

Research article

# A new species of *Tapinella* Enderlein, 1908 (Insecta: Psocoptera) from French Guiana, North Amazon rainforest

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**Abstract:** A new species of *Tapinella* Enderlein, 1908 was described from French Guiana – *T. montjoliensis* **n. sp.** It was collected near Montjoly Town and Wayki Village. The species was found in a plantation and a village from dry banana (*Musa* sp.) leaves, and among river bank scrubs from dry leaves of various bushes.

**Keywords:** Amazonia, biodiversity, equatorial, insects, rainforest

## Introduction

The faunistic and taxonomic works on the psocid fauna of the Guianas (North Amazon) are scarce. For the territory of French Guiana only 20 species of Psocoptera are known (Lienhard 2016). Information about this insect group can be found in the papers and monographs of Enderlein (1919), Eertmoed (1973), New (1973), Mockford (1974, 1993), and García-Aldrete (2000).

No any species from the family Pachytroctidae were known from the Guianas till now. In this paper I describe a new species of *Tapinella* Enderlein, 1908 (Pachytroctidae) from French Guiana, a genus which contains mainly tropical species and is not studied in detail in the entire area of Equatorial America.

## Material and methods

Psocoptera were collected from French Guiana by beating the vegetation between 29.07–03.08.2023. The specimens were stored in 96% ethanol. The photos (specimens in glycerin) were taken by a camera Canon PowerShot SX500IS through the eyepiece of a light microscope Optika. The material was deposited at the National Museum of Natural


History, Sofia, Bulgaria (NMNH), Natural History Museum of Geneva, Switzerland (NHMG) and the collection of the author. The species discussed in the paper were considered according to original descriptions. Measurements followed Lienhard (1998).

Measurements abbreviations (all in mm in the text): LC = body length; A = antenna length, F+tr = hind femur and trochanter length; T = hind tibia length; t1, t2, t3 = tarsomeres of hindtarsus (lengths measured from condyle to condyle), FW = forewing, HW = hindwing, D = anteroposterior diameter of the compound eye, IO = shortest distance between compound eyes.

## Results and discussion

Family Pachytroctidae Enderlein, 1904

*Tapinella montjoliensis* **n. sp.**

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Material examined: Holotype: 1 ♀, 03.08.2023, North Amazon Region, French Guiana, near Montjoly

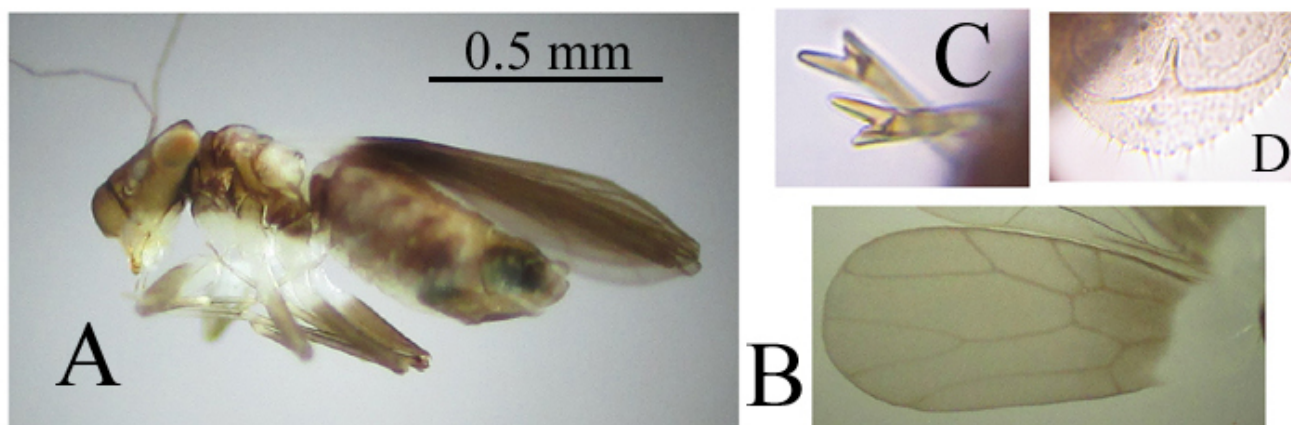


Fig. 1. *Tapinella montjoliensis* n. sp.: A – lateral view, B – forewing, C – tips of the lacinias, D – apex of the subgenital plate with the T-sclerite (C, D – not to scale).

Town, banana (*Musa* sp.) plantation, from dry banana leaves, N04 51 33.0 W52 15 46.0, 14 m a.s.l., NMNH – Sofia, Bulgaria; Paratypes: 2 ♀♀, same date and locality, NMNH – Sofia, Bulgaria; 2 ♀♀, same date and locality, NHMG – Geneva, Switzerland; Additional material: 1 ♀, 29.07.2023, North Amazon Region, French Guiana, near Montjoly Town, banks of Mahury River, from dry bush vegetation, N04 51 38.0 W52 15 23.1, 3 m a.s.l., coll. D. Georgiev; North Amazon Region, French Guiana, Wayki Village, from dry banana leaves, N04 44 27.8 W52 19 13.6, 8 m a.s.l., coll. D. Georgiev.

Type locality: North Amazon Region, French Guiana, near Montjoly Town, banana (*Musa* sp.) plantation, from dry banana leaves, N04 51 33.0 W52 15 46.0, 14 m a.s.l.

Description (after 28 days in 96% ethanol): Female: Colouration: The whole animal is blackish-brown with an exception of the base of the wings, dorsal and ventral side of the thorax, distal half of the coxae, base of the femurs, distal part of the tibiae, ocelli, base of the palps, and mouth apparatus which are white or pale creamy (Fig. 1A).

Morphology: Macropterous. Three ocelli present. Lacinial tip with one long cusp and a small one having itself a small ridge at its internal side (Fig. 1C). Fore and hind wings slender with venation typical for the genus, same as in *T. pictipenna* Thornton, Lee & Chui, 1972 (Thornton et al. 1972) (Fig. 1B). Subgenital plate with large T-sclerite having well developed stem and very long arms, more than two times longer than the stem length (Fig. 1D).

Epiproct cone-shaped, paraprocts elongated. Both with two types of setae: long and short. The long setae of the epiproct are same length like these of the paraprocts.

Measurements (in mm): Holotype (female): LC = 1.06; F+tr = 0.42; T = 0.40; t1 = 0.10, t2 = 0.03, t3 = 0.04, FW = 0.96, HW = 0.74, D = 0.12, IO = 0.25, IO/D = 2.08.

Male: Unknown.

Diagnosis: In body coloration *T. montjoliensis* n. sp. is most similar with *T. pictipenna* Thornton, Lee & Chui, 1972 known from Indonesia (Thornton et al. 1972). The new species differs from *T. pictipenna* by its brown eyes (versus black), darker maxillary palps and antennae (versus very pale buff) and lack of wide dark grey longitudinal band at each side of the abdomen and between the compound eye and the antennal socket (only slight dark patches present). The pigmentation of the forewing of the new species is more evenly distributed, and only by a particular light a slight darkening can be observed near the hyaline basal zone. In addition the arms of the T-sclerite compared to its stem are longer in *T. montjoliensis* n. sp. (more than two times than the stem length). The ratio IO/D in the new species is about two times lower than this in *T. pictipenna* (2.1 vs 4.5).

Etymology: Named after the Montjoly Town, French Guiana, at which vicinities the species was firstly found.

Habitat: The species was collected from a plantation and a village from dry banana (*Musa* sp.)

leaves, and among river bank scrubs from dry leaves of various bushes.

### Acknowledgements

I am grateful to Dr Cristina Fiera (Institute of Biology, Bucharest, Romania) for the scanned paper of Badonnel (1977) about the Cuban cave *Tapinella*.

### References

- Eertmoed G. 1973 The phenetic relationships of the Epipsocetae (Psocoptera): the higher taxa and the species of two new families. Transactions of the American Entomological Society 99: 373–414.
- Enderlein G. 1919 Copeognatha. Collections Zoologiques du Baron Edmond de Selys-Longchamps. Catalogue systematique et descriptif 3 (2): 1–55.
- García-Aldrete A. 2000 New South American *Lachesilla* in the group *forcepeta* (Psocoptera: Lachesillidae). Acta Zoológica Mexicana 80: 69–99.
- Lienhard C. 1998 Psocoptères euro-méditerranéens. Faune de France 83: 1–517.
- Lienhard C. 2016 Country checklists of the Psocoptera species of the World, extracted from Lienhard C., Smithers C. 2002 “Psocoptera (Insecta) – World Catalogue and Bibliography”, Psocid News Special Issue I: 1–123.
- Mockford E. 1974 Records and descriptions of Cuban Psocoptera. Entomologica Americana 48: 103–215.
- New T. 1973 The Archipsocidae of South America (Psocoptera). Transactions of the Royal Entomological Society of London 125 (1): 57–105.
- Thornton I., Lee S., Chui V. 1972 Insects of Micronesia: Psocoptera. Insects of Micronesia 8 (4): 45–144.