



Description of the egg and larva of *Paederidus* Mulsant & Rey, 1878 (Coleoptera, Staphylinidae, Paederinae) based on the two European species

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Abstract

The egg of *Paederidus ruficollis* (Fabricius, 1781) and larvae of that and *P. rubrothoracicus carpathicola* Scheerpeltz, 1957 are described and illustrated. This is the first thorough description of immature stages for the genus *Paederidus* Mulsant & Rey (1878). The immature stages were obtained by rearing adults. Morphological differences between instars of the same species and also between the studied species are found in the detailed structure of the antenna, nasale, maxillary palp, labial palp, tarsungulus and urogomphus; chaetotaxy of pronotum, profemur and protibia; proportions of same body parts; microstructure of urogomphus and body colour. Comparative characters of larvae of two subtribes Paederina and Stilicina are presented.

Key words: morphology, chaetotaxy, immature stages, stenotopic, Stilicina, Paederina

Introduction

Paederidus was originally described as a subgenus of *Paederus* by Mulsant & Rey in 1878. Since that, the systematic position of the taxon was changed several times. First Casey (1905) raised *Paederidus* to the generic level, subsequently Bernhauer & Schubert (1912) reduced it to a subgenus. Blackwelder (1939) synonymised it with *Paederus* s.str., and Jarrige (1944) elevated it again to a subgenus. Scheerpeltz (1957) re-elevated *Paederidus* to generic rank. Although some later investigators (Burakowski *et al.* 1979; Lucht 1987) treat *Paederidus* as a subgenus, most shared Scheerpeltz's opinion (e.g., Frank 1988). The taxonomic history of the genus *Paederidus* shows that it is closely related to the genus *Paederus*. Despite this, the systematic distinction of *Paederidus* from *Paederus* is questionable. To resolve some doubts, detailed morphological study of the larvae of *Paederus*, sensu lato may be instructive. Frank & Kanamitsu (1987) reviewed and summarised literature devoted larval morphology of that staphylinids. Most descriptions are very superficial and poorly illustrated (e.g. Cerruti 1940, Isaac 1934) and only few (Ahmed 1957, Ramirez 1966) deliver essential morphological details. Nevertheless even these decent descriptions of *Paederus alfieri* Koch or *P. columbinus* Laporte are not enough detailed to be helpful in solving systematic doubts. Modern descriptions of larvae of genus *Paederus* are urgent necessary.

Forty four species of the genus *Paederidus* Mulsant & Rey (1878) are currently known worldwide, two of which are found in central Europe and Poland: *P. ruficollis* (Fabricius, 1781) and *P. rubrothoracicus* (Goeze, 1777) (Burakowski *et al.* 1979; Lucht 1987; Frank 1988; Koch 1989; Staniec 2004).

Paederidus ruficollis (Fabricius, 1781) (morphologically sternite VI, adult habitus and aedeagus as in Figs 49, 51, 53, 53A, 55, 55A) is known from the northwestern part of Africa and the greater part of the European region (except some northern and Balkan countries), including five known subspecies. In Poland it is a rather common species, recorded from most regions of the country; however moving towards the northern regions it becomes progressively rarer (Burakowski *et al.* 1979; Lucht 1987; Stan 2004).

Paederidus rubrothoracicus is known from western, southern and eastern part of Europe, Turkey, Asia Minor, the Caucasus and Armenia. This species exhibits great morphological diversity across this distribution. Nine subspecies of *P. rubrothoracicus* were distinguished, three of them (*P. rub. rubrothoracicus*, *P. rub. occidentalis* and *P.*