Some new Delphacinæ from Denmark. (Hem. Hom.).

By

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Extensive researches in the Danish Homoptera by Mr. O. Jacobsen, Copenhagen, brought the unexpected results that several species new to science have been discovered; one of them even constitutes a new genus near *Liburnia.*

The following lines will describe the new genus and two new species, and repeat the description of a third species, which has just been published.

Paraliburnia n. gen.

♂. Genital segment very peculiar, seen from below oviform (see fig. 1 a); cavity *(apertura postica)* below the very wide excavation around the anal tube small and narrow, downwardly acute-angled, almost cuneiform (with somewhat flexed sides); the pointed end of the cavity very far from base of the segment. Genital styles *(styli genitales)* except the very tips of them — in the genotype — involved and quite hidden under the confluent and united sides of the segment, as seen from the figure. Last dorsal segment of abdomen *(in casu* genital segment) without distinct excavation for the transversally very wide and large anal tube *(tuba analis).* Anal style *(stylus analis)* long and stout, somewhat hairy.

♀. Space between *vertex* and front *(frons)* completely smooth and shining, without any trace of keels. Ribs of hemelytra strongly granulate. (These characters are also, though not quite so pronounced, due to the male; otherwise the keels of front and vertex are well defined).

Genotype: *Paraliburnia Jacobseni* n. sp. Type locality: Iselingen near Vordingborg, Denmark. Discovered by O. Jacobsen.

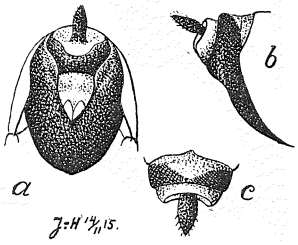

Fig. 1.

Paraliburnia Jacobseni n. sp. a. Genital segment of male, from below. b. Same, from the side. c. Last dorsal segment (with anal tube and anal style) of male. Much enlarged.

Paraliburnia Jacobseni *n. sp.* (Fig. 1). A large and very robust species, larger than any of the hitherto known species of *Liburnia* from Middle and Northern Europe (the shortwinged ♀ is at least as large as the largest ♀♀ of our *Stiroma*-species).

Ground colour sordid-yellow with more or less rufescent tinge. Abdomen of ♂ blackish or brownish, including genital segment, but anal tube and *apertura postica* partly whitish yellow; also spots on the dorsal part of abdomen lighter; the visible tips of the genital styles clear yellow. Abdomen of ♀ dorsally pale.

Genital styles at apex coadunate. Apex of front (at base of clypeus) in both sexes with an obtuse-angled incision. Front rather broad, in the male widest between lower edge of the eyes, in the female widest between eyes and clypeus. Legs long and slender; especially so the first joint of hind tarsi. Long. 3,5 (♂) — 4,2 (♀)mm.

Apparently climatically dimorphous. The type specimens, one male and one female, are brachypterous; both have the wing covers *(tegmina,* hemelytra) a little shorter than abdomen.

Type locality as noted above (O. Jacobsen leg.).

Food plant: Not known. Type specimens in the collection of Mr. O. Jacobsen. The author takes great pleasure in dedicating this species to its discoverer, who has been exceedingly successful in exploring the Danish Hemipterous Fauna.

As only one pair of the species is known hitherto, the author did not regard it advisable to dissect the specimens for further examination. It is hoped that more specimens may be found later on, so that, for an instance, the shape of the genital styles of the male may be fully described and delineated.

Liburnia elymi J.-Hrp. (Fig. 2).

From „Flora og Fauna", Dec. 1915.

„Ground colour peculiar, clear and pale yellow, almost translucent. Thorax and scutellum with a rather broad, ill defined ivory white, longitudinal, median stripe. Abdomen of ♂ slightly, of ♀ more extensively spotted with black. Legs and antennæ pale.

Legs and antennæ rather slender. 2nd joint of antennæ about 2½ times as long as 1st joint and together with apex of 1st joint provided with dispersed, short and stiff, brownish hairs. Front *(frons)* narrow, nearly parallelsided, almost 3 times as long as broad between the lower edge of eyes, yellowish, with sharp, whitish pale keels continuing to vertex. Sides of clypeus converging and slightly incurved towards apex.

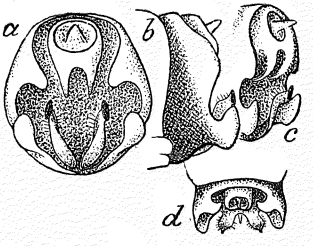

Fig. 2.

Liburnia elymi J.-Hrp.

a. Genital segment of male, from behind. b. Same, from the side. c. Same, seen half from the side and half from behind. d. Same, from above. Much enlarged, especially d.

Genital segment of male very characteristic (see fig. 2), as high as broad, widest below middle, blackish, but with hind margins pale; sides strongly, almost semicircu-

larly excavated, with upper, tongue-shaped lobes inflexed, and lower, backwards and upwards very projected lobes rounded and somewhat flexed; lower excavation broad and deep. Genital styles yellowish, upright and slightly diverging, to some degree twisted or flexed, ending in a little coal-black, hammer-shaped and backwardly directed development at the tip. Anal tube below provided with two long, spiny and strongly incurved clawlike appendices.

Climatically dimorphous. Macropterous specimens in the type locality in majority.

Forma macroptera: Hemelytra pale, much longer than abdomen, with stout and smooth ribs, which are darkened towards apex. Long. 3—4 mm.

Forma brachyptera: Hemelytra whitish and transparent, as long as or a little shorter than abdomen. Long. 2—2,5 mm.

Type locality: Strib and Fredericia, Denmark. Feeding on *Elymus arenarius.* Discovered by Mr. O. Jacobsen, Copenhagen.

Type specimens in the author's and Mr. O. Jacobsen's collections".

Chloriona danica n. sp. (Fig. 3).

Habitually like *Chl. unicolor* H. Sch., but genital segment of ♂ much differing from the said species; moreover some other special characters will separate it from this and the other hitherto described European species of the genus; for an instance the much prolonged spur of hind tibia is not exceedingly shorter than 1st joint of the tarsus, and the area outside the lateral keels of scutellum is more or less blackish or brownish.

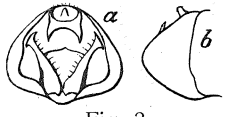

Fig. 3.
Chloriona danica n. sp.
a. Genital segment of male, seen from behind.
b. Same, lateral view.
Much enlarged.

♂. Genital segment, seen from behind, a little broader than high, widest below middle, seen from the side almost triangularly prolonged posteriorly, but with well

rounded apical tip. Genital styles long and upright, though to some degree divaricate, with the tips bihamate (see figure), so that the species in that way bears some resemblance to Melichars *Chlorionidea flava* Löw; the basal outline of the styles somewhat undulate or, perhaps better said, angularly fractured; outer side of them, from base to middle, with a well defined blackish streak. Anal tube with short, widely separated, clawlike appendices. Long.: Macropterous specimens 4,2—4,7 mm.

♀. At present not separable from females of allied species, perhaps except in the coloration of the scutellum. Length of macropterous specimens 4,4—4,8 mm.

Apparently climatically dimorphous. In the type locality macropterous.

Type locality: Forest of Rosenfeld near Vordingborg, Denmark, in damp places.

Food plant: *Phragmites communis*. O. Jacobsen leg.

Type specimens in the author's and Mr. O. Jacobsen's collections.

The species of *Chloriona* ought to be carefully studied. More species new to science may probably be found in Northern and Middle Europe. It is a matter of fact that the genus hitherto has been much neglected by the various authors.