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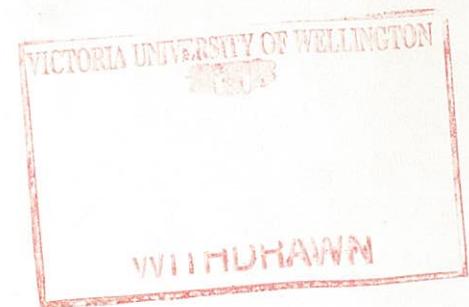
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Harpacticoid Copepods. Amendment Bulletin No. 3.

**KEYS TO AID IN THE IDENTIFICATION OF MARINE
HARPACTICOID COPEPODS**

Amendment Bulletin No. 3.

by

J. B. J. Wells,

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Zoology Publications from Victoria University of Wellington
No. 75, issued June 1981.

INTRODUCTION

Three major papers (Becker, Noodt and Schriever, 1979, Becker & Schriever, 1979, Mielke, 1979) have been published recently that necessitate many amendments to my Keys (Wells, 1976), including the addition of new key-groups. The readers attention is drawn also to Bodin's (1979) new edition of his catalogue of new species. This includes most of the information contained in the General Notes to each of the families in the original keys. As in previous Amendment Bulletins (Wells, 1978, 1979) the page numbers in parentheses are those of the original Keys.

Family Longipediidae

Longipedia, the only genus in the family, has been completely revised by Wells (1980). This revision takes into account recent papers by Mielke (1979) and Itô (1980a).

Family Canuellidae

Two new monotypic genera have been proposed in this family; both require new codons in KGG 1 (p.18) :

6:5:4:4:4:4:3/a/3/7 — *Galapacanuella beckeri* Mielke, 1979.
7:7:4:4:6:5:4:4/a/3/7 — *Intercanuella lima* Becker & Schriever, 1979.

Family Cerviniidae

1. *Cervinia langi* Montagna, 1979 to codon for *C. synarthra* and *C. pilosa* in KGG 1 (p.21).
2. *Pontostratiotes peruanus* Becker & Schriever, 1979 to genus codon in KGG 1 (p.21).

Family Ectinosomatidae

1. KGG 1 (p.28) :
 - (a) *Arenosetella littoralis* Bodin, 1977 and *A. germanica galapagoensis* Mielke, 1979 to the genus codon.
 - (b) *Noodtiella frequentior* Mielke, 1979 requires a new codon—
cr/2/bl:e/0/2:n.
2. KGG 100 (p.29) :
 - (a) *Ectinosoma pectinatum* Mielke, 1979 and *E. nonpectinatum* Mielke, 1979. Both species have four setae on the second endopod segment of the maxilliped. The genus codon thus requires amending to read — <3/s/ben/7:7/3-4.
 - (b) *Halectinosoma paraspinicauda* Bodin, 1977 to genus codon.

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3. KGG 200 (p.31):
 - (a) *Pseudobradya rhea* Bodin, 1977 requires a new codon — p/d/6:?:?/3.
 - (b) *Sigmatidium triarticulatum* Mielke, 1979 to codon for *Pseudobradya ambigua*.
4. KGG 300: *Hastigerella abbotti sanctacruzensis* Mielke, 1979 to codon for *Hastigerella*a) (p.33); add to footnote a).
5. KGG 400: *Sigmatidium kunzi* Mielke, 1979 to codon for *S. parvulum* (p.34).
6. KGG 500 (p.35): *Noodtiella hoodensis* Mielke, 1979 to genus codon. This KGG can be expanded to provide more exact identification of the species—

KGG 500 — characters

1. P.1
n:n - number of segments in Exp. and Enp. respectively.
2. P.2-P.4. Exp.
n:n:n - number of segments in P.2, P.3 and P.4 respectively.
3. P.2-P.4 Enp.
n:n:n - number of segments in P.2, P.3 and P.4 respectively.
4. P.2-P.4 Exp., distal segment
n:n:n - number of setae and/or spines in P.2, P.3 and P.4 respectively.
5. P.2-P.4 Enp., distal segment
n:n:n - number of setae and/or spines in P.2, P.3 and P.4 respectively.

KGG 500

P.1 segs.	P.2-P.4 Exp. segs.	P.2-P.4 Enp. segs.	P.2-P.4 Exp. distal seg. setae	P.2-P.4 Enp. setae	
3:2	3:3:2	2:2:2	3:3:4	4:4:3	<i>Noodtiella gracile</i>
3:2	3:3:3	2:2:2	3:3:3	3:4:4	<i>N. problematica</i>
3:2	3:3:3	2:2:2	3:3:3	4:4:4	<i>N. hoodensis</i>
3:2	3:3:3	2:2:2	3:3:3	5:5:5	<i>N. lusitanica</i>
3:2	3:3:3	2:2:2	4:4:4	4:4:4	<i>N. arenosetelloides</i>
3:2	3:3:3	2:2:2	4:4:4	5:5:5	<i>N. wellsi</i>
3:2	3:3:3	3:3:3	4:4:4	4:4:4	<i>Lineosoma intermedia</i>
3:3	3:3:3	3:3:3	3:3:3	3:5:5	<i>L. iscensis</i>
3:3	3:3:3	3:3:3	3:3:3	5:5:5	<i>L. enertha</i>

Family Darcythompsoniidae

KGG 1: *Leptocaris kunzi* Fleeger & Clark, 1980 requires a new codon—
0:2/0:2/3:4/1:0:0:0/2:5:3:3.

Family Harpacticidae

1. KGG 1 (p.43):
 - (a) The codon for *Tigriopus californicus* and *T. japonicus* is incorrect; delete and add both species to the codon for *Paratigriopus hoshidei*.
 - (b) *Zausodes biarticulatus* Itô, 1979a requires a new codon—
2/3:3:2/a/7:8:8/5:5:5.
2. KGG 100 (p.45):
 - (a) *Harpacticus chelifer* has been omitted from the keys; add a new codon—
nor/8/1/mod/3:5:0:4.
 - (b) *H. purpureus* Itô, 1979b to codon for *Harpacticus*b); add to footnote b) (p.46).
 - (c) *Zaus hiranoi* Itô, 1980b to genus codon.

Family Tisbidae

1. KGG 1 (p.48):
 - (a) *Zosime paratypica* Becker & Schriever, 1979 to genus codon.
 - (b) *Zosime reducta* Becker & Schriever, 1979 to codon for *Peresime abyssalis*; there can be no doubt that *Z. reducta* belongs to the genus *Peresime*.
 - (c) *Cholidya intermedia* Bresciani, 1970 requires a new codon—
1/3:3:3:3/2:2:2:2.
2. KGG 100: *Tisbe remanei* Volkmann, 1975 and *T. prolata* Waghorn, 1979 to genus codon (p.49).

Family Porcellidiidae

Porcellidium planum Tiemann, 1977, *P. peniculiferum* Tiemann, 1978 and *P. hartmannorum* Tiemann, 1978 are added to this, the sole genus in the family.

Family Peltidiidae

1. Pallares (1979) considers that *Alteutha littoralis* Pallares, 1968 is a synonym of *A. depressa*; see footnote b) to KGG 1 (p.54).
2. *Neopeltopsis hicksi* Pallares, 1979 to codon for *Eupelte gracilis* in KGG 1 (p.54).

Family Tegastidae

Add these species to General Note 1 (p.57):
Tegastes singularisetus, *T. pygmaeus*, *Syngastes tanzaniae*, *S. kunzi*, all new species by Marcus, 1977, and *Tegastes fernandici* Pallares, 1979.

Family Thalestridae

1. *Diarthrodes cystoeucus* is redescribed by Pallares, 1977; add superscripta) to the species in KGG 1 (p.59) and add to General Notes (p.69).

2. KGG 1 (p.58):
 - (a) *Dactylopusiooides macrolabris*; amend codon on p.58 to read—
3:3/6-7:7:7/2:2/1/p:f.
 - (b) *Pseudotachidius ibericus* Becker & Schriever, 1979 requires a new codon—
3:3/7:7:8/1:1/3/(p:d)?.
 - (c) *Diarthrodes parvulus* Pallares, 1977 requires a new codon—
2:3/6:6:6/2:1/1/p:f.
 - (d) *Diarthrodes lilacinus* Pallares, 1977 to codon for *D. tetrastachyus* (see Wells, 1978:2).
 - (e) *Pseudotachidius bipartitus* Montagna, 1980 requires a new codon—
3:2/7:8:7/1:1/3/p:d.
3. *Pseudotachidius brevisetosus* Montagna, 1980 requires a new codon in KGG 300 (p.63)—
p:d/3/6/2/3.
4. Montagna (1980) has reviewed the literature on *Pseudotachidius coronatus*. As a consequence not only is the codon in KGG 1 of my original Keys wrong but so is the codon in KGG 300 that I proposed later (Wells, 1979:2); delete these two codons and add a new codon in KGG 1—
3:3/7:?:7/1:1/3/p:d.

Family Diosaccidae

1. Becker & Schriever (1979) describe a diosaccid copepodid of uncertain affinities for which they propose the new generic name *Paraschizopera* but to which they decline to give a trivial name in the belief that the interpretation of juvenile characters is problematic. Thus at present the genus *Paraschizopera* is not valid. However, their excellent description leaves no doubt that the specimen is a Stage V female and since only minor modifications are likely to occur at the final moult it is reasonable to regard the peculiar characters of this juvenile as representing also the most likely state of the adult. Article 17(4) of the International Code of Zoological Nomenclature permits the description of a species to be based on a juvenile. I have no doubt that this copepodid is a new species for which a valid genus must be erected. In the hope that it will cause the least confusion in the literature I shall use Becker & Schriever's presently invalid name for this new genus although it cannot, under these circumstances, come under their authorship. I propose formally, therefore, that Becker & Schriever's specimen be the Holotype of a new species, *Paraschizopera beckeri* n.sp., which itself is the type-species by monotypy of a new genus, *Paraschizopera* n.gen., of which the invalid name *Paraschizopera* Becker & Schriever, 1979 is a synonym. The description and distinctive features of this new species and genus are as described by Becker & Schriever (1979:58).

Paraschizopera beckeri n.gen., n.sp. requires a new codon in KGG 1 (p.70)—
1/3/2/4/2:2:2.

2. *Onychostenhelia falcifera* Itô, 1979b keys out to the amended codon (Wells, 1979:3) for *Pseudostenhelia* in KGG 1 (p.70). Amend this so that the codon refers to KGG 1200 and add this new KGG to the family—

KGG 1200 — characters

1. ♀ antennule
n - number of segments.
2. P.2-P.3 Exp. 3
n:n - number of setae and/or spines on P.2 and P.3 respectively.
3. ♀ P.5 Benp.
n - number of setae and/or spines.
4. ♂ P.4 Exp.
♀ - as female.
mod - modified.
5. ♂ P.5
d - Benp. and Exp. distinct.
f - Benp. and Exp. fused.

KGG 1200

♀ A.1 segs.	P.2-P.3 Exp. 3	♀ P.5 Benp.	♂ P.4 Exp.	♂ P.5
		setae	setae	

5	6:6	2	♀	f <i>Pseudostenhelia prima</i>
5	6:6	4	♀	f <i>P. wellsi</i>
?	5:6	?	♀ ?	f <i>P. secunda</i>
7	7:8	5	mod	d <i>Onychostenhelia falcifera</i>

3. KGG 1:

- (a) *Pseudodiosaccus propinquus* has been omitted from the keys; add a new codon—
2/3/2/4/?:?:3 (p.70).
- (b) Add *Diosaccus hamiltoni* to footnote c) on p.71.
4. KGG 100 (p.73):
 - (a) *Stenhelia (S.) aemula*; amend the codon to read—
4/7:8:8/1:1:1/2:1:1/1.
 - (b) New codons are required for these new species by Thistle & Coull (1979)—
4/7:8:8/1:1:1/1:1:1/1 — *Stenhelia (S.) diegensis*.
4/6:7:8/0:0:0/2:1:1/1 — *S. (S.) asetosa*.
5. KGG 110 (p.74): *Amphiascoides* sp. ♂ Becker & Schriever, 1979 requires a new codon—
, Exp/se/7/?/2:5.

6. KGG 200 (p.76) : Through an error in Lang's table of setal formulae (Lang, 1948, p.593), where P.2 Exp. 1 of the *pacificus*-group of *Amphiascus* is stated as being asetose, the codons for *A. pacificus*, *A. parvus* and *A. sinuatus* are incorrect. In each case amend column three to read 1:1:1. As a further consequence *A. undosus* (p.77) should now be included in the codon for *A. pacificus* and *A. parvus*.
7. KGG 230 (p.80) : *Amphiascus profundus* Becker & Schriever, 1979 to codon for *Amphiascus b*; add to footnote b).
8. KGG 400 (p.86) : *Stenelia (D.) lima* Becker & Schriever, 1979 requires a new codon—
5/7:8:8/8/d:?:lss.
9. KGG 500 (p.88) :
 - (a) *Pseudomesochra beckeri* Becker & Schriever, 1979 requires a new codon—
2:2:2/6:7:7/0:0:0
 - (b) *Stenelia (D.) longifurca* is redescribed by Reddy & Radha-krishna (1980a), who also describe the previously unknown male. Add to General Note 3 (p.99). They discover some errors in the original description and as a consequence the codon for this species should read—
3:2:2/6:5:6/1:1:1,
i.e. the same codon as *S. madrasensis* and *S. krishnensis* (see also Wells, 1979:3).
10. KGG 600 (p.89) : Delete *Diosaccus hamiltoni*.
11. KGG 700 (p.91) : *Pseudomesochra abyssalis* Becker & Schriever, 1979 to codon for *P. aberrans*.

Family Ameiridae

1. General Notes (p.122) :
 - (a) *Ameira pusilla* is redescribed by Bodin (1977); add to Note 2.
 - (b) The previously unknown male of *Ameira pusilla* is described by Bodin (1977) who also describes the male of *Pseudameira crassicornis*, previously described by Moore (1976); add to Note 5.
2. KGG 100 (p.105) : Petkovski (1978) redescribes the female of *Cancrincola jamaicensis*. As a consequence amend the codon to read—
1:1:0/1:1:1/4:5:5/5:5-6/2:2-3.
Note also that the codon for both *C. abbreviata* and *C. longiseta* should read—
1:1:0/1:1:1/4:5:5/5:5/2:3.
3. KGG 300 (p.107) : Add *Nitocra pusilla* to footnote e) (p.108).
4. KGG 400 (p.114) :
 - (a) The codon on line 1 of p.115 refers to *A. brevipes*, not *A. longipes* (see also Wells, 1979:3).
 - (b) *Ameira bathyalis* Becker & Schriever, 1979 requires a new codon—
0:0:0/1:1:1/1:1:1/4:5:5/4:6/?.
But note that the innermost seta of the P.5 Exp. is very small in this species. Thus it could be confused with several other species of the genus, e.g. *A. longipes*, *A. minuta*, *A. tenuicornis*, *A. speciosa*, *A. parvuloides*, *A. pusilla*, *A. parvula*, *A. scotti*.

- (c) *Pseudameira mixta* has been omitted from the Keys; add a new codon—
1:1:0/1:1:1/1:1:1/4:5:4/4:4/?.
- (d) *Ameiropsyllus monardi* Bodin, 1977 requires a new codon—
0:0:0/1:1:1/0:0:0/4:4:4/3:5/?.
- (e) *Ameiopsis ariana*: Bodin (1977) places this species in his new genus *Ameiropsyllus*; amend the species name to *Ameiropsyllus arianaus*.
5. KGG 700 (p.120) : *Nitocrella aestuarina* Coull & Bell, 1979 requires a new codon—
5:5:6/0:0:0/2:2:2/5:5/?.

Family Paramesochridae

1. KGG 1 (p.124) :
 - (a) *Kliopsyllus abyssalis* Becker, Noodt & Schriever, 1979 to codon for *K. runtzi*.
 - (b) *Paramesochra (?) gigas*: Becker, Noodt & Schriever, 1979 believe this species belongs to *Kliopsyllus*.
 - (c) *Leptopsyllus abyssalis* Becker, Noodt & Schriever, 1979 requires a new codon—
2:0:0:1/2/na/4/nf.
2. KGG 200 (p.127) : Bodin (1977) has proposed *Kliopsyllus masryi* as nom. nov. for the preoccupied *K. minutus* Masry, 1970. Make the appropriate amendments here and in General Note 4 (p.130).
3. KGG 300 (p.129) :
 - (a) *Apodopsyllus lynceorum* Cottarelli, 1971 to codon for *A. littoralis*.
 - (b) *Apodopsyllus arenicolus*: The male is described by Bodin (1977); add to General Note 3 (p.130) and amend the codon to read—
1/5/0:3-4/0:4.

Family Tetragonicpitidae

- KGG 1 (p.131) :
- (a) *Phyllopodopsyllus curtus* Marcus, 1976; female to codon for *P. bermudae* and *P. parafurciger*; male requires a new codon—
a/2wd/2/3:2:2/5:6:7.
 - (b) *Diagoniceps trifidus* Yeatman, 1980 requires a new codon—
a/a/3/3:4:4/4:4:7.
 - (c) Yeatman (1980) redescribes *Diagoniceps laevis*. As a consequence the codons require amendment to read—
for the female — a/a/2/3:3:4/5:5:7
for the male — a/a/2/3:3:4/5:5:7.

Family Canthocamptidae

- KGG 100 (p.137) :
- (a) Coull & Bell (1979) describe the male of *Mesochra mexicana*; add to General Note 4 (p.139) and amend codon to read—
6/3/6:7:7/5:5/6:5/3:5.
 - (b) Bodin (1977) describes a female that he tentatively assigns to *Mesochra anomala*. As a consequence amend the codon to read—
6/2/5:6:6/2-3:4-5/5:5/2:6.

Family Cylindropsyllidae

1. KGG 1 (p.141) : *Arenotopa rossii* Cottarelli, 1977 to codon for *Psammastacus ghanai*. Wells (1967) regards *Arenotopa* as a synonym of *Psammastacus*.
2. KGG 200 (p.143) :
 - (a) *Stenocaris profundus* Becker, Noodt & Schriever, 1979 requires a new codon—
2:2:2/ns/1:2/5.
 - (b) *Stenocaris abyssalis* Becker, Noodt & Schriever, 1979 (only the male is described) to codon for *S. intermedia* ♂.

Family Cletodidae

1. KGG 1 (p.154) :
 - (a) *Austrocletodes tricomatosum* Pallares, 1979 requires a new codon—
3:2/3:3:3/0-1h):0/5:5:5/3h):0.
Add a new footnote—
h) In this species P.2 Enp. is either absent or represented by a very small stump; in either case three minute setae are present. P.3 Enp. of both sexes is a minute asetose stump.
 - (b) *Dizahavia halophila* Por, 1979 requires a new codon—
3:2/3:3:3/3:2/7:8:7/4:4.
 - (c) *Hemimesochra rapiens* Becker, Noodt & Schriever, 1979 requires a new codon—
3:2/3:3:3/2:0/5:5:5/3(4?):na.
 - (d) *Barbaracletodes* Becker, Noodt & Schriever, 1979, a new genus, requires new codons for its two species—
3:2/3:3:3/2:2/5:6:6/4:4 — *B. barbara*
3:2/3:3:3/2:2/5:6:6/4:5 — *B. carola*.
 - (e) Becker, Noodt & Schriever (1979) describe six new species of *Metahuntemannia*—
M. magniceps (only the female is described) to *Metahuntemannia*b); add to footnote b) (p. 159).

<i>M. iberica</i> ♀	—	3:bs/3:3:3/2:2/4:5:5/4:2.
<i>M. talpa</i> ♀	—	3:bs/3:3:3/0:0/5:5:5/na:na.
<i>M. curticauda</i> ♀	—	3:1/3:3:3/0:0/3:3/3/na:na.
<i>M. talpa</i> ♂	—	3:2/3:3:3/3:2/5:5:6/3:5.
<i>M. peruana</i> ♂	—	3:2/3:3:3/3:2/5:6:6/3:4.
<i>M. peruana</i> ♀	—	1:0/3:3:3/3:2/5:6:6/4:4.
<i>M. pacifica</i> ♀	—	1:0/3:3:3/2:2/5:6:6/4:4.
<i>M. pacifica</i> ♂	—	2:2/3:3:3/2:2/5:6:6/3:4.
 - (f) Becker, Noodt & Schriever (1979) describe four new species of *Paranannopus*; all require new codons—

<i>P. reductus</i>	—	3:2/2:1:1/0:0/2(3?):2:2/na:na.
<i>P. longithorax</i>	—	3:2/3:3:3/1:1/3:3:3(4?)/1:1.
<i>P. truncatus</i>	—	3:2/3:3:3/2:2/6:6:6/4:3.
<i>P. elongatus</i>	—	3:2/3:3:3/2:2/3:3:3/1:1.
 - (g) *Enhydrosoma radhakrishnai* Reddy, 1979 and *E. longum* Shen & Tai, 1979 to codon for *E. breviarticulatum* and *E. birsteini*.
 - (h) *Mesocletodes parirrasus* Becker, Noodt & Schriever, 1979 to codon for *M. bodini* (see Wells, 1978:7).

- (i) *Eurypletodes profundus* and *E. (O.) peruanus*, new species by Becker, Noodt & Schriever (1979) to codon for *Eurypletodes*d); add to footnote d) (p.159). *E. profundus* cannot be placed in either sub-genus.
- (j) Dr Helmut Kunz informs me that he now believes that *Taurocletodes gallicus* Kunz, 1974 is the male of *Parepactophanes dubia*, which previously was unknown. Add an appropriate comment to General Notes 2 and 4 (p.170) and amend the codons on p.158.
- (k) *Cletocampius albuquerqueensis*: Subsequent to publication of an amendment to the codon for this species (Wells 1978:7) I noted it had been redescribed by Pallares (1962). In her specimens P.4 Enp. is of two segments and she notes that Chappuis (1933) also records this bi-segmented condition. Make a note in General Note 1 (p.170) and amend the codon to read—
3:2/3:3:3/2:1-2/5:5:4/3:1.
- (l) *Cletocampitus helobius* Fleeger, 1980 requires a new codon—
3:2/3:3:3/2:0/5:5:4/3:na.
- (m) *Huntemannia lacustris* ♀ : Amend codon to read—
2-3:1/2:2:2/1:1/5:5-6:6/1-2:1.
2. KGG 300 (p.162) : *Mesocletodes sarsi* Becker, Noodt & Schriever, 1979 requires a new codon—
7/1:2/0/4:3:6.
3. KGG 400 (p.163) : Becker, Noodt & Schriever, 1979 transfer *Leimia dubia* to *Hemimesochra*.
4. KGG 600 (p. 166) :
 - (a) There is an error in the second column of this KGG with respect to most species of *Rhizothrix*; correct as follows on p.167—
3:4 — *R. tenella*, *R. gracilis* in line 1, *R. pubescens*.
3:3 — *R. gracilis* in line 3, *R. scotti*, *R. spinosa*, *R. curvata* in lines 4 and 7.
 - (b) *Rhizothrix wilsoni* Becker, Noodt & Schriever, 1979 requires a new codon—
p/4:4/0:0/d:5:5:f:1:3.
 - (c) *Cletodes dorae* Por, 1979 requires a new codon—
a/1:2-3/0:0/d:3:5/d:0:2.
 - (d) Reddy & Radhakrishna (1980b) give a complete redescription of *Limnocletodes secundus*, including a first description of the male; it does not alter my conviction (Wells, 1971) that this species is a synonym of *L. behningi*.
5. *Argestigens abyssalis* and *Neoargestes incertus*, both new species by Becker Noodt & Schriever (1979), key out to *Argestigens* in KGG 1 (p.158). Amend so that the codon refers to KGG 800 and add this new KGG to the family.

KGG 800 — characters

1. P.1 Exp. 1
n - number of setae on the inner border.
2. P.1 Exp. 3
n - number of setae and/or spines.
3. ♀ P.5
n:n - number of setae on Benp. and Exp. respectively.

KGG 800

P.1 Exp. 1	P.1 Exp. 3	♀ P.5 setae
inner setae		

1	5	4:4 <i>Argestigens glacialis</i>
1	5	4:5 <i>A. abyssalis</i>
0	5	4:5 <i>A. uniremis</i>
0	4	1:3 <i>Neoargestes incertus.</i>

Family Laophontidae

1. *Laophonte hirsutus* Pallares, 1979 (only the female is described) requires a new codon in KGG 1 - ♀ ♀ (p.172)—
3:3:3/2:2:1/5:5/3/6.
2. *Paronychocamptus connexus* Pallares, 1979 (only the female is described) requires a new codon in KGG 1 - ♀ ♀ (p.172)—
3:3:3/2:2:2/5:5/3/8.
3. *Heterolaophonte denticulata*: Amend codon in KGG 1 - ♀ ♀ (p.172) to read—
3:3:3/2:2:1/5:6/3/7.
4. *Heterolaophonte discophora*: Amend the codons for this species in KGG 1000 - ♀ ♀ (p.182) and KGG 1900 - ♀ ♀ (p.186) to read—
6:6:4-5/1:1/0:0/0:4:6/4:0:0:0.
5. *Laophonte thoracica*: The male has been omitted from the Keys; add a new codon to KGG 1100 - ♂ ♂ (p.197)—
6:6:6/1:1/4:4:3/0:0/p.
6. Coull & Zo (1980) describe three new species of *Laophontina*; all require new codons in KGG 1 - ♀ ♀ (p.172)—
1s:3:3/2:2:1/4:5/1/6 — *L. triarticulata*.
1:2:3/2:1-2:1/4:5/1/6 — *L. variabilis*.
2s:1:3/0:1s:1s/3:5/1/5 — *L. reducta*.
in KGG 1 - ♂ ♂ (p.188)—
2s:3:3/2:0/0:3/1/2 — *L. triarticulata*.
2s:1:3/0:1s/0:3/1/1s — *L. reducta*.

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