

# Specimina typorum insectorum a Carolo Linnaeo descriptorum in Museo Degeeriano asservata.

## Pars III. Neuroptera.

By

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My friend Mr Felix Bryk, Stockholm, has most kindly entrusted to me a revision of Linnaean type-specimens of the order Neuroptera recently discovered by him in the De Geer collection of the Natural History Museum, Stockholm. These specimens represent the two species *Hemerobius Chrysops* and *Hemerobius cornutus*, which have been described by Linnaeus on specimens belonging to his friend Charles De Geer. This is distinctly indicated in the original descriptions, in which the words »De Geer» are included. The specimens, on which my revision is based, are thus to be considered as the actual type-specimens of Linnaeus.

### I. *Hemerobius Chrysops* L.

In Fauna Svecica, ed. I<sup>ma</sup>, p. 222 (1746):

732. HEMEROBIUS / viridi nigroque varius; alis aqueo / reticulatis. De Geer. / Reaum. gall. 3. t. 3. f. 14, 15. / Frisch. germ. 4. p. 40. t. 23. Musca foetida auro oculata. / Habitat in arboribus. /

In Syst. Nat. Ed. X<sup>ma</sup>, p. 549 (1758):

210. HEMEROBIUS. / Chrysops. 2. H. viridi nigroque varius, alis hyalinis reticulatis. Fn. / Svec. 732. / Frisch. ins. 4. p. 40. t. 23. / Reaum. ins. 3. t. 3. f. 14, 15, 16. / Roes. ins. app. I, p. 126. t. 21. f. 3. / Habitat in Europa. /

In Fauna Svecica, ed. II<sup>da</sup>, p. 382 (1761):

1505. HEMEROBIUS *chrysops* viridi nigroque varius, alis hyalinis maculatis reticulatis. Fn. 732. / Reaum. gall. 3. t. 3. f. 15, 16. / Frisch. germ. 4. p. 40. t. 23. Musca foetida auro oculata. / Habitat in arboribus. / DESCR. Major. Alae striatae & reticulatae; fuscae venae plures ad marginem / inferiorem; duae vero validiores in margine tenuiore supra dorsum. /

In Syst. Nat. Ed. XII<sup>ma</sup>, p. 912 (1767):

237. HEMEROBIUS. / Chrysops. 4. H. viridi nigroque varius, alis hyalinis maculis reticulatis. Fn. Svec. 1505.\* / Scop. carn. 708. / Frisch. ins. 4. p. 40. t. 23. / Reaum. ins. 3. t. 33. f. 14—15, 16. / Roes. ins. app. I. p. 126, t. 21, f. 3. / Geoffr. paris. 2. p. 454. n. 2. / Habitat in Europa. /

Seven specimens are present, placed in the box behind the bottom-label »H. Chrysops L. DG. T. II. p. 708.» They are mounted on very short pins. Six of them are in a good condition. Closely behind the label are placed four specimens, 2 ♂♂, 1 ♀, and one specimen lacking the abdomen, which all represent the species, now generally known as *Chrysopa perla* L. (*sensu* Schneid.). These specimens are of ordinary size, measuring: length of fore-wing 13, 14 1/2, 14 1/2, and 14 mm respectively. I have designated the first-mentioned ♂ as the holotype ♂, the ♀ as the allotype ♀, and the two other specimens as paratypes.— After these specimens follow one ♀ of *Chrysopa septempunctata* Wesm., one ♀ of *Chrysopa ventralis prasina* Burm., and one ♀ of *Chrysopa vulgaris* Schneid. The last three do not at all agree with the diagnose and cannot be considered as types. All the specimens are unlabelled.

It seems to be no doubt that Linnaeus with his *Hemerobius Chrysops* means the species, now generally dealt with as *Chrysopa perla* L. The older authors were also of this opinion. De Geer's description and figures of the insect and of its head (in front), Mem. Ins. II, 2, p. 708, t. 22, f. 1—3, 1771, distinctly represent *Chrysopa perla* of authors. Fabricius (1781, 1787) and Rambur (1842) were of the same opinion and also J. W. Zetterstedt (1840) has correctly dealt with the species. Unfortunately G. T. Schneider in his monograph of the genus *Chrysopa* (1851) made a change of names. Thus he deals with *Chrysops* L. DG. F. Zett. Ramb. as »*perla* L.» and applies the new name »*vulgaris*» to the species which by Linnaeus had been described as *Perla*. Later authors have dealt with these two species in accordance with Schneider's opinion.

Wallengren (1871) was the first Swede who used Schneider's nomenclature. Moreover, he applies the name *Chrysops* to the European species of the genus *Osmylus*, stating that there exists one specimen of *Osmylus* in the Linnean collection, labelled by Linnaeus himself as *Chrysops*. He states furthermore, that the words of the diagnose »*alis hyalinis maculis reticulatis*» distinctly show that *Osmylus* is intended. But he neglects to cite the other words of the same diagnose »*H. viridi nigroque varius*» which indicate a green species. *Osmylus* is not green. The name *Chrysops* itself indicates an insect with golden eyes. *Osmylus* has brown eyes, both in life and after death, but all our members of the genus *Chrysopa* have brilliantly metallic, golden eyes. The words »*maculis reticulatis*» simply indicate the very distinct, reticulate wing-venation with its black- and green-coloured veins (verbally translated: reticularly or net-formed spotted). It is thus no doubt more about the identity of the species *Hemerobius Chrysops* of Linnaeus, for the specimen of *Osmylus* in the Linnaean collection, mentioned by Wallengren cannot be considered as an actual type, as it does not agree with the description. Wallengren's opinion of *Chrysops* as an *Osmylus* seems to have been followed only by a few authors. Most authors have correctly dealt with the European *Osmylus*-species as *O. fulvicephalus* Scop.



Fig. 1. Photograph of the holotype ♂ of *Hemerobius cornutus* L., i.e. *Corydalus cornutus* (L.).

*Chrysopa perla* (L.) is described by Linnaeus as a green species with green veins: »*Hemerobius viridis*, alis hyalinis: vasis viridibus» and represents no doubt the species *Chrysopa vulgaris* Schneid.

The names should correctly be altered in agreement with the above statements. The names *Chrysopa perla* and *vulgaris* have now been used in Schneider's sense since 1851 and — though incorrectly adopted — they may be considered as »nomina conservanda». The name »*chrysope*» has disappeared from the species-list which fact is—of course—unfortunate, as we now know the identity of the species. It depends upon the International Commission on Zoological Nomenclature to judge in this case.

## 2. *Hemerobius Cornutus* L.

In Syst. Nat. Ed. X<sup>ma</sup>, p. 551 (1758):

210. HEMEROBIUS. / *cornutus*. 14. H. maxillis corniformibus porrectis thorace longiori-/bus. | *Habitat* in Pennsylvania. De Geer. | *Alter sexus* cornibus teretibus majoribus laevibus, alter | vero brevioribus et introrsum denticulatis. |

In Syst. Nat. Ed. XII<sup>ma</sup>, p. 916 (1767):

240. RAPHIDIA. / Cornuta. 3. R. maxillis corniformibus porrectis thorace longio-ribus. / Syst. Nat. 10, p. 551, n. 14. Hemerobius cornutus. / Habitat in Carolina, Canada. / Magnitudo *Libellulae majoris*. Caput ferrugineum, sub-rotundum, depressum, margine utrinque unidentatum. Stemmata 3, convexa. Maxillae 2, incurvae, acutae dentibus 3. Palpi 2, bifidi. Antennae setaceae, corpore 1/3 breviores, articulis circiter 50, sub-rotundis. Thorax ferrugineus, semicylindricus, longitudinaline capitis. Scutellum nudum, bifidum lobo medio accessorio. Alae 4, deflexae, pallidae, venoso-reticulatae: margine lato venis transversis, medio albis. Pedes 6, lividi. Abdomen nudum absque cauda. /

One ♂ of this species is now present in De Geer's collection (Fig. 1.) It is placed behind the bottom-label »H. cornutus L. DG. T. III p. 560» and represents the species now well-known as *Corydalus cornutus* L. It belongs to the form of this species which by Van der Weele (1910) has been dealt with as the typical condition of the species. No other species of the genus *Corydalus* Latr. are known from the U. S. A. and Canada.

The specimen, which agrees perfectly with the above-cited original description, is pinned on a darning-needle and another such needle is stuck through the body of the insect and proceeds out of the defect abdomen, which lacks its apex, as already stated by Linné »absque cauda».

De Geer figures this specimen (Mem. XIII, pl. 27, f. 1) and in his good description (l. c. p. 560) he informs that the specimen was taken in Pennsylvania by Mr Acrelius. He figures also the head of a female, taken in Pennsylvania by the same collector. Linnaei original description is founded on this pair. The female is not present in De Geer's collection.

The present ♂ has been designated by the author as holotype ♂. The specimen measures: length of fore-wing 56 mm, of left mandible 20 mm.

#### Literature references.

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