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On *Biton monodentatus*, a new species of the family Daesiidae (Solifuga, Arachnida)

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Introduction

This new form closely resembles the *striatus* group (Lawrence, 1928, 1955, 1964), from which it differs in the details of the dentition and of the flagellum, as well as in the spination. The specimens were collected from Sar Uanle, Somalia, by Spedizione Biologica in Somalia del "Centro di Studio per la Faunistica ed Ecologia Tropicali del Consiglio Nazionale delle Ricerche".

Biton monodentatus n.sp.

Material

The following specimens were studied: holotype ♂ no. 160 M.F., 1975; paratypes 1♂ no. 160 M.F., 1975; 1♂ no. 159 M.F., 9 June 1973; 1♀ no. 161 M.F., August 1975.

The right chelicera of the holotype, after cleaning with an ultrasonic apparatus for between 2 and 15 sec, was mounted on a base, coated with evaporated gold and examined with a JSM-2 scanning electron microscope.

Male holotype

Dimensions. Total length 16 mm; pedipalp length 16.5 mm; width of propeltidium 3.12 mm, length of propeltidium 2.87 mm, ratio between them 1.08; length of 4th leg 18 mm.

Colour. Dorsal surface of chelicera with faint violet stripes; propeltidium a little darker than the general background colour of the specimen, ocular tubercle black-violet; pedipalp, tarsus and basitarsus dark violet, tibia a little paler, femur with distal half violet, the remainder yellow; abdomen pale yellow with violet spots dorsally; 4th leg with femur infuscated violet.

Flagellum. As in Fig. 1, the basal portion not dilated and forming a regular cone; a crista occurs on the basal portion (Fig. 2).

Dentition. Different from all previously described forms. The fixed finger of the chelicerae has rounded and non-pointed teeth, as usually seen in old females of Solifuga; no intermediate tooth, but with three inner and four outer cheek teeth (Fig. 3). The movable finger has the main tooth pointed and large, the intermediate and anterior teeth small and similar; the finger ends with a large (1.9 mm) "boat-shaped" excavation (Fig. 4). The fingers are equal in length.

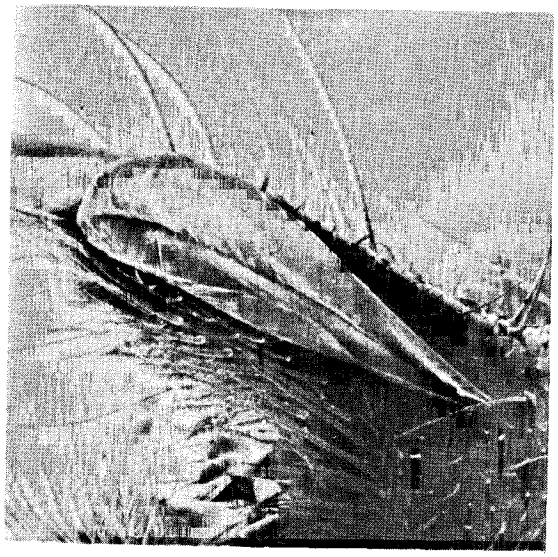
Spination. Chelicerae, headplate, abdomen with few sparse but long dorsal yellow setae; pedipalp basitarsus with three pairs of spines and two proximal pairs of long bristles; tibia with no spines, only setae. Second abdominal sternite on each side with a group of 9-12 ctenidia longer than the neighbouring bristle. Tarsal spination of 2nd-4th legs typical of genus *Biton* except for specimen no. 159 M.F. which has the 4th right leg with 2./0. and left 2.2./0./2./0.

Female paratype

The female specimen has many characters as in the male, viz. dimensions and form of ctenidia, colour, spination, rows of inner and outer cheek teeth, but the specimen shows some differences in size (total length 25.5 mm; pedipalp length 15.5 mm; length of 4th leg 20.5 mm) and in the denticulation of the fixed finger, having two anterior teeth, one intermediate and one main tooth.

Diagnosis

Direct comparison with the type specimens of *Biton striatus* (Lawrence, 1928) (1♂, 1♀ South African Museum B 7225, Otjikondo, SWA, Museum Expedition 1926) reveals the following differences: (1) the flagellum is quite different in its basal portion and in the general features (Fig. 6); (2) the ratio between the width and length of the propeltidium is 1.08 in our specimen, and 1.18 in the type specimen of *B. striatus*; (3) the fixed finger of *B. striatus* is much shorter than the movable (Fig. 5), while our specimen shows the movable finger with a unique feature. Differences in the dentition and in the structure of the flagellum also distinguish our species from *B. striatus bidentatus* Lawrence, 1955. The puzzling occurrence of this species of South African affinities in Somalia may be explained either by the fact that this area is still poorly known and a comprehensive



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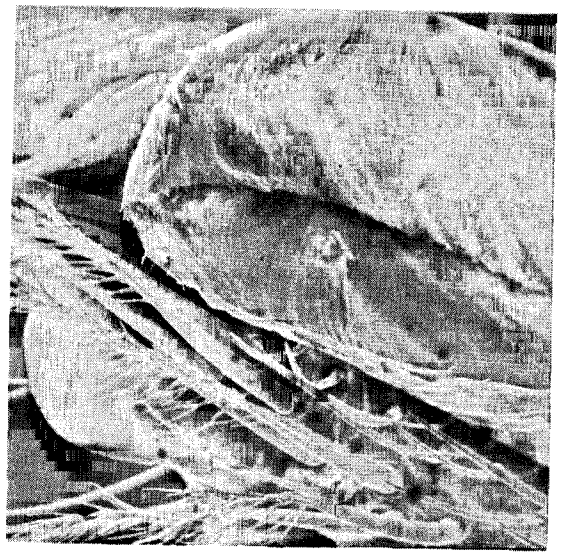

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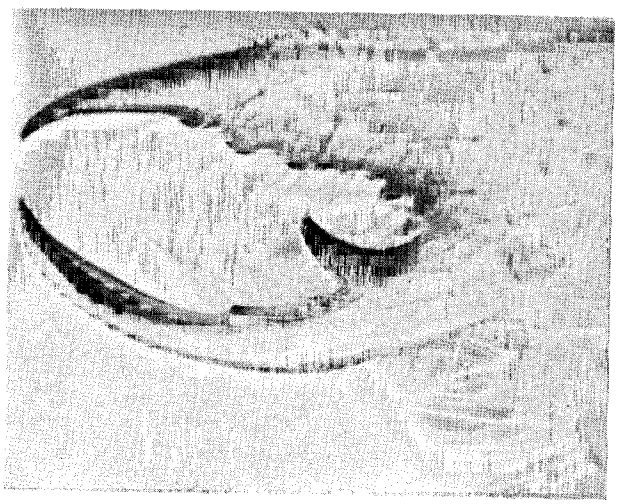

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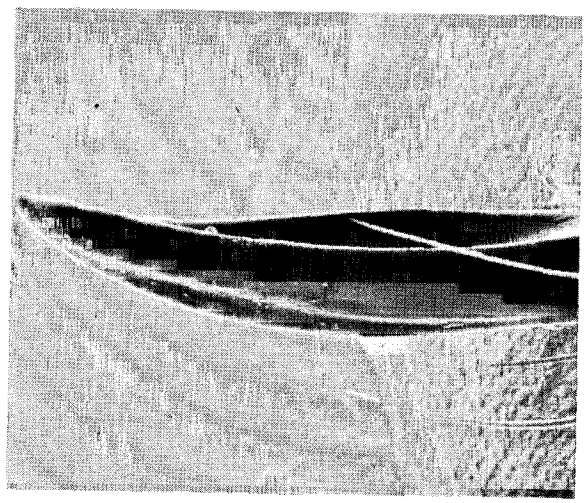

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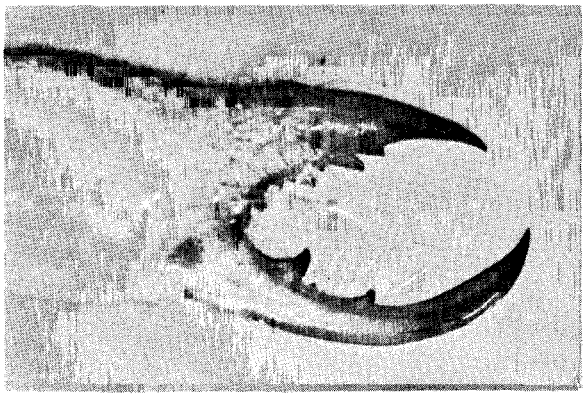
Figs. 1-4: *Biton monodentatus* n.sp., holotype ♂. **1** flagellum (S.E.M. x 35); **2** the same (S.E.M. x 105); **3** left chelicera, external surface; **4** detail of movable finger of right chelicera (S.E.M. x 80).



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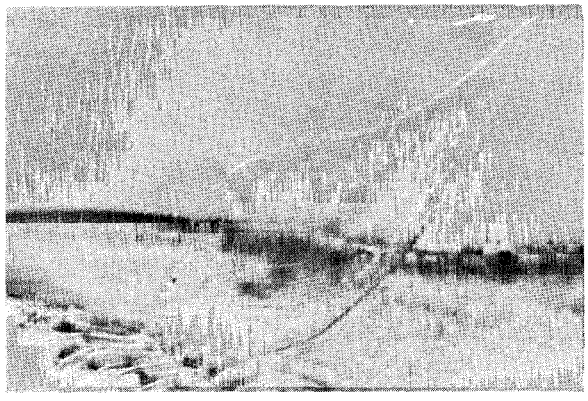

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Figs. 5-6: *Biton striatus* (Lawrence, 1928), holotype ♂. **5** right chelicera, external surface; **6** flagellum.

evaluation of its faunal affinities is impossible, or by the hypothesis that we meet in this area with relicts of a more archaic faunal structure.

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