

A NEW SUBTERRANEAN SPECIES OF *SYMPLOCE* HEBARD
FROM GRAN CANARIA (CANARY ISLANDS)
(Blattaria, Blattellidae)

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INTRODUCTION

The genus *Symploce* includes a total of 91 species distributed throughout the intertropical zone (Roth, 1984; 1985a; 1985b; 1985c; 1985d; 1986; 1987a; 1987b). Only *S. pallens* (Stephens) have a wide distribution, surely dispersed by man, but the remaining species are more localized, many of them being insular endemics. Two species occur in hypogean habitats: *S. miyakoensis* Asahina living in caves of Miyako-jima Islands (Japón) (Asahina, 1974) and *S. strinatii* Roth, found in a cave of Malasya (Roth, 1988). A new hypogean species of this genus found in the underground environment of Gran Canaria is described herein.

***Symploce micropthalma* n. sp.**

TYPE MATERIAL. Holotype: ♂ Pinar de Tirajana, Gran Canaria, Canary Islands, 1200 m snm., 26-July-1989, A. L. Medina leg. Allotype: ♀ Pinar de Tirajana, Gran Canaria, Canary Islands, 1200 m snm, 26-July-1989, A. L. Medina leg. Paratypes: 1 ♂ Pinar de Tirajana, Gran Canaria, Canary Islands, 1200 m snm. 26-July-1989, A. L. Medina leg.; 1 ♀ Andén Verde, Gran Canaria, Canary Islands, 200 m snm, 28-Dec-1988, M. Valido; 1 nymph Andén Verde, Gran Canaria, Canary Islands, 200 m snm, 1200 m snm, 21-August-1990, C. G. Campos leg.

All the type material is deposited in the Department of Animal Biology (Zoology), La Laguna University (Canary Islands).

DESCRIPTION. Sexual dimorphism marked.

Male. Head trigonal, 1.3 longer than wide. Eyes greatly reduced. Ocelli slightly visible. Tegmen greatly reduced, only reaching the first abdominal tergum. Hind wings absent. The tegmina overlap in the distal margin and show a proximal triangle (fig. 1a). First abdominal tergum with a deep fossa distally divided by a central setal tuft (fig.

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2). Seventh abdominal tergite with a deep glandular fossa weakly divided by a posterior medial setal tuft; the pit opening is in the anterior margin and the fossa extend proximally under the sixth tergum. Short lateral plates in T7 (fig. 3). Lateral plates of T9 elongated, right one larger with a fringe of spinules along its ventral margin; apical margins rounded (fig. 4). Supraanal plate symmetrical with posterior margin strongly concave. Paraprocts dissimilar, right one rounded with 4 rows of spinules on exterior margin; left one more elongated and without spinules (fig. 5). Subgenital plate asymmetrical with irregular posterior margin and two elongated cylindrical styles, right one larger, and 3 spinelike processes on the inner right margin (fig. 6). Cerci consisting of 11 segments. Genital phallomere L3 with width and cylindrical basal portion, short and strongly curved neck, hook portion gradually thin distally (fig. 7). Anteroventral margin of front femur Type B3. Pulvilli absent. Arolia present. General coloration yellowish brown. Last abdominal terga and styles weakly darker.

Measurements (mm). Body length, 13.7; pronotum length \times width, 3.7×4.0 ; tegmen length, 3.8; abdomen width, 4.0; head length \times width, 2.6×2.0 ; metanotum width, 4.2; front femur length (F1), 2.7; medial femur length (F2), 3.5; posterior femur length (F3), 4.2; Front tibia length (Ti1), 2.8; Ti2, 3.4; Ti3, 5.0; front first tarso length (To1), 1.3; To2, 2.2; To3, 3.0.

Female. Body larger and wider than males. Tegmina more rounded and reduced, extend only to front part of the metanotum do not overlap them. Supraanal plate trigonal.

Measurements (mm). Body length, 17.2; pronotum length \times width, 5×5.9 ; tegmen length, 3.3; abdomen width, 6.0; head length \times width, 3.5×2.7 ; metanoto width, 6.1; F1, 3.9; F2, 4.5; F3, 5.5; Ti1, 2.3; Ti2, 4.6; Ti3, 7.0; To1, 1.6, To2, 2.9; To3, 4.5.

DERIVATIO NOMINIS. The specific name shows up its reduced eyes.

SYSTEMATICAL REMARKS. *Symploce microphthalmalma* may fall into the *kenyensis*-species group, subgroup *a* (Roth, comm. pers.) showing certain similarities with these species. Genital phallomere L3 is similar to that of *somaliensis* Roth, *marshallae* Kumar and *kenyensis* Chopard; styles resemble *marshallae* though they are very alike to *incuriosa* Roth from the *pallens*-species group; *S. divisa* have also a

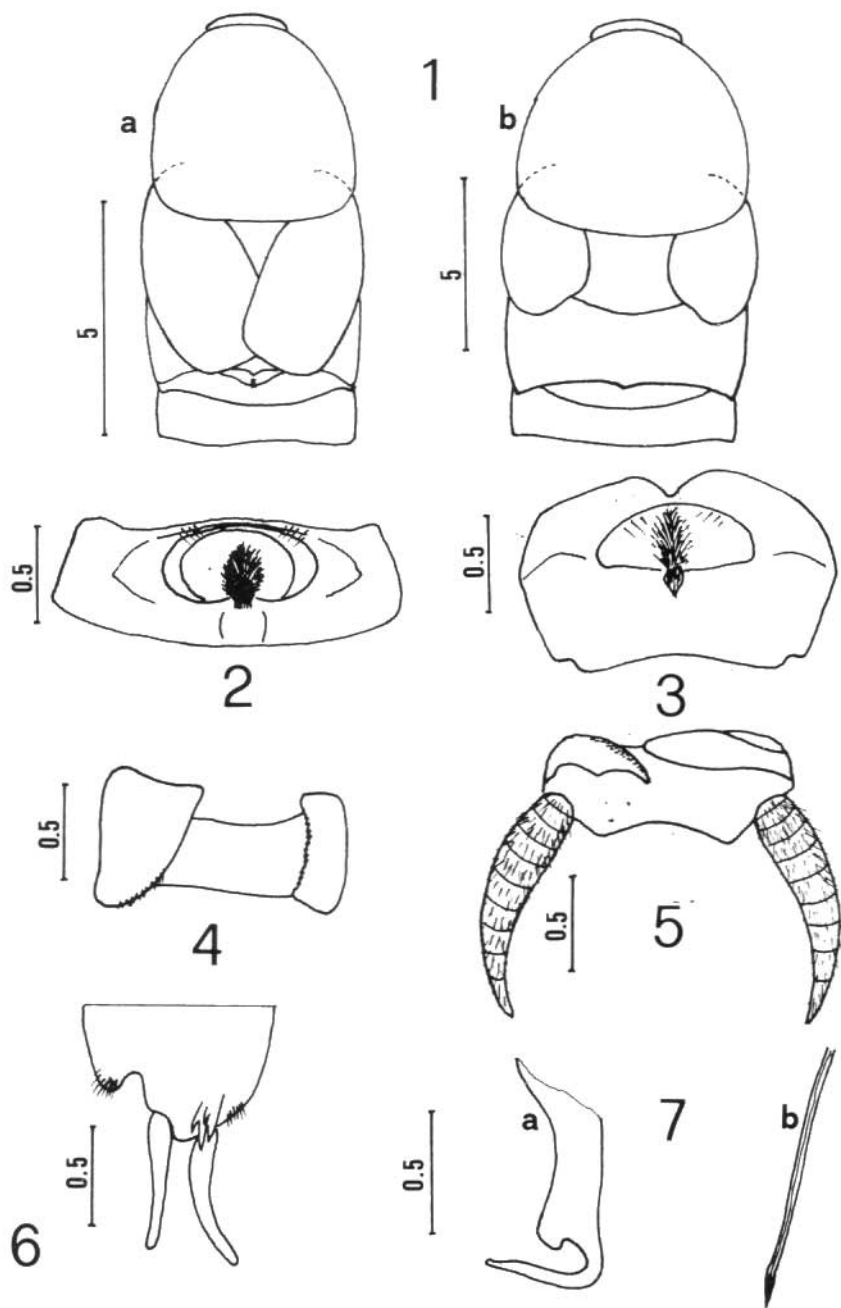


Fig. 1-7 — Pronotum, mesonotum, metanotum, 1st and 2nd abdominal tergites, and elitra of a male (1a), Idem of female (1b); first abdominal tergum (male) (2); seventh abdominal tergum (male) (3); abdominal tergite 9 and lateral plates (ventral). The left one is broken (4); paraprocts and supraanal plate (5); subgenital plate (plate) (6); genital phallomere L3 (7).

tergal gland on T1 y T7; supraanal plate is similar to that of *somaliensis*, though the posterior concavity is more pronounced in *microphthalma*.

The dissimilarity between the left and right lateral plates of 79 is a common feature in the genus *Episymploce* Bey-Bienko (Roth, 1986), but it appears also in *Symploce microphthalma* n. sp. and in some other species like *S. jarivenensis* Roth.

COMMENTS. *Symploce microphthalma* is the first record of this genus in the Canary Islands. Only *S. pallens* is found on the North Atlantic Islands, in the Cape Verde archipelago. The closest relatives to *microphthalma* probably are *kenyensis*, *somaliensis*, *divisa* and *marshallae*, living in the ecuatorial African zone, but the genus is not represented in North Africa (fig. 8).

A similar situation is observed with the pseudoscorpions *Tyrannochthonius superstes* Mahnert, a troglobite occurring in caves of Tenerife: it is the only species to be found not only in the Canarias but in the whole Palearctic, being the nearest species in the Ethiopic region. According to Mahnert (1986) this genus represents an ancient fauna that extended to North Africa.

Just like it happens with other troglobitic arthropods from the Canaries (Martin et al., 1989) and the Galapagos Islands (Peck, 1991), *S. microphthalma* has no close relatives living on the surface. Therefore it has probably evolved in situ forming an endemic and relict species.

This new species can be considered as the only troglomorphic one in the genus: it is microphthalmous, slightly pigmented, with greatly reduced tegmina and absence of pulvilli and hind wings. Other known hypogean species must rather been considered as ambimorphic or epigeomorphic species, in the sense given by Christiansen (1962) and Barr & Holsinger (1985).

S. microphthalma lives on the "superficial underground environment" or "mesocavernous shallow stratum" (MSS) in the island of Gran Canaria, although it can be rarely found under stones in humid zones of the island. However, in the drier zones like the southern pine forests it is probably linked exclusively to the MSS, together with other hypogean arthropods living in the underground of this island (Medina, 1991).

Another genus of Blattellidae colonizing the underground in the Canary Islands is *Loboptera* Brunner, actually represented throu-

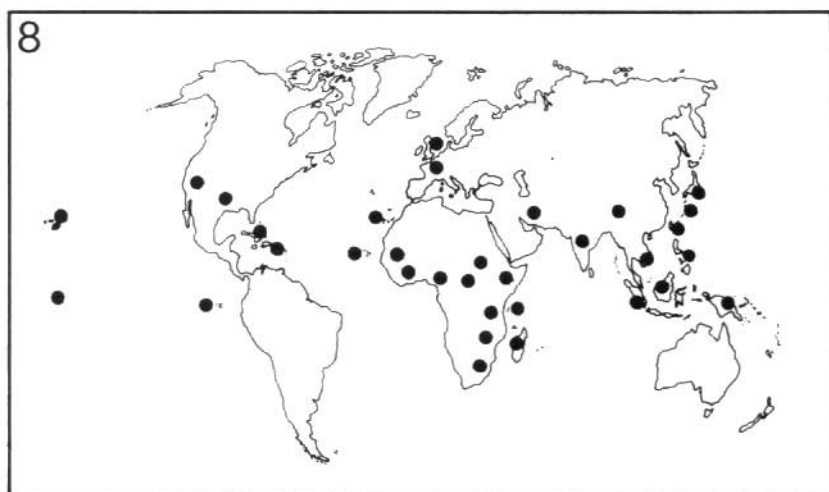


Fig. 8 — Distribution of the genus *Symploce* (according Roth, 1987).

ghout the southwestern Palearctic (Bohn, 1991a; 1991b). This genus includes seven species on the archipelago, six of which have diverse degrees of dependence with respect to the underground environment (Izquierdo et al., 1990). These species are distributed over the islands of La Palma, El Hierro and Tenerife, but they have never been found on the other ones. *Symploce microphthalmalma* has occupied a similar ecological niche to that of *Loboptera* species in the MSS of Gran Canaria. Probably, this occupation was before the one of *Loboptera* since relative species to *S. microphthalmalma* have virtually extincted in the Canarian archipelago, Northern Africa and Mediterranean zone, while the genus *Loboptera* is still notably represented over these regions.

ACKNOWLEDGEMENTS. Special thanks to L.M. Roth who helped us in placing the genus and corrected the initial description. To P. Oromí for his comments and corrections to the text. To M. Valido and C.G. Campos for his help in collecting specimens.

SUMMARY

A new species of the genus *Symploce* from the underground environment of the Canary Islands is described. Its occupation of the Mesocavernous Shallow Stratum (MSS) in the island of Gran Canaria and its relationships with the African relatives are discussed.

RESUMEN

Se describe una nueva especie del género *Symptloce* descubierta en el medio subterráneo de las Islas Canarias. Se discute brevemente la relación filética con sus parientes africanos y la ocupación del Medio Subterráneo Superficial (MSS) en la isla de Gran Canaria.

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