

THE ANNALS  
AND  
MAGAZINE OF NATURAL HISTORY,

INCLUDING  
ZOOLOGY, BOTANY, AND GEOLOGY.

(BEING A CONTINUATION OF THE 'ANNALS' COMBINED WITH LOUDON AND  
CHARLESWORTH'S 'MAGAZINE OF NATURAL HISTORY.')

CONDUCTED BY  
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AND  
WILLIAM FRANCIS, JUN., F.L.S.

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VOL. XI.—SEVENTH SERIES.  
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“Omnes res creatæ sunt divinæ sapientiæ et potentiæ testes, divitiæ felicitatis humanæ:—ex harum usu *bonitas* Creatoris; ex pulchritudine *sapientia* Domini; ex œconomiâ in conservatione, proportione, renovatione, *potentia* majestatis elucet. Earum itaque indagatio ab hominibus sibi relictis semper aestimata; à verè eruditis et sapientibus semper exulta; malè doctis et barbaris semper inimica fuit.”—LINNÆUS.

“Quel que soit le principe de la vie animale, il ne faut qu’ouvrir les yeux pour voir qu’elle est le chef-d’œuvre de la Toute-puissance, et le but auquel se rapportent toutes ses opérations.”—BRÜCKNER, *Théorie du Système Animal*, Leyden, 1767.

. . . . . The sylvan powers  
Obey our summons; from their deepest dells  
The Dryads come, and throw their garlands wild  
And odorous branches at our feet; the Nymphs  
That press with nimble step the mountain-thyme  
And purple heath-flower come not empty-handed,  
But scatter round ten thousand forms minute  
Of velvet moss or lichen, torn from rock  
Or rifted oak or cavern deep: the Naiads too  
Quit their loved native stream, from whose smooth face  
They crop the lily, and each sedge and rush  
That drinks the rippling tide: the frozen poles,  
Where peril waits the bold adventurer's tread,  
The burning sands of Borneo and Cayenne,  
All, all to us unlock their secret stores  
And pay their cheerful tribute.

J. TAYLOR, *Norwich*, 1818.

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# THE ANNALS

AND

## MAGAZINE OF NATURAL HISTORY.

[SEVENTH SERIES.]

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LX.—*Fifteen new Species and Two new Genera of Tropical and Southern Opiliones.* By R. I. POCKOCK.

[Plates XI. & XII.]

### Family Phalangiidæ.

Genus PRIONOSTEMMA, nov. nom.

(For *Prionomma*, Loman, 1902, preocc. by White in 1835 for a Longicorn beetle.)

*Prionostemma insculptum*, sp. n.

♂.—*Colour.* Dorsal surface yellowish or blackish brown, sometimes the black, sometimes the yellow predominating, no median band; ventral surface marbled black and brown; femora of legs mostly blackish; palpi blackish, paler distally.

*Dorsal surface* densely sculptured with close-set pits, separated by a close reticulation of ridges. *Ocular tubercle* high and vertical in front, higher here than it is wide; mesially grooved above and on each side of the groove beset with numerous irregularly arranged small tubercles. The *dorsal scute* without trace of segmentation.

*Palpi* studded with small tubercles and short hairs; patella a little shorter than tibia, its process short, conical, about one

sixth the length of the segment; tarsus about twice as long as tibia.

*Legs* with femora finely spicular; coxæ granular, with marginal tridenticulate, columnar tubercles. *Genital plate* granular.

Abdominal *sterna* sparsely granular.

Total length about 3 millim.; femur of first leg 5, of second 8 (entire appendage about 34), of third 4.5, of fourth 7.

*Loc.* Venezuela: Merida.

Specimens from the same locality which I regard as the females of the above-described males are larger, reaching 5.5 millim. in length, and have a pale median, sometimes †-shaped dorsal band, and the legs more annulate.

*Prionostemma scintillans*, sp. n.

♀.—*Colour.* Trunk a tolerably uniform blackish or dark brown, with a metallic golden marginal patch on each side of the fore part of the carapace, a similar one on the outer side of the distal portion of the coxa of the fourth leg, and two on the second free tergite of the abdomen; ventral surface, mandibles, palpi, and legs yellowish, with the exception of the trochanter and extreme base of femur, which are blackish.

Structurally closely allied to the preceding species; the *dorsal surface* similarly sculptured; but the *ocular tubercle*, which is rather lower, is nearly smooth above and furnished only with a small and inconstant number of irregularly disposed denticles, a single anterior pair being the only ones of invariable occurrence.

Length 4.5 millim.

♂.—Resembling female in colour and other characters, but smaller.

Total length barely 4 millim.; femur of first leg 11, of second 16 (length of entire appendage about 55), of third 11, of fourth 13.

*Loc.* Guatemala: Barrancos, Guatemala city (*O. Stoll*).

*Prionostemma bicolor*, sp. n.

♂ ♀.—Very nearly allied to *P. scintillans*, but differing in colour; dorsal scute yellowish brown, obscurely mottled, about the same tint as femora of the legs, the carapace with a suffusion of gold; mandibles and palpi yellowish brown; genital plate and the abdominal *sterna* much paler yellow; coxæ and trochanters of the legs deep brownish black and contrasting with the paler dorsal and ventral areas; the membrane between the trochanter and coxa greyish white.

*Measurements in millimetres.*—♂. Total length 3; femur of first leg 9, of second 16 (entire appendage about 50), of third 10, of fourth 13.

*Loc.* Guatemala: the Barrancos, Guatemala city (*O. Stoll*).

*Prionostemma citrinum*, sp. n.

*Colour.* Dorsal surface pale (almost lemon-) yellow, with the ocular tubercle black, and a longitudinal black stripe on each side of the abdominal shield; palpi, coxæ, and sternal surface also yellow, trochanters black, legs dark blackish brown; mandibles yellow proximally, blackish distally; apex of maxillary process of first leg black.

*Dorsal surface* closely granular; *ocular tubercle* as in *P. insculptum*; ventral surface and coxæ much less granular than in the foregoing species; the coxæ without distinct marginal tubercles.

*Palpi* much smoother than in the other species; the patellar process shorter and blunter.

*Measurements in millimetres.*—Total length 3·5; femur of first leg 10, of second 17 (entire appendage about 78), of third 9, of fourth 13·5.

*Loc.* Brazil: Lages.

The species here referred to *Prionostemma* differ from the two species described by Loman (*Zool. Jahrb. Syst.* 1902, pp. 178–179) in the weakness of the denticulation of the ocular tubercle and the shortness of the patellar apophysis. They may be distinguished as follows:—

- a. Carapace and dorsal scute with sculpturing of pits and ridges.
  - a<sup>1</sup>. Ocular tubercle nearly smooth, with only a few granules.
  - a<sup>2</sup>. Coxæ yellow, that of fourth leg with golden patch; dorsal surface dark . . . . . *scintillans*.
  - b<sup>2</sup>. Coxæ blackish, no golden patch on fourth; dorsal surface pale . . . . . *bicolor*.
  - b<sup>1</sup>. Ocular tubercle with numerous small denticles . . . . . *insculptum*.
- b. Carapace and dorsal scute with granular sculpturing.
  - a<sup>3</sup>. Ocular tubercle weakly and irregularly denticulate; patellar apophysis much shorter than half the length of the segment . . . . . *citrinum*.
  - b<sup>3</sup>. Ocular tubercle strongly and regularly denticulate; patellar apophysis equal to half the length of the segment . . . . . *coronatum & unicolor*, Loman.

## Genus PANTOPSALIS, Sim.

In the Proc. Zool. Soc. 1902, ii. pp. 399-400 (published April 1903), I described two new species of this genus, *P. albipalpis* and *P. nigripalpis*, and suggested that the former was perhaps based upon the male of *P. Listeri*, White. I also referred to a specimen, collected by Mr. Jennings at Maungatua, as the female of *P. nigripalpis*. This specimen, however, turns out to be a male. Hence the supposition that the differences between *P. Listeri* and *P. albipalpis* are of a sexual nature proves to be without the foundation that was claimed for it; and I am compelled to regard the above-mentioned example from Maungatua as the representative of a new species. This I have described below, in addition to two new forms received since the printing of my paper in the P. Z. S.

*Pantopsalis coronata*, sp. n.

*Colour* mostly black, but the last segment of the carapace and the first tergite of the abdomen ornamented with a bright transverse orange-red band; second segment with a mesially interrupted pale band, the rest with a narrow chalky-grey band; palpi paler than the rest of the appendages, reddish brown, with the distal half of the tarsus yellow; forceps of the mandibles also yellowish brown.

*Carapace* smooth, with at most a few tiny granuliform spicules; ocular tubercle also almost entirely smooth, one or two minute spicules on its posterior portion.

*Terga and sterna of abdomen* smooth.

*Coxæ of appendages* smooth.

*Palpi* smooth, studded with short hairs; femur about as long as patella + tibia; tarsus longer than patella + tibia by one third of its length.

First and second segments of *mandibles* beset with sharp spiniform tubercles, the tubercles fewer on the inner side; the basal segment exceeding in length the width of the carapace and rather longer than the body, subcylindrical; the second segment of about the same length, gradually incrassate distally, about five or six times as long as its distal thickness; the digits each armed with one strong tooth and some apical denticles; the denticles on the immovable digit borne upon an eminence.

*Femora of legs* (? of fourth) sparsely spicular; patellæ apically spicular; tibia of second composed of four subsegments; femur of first a little longer than basal segment of mandible.

*Measurements in millimetres.*—Total length 3·8; width of carapace 2·5; length of basal segment of mandible 4·5, of second segment 5; femur of first leg 5·5, of second 9, of third 5; first leg about 23.

*Loc.* New Zealand: Timaru in Canterbury (*C. H. Tripp*).

For the type of this and of the following species of *Pantopsalis* from Timaru I am indebted to Mr. F. F. Laidlaw, of Owens College, Manchester. Both specimens were collected by Mr. C. H. Tripp, after whom I propose to name the sub-joined species.

*Pantopsalis Trippi*, sp. n.

♂.—Very nearly related to the foregoing, but without the orange-red band on the abdomen, the palpi more infuscate, and the forceps of the mandibles not so noticeably reddish.

*Carapace* with about half a dozen strongish spicules in front.

*Mandibles* much longer than in *P. coronata*; first segment nearly four times as long as the width of the carapace and longer than the femur of the first leg by at least one third of its length; the second segment a little longer, its distal fourth incrassate.

*Measurements in millimetres.*—Total length (contracted) about 3; width of carapace 2·5; length of first segment of mandible 9·5, second segment 10·5; femur of first 6, of third 5, of fourth 8; length of first leg 25.

*Loc.* New Zealand: Timaru in Canterbury (*C. H. Tripp*).

*Pantopsalis Jenningsi*, sp. n.

*Pantopsalis nigripalpis*, Poc. P. Z. S. 1902, ii. p. 400, ♀.

♂.—*Colour.* Body blackish, all the appendages a deep blackish brown, with faint annulations on the legs.

*Carapace* with its median frontal area studded with sharp denticles; ocular tubercle with two rows of minute denticles.

*Mandible* with its basal segment about twice as long as the palpus and shorter than the femur of the first leg; second segment incrassate, about six times as long as wide; both segments studded with sharp tubercles.

*Measurements in millimetres.*—Width of carapace 3; length of basal segment of mandible 5, of second segment 6; femur of first leg 7·5, of second 13, of fourth 10.

*Loc.* New Zealand: Maungatua in Dunedin (*J. V. Jennings*).

The type of this species was wrongly determined as a female, and referred to one of the forms of *P. nigripalpis*.

It is a male, and differs from the male of *P. nigripalpis* in the characters pointed out in the subjoined tables.

*Synopsis of the Species of Pantopsalis.*

- |   |   |                           |
|---|---|---------------------------|
| a. Mandibles shorter, basal segment shorter than femur of first leg and about as long as palpus.                  |   |                           |
| a <sup>1</sup> .  | Carapace and ocular tubercle smooth; anterior end of abdomen with broad transverse red stripe.            | <i>coronata</i> , sp. n.  |
| b <sup>1</sup> .  | Carapace studded with spiniform tubercles on its frontal portion; no red stripe on abdomen.               |                           |
| a <sup>2</sup> .  | Palpi uniformly black   | <i>Jenningsi</i> , sp. n. |
| b <sup>2</sup> .  | Palpi uniformly yellow  | <i>Listeri</i> , Wh.      |
| b. Mandibles very long, basal segment much longer than femur of first leg and about twice the length of the palp. |   |                           |
| a <sup>3</sup> .  | Ocular tubercle and carapace almost smooth (palpus paler than legs, its tarsus yellow in the distal half) | <i>Trippi</i> , sp. n.    |
| b <sup>3</sup> . Ocular tubercle and frontal area of carapace studded with fine sharp denticles.                  |   |                           |
| a <sup>4</sup> .  | Palpi uniformly blackish  | <i>nigripalpis</i> , Poc. |
| b <sup>4</sup> .  | Palpi uniformly yellow  | <i>albipalpis</i> , Poc.  |

If in the future it be discovered that the males of the species of *Pantopsalis* are dimorphic as to their mandibles, growing them either long and thin or short and thick, the number of species at present referred to the genus will perhaps be reduced to one half by the union of the pairs of species classified together in the following alternative table:—

- |   |                            |                      |
|---|----------------------------|----------------------|
| a. Carapace and ocular tubercle almost entirely without spicules.         |                            |                      |
| a <sup>1</sup> .  | Mandibles long             | <i>Trippi</i> .      |
| b <sup>1</sup> .  | Mandibles short            | <i>coronata</i> .    |
| b. Carapace and ocular tubercle studded with spicules, at least in front. |                            |                      |
| a <sup>2</sup> . Palpi yellow.  |                            |                      |
| a <sup>3</sup> .  | Mandibles long and slender | <i>albipalpis</i> .  |
| b <sup>3</sup> .  | Mandibles short and thick  | <i>Listeri</i> .     |
| b <sup>2</sup> . Palpi uniformly blackish.                                |                            |                      |
| a <sup>4</sup> .  | Mandibles long and slender | <i>nigripalpis</i> . |
| b <sup>4</sup> .  | Mandibles short and thick  | <i>Jenningsi</i> .   |

Genus PHALANGIUM.

*Phalangium Bettoni*, sp. n.

♀.—*Colour* olive-yellow, with black pigment in the depression on the carapace and black spots laterally on the abdomen; mandibles yellow, marbled with brown; palpi yellow, banded with blackish; legs with femora and tibiæ distally infusate and patellæ black in front.

*Dorsal scute* very finely and closely granular, the segments marked by transverse rows of small spicules; a few spicules on the sides of the carapace and many more in front, those in front of the tubercle arranged in two rows uniting behind midway between the tubercle and the anterior border, an isolated denticle in the middle of the lateral border. Ocular tubercle armed on the summit with two pairs of largish denticles, behind with one pair, and in front with two small denticles on one side, four on the other, all pointing upwards.

*Mandibles* unarmed except for three or four denticles in the middle of the upperside of the first segment.

*Palpi* unarmed; inner surface of patella and tibia studded with short erect hairs; the distal angle of the patella rounded and slightly produced.

*Legs* with femora and patellæ armed with serially arranged spicules; tibiæ compressed, quadrangular in section, with hairy edges.

*Measurements in millimetres.*—Total length 9; width of head 4; length of palp 6; femur of first leg 4, second leg 7, third 4, fourth 6; total length of first leg 20.

*Loc.* British East Africa: El donyo eb Urru, on the Mombasa-Uganda Railway (*C. S. Betton*).

This species may be at once distinguished from the South-African species *P. Leppanæ*, Poc. (P. Z. S. 1902, ii. p. 392), by the much smaller dorsal denticles, the smoothness of the coxæ, the slight production of the inner apex of the patella of the palp, &c.

### Family Triænonychidæ.

#### Genus SORENSENELLA, Poc.

[Proc. Zool. Soc. 1902, ii. p. 409 (April 1903).]

#### *Sorensenella bicornis*, sp. n. (Pl. XI. figs. 3, 3 a.)

♀.—*Colour.* Body blackish, median area of scute clearer reddish; palpi reddish; legs olive-black, obscurely ringed with paler markings.

Anterior portion of *dorsal scute* with a single long suberect spike near its antero-lateral angle; no tubercles on its anterior border apart from those that project between and on each side of the mandibles, and no spiniform tubercles above the base of the second leg. Ocular spike higher than in *S. prehensor*. First segment (carapace) of dorsal scute defined behind by a conspicuous procurved groove; the second, third, fourth, and fifth defined by feeble grooves and low tubercles; the

second antero-posteriorly constricted in the middle and, like the third, with a pair or two pairs of weak tubercles (grains); fourth with a pair of much stronger submedian tubercles and some weaker ones at the side; fifth with a transverse row of tubercles, of which two are larger but more wide apart than those of the fourth; sixth with a row of weak tubercles some distance in front of the posterior border of the scute, with a shallow transverse groove running just behind them. First and second free abdominal *tergal plates* also with a weak groove and weak row of tubercles, third more coarsely and numerous tubercular. *Sterna* grooved and tuberculated.

*Palp.* Trochanter with 1 long and 1 short spine below; femur with 6 spines below, the fourth and sixth the shortest, third the longest; 6 + 2 spines above and 3 on the inner side; tubercular externally; patella with 2 long internal spines; tibia with 4 internal and 5 external, whereof the first and third are small and subtubercular, this segment also with scattered tubercles; tarsus with 3 pairs of very long spines, also 1 small proximal spine on outer side and 1 small distal tubercle on each side.

*Legs* as in *S. prehensor*; the lateral branches of the claws of third and fourth legs almost twice as long as the median branch. (Pl. XI. fig. 3 a.)

♂.—Like the female, but with dorsal area flatter, less convex longitudinally.

*Palpi* longer and stouter, with the spines shorter, except one on the inner surface of the femur, which is very long, crossing its fellow of the opposite side in front of the mandibles, when the two palpi are approximated.

*Measurements in millimetres.*—♀. Total length 6; palp 5; first leg 7, second 12, third 11, fourth 8 (approx.).

*Loc.* New Zealand: Christchurch (*Arthur Dendy*).

This new species and *S. prehensor* (the only other species of this genus that has been discovered) may be compared as follows:—

- a. Carapace with two small tubercles near the middle of its anterior border and three spines on each side; spine on ocular tubercle low, not higher than long; dorsal tubercles coarser ..... *prehensor*, Poc.
- b. Carapace without anterior submedian tubercles and with only a single long spine on each side; ocular spine higher than its basal length; dorsal tubercles weaker ..... *bicornis*, sp. n.

With regard to the claws of the third and fourth legs of the Triænonychidæ, it may be observed that the suppression



of the small lateral branches seen in *Trienonyx* or *Acumontia* would lead to the one claw of the Plagiostethi, whereas the suppression of the median branch and the extension of the median cleft to the base of the claw in *Sorensenella* would yield the two-clawed condition seen in the Mecostethi.

#### Genus ACUMONTIA, Loman.

In the Proc. Zool. Soc. ii. pp. 405-409, for 1902, I described two new species and one new subspecies of this Mascarene genus, basing them for the most part upon a few rather badly preserved specimens recently received from Dr. Forsyth Major. What were presumed to be the males and females of the two species were described, and attention was drawn to a peculiarity in the structure of the protarsus of the first leg of the supposed female specimens. Additional and better-preserved material received during the passage of that paper through the press has convinced me that I fell into error in the following particulars:—Firstly, the distal emargination of the first protarsus is not a female, but a male character of some species, e. g. *A. Majori*, though not found in the males of *A. rostrata*; its absence in the male of *A. rostrata* and its presence in what were regarded as the females of this species were the causes of the errors in sexual determination that I made: secondly, the specimen described as the female of *A. rostrata* is the male of another species: thirdly, the specimens described as *A. Majori* probably represent the sexes of two distinct species: fourthly, the specimens described as *A. rostrata* subsp. *Cowani* are males and females of a form which must be regarded as a valid species.

#### *Acumontia rostrata*, Poc. (Pl. XI. figs. 2, 2 a.)

*Acumontia rostrata*, Poc. P. Z. S. 1902, ii. p. 405, ♂ nec ♀, text-fig. 82 A nec B.

The female of this very distinct species is unfortunately unknown. The penis of the male terminates in a tridentate glans retractile between an upper and a lower valve; the upper is double, being mesially cleft to its base, the lower is strongly curved and furnished beneath on each side with two strong setæ.

#### *Acumontia echinata*, sp. n.

*Acumontia rostrata*, Poc. P. Z. S. 1902, ii. p. 407, ♀, text-fig. 82 B.

♂.—*Dorsal scute* more closely granular than in *A. rostrata*; ocular tubercle not tubercularly spinous, but coarsely

granular; the carapacic portion of the dorsal scute with a single tubercle on each side midway between the ocular tubercle and the lateral margin, and two widely separated papilliform tubercles or spines before the sulcus defining its posterior limiting groove. The first segment of the abdominal constituents of the scute marked with a pair of erect, rounded, papilliform spines; spines on the second and third segments erect, subcylindrical, bluntly rounded at the apex, basally tubercular, as long as the spiniform process of the ocular tubercle. Spines on the fourth segment of the scute papilliform, cylindrical, bluntly rounded, alternately larger and smaller, one in the middle quite small, then on each side come a larger, smaller, larger, smaller, and a small marginal. First and second *free terga* similarly armed, but the spines are longer, the longest at least twice as long as wide at the base, the third with a pair of submedian tubercular papillæ and a marginal tubercle.

*Mandibles* spined much as in *A. rostrata*. *Palpi* also as in that species, but of the four spines on the dorsal side of the femur the first and fourth are low and tubercular, and on the lower side of the femur there are two subequal spines distad of the strong basal spine. First *leg* not so strongly tuberculous, its protarsus distally excavated beneath.

♀.—Not differing appreciably from the male in structure, except for the unmodified first protarsus and rather smaller palpi.

*Measurements in millimetres*.—♂. Total length 6; width 4; length of palpus 7.5, of first leg 11, second 21, third 15, fourth 21.

*Loc.* Madagascar: Ambohimombo, a village in the forest of the Tanala district (*C. I. Forsyth Major*).

#### *Acumontia Cowani*, Poc.

*Acumontia rostrata*, subsp. *Cowani*, Poc. P. Z. S. 1902, ii. p. 407.

Very nearly allied to *A. echinata*, but distinguishable by the smallness of the spines, the two longest on the scute not exceeding the height of the eye from the carapace and less than the height from the eye to the apex of the ocular spine. Spines on the posterior border of the scute and on the first, second, and third *free terga* all low, tubercular, and not higher than wide. Of the four spines on the upperside of the femur of the palp, the first is fairly long, a little shorter than the second, but longer than the fourth.

*Measurements* apparently as in *A. echinata*.

*Loc.* Betsileo (*Rev. Deans Cowan*).

*Acumontia Majori*, Pocock.

*Acumontia Majori*, Pocock, P. Z. S. 1902, ii. p. 407, text-fig. 83, A-A<sup>2</sup> (the specimen questionably described as a female).

Two specimens—a male and a female—were originally described under this name, but the example described as the male is the female, and *vice versa*. Moreover, the evidence supplied by other species does not justify the opinion that the very considerable structural differences between these two are merely attributable to sex. External sexual characters in the genus *Acumontia* and other genera of Triænonychidæ are usually slight as compared with what obtains in some of the Mecostethous Opiliones. Hence I feel compelled to regard the two specimens in question as representatives of distinct species.

The type of *A. Majori* is the specimen described on p. 409 as questionably a female, and figured on p. 403, figs. A, A<sup>1</sup>, A<sup>2</sup> \*.

*Acumontia Roberti*, sp. n.

*Acumontia Majori*, Poc. P. Z. S. 1902, ii. p. 407 (♂ ?).

To diagnose this species it will be only necessary to contrast it with *A. Majori*.

- a. Scute armed in front near the base of the ocular eminence with a single small spiniform tubercle, the lateral tubercles absent or small; dorsal spines on scute shorter, basal distance between those of the median pair greater than the length of the spine, apical distance between those of the posterior pair not less than the length of the spine; trochanter of palp unspined above; femur with three strong upper spines, five or six inferior spines, and one long internal spine remote from the distal end; distal spine on inner edge of tibia much shorter than the median, the latter close to the distal, remote from the proximal spine; proximal spine on inner surface of tarsus recurved (♂) ..... *Majori*, Poc.
- b. Scute armed in front with two spiniform tubercles, the upper (inner) of which is remote from the ocular eminence; dorsal spines on scute longer, the basal width between the medians less than their height, apical distance between the posteriors only about half their length; trochanter of palp with two spines above, the outer small; femur with five spines above, four in a series, the fifth isolated and more internal; the longish spine on the inner surface of

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\* In this figure the two inferior tubercles near the anterior border of the head-shield are much too large.

the femur close to the distal end; three or four spines on lower side of femur; distal spine on inner side of tibia long, almost as long as the proximal, the median spine only a little nearer to the distal than to the proximal (♀) ..... *Roberti*, sp. n.

*Loc.* Ambohimombo (*C. I. Forsyth Major*).

This species is named after Mons. A. Robert, who accompanied Dr. Major on his expedition to Madagascar and added largely to the value of the collections brought home.

*Synopsis of the Species of Acumontia.*

- a.* Legs short; first a little longer than body, second less than twice as long, fourth about twice as long; ocular spine sharply differentiated by its greater narrowness from the tubercle (♂ ♀) ..... *armata*, Lom.
- b.* Legs long; first about twice as long as body, second and fourth more than three times as long; ocular tubercle and spine forming a long and more or less evenly attenuated process.
- a*<sup>1</sup>. Protarsus of first leg of male unmodified; first, second, and third free abdominal terga with a few longer and shorter spines (♀ unknown) .... *rostrata*, Poc.
- b*<sup>1</sup>. Protarsus of first leg in male distally emarginate beneath; four abdominal terga armed with short spines or tubercles.
- a*<sup>2</sup>. Of the two hindmost pairs of spines on the scute the posterior are much longer and stouter than the anterior and narrowly separated at the base.
- a*<sup>3</sup>. One spiniform tubercle on anterior portion of scute near ocular tubercle; trochanter of palp unspined above, femur with four large dorsal spines, &c. .... *Majori*, Poc.
- b*<sup>3</sup>. Two spines on anterior portion of scute on each side remote from the tubercle; trochanter of palp spined above; femur with five dorsal spines, &c. .... *Roberti*, sp. n.
- b*<sup>2</sup>. Spines of the two hindmost pairs on the scute subequal and widely separated at the base.
- a*<sup>4</sup>. Tubercles on free abdominal terga subspiniform, much longer than wide; length of spines on dorsal scute much exceeding height of eye from carapace ..... *echinata*, sp. n.
- b*<sup>4</sup>. Tubercles on free abdominal terga not higher than wide; spines on scute low, about as high as height of eye above carapace ..... *Covani*, Poc.

Genus *MONOXYOMMA*, nov.

Ocular tubercle not rising from the anterior border of the carapace, but distinctly behind it, moderately high, and armed with a long suberect spine. Scute furnished with a single pair of long spines on what appears to be its third abdominal

segment, the rest of the segments of the scute indicated by a transverse series of granules. Dorsal valve of penis distinctly trilabiate, the protrusible portion (glans) elongate, simple, not tridentate.

Differing from *Acumontia* in the backward position of the ocular tubercle, in the presence of only a single pair of spines on the scute, and in the structure of the penis, the dorsal valve of which in *Acumontia* is bilabiate, the protrusible glans being strongly tridentate. (Pl. XI. figs. 1-1 a, 2-2 a.)

In many respects this genus seems to resemble *Trienonyx*, the type of which (*T. rapax*) is unknown to me; but it at least differs in that the ocular tubercle does not rise from the anterior border of the carapace, and the ocular and dorsal spines are very much longer. Moreover, sketches of the carapace of *T. valdiviensis* which Dr. Hansen has kindly sent to me show that the latter species, although referred by Sörensen to *Trienonyx*, has no distinct spines either on the ocular tubercle or on the scutum.

In the paper above quoted (P. Z. S. 1902, ii. pp. 403-405) I have referred several species of Trienonychidæ to the genus *Trienonyx*. One of them, namely, *T. sublævis*, is certainly congeneric with *Nuncia sperata*, Loman, with which I have been able, through the kindness of Dr. Loman, to compare it. The two differ in the form of the maxillary processes of the second leg and in some other specific features, but must be referred to the same genus. Now the ocular tubercle in *T. sublævis* occupies the same position as the tubercle of *T. valdiviensis*, and differs only in being lower and smooth. In neither does it rise "ex ipso margine scuti," as is said to be the case in *T. rapax* and as is the case in *T. verrucosa*, Poc. I am unable without more material to settle how many genera are here involved, provided all the species hitherto referred to *Trienonyx* and *Nuncia* represent more than one genus.

*Monoxyomma spinatum*, sp. n.

(Pl. XI. figs. 1-1 c.)

♂.—*Colour* a tolerably uniform reddish brown, lightly clouded with black.

*Dorsal scute* not thickly granular; a series of small tubercles above its anterior border, some more on the sides and above the margin of the thoracic portion; the abdominal portion marked with transverse rows of segmentally-arranged tubercles; a single pair of longish spines rising near the middle of the area between the posterior border of the scute

and the shallow depression defining the thoracic area; anterior margin with the normal 5 porrect spines. *Ocular tubercle* rather low, the eye not much more than its own diameter from its base; the spine longer than the height of the tubercle. The first and second *free terga* with a single row of tubercles, the third with more tubercles subserially arranged.

*Sterna* with transverse rows of weak granules, obsolete in the middle line.

*Mandibles* with basal segment armed distally with 1 or 2 spines, second segment with 2 or 3 strongish spines.

*Palpi*. Trochanter spined below; femur thick, arcuate, and armed above with about 9 spines in two rows, 3 spines on the inner side, 3 beneath externally, and some smaller ones internally, and a large stout bifid or trifid vertically directed spine at its proximal end beneath, also some scattered tubercles; patella unarmed externally, bispinate internally; tibia and tarsus with 3+3 spines, tibia granular below.

Tarsal segments of *legs* 6, 12, 4, 4; protarsus of first modified as in *Acumontia Majori*; coxa of first leg with strong cylindrical spines, coxæ of remaining legs scarcely granular.

*Measurements in millimetres*.—Total length 7; palpus 10; first leg 13, second 21, third 15, fourth 20.

*Loc.* New South Wales: Hill Grove (*R. Broom*).

### Family Phalangodidæ, Simon.

[=*Epedanidæ*, Thorell, Loman.]

### Genus EPEDANUS, Thor.

*Epedanus geniculatus*, sp. n. (Pl. XII. fig. 1.)

♀.—*Colour* a rich deep or paler brown, with a large pale green spot on each side of the cephalic area slightly behind the level of the ocular tubercle; legs and palpi dark, the former paler towards the extremities.

*Dorsal scute* polished, a row of marginal tubercles and a row upon each of the four sharply defined divisions. *Ocular tubercle* longitudinally oval, about twice as wide as long, about its own median length from the anterior border of the head-shield; spine smooth, erect, not so long as the width of the tubercle. Abdominal *sterna* smooth, each with a row of short bristles.

Basal segment of *mandible* smooth, second segment with two series of setiferous tubercles in front.

*Palpi* long; trochanter with 1 dorsal and 1 or 2 ventral

spines; femur slender, lightly arcuate, nearly two thirds the length of the trunk, tubercular above and below in its proximal half; patella proximally constricted, smooth, without spines or tubercles, about two thirds the length of the tibia; tibia with its proximal extremity bent upwards at right angles, hence the segment lies at right angles to the patella, armed inferiorly with three pairs of long spines, of which the distal are the shortest, and 1 short spine, varying in position, between the bases of the four proximal spines; tarsus bent at right angles to the tibia, oval, armed below distally with 3 external and 4 internal spines, which decrease in length towards the claw; claw about as long as tarsus.

*Legs* unarmed; coxa of first and second with a few low tubercles below; some marginal tubercles on that of the third; tarsal segments of first leg with 10 or 11, of third and fourth with 8 or 9 tubercles.

♂.—*Mandible* larger, with a few low tubercles on the basal segment, the second elevated at its proximal extremity, its tubercles larger. Tubercles on lower side of femur of palp produced into stout subcylindrical spines.

*Measurements in millimetres*.—Total length 7; greatest width 5.3; length of palp (including trochanter, but excluding claw) 10–11, its femur 4; second leg 17, third leg 16, fourth leg 21, its femur 6.

*Loc.* Hong Kong (*J. C. Bowring*).

This species apparently differs from the Malaysian species referred by Thorell to *Epedanus*, which are unknown to me, in the geniculation of the palpi and the absence of spines from the patellar segment.

#### Genus PLISTOBUNUS, nov.

Resembling *Epedanus* in the position, shape, and armature of the ocular tubercle, the number and depth of the sulci of the dorsal scute, the exposure of the spiracles, &c., but differing in the presence of a pair of long erect spines on the second abdominal segment of the scute, the mandibles very large and long, recalling those of *Rhampsinitus* amongst the Phalangiidae, and the two distal segments of the palpi rotated so as to fold in a horizontal plane with their lower surface looking inwards; also in the presence of spines on the femur of the first leg.

*Plistobunus rapax*, sp. n. (Pl. XII. fig. 2.)

*Colour* a uniform yellowish brown.

*Dorsal scute* smooth, polished; ocular tubercle about the

middle of the carapace, more than its long diameter from the anterior border, its spine erect; anterior border of carapace with a series of small suberect spines, lateral border of scute with a row of tubercles; spines on the second abdominal segment a little shorter than the ocular spine and a little shorter than the basal distance between them; posterior segment of the scute with a series of suberect spines, those on its median third the longest; the first, second, and third free abdominal terga also spined, though less strongly.

Basal segment of *mandible* long, subcylindrical, slightly incrassate, rather longer than the dorsal area of the carapace segment of the dorsal scute, armed with scattered tubercles or short spines and one very long spine near the middle of its dorsal surface and a shorter one nearer the base; the second segment oval, beset with setiferous bristles.

*Palpi* long, rather slender; coxæ armed above with 2, below with 3 tuberculiform spines; trochanter with 1 above and 3 below; femur slender, arcuate, armed above and below with short blunt spines; patella distally incrassate, elongate, armed with 1 short inferior spine and 3 long distal spines on the inner side; tibia rather shorter than the patella, armed with 5 long inferior (external) spines and 3 superior (internal) spines, also a few short spines on its lower surface; tarsus oval, slightly shorter than the tibia, armed with four pairs of long spines, and its lower surface furnished with a median denticulated crest, upon which the claw closes.

Femur of first *leg* with a series of spiniform tubercles below, that of the second leg similarly but less strongly tubercular, of the fourth leg practically smooth; coxa of first, second, and third legs with a series of granules.

Total length 3 millim.; palpi about 5, fourth leg about 10.  
*Loc.* Hong Kong (*J. C. Bowring*).

#### Genus PODACTIS, Thorell.

*Podactis pictulus*, sp. n. (Pl. XII. figs. 3, 3 a.)

*Colour.* Trunk yellowish red, ornamented with large deep green patches, exhibiting an alternate or chequered pattern (arrangement), mandibles and palpi a deep rich green; ventral surface of abdomen mesially yellow, laterally green.

Dorsal *scute* coarsely coriaceous, subgranular; from its anterior border on each side arise about 5 tubercular spines, the inner of which is the largest and meets and fuses with the end of a spiniform apophysis, which runs forward from the ocular tubercle in front of the eyes, the two forming a distinct archway. In addition to the paired larger dorsal



tubercles, the last two segments of the scute and the following free terga have a median tubercle equalling the others in size.

*Mandibles* of normal size; basal segment with 1 distal tooth, second segment with 3 proximal teeth.

*Palpi* scarcely longer than dorsal scute; trochanter armed with 1 upper and 2 lower spiniform tubercles; femur with 4 inferior (whereof 3 are proximal) and 1 inner distal; patella with 1 external, 2 internal; tibia with 3 pairs, tarsus with 2 pairs of long spines; patella, tibia, and tarsus of palp subequal in length.

Femur of first *leg* with 5 spines below, the second and third the longest, the fifth the shortest; the rest of the femora unspined, granular; coxæ granular, not spined, except the posterior aspect of that of the second leg, which bears 1 spine.

Abdominal *sterna* with a transverse row of small tubercles.

*Measurements in millimetres*.—Total length about 4.5 (contracted); palp 3.5; first leg 7, second 12, fourth 15.

*Loc.* Ceylon: probably Kandy (*E. E. Green*).

On the evidence supplied by one specimen I do not feel justified in separating this form generically from the Pinang species described by Thorell as *Podactis armatissimus* (Ann. Mus. Genova, (2) x. pp. 99-103, 1890). Specifically the two certainly differ in colour. A further difference is furnished by the larger size of the dorsal tubercles, justifying their description as "dentes fortes" in *P. armatissimus*. Nor is the ocular spine in *P. pictulus* describable as "dentem sat fortem obtusissimum"; nor has the femur of the first leg spines on its dorsal margin.

## EXPLANATION OF THE PLATES.

### PLATE XI.

*Fig. 1.* *Monoxyomma spinatum*, gen. et sp. n. Lateral view of dorsal scute and of first three free terga.

*Fig. 1 a.* Ditto. Dorsal aspect of extremity of penis. *gl.*, glans; *v.v.*, ventral valve; *m.d.v.* and *l.d.v.*, median and lateral lobes of dorsal valve.

*Fig. 1 b.* Ditto. Lateral aspect of same, with lettering as in 1 a.

*Fig. 1 c.* Ditto. Claw of fourth leg, showing small lateral branch.

*Fig. 2.* *Acumontia rostrata*, Poc. Dorsal aspect of extremity of penis with glans partially retracted. Lettering as in fig. 1 a, with *d.v.*, left lobe of dorsal valve.

*Fig. 2 a.* Ditto. Lateral aspect of same, with lettering as in fig. 2.

*Fig. 3.* *Sorensenella bicornis*, sp. n., ♂. Anterior end of dorsal scute.

*Fig. 3 a.* Ditto. Claw of fourth leg, showing large lateral branches, for comparison with fig. 1 c.

### PLATE XII.

*Fig. 1.* *Epedanus geniculatus*, sp. n. External side of right palp.

Fig. 2. *Plistobunus rapax*, gen. et sp. n. Lateral view of scute, anterior three free terga, mandible, and palpus, the latter with tarsus and claw omitted.

Fig. 3. *Podactis pictulus*, sp. n. Lateral view of scute and anterior three free tergal plates.

Fig. 3 a. Ditto. Ocular tubercle from the front.

LXI.—*Descriptions of new Genera and Species of New Zealand Coleoptera.* By Capt. T. BROUN, F.E.S.

- |                                   |                                 |
|-----------------------------------|---------------------------------|
| Group CNEMACANTHIDÆ.              | <i>Cylomissus glabratus.</i>    |
| <i>Mecodema costellum.</i>        | <i>Zeadolopus spinipes.</i>     |
| — <i>intricatum.</i>              |                                 |
| — <i>nitidum.</i>                 | Group OXYTELIDÆ.                |
| — <i>variolosum.</i>              | <i>Trogophlœus maritimus.</i>   |
| <i>Metaglymma rugiceps.</i>       |                                 |
| — <i>calcaratuni.</i>             | Group LUCANIDÆ.                 |
|                                   | <i>Lissotes auriculatus.</i>    |
| Group ANCHOMENIDÆ.                | <i>Mitophyllus comognathus.</i> |
| <i>Dichrochile cordicolle.</i>    |                                 |
| <i>Anchomenus Walkeri.</i>        | Group PYCNOMERIDÆ.              |
| <i>Tarastethus simplex.</i>       | <i>Pycnomerus nitiventris.</i>  |
| — <i>levicollis.</i>              | <i>Bothrideres picipes.</i>     |
|                                   |                                 |
| Group FERONIDÆ.                   | Group OPATRIDÆ.                 |
| <i>Trichosternus Walkeri.</i>     | <i>Syrphetodes simplex.</i>     |
| — <i>akaroensis.</i>              |                                 |
| — <i>bucolicus.</i>               | Group EDEMERIDÆ.                |
| <i>Pterostichus Kirkianus.</i>    | <i>Thelyphassa fuscata.</i>     |
| — <i>memes.</i>                   | <i>Techmessa longicollis.</i>   |
| — <i>prassignis.</i>              | <i>Exocalopus antennalis.</i>   |
| — <i>setiventris.</i>             |                                 |
|                                   | Group OTIORHYNCHIDÆ.            |
| Group HARPALIDÆ.                  | <i>Cecyropa lineifera</i>       |
| <i>Allocinopus sculpticollis.</i> | — <i>striata.</i>               |
|                                   | <i>Brachyolus albescens.</i>    |
| Group POGONIDÆ.                   | — <i>cervalis.</i>              |
| <i>Öpöterus latipennis.</i>       | <i>Aphela pictipes.</i>         |
| — <i>probus.</i>                  |                                 |
| — <i>parvulus.</i>                | Group CYLINDRORHINIDÆ.          |
|                                   | <i>Anagotus pallescens.</i>     |
| Group BEMBIDIIDÆ.                 | <i>Sargon carinatus.</i>        |
| <i>Bembidium actuarium.</i>       |                                 |
|                                   | Group RHYPAROSOMIDÆ.            |
| Group PERICALIDÆ.                 | <i>Memes rufirostris.</i>       |
| <i>Scopodes viridis.</i>          |                                 |
|                                   |                                 |
| Group HYDROPHILIDÆ.               |                                 |
| <i>Rygmodus nigripennis.</i>      |                                 |



