

Alopecosa thaleri, a new wolf spider from Gran Canaria (Araneae, Lycosidae)

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Summary

A previously unknown species of lycosid spider, *Alopecosa thaleri*, new species, was discovered in montane woodlands on Gran Canaria. The male copulatory organ differs from that of all other *Alopecosa* species, but the female is similar to *A. artenarensis* and *A. palmae* from which it can be distinguished by the gap between the left and right anterior epigynal margins and by the form of the vulva. Furthermore, *A. thaleri* differs from these species in the overall body coloration. Both *A. artenarensis* and *A. palmae* are dark, nearly black, while *A. thaleri* is almost brownish. *A. thaleri* inhabits montane woodlands at elevations between 1100–1600 m above sea level.

Introduction

Although many studies have been carried out on spiders of the Canary Islands (e.g. Schmidt, 1972; Wunderlich, 1992), our knowledge of the wolf spiders of these islands is still incomplete and many species are known from only one sex (Wunderlich, 1992).

Twelve species of the genus *Alopecosa* are known from the Canary Islands (Wunderlich, 1992; Platnick, 2005), all of which are considered to be endemic; two of these occur exclusively on Gran Canaria: *A. grancanariensis* Wunderlich, 1992 and *A. artenarensis* Wunderlich, 1992. The species described in this study was discovered by H. F. Paulus during several collecting trips between 1990 and 2001.

In order to find related *Alopecosa* species, differential diagnostic characteristics of the new species were compared with relevant illustrations from the literature using the world spider catalogue (Platnick, 2005) as the most current database. The morphological examinations revealed clear structural differences from all known *Alopecosa* species.

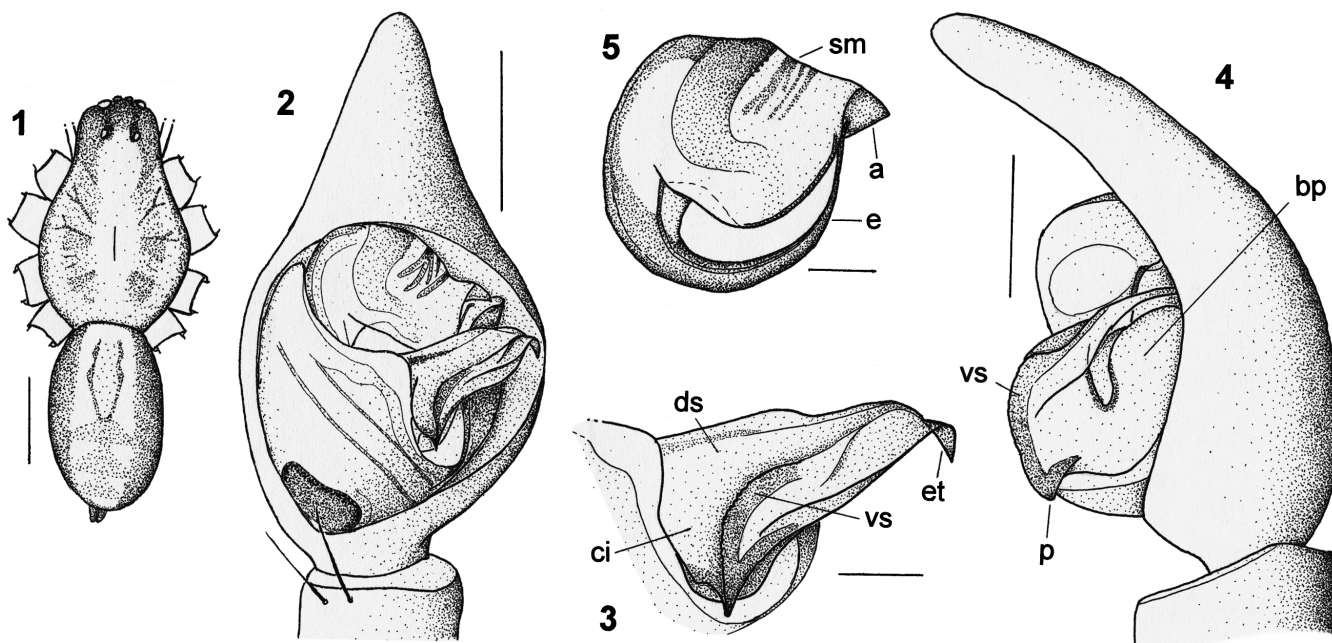
Alopecosa thaleri, new species (Figs. 1–9)

Types: Holotype ♂, Gran Canaria, near Rincon/Tenteniguada, pine wood, ~1100 m, 20 February 1997 (leg. Paulus). Paratype: 1♀, Gran Canaria, near Presa de Cuevas Blancas, pine wood, ~1600 m, 2 January 1999 (leg. Paulus). Both specimens will be deposited in the Natural History Museum of Vienna.

Etymology: The species name is chosen to honour the memory of K. Thaler, a distinguished and influential Austrian arachnologist, who passed away on 11 July 2005.

Diagnosis: The general habitus of this distinctive species (Fig. 1) is characterised by the light, constricted median band on the brownish opisthosoma. The males can easily be recognised by the form of the tegular apophysis (Figs. 2–4). The female epigynum is similar to those of *A. artenarensis* and *A. palmae* Schmidt, 1982, but *A. thaleri* can be distinguished by the gap between the left and right anterior epigynal margins (Figs. 6–7). Differences also exist in the copulatory ducts, which are curved in *A. artenarensis* but almost straight in *A. thaleri* (Fig. 8).

Description: *Male* (holotype): Carapace 4.7 mm long, 3.3 mm wide, reddish brown; light median band with constriction at $\frac{1}{3}$ of its length, lateral bands not clearly visible. Sternum brownish, medially lighter. Opisthosoma reddish brown with large, light median band with



Figs. 1–5: *Alopecosa thaleri*, new species, male holotype. 1 Habitus, dorsal view; 2 Left palp, ventral view; 3 Tegular apophysis, ventral view; 4 Left palp, retrolateral view; 5 Terminal part of left bulbus, ventral view. Abbreviations: a=apophysis; bp=basal, drop-shaped part of tegular apophysis; ci=cuneiform indentation; ds=dorsal sidewall; e=embolus; et=elongated tip of converged sidewalls; p=tooth-like process; sm=sclerotised markings; vs=ventral sidewall. Scale lines=2.0 mm (1), 0.4 mm (2, 4), 0.1 mm (3, 5).

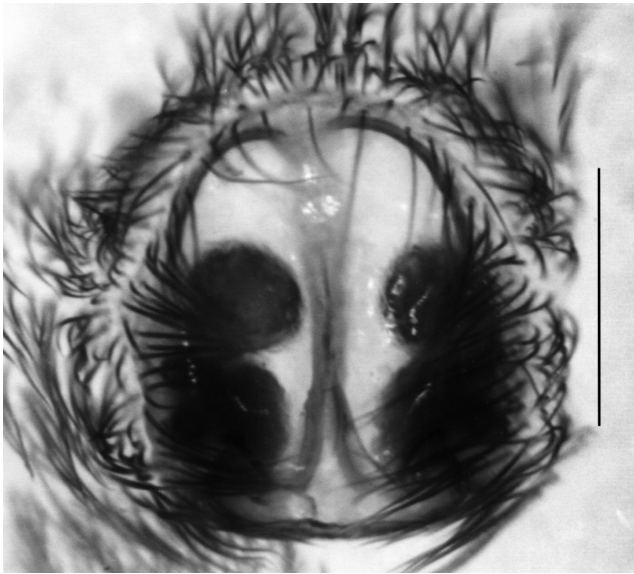


Fig. 6: *Alopecosa thaleri*, new species, female paratype, epigynum, ventral view. Scale line=0.5 mm.

dark cardiac mark and adjacent triangular marks (Fig. 1); ventrally light brown with dense, short dark hairs. Legs reddish brown, Ti, Mt and Ta of legs I–II darker. Dense scopulae on Ta I–IV and Mt I–II. Leg measurements, see Table 1. Chelicerae dark red, nearly black, with three anterior and two posterior teeth. Femur, patella and tibia of palp light brown, cymbium darker with short, light hairs. Spinnerets light brown. Palp: tegular apophysis (Figs. 2–4) consists of two parts: a simple basal part and a distal part overlapping the basal part. The basal part has a simple, drop-shaped form (Fig. 4). The distal part possesses a cuneiform indentation, the sidewalls of which have several sclerotised margins (Fig. 3). The sclerotised margin of the ventral sidewall has a conspicuous pectinate form. Furthermore, at its base the ventral sidewall has a sclerotised tooth-like process pointing towards the palpal tibia. The sidewalls converge retrolaterally to an elongated tip that partially overlaps the basal part of the apophysis and

	Tr	Fe	Pa	Ti	Mt	Ta
Male						
I	0.55	3.40	1.75	2.80	3.15	2.10
II	0.55	3.30	1.50	2.50	2.95	1.85
III	0.50	3.20	1.40	2.00	2.80	1.70
IV	0.70	4.00	1.60	3.15	4.40	2.25
Female						
I	0.80	3.85	2.05	2.95	2.85	1.95
II	0.70	3.60	1.80	2.45	2.60	1.70
III	0.65	3.30	1.70	2.15	2.75	1.70
IV	0.80	4.55	1.95	3.25	4.55	2.10

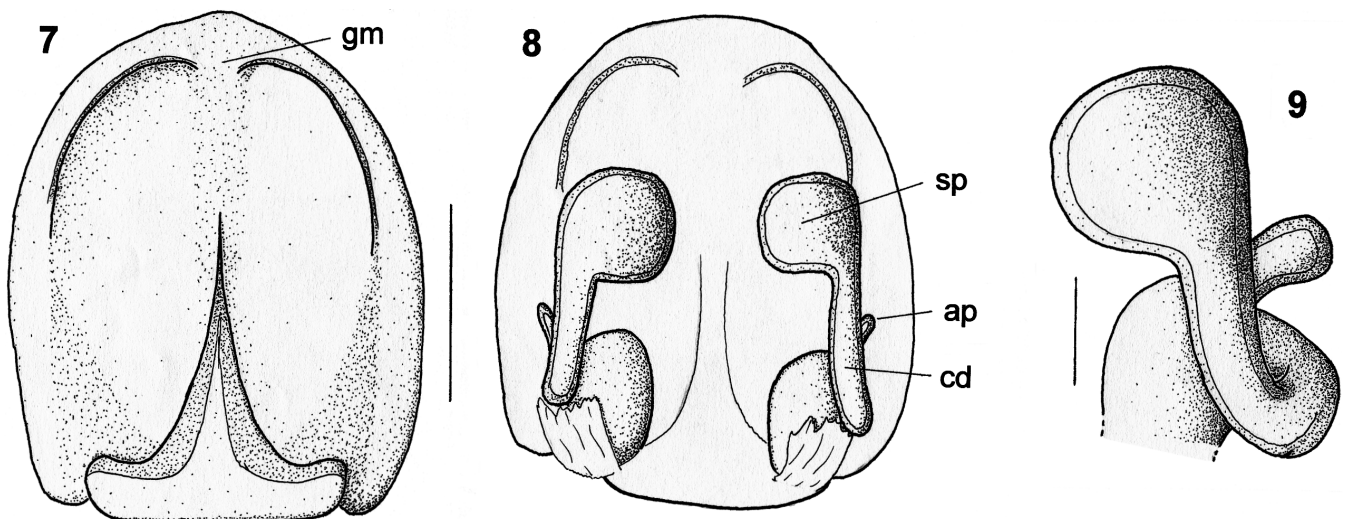
Table 1: *Alopecosa thaleri*, leg measurements of male holotype and female paratype.

points towards the palpal tibia. The terminal part of the bulbus (Fig. 5) has characteristic sclerotised markings. The embolus is curved with a broad base, which is mostly unsclerotised. The terminal part of the bulbus has one apophysis, which covers the tip of the embolus (Fig. 5).

Female (paratype): Carapace 5.4 mm long, 4 mm wide, brown; light median band with constriction at $\frac{1}{3}$ of its length, lateral bands not clearly visible. Sternum brownish with lighter median area. Opisthosoma brown with lighter median area with cardiac mark. Triangular marks not clearly visible. Ventrally light brown with dense, short dark hairs. Spinnerets light brown. Legs light brown, becoming darker towards the tips of the legs. Dense scopulae on Ta I–IV and Mt I–II. Leg measurements, see Table 1. Chelicerae dark red, nearly black, with three anterior and two posterior teeth. Epigynum with inverted T-shaped median septum and large transverse pockets (Figs. 6–7). Anterior epigynal margin with median gap (Figs. 6–7). Copulatory ducts straight with spherical spermathecae (Figs. 8–9); basal part of copulatory duct ventrally with a laterally directed appendix (Figs. 8–9).

Other material examined: None.

Ecology: A male and a female were found in montane pine-woods ranging from 1100–1600 m above sea level,



Figs. 7–9: *Alopecosa thaleri*, new species, female paratype. 7 Epigynum, ventral view; 8 Vulva, dorsal view; 9 Detail of vulva, diagonally retrolateral dorsal view. Abbreviations: ap=appendix of basal part of copulatory duct; cd=copulatory duct; gm=gap between left and right epigynal margins; sp=spermatheca. Scale lines=0.4 mm (7–8), 0.1 mm (9).

in January and February. Both individuals were running on the ground.

Relationships: The new species was compared with all known *Alopecosa* species from Gran Canaria, the Palaearctic, the Mediterranean, Africa and Europe. The male of the new species, however, showed no similarity to the compared species. The tegular apophysis is uniquely formed and is unlike that of any other species of the genus *Alopecosa*. Females are close to *A. artenarensis* and *A. palmae*. One diagnostic character is the median gap in the anterior epigynal margin, and another is the appendix on the spermathecae. Furthermore, *A. artenarensis* and *A. palmae* are blackish in their overall body coloration, while *A. thaleri* is clearly brownish. In addition, *A. thaleri* is smaller than the other two species.

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