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***Plinthisus (Plinthisus) jordiribesi* n. sp.**  
**from Murcia, Spain (Hemiptera: Heteroptera:**  
**Lygaeidae: Rhyparochrominae)**

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### Abstract

*Plinthisus (Plinthisus) jordiribesi* n. sp. is described from Totana, Murcia, Spain, in the subarid southeastern region of the Iberian Peninsula. Belonging to the *brevipennis*-group of species, it can be separated from the most closely related species (*brevipennis*, *lepineyi*, *major*, *mehadiensis*) by its greater size (3.5–4.3 mm), the shape of its parameres and other characters of external morphology. The habitus of both sexes and the paramere in different views are illustrated.

**Key words:** *Plinthisus (Plinthisus) jordiribesi* n. sp., Heteroptera, Lygaeidae, Murcia, Iberian Peninsula, taxonomy.

### Resumen

***Plinthisus (Plinthisus) jordiribesi* n. sp. de Murcia, España (Hemiptera: Heteroptera: Lygaeidae: Rhyparochrominae)**

Se describe *Plinthisus (Plinthisus) jordiribesi* n. sp. de Totana, Murcia, España, en la región subárida del sureste de la Península Ibérica. Perteneciente al grupo de especies de *brevipennis*, puede separarse de las especies más próximas (*brevipennis*, *lepineyi*, *major*, *mehadiensis*) por su mayor tamaño (3,5–4,3 mm), la forma de sus parámetros y otros caracteres de morfología externa. Se presentan ilustraciones del habitus de ambos sexos, así como de diversas visiones del parámetro.

**Palabras clave:** *Plinthisus (Plinthisus) jordiribesi* n. sp., Heteroptera, Lygaeidae, Murcia, Península Ibérica, taxonomía.

### Laburpena

***Plinthisus (Plinthisus) jordiribesi* n. sp. Murtziakoa, Espainia (Hemiptera: Heteroptera: Lygaeidae: Rhyparochrominae)**

*Plinthisus (Plinthisus) jordiribesi* n. sp. deskribatzen da Totanakoa (Murtzia, Espainia), Iberiar Penintsularen hegoekialdeko eskualde azpiidorrekoa hain zuzen. Espezie berria *brevipennis* espezie-taldekora izanik, espezie hurbilenetatik (*brevipennis*, *lepineyi*, *major*, *mehadiensis*) bereiz daiteke bere tamaina handiagoa (3,5–4,3 mm), parameroen forma eta kanpo-morfologiaren beste ezaugarri batzuk direla eta. Bi sexuen habitusak eta parameroaren zenbait ikuspegiaren irudiak aurkezten dira.

**Gako-hitzak:** *Plinthisus (Plinthisus) jordiribesi* n. sp., Heteroptera, Lygaeidae, Murtzia, Iberiar Penintsula, taxonomia.

## Introduction

The cosmopolitan and highly diverse genus *Plinthisus* Stephens, 1829 presently is the only genus included in the rhyparochromine tribe Plinthisini Slater & Sweet, 1961<sup>(1)</sup>. Its subgeneric classification (history summarized by Péricart (1999: 116)) is reasonably workable for the Palaearctic fauna, but it is inadequate (subgenera viewed as «provisional constructs» or «form-genera») when the genus is considered on a global scale (Slater and Sweet, 1977; Sweet and Slater, 2004). On the way towards the systematic and biogeographic analysis of the world *Plinthisus* fauna, Sweet and Slater (2004) have recently used the «species-group» approach for the Ethiopian Region, as an intermediate step (avoiding nomenclatural changes) prior to such global study under way. In fact, they believe that many of those species-groups will prove to merit generic status.

Concerning the Euro-Mediterranean fauna (Péricart, 1999, 2001), four subgenera are currently accepted: *Isioscytus* Horváth, 1876, *Nanoplinthisus* Wagner, 1963, *Plinthisomus* Fieber, 1864 and the nominal *Plinthisus* Stephens, 1829. In the Iberian Peninsula, 4, 5, 1 and 5 species in those subgenera, respectively, are certainly known to occur.

*Plinthisus* s. str. can be easily separated from the remaining subgenera by several characters of external morphology (Péricart, 1999): its greater size (2.6–4.4 mm), the profemora ventrally provided with at least two teeth, the difference in punctuation between anterior and posterior lobes of the pronotum and the strongly sexual dimorphic protibiae (more or less curved). On the contrary, the species-level identification is considered to be a difficult task, particularly due to the pterygopolymorphism (brachypterous and macropterous forms) of some species and to the scarcity of specimens in collections for a number of taxa.

*P. (s. str.) brevipennis* (Latreille, 1807) is the most common species in the whole Iberian Peninsula. Recently, Costas *et al.* (2005) have added *P. (s. str.) autrani* Horváth, 1898 to the list of its synonyms. The Iberian distribution of *P. (s. str.) putoni* Horváth,

1876 and *P. (s. str.) longicollis* Fieber, 1861 is mostly Mediterranean. Finally, the scarce Iberian records of *P. (s. str.) lepineyi* Vidal, 1940 and *P. (s. str.) major* Horváth, 1876 come from southern localities.

Among the Heteroptera collected by Ch. R. by light trap in Totana (Murcia, Spain, in the subarid southeastern region of the Iberian Peninsula), some big, macropterous specimens of *Plinthisus* s. str. cannot be ascribed to any known species. We describe the new species below.

All measurements are in mm. For some morphometric characters, after the average value, the whole range is given in parenthesis.

## Description

### *Plinthisus* (s. str.) *jordiribesi* n. sp. (Figs. 1-3)

Macropterous males and females (Figs. 1a-b). Brachypterous phenotypes, if exist, unknown. Total length: males = 3.98 (3.70–4.25); females = 4.08 (3.50–4.30). Body elongate to subovate, 2.8–3.1 × longer than basal (posterior) width of pronotum and 2.3–2.7 × longer than maximum hemelytral width.

Shiny, with dorsal pubescence very short and fine, indistinct. Coloration: Approximately bicolor: Head, pronotum and scutellum dark brown to black; abdomen and ventral face also dark brown. Hemelytra, antennae and legs pale brown. Rostrum also pale brown, except for the apical half of segment IV, which is dark. Posterolateral angles of pronotum usually paler. Clypeus, anteromedial region of pronotum and apex of scutellum sometimes paler. Femora (particularly profemora) and antennal segments III and IV (and sometimes apical third of II) usually darker. Brown color of corium uniform, without darker spots. Membrane uniformly clear, translucent. Eyes silvery.

Punctuation. Head finely punctate. Anterior lobe of pronotum finely and sparsely punctate, with coarser punctures anteromedially and sometimes laterally. Posterior lobe of pronotum, scutellum, clavus and corium densely and closely punctate, with coarser punctures on the posterior lobe of pronotum than on clavus, on clavus than on corium, and on corium than on scutellum. A regular row of punctures on either side of clavus-corium suture, forming altogether a shallow but distinct depression of impunctate

<sup>(1)</sup> According to Henry's (1997) proposal, the Plinthisinae Slater & Sweet, 1961 are a subfamily of the Rhyparochromidae Amyot and Serville, 1843, as has been adopted, among many other authors, by Sweet (see, for example, Sweet and Slater, 2004). Here we follow the conservative criterion maintained by other, particularly European authors, such as Péricart (see, for example, Péricart, 1999, 2001), without giving any opinion at this respect.

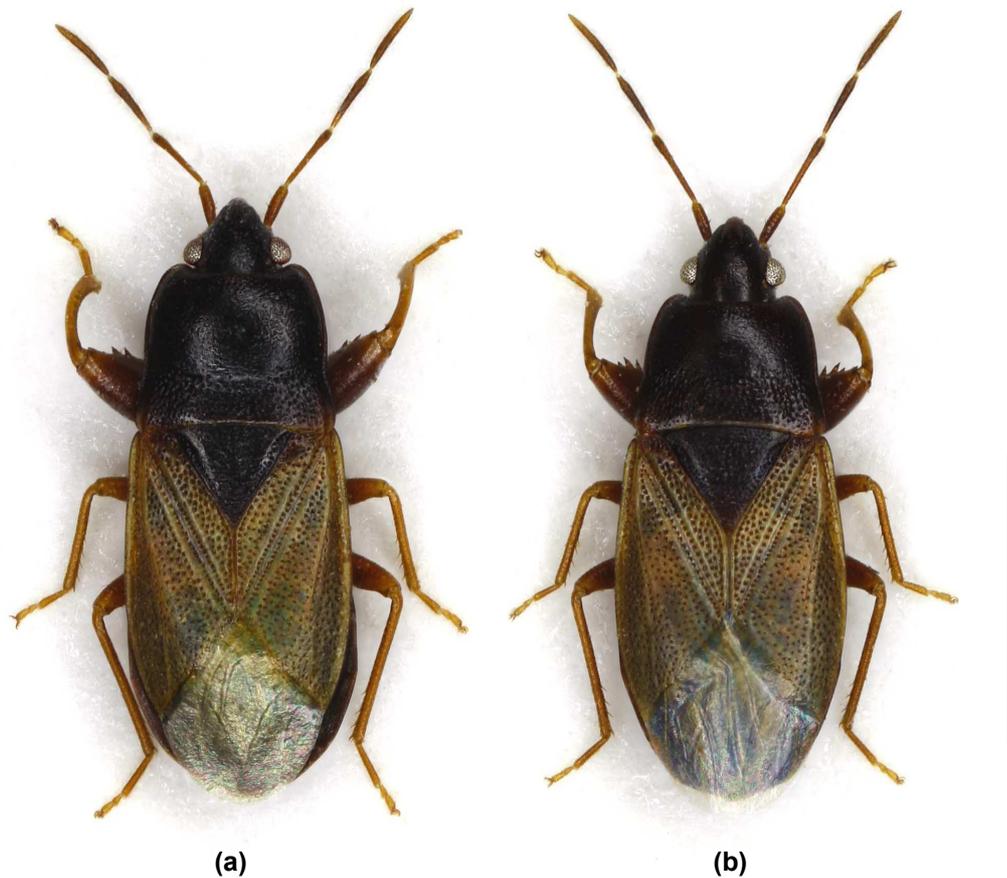


FIGURE 1. *Plinthisus* (*s. str.*) *jordiribesi* n. sp.: Habitus: (a) Male; (b) Female (Scale bar = 2 mm).

slopes; remaining punctures of clavus forming more or less irregular rows, the penultimate row usually being arcuate. Scutellum-clavus commissure also surrounded by a pair of rather regular rows of punctures; the last row on scutellum preceded by a polished area devoid of punctures; some individuals also devoid of punctures on a medial line of scutellum. A large, central area of scutellum and a medial area of the boundary anterior-posterior lobes of pronotum may be transversely striate. Endocorium totally punctate, also posteriorly, but punctures somewhat shallower and sparser there than those adjacent on exocorium.

Long setae visible from above (but not in Fig. 1), as in *Plinthisus* (*s. str.*) *brevipennis* (see Péricart, 1999: Fig. 183a): three pairs on the head (arising respectively from the eyes, from near the clypeus and anterolater-

rally from the vertex), one pair arising from the pro-tibiae very basally, and four pairs arising laterally from the abdomen.

Head rather protruding, ratio length (from apex of clypeus to an imaginary transversal line between ocelli) / width = 0.6–0.7. Ocular index = 3.37 (3.0–3.70). Antennae a bit shorter than half the body length. Length of antennal segments I–II–III–IV = 0.30 (0.27–0.32) – 0.59 (0.51–0.65) – 0.49 (0.42–0.52) – 0.53 (0.45–0.57). Antennal segment I surpassing clypeus by roughly half of its length. Ratio antennal segment II / interocular distance (synthlipsis) = 1.25 (1.21–1.30). Ratio antennal segment II / diatone = 0.79 (0.74–0.81). Ratio antennal segments III/II = 0.82 (0.80–0.85). Ratio antennal segments IV/III = 1.09 (1.06–1.14). Antennae covered with short, pale

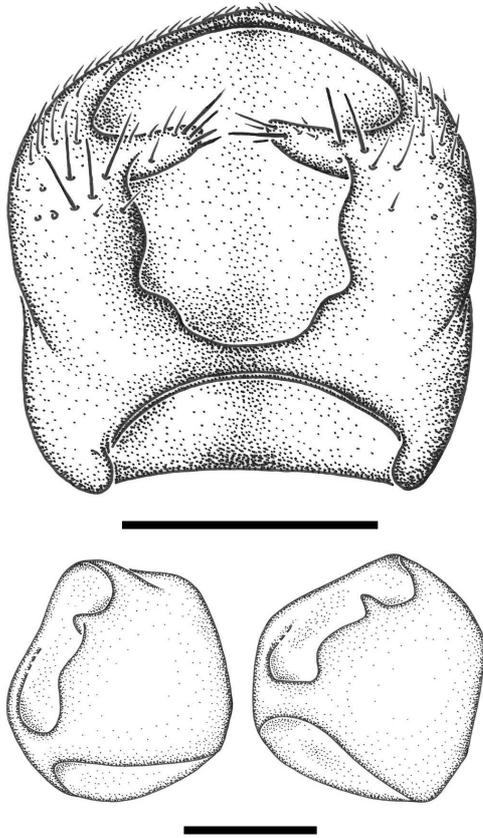


FIGURE 2. *Plinthisus* (s. str.) *jordiribesi* n. sp.: Pygophore, different views (Scale bars = 0.2 mm).

pubescence; segment I also bearing dark setae: 3-4 directed inwards + 1 distal, directed outwards. Rostrum attaining mesocoxae.

Pronotum shape from faintly trapeziform (even subquadrangular) to markedly trapeziform. Lateral sides slightly sinuate. Lateral rim, viewed from side, pale brown or yellowish. Anterior lobe moderately convex. Maximum width of anterior lobe = 1.22 (1.05–1.32). Maximum width of posterior lobe = maximum pronotal width = basal width = 1.37 (1.20–1.50). Mesal pronotal length = 0.95 (0.80–1.10).

Scutellum length = 0.7–0.8, and 1.4–1.6 × longer than claval commissure.

Hemelytra reaching and slightly surpassing the extreme of abdomen. Maximum width of hemelytra at 40% of their length.

Legs. Profemora ventrally with two rows of teeth:

inner row with 3 large (middle one the largest) and, more basally, one smaller teeth; outer row with 4-5 teeth, very distally and much smaller than the 3 distal teeth of inner row. Slight asymmetries in the size of teeth can be found in the same individual between left and right profemora. Protibiae more strongly bent and distally more swollen in males than in females, as typically in the subgenus (see Péricart, 1999: Figs. 182c, e). Protibiae ventrally armed with a row of microteeth along all its length. Meso- and metatibiae provided with fine, yellowish to dark brown spines (normally pale brown, the same colour as tibiae), more abundant towards distal half and inner side. Length of posterior tarsomeres: I longer than 3 × II or III; III slightly longer than II (approx. proportions: I–II–III = 11–3–3.5).

Pygophore as in Fig. 2. Parameres (Fig. 3) flat, somewhat cruciform with a long hypophysis and two lateral lobes.

Sexual dimorphism. Apart from the character of protibiae (stouter and strongly bent in males), the body shape is different between sexes. Although not being significantly longer, females are more voluminous, as revealed by the ratio total length / maximum hemelytral width, when analysed separately: males = 2.66 (2.57–2.73); females = 2.44 (2.33–2.56).

#### Type material:

HOLOTYPE ♂, with a white, typewritten label: «SP-Murcia; Totana / Ortsrand W, Lichtfang / 1.30 W 37.46 N / 12.08.1995, leg.Rieger». A red, typewritten label is now added below: «HOLOTYPE / *Plinthisus* (s. str.) / *jordiribesi* n.sp. / Rieger & Pagola-Carte, 2011».

PARATYPES: 7 (4 ♂♂ and 3 ♀♀), with identical data and label as the holotype. A red, typewritten label is now added below: «PARATYPE / *Plinthisus* (s. str.) / *jordiribesi* n.sp. / Rieger & Pagola-Carte, 2011».

The specimens are mounted on a card, one paratype bearing the genitalia glued on a transparent card below. Deposited in the collection of Ch. Rieger (Nürtingen), except two paratypes (male and female) in the Pagola-Zabalegui collection (Donostia).

#### Etymology:

We are pleased to name this species after Jordi Ribes, in recognition of his outstanding contributions to the knowledge of Iberian and West-Palaeartic Heteroptera.

#### Biology and distribution:

Only known so far from the type locality (Spain: Murcia: Totana), in the subarid southeastern region of

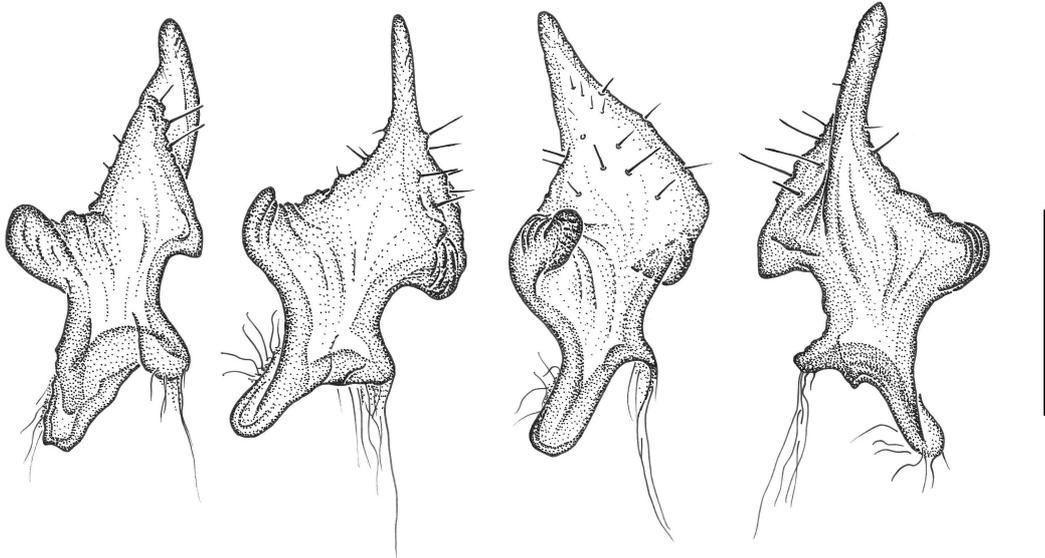


FIGURE 3. *Plinthisus* (*s. str.*) *jordiribesi* n. sp.: Left paramere, different views (Scale bar = 0.1 mm).

the Iberian Peninsula. All specimens were collected at light in summer. No additional biological data are known; see Péricart (1999) for the general requirements or preferences of the genus, which might be presumed also in this species.

## Discussion

*Plinthisus* (*s. str.*) *jordiribesi* n. sp. undoubtedly belongs to the subgenus *Plinthisus* (*s. str.*) for sharing its morphological characters (see Introduction) (Fig. 1). Most of the West-Palaearctic species of this subgenus may be arranged in two species-groups (Péricart, 1999): (1) The *longicollis*-group, with falcate parameres and tergite IV more or less visible in brachypterous forms; (2) The *brevipennis*-group, with laminar parameres and only tergite V more or less visible in brachypterous forms. To this second group belong the majority of species in the subgenus. The paramere of the new species (Fig. 3) is of the *brevipennis* type.

The great size of *P. (s. str.) jordiribesi* n. sp. (3.5–4.3 mm) distinguishes it from the remaining species, with the exception of *P. (s. str.) mebadiensis* Horváth, 1881 (3.7–4.5 mm) and *P. (s. str.) lepineyi* Vidal, 1940 (3.9–4.3 mm) (Péricart, 1999).

*P. (s. str.) mebadiensis* is an Est-Mediterranean species

with only brachypterous forms known so far (Péricart, 1999, 2001). Its conspicuous, semierect pubescence and the shape of its parameres (Wagner, 1963: Fig. 23b; Péricart, 1999: Fig. 187b) are quite different from those in the new species.

*P. (s. str.) lepineyi*, with macropterous and brachypterous forms, is known from Morocco and southern Spain (Péricart, 1999, 2001). The colour pattern of its hemelytra (ferruginous yellow with an elongate dark spot on external margin), its greater ratio antennal segment II / diatone (1.15–1.25) and the shape of its paramere (Péricart, 1999: Fig. 190e) are different from those in the new species.

*P. (s. str.) major* Horváth, 1876, close to *P. (s. str.) lepineyi* and which also lives in northern Africa and has been rarely recorded from the Iberian Peninsula, shows clear differences too: smaller size (3.0–3.75 mm), more elongate antennae with greater ratio segment II / diatone (1.3–1.4) and shape of the paramere (Péricart, 1999: Fig. 187g).

It should be noted, however, that the shape of the paramere in *Plinthisus s. str.* is not, at the current state of knowledge, as informative as wished. Many of the available pictures in the literature may induce to simplistic conclusions. Costas *et al.* (2005) showed the limited value of comparing parameres drawn in different rotation positions. We have tried to represent (Fig. 3) several views of the paramere in the new species,

particularly those allowing comparison to previous authors' works (Wagner, Péricart...) as well as those most frequently adopted by the piece itself immersed in glycerine on the microscope slide. The paramere of *P. (s. str.) jordiribesi* n. sp. is similar to that of *P. (s. str.) brevipennis* (Latreille, 1807).

Among the species of *Plinthisus* (s. str.) only known by brachypterous specimens, we have checked the possibility of any correspondence between those longer than 3 mm and the new species (only known by macropterous specimens). *P. (s. str.) obsoletus* Horváth, 1886 is characterized by its hemelital punctuation, which is shallow and disordered. *P. (s. str.) angulatus* Horváth, 1876 and *P. (s. str.) canariensis* Wagner, 1963 are two closely related species, which also could be close to *P. (s. str.) jordiribesi* n. sp. Their distribution areas (Péricart, 1999, 2001), however, preclude from considering the remote hypothesis of conspecificity with it.

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