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XXXVI.—*The* Staphylinidæ *of Japan.*

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This memoir is intended to add to our knowledge of the Coleoptera of Japan by description of the new species of Staphylinidæ obtained by Mr. George Lewis during his tour in the islands in 1880–81. Previous to the year 1874 only three or four species of the family Staphylinidæ were known as occurring in Japan; but in that year I enumerated, in the 'Transactions of the Entomological Society of London,' 190 species that had been obtained in the islands by Mr. Lewis during his first residence there; this total has since been increased by Weise and others to 218, as recorded in Herr von Schönfeldt's recent Catalogue of the Coleoptera of Japan. To this number I am now able to add 249, making a total of 467 species of the family at present known as inhabiting the archipelago.

Thanks to the efforts of Mr. Lewis we have attained a fair knowledge of the Coleoptera of the Japanese islands, his entomological work there having resulted in the formation of a collection of about 4000 or 5000 species of the order. Some considerable parts of this large and interesting collection have

been thoroughly examined—the Geodephaga, with 406 species, and the Longicorns, with 236 species, by Bates; the Chrysomelidæ, 303 species, by Baly and Jacoby *. These families, with the Staphylinidæ, make a total of about 1400 species, and as they comprise insects of very varied habits, they may be taken for statistical purposes as probably fairly representative of the whole collection. Bates has already discussed † the relations of the Coleopterous fauna, so far as the ground-beetles and Longicorns are concerned, to that of the various adjacent regions; but as we can now make use of a much larger material, and as he followed Wallace's plan of using generic statistics for the purposes he had in view, it is still of interest to make a somewhat similar comparison, making use of the species of the four great groups I have mentioned above instead of the genera of the two groups treated by Bates.

Of the 1406 species found in Japan only 210 are known to occur in Europe and Siberia; so that only about 15 per cent. are common to the two subregions. A similar proportion appears to be maintained in the rest of the order Coleoptera, as von Heyden has stated, in the introduction to Schönfeldt's Catalogue of Japanese Coleoptera, that out of the 2682 species recorded in it 391, or rather less than 15 per cent., are also known to occur in Siberia or Europe. This is a very small amount of community for the two provinces; but there is considerable reason for supposing that the discrepancy between the two faunas is at present much greater than it will prove to be when our information is more exhaustive. Lewis's collections have been formed chiefly in the southern islands, whereas it is of course in the more northern island of Yezo that we should expect to find the greater amount of similarity with Siberia. Moreover the Coleoptera of the extreme east of Siberia are not very well known, so that I consider it far from improbable that as much as 30 or 40 per cent. of the species of Japanese Coleoptera may ultimately be proved to exist also in Siberia, though at present the amount is only 15 per cent.

A comparison of the Coleoptera of Japan with the fauna of the parts of the Asiatic continent more to the south than Siberia can at present be made only in a very imperfect manner; it is probable that we do not know more than one tenth of the species of Coleoptera inhabiting Mantchuria,

* Some other families have been worked through by Lewis himself and by Gorham and Reitter, but to these, for my present purpose, I need not specially refer.

† Trans. Ent. Soc. Lond. 1883, p. 205 *et seq.*, and Journ. Linn. Soc. xviii. pp. 205–207.

Northern China, and Korea, so that no useful purpose would be served by estimating what percentage of the Japanese Coleoptera is at present known from there. A paper has recently been published by Herr Kolbe that gives us some, if only a little, information on the question of the relation between the Coleopterous faunas of Japan and of the other portions of Wallace's Mantchurian subregion. Describing * a small collection of 142 species of Coleoptera made by Dr. Gottsche in Korea, he has entered fully into the question of the geographical relations of the species, and announces that Korea is "faunistically extraordinarily closely related to Japan," 77 out of the 142 species detected there being known as occurring also in Japan. This certainly leads us to infer that a considerable amount of community exists between the two provinces; but it appears to be by no means so great as might have been expected, for although we have a fair knowledge of the Coleoptera of the southern islands of Japan, it appears that out of 142 species from the Korea 65, that is nearly 46 per cent., are not known to be Japanese. Kolbe states also that the Korea has more in common with Japan than it has with China; but this is probably connected with the fact that we know so much more of Japanese than we do of Chinese Coleoptera.

I think it will be admitted that with such imperfect data as we possess we cannot pretend to form any trustworthy estimate of the exact relations of the Coleopterous fauna of Japan to those of other provinces. At present what we know seems to indicate a larger amount of endemicity than we should have expected from its geographical position and from its proximity at more than one point to other lands; its fauna, too, seems to have affinities extending over a wide area, including some undoubted and even striking points of resemblance with North America and with East India.

The geographical position of the islands gives their fauna a considerable interest, which is much increased by the fact that the islands themselves are well separated from one another: a comparison of the fauna of the island of Yezo with those of Nipon, Saghalien, and Mantchuria could not fail to throw light on such questions as the exact relation between endemicity and geographical isolation, and as the correlation between present climatic conditions and the distribution of species; but for all such purposes it is necessary to have a complete knowledge of the faunas of the various regions involved, and this we are very far from possessing. Mr.

* Arch. f. Nat. 1886, i. pp. 139–240.

Lewis has probably obtained somewhere between 50 and 80 per cent. of the beetles of Japan; but Yezo has been comparatively neglected, and of the Coleoptera of Saghalien and the Kurile Islands we know really nothing, whilst our knowledge of the beetles of the adjacent parts of the continent of Asia is quite rudimentary.

One of the points that has seemed to occasion some surprise is the occurrence in Japan of forms we were previously only acquainted with from the eastern tropics; but this is probably due to our great ignorance as to the fauna of extreme eastern Asia. In most other parts of the northern hemisphere, as is indeed well known, the tropical fauna is separated from that of the temperate regions by intervening zones of barren country, very different in climate and in capacity for supporting life from the regions adjacent to them. In the extreme east of Asia there seems to be no such barrier to the spread of tropical forms of life into temperate regions, or of temperate forms into tropical regions, and such information as we possess about this region seems to show that a great mixture exists. Bates has already pointed out that there is a large tropical element in the Coleoptera of Japan; and Fairmaire tells us * of Yunnan, far to the south, that there is a great mingling of European genera with tropical forms; and Sémenow again, in remarking † on the Coleoptera collected in China and Mongolia by Potanin, says that three faunas are represented, one of them eminently palæarctic. At present therefore it appears very doubtful whether in this part of the world any natural separation between Palæarctic and Oriental regions exists.

In the present paper I have not included the names of all the species of Japanese Staphylinidæ, those that have been recorded in my previous paper on the subject (Trans. Ent. Soc. 1874, pp. 1–103) only being mentioned when I have some addition or correction to make. I have, however, included the names of all other species that I know of as recorded from the islands; so that this and the paper just mentioned give a complete list of Japanese Staphylinidæ up to this date.

* Ann. Soc. ent. Belg. 1887, p. 87.
† Hor. Soc. ent. Ross. xxi. p. 390.

Subfam. *Aleocharidæ*.

Group Aleocharina.

Aleochara claviger.

Aleochara claviger, Sharp, Tr. Ent. Soc. Lond. 1874, p. 7.

Mr. Lewis has brought from Hakodate a single specimen, having the elytra of a clear pale red colour. I do not know whether it is distinct or only a variety of *A. claviger*. It comes very near to *A. celebensis*, Fauv., but is more finely punctate.

Aleochara discoidea.

Aleochara discoidea, Sharp, Tr. Ent. Soc. Lond. 1874, p. 7.

A small series of examples from different localities on the main island show that this is either a very variable species or that there may be two or three species in Japan very closely allied to *A. fuscipes*, L.; but the material is quite insufficient to form a judgment on.

Aleochara lata?

Aleochara lata, Gravenhorst, Col. Micr. p. 186.

Kiga and Miyanoshita; two specimens. These examples do not agree exactly with either European or North-American specimens, and may possibly be distinct; they are very broad and densely punctate.

Aleochara asiatica.

Aleochara asiatica, Kr., Wiegm. Arch. f. Nat. xxv. p. 13 (sep. pag.).
Aleochara japonica, Sharp, Tr. Ent. Soc. Lond. 1874, p. 8.

We have not yet obtained in Japan any examples with red elytra, such being, according to Kraatz, the ordinary form in Ceylon; but both Kraatz and myself have pointed out that the speciés is variable in colour, and I have no doubt that the two forms are not distinct.

Aleochara niponensis, n. sp.

Nigra, fusco-pubescens, antennarum basi pedibusque testaceis; dense punctata; antennis apicem versus latioribus, articulis 5°–10^{m} transversis.
Long. 6 millim.

Antennæ short, rather stout, the three basal joints sordid red; ninth and tenth joints quite similar to one another. Thorax strongly transverse, densely and finely punctate and pubescent. Elytra about as long as the thorax, densely, moderately finely punctate, the hind margin very slightly red. Hind body much narrowed to the extremity, densely, moderately finely punctate; last dorsal plate with the hind margin simple.

Kiga, Nagasaki, and Nikko; four specimens.

The place of this species is between *A. bipunctata* and *A. asiatica*; from the former it is distinguished by the finer punctuation and shorter and thicker antennæ, and from *A. asiatica* by denser and finer punctuation and the unemarginate last dorsal plate.

Aleochara nitida.

Aleochara nitida, Grav. Col. Micr. Bruns. p. 97.

Found on the main island at Inoshima and in Yezo at Hakodate; several examples.

Aleochara squalithorax (Fauvel in litt.), n. sp.

Opaca, fusco-nigra, breviter flavo-setosa; prothorace peropaco, obsolete punctato; elytris abdomineque densissime punctatis; antennarum basi pedibusque fuscis.
Long. 4 millim.

Antennæ small and not thick, penultimate joint evidently transverse. Head narrow, quite dull, almost impunctate. Thorax transverse, remarkably dull, sparingly and obsoletely punctate, along the middle an obscure, rather broad, scarcely elevated space quite free from sculpture. Elytra scarcely longer than the thorax, very densely and roughly sculptured. Hind body very densely punctate. Mesosternum very strongly carinate quite to the apex.

Hagi (*Fauvel*), Hakodate (*Lewis*).

I have preserved the name proposed for this curiously sculptured species by the well-known French savant.

Aleochara trisulcata.

Aleochara trisulcata, Weise, Deutsche ent. Zeitschr. 1877, p. 88.

Hagi (*Weise*), Hakodate (*Lewis*).

Only one example of this very peculiar little insect was obtained by Mr. Lewis.

Homœusa acuminata.

Euryusa acuminata, Märkel, Stett. ent. Zeit. 1842, p. 143.

Miyanoshita, May 1880; one example, agreeing exactly with European specimens.

Homœusa lævigata, n. sp.

Nigra, subnitida; antennis, pedibus anoque rufo-sordidis; subtilissime punctulata; thorace fere lævigato.
Long. $3\frac{1}{2}$ millim.

Antennæ rather short, much thicker externally, fifth to tenth joints transverse, terminal joint elongate, nearly as long as the preceding three together. Thorax strongly transverse, considerably broader than the elytra, bisinuate on each side at the base; hind angles acute, sharply defined, the surface sparingly and excessively finely punctate, somewhat shining. Elytra about as long as the thorax, very finely punctate. Hind body acuminate behind, very finely punctate.

Seba, July 30th, 1881; one specimen in an ant's nest.

Homœusa longicornis, n. sp.

Picea, haud nitida, thoracis lateribus anoque testaceis; elytris brunneis; antennis pedibusque rufis; subtiliter punctata; antennis sat elongatis, articulo penultimo vix transverso.
Long. $3\frac{1}{2}$ millim.

This insect is considerably larger than *H. japonica* and has quite different antennæ, these organs being more slender and elongate than they are in *H. japonica* or the other known species of the genus. The thorax is strongly transverse, a little rounded at the sides, bisinuate behind, the hind angles slightly acute; the surface finely punctate and pubescent. Elytra about as long as the thorax, rather closely and finely punctate. Legs rather long.

Sapporo; one specimen.

Aspidobactrus, nov. gen.

Tarsi anteriores 5-articulati. Antennæ breves, crassæ, fusiformes, rigidæ. Pronotum magnum, anterius semicirculare, posterius bisinuatum. Coxæ intermediæ contiguæ.

Of this peculiar insect Mr. Lewis obtained only one example, and although I can see its characters only very im-

perfectly, I have little or no doubt that it is allied to *Homœusa*, and distinguished from it and other neighbouring genera by the very peculiar antennæ, the joints of which are consolidated, so that they cannot be easily counted; the terminal joint is elongate, acuminate, about equal in length to the rest of the consolidated mass; the first joint is distinct, the second and third small and slender, the following joints considerably larger, consolidated.

Aspidobactrus claviger, n. sp.

Ferrugineo-testaceus, abdomine obscuriore apice testaceo, subtiliter punctulata; thorace anterius rotundato, abdomine acuminato.
Long. 3 millim.

Antennæ short, thick, rigid, subacuminate. Head immersed under the large thorax; this latter completely rounded at the front and sides, the base strongly bisinuate, the hind angles acute and projecting backwards, the surface finely punctate and pubescent. Elytra considerably shorter and narrower than the thorax, strongly sinuate near the outer hind angle, finely punctate; scutellum not visible. Hind body strongly narrowed from base to apex, feebly punctate, rather strongly pubescent. Tarsi rather short, very slender, especially at the extremity.

Nikko; one specimen.

This is one of the most remarkable of the Staphylinidæ captured by Mr. Lewis, and is pretty certainly either myrmecophilous or termitophilous in its habits.

Thiasophila oxypodina, n. sp.

Elongata, subparallela, minus depressa, subtilissime punctata, evidenter pubescens, opaca, rufo-testacea, abdomine medio nigricante.
Long. $2\frac{1}{2}$ millim.

Antennæ red, thick, thicker externally, second and third joints subequal, fifth to tenth strongly transverse. Head rather narrow. Thorax slightly transverse, densely punctate, base scarcely bisinuate, hind angles very minutely acute. Elytra slightly longer than the thorax. Hind body slender, rather sparingly punctate, basal two segments deeply transversely impressed at the base.

Hakone, Suyama, Miyanoshita, in company with a small ant.

This little insect seems better placed in *Thiasophila* than

in *Oxypoda*, but will probably prove to belong to a distinct genus between these two and also related to *Homœusa*.

Oxypoda luridipennis, n. sp.

Elongata, angustula, nigra ; elytris fusco-ferrugineis, antennis pedibusque testaceis ; dense subtilissime punctulata, opaca ; antennis sat elongatis.
Long. 4 millim.

Antennæ slender, not thicker externally, each joint longer than broad ; terminal joint elongate, but not so long as the two preceding together. Head orbicular, not much more than half as broad as the elytra. Thorax not strongly transverse, but evidently broader than long, rounded at the sides and a little narrowed in front, very densely punctate. Elytra rather long, distinctly longer than the thorax, very finely punctate. Hind body excessively finely and densely punctate. Legs clear yellow.

Yokohama, Oyama ; two specimens.

Oxypoda subrufa, n. sp.

Elongata, angusta, rufa, opaca, dense subtilissime punctulata pubescensque ; thorace elytrisque obscurioribus, capite nigricante, pedibus testaceis.
Long. $2\frac{3}{4}$ millim.

Antennæ short, third joint shorter than second, fourth short, slightly transverse, fifth to tenth differing little from one another, each rather strongly transverse, terminal joint obtuse, not twice as long as the tenth. Head narrow, closely and finely punctate. Thorax rather broader than long, front angles extremely depressed, rather broader at the base than in front, very finely and densely punctate. Elytra longer than the thorax. Hind body elongate and narrow, very densely and finely punctate, and delicately pubescent, not so dull as the front parts.

Nagasaki, in February and March ; three specimens.

Oxypoda hilaris, n. sp.

Angustula, rufa, dense subtilissime punctata pubescensque, opaca ; capite, elytris posterius abdomineque ante apicem fuscescentibus, pedibus testaceis.
Long. 3 millim.

Antennæ short and stout, third joint longer than the second,

fifth to tenth strongly transverse, terminal joint as long as the two preceding joints together. Head infuscate red, rather broad and short, very finely punctate. Thorax strongly transverse, nearly twice as broad as long, base much rounded, very finely punctate. Elytra yellow at the base, fuscous for a large space at the outer apical angle, a good deal longer than the thorax, very densely punctate. Hind body with the basal two segments yellow, the following three fuscous, closely very finely punctate.

Nikko, Yokohama, Kuromazu; five examples.

Oxypoda læta.

Oxypoda læta, Weise, Deutsche ent. Zeitschr. xxi. (1877) p. 97.

Hagi; not found by Lewis.

Calodera desdemona, n. sp.

Elongata, angustula, fusco-testacea; antennis pedibusque pallidis, abdomine medio nigricante; dense subtilissime punctata; prothorace sat elongato.

Long. 3 millim.

Antennæ entirely pale red, fourth joint much broader than the third, fourth to tenth very similar to one another, each transverse, terminal joint twice as long as the tenth. Head suborbicular, piceous. Thorax about as long as broad, densely and very finely punctured, with a transverse impression in front of the base in the middle. Elytra a little longer than the thorax, finely, very densely punctate. Hind body closely and finely punctate.

Yokohama; one specimen.

Closely allied to *C. æthiops*, but about twice the size.

Porocallus, nov. gen.

Tarsi omnes 5-articulati. Palpi maxillares triarticulati, articulo tertio lato, cyathiformi.

This genus is most nearly allied to *Callicerus*, agreeing with it in the peculiar structure of the maxillary palpi, which are of the type seen in some genera of Pæderidæ, the penultimate joint being broad and truncate at the apex and no doubt receiving the fourth joint, which is invisible; the labial palpi are triarticulate, the basal joint stout, the terminal joint minute and slender; the genæ are very obsoletely margined. The middle coxæ are distinctly separated, the mesosternum

much produced between them, but not quite meeting the raised margin of the metasternal process. The basal joint of the hind tarsus is very long, longer than the three following together. By this character the genus is well distinguished from *Callicerus*. In *Callicerus* the anterior tarsi are said to be only four-jointed; in *Porocallus* they appear to me to be five-jointed, but I may possibly be mistaken, as I have only one example at my disposal, and in it the feet have been clogged with gum-tragacanth.

Porocallus insignis, n. sp.

Niger, capite, thorace elytrisque fusco-nigris, densissime punctatis, opacis; abdomine nitido, crebre punctato; antennis, palpis pedibusque rufis.
Long. 6 millim.

Antennæ elongate, rather stout, but little thicker externally, third joint longer than the second, little longer than the fourth, longer than broad, terminal joint elongate, considerably longer than the tenth. Head broad and short, extremely densely punctate, quite dull. Thorax a little narrower than the elytra, transverse, slightly narrowed behind, extremely densely, moderately coarsely punctate, quite dull. Elytra broad, longer than the thorax, dull, densely punctate, the colour towards the hind margin brown, the punctuation there rather coarser and less dense. Hind body with each of the basal segments depressed at the base, and there densely punctate, each behind more sparingly and finely punctured.

Yuyama, May 11th, 1881; one specimen, probably a female.

Group Myrmedoniina.

Saphocallus, nov. gen.

Tarsi anteriores 4-, intermedii et posteriores 5-articulati. Palpi maxillares triarticulati, articulo tertio sat gracili, apice truncato.

Antennæ elongate. Head narrow, with convex eyes. Thorax quadrate. Middle coxæ slightly separated, but neither the metasternum nor the mesosternum is much produced between them, so that a great space in the longitudinal direction exists between the margins of these two parts. Legs elongate. The hind tarsi long, the basal joint elongate, not twice as long as the second joint, this latter a little longer

than the third, the two together about as long as the basal joint; terminal joint slender, about as long as the basal joint.

The place of this genus will be between *Myrmœcia* and *Callicerus*; the insect resembles *Callicerus obscurus* in appearance, but it is well distinguished by the structure of the breast.

Saphocallus parviceps, n. sp.

Angustulus, fuscus, antennis pedibusque rufis: elytris fusco-ferrugineis; thorace subquadrato, densissime punctato, opaco, elytris illo longioribus, fortiter punctatis.

Long. $3\frac{1}{2}$ millim.

Antennæ elongate, red, darker at the base, third joint quite as long as the second, tenth as long as broad, terminal joint elongate, nearly twice as long as the tenth. Head narrow, and considerably narrowed behind the prominent eyes. Thorax evidently narrower than the elytra, nearly as long as broad. Elytra rather roughly punctured, conspicuously emarginate near the outer hind angle. Hind body slender, shining, the base of each segment punctate and somewhat depressed. In the male there is a tubercular elevation on each wing-case near the suture behind; a short denticle on the middle near the hind margin of the penultimate dorsal plate of the hind body; the hind margin of the terminal dorsal plate is emarginate, and the genital armature projects as two short, stout, corneous processes.

Nagasaki, 6th April, 1881; one specimen.

Atemeles sinuata, n. sp.

Rufula, capite, thorace (lateribus exceptis), abdomine ex parte pectoreque nigris; thorace punctulato utrinque foveolato, lateribus valde emarginatis, basi in medio longe lateque lobato.

Long. 5 millim.

Antennæ moderately long and stout, penultimate joint slightly transverse. Head small, narrow, black, quite dull. Thorax transverse, irregular in shape, sides much elevated, a large fovea on each side, the base much produced in the middle. Elytra a little longer than the thorax, densely, very finely punctate. Hind body densely tufted at the sides and less conspicuously at the apex.

This is allied to *A. emarginata*, but has the thorax considerably more eccentric in form.

Chiuzenji; a single specimen, 21st August, 1881, in company of *Myrmica*.

Hoplandria convexa.

Hoplandria convexa, Weise, Deutsche ent. Zeitschr. xxi. (1877), p. 88.

Hagi. Described by Herr Weise from a single example; the genus is doubtful.

Myrmedonia optata, n. sp.

Nitida, capite, thorace, pectore elytrorumque angulis externis nigris, pedibus flavis; antennis, elytris abdomineque testaceo-ferrugineis, hoc apicem versus piceo-variegato; prothorace parce profundeque punctato, basi in medio profunde foveolato; elytris crebrius profunde punctatis.
Long. 6 millim.

Antennæ long and stout, penultimate joints strongly transverse. Head very shining, with a few deep punctures. Thorax broader than long, very distinctly punctate. Elytra a little longer than the thorax. Hind body with the terminal segments marked with black; at the base of each segment a fine punctuation.

Kashiwagi and Chiuzenji; two specimens.

This is closely allied to *M. Haworthi*, but is much smaller, has the antennæ comparatively larger, and the elytra more finely punctate.

Myrmedonia Haworthi.

Aleochara Haworthi, Steph. Ill. Brit. Ent. v. p. 126, pl. xxvi. fig. 3.

Hitoyoshi and Kashiwagi; two examples.

Myrmedonia fugax, n. sp.

Capite cum antennis, elytris, pectore abdominisque apice nigris; thorace abdomineque læte rufo-testaceis, pedibus flavis, antennis articulo ultimo testaceo; thorace transversim subquadrato parce obsoleteque punctato.
Long. 5 millim.

Antennæ thick, fourth to tenth joints strongly transverse. Head shining black, smooth in the middle, sparingly punctate at the sides. Thorax a good deal broader than long, sparingly and subobsoletely punctured, with a basal depression in the middle, very shining, bright yellowish red. Elytra only slightly longer than the thorax, black, shining, rather closely and coarsely punctate. Hind body bright

yellowish red, with the terminal segments black, shining, with some fine punctures at the base of each segment.

Kioto, June 10th, 1881; one specimen.

A distinct species of the subgenus *Zyras*.

Myrmedonia particornis, n. sp.

Capite cum antennarum basi, elytris, pectore abdominisque apice nigris; thorace abdomineque rufo-testaceis; antennis extrorsum albidis, pedibus flavis; thorace subquadrato, obsolete punctato. Long. 5 millim.

Antennæ black at the base, the apical joints quite white, fifth to tenth joints transverse. Head shining black, obsoletely punctate. Thorax a good deal narrower than the elytra, slightly broader than long, a little narrowed behind, foveolate at the base in the middle, sparingly and obsoletely punctured. Elytra slightly longer than the thorax, shining black, coarsely, moderately closely punctate. Hind body with a few fine punctures at the base of each segment.

Kioto, July 2nd, 1881; one specimen.

This also belongs to the subgenus *Zyras*; it is very remarkable on account of the colour of the antennæ.

Myrmedonia picta.

Ilyobates pictus, Sharp, Trans. Ent. Soc. Lond. 1874, p. 11.

This insect was met with again near Nagasaki. There are only four joints in the front feet, so the species must be removed to *Myrmedonia* and placed in the subgenus *Zyras*.

Myrmedonia cognata, var. *japonica*.

Myrmedonia cognata, Märkel, Stett. ent. Zeit. 1842, p. 142.

On his previous visit to Japan Mr. Lewis found only a single example of this insect; but more recently he has procured a good series in the nests of *Formica japonica* at Bukenji. These examples differ from European examples of *M. cognata* in being of a more uniform and dark colour and more densely punctate; but as they agree in other respects I prefer to treat them as a variety, though, if these slight characters prove to be constant when examples have been found in other localities, the two forms may be really distinct. In Europe *M. cognata* inhabits the nests of *F. fuliginosa*, a species closely allied to *F. japonica*.

Myrmedonia similis.

Myrmedonia similis, Märkel, Germar's Zeitschr. v. p. 200.

Kiga and Miyanoshita; four examples. The species is rather rare in Europe, where it inhabits the nests of *Formica fuliginosa.* The ant to whose nest it is attached in Japan has not been noted.

Myrmedonia indiscreta, n. sp.

Fusco-picea, minus nitida, subtiliter punctata; antennis pedibusque rufis, abdominis segmentis basalibus piceis; thorace valde transverso, basi et lateribus rotundatis.
Long. 4 millim.

Antennæ rather short, much thicker externally, fourth to tenth joints transverse, the last twice as broad as long, terminal joint moderately acuminate, quite twice as long as the tenth. Head black. Thorax about twice as broad as long, moderately closely and finely punctate; hind angles very obtuse and indistinct. Elytra a little longer than the thorax, densely and very finely punctate. Hind body impunctate.

Seba and Hakodate; six specimens.

This is similar to the European *M. laticollis*, but is much smaller and narrower and differs in numerous minor points.

Myrmedonia spreta, n. sp.

Nigra, elytris brunneis, antennis pedibusque rufis; antennis brevibus, apicem versus latioribus; prothorace fortiter transverso, lateribus rotundatis, sat crebre asperato-punctato, basi in medio foveolato.
Long. 5–6 millim.

Basal three joints of antennæ clear red, the others more obscure, third joint much longer than the second, fifth to tenth each transverse, each narrower at the base; penultimate joint more than twice as broad as long, terminal quite acuminate. Head broad and very short; eyes large. Thorax nearly twice as broad as long, sides and base rounded; hind angles very obtuse, the surface very distinctly, not densely punctate, minutely pubescent. Elytra a little longer than the thorax, closely and finely punctate, of a pale brown colour, darker at the outer apical angle. Hind body shining, impunctate.

Sapporo and Hakodate.

A very distinct species, somewhat similar to *M. laticollis* and *M. similis*, but with peculiar punctuation on the thorax.

Thamiaræa diffinis, n. sp.

Fusco-cinnamomea, abdomine nigro, segmentis basalibus ad latera rufo-maculatis, antennarum basi pedibusque testaceis; capite, thorace elytrisque subtiliter punctatis, abdomine nitido, fere impunctato.
Long. 5 millim.

Antennæ moderately long and slender, setose, third joint elongate, longer than the second, fifth nearly as long as broad, sixth to tenth transverse, terminal joint acuminate, more than twice as long as the tenth. Head broad and short, not much more than half as broad as the elytra, sparingly and finely punctured. Thorax strongly transverse, the base rounded, the surface even, finely, moderately, closely punctate, shining. Elytra a little longer than the thorax, and rather more distinctly punctured.

This is larger than the European *T. cinnamomea*, and has longer and more slender antennæ, and the upper surface is more shining.

Homalota.

Mr. Lewis's collection contains examples of several species of this genus in addition to those I have described or determined; but the specimens are not sufficiently numerous or well preserved to describe from in this most obscure genus—the most difficult to deal with of all the genera of Coleoptera.

Homalota variolosa.

Homalota variolosa, Weise, Deutsche ent. Zeitschr. xxi. 1877, p. 89.

Hagi; one specimen. This has not been found by Mr. Lewis. The genus is doubtful.

Homalota Hilleri.

Homalota Hilleri, Weise, Deutsche ent. Zeitschr. xxi. 1877, p. 90.

Hagi, on the sea-shore.

Homalota niponensis, n. sp.

Parva, nitida, nigra; elytris fusco-testaceis, pedibus testaceis; pro-thorace transverso, medio late profundeque impresso, abdomine crebre punctato.
Long. $2\frac{1}{3}$ millim.

Antennæ small, rather slender, but little thicker externally,

basal joint fuscous, the others black; fourth to tenth joints slightly transverse. Head black, shining, impunctate, almost without pubescence. Thorax about as broad as the elytra, not twice as broad as long, rounded at the sides, very slightly narrowed in front, very delicately punctulate, shining, on the middle with a very large depression, not extending quite to the front. Elytra a little longer than the thorax, sordid testaceous, blackish at the base, very finely punctate. Hind body with all the segments finely, moderately closely punctate.

Nagasaki, 22nd February, 1881; two examples.

This may be placed near the European *H. nigra*, to which it is not, however, at all closely allied; if the remarkable thoracic depression be sexual, the two examples are no doubt males, but there is no peculiar structure of the hind body to indicate this.

Homalota lutulenta, n. sp.

Parva, rufula, antennarum basi, thorace, elytris pedibusque testaceis; antennis extrorsum, capite abdomineque ante apicem fusces-centibus; crebre punctata, abdomine fortiter acuminato, crebrius conspicueque setosello.

Long. $2\frac{1}{2}$ millim.

Antennæ short and rather stout, thicker externally, third joint rather shorter than the second, fifth to tenth joints transverse, the last of them rather strongly so; terminal joint about as long as the two preceding together. Thorax convex, rounded at the sides and base, and narrowed in front, bright yellowish red, finely punctate, rather feebly transverse. Elytra slightly longer than the thorax, coloured like it, rather more closely punctate. Hind body very acuminate, rather closely punctate, evidently pubescent, and with the exserted setæ very distinct.

Yokohama and Nagasaki.

This is one of the species with most strongly acuminate hind body; it may be easily distinguished from the equally bright-coloured *H. vivida* by its smaller size, thicker antennæ, and more closely punctate hind body.

Homalota oligotinula, n. sp.

Parva, brevis, subdepressa, testaceo-ferruginea, pedibus flavis; subtilissime punctulato; antennis brevibus, crassis.

Long. 2 millim.

Antennæ stout, very short, thicker externally; fourth to

tenth joints transverse, the tenth quite twice as broad as long. Head stout, about half as broad as the elytra. Thorax quite twice as broad as long, base and sides greatly rounded, the surface without depressions, scarcely visibly punctate. Elytra a little longer than the thorax, very minutely punctate. Hind body shining, almost impunctate, narrower behind.

Suyayama and Kumamoto; two specimens.

Homalota gyrophœnula, n. sp.

Brevis, subdepressa, rufo-testacea; antennis extrorsum, pectore abdominisque segmentis 4°–6^{m} nigricantibus; elytris fusco-testaceis; antennis brevibus, apicem versus crassioribus.
Long. 2 millim.

Antennæ very short, third joint small, fifth much broader than the fourth, fifth to tenth transverse, the last of them strongly so; terminal joint short, obtuse. Head small, about half as broad as the elytra. Thorax strongly transverse, quite twice as broad as long; base strongly rounded, surface even, delicately pubescent, scarcely visibly punctate. Elytra longer than the thorax, very finely punctate. Hind body broad and short, finely punctate.

Thectura armata, n. sp.

Elongata, angusta, parallela, depressa, nigra; elytris fuscis; antennis, palpis pedibusque testaceis; capite fortiter punctato, thorace medio longitudinaliter impresso.
Long. $2\frac{1}{4}$ millim.

Antennæ short and rather stout, reddish, outwardly more obscure, fifth to tenth joints transverse. Head subquadrate, slightly narrower than the thorax, rather closely and coarsely punctate. Thorax feebly transverse, very finely punctate. Elytra longer than the thorax, very finely punctate. Hind body narrow and elongate, very obsoletely punctate. In the male the last dorsal plate is armed in the middle behind with a projection, close to which on each side there is a fine spine; the outside of the hind margin has a long conspicuous spine.

This differs from *T. cuspidata* in the male characters and is of larger size.

Falagria myrmecophila, n. sp.

Brunnea, antennis pedibusque testaceis, dense subtiliter punctata,

subopaca ; antennis crassiusculis ; thorace profunde canaliculato, scutello simplice.
Long. 3 millim.

Antennæ stout, fourth to tenth joints transverse. Thorax nearly as long as broad, narrower than the elytra, much narrowed behind, closely and finely punctate, deeply canaliculate from the front to near the base, where the channel expands into a fovea. Elytra a little longer than the thorax, a little narrowed at the shoulders, densely punctate ; scutellum densely punctate. Hind body a little narrower towards the base, densely punctate, the basal segments slightly paler than the others.

Kashiwagi, Nara, Sheba, Shimonosuwa, Bukenji, Sapporo.

This is closely allied to *F. thoracica*, but it is rather larger and of a nearly uniform brown colour, the antennæ are considerably thicker, and the punctuation is denser. Like the European species it inhabits the nests of ants in trees.

Falagria sulcata.

Staphylinus sulcatus, Payk. Mon. Staph. Suec. p. 32.

Yokohama and Hakodate.

[To be continued.

XXXVII.—*Notes on the Palæozoic Bivalved Entomostraca.*—No. XXVI. *On some new Devonian Ostracoda.* By Prof. T. Rupert Jones, F.R.S., F.G.S. *With a Note on their Geological Position*, by the Rev. G. F. Whidborne, M.A., F.G.S.

[Plate XI.]

I.

The new Ostracodous genus herein described is founded on numerous specimens discovered by the Rev. G. F. Whidborne, F.G.S., in a Devonian Limestone at Daddy-Hole Cove, near Torquay, Devonshire.

Kyamodes, gen. nov.

Carapace bivalved, subconvex ; dorsal edge straight, ven-