

**Study on the subgenus *Micantulina* s. str. in Italy with description
of a new species, *Micantulina vidaniana* sp. nov., from the
Apennine Peninsula and Sicily
(Rhynchota, Auchenorrhyncha, Cicadellidae)**

Adalgisa Guglielmino, Vera D'Urso, Christoph Bückle¹

Summary: *Micantulina vidaniana* sp. nov., closely related to *M. micantula* Zetterstedt, 1840, and *M. pseudomicantula*, Knight 1965, is described from Italy. The genital morphology of *M. micantula* in northern Italy (Valle D'Aosta) is figured. The distribution of the subgenus *Micantulina* s. str. in Italy is discussed.

Keywords: Cicadomorpha, Typhlocybinae, distribution

1. Introduction

Anufriev (1970) established the genus *Micantulina* with *Cicadula micantula* Zetterstedt, 1840 as type species. Within this genus he distinguished two subgenera: *Micantulina* s. str. and *Mulsantina* (with *Typhlocyba stigmatipennis* Mulsant & Rey, 1855 as type species). Koçak (1981) replaced the name *Mulsantina* with *Anufrieviola* because of homonymy with a beetle genus. To date, the genus *Micantulina* includes seven species, with *M. golesanica* Dlabola, 1994, *M. micantula* (Zetterstedt, 1840), *M. nigrohumeralis* (Anufriev, 1969) and *M. pseudomicantula* (Knight, 1965) belonging to *Micantulina* s. str., and *M. acuticeps* (Linnavuori, 1962), *M. stigmatipennis* (Mulsant & Rey, 1855) and *M. teucarii* (Cerutti, 1938) belonging to the subgenus *Anufrieviola*.

Aim of this paper is to increase the knowledge on this genus with the description of a new species, *M. vidaniana* sp. nov., collected in Sicily and southern and central peninsular Italy.

2. Material and methods

The specimens were collected by means of a sweeping net and aspirator, afterwards dried and conserved. For mounting and aedeagus dissection, the material was moistened again in a little box with moist paper. The genital segment was put in glycerine, the different elements of the male genitalia dissected with two entomological pins and later glued on the same label as the other parts of the insect. For the drawings, genital styles and aedeagus were imbedded in Faure solution.

We examined specimens from the following collections:

- Private collection Guglielmino/Bückle (CGB).
- Private collection Vera D'Urso (CD).

In order to facilitate the comparison of data in different papers of two of the authors we maintained the number system of their collecting sites applied already in other publications.

¹ Corresponding author, e-mail: rosaurus@gmx.de

3. Results

Taxonomy

Micantulina vidaniana sp. nov.

Diagnosis: *M. vidaniana* sp. nov. is closely related to the other species of the subgenus *Micantulina* s. str., above all to *M. micantula* Zetterstedt. It shares with the other European species of the subgenus the pattern of dark spots on the fore wings (Fig. 1), but is distinguished by its aedeagus morphology (Fig. 2). In particular it differs from *M. micantula* (Fig. 3) by the more elongate shaft (Figs 2A-F) and the shape of the lateral branches (less divaricated, longer, acuminate and curved in *M. vidaniana*, distinctly divaricated, shorter, stout and rather straight in *M. micantula*); from *M. pseudomicantula* (see Knight, 1965, Figs 2K, J) by the distinctly shorter and less acuminate lateral branches.

Description (Figs 1, 2, 4)

Body length male/female: 3.25–3.65 mm.

Coloration (Figs 1A, B) as in *M. micantula*: body $\pm$ yellowish white, mesosternum and dorsal side of abdomen except for lateral margin black or brown, fore wings white with black or brown spots: two spots on clavus at anterior margin and near posterior tip, one spot on corium touching exterior margin of clavus about at clavus midlength. Dark coloration of abdomen and mesosternum often indistinct or completely lacking. Female: tip of ovipositor sheath black or brownish (Fig. 4A), pregenital sternite completely yellowish white (Fig. 4A, B).

Genital morphology. Male: aedeagus (Figs 2A-F) with moderately elongate shaft and a pair of slightly divaricate, acuminate, curved lateral branches. Genital styles (Figs 2G, H) similar those of *M. micantula* (Figs 3E, F). Female: pregenital sternite (Fig. 4) distinctly protruding apically, hind margin in the central part very slightly emarginate.

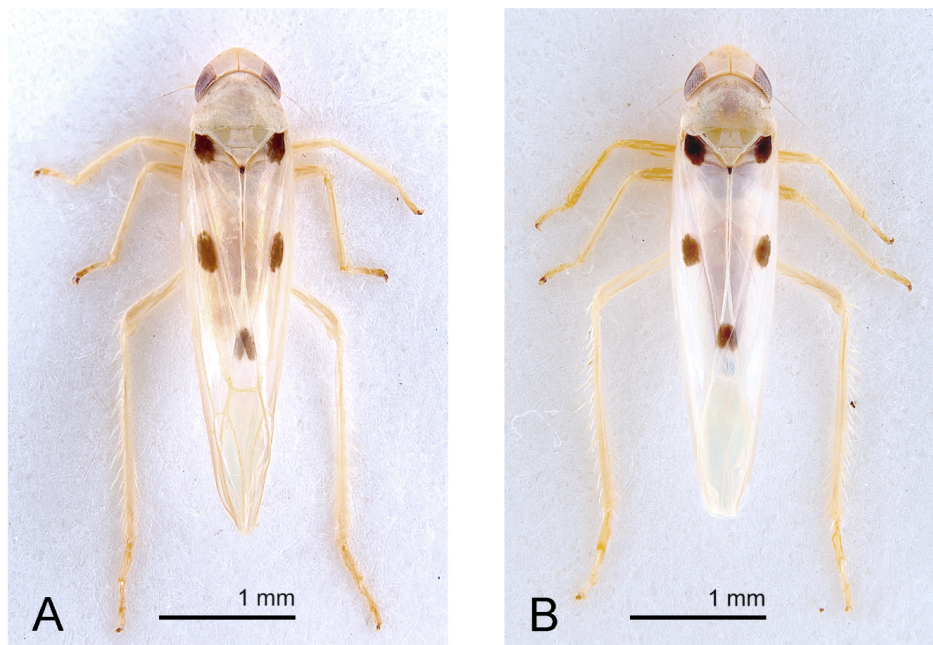


Fig. 1: *Micantulina vidaniana* sp. nov., Italy, Calabria, Monte Pollino. A: Male; B: Female.

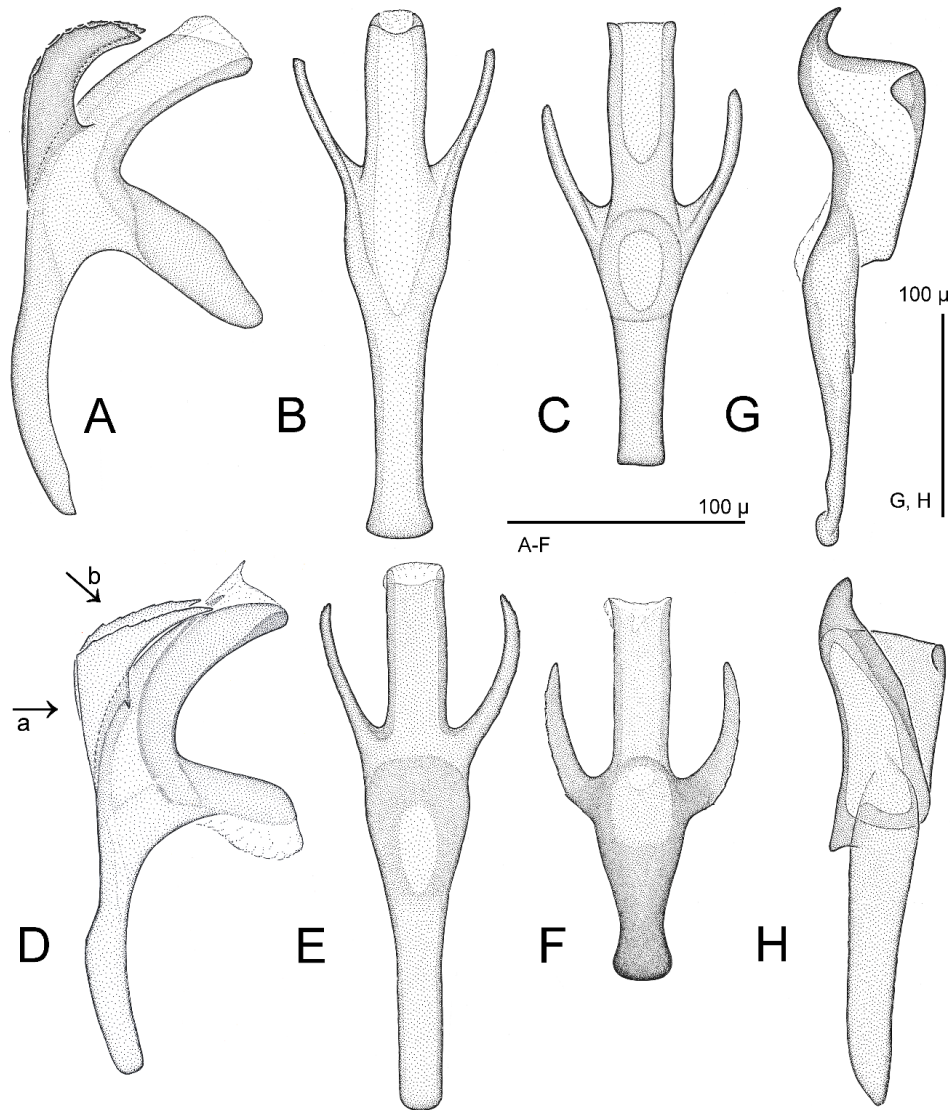


Fig. 2: *Micantulina vidaniana* sp. nov., male. A-C: Sicily, Lago Zilio: Aedeagus: lateral (A), ventral (B, as in direction of arrow a), and ventroapical (C, as in direction of arrow b) view. – D-F: Calabria, Monte Pollino. Aedeagus: lateral (D), ventral (E, in direction of arrow a), and ventroapical (F, in direction of arrow b) view; G, H: Left genital style: lateral (G) and dorsal view (H).

Ecology. The species was collected at 600 - 1900 m altitude, on open dry habitats and in forests. The host plant was at least in two localities *Thalictrum calabricum* Sprengel. The single specimen collected at 1900 m may have drifted there.

Phenology. Adults were found continuously from end of May until end of October. Possibly univoltine (see Vidano, 1965, for "*Dikraneura micantula*").

Distribution. To date, the species is known from Latium, Basilicata, Calabria, and Sicily.

Etymology. The species is named after Carlo Vidano, who found the species in Sicily in 1985, and mentioned it as new species in his notebook (as "*M. sicula*") (Moro Arzone et al. 2008, p. 367). He collected the species at the following locality: Sicily, Madonie (Palermo), Quacella, m 1200, 30.05.1985, Host plant *Thalictrum calabricum*: 3 males, 13 females, and sketched in his notebook the aedeagus in lateral and ventral view, the genital style, and the genital plate (see Moro Arzone et al. 2008).

Remarks. The material published as *M. micantula* from the Etna Mountain (Guglielmino 1993) also refers to *M. vidaniana* sp. nov.

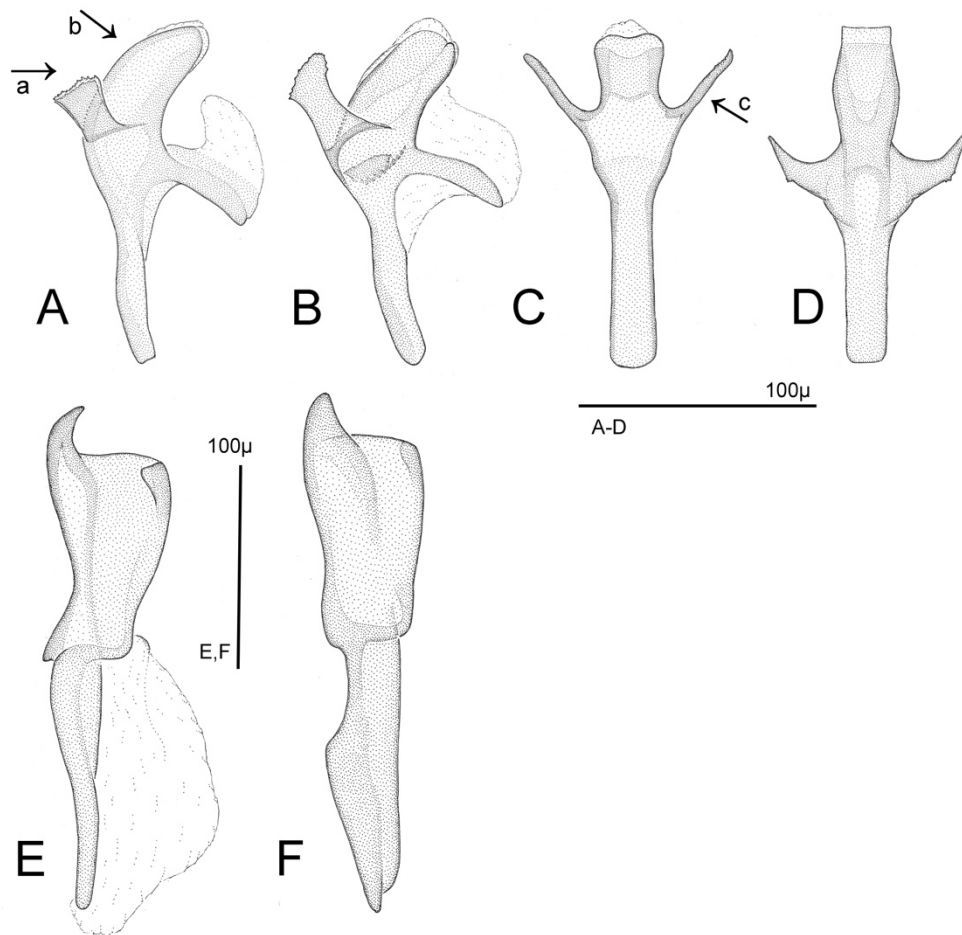


Fig. 3: Figure 3. *Micantulina micantula* Zetterstedt, male, Italy, Valle d'Aosta, Val di Cogne. A-D: Aedeagus: lateral (A), lateroproximal (B, as in direction of arrow c), ventral (C, as in direction of arrow a) and ventroapical (D, as in direction of arrow b) view. – E, F: Left genital style: lateral (E) and dorsal view (F).

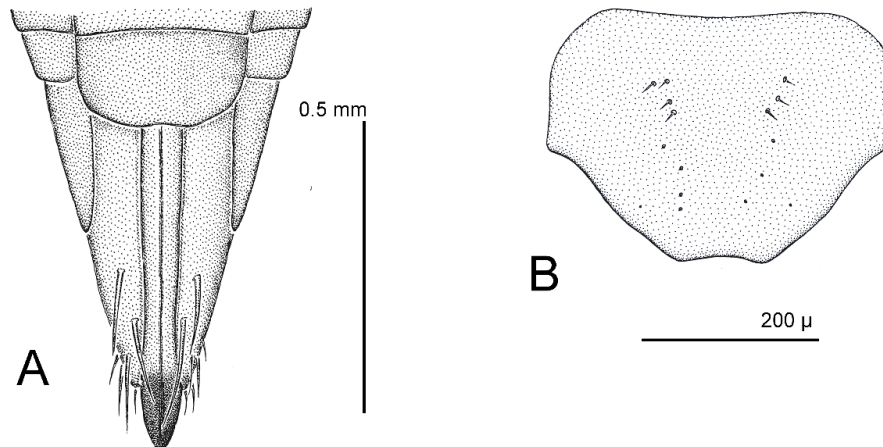


Fig. 4: *Micantulina vidaniana* sp. nov., female. A: Apical part of abdomen, ventral view. B: 7th abdominal sternite, ventral view.

Type material

Holotype male: Calabria (Cosenza); Monte Pollino, road from Civita to Colle Marcione, 2,2 km above fork to Frascineto; N39°49'49,0'' E16°18'11,6''; 612 m; 15/06/2010; Bückle & Guglielmino leg. (535); arid area with tussocks of Poaceae, *Juniperus*, *Pistacia lentiscus*, *Quercus ilex*, *Spartium*, *Helichrysum*. — Paratypes: Same data; 20 males, 20 females. — Calabria (Cosenza); Monte Pollino, road from Civita to Colle Marcione, 2,2 km above fork to Frascineto; N39°49'49,0'' E16°18'11,6''; 612 m; 28/06/2011; Bückle & Guglielmino leg. (570); arid area with tussocks of Poaceae, *Juniperus*, *Pistacia lentiscus*, *Quercus ilex*, *Spartium*, *Helichrysum*, Lamiaceae; 1 male, 2 females. — Calabria (Cosenza); Monte Pollino; XE0520; ~1500m; 08/08/1989; Bückle & Guglielmino leg. (26Sud); beech forest; 1 male, 2 females. — Latium (Latina); Monti Aurunci, Spigno Superiore, slope above Biviano; N41°19.915' E13°41.119'; 800-900 m; 29/07/2012; Bückle & Guglielmino leg. (652); forest with *Ostrya*, *Quercus ilex*, *Rubus*, *Salvia*, Lamiaceae; 1 male. — Sicily (Messina); Monti Nebrodi, Lago Zilio; 28/09/1988; ca. m 1100; D'Urso leg. (513a); undergrowth with *Acer*, *Crateagus*, *Rubus*, hygrophilous vegetation; 16 males, 10 females. — Sicily (Messina); Nebrodi, Moglia; 27.9.88; D'Urso leg. (511b); on *Crataegus*; 1 male. — Sicily (Messina); Nebrodi, Bosco di Malabotta (Roccella Valdemone); m 1215 (st. M1); 18/6/81; D'Urso leg.; beech forest; 3 males, 2 females. — Same locality; 17.9.81; D'Urso leg.; on *Fagus*; 3 males, 1 female. — Same locality; 17.9.81; D'Urso leg.; on clearings; 2 males, 2 females. — Sicily (Messina); Nebrodi, Bosco di Malabotta (Roccella Valdemone); m 1185 (st. M2); 18.6.81; D'Urso leg.; *Quercus cerris* forest; 1 male, 1 female. — Same locality; 17.9.81; D'Urso leg.; 1 male, 1 female. — Same locality; 17.9.81; D'Urso leg.; on *Quercus cerris*; 2 males, 2 females. — Same locality; 26.10.81; D'Urso leg.; 1 female. — Same locality; 25.6.82; D'Urso leg.; on *Quercus cerris*; 1 male. — Sicily (Messina); Nebrodi, Bosco di Malabotta (Roccella Valdemone); 26.10.81; D'Urso leg.; cut beech forest; 1 male, 1 female.

Holotype, two male and two female paratypes are deposited in Senckenberg Naturhistorische Sammlungen Dresden, Museum für Tierkunde, Dresden, Germany (MTD). 20 male and 22 female paratypes are deposited in Private collection Guglielmino/Bückle (CGB). 31 male and 21 female paratypes are deposited in Private collection Vera D'Urso (CD).

Further material examined

Micantulina vidaniana sp. nov.

Italy: Basilicata (Potenza); Laghi di Monticchio, Lago Grande, southwestern side; N40°55'55.9" E15°36'00.2"; 671m; 27/07/2009; Bückle & Guglielmino leg. (458); undergrowth of *Alnus glutinosa*, *Carex* spp., *Poa*, *Glyceria*, *Urtica*, *Salix alba*, *S. purpurea*., 1 female. — Calabria (Reggio); Monte Aspromonte, road from Gambarie to Montalto 10,5 km from fork of road SS 183; ~ 1900 m; 19/08/2009; Bückle & Guglielmino leg. (505); mixed forest with *Fagus sylvatica* and *Abies alba* with small strongly degraded pasture areas; 1 female. (CGB). — Sicily (Messina); Nebrodi, Gorgo Secco; VB8199; m 1600; 25.6.86; D'Urso leg.; clearings among beeches; 1 female. — Sicily (Messina); Nebrodi, between Cesarò and Portella Miraglia; m 1285 (st.5); 23.5.81; D'Urso leg.; oak forest; 1 female. — Same locality; 25.10.81; D'Urso leg.; 1 female. — Same locality; 25.10.81; D'Urso leg.; on clearing; 1 female. (CD).

Micantulina micantula Zetterstedt

Bulgaria: Novo Selo, Besaparski hills; 347 m; 29/05/2014 (BU67); Bückle & Guglielmino leg.; dry slope, on *Thalictrum*; 1 male. — Same locality; 334 m; 11/06/2013 (BU33); Bückle & Guglielmino leg.; 1 female. (CGB).

Italy: Valle Aosta; Cogne, Champlong; N45°35'49.5" E07°22'55.0"; 1605 m; 12/08/2022 (901); Bückle & Guglielmino leg.; forest edge, on *Thalictrum*; 5 males, 6 females. — Piemonte (Cuneo); Monviso, Valle Varaita, Chianale, road to Colle dell'Agnello; N44°39'11.6" E06°59'30.3"; 1839 m; 19/08/2022 (914); Bückle & Guglielmino leg.; forest with Poaceae, on *Thalictrum*; 1 male, 4 females. — Trentino-Alto Adige (Bolzano); Planeil; N46°43'34.0" E10°35'20.0"; 1720 m; 08/08/2023; Bückle & Guglielmino leg.; dry areas with *Carex humilis*, Poaceae, on *Thalictrum* (942); 2 females. (CGB).

4. Discussion

M. vidaniana sp. nov. seems to be restricted to the central and southern part of the Apennine Peninsula and Sicily. The species is closely related to *M. micantula*, present in Northern Italy along the mountain regions from Liguria, Piedmont, Valle Aosta, Trentino-Alto Adige to Friuli-Venezia Giulia. The record of seven adult specimens of *M. micantula* for Tuscany, province of Arezzo (Moro Arzone et al. 2008, Guglielmino et al. 2021) is erroneous and refers to *M. stigmatipennis* (see Vidano 1965). The presence of *M. micantula* in France is very probable, as the species was collected in Piedmont about only ten kilometres distant from the French border. Nevertheless, records from France up to now do not exist (Ribaut 1936, 1952; Della Giustina 1989).

In contrast to *M. micantula*, which is widely distributed in the Palearctic Region, *M. vidaniana* seems to have a rather restricted range and is possibly an Italian endemite.

M. pseudomicantula was listed for Italy and France by Nast (1987), but these records are surely based on a technical mistake (two type localities are recorded, one of them Italy). We could not find any original record of *M. pseudomicantula* for these two countries in the literature. Similarly, the listing from Sweden by Dmitriev et al. (2024) is apparently not backed by

any original records. Originally this species was described from Finland (Knight 1965) and later found in Lithuania (Vilbaste 1974), Mongolia (Emeljanov 1977) and Siberia, notably Tuva (Vilbaste 1980) and Khabarovsk Territory (Anufriev & Emeljanov 1988).

5. Zusammenfassung

Micantulina vidaniana sp. nov., nahe verwandt mit *M. micantula* Zetterstedt, 1840 und *M. pseudomicantula*, Knight 1965, wird aus Italien beschrieben. Die Genitalmorphologie von *M. micantula* in Norditalien (Valle D'Aosta) wird gezeichnet. Die Verbreitung des Subgenus *Micantulina* s. str. in Italien wird diskutiert.

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Addresses of authors:

Adalgisa Guglielmino: Rosaurus Research Center of Auchenorrhynchology, section 2, Piazza San Faustino 16, I-01100 Viterbo, Italy; e-mail: guglielmotettix@gmail.com

Vera d'Urso: Rosaurus Research Center of Auchenorrhynchology, section 1, Via Tripoli 72, I-95021 Aci Castello (CT), Italy; e-mail: dursovera@yahoo.it

Christoph Bückle: Rosaurus Research Center of Auchenorrhynchology, section 3, Neckarhalde 48, D-72070 Tübingen, Germany; e-mail: rosaurusrex@gmx.de

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