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36.

A new European Hemerobius
(Neuroptera)

By

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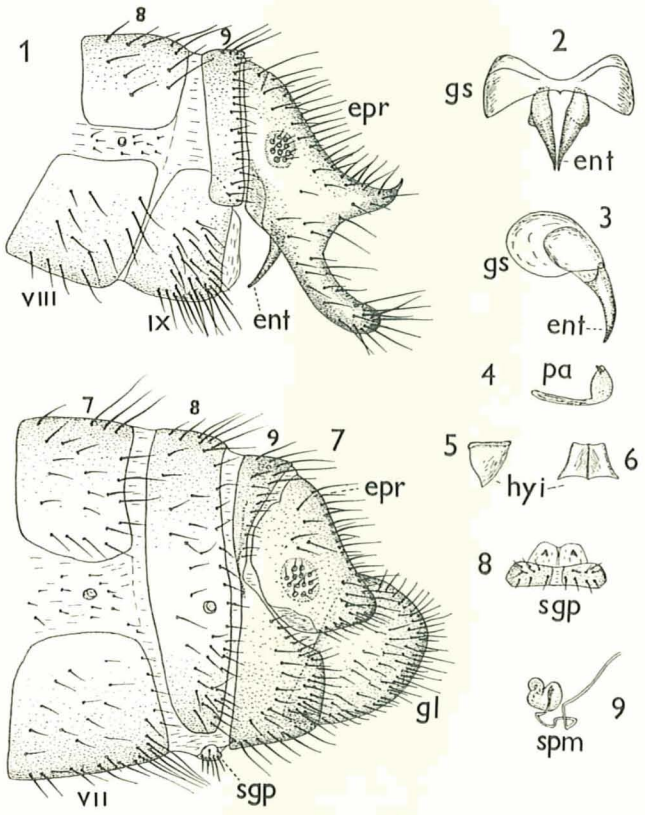
The discovery of the new species described below was made by Dr. WILLY EGLIN during field-work in the Schweizer Nationalpark in the Engadin Valley, south-eastern-most Switzerland. He met with a *Hemerobius* which he found very similar to *H. nitidulus* Fabr. but with shining black face. Suspecting the form perhaps being a valid species Dr. EGLIN forwarded a small series to the author, asking me to describe the species if I found it to really be a new one.

Examination of the genital structures unveiled immediately that the specimens received belong to a valid and apparently hitherto unknown species. It is allied to H. *nitidulus* Fabr. and resembles very much that common species, the available specimens being, however, more greyish than reddish brown and slightly larger than average nitidulus-specimens. In addition to the Swiss specimens I have in my own collection an immature and pale ♂ from Italy which belongs to the same species.

I have much pleasure in dedicating the new species to my friend Prof. Dr. EDUARD HANDSCHIN, Basel, leading authority of the Swiss insect fauna.

Henzerobius *handschini* n. sp. (Figs. 1–9)



Figs. 1–9. *Hemerobius handschini* n. sp.

1–6, holotype ♂; 7–9, sllotype ♀. – 1. Apex of ♂ abdomen, lateral. – 2. Gonarcus, caudal. – 3. Same, lateral. – 4. Right paramere, inside. – 5. Hypandrium internum, lateral. – 6. Same, dorsal. – 7. Apex of ♀ abdomen, lateral. – 8. Sabgenitale, ventral. – 9. Spermatheca. – All figures drawn with the same magnifying-power.

Locus typicus: Il Fuorn in the Schweizer Nationalpark, Switzerland. Types: one ♂ (holotype) and one ♀ (allotype) in the Naturhistorisches Museum, Basel.

Description.

Holotype ♂; dried and pinned specimen (figs. 1–6).

Length of body about 5 mm.; of fore wing 7 mm.; of hind wing 6 mm.

Head dark brown; face shining black. Palpi dark brown; apical segment of maxillary palpi paler, almost yellowish white. Basal segments of antennae blackish brown; flagellum pale testaceous with dark annulations but in the apical portion wholly dark.

Pronotum unicoloured dark brownish; meso- and metanotum of the same colour but a little paler. Legs pale, only the distal segments of the tarsi fuscescent.

Fore wings oval. Membrane iridescent, smoky greyish brown without dark spots or shadings but with an indistinct pale longitudinal stripe between veins M_1+_2 and Cu_1. Pterostigma not darker than membrane. Veins pale; costal cross-veins and longitudinal veins with closely-placed dark dots; each dot with a brownish hair. Rs three-parted. Basal cross-vein between R and M at the origin of the first part of Rs. No distal cross-vein between Cu_1 and Cu_2. Hind wings paler than fore wings with pale venation; only the costal cross-veins have dark dots as in fore wing.

Abdomen dark brownish. Genitalia: Tergite 9 narrow, band-like. Sternite 8 short. Parameres (pa) small, apically broadly flattened and with a small internal tooth as in fig. 4. Internal hypandrium (hyi) as in figs. 5 and 6. Gonarcus (gs) as a transverse arch with narrow central portion and broad lateral portions (figs. 2–3). A very small, medi-uncus-similar tooth is present. Entoprocessus (ent) relatively large, situated widely apart, directed downwards and convergent. Ectoprocts (epr) large, of the forked type. Their upper prong is short and ends as a narrow, upwards-inwards directed tooth-like apex; their lower prong is long and narrow, smoothly curved. The pilosity is not very dense. Cercal callus with 10 trichobothria.

Allotype ♀; dried and pinned specimen (figs. 7–9).

Length of body about 6 mm.; of fore wing 8 mm.; of hind wing 7 mm.

Colour as in holotype ♂ but wings with a decidedly darker brownish tinge and pterostigma reddish and relatively distinct. Pale stripe on fore wing more distinct than in the holotype.

Genitalia: Tergite 8 band-like with its prolonged sides almost reaching the under surface of the abdomen. A narrow, transverse subgenitale (sgp) is present, cf. figs. 7, 8. Tergite 9 very narrow in its upper portion; its lower portion is about twice as broad (lateral view). Laterally between the upper and lower portions the tergite is very narrow; only a weak, linear connection between the portions exists. Gonapophyses laterales (gl) with obliquely rounded hind border. Ectoprocts (epr) rather short, their apex triangularly backwards projecting. There are 13 trichobothria on the left, 14 on the right cercal callus. Spermatheca as in fig. 9.

Four paratypes ♂♂; dried and pinned specimens.

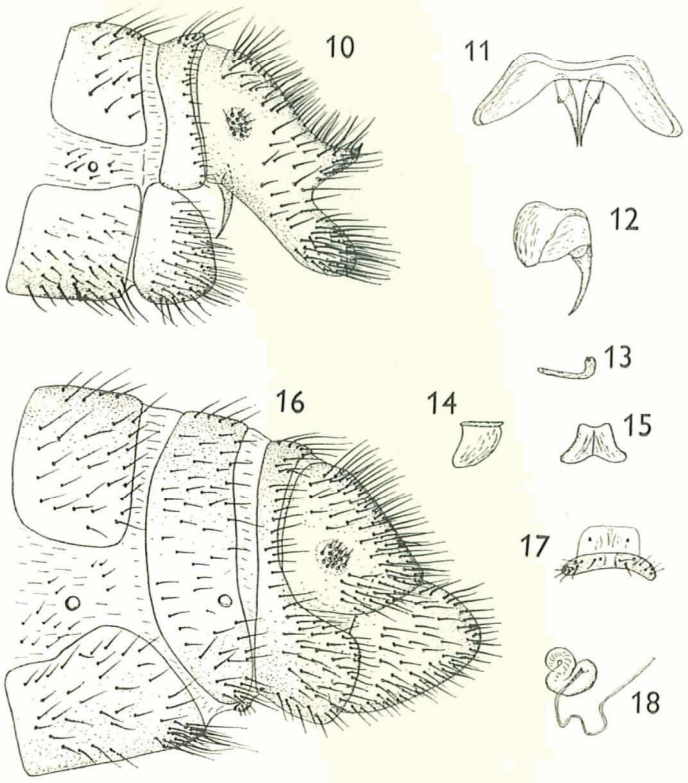
Length of body 4–5 mm.; of fore wing 6–7,5 mm.; of hind wing 5–6,5 mm.

Genital structures exactly as in the holotype ♂. Two specimens (from Switzerland and Italy respectively) are somewhat immature and consequently of a decidedly paler colour than the others, their face being brownish and their wings greyish. One of the specimens has four-parted Rs in both fore wings and the basal cross-vein between R and M more proximally situated than in the holotype.

Three paratypes ♀♀; dried and pinned specimens.

Length of body 6–7 mm.; of fore wing 7,5–8,5 mm.; of hind wing 6,5–7,5 mm.

Agree well with the allotype. As in the males the situation of the basal cross-vein



Figs. 10–18. *Hemerobius nitidulus* Fabr.
10–15 ♂ from Sweden: Falun; 16–18 ♀ from the same locality. The figures correspond to the figures 1–9 and are drawu with the same magnifying-power.

between R and Rl is varying. One specimen has three-parted Rs in the left, four-parted Rs in the right fore wing.

Geographical distribution.

Switzerland: **Kanton** Graubiinden, **Engadin** Valley, **Schweizer** Nationalpark, I1 Fuorn, Champlong, holotype ♂, 28.VI.1955, leg. W. EGLIN (in Mus. Chur); I1 Fuorn, Plan la Drosa, allotype ♀, **21.VI.**1955, leg. W. EGLIN (in Mus. Chur); Il Fuorn, 2 ♂ 1 ♀ paratypes, **20.VII.**1949, **leg.** W. EGLIN (in Mus. **Basel** ♂♀ and coll. TJEDER ♂); I1 Fuorn, **Champlöng,** 1 ♀ paratype, **28.VI.**1955, leg. W. EGLIN (in coll. TJEDER); I1 Fuorn, Val **Ftur,** 1 ♂ paratype, **28.VI.**1955, leg. W. EGLIN (in coll, TJEDER); Val **Cluozza,** 1 ♀ paratype, **18. VII.** 1949, leg. W. EGLIN (in coll. TJEDER); – Italy: Bologna, 1 ♂ paratype, **20.VII.**1932, **leg. CESARE NIELSEN** (in coll. **TJEDER).**

Ecological distribution.

The **Swiss specimens** were according to labels **and** information from Dr. EGLIN found in xerothermal pine wood, especially on *Pinus mugo,* up to the limit of trees;

1750–2200 m. above sea-level. Biological and ecological details will appear in a forthcoming paper by Dr. EGLIN dealing with the *Neuroptera* of the Schweizer Nationalpark.

As mentioned above the species is closely allied to H. *nitidulus* Fabr. (1777), which species also occurs in Switzerland. I possess one ♂ from Valais, Finges, 25–30. VII. 1946, leg. and ded. Dr. F. SCHMID. *H. nitidulus* is also present in my collections from Spain, Montseny, 1 ♂ 12.VI.1911, leg. L. NAVÁS, from England, Holland, and Sweden (several provinces). The two species are easily distinguished by differences in the genital structures. Fresh figures of H. *nitidulus* are given (figs. 10–18) for comparison. The ♂ of H. *nitidulus* has the lower prong of the ectoprocts very stout with a dense pilosity; also the other parts of the abdominal apex are more densely haircl in *nitidulus* than in *handschini*. This is also the case in the ♀ sex. The ♀ of *nitidulus* has the upper portion of tergite 9 band-like and broadly connected with the lower portion; the ectoprocts are longer; the subgenitale narrower; the gonapophyses laterales more narrowly ending.

The black face of H. *handschini* is also a characteristic of value but it should be noted that in Sweden, and especially in the northern provinces, mature specimens of *nitidulus* frequently have blackish face, occasionally equally as black and shining as in the types of H. *handschini*. An examination of the genitalia is therefore always advisable.