

Résumé.

From—	Species.	New.	Already known.
Abrolhos Islands	8	4	4
Magellan Straits	10	7	3
Galapagos Islands	10	5	5
Lower California	8	2	6
California	4	1	3

The scorpions collected on this occasion are six in number of species, and belong to the three families into which the order of Scorpions is divided.

Family BUTHIDÆ.

1. *Centrurus biaculeatus* Luc.

From Panama; a species, cosmopolitan, and frequently found in countries bordering the Atlantic Ocean below 25° north latitude.

2. *Centruroides exilicauda* Wood.

From St. Margarita Island, Lower California; a common species in that region.

3. *Centruroides luctifer* sp. nov.

From Indefatigable Island, Galapagos; a very interesting species.

Family PANDINIDÆ.

4. *Vejovis galapagoensis* sp. nov.

From Chatham Island, Galapagos.

5. *Broteas formosus* sp. nov.

From St. Margarita Island, Lower California.

Family BOTHRIURIDÆ.

6. *Timogenes niger* sp. nov.

A mutilated and broken specimen from Montevideo, Uruguay.

This is, so far, the result of my investigation, and I hope to have an opportunity to describe and figure the new species of this interesting collection.

MYRIAPODA.

BY C. H. BOLLMAN.

1. *Spirobolus sanctæ-luciæ* sp. nov.

DIAGNOSIS.—Allied to *Spirobolus surinamensis* Bollman; but the horse-shoe-like markings only prominent along the middle line of segment; no deep sulcus behind repugnatorial pore; legs light yellow.

Type.—No. 590.

HAB.—Port Castries, St. Lucia, Windward Islands.

Description.—Segments dark brown, posterior borders lighter; ante-

rior margin of first pale; head and first dorsal plate greenish; antennæ pale brown; legs very light yellow (pale), probably red in life.

Rather slender, anterior segments attenuated.

Venter slightly reticulated, sulcus very indistinct; clypeus not deeply excised, foveolæ 2+2, distant, sulcus shallow.

Antennæ slenderer than in *surinamensis*, hardly reaching second segment.

Ocelli about 40, in a series, patch suboval.

Segments shining, rather smooth, especially posteriorly; anterior ten segments with distinct concentric striæ on basal part; posterior part, especially on anterior segments, sulcate beneath; division of segments not evident, a hollow depression along which are horseshoe-like depressions; these are scattered over the dorsal part of segments, but are small and shallow; the posterior four segments almost destitute of markings.

First segment narrowed laterally, anterior margin concave, a strong marginal sulcus.

Anal segment obtusely angled, not surpassing valves; anal valves narrowly margined, reticulated; anal scale very slightly rounded, almost transverse.

Repugnatorial pore large, situated in hollow on anterior part.

Legs extending slightly beyond sides of body.

Segments 50.

Length of body 45^{mm}; width 3.4^{mm}. This species is described from an adult female; in the same vial is a very young specimen, showing only 41 segments. In Karsch's "*Neue Juliden des Berliner Museum*" this species would stand near *Spirobolus biconicus* from Mauritius.

2. *Himantarium tæniopse* (Wood).

No. 599, Margarita Island, Lower California; ♀.

A young specimen. Pairs of legs, 148.

3. *Pectiniunguis americanus* gen. et sp. nov.

DIAGNOSIS.—Related to *Schendyla eximia* Meinert; but the anal pair of legs jointed and the claw of maxillary palpus pectinate along its entire under side.

Type.—No. 598.

HAB.—Pichiliugue Bay, Gulf of California.

Description.—Orange, darkest anteriorly; legs pale.

Robust, scarcely attenuated anteriorly, more posteriorly.

Segments not polished, very finely reticulate; sparsely pilose.

Prehensorial legs not reaching base of antennæ; sternum almost twice as wide as long, anterior margin slightly callous; coxæ of about equal length and width, unarmed, anterior margin not much sinuate.

Cephalic plate slightly longer than wide; basal plate three times as wide as long; pre-basal plate exposed. Antennæ filiform, rather long.

Dorsal plate manifestly bisulcate.

Spiracles suboval, longitudinal, anterior largest.

Ventral plates not sulcate; porous area suboval, much smaller on posterior segments; last ventral plate very wide, pilose, sides converging.

Posterior pleuræ large, pilose; pores large, concealed.

Anal pair of legs 6-jointed, moderately crassate, joints all large, densely pilose; unarmed.

Pairs of legs ♀ 65.

Length 50^{mm}; width 1.55^{mm}.

This species is described from an adult female.

According to Meinert's diagnosis of the genus *Schendyla* this species would be included under that genus; but the three known species may be separated by the following generic characters:

- a. Claw of maxillary palpus not pectinate, outer part of first pair of maxillæ without a trace of a lateral process; labrum entirely united, teeth 20-22, equal; anal legs 6-jointed *Nemorensis*.
- aa. Claw of maxillary palpus pectinate; outer part of first maxillæ with a small lateral process; labrum free in the middle.
- b. Anal pair of legs 5-jointed; claw of maxillary palpus only pectinate under the apex; labral teeth about 15, equal; first joint of anal legs almost coalesce with second *Eximia*.
- bb. Anal pair of legs 6-jointed; claw of maxillary palpus pectinate for its entire length; labral teeth 8+10+8, the outer enlarged; first joint of anal legs not coalesced with second *Americanus*.

On account of these generic differences between the three species, especially between the first and the last two, I have thought it best to place *americanus* and *eximia* under the new genus *Pectiniunguis*, of which *americanus* is the type, restricting *Schendyla* to *nemorensis*.

The generic differences between *americanus* and *eximia* are no doubt worthy of subgeneric rank, and I therefore propose the name *Nannopus* for the reception of *eximia*.

4. *Scolopendra macracanthus* sp. nov.

DIAGNOSIS.—Allied to *Scolopendra subspinipes* Leach; but the femora of anal legs armed beneath with three spines, of which the two anterior are very large, the superior-interior surface armed with six spines; the first nine dorsal plates immarginate.

Type.—No. 165F.

HAB.—Pacific coast, some place between Lower California and Straits of Magellan.

Description.—Brownish-green; tip of antennæ and lateral parts of dorsal plates green; head and first dorsal plate darker.

Rather slender, smooth, only lightly punctate anteriorly.

Head suborbicular, punctate, not sulcate.

Antennæ, 18-jointed; articles moderate, the first six not hirsute.

Prosternal teeth 5+5, the inner two small and coalesced; coxal tooth large, apex carinate, nodule present.

Dorsal plate, except the first nine (10), marginate; sulci beginning at the third and indistinct on the posterior; posterior border transversely wrinkled.

Sulci of ventral plates distinct; last ventral plate long and narrow, sides converging, posterior border rounded.

Second tarsal joint of all the legs, except anal, armed beneath with a spine.

Anal legs long, slender; femora, with six spines on the superior-interior surface, arranged in three series; three beneath, uniseriate, the anterior two largest; apical process bifid.

Posterior pleuræ densely porose; angular process small, bifid.

Length 120^{mm}.

In the collection is a specimen without a more definite locality than "Pacific coast."

The following key will help to separate it from the related species:

Femora of penultimate pair of legs unarmed; first dorsal plate without a transverse furrow; tarsal joints armed.

a. Femora of anal legs unarmed beneath, two spines within; the first 6-11 dorsal plates immarginate; last two tarsal joints unarmed..... *Dehaani*.

aa. Femora of anal legs armed beneath.

b. Spines of femora of anal legs 4-6, always two beneath; the first four or five dorsal plates immarginate; the last or the last two tarsi unarmed.

Subspinipes.

bb. Spines of femora of anal legs 9, 3 beneath; the first nine dorsal plates immarginate; the last tarsal joint unarmed..... *Macrocanthus*.

5. *Scolopendra microcanthus* sp. nov.

DIAGNOSIS.—Allied to *Scolopendra pernix* Kohlrausch, but the anal pair of legs slender, spines small, and more numerous.

Type.—No. 600.

HAB.—St. Margarita Island, Lower California.

Description.—Pale green, posterior border of segments dark; prehensorial legs orange.

Slender; smooth, very lightly punctate.

Head suboval, punctate; sulci absent.

Antennæ 25-29-jointed, long, basal not very crassate, the first 3 or 4 smooth.

Prosternal teeth 4+4 inner coalesced; coxal tooth large, inner margin unarmed.

The first 15 dorsal plates immarginate; sulci well developed, and commencing at transverse suture of first plate and dividing them into three planes.

Sulci of ventral plates shallow, last plate short and wide, sides converging, rounded, posterior margin emarginate.

Second tarsal joints of all legs, except anal, armed.

Anal pair of legs slender as in *heros*; spines very small; 8-12, in 3 or 4 series on the superior-interior surface; 4 or 5 in 2 series on the

inner surface; beneath 10-12 in 2 or 3 series; apical process large and blunt, armed with 9-11 small spines.

Posterior pleuræ narrow; apex long, armed with 7-9 spines, posterior margin concave; a marginal spine.

Length 75^{mm}.

Described from one specimen of which the anal pair of legs is broken off.

This new species is separated from *heros*, *pachypus*, *nicaraguensis*, and *viridis* by the large number of spines of apical process of femora and the well-marked sulci of first dorsal plate.

6. *Scolopendra galapagoensis* sp. nov.

DIAGNOSIS.—Related to *Scolopendra viridicornis* Newport, but the spines of apical process of femora of anal legs, 6-8; spines of apex of posterior pleuræ, 9-12; spines of femora of 2-20 pairs of legs, 4 or 5.

Type.—No. 594.

HAB.—Chatham, James, and Albemarle Islands, Galapagos Archipelago.

Description.—Very dark brown, more yellowish posteriorly; under parts more brown than upper; the first five or six antennal joints dark blue, rest rusty; tarsi brownish, rest of legs bluish-brown, except base of femora, which is more brown, like ventral plates; posterior pleuræ and femora of anal legs reddish-brown.

Robust, smooth, all parts very slightly punctate.

Head suboval; two longitudinal sulci, which break up posteriorly, and send a branch along lateral margin.

Antennæ long, 17-jointed, articles long, basal subcrassate, the first four or five not hirsute.

Prosternal teeth 3+3, large, inner coalesced; a transverse sulcus along anterior part of sternum.

The first four dorsal plates immarginate; posterior borders transversely wrinkled; crest of anal segment weak, only extending three-fourths of the way.

Sulci of ventral plates distinct; last plate rather short, narrow, posterior border rounded.

Second tarsal joint of all the legs, except anal pair, armed. Anal legs rather long and stout; 10-13 spines on the superior-interior surface of femora arranged in 3 series; within are 2 or 3 uniseriate spines; beneath 7-9 spines arranged in 2 or 3 series; apical process with 6-8 spines.

Femora of 2-20 pairs of legs, armed with 4 or 5 spines at their exterior apex, the posterior usually with 5 spines; femora of penultimate pair of legs armed above with 1-3 spines.

Posterior pleuræ with 9-12 apical spines and 1 or 2 marginal; above on margin of dorsal plate are 2 small spines.

Length of largest specimen 160^{mm}.

This species is described from two adult and one young specimen from Chatham Island, one young individual from James Island, and another from Albemarle Island. The type is an adult from Chatham Island.

The five species belonging to this group of *Scolopendra* may be separated as follows:

Femora of penultimate pair of legs armed; first dorsal plate with a transverse sulcus.

a. Ventral plates not sulcate; tibiæ of anal legs armed with spines *Prasina*.

aa. Ventral plates with two longitudinal sulci.

b. Last dorsal plate without a median carina.

c. Femora of last three pairs of legs armed; tibiæ of anal legs unarmed... *Valida*.

cc. Femora of all legs armed; tibiæ of anal legs armed..... *Gigas*.

bb. Last dorsal plate with a median carina.

d. Femora of penultimate pair of legs not armed above; spines at apex of femora of 2-20 pairs of legs, 2 or 3; spines of apical process of anal legs, 1-3; spines of apex of anal pleuræ, 1-3 *Viridicornis*.

dd. Femora of penultimate pairs of legs with 1-3 spines above; spines of apex of femora of 2-20 pairs of legs, 4 or 5; spines of apical process of femora of anal legs, 6-8; spines of apex of anal pleuræ, 9-12..... *Galapagoensis*.

7. *Scolopendra* sp. ?

No. 591, Abrolhos Islands, Brazil.

A very young specimen and unidentifiable.

8. *Henicops chilensis* Gervais.

1847.—*Henicops chilensis* Gervais.

Aptères, iv, 239 (Chile).

No. 593, Port Churruca, Straits of Magellan.

One young mutilated female.

Prosternal teeth, 4+4.



Bollman, Charles H. 1889. "Myriopoda in the Scientific Results of Explorations by the U.S. Fish Commission Steamer 'Albatross'" *Proceedings of the United States National Museum* 1889, 211–216.

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