



Annals and Magazine of Natural History

Series 5

ISSN: 0374-5481 (Print) (Online) Journal homepage: <http://www.tandfonline.com/loi/tnah11>

XVII.—On the Pyrochroidæ of Japan

George Lewis F.L.S.

To cite this article: George Lewis F.L.S. (1887) XVII.—On the Pyrochroidæ of Japan , Annals and Magazine of Natural History, 20:117, 165-175, DOI: [10.1080/00222938709460033](https://doi.org/10.1080/00222938709460033)

To link to this article: <http://dx.doi.org/10.1080/00222938709460033>



Published online: 07 Oct 2009.



Submit your article to this journal [↗](#)



Article views: 1



View related articles [↗](#)

but differ in the absence of a distinct dermal reticulation of foreign bodies, such as is described and figured for that species, although irregularly scattered foreign bodies are fairly abundant in the skin. Dr. von Lendenfeld informs me that he now believes his *Euspongia canaliculata* to belong to the genus *Hippospongia*. At the time when he wrote his description of it he believed it to be identical in part with Mr. Carter's *Euspongia anfractuosa*, notwithstanding which he gave it a new name of his own, citing *Euspongia anfractuosa* as a synonym. Doubtless in his forthcoming monograph of the horny sponges this most perplexing question will be further elucidated.

EXPLANATION OF THE PLATES.

PLATE IX.

- Fig. 1. Suberites inconstans*, var. *globosa*, $\times \frac{1}{5}$.
Fig. 1 a. The same; tylostylus, $\times 190$.
Fig. 2. Suberites inconstans, var. *digitata*, $\times \frac{1}{5}$.

PLATE X.

- Fig. 1. Suberites inconstans*, var. *mæandrina*, $\times \frac{1}{5}$.
Fig. 1 a. The same; portion of upper surface, nat. size.

PLATE XI.

- Fig. 1. Axinella Donnani*, $\times \frac{5}{8}$.
Fig. 2. Phakellia Ridleyi, nat. size.
Fig. 2 a. The same; stylus, $\times 284$.

PLATE XII.

- Fig. 1. Raspailia Thurstoni*, $\times \frac{2}{3}$.
Fig. 1 a. The same; three of the spined styli, $\times 284$.
Fig. 1 b. The same; smooth stylus, $\times 284$.
Fig. 2. Raspailia fruticosa, $\times \frac{2}{3}$.
Fig. 2 a. The same; very long, slender stylus, $\times 284$.

XVII.—On the Pyrochroidæ of Japan.

By GEORGE LEWIS, F.L.S.

THE collection made in Japan in 1880 and 1881 contains twelve species of Pyrochroidæ, and there is a certain similitude between them and those known from the United States; this will be seen best from the following table, which gives the genera and number of species of both countries:—

	Japan.	America.
Ischalia	1	1
Pyrochroa	6	2
Schizotus	3	1
Dendroides	2	4

The other known members of the family are : from Europe six, Northern Asia and China four, Java one, Borneo one, and Australia one.

The Javan species, *Pyrochroa longa*, Perty, as the name implies, has a very different outline from any of the others, and in the British Museum there are two undescribed species, also from Java, which resemble it. But the table given above must be taken with qualification or it will lead, if it lead to any conclusion at all, to speculation of a poor sort. It merely gives the divisions of the family found in Japan and America according to the present generic arrangements, and all such assortments are necessarily more or less provisional and liable to change with an increase of knowledge. There is hardly a family perhaps in the Coleoptera of which so little is known as the Pyrochroidæ. The Japanese species of *Dendroides* are in several respects different from those known from America ; and although I consider it will not at any time be desirable to establish a genus to hold them, their discovery materially enlarges the scope of *Dendroides*. And when the comparative value of the table is examined, inquiries must also be undertaken as to the extent of the researches yet made in Japan and America. Are they or are they not relatively complete ? The species in Japan are local, and the inference therefore is that more discoveries may be made which may modify any views put forth, and the American continent is so vast that it seems safe to predict the same thing of it.

I am led into making these observations because Herr H. J. Kolbe, of Berlin, has lately published, in the 'Archiv für Naturgeschichte,' 1886, p. 142, eleven well-arranged tables showing the distribution of some Korean Coleoptera. The tables show great care in their elaboration, but they are based on such insufficient material that it is impossible to assign to them any value. Only 142 species are enumerated, and some of these are not, in my opinion, characteristic of the Eastern fauna. I do not refer especially to those that are usually called cosmopolitan insects, such as *Dermestes*, *Neorobia*, *Gibbium*, certain *Aphodii*, &c., but to others which have a very wide distribution and are species familiar to most coleopterists. The publication of geographical statistics for the Coleoptera of China, Korea, and Japan is premature now, and will, I think, remain so until the important region lying between

Pekin, Canton, and the Himalayan mountains is fairly well investigated, and the material brought to Europe or taken to America and worked out. From ten to fifteen thousand species would be a very moderate collection for this territory. Within its limits there are large forests of both deciduous and evergreen trees growing at all the various altitudes of the district, and the contents of them are, practically speaking, unknown. It is not the low-lying areas which nurture and harbour the distinctive species of the Japanese fauna, these mostly yield *Bembidia* and certain Hydradephaga and Staphylinidæ, which are much the same all the world over; there as elsewhere the higher altitudes give the characteristic species. The names of five or six of Herr Kolbe's species will ultimately rank as synonyms, a result inseparable from working on scant material. Korea is now being opened up to foreign trade, and more and more every year will travellers visit the country, and the natural history be gradually worked out, while the laying down of railways in China will facilitate the making of collections there; and what I fear may happen is, that the species described from Japan will not sufficiently engage the attention of authors when at work on the new material, and the result will be the creation of duplicate names.

If this paper therefore should fall into the hands of any entomologist who, in the course of writing a memoir, should desire to examine specimens of any Japanese species I possess, I shall be glad to submit to him compared types of all I can. For this purpose I have retained as long a series as possible of every species, and any labour on my part will be bestowed cheerfully that may tend to gain one end I desire, namely, to see a Catalogue of Japanese Coleoptera more free of synonyms than any other local list yet issued. Under the present rules of nomenclature the deletion of a single name is impossible, and I know synonyms cannot be avoided altogether, but, so far as the loan of types can go to prevent them, I am willing to do what I can. I do not wish it to be understood that I think an author may not legitimately refuse to acknowledge the existence of types and decide to be guided by the literature alone, I only offer the loan to those to whom it may be acceptable.

The *Pyrochroa rufula*, described in 1860 by Motschulsky, is not in the present series, and, as it formed part of Madame Gaschkevitch's collection, some doubt exists whether it really came from Japan. It has never transpired that this lady labelled her collections, but it is now pretty well established that some of the Lucanidæ of the collection were gathered on

the Asian continent. Motschulsky's knowledge of Japan at the time when the country had been opened to Europeans but two years was necessarily small, and it is reasonable to doubt whether he thought it a matter of much importance to keep the Japanese species separate from those of Dauria. In the map, Schrenck, Reisen &c. ii. 1860, Hakodate is spelt "Khokodady" and placed in the north of Yezo, whereas it is in the extreme south, close to Matsumai, which is inserted in the chart correctly.

The following is a list of the species referred to in this paper :—

<i>Ischalia patagiata</i> , Lewis.	<i>Schizotus rubricollis</i> .
<i>Pyrochroa vestiflua</i> .	— <i>auritus</i> .
— <i>laticollis</i> .	— <i>gibbifrons</i> .
— <i>brevitarsis</i> .	<i>Dendroides niponensis</i> .
— <i>peculiaris</i> .	— <i>ocularis</i> .
— <i>japonica</i> , Heyden.	_____
— <i>atripennis</i> .	<i>Pyrochroa rufula</i> , Motsch.

Ischalia patagiata, Lewis.

Ischalia patagiata, Lewis, Ann. & Mag. Nat. Hist. 1879, iv. p. 463.

Oblonga, depressa, nigra, parce albo-hirta; antennis pedibusque obscure nigris; elytris externe late luteo marginatis. L. 5-5½ mill.

Oblong, depressed, black, with the elytra broadly margined with yellow, the yellow band occupies half the width of each elytron until just before the apex, when it is confined to the dilated rim of the elytron. The head projects on each side to receive the antennæ; the eyes are rather coarsely granulate, with the space behind rather shining, convex, and sparsely punctured. The thorax is rather elevated behind the neck, with distinct lateral margins, and there is a longitudinal carina before the scutellum which occupies about one third of the length of the thorax, on each side of the carina is a transverse depression. The suture of the elytron is raised and the humeral angle dilated, its outer ridge forming the commencement of the elytral carina, which terminates just before the apex, just beyond the point where the yellow margin narrows. I do not see any sexual characters.

In 1881 I obtained four specimens in Hiogo and two at the foot of Miyasan, one of the original localities.

The American species of this genus was described as *Eupleurida costata* by Leconte in 1866; but Pascoe's *Ischalia indigacea* from Borneo was published in 1860, and his generic name has priority. Crotch first included *Ischalia* in the Pyrochroidæ.

Pyrochroa vestiflua.

Elongata, nigra, subnitida; fronte modice excavata, antice tuberculata; elytris rufo-brunneis, postice dilatatis. L. 10-17 mill.

Elongate, black, somewhat shining; head transversely excavated in front of the eyes, and between the antennæ there is a small tubercle on a short longitudinal ridge. The first joint of the antennæ is rather long and constricted before the base, the base being abruptly enlarged; the second joint is about one third the length of the first and slightly smaller before its base; the third joint is as long as the first and at its apex is the first pectinal tooth or branch, which in the male is as long as the joint itself; the next seven joints have subapical processes which are nearly three times the length of each joint; the terminal joint is (as in other species) long and simple; in the female the branch of the third joint is short and rather obtuse, the following joints bearing branches which gradually lengthen until the tenth joint, when the prolongation is half as long again as the segment. The thorax is clothed with a cinereous pile and anteriorly rounded at the sides, with a median depression which widens out before the scutellum; there are also two irregular depressions on each side. Scutellum somewhat rounded behind, black, and rugosely punctured. Elytra reddish brown, with concolorous pile, closely and rather transversely rugose and for three fourths of their length rather amply dilated. Legs intensely black with pale claws. The female has the forehead much less excavated than the male and the tubercle is less defined.

The larvæ, pupæ, and imagos were found together under bark of beech, April 21, 1880, at Suyama, and the perfect insect afterwards was found commonly at Miyanoshta, Nikko, Sapporo, Oyayama, and other places.

Pyrochroa laticollis.

Elongata, nigra, subnitida; capite punctulato, fronte utrinque excavata; thorace transverso post oculos subrecto. L. 10-11 mill.

This is very similar to the last in colour and form of the antennæ, but it is much smaller and has a transverse thorax. The head is finely and rather thickly punctured, and the transverse region between the antennæ and the eyes is excavated on each side, with a dividing central portion much less deep. The thorax is rather straight behind the head, with a very distinct angle on the outer edge behind the middle; the depressions are much as in *P. vestiflua*.

I possess six females, but do not know the male. The localities for it are Ichiuchi, Subashiri, Miyanoshita, and Oyayama.

Pyrochroa brevitarsis.

Elongata, nigra, subnitida; fronte transversim subexcavata, inter antennis subelevata; pronoto parum transverso utrinque biangulato; elytris testaceo-brunneis. L. $8\frac{1}{2}$ mill.

Head with an interantennal elevation with a median but small tubercle, the transverse space between the eyes and antennæ is slightly excavated. The thorax is anteriorly straight behind the neck, and then shelves off to a point, which, viewed over the elytra, looks like an angle; posteriorly, as in *laticollis*, there is another well-defined angle. The scutellum is black, and the thoracic depressions do not visibly differ from those of the preceding species.

There is no doubt about this species being distinct from the last on account of the size, thoracic angles, and shorter posterior tarsi.

Two examples, both females, were taken in the highest region of Kadzusa, April 5, 1880. In this part the plantations are chiefly of *Abies* and *Pinus*.

It is the smallest species known from Japan at present.

Pyrochroa peculiaris.

Elongata, nigra, subnitida; fronte bifoveolata; elytris piceis pilo rufo-brunneo. L. 9-11 mill.

Elongate, black, little shining. Head and thorax with an ashy pubescence; elytra piceous and clothed with a reddish-brown pile, which gives a peculiar dark tint to the whole. The forehead in the male has two deep foveæ between the antennæ, and the transverse space between the eyes and the antennæ is thickly clothed with pubescence; between the eyes the surface is sparsely punctulate; neck rather thickly punctate. The first joint of the antenna is somewhat compressed, second trigonate, third with a subapical branch, fourth to tenth with pectinal processes longer than the joints. The female has no frontal foveæ, but the transverse depression before the eyes is more distinct, the head generally more thickly punctured, and the antennæ obtusely pectinate. The thorax is round in both sexes, and the elytra but moderately dilated and rugosely sculptured.

I took this species in August, four specimens in South Yezo and one on Niohozan, above Nikko.

The two following species have slender tarsi and an interocular protuberance in the male :—

“*Pyrochroa japonica*, Heyd., ♀.

“*Pyrochroa japonica*, Heyd., ♀, Deutsche ent. Zeitschr. xxiii. 1879, Heft ii. p. 354.

“Depressa, obscure rufo-coccinea, antennis pedibusque nigris, ore, thorace lateribus nigris, fronte nigra; capite inter oculos fortiter transverse elevato, antice laxe excavato. Thorace minore, parum latiore quam longiore, lateribus post medium angulatis, ante medium transverse late impresso, linea media canaliculata in foveam antescutellarem effundente. Elytris plus quadruplo thorace longioribus, ante medium dilatatis, transverse densissime rugosis, in utroque lineæ duæ e rugis obliquis plumiformibus latioribus. Palporum articulis primo minuto rufo et secundo quarto æqualibus, tertio brevior et angustior, quarto lateribus parallelis, basi apiceque acuminatis. Antennæ partim desunt, articulis 1 et 3-6 longitudine æqualibus, primo basi attenuato, 3-6 sensim fortiter ramosis, fortius (jam in tertio) quam in *P. pectinicorni*, cui affinis sed major. L. 11 mill.”

The male of this species has the pectinate branches of the antennæ very long, and in joints six to nine the processes are more than three times the length of the joint that bears them. Between the eyes there is a large vertical protuberance, which is connected with the forehead by a median ridge, which, viewed sideways, is usually seen to come to a raised point immediately behind the antennæ; but in several examples this elevation is obsolete. In two specimens the vertical protuberance examined from above is divided on its upper surface into two lobes. Heyden only knew the female.

I have a series of about thirty examples from Subashiri, Kiga, and other places lying under Mount Fujisan, and also a few from Nikko.

Pyrochroa atripennis.

Atra, opaca; capite antice palpisque flavis; thorace rufo. L. 11 mill.

Black; head between the antennæ and the mouth-organs, except the tips of the mandibles, flavous. In the male there is a broad flattish protuberance on the head, which has its base between the eyes, and, projecting forwards, is somewhat truncate anteriorly and rounded off on each side, with two impressions on the upper surface, which leave the margins and a median division raised. Thorax red, sometimes a little transverse, with a cinereous pile and two lateral impressions

and one rather deep and broad before the scutellum ; scutellum posteriorly semicircular, black and opaque, like the elytra, the latter rugose and moderately dilated behind ; legs black with yellow claws. The female has the head transversely convex between the eyes, a slight longitudinal ridge between the antennæ and a small boss-like elevation on each side close to them ; the epistoma is flavous and the palpi black.

Whether this last character is really sexual or whether the coloration is inconstant in the species must remain at present uncertain, as I have but one female.

Found by sweeping under brushwood in June on Omine in Yamato, and at Chiuzenji. Four examples.

I have one more species of *Pyrochroa* from Miyanoshita which is unique, and I do not describe it. Its head is rather thickly punctured.

Pyrochroa rufula.

Pyrochroa rufula, Motsch. Bull. Soc. Mosc. 1866, p. 173.

“Statura et color *Pyrochroa pectinicorni*, sed major. Oblonga, depressa, opaca, supra rufo-coccinea, pubescens, corpore subtus, fronte, ore, oculis, antennis subserratis, pedibusque nigris ; thorace transverso, longitudinaliter triimpreso ; elytris thorace latioribus, postice subdilatis, nervis vix distinctis. Long. $3\frac{1}{4}$ l. (about 7 mill.) lat. $1\frac{1}{8}$ l.”

The measurements given above are less than those of *P. pectinicornis* ; but the diagnosis expresses a contrary statement.

Schizotus rubricollis.

Elongatus, subparallelus ; fronte in medio longitudinaliter carinata utrinque valde excavata ; elytris thoraceque rufis. L. 9 mill.

Elongate and posteriorly scarcely dilated ; head between the eyes transversely convex and sparsely punctulate, the convexity being broadest close to the eyes ; the region before the eyes is deeply excavated, with a polished longitudinal ridge in the centre of the excavation which terminates before the interocular raised or convex portion, and at the point of termination there is a triangular excavation deeper than that of the sides ; bordering the carina the head is more or less reddish ; the neck is red and somewhat coarsely punctured. Thorax uneven, a little raised in two portions behind the neck, with similar raised parts before the scutellum ; the raised portions are a little polished. Scutellum a little

prolonged and transversely depressed in the middle ; elytra red and rugose. I know the male only.

Captured at Miyanoshita, May 1880.

Schizotus auritus.

Elongatus, niger, subnitidus ; capite inter oculos elevato, ante oculos profunde excavato. L. 9 mill.

Black, rather shining ; elytra alone reddish brown. Head a little transverse, with the region between the eyes greatly elevated, the elevation or protuberance being divided into two portions by a median depression ; the surface is distinctly but not densely punctured ; this protuberance is excavated anteriorly, and within the excavation are long flavous hairs. The region between the antennæ is transversely canaliculate, with the space anterior to it roughly sculptured, with two rather deep lobe-shaped foveæ. The thorax is transverse, distinctly punctured, and has the usual depressions of the genus on either side and in the middle. Scutellum black, a little prolonged ; elytra rugose, not much dilated behind. The tarsi are rather slender, with pale claws. The female has a transverse depression between the eyes and the antennæ ; but it is not deep and does not quite approach the eyes. The first joint of the antennæ is much constricted before the base in both sexes, and the anterior portion is somewhat globular in the male.

Six specimens were taken on the plain of Fujisan and one on Otake.

Schizotus gibbifrons.

Elongatus, niger ; capite regione inter oculos perconvexa ; thorace basi anguste rufo. L. 10 mill.

Elongate, black ; posterior margins of the thorax narrowly red ; elytra reddish brown. Head with a well-marked oval boss between the eyes, shining and distinctly punctured ; forehead slightly and narrowly elevated between the antennæ, with the space intervening between the eyes depressed. The surface of the thorax is uneven, but has little to distinguish the species from its congeners ; the anterior angles are round. The scutellum is black, rather lengthened, depressed transversely in the middle, and posteriorly more acuminate than in *S. auritus*. Elytra as in preceding species. The female is very like the male, except that the interocular space is simply convex and the antennæ less pectinate.

Five examples, found on Oyayama in Hiogo, May 1881.

The American species of *Dendroides* have the elytra with distinct punctures separated from each other by a wide interstice. The Japanese species have the elytra closely sculptured as in the genus *Pyrochroa*; this sculpture is sometimes called coriaceous, but I think Dr. Heyden's "transverse densissime rugosis," applied to *Pyrochroa japonica*, is the better description of it.

Dendroides niponensis.

Elongatus, piceus; fronte excavata; elytris rufo-brunneis, antice subparallelis, postice parum dilatatis. L. 17 mill.

Elongate and relatively little dilated behind; elytra piceous, with a reddish-brown pile, which together give a tint which inclines to pink. The general colour simulates that of *P. peculiaris*, in which also the elytra are different in colour from the pubescence. Head excavated between the antennæ and in the region of the anterior portions of the eyes; between the hinder portions of the eyes the surface is glabrous and shining; neck punctured; thorax rather round behind, but slightly constricted behind the neck, with a cinereous pile; surface uneven. Scutellum blackish, broadest at base, gradually rounding off towards the apex. Legs black; claws yellow. The antennæ are strongly pectinate in both sexes, the pectination being longer and narrower in the male, shorter and more robust in the female.

The chief sexual characters are in the eyes. The eyes in the female are small and the interocular space double the width of that in the male, and the frontal excavation is shallow.

I obtained it at Kashiwagi, Nikko, Chiuzenji, and Akita.

Dendroides ocularis.

Elongatus, piceus; fronte haud excavata, punctata, oculis in medio approximatis. L. 13 mill.

Elongate, with the outline of the last species; epistoma slightly convex and a little rugosely punctate; eyes very prominent and above almost touching in the male; neck rugosely punctured; thorax slightly constricted before the base, lateral depressions deeper than those of the middle; scutellum black; elytra reddish brown. The female has a smaller head than in the preceding species, and the interocular space is about as wide as in the male of *D. niponensis*, and it is less shining and more punctured than in the male of its own species.

The two prominent characters which separate this species from the last are the want of frontal excavation and the very narrow space between the eyes in the male.

I possess three examples from Miyanoshita and one from Kashiwagi.

XVIII.—On a new Species of Semionotus, from the Lower Oolite of Brora, Sutherlandshire. By A. SMITH WOODWARD, F.G.S., F.Z.S., of the British Museum (Natural History).

[Plate VII.]

THROUGH the kindness of Prof. J. W. Judd, F.R.S., I have received from the Rev. J. M. Joass, LL.D., of Golspie, Sutherlandshire, some examples of an interesting fossil ganoid fish, from the Lower Oolites exposed in that district upon the coast. The specimens were discovered in a block of carbonaceous shale, believed by Dr. Joass to have been derived from the bed underlying the main seam of lignite in Strath Brora; and, as will appear from the description and figures, they are referable to a hitherto unknown species of *Semionotus*, adding one or two important items to our knowledge of the skeleton of this early genus*. Detached scales have already been recorded by Prof. Judd †, but no remains sufficiently perfect for specific determination seem to have been previously met with.

The most complete fossil (Pl. VII. fig. 1) shows the general form of the fish, with all the fins except the pelvic pair; but the shape and relations of the bones in the cephalic region have been rendered almost undistinguishable by crushing. A second specimen, with a portion of its counterpart, but destitute of the caudal fin, is even more dilapidated, though exhibiting some of the bones of the head and opercular folds. A fragment of a third individual shows a well-preserved pectoral fin and the upper lobe of the caudal pedicle; while a fourth is represented by its apparently entire caudal fin. A detached maxilla also displays the characters of that bone and its dentition.

* The most complete description of *Semionotus* hitherto published is by J. Strüver, "Die fossilen Fische aus dem Oberr Keupersandstein von Coburg," Zeitschr. d. deutsch. geol. Gesellsch. vol. xvi. (1864) pp. 305-321, pl. xiii.

† J. W. Judd, "The Secondary Rocks of Scotland.—Part I," Quart. Journ. Geol. Soc. vol. xxix. (1873) p. 194 (table).