

## ***Platymetopius cebifurcatus*: a new species of the *Platymetopius undatus* group (Auchenorrhyncha, Cicadellidae)**

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**Key words:** Homoptera, *Deltocephalinae*, Italy, France.

**Abstract:** *Platymetopius cebifurcatus*, a new species belonging to *undatus*-group, is described. His fundamental features lies in the shape of the aedeagus and the lamelliform expansions of the pygofer appendages. *P. cebifurcatus* is probably a polyphagous taxon, living in Italian Peninsula, Sicily and France (Alpes Maritimes). Adults were collected in various environments from 600 to 1800m, on herbaceous vegetation and trees. Some of the specimens of *P. cebifurcatus* n. sp. were identified (and published) by Servadei (1967; 1968) under the name *P. henribauti* Dlabola. Actually no specimens of the Servadei's collection belong to *P. henribauti* Dlabola. This species (if it is a proper species and not only a synonym of *P. undatus* De Geer) has to be excluded from the Italian Fauna.

*Platymetopius* is a genus considered difficult and one that is in need of revision. Indeed, as already pointed out by Dlabola (1974) and Abdul-Nour (1987), it is a large and heterogeneous genus, with several species inadequately described or known only from the female. At present, the species of this genus are divided in several more or less well-defined groups.

Aim of this work is to describe a new species of *Platymetopius*: *P. cebifurcatus*. It is to place among the species of *undatus*-group for the typical elegant marking of the adult (with a brown zig zag band on the fore wings), the long and curved pygofer appendages, the long triangular shape of the sub-genital plates, the morphology of the male aedeagus and the shape of the 7<sup>th</sup> abdominal sternite of the female (Abdul-Nour, 1987).

Specimens of *P. cebifurcatus* were collected by Guglielmino and Bückle during field researches carried out in the Italian Peninsula from 1998 to 2000. The author studied also all the specimens of *Platymetopius undatus*-group preserved in the Servadei's collection and some specimens of the D'Urso's and Remane's collections.

If not mentioned otherwise, all specimens were collected by Guglielmino and Bückle and identified by Guglielmino.

*Platymetopius cebifurcatus* n. sp.

Typical member of the *Platymetopius undatus-major* group. In coloration, markings and proportions very similar to *P. major* (Kbm), but slightly smaller. Head more or less as long and wide as pronotum, with a brown mottlement, as well as pronotum and scutellum (Figs 1, 2). Vertex pentagonal, acute angled; in most males as in Fig. 1, but in few males (probably parasitized) and many females as in Fig. 2. Face greenish-yellow (chancing to ochraceous in dead specimens). Pronotum with crenate and light lateral borders. Legs greenish-yellow. Fore wings longer than body, with the typical pattern of the *undatus* group species: a median, large, brown zig-zag band,

followed by a narrow, whitish area; the rest of the fore wings is greenish-yellow. A small, rounded, whitish spot on each claval cell (seldom absent), at the base of each apical cell, on the median cell and on the two subapical cells. Abdominal tergites dark brown to black with greenish-yellow borders; abdominal sternites greenish-yellow, the first sternites with brown spots varying in extension near the anterior margin.

**Male genitalia** (Figs 3-11): Pygofer (Fig. 6) brown with few, long and sturdy macrosetae in the posterior region near its caudal margin. Pygofer lobes each with the ventro-posterior part gradually narrowing and elongated in form of a sturdy, long appendage (Figs 4, 5, 6). At first each appendage moves towards middle and then turns suddenly towards the back. It bears medially, about in the basal half, a large lamelliform expansion having a protuberance in its basal two-thirds and the distal top prominent and angular in form of an anteriorly directed hook. Distal part of the pygofer appendages more than half as long as the lamelliform expansions. Anal tube (Fig. 6) like in *P. major* (Kbm) and other species of the *undatus*-group. Genital plates (Fig. 7) greenish-yellow, subtriangular, elongate, with the round apex and macrosetae on the lateral walls. Valve (Fig. 7) greenish-yellow, triangular with a brown stripe on the anterior margin. Genital styles (Fig. 3) in their basal part wide and trapezoidal; apophysis subconical with the rounded apex. Connective narrowly Y-shaped with a very long stem compared with the "arms". Aedeagus (figs 8-11) with a depress shaft, curved dorsally and anteriorly, and bearing one pair of thin basal appendages and two pairs of pre-apical appendages. Basal appendages arising near the base of the shaft, longer than it, curved dorsally with the apical portion flat laterally and subtriangular in shape. Of the two pre-apical appendages, the lateral ones short, pointed apically and slightly diverging, the median ones very long, curved cephalically and ventrally and strongly diverging. Phallotreme on the dorsal side of aedeagus in nearly apical position.

**Female genitalia** (Fig 12). Genital block greenish-yellow with macrosetae irregularly arranged in rows on the lateral walls. 7<sup>th</sup> abdominal sternite (Fig. 12) greenish-yellow, subrectangular; the posterior margin with two deep paramedian notches and a median protuberance bearing two small or very small posterior teeth and a shallow paramedian notch.

**Measurements:** Males. Total body length (from the vertex to the tip of the fore wings): 4.80-5.40 mm (holotypus: 4.86 mm); width of the head including the eyes: 1.30-1.44 mm (holotypus: 1.30 mm); length of vertex: 0.52-0.64 mm (holotypus: 0.52 mm); length of pronotum: 0.52-0.64 mm (holotypus: 0.52 mm); width of pronotum: 1.30-1.44 mm (holotypus: 1.30 mm). – Females. Total body length (from the vertex to the tip of the fore wings): 5.26-6.40 mm (allotypus: 5.26 mm); width of the head including the eyes: 1.44-1.64 mm (allotypus: 1.44 mm); length of vertex.: 0.72-0.80 mm (allotypus: 0.72 mm); length of pronotum: 0.68-0.80 mm (allotypus: 0.68 mm); width of pronotum: 1.48-1.70 mm (allotypus: 1.48 mm).

**Types and material examined:** Italy: Abruzzo: Road between Secinaro e Molina Aterno (L'Aquila), ~ 700 m, 15-16/VIII/1998, meadows with *Acer* and *Quercus*, 2MM, 2FF (1M holotypus, 1F allotypus, 1M and 1F paratypes); Monte Viglio (Avezzano – L'Aquila), ~ 1200 m, 10/VIII/1998, mixed wood, 3MM, 6FF (paratypes); N. of Meta (Avezzano - L'Aquila), ~ 1000 m, 11/VIII/1998, meadows with *Salix*, *Populus nigra*, *Quercus*, 1M, 1F (paratypes); Monte Velino (Passo c/o Piano di Ceraso - L'Aquila), 1577 m, 13/VIII/1998, pasture, 1F (paratypes); Monte Velino (L'Aquila) – N. of Piano di Mezzo, ~ 1800 m, 13/VIII/1998, pasture, 1M (paratypes); Road between Palena e Valico delle Forchette (Chieti), ~ 1000 m, 19/VIII/1998, mixed wood, 2MM, 2FF

(paratypes); La Maieletta (Pescara), road to Roccamorice, ~ 1600 m, 21/VIII/1998, beech-wood, 1M, 1F (paratypes). Liguria: Passo di Teglia (Imperia), 1400 m, 29/VIII/2000, on herbaceous vegetation, 1M. Marche: Cagli (Pesaro), 1/10/1966, 1M, 1F, leg. and det. Servadei as *P. henribauti* Dlabola; Piano dei Valli (Monte Terminillo - Rieti), 15/VIII/1950, 1M, leg. and det. Servadei as *P. henribauti* Dlabola. Campania: Torre Orsaia (Salerno), 27/V/1961, 1M, leg. and det. Servadei as *P. henribauti* Dlabola. Puglia: Gargano: Pendici a N. of M.Spigno, 800 m, 16/IX/1977, mixed wood, 1M, leg. Remane. Calabria: Gambarie (Reggio Calabria), 5/9/1959, 1M, leg. and det. Servadei as *P. henribauti* Dlabola; 6/9/1959, 1M, 2FF, leg. and det. Servadei as *P. henribauti* Dlabola; Piano di Vincenzo (Saracena – Cosenza), ~ 1250 m, 9/VIII/1989, faggeta, 3MM, 3FF. Sicilia: Monte Manfrè (Etna - Catania), 1/VIII/78, sottobosco castagneto, 1M, leg. D'Urso; 29/VIII/78, 1F, leg. D'Urso; Near Linguaglossa (Etna - Catania), 1100 m, 20/IX/1977, 1M, 1F, leg. Remane; Biviere di Cesarò (Nebrodi - Messina), 18/VII/81, 3MM, leg. D'Urso. France, Alpes Maritimes: Peille, 1000 m, 22/IX/1971, 1M, leg. Remane; N. of Peille, 1100 m, 22/IX/1971, 1F, leg. Remane; N.W. of Peille, 26/IX/1969, 600 m, 3FF, leg. Remane; S. of Peille, 24/IX/1971, 1000 m, 1F, leg. Remane; Saint Martin de Peille, 27/IX/1969, 600 m, 2FF, leg. Remane; N. of Luceram, 1100 m, 27/IX/1969, 1M, 1F, leg. Remane; Mont Ours, 1800 m, 22/IX/1971, 1F, leg. Remane; W. of Col de Braus, 1100 m, 22/IX/1971, 1F, leg. Remane.

There exist additional females from several localities, which might belong to this species, too. Only after a safe revision of the females in the *Platymetopius undatus*-group will be possible to publish these data.

Ecology: *P. cebifurcatus* seems to be polyphagous. Adults were collected on herbaceous vegetation and trees, from May to October.

Geographic distribution: At present *P. cebifurcatus* n. sp. is known from the Italian Peninsula, Sicily, and south-eastern France (Alpes Maritimes). Altitude of the collecting sites between 600 and 1800 m.

Discussion: *P. cebifurcatus* is a taxon apparently most similar to *P. libanoticus* Abdul-Nour, 1987. Indeed, these two are the only species, within the *undatus*-group, which have their aedeagus with 2 pairs of pre-apical appendages. *P. cebifurcatus* and *P. libanoticus* are easy distinguishable from each other and the most important differences are summarized in Tab. 1.

	<i>P. cebifurcatus</i>	<i>P. libanoticus</i>
Size and shape of lamelliform expansion of the pygofer appendages	Large with the medial margin sinuous	Narrow with the medial margin almost straight
Distal part of the pygofer appendages	More than half as long as the lamelliform expansion	Less than 1/3 of the length of the lamelliform expansion
Basal appendages of aedeagus	Thin with the distal portion large	Large with the distal portion thin
Pre-apical lateral appendages of aedeagus	Long, almost straight	Short, curved
Pre-apical medial appendages of aedeagus	More than half as long as the length of the shaft	Less than half as long as the length of the shaft

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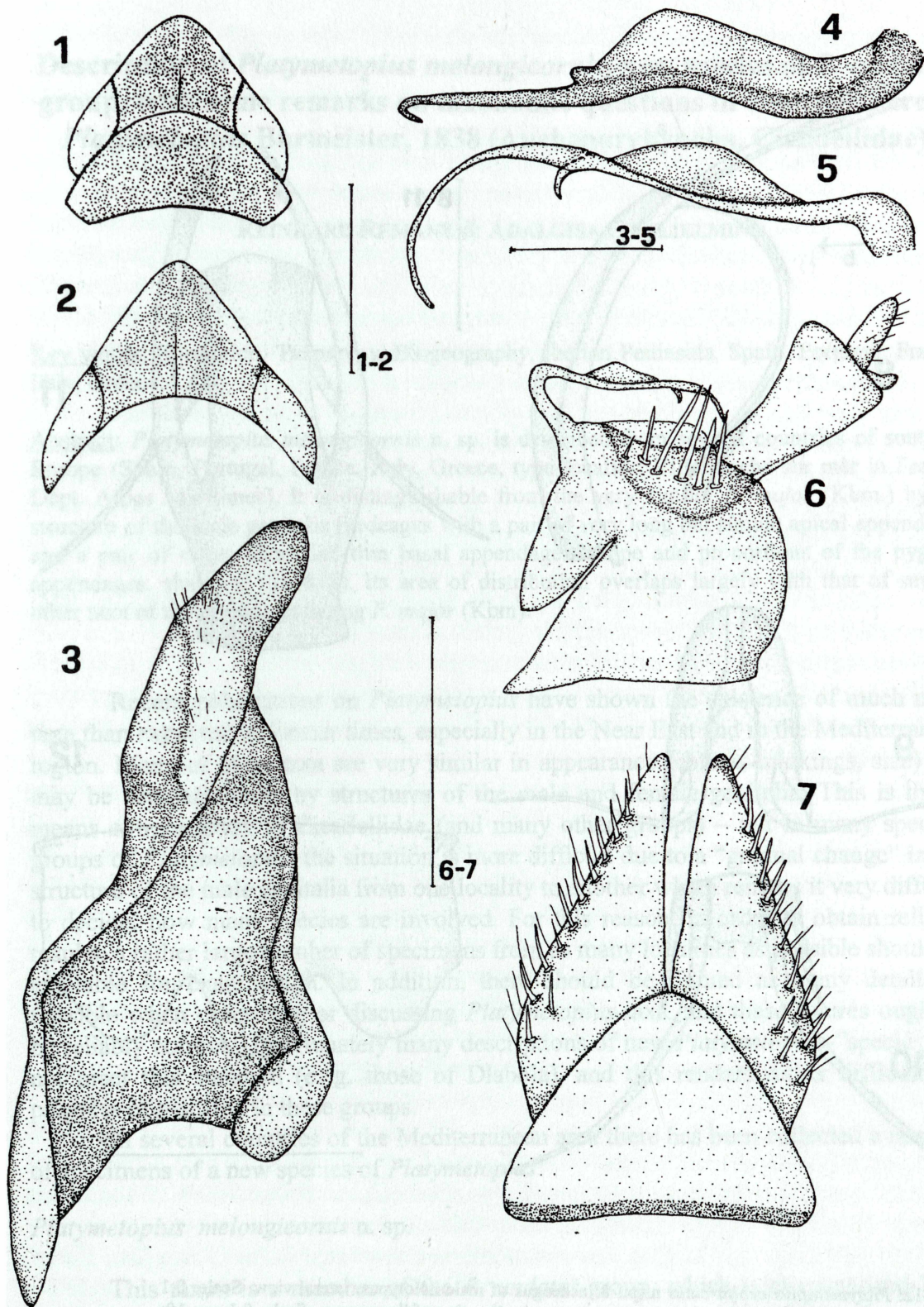
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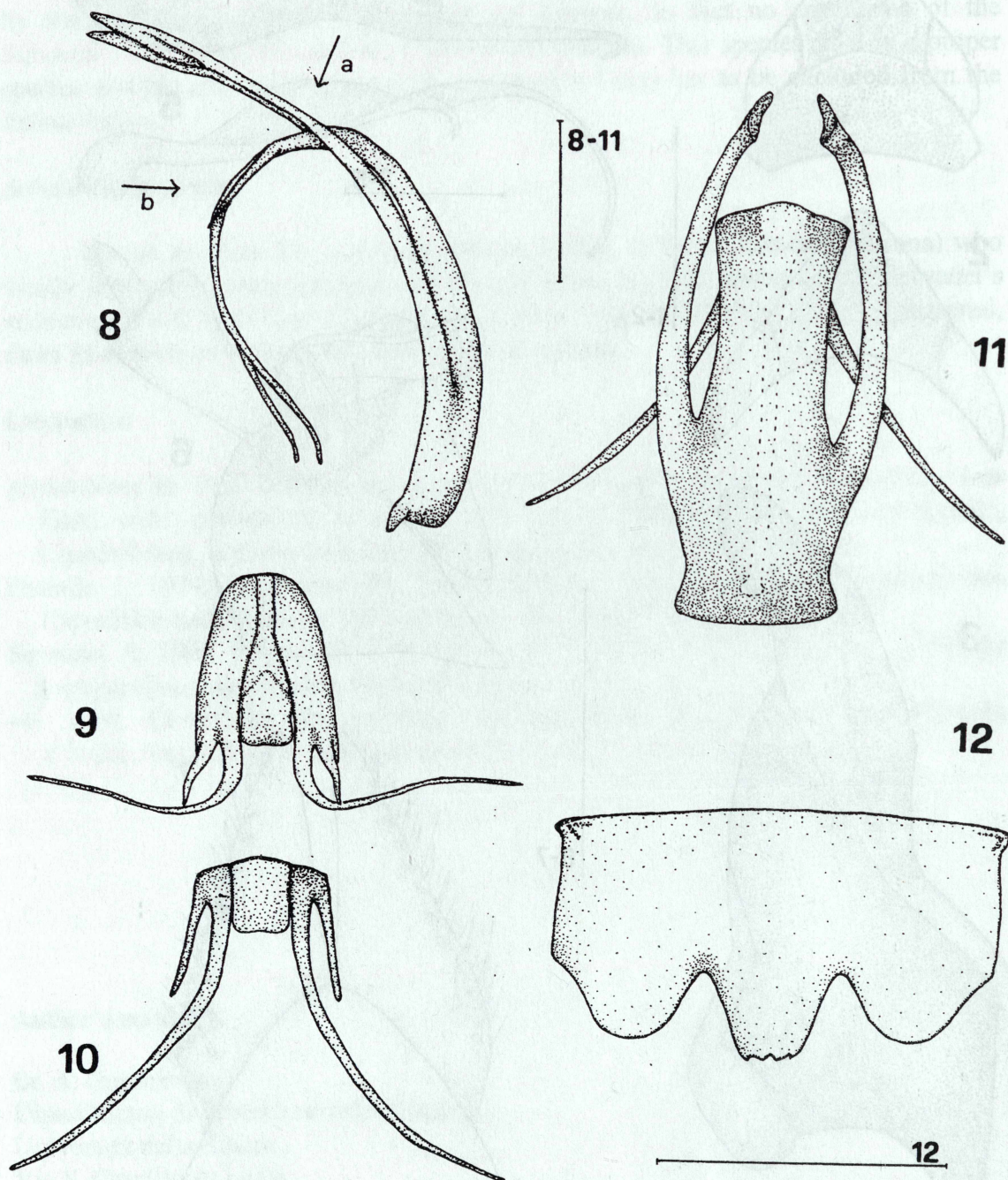
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Figs 1-7. *Platymetopius cebifurcatus* n.sp.: 1: Head and pronotum of male holotypus. Scale: 1 mm; 2: Head of female paratype from Abruzzo: Road between Secinaro e Molina Aterno. Scale: 1 mm; 3: right genital style of male holotypus, dorsal view. Scale: 0.1 mm; 4: appendage of left pygofer lobe of male holotypus, posterior view. Scale: 0.1 mm; 5: appendage of left pygofer lobe of male holotypus, lateral view; 6: pygofer and anal apparatus of male holotypus, lateral view. Scale: 0.5 mm; 7: genital valve and plates of male holotypus, ventral view. Scale: 0.5 mm.





Figs 8-12: *Platymetopius cebifurcatus* n.sp.: 8: aedeagus of male holotypus, lateral view. Scale: 0.1 mm; 9: apex of aedeagus of male holotypus as seen in direction of the arrow a. Scale: 0.1mm; 10: apex of aedeagus of male holotypus as seen in direction of the arrow b. Scale: 0.1mm; 11: aedeagus of male holotypus, posterior view. Scale: 0.1 mm; 12: 7<sup>th</sup> abdominal sternite of female allotypus, ventral view. Scale 0.5 mm.

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