

Larval form of *Plegaderus vulneratus* Panz

by

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Under the bark of pines and cherry-trees is found in great numbers a little beetle, named *Plegaderus vulneratus* Panz., length $1\frac{1}{3}$ — $1\frac{3}{5}$ mm, belonging to the family Histeridae, tribus Abraeni. (Everts' Coleoptera Neerlandica I p. 460.) This species is distributed in our whole country under the bark of these trees and pursuits little barkbeetles as *Hylastes palliatus* Gyll. a.o. As I found a multitude of larvae under the bark of pines in the burrows made by *Hylastes palliatus* I feel justified to consider the larva, which — according to the „Illustrated synopsis of the principal larval forms of the order coleoptera by Adam Böving Ph. D. and F. C. Craighhead, Ph. D.” was a Histerid, — as *Plegaderus vulneratus* Panz. Indeed there are more species of *Plegaderus*; in our country there are noted only *Plegaderus vulneratus* mentioned above and *Plegaderus caesus* Herbst, the last at Roosendaal near Velp under the bark of willows, poplars, oaks, birches, beeches and apple trees.

According to Reitter „Fauna germanica II p. 295 the larvae and imagines of *Plegaderus* live on Poduridae and larvae of insects, especially on *Crypturgus pusillus*.

Larva and pupa of *Plegaderus discissus* Er. are described by Perris.

The larval form of *Plegaderus vulneratus* Panz. is, as I believe, neither described nor figured.

At first sight the larva reminds of a carabid-larva which it is not. The legs of the carabidae are six-jointed with distinct tarsus, and one or two distinct movable claws. *Plegaderus* has legs consisting of five joints, namely 1 coxa, 2 trochanter, 3 femur, 4 tibio-tarsus, 5 one claw (fig. 11.).

Dr. A. Böving was so kind as to write me: „In the key of the synopsis the terminology of Verhoeff was followed according to the theory that tarsus was fused with the claw and not with the tibia”.

Couplet 5 (Synopsis p. 11.) should be changed into: Urogomphi jointed, individually movable, exceptionnally solid or absent, but then with free, jointlike maxillary palpiger.

Couplet 6 second alternative leads to the superfamily Hydrophiloidea, including the Histeridae after Dr. Böving's view.

In the family Histeridae there are two main groups of larvae namely 1° those which possess 3-jointed maxillary palps and 2-jointed labial palps (the genera *Hister*, *Gnathoncus*, *Platysoma* and *Paromalus*).

and 2°-those which possess 4-jointed maxillary palps and 3-jointed labial palps (the genera *Plegaderus* and *Abraeus*.) (comp. fig. 6 7 and 8).

According to Everts' *Coleoptera Neerlandica* *Abraeus*-species live in vegetable mould, decayed plant-material and old tan. *Abraeus globosus* Hoffm. and *granulum* Er are myrmecophilous. The species of *Abraeus* generally are very rare.

This leaves out the possibility of the larvae dealt with here belonging to *Abraeus*. The larva figured here therefore must belong to the genus *Plegaderus*, and according to its mode of life, cannot be anything else than that of *Plegaderus vulneratus* Panz.

The larvae are found in February, March, April, September and October in pinewoods in different parts of the Netherlands.

The larva (fig. 1) is pure white, head and thorax brown.

The 2d-to and inclusive the 8th abdominal segment have projections, resembling false legs or scansorial verrucae (s. *Calopus angustus* Lec. Böving plate 51) (fig. 2).

No ocelli.

Urogomphi short and two jointed with proximal joints fused at base. (fig. 3).

Antenna 3-jointed; the second joint with 2 vesiculiform joints and 3 setae, the third joint with 2 setae at the top and 3 setae at the side. (fig. 4).

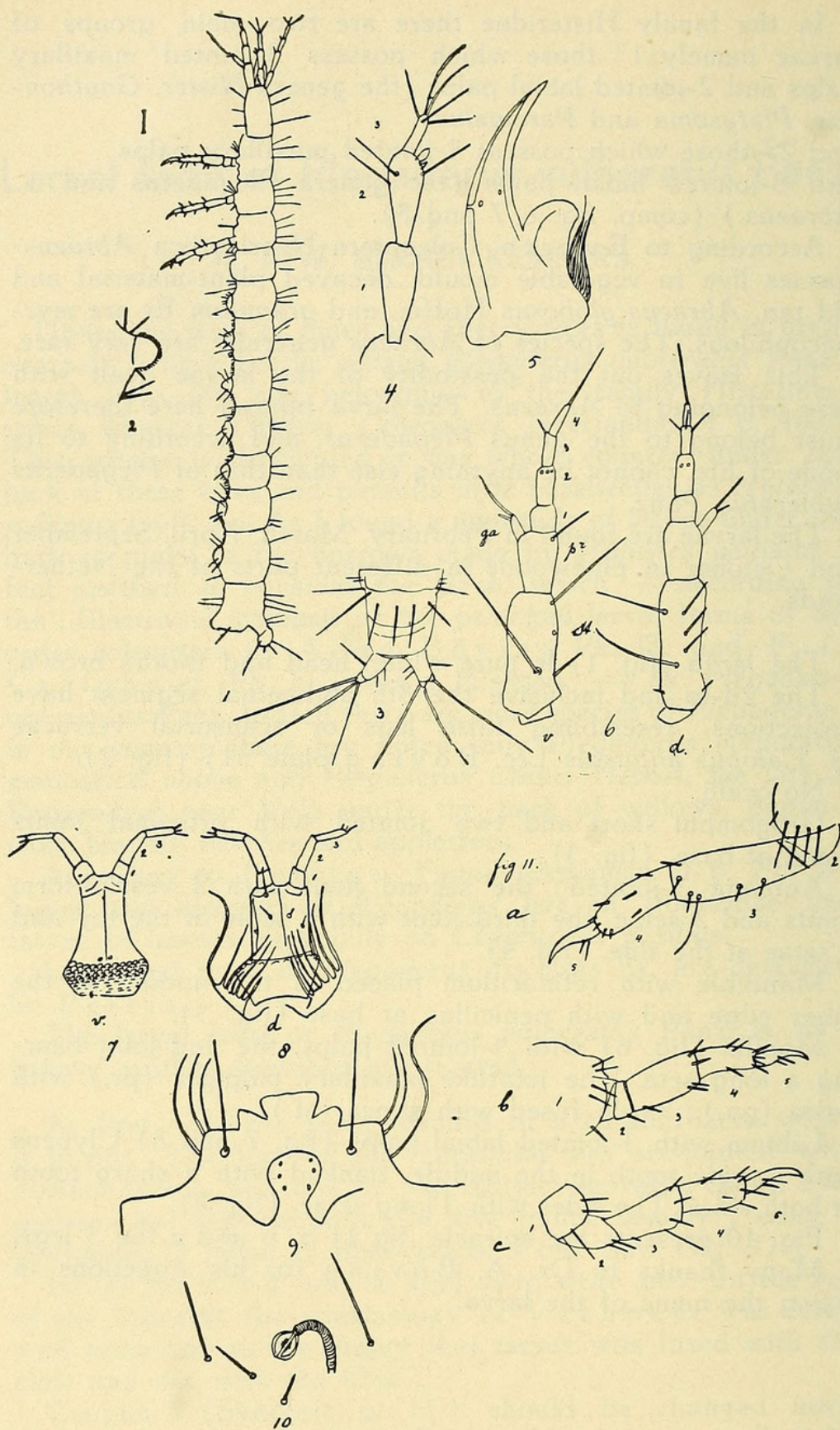
Mandible with retinaculum placed in the middle of the inner edge and with penicillus at base (fig. 5).

Maxilla (fig. 6) with 4-jointed palps, the end-joint bearing a long seta. The jointlike maxillary palpiger (pr.) with galea (ga.); cardo fused with stipes (st.).

Labium with 3-jointed labial palps (fig. 7 and 8) Clypeus with a wide tooth in the middle, flanked with a sharp tooth at both sides. The sides with 3 long setae. (fig. 9).

Fig. 10 presents the spiracle, fig 11 a, b and c the 3 legs.

Many thanks to Dr. A. Böving for his directions in fixing the name of the larva.





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