

The systematic position of species of the genus *Eriotrogus* REITT.  
(Coleoptera: Melolonthidae)

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ABSTRACT. The systematic position of species of the genus *Eriotrogus* REITT. was analysed based on the structure of male genitalia. *E. erivanicus* REITT. was transferred to the genus *Miltotrogus* REITT., resulting in a new synonym *Miltotrogus erivanicus* (REITT.) (comb. nov.) = *Miltotrogus gracilis* NONV.; *E. sinaicus* BAR. was transferred to the genus *Madotrogus* Reitt. The name *Eriotrogus* REITT. has become junior synonym of *Miltotrogus* REITT. Taxonomic mistakes result from the reduction in the number of antennal segments which is frequent in the *Melolonthidae*.

The genus *Eriotrogus* REITT. was erected by REITTER (1902) as subgenus in the genus *Amphimallon* BERTH., to accommodate *Amphimallon erivanicus* REITT. described by that author from Armenia. The main character of the new subgenus was the lack of emargination on pronotum. The remaining diagnostic characters: 9-segmented antennae, dorsal part of the body strongly hairy, shape of labial palps and claws, did not depart from such characters in other members of the genus *Amphimallon* BERTH.

Both MEDVEDEV (1951) and JABLOKOV-KHNZORIAN (1967) regarded it as subgenus in their monographs. BARAUD (1975) was of a similar opinion when describing a new species - *Amphimallon (Eriotrogus) sinaicus* BAR. However, already in 1966 MEDVEDEV in his key elevated the subgenus *Eriotrogus* to generic rank, that status being confirmed by BARAUD (1985) in his monograph.

Descriptions of both species included in that genus: *E. erivanicus* Reitt. and *E. sinaicus* BAR., suggested that they differed in so many characters, that I had to examine the type material thoroughly which resulted in interesting taxonomical conclusions.

*Miltotrogus erivanicus* (REITTER) n. comb.

*Amphimallon* (*Eriotrogus*) *erivanicus* REITTER, 1902: 253

*Miltotrogus gracilis* NONVEILLER, 1965: 57, n. syn.

The species based on specimens from Erevan differed from other representatives of the genus *Amphimallon* BERTH. in the lack of emargination of the base of pronotum, which character placed it close to the members of the genus *Miltotrogus* REITT. which, however, have 10-segmented antennae.

The first illustration of copulatory apparatus of *E. erivanicus* REITT. known to me was a figure in the key to the genera of the group "*Rhizotrogus*" (MEDVEDEV, 1966) (figs. 1-2). The figure suggests, however, that a member of *Miltotrogus* REITT. is concerned. Examining the holotype (Mus. Budapest) confirmed the suspicion. This allows an unequivocal placement of the species in the genus *Miltotrogus* REITT. Thus, it is only a specimen with reduced number of the antennal segments.

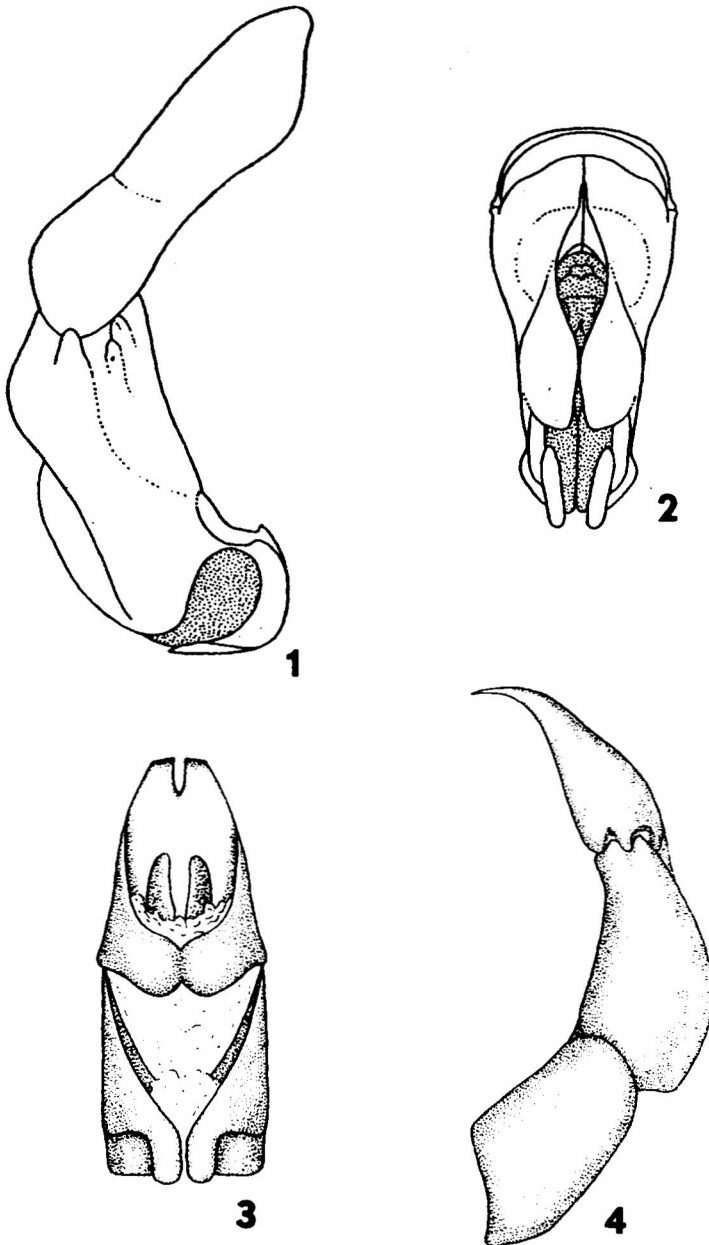
Besides, the analysis of the structure of the copulatory apparatus and morphological characters of the male described by NONVEILLER (1965) as *Miltotrogus gracilis* NONV. suggests that in both cases the same species is concerned (there is no type specimen in the collection of the Mus. Univ. Berlin). This is also confirmed by locality labels of both species: "Erivan, 1898, KORB" which probably originated from the same sample.

The conclusion is as follows: *Miltotrogus gracilis* NONV. is a synonym of *Miltotrogus erivanicus* (REITT) (n. comb.).

The distribution of *M. erivanicus* (REITT.) is a separate problem. MEDVEDEV (1951), when describing the distribution of "*Amphimallon erivanicus* REITT.", wrote: "Widely distributed in Transcaucasia: Armenia (Erevan), eastern Georgia (Tbilisi), Azarbaidzhan (vicinity of Evlach and southern part of Muganski steppe), Nakhchevanska ASSR to the river Arax (Ordubad), Turkish Armenia (Kurs, Surmaly)". Because I do not know the source of this information, it is difficult to ascertain if all the data pertain to the *M. erivanicus* (REITT.), or perhaps also to other members of the genus *Miltotrogus* REITT. with a reduced number of antennal segments.

## MATERIAL EXAMINED

Holotype, male, labelled: 1) Erivan, 1898, KORB; 2) coll. REITTER; 3) Holotypus, *Amphimallon erivanicus* Reitter, 1902; 4) *erivanicus* m. 1902, (revers): *erivanicus* m. 189; 5) *Miltotrogus erivanicus* (REITT.) = *M. gracilis* NONV., syn. n., Det. BUNALSKI M., 1991. (coll. Mus. Budapest).



1-2. *Miltotrogus erivanicus* (REITT.), male genitalia: 1 - lateral view, 2 - dorsal view (from MEDVEDEV, 1965); 3-4. *Madotrogus sinaicus* (BAR.), 3 - parameres, dorsal view, 4 - male genitalia, lateral view (from BARAUD, 1985)

*Madotrogus sinaicus* (BARAUD) n. comb.

*Amphimallon* (*Eriotrogus*) *sinaicus* BARAUD, 1975: 194.

The species was based on a series of specimens from Wadi Feran (Sinai). As stated by the author, it differs from the preceding species in nearly all possible morphological characters; the only character in favour of its inclusion in the genus *Eriotrogus* REITT. is the absence of emargination of pronotum base i.e. diagnostic character of the genus (BARAUD, 1985).

A preliminary analysis of the drawings of copulatory apparatus of *E. sinaicus* BAR. (BARAUD, 1975, 1985) reveals the inconsistency of the classification accepted by that author.

MEDVEDEV (1966) included the genus *Eriotrogus* REITT. in a group characterized by "long parameres, equal to or longer than the basal sclerite, forming a tube which narrows apically, fused from the base [...], their tips, however, never form a broad plate". In *E. sinaicus* described by BARAUD (1975) the parameres are much shorter than the basal part, and distinctly plate-like dilated (figs. 3-4). Apart from the fact that, as demonstrated above, all conclusions pertaining to the genus *Eriotrogus* REITT. were erroneously based on misdetermined specimens of the genus *Miltotrogus* REITT., it is obvious that both those authors meant quite different genera.

Thanks to the kindness of Mr. J. B. HUCHET I had an opportunity to examine the male of *E. sinaicus* BAR. from the type series. This made it possible to ascertain that actually a member of the genus *Madotrogus* REITT. was concerned. No doubt it is a good species, and its distribution on Sinai shifts the distribution border of the genus *Madotrogus* 1000 km south-west (BUNALSKI, 1993).

## MATERIAL EXAMINED

Paratype, male, labelled: 1) Wadi Feran, 4-3-35 Sinai, W. WITTMER; 2) *A. (Eriotrogus) sinaicus* BARAUD, Paratype; 3) *Madotrogus sinaicus* (BAR.), BUNALSKI 1993. (coll. J.BARAUD, Bordeaux).

Because of the transfer of the type species *E. erivanicus* REITT. of the genus *Eriotrogus* REITT. younger than *Miltotrogus* REITT., the name *Eriotrogus* is junior synonym of *Miltotrogus*.

## NOTES

It follows from the analysis of both cases that the basic reason for taxonomic problems with the *Melolonthinae* is the fact that their generic classification was based on the number of antennal segments. This, because of the frequent reduction in their number (BRANCO, 1990; BUNALSKI, in press; COCA-ABIA, 1992), may lead to consider-

able errors. Hence many modern papers, based on the analysis of the male genitalia, postulate a considerable reduction of the number of genera within the *Rhizotrogini* (NIKOLAEV, 1976; 1987).

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