CONCERNING THE GENUS NOTIOBIELLA
(NEUROPT.-HEMEROBIIDÆ)

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In recent years several genera have been made for forms agreeing with *Notiobiella* in having but one series of gradate veins in the fore wings.

Buxtonia Petersen 1928 (Insects Samoa) was based on males with enlarged veinlets in the stigmal area.

Vaja, Navas 1925, from Java and *Ganchetus*, Navas 1929 (Insecta Nova XIII) from Kamerun were based on an elongate pronotum, together with certain slight venational points.

Having a species of *Notiobiella* from the Malay Peninsula which has a long pronotum I have gone over the material in this genus available to me.

Notiobiella was published in 1909 with five species, four from Australia and one from the Fiji Islands. Shortly afterward Needham published a genus, *Annandalia* from India based on one species—*curta*. In my original description of *Notiobiella* I mention *N. unita* as type, so that the genus must be interpreted in this sense. The length of the pronotum varies from much broader than long to almost as long, fully as long, and plainly longer, and one specimen with a pronotum nearly twice as long as broad. This point therefore should not be used as a generic character. The size of the veinlets in the stigmal area used by Petersen for his *Buxtonia* is only developed in the males of certain species; his statement that my *N. stigmatica* would go in his new genus is correct; but I suspect that *N. stigmatica* is the male of *N. unita*, the type of the genus.

Navas mentions that in *Ganchetus* there is in the hindwing a "venulis externis." I have a species from Madagascar that has two such veins in one hind wing, and only

one in the other, moreover an Indian species with short pronotum also has a "venulis externis" in each hind wing.

In examining the material I notice that in some species the subcosta and radius are close together and no apparent cross-vein between them, in fact so close together there is no room for a cross-vein; in other species the subcosta and radius are wide apart and with one or two cross-veins. All the species with an elongate pronotum belong to the section with the subcosta and radius close together; these forms also normally have a "venulis externis."

These characters will readily divide the old genus *Notiobiella* in two sections which I shall call genera.

N. unita Bks. the type of the genus has the subcosta and radius close together, the pronotum is hardly elongate in the female, but in *N. stigmatica*, which is a male and may be the male of *N. unita*, the pronotum is narrow in front. *N. viridis* Tilly. also goes here, likewise the species from Madagascar, *N. viridineris* Bks. and *N. valida* Bks., as well as other forms. In all of these forms the face is more elongate than in the species with the radius widely separate from the subcosta. *Annandalia curta* Needham has the radius and subcosta widely separated and connected by two cross-veins. The pronotum is extremely broad; the face is short; the male genitalia are shorter than in *Notiobiella* and in the hind-wing there is rarely a "venulis externis." To this section belong several species, all however from the Old World, and this genus will be *Annandalia*.

To each genus I can place the following species:

Annandalia Needham 1909.

- A. iniquus* Hag. (*curta* Needh., *khandalensis* Navas).
Common in India.
- A. maindronia* Navas, may be the same, from India and Formosa.
- A. externa* Bks. (Notiob.). Australia.
- A. obliqua* Bks. (Notiob.). Australia.
- A. pretiosa* Bks. (Notiob.). Fiji Islands.
- A. minima* Bks. (Notiob.). Malay and Philippines.
- A. affinis* Bks. (Notiob.). Philippines.
- A. jeanneli* Navas (Notiob.). East Africa.

A. antennata Navas (Notiob.). Congo Belge.

A. galloisi Navas (Notiob.). Japan.

Notiobiella Bks. 1909.

N. unita Bks. Australia.

N. stigmatica Bks. Australia.

N. viridis Tilly. Australia.

N. viridinervis Bks. India, Malacca, Philippines.

N. valida Bks. Borneo.

N. fulva Petersen (Buxtonia). Samoa.

N. tumida Navas (Vaja) Java, Malacca.

N. africanus Navas (Ganchetus). Kamerun.

N. nitidula Navas. East Africa.

N. subolivacea Nakahara, Japan.

N. mexicanus Bks. Mexico.

N. rubrostigma Navas. South America.

N. bella Navas. Congo Belge.

N. decora Kimmins. Uganda, E. Africa.

N. costalis Bks. Gold Coast, W. Africa.

Besides these I add the following two new species.

***Annandalia hageni* sp. nov.**

Head pale, a black stripe each side from eye toward the mouth; last joint of palpi black; antennæ pale. Thorax and abdomen pale brown, legs pale yellowish, hind tibia with a short dark stripe each side near middle. Wings pale, veins brown, a black dot near base of median vein, and the gradate series dark, stigma not marked. Wings longer than in *A. iniquus*, more than twice as long as broad, the subcosta and radius wide apart as in that species, and a cross-vein one-third way out; first radial sector at its first fork is connected to radius by a cross-vein and the second radial sector is twice forked before the marginal fork; most of the costal veinlets are forked but once, and one or two simple. There is a cross-vein between radius and second radial sector in the fore-wing beyond the stigma (not in other species) and also a cross-vein between the upper branch of the first radial sector and the lower branch of the second radial sector out near the tip close to the marginal forks.

The hind-wing has no markings, and no cross-vein (venulis externis) near tip, and a very short one in the disc between the radial sector and median vein; the radial sector is three branched.

Length of fore-wing 4 mm.

From Ceylon (Hagen Coll.) ; sent him by Nietner. Type M. C. Z. 17026.

Notiobiella peterseni sp. nov.

Head pale yellowish, a black mark each side from eye to mouth, a rounded black spot below each antenna; vertex with faint dark marks in middle behind; antennæ pale, faintly reddish beyond the base. Pronotum plainly longer than broad, pale, with lateral margins dark; thorax pale, with a dark mark above the base of each fore-wing; legs very pale. Wings pale; veins pale, but with a few dark spots or streaks; stigma not marked, the base of the second radial sector and the connection to the first sector broadly black, also the cross-vein beyond the stigma from the radial sector to radius is broadly black, elsewhere there are several forkings of veins dark, and a cross-vein between cubitus and cubital fork black. In the hind-wings the radial sector is black between its first and second forking. In one hind-wing there is one, and in the other wing two cross-veins between the radial sector and radius beyond the stigma; radial sector with two branches, no cross-vein between fork of median and the cubital veins.

Length of fore-wing 7 mm.

From Tananarive, Madagascar (Challiat). Type M. C. Z. 17027.

Differs from *nitidula* Navas (Engl. E. Africa) as well as others by the mark on face, and mesonotum, mark on radial sector of hind-wing, and the radial sector of fore-wing arises nearer to the base than Navas figures, and many more costal veinlets.