XII COLEOPTERA, IV: LAMELLICORNIA.

By G. J ARROW, *F.E.S.*

The Lamellicornia consist of only 28 species, many of them represented only by single specimens. Nearly half the species are very widespread and familiar Indian insects and the complete absence of any representative of the Rutelinae, including such ubiquitous genera as *Anomala* and *Adoretus*, is probably accidental. Three species are here described as new, all of them being already represented in the British Museum collection.

CETONIINAE.

1. **Trigonophorus nepalensis,** Hope.

Rotung, 1400 ft., 23-xii-1911 (*Kemp*). One male specimen.

2. **Macronota nigricollis,** Jans.

Upper Renging, 2150 ft., 4-ii-1912. One specimen was found under rotten wood by Mr. Kemp.

3. **Glycyphana nepalensis,** Kraatz.

Rotung, 1400 ft., 23-xii-1911. One specimen was found by Mr. Kemp in rotten wood.

G. minima, Bates, although closely related, is not the same as *G. nepalensis*, Kr., but, as I have found by examination of the type in M. Oberthür's collection, is a form occurring in Java, Borneo and the Malay Peninsula. It seems to me doubtful whether it really occurs, as supposed, in the Punjab and for this reason it was omitted from my volume in the "Fauna of India" series. Another insect, *Melolontha argus*, Burm., recorded by Bates from the same locality, I believe to be purely Malayan and I am therefore inclined to believe that a few Malayan specimens were accidentally mingled with the Indian collection described by him.

4. **Protaetia inanis,** Wall.

Rotung, 1400 ft., 23-xii-1911. One specimen found with the preceding. This is of the usual copper-coloured Indian race (var. *cuprea*).

5. **Protaetia fusca,** Herbst.

Rotung, 1400 ft., 2-i-1912. A single example.

DYNASTINAE.

6. **Eupatorus hardwickei**, Hope, var. **cantori**, Hope.

Upper Rotung, 5-i-1912. A male specimen was found by the 32nd Sikh Pioneers while road-making. This is the only representative of the Dynastinae taken and the Rutelinae are entirely unrepresented.

MELOLONTHINAE.

7. **Hoplia** sp.

Three minute specimens, two males and one female, taken together at Rotung probably belong to one species, but the sexes are quite dissimilar and further evidence of their specific identity is necessary.

8. **Lachnosterna sikkimensis**, Brenske.

Rotung, 1400 ft., 31-xii-1911; Upper Rotung, 26-i-1912; Kobo, 400 ft., 30-xi-1911. Several examples of this species were found under stones.

9. **Lachnosterna serricollis**, Hope.

Rotung, 1400 ft., 31-xii-1911. One specimen taken by Capt. the Hon. M. de Courcy.

10. **Lachnosterna** sp.

Above Upper Renging, 7-ii-1912. One specimen of a species not previously known to me, taken by Capt. the Hon. M. de Courcy.

11. **Mèlolontha indica**, Hope, (=**flabellata**, Sharp).

Kobo, 400 ft., 7-xii-1911. A male taken by Mr. Kemp.

This species "described" in Gray's Zool. Misc., 1831, p. 23, was omitted from the Munich Catalogue. It is one of the species with an acute mesosternum for which the genus *Hoplosternus* was formed. I am not able to recognize that genus, for the process is found in every stage of development and in *M guttifera*, Sharp, is long in the female and absent in the male. *M. indica*, Hope, is probably the insect described by Burmeister as *Hoplosternus nepalensis*, Hope. That name was used by Blanchard but not by Hope.

12. **Apogonia** sp.

Rotung to Kalek, 2000-3500 ft., 14—15-iii-1912. A single specimen of a species unknown to me.

13. **Microserica viridicollis**, sp. nov.

Nigra, opaca; capite, pronotoque viridi-œneis, elytris nonnunquam rufis, leviter opalescentibus, corpore brevi, globoso; clypeo

nitido, grosse punctato, margine antico fortiter elevato, fere recto, fronte opaco, sicut pronoto minute punctato; scutello antice lato, apice sat acuto, lateribus fere rectis; elytris sulcatis, irregulariter haud minute punctatis, interstitiis convexis, pygidio grosse punctato; tibiis anticis fortiter bidentatis:

♂, *antennis 5-foliatis*; ♀, *antennis 3-foliatis.*

Long. 5—5·5 *mm. Lat. max.* 3·5—4 *mm.*

Hab. ASSAM: Sylhet; Rotung, 1400 ft., 6—13-iii-1912.

Found by Mr. Kemp under bark and also on flowers.

This is less brightly coloured than the majority of the little species which compose the genus *Microserica*. The head and pronotum are deep green-black, the elytra black or brick-red and slightly iridescent posteriorly. The body is globose, the clypeus shining and coarsely punctured, with its anterior edge strongly reflexed and nearly straight. The forehead is opaque and, with the pronotum, finely punctured. The scutellum is broad in front and acute at the apex. The elytra are irregularly sulcate and fairly strongly punctured. The pygidium is coarsely punctured. The front tibiae are strongly bidentate. The club of the antenna consists of 5 joints in the male and 3 in the female.

14. **Serica** sp.

Below Damda, 300 ft., 31-i-1912—1-ii-1912; Rotung, 1400 ft., 31-xii-1911. Under stones. Two specimens in bad condition.

15. **Serica** sp.

Janakmukh, 600 ft., 17-xii-1911. One specimen found under bark by Mr. Kemp, in bad condition.

COPRINAE.

16. **Gymnopleurus assamensis**, Wat.

Kobo, 400 ft., 30-iii-1912. Two specimens were found by Mr. Kemp.

This species is common in Assam and Burma, where it replaces *G. sinuatus*, Oliv., the closely allied corresponding form of Siam, China and Japan. Korea was quoted by Mr. Waterhouse as a habitat of *G. assamensis*, but this was an error due to wrong labelling of specimens.

17. **Paraphytus hindu**, sp. nov.

Niger, nitidus, elongatus, convexus, capite inæquali; clypeo 4-dentato; pronoto crebre punctato, elytris subtiliter (octes) striatis, striis sat remote punctatis; corporis subtus lateribus grosse et crebre punctatis, metasterno postice modice punctato, antice laevi, sutura meso-metasternali fere recta.

♂ *pygidio polito, impunctato, paulo bigibboso, apice emarginato, basi medio fossulato*; ♀ *pygidio fortiter punctato, apice profunde fisso.*

Long. 5—6 *mm. Lat. max.* 3—3·5 *mm.*

Hab. ASSAM: Khasi Hills; Upper Rotung, 1400 ft.

This has an extremely close resemblance to the Malayan species *P. ritsemae*, Har., of which it has the same size, shape and sculpture. The two may be distinguished by examination of the pygidium. This in the (apparent) male of *P. hindu* is very smooth and bigibbose, the apex being deeply indented as in *P. ritsemae*, while the basal furrow has a large pit in the middle, so that the pygidium is partially divided into two lateral halves. In the other sex, the basal pit is hardly visible, but the apical notch is very deep, reaching to the middle of the segment, and the whole surface of the latter is strongly punctured. The metasternum is very distinctly punctured in its posterior median part and the suture between the meso- and metasternum, which is angular in *P. ritsemae*, is almost straight, or gently curved, in *P. hindu.*

Specimens of the two forms were found together by Mr. Kemp under bark and in rotten wood in January at 1400 ft. alt., but the male is represented by a single specimen only. Three males from the Khasi Hills (taken in July, 1894) previously existed in the British Museum and one of these is the type of the new species.

18. Catharsius molossus, L.

Sadiya, N. E. Assam, 24-28-xi-1911; Kobo, 400 ft., 30-xi-1911.

This large and common beetle is probably one of the most familiar of all Oriental insects.

19. Copris magicus, Har.

Rotung, 1400 ft., 31-xii-1911. One specimen was found by Mr. Kemp under a stone.

20. Onitis philemon, F.

Sadiya, N. E. Assam, 24—28-xi-1911. A single specimen.

21. Oniticellus vertagus, F.

Sadiya, N. E. Assam, 23-xi-1911. A number of examples were found on cow-dung by Mr. Kemp.

22. Onthophagus tarandus, F.

One specimen was found together with the preceding. It appears to be a common species throughout India.

23 **Onthophagus triceratops,** sp. nov.

Niger, vel aeneoniger, ore antennisque ferrugineis, nitidus, sat laevis, clypeo pronotoque minute et modice crebre punctatis, vertice fere impunctato; elytris fortiter punctato-striatis, interstitiis convexis, parce et minutissime punctulatis; pygidio distincte sat crebre punctato:

♂, vertice late retrorsum producto in laminam horizontalem cujus margo postica medio paulo, utrinque longe producta est, cornubus duobus gracilibus intus curvatis facientibus; clypeo paulo producto, reflexo, medio truncato; pronoto antice retuso haud dentato.

Long. 8—8·5 *mm. Lat. max.* 4·5—5 *mm.*

Hab. N. E. ASSAM: Sadiya, 23-xi-1911.

A male specimen of this species has long existed in the British Museum and another was taken by Mr Kemp with the two species just previously mentioned. It is exceedingly like *O. luzonicus*, Lansb., but the elytral striæ are rather coarsely punctured and the interstices very finely, whereas in the Philippine form the scattered punctures are more evident than those in the striæ, which are very fine. In the male of the Indian species the cephalic lamina is a little produced in the middle between the horns, but in the other it is straight or slightly emarginate there, and on the other hand the prothorax is slightly prominent in the middle in the Malayan, but not in the Indian form.

24. **Onthophagus** sp.

Kobo, 400 ft., 30-iii-1912. A single specimen of a minute unknown species of this enormous genus.

APHODIINAE.

25. **Aphodius elegans,** All.

Yembung, 1100 ft., 8—9-ii-1912. One specimen.

26. **Aphodius urostigma,** Har.

Sadiya, N. E. Assam, 23-xi-1911.

This is an extremely common and widely distributed insect, ranging from the Himalayas to Ceylon and also to China, Japan, the Malayan Region and as far as east and south-east Africa.

27. **Aphodius chinensis,** Har.

Rotung, 1400 ft., 25-xii-1911. A single specimen was taken at light.

The species is common at Hong-Kong, but it is surprising to find it ranging so far westward.

28. **Saprosites marchionalis**, Har.

Kobo, 400 ft., 30-xi-1911. One specimen was taken by Mr. Kemp from a Polyporus fungus.