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**KEYS TO AID IN THE IDENTIFICATION OF MARINE
 HARPACTICOID COPEPODS**
 Amendment Bulletin No. 5



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 Marine Wetenschappen

Zoology Publications from Victoria University of Wellington.
 No. 80, issued October, 1985.

INTRODUCTION

Included in this Bulletin is an important series of papers by Kunz on the Family Tetragonicipitidae that have caused me to completely recast the keys to this family. As in previous Bulletins (Wells, 1978, 1979, 1981, 1983) the page numbers in parentheses are those of the original Keys (Wells, 1976).

Key to Families

1. Couplet 9 (p. 6) can be misleading; amend by replacing "at outer distal corner" with "on outer border".
2. To make the key comprehensive for Family Tachidiidae
 - (a) add a new couplet to follow couplet 41 (p. 9) —

42a.	Enp. P.1 of 2 segments	Tachidiidae
	Enp. P.1 of 3 segments	42b
 - (b) renumber couplet 42 as 42b,
 - (c) note that couplet 40 now leads to couplets 41 and 42a.

I am indebted to Morten Jødal and Michael Gee for suggesting these improvements.

Family Canuellidae

1. Add these new codons to KGG 1 (p. 18)

7:6:4:4/6:5:4:3/a/3/8	<i>Canuellina tuba</i> Por, 1983
5:4:4:4/6:5:4:4/a/3/7	<i>Brianola vangoethemi</i> Fiers, 1982
7:7:5:4/6:5:4:4/a/3/8	<i>Scottolana glabra</i> Fiers, 1982
	<i>S. dissimilis</i> Fiers, 1982
	<i>S. uxoris</i> Por, 1983

2. *Scottolana antillensis* Fiers, 1984c to codon for *S. inopinata* in KGG 1 (p. 18).
3. Fiers (1982) describes *Canuella paenelantica* n.sp. and states that he gives this name "because of the resemblance to *Canuella elantica* Por, 1967". Actually the correct name is *elanitica* (Por 1967: 106). Clearly *paenelantica* is an incorrect spelling due to a *lapsus calami* by Fiers and must be emended to *paenelanitica* (International Code of Zoological Nomenclature, 1985, Art. 32(c)(ii)).
4. *Canuella paenelanitica* Fiers, 1982 to codon for *C. perplexa* and *C. furcigera* in KGG 1 (p. 18).
5. Fiers (1982) erects *Parasunaristes* new genus. In KGG 1 (p. 19)
 - (a) Amend generic name of *Sunaristes dardani*, *Ellucana curticaudata* and *E. chelicerata* to *Parasunaristes*.
 - (b) Add *P. cucullaris* Fiers, 1982 to codon for *P. dardani*.
6. Fiers (1982) redescribes the female of *Ellucana longicauda* and (1984c) gives the first description of the male.

Family Cerviniidae

1. *Eucanuella longirostrata* Itô, 1983 to genus codon in KGG 1 (p. 21).
2. *Cervinia plumosa* Itô, 1983 to codon for *C. tenuiseta* and *C. unisetosa* in KGG 100 (p. 23).
3. Add these new codons to KGG 200 (p. 24)

5/2/5:7:7/4:5:6:5/>abd	<i>Cerviniopsis muranoi</i> Itô, 1983
?/?/5:5:5:4/4:5:5:3/=abd	<i>C. minutiseta</i> Itô, 1983

Family Ectinosomatidae

1. *Arenosetella longiseta* Kunz, 1983 to genus codon in KGG 1 (p. 28).
2. *Pseudobradya beduina faialensis* Kunz, 1983 to species codon in KGG 100 (p. 29).
3. *Bradya (Bradya) pugiochaeta* Arlt, 1983 to subgenus codon in KGG 200 (p. 31).
4. Hicks & Schriever (1983) erect the new genus *Kliella* to accommodate *K. spinosa* n.sp. and *Halophytophilus ? triarticulatus* Klie, 1949. As a consequence
 - (a) Add a new character-state to character 5 of KGG 1 (p. 27) --

3:p = 3 segments; prehensile.

- (b) The genus requires a new codon in KGG 1 (p. 28) –
fa/3/bl:3/n/3:p.

Family Darcythompsoniidae

1. Mielke (1982) redescribes *Darcythompsonia fairliensis* (note that the legends for his Abb. 3 and 4 are transposed). As a consequence the following are amended codons for KGG 1 (p. 37)

1:1/1:2/4:4/0:0:1/3:4:4:4	<i>D. scotti</i>
1:1/0:1 or 1:2/4:4/0:0:1/3:4:4:4	<i>D. fairliensis</i>
1:1/ ? /3:?:0:0:1/3:4:4:4	<i>D. inopinata</i>

2. *Leptocaris azoricus* Kunz, 1983 requires a new codon in KGG 1 (p. 37) – 0:2/0:2/3:5/1:1:0:0/2-3:3:3:3.

Family Harpacticidae

Add *Harpacticus longiantennata* Apostolov & Petkovski, 1980 to footnote c of KGG 100 (p. 46).

Family Tisbidae

1. *Tisbe spinulosa* Bradford & Wells, 1983 and *T. caymanensis* Yeatman, 1984 to genus codon in KGG 100 (p. 49).

2. The new genus *Volkmannia* Boxshall, 1979, with its two new species, *forficulata* and *attenuata*, to codon for *Tisbe* and *Bathydia* in KGG 100 (p. 49). Boxshall discusses these three genera and lists points of detail by which they can be separated (see also Wells, 1983).

3. KGG 300 (see Wells, 1983)

- (a) *Neotisbella gigas*, a new genus and species by Boxshall (1979) requires a new codon – 8/4/7:8:8/5:6:5/2:2:2.
- (b) As Apostolov & Petkovski (1980) reduce *Zosime bathybia* to a subspecies of *Z. incrassata*, delete *Z. bathybia* from footnote b.

Family Porcellidiidae

Porcellidium tapui Hicks & Webber, 1983 is added to this monogenic family (see p. 12).

Family Clytemnestridae

Boxshall (1979) points out that the family name Pseudopeltidiidae is not valid and must be replaced by Clytemnestridae (see character 8 of

Key to Families (p. 6) and note 3 on p. 11).

Family Tegastidae

Syngastes spinifer Fiers, 1983 to genus codon in KGG 1 (p.56).

Family Thalestridae

1. KGG 1 (p. 58)
 - (a) Add these new codons
3:2/7:8:8/1:1/3/p:d *Pseudotachidius horikoshii* Itô, 1983
3:3/6:6:6/1:1/3/p:f *P. minutus* Itô, 1983
2:2/6:7:7/2:2/3/p:f *Diarthrodes zavodniki* Apostolov & Petkovski, 1980
 - (b) *Pseudotachidius bipartitus pacificus* Itô, 1983 to the species codon (see Wells, 1981).
2. *Paradactylopodia striata* Kunz, 1983 to genus codon in KGG 100 (p. 61). Kunz gives a key to this genus.

Family Parastenheliidae

Pallares (1982a) adds two new species, *Parastenhelia costata* and *P. minuta* to this monogeneric family (see p. 12).

Family Diosaccidae

1. The previously unknown male of *Stenhelia* (*D.*) *minuta* is described by Marinov & Apostolov (1981).
2. KGG 100 (p. 73)
 - (a) amend column 3 of codon for *Robertgurneya*^d to 0:0:0.
 - (b) delete codon for *Robertgurneya smithi* and add the species to footnote d.
 - (c) Add *Haloschizopera bathyalis* Schriever, 1984a to footnote c.
3. KGG 110 (p. 74)
 - (a) *Amphiascoides breviarticulatus* Kunz, 1983 requires a new codon -- =Exp/se/7/5:5/3:5.
 - (b) Add *Paramphiascella austroatlantica* Pallares, 1982a to footnote b (p. 75).
4. *Bulbamphiascus cibimae* Pallares, 1982a to genus codon in KGG 230 (p. 80).
5. Kunz's (1983) specimens of *Eoschizopera reducta* show enhanced

setation; amend the species codon in KGG 300 (p. 85) to read --
0:1:1/3-4:3-4:2/4:4:5.

6. KGG 400 (p. 86)
 - (a) Add these new codons
 - 4/6:8:8/8/d:~/lss *S. (D.) intermedia* Marinov &
Apostolov, 1981
 - 4/7:8:8/7/d:d/lss *S. (D.) stephensoni* Greenwood &
Tucker, 1984
 - (b) *S. (D.) islandica* Schriever, 1982b to codon for *S. (D.) cornuta*
and *S. (D.) longipilosa* (p. 86).
 - (c) *Stenhelia (D.) adriatica* Marinov & Apostolov, 1981 to codon for
S. (D.) latisetosa (p. 87).
7. Add these new codons to KGG 700 (p. 91)
 - 2/3/6:7:7/f:~/4:2 *Pseudomesochra scheibeli* Schriever, 1982b
 - 2/3/4:4:4/f:~/4:6 *Schizopera arconae* Arlt, 1983.
8. *Schizopera soyeri* Kunz, 1983 to codon for *S. arenicola* and *S. nichollsi* in KGG 800 (p. 93).
9. *Stenhelia (D.) noodti* Schriever, 1982b requires a new codon in KGG 900 (p. 96) -- 6:7:7/5:5:4/d.

Family Ameiridae

1. KGG 1 (p. 101)
 - (a) Add these new codons
 - 3:2/3:3:3/3:3:2/5/0 *Psyllocamptus minutus* Pallares, 1982a
 - 2:2/2:2:2/3:3:3/6/na *Malacopsyllus hirsutus* Itô, 1983
 - (b) Add *Parapseudoleptomesochra hellenica* Pesce, 1981a and *P. attirei* Dumont, 1984 to footnote d on p. 103 (see Wells, 1978).
2. KGG 300 (p. 107)
 - (a) Add these new codons
 - s/0:0:0/1:1:1/3:4:4/2 *Pseudameiropsis argentinus*
Pallares, 1982b
 - s/0:1:1/0:1:1/4:4:4/2 *Nitocra baltica* Arlt, 1983
 - s/0:0:0/1:1:1/5:4:5/1 *N. mediterranea pontica*
Apostolov, 1980
 - s/0:0:0/1:1:1/3:3-4:4-5/1 *N. lacustris azorica* Kunz, 1983
 - (b) Note that on p. 108 the codon for *N. mediterranea* now refers to the nominate subspecies only.
 - (c) Note that in footnote b (p. 108) *N. lacustris* now refers to the subspecies *lacustris*, *sinoi* and the new subspecies *pacificus* Yeatman, 1983 only.
 - (d) *Abyssameira reducta*, a new genus and species by Itô (1983),

and *Sarsameira knorri* Reidenauer & Thistle, 1983 to codon for *Sarsameira pendula*.

3. *Parameiropsis magnus* Itô, 1983 to codon for *P. peruanus* in KGG 310 (p. 109).
4. *Nitocra pseudospinipes* Yeatman, 1983 requires a new codon in KGG 330 (p. 111) -- 7:7:7/0:0:0/3-4:6/3:5-6.
5. KGG 400 (p. 114)
 - (a) Add these new codons

0:0:0/1:1:1/1:1:1/4:5:4/3:5/?	<i>Ameira faroerensis</i>	Schriever, 1982b
0:0:0/1:1:1/1:1:1/4:5:5/4:5/4:5	<i>A. confluens</i>	Reddy, 1984
0:0:0/1:1:1/1:1:1/4:5:5/3-4:2/?	<i>Pseudameira antennulata</i>	Schriever, 1984a
0:0:0/1:1:1/1:1:1/3:3:3/4:2/?	<i>P. trisetosa</i>	Schriever, 1984a
 - (b) Kunz's (1983) specimens of *Ameira tenella* increase the degree of variation known for this species. As a consequence amend its codon (p. 115) to -- 0:0:0/0:0-1:1/0:0:0/4-5:4/4:5-6/?
 - (c) *Proameira thetiensis* Pallares, 1982a to codon for *P. simplex* and *P. arenicola* (p. 116).
 - (d) *Pseudameira mixta adriatica* Apostolov & Petkovski, 1980 to species codon (see Wells, 1981).
6. Add these new codons to KGG 600 (p. 118)

4:4:5/1:1:1/3:2:2/3:4/?	<i>Nitocrella rhodiensis</i>	Pesce, 1983a
4:4:5/1:1:1/2:2:2/4:4/2:5	<i>N. achaiae</i>	Pesce, 1981a
4:4:4/1:1:1/2:2:2/3:4/2:5	<i>N. morettii</i>	Pesce, 1984
4:4:4/1:1:1/2:2:1/2-3:4/?	<i>N. juturna</i>	Cottarelli, 1975
4:4:4/1:1:1/1:2:1/2:4/?	<i>N. maggii</i>	Pesce, 1983b
7. KGG 700 (p. 120)
 - (a) *Nitocrella skyrensis* Pesce, 1981b requires a new codon -- 4:4:4/1:1:1/2:2:2/2:4/2:4.
 - (b) *Nitocrella somalica* Dumont, 1981 to codon for *N. petkovskii* (see Wells, 1983).

Family Paramesochridae

1. KGG 1 (p. 124; see Wells, 1983)
 - (a) Add these new codons

3:3:3:3/3/3/5	<i>Diarthrodella lancifera</i>	Kunz, 1983
2:3:3:3/3/3/6	<i>D. galapagoensis</i>	Mielke, 1984b
2:2:3:3/3/2/7	<i>D. chilensis</i>	Mielke, 1985
2:1:1:2/2/0/4	<i>Scottopsyllus langi</i>	Mielke, 1984b

- (b) *Diarthrodella convexa* Kunz, 1983 and *D. neotropica* Mielke, 1984b to codon for *D. secunda*.
- (c) *D. parorbiculata pacifica* Mielke, 1984b to species codon.
- (d) *Rossopsyllus kerguelensis quellonensis* Mielke, 1985 to species codon.
- (d) Add *Leptopsyllus punctatus* and *L. platyspinosus*, new species by Mielke (1984b), to footnote e (p. 125).
- (e) Kunz (1983) gives a key to *Diarthrodella*.
2. KGG 100 (p. 126)
- (a) *Paramesochra unaspina* Mielke, 1984b requires a new codon —
4/4:4:2/0:0/0/2:3/0:3
- (b) *P. kunzi* Mielke, 1984a to codon for *P. dubia*.
- (c) *P. helgolandica galapagoensis* Mielke, 1984b to species codon.
3. KGG 200 (p. 127)
- (a) Add these new codons
4:4:2/1:1:1/1:3/0:4 *Kliopsyllus atlanticus* Kunz, 1983
4:4:2/1:1:1/ ? /0:4 *K. miguelensis* Kunz, 1983
4:4:3/1:1:1/1:3/0:3 *K. panamensis* Mielke, 1984a
- (b) *Kliopsyllus constrictus pacificus* Mielke, 1984a to species codon (p. 127).
- (c) Add *Kliopsyllus regulexstans* and *K. similis*, new species by Mielke (1984b), to footnote b (p. 128).
- (d) Add *Kliopsyllus unguiseta* Mielke, 1984b to footnote c (p. 128).
4. Mielke (1984a, b) describes *Apodopsyllus panamensis*, *A. aberrans* and *A. arcuatus*. These and other recent additions to this genus make interpretation of characters 3 and 4 of KGG 300 (p. 129) rather difficult. Replace KGG 300 with this new version.

KGG 300 - characters

1. P.1 Exp.
n = number of segments
2. P.1 Exp., distal (or only) segment
n = number of setae and/or spines
3. P.5♀
n = total number of setae and/or spines
4. P.5♂
n = total number of setae and/or spines

KGG 300

P.1 Exp. segs.	P.1 Exp. distal seg. setae	P.5♀ setae	P.5♂ setae	
2	4	6	4	<i>Apodopsyllus vermiculiformis</i>
				<i>A. panamensis</i>
				<i>A. arcuatus</i>
2	4	5	4	<i>A. africanus listensis</i>
2	4	4	4	<i>A. africanus</i> s.str.
				<i>A. schultzi</i>
				<i>A. unguiformis</i>
2	4	4	3	<i>A. bermudensis</i>
2	4	3(4?)	3	<i>A. adaptatus</i>
2	4	4	?	<i>A. madrasensis</i>
2	4	2	3	<i>A. spinipes</i>
2	4	?	5	<i>A. perplexus</i>
1	5	5	5	<i>A. camptus</i>
1	5	4	4	<i>A. littoralis</i>
				<i>A. lynceorum</i>
1	5	3-4	4	<i>A. arenicolus</i>
1	5	3	3	<i>A. depressus</i>

Family Tetragonicipitidae

Kunz (1984c) reviews the family and discusses its phylogeny. He places *Fearia* as a synonym of *Tetragoniceps* and declares *Phyllopodopsyllus pirogus* to be a juvenile male of *P. thiebaudi*.

Kunz (1984a, b) describes five new species of *Phyllopodopsyllus* (*angolensis*, *petkovskii*, *geddesi*, *gertrudi*, *mielkei*, with a subspecies *m. californicus*) and two new subspecies of *P. longipalpatus* — *l. madagascarensis* and *l. hawaiiensis*.

Pallares (1982a) redescribes *Phyllopodopsyllus mossmani* and places *P. paramossmani* in its synonymy.

Oniscopsis inabai Kitazima, 1983 is added to the genus.

These additions and amendments, together with the fact that the present key does not adequately deal with sexual dimorphism in *Phyllopodopsyllus*, have led me to construct the following new keys to the family to replace KGG 1 (pp. 131-133).

KGG 1 - characters

1. Cephalothorax ornamentation
 - p = process at posterior lateral corner present
 - a = process at posterior lateral corner absent
2. A.1, large dentiform projection
 - (Note: usually similar in both sexes, but may be reduced in the male and well developed in the female)
 - a = absent
 - 1 = present on first segment
 - 2 = present on second segment
3. P.1 Enp.
 - n = number of segments
4. P.2-P.4., distal (or only) segment
 - n:n:n = number of setae and spines on P.2, P.3 & P.4
5. P.2-P.4 Exp.3
 - n:n:n = number of setae and spines on P.2, P.3 & P.4

KGG 1

Cph. orn.	A.1 proj.	P.1 Enp.	P.2-P.4 Enp. distal seg. setae	P.2-P.4 Exp.3 setae	
p	1	2	3:3:2	6:6:5	<i>Laophontella typica</i>
p	1	2	3:3:1	6:6:5	<i>L. armata</i>
p	1	2	3:3:1	6:6:4-5	<i>L. horrida</i>
a	1	2	4:4:4	6:7:7	<i>Tetragoniceps prima</i>
a	1	2	3:3:3	6:5:7	<i>T. bergensis</i>
a	1	2	3:3:3	5:5:5	<i>T. bookhouti</i> ♀
a	1	2	3:3:3	5:4:7	<i>T. truncata</i>
a	1	2	3:3:3	4:4:5	<i>T. malleolatus</i>
a	1	2	3:3:?	6:5:4	<i>T. longicaudata</i>
a	1	2	?:3:3	?:5:6	<i>T. scotti</i>
a	1	2	2:3:3	5:5:5	<i>T. bookhouti</i> ♂
a	1	2	2:2:3	4:3:5	<i>T. browni</i> ♀
a	1	2	2?:3	5?:6	<i>T. arenicolous</i>
a	1	2	?:?:2	?:?:7	<i>T. dubius</i>
a	1	2	?	?	<i>T. brevicauda</i>
a	2	3	3:3:2	5:4:5	<i>Protogoniceps</i>
a	2	2	2-3:1-3:1-3	4-5:4-6:4-7	KGG 100
a	2	2	?	?	<i>Phyllopodopsyllus minor</i>
a	a	3	2:2:2	4:4:4	<i>Pteropsyllus</i>
a	a	3	3:3:4	4:4:7	<i>Diagoniceps trifidus</i>
a	a	3	3:3:3	5:5:8	<i>D. menaiensis</i>
a	a	2	4:4:4-5	6:7:8	<i>D. bocki</i>
a	a	2	4:4:4	6:7:8	<i>D. kunzi</i>

a	a	2	3:3:3	5:6:8	<i>D. monodi</i>
a	a	2	2-3:2-3:2-4	4-5:4-6:5-7	KGG 200
a	a	2	2-3:1:1	3:2:2	<i>Oniscopsis</i>
a	a	2	2:2:3	4:3:5	<i>Tetragoniceps brownei</i> ♂
a	a	2	?	?	<i>Phyllopodopsyllus</i> <i>tristanensis</i>

KGG 100-200 - characters

(The same five characters are used in both KGG)

1. P.2 Enp.2
n = number of setae
(Note: In the male the "setae" may include a long straight apophysis)
2. P.3 Enp.2
n:n = number of setae in ♀ and ♂
3. P.4 Enp.2
n:n = number of setae in ♀ and ♂
4. P.2-P.3 Exp.3
n:n = number of setae
5. P.4 Exp.3
n:n = number of setae in ♀ and ♂

KGG 100

P.2	P.3	P.4	P.2-P.3	P.4	
Enp.2	Enp.2	Enp.2	Exp.3	Exp.3	
	♀:♂	♀:♂		♀:♂	
3	3:3	3:3	5:6	6:6	<i>Phyllopodopsyllus chavei</i>
3	3:3	3:3	4:4	5:5	<i>P. medius</i>
3	3:3	3:2	5:6	7:7	<i>P. bermudae</i>
3	3:3	3:2	5:6	7:6	<i>P. setouchensis</i>
					<i>P. mielkei</i> s.str.
3	3:3	3:2	4:4	7:7	<i>P. danielae</i>
3	3:3	3:2	4:4	7:6	<i>P. simplex</i>
3	3:3	3:2	4:4	6:6	<i>P. pauli</i>
					<i>P. opisthoceratus</i>
3	3:3	2:1	5:6	6:6	<i>P. minutus</i>
3	3:2	3:2	5:6	7:7	<i>P. parafurciger</i>
					<i>P. curtus</i>
3	3:2	3:2	5:6	5-7:6	<i>P. furciger</i>
3	3:2	3:2	5:6	6:6	<i>P. longicaudatus</i>
3	3:2	3:2	4:4	6:6	<i>P. borutzkyi</i>
3	3:?	3:?	5:6	6:?	<i>P. mielkei californicus</i>
3	3:?	3:?	4:4	6:?	<i>P. laticauda</i>
3	3:?	2:?	4:4	6:?	<i>P. bahamensis</i>
3	2:3	3:2	5:5	5:5	<i>P. langi</i>
3	2:2	2:2	5:6	7:7	<i>P. parabradyi</i>

3(2♂)	3:2	3:2	5:6(5♂)	6:6	<i>P. bradyi</i>
2	3:3	3:2	4:4	6:6	<i>P. paraborutzkyi</i>
2	2:2	3:2	4:4	4:4	<i>P. geddesi</i>
2	2:2	2:2	4:4	5:5	<i>P. hermani</i>

KGG 200

P.2	P.3	P.4	P.2-P.3	P.4	
Enp.2	Enp.2	Enp.2	Exp.3	Exp.3	
	♀:♂	♀:♂		♀:♂	
3	3:3	3:4	5:5	7:7	<i>Diagoniceps laevis</i>
3	3:3	3:3	4:4	7:6	<i>Phyllopodopsyllus berrieri</i>
3	3:3	3:2	5:6	7:6	<i>P. briani</i>
					<i>P. petkovskii</i>
3	3:3	3:2	5:6(5♂)	7:6	<i>P. angolensis</i>
3	3:3	3:2	5:5	7:6	<i>P. thiebaudi</i>
3	3:3	3:2	5:5	7:5	<i>P. gertrudi</i>
3	3:3	3:2	4:4	7:6	<i>P. punctatus</i>
3	3:3	3:2	4:4	6-7:6	<i>P. mossmani</i>
3	3:?	3:?	5:6	6:?	<i>P. aegypticus</i>
3	3:?	3:?	4:4	7:?	<i>P. hibernicus</i>
					<i>P. laspalmensis</i>
3(2♂)	3:3	3:2	4:4	6:6	<i>P. hardingi</i>
2	2:3	2:2	4:4	6:6	<i>P. biarticulatus</i>
2	2:?	3:?	4:4	6:?	<i>P. xenus</i>
2	2:?	2:?	4:4	6:?	<i>P. paraxenus</i>
					<i>P. longipalpatus</i> s.str.
2(3♂)	2:2	2:2	4:4	7:5	<i>P. l. madagascarensis</i>
2(3♂)	2:2	2:2	4:4	7:6	<i>P. l. hawaiiensis</i>

Family Cylindropsyllidae

- KGG 1 (p. 141)
 - Arenopontia trisetosa* Mielke, 1982 requires a new codon — s/2:na/f/1:1:2/p.
 - Notopontia galapagoensis* Mielke, 1982 to codon for *Syrticola flandricus* (see Wells, 1983).
- KGG 200 (p. 143)
 - Stenocaris baltica* Arlt, 1983, known only from the male, requires a new codon — 2:2:2/ns/0:1/na.
 - As *S. pygmaea* is a synonym of *S. pontica* delete the codon for the former and amend the codon for *S. pontica* to read 1-2:1:2/ns/1:1/6.
- KGG 300 (p. 144)
 - Leptastacus ctenatus* and *L. spatuliseta*, new species by Mielke

(1982), require a new codon — p/2/0:0:1/3:4:5/1:1:0/1:1:2.

- (b) *Leptastacus dispinosus dispinosus* Mielke, 1982 and *L. d. pan-amensis* Mielke, 1983a to codon for *L. minutus*.

4. *Arenopontia peteraxi* Mielke, 1982 requires a new codon in KGG 600 (p. 149) — 4/3:3:3/1-2:1-2:2/4:4/r.

5. *Psammopsyllus stri* and *P. falciseta*, new species by Mielke (1983b), require a new codon in KGG 700 (p. 151) — ♀/0/3:2:2/3:2:2/3:3.

Family Cletodidae

1. Schriever (1982a, 1984a) describes three species in a new genus, *Thieliella*, that he assigns to the Family Ancorabolidae. In a later note Schriever (in press) recognizes that this is not correct and that

(a) *Thieliella endopodita* must be transferred to *Cletodes*. It requires a new codon in KGG 600 (p. 167) — a/1:2/0:0/d:1:5/d:0:4.

(b) *T. nordatlantica* and *T. reducta* are synonyms of *Monocletodes varians*.

2. KGG 1 (p. 154)

(a) Schriever (1983, 1984b) describes five new species of *Metahuntemannia* which require these treatments

(i) *M. pseudomagniceps*: ♂ requires a new codon — 3:2/3:3:3/2:2/4:6:6/4:3; ♀ to footnote b (p. 159).

(ii) *M. bifida* ♀ (male not known) requires a new codon — 3:1/3:3:3/0:0/4:4:4/na:na.

(iii) *M. triarticulata* requires new codons —

3:bs/3:3:3/2:2/5:6:6/1:2 ♀

3:bs/3:3:3/2:2/5:6:6/3:4 ♂

(iv) *M. atlantica* and *M. arctica* females (males are not known) to codon for *M. gorbunovi* ♀ and *M. spinosa* ♀ (p. 155).

(b) Add these new codons for new species by Schriever (1983)

3:1/3:3:3/1:1/7:7/5:5 *Mesocletodes parabodini*

3:2/3:3:3/2:2/6:6:5/3-4-4-5 *M. variabilis*

3:2/3:3:3/0:0/4:4:4/na:na *Paranannopus plumosus*

(c) *Mesocletodes trisetosa* Schriever, 1983 requires a new codon and a new footnote — 3:1/3:3:3/1:1¹/4:4:5/2:1

i) in this species P.4 Enp. is represented by a seta only.

(d) *Heteropsyllus serratus* Schriever, 1983 to codon for *H. rostratus* and *H. masculus* (p. 158).

- (e) Amend codon for *Paranannopus elongatus* (see Wells, 1981) to — 3:2/3:3/3:2/3:3/3:1:1. Note that this is also the codon for *Cylindronannopus primus* (p. 156).
- (f) Schriever (1983) describes the previously unknown female of *Paranannopus langi*. As a consequence delete the male symbol from the species codon (p. 156).

3. After Arlt (1983)

- (a) Amend columns 3 and 4 of codon for *Enhydrosoma longifurcatum* in KGG 500 (p. 165) to d-f:3:2-3/d-f:2:2.
- (b) In KGG 600 amend column 4 of codon for *Cletodes longicaudatus* (p. 167) to d:2-3:5, and for *Cletodes longifurca* (p. 168) to d:2:5-6.

4. The genus name *Echinocletodes* Pallares, 1982a is preoccupied by *Echinocletodes* Lang, 1936 (Family Ancorabolidae). I propose its replacement by *Rosacletodes* n.gen., whose sole and type species is *Echinocletodes kuehneimanni* Pallares, 1982a. The species requires new codons in KGG 1 (p. 154) —

2:1/2:1:1/0:0/4:4/1:1 ♀

2:2/2:3:2/0:0/4:4:5/1:1 ♂

Family Laophontidae

1. Cottarelli & Mura (1982) describe three new species of *Afrolaophonte* which require these treatments

- (a) *A. michaelae*: ♂ to codon for *A. pori* in KGG 1-♂♂ (p. 188); ♀ requires a new codon in KGG 1-♀♀ (p. 172) — 1:1:2/0:1:1/3:4/1/6.
- (b) *A. aequatorialis*: ♂ to codon for *A. schmidti* (see Wells, 1983) in KGG 1-♂♂ (p. 188); ♀ requires a new codon in KGG 1-♀♀ (p. 172) — 1:1:1/0:1:1/4:5/1/6.
- (c) *A. leonis*: ♂ unknown, ♀ to codon for *A. schmidti* in KGG 1-♀♀ (p. 172).

Note also that Cottarelli & Mura's legends for Figs. 3 and 4 are partially transposed.

2. *Novolaophonte viatorum* Cottarelli, Saporito & Puccetti, 1983, a new genus and species, requires new codons —

in KGG 1-♀♀ (p. 172) — 2:1s:1/0:0/0/4:3/1/5

in KGG 1-♂♂ (p. 188) — 3:3:3/1:1/1:3/1/3.

3. *Paronychocamptus anomalus* Reddy, 1984: ♀ to codon for *Psammlaophonte spinicauda* in KGG 1-♀♀ (p. 173), ♂ requires a new codon in KGG 400-♂♂ (p.194) — 6:6:5/1:1:1/4:4:3/0:0/p.

4. *Laophontina noodti* Kunz, 1983 requires a new codon in KGG 1-♀♀ (p.172) — 3s:1:2/0:1:1/3:5/1/6. The male is unknown.
5. In KGG 600-♀♀ (p. 179) the codon for *Paralaophonte innae* (see Wells, 1983) should read — 6:7:7/1:1:1/0:0:0/4:5:4/0:0:0.
6. Fiers (1984a) removes *Paralaophonte spinicauda* to *Laophonte* and makes slight amendments to the description of the male. As a consequence
 - (a) amend genus name in KGG 1200-♀♀ (p. 182) and KGG 500-♂♂ (p. 195),
 - (b) add *Laophonte spinicauda* to footnote a of KGG 1100-♂♂ (p. 197).
7. *Quinquelaophonte parasigmoides* is placed incorrectly in KGG 1800-♀♀ (p.185); transfer this species and its codon to KGG 1400-♀♀ (p. 183). Similarly, transfer this species from footnote h to footnote i of KGG 1-♂♂ (p. 191).
8. *Pseudonychocamptus marinovi* Apostolov & Petkovski, 1980 requires a new codon in KGG 1900-♀♀ (p. 185) — 6:6:6/1:1:1/0:0:0/4:5:4/0:1:1. The male is unknown.

Family Latiremidae

Delamarella phyllosetosa Kunz, 1984d requires a new codon (with an accompanying note) in KGG 1 (see Wells, 1978) — 9/3:2/4/0:0/*

* the segments bear a number of short, broad structures, of which possibly two are true setae.

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