

## *Macrotylus jordii* sp. nov. (Hemiptera: Heteroptera: Miridae) from Morocco

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### Abstract

*Macrotylus jordii* sp. nov. is described from Morocco. Photographs of the dorsal habitus, illustrations of some external characters and of genitalia (male and female) are provided. This new species is placed in the subgenus *Macrotylus* s. str. It is easily characterized by its peculiar habitus, especially the shape of its head and male and female genitalia.

**Key words:** *Macrotylus jordii* sp. nov., Phylinae, Miridae, Heteroptera, Morocco.

### Resumen

#### *Macrotylus jordii* sp. nov. (Hemiptera: Heteroptera: Miridae) de Marruecos

Se describe *Macrotylus jordii* sp. nov. de Marruecos, ilustrándose mediante fotografías del habitus dorsal y otras figuras de algunos caracteres externos, así como de la genitalia (masculina y femenina). La nueva especie se sitúa en el subgénero *Macrotylus* s. str., caracterizándose fácilmente por su peculiar habitus, especialmente la forma de la cabeza, y por la genitalia de machos y hembras.

**Palabras clave:** *Macrotylus jordii* sp. nov., Phylinae, Miridae, Heteroptera, Marruecos.

### Laburpena

#### *Macrotylus jordii* sp. nov. (Hemiptera: Heteroptera: Miridae), Marokokoa

*Macrotylus jordii* sp. nov. deskribatzen da, Marokokoa. Habitus dortsalaren argazkiak eta kanpoaldeko karaktere batzuen zein genitalien (arra eta emea) irudiak ematen dira. Espezie berri hau *Macrotylus* s. str. subgeneroan kokatzen da. Bere habitus berezia, batez ere buruaren itxura, eta arren eta emeen genitaliak direla eta, erraz bereizten da.

**Gako-hitzak:** *Macrotylus jordii* sp. nov., Phylinae, Miridae, Heteroptera, Maroko.

### Introduction

The genus *Macrotylus* Fieber, 1858 is widely distributed in the Palaearctic (about 50 species: Kerzhner and Josifov, 1999) and Nearctic (about 14 species: Schuh, 2008) Regions. Two species are recorded from South Africa (Schuh, 1974) and one from Pakistan (Schuh, 2008).

The genus is characterized by the following set of characters: (a) Distinctive claw structure: pulvillus long, free from the claw over most of their length;

claw strongly curved, with a conspicuous basal tooth; short, a little bit longer than tibia width; (b) Tylus prominent, strongly projecting anteriorly, well separated from front; front wide; long gula.

Wagner (1969), recognized 3 subgenera: *Macrotylus*, *Alloeonycha* and *Pontodemus*, defined as follows:

- Subgenus *Macrotylus*: apex of the vesica complex with several digitations or expansions.
- Subgenus *Alloeonycha*: vesica simple with a non-bifurcated apex.
- Subgenus *Pontodemus*: vesica of the *Alloeonycha* type,

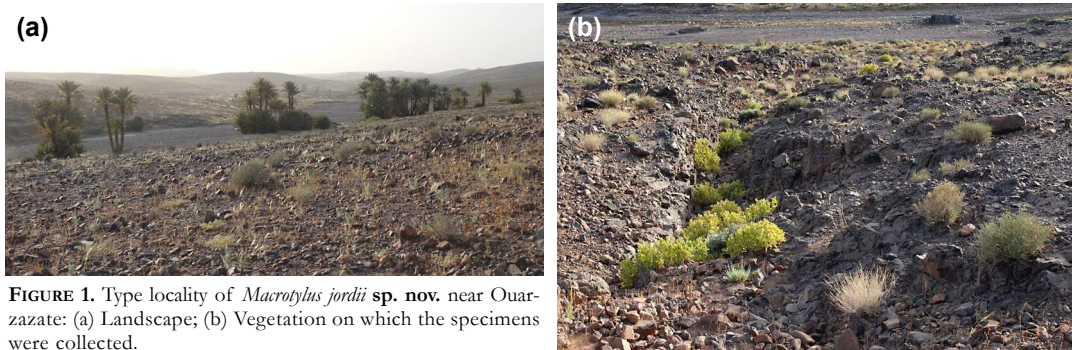


FIGURE 1. Type locality of *Macrotylus jordii* sp. nov. near Ouarzazate: (a) Landscape; (b) Vegetation on which the specimens were collected.

differing from *Alloeonycha* and *Macrotylus* subgenera by its typical claw structure, with a strong basal part in which the pulvillus is inserted.

These 3 subgenera were maintained by Kerzhner and Josifov (1999).

Sampling in Morocco in 2008, I discovered a new species of Miridae, which is described below. This species belongs to the genus *Macrotylus* but the shape of the head is special: not horizontal and not produced anteriorly (Fig. 3). The new species has a claw structure characteristic of the genus similar to those of the subgenera *Macrotylus* and *Alloeonycha* (Fig. 5). The vesica has a complex apex bifurcated, like in *Macrotylus* s. str. (Fig. 4).

## Taxonomy

### *Macrotylus* (s. str.) *jordii* sp. nov.

#### Type material:

HOLOTYPE: ♂: «18-V-2008 / environs de Ouarzazate / MAROC» [white label]; «N30,85052° / W6,82995° / Altitude 1 155 m» [white label]; «Versant sec sur arbuste / J.-C. Streito leg.» [white label]. Deposited in MNHN (Muséum National d'Histoire Naturelle, Paris).

PARATYPES, same labels: 1 ♀ MNHN; 1 ♂, 1 ♀ (Institut scientifique, Université Mohammed V Agdal, Rabat); 1 ♂, 1 ♀ (Armand Matocq collection, Paris); 1 ♀ (Jordi

Ribes collection, Barcelona); 2 ♂♂, 3 ♀♀ (Jean-Claude Streito collection, Montpellier).

Mounted on rhodoid card; genitalia in glycerin in a microvial pinned with the specimen, labelled.

#### Type locality:

A small palm-grove (Fig. 1a) situated in Ouarzazate region (Morocco), on the right along the road N9 from Ouarzazate to Zagora. In May 2009 we again looked for this species in the type locality but unsuccessfully.

#### Description:

Male and female of the same colour (Fig. 2a-b). Ground colour light brown with a typical pattern of yellowish patches. Head shining black, with four yellow spots: two large on each side of the vertex, two small close to eyes (Fig. 3). Antennae: 1<sup>st</sup> segment whitish with a large dark ring in the middle, 2<sup>nd</sup> whitish with two dark rings in subbasal and apical parts, 3 and 4 dark except base of 3, whitish; rings on 1<sup>st</sup> and base of 2<sup>nd</sup> segment darker than other dark parts of antennae. Rostrum: Yellowish, 4<sup>th</sup> segment embrowned on apical half. Pronotum light brown, lighter on anterior half. Scutellum brown, of ground colour, posterior part with two yellowish spots on each side. Clavus yellowish, hairs inserted on conspicuous dark brown dots; corium brown with a median yellowish band of same colour as clavus: yellowish with dark brown dots, cuneus coloured as clavus. Membrane grey with a white spot posterior to cells, surrounded by a darker circle, veins light brown basally, clear, nearly white on apical part. Anterior and middle femora yellowish, posterior femora yellowish,

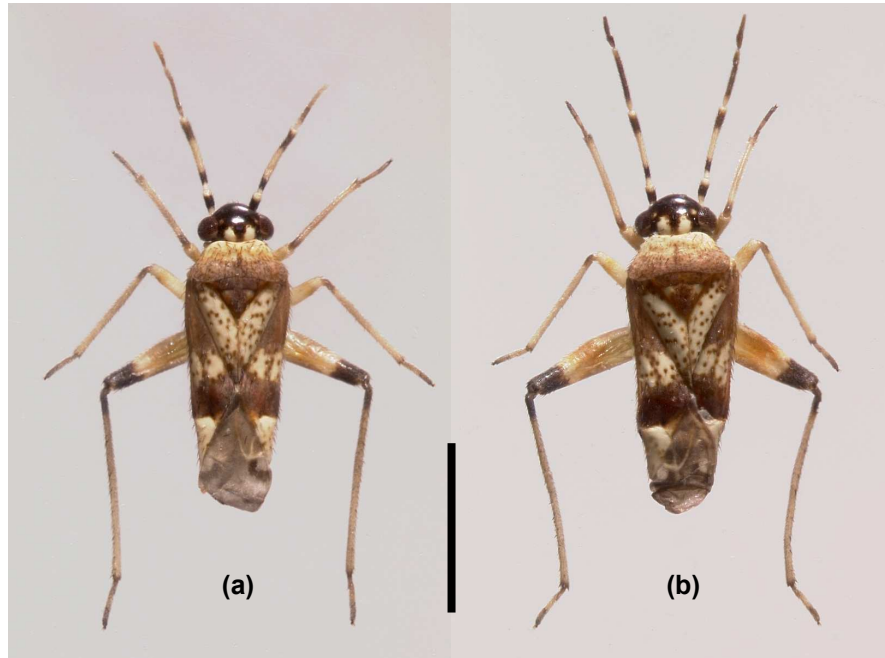


FIGURE 2. Habitus of *Macrotylus jordii* sp. nov.: (a) Holotype male; (b) A paratype female (Scale bar = 1 mm).

black on apical fourth, embrowned in the middle. Tibiae, same colour as femora and rostrum, yellowish, darker on base, posterior nearly black basally. Tarsi light brown, dark apically.

Dorsal vestiture: Strong semi-erect brown hairs inserted in dark dots when on yellow patches.

Body length (mini-maxi or average on 5 males and 7 females): Small, 1.6–1.7 mm (male); 1.7–2.0 mm (female).

Body elongate, about 3.0 times as long as basal width of pronotum (male and female). Head strongly sloping (Fig. 3): front vertical, rounded anteriorly, about 1.25 times (male and female) as broad as pronotum. Ocular index (vertex/eye) about 2.4 (male and female). Rostrum extending beyond abdominal base, reaching segments 2 to 4. Antennae: length of segments (ratio) 6/17.5/13/7 (male), 6/17.5/15/8 (female). Pronotum about 3 times (male and female) as broad as centrally

FIGURE 3. *Macrotylus jordii* sp. nov.: Different views of the head: (a) Dorsal; (b) Frontal; (c) Lateral (Scale bars = 0.25 mm).



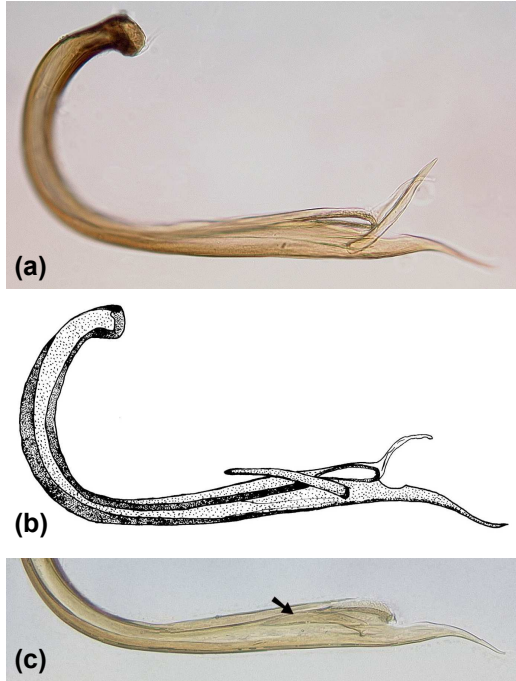


FIGURE 4. Vesica of *Macrotylus jordii* sp. nov. (holotype): (a)-(b) With digital structure erected; (c) With digital structure (arrow) folded down along the vesica.

long. Hemelytra distinctly longer than abdomen in both sexes.

Male genitalia (Figs. 4, 6a-f): Pygophore (Fig. 6a-b) cone shaped, its sides straight without indentations. Shape of parameres typical for Phylini: Left paramere: Fig. 6d-e; Right paramere: Fig. 6f. Vesica (Fig. 4) J-shaped, with two apical processes, the main one at the apex, long, the second one shorter and less sclerified, sometimes difficult to see (Fig. 4c). A third process apparently articulate is inserted below the secondary gonopore (more or less visible whether it is folded along the vesica (Fig. 4c) or erected (Fig. 4a-b)). Theca: Fig. 6c.

Female genitalia (Fig. 6g): Dorsal wall of the gynatrial complex: Ring sclerites quite small, with an internal process extending toward the longitudinal axis.

#### Etymology:

From the first name of our colleague and friend Jordi Ribes, in recognition of his huge amount of studies on Palearctic Heteroptera and especially for his contribution to the forthcoming volume (Pentatomidea) in the series «Faune de France». In celebration of his 80 years birthday.

#### Host-plant:

Collected by beating several unidentified plants (see Fig. 1b).

#### Discussion:

*M. jordii* sp. nov. belongs to the genus *Macrotylus*. Within the genus, it belongs to the subgenus *Macrotylus* by the claw structure (Fig. 5) and the complicated vesica (Fig. 4) with several digitations and processes.

*M. jordii* sp. nov. can be separated from the other species of the genus by its small size, the colour pattern and the shape of its head: strongly sloping, front vertical, rounded anteriorly (Fig. 3). Other species of *Macrotylus* have the head horizontal and produced anteriorly.

The shape of the ring sclerites in the gynatrial complex is also peculiar, with an internal process (Fig. 6g). The ring sclerites have been illustrated by Matocq (1995, 1996) for seven black species of the subgenus *Macrotylus* (*M. lindbergi*, *M. bernadettae*, *M. ehannoi*, *M. seidenstueckeri*, *M. phlomidis*, *M. soosi* and *M. scutellaris*); in these species, the ring sclerites do not show such internal processes.

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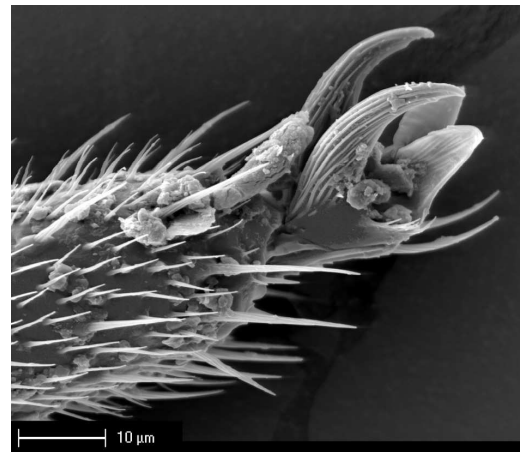
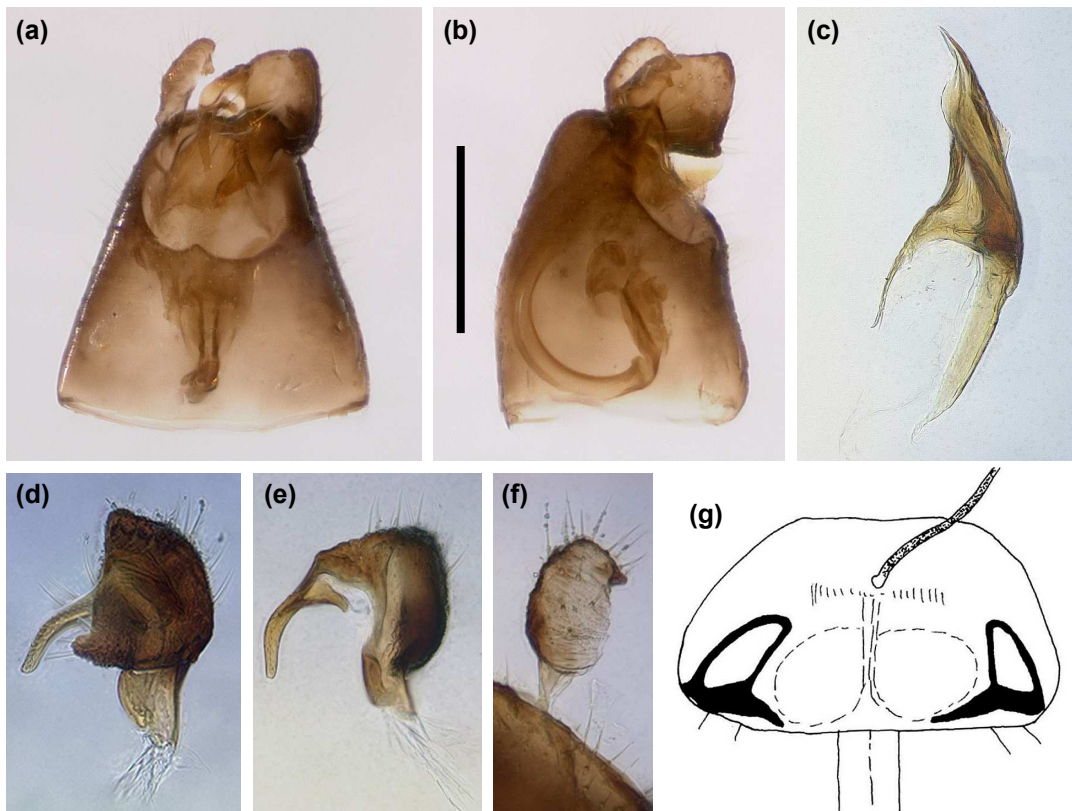


FIGURE 5. Claw of *Macrotylus jordii* sp. nov.



**FIGURE 6.** Genitalia of *Macrotylus jordii* sp. nov.: (a)-(b) Pygophore: (a) Dorsal view; (b) Lateral view (Scale bar = 0.25 mm); (c) Theca; (d)-(e) Left paramere (holotype), two different views; (f) Right paramere (holotype); (g) Gynatrial complex (female genitalia).

microscope. I am finally happy to thank Prof. Arahou Mohamed (Institut Scientifique, Rabat) for his administrative support for Morocco.

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