

dred of them might therefore have been expected to occur; not one has been found.

This peculiar character alone would seem sufficient to separate generically the so-called *Ceratodus Forsteri* from *Dipterus* and *Ctenodus*, and shows very clearly the relationship of the former to *Lepidosiren*, which is provided with two small pointed teeth in front of the upper dental plates\*, which latter do not differ much from those of this interesting Australian fish.

#### EXPLANATION OF THE PLATES.

##### PLATE XIII.

- Fig. 1.* Mandible, natural size, with the dental plate attached, of *Ctenodus imbricatus*: *a*, dental plate; *b*, glenoid notch.  
*Fig. 2.* Outside view, natural size, of the right ramus, with the dental plate attached, of *Ctenodus obliquus*: *a*, dental plate; *b*, symphyseal margin; *c*, glenoid notch; *d*, channel or cavity overhung by the dental plate.  
*Fig. 3.* Scale, much enlarged, of *Ctenodus elegans*: *a*, posterior or imbricated extremity.

##### PLATE XIV.

The palato-pterygoid bones, natural size, with dental plate attached, of *Ctenodus tuberculatus*: *a*, anterior extremity of the bone; *b*, dental plate; *c*, palatal side of the bone; *d*, pterygoid side of ditto.

XXIV.—*Catalogue of Zygopinæ, a Subfamily of Curculionidæ, found by Mr. Wallace in the Eastern Archipelago.* By FRANCIS P. PASCOE, F.L.S. &c., late Pres. Ent. Soc.

[Plates XV. & XVI.]

FOR the Zygopinæ of America and of the Old World Lacordaire sought to establish two sections depending on the, as a rule, greater breadth of the episterna of the metathorax in the former, and their narrowness in the latter, or, when in the latter the episterna are broad, on there being a funicle of only six joints, and the pectoral canal being absent. But, even with these limitations, the distinction will not now hold good, as several genera have broad episterna, either with a pectoral canal or with a seven-jointed funicle.

Lacordaire, however, was acquainted with but three of these Malasian genera, only one of which (*Arachnopus*) has narrow episterna; and this, with *Sphadasmus*, *Sympiezopus*, and their allies, it seems to me, had better be excluded from the subfamily. It is not at present my intention to swerve from Lacordaire's arrangement; still it may be desirable to show how the New-World Zygopinæ may be differentiated from the

\* "Description of the *Lepidosiren annectens*," by Richard Owen, Esq. Trans. Linn. Soc. vol. xviii. p. 341, tab. 27. fig. 2.

normal species of the Old World. Having regard to the aberrant portion, these differences may perhaps be best shown in a tabular form :—

True Zygopinæ.—Episterna of the metathorax broad, parallel, separating the posterior coxæ from the elytra; eyes always large, generally occupying the whole of the head or nearly so.

A pectoral canal; funicle of seven joints. *All the New-World Zygopinæ.*

Without a pectoral canal, or, if with one, then with a funicle of six joints; or with a funicle of seven joints without a pectoral canal. *Old-World Zygopinæ.*

Aberrant Zygopinæ.—Episterna of the metathorax narrow (*Nauphæus*, ex.), often indistinct, leaving the posterior coxæ in contact with the elytra; eyes of moderate size.

Perhaps entomologists only can appreciate the really wonderful collections made by Mr. Wallace, especially when we consider how poor the collections are, even the Dutch ones, which are occasionally sent to Europe. In this family Curculionidæ, to which the Zygopinæ belong, exclusive of the other Rhynchophorous groups, it is probably within the mark to say that he obtained during his travels among the eastern islands not less than a thousand species; and I think I am not far out of the way in estimating the number of new ones at nine-tenths of the whole. But even the knowledge we have thus obtained is insufficient to enable us to place any great dependence on the distribution or limitation of their beetle-fauna. If we suppose that Mr. Wallace has collected even half the species inhabiting these vast regions, extending for more than 4000 miles in length and about 1300 in breadth, it is obvious that in doubling the number results might be obtained which would very considerably modify any conclusions we may arrive at now. For instance, in the great island of Borneo, Sarawak, a small district on the north-west was the only part visited by Mr. Wallace; it is quite possible that on the south-east coast, opposite to and in one part not more than seventy miles from Celebes, the fauna might be found as allied to the "Australian region" of the archipelago as the north-western or, rather, the Sarawak fauna undoubtedly is to the "Indian region"—that is, supposing the Malayan-peninsular fauna is to be called Indian.

Wallace's Straits (as that portion of the sea has been called which separates Borneo, Java, &c. on the west from Celebes and the islands to the east of it as far as New Guinea) may in other branches of the fauna mark off the two regions alluded to; but, it seems to me, for the Coleoptera they do not show any stronger line of demarcation than would probably be found in taking other parts of the archipelago of about equal

extent. Taking, for instance, the 63 species noticed in this paper as belonging to the Malasian fauna, we find 5 genera and 17 species confined to the "Indian," 10 genera and 40 species to the "Australian," and 6 species, belonging to 4 genera, common to both regions, besides 4 other genera (*Dædania*, *Phylaitis*, *Pempheres*, and *Osphilia*) represented in both. They may be tabulated thus:—

	"Indian."	"Australian."	Common to both.
Mecopus . . . . .	2	4	2
Talanthia . . . . .	1	—	—
Agametis . . . . .	2	1	2
Ganyopis . . . . .	1	—	—
Odoacis . . . . .	2	—	—
Chirozetes . . . . .	2	3	1
Dædania . . . . .	1	1	—
Phylaitis . . . . .	2	2	—
Pempheres . . . . .	1	1	—
Emexaure . . . . .	1	—	—
Heurippa . . . . .	—	1	—
Metialma* . . . . .	—	1	1
Osphilia . . . . .	1	3	—
Brimoda . . . . .	1	—	—
Nauphæus . . . . .	—	1	—
Arachnopus . . . . .	—	10	—
Thyestetha . . . . .	—	1	—
Telaugia . . . . .	—	1	—
Idotasia . . . . .	—	5	—
Semiathe . . . . .	—	2	—
Elichora . . . . .	—	1	—
Xychusa . . . . .	—	1	—
Nyphæba . . . . .	—	1	—
	—	—	—
	17	40	6

Again, if we divide this "Australian region" into two groups, the one consisting of the shallow-sea islands of the Papuan group, New Guinea, Salwatty, Aru, Mysol, and Waigiou, the other the deep-sea islands between these and Wallace's Straits, comprising, among others, Celebes, Gilolo, Morty, Batchian, Ceram, and Amboyna, we find the 46 "Australian-region" species, including the 6 common to the two "regions," to be thus distributed:—5 genera and 21 species confined to the shallow sea, 5 genera and 17 species to the deep-sea islands, 8 species belonging to 5 genera common to both groups, and 3 other genera (*Chirozetes*, *Metialma*, and *Osphilia*) represented in both. The table below will show their special distribution:—

\* But this genus has species found in India and in China.

	Shallow-sea Islands.	Deep-sea Islands.	Common.
<b>Mecopus</b> . . . . .	2	2	2
<b>Agametis</b> . . . . .	1	1	1
<b>Chirozetes</b> . . . . .	3	1	
<b>Pempheres</b> . . . . .		1	
<b>Dædania</b> . . . . .	1		
<b>Phylaitis</b> . . . . .		1	1
<b>Heurippa</b> . . . . .		1	
<b>Metialma</b> . . . . .	1	1	
<b>Oosphilia</b> . . . . .	1	2	
<b>Nauphæus</b> . . . . .	1		
<b>Arachnopus</b> . . . . .	5	3	2
<b>Thyestetha</b> . . . . .	1		
<b>Telaugia</b> . . . . .		1	
<b>Idotasia</b> . . . . .	2	1	2
<b>Semiathe</b> . . . . .	2		
<b>Xychusa</b> . . . . .	1		
<b>Elichora</b> . . . . .		1	
<b>Nyphæba</b> . . . . .		1	
	—	—	—
	21	17	8

I do not attach much importance to these tables, or to any of the same character which may be drawn up on the strength of our present materials; but it would not be difficult to show that similar differences would be found to a greater or less extent in other cases. How very few species, for instance, are as yet known to be common to Dorey and Aru! and yet their faunas are probably almost identical.

Of the Australian Zygopinæ only two species have been described, *Ilacuris laticollis* and *Mecopus tipularius*. Another *Mecopus* and two *Idotasiæ* are in my collection; and these, as far as I know, are all that have at present been found in Australia—as when there are genera common to Malasia and Australia, they are frequently found in regions beyond the two: *Mecopus* and *Idotasia* have representatives in the Fiji Islands and New Caledonia respectively.

As to the habits of the species, Mr. Wallace tells me that the *Mecopi* are always found on dead trees in the forest, love the sunshine, and take flight rapidly. The members of the allied genera appear to have similar habits; but with the *Arachnopodes* it is different; they look like spiders and have the motion of spiders, frequent the edges of leaves, moving rapidly beneath when approached. *Idotasiæ* and their allies are also found on leaves, but are sluggish. The species observed by Lacordaire in Cayenne and Brazil "live exclusively on the trunks of trees, and are usually quiescent. At the approach of danger, they run rapidly round the tree; and when one attempts to seize them, they fall suddenly as though dead. But instead of

dropping to the ground, they take flight in the middle of their fall, and go back to the point from which they departed."

In the following table, which is drawn up on the principle of taking the most obvious characters rather than the most important, it is thought desirable to include two genera not occurring in the Malayan archipelago—one (*Sphadasmus*) represented by an Indian species, the other the Australian genus *Ilacuris*. Thus all the known Asiatic and Australian genera are here enumerated.

- a. No pectoral canal, or, if present, not passing the anterior coxæ.
- b. Eyes closely approximate, occupying the whole head or nearly so.
- c. Funicle six-jointed.
- d. Anterior femora linear, elongate.
- e. Scape not nearly reaching the eye ..... *Mecopus*, Schön.
- ee. Scape extending beyond the eye ..... *Talanthia*, n. g.
- dd. Anterior femora thickened, not, or only moderately, elongate.
- f. Propectus canaliculate.
- g. Second joint of the funicle very long ..... *Agametis*, Pasc.
- gg. Second joint of the funicle scarcely longer than the others ..... *Ganyopis*, n. g.
- ff. Propectus not canaliculate.
- h. Second abdominal segment as long as the third and fourth together.
- i. Anterior coxæ contiguous.
- j. Anterior tibiae compressed, curved, or bisinuate. *Dædania*, n. g.
- jj. Anterior tibiae straight or nearly so.
- k. Second joint of the funicle twice as long as the first ..... *Pempheres*, n. g.
- kk. Second joint of the funicle not longer than the first ..... *Phylaitis*, n. g.
- ii. Anterior coxæ not contiguous ..... *Chirozetes*, Pasc.
- hh. Second abdominal segment shorter than the third and fourth together ..... *Odoacis*, Pasc.
- cc. Funicle seven-jointed.
- l. Tarsi elongate, linear ..... *Emexaure*, n. g.
- ll. Tarsi less elongate, the three basal joints gradually broader.
- m. Body rhomboidal or elliptic.
- n. Three intermediate segments of abdomen equal. *Brimoda*, n. g.
- nn. Second segment of the abdomen as long as the two next together.
- o. Rostrum triangular at the base ..... *Osphilia*, n. g.
- oo. Rostrum cylindrical at the base ..... *Metialma*, n. g.
- mm. Body oblong, parallel ..... *Heurippa*, n. g.
- bb. Eyes not closely approximate, nor occupying the whole head.
- p. With ocular lobes.
- q. Intercoxal process narrowed ..... *Nauphaeus*, n. g.
- qq. Intercoxal process very broad ..... *Arachnopus*, Guér.
- pp. Without ocular lobes.
- r. Intermediate segments of abdomen of equal length *Sphadasmus\**, Schön.
- rr. Second abdominal segment longer than the next two together ..... *Ilacuris*, Pasc.

\* *Sphadasmus* has been considered to be confined to South Africa;

- aa.* A pectoral canal passing behind the anterior coxae.
- s.* Pectoral canal gradually effaced behind.
- t.* Rostrum in repose extending to the abdomen ..... *Thyestetha*, Pasc.
- tt.* Rostrum in repose not passing beyond the intermediate coxae ..... *Telaugia*, n. g.
- ss.* Pectoral canal limited behind.
- u.* Intercoxal process very broad, the posterior coxae close to the elytra.
- v.* Metasternum of moderate length, intermediate and posterior coxae on each side not approximate.
- w.* Femora canaliculate beneath, receiving the tibiae in repose ..... *Idotasia*, n. g.
- ww.* Femora not canaliculate beneath ..... *Semiathe*, n. g.
- vv.* Metasternum very short; intermediate and posterior coxae on each side nearly contiguous.
- x.* Pectoral canal not extending to intermediate coxae. *Xychusa*, n. g.
- xx.* Pectoral canal extending to the posterior border of the intermediate coxae ..... *Elichora*, n. g.
- uu.* Intercoxal process narrower; posterior coxae not near the elytra. .... *Nyphæba*, n. g.

### MECOPUS.

Schönherr, Disp. Meth. p. 304; Lacordaire, Gen. vii. p. 157.

The new species of this genus described below are all very distinct, and cannot possibly be confounded with any others. This is not the case with *M. bispinosus*\*, Weber, on which the genus is founded, and from which I cannot separate *M. Audineti*, Rld. Of the numerous examples in my collection, from seventeen localities, extending from Java and Singapore to New Guinea, I am unable satisfactorily to separate apparently different forms which, if taken without the intermediate individuals, would seem to represent good species. Here "natural selection" may be said to have failed to strike out connecting varieties, without which any such graduated series of forms can be considered only to represent a single spe-

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but the following species, not uncommon in Indian collections, brings it into our table:—

#### *Sphadasmus brahminus.*

*S. breviter ovalis*, fuscus, infra griseo-squamosus; rostro prothorace breviore; funiculi articulo primo secundo duplo longiore, tertio secundo fere æquali; prothorace transverso, subconico, regulariter convexo, medio et utrinque griseo-squamoso; elytris profunde striato-punctatis, interstitiis latis, convexis, basi figura transversa triloba, plaga laterali et maculis conjunctis in medio et pone medium sordide griseis notatis; pedibus squamis filiformibus vestitis. Long.  $4\frac{1}{4}$  lin.

*Hab.* Bengal.

\* *Rhynchænus bispinosus*, Fab. (Syst. El. ii. 475), quoted in Schönherr, is surely very different from this. Fabricius connects it with *Cionus*.

cies. It may be added that there is no ground for believing these varieties to be local subspecies. The descriptions below are all made from males; and it will be seen that two of them are without pectoral spines. There are a few other species in Mr. Wallace's collection; one of them is *M. trilineatus*, Guér., which was found in the islands of Aru and Waigiou as well as in New Guinea.

*Mecopus spinicollis.* Pl. XV. fig. 8.

*M. sat* breviter obovatus, ater, supra maculatum albo-squamatus, infra squamis albis dispersis; rostro prothorace duplo longiore, supra quinquecarinulato, basi silaceo-squamoso; antennis nigris, funiculo articulo secundo quam tertio duplo longiore; prothorace transverso, ampliato, medio antice paulo gibboso, in utroque latere cavitate sat profunda impresso et extrorsum spinis duabus erectis instructo, supra granulis opacis plurimis sat vase inter squamas detectis; elytris basi prothorace angustioribus, dorso planatis et versus scutellum paulo excavatis, sulcato-punctatis, interstitiis 4°, 5°, 6° spinis brevibus uniseriatim remote armatis; cornibus rectis, subulatis; pedibus minus elongatis, albo-squamosis, concinne nigro annulatis. Long. 5 lin.

*Hab.* Java.

In my specimen there are only two, but in the British Museum there is one with four or five shorter spines on each side. In the female they are replaced by tubercles.

*Mecopus cuneiformis.*

*M. oblongus*, postice gradatim attenuatus, nigro-piceus, silaceo-squamatus, femoribus elytrisque aliquando squamis niveis irroratis; rostro prothorace duplo longiore, quinquecarinulato, basi genisque silaceo-squamosis; antennis nigris, funiculo niveo-piloso, articulo secundo quam tertio triplo longiore; prothorace plus minusve ampliato, utrinque fortiter rotundato, supra subvage granulato; elytris anguste cuneatis, dorso planatis, striato-punctatis, interstitio quinto uniseriatim spinoso, reliquis exterioribus asperato-elevatis, apicibus truncatis, angulo externo tuberculato-productis; corpore infra dense albo-squamoso, maculis fuscis dispersis; femoribus supra silaceo-squamosis, reliquis albo sparsis. Long. 4-5 lin.

*Hab.* Sarawak.

In one or two of my specimens there are brown spots on the middle of the elytra. What I take to be the female has the apices of the elytra rounded. Another species very close to this, from Java, has the elytra mucronate in both sexes; but my male specimen is in too poor a condition for description.

*Mecopus pulvereus.* Pl. XV. fig. 3.

*M.* oblongus, postice gradatim attenuatus, prothorace squamulis, subtus elytrisque indumento, griseis dense tectus; rostro capite cum prothorace vix longiore, supra quinquecarinulato, squamulis griseis fere usque ad apicem irrorato; antennis dense griseo-pilosis, clava, basi excepta, nigra, funiculo articulo secundo quam tertio triplo longiore; prothorace sat amplio, apice angustato, squamulis rotundatis tecto; elytris cuneato-cordiformibus, apicibus rotundatis, striato-punctatis, interstitiis omnibus granulato-spinosis, marginibus exterioribus nigris; cornibus nullis; pectore longe lanoso; pedibus anticis quam reliquis multo longioribus; femoribus, præsertim posticis, incrassatis, his corpus vix superantibus, griseo-squamosis; tibiis tarsisque minus squamosis. Long. 4 $\frac{3}{4}$  lin.

*Hab.* Macassar.  
The same wedge-shaped outline as the last, but differently clothed, and the apices of the elytra rounded.

*Mecopus tenuipes.*

*M.* obovatus, fuscus, squamis grisecentibus albidisque variegatus; rostro prothorace fere triplo longiore, basi (præsertim lateribus) crebre rugoso-punctato, infra denticulato-granulato; antennis piceis, funiculo modice tenuato, articulis duobus basalibus fere æqualibus; prothorace valde transverso, ampliato, apice abrupte constricto, medio æqualiter fusco-squamoso, vittis tribus margineque basali subalbido-squamosis; scutello oblongo, griseo; elytris subcuneatis, supra subdepressis, apicibus rotundatis, interstitiis valde convexis, tertio postice bi-tridentatis, dorso griseo subvittatis, singulis pone medium macula fusca obliqua notatis; cornibus piceis, longiusculis, paulo recurvatis; corpore infra atro, albo marginato, abdomine segmento primo pone coxas brevi; pedibus tenuissimis; femoribus squamis griseis irroratis, posticis perparum incrassatis; tibiis posticis dense albo-squamosis. Long. 5 lin.

*Hab.* Dorey; Aru.

There is a vestige of another stripe on each side of the prothorax, making five in all; there are also a few nearly obsolete brownish spots on the base of the elytra; but in this genus colour is very uncertain \*.

\* Another species in my collection, from one of the Fiji islands, is very like the above in coloration and outline, but, *inter alia*, is finely granulated on the prothorax; it may be described as follows:—

*Mecopus collaris.*

*M.* forma et colore *M. tenuipedis*, sed rostro minus punctato, basi quadrangulari; antennis valde tenuatis, funieulo articulo secundo quam primo sesquiloniore; prothorace supra manifeste punctato, interstitiis tenuiter granulatis; elytris sutura postice subserratis, interstitiis 3°, 5°, 7°, granulis elongatis subapproximatis instructis; abdomine segmento primo longiore; femoribus posticis linearibus, nullomodo incrassatis; tibiis posticis dense nigro-squamosis. Long. 5 lin.

*Mecopus serrirostris.*

*M.* subellipticus, ater, squamis luteis, vel aurantiacis, albisque variegatus; rostro prothorace vix duplo longiore, squamoso, quinquecarinulato, carinulis, media excepta, subremote breviter spinosis, squamis carinulisque prope apicem evanescentibus; antennis tenuissimis, piceis, funiculo articulo secundo quam tertio quadruplo longiore; clava longe pedunculata; prothorace modice ampliato, granulis paucis inconspicuis instructo, atro, linea media nivea, lateribus luteis, sed plaga atra plus minusve ampliata signato; scutello niveo; elytris sat late subcuneatis, medio magis convexis, apicibus rotundatis, striato-punctatis, punctis oblongis, interstitiis angustis, acute elevatis, præsertim tertio pone medium, granulatis, granulis (propter squamas, vix conspicuis) atris, sutura vittisque duabus utrinque obliquis albis luteo lavatis; cornibus nullis; pectore integro, aurantiaco-lanoso; metasterno abdomineque atris, lateribus albo-squamosis; pedibus anticis elongatis, atris, femoribus intus aurantiacis, apicem versus apiceque ipso atris; femoribus intermediis et posticis (his modice incrassatis) plerumque aurantiacis. Long. 6 lin.

*Hab.* Batchian, Dorey, Saylee.

The yellowish tints of this species are more or less of a faded orange, but brightest on the breast, where, in the male, the scales are long and woolly-looking.

*Mecopus lituratus.*

*M.* obovatus, ater, squamis albis maculatim variegatus; rostro prothorace duplo longiore, valde arcuato, basi quinquecarinulato, utrinque vase squamoso; antennis subtestaceis, extrorsum infuscatis; funiculo articulo secundo quam tertio duplo longiore; prothorace sat brevi, vix ampliato, apice latiore, subtiliter creberrime punctato, maculis tribus albis basi notato; scutello oblongo, angusto; elytris breviusculis, utrinque modice rotundatis, striato-punctatis, interstitiis alternis elevatis, sat vase granulatis, apicibus rotundatis, basi suturaque, scutello inclusa, literam T formantibus, maculis plurimis albo-squamosis decoratis; cornibus subulatis, paulo recurvatis; corpore infra atro, sparse ochraceo-squamoso, ad latera squamis magis condensatis, metasterno utrinque plaga magna atra notato; pedibus anticis posticisque longitudine æqualibus; femoribus, posticis exceptis, modice incrassatis, his infra dente magno armatis. Long. 4 lin.

*Hab.* Tondano, Macassar, Sarawak.

## TALANTHIA.

*Rostrum* elongatum, tenuatum; *scrobes* subterminales. *Antennæ* longissimæ; *scapus* ultra oculum productus; *funiculus* 6-articulatus, articulis valde elongatis; *clava* ovata, basi pedunculata. *Prothorax* subquadratus, utrinque paulo rotundatus. *Scutellum*

parvum. *Elytra* prothorace paulo angustiora, basi supra planata. *Pedes* longissimi, lineares; *femora* mutica; *tibiae* fere rectæ; *tarsi* articulo basali longissimo. *Pygidium* obtectum.

With a habit very much like that of *Mecopus*, this genus is trenchantly differentiated by the unusual length of the antennæ—the scape alone, in (so far as I can judge) both sexes, extending to the posterior border of the eye.

*Talanthia phalangium.* Pl. XV. fig. 4.

*T. oblonga*, nigra, opaca; rostro nitido, corpore longiore, basi supra bicarinulato, ad latera sulcato, apicem versus arcuato, depresso; antennis piceis, funiculo articulo secundo longiore, primo tertioque æqualibus, cæteris gradatim brevioribus; prothorace subtiliter punctato, punctis majoribus vage interjectis, maculis septem albo-squamosis ornato, una basali linearis, tribus utrinque rotundatis; elytris latitudine duplo longioribus, lateribus sensim angustatis et parum rotundatis, sulcato-punctatis, punctis foveiformibus, intersticiis angustis, convexis, plaga communi scutellari, maculisque quatuor vel plurimis posticis, e squamis albis formatis, notatis; corpore infra ad latera albo plagiato; tibiis tarsisque infra concinne ciliatis, illis apice albis. Long.  $3\frac{1}{2}$ —5 lin.

*Hab.* Penang.

AGAMETIS.

Pascoe, Journ. Proc. Linn. Soc. (Zool.) x. p. 473.

The addition of four new species to this genus necessitates a slight modification of its characters as given by me in the work above quoted. The posterior femora of these species do not extend beyond the body as in the type; and all the femora, except in *A. deleta*, are more or less thickened towards the apex; the elytra, too, though still depressed, are not flattened. None of these species has a trace of the bright orange of their congener, *A. festiva*, but are of different greys and browns, with a few spots of whitish, which, as in other instances where these colours predominate, probably vary according to the individual. The forms of the femora and tibiæ seem to afford good characters.

*Agametis agrestis.*

*A. subovata*, fusca, squamis griseis sat dense tecta; rostro rufo-piceo, apice nigro, subtestaceis; prothorace valde transverso, modice punctato, sat parce squamoso, utrinque vitta indeterminata pallida notato; scutello haud conspicuo; elytris prothorace valde latioribus, sulcato-punctatis, punctis quadratis, intersticiis angustis, convexis, postice, prope apicem, subgibbosis maculisque duabus albidis notatis; corpore infra femoribusque dense griseo-squamosis; femori-

bus posticis incrassatis, medio macula nigra signatis; tibiis tarsisque rufo testaceis, squamis filiformibus albidis vestitis. Long. 4 lin.

*Hab.* Sarawak.

*Agametis deleta.*

*A.* subovata, ferruginea vel fusca, squamis grisescensibus vestita; rostro testaceo-piceo, subtilissime punctulato; antennis subtestaceis, funiculo articulo secundo sequentibus conjunctim haud longiore; prothorace valde transverso, sat dense squamoso, utrinque vitta indeterminata ochracea notato; scutello distincto, subquadrato; elytris prothorace paulo latoribus, sulcato-punctatis, punctis quadratis, squamigeris, interstitiis sat latis squamis elongatis remote uniseriatim munitis, sutura antice macula oblonga et pone medium maculis duabus albidis notata; corpore infra, lateribus thoracis, femoribusque dense albido-squamosis; femoribus posticis perparum incrassatis; tibiis posticis extus paulo arcuatis, anticis, apice solo crassiore, teretibus. Long.  $2\frac{3}{4}$  lin.

*Hab.* Singapore, Sarawak, Morty, Saylee.

*Agametis morata.*

*A.* subovata, fusca, flavid-squamosa; rostro nigro nitido, apice rufo-piceo, subtilissime punctulato; antennis subtestaceis, funiculo ut in precedente; prothorace valde transverso, sat dense squamoso, utrinque flavescente maculis indeterminatis notato; elytris prothorace paulo latoribus, sulcato-punctatis, punctis ovatis, interstitiis sat latis, convexis, squamis elongatis uniseriatim remote munitis, sutura antice, scutello inclusa, albido-squamosa, pone medium albo binotatis, maculisque indeterminatis fuscis variegatis; corpore infra pedibusque flavescenti-squamosis; femoribus incrassatis, praesertim posticis; tibiis breviusculis, extrorsum sensim incrassatis, posticis valde arcuatis. Long.  $2\frac{1}{2}$  lin.

*Hab.* Sarawak.

*Agametis ortyx.*

*A.* late subovalis, fusca, squamis ochraceis maculatim varia; rostro minus elongato, magis robusto, a medio ad apicem sensim latiore; antennis subpiceis, funiculo articulo secundo sequentibus conjunctim manifeste longiore; prothorace fortiter transverso, plaga media fusca, cruciatim separata, ornata, lateribus pallidis, indistincte fusco maculatis; elytris prothorace magis latoribus, sulcato-punctatis, maculis numerosis ochraceis fuscisque irroratis, quasi subtessellatis; corpore infra pedibusque ferrugineis, sat dense ochraceo-squamosis; femoribus incrassatis, posticis medio macula fusca notatis; tibiis anticis basi fortiter arcuatis, apice angustatis. Long. 3 lin.

*Hab.* Mysol.

## GANYOPIS.

*Caput* inter oculos cristatum; *rostrum* subvalidum, basi incrassatum, supra compressum, inter oculos ascendens; *scrobes* præmedianæ. *Scapus* oculum haud attingens; *funiculus* 6-articulatus, articulis crassis, tribus basalibus paulo longioribus, cæteris breviter obconicis; *clava* parva obovata. *Prothorax* suboblongus, apice tubulatus et supra haud sinuatus. *Elytra* prothorace latiora, elongata, subparallelia, postice subito declivia. *Pedes* mediocres; *femora* parum incrassata, infra dentata, postica longiora; *tibiæ* subrectæ; *tarsi* mediocres, articulo tertio fortiter dilatato; *coxæ* anticæ contiguæ. *Propectus* leviter canaliculatum, haud cornutum. *Abdomen* normale, suturis fere rectis.

In habit like *Agametis*, but the funicle different, the rostrum raised at the base, running up and forming a crest between the eyes, and the apical margin of the prothorax not sloped or sinuated above, as in that and many of the genera allied to *Mecopus*.

*Ganyopis leucura*. Pl. XV. fig. 7.

*G. elongata*, fusca; rostro prothorace breviore, ferrugineo, basi cristaque inter oculos silaceo-squamosis; antennis piceis, funiculo articulo secundo primo vix longiore, omnibus parce pilosis; prothorace latitudine longitudini fere æquali, fortiter sat crebre punctato, medio fusco, lateribus scutelloque dense silaceo-squamosis; elytris supra subplanatis, latitudine fere triplo longioribus, basi singulatim valde rotundatis, lateribus sensim angustatis, postice utrinque tuberculo conico et, apice ipso, tuberculo minore externo, munitis, fortiter seriatim punctatis, punctis approximatis, quadratis, lineis elevatis separatis, dimidio antico supra parteque declivi dense silaceo-squamosis; corpore infra femoribusque dense albo-squamosis; femoribus posticis macula fusca notatis; tibiis tarsisque minus dense squamosis. Long. 6 lin.

Hab. Malacca.

## ODOACIS.

Pascoe, Journ. Entom. ii. p. 427 (1865).

*Macrobamon*, Lacordaire, Gen. vii. p. 158 (1866).

Lacordaire's description of this genus was based on a female from Ceylon, which is doubtless distinct from the species described by me, as well as from the following. The genus is allied to *Mecopus*, and, owing to the length of the hind femora, is of a remarkable appearance. The male in the type (*O. grallarius*\*) has the anterior coxæ spined, not the breast as in

\* See Pl. XVI. fig. 5.

*Mecopus.* I have another species allied to it, from Singapore, but it is not quite perfect; it has a longer prothorax, with the posterior angles produced, and the sides of the elytra, for more than a third of their length, dilated, or forming a sort of ledge. The following is very distinct from both.

*Odoacis pedestris.*

*O. ovalis*, obscure fuscus, squamis sordide ochraceis sparse et submaculatim indutus; rostro nigro, basi quinquecarinulato; antennis piceis, griseo-pilosis; funiculo articulo secundo quam primo duplo longiore; clava subcylindrica; prothorace transverso, medio carinulato, angulis posticis producto-rotundatis, dorso reticulato foveato; elytris sulcato-punctatis, interstitiis alternis magis elevatis, quarto sextoque granulatis; corpore infra pedibusque squamis albidis irroratis; tibiis, præsertim posticis, valde compressis, his extrorsum nigris; tarsis posticis articulo basali valde compresso. Long. 4 lin.

Hab. Sarawak (and Labuan).

CHIROZETES.

Pascoe, Journ. Proc. Linn. Soc. Zool. x. p. 447.

From a communication lately received from M. Chevrolat, I find that the species described by me, and from which I drew up the characters of this genus, had been long ago published by Wiedemann \*, under the name of *Rhynchænus sphærops*, in a work which, at the moment, I had unfortunately overlooked. Of the species here described, the first three have a certain general resemblance to the type (*C. sphærops*); so have also, but in a less degree, the last two with one another. The following table will facilitate their recognition:—

Derm brown.

Prothorax longer than broad ..... *sphærops* (Wiedm.).

Prothorax transverse.

Elytra (♂) scarcely more than half as long again  
as broad.

Prothorax granulate ..... *auguralis*.

Prothorax not granulate ..... *junix*.

Elytra nearly twice as long as broad ..... *sectator*.

Derm black.

Apex of the prothorax entire ..... *nervosus*.

Apex of the prothorax sinuate ..... *grammicus*.

\* Zool. Mag. Bd. ii. Stück i. p. 129 (1825).

*Chirozetes sectator.*

*C. subellipticus*, fuscus, squamis silaceis conspersus; capite inter oculos silaceo-squamoso; rostro nitido, sat fortiter punctato; antennis piceis; prothorace transverso, apice supra modice sinuato, granulato-punctato, squamis silaceis irrorato, in medio et in utroque latere condensatis, vittas tres formantibus; elytris sulcato-punctatis, interstitiis alternis elevatis, reliquis complanatis, maculis silaceis notatis, pone scutellum in singulo elytro macula curvata, postice divergente, signatis; cornibus gracilibus, acutis; corpore infra dense albido-squamoso; pedibus minus squamosis. Long.  $5\frac{1}{2}$  lin.

Hab. Sarawak, Penang, Singapore.

*Chirozetes junix.*

*C. breviusculus*, fuscus; capite inter oculos silaceo-piloso; rostro sat fortiter punctato, basi vage silaceo-squamoso, apicem versus rufo; antennis testaceo-piceis; prothorace transverso, basi manifeste bisinuato, apice modice sinuato, haud granulato subcrebre punctato, squamis silaceis irrorato, in medio carinulato; elytris piceis, squamis silaceis flavescentibusque variegatim indutis, sulcato-punctatis, interstitiis  $1^{\circ}$ ,  $3^{\circ}$ ,  $5^{\circ}$  elevatis, hoc confertim punctato, reliquis subasperatis, plaga fusca pone medium notatis; cornibus gracilibus, acutis; corpore infra pedibusque albido-squamosis. Long. 4 lin.

Hab. Sarawak, Singapore, Mysol.

*Chirozetes auguralis.*

*C. subovalis*, fuscus; capite inter oculos genisque albidis; rostro ferrugineo, nitido, leviter confertim punctato; antennis testaceis, funiculo articulo primo secundo breviore; prothorace magis transverso, basi fortiter bisinuato, subgranulato-punctato, medio obsoleto carinulato, squamis albidis irrorato plagiisque quatuor notato, duabus apicalibus, duabus basalibus; elytris sulcato-punctatis, interstutiis plus minusve elevatis, praesertim prope basin, et interstutiis  $1^{\circ}$ ,  $3^{\circ}$ ,  $5^{\circ}$ , his asperatis, albido-squamosis, plaga in medio, ad suturam interrupta, nonnullis minoribus transversis ad latera notatis; corpore infra dense albido-squamoso, flavescente lavato; pedibus squamis albidis vestitis; tibiis posticis intus basi apiceque fuscis. Long. 4 lin.

Hab. Aru.

*Chirozetes nervosus.* Pl. XV. fig. 9.

*C. ellipticus*, niger; capite inter oculos genisque niveo-squamosis; rostro sat fortiter punctato; antennis piceis; prothorace latitudine vix longiore, apice supra perparum sinuato, confertim granulato-punctato, vittis tribus albidis notato, una mediana, una

utrinque, infra vitta laterali fuliginea, leviter punctato; elytris striato-punctatis, interstitiis alternis asperatis, nitidis, convexis, lineis albis ornatis, una, scutellum includente, margine basali sita, in singulo elytro una obliqua abbreviata ante medium et prope suturam, una post eam interstitio quinto limitata et fere ad apicem protensa, alteraque exteriore interstitio octavo locata; cornibus pectoris apice dilatatis; corpore infra squamis albidis sat dense vestito, lateribus sterni abdomineque in medio fuligineis; pedibus squamis piliformibus albis minus dense tectis. Long. 6 lin.

*Hab.* Amboyna.

Scales on the median stripe of the prothorax oval, with a central longitudinal depression, and placed, in the middle, obliquely or almost transversely.

*Chirozetes grammicus.*

*C.* subellipticus, fusco-niger; capite inter oculos genisque pallide ochraceo squamosis; rostro sat fortiter punctato, basi valde incrassato; antennis piceis; prothorace transverso, apice supra valde sinuato, granulato-punctato, squamis silaceis irroratis, in medio et ad latera condensatis vittas tres formantibus; elytris ut in præcedente, sed lineis obliquis a scutello incipientibus; cornibus pectoris apice acutis; corpore infra fuligineo, sterno segmentisque abdominis marginibus ochraceo-squamosis; pedibus ut in præcedente. Long.  $3\frac{1}{2}$  lin.

*Hab.* Mysol.

Scales on the median stripe of the prothorax narrowly wedge-shaped anteriorly, towards the base more oval, and without a central depression, arranged as in the last.

DÆDANIA.

*Rostrum* sat robustum, basi cylindricum, lineatum, apice depresso; *scrobes* præmedianæ. *Oculi* magni, contigi. *Scapus* basin rostri haud attingens; *funiculus* 6-articulatus, articulis duobus basalibus longioribus, cæteris submoniliformibus; *clava* pedunculata. *Prothorax* transversus, ampliatus, basi bisinuatus. *Elytra* prothorace haud latiora, subcuneiformia, supra subplanata, apicibus rotundata. *Pedes* mediocres, intermedii minores; *femora* incrassata, infra fortiter dentata; *tibiæ* compressæ, intus bisinuatæ; *tarsi* modice elongati, articulo tertio dilatato. *Coxæ* anticae approximatae. *Propectus* foveatum, bicornutum. *Epimera* mesothoracis haud ascendentia. *Abdomen* normale.

The anterior tibiæ in this genus have the inner edge bisinuate, owing to the tooth-like process at or near the middle;

the anterior femora also are much stouter, and have a large triangular tooth beneath.

*Dædania mesoleuca.* Pl. XV. fig. 1.

*D. obovata, nigra*; rostro prothorace paulo longiore, castaneo, fortiter crebre punctato, basi quinque-lineato; antennis piceis; prothorace utrinque fere parallelo, subtiliter granulato-punctato, maculis duabus, una apicali, una basali, lateribusque niveo-squamosis; elytris striato-punctatis, interstitiis convexis, uniseriatim granulatis, plaga magna basali subtriangulari, scutellum includente, niveo-squamosa; corpore infra, medio excepto, femoribus basi, tibiisque medio niveo-squamosis, reliquis tarsisque nigris; femoribus posticis corpus superantibus; tarsis anticis dilatatis, ciliatis. Long. 3 lin.

*Hab.* Mysol.

One of my specimens, apparently a female, has the anterior tarsi also dilated, but to a less extent.

*Dædania meleagris.*

*D. oblongo-obovata, nigra*; rostro basi lineis abbreviatis minus elevatis; antennis testaceis; prothorace utrinque rotundato, crebre punctato, squamis silaceis irrorato, maculis duabus, una apicali, una basali, lateribusque etiam duabus, sed majoribus, niveo-squamosis; elytris striato-punctatis, interstitiis convexis angustis, uniseriatim granulatis, squamulis silaceis maculatim dispositis, macula communi pone scutellum, singulatim maculisque tribus, 2 juxta suturam, altera exteriore notatis; corpore infra toto albo-squamoso; femoribus tibiisque minus dense squamosis; femoribus posticis corpus haud superantibus. Long.  $2\frac{3}{4}$  lin.

*Hab.* Sarawak, Singapore, Penang (and Cambodia).

The silaceous scales on the elytra are much smaller than those on the prothorax. A specimen, also from Sarawak, differs in having its markings pure ochre-yellow, and in its longer rostrum less rugose at the base.

PHYLAITIS.

*Rostrum tenuatum, basi cylindricum haud compressum, lineatum, apice subdepressum; scrobes præmedianæ. Oculi permagni, contigui. Scapus basin rostri vix attingens; funiculus 6-articulatus, articulis duabus basalibus, longioribus, æqualibus, cæteris transversis vel subtransversis; clava basi elongata, vix pedunculata. Prothorax transversus, basi bisinuatus. Elytra prothorace vix latiora, subcuneiformia, apicibus rotundata. Pedes elongati; femora modice incrassata, infra dentata, postica corpus longe superantia; tibiae graciles, longiusculæ, anticæ rectæ, reliquis*

flexuosis; tarsi elongati, articulo tertio dilatato. *Propectus* foveatum, bicornutum. *Episterna* metathoracis haud ascendentia. *Abdomen* normale.

In this genus the anterior tibiæ are slender, and of equal breadth throughout; the anterior femora are slightly thickened, and have a slender spine-like tooth beneath.

*Phylaitis V-alba.* Pl. XV. fig. 6.

*P.* obovata, nigra, albido-squamosa; rostro prothorace manifeste longiore, nigro-piceo, basi quinque-lineato, squamis albidis adsperso; antennis fusco-testaceis, funiculo articulis duobus basalibus longiusculis, cæteris breviter obconicis; prothorace fortiter transverso, ampliato, squamis albidis irrorato, apice nigro marginato; scutello lanciformi; elytris striato-punctatis, interstitiis latis, sordide albido variegatis, basi squamis majoribus albido-coloratis, literam V formantibus; corpore infra dense albido squamoso; pedibus squamis filiformibus albis minus dense vestitis. Long.  $2\frac{1}{4}$  lin.

*Hab.* Macassar, Celebes, Ternate, Mysol, Dorey.

*Phylaitis lineata.*

*P.* subelliptica, squamis angustis albidis conspersa; rostro prothorace cum capite manifeste longiore, basi quinque-lineato; antennis fusco-testaceis; funiculo articulis duobus basalibus longiusculis, cæteris transversis; prothorace subtransverso, vix ampliato, utrinque infra dense albido-squamoso, dorso vittis tribus indistinctis notato; scutello punctiformi; elytris striato-punctatis, interstutiis vase squamosis, duabus juxta suturam octavoque magis dense vestitis, inde lineatis; corpore infra dense albido-squamoso; pedibus fuscis, femoribus tibiisque squamis albis angustis conspersis. Long.  $2\frac{1}{2}$  lin.

*Hab.* Mysol.

*Phylaitis pusio.*

*P.* oblonga, rufo-fusca, variegatim niveo-squamosa; rostro nigro, extorsum rufo-testaceo, prothorace vix longiore, æquilato, basi obsolete trilineato; antennis testaceis; funiculo articulis duobus basalibus breviusculis, cæteris modice transversis; prothorace valde transverso, basi omnino niveo-squamoso; scutello parallelogrammico; elytris minus cuneiformibus, striato-punctatis, basi sutura, fascia obliqua medio, maculisque indistinctis posticis sparse niveo-squamosis; pedibus testaceis, squamis niveis sparse vestitis; femoribus posticis valde ampliatis, infra dente magno instructis. Long. 1 lin.

*Hab.* Sarawak.

This is the smallest species of the Malasian Zygopinæ, and is a narrower form than its congeners; it has also a

shorter funicle, and the rostrum is a little flattened at the sides at the base.

*Phylaitis cyclops.*

*P. oblonga*, fusco- vel testaceo-fusca, griseo-squamosa ; rostro testaceo, prothorace manifeste longiore, fere æquilato, basi obsolete lineato ; oculis peramplis, toto contiguis ; antennis testaceis, scapo rostri basin fere attingente ; prothorace valde transverso, ampliato, basi vix bisinuato, dorso sat dense griseo-squamoso, maculis quatuor brunneis transversim locatis ; scutello orbiculari ; elytris striato-punctatis, griseo-squamosis, singulatim maculis 3 v. 4 ornatis, 2 v. 3 antice ad latera, una pone medio sitis ; corpore infra sat dense albido-squamoso ; pedibus testaceis, minus dense squamosis ; femoribus posticis valde ampliatis, infra dente magno instructis. Long.  $1\frac{1}{2}$ - $1\frac{2}{3}$  lin.

*Hab.* Sarawak.

A slightly aberrant form, owing to the greater length of its scape.

PEMPHERES.

Characteres *Phylaiti* approximantes, sed *scapo* basin *rostri* fere attingente ; articulo secundo *funiculi* quam primo duplo longiore ; cæteris obconicis ; *femoribus* posticis corpus haud superantibus ; *tibiis* anticis flexuosis.

The relative length of the two basal joints of the funicle in the species of this and the preceding genus seems, from its persistence, to be a good primary character for both genera ; the form of the anterior tibiæ, however, is decisive of their generic difference.

*Pempheris trilineata.* Pl. XV. fig. 2.

*P. anguste obovata*, nigra, lineis albo-squamosis ornata ; rostro prothoraci cum capite longitudine æquali, ferrugineo, basi sat fortiter crebre punctato, et medio subcarinulato, apicem versus punctis evanescentibus ; antennis testaceo-piceis ; prothorace valde transverso, ampliato, apice supra sulcato, leviter granulato-punctato, vittis septem albis ornato, una mediana, tribus in utroque latere sitis ; elytris striato-punctatis, interstitiis latis, vix convexis, vittis tribus albis ornatis, una suturali communi, scutellum includente, una dorsali utrinque sitis ; corpore infra dense sordide albido-squamoso ; pedibus squamis filiformibus albidis vestitis. Long.  $3\frac{1}{2}$  lin.

*Hab.* Batchian, Morty, Amboyna.

*Pempheris habena.*

*P. anguste obovata*, nigra, lineis abbreviatis læte ochraceo-squamosis

ornata; rostro prothoraci cum capite longitudine æquali, fusco, basi leviter tricarinulato, crebre sat fortiter punctato, punctis apicem versus evanescentibus; antennis testaceo-piceis; prothorace transverso, paulo ampliato, leviter sat crebre punctato, vittis septem, ut in præcedente, sed ochraceis ornato; elytris breviusculis, striato-punctatis, interstitiis latis, regione scutellari, scutellum includente, vitta dorsali utrinque, medio interrupta, ochraceis ornatis, reliquo suturæ pilis albis instructis; corpore infra dense concinne ochraceo-squamoso; pedibus squamis filiformibus albis subvage vestitis. Long.  $3\frac{1}{2}$  lin.

*Hab.* Singapore, Sumatra.

#### EMEXAURE.

*Rostrum* longum, tenue, basi incrassatum, compressum, apice depresso; *scrobes* præmedianæ. *Oculi* magni, contigi. *Scapus* oculum vix attingens; *funiculus* 7-articulatus, articulo primo breviusculo, crassiore, secundo elongato, tertio quartoque sensim brevioribus, tribus ultimis obconicis; *clava* oblongo-ovata, distincta. *Prothorax* oblongus, basi bisinuatus, medio lobo productus. *Elytra* breviusecula, obovata, prothorace paulo latiora. *Pedes* graciles; *femora* in medio incrassata, infra dentata; *tibiæ* subrectæ; *tarsi* tenuati, articulo basali valde elongato, tertio haud dilatato. *Epimera* mesothoracis ascendentia. *Pygidium* obtectum. *Abdomen* breve, segmento secundo ampliato, sutura lateraliter valde arcuato.

The diagnostic characters of this genus are the seven-jointed funicle and long linear tarsi; the scales on the species described below are narrow and hair-like. The male has a manifestly shorter rostrum.

#### *Emexaure gallinula.* Pl. XVI. fig. 1.

*E. elliptico-rhomboidalis*, fusca, griseo-squamosa; rostro arcuato, prothorace duplo longiore, basi vage silaceo-squamoso, extrorsum ferrugineo; antennis læte testaceis; prothorace latitudine paulo longiore, sat crebre punctato, medio sparse squamoso, ad latera vitta curvata e squamis formata; scutello orbiculari; elytris striato-punctatis, interstitiis latis, planatis, interstitio suturali squamis longioribus oblique locatis, reliquis squamis griseis, non-nullis saturationibus variis; corpore infra pedibusque fusco-testaceis, illo sat dense, his sparse albido-squamosis. Long. 2 lin.

*Hab.* Sarawak.

#### HEURIPPA.

*Rostrum* longiusculum, tenue, basi compressum; *scrobes* medianæ. *Scapus* oculum haud attingens; *funiculus* 7-articulatus, articulis duobus basalibus modice elongatis, cæteris transversis; *clava* ad-

nata, longitudine funiculo æquali. *Oculi magni, contigi.* *Prothorax* suboblongus, basi rotundatus. *Elytra* parallelia, prothorace haud latiora. *Pedes mediocres; femora incrassata, subtus dentata; tibiæ basi arcuatæ; tarsi breves, articulo tertio haud dilatato.* *Epimera mesothoracis ascendentia.* *Pygidium obtectum.* *Abdomen* segmento secundo vix ampliato.

This is the only genus with an oblong cylindrical or subcylindrical body among all those with a seven-jointed funicle. The figure on the plate is far too broad, and gives a very inadequate idea of the insect.

*Heurippa amœna.* Pl. XV. fig. 5.

*H. oblonga, angusta, nigra;* rostro modice arcuato, ferrugineo, longitudine prothoracis, basi utrinque niveo-squamoso; antennis testaceis; prothorace basi longitudini æquali, antice angustiore, crebre punctato, maculis septem niveo-squamosis ornato, una basali linearis, tribus utrinque sitis; scutello ovato; elytris pone humeros paulo incurvatis, sulcato-punctatis, interstitiis subplanatis, cervino-squamosis, vitta suturali postice ampliata lateribusque nigris; corpore infra sat dense niveo-squamoso; pedibus rufo-testaceis, leviter albo-squamosis; femoribus posticis linea nigra obliqua notatis. Long. 2 lin.

*Hab.* Macassar.

METIALMA.

*Rostrum tenuatum, basi cylindricum, squamosum, supra lineatum; scrobes medianæ. Scapus oculum haud attingens; funiculus 7-articulatus, articulo primo crassiore, secundo longiore, cæteris brevioribus et gradatim latioribus; clava ovata, adnata. Prothorax transversus, subconicus, basi lobo mediano productus. Elytra cordiformia, supra planata, apice late rotundata. Pygidium detectum, transversum. Femora incrassata, præsertim antica, dente valido infra armata; tibiæ arcuatæ, intermediæ posticæque flexuosaæ, extrorsum incrassatae, apice oblique truncatae; tarsi mediocres, articulo tertio dilatato. Epimera mesothoracis ascendentia. Abdomen normale. Corpus rhomboideum.*

The species on which this genus is founded have a very uniform and distinctive appearance, and apparently are very widely distributed, two of them being found in Bombay and Hong Kong\* respectively.

\* I take this opportunity to describe them: the first probably marks the range of the subfamily to the north-west; and the other has perhaps very nearly attained the limit to the north or north-east.

*Metialma scenica.*

*M. nigra, supra pedibusque squamis filiformibus flavidis albisque variegata; rostro fusco, nitido, quinquelineato; antennis testaceis, funiculo*

*Metialma nævia.* Pl. XVI. fig. 4.

*M. nigra*, squamis filiformibus albis variegata; rostro fusco, nitido, apice luteo, basi crassiore, (?) supra quinque-lineato parce squamoso; antennis subtestaceis, funiculo articulis quinque ultimis transversis; prothorace supra indistincte albo varia, basi macula majuscula alba, margine nigra, quadrida circumdata; scutello oblongo, distincto; elytris striato-punctatis, interstitiis latis, planatis, basi, linea obliqua media maculisque incertis albo-squamosis, notatis; corpore infra dense albido-squamoso; pedibus minus squamosis; femoribus anticis dente triangulari maximo infra armatis, posticis extus in medio macula fusca signatis. Long.  $2\frac{1}{4}$  lin.

*Hab.* Macassar, Gilolo, Tondano, Java.

There are slight differences among my specimens, but nothing that can be regarded as specific; that from Java has a rostrum not thickened at the base, and, judging from *Mecopus*, probably represents a male.

*Metialma novata.*

*M. præcedenti affinis*, rostro magis attenuato, basi in utroque latere obsolete lineato; funiculo articulis quinque ultimis longioribus; prothorace antice minus angusto, medio nigro plagiato, basi macula albida literam T formante; scutello orbiculari, distincto; elytris brevibus, lateribus magis gradatim angustatis, supra albido-

articulis duobus basalibus minus longiusculis; clava magna, ovali; prothorace manifeste transverso, lobo medio triangulari, flavidio squamoso, maculis fuscis sex, quatuor ante medium transversim sitis, duabus basalibus, ornato; elytris subcordatis, striato-punctatis, apice late rotundatis et macula nivea notatis, squamis albidis flavidisque intermixtis, maculis nigris concinne dispersis; corpore infra albido-squamoso, segmentis tertio quartoque medio nigris; pedibus nigro annulatis. Long. 3 lin.

*Hab.* Bombay.

*Metialma signifera.*

*M. nigra*, squamis filiformibus flavidis albisque interjectis subvariegata; rostro fusco, nitido, quinque-lineato; antennis subtestaceis, funiculo articulis duobus basalibus longiusculis; clava breviter ovata; prothorace modice transverso, basi lobo medio producto, hoc maculis duabus notato, una postica alba, altera flava, duabus conjunctis linea nigra fere circumdatis; elytris breviter subcordatis, apice latis, leviter emarginatis, striato-punctatis, flavidio-squamosis, squamis albis parce intermixtis, maculisque nigris vase dispositis, apice macula laete flava ornata; corpore infra albido-squamoso; pedibus flavidis, femoribus apicem versus nigro annulatis. Long.  $1\frac{2}{3}$  lin.

*Hab.* Hong Kong.

squamosis irregulariter nigro maculatis; pygidio fere obtecto; corpore infra dense albido-squamoso, epimeris mesothoracis nigro notatis; pedibus ut in præcedente. Long. 2 lin.

*Hab.* Aru.

From Saylee there is another species of this genus, probably allied to this, but very much worn.

### BRIMODA.

*Rostrum* modice robustum, prothorace vix longius, basi cylindricum, lineatum; *scrobes* medianæ. *Funiculus* 7-articulatus, articulis duobus basalibus longioribus, cæteris brevibus, gradatim crassioribus, ultimo clavæ adnato. *Prothorax* transversus, utrinque rotundatus, basi perparum bisinuatus. *Elytra* trigona, apice rotundata. *Pedes* breves; *femora* subincrassata, infra leviter dentata; *tibiæ* validæ, compressæ, arcuatæ, vel flexuosæ, apicem versus crassiores; *tarsi* breviusculi. *Epimera* mesothoracis parum ascendentia. *Propectus* canaliculatum. *Coxæ* anticæ sejunctæ. *Abdomen* segmentis tribus intermediis æqualibus.

A small dull-looking insect at present is the sole representative of this genus, which, however, is one of the most distinct of the group.

#### *Brimoda pagana.*

*B.* subelliptica, fusca, parce rude griseo-squamosa; rostro piceo, basi paulo squamoso; antennis subtestaceis; prothorace modice transverso, apice lato, utrinque manifeste rotundato, parce griseo-squamoso, in medio carina abbreviata valida munito; elytris fortiter striato-punctatis, interstitiis convexis, tuberculato-asperatis, squamis suberectis vestitis; corpore infra femoribusque piceis, dense albido-squamosis; tibiis parce squamosis. Long.  $1\frac{3}{4}$  lin.

*Hab.* Singapore.

### OSPHILIA.

*Metialmæ* fere congruens, sed *rostro* basi triangulariter compresso; *tibiis* intermediis posticisque rectis, sublinearibus; et *corpore* magis elliptico.

Whilst *Metialma* contains species nearly homogeneous, in this genus they are more diversified, although there are several which are so alike that, with my present materials, I have not attempted to describe them. Three of these are allied to *O. flavirostris* (two from Sula and one from Sarawak); and two to *O. undata* (one from Makian, the other from Batchian). They are all thinly clothed with narrow scales, so narrow in some as scarcely to be distinguished from hairs. A transverse section of the rostrum at the base would be nearly represented

by the letter V reversed, =  $\Lambda$ ; in *Metialma*, by an O. The antennæ also are situated much nearer the base of the rostrum; the scape is therefore much shorter.

*Osphilia flavirostris.*

*O. elliptica*, fuscescens, supra squamulis angustis griseis variegata, subtus æqualiter vestita; rostro fortiter arcuato, subtestaceo, nitido, basi genisque dense flavo-squamosis; antennis subtestaceis, scapo brevi; funiculo articulo secundo quam primo sesquiloniore, cæteris gradatim brevioribus, ultimis transversis; prothorace sat valde transverso, apice haud angusto, basi fortiter bisinuato, lobo medio rotundato, perparum producto, disco plagis quatuor fuscescentibus, cruciatim separatis, signato; elytris subcordatis, striato-punctatis, basi suturaque plus minusve maculisque plurimis griseo-squamulosis; pedibus subtestaceis, griseo-pilosis; femoribus anticis incrassatis, subtus dente valido instructis, reliquis minus robustis, posticis corpus longe superantibus; tibiis anticis gracilibus, modice arcuatis, intermediis posticisque parum compressis; tarsis articulo primo sat elongato. Long. 2 lin.

*Hab.* Mysol.

*Osphilia onca.*

*O. subrhomboidalis*, fuscescens, supra squamulis angustis griseis variegata; rostro ut in præcedente, sed longiore; prothorace etiam simillimo, sed lobo medio truncato; elytris magis late subcordatis, griseo-squamulosis, maculis fuscescentibus plus minusve conjunctis subfasciatim dispositis; corpore infra dense flavidо-squamoso; pedibus ut in præcedente, sed femoribus anticis crassissimis, dente magno triangulari apice acute spinoso instructis, posticis corpus haud superantibus; tibiis anticis fortiter arcuatis, ad apicem excrvatis. Long.  $1\frac{2}{3}$ -2 lin.

*Hab.* Morty, Ceram.

*Osphilia apicalis.*

*O. subrhomboidalis*, nigro-fusca, pilis flavidis parce vestita; rostro nigro, nitido, dimidio apicali subferrugineo, basi genisque parce silaceo-pilosis; antennis subtestaceis; funiculo articulo secundo quam primo vix sesquiloniore, tribus ultimis ovalibus; clava subcylindrica; prothorace latitudine longitudini in medio æquali, subtiliter confertim punctulato, basi vix bisinuato, lobo medio producto, truncato, lateribus margineque apicali flavidо-pilosis; elytris oblongo-subcordatis, striato-punctatis, sutura postice, apice maculisque lateralibus flavidо-pilosis; corpore infra nigro, laterali flavidо-piloso; femoribus anticis valde incrassatis, infra dente oblongo-triangulari armatis; tibiis anticis fortiter arcuatis, prope apicem excrvatis; pedibus reliquis sat tenuatis, omnibus subferrugineis, flavidо-pilosis. Long. 3 lin.

*Hab.* Sarawak.

*Osphilia undata.* Pl. XVI. fig. 6.

*O.* subrhomboidalis, fusca, variegatim griseo-pilosa; rostro nigro, nitido, prope apicem ferrugineo, basi parce flavidio-piloso; antennis subferrugineis, funiculo articulo secundo quam primo fere duplo longiore, tribus ultimis transversis; clava elongata, subcylindrica; prothorace latitudine longitudini in medio æquali, lobo medio anguste producto, truncato; disco plagis quatuor fuscis, cruciatim separatis, signato; elytris subcordatis, striato-punctatis, griseo-pilosus, maculis fuscis fasciatim dispositis; corpore infra vix dense piloso; pedibus magis elongatis, pilosis; femoribus anticis dente triangulari magno armatis; tibiis anticis fortiter arcuatis, prope apicem excurvatis; tibiis intermediis posticisque tenuatis. Long. 3-3 $\frac{3}{4}$  lin.

Hab. Batchian.

## NAUPHÆUS.

*Caput* sphæricum; *rostrum* modice arcuatum, depresso; *scrobes* præmedianæ, obliquæ. *Scapus* brevis; *funiculus* 7-articulatus, articulo secundo quam primo multo longiore, cæteris gradatim brevioribus et crassioribus; *clava* ovata, distincta. *Oculi* magni, verticem haud occupantes. *Prothorax* transversus, apice tubulatus, antice utrinque rotundatus, basi medio lobatus, lobis ocularibus manifestis. *Elytra* basi prothoracis haud latiora, subnavicularia, utrinque sensim angustiora, apicibus rotundatis. *Pedes* intermedii minores, antici longiores; *femora* compressa, incrassata, infra dentata; *tibiae* compressæ, arcuatæ; *tarsi* modice elongati, articulo tertio dilatato. *Rima pectoralis* profunda, inter coxas anticas terminata, apice (in mesosterno) fornicato. *Episterna* metathoracis lata. *Epimera* mesothoracis haud ascendentia. *Abdomen* normale.

There is some doubt respecting the position of this genus, which, except for its large contiguous eyes, not covered by the ocular lobes in repose, I should have placed with *Cryptorhynchinae*; but, assuming it to be a *Zygopine*, it would, according to Lacordaire's arrangement, take its place with the New-World forms, owing to the breadth of the metathoracic episterna conjointly with the presence of a pectoral canal and a seven-jointed funiculus. For the present I place it after *Sphadasmus*, partly on account of the eyes not occupying the whole of the head, and partly because it leads to *Sympiezopus*, which has a deep pectoral canal. The remarkable insect described below is closely covered above with black opaque spots, in the middle of each of which is a little shining granule: the effect of these among the pure grey scales is to give the upper surface an ashy colour; the under part is of a pure ivory-white.

*Nauphæus miliaris.* Pl. XVI. fig. 3.

*N.* oblongo-obovatus, niger, supra granulis nitidis nigro circumdati confertim maculatus, interstitiis griseo-squamosis, medio prothoracis elytrorumque antice linea grisea notatis; capite supra oculos dense squamoso, maculis duabus fuscis decorato; rostro prothorace multo breviore, testaceo, subtiliter remote punctulato, basi squamoso; antennis testaceis; prothorace pone apicem utrinque macula obliqua nigra; scutello distincto, orbiculari; elytris lateribus modice rotundatis, basi pone scutellum paulo gibbosis, in medio dorsi utrinque perparum longitudinaliter excavatis, striato-punctatis, interstitiis latis, vix convexis, confertim uniseriatim granulatis, medio macula rotundata nigra ad suturam approximata, plagiisque duabus oblongis margine externo, ornatis; corpore infra femoribusque densissime eburneo-squamosis; tibiis tarsisque squamis filiformibus minus dense vestitis, his infra flavo-tomentosis. Long.  $4\frac{1}{2}$  lin.

Hab. Waigiou, Mysol.

[To be continued.]

XXV.—*Ceratodus, and its Place in the System.*

By Dr. ALBERT GÜNTHER, F.R.S.

THE general external appearance of this most remarkable fish has been described by Mr. Krefft in Proc. Zool. Soc. 1870, p. 221. My observations\* are based on three specimens, viz. one without intestines, one fully developed male, and one female which does not appear to have attained to maturity. Differences in the number and microscopical structure of the scales seem to indicate the existence of a second species beside that described by Mr. Krefft as *Ceratodus Forsteri*. Its scales are considerably smaller and more numerous; and it may be named *Ceratodus miolepis*.

The skeleton represents the type which is so well known from Owen's, Bischoff's, and Hyrtl's descriptions of *Lepidosiren* and *Proptopterus*. In certain points of detail, such as the arrangement of the bones of the skull, the form of the cerebral and acoustic cavities, the development of the first rib and apophyses generally, the structure of the scapular arch and pelvis, the resemblance of the genera named is perfect; and from an examination of the skeleton alone the conclusion might have been drawn that they belong to the same natural

\* The following notes are a short *résumé* of a memoir presented to the Royal Society at the beginning of last month, and containing a detailed description of the entire organization of *Ceratodus*, with the exception of the nervous system.

**XXXIII.—Catalogue of Zygopinæ, a Subfamily of Curculionidæ, found by Mr. Wallace in the Eastern Archipelago.**  
By FRANCIS P. PASCOE, F.L.S. &c., late Pres. Ent. Soc.

[Continued from p. 222.]

ARACHNOPUS.

Guérin, Voy. Coq. (Entom.) p. 127; Lacordaire, Gen. vii. p. 159.  
*Arachnopus*, Boisduval, Voy. Astr. ii. p. 435.

Lacordaire, who was only acquainted with one species (*A. gazella*), considered this genus so aberrant that he hesitated whether he should not make it a distinct tribe. In my opinion it would have been quite right to do so, as the new forms described below, although all furnished with a pectoral canal, are evidently allied to it, and indicate a subfamily distinct from the normal Zygopinæ of Malasia and America. The chief structural peculiarities of this group are the great breadth of the intercoxal process, in all except *Nyphæba*, whereby the posterior coxæ are placed close to the edge of the elytra, and the narrow metathoracic episterna; then underneath the femora there is frequently an excavation or canal for the reception of the tibiæ, and the latter are often deeply scored or lined in a manner never seen in the genuine Zygopinæ. There are five species of this genus already described, viz.:—*A. striga*, Guér. (Dorey); *A. gazella*, Boisd. (Dorey, Waigiou, Aru); *A. persona*, Vollenh. (Waigiou, Batchian); *A. frenatus*, Vollenh. (Salwatty); *A. geometricus*, Vollenh. (Tondano).

*Arachnopus binotatus.*

*A. ovatus*, niger; rostro basi confertim rude punctato; antennis nigris; funiculo articulis duobus basalibus breviter obconicis, cæteris rotundatis, ultimo clavam quasi incipiente; prothorace subtiliter crebre punctato; elytris in medio prothorace latoribus, seriatim punctatis, punctis sat magnis sed leviter impressis et paulo approximatis, interstitiis latis, in singulo elytro macula magna rotunda densissime flavescenti-squamosa decoratis; corpore infra nigro; femoribus tibiisque nigro fimbriatis. Long. 6 lin.

Hab. Aru.

*Arachnopus Wallacei* \*.

*A. ovatus*, ater; rostro basi confertim rude punctato et vage albosetoso; antennis nigris; funiculo articulis duobus basalibus longiusculis; prothorace sat crebre punctato, basi in medio paulo excavato, antice utrinque maculis duabus niveis, basi linea griseo-

\* A figure of this species is given in Wallace's 'Malay Archipelago,' vol. ii. p. 154.

squamosa marginato; elytris in medio prothorace paulo latioribus, seriatim conferte et grosse punctatis, interstitiis indistinctis, in singulo elytro maculis quinque niveo-squamosis decoratis; corpore infra nigro, pectore ante coxas anticas linea curvata, metasterno antice, segmentis abdominis tertio quartoque utrinque et ultimo toto, niveis; pedibus parce niveo-setosis; femoribus tibiisque albo fimbriatis. Long. 6 lin.

Hab. Gilolo.

*Arachnopus phaleratus.* Pl. XVI. fig. 9

A. ovatus, niger; rostro ( $\delta$ ) basi tenui, modice punctato, ( $\varphi$ ) basi tumidulo, magis rude punctato; oculis supra albo marginatis; prothorace lateribus antice fortiter rotundatis, deinde subparallelis, confertim granulato-punctato, punctis plerumque griseo-squamigeris, linea laterali ab apice ad basin decorato; elytris grosse sulcato-punctatis, punctis approximatis, interstitiis tuberculatis, vitta suturali fasciisque duabus angustis niveis, una basali, altera curvata mediana; corpore infra nigra, pectore segmentoque basali abdominis confertim punctatis; femoribus subtiliter granulatis, parce albo-setosis; tibiis albo-fimbriatis. Long. 4–6 lin.

Hab. Ceram.

*Arachnopus simius.*

A. ovatus, niger; rostro basi utrinque albo lineato, rude sulcato-punctato, apicem versus sensim subtiliter punctulato; prothorace utrinque rotundato, leviter confertim punctato, supra lineis tribus albidis ornato, una mediana longitudinali, una obliqua in utroque latere; elytris breviusculis, fortiter sulcato-punctatis, interstutiis asperatis, vel subtuberculatis, in singulo macula basali vittisque tribus abbreviatis albidis, duabus apicalibus, quarum una suturali, altera humerali, ornatis; corpore infra nigro; metasterno, etiam aliquando segmento primo abdominis, griseo-squamoso; femoribus tibiisque ut in *A. phalerato*. Long.  $3\frac{1}{2}$ – $4\frac{1}{2}$  lin.

Hab. Mysol, Ceram.

Allied to *A. persona*, Vollenh., but, *inter alia*, the prothorax of that species is longer, very remotely punctured, and the interstices of the elytra have closer-set, shining, and mostly transverse tubercles; the elytra also are spotted so as to suggest in a rough way eyes, nose, mouth, &c.: hence the name.

*Arachnopus sannio.*

A. ovatus, niger, indumento squamisque interruptis griseis indutus; rostro antennisque fusco-ferrugineis, illo basi subsulcato, reliquo fere obsolete punctato; prothorace utrinque rotundato, subvage punctato, lineis sex, quarum una transversa pone medium, punctisque squamigeris notato; elytris striato-punctatis, punctis remotis, plerumque squamis obtectis, interstutiis convexis, uniseriatim remote nigro tuberculatis, griseo-squamosis, singulo

plagis duabus basalibus alterisque tribus posticis, duabus sub-suturalibus, tertioque elongata marginali; corpore infra nigro, nitido, pectore abdomineque griseo marginatis, metasterno toto griseo; pedibus parce griseo-squamosis; tibiis griseo fimbriatis. Long. 3 lin.

*Hab.* Aru.

#### THYESTETHA.

Pascoe, Journ. of Entom. ii. p. 426.

*Char. emend.*—*Rostrum cylindricum, tenuatum, perparum arcuatum, pone coxas posticas protensum; scrobes antemedianæ, infra rostrum desinentes. Oculi subgrosse granulati, antice haud approximati. Scapus oculum haud attingens; funiculus 7-articulatus, articulis duobus basalibus longioribus, cæteris gradatim brevioribus; clava ovalis, distincta. Prothorax subconicus, apice supra paulo productus. Elytra cordiformia, basi prothorace haud latiora. Pedes elongati; femora sublinearia, infra canaliculata, et dente parvo instructa; tibiæ rectæ, sulcatæ; tarsi articulo penultimo late transverso. Rima pectoralis inter coxas posticas evanescens. Coxæ utrinque approximatæ. Processus intercoxalis latissimus. Abdomen segmento secundo vix ampliato.*

In this genus and the next the pectoral canal gradually disappears behind, the apex of the rostrum in repose lying beyond it. The tibiæ in this and nearly all the following genera are longitudinally grooved, the intervals between the grooves consisting of narrow elevated lines generally studded with small scales. These are small, very glossy, glabrous insects, frequently with a snowy-white line along the upper margin of the femora. The only species (*T. nitida*) is figured on Pl. XVI. fig. 8, and is from Aru and Dorey.

#### TELAUGIA.

*Rostrum haud elongatum, vix tenuatum, apice depresso parum arcuatum; scrobes præmedianæ, obliquæ, ad partem inferiorem oculorum currentes. Funiculus articulis duabus basalibus longiusculis, cæteris brevibus; clava ovata, distincta. Oculi laterales, tenue granulati. Prothorax subconicus, lobis ocularibus fere obsoletis. Elytra subcordiformia. Femora modice elongata, linearia, infra subcanaliculata, mutica; tibiæ rectæ, sulcatæ; tarsi normales. Rima pectoralis mesosterno evanescens. Abdomen normale.*

As in *Thyestetha*, the pectoral canal is not limited behind, the mesosternum being hollowed out in the middle, allowing the rostrum to pass between its two projecting sides; the rostrum, however, does not extend beyond the intermediate coxæ. The canal beneath the femora is not so well marked as in *Thyestetha*.

*Telaugia coccosa.*

*T.* breviter obovata, atra, nitida; capite haud squamoso; rostro vase punctulato, sulco laterali squamis albis repleto; antennis testaceis; prothorace vase subtiliter punctulato; elytris rufo-brunneis, nitidissimis, remote subtiliter seriatim punctulatis; corpore infra rufo-brunneo, nitido; pedibus nigris, sparse albo-squamosis; femoribus supra linea niveo-squamosa ornatis. Long. 2 lin.

Hab. Batchian.

## IDOTASIA.

*Rostrum* haud elongatum, validum, arcuatum; *scrobes* medianæ, ad partem inferiorem oculorum currentes. *Oculi* laterales, antice haud approximantes. *Scapus* brevis, oculum vix attingens; *funiculus* 7-articulatus, articulis 1°, 2° longiusculis, cæteris brevioribus; *clava* ovata, adnata. *Prothorax* subconicus, supra valde convexus, lobis ocularibus distinctis. *Scutellum* nullum. *Elytra* breviuscula, valde convexa, subcordiformes, prothorace paulo latiora. *Pedes* elongati; *femora* incrassata, compressa, infra canaliculata; *tibiæ* rectæ, sulcatæ; *tarsi* æquales, articulo basali modice elongato, secundo angustiore, tertio late bilobo, quarto breviusculo; *unguiculi* approximati, basi connati? *Rima pectoralis* mesosterno terminata, apice margine elevato. *Metasternum* normale. *Processus intercoxalis* latissimus. *Abdomen* segmentis tertio quartoque brevissimis.

There is a very marked resemblance between the species of this genus, which are, notwithstanding, distinguished by very distinctive characters. The genus is also found in Northern Australia.

*Idotasia nasuta.* Pl. XVI. fig. 2.

*I.* nigra, nitida; rostro dimidio basali arcuato-gibboso, et niveo-squamoso; antennis pallide ferrugineis; oculis tenue granulatis; prothorace ampliato, transverso, subvage subtilissime punctulato; elytris seriatim remote subtilissime punctulatis; corpore infra nigro-brunneo; femoribus lineatim albo-squamosis, supra squamis dense vestitis, anticis valde ampliatis, subtus dente minuto instructis, cæteris muticis; tibiis posticis basi paulo arcuatis. Long.  $1\frac{2}{3}$  lin.

Hab. Dorey, Morty, Waigiou.

*Idotasia ebriosa.*

*I.* præcedenti simillima; rostro minus elongato, fere toto arcuato-gibboso, squamis niveis basi vestito; antennis pallide ferrugineis; oculis tenue granulatis; prothorace subconico, vase subfortiter punctato; elytris seriatim subtiliter, sat minus remote punctulatis; corpore infra pedibusque piceis, his sparse niveo-squamulosis; femoribus vix incrassatis, haud dentatis, nec lineatis. Long.  $1\frac{1}{4}$  lin.

Hab. Salwatty.

*Idotasia inclusa.*

*I. nigra*, nitida; rostro fere toto arcuato, subgibboso, basi niveo-squamoso; oculis grosse granulatis; prothorace medio carinulato, lineis confertis abbreviatis sublongitudinalibus insculpto, singulis pilis perpaucis minutis transversim obsitis; elytris sat fortiter striato-punctatis, interstitiis latis, uniseriatim remote punctatis, sutura, præsertim basi, subacute elevatis; pedibus vage niveo-squamosis; femoribus nec dentatis nec lineatis; tarsis piceis. Long. 1 lin.

Hab. Mysol.

*Idotasia scaphioides.*

*I. nigra*, nitida; capite inter oculos rostroque confertim oblongo-punctatis, interstitiis carinulatis, hoc toto arcuato; antennis ferrugineis; oculis grosse granulatis; prothorace minus transverso quam in *I. nasuta*, sat fortiter subvage punctato, in medio linea glabra impunctata; elytris subtiliter striato-punctatis, punctis majusculis; femoribus haud lineatis, subtus omnibus dente minuto instructis; tibiis posticis basi valde arcuato-productis. Long.  $1\frac{2}{3}$  lin.

Hab. Batchian, Saylee (Gilolo, var.?).

*Idotasia elliptica.*

*I. nigra*, nitida; capite inter oculos rostroque antice tricarinulatis, inter carinulas basi transversim subquadrato-insculptis, hoc toto arcuato-gibboso; antennis ferrugineis; oculis tenue granulatis; prothorace oblongo, haud ampliato, utrinque perparum rotundato, sat fortiter subvage punctato; elytris pone medium paulo longioribus, punctis ut in *I. scaphioides* simillimis; femoribus haud lineatis, subtus omnibus dente minuto instructis; tibiis posticis basi arcuato-productis. Long.  $1\frac{1}{2}$  lin.

Hab. Ceram, Batchian.

The differentiation of these species will be the more readily contrasted by the following table:—

Eyes coarsely faceted.

Rostrum gibbous.

Prothorax normally punctured..... *ebriosa*.

Prothorax with short impressed lines ..... *inclusa*.

Rostrum not gibbous ..... *scaphioides*.

Eyes finely faceted.

Prothorax minutely punctured..... *nasuta*.

Prothorax rather strongly punctured ..... *elliptica*.

## SEMIATHE.

*Idotasiæ* subsimilis, sed rostro tenuato; scutello distincto, et femori-

*bus* infra haud canaliculatis. *Oculi* magni, tenue granulati. *Corpus* modice convexum.

The femora in this genus are only grooved at the apex in the ordinary way; the tibiæ, therefore, do not admit of being lodged in them as in those genera in which they are canaliculate or grooved in their whole extent.

*Semiathe rufipennis.*

*S.* late elliptica, supra nitida, nigra, elytris rufo-luteis; capite antice vix convexo, crebre punctato; rostro prothorace breviore, subtilissime punctato, basi lato; antennis testaceis; oculis antice vix approximatis, squamis albis marginatis; prothorace basi longitudine paulo latiore, leviter subvage punctato; scutello punctiformi; elytris prothorace duplo longioribus, pone basin latioribus, seriatim leviter punctatis, interstitiis latis, impunctatis, apicem versus nigricantibus et vitta albo-squamosa decoratis; corpore infra subluteo; pedibus piceis, vage squamosis; femoribus anticis dente valido instructis. Long. 2 lin.

*Hab.* Dorey.

*Semiathe ophthalmica.*

*S.* subelliptica, oblonga, nigra, nitida; capite parvo; rostro prothorace breviore, basi vix latiore, subtilissime punctulato; antennis subtestaceis; oculis subapproximatis; prothorace basi latitudine parum longiore, leviter subvage punctulato; scutello suborbiculari; elytris prothorace plus duplo longioribus, pone basin latioribus, seriatim leviter punctulatis, interstitiis latis, apicem versus vitta abbreviata albo-squamosa decoratis; pedibus piceo-nigris, vage squamosis; femoribus basi infra dense albo-squamosis, totis dente valido instructis. Long. 2½ lin.

*Hab.* Mysol.

XYCHUSA.

*Rostrum* subtenuatum, depresso. *Clava* ovata, distincta. *Oculi* tenue granulati, approximantes. *Prothorax* utrinque valde rotundatus, basi paulo constrictus, sulcato-marginatus. *Elytra* ovata, prothorace vix latiora. *Femora* infra haud canaliculata, dente parvo instructa; *tibiæ* haud sulcatæ; *coxae* intermediæ et posticæ utrinque fere contiguæ. *Metasternum* brevissimum. Cæteris ut in *Idotasia*.

In the form of the prothorax, narrower at the base than in the middle, and in its grooved margin, this genus differs from all the preceding; like *Idotasia* and *Semiathe*, it has also the upper edge of the femora covered with white scales.

*Xychusa larvata.*

*X.* subanguste ovalis, nigra, nitida, elytris piceo-luteis; capite supra convexo, subtilissime crebre punctulato, inter oculos squamis

niveis dense tecto; rostro castaneo, basi subfortiter punctato; antennis piceo-testaceis; prothorace longiore quam latiore, apice haud tubulato, sat fortiter vage punctato; scutello inconspicuo; elytris obovatis, convexis, seriatim punctatis, punctis oblongis, interstitiis latis planatis, piceo-luteis, apicem versus nigricantibus et vitta abbreviata niveo-squamosa notatis; corpore infra pedibusque piceis, femoribus crebre punctatis, supra linea niveo-squamosa ornatis. Long. 2 lin.

Hab. Aru.

#### ELICHORA.

*Rostrum* longiusculum, tenuatum. *Scapus* oculum haud attingens. *Oculi* grosse granulati. *Pedes* longiusculi; *femora* linearia, mutica; *coxæ* intermediæ et posticæ utrinque fere contiguae. *Rima* pectoralis coxarum intermedianarum marginem posteriorem attingens. Cæteris ut in *Idotasia*.

This genus approaches *Xychusa* in the extreme shortness of the metasternum and the consequent approximation of the intermediate and posterior coxæ, but differs in the greater length of the rostrum and the corresponding extension of the pectoral canal. In habit it resembles *Thyestetha*, but, with *Xychusa*, it is more nearly allied to *Idotasia*.

#### *Elichora coruscans.*

*E. elliptica*, nigra, nitida; rostro basi rude lineatim punctato, apicem versus punctis sensim minoribus; antennis testaceis; prothorace oblongo-conico, vage subtiliter punctulato; elytris pone basin latioribus, remote subtilissime seriatim punctulatis; corpore infra nudo, nitido; pedibus disperse albo-squamosis; tarsis ferrugineis. Long.  $2\frac{1}{2}$  lin.

Hab. Batchian.

#### NYPHÆBA.

*Rostrum* breviusculum, validum, arcuatum, apice depresso. *Funiculus* 7-articulatus, articulis duobus basalibus longioribus, cæteris transversis, ultimo clava ovata quasi incipiente. *Oculi* magni, antice subapproximantes, grosse granulati. *Prothorax* transversus. *Scutellum* distinctum, punctiforme. *Elytra* oblonga, modice convexa, prothorace parum latiora. *Femora* subcrassa, infra canaliculata et dentata; *tibiæ* breviusculæ, subarcuatæ, sulcatæ; *tarsi* normales. *Rima* pectoralis ut in *Idotasia*. *Metasternum* modice elongatum. *Processus intercoxalis* angustatus. *Abdomen* normale.

The narrowness of the intercoxal process, as compared with *Idotasia* and allied genera, is a marked departure from their structure in that respect. The type of this genus is nearly glabrous, except that it is spotted here and there with a few

white scales collected together principally on the elytra, and resembles a small *Monomma* or, still nearer perhaps, a *Chelonarium*.

*Nyphæba monommoides.* Pl. XVI. fig. 7.

*N. ovalis*, nitida, nigro-picea, elytris rufo-piceis; capite fronte opaco, impunctato, inter oculos foveato; rostro basi rugoso-punctato; antennis testaceo-piceis; prothorace basi fere duplo latiore quam longiore, antice tubulato, utrinque valde rotundato, sat fortiter subvage punctato, basi maculis duabis albis notato; elytris duplo longioribus quam latioribus, utrinque modice rotundatis, fortiter sulcato-punctatis, punctis magnis subquadratis, interstitiis sub certa luce planatis et, basin versus, corrugatis, maculis albis irroratis e squamis albis formatis; corpore infra pedibusque piceis. Long.  $2\frac{1}{2}$  lin.

Hab. Ceram.

EXPLANATION OF THE PLATES.

PLATE XV.

- Fig. 1.* *Dædania mesoleuca*: *a*, head and part of the prothorax; *b*, antenna; *c*, fore tarsus.  
*Fig. 2.* *Pempheres trilineata* (the fore tibiæ are not sufficiently curved): *a*, head.  
*Fig. 3.* *Mecopus pulvereus*.  
*Fig. 4.* *Talanthia phalangium*: *a*, head.  
*Fig. 5.* *Heurippa amœna* (the body is much too broad): *a*, head; *b*, antenna.  
*Fig. 6.* *Phylaitis V-alba*: *a*, head; *b*, antenna.  
*Fig. 7.* *Ganyopis leucura*: *a*, head.  
*Fig. 8.* *Mecopus spinicollis*.  
*Fig. 9.* *Chirozetes nervosus*: *a*, front view of the head.  
*Fig. 10.* Antenna of *Agametis festiva*.  
*Fig. 11.* Head and part of the prothorax of *Mecopus bispinosus*, Web.  
*Fig. 12.* Head and part of the prothorax of *Mecopus serrirostris*.  
*Fig. 13* *a*, antenna; *b*, head, of *Brimoda pagana*.  
*Fig. 14.* Front view of the head of *Phylaitis cyclops*.

PLATE XVI.

- Fig. 1.* *Emexaure gallinula* (the penultimate tarsal joints are much too broad): *a*, head; *b*, fore leg.  
*Fig. 2.* *Idotasia nasuta*: *a*, head.  
*Fig. 3.* *Nauphæus miliaris*: *a*, head.  
*Fig. 4.* *Metialma nævia*: *a*, head; *b*, fore leg.  
*Fig. 5.* *Odoacis grallarius*: *a*, head.  
*Fig. 6.* *Osphilia undata*.  
*Fig. 7.* *Nyphæba monommoides*.  
*Fig. 8.* *Thyestetha nitida*: *a*, head and part of the prothorax.  
*Fig. 9.* *Arachnopus phaleratus*.  
*Fig. 10.* Head of *Idotasia ebriosa*.  
*Fig. 11.* Head of *Idotasia scaphioides*.

*Fig.* 12. Part of hind femur and tibia of *Idotasia scaphioides*.

*Fig.* 13. Head of *Oosphilia apicalis*.

*Fig.* 14. Right fore leg of *Xyphusa larvata*.

*Fig.* 15. Front view of the head of *Semiathe ophthalmica*. The eyes are scarcely large enough, and not sufficiently approximate.

XXXIV.—*Note on Prof. Cope's Interpretation of the Ichthyosaurian Head.* By HARRY G. SEELEY, F.G.S., Assistant to Prof. Sedgwick in the Woodwardian Museum, University of Cambridge.

PROFESSOR COPE, in the 'American Naturalist' for October 1870, published an illustrated abstract of his recent memoir on the crania of the lower Vertebrata. By the aid of these figures many readers will become conversant with the curious new interpretations which are among the results of Prof. Cope's labours; and this consideration leads me to offer the following remarks upon the abstract of the memoir. As a briefer notice has already been reprinted in the 'Annals' (1871, vii. p. 67), it may be enough to state that from study of the skull-bones which are immediately connected with the quadrate bone, Prof. Cope finds that previous writers have not accurately determined the cranial elements in Ichthyosauria, Dicynodontia, and others of the Monocondylia. And the questions raised are questions of fact, concerning one or two of which it is necessary to ask, Do the alleged facts exist? and if they exist, are they truly interpreted in the figures? On one point, that of the new interpretation of Ichthyosauria, we have good materials in England for forming a judgment; and having had occasion in the last few years to study these specimens in detail, I will endeavour to make Prof. Cope's positions intelligible.

First he finds at the back of the external nostril in *Ichthyosaurus* two small bones which are named the nasal bones. There is no antecedent improbability in this determination; the nasal bones commonly have such a position in all the Vertebrata, and any deviation from such a plan may be regarded as exceptional. A consequence, however, of such an identification is that a bone which Prof. Cope regards as the principal frontal bone (nasal of authors) enters into the nostril also; and against this there is a *prima-facie* probability, because the frontal bone has no such relation in vertebrates. But the improbability is lessened when the nostril of *Ichthyosaurus* is seen to occupy the position usually held by the middle hole of the skull (seen in Ornithosaurs, Dinosaurs, Teleosaurs, &c.); and with that anteorbital perforation it may



