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Issue 5

Lund, Sweden 15 August 1995

ISSN 1104-5957

A new species of *Meligethes* (Coleoptera, Nitidulidae) from South Africa

PAOLO AUDISIO

Audisio, P.: A new species of *Meligethes* (Coleoptera, Nitidulidae) from South Africa. *Stobaeana* 1995(5)1–4, Lund, Sweden 1995-08-15. ISSN 1104-5957.

A new species, *Meligethes danielssoni* n.sp., from South Africa (Western Cape) is described and figured. It is compared with *M. odiosus* Reitter (from Western and Eastern Cape; member of the subgenus *Lariopsis* Kirejtshuk), but it has a very peculiar combination both of external and genital characters, and its true taxonomic position is unclear.

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The author of the present paper since 1988 has been engaged in a revision of the South African and Namibian species of the pollen-beetle genus *Meligethes* Stephens, 1830, which includes in this area probably more than 140 (mostly undescribed) species. The present note (a preliminary contribution towards the above mentioned project) is based on material belonging to a new and very interesting species recently collected in South Africa by the writer, by R. Danielsson (Lund), and by S. Endrödy-Younga (Pretoria).

Meligethes danielssoni sp.n.

Figs. 1–6.

Type material: *Holotype*: ♂, Republic of South Africa, Western Cape Province, De Hoop Nature Reserve (nearly 40 km S Swellendam), 0–200 m a.s.l., 34°27'S, 20°25'E, 10–13.X.1994, R. Danielsson leg., in coll. Mus. Zool., Lund. — *Paratypes*: Same data as holotype, 3♂♂, 9♀♀ (in coll. Mus. Zool., Lund, and in the author's collection, Rome); Republic of South Africa, Western Cape Province, Franschoek Pass (E slope), 550 m a.s.l., 25.X.1993, P. Audisio leg., 1♀ (in the author's collection, Rome); Republic of South

Africa, Western Cape Province, Swellendam, Marloth Nature Reserve, 250 m a.s.l., 26.X.1993, P. Audisio leg., 1♀ (in the author's collection, Rome); Republic of South Africa, Western Cape Province, Outeniqua Mts, Robinson Pass (S slope), 500 m a. s. l., 26.X.1993, P. Audisio leg., 1♀ (in the author's collection, Rome); Republic of South Africa, Western Cape Province, 8 km W Nieuwoudtville, Vanrhyns Pass (E slope), 750 m a. s. l., 15.IX.1994, P. Audisio leg., 1♀ (in the author's collection, Rome); Republic of South Africa, Western Cape Province, N Arniston, 34°39'S, 20°13'E, 29.VIII.1983, S. Endrödy-Younga leg., 1♀ (in coll. Transvaal Mus., Pretoria).

Etymology: The new species is named after Roy Danielsson (Mus. Zool., Lund), who first collected some male specimens, so enabling the author to describe it thoroughly.

Diagnosis: This species is probably rather isolated amongst other South African members of the genus *Meligethes*. Although it is similar in general appearance to members of the recently revised South African subgenus *Lariopsis* Kirejtshuk (Kirejtshuk & Audisio, 1995), it is easily distinguished from the (probably only superficially) similar *Meligethes (Lariopsis) odiosus* Reitter (Reitter, 1872; Kirejtshuk & Audisio, 1995) by the strongly marked transverse elytral strigosity, the more developed prosternal antennal furrows, as well as by the characteristically shaped male and female genitalia.

Description

More or less elongate, oval (Fig. 1), moderately convex, small-sized (length: 1.70–2.05 mm; width: 0.95–1.18 mm); unicolorous metallic dark brown or blackish, with yellowish front legs and antennae (club darker), middle and hind legs yellowish to castaneous.

Pubescence golden, rather distinct but short and recumbent. Hairs on lateral margin of pronotum and elytra barely visible.

Head with moderately deep punctures nearly as large as eye facets, separated by 0.5–1 diameter, surface between smooth and shining; front margin of clypeus transversely truncate and distinctly bordered, with side angles rather blunt (Fig. 1). Fronto-geneal grooves clearly distinct. Frons without tentorial impressions. Antennae medium-sized, club small, with short pubescence (Fig. 1); antennal segment 3 elongate, slightly shorter than segment 2.

Pronotum moderately convex, 1.60–1.70× as wide as long, moderately rounded at sides, more strongly narrowed anteriorly than posteriorly, broadest in the middle or at posterior third (Fig. 1), with posterior angles completely rounded; sides narrowly bordered. Posterior margin slightly sinuate on either side of scutellum; discal punctures as on head or slightly larger and deeper, surface between them smooth and shining. Scutellum rather large, its exposed portion very finely punctate; surface usually with distinct traces of microreticulation.

Elytra 1.01–1.05× as long as wide, scarcely arcuate at sides, arcuately narrowed towards the apex, broadest in the middle or at basal 0.4, 1.15–1.20× as wide as pronotum; shoulders moderately raised; punctures much smaller and shallower than on pronotum, combined with strongly marked transverse strigosity; spaces between punctures smooth and shining.

Prosternal antennal furrows nearly as long as antennal segment 2, oblique, and clearly visible. Prosternal process subparallel, moderately widened towards the narrowly rounded apex, nearly as wide as antennal club; punctures moderately deep, smaller than eye facets, separated by nearly one diameter; surface smooth. Mesosternum with hind edge straight. Metasternum almost flat and simple in both sexes; punctures simple, moderately deep, on average as large as eye facets, separated by one diameter or more, surface smooth and shining. Posterior edge of last abdominal sternite almost simple in both sexes. Arc-like lateral impressions on last abdominal sternite large and strongly marked.

Front tibiae rather long and narrow, their outer edge minutely serrate, with a series of 9–11 small, narrowly

triangular, relatively even teeth (Fig. 2); inner edge of front tibiae simple and almost straight in both sexes. Front tarsi in female specimens nearly as wide as first antennal segment, slightly wider in male specimens. Tarsi of normal shape, all being rather short, the posterior ones being much shorter than antennae (Fig. 1). Hind tibiae moderately elongate, their inner edge simple and almost straight in both sexes; outer edge of both middle and posterior tibiae arcuately and regularly shaped (Fig. 1). Middle and posterior femora with simple posterior edge in both sexes.

Tegmen (Fig. 3) relatively small, slender, with apex distinctly setose, and a narrow deep U-shaped median excision; median lobe of aedeagus very long (Fig. 4), strongly narrowed from its distal third, sharp at apex.

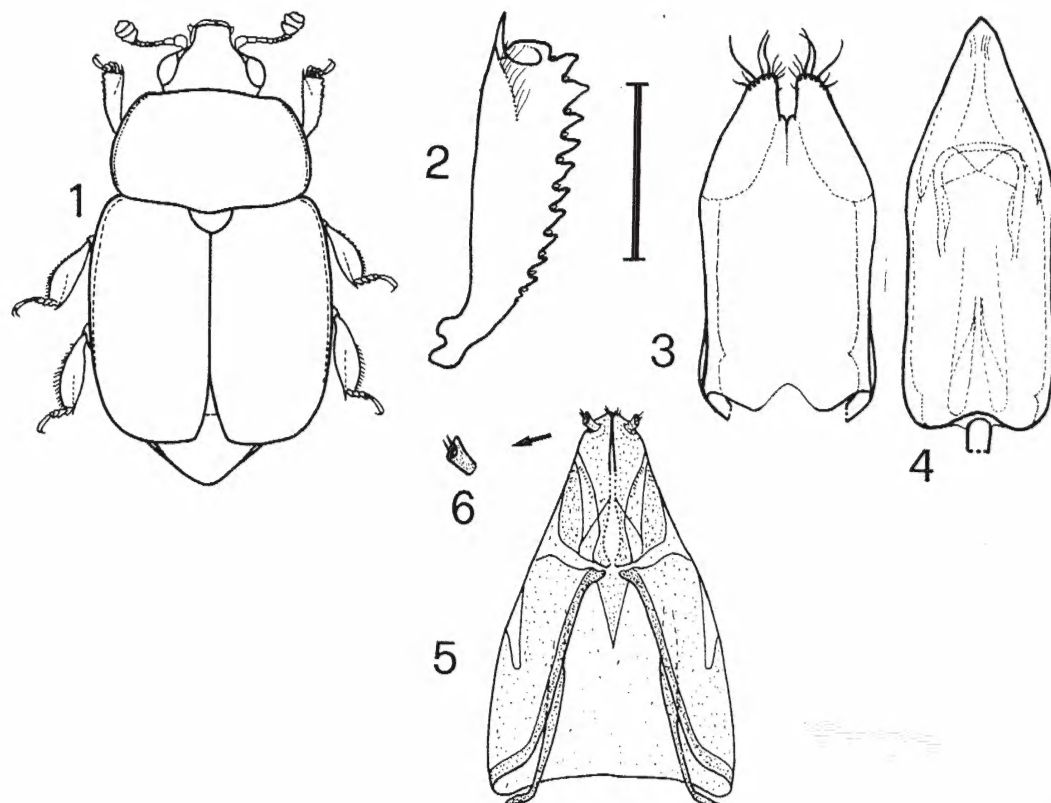
Ovipositor as figured (Fig. 5), unicolorous yellowish, small, apex obliquely subtruncate with short and peculiarly asymmetric styli (Fig. 6); outer subdivision of coxites small and narrow; 'central point' placed at distal 3/7, with long and wide ventral spicule; transverse suture widely V-shaped.

Comparative notes

As discussed above, this species is probably rather isolated amongst other South African members of the genus *Meligethes*, and its taxonomic position is still unclear. Although it is similar in general appearance to members of the recently revised South African subgenus *Lariopsis* Kirejtshuk (Kirejtshuk & Audisio 1995), it is easily distinguished from the (probably only superficially) similar *Meligethes (Lariopsis) odiosus* Reitter by the characters given in the diagnosis. Easily distinguished from all other known South African *Meligethes* by the combination of the following characters: transversely truncate front margin of clypeus; uniform dark brown metallic colouration with yellowish antennae and (at least anterior) legs; strongly marked transverse elytral strigosity; strongly marked arc-like impressions on last abdominal sternite; clearly visible and developed prosternal antennal furrows; outer edge of front tibiae minutely serrate, with relatively even teeth; characteristically shaped male and female genitalia.

Biological notes

The biology of *M. danielssoni* sp. n. is almost completely unknown. Adults have been collected in spring on flowers of different families, especially on small white Ericaceae growing near damp places in localities with Fynbos and Sandveld dominant vegeta-



Figs. 1–6. — 1. Habitus of *Meligethes danielssoni* sp.n. (female paratype from Franschoek Pass). — 2. Right front tibia of *M. danielssoni* sp. n. (male paratype from De Hoop Nature Reserve). — 3–4. Male genitalia (tegmen and median lobe of aedeagus) of *M. danielssoni* sp. n. (male paratype from De Hoop Nature Reserve). — 5–6. Ovipositor (ventral view) and stylus of *M. danielssoni* sp. n. (female paratype from Franschoek Pass). Scale bar = 0.9 mm (Fig. 1); = 0.17 mm (Figs. 2–5); = 0.08 mm (Fig. 6).

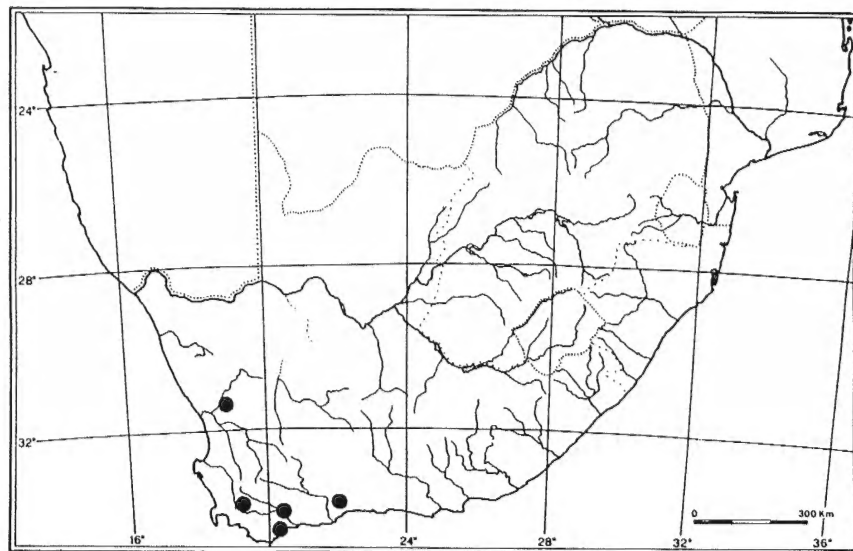


Fig. 7. Known geographic distribution of *Meligethes danielssoni* sp.n.

tion. *M. odiosus* and its relatives (Kirejtshuk & Audisio, 1995) are associated with flowers of the family Mesembryanthemaceae (= Aizoaceae) for their larval development; the discovery of the host plants of *M. danielssoni* sp.n., will probably allow to clarify the phylogenetic position of this peculiarly shaped species. The reproductive period is probably in spring or in early summer.

M. danielssoni sp. n. is an evidently rare species, although widespread in spring in subcoastal and inner areas with Sandveld (sandy flats and lower sandy slopes) and low Fynbos vegetation; known from sea level up to nearly 800 m.

Geographic distribution

M. danielssoni sp. n. is apparently confined to the Western Cape Province (Fig. 7).

Acknowledgments

The author is indebted to various colleagues and institutions for material and data used for this study: R. Danielsson (Museum of Zoology, Lund University); S. Endrödy-Younga, C. L. Bellamy and R. Müller (Transvaal Museum, Pretoria); my friends and colleagues M. A. Bologna (Rome), A. De Biase (Rome), and M. Biondi (L'Aquila, Italy).

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