

The nomenclature of the *melanocephalus* group of the genus *Calathus* (Coleoptera: Carabidae)

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Abstract: Type material of *Calathus melanocephalus*, *C. mollis* and *C. cinctus* is examined in order to stabilize nomenclature in the *melanocephalus* group of the subgenus *Neocalathus*. Lectotypes are designated for *Carabus melanocephalus* Linnaeus and *Carabus mollis* Marsham. *Calathus cinctus* Motschulsky appears to be a senior synonym of *Calathus erythroderus* Gemminger & Harold nov. syn.

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Introduction

The taxonomic status and the identification of the West Palearctic representatives of the so-called *melanocephalus* group of the subgenus *Neocalathus* Ball & Negre of the genus *Calathus* Bonelli have given many problems (see Aukema (1990) for a review).

Lucht (1987) lists two species, both represented by two subspecies: *melanocephalus*, represented by *melanocephalus melanocephalus* (Linnaeus) and *melanocephalus alpinus* Dejean, and *mollis*, represented by *mollis mollis* (Marsham) and *mollis erythroderus* Gemminger & Harold.

Cross-breeding experiments and morphological studies, however, showed that in fact there are three good species: *melanocephalus*, *mollis* and *erythroderus* (Aukema, 1990).

To stabilize the nomenclature in this group of closely related species the types of the species involved were examined.

Calathus melanocephalus

Carabus melanocephalus was described by Linnaeus in 1758 from "Europe". In the collection of Linnaeus, now in the keeping of the Linnean Society of London at Burlington House, *melanocephalus* is represented by a single female, labelled "15 melanocephalus"

and "22". Both labels are narrow horizontal stripes. The first one is an original label in the hand of Linnaeus (for a review of Linnean labels see Day & Fitton, 1978 and Robinson & Schmidt Nielsen, 1983), the number referring to the serial number of *melanocephalus* in the 10th edition of his *Systema Naturae* (Linnaeus, 1758). The second label, referring to the serial number of *melanocephalus* in the 12th edition of the *Systema Naturae* (Linnaeus, 1767), was put on the specimen after photographs of the collection have been taken in the 1950s.

The specimen is designated as lectotype by labelling it "Lectotype *Carabus melanocephalus* Linnaeus/Design. B. Aukema, 1990".

Calathus mollis

Carabus mollis was described by Marsham in 1802 from Ealing, West London. His collection, or at least the bulk of it, was purchased in 1820 by J. F. Stephens and bought in 1853 by the British Museum (Natural History), London (Hammond, 1972).

Stephens' collection contains a small box with fourteen unlabelled specimens (seven males and seven females, all long winged) of *mollis*. A male was designated as lectotype by labelling it "Lectotype *Carabus mollis*"

Marsham/Design. B. Aukema, 1990". The vesica and right paramere were dissected and glued to the card holding the specimen.

Silfverberg (1977), however, showed that *mollis* Marsham is a junior primary homonym of *Carabus mollis* Ström, 1768 (now in the synonymy of *Cymindus vaporariorum* (Linnaeus) and replaced it by its senior synonym *ochropterus* (Duftschmid, 1812). Unfortunately the collection of Duftschmid is not traceable (Gusenleitner, 1984), and the identity of *ochropterus* could not be checked. Since it is very unlikely that *ochropterus*, described from the Schneeberg near Vienna, Austria, represents the same taxon (*mollis* is limited to coastal dunes and inland blown sands and does not occur in Austria at all, see Aukema, 1990), and since *mollis* is a well-established name for this species, the International Commission on Zoological Nomenclature will be requested to preserve the name *mollis* Marsham for this species (Aukema & Luff, 1990).

Calathus cinctus (= *Calathus erythroderus* syn. nov.)

Gautier des Cottes (1868) described *Calathus ruficollis* from Sicily. Gemminger & Harold (1868), however, in preparing their catalog, found this name preoccupied by the Nearctic *C. ruficollis* Dejean, 1828 and replaced it by *erythroderus* (Gautier des Cottes (1869): *erythroderus* (sic!)). Despite special efforts the *Calathus* types of Gautier des Cottes could not be traced.

Vereshchagina (1985) in her revision of the genus *Calathus* in the USSR synonymised *C. cinctus* Motschulsky, 1850, described from the Caucasus, with *C. mollis*. Since *mollis* is not known from the Caucasus, nor from eastern Europe (Aukema, 1990), records of *mollis* from this region generally will concern *erythroderus*. A check of the lectotype of *cinctus*, kept at the Museum of Moscow University, confirmed this opinion. The male (vesica and right paramere dissected and glued on a separate card) bears four labels: "Derbent", "Calathus cinctus m./ Erivan", "Lectotypus Calathus cinctus Motsch./design. T. Vereshchagina"

and "Calathus mollis Marsh./T. Vereshchagina det.". Since *cinctus* Motschulsky is a senior synonym of *erythroderus* Gemminger & Harold, the valid name for this taxon accordingly is *cinctus*.

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