

Redescription of the male of *Dorceus quadripilotus* Simon, 1908 from Egypt (Araneae: Eresidae)

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Summary

The male of *Dorceus quadripilotus* Simon, 1908 is redescribed, with notes on its behaviour in the laboratory. Notes on the distribution of *Dorceus* species and a distribution map are included.

Introduction

Dorceus is one of ten genera of the family Eresidae (Platnick, 1993). It includes eight species from North Africa and Senegal (Roewer, 1954). *Dorceus quadripilotus* Simon, 1908 was described from the northern (Mediterranean) coast area of Egypt. The material was three males collected by Letourneux (Muséum National d'Histoire naturelle, Paris (MNHN), tube no. 8348; Rollard, pers. comm.). It was redescribed by Simon (1910). A male specimen was collected on 11 May 1990 at a locality about 6 km west of El-Hammam (about 40 km west of Lake Mariout, Alexandria, the type locality), about 30°49'N 29°17'E. It is redescribed here in detail. A dorsal view photograph is included. The right palpal organ is drawn from and photographed by scanning electron microscopy (Jeol JSM-5400).

The movement of *D. quadripilotus* and its nesting behaviour in the laboratory are described here. The distribution of *Dorceus* species is summarized from literature and plotted on a map. All measurements are in millimetres.

Genus *Dorceus* C. L. Koch, 1846

Diagnosis: *Dorceus* and the closely related *Seothyra* can be distinguished from other eresid genera by their short posterior spinnerets which are half the length of the anterior ones (Dippenaar-Schoeman, 1990). They differ mainly in the shape of the cephalothorax

(cephalic part nearly as long as wide in *Seothyra*) and the size of eyes (subequal or equal size in *Seothyra*) (Simon, 1903), as well as the development of front legs (Dippenaar-Schoeman, 1990).

Notes on the distribution of *Dorceus* species

The following notes are based on data included in different references (Roewer, 1954) and the data of the type specimens preserved in MNHN (Rollard, pers. comm.). The names and co-ordinates of geographical localities were verified using the Royal Military College Atlas (Anon, 1928), The Arab Atlas (Anon, 1968), and Nordafrika map (Anon, 1983) and plotted on a map (Fig. 5).

The distribution of *Dorceus* species is confined to the range: 29°17'E–17°00'W, 14°40'N–38°08'N. Most records of *Dorceus* are from Mediterranean or Atlantic coastal localities. The other records are from coastal desert regions, at most 180 km from the coast. The highest altitude was 2100 m in Morocco for *Dorceus albopictus*, but most of the records are from near sea level where relative humidity is high.

Redescription of *Dorceus quadripilotus*

Male: Total length 6.11. Cephalothorax: L 3.24; cephalic part: L 2.12 W 2.40, more highly raised than the thoracic part, ending in a semi-circular shape which is abruptly inclined to the thoracic part. Integument crimson red,



Fig. 1: *Dorceus quadripilotus*. Dorsal view of living male spider.

covered by short black hairs. Four spots of white hairs: two in the anterior third of the cephalic part, the other two smaller (about one-quarter of the anteriors), just in front of the posterior lateral eyes. Behind the area of the median eyes, there is a small, bare area. Eyes: posterior medians largest, others subequal. Median ocular quadrangle trapezoidal with anterior edge much narrower than posterior. Anterior lateral eyes directed laterally and downwards. Clypeus very narrow, about 0.1 mm from anterior median eyes. Eye measurements: AME 0.11, ALE 0.09, PME 0.13, PLE 0.10, AM-AM 0.12, AL-AL 1.67, PM-PM 0.32, PL-PL 1.52, AM-AL 0.72, AM-PM 0.02. Thoracic part: L 1.12, W 2.25; almost flat, faintly inclined behind the cephalic part until the end of the thoracic part which is forwards notched. Lighter in colour than cephalic part, it has sparse black hairs on both sides, mixed with white hairs near edges, which increase on both sides backwards. Fovea small, just behind the incline of the cephalic part. Area behind fovea bare except for a few white hairs. Chelicerae: crimson red, covered by black hairs longer anteriorly, and nearly bare in parts adjacent to labium and maxillae; with strong boss;

with big tooth on the inner edge. Sternum: L 1.87; anteriorly wide, posteriorly attenuated between coxae IV, with minute extensions between other coxae; reddish brown, covered by sparse black hairs. Labium L: 0.67. Maxilla L: 1.00; like sternum in colour. Pedipalps: crimson red, covered by black hairs, except patella which is covered in white hairs; no tibial or patellar apophyses. Palp: conductor screw-shaped, its terminal element undivided, with an acute tip anteriorly (Figs. 2-4). Legs: crimson red, covered by black and white hairs. Coxae: lighter in colour, with sparse white hairs at edges with trochanters. Leg I: femur black with white hairs near patella; patella one-quarter white, three-quarters black; tibia two-thirds black, one-third white; metatarsus one-third white, two-thirds black; tarsus half white, half black. Leg II: like I except: patella three-quarters white, one-quarter black; tibia half black, half white. Leg III: white except lateral sides of femur and tip of tarsus black. Leg IV: femur black with white hairs near patella; patella white; tibia one-third white, two-thirds white with black lateral sides; metatarsus and tarsus like leg III. Metatarsus IV without calamistrum. Tarsi: tip thickened, laterally pressed, with weak scopula; with three claws, two uniserrated and one smooth. Spination pattern: only on tibiae III & IV, metatarsi and tarsi I-IV. Legs I & II: metatarsus I v 0-0-2 p 0-0-1, II v 0-2-2 p 0-1-1-1 r 0-0-1; tarsus with a few ventral spines. Legs III & IV: tibia III v 0-0-2, IV v 0-0-2-3; metatarsi and tarsi with numerous ventral spines and rarely prolateral and retrolateral spines at distal end. Leg measurements: Leg I Fe 2.62, Pa 1.22, Ti 1.45, Mt 1.67, Ta 1.12, total 8.08; Leg II Fe 2.25, Pa 1.20, Ti 1.25, Mt 1.50, Ta 0.97, total 7.17; Leg III Fe 1.82, Pa 1.00, Ti 1.00, Mt 1.20, Ta 0.65, total 5.67; Leg IV Fe 2.50, Pa 1.22, Ti 1.85, Mt 1.75, Ta 0.87, total 8.19. Abdomen: L 2.87; entirely covered by black hairs dorsally, except two white oblong spots in the front, separated by an area equal to one of them. In the middle, backwards, there is a semi-circular procurved wide band which is thickened at both ends forming two triangles, with tops facing each other. This band and thick triangles are covered by white hairs. Also, there is a small spot of white hairs above the spinnerets at the end of the abdomen. These white areas on black background resemble an "African mask" with

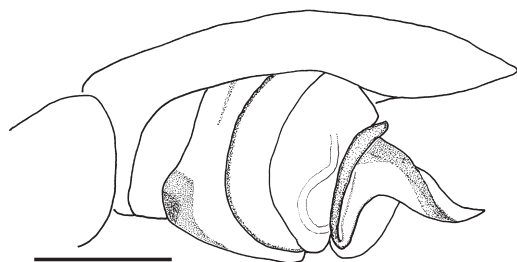


Fig. 2: *Dorceus quadrispilatus*. ♂ palp, retrolateral. Scale line = 0.25 mm.

two eyes, a mouth, and a white chin (Fig. 1). Ventral: covered by black hairs, except the divided cribellum and the large, creamy-white area above the book lungs. Spinnerets: anterior pair large; others comparatively very small.

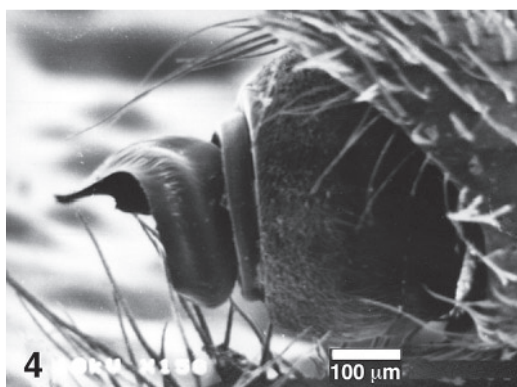
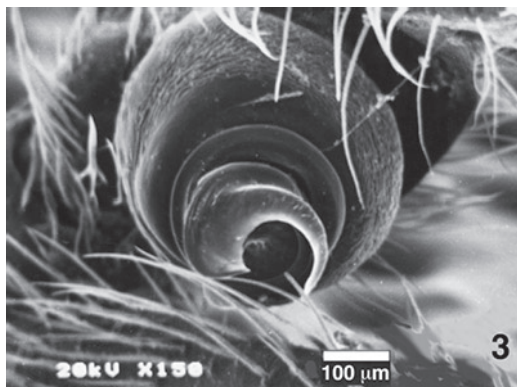
Habitat

Semi-arid region very near to the Mediterranean sea coast. Climate, in May, very humid in the early morning; cold before sunrise and moderately hot at noon; mean temperature 17.5–21.0 °C; rainfall 0.4–0.8 mm; evaporation 5.0–7.5 mm/day; and relative humidity 67.0–73.5% (Ali, 1982). Ground of semi-stabilized sand, covered by low vegetation, mostly of annual herbs.

Natural history

In 1967, Lehtinen stated that: “Nothing is known about the habits of *Dorceus*”, except that it was expected to be “terricole” or subterranean (Simon, 1892; Lehtinen, 1967) because of the morphological resemblance between it and *Seothyra*. Unfortunately, the nests of *Dorceus* species have not been discovered in nature, whilst *Seothyra* has well-described subterranean nests (Dippenaar-Schoeman, 1990).

The male specimen which is described here was found at noon, running on the hot ground with an ant-like movement. This behaviour resembles that of *Seothyra* (Dippenaar-Schoeman, 1990). This specimen was kept alive for a few days in a transparent plastic bottle filled partly with sand. After the first night, it hid under a tent of sand and silk threads: a dome-



Figs. 3–4: *Dorceus quadrispilatus* ♂ palp: 3 ventral; 4 prolateral.

shaped tent with a few threads spread from it in parallel lines extending for a few centimetres on the surface of sand. When the tent was turned over, the spider was found hanging upside down inside. There was no burrow like that of *Seothyra*, but it may construct a burrow in nature.

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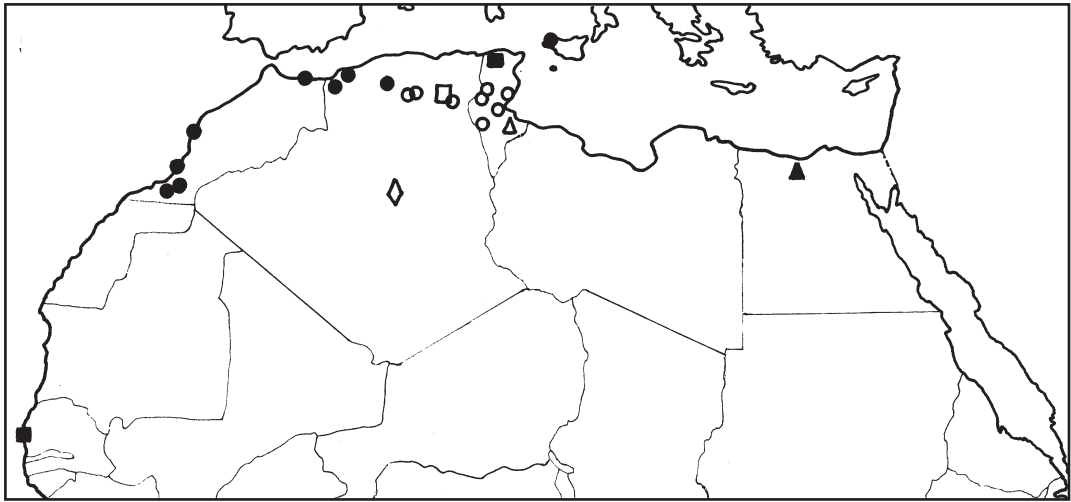


Fig. 5: Distribution map of *Dorceus* species. *D. albolunulatus* (open square), *D. albopictus* (filled circles), *D. eburneus* (open circles), *D. fastuosus* (filled squares), *D. latifrons* (open diamond), *D. quadrispilatus* (filled triangle), *D. trianguliceps* (open triangle).

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