

A NEW SPECIES OF *TYCHUS* FROM NORTHERN ITALY
(Coleoptera, Pselaphidae) (*)

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In the course of a revision of the Italian Tychini, some species of the genus *Tychus* Leach, 1817 from the Fiori collection (Museum of Bologna Zoology Institute: IZB) were re-examined. Most of them are well known species, whereas some specimens belong to a new species, *Tychus emilianus* n. sp., that is described in this paper.

Tychus emilianus n. sp.

DIAGNOSIS. A *Tychus* belonging to the *corsicus* group (Sabella 1992), distinguished by the following characters: head (fig. 1) longer than wide, male 3rd-5th antennal segments less thickened (fig. 2), aedeagus (fig. 5) with apex of left paramere laterally orientated and curved downwards.

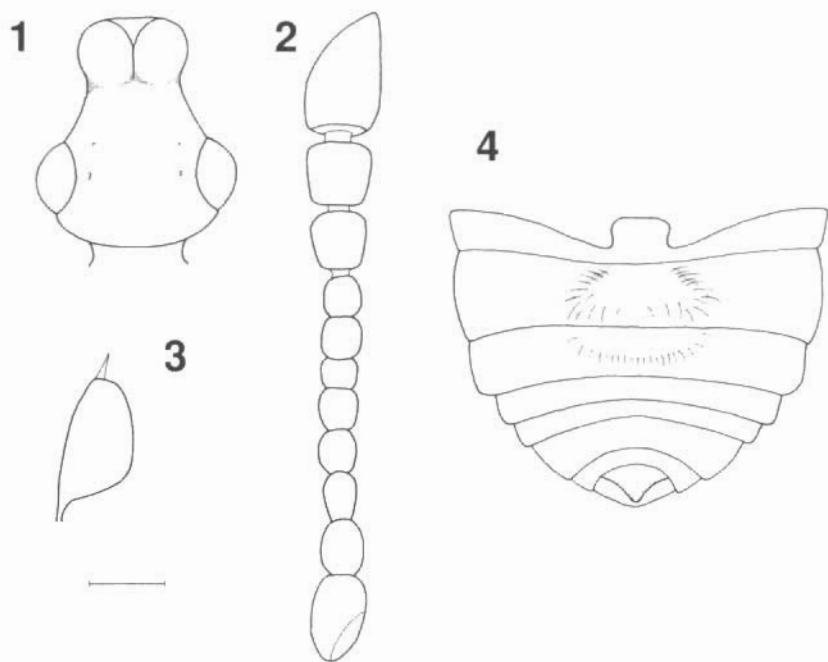
MATERIAL EXAMINED. Italia, Emilia, Modena, Monte Gibbio, 19.III.1893 1♂ (A. Fiori) (Holotype) (IZB); Monte Gibbio, 1.IV.1894 1♂ (A. Fiori); S. Maria 7.V.1895 2♂; M. Sofira (?), 26.III.1889 1♂ (A. Fiori) (Paratypes) (IZB).

DESCRIPTION. Length 1.5-1.55 mm, winged, dark brown with red elytra, reddish antennae and legs, yellow palpi. Pubescence of flat golden bristles on entire dorsal surface, particularly thick behind temples. Very thick suberect yellowish bristles between metasternum and first abdominal sternite and numerous also on antennae, palpi and legs.

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Head (fig. 1), including eyes, distinctly longer (0.30 mm) than broad (0.26-0.28 mm), widest on the level of the eyes which are rather protruding and normally developed. Head anterior to the eyes tapered, most narrow at the base of the antennal tubercles. These are prominent, 0.14-0.15 mm wide, separated by a median longitudinal deep groove that almost reaches the forehead. Tegument smooth and shiny, two deep interocular pits with a little tooth anterior to each. Antennae (fig. 2) relatively long (0.76-0.78 mm) with a very large antennal club (length: 0.32-0.33 mm). Scaapus length approximately twice its width; 2nd and 3rd segment subequal, distinctly longer than wide. 3rd segment slightly narrower at the base; 4th and 5th segments subequal, slightly thickened and wider than long, 6th shorter than previous ones, distinctly wider than long. 7th barely wider than long and 8th shorter and narrower than 7th, clearly wider than long. Antennal club is made up of th-



Figs 1-4 – *Tychus emilianus* n. sp., Holotype male: head, profile dorsally (1); left antenna dorsally (2); last palpal segment (3); abdomen ventrally (4). Scale: 0.1 mm.

ree segments which broaden progressively from 9-11th. 9-10th wider than long and 11th longer than combined length of 9th and 10th. Short and rounded temples. Last palpal segment (fig. 3) markedly dilated, length 0.175 mm, width 0.075 mm.

Pronotum 0.34-0.35 mm wide and 0.33-0.34 mm long; in some specimens with equallength and width, in others wider than long. Pronotum always distinctly broader than head, its greatest width in the middle. It is anteriorly more clearly tapered and rounded than posteriorly.

Elytra, 0.52-0.56 mm long, more than one and a half times the length of pronotum; together broader (0.59-0.60 mm) than long. Humeri protruding but not very developed. Surface with a few large pores, two basal pits on each elytron that extend into grooves. Sutural groove reaches elytra apex while lateral groove, even though deeper than sutural one, reaching about half elytra length.

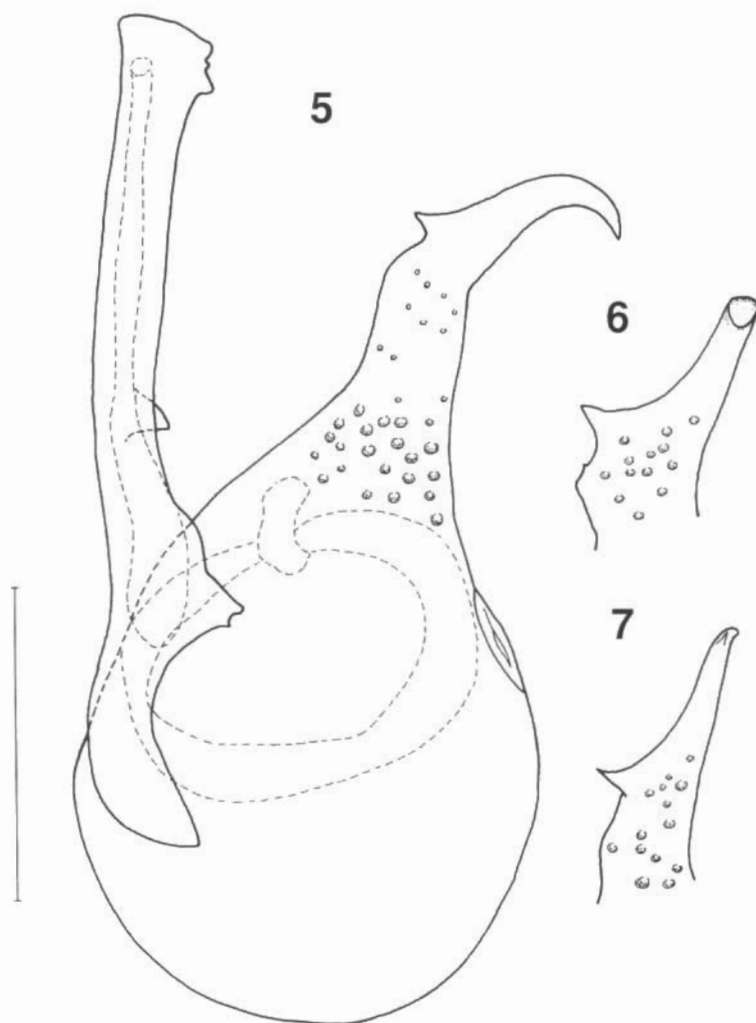
Abdomen shorter than elytra (length 0.37-0.38 mm), 1st tergite 0.17-0.185 mm long. Anterior margin of 1st tergite with slight median pubescent concavity that occupies about one third of its width.

Male characters: 4th and 5th antennal segments slightly thickened, middle of posterior margin of median trochanters extend into a sharp spine. Femurs of all legs barely thickened. Abdomen (fig. 4) with 1st abdominal sternite hardly convex in the middle, more accentuated anteriorly, sides of convex area pubescent. Middle of 2nd abdominal sternite thickly pubescent. Aedeagus (figs 5, 8), 0.31-0.33 mm long, with a sinuate and canaliculated distal tubule, that presents, about in the middle, a medially directed ventral apophysis. The medial margin of this distal tubule is prolonged, at its basal third, in a spine-like process. Left paramere shorter than distal tubule; its apex laterally orientated and curved downwards. Proximally from the apex, dorsal margin of paramere prolonged into a small tooth. In all examined specimens, distal tubule as given that in figs 5 and 8, while apex of left paramere is rather variable (figs 5-10). However, this leaves no doubt as to the specific determination.

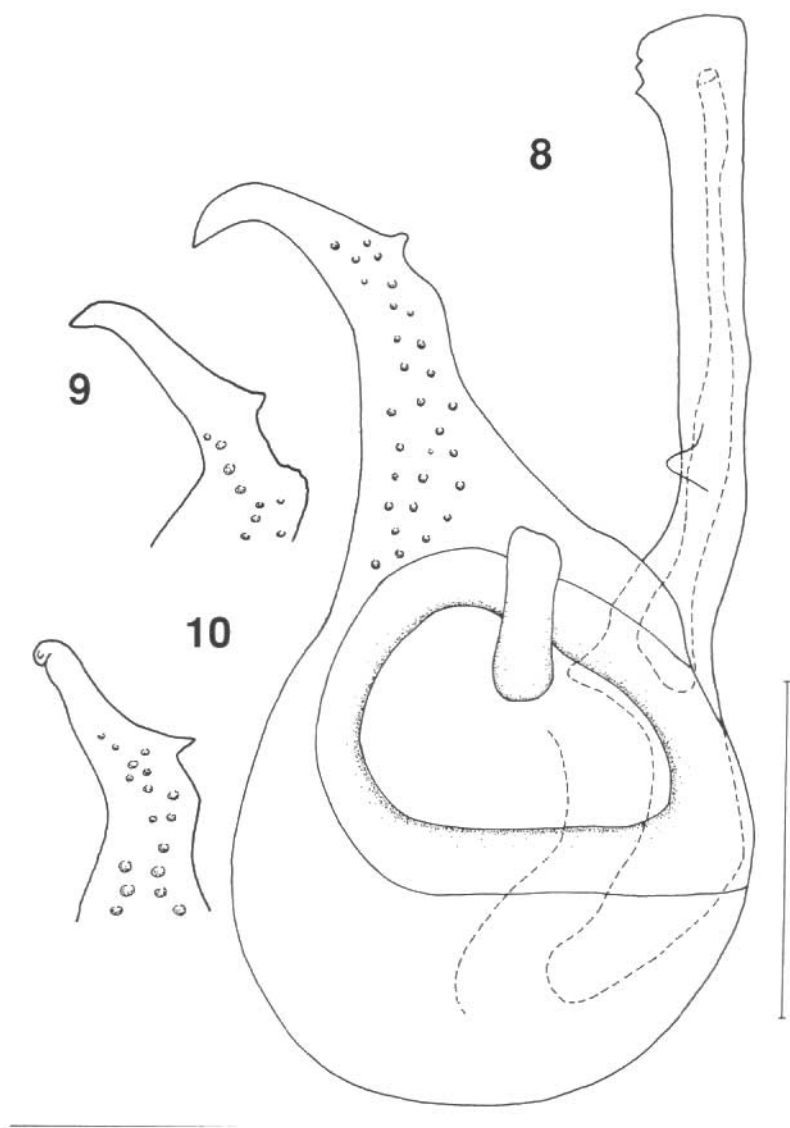
Female unknown.

ETYMOLOGY. The new species name is derived from Emilia, a region of northern Italy.

DISCUSSION. *Tychus emilianus* n. sp. belongs to the *corsicus* group (Sabella 1992), that is characterized by the following features: length 1.25-1.55 mm, width of frontal lobe 0.13-0.15 mm, length of elytra more than one and a half the length of pronotum, in males



Figs 5-7 – *Tychus emilianus* n. sp., aedeagi dorsally: Holotype (5); apex of left paramere of a specimen from M.te Gibbio (6); apex of left paramere of a specimen from M.te Sofira (7). Scale: 0.1 mm.



Figs 8-10 - *Tychius emilianus* n. sp., aedeagi ventrally: Holotype (8); apex of left paramere of a specimen from M.te Gibbio (9); apex of left paramere of a specimen from S. Maria (10). Scale: 0.1 mm.

3rd-5th antennal segments more or less thickened, median trochanters armed, 1st abdominal sternite slightly convex and pubescent in the middle, 2nd abdominal sternite pubescent in the middle, aedeagus with canaliculated and sinuate distal tubule that presents two spine-like apophyses, left paramere shorter than distal tubule. *T. emilianus* n. sp. differs from other taxa of the *corsicus* group in the shape of the aedeagus, especially the left paramere that is orientated laterally with a downwards curved apex. Furthermore the head of *T. emilianus* n. sp. is longer than wide (wider than long in others taxa of *corsicus* group) and the male 3rd-5th antennal segments are less thickened than in the other species. I presently know that the

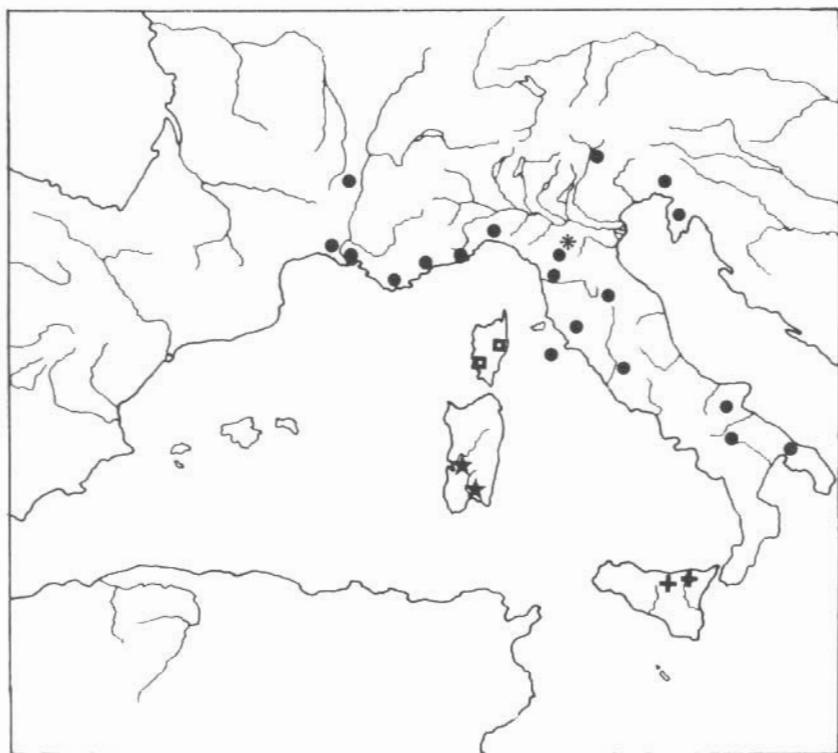


Fig. 11 – Distribution of species and subspecies of *Tychius* of the *corsicus* group: *T. corsicus corsicus* (squares); *T. c. lostiensis* (stars); *T. c. spissatus* (spots); *T. nebrodensis* (crosses); *T. emilianus* n. sp. (asterisks). The distribution of *T. c. insularis* is not indicated because it is reported, in literature, generically for Sicily.

corsicus group has an apennine distribution (fig. 11), but *T. c. spissatus* is also present in southeastern France. The distribution of species and subspecies belonging to this group is as follows:

- *Tychus corsicus corsicus* Reitter, 1881. Endemic to Corsica.
- *Tychus corsicus lostiensis* Karaman, 1955. Endemic to southern Sardinia.
- *Tychus corsicus insularis* Karaman, 1955. Endemic to Sicily.
- *Tychus corsicus spissatus* Rey, 1888. Reported for the Italian peninsula (Piedmont, Friuli-Venezia Giulia, Liguria, Tuscany, Giglio island, Latium and Apulia) and southeastern France. Meggiolaro (1958: 152) reports *T. corsicus* from Spain; Oliveira (1893: 116) and Ladeiro (1951:6) cite it also from Portugal. I believe that these reports require confirmation.
- *T. nebrodensis* Sabella, 1992. Endemic to northeastern Sicily.

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SUMMARY

A new species of Pselaphid beetle, *Tychus emilianus* n. sp. is described from Emilia (northern Italy). The new species belongs to the *corsicus* group (Sabella 1992) due to the aedeagus morphology and external characters. *T. emilianus* n. sp. can be distinguished from other members of this group by the head longer than wide, the male 3rd-5th antennal segments less thickened and the aedeagus with apex of left paramere laterally orientated and curved downwards.

RIASSUNTO

Viene descritta una nuova specie di Coleottero Pselafide dell'Emilia: *Tychus emilianus* n. sp. che, sulla base della morfologia esterna e dell'edeago, appartiene al gruppo *corsicus* (Sabella 1992). La nuova specie si distingue agevolmente dalle altre del gruppo per il capo più lungo che largo, gli articoli antennali 3°-5° del maschio meno ispessiti ed infine per la forma dell'edeago, in particolare il paramero sinistro presenta l'apice rivolto lateralmente e ricurvo all'ingiù.

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