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# Notes on Chilopods from the East Indies. 

By Ralph V. Chamberlin, Cambridge, Mass. (Plate XVII)

The following chilopods were secured by Dr. Thomas Barbour, of the Museum of Comparative Zoology, during his trip in the East Indies and neighboring parts, 1906-1907, incidentally to his other collecting. All of the specimens, including the types of the four new species here described, are deposited in the Museum at Cambridge.

## SCOLOPENDROIDEA. <br> Cryptopidae.

1. Otocryptops melanostomus (Newport).

Locality.—Java: Tjibodas.
This species is widely distributed in the tropics of the entire earth.

Otostigmidae.
2. Otostigmus punctiventer (Tömösvary).

Locality.-Dutch New Guinea : Sorong.
The single specimen obtained is variant in having three lat-
eral spines on the coxopleural process (with two dorsal) and in having the median pits of the sternites of the middle region of the body very weak. The species was previously known from Borneo and New Britain.
3. Otostigmus nemorensis Silvestri.

Locality.-Java: Buitzenzorg.
A number of specimens were obtained. In all of these the last ventral plate is clearly narrowed caudad, being less quadrate than would be inferred from the accounts of Silvestri and Kraepelin. The species was previously known from Su matra.
4. Otostigmus barbouri sp. nov. (Pl. XVII, figs. 1-3).

Dorsum olive green, with the head and prosternum a little more brownish. Venter paler and less greenish than the dorsum. Legs greenish distad of the prefemora.

Head shining. Distinctly punctate, as is also the first dorsal plate. Unfurrowed.

Antennae composed of 20 articles. The proximal 2 I-3 articles glabrous and shining; the others densely clothed with fine short hairs of the usual type.

Dental plates of prosternum moderately long. Teeth 4 plus 4 ; the inner pair and the outer pair on each side separated by a wider and deeper interval than that between the members of each pair; the most ectal tooth much smaller than the adjoining one, as is also, though less so, the most mesal.

Dorsal plates from the fourth to the twentieth longitudinally bisulcate, the sulci fine but distinct, excepting on the fourth plate, where they are less pronounced at ends. Plates of the middle and caudal regions of body with a flat, inconspicuous or often obscure median keel, but with no lateral keels whatsoever. Plates from the ninth to the twenty-first distinctly margined; the seventh and eighth also with margins less sharply set off by longitudinal depressions; the twentyfirst plate most sharply margined. Plates of the middle and caudal regions weakly longitudinally rugose at sides and finely sparsely scabrous, the minute spinous points becoming more distinct caudad.

Last dorsal plate with the median keel obscurely indicated on the anterior two-thirds of length, the keel being followed caudad by a moderate longitudinal depression. Caudal margin obtusely angular, mesally a little rounded.

Ventral plates distinctly subdensely punctate. Those from the second to the nineteenth inclusive with distinct traces of longitudinal
sulci, these being evident only across the anterior borders in the anterior region of body, but in the middle and caudal regions extending to the middle of plates. None of the sternites with any distinct pits or depressions.
Last ventral plate strongly narrowed caudad; sides convex; caudal margin deeply subangularly excurved. Smooth, without furrows.
First seven pairs of legs with 2 tarsal spines; the eighth to twentieth inclusive with one.

Coxopleural process moderately long, ending in 2 stout points; bearing in addition either 1 or 2 dorsal spines and 3 lateral. (See Fig. 3.)

Prefemur of anal legs with 4 spines in the ectal ventral series and 3 in mesoventral series, 5 more occur in a series at or a little ventrad of the middle of the ventral surface, and dorsomesally are 2 in addition to the spine at the distal corner. Other joints unarmed.

Length, 43 mm .

## Locality.-Dutch New Guinea : Sorong.

## Two specimens.

This species seems to be closest to $O$. spinosus Porat of Java and Borneo. Among the various differences, it is readily to be distinguished from that species through the absence of the characteristic spinae on the prefemur of the twentieth legs.
5. Otostigmus malayanus sp. nov. (Pl. XVII, figs. 4, 5).

Dorsum brown, tinged with dilute bluish green; a deeper narrow bluish green band along the middle of caudal margin of each plate. Head and, to a less extent, the first dorsal plate a little paler and less greenish. Antennae pale. Legs somewhat testaceous, tinged with bluish green distad, the green more pronounced in the caudal pairs.
Head and first dorsal plate subdensely but not coarsely punctate. Otherwise smooth.

Articles of antennae 21 , of which only the first 2 to 2 I-3 are glabrous and shining.

Prosternal teeth 4 plus 4, the two most mesal on each side largest, a minute denticle at edge of mesal incision on each side, including which the teeth number 5 plus 5 . Lines setting off dental plates meeting at an obtuse angle. Process of prefemur with two denticles on mesal side below apex.

Dorsal plates from the fifth on and somewhat obscurely also the third and fourth, with mostly 7 more or less clearly defined longitudinal keels which are not sharp edged. Keels, especially caudad, finely but neither finely nor especially conspicuously scabrous. Plates from the third caudad distinctly and sharply margined, the raised edge thin.

Last dorsal plate parallel-sided; rather sharply bowed out caudad,
without keels or cornicles. A very short but sharply impressed median longitudinal furrow immediately cephalad of the caudal margin.

Ventral plates with two distinctly impressed longitudinal sulci which in the anterior region mostly cross the entire plate but caudad may extend only one-half to three-fourths the length. Without pits; but some of the plates showing a transverse depression or furrow between the middle and the caudal margin.

Last ventral plate strongly narrowed caudad. Caudal corners obliquely excised. Caudal margin incurved.

First 15 pairs of legs with 2 tarsal spines; sixteenth to nineteenth with I tarsal spine; the twentieth with none.

Coxopleural process short, subtriangular; terminating in 4 points or spines. A single lateral spine; none dorsally.

Length about 27 mm .
Locality.-Malay Peninsula : Johore State.
(Taken January io, 1907.)
This species stands closest to $O$. scaber Porat, occurring in China, Siam and the Nicobars, and O. insularis Haase, known from Ceylon and the Seychelles. From the former it is readily separated in having 2 tarsal spines on the first 15 pairs of legs instead of on the first 7 only, etc.; and from the latter in having no tarsal spine on the twentieth legs, in having fewer pairs with 2 tarsal spines, in having the antennae 2 I -jointed, etc.
6. Otostigmus moluccanus sp. nov. (Pl. XVII, figs. 6, 7). Olivaceous, with the head and first few plates somewhat paler. Head and first dorsal plate finely and uniformly punctate.
Articles of antennae 18 . The first 2 or $21 / 4$ glabrous and shining.
Dental plates moderately long, the lines setting them off meeting at an angle. Teeth 3 plus 3 , of which the outermost on each side is separated by a wider and deeper interval from the median one, than the latter is from the most mesal, the median and most mesal being fused nearly to their apices.
Dorsal plates from third to fifth caudad margined. A median keel only obscurely indicated. Lateral portion of plates in caudal region weakly longitudinally rugose; only finely and weakly scabrous.
Last dorsal plate subangularly bowed out, with a conspicuous median longitudinal depression immediately in front of the caudal margin.

Ventral plates with distinct paired longitudinal sulci extending mostly about two-thirds the length of the plate or very nearly so. In addition to the paired sulci there is a median longitudinal sulcus or furrow distinctly impressed on the anterior portion of the plate, espe-
cially in the anterior and middle region of the body, but tending to be reduced to an indistinct impressed dot caudad. Plates punctate.

Last ventral plate strongly narrowed caudad. Caudal margin conspicuously and somewhat angularly incurved. A weak median longitudinal sulcus.

Only the first 5 pairs of legs with 2 tarsal spines.
Coxopleural process long and subcylindrical, ending in 2 points. Lateral spines 3, of which the two most proximal are larger than the distal one. Also with I stout dorsal spine. (See Fig. 7.)

Length, cir. 20 mm .
Locality.-Moluccas : Ternate. One specimen.
This species appears to be nearest in structure to $O$. punctiventer (Tömösvary), above listed. It differs from that species in having the last ventral plate more conspicuously narrowed caudad; in the longer and more strongly marked sulci of the ventral plates; and in various minor points.
7. Trematophychus immarginata (Porat).

Locality.-Upper Burma: Katha and Tagourg (December 19 and 20, I906). Java: Buitzenzorg.

This species is widely distributed in the East Indies and adjacent lands, having been reported previously from Sumatra, Borneo, India and the Philippines.
8. Trematophychus longipes (Newport).

Locality.-Java: Buitzenzorg.
This species is distributed throughout the tropical regions of both hemispheres.
9. Ethmostigmus rubripes (Brandt).

Locality.-Dutch New Guinea.
Also known from Australia, Java, Thursday Islands and China.
10. Ethmostigmus cribrifer (Gervais).

Localities.-Moluccas ; Ceram Is.; Wahaai ; Halmaheira Is. ; Sain.

Originally described from this same general region.

## Scolopendridae.

11. Scolopendra morsitans Linné.

Localities.-Dutch New Guinea. Java: Buitzenzorg.
A cosmopolitan species.
12. Scolopendra subspinipes Leach.

Localities.-Dutch New Guinea: Manokwari and Sorong.
13. Scolopendra subspinipes dehaani Brandt.

Locality.—Java: Buitzenzorg.
Four very large specimens were secured at this place.
14. Scolopendra gracillima Attems.

Localities.-Java: Buitzenzorg. Moluccas: Ceram Is., Wahaai.

Originally described from Java, heretofore the only known locality.
15. Trachycormocephalus indiae sp. nov. (Pl. XVII, figs. 8-10).

Brown; with a somewhat obscure slightly greenish dark median longitudinal band along the dorsum, the band being about one-third the total width of plates; each plate with a narrow stripe of much deeper greenish color along caudal margin, this being the width of the longitudinal band; the longitudinal band widens across the first plate and embraces the entire head which is distinctly greenish in color. Antennae green. Legs testaceous, the last pair tinged with green.

Head subcordate, conspicuously narrowed cephalad. Smooth, not punctate; a distinct transverse furrow a little in front of the caudal margin; on each side a V-shaped impression with apex at transverse furrow, the inner arm extending a little distance cephalad parallel with its fellow of the opposite side and the outer arms diverging ectocephalad; two short submedian parallel longitudinal furrows between the V -shaped impressions; all these impressions rather weak.

Antennae composed of 18 articles. Short, reaching to or a little caudad of the middle of the third pediferous segment. The $3-5$ proximal articles nearly glabrous; the fifth to seventh or eighth somewhat intermediate; the others fully clothed.

Dental plates of prosternum long, each bearing 4 distinct, subacute teeth or with a small fifth tooth at mesal end. Of these teeth the most ectal is a little more widely removed than the others are from each other, the latter being more or less fused at bases. Line setting off dental plates subsemicircular.

Dorsal plates from the third to the twentieth inclusive longitudinally bisulcate, the sulci all complete and distinct. Only the twenty-first plate distinctly margined.

Last dorsal plate with caudal margin subsemicircular or bow-shaped. With a distinct and complete median longitudinal sulcus.

Ventral plates from the second to the twentieth inclusive bisulcate; otherwise nearly smooth.

Last ventral plate conspicuously narrowed caudad. Sides straight or nearly so. Caudal margin nearly straight or but slightly incurved, with the corners a little rounded.

First ig pairs of legs with a tarsal spine. All legs, including also the anal, with spines at base of claws, those of claw of last pair very small.

Coxopleurae but slightly extended at caudomesal corner, the very short process distally rounded and bearing 3 points or spines. A single small spine laterad of process on caudal margin.

Anal legs short. The prefemur twice as long as greatest thickness or very nearly so. Prefemur bearing ventrally an ectal row of 2 spinules, a submedian one of 3 and an inner or mesal one of 2 ; dorsomesally a series of 3 spinules; the corner process at distal end bearing 2 or 3 spinules. Other articles unarmed. The claw with small fine spines at base.

Length, $22-23 \mathrm{~mm}$.
Locality.—India: Jeypore (November 8, igo6). Two specimens.

The separation of this species from the two previously described may be made as follows:
a. The last dorsal plate with a distinct and complete median longitudinal sulcus.
b. Claw of anal legs without basal spines, dorsal plates from seventeenth to nineteenth caudad margined; antennae with 19 articles $\qquad$
bb. Claw of anal legs with distinct basal spines; only the twen-ty-first dorsal plate margined; antennae I8-jointed,
T. indiae sp. nov.
$a a$. The last dorsal plate without a median longitudinal sulcus.
Antennae 17 -jointed; only the twenty-first dorsal plate margined; claw of anal legs with basal spines....T. afer (Meinert)

GEOPHILOIDEA.
Mecistocephalidae.
16. Mecistocephalus punctifrons Newport.

Localities.-Java: Batavia. Upper Burma.
This is proving to be a common form in the warmer parts of both hemispheres.

Oryidae.
17. Orphnaeus brevilabiatus (Newport).

Locality.—Java: Buitzenzorg.
Common in the warmer parts of America as well as throughout the East.

## SCUTIGEROMORPHA.

Scutigeridae.
18. Thermopoda sp.

One young specimen apparently belonging to this genus. It is lacking the head, making further identification impossible.

## EXPLANATION OF PLATE XVII. <br> Otostigmus barbouri sp. nov.

Fig. I. Portion of prosternum and prehensors showing dental plates. Fig. 2. Last ventral plate.
Fig. 3. Lateral aspect of the twenty-first segment, showing coxopleura.
Otostigmus malayanus sp. nov.
Fig. 4. Last ventral plate.
Fig. 5. Lateral aspect of twenty-first segment, showing coxopleura.
Otostigmus moluccanus sp. nov.
Fig. 6. Last ventral plate.
Fig. 7. Lateral aspect of twenty-first segment, showing coxopleura.
Trachycormocephalus indiae sp. nov.
Fig. 8. Portion of prosternum and prehensors showing dental plates.
Fig. 9. Last ventral plate.
Fig. io. Lateral aspect of twenty-first segment, showing coxopleura.

## Insects found on Nursery Stock Imported into New Jersey during 1913.

By Harry B. Weiss, in Charge of Nursery and Imported Stock Inspection, New Brunswick, N. J.
The inspection of imported stock is primarily of course for the purpose of preventing the introduction and spread of insects and diseases not already established. According to the report of the Federal Horticultural Board by C. L. Marlatt, there were imported into the United States in 1912 44,781 cases of nursery stock, of which amount about one-fifth entered the State of New Jersey.

A list of the insects, therefore, which were imported on stock entering New Jersey during the year 1913 should not be without interest to those engaged in inspection work in other States. As a rule, one is not aware during the inspection seasons of what is taking place in other States and it seems that


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