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Two new *Holoparasitus* species from Italy and Poland
(Acari: Gamasida: Pergamasidae)

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ABSTRACT. A new mite species from Sicily, *Holoparasitus (Holoparasitus) globosus* (*Pergamasidae*) is described. New name *H. (H.) ampullaris* is given to specimens described by MICHERDZIŃSKI (1969) and WITALIŃSKI (1972) as *H. excisus* (BERLESE, 1906). Lectotype and syntypes for *H. excisus* are designated. *H. stramenti* KARG, 1971 and *H. bilaminatus* WITALIŃSKI, 1972 are synonymized with *H. excisus* (BERLESE, 1906).

Holoparasitus (Holoparasitus) globosus sp. n.

DIAGNOSIS

Idiosoma very broad, in female nearly circular in outline. Openings of postcoxal glands in cuticular foveolae.

Female: Endogynium with many sharp dents at the margin; two largest dents located at the posterior margin and curved more or less abaxially, usually facing bifid dent set medially at the anterior margin of endogynial sac.

Male: Fixed digit of chelicera with characteristic elevation on external (dorsal) margin.

DESCRIPTION

Female: Idiosoma (Fig. 1) rounded and highly convex; cuticle well sclerotized, brown. Dimensions of idiosoma: 575-620 x 750-780 μm (l/w factor 1.23-1.33, N=7). Setae on holodorsal shields short (ca. 8-11 μm), on opisthogaster 28-30 μm , reaching 55-60 μm on sternum.

Ventral side: Accreted presternal plates form a smooth ribbon-shaped plate, narrowing in the central region (Fig. 2a). Lateral presternal platelets partially united with or at least adhering to the ends of presternal plate. Anterior margin of sternal plate concave, usually with a pair of incisions located between bases of first pair of sternal setae (Fig. 2b); margin of sternum facing coxae I thickened. Reticulation of sternal plate with two prominent lines: the first, V-shaped and running through st1 pores delimits the more pigmented anterior region of sternum. Behind the second line, running through st2 pores, reticulation of sternum very weakly visible.

Genital region: Epigynial plate (Fig. 2c) heptagonal, its anterior margin trispinate with a middle spine regularly pointed, flanked by sharp and arcuate lateral spines. Thickenings under central spine well pronounced, with lateral protrusions slightly extending beyond epigynium margin. Paragynia (Fig. 2d) with elliptical thickenings facing coxae III and not extending beyond paragynium edge. Metagynial thickenings slightly arcuate. Through paragynial pores run more or less pronounced arcuate thickenings. Paragynial protrusions "locking" epigynial plate with rounded margin. Endogynium (Fig. 2e) cup-shaped, circular in outline and large: its diameter exceeds the distance to coxa IV. Sac margin richly armed with sharp and relatively long teeth; of them, two posterior longer and curved abaxially. Their tips usually face tips of bifid dent which is set medially on the anterior margin of endogynial sac. Posterior part of endogynial sac covered by delicate endogynial plate (Figs 2e,f).

Postgenital region: Gland pores behind coxa IV located in foveolar thickenings of the cuticle.

Gnathosoma: Tectum (Fig. 2g) trispinate, with central prong long and narrow at the end. Corniculi conical. Deutosternum bears 9-11 (holotype: 10) rows of weakly visible hypognathal denticles. 3-4 posteriormost rows usually represented by several (1-3) lateral denticles only. Gnathosomal setae pilose except external posterior hypostomatic setae which are nearly simple.

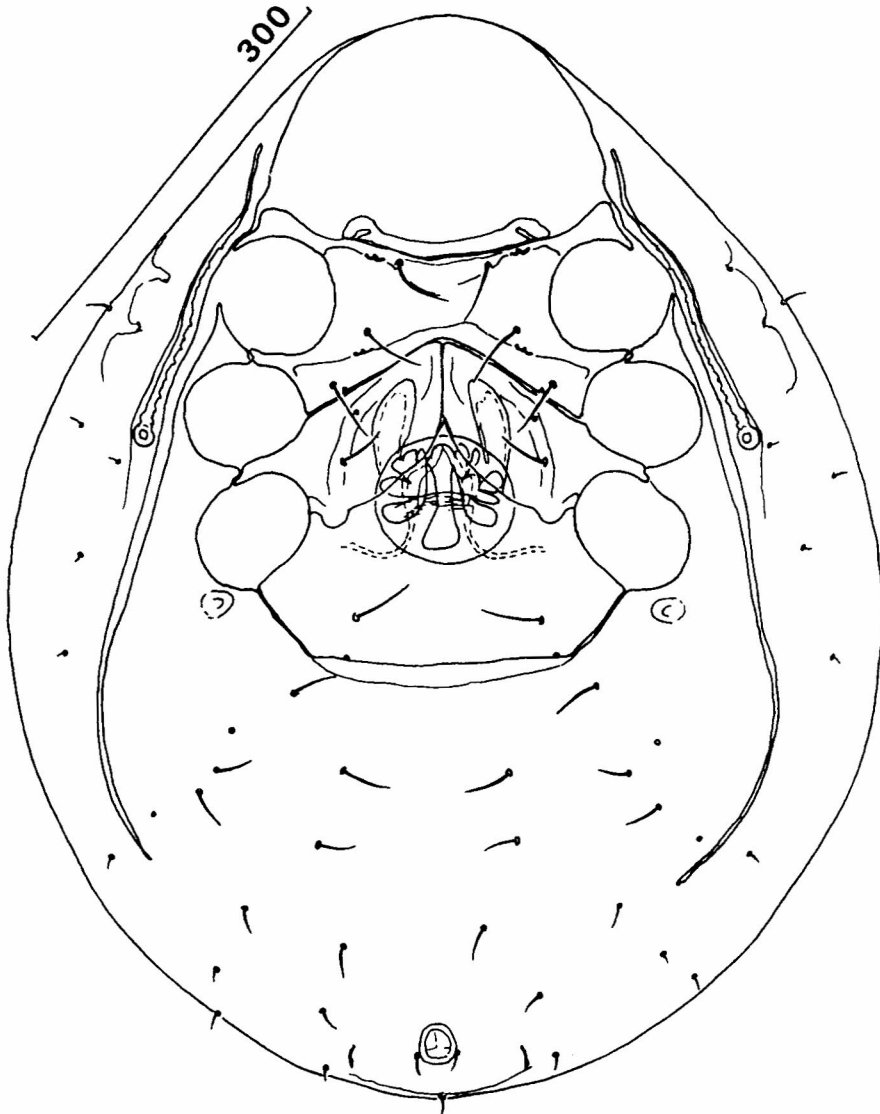
Chelicera (Fig. 3a): Fixed digit with four regularly distributed denticles followed by thin cuticular lamina. Margin of the lamina with shallow concavity. Pilus dentilis located at the base of additional denticle set side-by-side at the level of third dent counting from digit apex. Movable digit bearing three dents; synarthrodial membrane rounded at the end.

Pedipalps developed normally. Paraxial border of palp trochanter slightly thickened and tuberculate between anterolateral setae al1 and al2. All evidently pilose, whereas al2 nearly simple. Anterolateral seta of femur spatulate and pectinate on one edge, setae of genu simply spatulate.

Leg structure and setae pattern unremarkable.

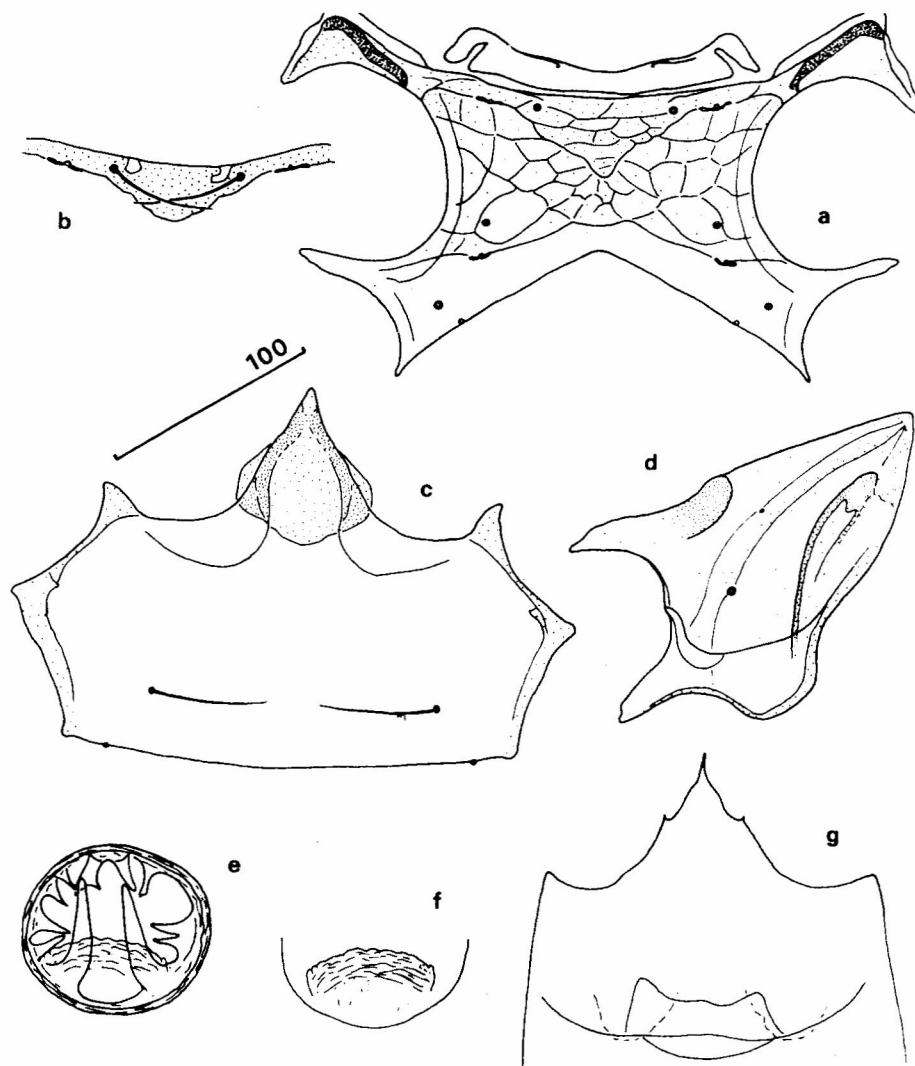
Male: Idiosoma rounded, highly sclerotized. Dimensions of idiosoma: 480-510 x 660-690 μm (l/w factor 1.31-1.38, N=6). Sternal setae reaching 32 μm , opisthogastric setae moderately long (ca. 29 μm), dorsal setae very short (ca. 6-7 μm). Ventral side: Genital opening (Figs 3b,c) located in a deep concavity of sternal shield margin. Genital lamina (Fig. 3b) divided into three lobes: triangular central lobe and two

lateral ones with more or less dentated edges. On sides, the lamina forms long and sharp lateral projections. 'Excipulum' absent, but corresponding ellipsoidal area of



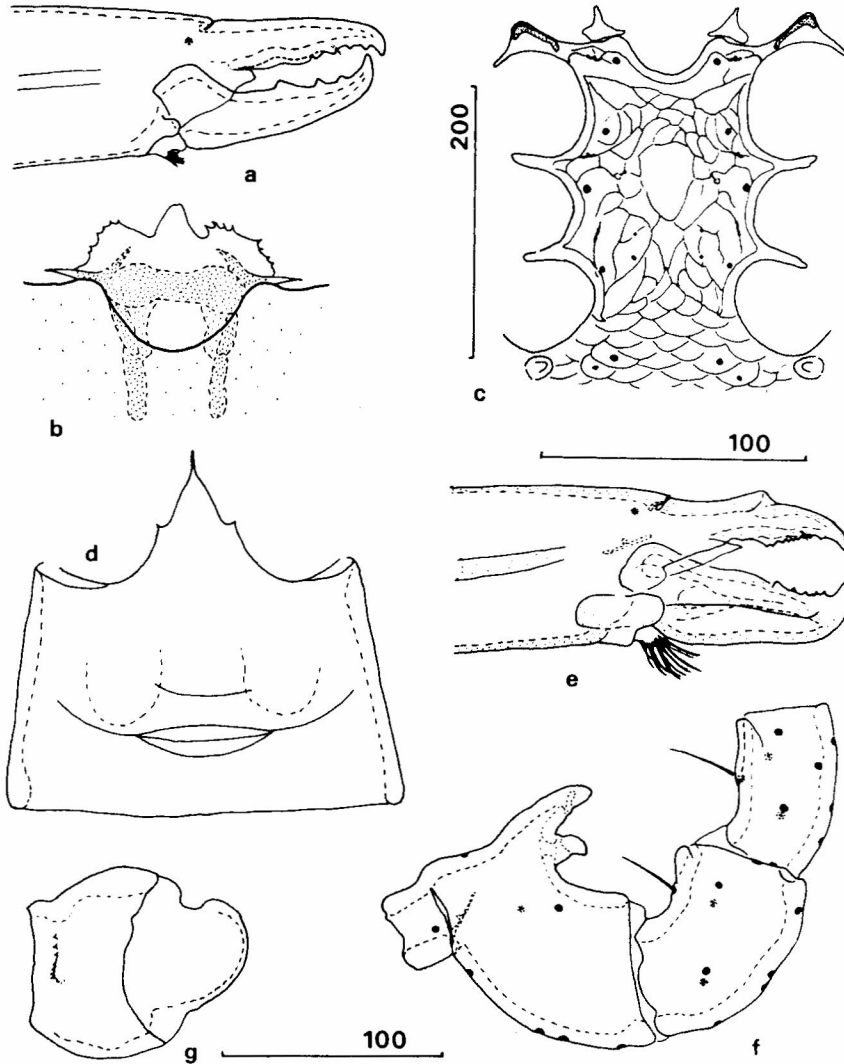
1. *H. globosus* sp.n., female (no. 996 E). Ventral view of idiosoma

sternum not reticulated. Orientation of sternal shield reticulation changes rapidly at the level of coxae IV. Gland pores located behind those legs sunken in foveolar cuticular thickenings.



2. *H. globosus* sp.n., female (b: no. 996 E, others: no. 996 B, holotype). a - presternal and sternal plates; b - anterior margin of sternal plate; c - epigynium; d - paragnathium; e - endogynium; f - endogynial plate; g - tectum

Gnathosoma: Tectum (Fig. 3d) trispinate, very similar to that in the female. Corniculi with ventroaxial surface slightly sinuous. Deutosternum has 11 complete rows of hypognathal denticles. Palpcoxal setae pilose, the others simple.



3. *H. globosus* sp.n., female (a: 996 A) and male (c: 996 D, others: no. 996 C). a - chelicera; b - genital lamina; c - sternal shield; d - tectum; e - chelicera; f - femur, genu and tibia of leg II; g - coxa II

Chelicera (Fig. 3e): Fixed digit bears distally a row of 8-10 small uniform denticles with pilus dentilis located near the centre of that group. External (dorsal) edge of digit has characteristic elevation in the middle region. Movable digit has 5-6 dents; of them, proximal one largest and directed backwards. Synarthrodial membrane tapered.

Pedipalp structure unremarkable. Distal seta on palp trochanter (al1) pilose, whereas the proximal one (al2) simple.

Legs I, III and IV normally developed. Armature of leg II as follows (Fig. 3f): main spur on femur regularly conical and nearly straight; its distal segment small. Auxiliary spur set at main spur base and curved towards the femur. Spur on genu located between posteroventral seta and distal genu margin - not extending to them; its end rounded. Tibia with long and low spur; its edge slightly concave. The spur extends from posteroventral seta nearly to distal tibia edge. Distal spur end not rounded. Like in the female, coxa II with comb of 8 denticles (Fig. 3g).

SYSTEMATIC AND MORPHOLOGICAL REMARKS

H. globosus is similar to *H. dallai* WITALIŃSKI, 1994, since both are characterized by gland pores behind coxa IV located in foveolar thickenings of the cuticle (smaller in *H. globosus*). Female of *H. globosus* has, however, different endogynial armature: two posterior largest dents curved abaxially, other dents numerous and large. In male of *H. globosus*, the 'excipulum' is lacking and the elevation on fixed digit is characteristic of the species.

ETYMOLOGY

The name *H. globosus* (lat. *globosus* = spherical) has been given due to spherical body shape.

MATERIAL EXAMINED

The holotype female (No. 996 B) and 7 female, 6 male paratypes (Nos. 996 A, C-E) - 25.03.1972, Monti Nebrodi, Sicily, moss growing on rocks (alt. 1400m); 2 female, 1 male paratypes (No. 993) - 25.03.1972, Monti Nebrodi, Sicily, moss and litter in oak wood; 1 male (No. 990) - 25.03.1972, S. Fratello, Sicily, moss and litter under oaks (this specimen not included in the type-series). All material was collected by staff of the Department of Evolutionary Biology, University of Siena, Italy.

***Holoparasitus (Holoparasitus) excisus* (BERLESE, 1906)**

Gamasus (Ologamasus) calcaratus var. *excisus* BERLESE, 1906: 249.

Gamasus (Ologamasus) calcaratus var. *excisus* BERLESE, 1906 sensu HALBERT, 1915: 54 (in part). HYATT, 1987: 146.

Gamasus (Ologamasus) pollicipatus BERLESE, 1906 sensu HALBERT, 1915: 55. HYATT, 1987: 146.

Holoparasitus lichenis var. *excisus* (BERLESE, 1887) sensu TURK, 1953. MICHERDZIŃSKI, 1969: 379.

Holoparasitus pollicipatus (BERLESE, 1906) sensu BROWNING, 1956: 386. HYATT, 1987: 146.

Holoparasitus stramenti KARG, 1971: 356. **Syn. nov.**

Holoparasitus bilaminatus WITALIŃSKI, 1972: 233. **Syn. nov.**

Non *Holoparasitus excisus* (BERLESE, 1906) sensu MICHERDZIŃSKI, 1969: 379; sensu WITALIŃSKI, 1972: 223; sensu JUVARA-BALS, 1975: 390.

BERLESE's original description (1906; p. 249) was too laconic to determine precisely the species. During my own examination of the BERLESE material in the Istituto Sperimentale per la Zoologia Agraria, Florence, 1992, it appeared that the female of *H. excisus* depicted by BERLESE (1906; Tab. XV, Fig. 7) was identical with a female described in 1971 by KARG as *H. stramenti*. BERLESE's original slide no. 18/49 has the label: "*Gamasus (Ologamasus)* female BERL." and, in another ink, "*calcaratus? excisus*". In the collection there is also another slide (no. 35/22) labelled: "*Gamasus (Ologamasus) calcaratus* var. *excisus* BERL. Friedrischule, Germ.", containing 1 female of *H. excisus* with endogynium very clearly visible. These facts lead to a conclusion that *H. stramenti* KARG, 1971 is a synonym of *H. excisus* (BERLESE, 1906).

Both females of *H. excisus* (BERLESE, 1906) in BERLESE collection (slides 18/49 and 35/22) should be regarded as syntypes and the specimen on slide 18/49 should be designated as lectotype.

***Holoparasitus (Holoparasitus) ampullaris* sp. n.**

H. excisus (BERLESE, 1906) sensu MICHERDZIŃSKI, 1969: 379 (female).

H. excisus (BERLESE) sensu WITALIŃSKI, 1972: 223 (female and male).

This new specific name is given to species described by MICHERDZIŃSKI (1969) (2 females from Tatra Mountains) and WITALIŃSKI (1972) (4 females, 1 male from environs of Kraków) as *H. excisus* (BERLESE, 1906).

DIAGNOSIS

Female: Endogynium devoid of denticles, bubble-shaped. Diameter of tube leading to endogynial sac about 1/2 sac diameter.

Male: 'Excipulum' absent, corniculus with dent on ventroaxial surface. Tectum devoid of lateral prongs, central prong pointed. Tibia II with long and low spur; its distal end reaching margin of segment.

ETYMOLOGY

The name *H. ampullaris* (lat. *ampullaris* = bubble-shaped) has been selected to emphasize the characteristic shape of endogynium in the female (WITALIŃSKI, 1972; Fig. 8b).

MATERIAL EXAMINED

The holotype female (No. 554 A) and 4 female, 1 male paratypes (Nos. 551, 552, 554 B) - 15. 11. 1969, Myślenice, Southern Poland, litter of a young coniferous forest.

1 female (No. 544) - 10.11.1969, Myślenice, in moss (this specimen not included in the type-series).

The holotypes and the paratypes have been deposited in the Zoological Museum of the Jagiellonian University, Cracow, Poland.

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