(3) *Nitocra brevisetosa*, Daday.

Nitocra brevisetosa, Daday, Termes. Fuz. xxxiv. 1901, p. 37 (New Guinea).

The two-jointed endopodite of the fourth leg and the structure of the antenna and fifth feet exclude this species from the genus *Nitocra*. It should be included in the genus *Canthocamptus*.

(4) *Nitocra gracilimana*, Giesbrecht.

Nitocra gracilimana, Giesbrecht, Res. Voyage du Belgica, 1902.

The smooth anal operculum, slenderness of first leg, form of the sensory spine of the male first leg, and the structure of the fifth feet indicate the genus *Ameira*.

Key for Discrimination of the European Species of Nitocra.

1.	First leg: first joint of endopodite as long as, or longer than, exopodite	2.
	This joint shorter than the exopodite	4.
2.	Anal operculum smooth	*N. pusilla*, Sars.
	Anal operculum with spines	3.
3.	Furcal rami longer than wide	*N. hibernica* (Brady).
	Furcal rami wider than long	*N. typica*, Boeck.
4.	Distal joint of fifth leg of female with six setæ	*N. simplex*, Schmeil.
	This joint with five setæ	5.
5.	Furcal rami as wide as long. Distal joint of fifth foot of female narrow	*N. wolterecki*, Brehm.
	Furcal rami wider than long. Distal joint of fifth leg of female broad	*N. spinipes*, Boeck.

XXVII. — *The 'Challenger' Eryonidea (Crustacea)*. By Oscar Sund, Cand. Real., Scientific Adviser to the Norwegian Bureau of Fisheries, Bergen.

During a recent stay in London I had, through the kindness of Dr. W. T. Calman, an opportunity of making the 'Challenger' collection of Eryonidea the object of a cursory examination. The following lines are a brief account of the chief conclusions arrived at.

Eryoneicus cæcus, Bate.

The single (type) specimen is 12 mm. long (carapace 6·5 mm.), and seems to have been in a rather poor condition when preserved. Still it is possible to see that the description given by Bate and Willemoes-Suhm is incomplete and the drawings, especially that by Bate (pl. xii. E), not very

accurate. From the arrangement of the median dorsal spines of the carapace, it appears with little doubt that *Eryonicus faxoni*, Bouvier (Bull. Mus. Oc. Monaco, 1905), is a synonym, and that therefore *E. cæcus* is a young stage of *Stereomastis* (*Polycheles*) *sculpta*, Smith. If a single spine is designated with 1, a double with 2, and a blunt-tipped with 3, the arrangement alluded to may be represented thus:—2 (the very small rostral spines) —1—2—3 (cerv. sulcus) —2—2—3—2. I could not detect the single spine occupying the fourth place in *E. faxoni*, but that may be due to the bad state of preservation making the investigation very difficult. Along the lateral edge is found a row of eight long spines, on the branchial area a row of five, on the gastral area two, and on the branching point of the cervical sulcus one.

Willemoesia leptodactyla, Willemoes-Suhm.

Bate enumerates (p. 164) four specimens from the 'Challenger' referred to this species, but on p. 169 he mentions five. The collection contains six, some particulars of which are given in the table below, as Bate's statements partly are inaccurate, partly wrong. Measurements given in per cent. of carapace length, if not expressly stated as mm.

'Challenger' Stat. no...	13	133	298		300	
Locality.....	21° 38′ N. 44° 39′ W.	35° 41′ S. 20° 55′ W.	34° 7′ S. 73° 56′ W.		33° 42′ S. 78° 18′ W.	
Specimen no.	1	2	3	4	5	6
Sex.....	♀.	♀.	♀ (egg).	♀.	♂.	♂.
Length of carapace (C), mm.	49	38	54	46	46	33
Total length (L), mm...	(107)	81	120	105	110	77
Do. in per cent. of C ..	217	213	222	227	238	233
Breadth (where cervical crosses median line)..	65	68	67	67	76	67
Breadth between antero-lateral points of carapace	(35)	42	43	43	41	46
Distance from cervical to posterior edge of carapace	47	50	50	49	49	49
Cheliped:						
Merus.....	106	100	98	96	93	..
Carpus	82	68	78	74	70	..
Propodus	88	82	83	80	91	..
Dactylus	47	50	46	46	50	..

The following additional particulars are of interest in describing the specimens :—

Specimen no. 1.—This is the type of the species, and is figured in pl. xviii. and pl. xix. C″, but rather inaccurately as far as the spines are concerned at least. The armature of the median ridge may be expressed by the following formula, employing the same symbols as above, under *Eryoneicus cœcus* :—

1 1 1 1 1 2 1 1 *C* 2 1 1 1 1.

The lateral edge carries 29 spines, of which 7 are situated forward of, 4 between, and 18 behind the branches of the cervical sulcus (7+4+18). The surface of the carapace is covered by a dense "fur" of short spinules except on the elevated ridges, which are smooth. The hook in the middle line on the back of the first pleosomite is quite rudimentary.

Specimen no. 2.—Median ridge spine-formula :

1 1 1 1 1 1 2 1′ *C* 1′ 1 1 1.

Lateral edge spine-formula :

Right side 11+6+21, left 10+6+19.

This specimen furthermore differs from no. 1 in the following particulars :—

(*a*) Two of the median spines (marked ′ in the above formula) are elastic and bend when pressed, in these respects resembling the blunt-tipped spines found in the corresponding place in all *Eryoneicus*.

(*b*) The frontal edge has nearly no orbital sinus, a feature which is well-marked in the type-specimen.

(*c*) The third joint of the antennular peduncles is only half as long as the second, in no. 1 the three joints are of about the same length.

(*d*) The last joint of the antennal peduncle is about 50 % longer than the penultimate, in no. 1 it is of equal length.

Specimen no. 3.—Median line spine-formula :

1 1 1 1 1 *C* (posterior part smooth).

Lateral edge spine-formula :

5+3+8.

Posterior portion of the edge smooth. "Fur" on carapace as in no. 1.

Specimen no. 4.—This specimen is not mentioned by Bate. Median line formula as in no. 3. Lateral edge formula:

5+3+5.

Posterior half of the edge smooth. "Fur" as in no. 1.

Specimen no. 5.—Figured by Bate in pl. xix. C. The frontal margin forms a retreating angle, at the top of which the rostral spines are situated. The carapace, when seen in profile, is strongly arched. Median line spine-formula:

1 1 1 1 2 1 1 1 *C* 1 1 1 1 1.

These spines are small. Lateral edge spine-formula:

10+5+23, well-developed spines.

The smaller spines spread over the carapace are more sparsely set than in nos. 1, 3, 4, and 6. The first pleosomite carries dorsally a well-developed hook, and the branchial ridge, which is smooth in the other specimens, carries a row of spines.

Specimen no. 6 resembles nos. 3 and 4. Median line and lateral edge-formulas as in no. 4.

The conclusion I arrived at when examining the above specimens is that they ought to be conceived as representatives of *four* instead of one species, and I accordingly propose the following names:—

1. *Willemoesia leptodactyla*, Willemoes-Suhm, represented by the type-specimen no. 1.
2. —— *secunda*, sp. n., represented by specimen no. 2.
3. —— *challengeri*, sp. n., represented by specimens nos. 3, 4, and 6.
4. —— *pacifica*, sp. n., represented by specimen no. 5.

Stereomastis suhmi, Bate.

Bate's figure (pl. xv. fig. 3) is not very good, the form of the body being, in fact, not very different from *S. nana*, *S. sculpta*, etc.

All the nine specimens, of sizes from 31 to 45 mm., were taken at Stat. 311, and every one of them displays the same median ridge spine-formula:

2 1 1 2 2 1 *C* 2 (2) (2) 2.

Bate gives it somewhat differently, making the two intermediary, small, double spines appear as single, both in the

text and in the drawing, thus precluding the possibility of referring any new finds to his species, as the genus *Stereomastis* (sensu de Man) is especially characterized by the great constancy of the arrangement of the spinous armature.

Stereomastis auriculata, Bate.

The type (holotype) is a female, 49 mm. long. Length of carapace=22, breadth 15, distance from cervical sulcus to posterior edge 9 mm. Median ridge spine-formula:

2 1 1 1 2 1 *C* 2 2 *2*.

The two hindmost spines, designated by *2*, are very large. The lateral edge is armed with 5+3+7 spines. On the gastral area is a row of four spines, on the branching point of the cervical ridge one, and on the anterior branch one spine. The branchial ridge carries eleven spines.

Polycheles helleri, Bate.

Stereomastis helleri, de Man, 'Siboga' Monogr. 39 a 2.

The type (from Stat. 218, N. of New Guinea) is figured in pl. xiv. fig. 2 and pl. xv. fig. 1. Especially the last-named figure is quite misleading. The lateral edge carries 6+3+2 spines+a number of rudimentary ones in its posterior part. There is a spine in the middle of the anterior branch of the cervical ridge not shown in the figure (xiv. 2). Total length 47, carapace 22 mm.

The other specimen (from Stat. 170, near Kermadec Islands, N. of New Zealand) is certainly of a species distinct from the type. The median ridge carries the same sequence of large spines, but the spaces between these are occupied by numerous small spinules set in single row. Along the lateral edge are found 7+4+14 well-developed spines. On the cervical ridge no spines are found. Total length 32, length of carapace 16, breadth 10·5 mm.

As the specimen from Stat. 170 seems to differ fundamentally from all other species described in several of the characters mentioned above, it has a claim to a name of its own, and I take the liberty of proposing for it the name

Stereomastis kermadecensis, sp. n.

Pentacheles gracilis, Bate.

Polycheles gracilis, de Man, *l. c.*

The single specimen (from Stat. 174, 19° 8′ S., 178° 20′ E.)

is a female 52 mm. long, carapace = 25 mm., breadth 19·5 and distance from cervical sulcus to posterior edge of carapace 12 mm. The median spine-formula may be given thus:

2 1 1 1 1 1 1 : . . . . . *C* . . . . . .,

the spines in the posterior part being mere tubercles. The lateral edge is armed with 9+4+14 spines. The branchial ridge carries 30–32 small spines. There are no spines on the gastral area and none on the cervical ridges. The figure given by Bate is not particularly good.

Pentacheles lævis, Bate.

Polycheles lævis, de Man, *l. c.*

Two specimens are referred to this species. There is not much evidence apart from the labels that they are the objects referred to in Bate's text and figures.

Station	214	300
Locality	4° 33′ N., 127° 6 E.	33° 42′ S., 78° 18′ W.
Specimen	No. 1 (type).	No. 2 (cotype).
Length of carapace	18 mm.	20 mm.
Total length	37	42
Do. in per cent. of carapace	205	210
Breadth in do.	74	70
Distance from cervical to posterior edge of carapace in do.	46	46

Median ridge-formula of no. 1:

2 : : : : : 1 : : : : 2 : : : : : 1 : : : : *C* : : : : : 2 : : : : : : : :,

do. of no. 2:

2 : : : : : : : : : : : : 2 : : : : 1 : : : : : *C* : : : : : : 1 : : : : 2 : : 2 : : : : : : : :.

Lateral edge-spines:

No. 1: 8+3+14, no. 2: 8+3+9.

Bate gives the total length as "38 mm. (1·5 in.)" and "47 mm. (1·75 in.)" respectively, and states that the dorsal surface is unarmed save for the two rostral teeth and the two single spines between these and the cervical sulcus. As will be seen from the above formulas, the median ridge is in both specimens armed in a way similar to *P. debilis*, Smith, and *P. armatus*, Bouvier, and between the more prominent spines the ridge is all along armed with a double row of small tubercles (designated by a series of : : : : : in the formulæ above).

Otherwise there are a number of well-marked differences between the two specimens. The "fur" on the carapace is much denser in the cotype, which also carries a definite row of spines along the branchial ridge, wanting in the type. The greatest difference is, however, found in the outline of the front, the type resembling to a certain degree the figure given by Bate (xv. 5, ♀). But in the cotype the orbits are wide and open in comparison to the narrow notches found in the type. They are angular and embrace an angle of about 90 degrees. The distance between the intra-orbital spine and the antero-lateral is about equal to the distance between the two intra-orbital spines. In the type the last-named distance is by much the greater.

On the whole, I think it scarcely justified to refer both specimens to one species; the cotype ought to be made the type of a separate species, for which I take the liberty to propose the name

Polycheles chilensis, sp. n.

Pentacheles euthrix, Willemoes-Suhm.

Polycheles euthrix, de Man, *l. c.*

Four specimens are mentioned in Bate's text. Only two are preserved to this day, one from Stat. 170 and one from Stat. 173. They agree quite well also in matter of median ridge-armature, which, however, is wrongly represented both in the text and in the figures. It may be given thus:—

2 : : . 1 . . . 1 . . 2 : : : 1 : : : : *C* 2 : *2.*

The lateral edge is armed with 9+4+13 spines. The gastral area carries only one spine, and there are no spines on the branchial region.

Polycheles baccata, Bate.

The six specimens, all taken at Stat. 173, were of the following sizes:—

No.	Total length in mm.	Length of carapace in mm.	Length in % of carapace.	Sex.
1..	68	29	235	Male.
2..	50	22	227	,,
3..	43	19	227	,,
4..	72	30	240	Female.
5..	41	18	227	,,
6..	41	18	227	,,