

I had long known this species as a not uncommon little insect of the Scottish Highlands, and it was only in 1925 that I realised it was not recorded as British!

In its simple dental spine it comes near *T. vulgaris*, from which it is distinguished by its small size, the few (2-3) inner teeth of the upper claw, the dental formulae and the short antenna, of which Ant. III is only about twice the length of IV.

SCOTLAND, Speyside, Deeside and Perthshire—old records—and probably widely distributed. According to Handschin it is known from Northern Europe, Bohemia and Switzerland.

Orchesella bifasciata Nic.

The remarks under the last species apply equally well to this; also the citation (p. 189) and the note on distribution.

The species is only 2.0 mm. in length, usually pale but for the darkly pigmented eye-patches, two blackish transverse bars occupying the anterior half or more of Abd. II and III and a lightly flecked design on Abd. IV.

Orchesella alticola Uz. var. *obscura* Handsch.

This mountain species was also included in my MS. list, but I was not then aware that Carpenter's *Entomobrya anomala* was the same species. I first met with it in Ireland in 1908, whilst in 1912 it was submitted to me by Dr. Randall Jackson, who had collected it in some plenty from the summits of Helvellyn and Ben Nevis. So far as I am aware, it has only been recorded from Fair Head, Co. Down (Carpenter), and therefore I have brought together the records known to me. It is usually to be found plentifully under the stones of screes on the slopes of mountains.

N. IRELAND: ANTRIM, Fair Head, 1905 (Carpenter); ARMAGH, shores of L. Neagh near Lurgan, ix.08 (R.S.B.). SCOTLAND: INVERNESS-SHIRE, slopes of Ben Nevis at 4,000 feet, 1912 (A. Randall Jackson), and PERTHSHIRE, on Ben More at c. 3,000 ft., ix.25 (R.S.B.). ENGLAND: NORTHUMBERLAND, near summit of Cheviot, 2,500 ft., common, 1912 (R.S.B.); CUMBERLAND, summits of Helvellyn, 1912 (A. Randall Jackson); Skiddaw at c. 2,500 ft., vi.16, and Sunday's Crag, near Patterdale, at 2,500 ft., v.15 (R.S.B.). EIRE: CORK, summit of Healy Pass, 1,084 ft., 17.ix.39, and Sugar Loaf, Caha Mountains, 1,800 ft., one example in Sphagnum, 13.ix.39 (J. Litsler).

3 St. Helen's Terrace,
Low Fell, Gateshead-on-Tyne.
October 27th, 1939.

NEW SPECIES OF STAPHYLINIDAE (COL.) FROM JAVA.

BY MALCOLM CAMERON, M.B., R.N., F.R.E.S.

OXYTELINAE.

Thoracophorus javanus sp.n.

Rather dull, dark ferruginous red. Antennae and legs reddish-yellow. Length 2 mm. Colour and lustre of *philippinus* Bernh., but larger and more robust, the head broader with less developed basal keels, the antennae a little stouter, sides of thorax closely and distinctly crenulate, elytra each with six keels.

Head a little narrower than the thorax (3 : 3.75), the posterior angles obtuse but prominent, the anterior margin rounded, close behind it with a curved ridge interrupted in the middle; at the base with a pair of nearly parallel sharp keels; strongly coriaceous. Antennae with five-jointed club. Thorax transverse (3.75 : 2.5), the sides parallel and closely crenulate, anterior angles rounded and prominent, the base truncate in the middle, oblique and feebly sinuate on each side, the posterior angles obtuse and prominent; the surface with four keels, the lateral oblique and sharp, extending from the anterior border to the posterior angle, the median pair widely separated and bifurcate in front, the surface between with some indistinct longitudinal striae; strongly coriaceous. Elytra longer (3.5 : 2.5) and broader than the thorax, transverse (4 : 3.5), each with six keels, of which the third is much less distinct than the others; strongly coriaceous. Abdomen with close longitudinal ridges on the first three segments, less close and more obsolete on the following; strongly coriaceous.

E. JAVA: Djember (*C. J. Louwerens*). Unique. My collection.

Stenus (Hypostenus) louwerensi sp.n.

Shining, head, elytra (except for the extreme base), posterior two-thirds of the 5th visible tergite and whole of the 6th black, the thorax, extreme base of elytra and rest of abdomen red. Antennae, palpi and legs yellow, the 6th to 8th joints of the former and the bases of the middle and posterior tibiae infusate. Length, 5.5 mm. Colour of *elegantulus* Cam., but larger and more robust, thorax more closely punctured, elytra longer, the abdomen much less punctured.

Head a little narrower than the base of the elytra, broadly and distinctly bisulcate, with narrow raised impunctate median space, elsewhere closely and moderately finely punctured. Antennae slender, reaching the base of the thorax, all the joints longer than broad. Thorax longer than broad (3.5 : 2.5), the sides gently rounded for the anterior three-fourths, straight and retracted for the posterior fourth, rather coarsely and rather closely punctured. Elytra broader and a third longer than the thorax, as long as broad, the puncturation a little coarser and closer and with a very fine and obsolete ground sculpture. Abdomen a little narrowed at apex, finely coriaceous, the first four visible tergites strongly constricted at their bases and there more coarsely and closely punctured, more finely and sparingly elsewhere, the last two segments moderately closely but

obsoletely punctured.

♂ unknown.

E. JAVA: Djember (*C. J. Louwerens*). Unique. My collection.

PAEDERINAE.

***Astenus louwerensi* sp.n.**

Head and thorax pitchy-black, only slightly shining; the elytra shining pitchy-black, the posterior margin and sutural region broadly and indeterminately reddish-yellow; abdomen shining, the first four visible tergites red, the following black. Antennae and legs entirely reddish-yellow. Length, 4 mm. Build of *gratellus* Fauv. but smaller and narrower, differently coloured, the antennae longer, sculpture of head and thorax less coarse.

Head with the post-ocular region completely coarctate with the base and with the usual reticulate-umbilicate sculpture. Antennae very long and slender, all the joints much longer than broad. Thorax longer than broad (5.5:4), trapezoidal, the sculpture as on the head. Elytra as long as, but broader than, the thorax, shining, rather coarsely and rather closely punctured. Abdomen with the first four visible tergites rather coarsely and closely punctured, the last two much more finely and sparingly. Anal styles yellow.

♂ unknown.

E. JAVA: Djember (*C. J. Louwerens*). Unique. My collection.

***Lathrobium cafrum* Boh. subsp. *javanum* n.**

This subspecies differs from the type form in the smaller average size (5.5 mm.), slightly shorter antennae, more closely punctured base and sides of the head and much more closely punctured sides of the thorax; the last two abdominal tergites are also more or less extensively infuscate.

S. JAVA: Tjilatjap (*F. C. Drescher*). Two examples. My collection.

ALEOCHARINAE.

***Brachida javana* sp.n.**

Shining; head, thorax and abdomen yellowish-red, the latter a little infuscate before the apex; the head somewhat infuscate at the base; the elytra brownish-yellow. Antennae black, the first four joints and legs reddish-yellow. Length, 1.75 mm. In build and colour somewhat like *crassiuscula* Kr., but much smaller, the elytra shorter and more yellow in colour.

Head narrower than the thorax (3:3.5), transverse, the eyes nearly as long as the post-ocular region, extremely finely and very sparingly punctured. Antennae moderate, the third joint narrower and a little shorter than the second, fourth small, transverse, the fifth and following more strongly so, the penultimate about a half broader than long. Thorax transverse (3.5:2.3), the sides

evenly rounded, the posterior angles rounded, extremely finely and very sparingly punctured. Elytra slightly longer and a good deal broader than the thorax (4.5:3.5), less finely and moderately closely punctured. Abdomen narrowed at base and apex, widest at the middle, extremely finely, moderately closely punctured on the anterior segments, much more sparingly behind, the pubescence sparing and rather long, the sides closely covered with long hairs. Head and thorax with sparing, stiff, more or less erect hairs, the elytra with longer and closer semi-erect pubescence.

E. JAVA: Djember (*C. J. Louwerens*). Unique. My collection.

***Coenonica louwerensi* sp.n.**

Fore-parts moderately, abdomen strongly shining. Head black; thorax dark reddish-brown; elytra blackish, indeterminately yellowish at the shoulders; abdomen black, the first two visible segments obscurely yellowish. Antennae black, the first three joints and apex of the 11th reddish-yellow. Legs reddish-yellow, the tibiae more or less infuscate. Length, 2.5-3 mm. Very like *philippina* Bernh. in build, but more robust, with longer antennae, the sculpture of the fore-parts coarser, but of similar character.

Head narrower than the thorax (3.7:4.5), the eyes large, longer than the post-ocular region, at the middle of the base with a short, shining keel, the front sparingly, elsewhere closely covered with large umbilicate punctures. Antennae stout, the third joint a little longer than the second, fourth and fifth a little longer than broad, sixth about as long as broad, seventh to tenth transverse, about a half broader than long, the eleventh a little longer than the ninth and tenth together. Thorax transverse (4.5:3), convex, the sides rounded in front and with a seta about the middle, retracted and a little sinuate before the obtuse posterior angles, before the middle of the base with a V-shaped impression, the whole surface closely covered with coarse granules. Elytra longer (4:3) and broader than the thorax, the sculpture very similar but not quite so close, with a seta at the shoulders and another about the middle of the sides. Abdomen a little narrowed before the apex and except for a transverse row of small punctures near the posterior margins of the segments, impunctate, the sides and apex with long black setae.

Sexual differences not apparent (? ♀ ♀).

E. JAVA: Res. Kediri, Samberbajem (*C. J. Louwerens*). Two examples. Type in coll. Louwerens, cotype in my collection.

***Tachyusa (Caliusa) javana* sp.n.**

Shining; head black; thorax red; elytra black with the humeral angles reddish; abdomen with the first two visible segments and base of the third red, the following black. Antennae black, the first three joints and legs yellow. Length, 3.5 mm. Very like *ferialis* Er., but with broader thorax and differently coloured elytra.

Head round, nearly as broad as the thorax, very finely and sparingly punctured, indistinctly coriaceous. Antennae with the third joint almost as long as

the second, fourth to tenth all longer than broad, decreasing in length, the penultimate only slightly longer than broad, the eleventh as long as the ninth and tenth together. Thorax as long as broad, the sides rounded in front, retracted and a little sinuate behind, the posterior angles obtuse; before the scutellum with a small impression, with fine, moderately close, asperate punctures; ground sculpture very feeble. Elytra broader and slightly longer than the thorax, transverse, the puncturation finer and rather closer. Abdomen a little widened towards the apex, the basal impressions of the first three visible tergites closely and rather coarsely punctured, elsewhere very finely and sparingly.

E. JAVA: Djember (*C. J. Louwerens*). Unique. My collection.

Zoological Museum,

Tring, Herts.

January 22nd, 1940.

Reviews.

'THE MIND OF THE BEES.' By J. FRANÇON. Translated by H. ELTRINGHAM. F.R.S. 8vo, xi+146 pp. London: Methuen & Co. Ltd. 1939. Price 6s.

'THE LANGUAGE OF BEES.' By PROF. K. VON FRISCH. Smithsonian Report for 1938, pp. 423-431. 1939.

These two fascinating studies of bee behaviour are complementary and should be considered in relation to one another. Monsieur Julien Françon's stimulating and human book first appeared in France under the title 'L'Esprit des Abeilles.' In it we recapture all the thrills of first reading the 'Souvenirs' of his immortal countryman, Jean Henri Fabre. As Fabre was fortunate in his translators, so too is Françon, and our old friend Dr. Harry Eltringham, already well-known to us as a skilled Lepidopterist, histologist, artist, craftsman and oarsman, stands revealed in a new light. It must be pointed out that Prof. von Frisch's material was delivered as a lecture at University College, London, in March, 1937, appeared in the same year in *Science Progress*, 32: 29-37, and is now reprinted. A more detailed account of the work was published in 1923, *Zool. Jahrb., Abt. Zool. Phys.*, 40: 1-186. In the pamphlet now before us he is much more concise than Françon, who has set himself the task of writing in popular vein with highly successful results.

Both authors experimented with marked bees, attracted to honey or sugar-water, and both maintain that these insects are able to communicate to other bees information concerning an abundant and easily secured supply of food; these then help the original finder. V. Frisch shows that this is accomplished in the course of a kind of dance in the hive, but he believes that the information so conveyed is of a general nature, as the bees 'flew out in all directions' in search of the experimental dishes. Françon's 'assistant' bees, however, seemed to show complete knowledge of the position and means of access to the most unnatural and complicated contrivances. Both works have sections on the colour vision of bees, while v. Frisch discusses the senses of taste and smell, and alludes to the use of an abdominal scent organ in attracting other bees which may be near the special source of food.

The two publications will be read with interest by general entomologists, bee-keepers and students of insect psychology. Indeed, they are so stimulating, and the experiments so capable of universal application, that only the rigorous rationing of sugar prevents the reviewer from quitting his study table to commence marking bees forthwith.

'THE MOTHS OF THE BRITISH ISLES.' By R. SOUTH. Edited and revised by H. M. EDELSTEN. 8vo, First Series, pp. vii+360, 159 pls., 26 figs; Second Series, pp. vii+399, 159 pls., 20 figs. London: F. Warne & Co. Ltd. 1939. Price 10s. 6d. each volume.

For more than three decades this fine work, and the companion volume on British butterflies, have been used with pleasure and profit by all classes of naturalist from schoolboy tyro to research worker. Perhaps it would be correct to say that no entomological books published in Britain during the present century have had so wide an appeal or such a long life.

With the passage of time, however, some revision became inevitable, and this has been very successfully achieved by Mr. H. M. Edelsten in the face of the severe limitations imposed upon him by the continued use of the original plates of type. Modifications are therefore confined to small verbal changes, additions and corrections, which, although not extensive in themselves, together make a vast difference to the accuracy and usefulness of the book. Additional information, too long for inclusion in the text, has been embodied in the two appendices. The most striking changes are in nomenclature, but the names adopted represent the carefully considered findings of the editor, Mr. W. H. T. Tams and other experts at the British Museum (Nat. Hist.) after a close and long overdue examination of original sources and proper regard for the International Rules; advantages which should secure for these names not only an immediate following, but also stability in the future. One slight disadvantage resulting from the use of the original plates in combination with the new nomenclature is that the old order of species sometimes differs from that which would now be adopted, in a few cases even separating species to-day considered congeneric. A more serious matter is the continued omission of authorities for trivial names, which, it would appear, could easily have been introduced at the time of such sweeping alterations in the various headings. On the other hand, life-histories and distribution lists, including those for Ireland, have been brought up to date, while there are new general and specific indexes.

In conclusion, we must point out that the 'Small Fry,' as South called them in the preface to the first edition of his second volume, have still been left 'for separate treatment at some more convenient season.' Is it too much to hope that Messrs. Warne & Co. will one day give us a similar volume with enlarged illustrations of Microlepidoptera? These volumes are so good that, like Oliver Twist, we have no hesitation in asking for more.

Gnorimus nobilis L. (*Col., Scarabaeidae*) in Kent. — The larva of this interesting and extremely local green chafer beetle feeds upon the wood mould of old, partially decayed fruit trees, more especially the plum. A few larvae were found in a decayed plum tree at East Malling in April, 1928, but it has not been seen again until last year, when larvae were found in numbers in the wood mould of an old Keswick Codling apple tree at East Malling. Some of the larvae were boring into the heart-wood of the tree, but the majority seemed to prefer the decayed portions. It is evident that this insect has been breeding in the tree for several years, and the owner of the orchard informs me that he has noticed for a number of seasons a green woodpecker 'working' the tree trunk to procure the larvae. The larvae were collected and placed in cages containing wood mould. Eleven pupae were noted in one cage at the end of February, and three adults emerged on the 17th March. When breeding this species great care must be taken to keep the wood mould in a moist condition, but it is fatal to damp it too much.—A. M. MASSEE, East Malling Research Station, Maidstone, Kent: March 19th, 1940.

A census of species is given, and is here compared with a census for Great Britain, for which, except in the case of groups marked with an asterisk (*), the reviewer is indebted to the labours of Mr. R. F. Bretherton. The starred figures are taken from 'A list of the Micro-Lepidoptera of the Oxford district,' by the late E. G. R. Waters (1929, *Proc. Ashmol. nat. Hist. Soc.*, 1928: 71).

This list brings out interesting differences between the faunas of New Zealand and Great Britain. The family Thyrididae is the only one represented in the former area but not in the latter. On the other hand, the following families appear to be unrepresented in New Zealand while occurring, in the numbers now given, in the home country: Notodontidae, 25; Thyatiridae, 9; Lymantriidae, 10; Lasiocampidae, 11; Endromiidae, 1; Saturniidae, 1; Drepanidae, 6; Nolidae, 5; Chloephoridae (including Sarrothripinae), 4; Brepidae, 2; Zygaenidae, 10; Cochlidiidae, 2; Cossidae, 3. These numbers, added to the former British list, make a total of 2,110 for Great Britain, compared with 1,471 for New Zealand, Tineidae in both cases heading the roll. There are some interesting differences in the proportionate values of other families: e.g. in New Zealand Noctuidae form nearly 11 per cent. of the whole, in Great Britain nearly 16 per cent.; Tortricidae in Great Britain form just over 16 per cent. of the whole, in New Zealand just over 9 per cent.

An appendix of some three pages deals with (1) the Lepidoptera of a particularly interesting area, the Te Anau-Manapouri Lake District. (2) An unknown case-bearing larva, of which a figure is given. Although Mr. Hudson has endeavoured every year from 1910 to rear this, he has been unsuccessful. (3) A suggested explanation of variation in cryptic Lepidoptera, first put forward in 1935 in this Magazine (71: 156-8). The author was unaware that E. B. Poulton had long previously written the same explanation. (4) Additional notes on seven species.

The index, for this supplement only, has been tested at random and found to be accurate. There remain for consideration the ten plates, of which two are concerned with larvae and pupae. We have nothing but praise for the figures themselves, but find the arrangement a little tiresome. Some of the larvae face one way, some another, and the method of numbering the figures causes difficulty, whether one looks in the explanation for the name of a particularly attractive figure, or looks first at a name and its reference number and searches for a figure with that number. The result of the arrangement of the figures is that allied larvae are not near each other, and the reference numbers not in sequence. The same applies to some of the plates of moths: nearly allied species on Plate LXI, for instance, are, in the case of Pyralidae and Micropterygidae, nearly as far apart as possible. The figures themselves, enlarged for the smaller species, are exquisitely done by Messrs. Vaus and Crampton, who have surpassed those they did for the main volume. The figure of the male *Kiwaia jeanae* Philp. (Pl. LVIII, fig. 9) admirably supports the author's account of it as a 'most remarkable little insect': it is surely the oddest looking moth that was ever figured, with its dense fuzzy hairs on the hind wings obscuring the body. The treatment, in general, of the fine hairs of the fringes is an advance even upon Messrs. Vaus and Crampton's previous work.

Finally, we would emphasise the lack of so comprehensive, well illustrated and up-to-date a work on *British* Lepidoptera, and hope that this reproach will not be applicable much longer to British Entomology. The mother country has certainly been taught a lesson by her daughter.—G. D. H. CARPENTER.

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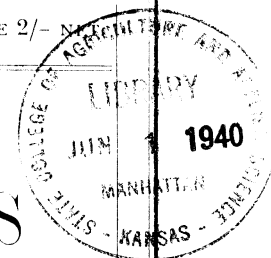
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