

21. **Menopon lutescens** Nitzsch in Burmeister, Handbuch, II, p. 440 (1838).
Recorded from *Machetes pugnax* = *Philomachus pugnax* (ruff), a migrant to South Africa, and other species of *Charadriiformes*.
22. **Menopon madagascariense** Mjöberg, Arkiv. f. Zool., VI, p. 34 (1910).
This species has been taken from *Scopus umbretta bannermani* (hammerhead) in the Transvaal and Natal (1). It was described from specimens taken off *Scopus umbretta* in Madagascar.
23. **Menopon meyeri** Giebel, Ins. Epiz., p. 296 (1874).
Recorded from *Limosa lapponica* = *Vetola lapponica* (bar-tailed godwit), a migrant to South Africa.
24. **Menopon micrandum** Nitzsch in Giebel, Zeit. f. ges. Nat., XXVIII, p. 392 (1866).
Recorded from *Recurvirostra avosetta* (avocet), a migrant to South Africa.
25. **Menopon nigropleurum** Denny, Anoplur. Brit., p. 234, Pl. 20, f. 1 (1842).
Recorded from *Totanus calidris* = *T. totanus* (redshank), and *Machetes pugnax* = *Philomachus pugnax* (ruff), both of which are migrants to South Africa.
26. **Menopon pachyus** Piaget, Tijd. v. Ent., XXXIII, p. 161, Pl. 4, f. 4 (1888).
Described from specimens taken off *Sterna hirundo* (common tern).
27. **Menopon parvulum** Piaget, Pédiculines, p. 444, Pl. 35, f. 4 (1880).
Recorded from *Cypselus apus* = *Micropus apus* (European swift, a migrant to South Africa).
28. **Menopon pellucidum** Rudow, Zeit. f. ges. Nat., XXXIV, p. 400 (1869).
Described from specimens taken off *Phalacrocorax capensis* = *Pseudocarbo capensis* (Cape cormorant).
29. **Menopon phaeostomum** Nitzsch in Giebel, Zeit. f. ges. Nat., XXVIII, p. 391 (1866).
Recorded from *Pavo cristatus* (peacock) (36).
30. **Menopon powelli** Bedford.
Described from specimens taken off *Pternistis swainsoni* (Swainson's red-necked francolin) and *Francolinus sephaena* = *Dendroperdix sephaena* (bush partridge) in the Rustenburg District, Transvaal.
31. **Menopon pustulosum** Nitzsch in Giebel, Zeit. f. ges. Nat., XXVIII, p. 393 (1866).
Recorded by Waterston (36) from *Sula capensis* = *Sulita capensis* (Malagas).
32. **Menopon sigmoidale** Picaglia, Atti, Soc. Ital. Sc. Nat., XXVIII, p. 6 (1885).
Described from specimens taken off *Phalacrocorax lucidus* (South African cormorant).
33. **Menopon strepsilae** Denny, Anoplur. Brit., p. 226, Pl. 21, f. 8 (1842).
Recorded from *Strepsilas collaris* = *Arenaria interpres* (turnstone), a migrant to South Africa.
34. **Menopon tumidum** Piaget, Pédiculines, Suppl., p. 151, Pl. 16, f. 5 (1885).
Described from specimens taken off *Plectropterus gambensis* (spurwing goose).
35. **Menopon virgo** Giebel, Ins. Epiz. p. 288 (1874).
Described from specimens taken off *Coracias garrulus* (European roller), a migrant to South Africa.

Genus *Colpocephalum* Nitzsch.

Colpocephalum, Nitzsch, Germar's Magazin, III, p. 298 (1818).

1. *Colpocephalum abruptofasciatum* Mjöberg Arkiv. f. Zool. VI, p. 36, f. 23 (1910).
Described from specimens taken off *Milvus aegyptius* (yellow-billed kite) at Cairo. It has also been taken off the same host in Zululand.
2. *Colpocephalum affine* Nitzsch in Giebel, Ins. Epiz. p. 276 (1874).
Recorded from *Totanus ochropus* = *Tringa ochropus* (green sandpiper),
3. *Colpocephalum caudatum* Giebel, Ins. Epiz., p. 261 (1874).
Recorded taken off *Gyps Kolbei* = *Gyps coprotheres* (Cape vulture) in the Pretoria District, Transvaal, and from *Pseudogyps africanus* (southern white-backed vulture) in the Rustenburg District, Transvaal (2).
4. *Colpocephalum cucullare* Giebel, Ins. Epiz., p. 264 (1874).
C. majus, Piaget, Pédiculines, p. 519 (1880).
Described from specimens taken off *Gypoggeranus serpentarius* = *Sagittarius serpentarius* Miller (secretary-bird), Waterson (36) has recorded it taken off the same host in South Africa, and in the laboratory collection there are specimens taken off a secretary-bird.
5. *Colpocephalum decimfasciatum* Bois and Lac., Faun. Ent. Env. Paris, p. 123 (1835).
Colpocephalum importunum Nitzsch in Denny, Anoplur. Brit., p. 214, Pl. 18, f. 1 (1842).
Recorded from *Ardea cinerea* (common grey heron), and Piaget has recorded a variety from *Ardea garzetta* = *Egretta garzetta* (little egret), and *Ardea minuta* = *Ixobrychus minutus* (European little bittern).
6. *Colpocephalum dissimile* Piaget, Pédicul, p. 520, Pl. 43, f. 4 (1880).
Described from specimens taken off *Milvus aegyptius* (yellow-billed kite) in the Leyden museum.
7. *Colpocephalum ephippiorhynchi* Mjöberg, Arkiv. f. Zool., VI., p. 43, Pl. 3, f. 9 (1910).
Described from specimens taken off *Ephippiorhynchus senegalensis* (saddle-bill stork) at Khartoum, Sudan.
8. *Colpocephalum flavescens* Nitzsch in Lyonet, Mém. Mus., XVIII, p. 262, Pl. 12, f. 1 (1829).
This species has been recorded from various Accipitrines, including *Gyps rüppelli* (Rüppell's vulture), *Pernis apivorus* (honey buzzard) and *Pandion haliaetus* (osprey).
9. *Colpocephalum furcatum* Rudow, Zeit. f. ges. Nat., XXVII, p. 472 (1866).
Described from specimens taken off *Procellaria mollis* = *Pterodroma mollis* (soft-plumaged petrel).
10. *Colpocephalum haliaeti* Denny, Anoplur. Brit. p. 216, Pl. 19, f. 1 (1842).
C. pachygaster Giebel, Ins. Epiz., p. 264 (1874).
Recorded from *Pandion haliaetus* (osprey),
11. *Colpocephalum heterosoma* Piaget, Pédiculines, p. 572, Pl. 48, f. 3, 4 (1880).
Described from specimens taken off *Phoenicopterus antiquorum* = *P. major* (greater flamingo).
12. *Colpocephalum longissimum* Rudow, Zeit. f. ges. Nat., XXXIV, p. 398 (1869).
Recorded taken off *Leptoptilus crumeniferus* (marabou stork).

13. **Colpocephalum nyctarde** Denny, Anoplur. Brit., p. 215, Pl. 20, f. 9 (1842).
Described from specimens taken off *Ardea nycticorax* = *Nycticorax nycticorax* (night heron).
14. **Colpocephalum occipitale** Nitzsch in Giebel, Ziet, f. ges. Nat., XXVIII, p. 394 (1866).
Piaget (32) has recorded this species from *Anastomus lamelligerus* (openbill stork). It was originally described from specimens taken off *Anastomus coromandelicus*.
15. **Colpocephalum ocellatum** Rudow, Zeit. f. ges. Nat., XXXIV, p. 392, (1869).
Described from specimens taken off *Numenius phaeopus* = *Phaeopus phaeopus* (whimbrel).
16. **Colpocephalum oreas** Kellogg, Schwed. Exp. Kilimanjaro, p. 51, Pl. 7, f. 8 (1910).
This species was described from specimens taken off *Ephippiorhynchus senegalensis* (saddlebill stork) and *Herodias alba* = *Casmerodius albus melanorhynchus* (African great white heron) in East Africa. Both these hosts occur in South Africa.
17. **Colpocephalum pediculoides** Mjöberg, Arkiv. f. Zool., VI., p. 44., Pl. 2, f. 6 (1910).
Described from specimens taken off *Strepsilas interpres* = *Arenaria interpres* (turnstone), a migrant to South Africa.
18. **Colpocephalum piceum** Denny, Anoplur. Brit., p. 212, Pl. 18, f. 4 (1842).
C. maurum Nitzsch in Giebel, Zeit. f. ges. Nat., XXVIII, p. 395 (1866).
This species was described from specimens taken off *Sterna cantiaca* = *Thalasseus sandwicensis* (sandwich tern) in Britain. It has also been recorded from *Sterna bergii* = *Thalasseus bergii* (swift tern) and other species of terns. It is probably a species of *Actornithophilus*.
19. **Colpocephalum pingue** Kellogg, New Mallophaga, I, p. 144, Pl. 12, f. 5 (1896).
This species has been recorded taken off *Diomedea exulans* (wandering albatross) in the Cape Province (36).
20. **Colpocephalum pygidiale** Mjöberg, Arkiv. f. Zool. VI, p. 46, Pl. 3, f. 8 (1910).
We have recorded this species taken from *Ibis religiosa* = *Threskiornis aethiopica* (sacred ibis) in the Rustenburg District, Transvaal (1), and have also taken specimens off the same host in northern Zululand.
21. **Colpocephalum quadripustulatum** Nitzsch in Burmeister, Handbuch, II, p. 438 (1838).
This species has been recorded from *Ciconia ciconia* (white stork) and *Ciconia niger* = *Melanopelargus niger* (black stork), both of which are migrants to South Africa.
22. **Colpocephalum semicinctum** Rudow, Zeit. f. ges. Nat., XXVII, p. 475 (1866).
Recorded taken off *Corvus scapulatus* = *Corvus albus* (pied crow) from Lamberts Bay, C.P., and from the same host at Beira, East Africa (2).
23. **Colpocephalum scopinum** Mjöberg, Arkiv. f. Zool. VI, p. 47, f. 25, 26 (1910).
Recorded taken off *Scopus umbretta bannermani* (hammerhead) at Pietermaritzburg, Natal. It was originally described from specimens taken off *Scopus umbretta* in Madagascar.

24. **Colpocephalum subflavescens** Piaget, Pédiculines, p. 571, Pl. 48, f. 2 (1880).
Described from specimens taken off *Xenorhynchus senegalensis* = *Ephippiorhynchus senegalensis* (open-bill stork).
25. **Colpocephalum subpachygaster** Piaget, Pédiculines, p. 517, Pl. 34, f. 2 (1880).
Waterston (36) has recorded this species taken off *Bubo capensis* (Cape eagle owl) in South Africa, and it has also been recorded taken off the same host at Pietermaritzburg, Natal, and from *Strix flammea maculata* = *Typo alba affinis* (Cape barn owl) at Onderstepoort, Transvaal (1).
26. **Colpocephalum subpenicillatum** Piaget, Pédiculines, Suppl., p. 123, Pl. 13, f. 6 (1885).
Described from specimens taken off *Ibis hagedasch* = *Hagedashia hagedash* (hadadah ibis). It has also been recorded taken off the same host at Mfongosi, Zululand (1 and 27).
27. **Colpocephalum tricinctum** Nitzsch in Giebel, Zeit. f. ges. Nat., XVII, p. 524 (1861).
Giebel (17) has recorded this species from *Circus aeruginosus* (European marsh harriers).
28. **Colpocephalum trilobatum** Giebel, Ins. Epiz., p. 275 (1874).
Described from specimens taken off *Tringa minuta* = *Pisobia minuta* (little stint).
29. **Colpocephalum trochioxum** Nitzsch in Burmeister, Handbuch, II, p. 438 (1838).
Described from specimens taken off *Ardea stellaris* = *Botaurus stellaris* (little bittern). Piaget (32) has recorded it taken from the same in the zoological gardens at Rotterdam, and from *Ardea purpurea* = *Pyrherodia purpurea* (purple heron) in the Leyden Museum.
30. **Colpocephalum turbinatum** Denny, Anoplur. Brit., p. 209, Pl. 21, f. 1 (1842).
C. longicaudatum Nitzsch in Giebel, Zeit. f. ges. Nat., XXVIII, p. 394 (1866).
This species has been recorded from specimens taken off a domestic pigeon at Pietermaritzburg, Natal.
31. **Colpocephalum veratrum** Kellogg, Schwed. Exp. Kilimanjaro, p. 52, Pl. 7, f. 9 (1910).
Described from specimens taken off *Herodias alba* = *Casmerodius albus melanorhynchus* (African great white heron) in East Africa.
32. **Colpocephalum zebra** Nitzsch in Burmeister, Handbuch, II, p. 438 (1838).
Waterston (36) has recorded this species taken off *Ciconia alba* = *C. ciconia* (white stork) in South Africa.

Genus **Actornithophilus** Ferris.

Actornithophilus Ferris, Canadian Entomologist, p. 303, Sept., 1916.

1. **Actornithophilus bicolor** Piaget, Pédiculines, p. 561, pl. 47, f. 1 (1880).
Described from specimens taken off *Strepsilas interpres* = *Arenaria interpres* (turnstone), a migrant to South Africa.
2. **Actornithophilus brachycephalum** Giebel, Ins. Epiz., p. 278 (1874).
Described from specimens taken off *Lestris pomarina* = *Coprotheres pomarinus* (large white-necked skua).
3. **Actornithophilus crassipes** Piaget, Pédiculines, p. 566, Pl. 47, f. 6 (1880).
Described from specimens taken off *Sterna bergii* = *Thalasseus bergii*. (swift tern) in the Leyden Museum.

4. **Actornithophilus epiphanes** Kell. & Chap., Jour. N.Y. Ent. Soc., X, p. 161, Pl. 14, f. 2 (1902).
Described from specimens taken off *Anous stolidus* (noddy).
5. **Actornithophilus latifasciatum** Piaget, Pédiculines, Suppl., p. 130, Pl. 14, f. 2 (1885).
Described from specimens taken off *Rhynchops flavirostris* (African skimmer).
6. **Actornithophilus patellatum** Piaget, Tijds. v. Ent., XXXIII, p. 254, Pl. 10, f. 8 (1888).
Described from specimens taken off *Numenius arquatus* (curlew), a migrant to South Africa.
7. **Actornithophilus pustulosum** Piaget, Pédiculines, p. 559, Pl. 46, f. 8 (1880).
Described from specimens taken off *Machetes pugnax* = *Philomachus pugnax* (ruff), a migrant to South Africa.
8. **Actornithophilus spinulosum** Piaget, Pédiculines, p. 563, Pl. 47, f. 3 (1880).
This species has been recorded from *Philomachus pugnax* (ruff), *Arenaria interpres* (turnstone), *Calidris arenaria* = *Crocethia alba* (sanderling), and *Limosa limosa* (black-tailed godwit), all of which are migrants to South Africa.
9. **Actornithophilus umbrinum** Nitzsch in Burmeister, II, p. 438 (1838).
Colpocephalum cornutum Nitzsch in Giebel, Zeit. f. ges. Nat., XXVIII, p. 395 (1866).
This species has been recorded from *Tringa subarquata* = *Erolia testacea* (curlew sandpiper) and *Machetes pugnax* = *Philomachus pugnax*, both of which are migrants to South Africa.
10. **Actornithophilus umbrosum** Harrison, Parasit., Vol. IX, Pt. 1, p. 56 (1916).
Colpocephalum umbrinum Piaget, Pédiculines, p. 556, Pl. 46, f. 6 (1880), nec Nitzsch (1838).
Described from specimens taken off *Tringa subarquata* = *Erolia testacea* (curlew sandpiper).
11. **Actornithophilus uniseriatum** Piaget, Pédiculines, p. 562, pl. 47, f. 2 (1880).
Described from specimens taken off *Recurvirostra avosetta* (avocet), a migrant to South Africa.

Genus **Heleonomus** Ferris.

Heleonomus Ferris, Canadian Entomologist, p. 305, Sept., 1916.

This genus contains five species found on Gruidae, in addition to the following species:—

1. **Heleonomus harrisoni** Bedford.
Colpocephalum harrisoni Bedford, 5th and 6th Rep., Dir. Vet. Res., Un. S. Afr., p. 720, f. 7 (1919).
Described from two females reported to have been taken off a bustard in Angola, but probably taken from a crane.

Genus **Myrsidea** Waterston.

Myrsidea Waterston, Ent. Month. Mag., p. 12 (1915).

The majority of the species included in this genus were formally placed in the genus *Menopon*. They occur for the most part upon *Passeriformes*, particularly the *Corvidae*, but also occur upon certain families of the *Coraciiformes*.

1. **Myrsidea cucullaris** Nitzsch in Burmeister, Handbuch, II, p. 439 (1838).
M. flavescens Piaget, Pédiculines, p. 439, Pl. 35, f. 9 (1880).
This species has been recorded from *Sturnus vulgaris* (starling) in Europe.

2. **Myrsidea nigra** Kellogg & Paine, Bull. Ent. Res., Vol. II, p. 151, Pl. 5, f. 4 (1911).
Described from specimens taken off *Corvultur albicollis* (white-necked raven) in Southern Nigeria.
3. **Myrsidea obovata** Piaget, Pédiculines, p. 429, Pl. 34, f. 1 (1880).
Described from specimens taken off *Corvus scapulatus* = *C. albus* (pied crow), in the Leyden Museum.
4. **Myrsidea ovata** Piaget, Pédiculines, p. 430, Pl. 34, f. 6 (1880).
Described from specimens taken off *Corvus scapulatus* = *C. albus* (pied crow).
5. **Myrsidea rustica** Nitzsch in Giebel, Ins. Epiz., p. 288 (1874).
Waterston (36) has recorded this species from *Hirundo rustica* (European swallow) in South Africa, and we have recorded it as having been taken off *Delichon urbica* = *Chelidonaria urbica* (house martin) at Blokspruit, Pretoria District, Transvaal (1).
6. **Myrsidea sjoestedti** Kellogg, Schwed. Exp. Kilimanjaro, p. 50, Pl. 7, f. 7 (1910).
Described from specimens taken off *Corvus scapulatus* = *C. albus* (pied crow) and *Corvultur albicollis* (white-necked raven) in East Africa.

Genus **Menacanthus** Neumann.

Menacanthus Neumann, Arch. de Parasit., XV, p. 353 (1912).

1. **Menacanthus crateropus** Bedford, 7th and 8th Rep. Dir. Vet. Res., Un. S. Af., pp. 719-721, Pl. iv, f. 1 (1920).
Described from specimens taken off *Crateropus bicolor* = *Turdoides bicolor* (pied babbler) and *Crateropus jardinei* = *Turdoides jardinei* (Jardine's babbler) in the Rustenburg District, Transvaal.
2. **Menacanthus giganteum** Denny, Anoplur. Brit., p. 225, Pl. 21, f. 2 (1842).
M. latum Piaget, Pédiculines, p. 457, Pl. 37, f. 1 (1880).
This species has been recorded taken off a domestic pigeon at Onderstepoort, Transvaal, and from *Turtur capicola* = *Afropelia capicola* (Cape turtle dove) at Blokspruit, Pretoria District, Transvaal (1).
3. **Menacanthus numidae** Giebel, Ins. Epiz., p. 292 (1874).
Recorded from domestic fowls at Onderstepoort, Transvaal, and from *Numida coronata* (crowned guinea-fowl) at Elandsfontein, Pretoria District, Transvaal (1).
4. **Menacanthus spinosum** Piaget (1880).
Recorded taken off *Lamprocolius phoenicopterus bispecularis* (Northern Cape glossy starling) at Jericho, Transvaal, and one female from *Pycnonotus barbatus layardi* = *Loidorusa layardi* (Layard's bulbul) at Pietermaritzburg, Natal (1). We have also taken specimens off *Melaenornis ater* (black flycatcher) at Ntambanana, Zululand.
5. **Menacanthus stramineum** Nitzsch in Giebel, Ins. Epiz., p. 291 (1874).
M. biseriatum Piaget, Pédiculines, p. 469, Pl. 37, f. 2 (1880).
A common species on domestic fowls and turkeys in South Africa.

Genus **Neomenopon** Bedford.

Neomenopon Bedford, Parasit., Vol. XII, No. 2, p. 170 (1920).

1. **Neomenopon pteroclurus** Bedford, Parasit., Vol. XI, No. 2, p. 170, Pl. xii, f. 1, 2 (1920).
Described from three females taken off *Pteroclurus namaqua* = *Pterocles namaquus* (Namaqua sand-grouse) in the Rustenburg District, Transvaal.

Genus **Machaerilaemus** Harrison.

Machaerilaemus Harrison, Parasit., Vol. VII, p. 389 (1915).

1. **Machaerilaemus plocei** Bedford, Parasit., Vol. XII, No. 2, p. 168, Pl. xii, f. 1, 2, 3 (1920).

Described from one female and one male taken off a waxbill at Onderstepoort, Transvaal.

Genus **Dennyus** Neumann.

Dennyus Neumann, Bull. Soc. Zool., France, XX, p. 59 (1906).

Nitzschia Denny, Anoplur. Brit., p. 230 (1842).

1. **Dennyus minor** Kellogg and Paine, Rec. Ind. Mus., X, p. 242 (1914).

Described from specimens taken off *Cypselus affinis* = *Colletoptera affinis* (Indian swift), occurring in Africa as well as in India.

2. **Dennyus truncatus** Olfers, De Vegetatives, p. 91 (1816).

N. burmeister Denny, Anoplur. Brit., p. 230, Pl. 22, f. 5 (1842).

N. pulicaris Nitzsch in Giebel, Zeit. f. ges. Nat., XVIII, p. 304 (1861).

N. tibialis Piaget, Pédiculines, p. 576, Pl. 48, f. 5 (1880).

This species has been recorded from *Cypselus apus* = *Micropus apus* (European swift), a migrant to South Africa.

Genus **Trinoton** Nitzsch.

Trinoton Nitzsch, Germar's Magazin, III, p. 300 (1818).

1. **Trinoton aculeatum** Piaget, Pédiculines, Suppl., p. 136, Pl. 15, f. 1 (1885).

This species was described from specimens taken off *Dendrocygna viduata* in the Leyden Museum. It has been recorded from the following hosts in South Africa (1):—

Dendrocygna viduata (white-faced duck), *Sarkidiornis melanotus africanus* (knob-billed duck), *Casarca cana* (South African shelduck), and *Thalassornis leuconotus* (white-backed duck).

2. **Trinoton anserinum** Fabr. Syst. Antl., p. 345 (1805).

T. conspurcatum Nitzsch in Burmeister, Handbuch, II, p. 440 (1838).

T. continuum Piaget, Pédiculines, p. 591 (1880).

This species has been recorded taken off *Plectropterus gambensis* (spurwing goose) in South Africa (1).

3. **Trinoton femoratum** Piaget, Pédiculines, p. 593, Pl. 49, f. 4 (1880).

Recorded taken off *Phoenicopterus roseus* = *P. major* (greater flamingo) at Durban (2). It was described from specimens taken off *Phoenicopterus antiquorum* = *P. major* in the Zoological Gardens at Rotterdam.

4. **Trinoton querquedulae** Linné, Syst. Nat., p. 612 (1758).

T. luridum Nitzsch in Burmeister, Handbuch, II, p. 441 (1838).

T. squalidum Denny, Anoplur. Brit., p. 235, Pl. 17, f. 3 (1842).

Recorded taken off the following species of duck, in the Rustenburg District, Transvaal (1):—

Sarkidiornis melanotus africanus (knob-billed duck), *Casarca cana* (South African shelduck), *Anas erythrorhyncha* = *Paecilonitta erythrorhyncha* (red-billed teal), and *Nyroca capensis* (South African pochard).

Genus **Eureum** Nitzsch.

Eureum Nitzsch, Germar's Magazin, III, p. 301 (1818).

1. **Eureum cimicoides** Nitzsch in Burmeister, Handbuch, II, p. 441 (1838).

This species has been described and figured by Denny [Anoplur. Brit., p. 237, Pl. 22, f. 4 (1842)] from specimens taken off *Cypselus apus* = *Micropus apus* (European swift).

2. **Eureum malleus** Nitzsch in Burmeister, Handbuch, II, p. 441 (1838).
Recorded from *Hirundo rustica* (European swallow).

Genus **Pseudomenopon** Mjöberg.

Pseudomenopon Mjöberg, Arkiv. f. Zoologi, VI, p. 50 (1910). Ferris, Parasit.

1. **Pseudomenopon rostratula** Bedford.

Described from specimens taken off *Rostratula capensis* = *R. benghalensis* (painted snipe) in the Rustenburg District, Transvaal.

2. **Pseudomenopon tridens** Nitzsch in Burmeister, Handbuch, II, p. 440 (1838).

Menopon scopulacorne Denny, Anoplur. Brit., p. 221, Pl. 18, f. 9 (1842).

Menopon insolens Kellogg, New Mallophaga, I, p. 116, Pl. 15, f. 3, 4 (1896).

Menopon pacificum Kellogg, New Mallophaga, I, p. 116 (1896).

Recorded taken off the following hosts in the Rustenburg District, Transvaal (1):—

Gallinula chloropus brachyptera (African moorhen), *Gallinula angulata* = *Porphyriops angulata* (lesser moorhen), and *Fulica cristata* (red-knobbed coot).

This species has been found on *G. chloropus* and other rails in both Europe and America.

Genus **Ancistrona** Westwood.

Ancistrona Westwood, Thes. Ent. Oxon., p. 197 (1874).

This genus includes but a single species.

1. **Ancistrona vagelli** Fabr., Mant. Ins., p. 369 (1787).

A. procellariae Westwood, Thes. Ent. Oxon., p. 197, Pl. 37, f. 4 (1874).

A. gigas Piaget, Tijd. v. Ent., XXVI, p. 152, Pl. 9, f. 1 (1883).

Recorded by Waterston (36) taken off *Oceanites oceanicus* (sooty petrel) in the Cape. Westwood has also recorded it from *Daption capensis* (Cape sea-pigeon).

Family LAEMOBOTHRIDAE Mjöberg.

Genus **Laemobothrion** Nitzsch.

Laemobothrion Nitzsch, Germar's Magazin, III, p. 301 (1818).

1. **Laemobothrion africanum** Kellogg, Schwed. Zool. Exp. Kilimanjaro, p. 47, Pl. 7, f. 6 (1910).

Described from specimens taken off *Pseudogyps africanus* (white-backed vulture) in East Africa.

2. **Laemobothrion gypsis** Kellogg, Ent. News, XVII, p. 63 (1906).

Described from specimens taken off *Gyps kolbi* = *Gyps coprotheres* (Cape vulture) in the Transvaal.

3. **Laemobothrion kelloggi** Bedford, 5th and 6th Rep. Dir. Vet. Res., Un. S. Afr., p. 723 (1919).

L. africanum Kellogg and Ferris, Ann. Durban Mus., I, p. 147, Pl. 15, f. 1 (1915) nec Kellogg, 1910.

Described from specimens taken off *Theristicus hagedasch* = *Hagedashia hagedash* (hadadah ibis) at Mfongosi, Zululand.

4. **Laemobothrion perenopteri** Gervais, Aptères, III, p. 321, Pl. 48, f. 6 (1847).

L. pallidum Giebel, Ins. Epiz. p. 250 (1874).

Recorded from *Neophron percnopterus* (Egyptian vulture).

5. **Laemobothrion tinnunculi** Linné, Syst. Nat., p. 612 (1758).

L. nigrolimbatum Giebel, Ins. Epiz., p. 252 (1874).

L. giganteum Nitzsch in Burmeister, Handbuch, II, p. 441 (1838).

L. laticolle Nitzsch in Denny, Anoplur. Brit., p. 239, Pl. 23, f. 4 (1842).

Waterston (36) has recorded this species having been taken off *Falco subbuteo* (hobby) in South Africa. It has been recorded from numerous Accipitrines, including *Circus aeruginosus* (European marsh harrier) and *Gyps rüppelli* (Rüppell's vulture).

6. **Laemobothrion titan** Piaget, p. 578, Pl. 49, f. 1 (1880).
Recorded by Mjöberg from *Milvus aegyptius* (yellow-billed kite).

Family RICINIDAE Neumann.

Genus **Ricinus** Degeer.

Ricinus Degeer, Mém. Hist. Ins., VII, p. 69 (1778).

Physostomum Nitzsch, Germar's Mag., III, p. 288 (1818).

1. **Ricinus dolichocephalus** Scopoli, Ent. Carn., p. 383 (1763).
R. oriole Fabr., Gen. Ins. p. 309 (1776).
R. sulphureus Nitzsch in Burmeister, Handbuch, II, p. 442 (1838).
Specimens of this species taken off *Oriolus larvatus larvatus* (black-headed oriole) at Pietermaritzburg, Natal, have been forwarded by Mr. L. Hill for identification. The species was described from specimens taken off *Oriolus galbula* = *Oriolus oriolus* (European golden oriole), a migrant to South Africa.
2. **Ricinus longetarsatus** Piaget, Tijd. v. Ent., XXXVIII, p. 101 (1895).
Recorded having been taken off *Lamprotornis sp.* in the Transvaal.

Family TRICHODECTIDAE.

Genus **Trichodectes** Nitzsch.

Trichodectes Nitzsch, Germar's Magazin, III, p. 294 (1818).

1. **Trichodectes bedfordi** Hill, Parasit., Vol. XIV, No. 1, p. 63, Pl. 2, f. 1-3 (1922).
Described from numerous males and females taken off *Cephalophus monticola* (blue duiker) at Ngome Forest, Mt. Ngwibi, Natal.
2. **Trichodectes bovis** Linné, Syst. Nat., p. 611 (1758).
T. scalaris, Nitzsch in Burmeister, Handbuch, II, p. 436 (1838). This species is common on cattle in South Africa.
3. **Trichodectes caffra** Bedford, 5th and 6th Rep. Dir. Vet. Res., Un. S. Afr., pp. 724, 725, Pl. iii, f. 10, 11 (1919).
Described from specimens taken off *Felis caffra* = *F. ocreata caffra* (kaffir cat) at Blokspruit, Pretoria District, Transvaal.
4. **Trichodectes caprae** Gurlt, Mag. f. ges. Thierheilk., IX, p. 3, Pl. 1, f. 2 (1843).
T. climax Nitzsch in Gervais, Hist. Ins. Apt., III, p. 313, Pl. 48, f. 3 (1847).
T. solidus Rudow, Zeit. f. ges. Nat. 27, p. 112, Pl. 7, f. 2 (1866). Common on goats in South Africa.
5. **Trichodectes cornutus** Gervais, Hist. Ins. Apt., III, p. 315, Pl. 49, f. 10 (1847).
T. longiceps Rudow, Zeit. f. ges. Nat., XXVII, Pl. 6, f. 1 (1866).
Recorded taken off from *Cervicapra fulvorufula* = *Redunca fulvorufula* (mountain reedbuck) at Mfongosi, Zululand (1 and 12). Specimens have also been taken off *Redunca arundinum* (reedbuck) in northern Zululand, 29th October, 1924 (G.A.H.B.).
6. **Trichodectes equi** Linné (1758).
T. parumpilosus Piaget Pédiculines, p. 397, Pl. 32, f. 5 (1880).
Common on domestic equines in South Africa.

7. **Trichodectes genetta** Bedford, 5th and 6th Rep. Dir. Vet. Res., Un. S. Afr., pp. 725-726, Pl. iv, f. 12, 13 (1919).
Described from specimens taken off *Genetta ludia* (small spotted genet) at Jericho, Transvaal.
8. **Trichodectes limbatus** Gervais, Hist. Ins. Apt., 3, p. 313, Pl. 48, f. 4 (1847).
T. crassipes Rudow, Zeit. f. ges. Nat., 27, p. 3, Pl. 7, f. 1 (1866).
T. pennicillatus Piaget Pédiculines, p. 406, Pl. 32, f. 10 (1880).
T. major Piaget, Pédiculines, Suppl. p. 86 (1885).
T. hermsi Kellogg and Nakayama, Psyche, 22, p. 34 (1915).
This species is common on Angora goats in South Africa.
9. **Trichodectes lindfieldi** Hill, Parasit., Vol. XIV, No. 1, p. 65, f. 4-6 (1922).
Described from numerous males and females taken off *Procavia capensis* = *P. capensis natalensis* (Natal dassie) at Mtabamhlope, Estcourt District, Natal.
10. **Trichodectes lineatus** Bedford, 7th and 8th Rep. Dir. Vet. Res., Un. S. Afr., pp. 723-724, Pl. v, f. 2 (1920).
Described from specimens taken off *Rhaphiceros campestris* (steenbuck) in the Rustenburg District, Transvaal.
11. **Trichodectes ovis** Linné, Syst. Nat., p. 611 (1758).
T. sphaerocephalus, Olfers, De Orgetativis, etc., p. 85 (1816).
This species occurs on sheep in South Africa, but is not very common.
12. **Trichodectes painei** Kellogg and Nakayama, Psyche, 21, p. 90, f. 1 (1914). A common species on goats in South Africa.
13. **Trichodectes peregrinus** Taschenburg, Nova Acta, XLIV, p. 218, Pl. 7, f. 10 (1832).
This species has been recorded taken off fat-tailed sheep in South-West Africa.
14. **Trichodectes subrostratus** Nitzsch in Burmeister, Hanbuch, II, p. 436 (1838).
Recorded taken off a domestic cat at Pietermaritzburg, Natal (2). It does not appear to be a common parasite in this country.
15. **Trichodectes univirgatus** Neumann, Arch. Parasit., p. 612, f. 6 (1913).
T. serraticus Hill, Parasit., Vol. XIV, No. 1, p. 67, f. 7-9 (1922).
Described by Neumann from specimens taken off *Hyrax* sp.
Hill's material was collected from *Procavia capensis* = *P. capensis natalensis* (Natal dassie) at Mtabamhlope, Escourt district, Natal, along with specimens of *T. lindfieldi*, Hill, and a third species close by allied to *T. univirgatus*.

Genus **Damalina** Mjöberg.

Damalina Mjöberg, Arkiv. f. Zoologi, VI, p. 69 (1910).

1. **Damalina crenelata** Piaget, Pédiculines, p. 402, Pl. 32, f. 8 (1880).
Described from specimens taken off *Antilope albifrons* = *Damaliscus albifrons* (blesbok).

Family PHILOPTERIDAE.

Genus **Goniodes** Nitzsch.

Goniodes Nitzsch, Germar's Magazin, III, p. 293 (1818).

1. **Goniodes aegypticus** Kellogg and Paine.
Goniodes minor Piaget Pédiculines, p. 256, Pl. 21, f. 3 (1880), nec Piaget, p. 248.
Gonicotes aegypticus Kellogg and Paine, Bull. Ent. Res., Vol. 2, Pt. 2, p. 148, Pl. 5, f. 2 (1911).

Goniodes piageti Johnston and Harrison, Proc. Roy. Soc. Qsld., 24, p. 19 (1912).

Waterston (36) has recorded this species from South Africa taken from *V. nago delalandi* (Cape green pigeon) and *Turtur capicola* = *Afropelia capicola* (Cape turtle dove).

It has also been recorded taken from *Afropelia capicola damarensis* (Damara turtle dove) and *Turtur senegalensis* = *Stigmatopelia senegalensis* (laughing dove) in the Transvaal (2).

2. **Goniodes assimilis** Piaget, Pédiculines, p. 248 (1880).
Described from specimens taken off *Francolinus capensis* = *Chaetopsu capensis* (Cape noisy francolin) in the Zoological gardens at Rotterdam.
3. **Goniodes dissimilis** Nitzsch in Denny, Anoplur. Brit., p. 162, Pl. 12, f. 6 (1842).
Males and females of this species have been taken off domestic fowls at Pietermaritzburg, Natal (L. Hill).
4. **Goniodes fimbriatus** Neumann, Arch. Parasit., XV, p. 629, f. 19, 20 (1913).
Described from specimens taken off unknown hosts at Konakry and in Moçambique.
5. **Goniodes hilli** Bedford, 7th and 8th Rep. Dir. Vet. Res., Un. S. Afr., pp. 724-726, Pl. v., f. 3 (1920).
Described from specimens taken off *Turtur semitorquatus* = *Streptopelia semitorquata* (red-eyed turtle dove) at Pietermaritzburg, Natal.
6. **Goniodes meleagridis** Linné, Syst. Nat., p. 613 (1758).
G. stylifer Nitzsch, in Burmeister, Handbuch, II, p. 432 (1838).
G. styliferum Taschenberg, Die Mallophagen, p. 47 (1882).
A common parasite of the domestic turkey in South Africa.
7. **Goniodes numidae** Mjöberg, Arkiv. f. Zoologi, vi, p. 103, f. 60, 61 (1910).
Recorded taken on *Numida coronata* (crowned guinea-fowl) at Bridge-water, Transvaal (1). It was described from specimens taken off *Numida ptilorhyncha* in the Sudan.
8. **Goniodes parviceps** Piaget, Pédiculines, p. 277, Pl. 23, f. 2 (1880).
A parasite of *Pavo cristatus*, but not yet recorded from this bird in South Africa.
9. **Goniodes pavonis** Linné, Syst. Nat. p. 613 (1758).
G. falcicornis Nitzsch, in Burmeister, Handbuch, II, p. 432 (1838).
Recorded by Waterston taken from *Pavo cristatus* in South Africa.

Genus **Goniocotes** Burmeister.

Goniocotes Burmeister, Handb., der Ento., II, p. 431 (1838).

1. **Goniocotes bidentatus** Scopoli, Ent. Carn., p. 285 (1763).
G. compar Nitzsch, in Burmeister, Handbuch, II, p. 431 (1838).
This species has been recorded taken from domestic pigeons at Onderstepoort, Transvaal, and Pietermaritzburg, Natal (1).
2. **Goniocotes gallinae** Retz.
G. hologaster Nitzsch, in Burmeister, Handbuch, II, p. 431 (1838).
G. maculatus Taschenberg, Die Mallophagen, p. 76, Pl. 3, f. 3 (1882).
G. nigromaculatus Mjöberg, Arkiv. f. Zool., VI, p. 106, f. 62 (1910).
Recorded taken from domestic fowl at Pretoria North, Transvaal, and from *Francolinus sephaena* = *Dendroperdix sephaena* (bush partridge) and *Numida coronata* (crowned guinea-fowl) in the Transvaal.

3. **Goniocotes gigas** Taschenberg, Zeit. f. ges. Nat., LII, p. 104, Pl. 1, f. 10 (1879).
G. hologaster Denny, Anoplur. Brit., p. 153, Pl. 12, f. 4 (1842), nec Nitzsch, 1839.
G. abdominalis Piaget, Pédiculines, p. 238, Pl. 20, f. 9 (1880).
 Recorded taken off domestic fowls at Onderstepoort and at Pietermaritzburg, Natal; also from *Numida coronata* (crowned guinea-fowl) at Bridgewater, Transvaal (1).
4. **Goniocotes rectangulatus** Nitzsch, in Giebel, Zeit. f. ges. Nat., XXVIII, p. 389 (1866).
 A parasite of *Pavo cristatus*, but not yet recorded from this bird in South Africa.

Genus **Lipeurus** Nitzsch.

Lipeurus Nitzsch, Germar's Magazin, III, p. 292 (1818).

1. **Lipeurus caponis** Linné, Syst. Nat., p. 614 (1758).
L. variabilis Nitzsch, in Burmeister, Handbuch, II, p. 434 (1838).
 Recorded taken from a domestic fowl at Pietermaritzburg, Natal (1).
2. **Lipeurus gallipavonis** Geoffroy, Hist. Abr. Ins., p. 600 (1762).
L. polytrapezius Nitzsch, in Burmeister, Handbuch, II, p. 434 (1838).
 Specimens of this species have been taken off a domestic turkey at Pietermaritzburg, Natal, by L. Hill.
3. **Lipeurus heterographus** Nitzsch in Giebel, Zeit. f. ges. Nat., XXVIII, p. 381 (1866).
L. obscurus Giebel, Ins. Epiz., p. 220 (1874).
 A common parasite of the domestic fowl in South Africa.

Genus **Austrogoniodes** Harrison.

Austrogoniodes Harrison, Parasit., VII, p. 398 (1915).

This genus includes four species found on *Spheniscidae*, which were formally placed in the genera *Goniodes* and *Goniocotes*.

1. **Austrogoniodes bifasciatus** Piaget, Pédiculines, Suppl., p. 47, Pl. 5, f. 6 (1885).
 Recorded by Waterston (36) taken from *Spheniscus demersus* (jackass penguin) in South Africa.

Genus **Philopterus** Nitzsch.

Philopterus Nitzsch, Germar's Magazin, III, p. 288 (1818).

Docophorus Nitzsch, ibid., III, p. 289 (1818).

1. **Philopterus acanthus** Giebel, Ins. Epiz., p. 101 (1874).
 Mjöberg (Arkiv. f. Zool., p. 122) has recorded this species from the following:—
Limosa lapponica = *Vetola lapponica* (bar-tailed godwit) and *Numenius phaeopus* = *Phaeopus phaeopus* (whimbrel), both migrants to South Africa.
2. **Philopterus antennatus** Piaget, Pédiculines, p. 101, Pl. 8, f. 6 (1880).
 Described from specimens taken off *Dromas ardeola* (crab plover), a migrant to South Africa.
3. **Philopterus aquilinae** Denny, Anoplur. Brit., p. 81, Pl. 2, f. 7 (1842).
 This species has been recorded from *Falco apivorus* = *Pernis apivorus* (honey buzzard).

4. **Philoaterus capistratus** Neumann, Arch, Parasit., XV, p. 375, f. 20 (1912).
Recorded taken off *Halcyon albiventris* = *Chelicutona albiventris* (brown-hooded kingfisher) at Mooivlei, Transvaal, and at Pietermaritzburg, Natal (1). It was described from specimens taken off *Halcyon semicaeruleus*.
5. **Philoaterus cephalus** Denny, Anoplur, Brit., p. 81, Pl. 2, f. 8 (1842).
D. glareolae Giebel, Zeit. f. ges. Nat., XXVIII, p. 361 (1866).
D. nitzschi Giebel, Ibid., p. 361 (1866).
D. cordiceps Giebel, Ins. Epiz., p. 103 (1874).
Recorded from *Stercorarius pomarinus* = *Coprotheres pomarinus*, *Calidris arenaria* = *Crocethia alba* (sanderling), and *Totanus glareola* = *Rhyacophilus glareola* (wood sandpiper).
6. **Philoaterus ceblebrachys** Nitsch, in Denny, Anoplur. Brit., p. 92, Pl. 1, f. 3 (1842).
Recorded taken off *Bubo lacteus* = *Nyctaeus lacteus* (giant eagle owl) in the Rustenburg District, Transvaal.
7. **Philoaterus cerylinus** Mjöberg, Arkiv, f. Zoologi., VI, p. 119, f. 67, 68 (1910).
Recorded taken from *Ceryle rudis* (pied kingfisher) at Mooivlei, Transvaal (1). *P. cerylinus* in probably a synonym of *duplicatus* Piaget.
8. **Philoaterus conicus** Denny, Anoplur. Brit., p. 90, Pl. 5, f. 2 (1842).
D. fuliginosus Kellogg, New Mallophaga, I, p. 80, Pl. 3, f. 2 (1896).
Recorded from several species of *Charadriidae*, including *Squatarola squatarola* (grey plover), a migrant to South Africa.
9. **Philoaterus cornatus** Piaget, Pédiculines, p. 21 (1880).
Recorded from *Pernis apivorus* (honey buzzard), a migrant to South Africa.
10. **Philoaterus cursor** Nitsch, in Burmeister, Handbuch, II, p. 426 (1838).
Waterston (36) has recorded this species taken from *Bubo capensis* (Cape eagle owl) and *Bubo maculosus* = *B. africanus* (spotted eagle owl) in South Africa. It has also been recorded taken from *B. africanus* at Onderstepoort, and from *Bubo capensis* and *Syrnium woodfordi* = *Strix woodfordi* (Woodford's bush owl) in the Rustenburg District, Transvaal (1 and 2).
11. **Philoaterus duplicatus** Piaget, Tijd. v. Ent., XXXIII, p. 223, Pl. 8, f. 1 (1888).
Described from specimens taken off *Ceryle rudis* (pied kingfisher).
12. **Philoaterus elongatus** Piaget, Pédiculines, Suppl., p. 15, Pl. a, f. 4 (1885).
Described from specimens taken off *Rhynchops flavirostris* (African skimmer) in the Leyden Museum.
13. **Philoaterus excisus** Nitsch, in Burmeister, Handbuch, II, p. 425 (1838).
D. hirundinis Piaget, Tijd. v. Ent., XIV, p. 134, Pl. 7, f. 13 (1871).
This species has been recorded taken off *Hirundo rustica* (European swallow) and *Chelidon urbica* = *Chelidonaria urbica* (house martin) in South Africa (1 and 36).
14. **Philoaterus fusiformis** Denny, Anoplur, Brit., p. 84, Pl. 1, f. 2 (1842).
D. canuti Denny, Anoplur, Brit., p. 84, Pl. 3, f. 5 (1842).
Described by Denny from specimens taken off *Tringa minuta* = *Pisobia minuta* (little stint) and *T. canutus* = *Calidris canutus* (knot). Piaget (1880, p. 86) has also described and figured this species from specimens taken off *T. subarquata* = *Erolia testacea* (curlew sandpiper). All these hosts are migrants to South Africa.

15. **Philopterus gonothorax** Giebel, Zeit. f. ges. Nat., XXXVII, p. 450 (1871).
D. lari Fabr., Faun. Groen., p. 219 (1780), nec Degeer, 1778.
D. congener Giebel, Ins. Epiz., p. 111 (1874).
D. breviappendiculatus Piaget, Pédiculines, p. 112 (1880).
D. magnus Piaget, Ibid., p. 112 (1880).
 Waterston (36) has recorded this species taken off the following hosts in South Africa: *Diomedea melanophrys* = *Thalassarche melanophris* (mollymawk), *Larus dominicanus* (Cape black-headed gull), and *L. hartlaubi* = *Bruchigavia novae-hollandiae hartlaubi* (white-headed gull).
16. **Philopterus humeralis** Denny, Anoplur. Brit., p. 88, Pl. 5, f. 7 (1842).
 This species has been recorded from *Numenius arquatus* (curlew) and *N. phaeopus* = *Phaeopus phaeopus* (whimbrel), both migrants to South Africa.
17. **Philopterus lanii** Fabr., Ent. Syst. Suppl., p. 570 (1798).
D. fuscicollis Nitzsch, in Burmeister, II, p. 425 (1838).
D. trigonophorus Giebel, Ins. Epiz., p. 87 (1874).
 Recorded from *Lanius collurio* = *Enneoctonus collurio* (red-backed shrike), a migrant to South Africa.
18. **Philopterus latifrons** Nitzsch, in Denny, Anoplur. Brit., p. 97, Pl. 1, f. 4 (1842).
 Described from specimens taken off *Cuculus canorus* (European cuckoo, a migrant to South Africa).
19. **Philopterus leptomelas** Giebel, Zeit. f. ges. Nat., XXVIII, p. 358 (1866).
 Described from specimens taken off *Corvultur albicollis* (white-necked raven).
20. **Philopterus limosae** Denny, Anoplur. Brit., p. 86, Pl. 4, f. 2 (1842).
 Described from specimens taken off *Limosa melanurus* = *L. limosa* (black-tailed godwit), a migrant.
21. **Philopterus macropus** Giebel, Ins. Epiz., p. 301 (1874).
 Recorded taken off *Caprimulgus europaeus* (European nightjar), a migrant.
22. **Philopterus major** Waterston, Ent. Month. Mag., p. 62 (1912).
D. nirmoides Piaget, Pédiculines, p. 104 (1880), nec Nitzsch (1861).
 Described by Piaget from specimens taken off *Numenius arquatus* (curlew), a migrant.
23. **Philopterus melanocephalus** Nitzsch, in Burmeister, Handbuch, II, p. 426 (1838).
D. laricola Nitzsch, in Giebel, Zeit. f. ges. Nat., XXVIII, p. 363 (1866).
D. laticaudatus Rudow, Beitrag., p. 12 (1869).
D. lobaticeps Giebel, Ins. Epiz., p. 109 (1874).
 This species has been recorded by Waterston taken off *Sterna bergii* = *Thalasseus bergii* (swift tern) in South Africa. It has also been recorded from *Sterna hirundo* (common tern), *S. cantiaea* = *Thalasseus sandwicensis* (sandwich tern), and *S. minutus* = *Sternula albifrons*.
24. **Philopterus meropis** Denny, Anoplur. Brit., p. 101, Pl. 4, f. 4 (1842).
D. bifrons Nitzsch, Zeit. f. ges. Nat., XXVII, p. 116 (1866).
 This species we have taken on *Merops apiaster* (European bee-eater) at Onderstepoort, Transvaal, and have also recorded it taken from *Melittophagus bullockoides* = *Coccolarynx bullockoides* (white-fronted bee-eater) in the Rustenburg District, Transvaal.

25. **Philopterus milvi** Mjöberg, Arkiv. f. Zool., VI, p. 109, f. 63 (1910).
Described from specimens taken off *Milvus aegypticus* (yellow-billed kite) at Cairo. It has also been collected on the same host in Zululand by H. H. Curson.
26. **Philopterus naumanni** Giebel, Ins. Epiz., p. 100 (1874).
Described from specimens taken off *Vanellus squatarola* = *Squatarola squatarola* (grey plover), a migrant to South Africa.
27. **Philopterus nisi** Denny, Anoplur. Brit., p. 109, Pl. 3, f. 11 (1842).
D. gonorhynchus Giebel, Zeit. f. ges. Nat., XVII, p. 526 (1861).
Recorded from *Circus aeruginosus* (European marsh harrier).
28. **Philopterus ornatus** Nitzsch, Zeit. f. ges. Nat., XXVII, p. 116 (1866).
Recorded taken off *Oriolus larvatas* (black-headed oriole) at Pietermaritzburg, Natal (2). It was described from specimens taken off *Oriolus galbula* = *O. oriolus* (European golden oriole), a migrant to South Africa.
29. **Philopterus ovatus** Giebel, Ins. Epiz., p. 98 (1874).
Described from specimens taken off *Botaurus stellaris* (bittern).
30. **Philopterus platyclypeatus** Piaget, Tijd. v. Ent., XIV, p. 133, Pl. 7, f. 12 (1871).
Described from specimens taken off *Anastomus lamelligerus* (open-bill stork).
31. **Philopterus platygaster** Denny, Anoplur. Brit., p. 83, Pl. 2, f. 5 (1842).
D. semivittatus Giebel, Ins. Epiz., p. 102 (1874).
This species has been recorded by Waterston (36) taken from the following hosts in South Africa: *Aegialitis marginata* = *Leucopoliis marginatus* (white-fronted sandplover), *A. pecuaria* = *L. varius* (Kittlit's sandplover), and *A. tricoloris* = *Afroxechus tricoloris* (three-banded sandplover).
32. **Philopterus platyrhynchus** Nitzsch, in Giebel, Zeit. f. ges. Nat., XVII, p. 525 (1861).
D. dilatatus Rudow, Bieträge, p. 14 (1869).
D. eurygaster Giebel, Ins. Epiz., p. 69 (1874).
D. leucogaster Giebel, Ibid., p. 300 (1874).
Recorded by Waterston (36) taken off *Buteo jakal* = *Pterolestes rufofuscus* (jackal buzzard) in South Africa.
33. **Philopterus pustulosus** Nitzsch, in Giebel, Zeit. f. ges. Nat., XXVIII, p. 363 (1866).
D. euryrhynchus Giebel, Ins. Epiz., p. 112 (1874).
This species has been recorded from *Lestris pomarina* = *Coprotheres pomarinus* (large white-necked skua).
34. **Philopterus pygaspis** Nitzsch, in Geibel, Zeit. f. ges. Nat., XXVIII, p. 310 (1866).
D. pilosus Piaget, Pédiculines, p. 116, Pl. 10, f. 4 (1880).
D. phoenicopterus Mjöberg, Arkiv. f. Zool., p. 127 (1910).
Described from specimens taken off *Phoenicopterus antiquorum* and *P. roseus*, both names being synonyms of *P. major* (greater flamingo).
35. **Philopterus quinquemaculatus** Piaget, Pédic. Suppl., p. 9, Pl. 1, f. 10 (1885).
Described from specimens taken off *Hirundo urbica* = *Chelidonaria urbica* (house martin).
36. **Philopterus rostratus** Nitzsch, in Burmeister, Handb., II, p. 427 (1838).
D. rostratus Denny, Anoplur. Brit., p. 87, Pl. 2, f. 4 (1842).
D. rostratus Piaget, Pédic., p. 27, Pl. 1, f. 7 (1880).

Waterston (36) has recorded this species from *Bubo maculosus* = *B. africanus africanus*, and it has also been recorded taken off *Strix flammea maculata* = *Tyto alba affinis* (Cape barn owl) at Onderstepoort, Transvaal (2).

37. **Philopterus rotundus** Rudow, Beiträge, p. 11 (1869).
Docophorus rotundus Piaget, Pédic., p. 85 (1880).
 Described from specimens taken off *Numenius phaeopus* = *Phaeopus phaeopus* (whimbrel), a migrant to South Africa.
38. **Philopterus semisignatus** Nitzsch, in Burmeister, Handb., II, p. 424 (1838).
D. albidus Piaget, Pédiculines, p. 48, Pl. 3, f. 6 (1880).
 Described by Piaget from specimens taken off *Corvus scapulatus* = *C. albus* (pied crow) in the Leyden Museum.
39. **Philopterus senegalensis** Rudow, Beiträge, p. 10 (1869).
Docophorus senegalensis Piaget, Pédiculines, p. 70 (1880).
 Recorded taken off *Lamprocolius phoenicopterus* (red-shouldered glossy starling) at Pietermaritzburg, Natal, and from *L. phoenicopterus bispecularis* (lesser red-shouldered glossy starling) at Cumberland, Transvaal (2).
 The type was found on *L. nitens*.
40. **Philopterus spathulatus** Giebel, Ins. Epiz., p. 73 (1874).
D. penicillatus Piaget, Pédiculines, p. 22 (1880).
 Recorded by Piaget taken from *Milvus aegyptius* (yellow-billed kite).
41. **Philopterus sturni** Schrank, Beiträge, p. 118, Pl. 5, f. 11 (1776).
D. leontodon Nitzsch, in Burmeister, Handb., II, p. 425 (1838).
D. leontodon Piaget, Pédiculines, p. 66, Pl. v, f. 1 (1880).
P. pastoris Denny, Anoplur. Brit., p. 77, Pl. 4, f. 3 (1842).
 This species occurs on *Sturnus vulgaris* (starling), but has not yet been recorded from South Africa.
42. **Philopterus subflavescens** Geoff., Hist. Abs. Ins., II, p. 599 (1762).
D. communis Nitzsch, in Burmeister, Handb., II, p. 425 (1838).
 This species has been recorded from numerous passerine birds under different names, a number of which may ultimately prove to be valid. It has been recorded from the following hosts in South Africa (2): *Dryoscopus ferrugineus* = *Laniarius ferrugineus* (Cape ferrugineous bush-shrike), *Alseconax adustus* (Cape dusky flycatcher), and *Passer arcuatus* = *P. melanurus* (Cape black-headed sparrow); also from the following birds in Europe, all of which are migrants to South Africa: *Muscicapa grisola* = *M. striata* (spotted flycatcher), *Sylvia curruca* (common whitethroat), *Sylvia hypolais* = *Hippolais coelebs* (icterine warbler), and *Sylvia phragmitis* = *Muscipeta schoenobaena* (European sedge warbler).
43. **Philopterus sulcatus** Piaget, Tijd. v. Ent., XXXI, p. 149, Pl. 3, f. 2 (1888).
 Described from specimens taken off *Ardetta minuta* = *Ixobrychus minutus* (little bittern).

Genus *Anatoecus* Cummings.

Anatoecus Cummings, Proc. Zool. Soc., London, p. 653 (1916).

This genus includes seven species found on ducks, geese, and swans. Formally they were included in the genus *Philopterus*.

1. **Anatoecus dentatus** Scopoli, Ent. Carn., p. 383 (1763).
A. icterodes Nitzsch, in Burmeister, Handb., II, p. 424 (1838).
 Recorded taken off *Dendrocygna viduata* (white-faced duck) and *Thalassornis leuconotus* (white-backed duck) in the Rustenburg District, Transvaal; also from a domestic duck at Pietermaritzburg, Natal (1).

2. **Anatoecus ferrugineus** Giebel, Ins. Epiz., p. 114 (1874).

Recorded taken off *Sarkidiornis melanotus africanus* (knob-billed duck) in the Rustenburg District, Transvaal. The type was taken from *Anus clypeata* = *Spatula clypeata* (European shoveller), a migrant to South Africa.

Genus **Ibidoecus** Cummings.

Ibidoecus Cummings, Proc. Zool. Soc., London, p. 663 (1916).

This genus contains five species found in ibises.

2. **Ibidoecus plataleae** Denny, Anoplur. Brit., p. 100, Pl. 4, f. 9 (1842).

D. sphenophorus Nitzsch, in Giebel, Zeit. f. ges. Nat., XXVIII, p. 361 (1866).

D. sphenophorus Piaget, Pédiculines, p. 89, Pl. 7, f. 5 (1880).

Recorded taken off *Platalea alba* (African spoonbill) in the Pretoria District, Transvaal. It was described from specimens taken off *Platalea leucorodia* which was killed at Yarmouth, Norfolk, in 1829.

Genus **Neophiloaterus** Cummings.

Neophiloaterus Cummings, Proc. Zool. Soc., London, p. 660 (1916).

This genus includes five species found on *Ciconiidae*.

1. **Neophiloaterus episcopi** Kellogg, Schwed, Exp. Kilimanjaro, p. 44, Pl. 7, f. 2 (1910).

Described from specimens taken off *Dissoura episcopus* (woolly-necked stork), *Herodias alba* = *Casmerodius albus* (great white heron), and *Ephippiorhynchus senegalensis* (saddle-bill stork).

2. **Neophiloaterus incompletus** Nitzsch, in Denny, Anoplur. Brit., p. 105, Pl. 6, f. 5 (1842).

Docophorus incompletus Piaget, Pédiculines, p. 96, Pl. 8, f. 3 (1880).

Recorded taken from *Ciconia alba* = *C. ciconia* (white stork), a migrant to South Africa.

3. **Neophiloaterus tricolor** Nitzsch, in Burmeister, Handb., II, p. 424 (1838).

Docophorus tricolor Piaget, Pédiculines, p. 94, Pl. 8, f. 2 (1880).

Described from specimens taken off *Ciconia nigra* = *Melanopelargus niger* (black stork), a migrant to South Africa.

Genus **Dollabella** Cummings.

Dollabella Cummings, Proc. Zool. Soc., London, p. 675 (1916).

This genus includes only one species.

1. **Dollabella testudinarius** Denny, Anoplur. Brit., p. 96, Pl. 1, f. 6 (1842).

Docophorus testudinarius Piaget, Pédiculines, p. 83, Pl. 6, f. 5 (1880).

Described from specimens taken off *Numenius arquatus* (curlew), a migrant to South Africa.

Genus **Degeeriella** Neumann.

Degeeriella Neumann, Bull. Soc. Zool. France, XX, p. 59 (1906).

Nirmus Nitzsch, Germar's Magazin, III, p. 291 (1818), nec Hermann, 1804.

1. **Degeeriella actophila** Kell. and Chap., New Mallophaga, III, p. 79, Pl. 6, f. 4 (1899).

Recorded taken off *Tringa subarquata* = *Erolia testacea* (curlew sandpiper), shot at Lamberts Bay, Cape Province, also from *Tringa minuta* = *Pisobia minuta* (little stint) in the Pretoria District, Transvaal (2). It was described from specimens taken off *Calidris arenaria* in California.

2. **Degeeriella apiastri** Denny, Anoplur. Brit., p. 133, Pl. 10, f. 4 (1842).
Nirmus apiastri Piaget, Pédiculines, p. 158, Pl. 13, f. 11 (1880).
 Described from specimens taken off *Merops apiaster* (European bee-eater).
3. **Degeeriella assimilis** Piaget, Proc. Ent. Soc., London, p. xxiii (1890).
 Described from specimens taken off *Aegialitis asiatica* = *Eupodella asiatica* (Caspian plover), a migrant to South Africa.
4. **Degeeriella argula** Nitzsch, in Burmeister, Handb., p. 430 (1838).
 Recorded taken off *Corvus capensis* = *Heterocorax capensis* (black crow) at Onderstepoort, Transvaal.
5. **Degeeriella bicurvata** Piaget, Pédiculines, p. 159, Pl. 13, f. 18 (1880).
 Described from specimens taken off *Vidua paradisica* = *Steganura paradisica* (paradise widowbird) in the Leyden Museum.
6. **Degeeriella bipunctata** Rudow, Zeit. f. ges. Nat., XXXV, p. 466 (1879).
 Described from specimens taken off *Corvus scapularis* = *C. albus* (pied crow).
7. **Degeeriella brevipes** Piaget, Pédiculines, p. 179, Pl. 15, f. 3 (1880).
 Described from specimens taken off *Tringa subarquata* = *Erolia testacea* (curlew sandpiper).
8. **Degeeriella brunnea** Nitzsch in Giebel, Zeit. f. ges. Nat., XXVIII, p. 373 (1866).
 Described from specimens taken off *Dromas ardeola* (crab plover), a migrant to South Africa.
9. **Degeeriella cingulata** Nitzsch in Denny, Anoplur. Brit., p. 146, Pl. 11, f. 3 (1842).
Nirmus cingulatus Piaget, Pédiculines, p. 187, Pl. 16, f. 9 (1880).
 Recorded from *Calidris arenaria* = *Crocethia alba* (sanderling), *Limosa melanura* = *L. limosa* (black-tailed godwit), and *Tringa minuta* = *Pisobia minuta* (little stint), all migrants to South Africa.
10. **Degeeriella colymbina** Scopoli, Ent. Carn., p. 384 (1763).
N. fuscomarginatus Denny, Anoplur. Brit., p. 136, Pl. 10, f. 1 (1842).
N. fuscomarginatus Piaget, Pédiculines, p. 202, Pl. 16, f. 6 (1880).
 I have recorded this species as reported to have been taken off *Phalacrocorax lucidus* in the Rustenburg District, Transvaal, but it was probably taken off a grebe (2). The species was described by Denny from specimens taken off *Podiceps auritus* in Ireland, and Piaget has recorded it from *Podiceps cristatus* (crested grebe), to which an allied species occurs in South Africa.
11. **Degeeriella complexiva** Kell. and Chap., New Mallophaga, III, p. 75, Pl. 6, f. 3 (1899).
 Described from specimens taken off *Calidris arenaria* = *Crocethia alba* (sanderling), a migrant to South Africa.
12. **Degeeriella cruciata** Burmeister, Handb., II, p. 429 (1838).
 Described from specimens taken off *Lanius collurio* = *Enneoctonus collurio* (red-backed shrike), a migrant to South Africa.
13. **Degeeriella decipiens** Nitzsch, in Denny, Anoplur. Brit., p. 125, Pl. 2, f. 2 (1842).
Nirmus decipiens Piaget, Pédiculines, p. 180, Pl. 15, f. 4 (1880).
 Waterston has recorded this species taken off *Recurvirostra avosetta* (avocet), Philipstown, Cape Province.

14. *Degeeriella emarginata* Kell. and Chap., Journ. New York Ent. Soc., X, p. 159 (1902).
Described from specimens taken off *Anous stolidus* (common noddy), a migrant to South Africa.
15. *Degeeriella erythropteri* Piaget, Pedicul., Suppl., p. 28, Pl. 3, f. 8 (1885).
Recorded taken off *Melittophagus meridionalis*=*M. pusillus meridionalis* (little bee-eater) and *M. bullockoides*=*Coccolarynx bullockoides* (white-fronted bee-eater) in the Rustenburg District, Transvaal. This species was described from a male taken off *M. pusillus*.
16. *Degeeriella fulvofasciata* Grube, Midd. Sib. Reise, p. 475, Pl. 31, f. 1 (1851).
Recorded taken off *Tringa cinerea*=*Terekia cinerea* (Terek sandpiper), a migrant.
17. *Degeeriella furva* Nitzsch, in Burm., Handb., II, p. 427 (1838).
Piaget, Pédiculines, p. 169, Pl. 14, f. 3 (1880).
Recorded from *Charadrius geoffroyi*=*Pagoa leschenaultii* (great sandplover) and *Hypsibates himantopus* (black-winged stilt), both of which are migrants to South Africa.
18. *Degeeriella fusca* Nitzsch, in Denny, Anoplur. Brit., p. 118, Pl. 9, f. 8 (1842).
N. vittatus Giebel, Ins. Epiz., p. 127 (1874).
Recorded from numerous accipitrines under different names, some of which will ultimately prove to be valid. It has been recorded taken from the following hosts in South Africa: *Circus macrurus*=*Pseudocircus macrourus*; *Melierax canorus*=*M. musicus*; *Astur tachiro*=*Aerospiza tachiro*; *Micronisus gabar*; *Buteo jakal*=*Pterolestes rufofuscus*; *Eutolmaetus spilogaster*=*Nisaetus spilogaster*; *Eutolmaetus pennatus*=*Hieraetus pennatus*; *Haliaetus vocifer*=*Cuncuma vocifer*; *Elanus caeruleus*; *Cerchneis rupicola* and *Cerchneis naumanni*=*Tichornis naumanni* (1, 2, and 36). It has also been recorded taken from the following South African birds in other countries: *Gyps ruppelli*, *Circus aeruginosus*, *Neonisis melanoleucus*, and *Milvus aegyptius*.
19. *Degeeriella gracilis* Nitzsch, in Burmeister, Handb., II, p. 429 (1838).
Nirmus gracilis Piaget, Pédiculines, p. 151, Pl. 13, f. 10 (1880).
N. elongatus Denny, Anoplur. Brit., p. 140, Pl. 7, f. 4 (1842).
Recorded from *Hirundo rustica* (European swallow) and *Delichon urbica*=*Chelidonaria urbica* (house martin).
20. *Degeeriella gloriosa* Kell. and Kuw., Proc. Wash. Acad. Sc., IV, p. 467, Pl. 29, f. 1 (1902).
Described from specimens taken off *Anous stolidus* (common noddy).
21. *Degeeriella hebes* Kellogg, New Mallophaga, I, p. 101, Pl. 5, f. 3 (1896).
Recorded taken off *Anous stolidus* (common noddy).
22. *Degeeriella hemichroa* Nitzsch in Giebel, Zeit. f. g. Nat., XXVIII, p. 372 (1866).
Described from specimens taken off *Himantopus himantopus*=*Hypsibates himantopus* (black-winged stilt).
23. *Degeeriella hiaticulae* Müller in Fabr., Faun. Groen, p. 220 (1780).
D. bicuspis Giebel, Ins. Epiz., p. 155, Pl. 5, f. 11, 12 (1874).
Piaget, Pédiculines, p. 184, Pl. 15, f. 7 (1880).
Recorded from *Charadrius hiaticula* (ringed plover) and *Recurvirostra avosetta* (avocet), both migrants.

24. **Degeeriella holophaea** Nitzsch in Burm., Handb., II, p. 427 (1838).
Piaget, Pédiculines, p. 171, Pl. 14, f. 4 (1880).
Recorded from *Arenaria interpres* (Turnstone); *Machetes pugnax*=*Philomachus pugnax* (ruff) and *Tringa canuta*=*Calidris canutus* (knot).
25. **Degeeriella hoplopteri** Mjöberg, Arkiv. f. Zool., p. 157 (1910).
Recorded taken off *Hoplopterus speciosus*=*H. armatus* (blacksmith plover) at Bridgewater, Transvaal. It was described from specimens taken off *H. spinosus* in the Sudan.
26. **Degeeriella hospes** Nitzsch in Giebel, Zeit. f. ges. Nat., XXVIII, p. 371 (1866).
Described from specimens taken off *Vanellus squatarolus*=*Squatarola squatarola* (grey plover).
27. **Degeeriella hypoleuca** Nitzsch in Denny, Anoplur. Brit., p. 66, Pl. 7, f. 3 (1842).
Lipeurus hypoleucus (N.) Piaget, Pédiculines, Suppl., p. 66, Pl. 7, f. 3 (1885).
Esthiopterum hypoleucum (N.) Harrison, Parasit., IX, p. 136 (1916).
A single male, recorded taken off *Caprimulgus europaeus* (European night-jar) in the Rustenburg District, Transvaal (2).
28. **Degeeriella kilimanjarensis** Kellogg, Schwed. Exp. Kilimanjaro, p. 46, Pl. 7, f. 3 (1910).
Described from specimens taken off *Colymbus capensis*=*Podiocephalus capensis* (Cape dabchick) in East Africa.
29. **Degeeriella latirostris** Burmeister, Handbuch, II, p. 429 (1838).
N. cuculi Denny, Anoplur. Brit., p. 120, Pl. X, f. 11 (1842).
N. fenestratus Nitzsch, Zeit. f. ges. Nat., XXVII, p. 117 (1866).
N. fenestratus Piaget, Pédicul., p. 146, Pl. 12, f. 3 (1880).
Recorded taken off *Cuculus canorus* (European cuckoo).
30. **Degeeriella leucocephala** Nitzsch in Giebel, Zeit. f. ges. Nat., XXVIII, p. 365 (1866).
Described from specimens taken off *Corvus albicollis*=*Corvultur albicollis* (white-necked raven).
31. **Degeeriella lingulata** Waterston, Ann. S. Afr. Mus., X, p. 285 (1914).
Described from numerous specimens taken off *Larus hartlaubi*=*Bruchigavia novae-hollandiae hartlaubi* (white-headed gull) in Table Bay.
32. **Degeeriella macrocephalus** Waterston, Ann. S. Afr. Mus., X, p. 284, Pl. 25, f. 2, 5 (1914).
Described by Waterston from numerous specimens taken off the following hosts in South Africa: *Aegialitis marginatus*=*Leucopoliis marginatus* (white-fronted sandplover); *A. pecuaria*=*L. varius* (Kittlitz's sandplover); and *A. tricoloris*=*Afrozechus tricoloris* (three-banded sandplover). We have also recorded specimens taken from *L. marginatus* at Port Alfred, Cape Province.
33. **Degeeriella munda** Nitzsch in Giebel, Zeit. f. ges. Nat., XXVIII, p. 366 (1866).
This species was described from specimens taken off *Oriolus galbula*=*O. oriolus* (European golden oriole), a migrant to South Africa.
34. **Degeeriella nebulosa** Burmeister, Handbuch, II, p. 429 (1838).
N. nebulosus Piaget, Pédiculines, p. 155, Pl. 13, f. 4 (1880).
Recorded by Waterston taken from *Sturnus vulgaris* in South Africa.

35. **Degeeriella normifer** Grube, Midd. Sib. Reise, II, p. 478, Pl. 1, f. 8 (1851).
N. triangulatus Nitzsch in Giebel, Zeit. f. ges. Nat., XXVIII, p. 378 (1866).
N. triangulatus Piaget, Pédiculines, p. 201, Pl. 16, f. 5 (1880).
 Recorded from *Lestris pomarina*=*Coprotheres pomarinus* (large white necked skua) and *Stercorarius parasiticus* (white-necked skua).
36. **Degeeriella numenii** Denny, Anoplur. Brit., p. 144, Pl. 9, f. 6 (1842).
 Described from specimens collected in England off *Numenius arquatus* (curlew), a migrant to South Africa.
37. **Degeeriella nycthemera** Nitzsch in Burmeister, Handb., II, p. 428 (1838).
Nirmus nycthemerus Giebel, Ins. Epiz., p. 174, Pl. 5, f. 8 (1874).
 Described from specimens taken off *Sterna minuta*=*Sternula albifrons*.
38. **Degeeriella obscura** Burmeister, Handb., II, p. 427 (1838).
Nirmus obscurus Giebel, Ins. Epiz., p. 163, Pl. 6, f. 2, 3 (1874).
 Described from specimens taken off *Totanus glareola*=*Rhyacophilus glareola* (wood sandpiper), a migrant to South Africa.
39. **Degeeriella ochropi** Denny, Anoplur. Brit., p. 134, Pl. 11, f. 12 (1842).
 Described from specimens taken off *Totanus ochropus*=*Tringa ochropus* (green sandpiper), a migrant to South Africa.
40. **Degeeriella opisthotoma** Kellogg, Schwed. Exp. Kilimanjaro, p. 46, Pl. 7, f. 4 (1910).
 Described from specimens taken off *Himantopus himantopus*=*Hypsibates himantopus* (black-winged stilt), a migrant in East Africa.
41. **Degeeriella phaeopi** Denny, Anoplur. Brit., p. 144, Pl. 10, f. 7 (1842).
N. phaeopodis Giebel, Ins. Epiz., p. 166 (1874).
N. inaequalis Piaget, Pédiculines, p. 176, Pl. 15, f. 1 (1880).
 Recorded from *Numenius arquatus* (curlew) and *N. phaeopus*=*Phaeopus phaeopus* (whimbrel), both migrants to South Africa.
42. **Degeeriella phlyctopyga** Nitzsch in Giebel, Zeit. f. ges. Nat., XVII, p. 526 (1861).
Nirmus phlyctopygus Giebel, Ins. Epiz., p. 128 (1874).
 Described from specimens taken off *Pernis apivorus* (honey buzzard), a migrant.
43. **Degeeriella quadrangularis** Rudow, Beitrag., p. 18 (1869).
 Described from specimens taken off *Corvus scapulatus*=*C. albus* (pie crow).
44. **Degeeriella rufa** Nitzsch in Burmeister, Handb., II, p. 430 (1838).
Nirmus rufus Piaget, Pédiculines, p. 131 (1880).
 This species has been recorded from *Falco subbuteo* (hobby), a migrant, by both Piaget and Mjöberg (1910).
45. **Degeeriella sacra** Giebel, Zeit. f. ges. Nat., XXVIII, p. 375 (1866).
Nirmus sacer Giebel, Ins. Epiz., p. 171 (1874).
 Described from specimens taken off *Ibis sacra*=*Plegadis falcinellus* (glossy ibis), a migrant from Europe.
46. **Degeeriella scalaris** Piaget, Pédiculines, p. 190, Pl. 17, f. 2 (1880).
 Described from specimens taken off *Machetes pugnax*=*Philomachus pugnax* (ruff), a migrant to South Africa.
47. **Degeeriella sellata** Burmeister, Handb., II, p. 428 (1838).
N. selliger Nitzsch in Giebel, Zeit. f. ges. Nat., XXVIII, p. 376 (1866).
N. selliger Piaget, Pédiculines, p. 197, Pl. 16, f. 2 (1880).
 Piaget has recorded this species taken from *Sterna hirundo* (common tern) and *S. cantiaea*=*Thalasseus sandvicensis* (sandwich tern) in the Zoological Gardens at Rotterdam. Both birds are migrants to South Africa.

48. *Degeeriella signata* Piaget, *Pédiculines*, p. 186, Pl. 15, f. 8 (1880).
Described from specimens taken off *Recurvirostra avosetta* (avocet) in the Zoological Gardens at Rotterdam. Waterston (36) has recorded it taken from the same host in South Africa.
49. *Degeeriella stictochroa* Nitzsch in Giebel, *Zeit. f. ges. Nat.*, XXVIII, p. 374 (1866).
Nirmus stictochrous Piaget, *Pédiculines*, p. 193 (1880).
Described from specimens taken off *Dromas ardeola* (crab plover), a migrant.
50. *Degeeriella strepsilaris* Denny, *Anoplur. Brit.*, p. 135, Pl. 11, f. 4 (1842).
N. subcingulatus Nitzsch in Giebel, *Zeit. f. ges. Nat.*, XXVIII, p. 372 (1866).
Described from specimens taken off *Strepsilas interpres* = *Arenaria interpres* (turnstone).
51. *Degeeriella subcuspidata* Nitzsch in Burmeister, *Handb.*, II, p. 430 (1838).
Nirmus subcuspidatus Piaget, *Pédiculines*, p. 148, Pl. 12, f. 5 (1880).
Ferris has recorded this species taken from *Coracias garrulus* (European roller) in South Africa.
52. *Degeeriella tenuis* Nitzsch in Burmeister, *Handb.*, II, p. 429 (1838).
Nirmus tenuis Denny, *Ano. Brit.*, p. 148, Pl. 11, f. 9 (1842).
Recorded taken off *Hirundo riparia* = *Riparia riparia* (European sandmartin), a migrant.
53. *Degeeriella testudinaria* Children, *App., Back's Land Exp.*, p. 538 (1836).
N. pileus Nitzsch in Giebel, *Zeit. f. ges. Nat.*, XXVII, p. 373 (1866).
N. pileus Piaget, *Pédiculines*, p. 182, Pl. 15, f. 6 (1880).
Recorded by Waterston (36) taken off *Recurvirostra avosetta* (avocet) at Philipstown, Cape Province.
54. *Degeeriella melanophrys* Nitzsch in Giebel, *Zeit. f. ges. Nat.*, XXVIII, p. 369 (1866).
Docophorus upupae Denny, *Ano. Brit.*, p. 92, Pl. 8, f. 1 (1842), nec Schrank, 1803.
Nirmus melanophrys Piaget, *Pédiculines*, p. 149, Pl. 12, f. 7 (1880).
Recorded by Waterston (36) taken off *Upupa africana* (African hoopoe) at Philipstown, Cape Province. It has also been recorded taken from the same host at Pietermaritzburg, Natal (1). This species was described from specimens taken off *Upupa epops* (North African hoopoe).
55. *Degeeriella umbrina* Nitzsch in Giebel, *Zeit. f. ges. Nat.*, XXVIII, p. 371 (1866).
Recorded taken off *Scopus umbretta* = *S. umbretta bannermani* (hammerhead) in the Rustenburg District, Transvaal, and at Pietermaritzburg, Natal (1).
56. *Degeeriella varia* Nitzsch in Burmeister, *Handb.*, II, p. 430 (1838).
Nirmus varius Piaget, *Pédiculines*, p. 139, Pl. 11, f. 8 (1880).
Recorded by Waterston (36) taken off *Corvus capensis* = *Heterocorax capensis* (black crow) in South Africa. It has also been recorded by Kellogg & Paine from *Corvultur albicollis* (white-necked raven) in Southern Nigeria.
57. *Degeeriella vulgata* Kellogg, *New Mallophaga*, II, p. 496, Pl. 57, f. 5 (1896).
Recorded by Waterston (36) taken off *Passer arcuatus* = *P. melanurus* (Cape sparrow) at Capetown, Cape Province, and also from *Amadina erythrocephala* (red-headed finch) at Philipstown, Cape Province.

58. *Degeeriella zonaria* Nitzsch in Giebel, Zeit. f. ges. Nat., XXVIII, p. 374 (1866).

Nirmus zonarius Giebel, Ins. Epiz., p. 166 (1874).

Recorded by both Waterston (36) and Bedford (2) taken off *Tringa subarquata*=*Erolia testacea* (curlew sandpiper) in South Africa. It has also been recorded taken from *Tringa minuta*=*Pisobia minuta* (little stint) in the Pretoria District (2).

Genus *Rallicola* Johnston & Harrison.

Rallicola Johnston and Harrison, Proc. Linn. Soc. N.S. Wales, XXXVI, p. 324 (1911).

Oncophorus Piaget, Pédiculines, p. 213 (1880), nec Rudow (1870).

This genus includes sixteen species, the majority having been found on Rallidae.

1. *Rallicola mystax* Giebel, Ins. Epiz., p. 301 (1874).

Described from specimens taken off *Ortygometra porzana* (spotted crane), a migrant from Europe.

2. *Rallicola ortygometrae* Schrank, Ins. Aust., p. 503 (1781).

Nirmus attenuatus Nitzsch in Denny, Anoplur. Brit., p. 134, Pl. 10, f. 2 (1842).

Oncophorus attenuatus Piaget, Pédiculines, p. 214, Pl. 18, f. 1 (1880).

Described from specimens taken of *Crex pratensis*=*Crex crex* (corncrake), a migrant from South Africa.

3. *Rallicola turbinata* Piaget, Tijd. v. Ent., XXIII, p. 233, Pl. 8, f. 10 (1888).

Described from specimens taken off *Mycteria senegalensis* = *Ephippiorhynchus senegalensis* (saddle-bill stork).

Genus *Acidoproctus* Piaget.

Acidoproctus Piaget, Tijd. v. Ent., VI, p. 178 (1878).

This genus includes six species found on Anatidae.

1. *Acidoproctus bifasciatus* Piaget, Tijd. v. Ent., XXI, p. 181, Pl. 12, f. g (1878).

A. bifasciatus Piaget, Pédiculines, p. 210, Pl. 17, f. 5 (1880).

Recorded taken off the following hosts in the Rustenburg District, Transvaal (1) : *Sarkidiornis melanotus* (knob-billed duck), *Dendrocygna viduata* (white-faced duck), *Casarca cana* (South African shelduck), *Anas erythrorhyncha* = *Paecilornitia erythrorhyncha* (red-billed duck), *Thalassornis leuconotus* (white-backed duck), and *Plectropterus gambensis* (spur-winged goose).

2. *Acidoproctus stenopygus* Nitzsch, in Giebel, Ins. Epiz., p. 179, Pl. 8, f. 6, 7 (1874).

A. stenopygus Kell. and Paine, Bull. Ent. Res., II, p. 148, Pl. 5, f. 6, 6 (a), 6 (b) (1911).

Recorded taken off *Plectropterus gambensis* (spur-winged goose) in the Rustenburg District, Transvaal.

Genus *Esthiopterum* Harrison.

Esthiopterum Harrison, Parasit., IX, p. 129 (1916).

This genus includes a number of species formally placed in the genus *Lipeurus*.

1. *Esthiopterum acutifrons* Rudow, Zeit. f. ges. Nat., XXXV, p. 138 (1870).

Nirmus capensis Rudow, *ibid.*, p. 469 (1870).

N. dispar Piaget, Pédiculines, p. 174, Pl. 14, f. 7 (1880).

- Recorded by Waterston (36) taken off *Phalacrocorax capensis* = *Pseudocarro capensis* (Cape cormorant) in Table Bay.
2. ***Esthiopterum afer*** Kellogg, Schwed. Zool. Exp. Kilimanjaro, p. 47, Pl. 7, f. 5 (1910).
Described from specimens taken off *Phalacrocorax africanus* = *Microcabo africana* (reed cormorant) in East Africa.
Waterston (36) has recorded this species taken from the same host in Table Bay.
 3. ***Esthiopterum angusticeps*** Piaget, Pédiculines, p. 306, Pl. 25, f. 4 (1880).
Described from specimens taken off *Procellaria cinerea* = *Adamastor cinerea* (great grey petrel) in the Leyden Museum.
 4. ***Esthiopterum anseris*** Linné, Syst. Nat., p. 612 (1758).
Lipeurus jejunos Nitzsch, in Denny, Anoplur. Brit., p. 177, Pl. 15, f. 4 (1842).
L. jejunos Piaget, Pédiculines, p. 348, Pl. 30, f. 8 (1880).
Recorded taken off domestic goose at Pietermaritzburg, Natal (1).
Piaget has recorded this species from *Anser aegyptiacus* = *Alopochen aegyptiacus* (Egyptian goose).
 5. ***Esthiopterum ardeae*** Linné, Syst. Nat., p. 613 (1758).
L. leucopygus Nitzsch, in Burmeister, Handb., II, p. 434 (1838).
L. leucopygus Piaget, Pédiculines, p. 318, Pl. 27, f. 4 (1880).
Recorded taken off *Ardea cinerea* (grey heron) in the Rustenburg District, Transvaal.
 6. ***Esthiopterum asymmetricum*** Rudow, Zeit. f. ges. Nat., XXXV, p. 312 (1870).
Described from specimens taken off *Anser aegyptiacus* = *Alopochen aegyptiacus*.
 7. ***Esthiopterum capitatum*** Piaget, Pédiculines, Suppl., p. 63, Pl. 6, f. 9 (1885).
Recorded taken off *Hagedashia hagedash* (hadadah ibis) at Mfongosi, Zululand (1 and 24).
 8. ***Esthiopterum ciconiae*** Linné, Syst. Nat., p. 613 (1758).
Lipeurus versicolor Nitzsch, in Burm., Handb., II, p. 434 (1838).
L. versicolor Piaget, Pédiculines, p. 315, Pl. 27, f. 2 (1880).
L. maculatus Nitzsch, in Giebel, Zeit. f. ges. Nat., XXVIII, p. 383 (1866).
L. fissomaculatus Giebel, Ins. Epiz., p. 225 (1874).
L. castaneus Piaget, Pédicul., Suppl., p. 82, Pl. 9, f. 1 (1885).
L. viriegatus Neumann, Arch. Parasit., XV, p. 381, f. 27, 28 (1912).
Recorded taken off *Ciconia alba* = *C. ciconia* (white stork) in South Africa (36). It has also been recorded from *C. nigra* = *Melanopelargus niger* (black stork), and *Mycteria crumenifera* = *Leptoptilus crumeniferus* (marabou stork).
 9. ***Esthiopterum colius*** Bedford, 7th and 8th Rep. Dir. Vet. Res., Un. S. Afr. pp. 731-733, Pl. vii, f. 1, 2 (1920).
Described from specimens taken off *Colius indicus* = *Urocolius indicus transvaalensis* (Transvaal red-faced coly) at Onderstepoort, Transvaal.
 10. ***Esthiopterum columbiae*** Linné, Syst. Nat., p. 614 (1758).
L. baculus Nitzsch, in Giebel, Zeit. f. ges. Nat., XXVIII, p. 379 (1866).
L. baculus Piaget, Pédiculines, p. 303, Pl. 25, f. 2 (1880).
This species is a common parasite on domestic pigeons in South Africa.
It has also been recorded taken off *Vinago delalandei* (Cape fruit pigeon) at Port St. Johns, Cape Province (36), and from *Turtur senegalensis* = *Stigmatopelia senegalensis aequatorialis* (laughing dove), and *T. capicola damarensis* = *Afropelia capicola damarensis* (Damara turtle dove) in the Transvaal (1).

11. **Esthiopterum crassicorne** Scopoli, Ent. Carn., p. 383 (1763).
L. squalidus Nitzsch, in Denny, Anoplur. Brit., p. 176, Pl. 14, f. 5 (1842).
L. squalidus Piaget, Pédiculines, p. 344, Pl. 30, f. 5 (1880).
 Piaget has recorded this species from several ducks, including *Anas clypeata* = *Spatula clypeata* (European shoveller), and it has also been recorded taken from *Paecilornitta erythrorhyncha* (red-billed teal) in the Rustenburg District, Transvaal.
12. **Esthiopterum diomedae** Fabr., Syst. Ent., p. 808 (1775).
Lipeurus ferox Giebel, Zeit. f. ges. Nat., XXIX, p. 195 (1867); Ins. Epiz., p. 235 (1874).
L. densus Kellogg, New Mallophaga, I, p. 114, Pl. 7, f. 1, 2 (1896).
 Waterston (36) has recorded this species taken off *Diomedea exulans* (wandering albatross) in South Africa.
13. **Esthiopterum diversum** Kellogg, New Mallophaga, I, p. 123, Pl. 8, f. 3, 4 (1896).
E. limitatum Kellogg, *ibid.*, p. 124, Pl. 8, f. 5, 6 (1896).
 Recorded taken off *Majaqueus equinoctialis* = *Procellaria aequinoctialis* (Cape hen) and *Oceanites oceanicus* (sooty petrel) in South Africa.
14. **Esthiopterum emarginatum** Piaget, Pédiculines, p. 328, Pl. 28, f. 2 (1880).
 Described from a male taken off *Totanus ochropus* = *Tringa ochropus* (green sandpiper), a migrant from Europe.
15. **Esthiopterum forficulatum** Nitzsch, Zeit. f. ges. Nat., XXVIII, p. 386 (1866).
 Recorded taken off *Pelecanus rufescens* = *Neopelecanus rufescens* (pink-backed pelican) in the Zoological Gardens, Pretoria (1).
16. **Esthiopterum fuliginosum** Taschenb., Nova Acta., XLIV, p. 156, Pl. 4, f. 3 (1882).
L. testaceus Taschenb., *ibid.*, p. 135, Pl. 5, f. 3 (1882).
 This species has been recorded by Waterston (36) taken from the following hosts in South Africa: *Diomedea exulans* (wandering albatross), *D. melanophrys* = *Thalassarche melanophrys* (mollymawk), *Oceanites oceanicus* (sooty petrel), and *Procellaria aequinoctialis* (Cape hen). It has also been recorded from *Daption capensis* (Cape sea-pigeon) and *Thalassogeron chlororhynchus* = *Nealbatrus chlororhynchus* (yellow-billed mollymawk), both of which frequent our coasts.
17. **Esthiopterum gambense** Piaget, Pédiculines, Suppl., p. 58, Pl. 6, f. 5 (1885).
 Recorded taken off *Plectropterus gambensis* (spur-winged goose) in the Rustenburg District, Transvaal.
18. **Esthiopterum giganticola** Kellogg, New Mallophaga, I, p. 105, Pl. 5, f. 6 (1896).
Lipeurus confidens Kellogg, *Ibid*, III, p. 26, Pl. 3, f. 1 (1899).
L. miriceps Kell. and Kuw., Proc. Wash. Acad. Sci., IV, p. 480 (1902).
 Recorded taken off the following hosts in South Africa (2 and 36): *Diomedea exulans* (wandering albatross), *D. melanophrys* = *Thalassarche melanophrys* (mollymawk), *Thalassogeron layardt* = *Diomedella cantalayardi* (Layard's albatross), and *Nealbatrus chlororhynchus* (yellow-billed mollymawk).
19. **Esthiopterum gurlti** Taschenb, Nova Acta., XLIV, p. 151, Pl. 5, f. 6 (1882).
L. lugubre Taschenb., *ibid.*, p. 153, Pl. 6, f. 9 (1882).
 Described from specimens taken off *Daption capensis* (Cape sea-pigeon).

20. **Esthiopterum lepidum** Nitzsch, in Giebel, Zeit. f. ges. Nat., XXVIII, p. 383 (1866).
L. signatus Piaget, Pédiculines, p. 310, Pl. 25, f. 7 (1880).
 Recorded taken from *Anastomus lamelligerus* (open-bill stork).
21. **Esthiopterum leucoproctum** Nitzsch, in Giebel, Zeit. f. ges. Nat., XXVIII, p. 384 (1866).
 Described from specimens taken off *Ardea purpurea* = *Pyrrherodia purpurea* (purple heron).
22. **Esthiopterum longicorne** Piaget, Pédiculines, p. 334, Pl. 27, f. 3 (1880).
 Recorded taken off *Phalacrocorax lucidus* (South African cormorant) in South Africa (2 and 36).
23. **Esthiopterum modestum** Giebel, Ins. Epiz., p. 210 (1874).
L. grandis Piaget, Pédiculines, p. 323, pl. 26, f. 7 (1880).
L. laculatus Kell. and Chap., New Mallophaga, III, p. 93, Pl. 7, f. 1 (1899).
 Described from specimens taken off *Lestris pomarina* = *Coprotheres pomarinus* (large white-necked skua).
24. **Esthiopterum monile** Nitzsch, in Giebel, Zeit. f. ges. Nat., XVII, p. 519 (1861).
L. frater Giebel, Ins. Epiz., p. 242 (1874).
 Described from specimens taken off *Neophron percnopterus* (Egyptian vulture).
25. **Esthiopterum obscurum** Rudow, Zeit. f. ges. Nat., XXXVI, p. 125 (1870).
L. melanocnemis Giebel, Ins. Epiz., p. 233 (1874).
L. tricolor Piaget, Pédiculines, p. 363, Pl. 30, f. 4 (1880).
L. lepturus Enderl., Deutsch. Süd-polar Exp., X, p. 453 (1909).
L. gaini Neumann, Deux. Exp. Antaret. Fr., p. 192 (1913).
 This species has been recorded taken from *Macronectes giganteus* (giant petrel) and *Phoebetria fuliginosa* = *P. palpebrata* (sooty albatross).
26. **Esthiopterum parviceps** Piaget, Pédiculines, p. 321, Pl. 26, f. 6 (1880).
 Described from specimens taken off *Sterna hirundo* (common tern).
27. **Esthiopterum quadripustulatum** Nitzsch, in Burmeister, Handb., II, p. 434 (1838).
Lipeurus quadripustulatus (N.) Piaget, Pédiculines, p. 296 (1880).
 Recorded taken off *Gyps rüppelli* (Rüppell's vulture).
28. **Esthiopterum rotundatum** Piaget, Tijd. v. Ent., XXXI, p. 159, Pl. 4, f. 2 (1888).
 Described from specimens taken off *Podica senegalensis* = *P. petersi* (Peter's finfoot).
29. **Esthiopterum secretarium** Giebel, Ins. Epiz., p. 213 (1874).
Lipeurus secretarius (G.) Piaget, Pédiculines, p. 292, Pl. 24, f. 2 (1880).
 Recorded taken off *Serpentarius secretarius* = *Sagittarius serpentarius* (secretary-bird) in South Africa (36).
30. **Esthiopterum setosum** Piaget, Pédiculines, p. 335, Pl. 27, f. 4 (1880).
 Recorded by Piaget taken off *Graculus africanus* = *Microcarbo africana* (reed cormorant) and *Plotus levaillantii* = *Anhinga rufa levaillanti* (Cape snake-bird) in the Leyden Museum.
31. **Esthiopterum stellare** Denny, Anoplur. Brit., p. 178, Pl. 15, f. 3 (1842).
 Described from specimens taken off *Botaurus stellaris* (bittern).

32. **Esthiopterum struthionis** Gervais, Aptères, III, p. 354, Pl. 9, f. 2 (1847).
L. quadrimaculatus Piaget, Pédiculines, p. 298, Pl. 24, f. 8 (1880).
 Recorded taken off *Struthio australis* (southern ostrich) at Onderstepoort, Transvaal (1). Piaget described this species from specimens taken off *Struthio camelus* and *Rhea americana* in the Zoological Gardens at Rotterdam.
33. **Esthiopterum subsignatum** Giebel, Zeit. f. ges. Nat., XXVIII, p. 384 (1866).
Lipeurus subsignatus Piaget, Pédiculines, p. 320, Pl. 26, f. 5 (1880).
 Described from specimens taken off *Phoenicopterus antiquorum* = *P. major* (greater flamingo).
34. **Esthiopterum sudanicum** Mjöberg, Arkiv. f. Zool., VI, p. 85 (1910).
 Described from specimens taken off *Turtur semitorquatus* = *Streptopelia semitorquata* (red-eyed turtle dove) in the Sudan.
 It has also been recorded taken from *T. capicola damarensis* = *Afropelia capicola damarensis* (Damara turtle dove) and *T. senegalensis* = *Stigmatorpelia senegalensis aequatorialis* (laughing dove).

Genus **Pectinopygus** Mjöberg.

Pectinopygus Mjöberg, Arkiv. f. Zool., VI, p. 95 (1910).

This genus includes a single species which was previously included in the genus *Lipeurus*.

1. **Pectinopygus bassanae** O. Fabricius, Faun. Groen., p. 218 (1780).
Lipeurus staphylinoides Denny, Anoplur. Brit., p. 180, Pl. 15, f. 2 (1842).
Lipeurus pullatus Nitzsch, in Giebel, Zeit. f. ges. Nat., XXVIII, p. 387 (1866).
 This species has been recorded taken off *Sula capensis* = *Sulita capensis* (malagash) at Capetown, Cape Province, and Knysna, Cape Province (2 and 36). It was described from specimens taken off *Sula bassana* (European gannet).

Genus **Giebelia** Kellogg.

Giebelia Kellogg, New Mallophaga, I., p. 137 (1896).

This genus contains three species found on petrels.

1. **Giebelia hexakon** Waterston, Ann. S. Afr. Mus., X, p. 291 (1914).
 Described from specimens taken off *Majaqueus aequinoctialis* = *Procellaria aequinoctialis* (Cape hen) in South Africa.

Genus **Trabeculus** Rudow.

Trabeculus Rudow, Zeit. f. ges. Nat., XXVII, p. 466 (1866).

Oncophorus Rudow, *ibid.*, XXXV, p. 475 (1870).

Mackayia Waterston, Scottish Naturalist, p. 251 (1912).

1. **Trabeculus schillingi** Rudow, Zeit. f. ges. Nat., XXVII, p. 467 (1866).
Oncophorus schillingi Piaget, Pédiculines, p. 221 (1880).
Mackayia heteracanthus Waterston, Scott. Nat., p. 258 (1912).
 Recorded taken off *Procellaria gigantea* = *Macronectes giganteus* (giant petrel) and *Oceanites oceanicus* (sooty petrel) in South Africa (36). It was described by Rudow from specimens taken off *Procellaria mollis* = *Pterodroma mollis* (soft-plumaged petrel).

Genus *Docophoroides* Giglioli.

Docophoroides Giglioli, Quart. Journ. Micr. Science, IV, p. 21 (1864).

Eurymetopus Taschenberg, Nova Acta., Halle, XLIV, p. 182 (1882).

Taschenbergius Neumann, Bull. Soc. Zool., France, XX, p. 59 (1906).

Taschenbergiella Neumann, Deux. Exp. Ant., France (1913).

This genus includes four species found on Diomedeidae.

1. *Docophoroides brevis* Dufour, Ann. Soc. Ent., Fr., IV, p. 676, Pl. 21, f. 3 (1834).

D. taurus Nitzsch, in Giebel, Zeit. f. ges. Nat., XXVIII, p. 385 (1866).

L. taurus Piaget, Pédiculines, p. 332, Pl. 31, f. 3 (1880).

This species has been recorded taken off the following hosts in the Cape (36): *Diomedea exulans* (wandering albatross), *Thalassogeron chlororhynchus* = *Nealbatrus chlororhynchus* (yellow-billed mollymawk), and *Majaqueus aequinoctialis* = *Procellaria aequinoctialis* (Cape hen).

2. *Docophoroides simplex* Waterston, Ann. S. Afr. Mus., X, p. 303 (1914).

Described from specimens taken off *Diomedea melanophrys* = *Thalassarche melanophrys* (mollymawk) and *Procellaria aequinoctialis* (Cape hen) in the Cape.

Order SIPHONAPTERA.

TABLE OF FAMILIES (after Jordan and Rothschild).

Family 1. *Sarcopsyllidae* (Chigoes).

Rostrum consisting of three, or fewer, very feebly chitinized segments.

The genal edge of the head always produced downwards into a triangular lobe situated behind the mouth-parts. Combs absent. The three segments of the thorax are always shorter than the first abdominal tergite.

Family 2. *Pulicidae* (True Fleas).

Rostrum (= *labium* + *labial palpi*) consisting of four or more segments.

Many species possess combs. Eyes absent or present. The three segments of the thorax together, longer than the first abdominal tergite.

Family 3. *Ceratopsyllidae* (Bat Fleas).

Head of a peculiar shape, the face sloping strongly forwards and being recurved just above the mouth, with two flaps situated at the frontal oral corner.

Family SARCOPSYLLIDAE.

TABLE OF GENERA.

Hind coxa with patch of spines on inner side.....*Echidnophaga*.
Hind coxa without such a patch of spines.....*Tunga*.

Genus *Tunga* Jarocki.

Tunga Jarocki (1838).

Dermatophilus Guerin, Icon. Règne Anim., Ins., p. 12 (1839).

This genus contains three species, of which one, the chigoe or jigger flea, occurs in South Africa.

1. *Tunga penetrans* Linné.

Recorded from man and many other animals, including pig, in South America, West Indies, West and East Africa, and Madagascar. It is a common parasite of man in many localities along the coastal belt of Natal and Zululand.

Genus *Echidnophaga* Olliff.*Echidnophaga* Olliff, Proc. Linn. Soc., New South Wales (2), I, p. 172 (1886).

TABLE OF SPECIES (after Jordan and Rothschild).

1. Fifth tarsal segment on each side with five heavy bristles.....
E. bradyta J. and R.
Fifth tarsal segment on each side with three heavy bristles and a smaller fourth..... 2
 2. Fifth tarsal segment with one apical ventral bristle.....
E. aethiops J. and R.
Fifth tarsal segment with two apical ventral bristles..... 3
 3. Second bristle of fifth tarsal segment midway between first and third..
E. gallinaceus Westw.
Second bristle nearer the first than the third.....*E. larina* J. and R.
1. ***Echidnophaga bradyta*** Jordan and Rothschild.
E. bradyta Jord. and Roths., Thom. Yates and John. Lab. Rep., VII, Pt. 1, p. 47 (1906).
Recorded from *Suricata tetradactyla* = *S. suricatta* (suricate), *Xerus capensis* = *Geosciurus capensis* (ground-squirrel), and *Zorilla striata* = *Ictonyx striata* (stink muishond) at Deelfontein, Cape Province. It has also been found on *Cynictis penicillata* (yellow mungoose), and *G. capensis* near Bothaville, in the Orange Free State (8).
 2. ***Echidnophaga larina*** Jordan and Rothschild.
E. larina Jord. and Roths., Thom. Yates and John. Lab. Rep., VII, Pt. 1, p. 49 (1906).
Recorded from a dog in Somaliland; *Hyaena crocuta* and *Felis leopardus* = *Panthera leopardus* in Abyssinia, and from the following hosts at Deelfontein, Cape Province: *Orycteropus capensis* = *O. afer* (Cape ant-bear), *Erinaceus frontalis* = *Aethichinus frontalis* (hedgehog), *Hystrix cristatus* = *H. africana-australis* (Cape porcupine), and *Herpestes pulverulentus* = *Calogale pulverulentus* (grey mungoose).
It is common on the Natal warthog (*Phacochoerus sundevalli*) in Zululand, and has also been recorded from *Mastomys coucha* (multimammate mouse) near Bothaville, Orange Free State (8).
 3. ***Echidnophaga aethiops*** Jordan and Rothschild.
E. aethiops Jord. and Roths., Thom. Yates and John., Labs. Rep., VII, Pt. 1, p. 51 (1906).
Described from a female taken off a bat at Klipfontein, Namaqualand.
 4. ***Echidnophaga gallinaceus*** Westwood.
Sarcosylla gallinaceus Westwood, Ent. Month. Mag., XI, p. 246 (1875).
E. gallinaceus Jord. and Roths., Thom. Yates and John., Labs. Rep., VII, Pt. 1, p. 52 (1906).
This species is very common on fowls, dogs, and cats in South Africa. It has also been recorded from Europe, America, Asia, Fiji Islands, West and East Africa, and Madagascar. Jordan and Rothschild (1906) have recorded it from the following hosts in South Africa: *Suricata tetradactyla* = *S. suricatta* and *Herpestes badius* = *Calogale railamuchi* (bay mungoose) at Deelfontein, Cape Province, *Lepus capensis* at Port Nolloth, and a hawk at Durban.
Waterston (23) has recorded it taken off *Mus rattus* = *Rattus rattus* (black rat) at Grahamstown, Cape Province, and it has also been recorded taken off the following hosts near Bothaville, Orange Free State (8): *Xerus capensis* = *Geosciurus capensis* (ground-squirrel), *Cynictis penicillata* (yellow mungoose), and *Suricata suricatta* (suricate).

Family PULICIDAE.

TABLE OF PRINCIPAL GENERA.

Club of antenna distinctly segmented only on the posterior side. Section I.
 Club of antenna distinctly segmented all round. Section II.

Section I—

- Comb present on the pronotum and at the lower edge of the head; eyes present.....*Ctenocephalus*.
 No comb on the head and pronotum; eyes present..... 2
 2. Mesosternite very narrow, without internal rod-like incassation from the insertion of the coxa upwards.....*Pulex*.
 3. Frons without tubercle; anterior angle of genal edge produced backwards into a triangular lobe; pronotum longer than metanotum....
Parodontis.
 Frons without tubercle; anterior angle of genal edge not produced into a triangular lobe; mesosternite with a rod-like internal incassation from the insertion of the coxa upwards.....*Xenopsylla*.

Section II—

- Eyes developed..... 4
 Eyes vestigial or absent.
 4. No comb on head..... 5
 Two spines at angle of gena.....*Chiastopsylla*.
 5. Pygidium not projecting backwards; frons with tubercle.. *Ceratophyllus*.
 Pygidium strongly convex, projecting backwards; frons without tubercle:
Stivalius.

Genus *Pulex* Linné.

Pulex Linné, Syst. Nat., X, p. 614 (1758).

Pulex (Linné), Jord. and Rotsch., Parasit., I, p. 5 (1908).

This genus contains only one species.

1. *Pulex irritans* Linné.

Pulex irritans Linné, Syst. Nat., X, p. 614 (1758).

Pulex irritans Jord. and Rothsch., Parasit., I, p. 7 (1908).

This species has been recorded from various parts of the world. It is a parasite of man, and has also been found on various animals, including the badger in Europe, dogs, cats, etc. It has been collected on man in the Uitenhage District, Cape Province, and has also been recorded taken off *Felis caracal* = *Lynx caracal* (caracal) at Deelfontein, Cape Province, and *Proteles cristatus* (aardwolf) in South Africa (3 and 22). It has also been recorded to occur freely in kaffir kraals at Kingwilliams-town, Cape Province.

Genus *Parodontis* Jord. and Rothsch.

Parodontis Jord. and Rothsch., Parasit., I, p. 13 (1908).

This genus also contains but a single species.

I. *Parodontis riggenbachi* Rothschild.

Pulex riggenbachi Rothsch., Nov. Zool., XI, p. 611 (1904).

Parodontis riggenbachi Jord. and Rothsch., Parasit., I, p. 14 (1908).

This species has been recorded taken off *Hystrix cristatus* in Morocco, and from *H. cristatus* = *H. africae-australis* at Deelfontein, Cape Province, and other parts of the Union. It has also been found in Angola and East Africa.

Genus *Xenopsylla* Glink.

Xenopsylla Glink, Sitzber. Akad. Wiss. Wien., CXVI, 1, p. 381 (1907).

Loemopsylla Jord. and Rothsch., Parasit., I, p. 15 (1908).

This genus contains a number of species found in Africa and Central Asia, and one occurring throughout the tropics and sub-tropics.

TABLE OF SPECIES FOUND IN SOUTH AFRICA (after Jordan and Rothschild).

- | | |
|---|--------------------------------------|
| 1. Episternum and sternum of metathorax separated from each other by a suture..... | 2 |
| 2. Hind femur with tooth ventrally at the widest point..... | 3 |
| Hind femur without a tooth ventrally at the widest point..... | 7 |
| 3. Subapical bristle of the seventh abdominal tergite of ♂ on a conical process, which projects beyond the apex of the segment; seventh sternite of ♀ with about fifteen bristles in front of the postmedian row on the two sides together..... | <i>X. scopulifer</i> Rothsch. |
| Subapical bristle of ♂ on a process; hind femur in both sexes with three bristles on the outer side..... | <i>X. tortus</i> Jord. and Rothsch. |
| Subapical bristle of ♂ not on a process; seventh sternite of ♀ with considerably less than fifteen bristles; hind femur with two bristles on the outer side..... | 4 |
| 4. Subapical bristle of seventh abdominal tergite considerably shorter than the second hind-tarsal segment..... | <i>X. eridos</i> Rothsch. |
| Subapical bristle at least as long as the second hind-tarsal segment..... | 5 |
| 5. One of the two processes of the clasper broad, its upper edge rounded... | 6 |
| Both processes of the clasper slender..... | <i>X. nubicus</i> Rothsch. |
| 6. Bristles of the flap-like process of the clasper of ♂ all slender..... | <i>X. cheopis</i> Rothsch. |
| Bristles of the flap-like process of the clasper of ♂ nearly all very stout, one being elbowed..... | <i>X. brasiliensis</i> Baker. |
| 7. Hind coxa ear-shaped, the comb situated near the apex..... | 8 |
| Hind coxa more or less sinuate behind, near the apex..... | <i>X. erilli</i> Rothsch. |
| 8. Rostrum longer than the maxillary palpus..... | 9 |
| Rostrum shorter than the maxillary palpus..... | <i>X. creusae</i> Rothsch. |
| 9. Apical margin of the seventh abdominal tergite strongly chitinized dorsally, projecting backwards..... | <i>X. divergens</i> Jord. and Roths. |
| This position of the segment hardly more chitinized than the rest of the segment, projecting very slightly backwards..... | <i>X. isidis</i> Rothsch. |
- In addition to the above a new species has recently been found on *Pedetes caffer* (springhare) near Bothaville, Orange Free State (8).

1. *Xenopsylla brasiliensis* Baker.

Pulex brasiliensis Baker, Proc. U.S. Nat. Mus., XXVII, p. 379 (1904).

Xenopsylla brasiliensis Rothsch., Bull. Ent. Res., I, No. 2, p. 92, f. 8, 10 (1910).

Recorded taken off *Rattus rattus fruginis* = *R. rattus frugivorus* (arboreal black rat) near Bothaville, Orange Free State. It also occurs in East and West Africa; also in Brazil.

2. *Xenopsylla cheopis* Rothschild.

Pulex cheopis Rothschild, Ent. Month. Mag., XIV, p. 85 (1903).

Loemopsylla cheopis Jord. and Rothsch., Parasit., I, p. 42 (1908).

Recorded taken off rats in Europe, Asia, Africa, and Australia. It has been taken off the following hosts in South Africa: *Mus decumanus* = *Rattus norvegicus* (brown rat) in Pretoria, Transvaal (3), *Rattus rattus* (black rat) near Bothaville, Orange Free State (8), and *Damaliscus pygargus* (bontebok) from Bredasdorp, Cape Province (23).

3. *Xenopsylla creusae* Rothschild.

Pulex creusae Rothschild, Nov. Zool., XI, p. 608 (1904).

Loemopsylla creusae Jord. and Rothschild, Parasit., I, p. 54 (1908).

Described from specimens taken off *Felis caracal* = *Lynx caracal*, *Procapra capensis* (Cape dassie), and *Spreo bicolor* (pied starling) at Deelfontein, Cape Province, and from *Procapra capensis* at Wakkerstroom, Transvaal.

4. *Xenopsylla divergens* Jordan and Rothschild.

Loemopsylla divergens Jordan and Rothschild, Parasit., I, p. 57 (1908).

Described from specimens taken off *Felis caracal* = *Lynx caracal* and *Procapra capensis* (Cape dassie) at Deelfontein, Cape Province.

5. *Xenopsylla eridos* Rothschild.

Pulex eridos Rothschild, Nov. Zool., XI, p. 611 (1904).

Loemopsylla eridos Jord. and Rothschild, Parasit., I, p. 49 (1908).

Described from specimens taken off *Otomys brantsi* = *Parotomys brantsi* (Brant's karroo rat) at Deelfontein, Cape Province. It has also been recorded taken from *Mus* sp. at Mfolozi, Zululand (3), and from *Tatera lobengulae* (gerbille), and *Arvicanthis pumilio* = *Rhodomys pumilio* (striped mouse) near Bothaville, Orange Free State (8).

6. *Xenopsylla erilli* Rothschild.

Pulex erilli Rothschild, Nov. Zool., XI, p. 610 (1904).

Loemopsylla erilli Jord. and Rothschild, Parasit., I, p. 58 (1908).

Described from specimens taken off *Zorilla striata* = *Ictonyx striatus* (stink muisheid), *Suricata tetradactyla* = *S. suricata*, and *Xerus capensis* = *Geosciurus capensis* (ground-squirrel) at Deelfontein, Orange Free State.

7. *Xenopsylla isidis* Rothschild.

Pulex isidis Rothschild, Ent. Mont. Mag., XIV, p. 313 (1903).

Loemopsylla isidis Jord. and Rothschild, Parasit., I, p. 56 (1908).

Recorded taken off *Geosciurus capensis* (ground-squirrel) and *Cynictus penicillata* (yellow mungoose) near Bothaville, Orange Free State (8). It was described from specimens taken off *Procapra erlangeri* at Harar, and has also been recorded taken off *Procapra daemon* in Kenya Colony [Rothschild, Nov. Zool., XX, p. 530 (1913)].

8. *Xenopsylla nubicus* Rothschild.

Pulex nubicus Rothschild, Ent. Month. Mag. (2), XIV, p. 84, f. 10, 16 (1903).

Loemopsylla nubicus Jord. and Rothschild, Parasit., I, p. 46 (1908).

One female recorded taken with other parasites off two species of bats, viz., *Miniopterus* sp. and *Rhinolophus augur* = *R. geoffroyi augur* (Namaqua augur bat) found in a cave at Pretoria, Oct., 1910 (23). This species has been recorded by Jordan and Rothschild (3) taken off various animals belonging to the following genera in the Sudan and Egypt: *Arvicanthis*, *Herpestes*, *Genetta*, *Gerbillus*, and *Jaculus*.

9. *Xenopsylla scopulifer* Rothschild.

Pulex scopulifer Rothschild, Nov. Zool., XII, p. 480 (1905).

Loemopsylla scopulifer Jord. and Rothschild, Parasit., I, p. 52 (1908).

Recorded taken off *Saccostomus campestris* (Peter's pouched mouse) and *Mus uricomis* = *Praomys arborarius* (golden rock mouse) at Mfolozi Zululand, and off *Cricetomys gambianus* (giant rat) at Beira, Portuguese East Africa.

10. *Xenopsylla tortus* Jordan and Rothschild.

Loemepsylla tortus Jord. and Rothsch., parasit., I, p. 53 (1908).

Described from specimens taken off *Cricetomys gambianus* (giant rat) at Beira, Portuguese East Africa, and off *Mus sp.* in the Inbambane district, Portuguese East Africa.

Genus *Ctenocephalus* Kolenati.

Ctenocephalus Kolenati, Fauna d. Altvat., p. 65 (1859).

1. *Ctenocephalus canis* Curtis.

Pulex canis Curtis, Brit. Ent., III, No. 114, f. A-E, f. 8 (1826).

Rothschild (16) states that this species is practically cosmopolitan, but more abundant in temperate countries than in the tropics. It is a parasite of dogs, but also occurs on rats. It has been recorded taken off the following hosts in South Africa: *Geosciurus capensis* (ground squirrel), *Cynictis penicillata* (yellow mungoose), and *Suricata suricatta* near Bothaville, Orange Free State (8); also from a blue duiker (*Cephalopus monticola*) (23).

2. *Ctenocephalus felis* Bouché.

Pulex felis Bouché, Nova. Acta. Acad. Leop. Carol., XVII, p. 505 (1835).

A common and widely distributed flea throughout the world on cats, dogs, rats, and other animals. It is a common parasite on dogs and cats in the Pretoria District. Waterston (23) has recorded it taken off *Cephalopus monticola* (blue duiker).

The head of this species is longer, and the frons much less rounded than in *C. canis* [see Rothschild (16), f. 12 and 13].

Genus *Ceratophyllus* Curtis.

This genus contains a large number of species, many of them being found on birds.

1. *Ceratophyllus fasciatus* Bosc.

Jordan and Rothschild (6) have recorded two ♀♀ collected at Capetown, Cape Province, on *Epimys decumanus* = *Rattus norvegicus* (brown rat).

It has also been recorded taken off *R. norvegicus* and other small mammals in Europe, Asia, North America, and Australia.

2. *Ceratophyllus vicinus* Rothschild.

Ceratophyllus vicinus Rothschild, Nov. Zool., XII, p. 484 (1905).

Described from specimens taken off *Herpestes badius* = *Calogale ratlamuschi* (bay mungoose) at Wakkerstroom, Cape Province.

Genus *Stivalius* Jordan and Rothschild.

Stivalius Jordan and Rothschild, Ectoparasites, I, Pt. 4, p. 249 (1922).

This genus includes seventeen species, three of which were described from specimens collected in South Africa.

TABLE OF SOUTH AFRICAN SPECIES.

1. Males.....	2
Females.....	4
2. Ninth sternite with lateral subapical process.....	3
Ninth sternite without lateral subapical process.....	<i>S. afer</i> Roths.
3. Paramere of penis with simple claw and a dorsal hump.....	<i>S. ahalae</i> Roths.
Paramere of penis with double claw and a dorsal hump.....	<i>S. aporus</i> Jord. and Roths.

4. Ventral angle of eighth tergite produced, acuminate..... 5
 Ventral angle of eighth tergite rounded off..... *S. afer* Roths. 4
5. Head of receptaculum seminis strongly humped dorsally. *S. ahalae* Roths.
 Receptaculum seminis less humped; the stout outer dorsal bristles
 between middle and apex of hind tibia forming an almost regular comb.
S. aporus Jord. and Roths.

1. ***Stivalius afer*** Rothschild.

♀ *Pygiopsylla afer* Roths., Proc. Zool., Lond., p. 618 (1908).

♂ *Stivalius afer* Jord. and Roths., Ectoparasites, I, Pt. 4, p. 250 (1922).

Described from specimens collected at Benguella and Dalla Tando in Angola; in the latter locality from *Arvicanthis rufinus*.

2. ***Stivalius ahalae*** Rothschild.

♂ *Ceratophyllus ahalae* Roths., Nov. Zool., XI, p. 631 (1904).

♂ *Pygiopsylla ahalae* Roths., Proc. Zool. Soc., Lond., p. 617 (1908).

♂ *Stivalius ahalae* Jord. and Roths., Ectoparasites, I, Pt. 4, p. 252 (1922).

This species has been found in India on *Rattus rattus* and *Sciurus palmarum*.

Jordan and Rothschild have also recorded a male taken off *Mus colonus* = *Myomys colonus* (Brants' mouse) at Mfongosi, Zululand, which differs very slightly from the type.

3. ***Stivalius aporus*** Jordan and Rothschild.

Stivalius aporus Jord. and Roths., Ectoparasites, I, Pt. 4, p. 254 (1922).

Described from specimens taken off several hosts in India. One male is also recorded taken off *Mus colonus* = *Myomys colonus* (Brants' mouse) at Mfongosi, Zululand, which like the last also differs very slightly from the type.

Genus ***Chiastopsylla*** Rothschild.

Chiastopsylla Rothschild, Ent., XLIII, No. 563, p. 105 (1910).

This genus contains four species found exclusively in South Africa on small rodents.

TABLE OF SPECIES (after Waterston).

1. Males (male of *C. octavii* unknown)..... 2
 Females..... 4
2. Frons evenly rounded. "Finger" broadest below the middle, short, not exceeding in length the greatest breadth of the ninth sternite, of which the fringing bristles are all simple..... *C. godfreyi* Waterst.
 Frons with distinct angle near the base of the maxillary palpus
 "Finger" slender, broadest near base, greatly exceeding the breadth of the ninth sternite, which bears three pairs of scales distally..... 3
3. Eighth sternite finger-like distally, the three scales on the ninth diamond-shaped, equal, acutely pointed..... *C. numae* Rothsch.
 Eighth sternite wedge-shaped, the scales dissimilar. The uppermost broad, subquadrate, the second deeply and roundly emarginate distally, the third longest, pointed, spatulate..... *C. rossi* Waterst.
4. Posterior edge of seventh sternite incised about the middle..... 5
 Posterior edge of seventh sternite entire or produced medianly..... 6
5. Eighth tergite with about a dozen stiff bristles on its ventral half, not counting those which stand along the margin posteriorly. Incision of the seventh tergite moderately deep. Metanotum and some of the tergites armed with teeth on hind margin..... *C. numae* Rothsch.
 Eighth tergite nearly bare ventrally, incision shallow, marginal teeth absent..... *C. godfreyi* Waterst.
6. Seventh sternite with edge posteriorly entire, four or five external bristles on hind tibia..... *C. octavii* Rothsch.
 Seventh sternite with short but distinct rounded median lobe, eight external bristles on hind tibia..... *C. rossi* Waterst.

1. *Chiastopsylla godfreyi* Waterston.

♂ *Chiastopsylla godfreyi* Waterst., Proc. Roy. Phys. Soc., Edin., XIX, No. 1, p. 8, f. 1 (1913).

♀ *Chiastopsylla godfreyi* Waterst., Trans., Ent. Soc., Lond., Pts. 3-5, p. 414, f. 1 (1920).

Described from a single male taken off *Arvicanthis pumilio* = *Rhabdomys pumilio* (striped mouse) on the Pirie Mountains, near Kingwilliamstown, Cape Province, and from two females collected at Grahamstown, Cape Province.

2. *Chiastopsylla numae* Rothschild.

Ceratophyllus numae Rothschild, Nov. Zool., XI, p. 637 (1904).

Described from specimens taken off *Otomys brantsi* = *Paratomys brantsi* (Brant's karroo rat) at Deelfontein, Cape Province. In the laboratory collection there are specimens collected in the Uitenhage District, Cape Province, from *Otomys irroratus* (African water-rat).

3. *Chiastopsylla octavii* Rothschild.

Ceratophyllus octavii Rothschild, Nov. Zool., XI, p. 638 (1904).

Described from two females taken off *Graphocularis biurus* [= *Graphiurus ocellaris* (Cape dormouse)] at Deelfontein, Cape Province. It has also been recorded taken off *Arvicanthis pumilio* = *Rhabdomys pumilio* (striped mouse) near Bothaville, Orange Free State (8).

4. *Chiastopsylla rossi* Waterston.

Ceratophyllus rossi Waterston, Ent. Mo. Mag. (2), XX, p. 271, Pl. 5, f. 3, 4 (1909).

Described from a single female taken off *Mus rattus* = *Rattus rattus* (black rat) at Pirie, Kingwilliamstown, Cape Province.

Waterston (23) has also recorded it taken from *Rattus rattus*, *Otomys irroratus* (African water-rat), *Crocidura flavescens* (red shrew), and *Mystromys albicaudatus* (white-tailed rat) at Grahamstown, Cape Province.

In the collection there are specimens taken off *Otomys irroratus* in the Uitenhage District, Cape Province.

Genus *Listropsylla* Rothschild.

Listropsylla Rothschild, Ent. Mont. Mag. (2), XVIII, p. 175 (1907).

1. *Listropsylla agrippinae* Rothschild.

Ceratophyllus agrippinae Roths., Nov. Zool., XI, p. 634, Pl. 12, f. 56, 57, Pl. 13, f. 62, 64 (1904).

Described from specimens taken off *Otomys brantsi* = *Paratomys brantsi* and *O. unisulcatus* = *Myotomys unisulcatus* (karroo rat) at Deelfontein, Cape Province. In the collection there are specimens taken off *Otomys irroratus* (African water-rat), *Calogale caurii* (slender mungoose), and nest of *Rhabdomys pumilio* (striped mouse) in the Uitenhage District, Cape Province. It has also been recorded taken off *Mystromys albicaudatus* (white-tailed rat) at Grahamstown, Cape Province (23).

2. *Listropsylla chelura* Rothschild.

♀♂ *Listropsylla chelura* Rothschild, Ent. Mo. Mag. (2), XXIV, p. 207, Pl. 5, f. 1, 2 (1913).

Described from two males taken off *Arvicanthis pumilio* = *Rhabdomys pumilio* (striped mouse) at Pirie, Kingwilliamstown, Cape Province, and one female from the same locality off *Myosorex tenuis* (least brown-footed shrew). This species is allied to *L. dolosus*, Rothschild (1907), from Kenya and Uganda.

3. *Listropsylla dorippae* Rothschild.

Ceratophyllus dorippae Rothschild, Nov. Zool., XI, p. 636 (1904).

Described from specimens taken off *Herpestes badius* = *Calogale rallamuchi* (bay mungoose) at Deelfontein, Cape Province.

4. *Listropsylla stygius* Rothschild.

Ceratophyllus stygius, Rothschild, Ent. Mont. Mag. (2), XIX, p. 77 (1908).

Described from a single male taken off a mouse on the Ruwenzori Mountains, East Africa. It has also been recorded taken off the following hosts near Bothaville, Orange Free State (8):—*Leggada* sp. = *L. deserti* (desert dwarf mouse), *Malacothrix* sp. = *M. typicus* (large-eared mouse), *Steatomys* sp. = *S. krebsi* (Cape fat mouse), *Cynictis penicillata* (yellow mungoose), and *Tatera lobengulae* (gerbille).

Genus *Ctenophthalmus* Kolenati (1856).

This genus contains a number of species found on rats and mice.

1. *Ctenophthalmus ansorgei* Rothschild.

C. ansorgei Rothschild, Nov. Zool., XIV, p. 330 (1907).

Described from specimens collected at Bihé, Angola, off *Goerychus bocagei* = *Cryptomys bocagei* de Wint (mole-rat).

2. *Ctenophthalmus calceatus* Waterston.

♀ *Ctenophthalmus calceatus* Waterst., Ent. Mo. Mag. (2), XXIII, p. 27 (1912).

♂ *Ctenophthalmus calceatus* Rothschild, Ent. Mo. Mag. (2), XXIV, p. 208 (1913).

Described from one ♀ taken off *Arvicanthis pumilio* = *Rhabdomys pumilio* on the Pirie Mountains, near Kingwilliamstown, Cape Province, and two males taken off the same host in the same locality.

This species is closely allied to *C. ansorgei* Rothschild. The female also resembles that of *C. triodontus* Rothschild. (Novit. Zool., XIV, p. 330, f. 3, 4 (1907).

Genus *Dinopsyllus* Jordan and Rothschild.

Dinopsyllus Jord. and Rothschild, Nov. Zool., XX, 3, p. 561 (1913).

This genus contains ten large species, mostly parasitic upon rats and mice. It is confined to Africa south of the Sahara.

TABLE OF SOUTH AFRICAN SPECIES (after Jordan and Rothschild).

1. 0 to 2 genal spines.....	<i>D. ingens</i> Rothschild.	
Five genal spines; surface of body with dorso-ventral lines.....		2
2. Males.....		3
Females.....		5
3. Vestigial frontal tubercle in or below centre of frons; the two bristles placed near the ventral distal angle of the eighth sternite close together.	<i>D. ellobius</i> Rothschild.	
Vestigial frontal tubercle above centre of frons.....		4
4. Combs on second and third abdominal segments with eight or more spines.	<i>D. longifrons</i> Jord. and Rothschild.	
These combs with six or less spines.....	<i>D. lypusus</i> Jord. and Rothschild.	
5. Metepimerum with more than twenty-eight bristles; first abdominal tergite without apical spines.....	<i>D. longifrons</i> Jord. and Rothschild.	
Metepimerum with less than twenty-six bristles.....		6
6. Distance from frontal oral angle to tip of first genal spine larger than distance of frontal tubercle.....	<i>D. ellobius</i> Rothschild.	
The former distance shorter than the latter.....	<i>D. lypusus</i> Jord. and Rothschild.	

1. **Dinopsyllus ellobius** Rothschild.

Ctenopsyllus ellobius Rothschild, Nov. Zool., XII, p. 490 (1905).

Described from specimens taken off *Crocidura flavescens* (red shrew) at Wakkerstroom, Cape Province, and off *Mus* sp. at Sibudeni, Zululand.

Waterston (23) has also recorded it from *Myodomys albicaudatus* (white-tailed rat), Grahamstown, Cape Province.

2. **Dinopsyllus ingens** Rothschild.

Typhlopsylla ingens Rothschild, Ent. Rec., XII, p. 37, Pl. 2, t. 4 (1900).

Described from specimens taken off *Bathergus maritimus* = *B. suillus* (Cape dune mole) in the Cape Province.

Waterston (22) has also recorded it "probably from porcupine."

3. **Dinopsyllus longifrons** Jordan and Rothschild.

Dinopsyllus longifrons Jord. and Roths., Nov. Zool., XX, No. 3, p. 566 (1913).

This species was described from specimens taken off the following hosts in Kenya Colony and Uganda: *Tachyoryctes audax*, *Otomys irroratus elgonis*, *Thamnomys* sp., *Arvicanthus abyssinicus rubescens*, *Epimys* sp., *Lophuromys* sp., and *Oenomys* sp.

In the laboratory collection there are specimens taken off *Otomys irroratus* (African water-rat) and *Mastomys coucha* (multimammate mouse), and from a nest of *Rhabdomys pumilio* (striped mouse) in the Uitenhage District, Cape Province.

4. **Dinopsyllus lypusus** Jordan and Rothschild.

Dinopsyllus lypusus Jord. and Roths., Nov. Zool., XX, No. 3, p. 570 (1913).

Described from specimens collected in Kenya Colony and Uganda off several hosts belonging to the following genera: *Nasilio*, *Epimys*, *Arvicanthus*, *Lophuromys*, *Otomys*, *Oenomys*, and *Dasymys*. It has also been recorded taken off the following hosts near Bothaville, Orange Free State: *Tatera lobengulae* (gerbille), *Rattus coucha* = *Mastomys coucha* (multimammate mouse), *Arvicanthus pumilio* = *Rhabdomys pumilio* (striped mouse), and *Malacothrix* sp. = *M. typicus* (large-eared mouse).

Genus **Hypsophthalmus** Jordan and Rothschild.

Hypsophthalmus Jord. and Roths., Nov. Zool., XX, No. 3, p. 578 (1913).

This genus contains three African species, two of which have been found in South Africa.

1. **Hypsophthalmus aganippes** Rothschild.

Ctenopsyllus aganippes Rothschild, Nov. Zool., XI, p. 647 (1904).

Described from specimens taken off *Mus* sp. at Deelfontein, Cape Province.

2. **Hypsophthalmus granti** Rothschild.

Ctenopsyllus granti Roths., Nov. Zool., XI, p. 646 (1904).

Described from specimens taken off *Macro probosciderus* = *Macroscelides proboscideus* (karroo elephant-shrew) at Deelfontein, Cape Province.

Genus **Leptopsylla** Jordan and Rothschild.

Leptopsylla Jord. and Roths., Nov. Zool., XVIII, Pt. 1, p. 85 (1911).

Ctenopsyllus Kolenati (1862), nec *Kolenati* (1856).

1. **Leptopsylla musculi** Dugès.

Pulex musculi Dugès, Ann. Sci. Nat., XXVII, p. 160 (1832).

Rothschild (16) states that this species is widely distributed, and is very common on rats and mice, especially *Mus musculus* (house mouse), with which it has spread. Waterston (23) has recorded it taken off *M. rattus* = *Rattus rattus* (black rat) at Grahamstown, Cape Province.

Family CERATOPSYLLIDAE.

Genus *Thaumapsylla* Rothschild.

Thaumapsylla Rothschild., Nov. Zool., XIV, p. 329 (1907).

This genus includes a single species found on bats in South Africa.

1. *Thaumapsylla breviceps* Rothschild.

Thaumapsylla breviceps Rothschild., Nov. Zool., XIV, p. 329 (1907).

Described from specimens taken off *Roussetus collaris* = *R. leachi* (Cape fruit bat) in the Cape Province, and off *Roussetus stramineus* = *Eidolon helvum* (long-winged fruit bat) at Knysna, Cape Province.

Genus *Ischnopsyllus* Westwood.

Ischnopsyllus Westwood, Ent. Mo. Mag., I, p. 359 (1833).

This genus contains several species found on bats.

1. *Ischnopsyllus ashworthi* Waterston.

Ischnopsyllus ashworthi Waterston., Proc. R. Physic. Soc., Edin., p. 12 (1913).

Described from a single female taken off *Rhinolophus unguis* = *R. geoffroyi augur* (Namaqua augur bat) at Pizie, Kingwilliamstown, Cape Province.

2. *Ischnopsyllus emminus* Jordan and Rothschild.

Ischnopsyllus emminus, Jord. and Rothschild., Ectoparasites, I, Pt. 3, p. 142, f. 116, 117 (1921).

Described from one ♂ and two ♀♀ taken off *Vespertilio capensis* = *Eptesicus capensis* (Cape house bat) at Greenwood Park, Natal.

3. *Ischnopsyllus grahami* Waterston.

Ischnopsyllus grahami Waterston., Rec. Albany Mus., III, Pt. 2, p. 115, f. 1-3 (1915).

Described from ♂ taken off *Eptesicus capensis* (Cape house bat) at Grahamstown, Cape Province.

Genus *Araeopsylla* Jordan and Rothschild.

Araeopsylla Jord. and Rothschild., Ectoparasites, I, Pt. 3, p. 146 (1921).

Allied to *Ischnopsyllus*, but more strongly chitinized; occiput and thorax with additional internal dorsal incassations, abdominal sternites ventrally, also more or less distinctly strengthened, and the bases of the abdominal tergites appearing as conspicuous vertical bands. Posterior margin of occiput with four or more short strong-pointed spine-like bristles behind antennal groove. Metepimerum higher than long. This genus includes four species, two of which have been found in South Africa.

1. *Araeopsylla isomalus* Waterston.

Araeopsylla isomalus Waterston., Rec. Albany Mus., III, Pt. 2, p. 109, f. 4, 5 (1915).

Described from one ♀ taken in a cave near Pretoria, in which two species of bats were present, namely, *Miniopterus* sp. and *Rhinolophus augur* = *R. geoffroyi augur* (Namaqua augur bat).

2. *Araeopsylla scitulus* Rothschild.

Ischnopsyllus scitulus Rothschild., Nov. Zool., XVI, p. 55 (1909).

Described from specimens taken off *Nyctinomus aegyptiacus* (Egyptian free-tailed bat) at Kingwilliamstown, Cape Province.