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aa. No longitudinal vein between the first and fourth longitudinal veins; wing fig. 2; eyes contiguous (♂).
Hammatorrhina Lw. - H. bella Lw. ♂. - Ceylon.

AA. Proboscis short; hind tibiae without spurs; ungues pulvilliform; wing fig. 8; eyes contiguous [or subcontiguous?] (\$\sigma\$).
 Hapalothrix Lw. - H. lugubris Lw. \$\sigma\$ --

Europe.

On the Chaetotaxy of Cacoxenus indagator Lw.

by C. R. Osten Sacken.

Cacoxenus indagator is a little fly, between 3 and 4 mm. long., which was first observed in Silesia by Dr. Scholz in sand-pits, frequented by sand-burrowing bees; a little later Dr. Giraud (Verh. Z. Bot. Ges. 1861, p. 489) bred it from the nests of Osmia emarginata, found on old walls. The larva of the fly consumes the provisions gathered by the bee, and thus reduces the progeny of its host to starvation. Loew recognized a new genus in this fly, gave it a well-chosen name (Cacoxenus = bad guest) and described it in a short paper (Wien. Ent. Mon. 1858, p. 213-222), a very model of accuracy and completeness. The only point, in which the description is incomplete, is the enumeration of the macrochaetae, especially of those of the thorax. I shall attempt to fill this deficiency by applying to this fly my chaetotactic system, as described in the Trans. of the Entom. Soc. of London 1884, p. 497-517.

My specimens of *C. indagator* I find on the windows of my rooms in Heidelberg, three or four of them regularly every spring, during the first half of May; they may be the guests of some masonbee nesting along the walls of the house.¹) I have now about a

¹⁾ Mr. Raddatz found *C. indagator* in the same situation; compare his Dipt. Mecklenburgs, in the Archiv des Vereins für Naturwiss. in Mecklenburg, 1873.

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dozen specimens, two of whom are males. Loew does not mention that the living specimens have handsome red eyes. These eyes may fairly be called glabrous; and when Loew said that: "die sparsame Behaarung wird nur bei starker Vergrösserung bemerkt", he must have used a compound microscope; with a strong lens I do not see any hairs whatever. The chaetotaxy is as follows:

Cephalic bristles.

Vertical bristles four; inner pair converging (when undisturbed, the tips are in contact); outer pair of about the same length, but diverging.

Postvertical bristles converging, very small.

Ocellar pair diverging and proclinate, shorter than the vertical bristles; some very minute bristles between the posterior ocelli. Fronto-orbital bristles — three pairs; the upper pair on a line with the posterior ocelli; the second pair but very little above the middle of the distance between the lower ocellus and the base of the antennae; the third pair is immediately below the second, and therefore very near the middle of said distance. The two first pairs are reclinate; the third proclinate.

On the sides of the lower part of the face, in the angle between the oral margin and the lower end of the frontal fissure, some small, stiff hairs are inserted, one of which is longer, and has the appearance of a small vibrissa.

Thoracic dorsal bristles.

I. Dorso-humeral bristles: one humeral, two posthumeral (in the praesutural depression), one short praesutural.

II. Dorso-(or supra-) alar bristles: only two, that is, the second (at the top of the alar frenum), and the third (near the edge of the anterior portion of the alar cavity); the first supra-alar bristle (whose place is on the post-alar callus), is hardly distinguishable here, but a rudiment of it can be perceived under a strong lens.

III. Dorso-central bristles: there are no longitudinal rows of them, but only a transverse row of four praescutellar bristles; the outer pair are much longer, and have, in front of them, on each side another, smaller bristle.

Thoracic pleural bristles.

Two sternopleural bristles, immediately under the sternopleural suture, one anteriorly, the other posteriorly, of the point of intersection of the mesopleural suture. Biodiversity Heritage Library, http://www.biodiversitylibrary.org/www.zobodat.at Synonymy of Antocha O. S. and Orimargula Mik. 313

Scutellar bristles: four, of about equal length, the middle pair decussate. 1)

As long as the chaetotaxy of all the known genera is not worked out, it will be necessary to go into this detail, in describing a genus; later, it will be sufficient to indicate the differences. The application of chaetotaxy is not very difficult, as soon as its terminology is thoroughly mastered, and its more general use will afford, I think, an excellent index of the affinities of genera.

Heidelberg, Germany, May 20. 1890.

Synonymy of Antocha O. S. and Orimargula Mik

by C. R. Osten Sacken.

In my Studies on Tipulidae (Berl. Ent. Zeitsch. 1887, p. 187) I said:

"Orimargula alpigena Mik, Wien Ent. Z. 1883, p. 198, w. fig., from the austrian and bavarian Alps, is an Antocha with an open discal cell. The generic agreement is perfect. It seems to me that in Prof. Mik's figure the auxiliary vein is represented as too far remote from the first longitudinal. I remember seeing this species in Dr. Loew's collection many years ago; the specimens are in the Berlin Museum now, and are labelled: Kochel, Bavarian Alps, August 1867." —

Whereupon Prof. Mik answered (Wien. Ent. Zeit. 1888, p. 226): "In Bezug darauf, ob meine Gattungen Orimargula und Symplectomorpha mit Recht eingezogen werden, behalte ich mir vor, an

1) It was Dr. Schnabl in Warsaw who introduced the term decussate (Kreuzborsten) to describe the position of macrochaetae crossing each other, as they sometimes do, on the head, or the scuttellum. The term, derived from the latin decem (X), is very happily chosen and has already been used in botany. Thus we now have, for the relative position of a pair of bristles, the following terms: erect, diverging, converging, decusate, proclinate (pointing forwards) and reclinate (pointing backwards).

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