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NEW RECORDS OF TWO *COPELATUS* SPECIES,  
NEVER REPORTED AGAIN SINCE THEIR  
DESCRIPTIONS  
(Coleoptera Dytiscidae)

ABSTRACT - PEDERZANI F., 2007 - New records of two *Copelatus* species, never reported again since their descriptions (Coleoptera Dytiscidae).

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New records of *Copelatus usagarensis* Zimmermann, 1926 and *Copelatus ischius* Guignot, 1956 are reported. Of both species only the type materials were known so far. The aedeagus of *Copelatus ischius* is illustrated for the first time.

KEY WORDS - Coleoptera, Dytiscidae, *Copelatus*, *usagarensis*, *ischius*, Tanzania, Zambia.

RIASSUNTO - PEDERZANI F., 2007 - Ritrovamento di due specie di *Copelatus* che non erano più state segnalate dopo la loro descrizione (Coleoptera Dytiscidae).

Si riportano recenti ritrovamenti delle due specie africane *Copelatus usagarensis* Zimmermann, 1926 e *Copelatus ischius* Guignot, 1956, di cui si conoscevano finora solamente i materiali tipici. Si raffigura per la prima volta l'edeago di *Copelatus ischius*.

PAROLE CHIAVE - Coleoptera, Dytiscidae, *Copelatus*, *usagarensis*, *ischius*, Tanzania, Zambia.

In a collection of Hydradephaga from Tanzania and Zambia I found several specimens of two species of *Copelatus* Erichson, 1832 never reported again, as far as I know, since their descriptions: *Copelatus usagarensis* Zimmermann, 1926 and *Copelatus ischius* Guignot, 1956. All specimens were collected at light by the Czech naturalist Arnost Kudrna jr. and are kept in my collection and Rocchi collection (Florence).

*Copelatus usagarensis* Zimmermann*Type material*

♂ and ♀ (ZIMMERMANN, 1926) «Deutsch-Ost-Afrika, Usagara». According to GUIGNOT (1961) types should be in «Zool. Samml. Bay. St. München».

*New record*

4 ex. Tanzania: Morogoro Prov. 60 Km N to NW Morogoro, 500 m, 12-13/I/2007.

*Size*

(2 males and 2 females measured) average length  $4.1 \pm 0.029$  mm, min. 4.05, max. 4.15 mm; average length to width ratio 2.16.

*Biology*

Unknown, because Zimmermann did not describe the habitat, and the new specimens were collected at light.

*Distribution*

SE Tanzania. The new record does not extend the known geographical distribution of the species. I was not able to find the exact location of the ancient «Usagara» on a map. As far as I know, there was a wide region with this name, which also includes the present Morogoro province.

*Remarks*

*Copelatus usagarensis* belongs to Guignot's «groupe duodecimstriatus»; it is easily recognizable among the few species of that group by small size, colour pattern of elytra and peculiar elytral striae. I am not aware of further records, after the type material was described by ZIMMERMANN (1926). NILSSON *et al.* (1997: 34) published the drawings of the aedeagus (I suppose drawn from type material, since no different sources are mentioned). The aedeagus of my two male specimens (Figs 1a-b) is in good accordance with the figures by NILSSON *et al.* (l.c.).

*Copelatus ischius* Guignot*Type material*

♀ (GUIGNOT, 1956) «Congo Belge, District du Tanganika: Musosa, 980 m, XI.1953 (H. Bomans). Type unique au Musée Royal du Congo Belge. ♂ Inconnu».

*New records (listed from North to South)*

- 1 ex. Tanzania: Kigoma Prov., Uvinsa, 30 Km dir. Kasulu, 1050 m, 28-29/XII/2006.
- 2 ex. Tanzania: Iringa Prov., ca. 50 Km NW Iringa, road to Ruaha N.P., 1000 m, 7-9/I/2007.
- 42 ex. Tanzania: Mbeya Prov., 35 Km NE Mbeya, 1150 m, 4/I/2007.
- 1 ex. Zambia: Lusaka Prov., 30 Km S Lusaka, 16-17/XII/2002.
- 1 ex. Zambia: Southern Province, 30 Km NW Kazungula, 22-23/XII/2002.

*Size*

Male (20 ex. measured) average length  $4.48 \pm 0.042$  mm, min. 4.20, max. 4.75 mm; average length to width ratio 2.14.

Female (25 ex. measured) average length  $4.34 \pm 0.037$  mm, min. 3.85, max. 4.60 mm; average length to width ratio 2.08.

*Biology*

Unknown, because all specimens known so far, including the type, were collected at light.

*Distribution*

Democratic Republic of Congo, and Tanzania, around lake Tanganyika, to southern Zambia. The type locality «Musosa» is close to the Congo-Zambia border, between lake Tanganyika and lake Mweru.

*Remarks*

*Copelatus ischius* belongs to Guignot's «groupe longicornis, sous-groupe guerini»; it is easily recognizable by the very short first stria and

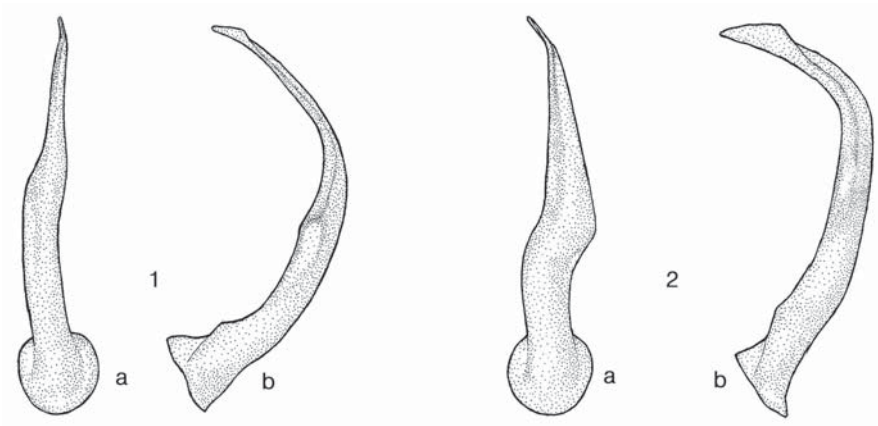


Fig. 1. Aedeagus of *Copelatus usagarensis* Zimmermann: a. dorsal view, b. lateral view (Tanzania: Morogoro).

Fig. 2. Aedeagus of *Copelatus ischius* Guignot: a. dorsal view, b. lateral view (Tanzania: Mbeya).

the yellowish marginal band of elytra, clearly described in the original description, that is why I assume the new records belong here, although I have not seen the type. The new material gives the opportunity of describing the male (allotype) and giving the figure of the aedeagus and additional measures. All characters given in the description are confirmed. The length of first stria is variable, very short as a rule and sometimes reduced to a pre-apical line, but in some specimens it extends as far as one third of elytral length.

Male. A little longer and more elongate than female. Dorsal surface shiny, with sculpture less impressed than in female, as a rule. Fore and intermediate tarsi much widened. Aedeagus as in figs 2a-b.

Female. Most females have the elytral surface covered with a short aciculation beyond the outer stria; in some specimens the aciculate area extends inwards, and in one specimen also the sutural space shows a sparse striolation. Actually this species can show dimorphous females.

These two taxa belong to different groups of species, according to the current taxonomy of *Copelatus* based on the number of elytral striae, however they share two peculiar features: the lack of submarginal stria and the basic structure of aedeagus (Figs 1 and 2), besides colour

pattern, size and oblong shape. Maybe they are closer relatives than it appears from their present taxonomic position.

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