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# A new *Mysmena* (Araneae: Mysmenidae) from Spain

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## Introduction

During a collecting trip made to the Sierra de Cazorla y Segura in Andalusia, southern Spain, in September 1980, a single female of a species of *Mysmena* was taken. This specimen showed an extremely pronounced abdominal "hump" and did not correspond to any of the known species. A further visit was made to the site in 1982. Seven more females and four males were taken as well as several juveniles. Both sexes of this new species, which is close to *M. leucoplagiata* Simon, 1879, are here described.

### *Mysmena gibbosa* sp.n. (Figs. 1-8)

*Male*

*Total length:* 1.06-1.15 mm. *Carapace:* Length 0.45-0.47 mm, width 0.38-0.40 mm. Yellow-brown with a dark border and dusky markings, particularly in cephalic region. Cephalic region raised. Some long forwardly-directed hairs in ocular area and in an apical dorsal line. *Eyes:* Eight subequal eyes. Anterior row recurved, posterior row straight. AM dark and overhanging clypeus, separated by their diameter. AL and PL subcontiguous. *Chelicerae:* Small, reaching to little more than half length of maxillae. Anterior margin with 2 teeth, posterior margin with no teeth. *Sternum* (Fig. 3): Heart-shaped and slightly rugose. Mid brown with a pale median stripe and two antero-lateral pale patches. *Legs:* Formula I II IV III. Yellow-brown suffused with dark brown distally, and ventrally on tibiae I and II. A small "femoral organ" present on ventral side of femora I and II. A single spine present (0.65) antero-laterally on metatarsus I, not modified as in *M. leucoplagiata*. *Abdomen* (Fig. 5): With a dorsal protuberance similar to that of *Cyclosa conica* (Pallas). The size of this protuberance is somewhat variable between specimens. Dark grey with many irregular paler patches of various sizes. Dorsally 4 or 6 white spots. Some specimens also have a pair of white spots ventrally, anterior to spinners. Posteriorly, a white area from spinners to apex of dorsal protuberance. The central part of this is less heavily pigmented with white. Sparsely covered with short fine hairs. *Male palp* (Figs. 1-2): Bulb ovoid. Embolus long and coiled round bulb. Cymbium modified distally to form a "cymbial conductor". This comprises a projection of the cymbium which forms a groove, protected by several spines, in which lies the tip of the embolus. Tibia cup-shaped. Cymbial thorn or "Kegeldorn" (Kraus, 1967) present.

*Female*

*Total length:* 1.05-1.25 mm. *Carapace:* Length 0.5-0.55 mm, width 0.40-0.42 mm. Cephalic region not raised, otherwise as in male. *Eyes:* As in male. *Chelicerae:* Small, reaching to little more than half length of maxillae. Anterior margin with 2 teeth, posterior margin with 1 tooth. *Sternum:* As in male. *Legs:* As in male. "Femoral organ" (Fig. 4) large on femur I, less well developed on femur II. *Abdomen* (Fig. 7): Similar to male but shows considerable variation in degree of elevation. Dark grey with many irregular paler patches, but lacking dorsal white spots of male. These white spots present in all juveniles examined but are probably lost in females at the last moult. Posterior white patch from apex of dorsal hump to spinners present as in male. *Epigyne* (Fig. 6): A short curved finger-like scape, unsclerotized and rather variable in length, with a small ventral notch or pocket in its end. *Vulva* (Fig. 6): Very difficult to interpret due to the minute size and lack of sclerotization of much of the structure. Similar to *M. leucoplagiata* although the lumen of the receptaculum is relatively simple, unlike the complex helical arrangement of that species. Between the two sclerotized receptacula lie a pair of rather indeterminate thin-walled sacs.

*Material examined*

Holotype ♂, paratypes 3 ♂ 8 ♀. Also 31 juveniles of both sexes. All from Sierra de Cazorla, Prov. Jaen, Spain, 37° 54′ N., 3° 00′ W., (Grid ref. WG 005947). Swept from long vegetation at the base of a cliff, leg. R.S., 1 ♂ 17 September 1980, remainder 13 September 1982. Holotype ♂ and 1 paratype ♀ deposited in British Museum (Natural History) (reg. nos. BMNH 1985.8.22.1 & 2), remainder in author's collection.

*Etymology*

The specific epithet refers to the "humped" shape of the abdomen.

*Diagnosis*

Similar to *M. leucoplagiata*. The male is distinguished by the structure of the palp, the shape of the abdomen, the lack of a modified clasping spur and the presence of femoral glands on legs I and II. The female is distinguished by the structure of the vulva and the shape of the abdomen.

## Taxonomic affinities

During the past 25 years there has been a considerable amount of work devoted to the Symphytognathidae/Mysmenidae, e.g. Gertsch, 1960; Kraus, 1967; Brignoli, 1968, 1970, 1980; Thaler, 1975; Forster & Platnick, 1977; Wunderlich, 1980; Baert & Maelfait, 1983. The problems of this polyphyletic group have been increased by successive generic synonymisations and revalidations and the erection of new genera on very dubious characters.

In his partial review of the Mysmenidae, Brignoli (1980) reduced the genus *Mysmena* to 2 species, the type-species *M. leucoplagiata* and the West Indian *M. calypso* Gertsch, 1960. All other species were transferred to the newly created genus *Mysmenella* or the revalidated genera *Calodipoena* Gertsch & Davis, 1936

and *Microdipoena* Banks, 1895. The true taxonomic position of the Algerian *Calodipoena conica* (Simon, 1895) with its unusual eye arrangement and its lack of a clasping spur must remain in some doubt.

*Mysmena gibbosa* sp.n. is close to *M. leucoplagiata* especially in the structure of the male palp, although it has proved impossible to locate a structure resembling the "Zahnspitze" (Kraus, 1967) of the latter species. This may be due to the minute size and the transparency of the palp. According to Thaler (1975) and Wunderlich (1980) the "femoral organ" is found only in the female of *Mysmena*, and then only on femur I. However, in *M. gibbosa* it is present on femora I and II of both male and female, albeit in a reduced form in the male. The presence of these organs in the male has previously been recorded only in *Trogloneta* species (Wunderlich, 1980). It is considered here that neither this character, nor the presence of an abdominal hump (which is not found in other *Mysmena* species (Baert & Maelfait, 1983)), requires the erection of a new genus.

## Occurrence

All specimens were taken by beating ground vegetation near the base of a waterfall 1 km south of Cazorla (Grid ref. WG 005947). The spiders were most common amongst Maidenhair fern, *Adiantum capillus-veneris* L., growing in a deep cleft at the base of a cliff, but were also present in small numbers in clumps of long grass growing nearby. The area in which the spiders were found supported a relatively lush ground flora due to a constant water supply and the high north-facing cliff giving shade for much of the day, even during the summer months.

According to Brignoli (1980), the only European congener of this new species would be *M. leucoplagiata* which has been reported from Mediterranean France, Corsica and Italy, under stones and amongst detritus in oak and chestnut woods.

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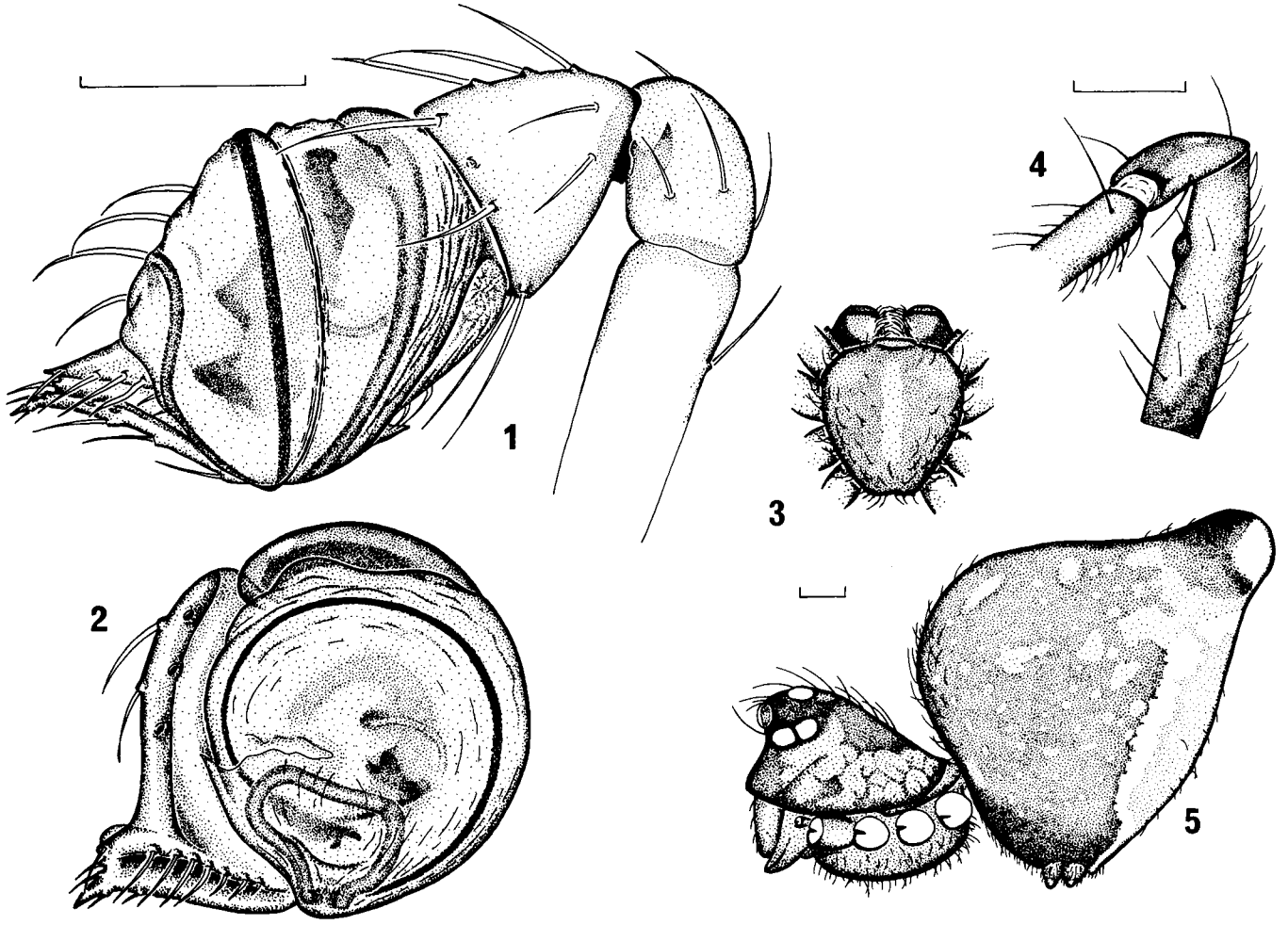
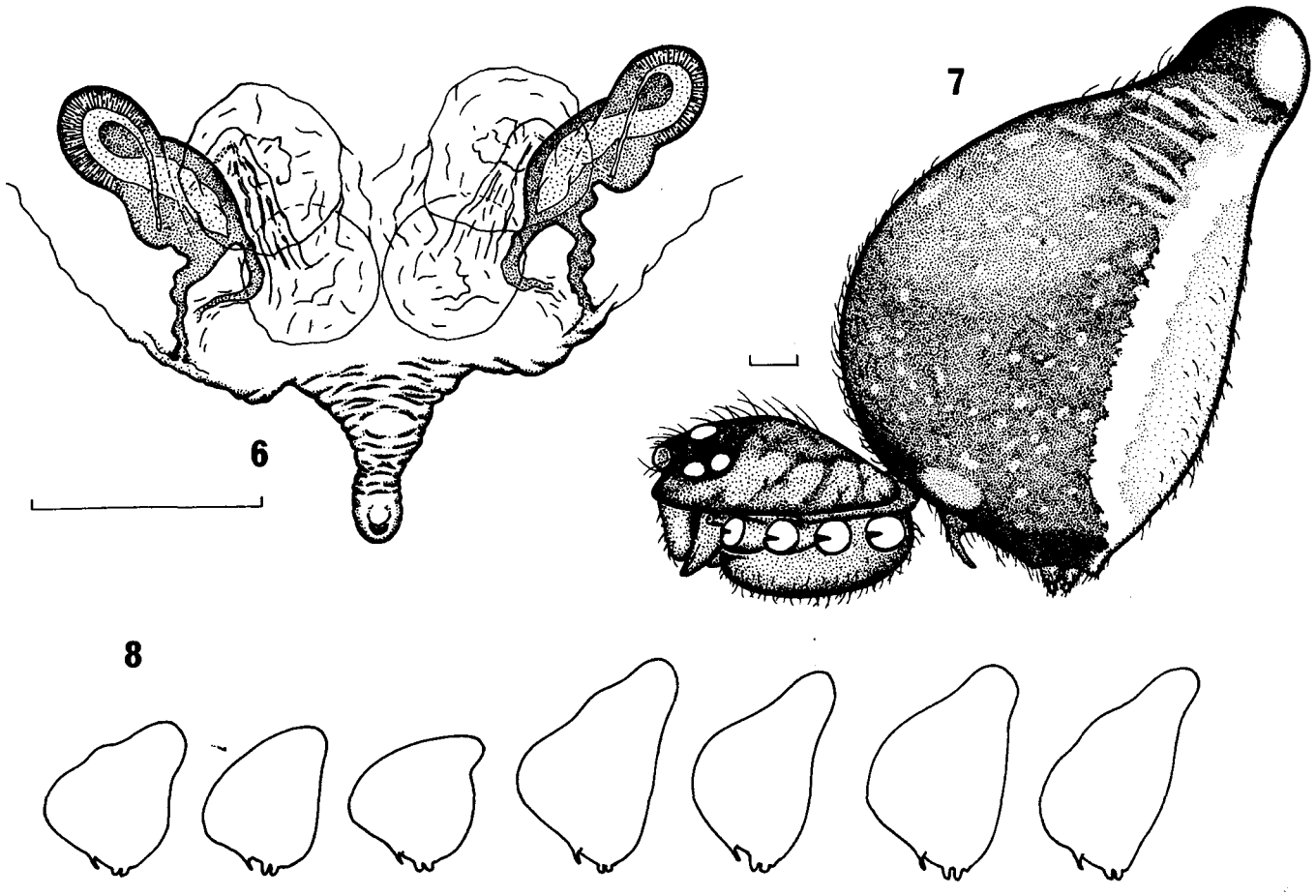



Figs. 1-5: *Mysmena gibbosa* sp.n. **1** Male left palp, lateral view; **2** Ditto, distal view; **3** Sternum; **4** Female left femur I with "femoral organ"; **5** Male, lateral view. Scale lines = 0.1 mm.




Figs. 6-8: *Mysmena gibbosa* sp.n. **6** Epigyne and vulva, hairs omitted; **7** Female, lateral view; **8** Variation in shape of female abdomen. Scale lines = 0.1 mm.

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