) *limosae* Denny, 1842).

Saemundssonia tringae (O. Fabricius, 1780) *s. l.*; Pilgrim & Palma 1982: 21, 31, note 23.
Saemundssonia (*Saemundssonia*) sp.; Palma & Horning 2002: 13, 17, 22.
Saemundssonia (*Saemundssonia*) *tringae* (O. Fabricius, 1780); Price *et al*. 2003: 237.
Saemundssonia (*Saemundssonia*) *tringae tringae* (O. Fabricius, 1780); Murray *et al*. 2006a: 1964.
Saemundssonia (*S.*) *tringae* (O. Fabricius, 1780); Palma 2010: 409.

Neotype ♂ in NHML (Clay & Hopkins (1954: 250).

Type host: *Calidris maritima* (Brünnich, 1764).

New Zealand host: *Calidris canutus rogersi* (Mathews, 1913).

Other hosts: At least 14 other species of *Calidris* (Price *et al*. 2003: 237); *Arenaria interpres* (Linnaeus, 1758); *Arenaria melanocephala* (Vigors, 1829); *Eurynorhynchus pygmaeus* (Linnaeus, 1758); *Limnodromus griseus* (J.F. Gmelin, 1789); *Limnodromus scolopaceus* (Say, 1823); *Phalaropus lobatus* (Linnaeus, 1758); *Philomachus pugnax* (Linnaeus, 1758).

New Zealand localities: MC, CA, Macquarie Island.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Harrison (1937); Watson (1967); Gressit (1970); Wise (1977); Pilgrim & Palma (1982); Palma & Horning (2002); Murray *et al*. (2006a); Palma (2010).

Other significant references: Clay & Hopkins (1954); Hackman & Nyholm (1968: 78); Martens (1974: 142); Hunter & Colwell (1994: 402); Palma (1996b: 226); Price *et al*. (2003).

Remarks: *Saemundssonia* (*S.*) *tringae* is a morphologically variable and infrequently collected "head & neck" louse parasitic on many shore bird species. Martens (1974: 142) divided this taxon into several subspecies which, without justification, have not been recognised as valid by Price *et al*. (2003: 238). Therefore, I qualify the material from *Calidris canutus rogersi* as "*sensu lato*", recognising that there is a range of intraspecific variation that needs detailed study to determine the validity of the subspecies.

Saemundssonia (*Saemundssonia*) *uppalensis* (Rudow, 1870)

Docophorus uppalensis Rudow, 1870: 455.
Philopterus uppalensis Rudow, 1870 [sic]; Harrison 1916: 106.
Saemundssonia uppalensis (Rudow, 1870); Hopkins 1951b: 374.
Saemundssonia upoluensis (Rudow, 1870); Hopkins & Clay 1952: 336. Unjustified emendation.
Saemundssonia upolensis [sic] (Rudow, 1870); Timmermann 1955: 516. Unjustified emendation.
Saemundssonia upoluensis (Rudow, 1870); Pilgrim & Palma 1982: 14. Unjustified emendation.
Saemundssonia upoluensis (Rudow, 1870); Murray *et al.* 1990: 1373. Unjustified emendation.
Saemundssonia uppalensis (Rudow, 1870); Forrester *et al.* 1995: 6.
Saemundssonia (*Saemundssonia*) *uppalensis* (Rudow, 1870); Price *et al*. 2003: 238.
Saemundssonia (*S.*) *uppalensis* (Rudow, 1870); Palma 2010: 409.

Type presumed lost. See Hopkins (1951: 374).

Type host: "*Phaethon aethereus*", in error (see Hopkins 1951: 374).

New Zealand host: *Phaethon lepturus dorotheae* Mathews, 1913.

Other hosts: *Phaethon lepturus catesbyi* J.F. Brandt, 1838; *Phaethon lepturus lepturus* Daudin, 1802; *Phaethon lepturus fulvus* J.F. Brandt, 1838.

New Zealand locality: ND.

Geographic distribution: Tropical and subtropical regions of the Atlantic, Indian and Pacific Oceans.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (2010).

Other significant references: Hopkins (1951b); Timmermann (1955); Amerson & Emerson (1971: 10, 27); Martín-Mateo (1992a: 49, figs 26–28); Forrester *et al.* (1995); Palma (1996b: 226); Price *et al*. (2003).

Remarks: *Saemundssonia* (*S.*) *uppalensis* is an infrequently collected "head & neck" louse parasitic on white-tailed tropicbirds. *Phaethon lepturus dorotheae* is a regular straggler to northern New Zealand (Checklist Committee 2010: 137).

Hopkins & Clay (1952: 336) emended the species epithet of this louse following Hopkins (1951: 374) who believed that the name referred to Upolu Island in the Samoan Archipelago, and not to "Uppala" as Rudow (1870:

455) had spelt it. However, regardless of the spelling of the type locality, the original species name must remain unaltered (see Palma 1999: 384, note C).

***Saemundssonia* (*Saemundssonia*) species** **New Record**

New Zealand host: *Pealeornis maoriana* Mathews, 1932.

New Zealand locality: CL.

Geographic distribution: New Zealand seas.

New Zealand reference: This paper.

Material examined and repository: 1♀ (1 sample, MONZ).

Remarks: The only available specimen could not be identified to species because it is a female (see Palma 2000: 127).

Genus *Strigiphilus* Mjöberg, 1910

Strigiphilus Mjöberg, 1910a. *Arkiv Zool. 6*(13): 132. Type species: *Docophorus heterocerus* Nitzsch [*in* Giebel], 1861a = *Strigiphilus goniodicerus* Eichler, 1949 (by original designation).

***Strigiphilus aitkeni* Clay, 1966**

Strigiphilus aitkeni Clay, 1966b: 12, figs 5, 7, 9, 11–12, pl. 2.
Strigiphilus aitkeni Clay, 1966; Wise 1977: 65.
Strigiphilus aitkeni Clay, 1966; Pilgrim & Palma 1982: 25.
Strigiphilus aitkeni Clay, 1966; Murray *et al.* 1999: 1241.
Strigiphilus aitkeni Clay, 1966; Palma 2010: 409.

Holotype ♂ in NHML.

Type host: *Tyto alba hellmayri* Griscom & Greenway, 1937.

New Zealand host: *Tyto alba delicatula* (Gould, 1837).

Other hosts: *Tyto alba javanica* (J.F. Gmelin, 1788); *Tyto alba tuidara* (J.E. Gray, 1829); *Tyto novaehollandiae novaehollandiae* (Stephens, 1826); *Tyto novaehollandiae castanops* (Gould, 1837); *Tyto capensis longimembris* (Jerdon, 1839).

New Zealand localities: MC, WD.

Geographic distribution: Americas; Asia; Australasia.

New Zealand references: Clay (1966b: 17, fig. 12); Wise (1977); Pilgrim & Palma (1982); Murray *et al.* (1999); Palma (2010).

Other significant references: Clay (1976b: 540, 546); Green & Palma (1991: 20; 36); Palma (1996b: 227); Price *et al.* (2003: 239).

Remarks: *Strigiphilus aitkeni* is a "head & neck" louse parasitic on many species of barn owls. *Tyto alba delicatula* is a vagrant to New Zealand (Checklist Committee 2010: 268), with only two records of *Strigiphilus aitkeni* from this country.

***Strigiphilus cursitans* (Nitzsch [*in* Giebel], 1861)**

Docophorus cursitans Nitzsch [*in* Giebel], 1861a: 529.
Philopterus cursitans Nitzsch, [*in* Giebel], 1861 [sic]; Harrison 1916: 92.
Philopterus cursitans (Nitzsch, 1861) [sic]; Marples 1942: 245.
Strigiphilus cursitans (Nitzsch, 1861) [sic]; Hopkins & Clay 1952: 339.
Strigiphilus cursitans (Nitzsch, 1861) [sic]; Wise 1977: 65.
Strigiphilus cursitans (Nitzsch, 1861) [sic]; Pilgrim & Palma 1982: 25.
Strigiphilus cursitans (Nitzsch, 1861) [sic]; Murray *et al.* 1999: 1241.
Strigiphilus cursitans (Nitzsch [*in* Giebel], 1861); Price *et al.* 2003: 239.
Strigiphilus cursitans (Nitzsch, 1861) [sic]; Palma 2010: 409.

Syntypes ♂♂ presumed lost. See Clay (1949a: 1) and Palma & Pilgrim (1984: 150).

Type host: *Athene noctua* (Scopoli, 1769).

New Zealand host: *Athene noctua* (Scopoli, 1769).

Other hosts: *Athene noctua bactriana* Blyth, 1847; *Athene noctua glaux* (Savigny, 1809); *Athene noctua saharae* (Kleinschmidt, 1909); *Athene noctua somaliensis* Reichenow, 1905; *Athene noctua vidalii* Brehm, 1857; *Strix butleri* (Hume, 1878).

New Zealand localities: NC, MC, SC, WD, CO, DN, SL.

Geographic distribution: Europe; Asia; Africa; New Zealand.

New Zealand references: Marples (1942); Wise (1977); Pilgrim & Palma (1982); Clayton & Price (1984: 343, figs 1–2, 7, 11, 32, 52, 54); Murray *et al.* (1999); Paterson *et al.* (1999: 220); Palma (2010).

Other significant references: Clayton (1990: 260); Price *et al*. (2003: 239); Adam (2007: 181); Martín-Mateo (2009: 169).

Remarks: *Strigiphilus cursitans* is a "head & neck" louse parasitic on several small species of owls. *Strigiphilus cursitans* was introduced to New Zealand with little owls by human agency (Checklist Committee 2010: 267).

Strigiphilus vapidus Clay, 1977

Figs 170–171

Strigiphilus vapidus Clay, 1977: 1, figs 1, 3, 5–6, 8.
Strigiphilus vapidus Clay, 1977; Pilgrim & Palma 1982: 25.
Strigiphilus vapidus Clay, 1977; Clayton & Price 1984: 345, figs 12, 33, 55.
Strigiphilus vapidus Clay, 1977; Murray *et al.* 1999: 1241.
Strigiphilus vapidus Clay, 1977; Palma 2010: 409.

Holotype ♂ in ANIC.

Type host: *Ninox boobook ocellata* (Bonaparte, 1850).

New Zealand host: *Ninox novaeseelandiae novaeseelandiae* (J.F. Gmelin, 1788).

Other host: *Ninox novaeseelandiae leucopsis* (Gould, 1838).

New Zealand localities: WO, BP, BP, TO, HB, WA, WN, SD, MB, BR, WD.

Geographic distribution: Australasia.

New Zealand references: Clay (1977: 2); Pilgrim & Palma (1982); Clayton & Price (1984); Murray *et al.* (1999); Palma (2010).

Other significant references: Clayton (1990: 260); Green & Palma (1991: 20, 36); Palma (1996b: 227); Price *et al*. (2003: 240).

Remarks: *Strigiphilus vapidus* is a "head & neck" louse belonging to the "*Strigiphilus cursitans* group" of species (Clayton & Price 1984) and restricted to Australasian owls.

Strigiphilus species

Strigiphilus sp.; Pilgrim & Palma 1982: 25.
Strigiphilus; Murray *et al.* 1999: 1241.

New Zealand host: *Sceloglaux albifacies albifacies* (Gray, 1844).

Other hosts: None

New Zealand locality: CO, DN.

Geographic distribution: New Zealand.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1999).

Other significant references: None.

Remarks: This species is represented by a single male louse belonging to the "*Strigiphilus cursitans* group" as defined by Clayton & Price (1984). It is morphologically close to *St. vapidus* Clay, 1977, but it exhibits some differences in head shape and details of the genitalia. However, considering that the host is almost certainly extinct (Checklist Committee 2010: 266), the probability of finding more specimens to confirm its identity is extremely low.

Genus *Sturnidoecus* Eichler, 1944

Sturnidoecus Eichler, 1944b. *Stettin. Entomol. Zeit. 105*: 81. Type species: "*Docophorus leontodon* Nitzsch, *sensu* Piaget, 1880" = *Sturnidoecus sturni* (Schrank, 1776) (by original designation).

***Sturnidoecus sturni* (Schrank, 1776)**

Figs 172–173

Pediculus sturni Schrank, 1776: 118, pl. 5: figs 11–14.
Philopterus (*Docophorus*) *leontodon* Nitzsch, 1818: 290.
Philopterus leontodon Nitzsch, 1818; Johnston & Harrison 1912: 368.
Philopterus sturni (Schrank, 1776); Thompson 1939: 71.
Sturnidoecus sturni (Schrank, 1776); Hopkins & Clay 1952: 345.
Sturnidoecus sturni (Schrank, 1776); Watt 1971: 238, 244, fig. 12.
Sturnidoecus sturni (Schrank, 1776); Pilgrim & Palma 1982: 27.
Sturnidoecus sturni (Schrank, 1776); Murray *et al.* 2006b: 1960.
Sturnidoecus sturni (Schrank, 1776); Palma 2010: 409.

Neotype ♂ in NHML (Clay & Hopkins 1954: 232, pl. 10: fig. 5).

Type host: *Sturnus vulgaris vulgaris* Linnaeus, 1758.

New Zealand host: *Sturnus vulgaris vulgaris* Linnaeus, 1758.

Other hosts: None.

New Zealand localities: HB, WI, WN, NC, MC, SC, WD, KE, Norfolk Island.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Johnston & Harrison (1912); Nelson (1969: 199); Watt (1971); Wise (1977: 65); Pilgrim & Palma (1982); Paterson *et al.* (1999: 220); Murray *et al.* (2006b); Palma (2010).

Other significant references: Thompson (1939); Eichler (1944b: 81); Séguy (1944: 253, figs 381–384); Clay & Hopkins (1954: 232, fig. 12, pl. 10: fig. 5); Kettle (1983: 403); Green & Palma (1991: 20, 41); Butler & O'Connor (1994: 457); Palma (1996b: 228); Price *et al*. (2003: 243); Johnson & Clayton (2003: 462); Palma & Jensen (2005: 59, 68); Adam (2007: 185); Martín-Mateo (2009: 205); Bartlow *et al*. (2016: 222).

Remarks: *Sturnidoecus sturni* was introduced to New Zealand with starlings by human agency (Checklist Committee 2010: 315).

***Sturnidoecus* species**

Sturnidoecus sp.; Pilgrim & Palma 1982: 27.
Sturnidoecus sp.; Paterson *et al.* 1999: 220.
Sturnidoecus sp.; Murray *et al.* 2006b: 1960.

New Zealand host: *Acridotheres tristis* (Linnaeus, 1766).

Other hosts: None.

New Zealand localities: ND, CL.

Geographic distribution: Asia; Australia; South Africa; islands of the Pacific and Indian Oceans.

New Zealand references: Pilgrim & Palma (1982); Paterson *et al.* (1999); Murray *et al.* (2006b).

Remarks: The two available records of *Sturnidoecus* from *A. tristis* could not be identified to species because the samples contain females only (voucher specimens in MONZ). *Acridotheres tristis* and its lice were introduced to New Zealand by human agency (Checklist Committee 2010: 315)

Genus *Trabeculus* Rudow, 1866

Trabeculus Rudow, 1866b. *Z. ges. NatWiss.* 27: 466. Type species: *Trabeculus schillingi* Rudow, 1866 (by monotypy).

Oncophorus Rudow, 1870. *Z. ges. NatWiss. 35*: 475. Type species: *Oncophorus schillingii* Rudow, 1870 = *Trabeculus schillingi* Rudow, 1866b (by monotypy).

Giebelia Kellogg, 1896a. *Proc. Calif. Acad. Sci. 6*: 137. Type species: *Giebelia mirabilis* Kellogg, 1896a = *Trabeculus mirabilis* (Kellogg, 1896) (by monotypy).

Mackayia Waterston, 1912a. *Scott. Nat. 11*: 252. Type species: *Mackayia dimorpha* Waterston, 1912a = *Trabeculus aviator* (Evans, 1912) (by monotypy).

Cecalymenus Enderlein, 1917. *Zool. Anz. 49*: 242. Type species: *Cecalymenus oestrelatae* Enderlein, 1917 = *Trabeculus schillingi* Rudow, 1866b (by original designation).

***Trabeculus aviator* (Evans, 1912)**

Docophorus, ? sp. n. Evans, 1912 (Oct.): 268, 270, 276, fig. 4.
Docophorus aviator Evans, 1912 (Oct.): 268, 270, 276, fig. 4.
Mackayia dimorpha Waterston, 1912a (Nov.): 252, figs 1–6.
Trabeculus aviator Evans, 1912 [sic]; Harrison 1916: 144. Listed as *nomen nudum*.
Trabeculus dimorphus Waterston, 1912 [sic]; Harrison 1916: 144.
Trabeculus dimorphus (Waterston, 1912); Timmermann 1951b: 142, fig. 1, left.
Trabeculus aviator (Evans, 1912); Hopkins & Clay 1952: 348.
Trabeculus aviator (Evans, 1912); Timmermann 1959b: 498, fig. 10.
Trabeculus aviator (Evans, 1912); Timmermann 1965: 133, fig. 74, pl. 2: figs 3–4.
Trabeculus aviator (Evans, 1912); Pilgrim & Palma 1982: 12.
Trabeculus aviator (Evans, 1912); Price *et al.* 2003: 244.
Trabeculus aviator (Evans, 1912); Palma 2010: 409.

Syntypes ♀♀, probably lost (Robert McGowan pers. comm. February 2014).

Type host: *Puffinus puffinus* (Brünnich, 1764).

New Zealand host: *Puffinus puffinus* (Brünnich, 1764).

Other hosts: None

New Zealand localities: WN, WI.

Geographic distribution: Atlantic and Pacific Oceans.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990: 1371); Palma (2010).

Other significant references: Timmermann (1951b); Timmermann (1959b; 1965); Fowler & Shaw (1990: 15); Butler & O'Connor (1994: 457); Price *et al*. (2003); Palma & Jensen (2005: 59–60).

Remarks: *Puffinus puffinus* is a straggler to Australasia, recorded in New Zealand three times (Checklist Committee 2010: 119), but with only two records of *Trabeculus aviator* from this country.

***Trabeculus flemingi* Timmermann, 1959**

Trabeculus flemingi Timmermann, 1959b: 497, fig. 9.
Trabeculus flemingi Timmermann, 1959; Timmermann 1965: 133, fig. 73.
Trabeculus flemingi Timmermann, 1959; Wise 1977: 65.
Trabeculus flemingi Timmermann, 1959; Pilgrim & Palma 1982: 12.
Trabeculus flemingi Timmermann, 1959; Murray *et al.* 1990: 1371.
Trabeculus flemingi Timmermann, 1959; Price *et al*. 2003: 244.
Trabeculus flemingi Timmermann, 1959; Palma 2010: 409.

Holotype ♂ in CMNZ (Nicholls *et al.* 1998: 30).

Type host: *Puffinus huttoni* Mathews, 1912.

New Zealand host: *Puffinus huttoni* Mathews, 1912.

Other hosts: None.

New Zealand localities: AK, WN, KA, NC, MC, SC.

Geographic distribution: Pacific Ocean.

New Zealand references: Timmermann (1959; 1965); Pilgrim (1970: 75); Wise (1977); Pilgrim & Palma (1982); Murray *et al.* (1990); Nicholls *et al.* (1998: 30); Page *et al.* (2004: 634, 638, 650); Galloway (2005: 16); Buckley *et al.* (2012: App. 2).

Other significant reference: Price *et al*. (2003).

Remarks: *Trabeculus flemingi* is an endemic and "at risk" species (Buckley *et al.* 2012), exclusively parasitic on Hutton's shearwaters.

***Trabeculus fuscoclypeatus* (Johnston & Harrison, 1912)**

Figs 174–175

Philopterus fuscoclypeatus Johnston & Harrison, 1912: 368, fig. 4.
Giebelia fuscoclypeata Johnston & Harrison, 1912 [sic]; Harrison 1916: 144.
Trabeculus fuscoclypeatus (Johnston & Harrison, 1912); Hopkins & Clay 1952: 349.
Trabeculus fuscoclypeatus (Johnston & Harrison, 1912); Timmermann 1959b: 491, fig. 5.
Trabeculus fuscoclypeatus (Johnston & Harrison, 1912); Timmermann 1965: 129, fig. 69.

Trabeculus fuscoclypeatus (Johnston & Harrison, 1912); Watt 1971: 238, 242, fig. 11.
Trabeculus fuscoclypeatus (Johnston & Harrison, 1912); Wise 1977: 65.
Trabeculus fuscoclypeatus (Johnston & Harrison, 1912); Pilgrim & Palma 1982: 9.
Trabeculus fuscoclypeatus (Johnston & Harrison, 1912); Palma 2010: 409.

Holotype nymph in MONZ (Palma *et al.* 1989: 45).

Type host: *Pterodroma neglecta neglecta* (Schlegel, 1863).

New Zealand host: *Pterodroma neglecta neglecta* (Schlegel, 1863).

Other hosts: *Pterodroma hasitata hasitata* (Kuhl, 1820); *Pterodroma arminjoniana* (Giglioli & Salvadori, 1869); *Pterodroma heraldica* (Salvin, 1888); *Pterodroma atrata* (Mathews, 1912); *Pterodroma alba* (J.F. Gmelin, 1789); *Pterodroma phaeopygia* (Salvin, 1876).

New Zealand localities: ND, KE.

Geographic distribution: Atlantic and Pacific Oceans.

New Zealand references: Johnston & Harrison (1912); Thompson (1939: 213); Pilgrim (1970: 75); Watt (1971); Wise (1977); Pilgrim & Palma (1982); Palma *et al.* (1989: 45); Murray *et al.* (1990: 1369); Palma (2010).

Other significant references: Timmermann (1959; 1965); Zonfrillo (1993: 327); Price *et al*. (2003: 244); Palma & Peck (2013: 63).

Remarks: The population of *Trabeculus* from *Pterodroma phaeopygia* has been regarded as *Trabeculus fuscoclypeatus sensu lato* (see Palma & Peck 2013: 63). *Pterodroma heraldica* and *Pt. atrata* are new host records for this louse species (voucher specimens in MONZ).

Trabeculus hexakon (Waterston, 1914)

Giebelia hexakon Waterston, 1914: 291, pl. 25: figs 7, 11, pl. 26: fig. 14.
Giebelia hexakon Waterston, 1914; Harrison 1916: 144.
Trabeculus hexacon (Waterston, 1914); Hopkins & Clay 1952: 349. Unjustified emendation.
Trabeculus hexakon (Waterston, 1914); Timmermann 1959b: 487, figs 1, 4. In part.
Trabeculus hexakon (Waterston, 1914); Timmermann 1965: 128, fig. 68, pl. 2: figs 1–2.
Trabeculus hexacon (Waterston, 1914); Clay & Moreby 1967: 166, 168, figs 80, 152. Unjustified emendation.
Trabeculus hexacon (Waterston, 1914); Wise 1977: 65. In part. Unjustified emendation.
Trabeculus hexakon (Waterston, 1914); Pilgrim & Palma 1982: 11.
Trabeculus hexakon (Waterston, 1914); Murray *et al*. 1990: 1371.
Trabeculus hexakon (Waterston, 1914); Marris 2000: 188.
Trabeculus hexakon (Waterston, 1914) *sensu lato*; Palma & Horning 2002: 13, 16. In part.
Trabeculus hexakon (Waterston, 1914); Price *et al*. 2003: 244. In part.
Trabeculus hexakon (Waterston, 1914); Palma 2010: 409. In part.

Syntypes ♂♀ in SAMS (see Remarks).

Type host: *Procellaria aequinoctialis* Linnaeus, 1758.

New Zealand hosts: *Procellaria aequinoctialis* Linnaeus, 1758; *Procellaria westlandica* Falla, 1946; *Procellaria parkinsoni* G.R. Gray, 1862; *Procellaria cinerea* J.F. Gmelin, 1789.

Other hosts: None.

New Zealand localities: ND, AK, CL, WO, WN, WD, SN, AN, AU, CA, Macquarie Island.

Geographic distribution: Pacific and Atlantic Oceans.

New Zealand references: Gressitt (1970: 328); Wise (1977); Pilgrim & Palma (1982); Murray *et al*. (1990); Paterson *et al.* (1999: 222); Marris (2000); Palma & Horning (2002); Palma (2010).

Other significant references: Séguy (1953: 587, fig. 44); Timmermann (1959; 1965); Clay & Moreby (1967); Palma (1996b: 229); Price *et al*. (2003: 244); Page *et al.* (2004: 637, 650).

Remarks: The original syntypes of *Trabeculus hexakon* were one male and four females (Waterston 1914: 291), of which I have examined the male (slide 200) and one female (slide 202). Although the male is labelled as "TYPE", it can not be the holotype because Waterston (1914) did not mention any type, and I am not aware of a lectotype having been designated.

A record of "*Giebelia hexakon*" from *Pachyptila desolata* in Harrison (1937: 37) was fully discussed and listed as "*Trabeculus* sp." by Palma & Horning (2002: 14, 22, note 24).

Trabeculus hexakon* (Waterston, 1914) *sensu lato

Giebelia hexakon Waterston, 1914; Guimarães 1943: 430, fig. 4.
Giebelia hexakon Waterston, 1914; Kéler 1952: 205, figs 1–3.
Trabeculus hexakon (Waterston, 1914); Timmermann 1959b: 488. In part
Trabeculus hexacon [sic] (Waterston, 1914) *sensu lato*; Clay 1964a: 232.
Trabeculus hexacon [sic] (Waterston, 1914); Gressitt 1964: 538.
"*Saemundssonia* sp." Watt, 1971: 238, 242 (not *Saemundssonia* Timmermann, 1936).
Trabeculus hexacon [sic] (Waterston, 1914); Watt, 1971: 238, 242.
Trabeculus hexacon [sic] (Waterston, 1914); Wise 1977: 65. In part.
Trabeculus hexakon (Waterston, 1914) *s. l.*; Horning *et al.* 1980: 7, 10.
Trabeculus hexakon (Waterston, 1914) *s. l.*; Pilgrim & Palma 1982: 8–9, 11–12.
Trabeculus hexakon (Waterston, 1914); Murray *et al*. 1990: 1370–1371.
Trabeculus hexakon (Waterston, 1914) *sensu lato*; Palma & Horning 2002: 13, 15. In part.
Trabeculus hexakon (Waterston, 1914); Price *et al*. 2003: 244. In part.
Trabeculus hexakon (Waterston, 1914); Palma 2010: 409. In part.

New Zealand hosts: *Pterodroma externa* (Salvin, 1875); *Pterodroma nigripennis* (Rothschild, 1893); *Pterodroma axillaris* (Salvin, 1893); *Pterodroma cookii* (G.R. Gray, 1843); *Pterodroma longirostris* (Stejneger, 1888); *Pterodroma pycrofti* Falla, 1933; *Pterodroma leucoptera caledonica* Imber & Jenkins, 1981; *Puffinus pacificus pacificus* (J.F. Gmelin, 1789); *Puffinus pacificus chlororhynchus* Lesson, 1831; *Puffinus carneipes* Gould, 1844; *Puffinus griseus* (J.F. Gmelin, 1789); *Puffinus tenuirostris* (Temminck, 1835).

Other hosts: *Pterodroma incerta* (Schlegel, 1863); *Puffinus creatopus* Coues, 1864; *Puffinus gravis* (O'Reilly, 1818).

New Zealand localities: ND, AK, CL, BP, WA, WN, NC, MC, SC, KA, WD, CO, DN, SI, KE, Norfolk Island, CH, SN, AN, Macquarie Island.

Geographic distribution: Pacific and Atlantic Oceans.

New Zealand references: Clay (1964a); Gressitt (1964); Nelson (1969: 199); Clay & Moreby (1970: 218); Gressitt (1970: 329); Watt (1971); Wise (1977); Horning *et al.* (1980); Pilgrim & Palma (1982); Murray *et al*. (1990); Palma (1996b: 229); Palma & Horning (2002); Page *et al.* (2004: 638, 650); Palma (2010).

Other significant references: Guimarães (1943); Kéler (1952); Séguy (1953: 587); Ward & Downey (1973: 395); Bourgeois & Threlfall (1979: 1356); Green & Palma (1991: 20, 27); Furness & Palma (1992: 35, 39); Forrester *et al.* (1995: 6); Foster *et al*. (1996: 85); Price *et al*. (2003); Palma & Jensen (2005: 59–60); Hänel & Palma (2007: 113, 128, 130); Martín-Mateo (2009: 139, fig. 31).

Remarks: The populations of *Trabeculus* from species of *Pterodroma* and *Puffinus* listed above are qualified as *sensu lato* because they have subtle but clear and consistent differences from the population of *Trabeculus hexakon* from the type host, and from the other species of *Procellaria*. The entire genus *Trabeculus* is in need of a systematic revision to evaluate those differences and reflect them into a proper nomenclatorial structure.

A record of "4 nymphs" of "*Saemundssonia* sp." from *Pterodroma nigripennis* in Watt (1971: 238, 242) is a misidentification of *Trabeculus hexakon sensu lato* (see Pilgrim & Palma 1982: 30, note 13).

***Trabeculus mirabilis* (Kellogg, 1896)**

Giebelia mirabilis Kellogg, 1896a: 138, pl. 11: figs 7–8.
Giebelia mirabilis Kellogg, 1896; Kellogg 1908: 34, fig. 5.
Giebelia mirabilis Kellogg, 1896; Harrison 1916: 144.
Trabeculus mirabilis (Kellogg, 1896); Hopkins & Clay 1952: 349.
Trabeculus mirabilis (Kellogg, 1896); Timmermann 1959b: 496, fig. 8.
Trabeculus mirabilis (Kellogg, 1896); Timmermann 1965: 132, fig. 72.
Trabeculus mirabilis Kellogg, 1896 *s. l.*; Pilgrim & Palma 1982: 12.
Trabeculus mirabilis (Kellogg, 1896); Murray *et al.* 1990: 1371.
Trabeculus mirabilis (Kellogg, 1896); Marris 2000: 188.
Trabeculus mirabilis (Kellogg, 1896); Price *et al*. 2003: 245.
Trabeculus mirabilis (Kellogg, 1896); Palma 2010: 409.

Lectotype ♂ in EMEC (Palma & Peck 2013: 64).

Type host: *Puffinus opisthomelas* Coues, 1864.

New Zealand hosts: *Puffinus newelli* Henshaw, 1900; *Puffinus assimilis kermadecensis* Murphy, 1927; *Puffinus assimilis haurakiensis* Fleming & Serventy, 1943; *Puffinus elegans* Giglioli & Salvadori, 1869.

Other hosts: *Puffinus lherminieri bannermani* Mathews & Iredale, 1915; *Puffinus lherminieri lherminieri* Lesson, 1839; *Puffinus lherminieri subalaris* Ridgway, 1897; *Puffinus assimilis baroli* (Bonaparte, 1857); *Puffinus assimilis boydi* Mathews, 1912.

New Zealand localities: ND, AK, CL, BP, WI, WA, WN, WD, KE, CH, AN.

Geographic distribution: Atlantic and Pacific Oceans.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (1999: 376, 383, note 2); Marris (2000); Palma (2010).

Other significant references: Timmermann (1959b; 1965); Palma (1996b: 229); Furness & Palma (1992: 35, 39); Forrester *et al.* (1995: 6); Price *et al*. (2003); Page *et al.* (2004: 638, 650); Hänel & Palma (2007: 113, 128, 129); Palma & Peck (2013: 64).

Remarks: Pilgrim & Palma (1982: 12) regarded the populations of *Trabeculus mirabilis* from three subspecies of *Puffinus assimilis* as somewhat different from that of the type host, and qualified them as *sensu lato*; however, my examination of more samples from those and other hosts, including the type host, shows that making such difference is not warranted.

Trabeculus schillingi Rudow, 1866

Trabeculus Schillingi [sic] Rudow, 1866b: 467.
Oncophorus Schillingii [sic] Rudow, 1870: 476.
Docophorus Schillingi [sic] (Rudow, 1866); Giebel 1874: 121.
Oncophorus Schillingi [sic] Rudow, 1870; Piaget 1880: 221.
Mackayia heteracanthus Waterston, 1912b: 258.
Mackayia heteracanthus Waterston, 1912; Waterston 1914: 292, pl. 25: fig. 8, pl. 26: figs 13, 16, 18.
Trabeculus schillingi Rudow, 1866; Harrison 1916: 144.
Cecalymenus oestrelatae Enderlein, 1917: 242, figs 2–4.
Trabeculus heteracanthus (Waterston, 1912); Hopkins & Clay 1952: 349.
Trabeculus schillingi Rudow, 1866; Hopkins & Clay 1952: 349.
Trabeculus schillingi Rudow, 1866; Timmermann 1959b: 492, fig. 7c. In part.
Trabeculus schillingi Rudow, 1866; Timmermann 1965: 130, fig. 71c. In part.
Trabeculus schillingi Rudow, 1866; Clay & Moreby 1970: 218. In part.
Trabeculus schillingi Rudow, 1866; Wise 1977: 66. In part.
Trabeculus schillingi Rudow, 1866; Pilgrim & Palma 1982: 8.
Trabeculus schillingi Rudow, 1866; Murray *et al.* 1990: 1369. In part.
Trabeculus schillingi Rudow, 1866; Marris 2000: 188. In part.
Trabeculus schillingi Rudow, 1866; Price *et al.* 2003: 245. In part.
Trabeculus schillingi Rudow, 1866; Palma 2010: 409. In part.

Syntypes ♂♀, presumed lost. See Palma (1996b: 229).

Type host: *Pterodroma mollis* (Gould, 1844).

New Zealand host: *Pterodroma mollis* (Gould, 1844).

Other hosts: *Pterodroma madeira* Mathews, 1934; *Pterodroma deserta* Mathews, 1934; *Pterodroma hasitata caribbaea* Carte, 1866.

New Zealand localities: WN, AN.

Geographic distribution: Pacific, Atlantic and Indian Oceans.

New Zealand references: Wise (1977); Pilgrim & Palma (1982); Murray *et al.* (1990); Marris (2000); Palma (2010).

Other significant references: Waterston (1914: 292, pl. 25: fig. 8, pl. 26: figs 13, 16, 18); Harrison (1916); Thompson (1935a: 558); Eichler (1941a: 354, fig. 16); Kéler (1957c: fig. 29); Timmermann (1959; 1965); Clay & Moreby (1967); Clay & Moreby (1970); Zonfrillo (1993: 327); Palma (1996b: 229); Furness & Palma (1992: 35, 41); Price *et al*. (2003); Hänel & Palma (2007: 113, 128, 130).

Remarks: See under *Trabeculus schillingi* Rudow, 1866 *sensu lato* below.

Trabeculus schillingi* Rudow, 1866 *sensu lato

Trabeculus schillingi Rudow, 1866b; Harrison 1937: 37.
Trabeculus schillingi Rudow, 1866; Timmermann 1959: 492, figs 2, 6, 7a,b. In part.
Trabeculus schillingi Rudow, 1866; Timmermann 1965: 130, figs 4, 67a, 70, 71a,b. In part.
Trabeculus heteracanthus (Waterston, 1912); Clay & Moreby 1967: 166, 168.
Trabeculus schillingi Rudow, 1866 *sens. lat.*; Clay & Moreby 1967: 166, 168, 191, figs 150–151.
Trabeculus schillingi Rudow, 1866; Clay & Moreby 1970: 218. In part.
Trabeculus schillingi Rudow, 1866; Wise 1977: 66. In part.
Trabeculus schillingi Rudow, 1866; Palma & Pilgrim 1977: 290.
Trabeculus schillingi Rudow, 1866b *s. l.*; Horning *et al.* 1980: 7, 9.
Trabeculus schillingi Rudow, 1866 *s. l.*; Pilgrim & Palma 1982: 8.
Trabeculus schillingi Rudow, 1866; Murray *et al.* 1990: 1369. In part.
Trabeculus schillingi Rudow, 1866; Palma 1999: 378.
Trabeculus schillingi Rudow, 1866; Marris 2000: 188. In part.
Trabeculus schillingi Rudow, 1866; Palma & Horning 2002: 13, 16.
Trabeculus schillingi Rudow, 1866; Price *et al.* 2003: 245. In part.
Trabeculus schillingi Rudow, 1866; Palma 2010: 409. In part.

New Zealand hosts: *Pterodroma macroptera gouldi* (Hutton, 1869); *Pterodroma lessonii* (Garnot, 1826); *Pterodroma solandri* (Gould, 1844); *Pterodroma inexpectata* (J.R. Forster, 1844).

Other hosts: *Pterodroma incerta* (Schlegel, 1863); *Pterodroma ultima* Murphy, 1949.

New Zealand localities: ND, AK, BP, TK, WI, WN, NC, MC, SC, WD, SI, Norfolk Island, SN, AU, AN, Macquarie Island.

Geographic distribution: Pacific and Atlantic Oceans.

New Zealand references: Harrison (1937); Clay & Moreby (1970); Gressitt (1970: 329); Wise (1977); Palma & Pilgrim (1977); Horning *et al.* (1980); Pilgrim & Palma (1982); Murray *et al.* (1990); Palma (1996b: 229); Palma (1999); Marris (2000); Palma & Horning (2002); Page *et al.* (2004: 638, 650); Palma (2010).

Other significant references: Timmermann (1959; 1965); Clay & Moreby (1967); Green & Palma (1991: 20, 26); Furness & Palma (1992: 35, 40); Price *et al.* (2003); Hänel & Palma (2007: 113, 128, 130).

Remarks: The populations of *Trabeculus* from the species of *Pterodroma* listed above are qualified as *sensu lato* because they have subtle but clear and consistent differences from the population of *Trabeculus schillingi* from the type host (e.g. Timmermann 1965: 130, fig. 71). The entire genus *Trabeculus* is in need of a systematic revision to evaluate those differences and reflect them into a proper nomenclatorial structure.

Pterodroma ultima is a new host record for *Trabeculus schillingi sensu lato* (voucher specimens in MONZ).

***Trabeculus* species 1**

Trabeculus sp.; Pilgrim & Palma 1982: 8.
Trabeculus sp.; Murray *et al.* 1990: 1370.

New Zealand host: *Pterodroma cervicalis* (Salvin, 1891).

New Zealand localities: BP, KE.

Geographic distribution: Pacific Ocean.

New Zealand references: Pilgrim & Palma (1982); Murray *et al.* (1990).

Other significant reference: Timmermann (1959).

Remarks: The population of *Trabeculus* from *Pterodroma cervicalis* represents an undescribed, unnamed species (voucher specimens in MONZ).

***Trabeculus* species 2**

Trabeculus undescribed species; Taylor & Tennyson 1994: 288.
Trabeculus sp.; Palma 1999: 375.

New Zealand host: *Puffinus nativitatis* Streets, 1877.

New Zealand locality: KE.

Geographic distribution: Pacific Ocean.

New Zealand references: Taylor & Tennyson (1994); Palma (1999).

Other significant reference: Timmermann (1959).

Remarks: The population of *Trabeculus* from *Puffinus nativitatis* represents an undescribed, unnamed species (voucher specimens in MONZ). This petrel is a rare vagrant to New Zealand (Checklist Committee 2010: 119), with a single record of *Trabeculus* from this country. Records of "*Trabeculus hexakon*" on *Puffinus nativitatis* from other Pacific Ocean localities in Amerson & Emerson (1971: 8, 27) and in Ward & Downey (1973: 395) are misidentifications.

Family TRICHODECTIDAE Kellogg, 1896

Trichodectidae Kellogg, 1896a. *Proc. Calif. Acad. Sci. 6*: 63. Type genus: *Trichodectes* Nitzsch, 1818.

Genus *Bovicola* Ewing, 1929

Subgenus *Bovicola* Ewing, 1929

Bovicola Ewing, 1929. *Manual External Parasites*: 121, 123, 193. Type species: *Trichodectes caprae* Gurlt, 1843 = *Bovicola* (*Bovicola*) *caprae* (Gurlt, 1843) (by original designation).

Rhabdopedilon Kéler, 1938a. *Nova Acat Leop.-Carol.* (*N.F.*) *5*(32): 453. Type species: *Trichodectes longicornis* Nitzsch, 1818 = *Bovicola* (*Bovicola*) *longicornis* (Nitzsch, 1818) (by original designation).

Bovicola (*Bovicola*) *bovis* (Linnaeus, 1758)

Pediculus bovis Linnaeus, 1758: 611.

Trichodectes scalaris Nitzsch, 1818: 296. Unnecessary *nomen novum* for *Pediculus bovis* Linnaeus, 1758.

Trichodectes bovis Linnaeus, 1758 [sic]; Harrison 1916: 69.

Trichodectes scalaris Nitzsch; Thomson 1922: 269.

Trichodectes bovis L. [sic]; Tillyard 1926: 134.

Bovicola bovis (Linnaeus, 1758); Kéler 1938a: 450, fig. 34.

Damalinia (*Bovicola*) *bovis* (Linnaeus, 1758); Hopkins 1949b: 527.

Damalinia bovis (Linnaeus, 1758); Hopkins & Clay 1952: 103.

Damalinia bovis (L.); Helson 1956: 13, 16.

Damalinia bovis (Linnaeus, 1758); Wise 1977: 57.

Bovicola (*Bovicola*) *bovis* (Linnaeus, 1758); Lyal 1985a: 251, figs 3, 48, 51.

Bovicola (*Damalinia*) *bovis* [sic]; Watson *et al*. 1996: 401.

Bovicola (*Bovicola*) *bovis* (Linnaeus, 1758); Tenquist & Charleston 2001: 486.

Bovicola (*Bovicola*) *bovis* (Linnaeus, 1758); Palma 2010: 409.

Neotype ♀ in NHML (Clay & Hopkins 1950: 227).

Type host: *Bos taurus* Linnaeus, 1758.

New Zealand host: *Bos taurus* Linnaeus, 1758.

Other hosts: None.

New Zealand localities: HB, WN.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Thomson (1922); Tillyard (1926); Helson (1956); Whitten (1970: 146); Helson (1970: 81); Whitten (1971: 161); Buchanan & Coles (1971: 197); Heath (1973: 330); Kettle (1974a); Kettle & Lukies (1974); Heath (1976: 57); Wise (1977); Tenquist (1977: 286); Chalmers & Charleston (1980a,b,c); Tenquist & Charleston (1981: 262); Watson *et al*. (1996); Tenquist & Charleston (2001); Palma (2010).

Other significant references: Werneck (1936: 550, figs 183–185); Kéler (1938); Séguy (1944: 388, figs 574–578); Webb (1946: 55); Hopkins (1949b); Werneck (1950: 63); Clay & Hopkins (1950: 227); Hopkins (1960: 82); Emerson & Price (1975: 68, figs 197–198); Rudolph (1983: 16); Lyal (1985a); Price (1987: 220, figs 22.26–22.28); Butler & O'Connor (1994: 451); Barker (1996: 231); Price *et al.* (2003: 253); Palma & Jensen (2005: 59, 69); Martín-Mateo (2009: 258, figs 52–53); Bartlow *et al*. (2016: 222).

Remarks: *Bovicola* (*Bovicola*) *bovis*, also known as "cattle biting louse", was introduced to New Zealand with its host by human agency (King 2005: 347).

***Bovicola* (*Bovicola*) *caprae* (Gurlt, 1843)**

Trichodectes caprae Gurlt, 1843: 3, pl. 1: fig. 2.
Trichodectes climax Nitzsch [*in* Giebel], 1861b: 81, pl. 1: figs 1–2.
Trichodectes climax Nitzsch, *in* Giebel, 1874 [sic]; Johnston & Harrison 1912: 373.
Trichodectes caprae Gurlt, 1843; Harrison 1916: 69.
Trichodectes climax Nitzsch; Thomson 1922: 269.
Trichodectes climax Nitzsch; Tillyard 1926: 134.
Bovicola caprae (Gurlt, 1843); Hopkins 1942a: 452.
Damalinia (*Bovicola*) *caprae* (Gurlt, 1843); Hopkins 1949b: 533.
Damalinia caprae (Gurlt, 1843); Hopkins & Clay 1952: 103.
Bovicola caprae (Gurlt); Neuffer 1954: 452, figs 1, 6–7, 11, 16, 29, 37, 40a.
Damalinia caprae (Gurlt); Helson 1956: 13, 16.
Damalinia caprae (Gurlt, 1843); Watt 1971: 233, 244, fig. 4.
Damalinia caprae (Gurlt, 1843); Wise 1977: 57.
Bovicola (*Bovicola*) *caprae* (Gurlt, 1843); Lyal 1985a: 251, figs 3, 45–46, 52.
Bovicola (*Bovicola*) *caprae* (Gurlt, 1843); Tenquist & Charleston 2001: 486.
Bovicola caprae; King 2005: 387.
Bovicola (*B.*) *caprae* (Gurlt, 1843); Palma 2010: 409.

Syntypes ♂♀, probably lost (Janet Weigner pers. comm. July 2012).

Type host: *Capra hircus* Linnaeus, 1758.

New Zealand host: *Capra hircus* Linnaeus, 1758.

Other hosts: None.

New Zealand localities: TK, HB, WN, SD, MB, NC, MC, SC, WD, KE.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Johnston & Harrison (1912); Thomson (1922); Tillyard (1926); Helson (1956); Watt (1971); Miller (1971: 131); Whitten (1971: 161); Andrews (1973: 326); Heath (1973: 330); Wise (1977); Tenquist & Charleston (1981: 262); King (1990: 420); Tenquist & Charleston (2001); King (2005); Palma (2010).

Other significant references: Werneck (1936: 540, figs 175–178); Hopkins (1942a); Séguy (1944: 391, figs 584–586, as *T. climax*); Hopkins (1949b); Werneck (1950: 60); Neuffer (1954); Clay & Hopkins (1955: 70); Emerson & Price (1975: 59, figs 193–196); Rudolph (1983: 16); Lyal (1985a); Barker (1996: 232); Price *et al.* (2003: 253); Martín-Mateo (2009: 258); Palma & Peck (2013: 65).

Remarks: *Bovicola* (*Bovicola*) *caprae*, also known as "goat biting louse", was introduced to New Zealand with its host by human agency (King 2005: 377).

***Bovicola* (*Bovicola*) *limbatus* (Gervais, 1844)**

Trichodectes limbatus Gervais, 1844: 313, pl. 48: fig. 4.
Trichodectes limbatus Gervais, 1847 [sic]; Harrison 1916: 70.
Bovicola limbatus (Gervais, 1844); Hopkins 1942a: 452.
Damalinia (*Bovicola*) *limbata* (Gervais, 1844); Hopkins 1949b: 533.
Damalinia limbata (Gervais, 1844); Hopkins & Clay 1952: 105.
Damalinia limbata; Andrews 1973: 328.
Damalinia limbata (Gervais, 1844); Wise 1977: 58.
Bovicola (*Bovicola*) *limbatus* (Gervais, 1844); Lyal 1985a: 251.
Bovicola (*Bovicola*) *limbatus* (Gervais, 1844); Tenquist & Charleston 2001: 487.
Bovicola limbatus; King 2005: 387.
Bovicola (*B.*) *limbatus* (Gervais, 1844); Palma 2010: 409.

Neotype ♂ in SAIM (Hopkins 1942a: 448).

Type host: *Capra hircus* Linnaeus, 1758.

New Zealand host: *Capra hircus* Linnaeus, 1758.

Other host: *Capra hircus angorensis* (Shaw, 1800).

New Zealand localities: HB, WN, BR, NC, MC, SC, WD, CO, DN, KE, AU.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Andrews (1973); Wise (1977); Tenquist & Charleston (1981: 263); King (1990: 420); Tenquist & Charleston (2001); King (2005: 387); Palma (2010).

Other significant references: Werneck (1936: 545, figs 179–182); Hopkins (1942a); Séguy (1944: 394, figs 593–594); Hopkins (1949b); Werneck (1950: 62); Lyal (1985a); Butler & O'Connor (1994: 451); Barker (1996: 232); Price *et al.* (2003: 253); Martín-Mateo (2009: 257).

Remarks: *Bovicola* (*Bovicola*) *limbatus* was introduced to New Zealand with goats by human agency (King 2005: 377).

Bovicola (*Bovicola*) *longicornis* (Nitzsch, 1818)

Figs 176–177

Trichodectes longicornis Nitzsch, 1818: 296.
Bovicola americana Jellison, 1935: 410, fig.
Rhabdopedilon longicornis (Nitzsch, 1818); Kéler 1938a: 456, figs 39–40.
Trichodectes longicornis Nitzsch, 1818; Séguy 1944: 395, figs 595–597.
Damalinia (*Rhabdopedilon*) *longicornis* (Nitzsch, 1818); Hopkins 1949b: 524.
Damalinia (*Rhabdopedilon*) *americanus* Jellison, 1935; Hopkins 1949b: 524.
Damalinia americana (Jellison, 1935); Hopkins & Clay 1952: 102.
Damalinia longicornis (Nitzsch, 1818); Hopkins & Clay 1952: 105.
Damalinia (*Bovicola*) *longicornis* (Nitzsch, 1818); Hopkins 1960: 86.
Damalinia (*Bovicola*) *concavifrons* Hopkins 1960: 87, figs 7–8.
Damalinia longicornis (Nitzsch, 1818); Andrews 1964: 104, figs 2, 3a.
Damalinia (*Bovicola*) *longicornis* (Nitzsch, 1818); Andrews 1972: 153, fig. 1.
Damalinia longicornis (Nitzsch, 1818); Wise 1977: 58.
Bovicola (*Bovicola*) *longicornis* (Nitzsch, 1818); Lyal 1985a: 251.
Damalinia longicornis; King 1990: 389, 451, 465.
Bovicola (*Bovicola*) *longicornis* (Nitzsch, 1818); Tenquist & Charleston 2001: 487.
Bovicola longicornis; King 2005: 358.
Damalinia longicornis; King 2005: 415, 426.
Bovicola (*B.*) *longicornis* (Nitzsch, 1818); Palma 2010: 409.

Neotype ♀ in the MLUH (Clay & Hopkins 1960: 45).

Type host: *Cervus elaphus* Linnaeus, 1758.

New Zealand hosts: *Cervus elaphus scoticus* Lönnberg, 1906; *Cervus elaphus nelsoni* (Bailey, 1935); *Rupicapra rupicapra rupicapra* Couturier, 1938.

Other hosts: None.

New Zealand localities: BP, WN, NC, MC, SC, BR, CO, DN, SL, FD, SI.

Geographic distribution: Eurasia; North America; South America; Australasia.

New Zealand references: Andrews (1964; 1972); Andrews (1973: 326, 328); Wise (1977); Charleston (1980: 150); Tenquist & Charleston (1981: 263); King (1990); Tenquist & Charleston (2001); King (2005); Palma (2010).

Other significant references: Kéler (1938); Séguy (1944); Hopkins (1949b); Clay & Hopkins (1960: 45); Hopkins (1960); Lyal (1985a); Butler & O'Connor (1994: 452); Price *et al.* (2003: 253).

Remarks: *Bovicola* (*Bovicola*) *longicornis* was introduced to New Zealand with red deer and wapiti by human agency (King 2005: 404, 422). New Zealand records of this louse species from *Rupicapra rupicapra* (e.g. Tenquist & Charleston 1981: 263; King 1990: 389) are likely due to a natural host-switch from *Cervus elaphus*, because *R. rupicapra* is parasitised by a different species —*Bovicola* (*Bovicola*) *alpinus* Kéler, 1942— in its native range (Price *et al.* 2003: 388).

The male of *Bovicola* (*Bovicola*) *longicornis* is extremely rare (Lyal 1985a: 251). However, two males (held in MONZ) have so far been collected from New Zealand deer, with the first recorded and described by Andrews (1972: 153, fig. 1).

Lyal (1985a: 251) resurrected *Bovicola* (*B.*) *concavifrons* from synonymy under *B.* (*B.*) *longicornis*, but I follow Andrews (1972: 153; 1973: 328) who, after a morphological assessment of the status of *B.* (*B.*) *concavifrons* [as *Damalinia concavifrons*] in New Zealand, did not recognise it as a species different from *B.* (*B.*) *longicornis*.

***Bovicola* (*Bovicola*) *ovis* (Schrank, 1781)**

Pediculus ovis Schrank, 1781: 502, pl. 1: figs 8–9.
Trichodectes sphaerocephalus Nitzsch, 1818: 296. Unnecessary *nomen novum* for *Pediculus ovis* Schrank, 1781.
Trichodectes ovis Schrank, 1781 [sic]; Harrison 1916: 71.
Trichodectes sphaerocephalus Nitzsch; Thomson 1922: 269.
Trichodectes ovis L. [sic]; Tillyard 1926: 134.
Bovicola ovis (Schrank, 1781); Kéler 1938a: 448, fig. 33.
Damalinia (*Bovicola*) *ovis* (Schrank, 1781); Hopkins 1949b: 533.
Damalinia ovis (Schrank, 1781); Hopkins & Clay 1952: 106.
Damalinia ovis (L.) [sic]; Helson 1956: 14, 16.
Damalinia ovis (Schrank, 1781); Clay 1964a: 233.
Damalinia ovis; Miller 1971: 131, fig. 345.
Damalinia ovis (Schrank, 1781); Wise 1977: 58.
Bovicola (*Bovicola*) *ovis* (Schrank, 1781); Lyal 1985a: 251.
Bovicola (*Bovicola*) *ovis* (Schrank, 1781); Tenquist & Charleston 2001: 487.
Bovicola ovis; King 2005: 396.
Bovicola (*B.*) *ovis* (Schrank, 1781); Palma 2010: 409.

Neotype ♂ in NHML (Clay & Hopkins 1954: 255).

Type host: *Ovis aries* Linnaeus, 1758.

New Zealand host: *Ovis aries* Linnaeus, 1758.

Other hosts: None.

New Zealand localities: WN, NC, MC, SC, CH, CA, Macquarie Island.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Thomson (1922); Tillyard (1926); Helson (1956); Thomas (1958: 217); Clay (1964a); Gressitt (1964: 539); Watson (1967: 71); Heath & Millar (1970: 211); Miller (1971: 131); Whitten (1971: 161); Andrews (1972: 155, fig. 2); Kettle & Pearce (1974); Wise (1977); Tenquist (1977: 285); Heath (1978: 364); Heath (1979: 141); Tenquist & Charleston (1981: 263); Kettle & Lukies (1982a,b); Heath (1983: 367); Kettle *et al*. (1983); Kettle & Lukies (1984); Heath & Bishop (1988); Heath *et al*. (1992a,b); Heath (1994: 29); Bany *et al*. (1995); Heath *et al*. (1995a,b; 1996a,b); Pfeffer *et al*. (1996); Wilson *et al*. (1997); Tenquist & Charleston (2001); Heath (2001: 9); Palma & Horning (2002: 14, 18); Heath (2002: 48); Heath *et al*. (2004); King (2005: 396); Heath (2005: 138); Palma (2010); Heath & Levot (2015: 202).

Other significant references: Werneck (1936: 535, figs 169–174); Kéler (1938); Séguy (1944: 399, figs 604–608); Webb (1946: 58); Hopkins (1949b); Werneck (1950: 73, figs 54–56); Clay & Hopkins (1954: 254); Murray (1955b; 1957a: 13; 1957b,c; 1960b; 1962; 1963c); Hopkins (1960: 84, fig. 4, pl. 1: fig. 5); Murray & Gordon (1969: 179); Emerson & Price (1975: 68, figs 199–202); Lyal (1985a); Barker (1996: 232); Price *et al.* (2003: 253); Palma & Jensen (2005: 59, 69); Martín-Mateo (2009: 255).

Remarks: *Bovicola* (*Bovicola*) *ovis*, also known as "sheep body louse", was introduced to New Zealand with its host by human agency (King 2005: 393).

Subgenus *Lepikentron* Kéler, 1938

Lepikentron Kéler, 1938a. *Nova Acta Leop.-Carol.* (*N.F.*) *5*: 452. Type species: *Trichodectes breviceps* Rudow, 1866a = *Bovicola* (*Lepikentron*) *breviceps* (Rudow, 1866) (by original designation).

***Bovicola* (*Lepikentron*) *breviceps* (Rudow, 1866)**

Fig. 178

Trichodectes breviceps Rudow, 1866a: 110, pl. 5: fig. 2.
Trichodectes breviceps Rudow, 1866; Harrison 1916: 69.
Trichodectes breviceps Rudow, 1866; Werneck 1936: 531, figs 161–168.
Lepikentron breviceps (Rudow, 1866); Kéler 1938a: 453, figs 37–38.
Bovicola breviceps (Rudow, 1866); Werneck 1950: 73.
Damalinia breviceps (Rudow, 1866); Hopkins & Clay 1952: 103.
Damalinia (*Lepikentron*) *breviceps* (Rudow, 1866); Weidner 1966: 261.

Bovicola (*Lepikentron*) *breviceps* (Rudow, 1866); Lyal 1985a: 253, figs 43, 55.
Bovicola (*Lepikentron*) *breviceps* (Rudow, 1866); Price *et al.* 2003: 253.
Bovicola (*Lepikentron*) *breviceps* (Rudow, 1866); Palma *et al.* 2006: 253.

Lectotype ♀ in ZMHG (Clay & Hopkins 1955: 69; Weidner 1966: 261).

Type host: *Lama glama* (Linnaeus, 1758).

New Zealand host: *Lama pacos* (Linnaeus, 1758).

Other hosts: *Lama guanicoe* (Müller, 1776).

New Zealand localities: WI, SC.

Geographic distribution: South America; Australasia.

New Zealand references: McKenna (2001: 15; 2003: 12); Palma *et al.* (2006).

Other significant references: Werneck (1936); Kéler (1938); Hopkins (1949b: 522); Werneck (1950); Clay & Hopkins (1955); Weidner (1966); Lyal (1985a); Price *et al.* (2003); Mey & González-Acuña (2007: 71, figs 1–12).

Remarks: *Bovicola* (*Lepikentron*) *breviceps* was introduced to New Zealand with alpacas by human agency (Corrin & Burnett 1989). The male of *B.* (*L.*) *breviceps* is extremely rare (Lyal 1985a: 253, fig. 55); records from New Zealand include females and nymphs only (Palma *et al.* 2006: 253).

Subgenus *Spinibovicola* Lyal, 1985

Spinibovicola Lyal, 1985. *Bull. Brit. Mus.* (*Nat. Hist.*) *51*(3): 253. Type species: *Trichodectes hemitragi* Cummings, 1916a = *Bovicola* (*Spinibovicola*) *hemitragi* (Cummings, 1916a) (by original designation).

Bovicola (*Spinibovicola*) *hemitragi* (Cummings, 1916)

Figs 179–180

Trichodectes hemitragi Cummings, 1916a: 273, figs 11–12.
Bovicola hemitragi (Cummings, 1916); Werneck 1950: 71, figs 52–53.
Damalinia hemitragi (Cummings, 1916); Hopkins & Clay 1952: 104.
Damalinia hemitragi (Cummings, 1916); Christie & Andrews 1964: 76.
Damalinia hemitragi (Cummings, 1916); Andrews 1970: 846.
Damalinia (*Bovicola*) *hemitragi* (Cummings, 1916); Andrews 1972: 156, fig. 3.
Damalinia hemitragi (Cummings, 1916); Wise 1977: 58.
Bovicola (*Spinibovicola*) *hemitragi* (Cummings, 1916); Lyal 1985a: 253, figs 12, 41, 50, 56.
Damalinia hemitragi; King 1990: 405
Bovicola (*Spinibovicola*) *hemitragi* (Cummings, 1916); Tenquist & Charleston 2001: 487.
Bovicola hemitragi; King 2005: 371.
Bovicola (*Spinibovicola*) *hemitragi* (Cummings, 1916); Palma 2010: 409.

Syntypes ♀♀ in NHML.

Type host: *Hemitragus jemlahicus* (Smith, 1826).

New Zealand host: *Hemitragus jemlahicus* (Smith, 1826).

Other hosts: None.

New Zealand localities: MC, WD.

Geographic distribution: Asia; New Zealand; South Africa; Argentina.

New Zealand references: Christie & Andrews (1964); Andrews (1970; 1972); Andrews (1973: 326, 328); Wise (1977); Tenquist & Charleston (1981: 262); King (1990); Tenquist & Charleston (2001); King (2005); Palma (2010).

Other significant references: Hopkins (1949b: 533); Werneck (1950); Lyal (1985a); Price *et al.* (2003: 253).

Remarks: *Bovicola* (*Spinibovicola*) *hemitragi* was introduced to New Zealand with Himalayan tahrs by human agency (King 2005: 362).

Genus *Felicola* Ewing, 1929

Subgenus *Felicola* Ewing, 1929

Felicola Ewing, 1929. *Manual External Parasites*: 121, 122, 192. Type species: *Trichodectes subrostratus* "Nitzsch" = *Felicola* (*Felicola*) *subrostratus* (Burmeister, 1838a) (by original designation).

***Felicola* (*Felicola*) *subrostratus* (Burmeister, 1838)**

Figs 181–182

Trichodectes subrostratus Burmeister, 1838a: 438.
Trichodectes subrostratus Nitzsch in Burmeister, 1838; Harrison 1916: 73.
Trichodectes subrostratus Nitzsch [sic]; Tillyard 1926: 134.
Felicola subrostrata [sic] Nitzsch, 1818 [sic]; Kéler 1938a: 443, figs 30–31.
Trichodectes subrostratus Nitzsch, 1818 [sic]; Séguy 1944: 403, figs 618–620.
Felicola (*Felicola*) *subrostratus* (Burmeister, 1838); Hopkins 1949b: 507.
Felicola subrostratus (Burmeister, 1838); Hopkins & Clay 1952: 140.
Felicola subrostrata (Nitz.) [sic]; Helson 1956: 13, 16.
Felicola subrostratus; Miller 1971: 131.
Felicola subrostrata [sic]; Whitten 1971: 161.
Felicola subrostratus (Burmeister, 1838); Wise 1977: 58.
Felicola (*Felicola*) *subrostratus* (Burmeister, 1838); Lyal 1985a: 312, figs 5, 204.
Felicola (*Felicola*) *subrostratus* (Burmeister, 1838); Tenquist & Charleston 2001: 500.
Felicola (*Felicola*) *subrostratus* (Burmeister, 1838); Palma 2010: 409.

Status, sex and repository of types unknown, presumed lost. See Clay (1949a: 1) and Palma & Pilgrim (1984: 150).

Type host: *Felis catus* Linnaeus, 1758.

New Zealand host: *Felis catus* Linnaeus, 1758.

Other hosts: *Felis silvestris* Schreber, 1777; *Ichneumia albicauda* (Cuvier, 1829); *Lynx rufus* (Schreber, 1777); *Salanoia concolor* (Geoffroy Saint-Hilaire, 1837); *Civettictis civetta* (Schreber, 1776).

New Zealand localities: HB, WN, NN, NC, MC, SC, CO, DN.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Tillyard (1926); Helson (1956); Pilgrim (1970: 76); Miller (1971: 131); Whitten (1971); Pilgrim (1974: 1034, fig. 1); Wise (1977); Tenquist & Charleston (1981: 265); King (1990: 344); Tenquist & Charleston (2001); Palma (2010).

Other significant references: Werneck (1936: 526, figs 157–160); Kéler (1938); Séguy (1944); Hopkins (1949b); Hopkins (1960: 80); Emerson & Price (1975: 52, figs 147–150); Lyal (1985a); Price (1987: 220, fig. 22.30); Barker (1996: 232); Price *et al.* (2003: 258); Martín-Mateo (2009: 247).

Remarks: *Felicola* (*Felicola*) *subrostratus* was introduced to New Zealand with cats by human agency (King 2005: 310).

Genus *Trichodectes* Nitzsch, 1818

Subgenus *Trichodectes* Nitzsch, 1818

Trichodectes Nitzsch, 1818. *Germar's Mag. Entomol. 3*: 294. Type species: *Trichodectes canis* (De Geer, 1778b) (by subsequent designation).

***Trichodectes* (*Trichodectes*) *canis* (De Geer, 1778)**

Figs 183–184

Ricinus canis De Geer, 1778b: 81, pl. 4: fig. 16.
Pediculus canis O. Fabricius, 1780: 215.
Trichodectes latus Nitzsch, 1818: 296. Unnecessary *nomen novum* for *Ricinus canis* De Geer, 1778.
Trichodectes canis De Geer, 1778 [sic]; Harrison 1916: 69.
Trichodectes latus Nitzsch; Thomson 1922: 269.
Trichodectes canis (De Geer, 1778); Hopkins & Clay 1952: 350.
Trichodectes canis (Degeer) [sic]; Helson 1956: 17.
Trichodectes (*Trichodectes*) *canis* (De Geer, 1778); Hopkins 1960: 77.
Trichodectes canis (De Geer, 1778); Wise 1977: 58.
Trichodectes (*Trichodectes*) *canis* (De Geer, 1778); Lyal 1985a: 300, figs 150, 158, 169.
Trichodectes (*Trichodectes*) *canis* (De Geer, 1778); Tenquist & Charleston 2001: 522.
Trichodectes (*Trichodectes*) *canis* (De Geer, 1778); Palma 2010: 409.

Neotype ♂ in NHML (Clay & Hopkins 1954: 244).

Type host: *Canis familiaris* Linnaeus, 1758.

New Zealand host: *Canis familiaris* Linnaeus, 1758.

Other hosts: *Canis aureus* Linnaeus, 1758; *Canis latrans* Say, 1823; *Canis lupus* Linnaeus, 1758; *Cerdocyon thous* (Linnaeus, 1766); *Pseudalopex culpaeus* (Molina, 1782); *Civettictis civetta* (Schreber, 1776); *Vulpes bengalensis* (Shaw, 1800).

New Zealand localities: WO, WN, NC, MC, SC.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Thomson (1922); Helson (1956: 17); Pilgrim (1970: 76); Whitten (1971: 161); Wise (1977); Tenquist & Charleston (1981: 273); Tenquist & Charleston (2001); Palma (2010).

Other significant references: Werneck (1936: 502, figs 130–135); Séguy (1944: 389, figs 579–583); Webb (1946: 55); Hopkins (1949b: 496); Symmons (1952: 396, figs 38–39); Clay & Hopkins (1954: 243); Kéler (1957c: figs 15, 17); Hopkins (1960); Emerson & Price (1975: 45, figs 119–122); Lyal (1985a); Price (1987: 220, fig. 22.29); Butler & O'Connor (1994: 452); Barker (1996: 233); Price *et al.* (2003: 274); Palma & Jensen (2005: 59, 69).

Remarks: *Trichodectes* (*Trichodectes*) *canis* was introduced to New Zealand with dogs by human agency (King 2005: 9, 258).

Subgenus *Stachiella* Kéler, 1938

Stachiella Kéler, 1938a. *Nova Acta Leop.-Carol.* (*N.F.*) 5: 428. Type species: *Trichodectes pusillus* "Nitzsch, 1861" = *Trichodectes mustelae* (Schrank, 1803) (by original designation).

Trichodectes (*Stachiella*) *ermineae* (Hopkins, 1941)

Figs 185–186

Stachiella ermineae Hopkins, 1941: 38.

Trichodectes (*Stachiella*) *ermineae* (Hopkins, 1941); Hopkins 1949b: 499.

Trichodectes ermineae (Hopkins, 1941); Hopkins & Clay 1952: 351.

Trichodectes (*Stachiella*) *ermineae* (Hopkins, 1941); Hopkins 1960: 78.

Trichodectes (*Stachiella*) *erminiae* [sic] (Hopkins, 1941); Lyal 1985a: 301, figs 156, 174.

Stachiella ermineae Hopkins, 1941; Price *et al.* 2003: 271.

Trichodectes (*Stachiella*) *ermineae* (Hopkins, 1941); Tenquist & Charleston 2001: 522.

Trichodectes ermineae; King 2005: 282.

Trichodectes (*Stachiella*) *ermineae* (Hopkins, 1941); Palma 2010: 409.

Holotype ♀ in NHML.

Type host: *Mustela erminea stabilis* Barrett-Hamilton, 1904.

New Zealand hosts: *Mustela erminea* Linnaeus, 1758; *Mustela furo* Linnaeus, 1758.

Other hosts: None.

New Zealand localities: WN, NN, NC, MC, SC, WD, CO, DN, FD.

Geographic distribution: Eurasia; Australasia.

New Zealand references: King (1990: 307); Tenquist & Charleston (2001); King (2005); Palma (2010).

Other significant references: Hopkins (1949b); Hopkins (1960: 78); Lyal (1985a); Butler & O'Connor (1994: 452); Price *et al.* (2003).

Remarks: *Trichodectes* (*Stachiella*) *ermineae* was introduced to New Zealand with stoats by human agency (King 2005: 264). In agreement with Lyal (1985a: 301) and contrary to Price *et al.* (2003: 271), I regard *Stachiella* as a subgenus.

New Zealand records of *Trichodectes* (*Stachiella*) *ermineae* from *Mustela furo* are likely due to a natural host-switch from *Mustela erminea*, because *M. furo* is parasitised by a different species— *Trichodectes* (*Stachiella*) *jacobi* Eichler, 1941b— in its native range (Price *et al.* 2003: 388).

Trichodectes (*Stachiella*) *mustelae* (Schrank, 1803)

Pediculus mustelae Schrank, 1803: 186.

Trichodectes mustelae Schrank, 1803 [sic]; Harrison 1916: 71.

Trichodectes (*Stachiella*) *mustelae* (Schrank, 1803); Hopkins 1949b: 499.

Trichodectes mustelae (Schrank, 1803); Hopkins & Clay 1952: 353.
Trichodectes (*Stachiella*) *mustelae* (Schrank, 1903 [sic]); Lyal 1985a: 301.
Trichodectes (*Stachiella*) *mustelae* (Schrank, 1803); Tenquist & Charleston 2001: 522.
Stachiella mustelae (Schrank, 1803); Price *et al.* 2003: 271.
Trichodectes mustelae; King 2005: 292.
Trichodectes (*S.*) *mustelae* (Schrank, 1803); Palma 2010: 409.

Neotype ♀ in the MLUH (Clay & Hopkins 1960: 11).

Type host: *Mustela nivalis nivalis* Linnaeus, 1766.

New Zealand host: *Mustela nivalis vulgaris* Erxleben, 1777.

Other host: *Mustela sibirica* Pallas, 1773.

New Zealand localities: WA, NC, MC, SC.

Geographic distribution: Eurasia; North America; New Zealand.

New Zealand references: Tenquist & Charleston (2001); King (2005); Palma (2010).

Other significant references: Kéler (1938: 429, figs 22–23); Séguy (1944: 398, figs 600–603); Hopkins (1949b); Clay & Hopkins (1960: 11); Lyal (1985a); Price *et al.* (2003); Martín-Mateo (2009: 243).

Remarks: *Trichodectes* (*Stachiella*) *mustelae* was introduced to New Zealand with weasels by human agency (King 2005: 288). In agreement with Lyal (1985a: 301) and contrary to Price *et al.* (2003: 271), I regard *Stachiella* as a subgenus of *Trichodectes*.

Genus *Tricholipeurus* Bedford, 1929

Tricholipeurus Bedford, 1929. *15th Annual Rep. Director Veterinary Services*: 514. Type species: *Tricholipeurus aepycerus* Bedford, 1929 = (by original designation).

Tricholipeurus lipeuroides (Mégnin, 1884)

Figs 187–188

Trichodectes lipeuroides Mégnin, 1884: 494, figs a,b,c.
Eutrichophilus lipeuroides Mégnin, 1884 [sic]; Harrison 1916: 74.
Damalinia (*Cervicola*) *lipeuroides* (Mégnin, 1884); Hopkins 1949b: 524.
Tricholipeurus lipeuroides (Mégnin, 1884); Werneck 1950: 175, figs 259–265.
Damalinia lipeuroides (Mégnin, 1884); Hopkins & Clay 1952: 105.
Damalinia (*Tricholipeurus*) *lipeuroides* (Mégnin, 1884); Hopkins 1960: 88.
Tricholipeurus lipeuroides (Mégnin, 1884); Emerson & Price 1975: 68, figs 211–214.
Damalinia lipeuroides (Mégnin, 1884); Wise 1977: 58.
Damalinia (*Tricholipeurus*) *lipeuroides* (Mégnin, 1884); Lyal 1985a: 265.
Damalinia (*Tricholipeurus*) *lipeuroides* (Mégnin, 1884); Tenquist & Charleston 2001: 494.
Tricholipeurus lipeuroides (Megnin, 1884); Price *et al.* 2003: 275.
Damalinia lipeuroides; King 2005: 464.
Tricholipeurus lipeuroides (Mégnin, 1884); Palma 2010: 409.

Syntypes ♂♀, repository unknown.

Type host: *Odocoileus virginianus mexicanus* (J.F. Gmelin, 1788).

New Zealand host: *Odocoileus virginianus borealis* (Miller, 1900).

Other hosts: *Odocoileus virginianus virginianus* (Zimmerman, 1780); *Odocoileus virginianus texanus* (Mearns, 1898); *Odocoileus hemionus* (Rafinesque, 1817).

New Zealand locality: SI.

Geographic distribution: Americas; Europe; New Zealand.

New Zealand references: Andrews (1973: 326, 328); Wise (1977); Tenquist & Charleston (1981: 263); King (1990: 513); Tenquist & Charleston (2001); King (2005: 464); Palma (2010).

Other significant references: Hopkins (1949b); Werneck (1950); Hopkins (1960); Emerson & Price (1975); Lyal (1985a); Price *et al.* (2003).

Remarks: *Tricholipeurus lipeuroides* was introduced to New Zealand with white-tailed deer by human agency (King 2005: 460).

***Tricholipeurus parallelus* (Osborn, 1896)**

Trichodectes parallelus Osborn, 1896: 240, fig. 148.
Trichodectes parallelus Osborn, 1896; Harrison 1916: 72.
Damalinia (*Cervicola*) *parallelus* (Osborn, 1896); Hopkins 1949b: 524.
Tricholipeurus parallelus (Osborn, 1896); Werneck 1950: 184.
Damalinia parallela (Osborn, 1896); Hopkins & Clay 1952: 106.
Damalinia (*Tricholipeurus*) *parallela* (Osborn, 1896); Hopkins 1960: 89.
Damalinia parallela (Osborn, 1896); Andrews 1973: 326, 328.
Tricholipeurus parallelus (Osborn, 1896); Emerson & Price 1975: 68, figs 215–218.
Damalinia parallela (Osborn, 1896); Wise 1977: 58.
Damalinia (*Tricholipeurus*) *parallela* (Osborn, 1896); Lyal 1985a: 265.
Damalinia (*Tricholipeurus*) *parallela* (Osborn, 1896); Tenquist & Charleston 2001: 494.
Tricholipeurus parallelus (Osborn, 1896); Price *et al.* 2003: 275.
Damalinia parallela; King 2005: 464.
Tricholipeurus parallelus (Osborn, 1896); Palma 2010: 409.

Syntypes ♀♀, but only one still extant in CUIC [http://cuic.entomology.cornell.edu/insects/view/1014871].
Type host: *Odocoileus virginianus* (Zimmermann, 1780).
New Zealand host: *Odocoileus virginianus borealis* (Miller, 1900).
Other host: *Odocoileus hemionus* (Rafinesque, 1817).
New Zealand localities: FD, SI.
Geographic distribution: Americas; Europe; New Zealand.
New Zealand references: Andrews (1973); Wise (1977); Tenquist & Charleston (1981: 263); King (1990: 513); Tenquist & Charleston (2001); King (2005); Palma (2010).
Other significant references: Hopkins (1949b); Werneck (1950); Hopkins (1960); Samuel & Trainer (1971: 507); Emerson & Price (1975); Lyal (1985a); Price *et al.* (2003).
Remarks: *Tricholipeurus parallelus* was introduced to New Zealand with white-tailed deer by human agency (King 2005: 460).

Genus *Werneckiella* Eichler, 1940

Werneckiella Eichler, 1940a. *Zool. Anz. 129*: 160. Type species: *Trichodectes equi* Denny, 1842 = *Werneckiella equi* (Denny, 1842) (by original designation).

***Werneckiella equi* (Denny, 1842)**

Trichodectes equi Denny, 1842: 61, 191, pl. 17: fig. 7.
Trichodectes pilosus Giebel, 1874: 59.
Trichodectes parumpilosus Piaget, 1880: 397.
Trichodectes equi Linnaeus, 1758 [sic]; Harrison 1916: 70.
Trichodectes pilosus Giebel, 1874; Tillyard 1926: 134.
Trichodectes equi (Linnaeus, 1758) [sic]; Werneck 1936: 554, figs 186–188.
Bovicola equi (Denny, 1842); Kéler 1938a: 450, figs 35–36.
Werneckiella equi (Denny, 1842); Eichler 1940: 160.
Damalinia (*Werneckiella*) *equi* (Denny, 1842); Hopkins 1949b: 520.
Damalinia equi (Denny, 1842); Hopkins & Clay 1952: 104.
Bovicola equi (L.) [sic]; Helson 1956: 13, 16.
Damalinia (*Bovicola*) *equi* (Denny, 1842); Hopkins 1960: 82.
Damalinia equi; Miller 1971: 131.
Bovicola equi (Linnaeus, 1758) [sic]; Emerson & Price 1975: 68, figs 203–206.
Damalinia equi (Denny, 1842); Wise 1977: 58.
Werneckiella equi (Denny, 1842); Moreby 1978: 399, figs 2–5, 7, 11, 15, 20, 25, 36.
Werneckiella equi (Denny, 1842); Tenquist & Charleston 1981: 274.
Werneckiella equi (Denny, 1842); Lyal 1985a: 255, figs 61–62.
Werneckiella equi (Denny, 1842); Tenquist & Charleston 2001: 523.
Bovicola (*Werneckiella*) *equi* (Denny, 1842); Price *et al.* 2003: 253.

Bovicola (*Werneckiella*) *equi* (Denny, 1842); Martín-Mateo 2009: 253, 329.
Werneckiella equi (Denny, 1842); Palma 2010: 409.

Lectotype ♀ in NHML (Moreby 1978: 400).

Type host: *Equus caballus* Linnaeus, 1758.

New Zealand host: *Equus caballus* Linnaeus, 1758.

Other hosts: *Equus przewalskii* (Poliakov, 1881); *Equus hemionus kulan* Groves & Mazak, 1967.

New Zealand localities: WN, NC, MC, SL.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Tillyard (1926); Helson (1956); Miller (1971); Whitten (1971: 161); Wise (1977); Tenquist & Charleston (1981); Tenquist & Charleston (2001); Palma (2010).

Other significant references: Werneck (1936); Kéler (1938); Eichler (1940); Séguy (1944: 392, figs 587–588); Hopkins (1949b); Werneck (1950: 79, figs 66–67); Murray (1957d: 183; 1963d); Hopkins (1960); Emerson & Price (1975); Moreby (1978); Lyal (1985a); Barker (1996: 233); Price *et al.* (2003); Palma & Jensen (2005: 59, 69); Martín-Mateo (2009).

Remarks: *Werneckiella equi*, also known as "horse biting louse", was introduced to New Zealand with its host by human agency (King 2005: 329). In agreement with Lyal (1985a: 255) and contrary to Price *et al.* (2003: 253), I regard *Werneckiella* as a full genus. Although a few males of *W. equi* are known (Lyal 1985a: 255), no male has been found on New Zealand horses yet.

***Werneckiella ocellata* (Piaget, 1880)**

Fig. 189

Trichodectes parumpilosus var. *ocellata* Piaget, 1880: 398.
Trichodectes ocellatus Piaget, 1880; Harrison 1916: 71.
Werneckiella ocellata (Piaget, 1880); Eichler 1940: 161.
Damalinia (*Werneckiella*) *ocellata* (Piaget, 1880); Hopkins 1949b: 520.
Bovicola ocellatus (Piaget, 1880); Werneck 1950: 84, figs 75–81.
Damalinia ocellata (Piaget, 1880); Hopkins & Clay 1952: 106.
Werneckiella equi asini Eichler, 1953: 445, fig.
Damalinia asini (Eichler, 1953); Hopkins & Clay 1955: 180.
Werneckiella ocellata (Piaget, 1880); Moreby 1978: 402, fgs 1, 12, 26.
Werneckiella ocellata (Piaget, 1880); Lyal 1985a: 255.
Werneckiella ocellata (Piaget, 1880); Tenquist & Charleston 2001: 523.
Bovicola (*Werneckiella*) *ocellatus* (Piaget, 1880); Price *et al.* 2003: 253.
Werneckiella ocellata (Piaget, 1880); Palma 2010: 409.

Lectotype ♀ in NHML (Moreby 1978: 403).

Type host: "*Equus burchelli*", in error (see Moreby 1978: 402).

New Zealand host: *Equus asinus* Linnaeus, 1758.

Other hosts: None.

New Zealand localities: WN, NC.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Tenquist & Charleston (2001); Palma (2010).

Other significant references: Eichler (1940); Hopkins (1949b); Werneck (1950); Moreby (1978); Lyal (1985a); Butler & O'Connor (1994: 452); Price *et al.* (2003).

Remarks: *Werneckiella ocellata* was introduced to New Zealand with donkeys by human agency (Barclay 2002: 26). In agreement with Lyal (1985a: 255) and contrary to Price *et al.* (2003: 253), I regard *Werneckiella* as a full genus. The male of *W. ocellata* is still unknown, therefore, this species is believed to be parthenogenetic (Lyal 1985a: 255).

Suborder ANOPLURA Leach, 1815

Anoplura Leach, 1815a: *Edinburgh Encyclopaedia 9*: 77.

Family ECHINOPHTHIRIIDAE Enderlein, 1904

Echinophthiriidae Enderlein, 1904b. *Zool. Anz. 28*: 136. Type genus: *Echinophthirius* Giebel, 1874.

Genus *Antarctophthirus* Enderlein, 1906

Antarctophthirus Enderlein, 1906. *Zool. Anz. 29*: 661. Type species: *Antarctophthirus ogmorhini* Enderlein, 1906 (by original designation).

Arctophtirius Mjöberg, 1910a. *Arkiv Zool. 6*(13): 177. Type species: *Arctophtirius trichechi* (Bohemann, 1865) = *Antarctophthirus trichechi* (Bohemann, 1865) (by monotypy).

Antarctophthirus carlinii Leonardi *et al*., 2014

Antarctophthirus sp.; Harrison 1937: 13.

Antarctophthirus sp. ?; Clay 1940a: 296.

"*Antarctophthirus* ? *ogmorhini*" Hopkins, 1949b: 510 (not *Antarctophthirus ogmorhini* Enderlein, 1906).

"*Antarctophthirus ogmorhini*" Murray, 1964: 243 (not *Antarctophthirus ogmorhini* Enderlein, 1906).

"*Antarctophthirus ogmorhini*" Murray *et al*., 1965: 761, fig. 1, pls 1–2 (not *Antarctophthirus ogmorhini* Enderlein, 1906).

"*Antarctophthirus ogmorhini*" Clay & Moreby, 1967: 166, 169, fig. 179 (not *Antarctophthirus ogmorhini* Enderlein, 1906).

Antarctophthirus ogmorhini Enderlein, 1906; Gressitt 1970: 329. In part.

Antarctophthirus ogmorhini; Kim *et al*. 1975: 547. In part.

Antarctophthirus ogmorhini; King 1990: 254. In part.

Antarctophthirus ogmorhini Enderlein, 1906; Durden & Musser 1994a: 7. In part.

Antarctophthirus ogmorhini Enderlein, 1906; Barker 1996: 237. In part.

"*Antarctophthirus ogmorhini*" Mehlhorn *et al*., 2002: 651, figs 1–17 (not *Antarctophthirus ogmorhini* Enderlein, 1906).

Antarctophthirus ogmorhini; King 2005: 234. In part.

Antarctophthirus ogmorhini Enderlein, 1906; Palma 2010: 409. In part.

Antarctophthirus ogmorhini Enderlein, 1906; Leonardi & Palma 2013: 451. In part.

Antarctophthirus carlinii Leonardi *et al*., 2014: 3948, figs 1–6.

Holotype ♂ in CENPAT.

Type host: *Leptonychotes weddellii* (Lesson, 1826).

New Zealand host: *Leptonychotes weddellii* (Lesson, 1826).

Other hosts: None.

New Zealand localities: Macquarie Island, RO.

Geographic distribution: Antarctica; Southern Oceans.

New Zealand references: Harrison (1937); Murray *et al.* (1965); Clay & Moreby (1967); Gressitt (1970); King (1990); Barker (1996); King (2005); Palma (2010).

Other significant references: Clay (1940a); Hopkins (1949b); Murray (1964); Kim *et al.* (1975); Durden & Musser (1994a); Durden & Musser (1994b: 141); Mehlhorn *et al*. (2002: 651, figs 1–17); Leonardi & Palma (2013); Leonardi *et al*. (2014).

Remarks: The population of *Antarctophthirus* from *Leptonychotes weddellii* was previously known as *A. ogmorhini*, but has been recognised as a separate species by Leonardi *et al*. (2014).

Antarctophthirus lobodontis Enderlein, 1909

"*Antarctophthirus ogmorhini*" Neumann, 1907a: 13 (not *Antarctophthirus ogmorhini* Enderlein, 1906).

Antarctophthirus lobodontis Enderlein, 1909: 508, 510, figs KK–NN.

Antarctophthirus lobodontis Enderlein, 1909; Hopkins 1949b: 509.

Antarctophthirus lobodontis Enderlein, 1909; Clay & Moreby 1967: 166, 169, fig. 180.

Antarctophthirus lobodontis Enderlein, 1909; Pilgrim 1974: 1031, fig. 3.

Antarctophthirus lobodontis Enderlein, 1909; Palma 2010: 409.

Syntypes ♂♀, repository unknown, probably lost (Leonardi & Palma 2013: 452).

Type host: *Lobodon carcinophagus* Hombron & Jacquinot, 1842.

New Zealand host: *Lobodon carcinophagus* Hombron & Jacquinot, 1842.

Other hosts: None.

New Zealand localities: WN, RO.

Geographic distribution: Antarctica; Southern Oceans; New Zealand.

New Zealand references: Pilgrim (1974); King (1990: 254, 277); King (2005: 234); Palma (2010).

Other significant references: Neumann (1907a); Freund (1928: 20, figs 14–16); Ferris (1934: 488, fig. 284); Clay (1940a: 296); Hopkins (1949b); Barker (1996: 236); Clay & Moreby (1967); Clay & Moreby (1970: 220); Kim *et al.* (1975: 547); Murray (1976: 92, fig. 4.8); Kim (1988: 108); Durden & Musser (1994a: 7); Durden & Musser (1994b: 141); Leonardi & Palma (2013: 452); Leonardi *et al.* (2016: 672, figs 1–6).

Remarks: There are only two records of *Antarctophthirus lobodontis* from the New Zealand Subregion: one from Antarctica dated 1963, and a sample from a crabeater seal found dead in the southern end of the North Island in March 2015 (voucher specimens in MONZ).

Antarctophthirus mawsoni Harrison, 1937

Antarctophthirus mawsoni Harrison, 1937: 11, pl. 1: fig. 1.
Antarctophthirus mawsoni Harrison, 1937; Hopkins 1949b: 509.
Antarctophthirus mawsoni Harrison, 1937; King 1990: 254, 278.
Antarctophthirus mawsoni Harrison, 1937; King 2005: 234.

Holotype ♀ in AMSA (Australian Museum 2012).

Type host: *Ommatophoca rossii* J.E. Gray, 1844.

New Zealand host: *Ommatophoca rossii* J.E. Gray, 1844.

Other hosts: None

New Zealand localities: None.

Geographic distribution: Antarctica; Southern Oceans.

New Zealand references: King (1990; 2005).

Other significant references: Hopkins (1949b); Clay & Moreby (1967: 166, 168); Kim *et al.* (1975: 547); Durden & Musser (1994a: 7); Durden & Musser (1994b: 141); Barker (1996: 236); Leonardi & Palma (2013: 452).

Remarks: Although *Ommatophoca rossii* occurs in the New Zealand Subregion as defined by the Checklist Committee (2010: 2, 497), *Antarctophthirus mawsoni* has not yet been recorded from the Subregion. This species is included here because of King's (1990: 254; 2005: 234) citations.

Antarctophthirus microchir (Trouessart & Neumann, 1888)

Figs 190–191

Echinophthirius microchir Trouessart & Neumann, 1888: 80, figs a,b,c.
Echinophthirius microchir Trouessart [sic]; Hutton 1904: 228.
Antarctophthirus microchir (Trouessart & Neumann, 1888); Enderlein 1906: 663, figs 3–4.
Echinophthirius microchir Trouessart [sic]; Myers 1922: 12.
Antarctophthirus microchir (Trouessart & Neumann, 1888); Tillyard 1926: 135.
Antarctophthirus microchir californianus Fahrenholz, 1939: 42.
Antarctophthirus microchir microchir (Trouessart & Neumann, 1888); Hopkins 1949b: 508.
Antarctophthirus microchir (Trouessart & Neumann, 1888); Clay 1964a: 233.
Antarctophthirus microchir (Trouessart & Neumann, 1888); Wise 1977: 67.
Antarctophthirus microchir (Trouessart & Neumann, 1888); Horning *et al.* 1980: 7, 13.
Antarctophthirus sp.; Horning *et al.* 1980: 7, 12.
Antarctophthirus microchir (Trouessart & Neumann, 1888); Palma 2010: 409.

Syntypes ♂♀, probably lost (Palma & Peck 2013: 65; Leonardi & Palma 2013: 450).

Type host: *Phocarctos hookeri* (J.E. Gray, 1844).

New Zealand hosts: *Phocarctos hookeri* (J.E. Gray, 1844); *Arctocephalus forsteri* (Lesson, 1828).

Other hosts: *Neophoca cinerea* (Péron, 1816); *Zalophus californianus* (Lesson, 1828); *Zalophus wollebaeki* Silvertsen, 1953; *Otaria flavescens* (Shaw, 1800); *Eumetopias jubatus* (Schreber, 1776).

New Zealand localities: KA, WD, SN, AU.

Geographic distribution: Palearctic, Nearctic, Neotropical and Australasian Regions.

New Zealand references: Trouessart & Neumann (1888); Hutton (1904); Enderlein (1906); Enderlein (1909: 504); Myers (1922); Tillyard (1926); Clay (1964a); Gressitt (1964: 539); Miller (1971: 131); Wise (1977); Horning *et al.*

(1980); King (1990: 254); Durden & Musser (1994a: 7); King (2005: 234); Palma (2010); Leonardi & Palma (2013: 450, 456); Leonardi & Lazzari (2014).

Other significant references: Enderlein (1909: 511, figs 176–177, 183–184); Freund (1928: 21, figs 17–19); Ferris (1934: 489, figs 285–286); Harrison (1937: 10); Webb (1946: 95); Hopkins (1949b); Ferris (1951: 75); Kim *et al.* (1975: 545); Kim *et al.* (1986: 46, pl. 2); Kim (1987: 230); Durden & Musser (1994b: 140); Barker (1996: 236); McIntosh & Murray (2007: 103); Leonardi *et al.* (2009: 1086, figs 1–7). Aznar *et al.* (2009: 293, figs 1–4); Leonardi *et al.* (2011: 62, figs 2–3, 6); Leonardi *et al.* (2012a: 929, figs 1–12); Leonardi *et al.* (2012b: 2, figs 1–3); Palma & Peck (2013: 65).

Remarks: Although some populations of *Antarctophthirus microchir* from different hosts show no morphological differences, they probably represent a complex of cryptic species (Leonardi & Palma 2013: 450). This is the first record of *Antarctophthirus microchir* from the New Zealand fur seal, *Arctocephalus forsteri*.

Antarctophthirus ogmorhini Enderlein, 1906

Antarctophthirus ogmorhini Enderlein, 1906: 662, figs 1–2.
Antarctophthirus ogmorhini Enderlein; Tillyard 1926: 135.
Antarctophthirus ogmorhini Enderlein, 1906; Harrison 1937: 11.
Antarctophthirus ogmorhini Enderlein, 1906; Watson 1967: 74.
Antarctophthirus ogmorhini Enderlein, 1906; Gressitt 1970: 329. In part.
Antarctophthirus ogmorhini; Kim *et al*. 1975: 547. In part.
Antarctophthirus ogmorhini Enderlein, 1906; Wise 1977: 67.
Antarctophthirus ogmorhini; King 1990: 254. In part.
Antarctophthirus ogmorhini Enderlein, 1906; Durden & Musser 1994a: 7. In part.
Antarctophthirus ogmorhini Enderlein, 1906; Barker 1996: 237. In part.
Antarctophthirus ogmorhini Enderlein, 1906; Palma & Horning 2002: 14, 18.
Antarctophthirus ogmorhini; King 2005: 234. In part.
Antarctophthirus ogmorhini Enderlein, 1906; Palma 2010: 409. In part.
Antarctophthirus ogmorhini Enderlein, 1906; Leonardi & Palma 2013: 451, 456. In part.
Antarctophthirus ogmorhini Enderlein, 1906; Leonardi *et al*. 2014: 3950.

Syntypes ♂♀ in NHML (Leonardi & Palma 2013: 451).

Type host: *Hydrurga leptonyx* (Blainville, 1820).

New Zealand host: *Hydrurga leptonyx* (Blainville, 1820).

Other hosts: None.

New Zealand localities: "New Zealand waters"; HB, Macquarie Island.

Geographic distribution: Antarctica; Southern Oceans.

New Zealand references: Tillyard (1926); Harrison (1937); Watson (1967); Gressitt (1970); Wise (1977); King (1990); Palma & Horning (2002); King (2005); Palma (2010).

Other significant references: Neumann (1907a); Enderlein (1909: 509, figs 174–175, 181–182); Cummings (1916c: 172); Freund (1928: 19, figs 12–13); Ferris (1934: 486, figs 282–283); Hopkins (1949b: 509); Ferris (1951: 73, fig. 31); Séguy (1953: 593, figs 49–50); Kim *et al.* (1975); Durden & Musser (1994a); Durden & Musser (1994b: 141); Barker (1996); Leonardi & Palma (2013); Leonardi *et al*. (2014).

Remarks: The population of *Antarctophthirus* from *Leptonychotes weddellii*—previously known as *A. ogmorhini*—has been described as a separate species: *A. carlinii* (see above).

Genus *Lepidophthirus* Enderlein, 1904

Lepidophthirus Enderlein, 1904a. *Zool. Anz. 28*: 44. Type species: *Lepidophthirus macrorhini* Enderlein, 1904 (by original designation).

Lepidophthirus macrorhini Enderlein, 1904

Figs 192–193

Lepidophthirus macrorhini Enderlein, 1904a: 46, figs 1–5.
Lepidophthirus macrorhini Enderlein, 1904; Enderlein 1909: 515, figs OO, PP, QQ, pl. 59, pl. 60: fig. 180.

Lepidophthirus macrorhini Enderlein, 1904; Tillyard 1926: 135.
Lepidophthirus macrorhini Enderlein, 1904; Clay & Moreby 1967: 166, 169, fig. 181.
Lepidophthirus macrorhini Enderlein, 1904; Watson 1967: 74.
Lepidophthirus macrorhini Enderlein, 1904; Wise 1977: 68.
Lepidophthirus macrorhini Enderlein, 1904; Horning *et al.* 1980: 8, 13.
Lepidophthirius [sic] *macrorhini*; King 2005: 234.
Lepidophthirus macrorhini Enderlein, 1904; Palma & Horning 2002: 14, 18.
Lepidophthirus macrorhini Enderlein, 1904; Palma 2010: 409.

Syntypes ♂♀, repository unknown, probably lost (Barker 1996: 237).

Type host: *Mirounga leonina* (Linnaeus, 1758).

New Zealand host: *Mirounga leonina* (Linnaeus, 1758).

Other hosts: None.

New Zealand localities: KA, SN, CA, Macquarie Island.

Geographic distribution: Antarctica; Southern Oceans.

New Zealand references: Tillyard (1926); Harrison (1937: 13); Murray (1958: 404); Gressitt (1964: 539); Murray & Nicholls (1965: 437); Watson (1967); Gressitt (1970: 329); Clay & Moreby (1970: 220); Wise (1977); Lowry *et al.* (1978: 137); Horning *et al.* (1980); King (1990: 254, 267); Durden & Musser (1994a: 8); Barker (1996: 237); Palma & Horning (2002); King (2005); Palma (2010).

Other significant references: Enderlein (1909); Freund (1928: 32, figs 30–35); Ferris (1934: 499, figs 291–292); Hopkins (1949b: 510); Ferris (1951: 78, fig. 34); Murray (1964: 242); Clay & Moreby (1967); Kim *et al.* (1975: 547); Durden & Musser (1994b: 141); Green & Turner (2004: 74); Leonardi & Palma (2013: 453, 456).

Remarks: *Lepidophthirus macrorhini* is a large species frequently found on southern elephant seals, and with an unusual life cycle (Murray & Nicholls 1965).

Family HAEMATOPINIDAE Enderlein, 1904

Haematopinidae Enderlein, 1904b. *Zool. Anz. 28*: 136. Type genus: *Haematopinus* Leach, 1815b.

Genus *Haematopinus* Leach, 1815

Haematopinus Leach, 1815b. *Encyclopaedia Britannica*, *Suppl. 1*: 24. Type species: *Haematopinus suis* (Linnaeus, 1758) (by monotypy).

Haematopinus asini (Linnaeus, 1758)

Figs 194–195

Pediculus asini Linnaeus, 1758: 612.
Pediculus macrocephalus Burmeister, 1838b: Species 18.
Haematopinus asini (Linnaeus); Denny 1842: 32, pl. 25: fig. 1.
Haematopinus macrocephalus (Burmeister, 1838); Giebel 1874: 44, pl. 2: fig. 5.
"*Haematopinus eurystermus* [sic]" Kirk, 1900: 303, fig. (not *Haematopinus eurysternus* Denny, 1842).
Haematopinus asini Linnaeus [sic]; Myers 1922: 12.
Haematopinus macrocephalus Burmeister [sic]; Thomson 1922: 339.
Haematopinus asini (Linnaeus, 1758); Ferris 1933: 464, figs 273–274.
Haematopinus asini asini (Linnaeus, 1758); Webb 1948: 578.
Haematopinus asini macrocephalus (Burmeister, 1838); Webb 1948: 578.
Haematopinus asini asini (Linnaeus, 1758); Hopkins 1949b: 520.
Haematopinus asini macrocephlus [sic] (Burmeister, 1838); Hopkins 1949b: 520.
Haematopinus asini (Linnaeus, 1758); Ferris 1951: 85, figs 37–38.
Haematopinus asini (L.); Helson 1956: 13, 16.
Haematopinus asini; Miller 1971: 131.
Haematopinus asini (Linnaeus, 1758); Wise 1977: 67.
Haematopinus asini (Linnaeus, 1758); Tenquist & Charleston 2001: 502.
Haematopinus asini (Linnaeus, 1758); Palma 2010: 409.

Status, sex and repository of types unknown.

Type host: *Equus asinus* Linnaeus, 1758.

New Zealand host: *Equus caballus* Linnaeus, 1758.

Other host: *Equus burchelli* (J.E. Gray, 1824).

New Zealand localities: WI, MC.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Kirk (1900); Myers (1922); Thomson (1922); Tillyard (1926: 135); Helson (1956); Miller (1971: 131); Whitten (1971: 161); Wise (1977); Tenquist & Charleston (1981: 266); Tenquist & Charleston (2001); Palma (2010).

Other significant references: Cummings (1916c: 172); Ferris (1933); Séguy (1944: 448, figs 722–723); Webb (1948); Hopkins (1949b); Webb (1949: 149); Ferris (1951); Murray (1957d: 183); Kim *et al.* (1986: 80, pl. 17); Durden & Musser (1994a: 15); Durden & Musser (1994b: 141); Barker (1996: 238); Durden (2001: 8).

Remarks: *Haematopinus asini*, also known as "horse sucking louse", was introduced to New Zealand with horses by human agency (King 2005: 329).

Haematopinus eurysternus Denny, 1842

Pediculus eurysternus Nitzsch, 1818: 305. *Nomen nudum*.
Pediculus eurysternus Burmeister, 1838b: Species 14. Suppressed by Opinion 1050 (I.C.Z.N. 1976).
Haematopinus eurysternus Denny, 1842: 29, pl. 25: fig. 5. Preserved by Opinion 1050 (I.C.Z.N. 1976).
Haematopinus eurysternus Nitzsch [sic]; Hutton 1904: 353.
Haematopinus eurysternus Nitzsch [sic]; Myers 1922: 12.
Haematopinus eurysternus Nitzsch [sic]; Thomson 1922: 339.
Haematopinus eurysternus (Nitzsch, 1818) [sic]; Ferris 1933: 448, figs 263–264.
Haematopinus eurysternus (Nitzsch, 1818) [sic]; Ferris 1951: 88, figs 39–40.
Haematopinus eurysternus (Nitz.) [sic]; Helson 1956: 13, 16.
Haematopinus eurysternus; Miller 1971: 131.
Haematopinus eurysternus Denny, 1842; Kim & Weisser 1973: 45.
Haematopinus eurysternus Denny, 1842; Meleney & Kim 1974: 511, figs 1–3, 18, 22, 24, 27, 30, 33.
Haematopinus eurysternus (Nitzsch, 1818) [sic]; Wise 1977: 67.
Haematopinus eurysternus Denny, 1842; Kim *et al.* 1986: 82, pl. 18.
Haematopinus eurysternus (Nitzsch, 1818) [sic]; Durden & Musser 1994a: 15.
Haematopinus eurysternus (Nitzsch, 1818) [sic]; Tenquist & Charleston 2001: 502.
Haematopinus eurysternus (Nitzsch, 1818) [sic]; Palma 2010: 409.

Lectotype ♀ in NHML (Kim *et al.* 1986: 82).

Type host: *Bos taurus* Linnaeus, 1758.

New Zealand host: *Bos taurus* Linnaeus, 1758.

Other hosts: None.

New Zealand localities: Not specified.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Hutton (1904); Myers (1922); Thomson (1922); Tillyard (1926: 135); Helson (1956); Whitten (1970: 146); Helson (1970: 81); Miller (1971); Whitten (1971: 161); Buchanan & Coles (1971: 197); Wise (1977); Tenquist (1977: 286); Chalmers & Charleston (1980a,c); Tenquist & Charleston (1981: 266); Tenquist & Charleston (2001); Palma (2010).

Other significant references: Ferris (1933); Séguy (1944: 449, figs 724–725); Webb (1946: 91); Webb (1949: 150); Hopkins (1949b: 527); Ferris (1951); Murray (1957a: 17); Kim & Weisser (1973); Meleney & Kim (1974); International Commission on Zoological Nomenclature (1976); Kim *et al.* (1986); Green & Palma (1991: 21, 23); Durden & Musser (1994a); Durden & Musser (1994b: 144); Barker (1996: 238); Durden (2001: 8); Bartlow *et al.* (2016: 222).

Remarks: *Haematopinus eurysternus*, also known as "short-nosed cattle louse", was introduced to New Zealand with its host by human agency (King 2005: 347). Notwithstanding the I.C.Z.N. (1976) Opinion designating "Denny, 1842" as the author and date of this species, several post-1976 authors incorrectly ascribed it to "Nitzsch, 1818".

***Haematopinus suis* (Linnaeus, 1758)**

Pediculus suis Linnaeus, 1758: 611.
Pediculus urius Nitzsch, 1818: 305.
Haematopinus suis (Linnaeus); Denny 1842: 34, pl. 25: fig. 2.
Haematopinus urius (Nitzsch, 1818); Giebel, 1874: 45, pl. 2: fig. 6.
Haematopinus suis Linnaeus [sic]; Myers 1922: 12.
Haematopinus urius Nitzsch [sic]; Thomson 1922: 339.
Haematopinus suis (Linnaeus, 1758); Ferris 1933: 425, figs 252–256.
Haematopinus suis suis (Linnaeus, 1758); Hopkins 1949b: 521.
Haematopinus suis (Linnaeus, 1758); Ferris 1951: 91, figs 41–42.
Haematopinus suis Linnaeus [sic]; Ineson 1954: 603.
Haematopinus suis (L.); Helson 1956: 14, 16.
Haematopinus suis; Miller 1971: 131.
Haematopinus suis (Linnaeus, 1758); Wise 1977: 67.
Haematopinus suis (Linnaeus, 1758); Tenquist & Charleston 2001: 503.
Haematopinus suis (Linnaeus, 1758); Palma 2010: 409.

Syntypes presumed lost. See Ferris (1951: 94) and Kim *et al.* (1986: 87).

Type host: *Sus scrofa* Linnaeus, 1758.

New Zealand host: *Sus scrofa* Linnaeus, 1758.

Other hosts: None.

New Zealand localities: ND, CL, TO, WA, WN, SD, MB, NC, MC, SC, Norfolk Island.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Myers (1922); Thomson (1922); Tillyard (1926: 135); Symmons (1952: 398, fig. 41); Ineson (1954); Helson (1956); Miller (1971); Whitten (1971: 161); Wise (1977); Tenquist & Charleston (1981: 266); King (1990: 369); Tenquist & Charleston (2001); Heath (2002: 48); King (2005: 343); Palma (2010).

Other significant references: Ferris (1933); Eichler (1941a: 369, fig. 35); Séguy (1944: 450, figs 721, 726); Webb (1949: 152); Hopkins (1949b); Ferris (1951: 91, figs 41–42); Ramcke (1965: 547, figs 1–31, 8 pls); Rudolph (1983: 16); Kim *et al.* (1986: 86, pl. 20); Green & Palma (1991: 21, 23); Durden & Musser (1994a: 17); Durden & Musser (1994b: 142); Tombesi & Castro (1995: 653); Barker (1996: 239); Durden (2001: 4, 8, fig. 1.1F).

Remarks: *Haematopinus suis*, also known as the "pig louse", was introduced to New Zealand with its host by human agency (King 2005: 336).

Family HOPLOPLEURIDAE Ewing, 1929

Hoplopleuridae Ewing, 1929. *Manual External Parasites*: 133. Type genus: *Hoplopleura* Enderlein, 1904 (as Hoplopleurinae).

Genus *Hoplopleura* Enderlein, 1904

Hoplopleura Enderlein, 1904c. *Zool. Anz. 28*: 221. Type species: *Hoplopleura acanthopus* (Burmeister, 1838b) (by original designation).

***Hoplopleura pacifica* Ewing, 1924**

Figs 196–197

Hoplopleura pacifica Ewing, 1924: 9, figs 1b,c, 2.
Hoplopleura pacifica Ewing, 1924; Hopkins 1949b: 481.
Hoplopleura oenomydis Ferris, 1921; Ferris 1951: 139. In part.
Hoplopleura pacifica Ewing, 1924; Ford-Robertson & Bull 1966: 223.
Hoplopleura pacifica Ewing, 1924; Wise 1977: 67.
"*Hoplopleura oenomydis*" Tenquist & Charleston, 1981: 267 (not *Hoplopleura oenomydis* Ferris, 1921).
Hoplopleura pacifica Ewing, 1924; Kim *et al.* 1986: 112, pl. 32.
Hoplopleura pacifica Ewing, 1924; Tenquist & Charleston 2001: 504.
Hoplopleura pacifica Ewing, 1924; Palma 2010: 409.

Lectotype ♀ in BPBM (Voss 1966: 30; Kim *et al.* 1986: 112).

Type host: *Rattus exulans hawaiiensis* Stone, 1917.

New Zealand host: *Rattus exulans* (Peale, 1848).

Other hosts: *Rattus argentiventer* (Robinson & Kloss, 1916); *Rattus norvegicus* (Berkenhout, 1769); *Rattus rattus* (Linnaeus, 1758); *Rattus tiomanicus* (Miller, 1900).

New Zealand localities: ND, AK, CL, NC, MC, SC, SI, KE.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Ford-Robertson & Bull (1966); Pilgrim (1970: 77); Wise (1977); Tenquist & Charleston (1981); Gibson & Pilgrim (1986: 95); King (1990: 189); Roberts (1991: 354); Tenquist & Charleston (2001); King (2005: 171); Palma (2010).

Other significant references: Hopkins (1949b); Ferris (1951); Voss (1966: 29, figs 1–6); Johnson (1964: 71, figs 1, 5, 9–11, 15); Johnson (1972: 220, figs 13, 15–17, 19, 26); Kim *et al.* (1986); Green & Palma (1991: 21, 24); Durden & Musser (1994a: 31); Durden & Musser (1994b: 160); Barker (1996: 241); Durden (2001: 8).

Remarks: *Hoplopleura pacifica* was introduced to New Zealand and other Pacific Ocean islands with kiore by human agency (King 2005: 161).

Family LINOGNATHIDAE Webb, 1946

Linognathidae Webb, 1946. *Proc. Zool. Soc. London*: *116*: 107. Type genus: *Linognathus* Enderlein, 1905.

Genus *Linognathus* Enderlein, 1905

Trichaulus Enderlein, 1904b. *Zool. Anz. 28*: 139, 141. Type species: *Trichaulus piliferus* (Burmeister, 1838b) = *Linognathus setosus* (von Olfers, 1816) (by original designation). Preoccupied by *Trichaulus* Mayr, 1885.

Linognathus Enderlein, 1905. *Zool. Anz. 29*: 194. *Nomen novum* for *Trichaulus* Enderlein, 1904.

Linognathus ovillus (Neumann, 1907)

Haematopinus ovillus Neumann, 1907b: 522, figs 1–3.
Haematopinus ovillus Neumann, 1907; Evans 1907: 225, fig.
Haematopinus ovillus Neumann, 1907; Gilruth 1908: 194, 3 figs.
Haematopinus ovillus NeumaNN, Myers 1922: 12.
Haematopinus ovillus NeumaNN, Thomson 1922: 339.
Linognathus ovillus (Neumann, 1907); Tillyard 1926: 135.
Linognathus ovillus (Neumann, 1907); Ferris 1932b: 346, figs 209–210.
Linognathus ovillus (Neumann); Helson 1956: 14, 17.
Linognathus ovillus; Miller 1971: 131.
Linognathus ovillus (Neumann, 1907); Wise 1977: 66.
Linognathus ovillus (Neumann, 1907); Tenquist & Charleston 2001: 507.
Linognathus ovillus (Neumann, 1907); Palma 2010: 409.

Syntypes ♂♀, repository not confirmed, probably in the Ecole Vétérinaire de Toulouse, France (Kim *et al.* 1986: 126).

Type host: *Ovis aries* Linnaeus, 1758.

New Zealand host: *Ovis aries* Linnaeus, 1758.

Other hosts: None.

New Zealand locality: WN.

Geographic distribution: Australasia; North America; Asia; Falkland Islands.

New Zealand references: Neumann (1907b); Evans (1907); Gilruth (1908); Myers (1922); Thomson (1922); Tillyard (1926); Ferris (1932b); Murray (1955a: 22); Helson (1956); Murray (1963a,b); Miller (1971); Whitten (1971: 161); Wise (1977); Tenquist & Charleston (1981: 267); Durden & Musser (1994a: 41); Tenquist & Charleston (2001); Palma (2010).

Other significant references: Webb (1949: 143); Hopkins (1949b: 534); Ferris (1951: 231, figs 99–100); Kim *et al.* (1986: 126, pl. 38); Durden & Musser (1994a: 41); Durden & Musser (1994b: 144); Barker (1996: 242); Durden (2001: 8).

Remarks: *Linognathus ovillus*, also known as "sheep face louse", was introduced to New Zealand with its host by human agency (King 2005: 393), and originally described from specimens collected in New Zealand and Scotland.

***Linognathus pedalis* (Osborn, 1896)**

Haematopinus pedalis Osborn, 1896: 170.
Trichaulus pedalis (Osborn, 1896); Enderlein, 1904b: 142.
Haematopinus pedalis Osborn; Myers 1922: 12.
Haematopinus pedalis Osborn; Thomson 1922: 339.
Linognathus pedalis (Osborn, 1896); Tillyard 1926: 135, fig. O3.
Linognathus pedalis (Osborn, 1896); Ferris 1932b: 344, figs 207–208.
Linognathus pedalis (Osborn); Helson 1956: 14, 17.
Linognathus pedalis; Miller 1971: 131, fig. 344.
Linognathus pedalis (Osborn, 1896); Wise 1977: 66.
Linognathus pedalis (Osborn, 1896); Tenquist & Charleston 2001: 508.
Linognathus pedalis (Osborn, 1896); Palma 2010: 409.

Neotype ♀ in NHML (Kim *et al.* 1986: 128).

Type host: *Ovis aries* Linnaeus, 1758.

New Zealand host: *Ovis aries* Linnaeus, 1758.

Other host: *Oreamnos americanus* (Blainville, 1816).

New Zealand localities: WN, KA, NC, MC, SC.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Myers (1922); Thomson (1922); Tillyard (1926); Helson (1956); Miller (1971: 131); Whitten (1971: 161); Wise (1977); Tenquist & Charleston (1981: 268); Tenquist & Charleston (2001); Palma (2010).

Other significant references: Ferris (1932b); Webb (1949: 134); Hopkins (1949b: 534); Ferris (1951: 231, figs 101–102); Murray (1960a; 1963a); Kim *et al.* (1986: 128, pl. 39); Durden & Musser (1994a: 42); Durden & Musser (1994b: 144); Barker (1996: 242); Durden (2001: 4, 8).

Remarks: *Linognathus pedalis*, also known as "sheep foot louse", was introduced to New Zealand with its host by human agency (King 2005: 393).

***Linognathus setosus* (von Olfers, 1816)**

Figs 198–199

Pediculus setosus von Olfers, 1816: 80.
Pediculus piliferus Burmeister, 1838b: Species 13.
Haematopinus piliferous [sic] (Burmeister); Denny 1842: 28, pl. 25: fig. 4.
Trichaulus piliferus (Burmeister, 1838); Enderlein, 1904b: 142.
Linognathus piliferus (Burmeister, 1838); Enderlein 1905: 194.
Haematopinus piliferus Burmeister; Myers 1922: 12.
Haematopinus pilferus [sic] Burm.; Thomson 1922: 339.
Linognathus piliferus Burmeister; Tillyard 1926: 135.
Linognathus setosus (von Olfers, 1816); Ferris 1932b: 340, figs 206–207, 216E.
Linognathus setosus (Olfers); Helson 1956: 13, 17.
Linognathus setosus; Miller 1971: 131.
Linognathus setosus (von Olfers, 1816); Wise 1977: 66.
Linognathus setosus (von Olfers, 1816); Tenquist & Charleston 2001: 508.
Linognathus setosus (von Olfers, 1816); Palma 2010: 409.

Neotype ♀ in University of Heidelberg, Germany (Kim *et al.* 1986: 130).

Type host: *Canis familiaris* Linnaeus, 1758.

New Zealand host: *Canis familiaris* Linnaeus, 1758.

Other hosts: *Canis lupus* Linnaeus, 1758; *Canis latrans* Say, 1823; *Vulpes lagopus* (Linnaeus, 1758).

New Zealand localities: WI, WN, MC.

Geographic distribution: All continents, except Antarctica

New Zealand references: Myers (1922); Thomson (1922); Tillyard (1926); Helson (1956); Miller (1971: 131); Whitten (1971: 161); Pilgrim (1974: 1031, fig. 2); Wise (1977); Tenquist & Charleston (1981: 268); Tenquist & Charleston (2001); Palma (2010).

Other significant references: Ferris (1932b); Séguy (1944: 439, figs 698–702); Webb (1946: 85); Webb (1949: 142); Hopkins (1949b: 496); Ferris (1951: 235, figs 103–104); Kim *et al.* (1986: 130, pl. 40); Green & Palma (1991: 21, 23); Durden & Musser (1994a: 42); Durden & Musser (1994b: 140); Barker (1996: 243); Palma & Jensen (2005: 59, 69).

Remarks: *Linognathus setosus*, also known as "dog sucking louse", was introduced to New Zealand with its host by human agency (King 2005: 9, 258).

***Linognathus stenopsis* (Burmeister, 1838)**

Pediculus stenopsis Burmeister, 1838b: Species 16, fig. 3.
Haematopinus stenopsis; Denny 1842: 36.
Trichaulus stenopsis (Burmeister, 1838); Enderlein, 1904b: 142, fig. 13.
Linognathus stenopsis (Burmeister, 1838); Ferris 1932b: 349, figs 210–212.
Linognathus stenopsis (Burmeister); Helson 1956: 13, 17.
Linognathus stenopsis (Burmeister, 1838); Wise 1977: 66.
Linognathus stenopsis (Burmeister, 1838); Tenquist & Charleston 2001: 508.
Linognathus stenopsis (Burmeister, 1838); Palma 2010: 409.

Neotype ♀ in University of Heidelberg, Germany (Kim *et al.* 1986: 132).

Type host: *Capra hircus* Linnaeus, 1758.

New Zealand host: *Capra hircus* Linnaeus, 1758.

Other hosts: *Capra ibex* Linnaeus, 1758; *Rupicapra rupicapra* Couturier, 1938.

New Zealand localities: HB, TK, WN, SD, MB, BR, NC, MC, SC, WD.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Helson (1956); Whitten (1971: 161); Pilgrim (1974: 1031, fig. 1); Wise (1977); Tenquist & Charleston (1981: 268); King (1990: 420); Tenquist & Charleston (2001); King (2005: 387); Palma (2010).

Other significant references: Ferris (1932b); Séguy (1944: 440, figs 703–704); Webb (1949: 136); Hopkins (1949b: 533); Ferris (1951: 238, figs 105–106); Murray (1957a: 17); Ramchurn (1980: 6); Kim *et al.* (1986: 132, pl. 41); Durden & Musser (1994a: 42); Durden & Musser (1994b: 144); Barker (1996: 243); Durden (2001: 8).

Remarks: *Linognathus stenopsis*, also known as "goat sucking louse", was introduced to New Zealand with its host by human agency (King 2005: 377).

***Linognathus vituli* (Linnaeus, 1758)**

Pediculus vituli Linnaeus, 1758: 611.
Haematopinus vituli (Linnaeus); Denny 1842: 31, pl. 25: fig. 3.
Trichaulus vituli (L.); Enderlein, 1904b: 142.
Linognathus vituli Linnaeus [sic]; Myers 1922: 12.
Haematopinus vituli Linnaeus; Thomson 1922: 339.
Linognathus vituli L. [sic]; Tillyard 1926: 135.
Linognathus vituli (Linnaeus, 1758); Ferris 1932b: 356, figs 214–216.
Linognathus vituli (L.); Helson 1956: 13, 17.
Linognathus vituli; Miller 1971: 131, fig. 343.
Linognathus vituli (Linnaeus, 1758); Wise 1977: 66.
Linognathus vituli (Linnaeus, 1758); Tenquist & Charleston 2001: 508.
Linognathus vituli (Linnaeus, 1758); Palma 2010: 409.

Neotype ♂ in University of Heidelberg, Germany (Kim *et al.* 1986: 134).

Type host: *Bos taurus* Linnaeus, 1758.

New Zealand host: *Bos taurus* Linnaeus, 1758.

Other hosts: None.

New Zealand localities: HB, WN, NN, NC, MC, SC, SL, KE.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Myers (1922); Thomson (1922); Tillyard (1926); Helson (1956); Whitten (1970: 146); Helson (1970: 81) Miller (1971: 131); Whitten (1971: 161); Buchanan & Coles (1971: 197); Kettle (1972; 1974a); Kettle

& Lukies (1974; 1979); Wise (1977); Tenquist (1977: 286); Chalmers & Charleston (1980a,b,c); Kettle & Watson (1981); Tenquist & Charleston (1981: 268); Watson *et al*. (1996); Tenquist & Charleston (2001); Heath (2002: 48); Palma (2010); Heath (2013: 14, fig. centre).

Other significant references: Bedford (1929: 502); Ferris (1932b); Séguy (1944: 441, figs 705–707); Webb (1946: 83); Webb (1949: 143); Hopkins (1949b: 527); Ferris (1951: 241, figs 107–108); Callinan (1980: 484); Rudolph (1983: 16); Kim *et al.* (1986: 134, pl. 42); Green & Palma (1991: 21, 23); Durden & Musser (1994a: 44); Durden & Musser (1994b: 144); Barker (1996: 243); Durden (2001: 8); Bartlow *et al*. (2016: 222).

Remarks: *Linognathus vituli*, also known as "long-nosed cattle louse", was introduced to New Zealand with its host by human agency (King 2005: 347).

Genus *Solenopotes* Enderlein, 1904

Solenopotes Enderlein, 1904b. *Zool. Anz. 28*: 139, 143. Type species: *Solenopotes capillatus*, Enderlein, 1904 (by original designation).

Solenopotes burmeisteri (Fahrenholz, 1919)

Figs 200–201

Linognathus burmeisteri Fahrenholz, 1919: 23.

Solenopotes burmeisteri (Fahrenholz, 1919); Ferris 1932b: 406, figs 249a,b,d.

Solenopotes burmeisteri (Fahrenholz, 1919); Ferris 1951: 253.

Solenopotes burmeisteri (Fahrenholz, 1919); Andrews 1964: 106, fig. 3b.

Solenopotes burmeisteri (Fahrenholz, 1919); Kim & Weisser 1974: 117, figs 3–4, 16, 25, 33, 40, 48.

Solenopotes burmeisteri (Fahrenholz, 1919); Wise 1977: 67.

Solenopotes burmeisteri (Fahrenholz, 1919); Tenquist & Charleston 2001: 521.

Solenopotes burmeisteri (Fahrenholz, 1919); Palma 2010: 409.

Lectotype ♂ in the MLUH (Kim & Weisser 1974: 117).

Type host: *Cervus elaphus* Linnaeus, 1758.

New Zealand hosts: *Cervus elaphus scoticus* Lönnberg, 1906; *Odocoileus virginianus borealis* (Miller, 1900).

Other host: *Cervus nippon* Temminck, 1838.

New Zealand localities: WA, CO, DN, SI.

Geographic distribution: Eurasia; North Africa; North America; Southern South America; Australasia.

New Zealand references: Andrews (1964); Pilgrim (1970: 78); Wise (1977); Charleston (1980: 150); Tenquist & Charleston (1981: 273); King (1990: 451); Tenquist & Charleston (2001); King (2005: 415); Palma (2010).

Other significant references: Ferris (1932b); Webb (1949: 147); Hopkins (1949b: 524); Ferris (1951); Kim & Weisser (1974); Durden & Musser (1994a: 45); Durden & Musser (1994b: 142).

Remarks: *Solenopotes burmeisteri* was introduced to New Zealand with red deer by human agency (King 2005: 404). *Odocoileus virginianus borealis* is a new host record for *S. burmeisteri* (voucher specimens in MONZ), and it may be the result of a host switch from *Cervus elaphus*.

Solenopotes capillatus Enderlein, 1904

Solenopotes capillatus Enderlein, 1904b: 144, figs 14–15. Preserved by Opinion 1050 (I.C.Z.N. 1976).

Solenopotes capillatus Enderlein, 1904; Ewing 1929: 139, fig. 76.

Solenopotes capillatus Enderlein, 1904; Ferris 1932b: 397, figs 243–244.

Solenopotes capillatus Enderlein, 1904; Ferris 1951: 253, figs 113–114.

Solenopotes capillatus; Helson 1970: 81.

Solenopotes capillatus; Whitten 1971: 161.

Solenopotes capillatus Enderlein, 1904; Kim & Weisser 1974: 118, figs 5–6, 17, 27, 34, 43, 46, 49.

Solenopotes capillatus Enderlein, 1904; Tenquist & Charleston 2001: 521.

Solenopotes capillatus Enderlein, 1904; Palma 2010: 409.

Holotype ♂ in ZMHU, but subsequently lost (Kim & Weisser 1974: 120).

Type host: *Bos taurus* Linnaeus, 1758.

New Zealand host: *Bos taurus* Linnaeus, 1758.

Other hosts: None.

New Zealand locality: WI.

Geographic distribution: Eurasia; North America; Australasia; South Africa.

New Zealand references: Helson (1970); Whitten (1970: 146); Whitten (1971); Chalmers & Charleston (1980a: 198); Tenquist & Charleston (1981: 273); Tenquist & Charleston (2001); Palma (2010).

Other significant references: Ferris (1932b); Séguy (1944: 446, figs 715–718); Webb (1946: 88); Webb (1949: 147); Hopkins (1949b: 527); Kim & Weisser (1973); Kim & Weisser (1974); International Commission on Zoological Nomenclature (1976); Kim *et al.* (1986: 138, pl. 44); Durden & Musser (1994a: 45); Durden & Musser (1994b: 144); Barker (1996: 244); Durden (2001: 8).

Remarks: *Solenopotes capillatus*, also known as "little blue cattle louse", was introduced to New Zealand with cattle by human agency (King 2005: 347).

Family PEDICULIDAE Leach, 1817

Pediculidae Leach, 1817. *Zool. Miscellany 3*: 64. Type genus: *Pediculus* Linnaeus, 1758.

Genus *Pediculus* Linnaeus, 1758

Pediculus Linnaeus, 1758. *Systema Naturae 10*: 610. Type species: *Pediculus humanus* Linnaeus, 1758 (by subsequent designation).

Pediculus humanus capitis De Geer, 1778

Figs 202–203

Pediculus humanus capitis De Geer, 1778a: 67, pl. 1: fig. 6. Preserved by Opinion 2333 (I.C.Z.N. 2014).

pediculus [sic] *humanus*; Polack 1838: 320.

Pediculus capitis Nitzsch [sic]; Hutton 1904: 353.

Pediculus capitis Nitzsch [sic]; Myers 1922: 12.

Pediculus capitis Nitzsch [sic]; Thomson 1922: 338.

"*Pediculus* (*Pediculus*) *humanus humanus*" Ewing, 1926: 22, text figs 1a, 2, 3a, 7, pl. 3: fig. 8 (not *Pediculus humanus* Linnaeus, 1758).

Pediculus capitis L. [sic]; Tillyard 1926: 135.

Pediculus humanus Linnaeus, 1758; Ferris 1935: 543, figs 307, 312B, 321B, 322G, 323B–324B, pls I, III. In part.

Pediculus humanus capitis; Buxton 1939: 10, figs 3, 7B.

Pediculus humanus capitis De Geer, 1778; Hopkins 1949b: 452.

Pediculus humanus capitis Deg. [sic]; Helson 1956: 14, 17.

Pediculus capitis; Miller 1971: 131, fig. 341.

Pediculus humanus capitis; Andrews 1976a: 61.

Pediculus humanus capitis De Geer, 1778; Wise 1977: 66.

Pediculus capitis De Geer, 1778; Busvine 1978: 7.

Pediculus humanus capitis De Geer, 1778; Savill 1990: 69.

Pediculus humanus capitis De Geer, 1778; Palma 2010: 295, 409.

Status, sex and repository of types unknown.

Type host: *Homo sapiens* Linnaeus, 1758.

New Zealand host: *Homo sapiens* Linnaeus, 1758.

Other hosts: None.

New Zealand localities: AK, HB, TK, WN, NC, MC, SC.

Geographic distribution: Cosmopolitan.

New Zealand references: Banks (1769: 186); Anonymous (1837: 3); Polack (1838); White & Doubleday (1843: 283); Hutton (1904); Myers (1922); Thomson (1922); Tillyard (1926); Helson (1956); Miller (1971); Andrews (1976a, 1976b: 62); Wise (1977); Andrews (1980); Andrews & Tonkin (1989: 199); Savill (1990); Palma (2010).

Other significant references: Ewing (1926); Ferris (1935); Buxton (1939); Busvine (1948: 1); Hopkins (1949b); Schaefer (1978: 669); Busvine (1978: 6); Maunder (1983: 8, figs 7–11); Bresciani *et al.* (1983: 24); Mumcuoglu & Zias (1988: 545); Palma (1991b: 194, pl. 21); Durden & Musser (1994a: 50); Durden & Musser (1994b: 140); Barker

(1996: 245); Palma & Jensen (2005: 60, 69); Leo & Barker (2005); Leo *et al.* (2005); Hänel & Palma (2007: 118, 128, 131); Reed *et al.* (2007); Light *et al*. (2008a,b); Arriaza *et al*. (2012); Rózsa & Apari (2012); Clayton *et al.* (2015: 169, 173); Reed *et al*. (2015: 203).

Remarks: The human head louse was introduced to New Zealand with humans. Both Polynesians and Europeans brought head lice with them (Anonymous 1837; Andrews 1976a: 59; Andrews 1976b: 64).

***Pediculus humanus humanus* Linnaeus, 1758**

Figs 204–205

Pediculus humanus Linnaeus, 1758: 610.
Pediculus humanus corporis De Geer, 1778a: 67, pl. 1: fig. 7.
Pediculus humanus corporis Retzius, 1783: 201. Suppressed by Opinion 2333 (I.C.Z.N. 2014).
Pediculus vestimenti Nitzsch, 1818: 305.
Pediculus vestimenti Nitzsch; Hutton 1904: 353.
Pediculus humanus Linnaeus; Myers 1922: 12.
Pediculus corporis De Geer; Thomson 1922: 338.
Pediculus (*Pediculus*) *humanus corporus* [sic] De Geer, 1778; Ewing 1926: 18.
Pediculus vestimenti Nitzsch; Tillyard 1926: 135.
Pediculus humanus Linnaeus, 1758; Ferris 1935: 543, figs 306, 308, 312A, 321A–324A. In part.
Pediculus humanus corporis; Buxton 1939: 10, figs 1, 4, 7A.
Pediculus humanus humanus Linnaeus, 1758; Hopkins 1949b: 452.
Pediculus humanus humanus L.; Helson 1956: 14, 17.
Pediculus corporis; Miller 1971: 131.
Pediculus humanus humanus; Andrews 1976a: 61.
Pediculus humanus humanus Linnaeus, 1758; Wise 1977: 66.
Pediculus humanus Linnaeus, 1758; Busvine 1978: 7.
Pediculus humanus Linnaeus, 1758; Tenquist & Charleston 2001: 515.
Pediculus h. humanus Linnaeus, 1758; Palma 2010: 296, 409.

Status, sex and repository of types unknown.

Type host: *Homo sapiens* Linnaeus, 1758.

New Zealand host: *Homo sapiens* Linnaeus, 1758.

Other hosts: None.

New Zealand locality: WN.

Geographic distribution: Cosmopolitan.

New Zealand references: Anonymous (1837: 3); Hutton (1904); Myers (1922); Thomson (1922); Tillyard (1926); Helson (1956); Miller (1971); Pilgrim (1974: 1033, figs 2, 3); Andrews (1976a, 1976b: 62); Wise (1977); Andrews (1980); Tenquist & Charleston (1981: 271); Tenquist & Charleston (2001); Leo & Barker (2005); Leo *et al.* (2005); Palma (2010).

Other significant references: Nuttall (1917: 80); Nuttall (1919: 335); Ewing (1926); Ferris (1935); Buxton (1939); Webb (1946: 77); Busvine (1948: 1); Hopkins (1949b); Ferris (1951: 261, figs 116–119); Schaefer (1978: 669); Busvine (1978: 6); Maunder (1983: 8, 18, fig. 12); Bresciani *et al.* (1983: 24); Rudolph (1983: 16); Kim *et al.* (1986: 150, pl. 48); Durden & Musser (1994a: 50); Durden & Musser (1994b: 140); Barker (1996: 245); Reed *et al.* (2007); Light *et al*. (2008b); Clayton *et al.* (2015: 169, 173); Reed *et al*. (2015: 203).

Remarks: The human body louse was introduced to New Zealand with humans. Both Polynesians and Europeans brought body lice with them. (Anonymous 1837; Thomson 1922; Andrews 1976a: 59; Andrews 1976b: 64).

Family PTHIRIDAE Ewing, 1929

Pthiridae Ewing, 1929. *Manual External Parasites*: 132. Type genus: *Pthirus* Leach, 1815a (as "Phthiridae").

Genus *Pthirus* Leach, 1815

Pthirus Leach, 1815a. Brewster's *Edinburgh Encyclopaedia* 9(1): 77. Type species: *Pediculus pubis* Linnaeus, 1758 (by subsequent designation) (see Hemming 1958: 54).

Phthirus Leach, 1817. *Zool. Miscellany 3*: 65. Invalid emendation (Kim *et al.* 1986: 209).
Phthirius Burmeister, 1835. *Handbuch Entomologie 1*: 58. Invalid emendation (Kim *et al.* 1986: 209).
Phtirius Mjöberg, 1910a. *Arkiv Zool. 6*(13): 171. Misspelling.

Pthirus pubis (Linnaeus, 1758)

Figs 206–207

Pediculus pubis Linnaeus, 1758: 611.
Pthirus inguinalis Leach, 1815a: 77.
Phthirus inguinalis Leach, 1815; Leach, 1817: 65.
Phthirius inguinalis Leach, 1815; Burmeister 1835: 58.
Phtirius inguinalis Leach; Mjöberg 1910: 171.
Phthirius pubis Linnaeus [sic]; Myers 1922: 12.
Phthirius inguinalis; Thomson 1922: 338.
Phthirus pubis L. [sic]; Tillyard 1926: 135.
Phthirus pubis (Linnaeus, 1758); Ferris 1935: 603, figs 335–337.
Phthirus pubis (Linnaeus, 1758); Helson 1956: 14, 17.
Phthirus pubis; Miller 1971: 131, fig. 342.
Phthirus pubis; Andrews 1976a: 61.
Pthirus pubis (Linnaeus, 1758); Wise 1977: 66.
Pthirus pubis (Linnaeus, 1758); Kim *et al.* 1986: 210, pl. 76.
Pthirus pubis (Linnaeus, 1758); Tenquist & Charleston 2001: 518.
Phthirus pubis (Linnaeus, 1758); Palma 2010: 296.
Pthirus pubis (Linnaeus, 1758); Palma 2010: 409.

Syntypes probably lost (Kim *et al.* 1986: 210).

Type host: *Homo sapiens* Linnaeus, 1758.

New Zealand host: *Homo sapiens* Linnaeus, 1758.

Other hosts: Occasionally recorded on dogs and other animals (Lupidio 1980: 30; Kim *et al.* 1986: 210).

New Zealand localities: HB, TK, WN, NN, NC, MC, SC.

Geographic distribution: Cosmopolitan.

New Zealand references: Myers (1922); Thomson (1922); Tillyard (1926); Helson (1956); Miller (1971); Pilgrim (1974: 1033, fig. 4); Andrews (1976a, 1976b: 62); Wise (1977); Tenquist & Charleston (1981: 272); Tenquist & Charleston (2001); Palma (2010).

Other significant references: Nuttall (1918: 383, figs 1, 3–5, 7–9); Nuttall (1919: 345); Ferris (1935); Buxton (1939: 93, fig. 25); Séguy (1944: 458, figs 735–736); Webb (1946: 82); Hopkins (1949b: 452); Ferris (1951: 281, figs 122–124); Kraus & Glassman (1976); Lupidio (1980: 30); Maunder (1983: 7, figs 6, 13); Girling (1984: 207); Kim *et al.* (1986); Burns (1987: 741); Durden & Musser (1994a: 76); Durden & Musser (1994b: 140); Barker (1996: 247); Kenward (1999); Palma & Jensen (2005: 60, 69); Reed *et al.* (2007); Clayton *et al.* (2015: 169); Reed *et al*. (2015: 203).

Remarks: The pubic louse was introduced to New Zealand with humans. Both Polynesians and Europeans brought pubic lice with them (Andrews 1976a: 59; Andrews 1976b: 64).

Family POLYPLACIDAE Fahrenholz, 1912

Polyplacidae Fahrenholz, 1912. *Jahrb. Niedersächs. Zool Ver. Hannover 2–4*: 58. Type genus: *Polyplax* Enderlein, 1904 (as Polyplacinae).

Genus *Haemodipsus* Enderlein, 1904

Haemodipsus Enderlein, 1904b. *Zool. Anz. 28*: 139, 143. Type species: *Haemodipsus lyriocephalus* (Burmeister, 1838b) (by original designation).

***Haemodipsus lyriocephalus* (Burmeister, 1838)**

Figs 208–209

Pediculus lyriocephalus Burmeister, 1838b: Species 11, fig. 7.
Haematopinus lyriocephalus (Burmeister); Denny 1842: 27, pl. 24: fig. 4.
Haemodipsus lyriocephalus (Burmeister, 1838); Enderlein 1904b: 143.
Haemodipsus lyriocephalus (Burmeister, 1839) [sic]; Ferris 1932b: 330, figs 202–203.
Haemodipsus lyriocephalus (Burmeister, 1839) [sic]; Wise 1977: 67.
Haemodipsus lyriocephalus (Burmeister, 1839) [sic]; Tenquist & Charleston 2001: 503.
Haemodipsus lyriocephalus (Burmeister, 1839) [sic]; Palma 2010: 409.

Status, sex and repository of types unknown.

Type host: *Lepus timidus* Linnaeus, 1758.

New Zealand host: *Lepus europaeus occidentalis* de Winton, 1898.

Other hosts: *Lepus europaeus* Pallas, 1778; *Lepus sinensis* J.E. Gray, 1832; *Lepus tolai* Pallas, 1778; *Lepus arcticus* Ross, 1819.

New Zealand locality: HB.

Geographic distribution: Eurasia; Australasia; South America.

New Zealand references: Pilgrim (1970: 78); Wise (1977); Tenquist & Charleston (1981: 267); King (1990: 170); Tenquist & Charleston (2001); King (2005: 156); Palma (2010).

Other significant references: Ferris (1932b); Séguy (1944: 443, figs 708–709); Webb (1946: 72); Hopkins (1949b: 453); Ferris (1951: 179, fig. 80); Broekhuizen (1971: 158, figs 1, 7); Durden & Musser (1994a: 56); Durden & Musser (1994b: 166).

Remarks: *Haemodipsus lyriocephalus* was introduced to New Zealand with hares by human agency (King 2005: 152).

As it can be seen in the above synonymy, there is a discrepancy in the literature regarding the original date of publication of *Pediculus lyriocephalus* Burmeister. This also applies to other species described in the same book (see Remarks under *Polyplax serrata* and *P. spinulosa* below). A comprehensive literature research has failed to show any evidence that the date "1839" for these species is correct. Therefore, I have changed it to "1838", as stated on the title page of Burmeister (1838b). See also Durden *et al*. (2014: 258).

***Haemodipsus ventricosus* (Denny, 1842)**

Haematopinus ventricosus Denny, 1842: 30, pl. 25: fig. 6.
Haematopinus ventricosus Denny, 1842; Enderlein 1904b: 143.
Haematopinus ventricosus Denny; Myers 1922: 12.
Haematopinus ventricosus Denny; Thomson 1922: 339.
Haemodipsus ventricosus Denny [sic]; Tillyard 1926: 135.
Haemodipsus ventricosus (Denny, 1842); Ferris 1932b: 332, figs 204–205.
Haemodipsus ventricosus (Denny); Helson 1956: 14, 17.
Haemodipsus ventricosus; Miller 1971: 131.
Haemodipsus ventricosus (Denny, 1842); Wise 1977: 67.
Haemodipsus ventricosus (Denny, 1842); Tenquist & Charleston 2001: 503.
Haemodipsus ventricosus (Denny, 1842); Palma 2010: 409.

Lectotype ♀ in NHML (Kim *et al.* 1986: 170).

Type host: *Oryctolagus cuniculus* (Linnaeus, 1758).

New Zealand host: *Oryctolagus cuniculus* (Linnaeus, 1758).

Other hosts: None. See Durden & Musser (1994a: 57) for erroneous host records.

New Zealand localities: BP, HB, WA, MC, AU, Macquarie Island.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Myers (1922); Thomson (1922); Tillyard (1926); Helson (1956); Bull (1960: 268); Miller (1971: 131); Wise (1977); Tenquist & Charleston (1981: 267); King (1990: 156); Tenquist & Charleston (2001); King (2005: 145); Palma (2010).

Other significant references: Ferris (1916b: 102, fig. 3); Ferris (1932b); Séguy (1944: 443, figs 710–711); Hopkins (1949b: 454); Ferris (1951: 179, figs 81–82); Kim *et al.* (1986: 170, pl. 57); Durden & Musser (1994a: 57); Durden & Musser (1994b: 166); Barker (1996: 246); Durden (2001: 8).

Remarks: *Haemodipsus ventricosus* was introduced to the New Zealand mainland and some Subantarctic islands with rabbits by human agency (Bull 1960; King 2005: 133).

Genus *Polyplax* Enderlein, 1904

Polyplax Enderlein, 1904b. *Zool. Anz. 28*: 139, 142. Type species: *Polyplax spinulosa* (Burmeister, 1838b) (by original designation).

Polyplax serrata (Burmeister, 1838)

Figs 210–211

Pediculus serratus Burmeister, 1838b: Species 6.
Haematopinus serratus; Denny 1842: 36.
Haematopinus serratus (Burmeister, 1838); Enderlein 1904b: 142.
Polyplax serrata (Burmeister, 1839) [sic]; Ferris 1923: 191, figs 120B, E.
Polyplax serrata (Burmeister, 1839) [sic]; Gibson & Pilgrim 1986: 95.
Polyplax serrata (Burmeister, 1839) [sic]; Tenquist & Charleston 2001: 516.
Polyplax serrata (Burmeister, 1839) [sic]; Palma: 409.

Status, sex and repository of types uncertain (Kim *et al.* 1986: 204).

Type host: *Mus musculus* Linnaeus, 1758.

New Zealand host: *Mus musculus* Linnaeus, 1758.

Other hosts: *Crocidura leucodon* (Hermann, 1780); *Clethrionomys glareolus* (Schreber, 1780); *Microtus arvalis* (Pallas, 1778); and nine species of *Apodemus* (see Durden & Musser 1994a: 73).

New Zealand localities: WN, MC.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Tenquist & Charleston (1981: 271); Gibson & Pilgrim (1986); King (1990: 241); Tenquist & Charleston (2001); King (2005: 171, 219); Palma (2010).

Other significant references: Ferris (1923); Hopkins (1949b: 482); Ferris (1951: 210); Murray (1961: 1); Wegner (1974: 203); Kim *et al.* (1986: 204, pl. 74); Durden & Musser (1994a: 73); Durden & Musser (1994b: 159); Barker (1996: 246); Durden (2001: 8).

Remarks: *Polyplax serrata* was introduced to New Zealand with mice by human agency (King 2005: 205). King (1990: 189) cites *P. serrata* as a parasite of *Rattus exulans*, but that record is regarded here as accidental, either from natural straggling or from contamination by human agency.

As it can be seen in the above synonymy, there is a discrepancy in the literature regarding the original date of publication of *Pediculus serratus* Burmeister. This also applies to other species described in the same book (see Remarks under *Haemodipsus lyriocephalus* and *Polyplax spinulosa*). A comprehensive literature research has failed to show any evidence that the date "1839" for these species is correct. Therefore, I have changed it to "1838", as stated on the title page of Burmeister (1838b). See also Durden *et al*. (2014: 258).

Polyplax spinulosa (Burmeister, 1838)

Pediculus spinulosus Burmeister, 1838b: Species 8.
Haematopinus spinulosus (Burmeister); Denny 1842: 26, pl. 24: fig. 5.
Polyplax spinulosa (Burmeister, 1838); Enderlein 1904b: 142.
Polyplax spinulosa (Burmeister, 1839) [sic]; Ferris 1923: 187, figs 119, 120A, D, F, H.
Polyplax spinulosa (Burmeister, 1839) [sic]; Clay 1964a: 233.
Polyplax spinulosa (Burmeister, 1839) [sic]; Watt, 1971: 238, 244.
Polyplax spinulosa (Burmeister, 1839) [sic]; Wise 1977: 67.
Polyplax spinulosa (Burmeister, 1839) [sic]; Gibson & Pilgrim 1986: 95.
Polyplax spinulosa (Burmeister, 1839) [sic]; Tenquist & Charleston 2001: 517.
Polyplax spinulosa (Burmeister, 1839) [sic]; Palma 2010: 409.

Status, sex and repository of types uncertain (Kim *et al.* 1986: 206).

Type host: *Rattus norvegicus* (Berkenhout, 1769).

New Zealand hosts: *Rattus exulans* (Peale, 1848); *Rattus norvegicus* (Berkenhout, 1769); *Rattus rattus* (Linnaeus, 1758).

Other hosts: *Rattus argentiventer* (Robinson & Kloss, 1916); *Rattus nitidus* (Hodgson, 1845); *Rattus tanezumi* Temminck, 1844; *Rattus turkestanicus* (Satunin, 1903); *Bandicota bengalensis* (J.E. Gray & Hardwicke, 1833).

New Zealand localities: ND, AK, CL, BP, TO, HB, WA, WN, BR, NC, MC, SC, KE, SI, Macquarie Island.

Geographic distribution: All continents, except Antarctica.

New Zealand references: Clay (1964a); Gressitt (1964: 539); Watson (1967: 74); Watt (1971); Wise (1977); Tenquist & Charleston (1981: 271); Gibson & Pilgrim (1986); King (1990: 204, 221); Tenquist & Charleston (2001); Palma & Horning (2002: 14, 18); King (2005: 184, 199); Palma (2010).

Other significant references: Enderlein (1905: 192); Fahrenholz (1912: 30, figs 8–10, pl. 2: figs 8–13); Cummings (1915: 256, 268, figs, 7, 15–16); Ferris (1923); Séguy (1944: 432, figs 677–682); Hopkins (1949b: 481); Kim *et al.* (1986: 206, pl. 75); Green & Palma (1991: 21, 24); Durden & Musser (1994a: 73); Durden & Musser (1994b: 160); Barker (1996: 246); Durden (2001: 8); Palma & Peck (2013: 67).

Remarks: *Polyplax spinulosa* was introduced to New Zealand with rats by human agency (King 2005: 176, 189). As it can be seen in the above synonymy, there is a discrepancy in the literature regarding the original date of publication of *Pediculus spinulosus* Burmeister. This also applies to other species described in the same book (see Remarks under *Haemodipsus lyriocephalus* and *Polyplax serrata* above). A comprehensive literature research has failed to show any evidence that the date "1839" for these species is correct. Therefore, I have changed it to "1838", as stated on the title page of Burmeister (1838b). See also Durden *et al*. (2014: 258).

SPECIES & SUBSPECIES DELETED FROM THE NEW ZEALAND LOUSE FAUNA

***Goniodes gigas* (Taschenberg, 1879)**

Wise (1977: 60) recorded this species following its inclusion by Helson (1956: 13, as *Goniocotes gigas*) in a list of arthropods affecting livestock in New Zealand. However, no specimens of this species have been collected, examined or recorded since that report. Instead, another similar species, *Goniodes dissimilis* (Denny, 1842) has been found parasitising chickens in New Zealand (Thomson 1922; Whitten 1971; Palma 1999: 384). Helson's (1956) record is most likely the result of a misidentification. Therefore, I delete *Goniodes gigas* from the New Zealand louse fauna.

***Holomenopon clypeilargum* Eichler, 1943**

Price (1971: 643) identified one female from *Aythya novaeseelandiae* as *Holomenopon clypeilargum*, and Price *et al*. (2003: 112, 279) repeated that host-louse association. However, examination of more specimens of both sexes showed that they belong to a yet unnamed and undescribed species. Therefore, Pilgrim & Palma (1982: 17) listed this record under *Aythya novaeseelandiae* as "*Holomenopon* sp." and included an explanatory note (Pilgrim & Palma 1982: 30, note 19). See also entry "***Holomenopon* species**" above.

***Lunaceps numenii numenii* (Denny, 1842)**

Pilgrim & Palma (1982: 20) recorded *Lunaceps numenii numenii* (Denny, 1842) from *Numenius madagascariensis*. However, that population is now known as *Lunaceps numenii madagascariensis* Gustafsson & Olsson, 2012. Therefore, I delete the nominate subspecies from the New Zealand louse fauna.

***Lunaceps incoenis* (Kellogg & Chapman, 1899)**

Pilgrim & Palma (1982: 21) recorded *Lunaceps incoenis* (Kellogg & Chapman, 1899) *s. l.* from *Calidris ferruginea*. However, that population is now known as *Lunaceps falcinellus* Timmermann, 1954, as determined by Gustafsson & Olsson (2012b: 24). Therefore, I delete *Lunaceps incoenis* from the New Zealand louse fauna.

***Perineus concinnus* (Kellogg & Chapman, 1899)**

Wise (1977: 63) listed this species following a report by Harrison (1937: 29). However, Pilgrim & Palma (1979: 177; 1982: 29) showed that it was a misidentification of *Perineus circumfasciatus* Kéler, 1957. Therefore, I delete *Perineus concinnus* from the New Zealand louse fauna.

***Sturnidoecus* sp.**

Watt (1971: 238, 244) listed 4 nymphs of "*Sturnidoecus* sp." from *Prosthemadera novaeseelandiae novaeseelandiae*. Re-examination of those nymphs shows that it is a misidentification of a *Saemundssonia* sp. and most likely the result of a contamination (see also Pilgrim & Palma 1982: 31, note 25).

HOST-PARASITE LIST

Louse taxa are listed under each host taxon in alphabetical order according to genera.

♦ Denotes louse species or subspecies which are **endemic** to the New Zealand Subregion.

♣ Denotes louse species or subspecies which are **new records** from the New Zealand Subregion.

ε Denotes host species or subspecies which breed in the New Zealand Subregion **only**, even if their geographical ranges extend outside the Subregion.

* Denotes host species or subspecies which have been **introduced** to the New Zealand Subregion by human agency.

AVES

CASUARIIFORMES
APTERYGIDAE

ε***Apteryx mantelli* Bartlett, 1852** — **North Island brown kiwi**
- ♦ *Apterygon mirum* Clay, 1961
- ♦ *Rallicola* (*Aptericola*) *rodericki* Palma, 1991

ε***Apteryx rowi* Tennyson, Palma, Robertson, Worthy & Gill, 2003** — **Okarito brown kiwi**
- ♦ *Apterygon okarito* Palma & Price, 2004
- ♦ *Rallicola* (*Aptericola*) *gadowi* Harrison, 1915 *sensu lato*

ε***Apteryx australis australis* Shaw, 1813** — **South Island brown kiwi**
- ♦ *Apterygon dumosum* Tandan, 1972
- ♦ *Rallicola* (*Aptericola*) *gadowi* Harrison, 1915

ε***Apteryx australis lawryi* Rothschild, 1893** — **Stewart Island brown kiwi**
- ♦ *Apterygon dumosum* Tandan, 1972
- ♦ *Rallicola* (*Aptericola*) *gadowi* Harrison, 1915 *sensu lato*

ε***Apteryx owenii* Gould, 1847** — **Little spotted kiwi**
- ♦ *Apterygon dumosum* Tandan, 1972
- ♦ *Rallicola* (*Aptericola*) *gadowi* Harrison, 1915 *sensu lato*
- ♦ *Rallicola* (*Aptericola*) *pilgrimi* Clay, 1972

ε***Apteryx haastii* Potts, 1872** — **Great spotted kiwi**
- ♦ *Apterygon hintoni* Clay, 1966
- ♦ *Rallicola* (*Aptericola*) *gracilentus* Clay, 1953

GALLIFORMES
PHASIANIDAE

* ***Callipepla californica brunnescens* (Ridgway, 1884)** — **California quail**
- *Goniodes stefani* Clay & Hopkins 1955
- *Lagopoecus docophoroides* (Piaget, 1880)
- *Oxylipeurus ellipticus* (Kéler, 1958)

*** *Numida meleagris* (Linnaeus, 1758) [captive]** — **Helmeted Guineafowl**
Menopon gallinae (Linnaeus, 1758)
Lipeurus caponis (Linnaeus, 1758)

*** *Alectoris chukar* (J.E. Gray, 1830)** — **Chukor**
Cuclotogaster heterographus (Nitzsch [*in* Giebel], 1866)
Goniocotes pusillus (Nitzsch [*in* Giebel], 1866)
Goniodes dispar Burmeister, 1838

*** *Perdix perdix perdix* (Linnaeus, 1758)** — **Grey partridge**
Amyrsidea (*Argimenopon*) *perdicis* (Denny, 1842)
Lipeurus maculosus maculosus Clay, 1938

*** *Coturnix ypsilophora australis* (Latham, 1802)** — **Australian brown quail**
Cuclotogaster synoicus (Clay, 1938)
Goniodes retractus Le Souëf, 1902

*** *Colinus virginianus taylori* Lincoln, 1915** — **Midwestern bobwhite quail**
Goniodes ortygis (Denny, 1842)
Oxylipeurus clavatus (McGregor, 1917)

*** *Gallus gallus gallus* (Linnaeus, 1758)** — **Feral chicken**
Cuclotogaster heterographus (Nitzsch [*in* Giebel], 1866)
Goniocotes gallinae (De Geer, 1778)
Goniodes dissimilis (Denny, 1842)
Lipeurus caponis (Linnaeus, 1758)
Menacanthus pallidulus (Neumann, 1912)
Menacanthus stramineus (Nitzsch, 1818)
Menopon gallinae (Linnaeus, 1758)

*** *Phasianus colchicus* Linnaeus, 1758** — **Common pheasant**
Amyrsidea (*Argimenopon*) *perdicis* (Denny, 1842)
Goniocotes chrysocephalus Giebel, 1874
Goniodes colchici (Denny, 1842)
Lipeurus maculosus maculosus Clay, 1938
Menacanthus pallidulus (Neumann, 1912)
Oxylipeurus mesopelios colchicus Clay, 1938

*** *Pavo cristatus* Linnaeus, 1758** — **Peafowl**
Amyrsidea (*Argimenopon*) *minuta* Emerson, 1961
Colpocephalum tausi (Ansari, 1951)
Goniodes pavonis (Linnaeus, 1758)

*** *Meleagris gallopavo gallopavo* Linnaeus, 1758** — **Wild turkey**
Chelopistes meleagridis (Linnaeus, 1758)
Lipeurus caponis (Linnaeus, 1758)
Menacanthus stramineus (Nitzsch, 1818)
Oxylipeurus polytrapezius polytrapezius (Burmeister, 1838)

ANSERIFORMES
ANATIDAE

***Dendrocygna eytoni* (Eyton, 1838)** — **Plumed whistling duck**
Holomenopon leucoxanthum (Burmeister, 1838)
♣ *Acidoproctus emersoni* Timmermann, 1962

*** *Cygnus olor* (Gmelin, 1789)** — **Mute swan**
Anatoecus icterodes oloris Złotorzycka, 1970
Ornithobius bucephalus (Giebel, 1874)

***Cygnus atratus* (Latham, 1790)** — **Black swan**
Anatoecus dentatus magnicornutus Złotorzycka, 1970
Anatoecus icterodes oloris Złotorzycka, 1970

Anatoecus singhi Palma, 2015
Ciconiphilus pectiniventris (Harrison, 1916)
Holomenopon leucoxanthum (Burmeister, 1838)
Ornithobius fuscus Le Souëf, 1902
Trinoton nigrum Le Souëf, 1902

*** *Anser anser* (Linnaeus, 1758)** — **Greylag goose**
Anaticola anseris (Linnaeus, 1758)
Ciconiphilus pectiniventris (Harrison, 1916)

*** *Branta canadensis maxima* Delacour, 1951** — **Canada goose**
Anaticola anseris (Linnaeus, 1758)
Ciconiphilus pectiniventris (Harrison, 1916)
Holomenopon leucoxanthum (Burmeister, 1838)
Ornithobius goniopleurus (Denny, 1842)
Trinoton querquedulae (Linnaeus, 1758)

ᵉ ***Tadorna variegata* (Gmelin, 1789)** — **Paradise shelduck**
Anaticola magnificus Ansari, 1955
Anatoecus dentatus (Scopoli, 1763) *sensu lato*
Anatoecus icterodes (Nitzsch, 1818) *sensu lato*
Holomenopon tadornae (Gervais, 1844)
Trinoton querquedulae (Linnaeus, 1758)

***Tadorna tadornoides* (Jardine & Selby, 1828)** — **Chestnut-breasted shelduck**
Anaticola magnificus Ansari, 1955
Anatoecus icterodes (Nitzsch, 1818) *sensu lato*
Holomenopon tadornae (Gervais, 1844)

***Chenonetta jubata* (Latham, 1802)** — **Australian wood duck**
Anaticola species
Anatoecus dentatus (Scopoli, 1763) *sensu lato*

ᵉ ***Hymenolaimus malacorhynchos* (Gmelin, 1789)** — **Blue duck**
♦ *Acidoproctus gottwaldhirschi* Eichler, 1958
Anatoecus icterodes (Nitzsch, 1818) *sensu lato*

***Anas gracilis* Buller, 1869** — **Grey teal**
Anaticola crassicornis (Scopoli, 1763)
Anatoecus dentatus (Scopoli, 1763) *sensu lato*
Anatoecus icterodes (Nitzsch, 1818) *sensu lato*
Holomenopon leucoxanthum (Burmeister, 1838)
Trinoton querquedulae (Linnaeus, 1758)

ᵉ ***Anas chlorotis* G.R. Gray, 1845** — **Brown teal**
Anaticola species
Anatoecus dentatus (Scopoli, 1763) *sensu lato*
Anatoecus icterodes (Nitzsch, 1818) *sensu lato*
Trinoton querquedulae (Linnaeus, 1758)

ᵉ ***Anas aucklandica* (G.R. Gray, 1849)** — **Auckland Island teal**
Holomenopon leucoxanthum (Burmeister, 1838)

*** *Anas platyrhynchos platyrhynchos* Linnaeus, 1758** — **Mallard**
Anaticola crassicornis (Scopoli, 1763)
Anatoecus dentatus (Scopoli, 1763) *sensu lato*
Anatoecus icterodes (Nitzsch, 1818) *sensu lato*
Holomenopon leucoxanthum (Burmeister, 1838)
Trinoton querquedulae (Linnaeus, 1758)

***Anas superciliosa* Gmelin, 1789** — **Grey duck**
Anaticola crassicornis (Scopoli, 1763)
Anatoecus dentatus (Scopoli, 1763) *sensu lato*

Anatoecus icterodes (Nitzsch, 1818) *sensu lato*
Trinoton querquedulae (Linnaeus, 1758)

***Anas rhynchotis* Latham, 1802** — **Australasian shoveler**
Anaticola crassicornis (Scopoli, 1763)
Anatoecus icterodes (Nitzsch, 1818) *sensu lato*
Holomenopon species 2
Trinoton querquedulae (Linnaeus, 1758)

ᵉ***Aythya novaeseelandiae* (Gmelin, 1789)** — **New Zealand scaup**
Anaticola crassicornis (Scopoli, 1763)
Anatoecus dentatus (Scopoli, 1763) *sensu lato*
Anatoecus icterodes (Nitzsch, 1818) *sensu lato*
♦ *Holomenopon* species 1
Trinoton querquedulae (Linnaeus, 1758)

PODICIPEDIFORMES
PODICIPEDIDAE

***Podiceps cristatus australis* Gould, 1844** — **Australasian crested grebe**
♣ *Aquanirmus podicepis* (Denny, 1842)

ᵉ***Poliocephalus rufopectus* (G.R. Gray, 1843)** — **New Zealand dabchick**
♦ *Aquanirmus australis* Kettle, 1974

SPHENISCIFORMES
SPHENISCIDAE

***Aptenodytes forsteri* G.R. Gray, 1844** — **Emperor penguin**
Austrogoniodes mawsoni Harrison, 1937

***Aptenodytes patagonicus* J.F. Miller, 1778** — **King penguin**
Nesiotinus demersus Kellogg, 1903

***Pygoscelis adeliae* (Hombron & Jacquinot, 1841)** — **Adelie penguin**
Austrogoniodes antarcticus Harrison, 1937

***Eudyptes filholi* Hutton, 1879** — **Eastern rockhopper penguin**
Austrogoniodes cristati Kéler, 1952
Austrogoniodes hamiltoni Harrison, 1937
Austrogoniodes macquariensis Harrison, 1937

ᵉ***Eudyptes pachyrhynchus* G.R. Gray, 1845** — **Fiordland crested penguin**
Austrogoniodes concii (Kéler, 1952)
Austrogoniodes cristati Kéler, 1952

ᵉ***Eudyptes robustus* Oliver, 1953** — **Snares crested penguin**
Austrogoniodes concii (Kéler, 1952)
Austrogoniodes cristati Kéler, 1952

ᵉ***Eudyptes sclateri* Buller, 1888** — **Erect-crested penguin**
Austrogoniodes concii (Kéler, 1952)
Austrogoniodes cristati Kéler, 1952
Austrogoniodes strutheus Harrison, 1915 *nomen dubium*

***Eudyptes chrysolophus* (Brandt, 1837)** — **Macaroni penguin**
Austrogoniodes cristati Kéler, 1952
Austrogoniodes macquariensis Harrison, 1937 *sensu lato*

ᵉ***Eudyptes schlegeli* Finsch, 1876** — **Royal penguin**
Austrogoniodes cristati Kéler, 1952
Austrogoniodes hamiltoni Harrison, 1937

Austrogoniodes macquariensis Harrison, 1937

[e] ***Megadyptes antipodes* (Hombron & Jacquinot, 1841)** — **Yellow-eyed penguin**
Austrogoniodes concii (Kéler, 1952)
♦ *Austrogoniodes vanalphenae* Banks & Palma, 2003

***Eudyptula minor* (J.R. Forster, 1781)** — **Little penguin**
Austrogoniodes waterstoni (Cummings, 1914)

PROCELLARIIFORMES
DIOMEDEIDAE

***Diomedea exulans* Linnaeus, 1758** — **Wandering albatross**
Austromenopon affine (Piaget, 1890)
Docophoroides brevis (Dufour, 1835)
Episbates pederiformis (Dufour, 1835)
Harrisoniella hopkinsi Eichler, 1952
Paraclisis hyalina (Neumann, 1911)
Perineus concinnoides Kéler, 1957

[e] ***Diomedea antipodensis antipodensis* Robertson & Warham, 1992** — **Antipodean albatross**
Austromenopon affine (Piaget, 1890)
Docophoroides brevis (Dufour, 1835)
Episbates pederiformis (Dufour, 1835)
Harrisoniella hopkinsi Eichler, 1952
Paraclisis hyalina (Neumann, 1911)

[e] ***Diomedea antipodensis gibsoni* Robertson & Warham, 1992** — **Gibson's albatross**
Docophoroides brevis (Dufour, 1835)
Episbates pederiformis (Dufour, 1835)
Paraclisis hyalina (Neumann, 1911)

[e] ***Diomedea epomophora* Lesson, 1825** — **Southern royal albatross**
Austromenopon affine (Piaget, 1890)
Docophoroides brevis (Dufour, 1835)
Episbates pederiformis (Dufour, 1835)
Harrisoniella hopkinsi Eichler, 1952
Paraclisis hyalina (Neumann, 1911)
Perineus concinnoides Kéler, 1957

[e] ***Diomedea sanfordi* Murphy, 1917** — **Northern royal albatross**
Austromenopon affine (Piaget, 1890)
Docophoroides brevis (Dufour, 1835)
Episbates pederiformis (Dufour, 1835)
Harrisoniella hopkinsi Eichler, 1952
Paraclisis hyalina (Neumann, 1911)
Perineus concinnoides Kéler, 1957

***Thalassarche chlororhynchos* (Gmelin, 1789)** — **Atlantic yellow-nosed-albatross**
Paraclisis diomedeae (J.C. Fabricius, 1775)
Perineus circumfasciatus Kéler, 1957

***Thalassarche chrysostoma* (J.R. Forster, 1785)** — **Grey-headed albatross**
Austromenopon navigans (Kellogg, 1896)
Austromenopon pinguis (Kellogg, 1896)
Docophoroides simplex (Waterston, 1914)
Paraclisis diomedeae (J.C. Fabricius, 1775)
Perineus circumfasciatus Kéler, 1957
Saemundssonia (*Saemundssonia*) *albatrossa* Palma, 2012

***Thalassarche melanophris* (Temminck, 1828)** — **Black-browed albatross**
Austromenopon navigans (Kellogg, 1896)
Austromenopon pinguis (Kellogg, 1896)

Docophoroides harrisoni Waterston, 1917
Docophoroides simplex (Waterston, 1914)
Harrisoniella ferox (Giebel, 1867)
Paraclisis diomedeae (J.C. Fabricius, 1775)
Perineus circumfasciatus Kéler, 1957

[e] ***Thalassarche impavida*** **Mathews, 1912** — **Campbell black-browed albatross**
Austromenopon pinguis (Kellogg, 1896)
Docophoroides simplex (Waterston, 1914)
Harrisoniella ferox (Giebel, 1867)
Paraclisis diomedeae (J.C. Fabricius, 1775)
Perineus circumfasciatus Kéler, 1957
Saemundssonia (*Saemundssonia*) *albatrossa* Palma, 2012

[e] ***Thalassarche bulleri bulleri*** **(Rothschild, 1888)** — **Southern Buller's albatross**
Austromenopon navigans (Kellogg, 1896)
Austromenopon pinguis (Kellogg, 1896)
Docophoroides harrisoni Waterston, 1917
Harrisoniella ferox (Giebel, 1867)
Paraclisis diomedeae (J.C. Fabricius, 1775)
Perineus circumfasciatus Kéler, 1957

[e] ***Thalassarche bulleri platei*** **(Reichenow, 1898)** — **Northern Buller's albatross**
Austromenopon navigans (Kellogg, 1896)
Austromenopon pinguis (Kellogg, 1896)
Docophoroides harrisoni Waterston, 1917
Harrisoniella ferox (Giebel, 1867)
Paraclisis diomedeae (J.C. Fabricius, 1775)
Perineus circumfasciatus Kéler, 1957

[e] ***Thalassarche cauta steadi*** **Falla, 1933** — **New Zealand white-capped albatross**
Austromenopon navigans (Kellogg, 1896)
Austromenopon pinguis (Kellogg, 1896)
Docophoroides harrisoni Waterston, 1917
Harrisoniella ferox (Giebel, 1867)
Paraclisis diomedeae (J.C. Fabricius, 1775)
Perineus circumfasciatus Kéler, 1957

[e] ***Thalassarche eremita*** **Murphy, 1930** — **Chatham Island albatross**
Austromenopon navigans (Kellogg, 1896)
Docophoroides harrisoni Waterston, 1917
Harrisoniella ferox (Giebel, 1867)
Paraclisis diomedeae (J.C. Fabricius, 1775)
Perineus circumfasciatus Kéler, 1957

[e] ***Thalassarche salvini*** **(Rothschild, 1878)** — **Salvin's albatross**
Austromenopon navigans (Kellogg, 1896)
Austromenopon pinguis (Kellogg, 1896)
Docophoroides harrisoni Waterston, 1917
Harrisoniella ferox (Giebel, 1867)
Paraclisis diomedeae (J.C. Fabricius, 1775)
Perineus circumfasciatus Kéler, 1957

Phoebetria fusca **(Hilsenberg, 1822)** — **Sooty albatross**
Perineus circumfasciatus Kéler, 1957

Phoebetria palpebrata **(J.R. Forster, 1785)** — **Light-mantled sooty albatross**
Austromenopon pinguis (Kellogg, 1896)
Docophoroides simplex (Waterston, 1914)
Paraclisis diomedeae (J.C. Fabricius, 1775)
Perineus circumfasciatus Kéler, 1957
Saemundssonia (*Saemundssonia*) *albatrossa* Palma, 2012

PROCELLARIIDAE

***Macronectes giganteus* (Gmelin, 1789)** — **Southern giant petrel**
Austromenopon ossifragae (Eichler, 1949)
Docophoroides murphyi (Kellogg, 1914)
Paraclisis miriceps (Kellogg & Kuwana, 1902)
Paraclisis obscura (Rudow, 1869)
Perineus macronecti Palma & Pilgrim, 1988
Saemundssonia (*Saemundssonia*) *gaini* (Neumann, 1913)

***Macronectes halli* Mathews, 1912** — **Northern giant petrel**
Austromenopon ossifragae (Eichler, 1949)
Docophoroides murphyi (Kellogg, 1914)
Paraclisis obscura (Rudow, 1869)
Perineus macronecti Palma & Pilgrim, 1988
Saemundssonia (*Saemundssonia*) *gaini* (Neumann, 1913)

***Fulmarus glacialoides* (A. Smith, 1826)** — **Antarctic fulmar**
Ancistrona vagelli (J.C. Fabricius, 1787)
Austromenopon brevifimbriatum (Piaget, 1880)
Perineus nigrolimbatus (Giebel, 1874)
Saemundssonia (*Saemundssonia*) *bicolor* (Rudow, 1870)

***Thalassoica antarctica* (Gmelin, 1789)** — **Antarctic petrel**
Ancistrona vagelli (J.C. Fabricius, 1787)
Austromenopon brevifimbriatum (Piaget, 1880)
Pseudonirmus lugubris (Taschenberg, 1882)
Saemundssonia (*Saemundssonia*) *antarctica* (Wood, 1937)

***Daption capense capense* (Linnaeus, 1758)** — **Cape petrel**
Ancistrona vagelli (J.C. Fabricius, 1787)
Austromenopon brevifimbriatum (Piaget, 1880)
Pseudonirmus gurlti (Taschenberg, 1882)
Saemundssonia (*Saemundssonia*) *stammeri* Timmermann, 1959

***Daption capense australe* Mathews, 1913** — **Snares Cape petrel**
Ancistrona vagelli (J.C. Fabricius, 1787)
Pseudonirmus gurlti (Taschenberg, 1882)
Saemundssonia (*Saemundssonia*) *stammeri* Timmermann, 1959

***Pagodroma nivea nivea* (G. Forster, 1777)** — **Lesser snow petrel**
Pseudonirmus charcoti (Neumann, 1907)

***Pagodroma nivea major* (Schlegel, 1863)** — **Greater snow petrel**
Pseudonirmus charcoti (Neumann, 1907)
Saemundssonia (*Saemundssonia*) *antarctica* (Wood, 1937)

***Lugensa brevirostris* (Lesson, 1833)** — **Kerguelen petrel**
Ancistrona vagelli (J.C. Fabricius, 1787)
Austromenopon popellus (Piaget, 1890)
Bedfordiella unica Thompson, 1937
Longimenopon species
Saemundssonia (*Saemundssonia*) *pterodromae* Timmermann, 1959

[e] ***Pterodroma macroptera gouldi* (Hutton, 1869)** — **Grey-faced petrel**
Ancistrona vagelli (J.C. Fabricius, 1787)
Austromenopon popellus (Piaget, 1890)
Halipeurus procellariae (J.C. Fabricius, 1775)
Naubates (*Guenterion*) *heteroproctus* Harrison, 1937
Saemundssonia (*Puffinoecus*) *enderleini* (Eichler, 1949)
Trabeculus schillingi Rudow, 1866 *sensu lato*

***Pterodroma lessonii* (Garnot, 1826)** — **White-headed petrel**
Ancistrona vagelli (J.C. Fabricius, 1787)
Austromenopon popellus (Piaget, 1890)
Halipeurus procellariae (J.C. Fabricius, 1775)
Naubates (*Guenterion*) *lessonii* Palma & Pilgrim, 2002
Saemundssonia (*Puffinoecus*) *enderleini* (Eichler, 1949)
Trabeculus schillingi Rudow, 1866 *sensu lato*

***Pterodroma solandri* (Gould, 1844)** — **Providence petrel**
Naubates (*Naubates*) *thieli* Timmermann, 1965
Trabeculus schillingi Rudow, 1866 *sensu lato*

[e] ***Pterodroma magentae* (Giglioli & Salvadori, 1869)** — **Chatham Island taiko**
Ancistrona vagelli (J.C. Fabricius, 1787)
Austromenopon popellus (Piaget, 1890)
Halipeurus procellariae (J.C. Fabricius, 1775)
Halipeurus theresae Timmermann, 1969
Longimenopon species
Saemundssonia (*Puffinoecus*) species

***Pterodroma neglecta neglecta* (Schlegel, 1863)** — **Kermadec petrel**
Austromenopon popellus (Piaget, 1890)
Halipeurus kermadecensis (Johnston & Harrison, 1912)
Longimenopon species
Trabeculus fuscoclypeatus (Johnston & Harrison, 1912)

***Pterodroma mollis* (Gould, 1844)** — **Soft-plumaged petrel**
Austromenopon popellus (Piaget, 1890)
Halipeurus procellariae (J.C. Fabricius, 1775)
Naubates (*Guenterion*) *pterodromi* Bedford, 1930
Saemundssonia (*Puffinoecus*) *enderleini* (Eichler, 1949)
Trabeculus schillingi Rudow, 1866

[e] ***Pterodroma inexpectata* (J.R. Forster, 1844)** — **Mottled petrel**
Ancistrona vagelli (J.C. Fabricius, 1787)
Austromenopon species 2
Halipeurus consimilis Timmermann, 1960
Longimenopon species
Naubates (*Guenterion*) *pterodromi* Bedford, 1930
Trabeculus schillingi Rudow, 1866 *sensu lato*

***Pterodroma externa* (Salvin, 1875)** — **Juan Fernández petrel**
Austromenopon popellus (Piaget, 1890)
Halipeurus kermadecensis (Johnston & Harrison, 1912)
Trabeculus hexakon (Waterston, 1914) *sensu lato*

[e] ***Pterodroma cervicalis* (Salvin, 1891)** — **White-naped petrel**
Ancistrona vagelli (J.C. Fabricius, 1787)
Austromenopon popellus (Piaget, 1890)
Halipeurus noctivagus Timmermann, 1960
Naubates (*Guenterion*) *damma* Timmermann, 1961
Trabeculus species 1

***Pterodroma nigripennis* (Rothschild, 1893)** — **Black-winged petrel**
Ancistrona vagelli (J.C. Fabricius, 1787)
Austromenopon species 1
Halipeurus confusus Palma, 2011
Longimenopon species
Trabeculus hexakon (Waterston, 1914) *sensu lato*

[e] ***Pterodroma axillaris* (Salvin, 1893)** — **Chatham petrel**
Halipeurus theresae Timmermann, 1969
Trabeculus hexakon (Waterston, 1914) *sensu lato*

[e] ***Pterodroma cookii* (G.R. Gray, 1843)** *Ancistrona vagelli* (J.C. Fabricius, 1787) *Austromenopon* species 1 *Halipeurus turtur* Edwards, 1961 *Longimenopon* species *Naubates* (*Guenterion*) *damma* Timmermann, 1961 *Trabeculus hexakon* (Waterston, 1914) *sensu lato*	**Cook's petrel**
***Pterodroma longirostris* (Stejneger, 1893)** *Ancistrona vagelli* (J.C. Fabricius, 1787) *Austromenopon* species 1 *Halipeurus leucophryna* Timmermann, 1960 *Longimenopon* species *Trabeculus hexakon* (Waterston, 1914) *sensu lato*	**Stejneger's petrel**
[e] ***Pterodroma pycrofti* Falla, 1933** *Austromenopon* species 1 *Halipeurus leucophryna* Timmermann, 1960 *Longimenopon* species *Trabeculus hexakon* (Waterston, 1914) *sensu lato*	**Pycroft's petrel**
***Pterodroma leucoptera caledonica* Imber & Jenkins, 1981** *Austromenopon* species 1 *Halipeurus pricei* Palma, 2011 *Naubates* (*Guenterion*) *damma* Timmermann, 1961 *Trabeculus hexakon* (Waterston, 1914) *sensu lato*	**New Caledonian petrel**
***Halobaena caerulea* (Gmelin, 1789)** *Ancistrona vagelli* (J.C. Fabricius, 1787) *Austromenopon stammeri* Timmermann, 1963 *Longimenopon* species *Naubates* (*Guenterion*) *clypeatus* (Giebel, 1874) *Saemundssonia* (*Saemundssonia*) *pterodromae* Timmermann, 1959	**Blue petrel**
***Pachyptila vittata* (G. Forster, 1777)** *Ancistrona vagelli* (J.C. Fabricius, 1787) *Austromenopon stammeri* Timmermann, 1963 *Longimenopon* species *Naubates* (*Guenterion*) *prioni* (Enderlein, 1908) *Saemundssonia* (*Saemundssonia*) *desolata* Timmermann, 1959	**Broad-billed prion**
***Pachyptila salvini salvini* (Mathews, 1912)** *Ancistrona vagelli* (J.C. Fabricius, 1787) *Austromenopon stammeri* Timmermann, 1963 *Longimenopon* species *Naubates* (*Guenterion*) *prioni* (Enderlein, 1908) *Saemundssonia* (*Saemundssonia*) *desolata* Timmermann, 1959	**Salvin's prion**
***Pachyptila desolata* (Gmelin, 1789)** *Ancistrona vagelli* (J.C. Fabricius, 1787) *Austromenopon stammeri* Timmermann, 1963 *Longimenopon galeatum* Timmermann, 1957 *Naubates* (*Guenterion*) *prioni* (Enderlein, 1908) *Saemundssonia* (*Saemundssonia*) *desolata* Timmermann, 1959	**Antarctic prion**
***Pachyptila belcheri* (Mathews, 1912)** *Ancistrona vagelli* (J.C. Fabricius, 1787) *Austromenopon stammeri* Timmermann, 1963 *Longimenopon* species *Naubates* (*Guenterion*) *prioni* (Enderlein, 1908) *Saemundssonia* (*Saemundssonia*) *desolata* Timmermann, 1959	**Thin-billed prion**

***Pachyptila turtur* (Kuhl, 1820)** — **Fairy prion**
- *Ancistrona vagelli* (J.C. Fabricius, 1787)
- *Austromenopon stammeri* Timmermann, 1963
- *Longimenopon* species
- *Naubates* (*Guenterion*) *prioni* (Enderlein, 1908)
- *Saemundssonia* (*Saemundssonia*) *desolata* Timmermann, 1959

ᵉ***Pachyptila crassirostris crassirostris* (Mathews, 1912)** — **Fulmar prion**
- *Ancistrona vagelli* (J.C. Fabricius, 1787)
- *Austromenopon stammeri* Timmermann, 1963
- *Naubates* (*Guenterion*) *prioni* (Enderlein, 1908)
- *Saemundssonia* (*Saemundssonia*) *desolata* Timmermann, 1959

ᵉ***Pachyptila crassirostris pyramidalis* Fleming, 1939** — **Chatham fulmar prion**
- *Ancistrona vagelli* (J.C. Fabricius, 1787)
- *Austromenopon stammeri* Timmermann, 1963
- *Longimenopon* species
- *Naubates* (*Guenterion*) *prioni* (Enderlein, 1908)
- *Saemundssonia* (*Saemundssonia*) *desolata* Timmermann, 1959

***Pachyptila crassirostris flemingi* Tennyson & Bartle, 2005** — **Lesser fulmar prion**
- *Naubates* (*Guenterion*) *prioni* (Enderlein, 1908)

***Bulweria bulwerii* (Jardine & Selby, 1828)** — **Bulwer's petrel**
- *Austromenopon bulweriae* Timmermann, 1963
- *Halipeurus bulweriae* Timmermann, 1960

***Procellaria aequinoctialis* Linnaeus, 1758** — **White-chinned petrel**
- *Ancistrona vagelli* (J.C. Fabricius, 1787)
- *Austromenopon popellus* (Piaget, 1890)
- *Naubates* (*Naubates*) *fuliginosus* (Taschenberg, 1882)
- *Trabeculus hexakon* (Waterston, 1914)

ᵉ***Procellaria westlandica* Falla, 1946** — **Westland petrel**
- *Ancistrona vagelli* (J.C. Fabricius, 1787)
- *Austromenopon popellus* (Piaget, 1890)
- *Naubates* (*Naubates*) *fuliginosus* (Taschenberg, 1882)
- *Trabeculus hexakon* (Waterston, 1914)

ᵉ***Procellaria parkinsoni* G.R. Gray, 1862** — **Black petrel**
- *Ancistrona vagelli* (J.C. Fabricius, 1787)
- *Austromenopon popellus* (Piaget, 1890)
- *Naubates* (*Naubates*) *fuliginosus* (Taschenberg, 1882)
- *Trabeculus hexakon* (Waterston, 1914)

***Procellaria cinerea* Gmelin, 1789** — **Grey petrel**
- *Ancistrona vagelli* (J.C. Fabricius, 1787)
- *Austromenopon popellus* (Piaget, 1890)
- *Naubates* (*Naubates*) *fuliginosus* (Taschenberg, 1882)
- *Trabeculus hexakon* (Waterston, 1914)

***Pseudobulweria rostrata* (Peale, 1848)** — **Tahiti petrel**
- *Halipeurus marquesanus* (Ferris, 1932)
- ♣ *Saemundssonia* (*Puffinoecus*) *jamaicensis* Timmermann, 1962

***Calonectris leucomelas* (Temminck, 1836)** — **Streaked shearwater**
- *Austromenopon longithoracicum* (Piaget, 1880)
- *Halipeurus angusticeps* (Piaget, 1880)
- *Saemundssonia* (*Puffinoecus*) *orientalis* (Uchida, 1949)

***Puffinus pacificus pacificus* (Gmelin, 1789)** — **Wedge-tailed shearwater**
- *Ancistrona vagelli* (J.C. Fabricius, 1787)
- *Austromenopon paululum* (Kellogg & Chapman, 1899)

Halipeurus (*Halipeurus*) *mirabilis* Thompson, 1940
Naubates (*Naubates*) *harrisoni* Bedford, 1930
Saemundssonia (*Puffinoecus*) *puellula* Timmermann, 1965
Trabeculus hexakon (Waterston, 1914) *sensu lato*

***Puffinus pacificus chlororhynchus* Lesson, 1831** **Wedge-tailed shearwater**
Austromenopon paululum (Kellogg & Chapman, 1899)
Halipeurus (*Halipeurus*) *mirabilis* Thompson, 1940
Naubates (*Naubates*) *harrisoni* Bedford, 1930
Trabeculus hexakon (Waterston, 1914) *sensu lato*

[e] ***Puffinus bulleri* Salvin, 1888** **Buller's shearwater**
Ancistrona vagelli (J.C. Fabricius, 1787)
Austromenopon paululum (Kellogg & Chapman, 1899)
Halipeurus (*Halipeurus*) *thompsoni* Edwards, 1961
Naubates (*Naubates*) *harrisoni* Bedford, 1930

***Puffinus carneipes* Gould, 1844** **Flesh-footed shearwater**
Ancistrona vagelli (J.C. Fabricius, 1787)
Austromenopon paululum (Kellogg & Chapman, 1899)
Halipeurus gravis priapulus Timmermann, 1961
Naubates (*Naubates*) *harrisoni* Bedford, 1930
Saemundssonia (*Puffinoecus*) species
Trabeculus hexakon (Waterston, 1914) *sensu lato*

***Puffinus griseus* (Gmelin, 1789)** **Sooty shearwater**
Ancistrona vagelli (J.C. Fabricius, 1787)
Austromenopon paululum (Kellogg & Chapman, 1899)
Halipeurus diversus (Kellogg, 1896)
Trabeculus hexakon (Waterston, 1914) *sensu lato*

***Puffinus tenuirostris* (Temminck, 1836)** **Short-tailed shearwater**
Ancistrona vagelli (J.C. Fabricius, 1787)
Austromenopon paululum (Kellogg & Chapman, 1899)
Halipeurus diversus (Kellogg, 1896)
Trabeculus hexakon (Waterston, 1914) *sensu lato*

***Puffinus nativitatis* Streets, 1877** **Christmas Island shearwater**
Trabeculus species 2

***Puffinus newelli* Henshaw, 1900** **Newell's shearwater**
Austromenopon paululum (Kellogg & Chapman, 1899)
Halipeurus placodus Edwards, 1961
Trabeculus mirabilis (Kellogg, 1896)

***Puffinus puffinus* (Brünnich, 1764)** **Manx shearwater**
Austromenopon paululum (Kellogg & Chapman, 1899)
Halipeurus diversus (Kellogg, 1896)
Trabeculus aviator (Evans, 1912)

[e] ***Puffinus gavia* (J.R. Forster, 1844)** **Fluttering shearwater**
Austromenopon paululum (Kellogg & Chapman, 1899)
Halipeurus spadix subclavus Timmermann, 1961
Saemundssonia (*Puffinoecus*) *valida* (Kellogg & Chapman, 1899)

[e] ***Puffinus huttoni* Mathews, 1912** **Hutton's shearwater**
Ancistrona vagelli (J.C. Fabricius, 1787)
Austromenopon paululum (Kellogg & Chapman, 1899)
Halipeurus spadix spadix Timmermann, 1961
Naubates (*Naubates*) *harrisoni* Bedford, 1930
♦ *Trabeculus flemingi* Timmermann, 1959

ᵉ *Puffinus assimilis kermadecensis* Murphy, 1927 — **Kermadec little shearwater**
Ancistrona vagelli (J.C. Fabricius, 1787)
Austromenopon paululum (Kellogg & Chapman, 1899)
Halipeurus placodus Edwards, 1961
Trabeculus mirabilis (Kellogg, 1896)

ᵉ *Puffinus assimilis haurakiensis* Fleming & Serventy, 1943 — **North Island little shearwater**
Ancistrona vagelli (J.C. Fabricius, 1787)
Austromenopon paululum (Kellogg & Chapman, 1899)
Halipeurus mundae Edwards, 1961
Trabeculus mirabilis (Kellogg, 1896)

***Puffinus elegans* Giglioli & Salvadori, 1869** — **Subantarctic little shearwater**
Austromenopon paululum (Kellogg & Chapman, 1899)
Halipeurus mundae Edwards, 1961
Trabeculus mirabilis (Kellogg, 1896)

HYDROBATIDAE

***Oceanites oceanicus exasperatus* Mathews, 1912** — **Wilson's storm petrel**
Philoceanus robertsi (Clay, 1940)

***Garrodia nereis* (Gould, 1841)** — **Grey-backed storm petrel**
Philoceanus garrodiae (Clay, 1940)
Saemundssonia (*Saemundssonia*) *nereis* Timmermann, 1956

***Pelagodroma marina dulciae* Mathews, 1912** — **Australian white-faced storm petrel**
Austromenopon enigki Timmermann, 1963
Halipeurus pelagodromae Palma, 2011
Saemundssonia (*Saemundssonia*) *marina* Timmermann, 1956

ᵉ *Pelagodroma marina maoriana* Mathews, 1912 — **New Zealand white-faced storm petrel**
Austromenopon enigki Timmermann, 1963
Halipeurus pelagodromae Palma, 2011
Longimenopon species
Saemundssonia (*Saemundssonia*) *marina* Timmermann, 1956

ᵉ *Pelagodroma albiclunis* Murphy & Irving, 1951 — **Kermadec storm petrel**
Ancistrona vagelli (J.C. Fabricius, 1787)
Halipeurus pelagodromae Palma, 2011

ᵉ *Pealeornis maoriana* Mathews, 1932 — **New Zealand storm petrel**
Austromenopon enigki Timmermann, 1963
Philoceanus fasciatus (Carriker, 1958)
♣ *Saemundssonia* (*Saemundssonia*) species

***Fregetta tropica* (Gould, 1844)** — **Black-billed storm petrel**
Austromenopon enigki Timmermann, 1963
Halipeurus pelagicus (Denny, 1842)
Philoceanus fasciatus (Carriker, 1958)
♣ *Saemundssonia* (*Saemundssonia*) *platycephalus* (Kellogg & Kuwana, 1902)

***Fregetta grallaria grallaria* (Vieillot, 1818)** — **White-bellied storm petrel**
Halipeurus pelagicus (Denny, 1842)
Philoceanus fasciatus (Carriker, 1958)

***Oceanodroma leucorhoa leucorhoa* (Vieillot, 1818)** — **Leach's storm petrel**
Halipeurus pelagicus (Denny, 1842)
Saemundssonia (*Saemundssonia*) *thalassidromae incisa* Timmermann, 1950

PELECANOIDIDAE

***Pelecanoides urinatrix urinatrix* (Gmelin, 1789)** — **Northern diving petrel**

Austromenopon elliotti Timmermann, 1954
Halipeurus falsus pacificus Edwards, 1961
Pelmatocerandra setosa (Giebel, 1876)

[e] ***Pelecanoides urinatrix chathamensis*** **Murphy & Harper, 1916** — **Southern diving petrel**
Austromenopon elliotti Timmermann, 1954
Halipeurus falsus pacificus Edwards, 1961
Pelmatocerandra setosa (Giebel, 1876)

Pelecanoides urinatrix exsul **Salvin, 1896** — **Subantarctic diving petrel**
Austromenopon elliotti Timmermann, 1954
Halipeurus falsus pacificus Edwards, 1961
Pelmatocerandra setosa (Giebel, 1876)

Pelecanoides georgicus **Murphy & Harper, 1916** — **South Georgian diving petrel**
Austromenopon elliotti Timmermann, 1954
Pelmatocerandra setosa (Giebel, 1876)

PHAETHONTIFORMES
PHAETHONTIDAE

Phaethon rubricauda **Boddaert, 1783** — **Red-tailed tropicbird**
Austromenopon beckii (Kellogg, 1906)
Saemundssonia (*Saemundssonia*) *hexagona* (Giebel, 1874)

Phaethon lepturus dorotheae **Mathews, 1913** — **White-tailed tropicbird**
Austromenopon beckii (Kellogg, 1906)
Saemundssonia (*Saemundssonia*) *uppalensis* (Rudow, 1870)

PELECANIFORMES
PELECANIDAE

Pelecanus conspicillatus **Temminck, 1824** — **Australian pelican**
Colpocephalum eucarenum Burmeister, 1838
Pectinopygus australis Thompson, 1948

SULIDAE

Morus serrator **(G.R. Gray, 1843)** — **Australasian gannet**
Eidmanniella pustulosa (Nitzsch [*in* Giebel], 1866)
Pectinopygus bassani (O. Fabricius, 1780)

Sula leucogaster plotus **(Forster, 1844)** — **Brown booby**
Eidmanniella albescens (Piaget, 1880)
Pectinopygus annulatus (Piaget, 1880)
Pectinopygus garbei (Pessôa & Guimarães, 1935)

Sula dactylatra tasmani **van Tets, Meredith, Fullagar & Davidson, 1988** — **Masked booby**
Eidmanniella albescens (Piaget, 1880)
Pectinopygus annulatus (Piaget, 1880)

PHALACROCORACIDAE

[e] ***Phalacrocorax melanoleucos brevirostris*** **Gould, 1837** — **Little shag**
Eidmanniella eurygaster (Nitzsch [*in* Giebel], 1866)
Pectinopygus dispar (Piaget, 1880)

Phalacrocorax carbo novaehollandiae **Stephens, 1826** — **Black shag**
Eidmanniella pellucida (Rudow, 1869)
Pectinopygus gyricornis (Denny, 1842)

[e] ***Phalacrocorax varius varius*** **(Gmelin, 1789)** — **Pied shag**
Eidmanniella pellucida (Rudow, 1869)
Pectinopygus varius Timmermann, 1964

***Phalacrocorax sulcirostris* (Brandt, 1837)** — **Little black shag**
Eidmanniella eurygaster (Nitzsch [*in* Giebel], 1866)
Pectinopygus setosus (Piaget, 1880)

[e] ***Leucocarbo carunculatus* (Gmelin, 1789)** — **New Zealand king shag**
Eidmanniella pellucida (Rudow, 1869)
♦ *Pectinopygus carunculatus* Timmermann, 1964 *sensu lato*

[e] ***Leucocarbo chalconotus* (G.R. Gray, 1845)** — **Stewart Island shag**
Eidmanniella pellucida (Rudow, 1869)
♦ *Pectinopygus carunculatus* Timmermann, 1964 *sensu lato*

[e] ***Leucocarbo onslowi* (Forbes, 1893)** — **Chatham Island shag**
♦ *Pectinopygus carunculatus* Timmermann, 1964 *sensu lato*

[e] ***Leucocarbo ranfurlyi* (Ogilvie-Grant, 1901)** — **Bounty Island shag**
♦ *Pectinopygus carunculatus* Timmermann, 1964 *sensu lato*

[e] ***Leucocarbo colensoi* (Buller, 1888)** — **Auckland Island shag**
♦ *Pectinopygus carunculatus* Timmermann, 1964

[e] ***Leucocarbo campbelli* (Filhol, 1878)** — **Campbell Island shag**
♦ *Pectinopygus carunculatus* Timmermann, 1964 *sensu lato*

[e] ***Leucocarbo purpurascens* (Brandt, 1837)** — **Macquarie Island shag**
Pectinopygus turbinatus (Piaget, 1890)

[e] ***Stictocarbo punctatus punctatus* (Sparrman, 1786)** — **Spotted shag**
Eidmanniella pellucida (Rudow, 1869)
♦ *Pectinopygus punctatus* Timmermann, 1964

[e] ***Stictocarbo punctatus oliveri* Mathews, 1931** — **Blue shag**
Eidmanniella pellucida (Rudow, 1869)
♦ *Pectinopygus punctatus* Timmermann, 1964

[e] ***Stictocarbo featherstoni* (Buller, 1873)** — **Pitt Island shag**
Eidmanniella pellucida (Rudow, 1869)
Pectinopygus species

CICONIIFORMES
ARDEIDAE

***Ardea modesta* J.E. Gray, 1831** — **White heron**
Ardeicola expallidus Blagoveshtchensky, 1940
Ciconiphilus decimfasciatus (Boisduval & Lacordaire, 1835)

***Ardea ibis coromanda* (Boddaert, 1783)** — **Eastern cattle egret**
Ardeicola expallidus Blagoveshtchensky, 1940
Ciconiphilus decimfasciatus (Boisduval & Lacordaire, 1835)

***Egretta novaehollandiae novaehollandiae* (Latham, 1790)** — **White-faced heron**
Ardeicola pilgrimi Tandan, 1972
Ciconiphilus decimfasciatus (Boisduval & Lacordaire, 1835)

***Egretta garzetta immaculata* (Gould, 1846)** — **Little egret**
Ardeicola expallidus Blagoveshtchensky, 1940
Ciconiphilus decimfasciatus (Boisduval & Lacordaire, 1835)

***Egretta sacra sacra* (Gmelin, 1789)** — **Reef heron**
Ardeicola neopallidus Price, Hellenthal & Palma, 2003
Ciconiphilus decimfasciatus (Boisduval & Lacordaire, 1835)

***Botaurus poiciloptilus* (Wagler, 1827)** — **Australasian bittern**
Ardeicola stellaris (Denny, 1842)
Ciconiphilus decimfasciatus (Boisduval & Lacordaire, 1835)

THRESKIORNITHIDAE

***Plegadis falcinellus* (Linnaeus, 1766)** — **Glossy ibis**
Ardeicola rhaphidius (Nitzsch [*in* Giebel], 1866)
Colpocephalum leptopygos Nitzsch [*in* Giebel], 1874
Ibidoecus bisignatus (Nitzsch [*in* Giebel], 1866)
Plegadiphilus plegadis (Dubinin, 1938)

***Threskiornis molucca strictipennis* (Gould, 1838)** — **Australian white ibis**
Ibidoecus dianae Tandan, 1958
Plegadiphilus threskiornis Bedford, 1939

***Platalea regia* Gould, 1838** — **Royal spoonbill**
Ardeicola plataleae (Linnaeus, 1758)
Eucolpocephalum femorale (Piaget, 1880)
Ibidoecus plataleae (Denny, 1842)

ACCIPITRIIFORMES
ACCIPITRIDAE

***Circus approximans* Peale, 1848** — **Swamp harrier**
Colpocephalum turbinatum Denny, 1842
Degeeriella fusca (Denny, 1842)
Nosopon lucidum (Rudow, 1869)

FALCONIFORMES
FALCONIDAE

***Falco cenchroides cenchroides* Vigors & Horsfield, 1827** — **Nankeen kestrel**
Colpocephalum subzerafae Tendeiro, 1988
Laemobothrion tinnunculi (Linnaeus, 1758)

ᵉ***Falco novaeseelandiae* Gmelin, 1788** — **New Zealand falcon**
Degeeriella rufa rufa (Burmeister, 1838)
Nosopon lucidum (Rudow, 1869)

GRUIFORMES
RALLIDAE

ᵉ***Gallirallus philippensis assimilis* (G.R. Gray, 1843)** — **Banded rail**
Pseudomenopon scopulacorne (Denny, 1842)
Rallicola (*Rallicola*) *ortygometrae philippensis* Emerson, 1966

ᵉ***Gallirallus australis greyi* (Buller, 1888)** — **North Island weka**
♦ *Pseudomenopon pilgrimi* Price, 1974
♦ *Rallicola* (*Rallicola*) *harrisoni* Emerson, 1955

ᵉ***Gallirallus australis australis* (Sparrman, 1786)** — **Western weka**
♦ *Rallicola* (*Rallicola*) *harrisoni* Emerson, 1955

ᵉ***Gallirallus australis hectori* (Hutton, 1873)** — **Buff weka**
♦ *Pseudomenopon pilgrimi* Price, 1974
♦ *Rallicola* (*Rallicola*) *harrisoni* Emerson, 1955

ᵉ***Gallirallus australis scotti* (Ogilvie-Grant, 1905)** — **Stewart Island weka**
♦ *Rallicola* (*Rallicola*) *harrisoni* Emerson, 1955

***Porzana tabuensis tabuensis* (Gmelin, 1789)** — **Spotless crake**
♣ *Fulicoffula stammeri* Eichler, 1958
Rallicola (*Rallicola*) *tabuensis* Emerson, 1966

ᵉ***Porzana pusilla affinis*** **(J.E. Gray, 1845)** — **Marsh crake**
- ♣ *Fulicoffula stammeri* Eichler, 1958
- ♣ *Incidifrons porzanae* Blagoveshtchensky, 1951
- *Rallicola* (*Rallicola*) *tabuensis* Emerson, 1966

Porphyrio melanotus melanotus **Temminck, 1820** — **Pukeko**
- *Pseudomenopon concretum* (Piaget, 1880)
- *Rallicola* (*Rallicola*) *lugens* (Giebel, 1874)

ᵉ***Porphyrio hochstetteri*** **(A.B. Meyer, 1883)** — **South Island takahe**
- ♦ *Rallicola* (*Rallicola*) *takahe* Holloway, 1956

Fulica atra australis **Gould, 1845** — **Australian coot**
- *Fulicoffula lurida* (Nitzsch, 1818)
- *Incidifrons fulicae* (Linnaeus, 1758)
- *Pseudomenopon pilosum* (Scopoli, 1763)
- *Rallicola* (*Rallicola*) *fulicae* (Denny, 1842)

CHARADRIIFORMES
SCOLOPACIDAE

ᵉ***Coenocorypha pusilla*** **(Buller, 1869)** — **Chatham Island snipe**
- ♦ *Quadraceps coenocoryphae* Timmermann, 1955

ᵉ***Coenocorypha huegeli*** **(Tristram, 1893)** — **Snares Island snipe**
- ♦ *Quadraceps coenocoryphae* Timmermann, 1955

ᵉ***Coenocorypha aucklandica aucklandica*** **(G.R. Gray, 1845)** — **Auckland Island snipe**
- *Austromenopon* species 3
- ♦ *Quadraceps coenocoryphae* Timmermann, 1955

ᵉ***Coenocorypha aucklandica meinertzhagenae*** **Rothschild, 1927** — **Antipodes Island snipe**
- *Austromenopon* species 3

ᵉ***Coenocorypha aucklandica perseverance*** **Miskelly & Baker, 2010** — **Campbell Island snipe**
- ♦ *Quadraceps coenocoryphae* Timmermann, 1955

Calidris canutus rogersi **(Mathews, 1913)** — **Lesser knot**
- *Actornithophilus umbrinus* (Burmeister, 1838)
- *Austromenopon lutescens* (Burmeister, 1838)
- *Carduiceps zonarius* (Nitzsch [*in* Giebel], 1866)
- *Lunaceps drosti* Timmermann, 1954
- *Saemundssonia* (*Saemundssonia*) *tringae* (O. Fabricius, 1780) *sensu lato*

Calidris alba **(Pallas, 1776)** — **Sanderling**
- *Lunaceps actophilus* (Kellogg & Chapman, 1899)

Calidris ferruginea **(Pontoppidan, 1763)** — **Curlew sandpiper**
- *Lunaceps falcinellus* Timmermann, 1954

Calidris acuminata **(Horsfield, 1821)** — **Sharp-tailed sandpiper**
- *Actornithophilus umbrinus* (Burmeister, 1838)
- *Carduiceps zonarius* (Nitzsch [*in* Giebel], 1866)
- *Lunaceps superciliosus* Gustafsson & Olsson, 2012

Calidris ruficollis **(Pallas, 1776)** — **Red-necked stint**
- *Lunaceps falcinellus* Timmermann, 1954

Numenius madagascariensis **(Linnaeus, 1766)** — **Eastern curlew**
- *Lunaceps numenii madagascariensis* Gustafsson & Olsson, 2012

***Numenius phaeopus variegatus* (Scopoli, 1786)** **Asiatic whimbrel**
Austromenopon phaeopodis (Schrank, 1802)
Lunaceps numenii oliveri (Johnston & Harrison, 1912)
Saemundssonia (*Saemundssonia*) *scolopacisphaeopodis scolopacisphaeopodis* (Schrank, 1803)

***Limosa lapponica baueri* Naumann, 1836** **Eastern bar-tailed godwit**
Actornithophilus limosae (Kellogg, 1908)
Austromenopon meyeri (Giebel, 1874)
Carduiceps cingulatus lapponicus Emerson, 1953
Lunaceps limosella Timmermann, 1954
Saemundssonia (*Saemundssonia*) *limosae* (Denny, 1842)

***Limosa limosa melanuroides* Gould, 1846** **Asiatic black-tailed godwit**
Actornithophilus spinulosus (Piaget, 1880)
Austromenopon limosae Timmermann, 1954
Carduiceps cingulatus cingulatus (Denny, 1842)
Lunaceps limosae Bechet, 1968
Saemundssonia (*Saemundssonia*) *thompsoni* Timmermann, 1951

***Tringa incana* (Gmelin, 1789)** **Wandering tattler**
Saemundssonia (*Saemundssonia*) *platygaster* (Denny, 1842) *sensu lato*

***Arenaria interpres* (Linnaeus, 1758)** **Ruddy turnstone**
Actornithophilus bicolor (Piaget, 1880)
Actornithophilus pediculoides (Mjöberg, 1910)
Austromenopon lutescens (Burmeister, 1838)
Quadraceps strepsilaris (Denny, 1842)

HAEMATOPODIDAE

[e] ***Haematopus unicolor* J.R. Forster, 1844** **Variable oystercatcher**
Actornithophilus grandiceps (Piaget, 1880)
Quadraceps auratus (Haan, 1829)
Quadraceps ridgwayi (Kellogg, 1906)
Saemundssonia (*Saemundssonia*) *haematopi* (Linnaeus, 1758)

[e] ***Haematopus finschi* Martens, 1897** **South Island pied oystercatcher**
Actornithophilus grandiceps (Piaget, 1880)
Austromenopon haematopi Timmermann, 1954
Quadraceps auratus (Haan, 1829)
Saemundssonia (*Saemundssonia*) *haematopi* (Linnaeus, 1758)

[e] ***Haematopus chathamensis* Hartert, 1927** **Chatham Island oystercatcher**
Actornithophilus grandiceps (Piaget, 1880)
Quadraceps auratus (Haan, 1829)

RECURVIROSTRIDAE

***Himantopus himantopus leucocephalus* Gould, 1837** **Pied stilt**
Austromenopon himantopi Timmermann, 1954
Quadraceps hemichrous (Nitzsch *in* Giebel, 1866)
Quadraceps semifissus (Nitzsch [*in* Giebel], 1866)
Saemundssonia (*Saemundssonia*) *platygaster* (Denny, 1842) *sensu lato*

[e] ***Himantopus novaezelandiae* Gould, 1841** **Black stilt**
Quadraceps hemichrous (Nitzsch *in* Giebel, 1866)
Quadraceps semifissus (Nitzsch [*in* Giebel], 1866)
Saemundssonia (*Saemundssonia*) *platygaster* (Denny, 1842) *sensu lato*

CHARADRIIDAE

***Pluvialis fulva* (Gmelin, 1789)** **Pacific golden plover**
Actornithophilus ochraceus (Nitzsch, 1818) *sensu lato*
Quadraceps charadrii orarius (Kellogg, 1896)
Saemundssonia (*Saemundssonia*) *conica conica* (Denny, 1842)

ᵉ***Charadrius obscurus aquilonius*** **Dowding, 1994** — **Northern New Zealand dotterel**
Actornithophilus ochraceus (Nitzsch, 1818) *sensu lato*
♦ *Quadraceps dominella* Timmermann, 1953
Saemundssonia (*Saemundssonia*) *platygaster* (Denny, 1842) *sensu lato*

ᵉ***Charadrius obscurus obscurus*** **Gmelin, 1789** — **Southern New Zealand dotterel**
Actornithophilus ochraceus (Nitzsch, 1818) *sensu lato*
♦ *Quadraceps dominella* Timmermann, 1953
Saemundssonia (*Saemundssonia*) *platygaster* (Denny, 1842) *sensu lato*

ᵉ***Charadrius bicinctus bicinctus*** **Jardine & Selby, 1827** — **Banded dotterel**
Quadraceps cedemajori Timmermann, 1969
Saemundssonia (*Saemundssonia*) *platygaster balati* Timmermann, 1969

ᵉ***Charadrius bicinctus exilis*** **Falla, 1978** — **Auckland Island banded dotterel**
Austromenopon aegialitidis (Durrant, 1906) *sensu lato*
Quadraceps cedemajori Timmermann, 1969
♦ *Quadraceps novaeseelandiae* Timmermann, 1953

Charadrius veredus **Gould, 1848** — **Oriental dotterel**
Quadraceps assimilis (Piaget, 1890)

ᵉ***Anarhynchus frontalis*** **(Quoy & Gaimard, 1830)** — **Wrybill**
Quadraceps cedemajori Timmermann, 1969

ᵉ***Thinornis novaeseelandiae*** **(Gmelin, 1789)** — **Shore plover**
♦ *Quadraceps novaeseelandiae* Timmermann, 1953
♦ *Saemundssonia* (*Saemundssonia*) *chathamensis* Timmermann, 1977

Vanellus miles novaehollandiae **Stephens, 1819** — **Spur-winged plover**
Actornithophilus hoplopteri (Mjöberg, 1910) *sensu lato*
Austromenopon aegialitidis (Durrant, 1906) *sensu lato*
Quadraceps renschi Timmermann, 1954

GLAREOLIDAE

Glareola maldivarum **J.R. Forster, 1795** — **Oriental pratincole**
♣ *Actornithophilus sedes* Eichler, 1944
♣ *Austromenopon cursorium* (Giebel, 1874)
Quadraceps ellipticus (Nitzsch [*in* Giebel], 1866) *sensu lato*

STERCORARIIDAE

Catharacta antarctica lonnbergi **Mathews, 1912** — **Subantarctic skua**
Austromenopon fuscofasciatum (Piaget, 1880)
Haffneria grandis (Piaget, 1880)
Saemundssonia (*Saemundssonia*) *euryrhyncha* (Giebel, 1874)

Catharacta maccormicki **(Saunders, 1893)** — **South polar skua**
Austromenopon fuscofasciatum (Piaget, 1880)
Haffneria grandis (Piaget, 1880)
Quadraceps normifer alpha (Kellogg, 1914)
Saemundssonia (*Saemundssonia*) *euryrhyncha* (Giebel, 1874)

Stercorarius parasiticus **(Linnaeus, 1758)** — **Arctic skua**
Austromenopon fuscofasciatum (Piaget, 1880)
Haffneria grandis (Piaget, 1880)
Quadraceps normifer normifer (Grube, 1851)
Saemundssonia (*Saemundssonia*) *cephalus* (Denny, 1842)

Stercorarius longicaudus **Vieillot, 1819** — **Long-tailed skua**
Austromenopon fuscofasciatum (Piaget, 1880)
Quadraceps normifer parvopallidus (Eichler, 1951)

Saemundssonia (*Saemundssonia*) *inexspectata* Timmermann, 1951

LARIDAE

***Larus dominicanus dominicanus* Lichtenstein, 1823** — **Southern black-backed gull**
Actornithophilus piceus lari (Packard, 1870)
Austromenopon transversum (Denny, 1842)
Quadraceps ornatus fuscolaminulatus (Enderlein, 1908)
♣ *Quadraceps punctatus sublingulatus* Timmermann, 1952
Saemundssonia (*Saemundssonia*) *lari* (O. Fabricius, 1780) *sensu lato*

ᵉ***Larus novaehollandiae scopulinus* J.R. Forster, 1844** — **Red-billed gull**
Actornithophilus piceus lari (Packard, 1870)
Austromenopon transversum (Denny, 1842)
Quadraceps punctatus lingulatus (Waterston, 1914)
Saemundssonia (*Saemundssonia*) *lari* (O. Fabricius, 1780) *sensu lato*

ᵉ***Larus bulleri* Hutton, 1871** — **Black-billed gull**
Austromenopon transversum (Denny, 1842)
Quadraceps punctatus lingulatus (Waterston, 1914)
Saemundssonia (*Saemundssonia*) *lari* (O. Fabricius, 1780) *sensu lato*

STERNIDAE

***Anous stolidus pileatus* (Scopoli, 1786)** — **Brown noddy**
Quadraceps separatus (Kellogg & Kuwana, 1902)

***Anous minutus minutus* Boie, 1844** — **Black noddy**
Actornithophilus ceruleus (Timmermann, 1954)
Austromenopon atrofulvum (Piaget, 1880)
Quadraceps hopkinsi hopkinsi Timmermann, 1952
Saemundssonia (*Saemundssonia*) *remota* Timmermann, 1951

***Procelsterna cerulea albivitta* Bonaparte, 1856** — **Grey noddy**
Actornithophilus ceruleus (Timmermann, 1954)
Austromenopon atrofulvum (Piaget, 1880)
Quadraceps hopkinsi apophoretus Timmermann, 1969

***Gygis alba candida* (Gmelin, 1789)** — **White tern**
Saemundssonia (*Saemundssonia*) *gygisa* Palma, 2012

***Onychoprion fuscatus serratus* (J.R. Forster, 1830)** — **Sooty tern**
Austromenopon atrofulvum (Piaget, 1880)
Quadraceps birostris (Giebel, 1874)
Saemundssonia (*Saemundssonia*) *albemarlensis* (Kellogg & Kuwana, 1902)

***Sternula albifrons sinensis* (Gmelin, 1789)** — **Eastern little tern**
Quadraceps nycthemerus (Burmeister, 1838)
Saemundssonia (*Saemundssonia*) *melanocephalus* (Burmeister, 1838)

***Hydroprogne caspia* (Pallas, 1770)** — **Caspian tern**
Austromenopon atrofulvum (Piaget, 1880)
Quadraceps caspius (Giebel, 1874)

ᵉ***Chlidonias albostriatus* (G.R. Gray, 1845)** — **Black-fronted tern**
Quadraceps species
Saemundssonia (*Saemundssonia*) *lockleyi* Clay, 1949

ᵉ***Sterna striata* Gmelin, 1789** — **White-fronted tern**
Austromenopon atrofulvum (Piaget, 1880)
Quadraceps sellatus sellatus (Burmeister, 1838)
Saemundssonia (*Saemundssonia*) *sternae* (Linnaeus, 1758)

ᵉ***Sterna vittata bethunei*** **Travers, 1896** — **New Zealand Antarctic tern**
Austromenopon atrofulvum (Piaget, 1880)
Quadraceps sellatus houri Hopkins, 1949
Quadraceps sellatus sellatus (Burmeister, 1838)
Saemundssonia (*Saemundssonia*) *lockleyi* Clay, 1949

Sterna paradisaea **Pontoppidan, 1763** — **Arctic tern**
Austromenopon atrofulvum (Piaget, 1880)
Quadraceps sellatus houri Hopkins, 1949
Saemundssonia (*Saemundssonia*) *lockleyi* Clay, 1949

COLUMBIFORMES
COLUMBIDAE

* ***Columba livia*** **Gmelin, 1789** — **Rock pigeon**
Bonomiella columbae Emerson, 1957
Campanulotes bidentatus compar (Burmeister, 1838)
Colpocephalum turbinatum Denny, 1842
Hohorstiella lata (Piaget, 1880)
Columbicola columbae columbae (Linnaeus, 1758)

* ***Streptopelia chinensis tigrina*** **(Temminck, 1810)** — **Spotted dove**
♣ *Coloceras chinense* (Kellogg & Chapman, 1902)
Columbicola columbae columbae (Linnaeus, 1758)

ᵉ***Hemiphaga novaeseelandiae*** **(Gmelin, 1789)** — **New Zealand pigeon**
♣ *Hohorstiella timorensis* Tendeiro, 1980
♦ *Coloceras novaeseelandiae* (Tendeiro, 1972)

ᵉ***Hemiphaga chathamensis*** **(Rothschild, 1891)** — **Chatham Island pigeon**
♦ *Coloceras harrisoni* (Tendeiro, 1972)

ᵉ***Hemiphaga spadicea*** **(Latham, 1802)** — **Norfolk Island pigeon**
♦ *Coloceras hemiphagae* (Tendeiro, 1972)
♦ *Coloceras restinctum* (Tendeiro, 1972)

PSITTACIFORMES
STRIGOPIDAE

ᵉ***Strigops habroptilus*** **G.R. Gray, 1845** — **Kakapo**
♦ *Heteromenopon* (*Keamenopon*) *kea* (Kellogg, 1907)

ᵉ***Nestor meridionalis meridionalis*** **(Gmelin, 1788)** — **South Island kaka**
♦ *Heteromenopon* (*Keamenopon*) *kea* (Kellogg, 1907)
♦ *Forficuloecus meinertzhageni* Guimarães, 1974
♦ *Neopsittaconirmus kea* (Kellogg, 1907)

ᵉ***Nestor meridionalis septentrionalis*** **Lorenz, 1896** — **North Island kaka**
♦ *Heteromenopon* (*Keamenopon*) *kea* (Kellogg, 1907)
♦ *Forficuloecus meinertzhageni* Guimarães, 1974
♦ *Neopsittaconirmus kea* (Kellogg, 1907)

ᵉ***Nestor notabilis*** **Gould, 1856** — **Kea**
♦ *Colpocephalum pilgrimi* Price, 1967
♦ *Heteromenopon* (*Keamenopon*) *kea* (Kellogg, 1907)
♦ *Forficuloecus meinertzhageni* Guimarães, 1974
♦ *Neopsittaconirmus kea* (Kellogg, 1907)

CACATUIDAE

Cacatua galerita **(Latham, 1790)** — **Sulphur-crested cockatoo**
Franciscoloa (*Franciscoloa*) *pallida* (Piaget, 1880)

Neopsittaconirmus albus (Le Souëf & Bullen, 1902)
Psittoecus vanzolinii Guimarães, 1974

PSITTACIDAE

*** *Platycercus eximius* (Shaw, 1792)** — **Eastern rosella**
♣ *Forficuloecus* species

ᵉ ***Cyanoramphus novaezelandiae novaezelandiae* (Sparrman, 1787)** — **Red-crowned parakeet**
♦ *Forficuloecus pilgrimi* Guimarães, 1985

ᵉ ***Cyanoramphus novaezelandiae chathamensis* Oliver, 1930** — **Chatham Island red-crowned parakeet**
♦ *Forficuloecus pilgrimi* Guimarães, 1985

ᵉ ***Cyanoramphus auriceps* (Kuhl, 1820)** — **Yellow-crowned parakeet**
♦ *Forficuloecus pilgrimi* Guimarães, 1985

ᵉ ***Cyanoramphus malherbi* Souancé, 1857** — **Orange-fronted parakeet**
♦ *Forficuloecus pilgrimi* Guimarães, 1985

ᵉ ***Cyanoramphus forbesi* Rothschild, 1893** — **Forbes' parakeet**
♦ *Forficuloecus pilgrimi* Guimarães, 1985

ᵉ ***Cyanoramphus unicolor* (Lear, 1831)** — **Antipodes Island parakeet**
♦ *Forficuloecus pilgrimi* Guimarães, 1985
Heteromenopon (*Keamenopon*) species

ᵉ ***Cyanoramphus hochstetteri* (Reischek, 1889)** — **Reicshek's parakeet**
♦ *Forficuloecus pilgrimi* Guimarães, 1985

CUCULIFORMES
CUCULIDAE

***Cuculus optatus* Gould, 1845** — **Oriental cuckoo**
Cuculicola latirostris (Burmeister, 1838)

ᵉ ***Chrysococcyx lucidus lucidus* (Gmelin, 1788)** — **Shining cuckoo**
♦ *Cuculicola kui* Kettle, 1980

ᵉ ***Eudynamys taitensis* (Sparrman, 1787)** — **Long-tailed cuckoo**
Cuculiphilus (*Cuculiphilus*) *fasciativentris* Carriker, 1955

***Scythrops novaehollandiae* Latham, 1790** — **Channel-billed cuckoo**
Cuculiphilus (*Cuculiphilus*) *platygaster* (Giebel, 1874)

STRIGIFORMES
STRIGIDAE

ᵉ ***Ninox novaeseelandiae novaeseelandiae* (Gmelin, 1788)** — **Morepork**
Kurodaia (*Conciella*) *cryptostigmatia* (Nitzsch [*in* Giebel], 1861)
Strigiphilus vapidus Clay, 1977

ᵉ ***Sceloglaux albifacies albifacies* (G.R. Gray, 1844)** — **South Island laughing owl**
Strigiphilus species

*** *Athene noctua* (Scopoli, 1769)** — **Little owl**
Strigiphilus cursitans (Nitzsch [*in* Giebel], 1861)

TYTONIDAE

***Tyto alba delicatula* (Gould, 1837)** — **Australian barn owl**
Strigiphilus aitkeni Clay, 1966

APODIFORMES
APODIDAE

***Hirundapus caudacutus caudacutus* (Latham, 1802)** — **White-throated needletail**
♣ *Dennyus* (*Takamatsuia*) species

CORACIIFORMES
HALCYONIDAE

***Dacelo novaeguineae novaeguineae* (Hermann, 1783)** — **Laughing kookaburra**
♣ *Alcedoecus delphax* (Nitzsch [*in* Giebel], 1866)
♣ *Emersoniella bracteata* (Nitzsch [*in* Giebel], 1866)

ᵉ***Todiramphus sanctus vagans* (Lesson, 1828)** — **New Zealand kingfisher**
Alcedoecus alatoclypeatus (Piaget, 1885)

CORACIIDAE

***Eurystomus orientalis pacificus* (Latham, 1802)** — **Dollarbird**
Capraiella species

PASSERIFORMES
ACANTHISITTIDAE

ᵉ***Acanthisitta chloris chloris* (Sparrman, 1787)** — **South Island rifleman**
Menacanthus species
♦ *Philopteroides novaezelandiae* Mey, 2004

ᵉ***Xenicus longipes longipes* (Gmelin, 1789)** — **South Island bush wren**
♦ *Philopteroides xenicus* Mey, 2004

CALLAEIDAE

ᵉ***Callaeas wilsoni* (Bonaparte, 1851)** — **North Island kokako**
♦ *Brueelia callaeincola* Valim & Palma, 2015
♦ *Philopterus novaezealandiae* Palma & Price, 2000

ᵉ***Callaeas cinerea* (Gmelin, 1788)** — **South Island kokako**
♦ *Brueelia callaeincola* Valim & Palma, 2015
♦ *Philopterus novaezealandiae* Palma & Price, 2000

ᵉ***Philesturnus rufusater* (Lesson, 1828)** — **North Island saddleback**
♦ *Brueelia callaeincola* Valim & Palma, 2015

ᵉ***Philesturnus carunculatus* (Gmelin, 1789)** — **South Island saddleback**
♦ *Brueelia callaeincola* Valim & Palma, 2015

ᵉ***Heteralocha acutirostris* (Gould, 1837)** — **Huia**
♦ *Rallicola* (*Huiacola*) *extinctus* (Mey, 1990)

NOTIOMYSTIDAE

ᵉ***Notiomystis cincta* (du Bus de Gisignies, 1839)** — **Stitchbird**
♦ *Myrsidea hihi* Sychra, Kolencik & Palma, 2016

TURNAGRIDAE

ᵉ***Turnagra capensis capensis* (Sparrman, 1787)** — **South Island piopio**
Brueelia species

ACANTHIZIDAE

ᵉ***Gerygone igata*** **(Quoy & Gaimard, 1830)** — **Grey warbler**
Myrsidea species
♦ *Philopteroides pilgrimi* Valim & Palma, 2013
Ricinus species

MELIPHAGIDAE

ᵉ***Anthornis melanura obscura*** **Falla, 1948** — **Three Kings bellbird**
♦ *Melibrueelia novaeseelandiae* Valim & Palma, 2015
♦ *Myrsidea novaeseelandiae* Sychra, Kolencik & Palma, 2016

ᵉ***Anthornis melanura oneho*** **Bartle & Sagar, 1987** — **Poor Knights bellbird**
♦ *Melibrueelia novaeseelandiae* Valim & Palma, 2015
♦ *Myrsidea novaeseelandiae* Sychra, Kolencik & Palma, 2016

ᵉ***Anthornis melanura melanura*** **(Sparrman, 1786)** — **Bellbird**
♦ *Melibrueelia novaeseelandiae* Valim & Palma, 2015
♦ *Myrsidea novaeseelandiae* Sychra, Kolencik & Palma, 2016

ᵉ***Prosthemadera novaeseelandiae novaeseelandiae*** **(Gmelin, 1788)** — **Tui**
♦ *Melibrueelia novaeseelandiae* Valim & Palma, 2015
♦ *Myrsidea novaeseelandiae* Sychra, Kolencik & Palma, 2016

PACHYCEPHALIDAE

ᵉ***Mohoua albicilla*** **(Lesson, 1830)** — **Whitehead**
Brueelia species
Myrsidea species
Philopterus species 2

ARTAMIDAE

* ***Gymnorhina tibicen*** **(Latham, 1802)** — **Australian magpie**
Brueelia semiannulata (Piaget, 1883)
Myrsidea ivanliteraki Sychra, Kolencik & Palma, 2016
Philopterus species 1

RHIPIDURIDAE

ᵉ***Rhipidura fuliginosa placabilis*** **Bangs, 1921** — **North Island fantail**
♦ *Philopteroides fuliginosus* Valim & Palma, 2013

ᵉ***Rhipidura fuliginosa fuliginosa*** **(Sparrman, 1787)** — **South Island fantail**
♦ *Menacanthus rhipidurae* Palma & Price, 2005
♦ *Philopteroides fuliginosus* Valim & Palma, 2013

CORVIDAE

* ***Corvus frugilegus*** **Linnaeus, 1758** — **Rook**
Colpocephalum fregili Denny, 1842

MONARCHIDAE

Monarcha melanopsis **(Vieillot, 1818)** — **Black-faced monarch**
Brueelia species

PETROICIDAE

ᵉ***Petroica*** **(*Petroica*)** ***macrocephala toitoi*** **(Lesson, 1828)** — **North Island tomtit**
♦ *Philopteroides macrocephalus* Valim & Palma, 2013

ᵉ***Petroica* (*Petroica*) *macrocephala macrocephala* (Gmelin, 1789)** — **South Island tomtit**
♦ *Philopteroides macrocephalus* Valim & Palma, 2013

ᵉ***Petroica* (*Petroica*) *macrocephala dannefaerdi* (Rothschild, 1894)** — **Snares Island tomtit**
♦ *Philopteroides macrocephalus* Valim & Palma, 2013

ᵉ***Petroica* (*Miro*) *australis australis* (Sparrman, 1788)** — **South Island robin**
Menacanthus eurysternus (Burmeister, 1838)

ALAUDIDAE

* ***Alauda arvensis* Linnaeus, 1758** — **Eurasian skylark**
♣ *Brueelia parviguttata* (Blagoveshtchensky, 1940)
♣ *Philopterus stadleri* (Eichler, 1959)

MEGALURIDAE

ᵉ***Bowdleria punctata wilsoni* Stead, 1936** — **Codfish Island Fernbird**
Penenirmus species

ZOSTEROPIDAE

***Zosterops lateralis lateralis* (Latham, 1802)** — **Silvereye**
Menacanthus eurysternus (Burmeister, 1838)

TURDIDAE

* ***Turdus merula merula* Linnaeus, 1758** — **Eurasian blackbird**
Brueelia amsel (Eichler, 1951)
Brueelia merulensis (Denny, 1842)
Menacanthus eurysternus (Burmeister, 1838)
Myrsidea thoracica (Giebel, 1874)
Philopterus turdi Denny, 1842

* ***Turdus philomelos* Brehm, 1831** — **Song thrush**
Brueelia turdinulae Ansari, 1956
Menacanthus eurysternus (Burmeister, 1838)
Philopterus turdi Denny, 1842

STURNIDAE

* ***Sturnus vulgaris vulgaris* Linnaeus, 1758** — **Common starling**
Brueelia nebulosa (Burmeister, 1838)
Menacanthus eurysternus (Burmeister, 1838)
Sturnidoecus sturni (Schrank, 1776)

* ***Acridotheres tristis* (Linnaeus, 1766)** — **Common myna**
Menacanthus eurysternus (Burmeister, 1838)
Sturnidoecus species

PASSERIDAE

* ***Passer domesticus domesticus* (Linnaeus, 1758)** — **House sparrow**
Brueelia cyclothorax (Burmeister, 1838)
Menacanthus eurysternus (Burmeister, 1838)

MOTACILLIDAE

ᵉ***Anthus novaeseelandiae novaeseelandiae* (Gmelin, 1789)** — **New Zealand pipit**
Menacanthus eurysternus (Burmeister, 1838)
Myrsidea species
♣ *Philopterus irkutensis* Fedorenko, 1985

ᵉ***Anthus novaeseelandiae steindachneri*** **Reischek, 1889** — **Antipodes Island pipit**
♣ *Philopterus irkutensis* Fedorenko, 1985

PRUNELLIDAE

***** ***Prunella modularis*** **(Linnaeus, 1758)** — **Dunnock**
♣ *Philopterus modularis* Denny, 1842

FRINGILLIDAE

***** ***Carduelis chloris*** **(Linnaeus, 1758)** — **European greenfinch**
♣ *Brueelia breueri* Balát, 1955
Menacanthus eurysternus (Burmeister, 1838)
Myrsidea serini (Séguy, 1944)

***** ***Carduelis carduelis britannica*** **(Hartert, 1871)** — **European goldfinch**
♣ *Brueelia densilimba* (Nitzsch [*in* Giebel], 1866)
Myrsidea serini (Séguy, 1944)

***** ***Serinus canaria*** **(Linnaeus, 1758) [captive]** — **Island canary**
Menacanthus eurysternus (Burmeister, 1838)
Myrsidea serini (Séguy, 1944)

EMBERIZIDAE

***** ***Emberiza citrinella*** **Linnaeus, 1758** — **Yellowhammer**
Brueelia delicata (Nitzsch [*in* Giebel], 1866)
Myrsidea serini (Séguy, 1944)

MAMMALIA

MARSUPIALIA
MACROPODIDAE

***** ***Petrogale penicillata*** **(J.E. Gray, 1825)** — **Brush-tailed rock wallaby**
Boopia notafusca Le Souëf, 1902
Heterodoxus ampullatus Kéler, 1971

LAGOMORPHA
LEPORIDAE

***** ***Oryctolagus cuniculus cuniculus*** **(Linnaeus, 1758)** — **European rabbit**
Haemodipsus ventricosus (Denny, 1842)

* ***Lepus europaeus occidentalis*** **de Winton, 1898** — **Brown hare**
Haemodipsus lyriocephalus (Burmeister, 1838b)

RODENTIA
CAVIIDAE

* ***Cavia porcellus*** **(Linnaeus, 1758)** — **Guinea pig**
Gliricola (*Gliricola*) *porcelli* (Schrank, 1781)
Gyropus ovalis Burmeister, 1838a

MURIDAE

* ***Rattus exulans*** **(Peale, 1848)** — **Kiore**
Hoplopleura pacifica Ewing, 1924

* ***Rattus norvegicus*** **(Berkenhout, 1769)** — **Norway rat**
Polyplax spinulosa (Burmeister, 1838b)

* ***Rattus rattus*** **(Linnaeus, 1758)** **Ship rat**
Polyplax spinulosa (Burmeister, 1838b)

* ***Mus musculus*** **Linnaeus, 1758** **House mouse**
Polyplax serrata (Burmeister, 1838b)

CARNIVORA
CANIFORMIA

OTARIIDAE

Arctocephalus forsteri **(Lesson, 1828)** **New Zealand fur seal**
Antarctophthirus microchir (Trouessart & Neumann, 1888)

Phocarctos hookeri **(J.E. Gray, 1844)** **New Zealand sea lion**
Antarctophthirus microchir (Trouessart & Neumann, 1888)

PHOCIDAE

Mirounga leonina **(Linnaeus, 1758)** **Southern elephant seal**
Lepidophthirus macrorhini Enderlein, 1904

Leptonychotes weddellii **(Lesson, 1826)** **Weddell seal**
Antarctophthirus carlinii Leonardi *et al*., 2014

Hydrurga leptonyx **(Blainville, 1820)** **Leopard seal**
Antarctophthirus ogmorhini Enderlein, 1906

Lobodon carcinophagus **(Hombron & Jacquinot, 1842)** **Crabeater seal**
Antarctophthirus lobodontis Enderlein, 1909

Ommatophoca rossii **J.E. Gray, 1844** **Ross seal**
Antarctophthirus mawsoni Harrison, 1937

CANIDAE

* ***Canis familiaris*** **Linnaeus, 1758** **Dog**
Linognathus setosus (von Olfers, 1816)
Trichodectes (*Trichodectes*) *canis* (De Geer, 1778)

MUSTELIDAE

* ***Mustela erminea*** **Linnaeus, 1758** **Stoat**
Trichodectes (*Stachiella*) *ermineae* (Hopkins, 1941)

* ***Mustela nivalis vulgaris*** **Erxleben, 1777** **Weasel**
Trichodectes (*Stachiella*) *mustelae* (Schrank, 1803)

* ***Mustela furo*** **Linnaeus, 1758** **Feral ferret**
Trichodectes (*Stachiella*) *ermineae* (Hopkins, 1941)

FELIFORMIA

FELIDAE

* ***Felis catus*** **Linnaeus, 1758** **Feral Cat**
Felicola (*Felicola*) *subrostratus* (Burmeister, 1838a)

PERISSODACTYLA
EQUIDAE

* ***Equus caballus* Linnaeus, 1758** — **Horse**
Haematopinus asini (Linnaeus, 1758)
Werneckiella equi (Denny, 1842)

* ***Equus asinus* Linnaeus, 1758** — **Donkey**
Haematopinus asini (Linnaeus, 1758)
Werneckiella ocellata (Piaget, 1880)

ARCTIODACTYLA
SUIDAE

* ***Sus scrofa* Linnaeus, 1758** — **Feral pig**
Haematopinus suis (Linnaeus, 1758)

BOVIDAE

* ***Bos taurus* Linnaeus, 1758** — **Feral cattle**
Bovicola (*Bovicola*) *bovis* (Linnaeus, 1758)
Haematopinus eurysternus Denny, 1842
Linognathus vituli (Linnaeus, 1758)
Solenopotes capillatus Enderlein, 1904

*** *Rupicapra rupicapra rupicapra* Couturier, 1938** — **Chamois**
Bovicola (*Bovicola*) *longicornis* (Nitzsch, 1818)

* ***Hemitragus jemlahicus* (Smith, 1826)** — **Himalayan tahr**
Bovicola (*Spinibovicola*) *hemitragi* (Cummings, 1916)

* ***Capra hircus* Linnaeus, 1758** — **Feral goat**
Bovicola (*Bovicola*) *caprae* (Gurlt, 1843)
Bovicola (*Bovicola*) *limbatus* (Gervais, 1844)
Linognathus stenopsis (Burmeister, 1838b)

* ***Ovis aries* Linnaeus, 1758** — **Feral sheep**
Bovicola (*Bovicola*) *ovis* (Schrank, 1781)
Linognathus ovillus (Neumann, 1907)
Linognathus pedalis (Osborn, 1896)

CAMELIDAE

* ***Lama pacos* (Linnaeus, 1758)** — **Alpaca**
Bovicola (*Lepikentron*) *breviceps* (Rudow, 1866)

CERVIDAE

* ***Cervus elaphus scoticus* Lönnberg, 1906** — **Red deer**
Bovicola (*Bovicola*) *longicornis* (Nitzsch, 1818)
Solenopotes burmeisteri (Fahrenholz, 1919)

* ***Cervus elaphus nelsoni* (Bailey, 1935)** — **Wapiti**
Bovicola (*Bovicola*) *longicornis* (Nitzsch, 1818)

*** *Odocoileus virginianus borealis* (Miller, 1900)** — **White-tailed deer**
Solenopotes burmeisteri (Fahrenholz, 1919)
Tricholipeurus lipeuroides (Mégnin, 1884)
Tricholipeurus parallelus (Osborn, 1896)

PRIMATES
HOMINIDAE

* ***Homo sapiens* Linnaeus, 1758** **Human**
Pediculus humanus capitis De Geer, 1778
Pediculus humanus humanus Linnaeus, 1758
Pthirus pubis (Linnaeus, 1758)

LIST OF BIRD SPECIES WHICH BREED IN THE NEW ZEALAND SUBREGION BUT WITH NO LICE COLLECTED FROM THEM IN THE SUBREGION

There are 18 bird species which breed in the New Zealand Subregion, but with no lice recorded from them. Among them, six species are rare endemics seldom searched for lice, six other species have been introduced by humans either purposely of by accident, and the remaining six are natives that also live in other parts of the world. Most of the native and introduced species have had lice recorded from them elsewhere, but in New Zealand they are rare or have restricted distributions. Despite some opportunities to search for lice from a few of these 18 species, no specimens have been found.

Tachybaptus novaehollandiae novaehollandiae (Stephens, 1826)	Australasian little grebe
Pygoscelis papua papua (J.R. Forster, 1781)	Northern gentoo penguin
Pygoscelis antarctica (J.R. Forster, 1781)	Chinstrap penguin
* *Cereopsis novaehollandiae* Latham, 1802	Cape Barren goose
ε *Lewinia muelleri* (Rothschild, 1893)	Auckland Island rail
Elseyornis melanops (Vieillot, 1818)	Black-fronted dotterel
Sternula nereis davisae Mathews & Iredale, 1913	New Zealand fairy tern
* *Streptopelia risoria* (Linnaeus, 1758)	Barbary dove
* *Platycercus elegans* (Gmelin, 1788)	Crimson rosella
ε *Xenicus gilviventris* Pelzeln, 1867	Rock wren
ε *Gerygone albofrontata* G.R. Gray, 1845	Chatham Island warbler
ε *Mohoua ochrocephala* (Gmelin, 1789)	Yellowhead
ε *Mohoua novaeseelandiae* (Gmelin, 1789)	Brown creeper
ε *Petroica* (*Miro*) *traversi* (Buller, 1872)	Black robin
Hirundo neoxena neoxena Gould, 1842	Welcome swallow
* *Fringilla coelebs* Linnaeus, 1758	Chaffinch
* *Carduelis flammea* (Linnaeus, 1758)	Common redpoll
* *Emberiza cirlus* Linnaeus, 1766	Cirl bunting

ε Denotes species or subspecies which are **endemic** to the New Zealand Subregion.
* Denotes species or subspecies which have been **introduced** to the New Zealand Subregion by human agency.

ACKNOWLEDGEMENTS

I am extremely grateful to Jean-Claude Stahl (MONZ) for his outstanding photographic work, shooting and preparing all the photographs included in this book. I am indebted to Julia Kasper (Wellington, New Zealand) for her translations of German papers and for her assistance in locating types held in German institutions, and to Stephen Marder (Washington, D.C., United States of America) for his translation of Russian papers. I greatly acknowledge the assistance of Terry D. Galloway (Winnipeg, Canada) for supplying useful historical references, and that of Brian Michael Fitzgerald (Stokes Valley, Wellington, New Zealand) for reviewing the historical section of the text. For providing information about the locations of primary type specimens, I thank: Costica Adam (Grigore Antipa National Museum of Natural History, Bucharest, Romania); Jürgen Deckert (Museum für Naturkunde, Berlin, Germany); Daniel Gustafsson (University of Utah, Salt Lake City, Utah, U.S.A.); Takuya

Kiyoshi (National Science Museum, Tokyo, Japan); Robert McGowan (National Museum of Scotland); Karen Needham (University of British Columbia, Vancouver, Canada); Peter T. Oboyski (Essig Museum of Entomology, University of California, Berkeley, California, U.S.A.); Graham Rotheray (National Museum of Scotland); Jürgen Schmidl (University of Erlangen-Nuremberg, Germany); Karla Schneider (Institut für Zoologie und Zoologische Sammlungen, Martin-Luther-Universität Halle-Wittenberg, Germany); Vincent S. Smith (Natural History Museum, London, England); Oldřich Sychra (University of Veterinary and Pharmaceutical Sciences, Brno, Czech Republic); Gert Tröster (Zoologisches Museum, Georg-August-Universität Göttingen, Germany); Michel P. Valim (Museu de Zoologia da Universidade de São Paulo, São Paulo, Brasil) and Janet Weigner (Freien Universität, Berlin, Germany).

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Checklist Committee (OSNZ): Gill, B.J. (Convener); Bell, B.D.; Chambers, G.K.; Medway, D.G.; Palma, R.L.; Scofield, R.P.; Tennyson, A.J.D. & Worthy, T.H. 2010: *Checklist of the birds of New Zealand, Norfolk and Macquarie Islands, and the Ross Dependency, Antarctica*. Fourth Edition. Wellington: Te Papa Press in association with the Ornithological Society of New Zealand. x + 501 pp.

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Figure 1: *Boopia notafusca* Le Souëf, 1902. Male.

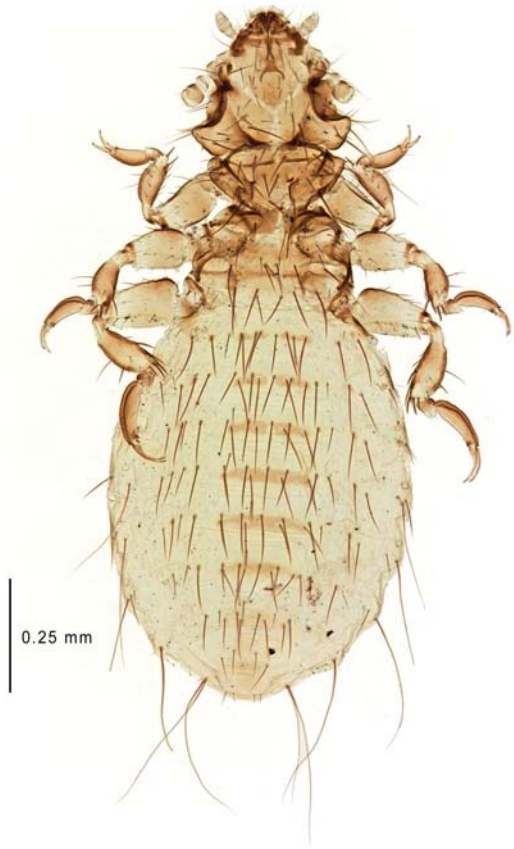


Figure 2: *Boopia notafusca*. Nymph.

Figure 3: *Heterodoxus ampullatus* Kéler, 1971. Male.

Figure 4: *Heterodoxus ampullatus*. Female.

Figure 5: *Gliricola* (*Gliricola*) *porcelli* (Schrank, 1781). Male.

Figure 6: *Gliricola* (*Gliricola*) *porcelli*. Female.

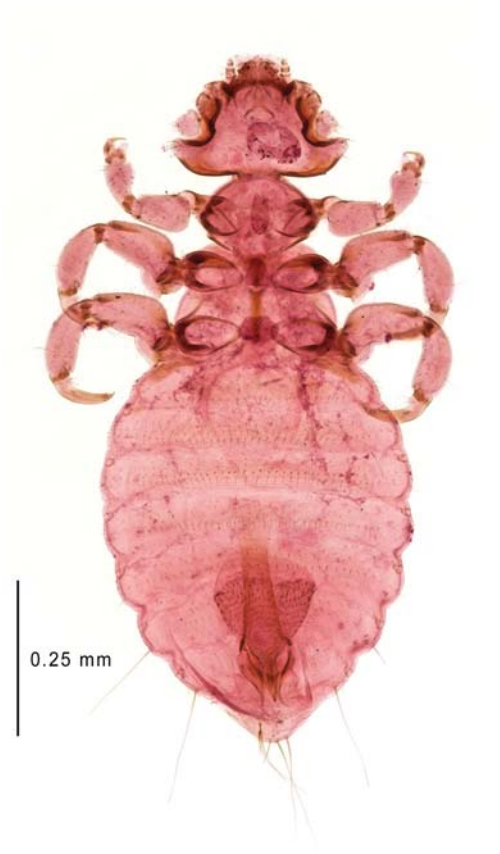


Figure 7: *Gyropus ovalis* Burmeister, 1838. Male.

Figure 8: *Gyropus ovalis*. Female.

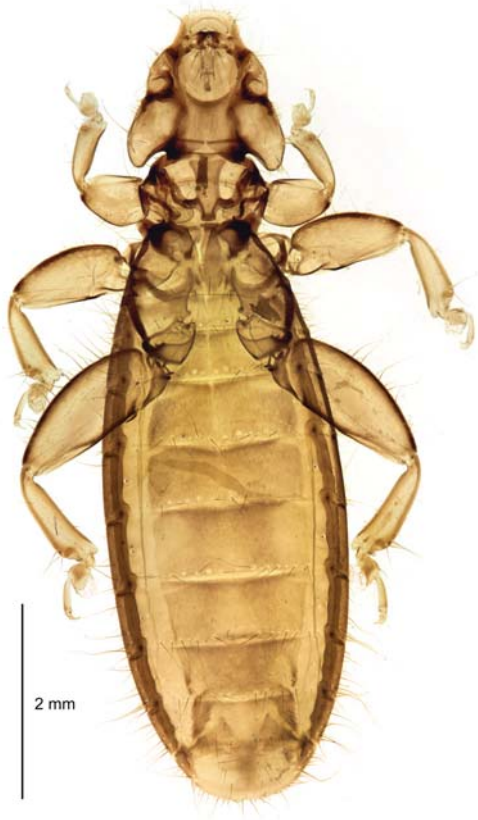


Figure 9: *Laemobothrion* (*Laemobothrion*) *tinnunculi* (Linnaeus, 1758). Female.

Figure 10: *Actornithophilus ceruleus* (Timmermann, 1954). Male.

Figure 11: *Actornithophilus ceruleus*. Female.

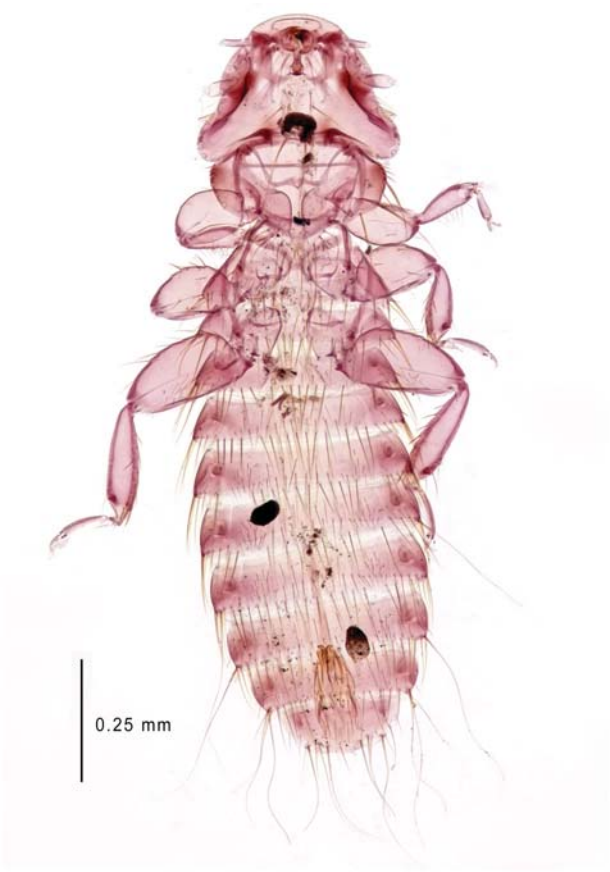


Figure 12: *Amyrsidea* (*Argimenopon*) *minuta* Emerson, 1961. Male.

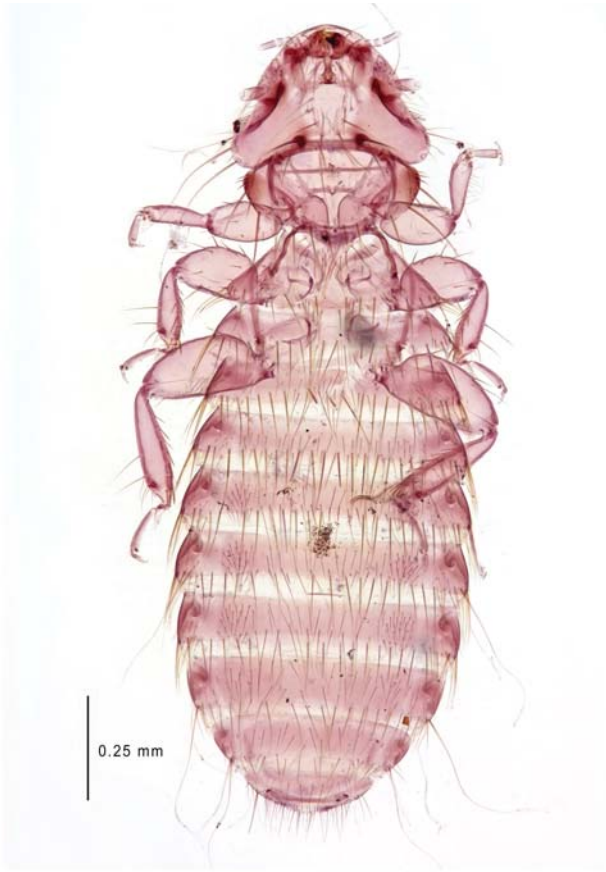


Figure 13: *Amyrsidea* (*A.*) *minuta* Female.

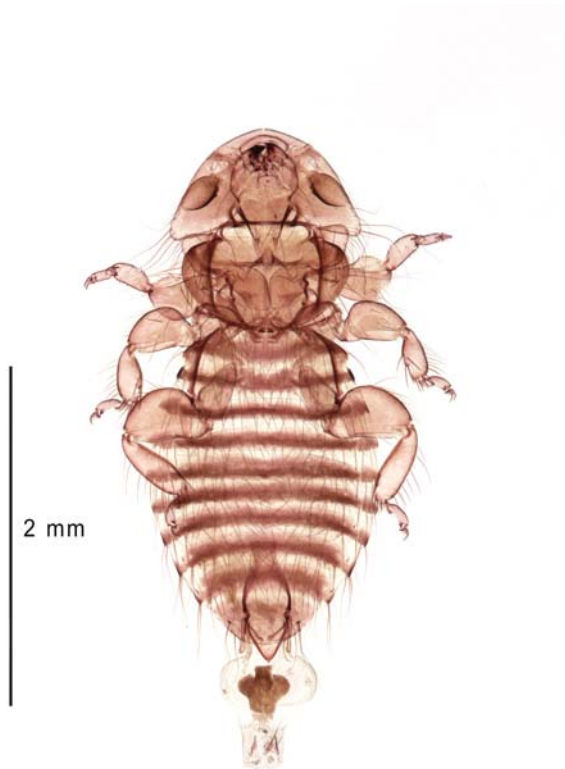


Figure 14: *Ancistrona vagelli* (J.C. Fabricius, 1787). Male.

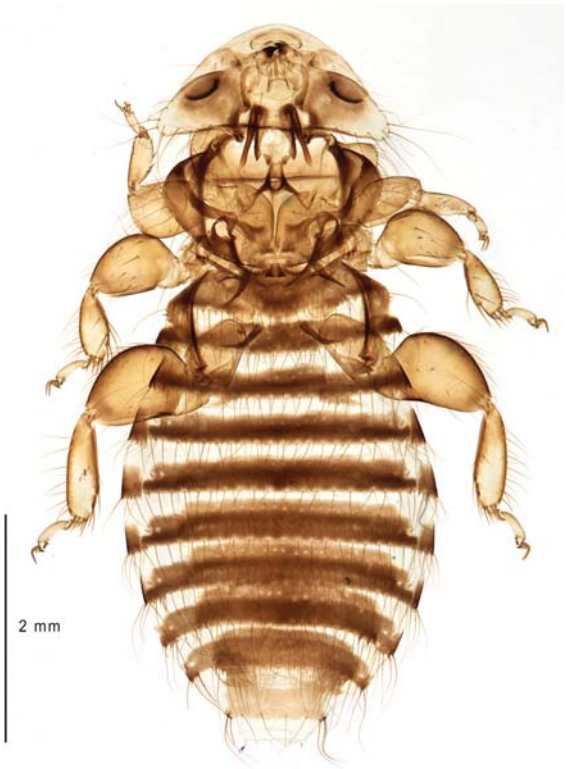


Figure 15: *Ancistrona vagelli*. Female.

Figure 16: *Apterygon okarito* Palma & Price, 2004. Male.

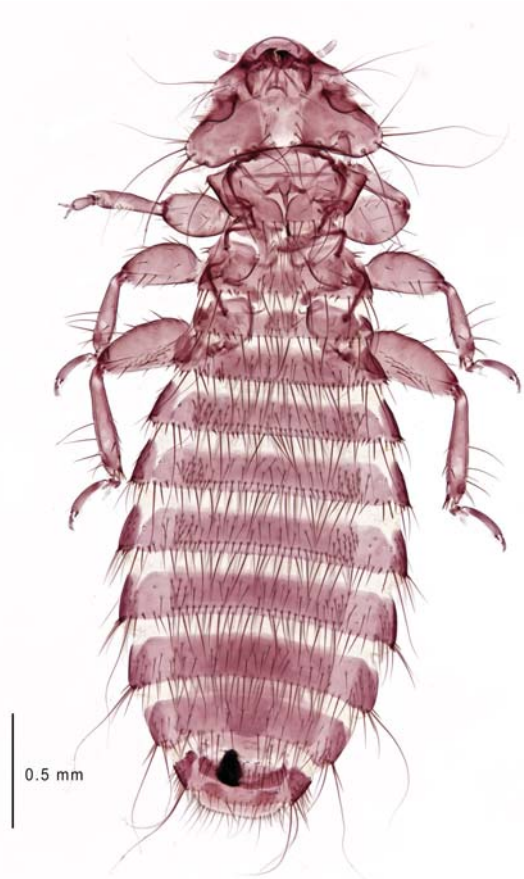


Figure 17: *Apterygon okarito*. Female.

Figure 18: *Austromenopon navigans* (Kellogg, 1896). Male.

Figure 19: *Austromenopon navigans*. Female.

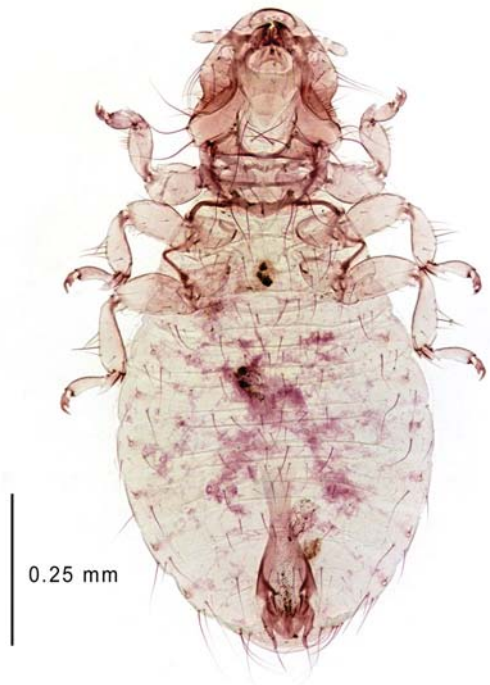


Figure 20: *Bonomiella columbae* Emerson, 1957. Male.

Figure 21: *Bonomiella columbae*. Female.

Figure 22: *Ciconiphilus decimfasciatus* (Boisduval & Lacordaire, 1835). Male.

Figure 23: *Ciconiphilus decimfasciatus*. Female.

Figure 24: *Colpocephalum pilgrimi* Price, 1967. Male.

Figure 25: *Colpocephalum pilgrimi*. Female.

Figure 26: *Cuculiphilus* (*Cuculiphilus*) *fasciativentris* Carriker, 1955. Male.

Figure 27: *Cuculiphilus* (*C.*) *fasciativentris*. Female.

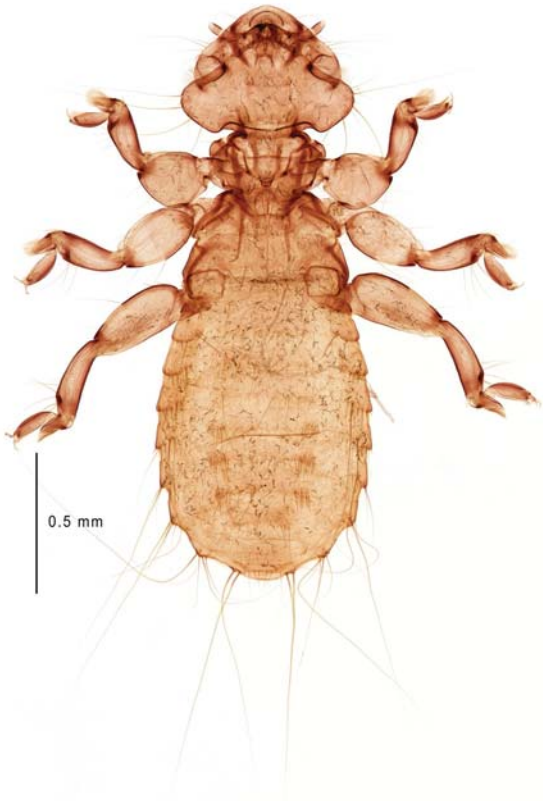


Figure 28: *Dennyus* (*Takamatsuia*) sp. Nymph.

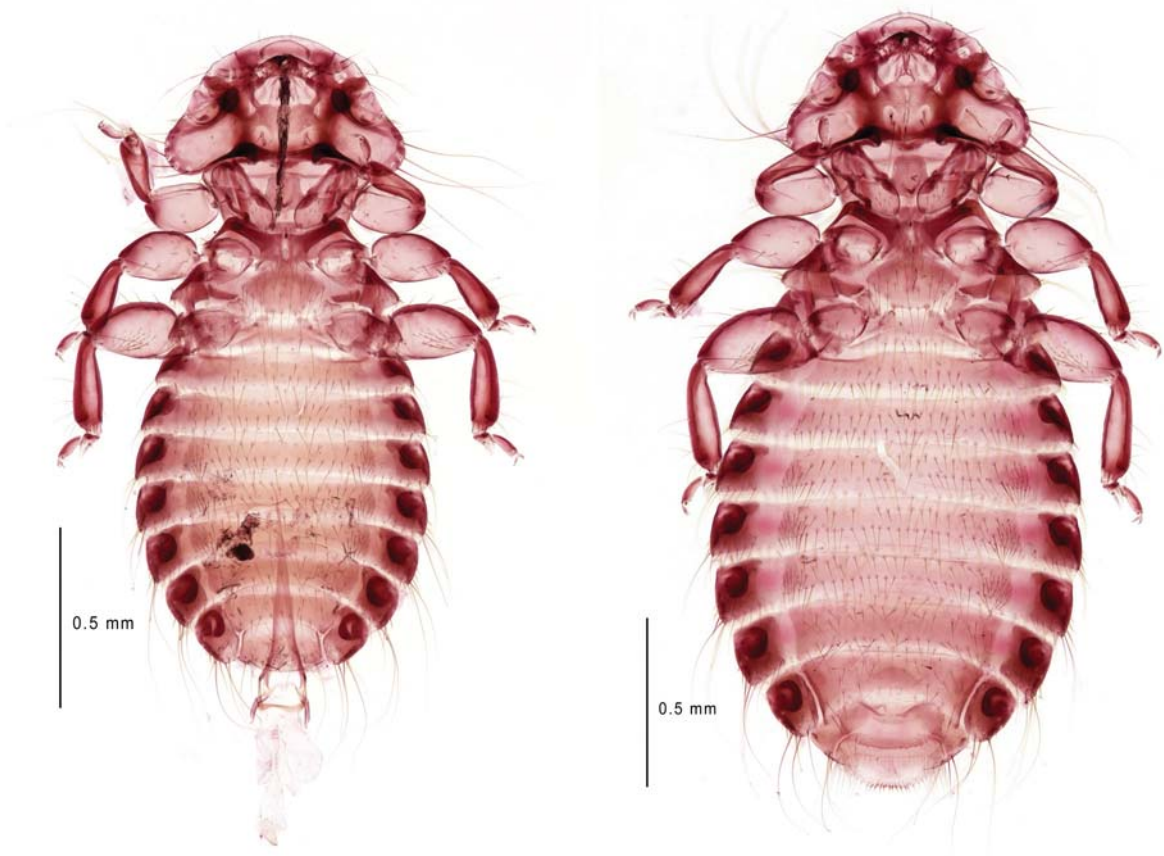


Figure 29: *Eidmanniella eurygaster* (Nitzsch [*in* Giebel], 1866). Male. **Figure 30:** *Eidmanniella eurygaster*. Female.

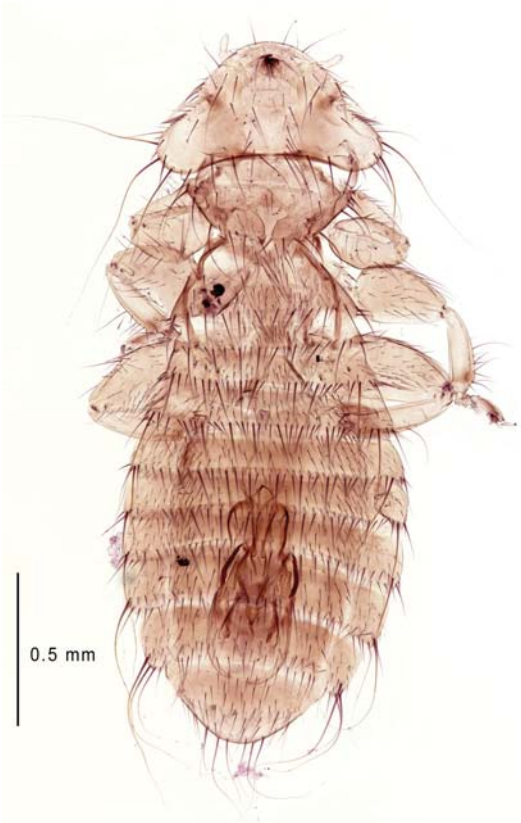


Figure 31: *Eucolpocephalum femorale* (Piaget, 1880). Male.

Figure 32: *Eucolpocephalum femorale*. Female.

Figure 33: *Franciscoloa* (*Franciscoloa*) *pallida* (Piaget, 1880). Male.

Figure 34: *Franciscoloa* (*Franciscoloa*) *pallida*. Female.

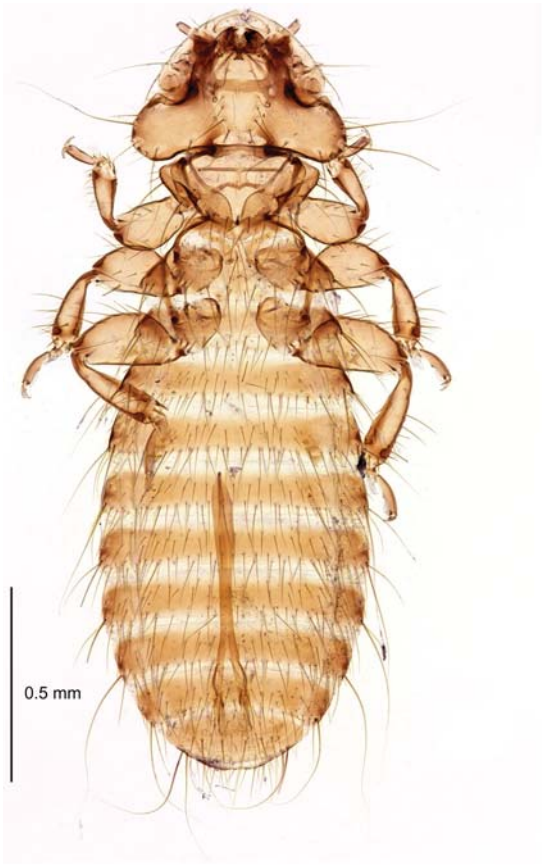


Figure 35: *Heteromenopon* (*Keamenopon*) *kea* (Kellogg, 1907). Male.

Figure 36: *Heteromenopon* (*K.*) *kea*. Female.

Figure 37: *Hohorstiella timorensis* Tendeiro, 1980. Male.

Figure 38: *Hohorstiella timorensis*. Female.

Figure 39: *Holomenopon tadornae* (Gervais, 1844). Male.

Figure 40: *Holomenopon tadornae*. Female.

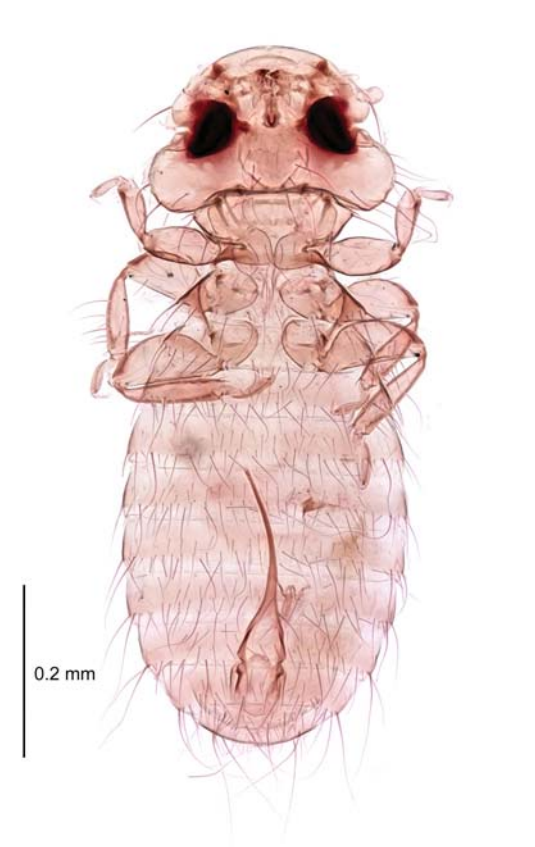


Figure 41: *Kurodaia* (*Conciella*) *cryptostigmatia* (Nitzsch [*in* Giebel], 1861). Male.

Figure 42: *Kurodaia cryptostigmatia*. Female.

Figure 43: *Longimenopon* sp. Male.

Figure 44: *Longimenopon* sp. Female.

Figure 45: *Menacanthus pallidulus* (Neumann, 1912). Male.

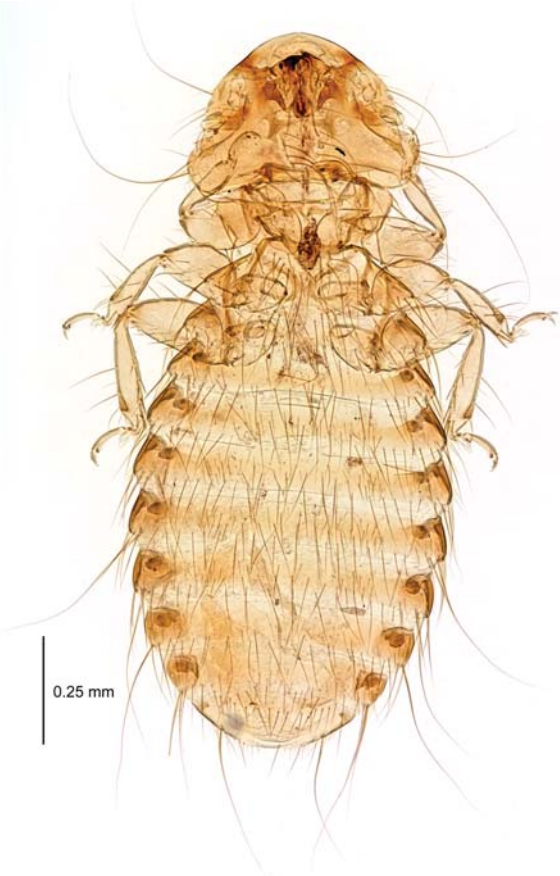


Figure 46: *Menacanthus pallidulus*. Female.

Figure 47: *Menopon gallinae* (Linnaeus, 1758). Male.

Figure 48: *Menopon gallinae*. Female.

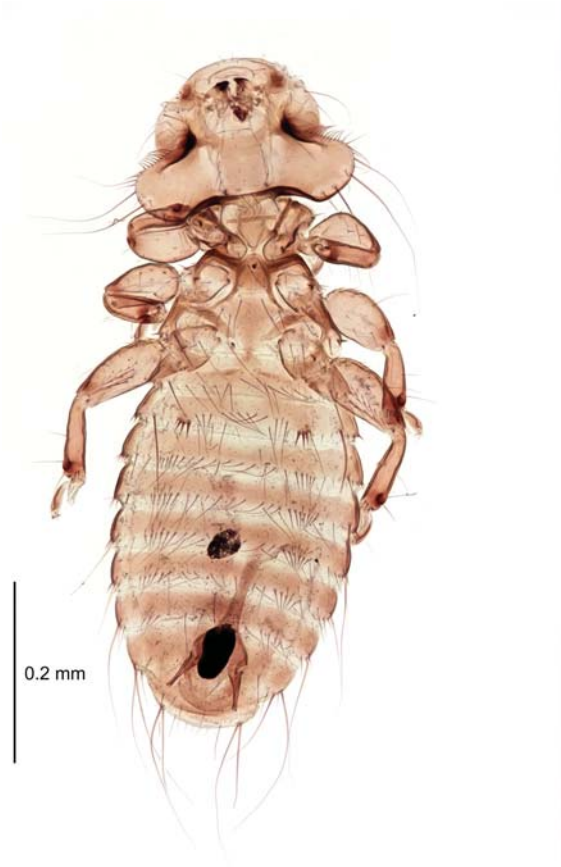


Figure 49: *Myrsidea thoracica* (Giebel, 1874). Male

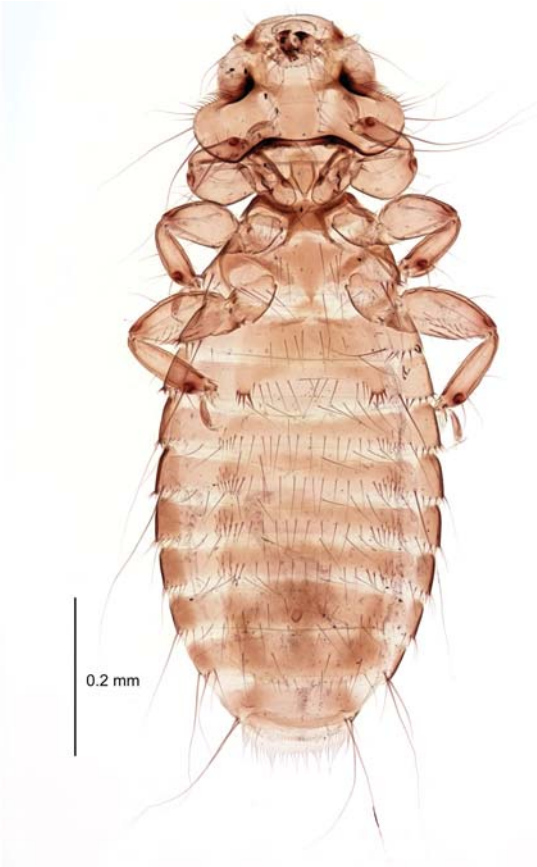


Figure 50: *Myrsidea thoracica*. Female.

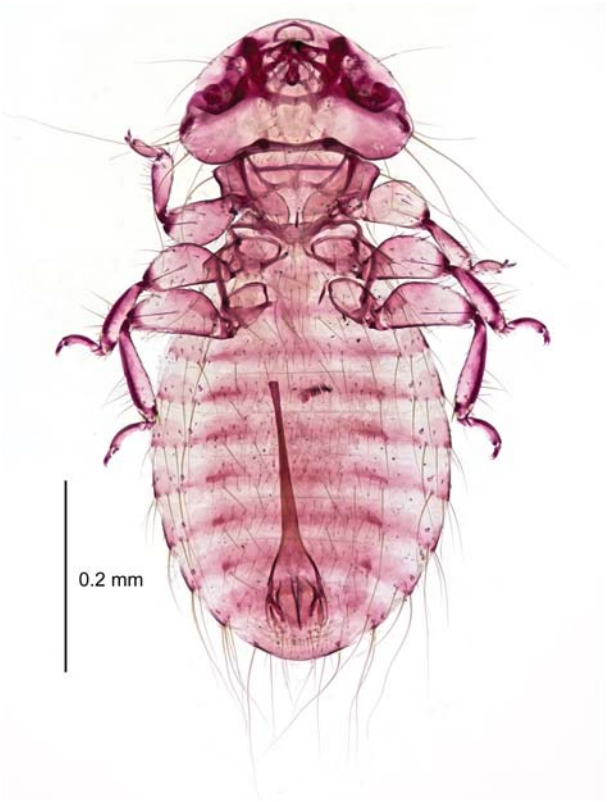


Figure 51: *Nosopon lucidum* (Rudow, 1869). Male.

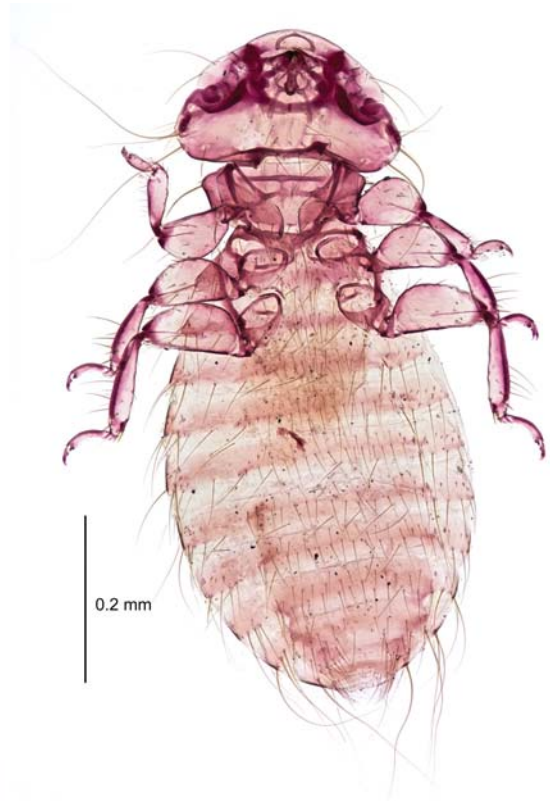


Figure 52: *Nosopon lucidum*. Female.

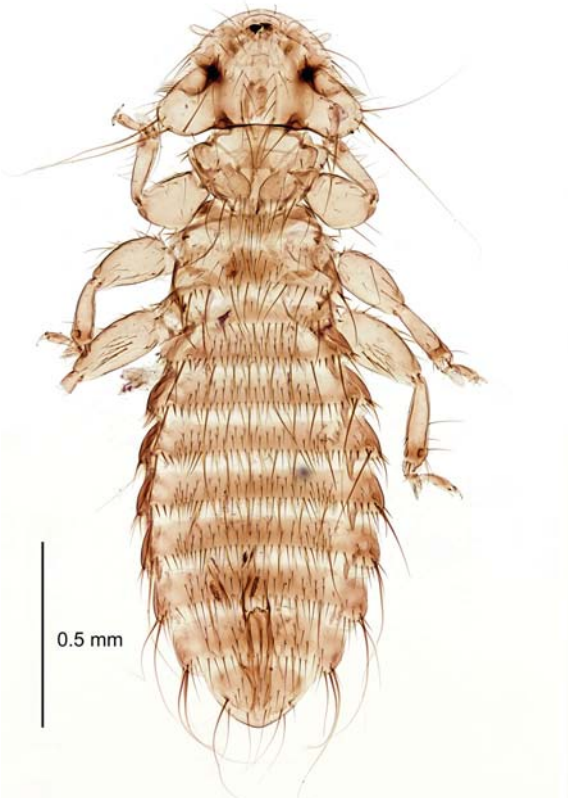


Figure 53: *Plegadiphilus plegadis* (Dubinin, 1938). Male.

Figure 54: *Plegadiphilus plegadis*. Female.

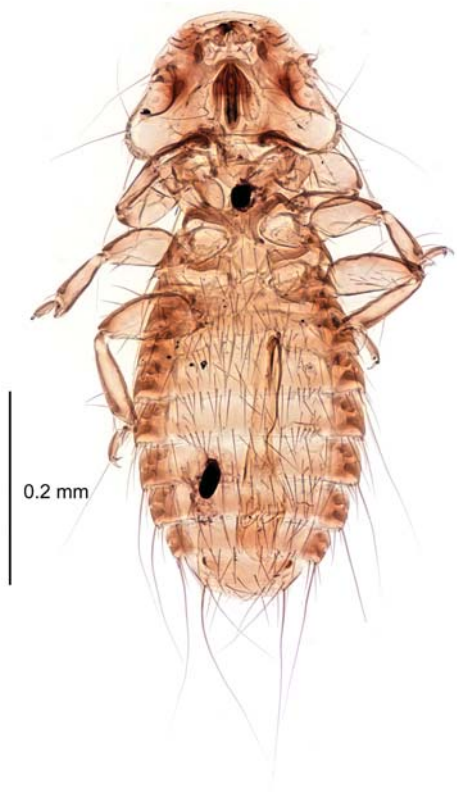


Figure 55: *Pseudomenopon pilgrimi* Price, 1974. Male.

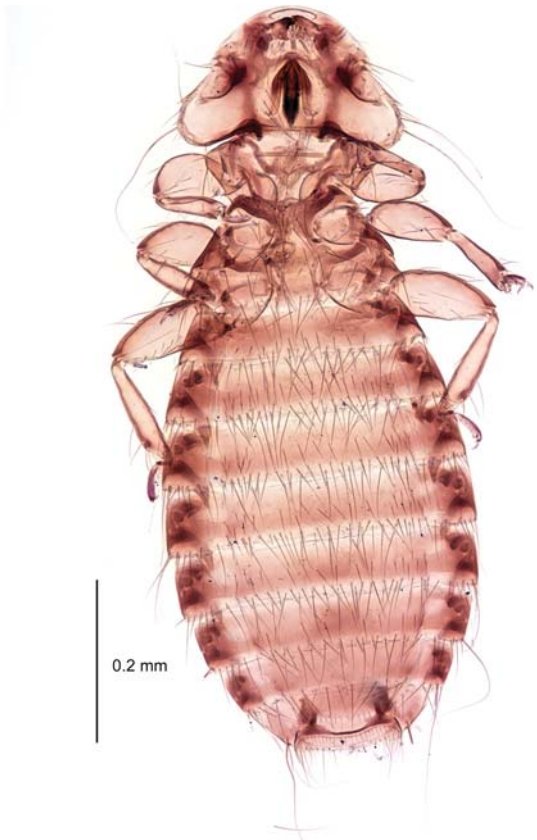


Figure 56: *Pseudomenopon pilgrimi.* Female.

Figure 57: *Trinoton nigrum* Le Souëf, 1902. Male.

Figure 58: *Trinoton nigrum*. Female.

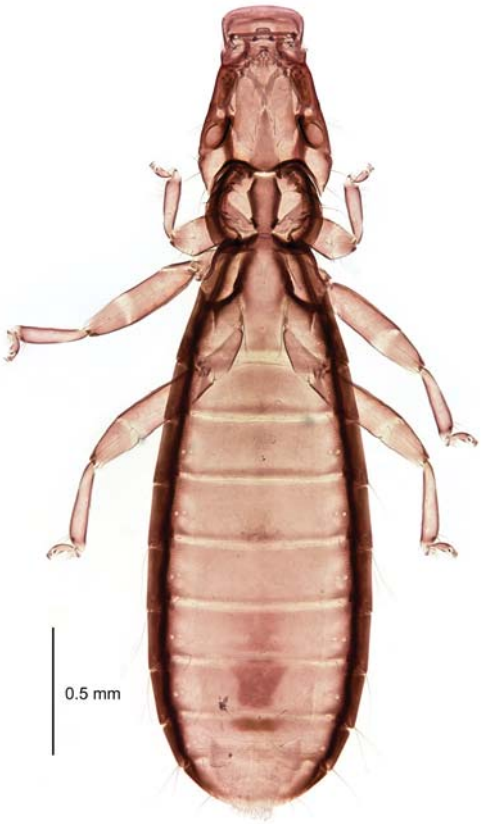


Figure 59: *Ricinus* sp. Female.

Figure 60: *Acidoproctus gottwaldhirschi* Eichler, 1958. Male.

Figure 61: *Acidoproctus gottwaldhirschi*. Female.

Figure 62: *Alcedoecus alatoclypeatus* (Piaget, 1885). Male.

Figure 63: *Alcedoecus alatoclypeatus*. Female.

Figure 64: *Anaticola magnificus* Ansari, 1955. Male.

Figure 65: *Anaticola magnificus*. Female.

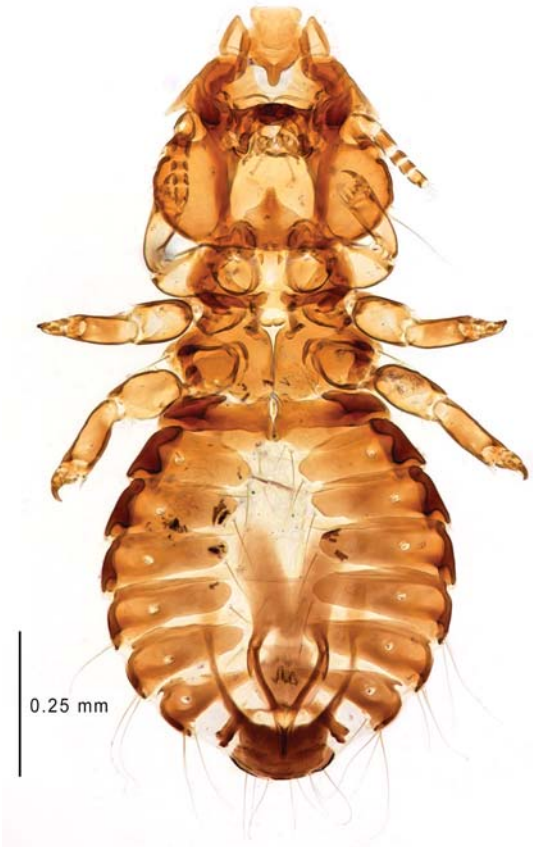


Figure 66: *Anatoecus icterodes oloris* Złotorzycka, 1970. Male.

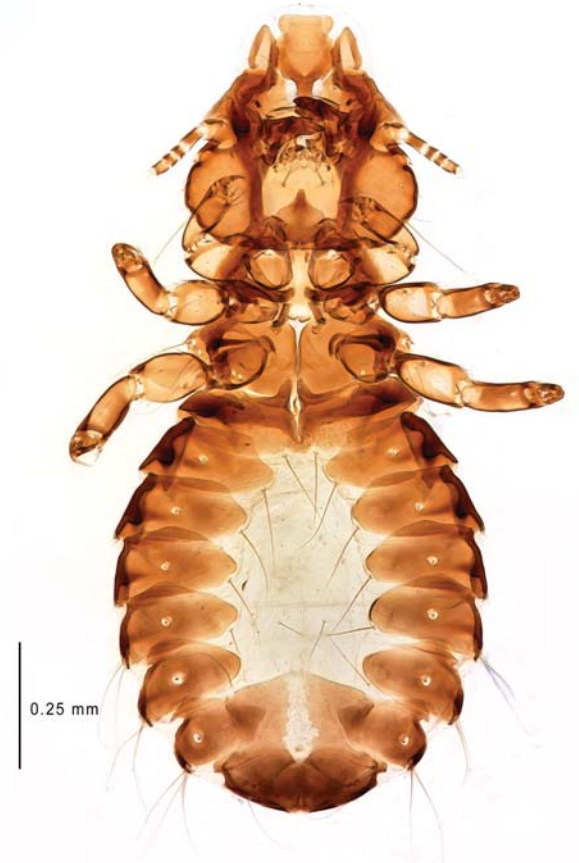


Figure 67: *Anatoecus icterodes oloris*. Female.

Figure 68: *Aquanirmus australis* Kettle, 1974. Male.

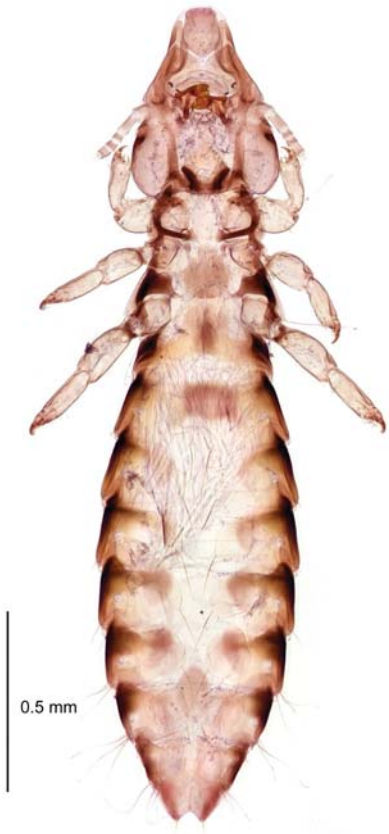


Figure 69: *Aquanirmus australis*. Female.

Figure 70: *Ardeicola neopallidus* Price, Hellenthal & Palma, 2003. Male

Figure 71: *Ardeicola neopallidus*. Female.

Figure 72: *Austrogoniodes hamiltoni* Harrison, 1937. Male

Figure 73: *Austrogoniodes hamiltoni*. Female.

Figure 74: *Bedfordiella unica* Thompson, 1937. Male.

Figure 75: *Bedfordiella unica*. Female.

Figure 76: *Brueelia semiannulata* (Piaget, 1883). Male.

Figure 77: *Brueelia semiannulata*. Female.

Figure 78: *Campanulotes bidentatus compar* (Burmeister, 1838). Male. **Figure 79:** *Campanulotes bidentatus compar*. Female.

Figure 80: *Capraiella* sp. Female.

Figure 81: *Carduiceps cingulatus cingulatus* (Denny, 1842). Male.

Figure 82: *Carduiceps cingulatus cingulatus*. Female.

Figure 83: *Chelopistes meleagridis* (Linnaeus, 1758). Male.

Figure 84: *Chelopistes meleagridis*. Female.

Figure 85: *Coloceras novaeseelandiae* (Tendeiro, 1972). Male.

Figure 86: *Coloceras novaeseelandiae*. Female.

Figure 87: *Columbicola columbae columbae* (Linnaeus, 1758). Male.

Figure 88: *Columbicola columbae columbae*. Female.

Figure 89: *Cuclotogaster synoicus* (Clay, 1938). Male.

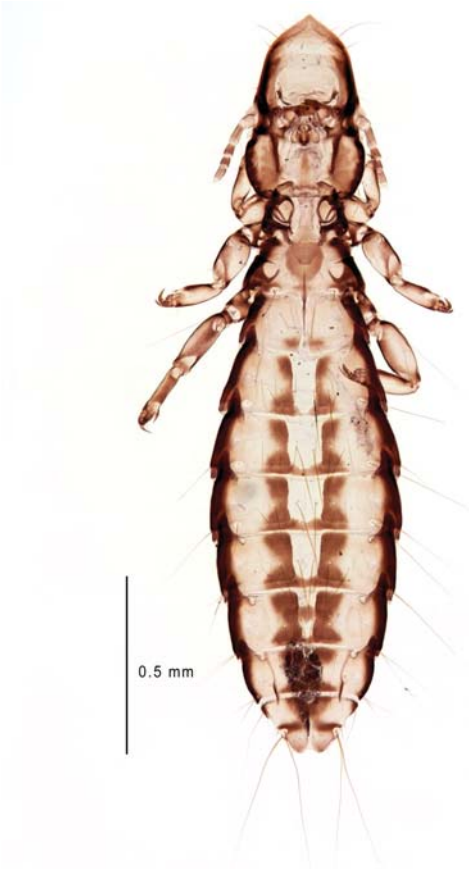


Figure 90: *Cuclotogaster synoicus*. Female.

Figure 91: *Cuculicola kui* Kettle, 1980. Male.

Figure 92: *Cuculicola kui*. Female.

Figure 93: *Degeeriella fusca* (Denny, 1842). Male.

Figure 94: *Degeeriella fusca*. Female.

Figure 95: *Docophoroides simplex* (Waterston, 1914). Male.

Figure 96: *Docophoroides simplex*. Female.

Figure 97: *Emersoniella bracteata* (Nitzsch [*in* Giebel], 1866). Male.

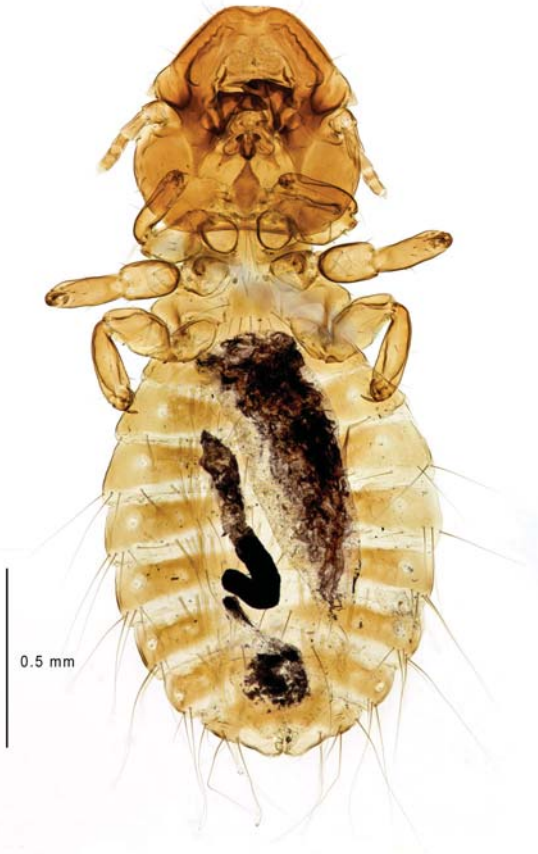


Figure 98: *Emersoniella bracteata*. Female.

Figure 99: *Episbates pederiformis* (Dufour, 1835). Male.

Figure 100: *Episbates pederiformis*. Female.

Figure 101: *Forficuloecus pilgrimi* Guimarães, 1985. Male

Figure 102: *Forficuloecus pilgrimi*. Female.

Figure 103: *Fulicoffula stammeri* Eichler, 1958. Male.

Figure 104: *Fulicoffula stammeri*. Female.

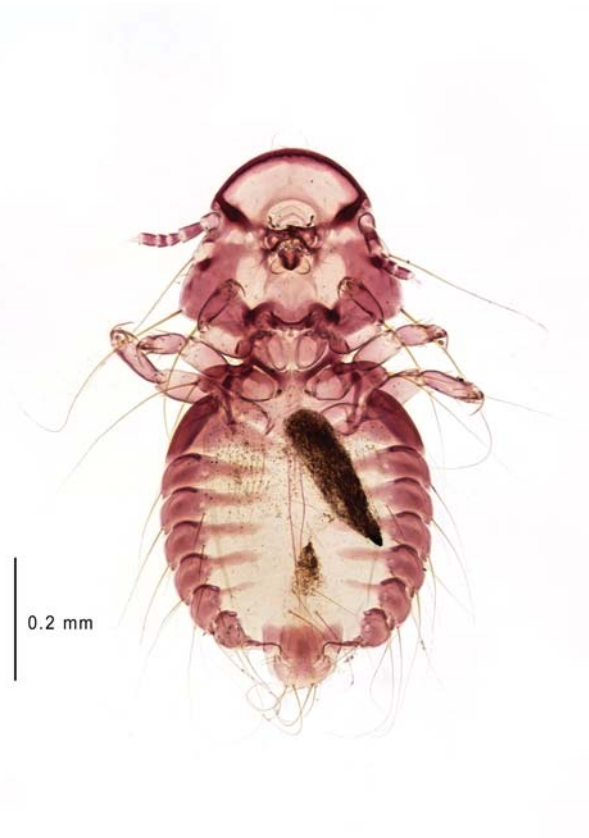


Figure 105: *Goniocotes pusillus* (Nitzsch [*in* Giebel], 1866). Male.

Figure 106: *Goniocotes pusillus*. Female.

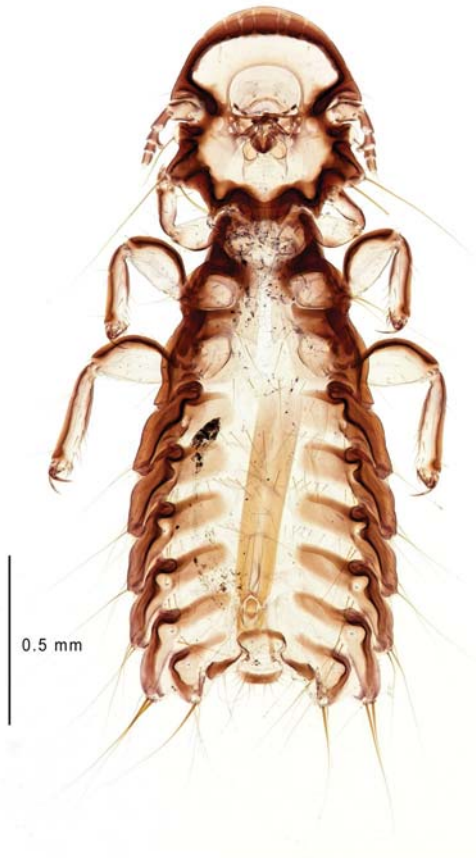


Figure 107: *Goniodes retractus* Le Souëf, 1902. Male.

Figure 108: *Goniodes retractus*. Female.

Figure 109: *Haffneria grandis* (Piaget, 1880). Male.

Figure 110: *Haffneria grandis*. Female.

Figure 111: *Halipeurus confusus* Palma, 2011. Male.

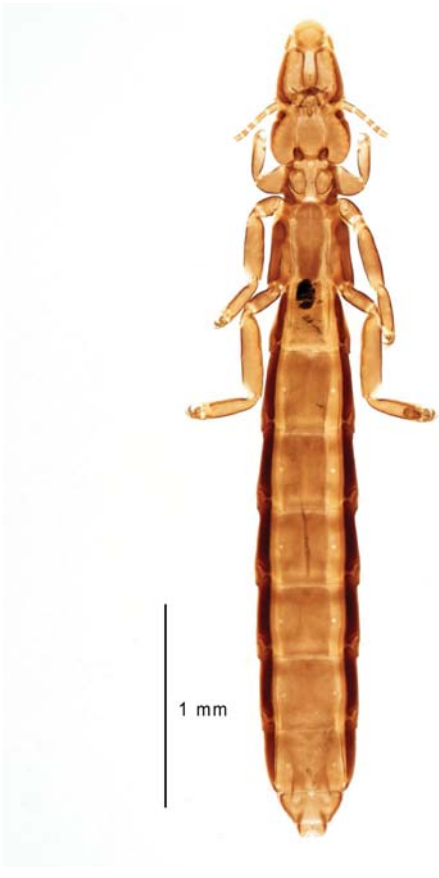


Figure 112: *Halipeurus confusus*. Female.

Figure 113: *Harrisoniella ferox* (Giebel, 1867). Male.

Figure 114: *Harrisoniella ferox*. Female.

Figure 115: *Ibidoecus dianae* Tandan, 1958. Male.

Figure 116: *Ibidoecus dianae*. Female.

Figure 117: *Incidifrons porzanae* Blagoveshtchensky, 1951. Male.

Figure 118: *Incidifrons porzanae*. Female.

Figure 119: *Lagopoecus docophoroides* (Piaget, 1880). Male.

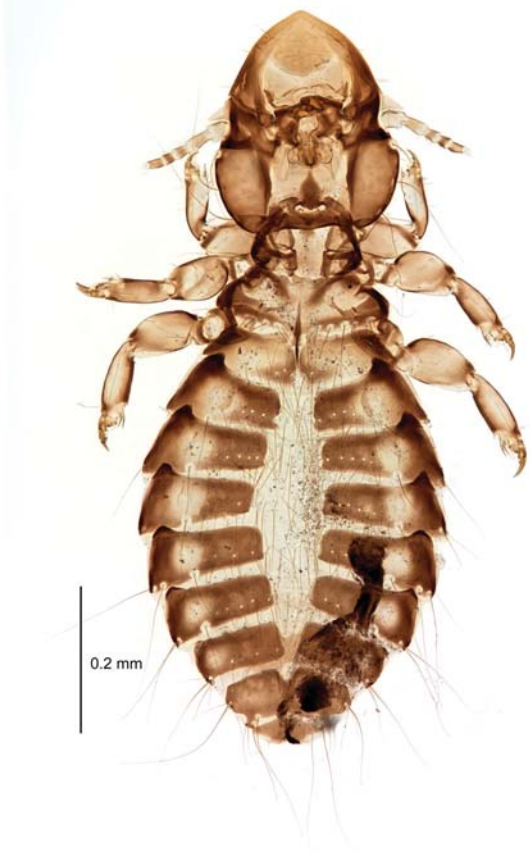


Figure 120: *Lagopoecus docophoroides*. Female.

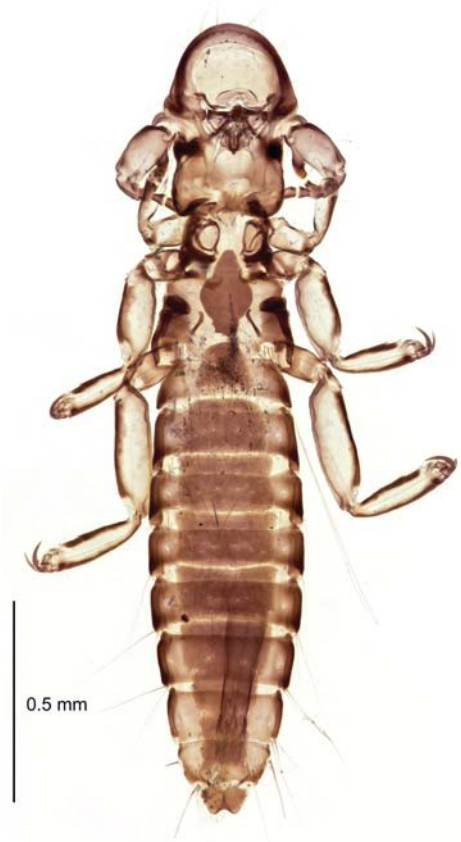


Figure 121: *Lipeurus maculosus maculosus* Clay, 1938. Male.

Figure 122: *Lipeurus maculosus maculosus*. Female.

Figure 123: *Lunaceps numenii madagascariensis* . Male. Gustafsson & Olsson, 2012

Figure 124: *Lunaceps numenii madagascariensis*. Female.

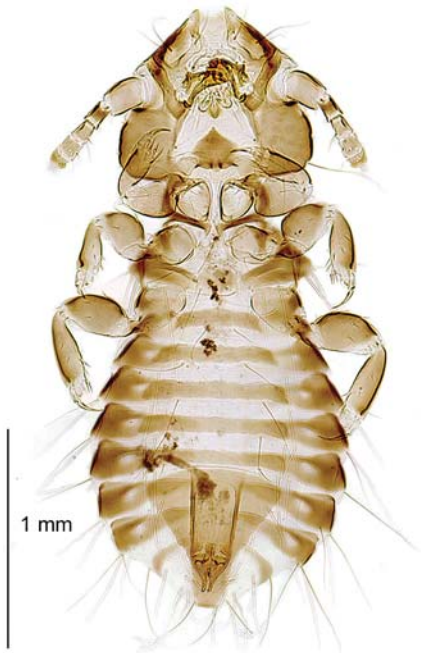


Figure 125: *Melibrueelia novaeseelandiae* Valim & Palma, 2015. Male.

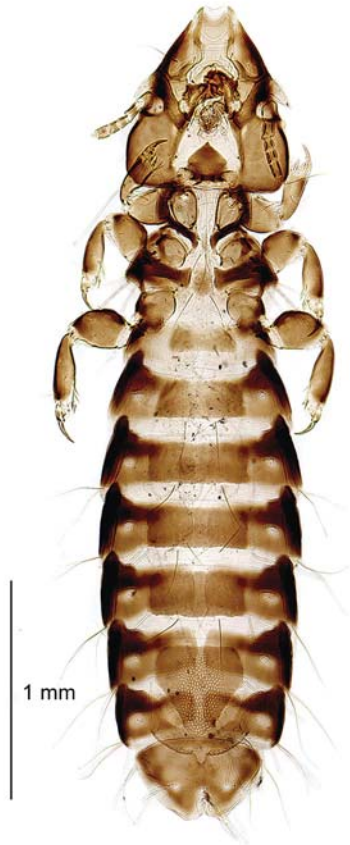


Figure 126: *Melibrueelia novaeseelandiae* . Female.

Figure 127: *Naubates* (*Guenterion*) *lessonii* Palma & Pilgrim, 2002. Male.

Figure 128: *Naubates* (*Guenterion*) *lessonii*. Female.

Figure 129: *Naubates* (*Naubates*) *thieli* Timmermann, 1965. Male. **Figure 130:** *Naubates* (*Naubates*) *thieli*. Female.

Figure 131: *Neopsittaconirmus kea* (Kellogg, 1907). Male. **Figure 132:** *Neopsittaconirmus kea*. Female.

Figure 133: *Nesiotinus demersus* Kellogg, 1903. Male.

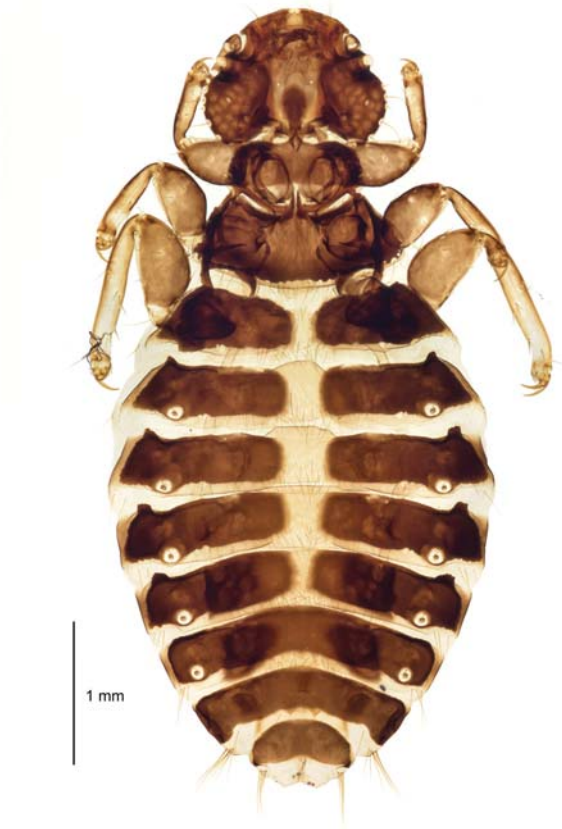


Figure 134: *Nesiotinus demersus*. Female.

Figure 135: *Ornithobius fuscus* Le Souëf, 1902. Male.

Figure 136: *Ornithobius fuscus*. Female.

Figure 137: *Oxylipeurus polytrapezius polytrapezius*. Male. (Burmeister, 1838)

Figure 138: *Oxylipeurus polytrapezius polytrapezius*. Female.

Figure 139: *Paraclisis miriceps* (Kellogg & Kuwana, 1902). Male.

Figure 140: *Paraclisis miriceps*. Female.

Figure 141: *Pectinopygus varius* Timmermann, 1964. Male.

Figure 142: *Pectinopygus varius*. Female.

Figure 143: *Pelmatocerandra setosa* (Giebel, 1876). Male.

Figure 144: *Pelmatocerandra setosa*. Female.

Figure 145: *Penenirmus* sp. Female.

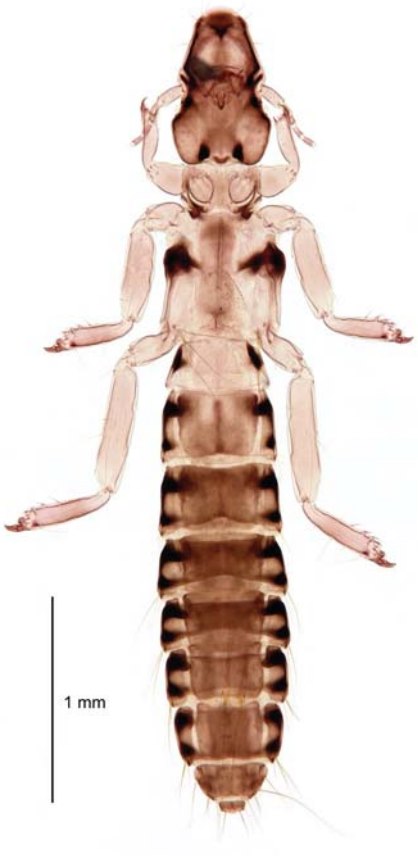


Figure 146: *Perineus concinnoides* Kéler, 1957. Male.

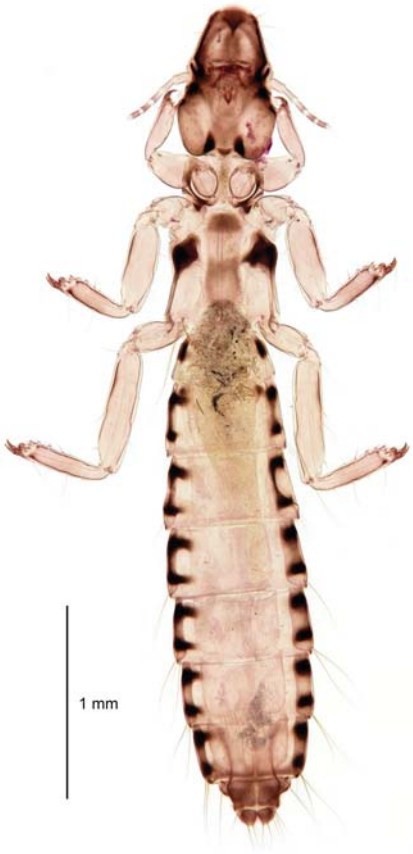


Figure 147: *Perineus concinnoides*. Female.

Figure 148: *Philoceanus fasciatus* (Carriker, 1958). Male.

Figure 149: *Philoceanus fasciatus*. Female.

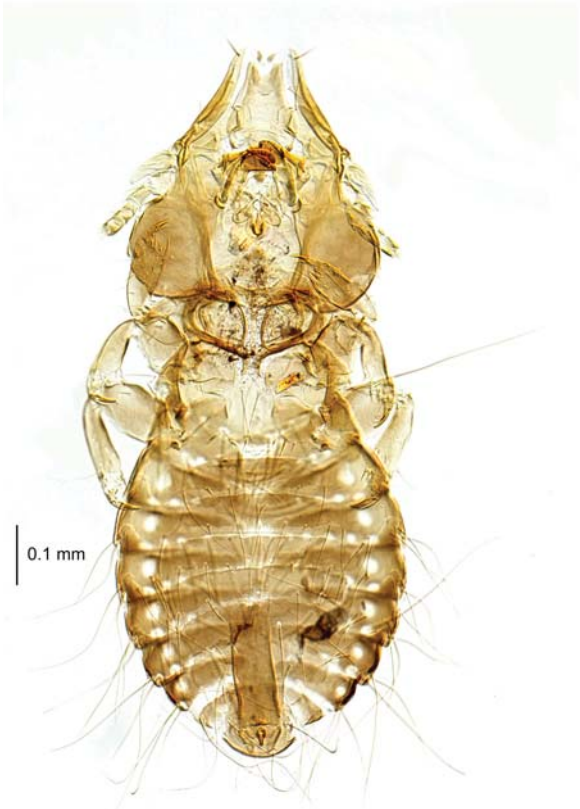


Figure 150: *Philopteroides fuliginosus* Valim & Palma, 2013. Male.

Figure 151: *Philopteroides fuliginosus*. Female.

Figure 152: *Philopterus novaezealandiae* Palma & Price, 2000. Male.

Figure 153: *Philopterus novaezealandiae*. Female.

Figure 154: *Pseudonirmus lugubris* (Taschenberg, 1882). Male.

Figure 155: *Pseudonirmus lugubris*. Female.

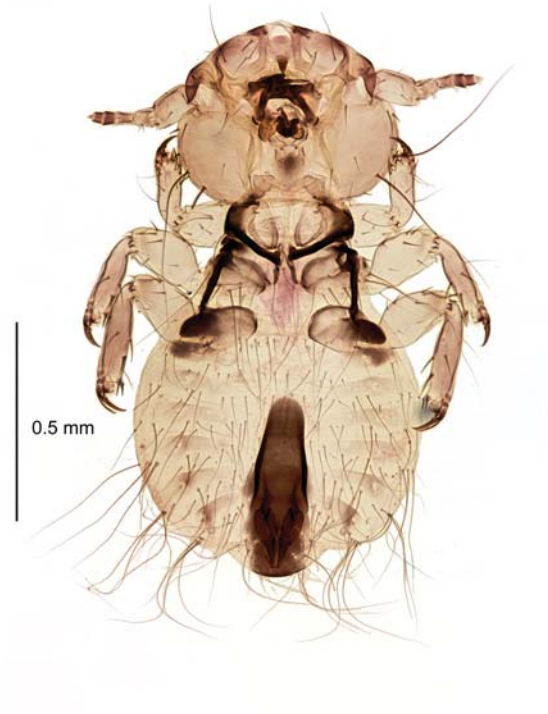


Figure 156: *Psittoecus vanzolinii* Guimarães, 1974. Male.

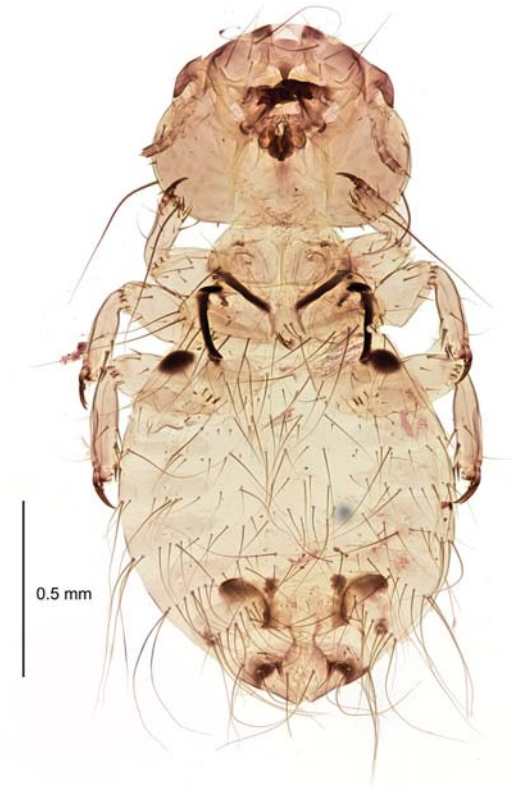


Figure 157: *Psittoecus vanzolinii*. Female.

Figure 158: *Quadraceps caspius* (Giebel, 1874). Male.

Figure 159: *Quadraceps caspius*. Female.

Figure 160: *Rallicola* (*Aptericola*) *rodericki* Palma, 1991. Male

Figure 161: *Rallicola* (*Aptericola*) *rodericki*. Female.

Figure 162: *Rallicola* (*Huiacola*) *extinctus* (Mey, 1990). Male.

Figure 163: *Rallicola* (*Huiacola*) *extinctus*. Female.

Figure 164: *Rallicola (Rallicola*) *tabuensis* Emerson, 1966. Male.

Figure 165: *Rallicola (Rallicola*) *tabuensis*. Female.

Figure 166: *Saemundssonia* (*Puffinoecus*) *enderleini* (Eichler, 1949). Male.

Figure 167: *Saemundssonia* (*P.*) *enderleini*. Female.

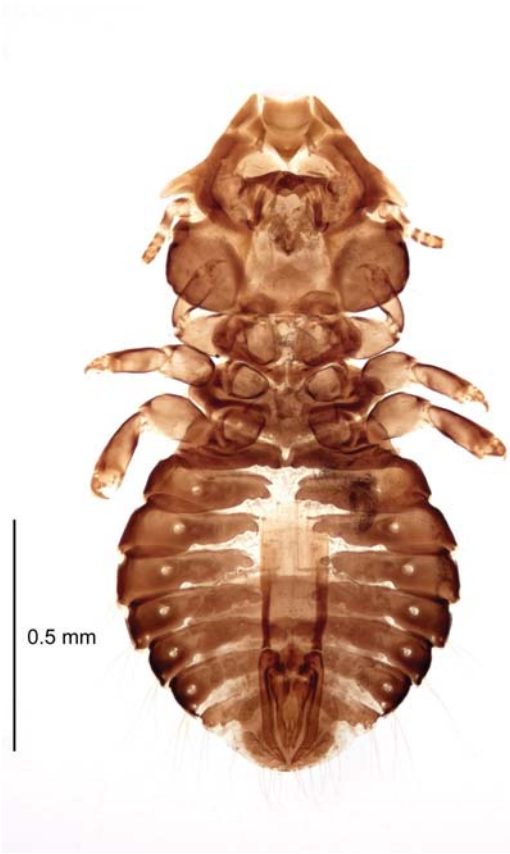
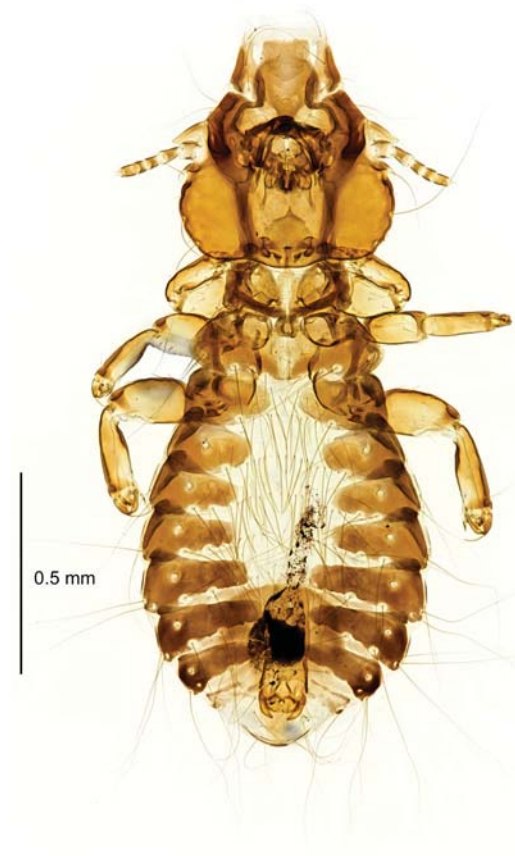


Figure 168: *Saemundssonia* (*Saemundssonia*) *albatrossa* Palma, 2012. Male. **Figure 169:** *Saemundssonia* (*S.*) *albatrossa*. Female.



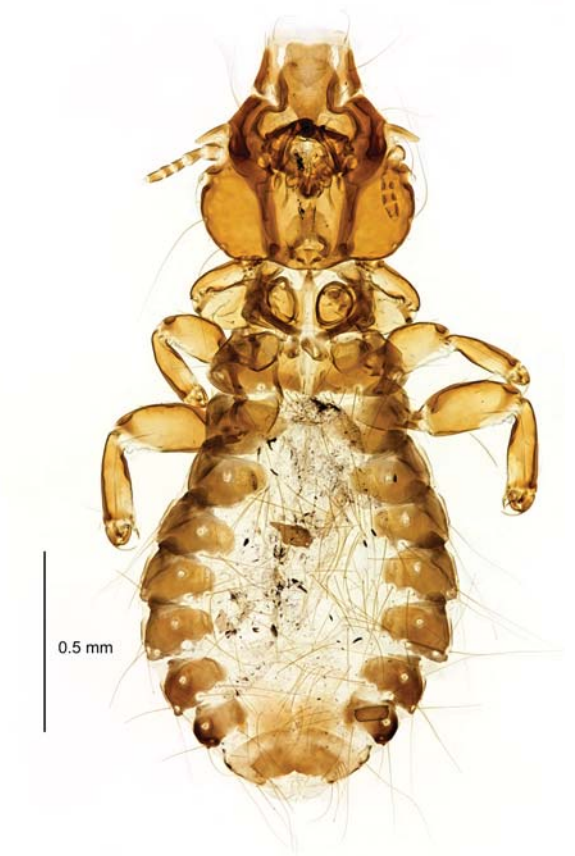


Figure 170: *Strigiphilus vapidus* Clay, 1977. Male.

Figure 171: *Strigiphilus vapidus*. Female.

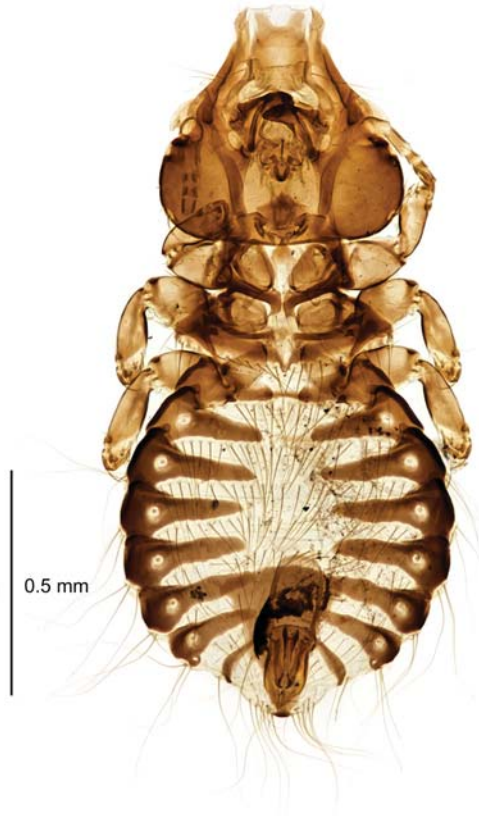


Figure 172: *Sturnidoecus sturni* (Schrank, 1776). Male.

Figure 173: *Sturnidoecus sturni*. Female.

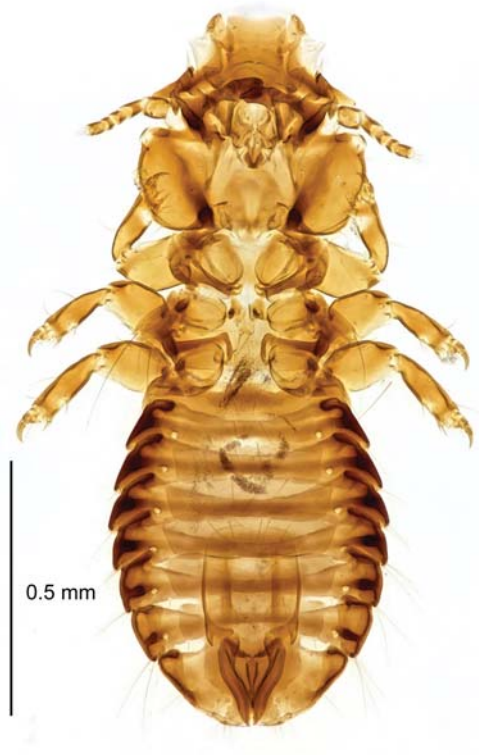


Figure 174: *Trabeculus fuscoclypeatus* (Johnston & Harrison, 1912). Male.

Figure 175: *Trabeculus fuscoclypeatus*. Female.

Figure 176: *Bovicola* (*Bovicola*) *longicornis* (Nitzsch, 1818). Male.

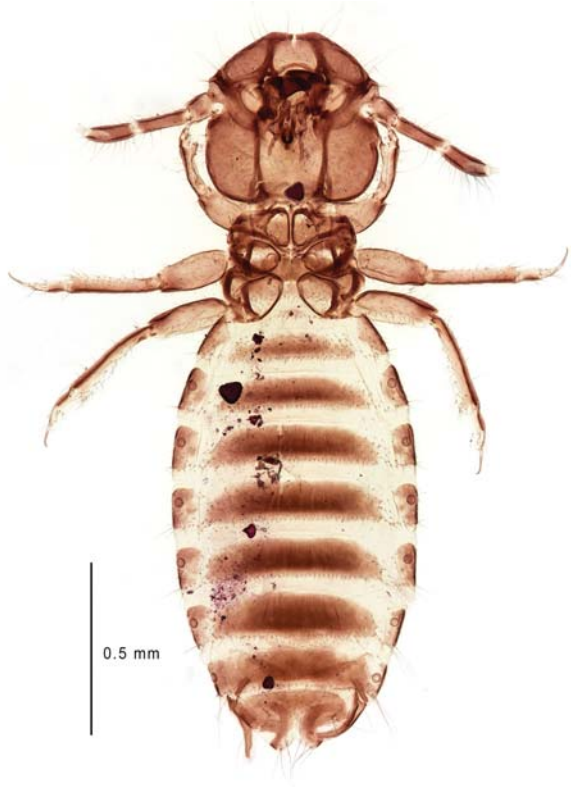
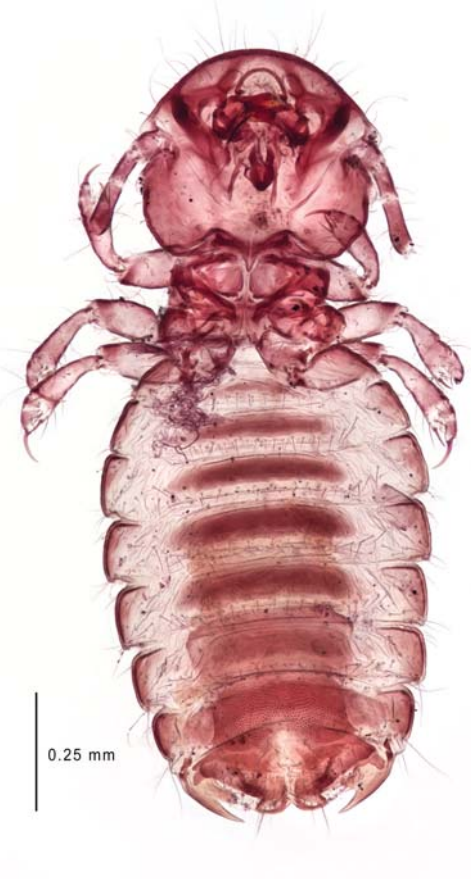


Figure 177: *Bovicola* (*B.*) *longicornis*. Female.



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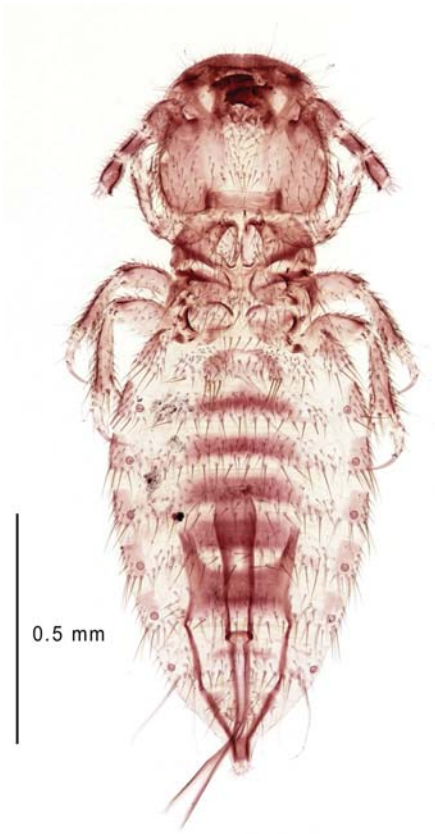

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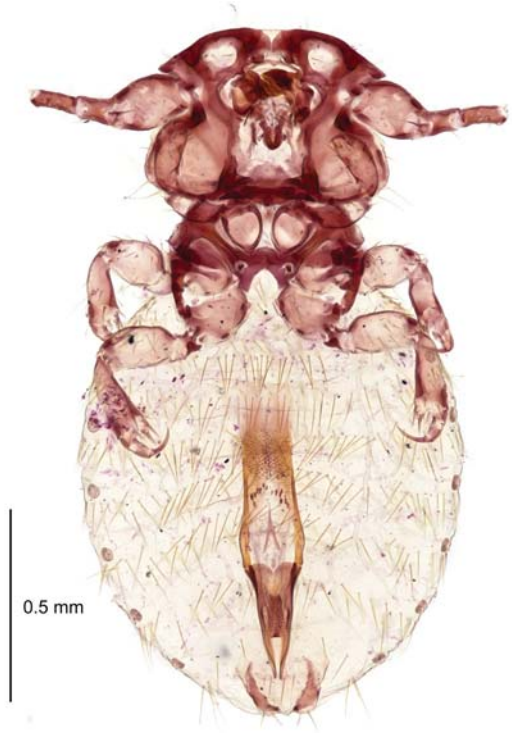
Figure 182: *Felicola* (*F.*) *subrostratus*. Female.



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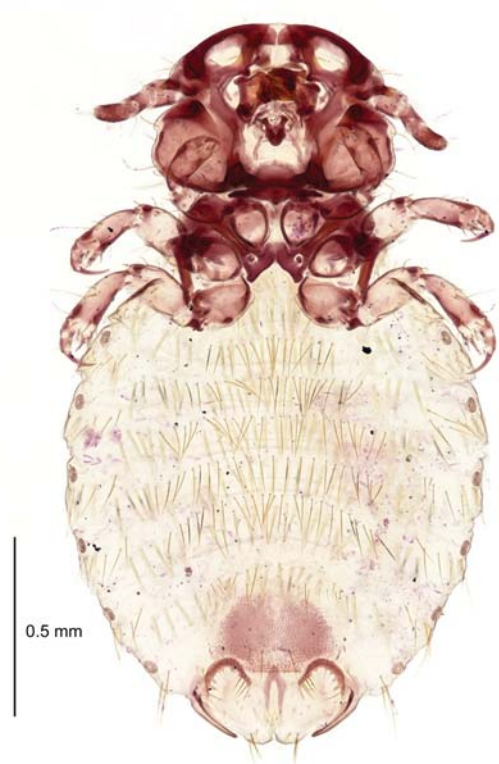
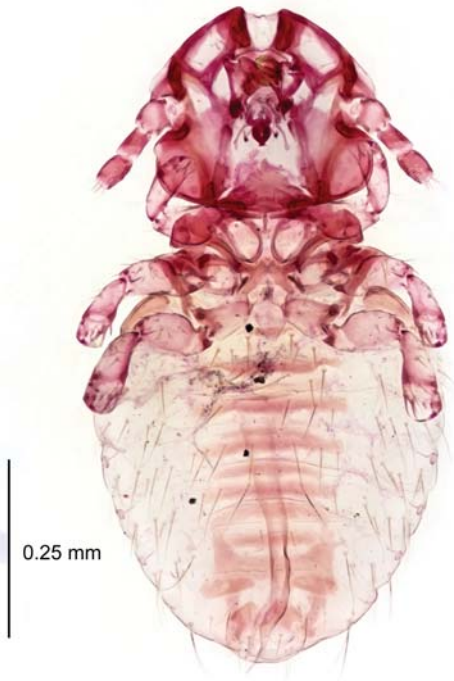


Figure 184: *Trichodectes* (*T.*) *canis*. Female.



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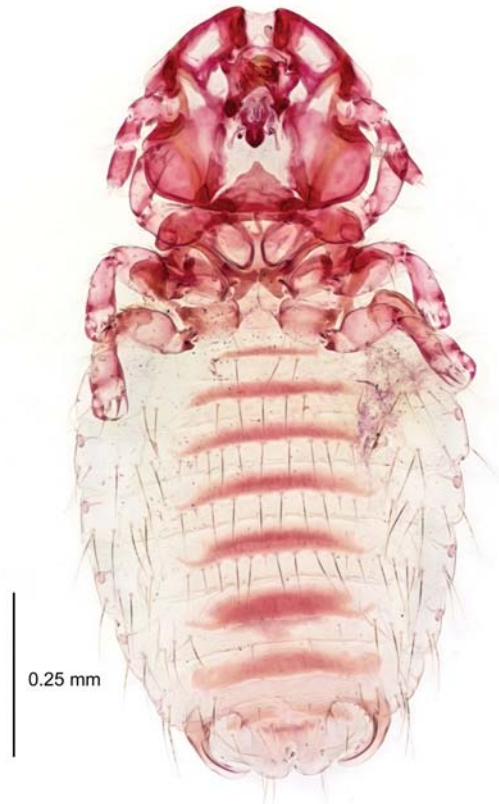

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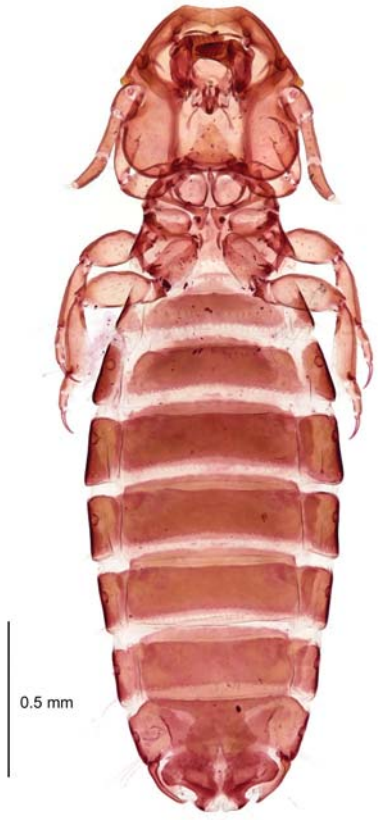

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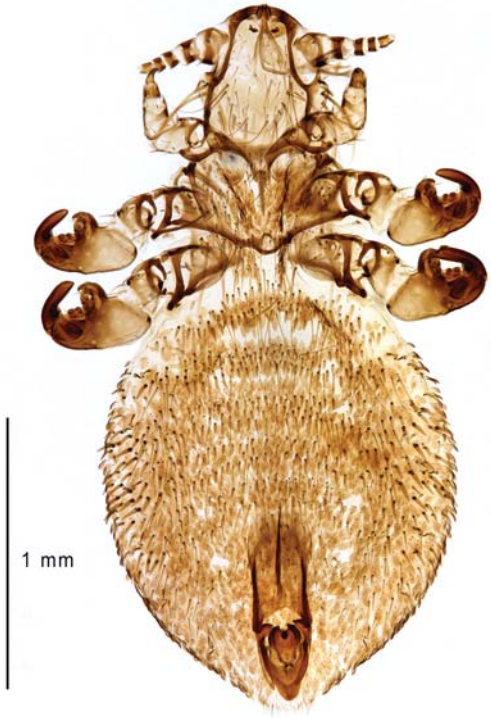

Figure 190: *Antarctophthirus microchir* (Trouessart & Neumann, 1888). Male.

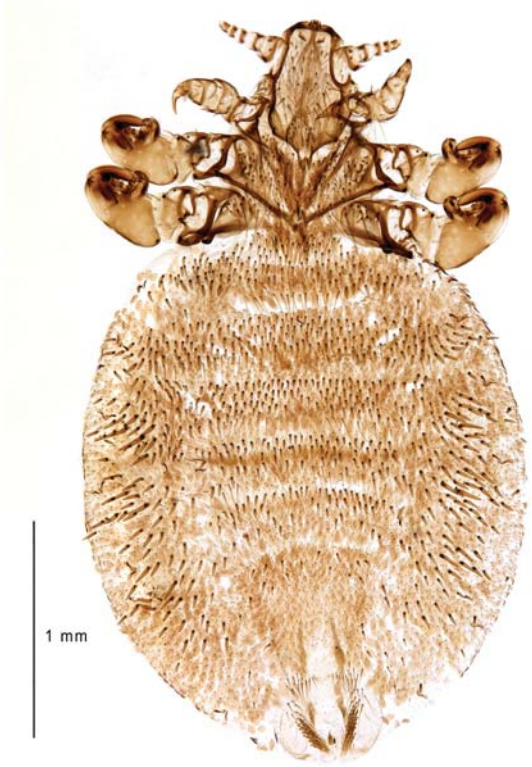

Figure 191: *Antarctophthirus microchir*. Female.

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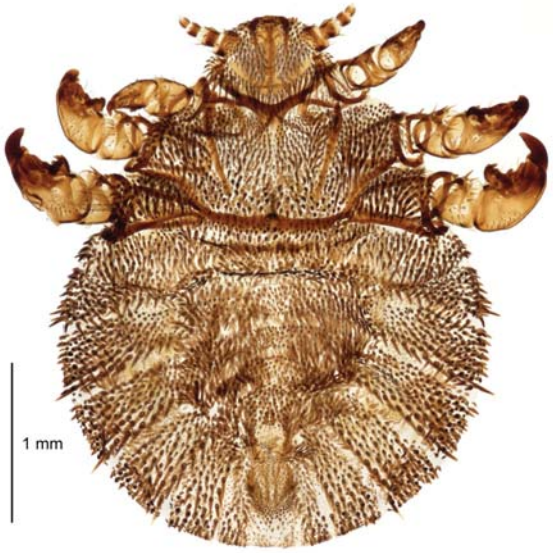

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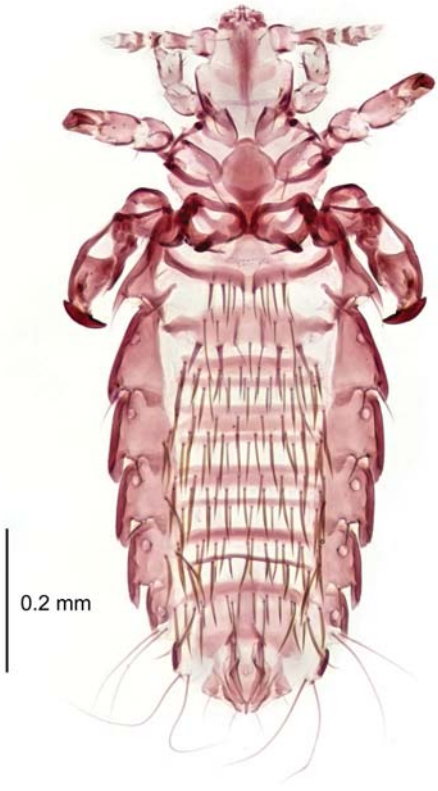


Figure 196: *Hoplopleura pacifica* Ewing, 1924. Male.

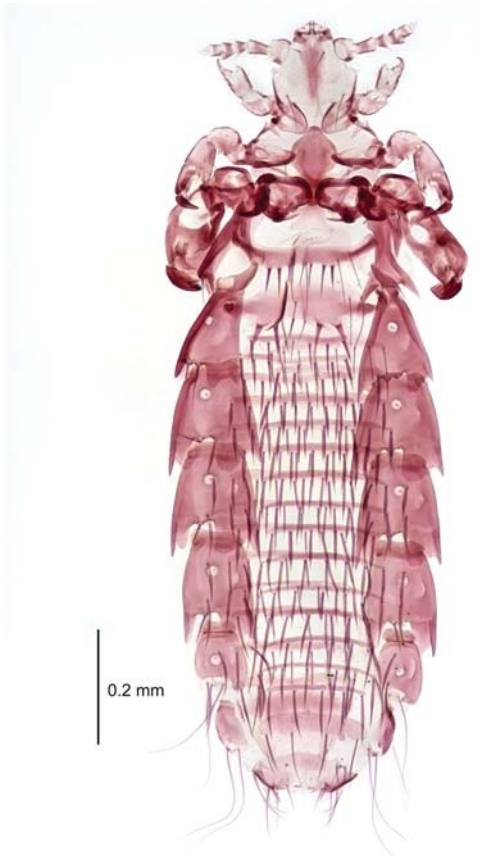


Figure 197: *Hoplopleura pacifica*. Female.

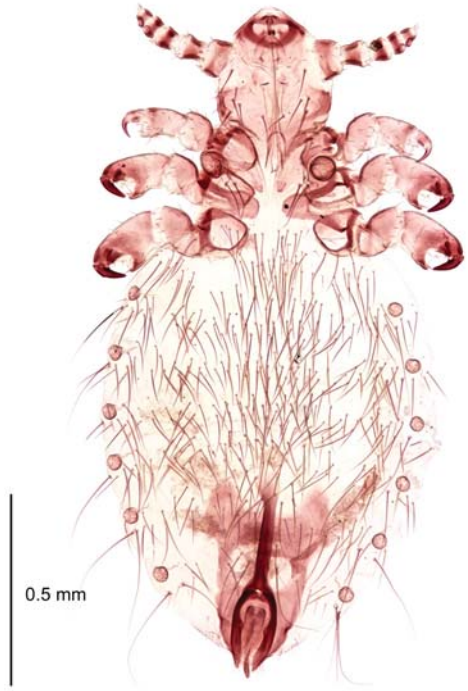
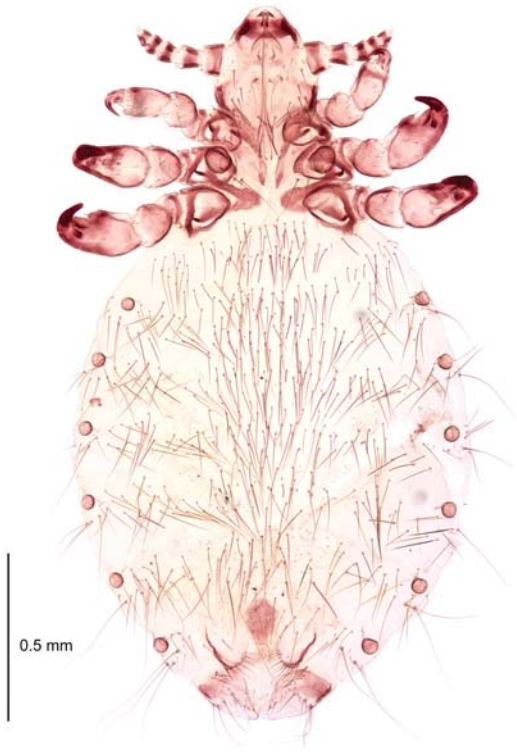


Figure 198: *Linognathus setosus* (von Olfers, 1816). Male.



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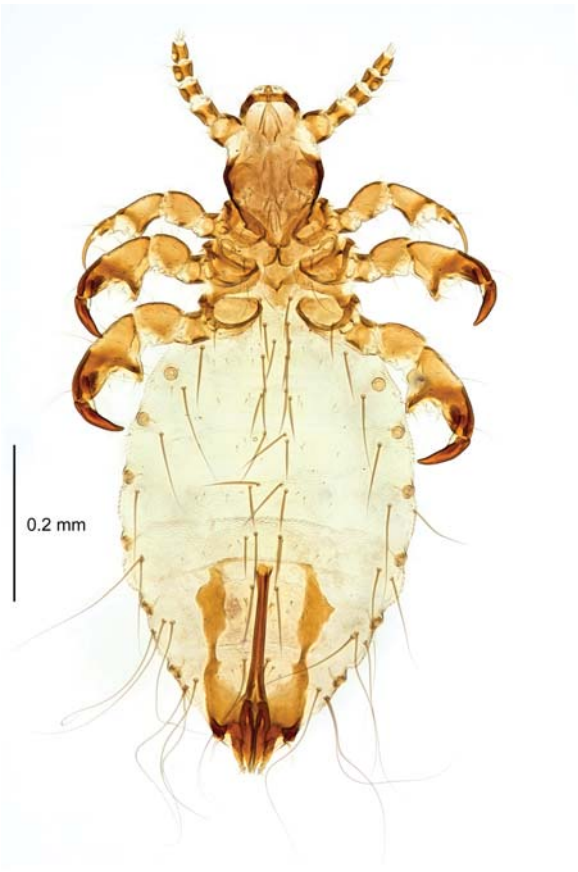

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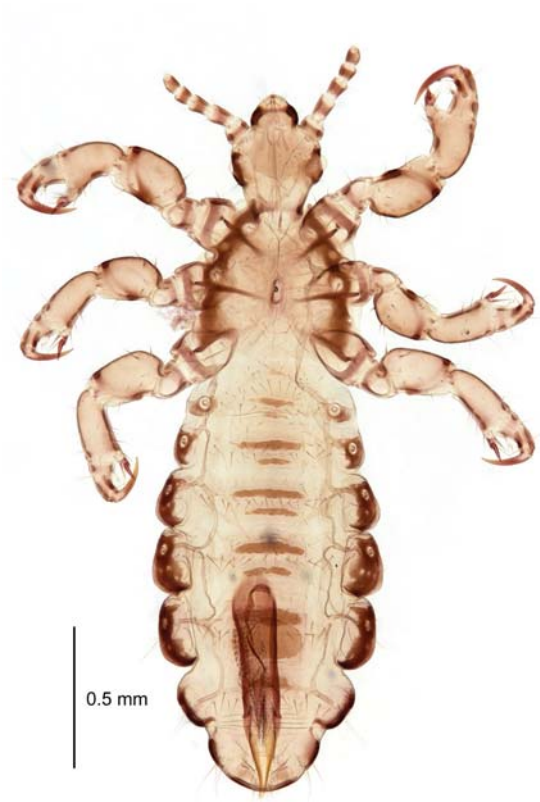
Figure 201: *Solenopotes burmeisteri*. Female.



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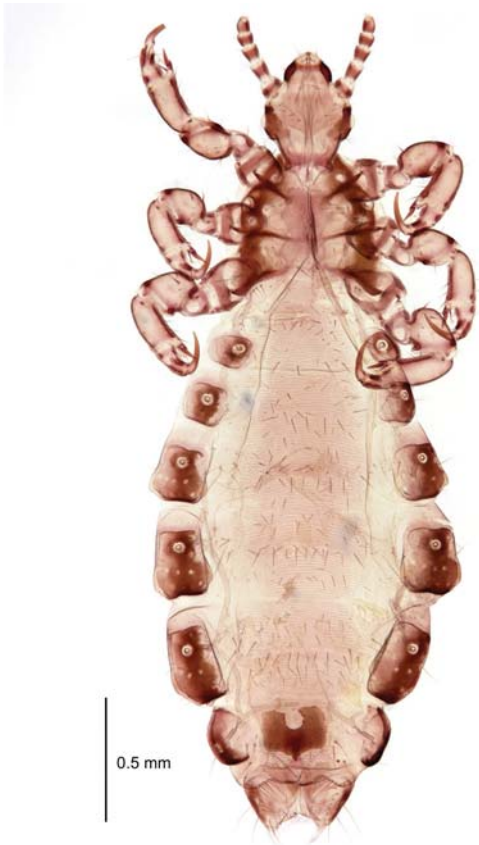
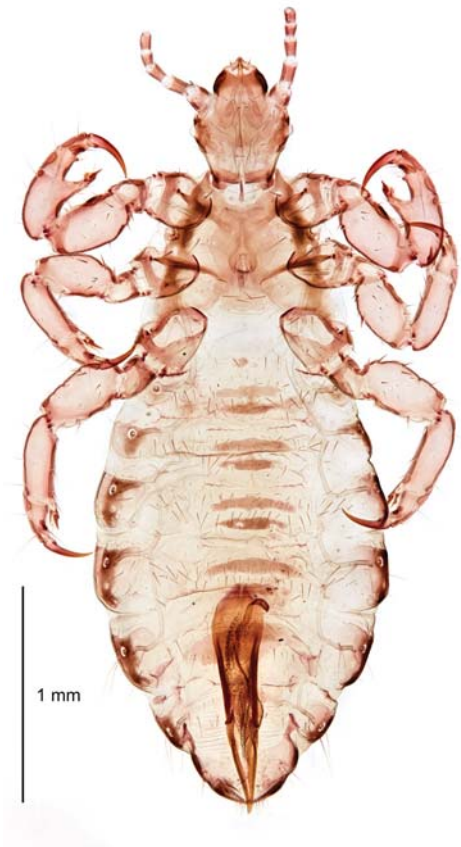


Figure 203: *Pediculus humanus capitis*. Female.



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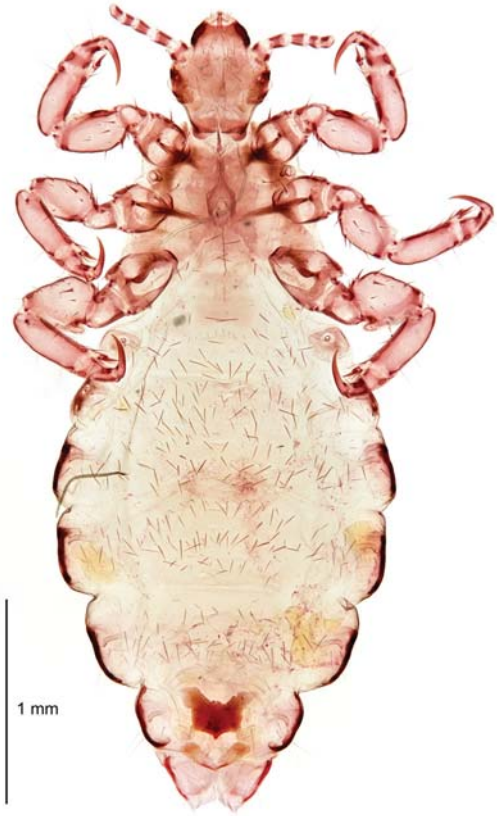

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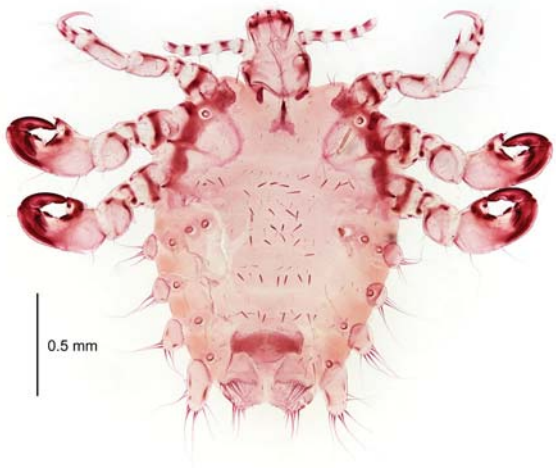

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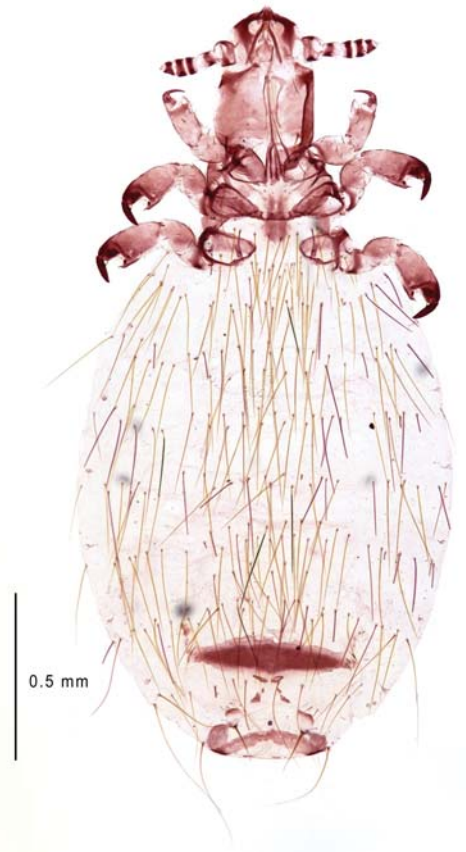

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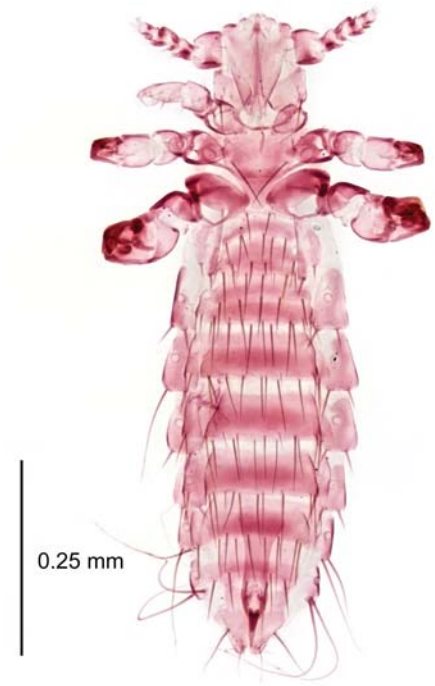

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TAXONOMIC INDEX

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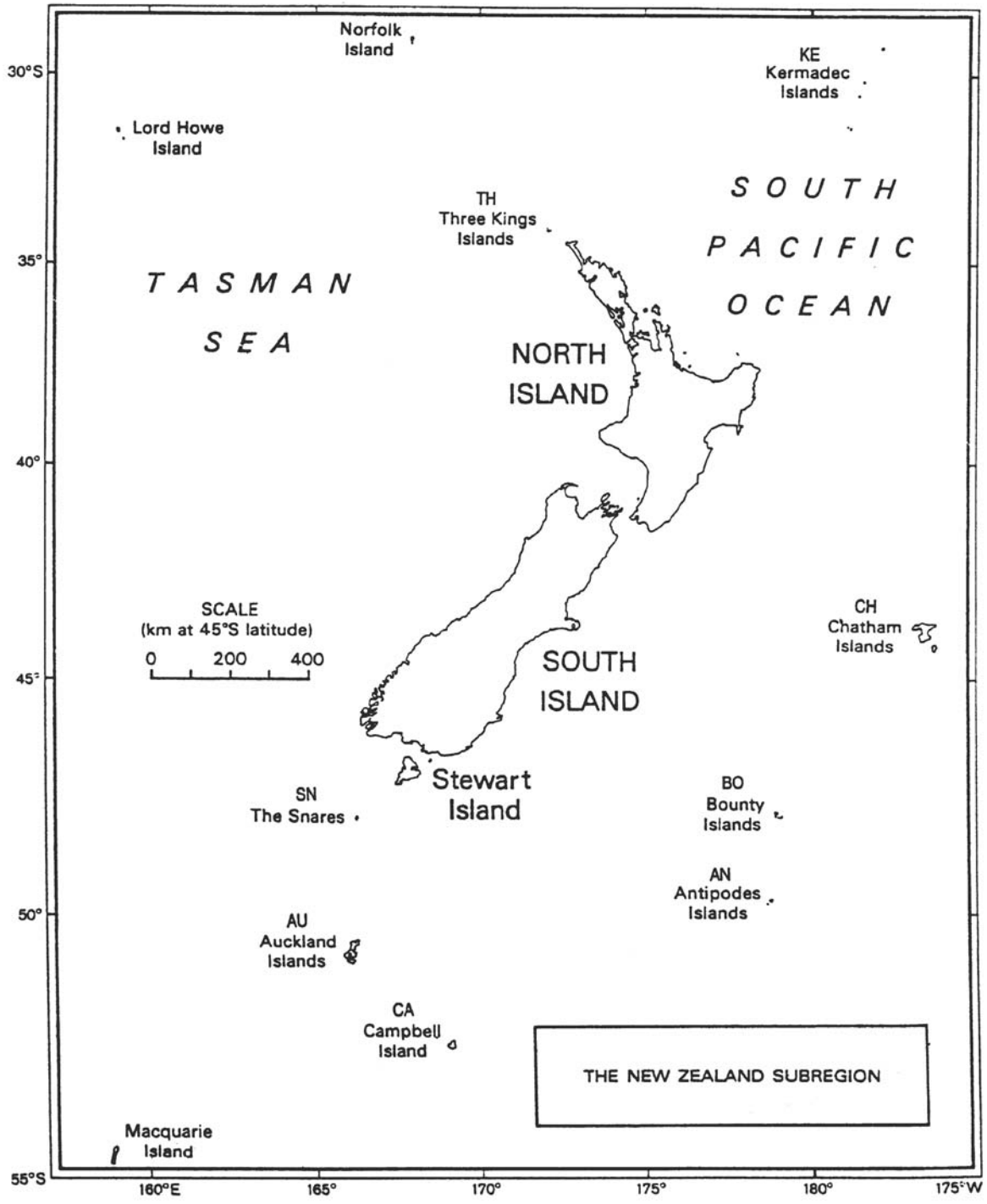
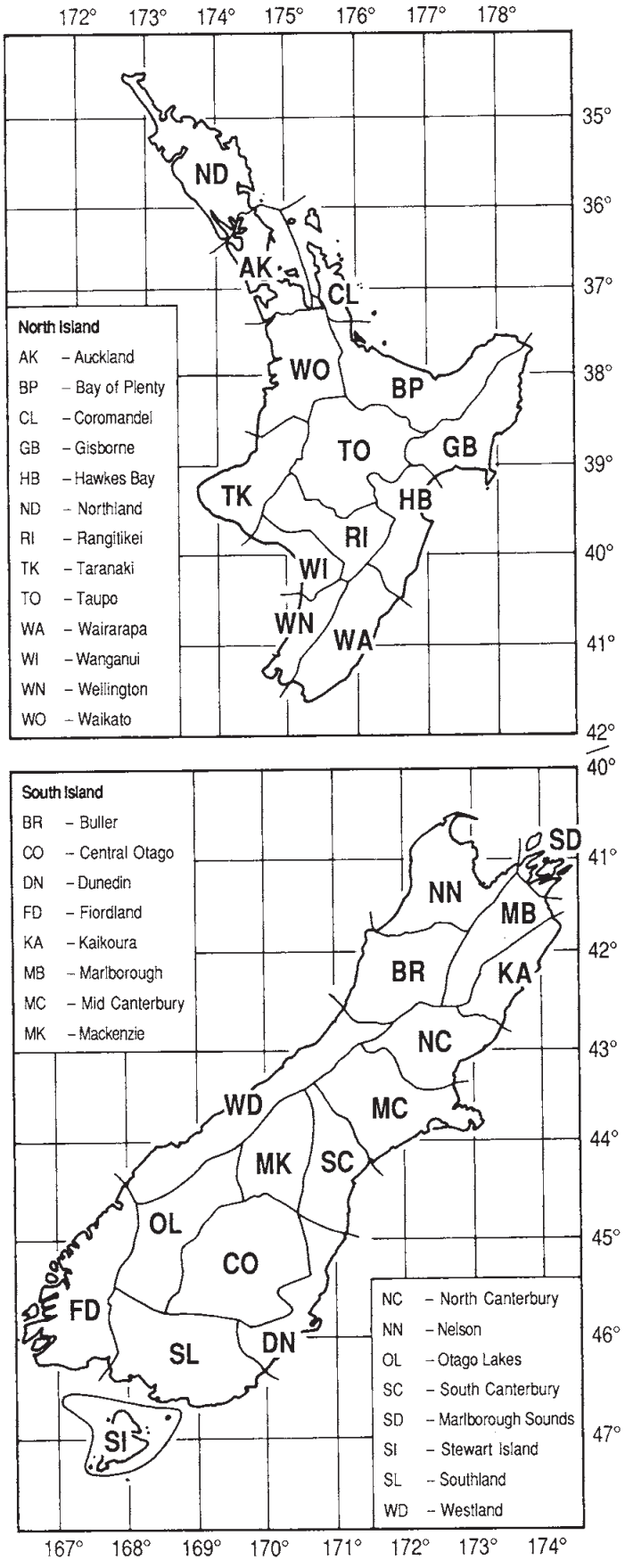

Norfolk Island
KE Kermadec Islands
Lord Howe Island
TH Three Kings Islands
SOUTH PACIFIC OCEAN
TASMAN SEA
NORTH ISLAND
SCALE (km at 45°S latitude)
0 200 400
SOUTH ISLAND
CH Chatham Islands
Stewart Island
SN The Snares
BO Bounty Islands
AN Antipodes Islands
AU Auckland Islands
CA Campbell Island
THE NEW ZEALAND SUBREGION
Macquarie Island
30°S
35°
40°
45°
50°
55°S
160°E
165°
170°
175°
180°
175°W



Area codes and boundaries used to categorise specimen locality data (after Crosby *et al.* 1976)

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He titiro whāiti tā tēnei pukapuka ki ngā mea noho whenua, kāore he tuarā; i pēnei ai i te mea kei te mōhio whānuitia ngā mea whai tuarā, ā, ko ngā mea noho moana, koirā te tino kaupapa o te huinga pukapuka *NIWA Biodiversity Memoirs.*

Ka āhei te tangata ki te **whakauru tuhituhinga** mehemea kei a ia ngā tohungatanga me ngā rauemi e tutuki pai ai tana mahi. Heoi anō, e wātea ana te Kohinga Angawaho o Aotearoa hei āta tirotiro mā te tangata mehemea he āwhina kei reira.

Me whāki te kaituhi i ōna whakaaro ki tētahi o te Kāhui Ārahi Whakarōpūtanga Tuarā-Kore, ki te Ētita rānei i mua i te tīmatanga, ā, mā rātou a ia e ārahi mō te wāhi ki tana tuhinga.