

The characters of *Amara infima* Dfts. (Col., Carabidae)

door

P. J. DEN BOER

(Mededeling van het Biologisch Station te Wijster, No. 104)

When identifying ground beetles (Carabidae) in 1960 it struck me that specimens of *Amara infima* Dfts., caught in the neighbourhood of Wijster, Drente prov. (Holland), did not fit to the descriptions given by GANGLBAUER (1892), EVERTS (1898), SCHAUFUSS (1916), JEANNEL (1942) and CSIKI (1946), since in the male the prosternum is not (or in a few specimens hardly) punctured (126 ♂♂) and in the female the last abdominal sternum is always provided with two (like in the male) instead of four spines (133 ♀♀)*. In the descriptions given by REDTENBACHER (1858), REITTER (1908), KUHN (1913), DAHL (1928) and GERSDORF & KUNTZE (1957) these characters are not mentioned at all.

As especially the number of spines on the last abdominal sternum in males and in females is of great diagnostic value in the genus *Amara* it was necessary to study specimens from other regions, since it might be possible that two species are hidden under the name *Amara infima* Dfts. First of all the specimens of the collection EVERTS (Rijksmuseum van Natuurlijke Historie, Leiden) were studied. In contrast with the description given by EVERTS (1898) all specimens of his collection (48 individuals from different parts of The Netherlands), like specimens from Drente prov., showed an unpunctured (or in a few specimens hardly punctured) prosternum in the male and only two spines on the last abdominal sternum in the female.

As DEJEAN in 1828 described a species *granaria* from Sweden it could be possible that *granaria* Dej. is not a synonym of *infima* Dfts., as is generally accepted. Thus, it was necessary to study specimens from Sweden too. 42 specimens from different parts of Sweden, five specimens from Denmark and one specimen from Finland (Naturhistoriska Museet, Göteborg) were identical with Dutch specimens. Also five specimens from Fontainebleau, France (Muséum National d'Histoire naturelle, Paris) and six specimens from Austria (Naturhistorisches Museum, Wien), the latter of which were compared in the time with the type of DUFTSCHMID, showed the same characters as the Dutch specimens.

We may conclude now, that in contrast with the description of GANGLBAUER (1892), EVERTS (1898), SCHAUFUSS (1916), JEANNEL (1942) and CSIKI (1946) in *Amara infima* Dfts. the male shows an unpunctured (or in a few specimens hardly punctured) prosternum and the female is provided with only two spines (like the male) on the last abdominal sternum. Obviously GANGLBAUER (1892) has been mistaken, either when writing the description of *Amara infima* Dfts., or in studying by accident some aberrant specimens (belonging to another — perhaps unknown — species?). EVERTS (1898) apparently has copied the description of GANGLBAUER (1892) and perhaps some of the other authors (SCHAUFUSS, JEANNEL and CSIKI) too.

*) Some asymmetrical specimens were found. In 3 females the last abdominal sternum was provided with three spines: two at one side and one at the other; in one female the last abdominal sternum was provided with only one spine: only at the left side.

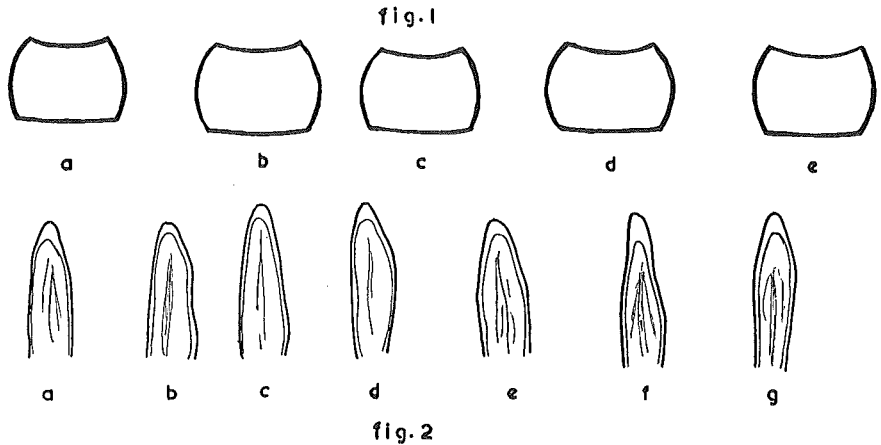


Fig. 1: Shape of the pronotum in specimens of *Amara infima* Dfts. from: a. Wijster (Drente prov., Holland), b. Tilburg (Holland), c. Eerbeek (Holland), d. Austria and e. Fontainebleau (France).

Fig. 2: Shape of the aedeagus in specimens of *Amara infima* Dfts. from: a. and b. Wijster (Drente prov., Holland), c. Nijmegen (Holland), d. Laren (Holland), e. Vlodrop (Holland), f. Austria and g. Fontainebleau (France).

As to other characters of *Amara infima* Dfts. the pronotum varies in shape (fig. 1), some specimens having the sides rather more rounded than others (e.g.: fig. 1, a and 1, b); in some specimens the pronotum is narrower in front than behind (fig. 1, a), in others the pronotum is as wide at the base as in front (fig. 1, e). Some specimens are of a rather narrow shape, others of a much broader shape. Also the shape of the aedeagus varies greatly (fig. 2); only in some specimens the aedeagus resembles the one pictured by JEANNEL (1942, fig. 308, e) (fig. 2, d and 2, g). In all specimens I saw (366) the scutellar stria was nearly or wholly absent.

I wish to thank Mr. G. COLAS (Paris), Dr. F. JANCZYK (Wien), Mr. H. W. WALDEN (Göteborg) and Mr. J. T. WIEBES (Leiden) for kindly sending me specimens of *Amara infima* Dfts.

Summary

In contrast with the descriptions of GANGLBAUER (1892), EVERTS (1898), SCHAUFUSS (1916), JEANNEL (1942) and CSIKI (1946) in *Amara infima* Dfts. the male shows an unpunctured (or in a few specimens a hardly punctured) prosternum and the female is provided with only two spines (like the male) on the last abdominal sternum. The shape of pronotum and aedeagus varies greatly (fig. 1 and 2). Specimens from Holland (307), Sweden (42), Denmark (5), Finland (1), France (5) and Austria (6) were studied.

Literature

CSIKI, E., 1946, Die Käferfauna des Karpaten-Beckens, 1. Band: Allgemeiner Teil und Caraboidea, p. 352.

- DAHL, T. M., 1928, Die Tierwelt Deutschlands, 7. Teil, Coleoptera, I: Caraboidea, p. 132.
- EVERTS, Ed., 1898, Coleoptera Neerlandica, 1: 80.
- GANGLBAUER, L., 1892, Die Käfer von Mitteleuropa, 1. Band: Caraboidea, p. 323.
- GERSDORF, E. & K. KUNTZE, 1957, Bestimmungstabelle der *Amara*-Arten (Col., Car.) Deutschlands. *Ent. Blätter* 53: 3—21.
- JEANNEL, R., 1942, Faune de France, 40: Coléoptères Carabiques, 2: 932.
- KUHNT, P., 1913, Illustrierte Bestimmungstabellen der Käfer Deutschlands, p. 96.
- REDTENBACHER, L., 1858, Fauna Austriaca, 2. Auflage, p. 49.
- REITTER, Ed., 1908, Fauna Germanica, 1. Band, p. 164.
- SCHAUFUSS, C., 1916, CALWER's Käferbuch, 6. Auflage, p. 80.