

ON THE MORPHOLOGY AND SYSTEMATICAL POSITION OF MYSMENA LEUCOPLAGIATA (SIMON, 1879) (ARANEAE: SYMPHYTOGNATHIDAE)

By

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A redescription based on the hitherto unpublished morphological features and information on the new Central European locality of *Mysmena leucoplagiata* (SIMON, 1879) are given.

Mysmena leucoplagiata (SIMON, 1879)

Syn.: *Theridion leucoplagiatum* SIMON, 1879: Bull. Soc. Zool. France, 4: 258.

Dipoena leucoplagiata (SIMON, 1881): Arachnides de France, 5: 117, Pl. XXVI, Fig. 2.

Mysmena leucoplagiata (SIMON, 1894): Histoire naturelle des araignées, 1: 588, Fig. 500.

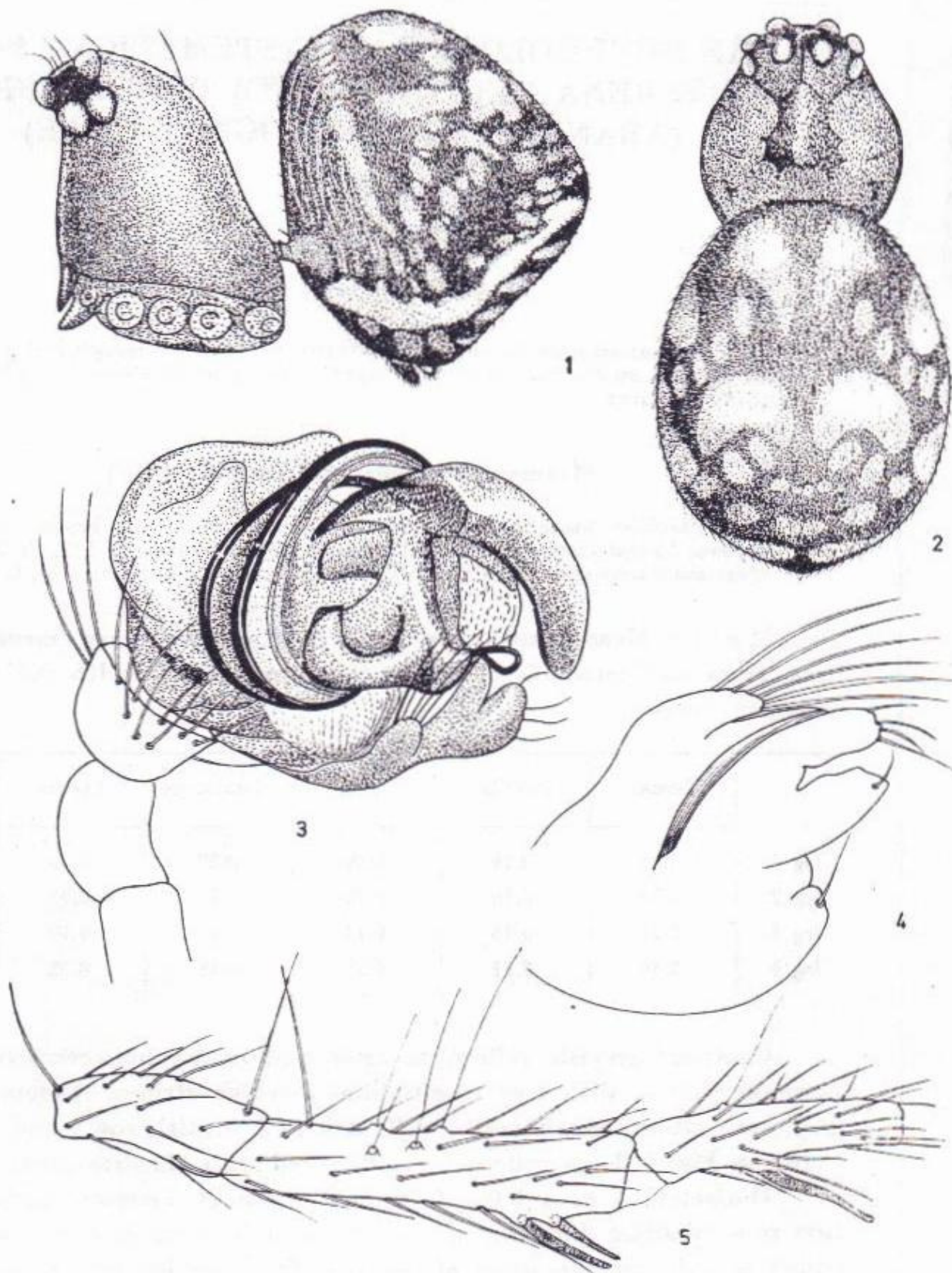
Male: Measurements (in mm): length of carapace (measured at its base, from chelicerae) 0.42, height 0.40, maximum width 0.45; length of abdomen 0.55.

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
leg 1	0.38	0.16	0.30	0.22	0.26	1.32
leg 2	0.19	0.16	0.25	0.19	0.21	1.00
leg 3	0.25	0.14	0.14	0.15	0.19	0.87
leg 4	0.34	0.11	0.21	0.18	0.22	1.06

Carapace greyish yellow, margins and region between eyes blackish. Sternum yellow, with two longitudinal blackish stripes. Abdomen greenish grey, its pattern, consisting of yellowish and whitish spots and a stripe, as shown in Fig. 1. Legs yellowish grey, ringed with blackish grey.

Diameter of eyes 0.05-0.06 mm; distance between median eyes of first row equalling diameter of one eye, that between posterior median ones equalling only half diameter of one eye. Distance between posterior lateral eyes and posterior median ones equalling 0.75 eye-diameter of one eye.

Configuration of chelicerae as in female (Fig. 7), that is, inner margin of chelicera finely dentate, exterior margin of basal joint with 4 teeth of various size, inner margin with one sharp tooth.



Figs. 1–5. *Mysmena leucoplagiata* (SIM.). 1 = ♂, lateral view; 2 = ♀, dorsal view; 3 = ♂ palp, lateral view; 4 = cymbium of ♂ palp, from the external side; 5 = patella, tibia and metatarsus, in lateral view, of ♂ leg 1

Position of embolus and conductor of palpus (Fig. 3) highly characteristic. Cymbium (Fig. 4) comparatively intricate, quinquelobate; apices of lobes 1 and 3 with several bristles, of lobes 4 and 5 with one bristle each; apart of lobe 2 covered by lobe 3 in Fig. 3, its apex without bristle.

Four bothriotrichae, arranged in a quadrangle, present on tibia of leg 1; proximals shorter than distals (Fig. 5). Ventrally with two slightly arcuate thick appendages. Metatarsus with one bothriotricha in proximal half of joint dorsally, and with one long, thick, doubly arcuate appendage nearly in middle ventrally. Large claw of leg 1, in distal half of claw, with an extremely small, hardly discernible inner tooth present; small claw rectangularly arcuate, before angle with a small but well visible ventral tooth.

Female. Measurements (in mm): length of carapace 0.44, height 0.25, maximum width 0.38, length of abdomen 0.69.

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
leg 1	0.34	0.15	0.28	0.22	0.25	1.24
leg 2	0.32	0.15	0.22	0.16	0.25	1.10
leg 3	0.22	0.11	0.16	0.11	0.19	0.79
leg 4	0.32	0.13	0.25	0.16	0.19	1.05

Colour as in male. Pattern of carapace and abdomen as shown in Fig. 2; any significant difference contrary to the pattern of the male appearing only in a blackish median spot on carapace.

Diameter of anterior median eyes 0.03 mm, of lateral eyes and posterior median ones 0.04 mm. Distance between anterior median eyes 0.06 mm, that between posterior median ones only 0.03 mm. Distance between posterior lateral eyes and posterior median ones 0.03 mm.

Claw of chelicerae and apex of basal joint as shown in Fig. 7.

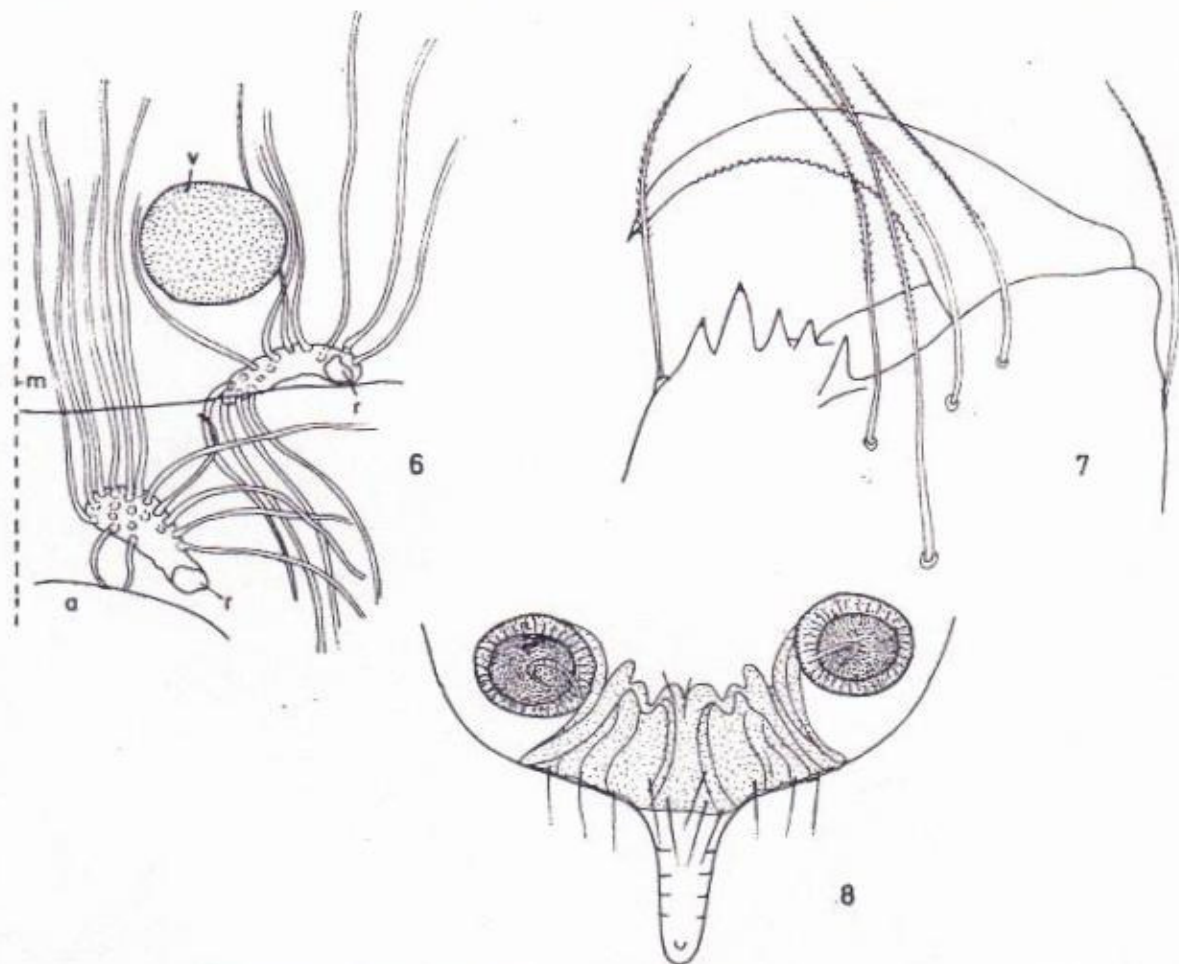
Vulva on each side with an almost spherical receptaculum (Fig. 8); canal system complex.

Respiratory organ with 2 pairs of lateral tracheae (Fig. 6); openings leading into curved, spacious sacs emitting tracheae. Anterior tracheae decurrent towards base and end of abdomen, some approaching those advancing anteriorad from posterior sac. From posterior sac majority of tracheae advancing in a heavy bundle anteriorad between vulval receptacles, with less in number decurrent towards abdominal sides and spinneret glands. In basic configuration, resembling those of *M. guttata* (BANKS, 1895) and *M. incredula* (GERTSCH et DAVIS, 1936).

Concerning its morphological features, *M. leucoplagiata* stands very near *M. guttata*; on several authors, considered *M. guttata* a junior synonym of

M. leucoplagiata. H. W. LEVI, however, clearly distinguished between the two rather similar species (LEVI, 1956: 5, 8—9). Even their ranges are similar, and they might be regarded as vicariant species.

The distribution of *M. leucoplagiata* was known from France. Though J. BALOGH found the species in a moits habitat along a brook near Jósvald, Hungary, on 16 June, 1934. Together with this single male he also collected



Figs. 6—8. *Mysmena leucoplagiata* (SIM.). 6 = one half of ♀ respiratory organ slightly schematically: m = imaginary median line of abdomen, v = receptaculum of vulva, a = base of anterior spinning papilla, r = respiratory openings; 7 = distal end and claw of basal joint of ♀ chelicera; 8 = ♀ vulva and outlines of epigyne

some *Theridiosoma gemmosum* (L. KOCH) specimens. Since then, nobody succeeded to capture specimens in Hungary or indeed in Central Europe, and even BALOGH's datum (1938: 64) was somehow forgotten, because no reference was ever made to it even in literature abroad, with France remaining as its single known area of occurrence. Its recent rediscovery in Hungary is rather important, because it represents a further proof of the northernmost and also continental range of the species, besides the gain in new ecological information.

The new locality data are as follows:

1. Tilalmas erdő, Újszentmargita. Several young specimens were collected from the litter layer of a *Galatello-Quercetum roboris festucetosum sulca-*

tae stand (in the course of cenological investigations within the frame of the IBP, 1969–70), but owing to their young stage, their identification as to species at that time was uncertain. Mrs. L. SZOMBATHELYI succeeded to capture a fully developed male specimen in the litter of the shrubby margin of the same forest on 27 July, 1972.

2. Mts. Pilis and the Mts. Szentendre-Visegrád.

a. Bubánat völgye, Kerek-tó, from a *Caricetum elatae* stand. Sifting the detritus of tussocks, locally in water, I collected 2 females and a young specimen on 30 June, 1972. On an earlier occasion (18 April), a young female was found in the marginal detritus of the lakeside *Phragmitetum communis* stand;

b. Miklósdeák-völgy, 18 April, 1972. A young male exemplar was collected on the wet *Alopecurus* meadow along a small stream.

According to the above data, in Hungary, the species attains its sexual maturity in June–July, inhabiting moist or wet lakeside or fluviatile habitats. It is probably not even rare, but escapes the attention of collectors owing to its minute size.

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