

## Revision of the genus *Pachytomella* (Heteroptera: Miridae: Orthotylinae: Halticini)

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**Abstract.** The Palaearctic genus *Pachytomella* Reuter, 1890, comprising six species, is revised, and new synonymies for varieties of *P. phoenicea* (Horváth, 1884) – *P. phoenicea* var. *antennalis* Reuter, 1891, *P. phoenicea* var. *pedalis* Reuter, 1904, *P. phoenicea* var. *nigricornis* Reuter, 1904 – are proposed. Diagnoses and detailed descriptions for the genus and all species are given. Keys to males and females, as well as colour digital habitus images and illustrations of genital structures are provided. The lectotype for *Pachytomella cursitans* Reuter, 1905 is designated. *Pachytomella parallela* is recorded for the first time from Andorra and *P. phoenicea* from Jordan and Syria.

**Key words.** Heteroptera, Miridae, Halticini, *Pachytomella*, taxonomy, revision, key, distribution

### Introduction

The genus *Pachytomella* Reuter, 1890 includes dark-coloured, small halticines (Miridae: Orthotylini: Halticini) clothed with only short simple setae and having a distinctly transverse head. The distribution is principally Mediterranean but also covers Central, Northern and Eastern Europe.

COSTA (1842) described the genus *Pachytoma* to accommodate a new species, *Pachytoma minor* A. Costa, 1842 (junior synonym of *P. passerinii* (A. Costa, 1842)) known only from females. Later, COSTA (1853) described males and broadened the diagnosis. He included in the genus *P. flavomarginatus* (A. Costa, 1842), subsequently transferred to *Schoenocoris* Reuter, 1890 by REUTER (1890), and *P. major* A. Costa, 1853 (junior synonym of *Orthocephalus saltator* (Hahn, 1835)).

REUTER (1890) recognized *Pachytoma* A. Costa, 1842 as a junior homonym of *Pachytoma* Swainson, 1840 (Mollusca), replaced it with the new name *Pachytomella*, and included four previously described species, *P. alutacea* (Puton, 1874), *P. doriae* (Reuter, 1884), *P. parallela* (Meyer-Dür, 1843), and *P. phoenicea* (Horváth, 1884). REUTER (1891, 1904, 1905) described

another two species, *P. nitens* Reuter, 1894 and *P. cursitans* Reuter, 1905, and three varieties of *P. phoenicea* (REUTER 1891, 1904). In addition, REUTER (1891) provided detailed redescrptions of the external morphology, using characters of the head structure, labium, antennae, tibiae, hemelytra and others, of *Pachytomella* and all included species (REUTER 1891) and noted that *Pachytomella* was similar to *Orthocephalus* Fieber, 1858.

Subsequently, *Pachytomella* was included in keys by KERZHNER (1964), WAGNER & WEBER (1965), and WAGNER (1974), where it was placed near the genus *Dasyiscytus* (Fieber, 1864), mainly on the basis of head structure. WAGNER (1974) provided the first key for all six species of *Pachytomella*, but he distinguished them only by external characters.

The present work continues the previous paper regarding the closely related genus *Orthocephalus* (NAMYATOVA & KONSTANTINOV 2009) where the systematic position and most of the diagnostic characters of *Pachytomella* were discussed. The diagnosis is based mainly on the peculiarities in genitalic structure and also includes external characters, such as head structure and vestiture. Also keys for males and females, diagnoses, detailed redescrptions, dorsal habitus digital photographic images (males and females), and illustrations of genitalic structures are provided for all species.

## Material and methods

Approximately 200 specimens were examined. Matrix code labels which uniquely identify specimens (unique specimen identifiers, or USIs) were attached to each specimen. Each USI label usually corresponds to the single specimen, but sometimes, in cases where several specimens are mounted on one pin, a single label corresponds to several specimens. The associated information can be searched through the Planetary Biodiversity Inventory (PBI) Plant Bug locality database ([http://research.amnh.org/pbi/databases/locality\\_database.html](http://research.amnh.org/pbi/databases/locality_database.html)) or through "Discover Life" (<http://www.discoverlife.org/>). The distribution maps based on label data of all specimens examined are available through the above mentioned websites. Georeference data for each locality were obtained from gazetteers, atlases, and other sources.

Distributions are mostly given in accordance with the political entities listed in the Catalogue of the Heteroptera of the Palaearctic Region (KERZHNER & JOSIFOV 1999). Territories from which a species is recorded for the first time are placed in bold print within the species treatments. Available material from the Zoological Institute, St. Petersburg, and other museums and collections were examined for this study. These institutional abbreviations listed are used throughout this paper:

ACPI	Attilio Carapezza collection, Palermo, Italy;
AMPF	Armand Matocq collection, Paris, France;
FMNH	Finnish Museum of Natural History (Museum of Zoology Helsinki), Helsinki, Finland;
HNHM	Hungarian Natural History Museum, Budapest, Hungary;
JRBS	Jordi Ribes collection, Barcelona, Spain;
MNHN	Muséum National d'Histoire Naturelle, Paris, France;
NHMW	Natural History Museum, Vienna, Austria;
NMPC	National Museum, Prague, Czech Republic;
RLRF	Rauno Linnavuori collection, Raisio, Finland;
ZIN	Zoological Institute, Russian Academy of Sciences, St. Petersburg, Russia.

Terminology for male genitalia follows KONSTANTINOV (2003) and that for females follows DAVIS (1955). Dorsal habitus colour digital photographic images were made using a Nikon D-70 camera equipped with macro rings. All measurements are in millimetres. Measurements are shown in table and include body length, clypeus to cuneus length, pronotum length and width, length of antennal segment II, head width, and interocular distance.

## Results

### *Pachytomella* Reuter, 1890

*Pachytoma* A. Costa, 1842: 288 (junior homonym of *Pachytoma* Swainson, 1840, Mollusca). Type species by subsequent designation (KIRKALDY 1906: 131): *Pachytoma minor* A. Costa, 1842 (= *Phytocoris passerinii* A. Costa, 1842).

*Pachytomella* Reuter, 1890: 253 (new name for *Pachytoma* A. Costa, 1842).

**Redescription. Male:** Macropterous, rarely brachypterous; small, elongate, total length 1.4–4.0 mm. COLOURATION (Fig. 1): Body dark brown to black, sometimes with yellowish or pale brown areas; head dark brown to black, sometimes with pale brown or yellowish roundish spot near inner margin of each eye or with single spot between eyes; maxillary plate rarely with yellowish stripe below antennal fossa; labium of same colour as or somewhat paler than head; eye often dark brown to black sometimes with yellowish margins, rarely yellowish with darker spots or uniformly yellowish; colouration of appendages ranging from yellowish to uniformly black; hemelytron usually uniformly dark brown to black, sometimes dirty yellowish or pale brown with dark brown outer margin of corium and inner margin of clavus; membrane uniformly pale brown or yellowish. SURFACE AND VESTITURE: Dorsum smooth or slightly rugose, matt or shining, pronotum and scutellum rugose, hemelytron smooth; entire body clothed with semi-adpressed short simple setae, setae somewhat longer and darker on appendages and abdomen, head and pronotum with few bristle-like setae (Figs. 9A, B); antennal segment I with a pair of spinelike mesial setae; tibial spines dark brown. STRUCTURE: Head: Distinctly transverse (Figs. 8A, C), wider than or as wide as basal width of pronotum (9A); head only slightly protruding ventrally below inferior margins of eyes, diameter of eye wider than distance between inferior margin of eye and apex of clypeus (Figs. 8A, E); eye oval from lateral view and semi-circular in anterior view, almost not protruding (Figs. 8A, C), located at small distance from anterior pronotal margin or in contact with anterior margin of pronotum (Fig. 9A); frons convex; vertex smooth, without depression along hind margin (Figs. 8A, C, E); mandibular and maxillary plates sub-quadrangular, antennal fossa placed lower than and at a small distance from inferior margin of eye (Fig. 8A); antennal segment I somewhat longer than diameter of eye and distinctly shorter than width of vertex; antennal segment I as thick as antennal segment II or slightly thicker, segment II cylindrical, somewhat incrassate, distinctly longer than width of vertex; antennal segments III and IV thin, combined length of these segments shorter than or as long as segment II; labium reaching middle coxa. Thorax: Pronotum trapeziform with almost straight sides, posterior margin straight or slightly concave, posterior angles rounded, calli more or less distinct, flattened; evaporatorium of metathoracic scent gland ellipsoidal, with posterior angle distinctly elongated and extended backwards; scutellum almost flat; hind

femur of typical shape, not swollen or somewhat swollen; tarsal segment II approximately 2× as long as segment I, tarsal segments II and III almost equal in length; in brachypterous specimens hemelytron with rounded posterior margin, cuneus and clavus indistinct, claval commissure shorter than inner margin of clavus. GENITALIA: Genital segment trapeziform, parameres of typical Halticini shape: right paramere spoon-shaped, with oval body and apex pointed or truncate; left paramere L-shaped, with hooked apex, sometimes with an additional process directed upward (Fig. 5). Aedeagus: theca membranous, with sclerotised dorsal wall sometimes bearing apical depression; middle part of ductus seminis membranous, with ribs; basal part of ductus seminis entirely sclerotised or membranous distally; distal portion of ductus seminis strongly sclerotised, divided in two parts separated by membranous area, flattened dorsoventrally, bowl-shaped or rarely elongated, its dorsal wall as long as or slightly longer than ventral wall, with secondary gonopore slitlike; sculpture around secondary gonopore absent or hardly visible (Fig. 2); endosoma voluminous with one or two sclerotised spicules, sometimes also with denticulate areas (Fig. 4).

**Female:** Brachypterous; broadly-oval, small, total size 1.7–2.9 mm. COLOURATION (Fig. 1): Similar to that of male, but hemelytron often dark brown to black, rarely uniformly dirty yellowish with dark brown inner margin. SURFACE AND VESTITURE: Similar to male, hemelytron sometimes rugose or with indistinct punctation. STRUCTURE: Similar to male, but more oval and broader than male; head broader than in male, eye not protruding and in contact with anterior pronotal margin; hemelytra with posterior margin truncate or slightly rounded, clavus indistinct or separated by shallow suture, claval commissure as long as inner margin of clavus. GENITALIA: Dorsal labiate plate with well-developed sclerotised rings of differing shapes and often more or less distinctly sclerotised areas near the rings (Fig. 6); posterior wall of bursa copulatrix with trapeziform sclerite or with a pair of triangular sclerites at sides (Fig. 7); vulva surrounded by a pair of straight sclerites (Fig. 7).

**Differential diagnosis.** Recognized by the following combination of characters: body relatively small, males 1.4–4.0 mm long and females 1.7–2.9 mm long, gracile, often dark coloured, sometimes with pale brown or yellowish appendages and rarely with pale inner part of corium (Fig. 1); dorsum smooth, sometimes rugose, hemelytron rarely with indistinct punctation; head distinctly transverse, slightly protruding ventrally below ventral margins of eyes, diameter of eye wider than distance between eye and apex of clypeus (Figs. 8A, E); head as wide as or wider than posterior margin of pronotum (Fig. 9A); vertex smooth without depression along posterior margin of head (Figs. 8A, C, E); eye bulging and slightly protruding (Fig. 8A), at small distance from or in contact with anterior margin of pronotum (Fig. 9A); antennal segment I short, always shorter than width of vertex, with mesial spine-like setae; dorsum covered only with adpressed, short, simple setae (Fig. 9A, B), without any flattened, scalelike setae, with bristlelike setae occurring only on head and anterior angles of pronotum; hemelytral membrane without setae; hind tarsal segment II at least twice as long as segment I, and longer than segment III; endosomal membrane of aedeagus with one or two spicules, sometimes with denticulate areas basal to spicules (Fig. 4); ductus seminis short, with strongly sclerotised basal portion and membranous middle portion bearing sclerotised ribs (Fig. 2); distal portion of ductus seminis with ring-like sclerite distally followed by membranous area and strongly sclerotised, distinctly bowl-shaped (elongated in *P. parallela*), dorso-ventrally

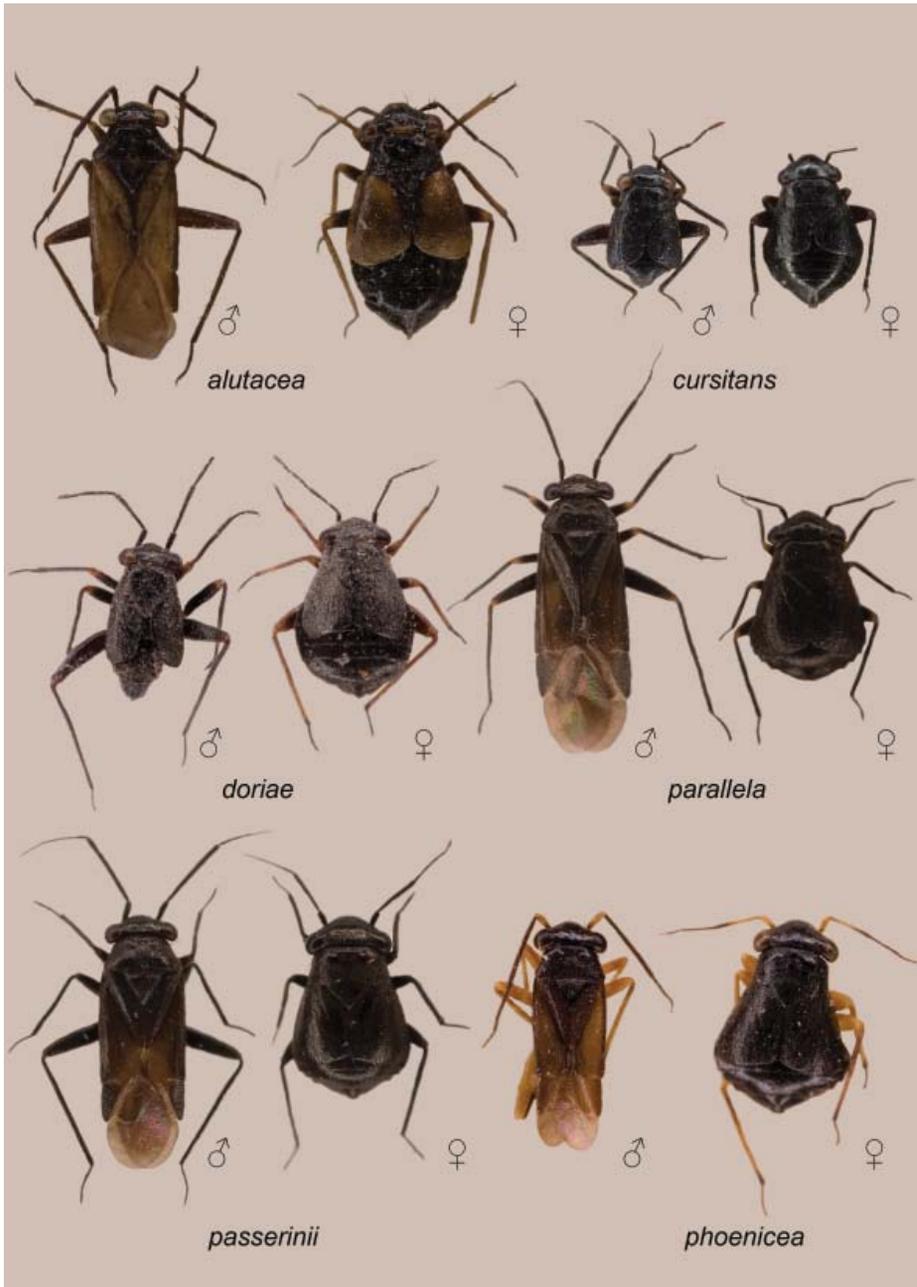


Fig. 1. Habitus views of *Pachytomella alutacea* (Puton, 1874), *P. cursitans* Reuter, 1905, *P. doriae* (Reuter, 1884), *P. parallela* (Meyer-Dür, 1843), *P. passerinii* (A. Costa, 1842), and *P. phoenicea* (Horváth, 1884).

flattened apex (Fig. 2); dorsal and ventral walls of apical portion of ductus seminis equally sclerotised, often equal in length, sometimes with ventral wall somewhat longer but not leaf shaped or broadened; secondary gonopore slit-like, with indistinct sculpture (Fig. 2). *Pachytomella* is close to the genera *Dasyscytus* Fieber, 1864, *Piezocranum* Horváth, 1877, and *Orthocephalus* Fieber, 1858. Representatives of all these genera have more or less equal body proportions, smooth, slightly rugose, or shallowly punctated dorsum in males, more or less transverse head, and antennal segment I shorter than width of vertex, bearing two or three mesial spinelike setae.

In addition to characters listed above, *Pachytomella* is also similar to monotypic *Dasyscytus* in the head slightly protruded below inferior margins of eyes (Fig. 8A), and body clothed only with short, pale setae (Fig. 9B). However, *Dasyscytus* differs by the width of head being distinctly shorter than posterior margin of pronotum, the presence of distinct depression along posterior margin of head, uniformly yellowish hemelytra in male, and hemelytral membrane clothed with pale simple setae. Distal part of ductus seminis in *Dasyscytus* is cylindrical, entirely sclerotised, with secondary gonopore oval-shaped (Fig. 3).

*Pachytomella* can be confused with *Piezocranum* in external view, as they both have elongated body, distinctly transverse head, and vestiture composed only of simple setae. However, the genus can be distinguished by the head distinctly narrower than the base of pronotum, the simple setae semi-erect and relatively long, the dorsum of females with distinct punctation and the distal part of ductus seminis entirely sclerotised, short, and tube-shaped (Fig. 3).

*Pachytomella* is also close to the genus *Orthocephalus* in structure of distal part of ductus seminis, but *Orthocephalus* is separated by possessing a more robust body, a head well extended below inferior margins of eyes (Fig. 8B, F) and its width distinctly shorter than posterior margin of pronotum (Fig. 9C), a vertex often with more or less distinct depression along posterior margin of head (Figs. 8B, D, F), and a body clothed with flattened or scalelike silver setae (9D–F). All species of *Orthocephalus* possess the peculiar structure of the distal portion of ductus seminis (NAMYATOVA & KONSTANTINOV 2009), which is bowl-shaped and flattened like that in most *Pachytomella* species (cf. Figs. 2 and 3). However, in *Orthocephalus* the distal portion of the ductus seminis is uniformly sclerotised, not subdivided by a membranous area. The ventral wall of the distal portion is strongly sclerotised with distinct sculpturing, and the dorsal wall is weakly sclerotised, leaf-shaped, and much longer than the ventral wall (Fig. 3).

**Discussion.** According to our phylogenetic analysis (NAMYATOVA & KONSTANTINOV 2009), *Pachytomella* is monophyletic and represents the sister group of the genus *Orthocephalus*. This conclusion is mainly based on the male genitalic structure, in particular, species of *Pachytomella* having a peculiar structure of the distal part of ductus seminis, as discussed above.

According to our observations, colouration, frons shape, and comparative length of tarsal segments are similar to those in the genera *Orthocephalus* and *Dasyscytus*. The length and coloration of hemelytra have limited systematic value. In *Orthocephalus* males are macropterous and females are mainly brachypterous, whereas in *Dasyscytus* only macropterous males and brachypterous females are known. In *Orthocephalus*, like in *Pachytomella*, the hemelytra are often dark brown to black, but sometimes with pale stripes, whereas in *Dasyscytus* males have uniformly yellowish hemelytra.

The sets of characters, such as the specific shape of the head and presence of only adpressed, short, simple setae, are useful for the *Pachytomella* diagnosing as they do not occur in *Orthocephalus* and *Dasyscyus*. Thus, we consider the genus *Pachytomella* a monophyletic group of species which are very similar to each other in both external and genitalic morphology.

### Key to species

#### Males

1. Macropterous; body length more than 2.7 mm; apical process of left paramere without triangular process at base (Fig. 5, *alutacea*, *parallela*, *passerinii*, *phoenicea*); theca smooth (Fig. 4, *alutacea*, *parallela*, *passerinii*, *phoenicea*). ..... 2
  - Brachypterous; body length less than 2.1 mm; apical process of left paramere with triangular process at base directed upward (Fig. 5, *cursitans*, *doriae*); theca with depression on dorsal wall (Fig. 4, *cursitans*, *doriae*). ..... 5
2. Antennal segments I and II, labium, legs, and rarely hemelytra pale brown or yellowish, sometimes only antennal segment I and II or legs pale brown or yellowish. .... 3
  - Body uniformly dark brown to black, often with spots between eyes, apices of femora, and bases of tibiae sometimes pale brown or yellowish. .... 4
3. Head with single yellowish spot on posterior margin of vertex; apical process of left paramere short and strongly twisted (Fig. 5); aedeagus with a single, small, denticulate spicule (Fig. 4). ..... *P. alutacea* (Puton, 1874)
  - Head with a yellowish spot near each eye; apical process of left paramere straight (Fig. 5, as in *P. passerinii*); aedeagus with a single, long spicule and wide sclerotised area ventral to spicule (Fig. 4). ..... *P. phoenicea* (Horváth, 1884)
4. Apical part of femora and basal part of tibiae often yellowish or pale brown, rarely legs uniformly dark brown to black; endosoma with two spicules, the short spicule more distinctly sclerotised, the long spicule thin and weakly sclerotised (Fig. 4). .....
  - ..... *P. parallela* (Meyer-Dür, 1843)
  - Femora and tibiae always dark brown to black; endosoma with single long distinctly sclerotised spicule and with more or less distinctly sclerotised wide area ventral to spicule (Fig. 4). ..... *P. passerinii* (A. Costa, 1842)
5. Larger, body length 1.8–2.1 mm; antennal segment II 1.5–1.7× longer than width of vertex; eyes not touching anterior margin of pronotum. .... *P. doriae* (Reuter, 1884)
  - Smaller, body length 1.4–1.7 mm; antennal segment II 1.1–1.3× longer than width of vertex; eyes touching anterior margin of pronotum. .... *P. cursitans* Reuter, 1905

#### Females

1. Tibiae mostly yellowish, rarely only fore and middle tibiae yellowish and hind tibiae brownish. .... 2
  - Tibiae dark brown to black or with only apices of femora and bases of tibiae yellowish or pale brown. .... 4
2. Hemelytra yellowish, darker laterally; head with single, yellowish or pale brown spot between eyes; sclerotised rings small,  $1/6^{\text{th}}$ – $1/7^{\text{th}}$  width of dorsal labiate plate (Fig. 6). ..... *P. alutacea* (Puton, 1874)

- Hemelytra dark brown to black; head uniformly dark brown to black or with yellowish or pale brown spot near each eye; sclerotised rings  $1/4^{\text{th}}$ – $1/5^{\text{th}}$  width of dorsal labiate plate (Fig. 6 *doriae*, *phoenicea*). ..... 3
- 3. Smaller, body length 2.0–2.3 mm; dorsal labiate plate with distinct sclerotised area near sclerotised ring (Fig. 6). ..... *P. doriae* (Reuter, 1884)
- Larger, body length more than 2.4 mm; dorsal labiate plate without sclerotised area near sclerotised ring (Fig. 6). ..... *P. phoenicea* (Horváth, 1884)
- 4. Smaller, body length 1.7 mm; vertex uniformly dark brown to black; sclerotised ring roundish and  $1/3^{\text{rd}}$ – $1/4^{\text{th}}$  width of dorsal labiate plate; dorsal labiate plate with sclerotised area near sclerotised ring indistinct (Fig. 6). ..... *P. cursitans* Reuter, 1905
- Longer, body length more than 2.0 mm; vertex often with spot near each eye; sclerotised ring roundish and less than  $1/4^{\text{th}}$  width of dorsal labiate plate or distinctly oval; dorsal labiate plate with sclerotised area near sclerotised ring well defined. .... 5
- 5. Femora and tibiae uniformly dark brown to black; sclerotised rings distinctly oval; sclerotised area near sclerotised ring more than two times as long as width of sclerotised ring. .... *P. passerinii* (A. Costa, 1842)
- Apices of femora and bases of tibiae often yellowish or pale brown, rarely uniformly dark brown to black; sclerotised rings more or less round; sclerotised area near sclerotised ring less than two times as long as width of sclerotised ring. ....  
..... *P. parallela* (Meyer-Dür, 1843)

***Pachytomella alutacea* (Puton, 1874)**

(Figs. 1, 4–7)

*Orthocephalus alutaceus* Puton, 1874: 218.

*Pachytomella alutacea*: REUTER (1890): 253 (revised generic placement).

**Type locality.** Madrid, Spain.

**Material examined.** SPAIN: ANDALUCIA: Quellgebiet des Rio Guarnon [= Source of Guarnon River], 37.11666°N 3.31666°W, H. Franz, 1 ♀ (AMNH\_PBI 00226305) (NHMW). GRANADA: MONACHIL Co.: Sierra Nevada, 37.09305°N 3.39416°E, 2256 m, H. Franz, 1 ♂ (AMNH\_PBI 00336362) (NHMW); Sierra Nevada Veleta, 37.08333°N 3.16667°W, 25.vii.1959–04.viii.1959, H. H. Weber, 1 ♀ (AMNH\_PBI 00145223) (JRBS), 3 ♀♀ (AMNH\_PBI 00312227–AMNH\_PBI 00312228, AMNH\_PBI 00313011) (RLRF).

**Redescription.** **Male:** Macropterous, total length 3.2 mm. COLOURATION (Fig. 1): **Head:** Dark brown, posterior margin of vertex with single yellowish spot  $1/3^{\text{rd}}$  width of vertex; eye uniformly yellowish, darker at posterior margin; mandibular and maxillary plates concolourous with frons; labial segments I and III pale brown, segments II and IV dark brown; antenna uniformly dark brown to black. **Thorax:** Pronotum, pleurites and evaporatorium dark brown, scutellum dark brown with pale brown stripe medially; coxa dark brown, fore and middle femora brownish with paler apex, hind femur uniformly dark brown, tibiae brownish with darker apices, tarsi dark brown to black; hemelytron dirty yellowish with darker outer margin and inner margin of clavus; membrane dirty yellow, same colour with hemelytra, veins yellowish or pale brown, somewhat darker than membrane. **Abdomen:** Dark brown to black. SURFACE AND VESTITURE: As in generic description, setae on dorsum dark brown. STRUCTURE AND MEASUREMENTS: Body 3.0× longer than width

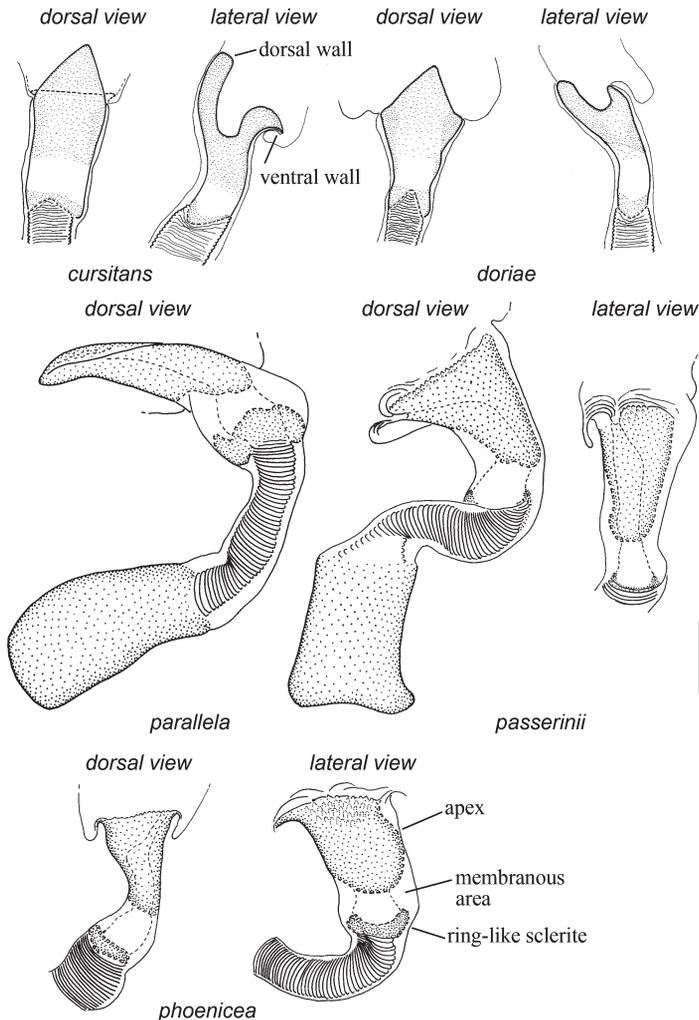


Fig. 2. Ductus seminis. *Pachytomella cursitans* Reuter, 1905 and *P. doriae* (Reuter, 1884): dorsal and lateral views of distal part of ductus seminis; *P. parallela* (Meyer-Dür, 1843): dorsal view of ductus seminis; *P. passerinii* (A. Costa, 1842): dorsal and lateral views of ductus seminis; *P. phoenicea* (Horváth, 1884): dorsal and lateral views of distal and medial parts of ductus seminis. Scale bar: 0.05 mm.

of pronotum. **Head:** 1.3× as wide as high; shape, position of antennal fossa and length of labium as in generic description; vertex 2.0× as wide as width of eye; antennal segment II 0.9× length of basal width of pronotum, 1.1× longer than width of head; antennal segments III and IV combined, shorter than segment II. **Thorax:** Pronotum 2.3× wider than long and 1.2× width of head with posterior margin straight; mesoscutum not exposed; hind femur not swollen. **GENITALIA:** Body of right paramere oval and apically pointed, apical process of

left paramere without triangular process at base, short and strongly twisted (Fig. 5); theca smooth, without depression (Fig. 4); basal portion of ductus seminis uniformly sclerotised, distal part of ductus seminis bowl-shaped (Fig. 2); endosoma with single, small, denticulate spicule (Fig. 4).

**Female:** Brachypterous, total length 2.6–2.9 mm. COLOURATION (Fig. 1): **Head:** Dark brown to black, posterior margin of vertex with single triangular yellow or pale brown spot, 1/2 width of vertex; eye brownish with yellowish posterior margin; mandibular and maxillary plates paler than frons; antennae dark brown to black, antennal segment IV paler than others; labium dark brown. **Thorax:** Pronotum, scutellum, pleurites, evaporatorium, and coxa dark brown to black, femora dark brown with yellowish apices, tibiae yellowish, somewhat darker at bases and apices, tarsi dark brown to black, hemelytron dirty yellowish with inner margin dark brown. **Abdomen:** Dark brown to black. SURFACE AND VESTITURE: As in generic description, hemelytra with indistinct dark punctation; setae on dorsum pale. STRUCTURE AND MEASUREMENTS: Body 2.6–2.9× longer than width of pronotum. **Head:** As in generic description, 1.3–1.4× as wide as high; vertex 2.4–2.7× width of eye; antennal segment II 0.6–0.7× as long as basal width of pronotum, 0.6–0.7× as long as width of head; antennal segments III and IV combined, as long as or shorter than segment II. **Thorax:** Pronotum 1.9–2.0× as wide as long and 0.9–1.0× width of head, with posterior margin straight or slightly concave; mesoscutum not exposed; hind femur not swollen; hemelytra not in contact with each other, reaching abdominal tergum VII, with posterior margin somewhat rounded; claval commissure distinctly longer than scutellum, clavus not delineated. GENITALIA: Dorsal labiate plate with small sclerotised rings, approximately 1/6<sup>th</sup>–1/7<sup>th</sup> the width of dorsal labiate plate, without sclerotised area near sclerotised rings (Fig. 6); posterior wall with a pair of triangular sclerites laterally, these sclerites not surpassing the anterior margin of posterior wall (Fig. 7).

**Differential diagnosis.** Distinguished by the macropterous male, yellowish hemelytra, femora and tibiae paler than pronotum, apical process of left paramere short and strongly twisted, without basal triangular process at base (Fig. 5), smooth theca, endosoma with single small spicula (Fig. 4), and sclerotised rings 1/6<sup>th</sup> to 1/7<sup>th</sup> width of dorsal labiate plate, without sclerotised area near small sclerotised rings (Fig. 6). Similar to *P. phoenicea* in colouration, which can be distinguished by having a spot near each eye on vertex, the straight and long apical process of left paramere (Fig. 5), the aedeagus with a long spicula (Fig. 4), and sclerotised ring 1/4<sup>th</sup>–1/5<sup>th</sup> width of dorsal labiate plate (Fig. 6).

**Distribution.** This species has been recorded only from Spain (PUTON 1874, KERZHNER & JOSIFOV 1999).

**Discussion.** The species was described by PUTON (1874) from a female specimen from Madrid. Subsequently, series of specimens, including males and females, were collected from the Sierra Nevada and near the source of the Guarnon River, by Franz. Females from both series are identical, their external view fits the description of PUTON (1874). Males possess a number of features peculiar to females, such as single yellowish marking between the eyes and yellowish hemelytra.

***Pachytomella cursitans* Reuter, 1905**

(Figs. 1, 2, 4–7)

*Pachytomella cursitans* Reuter, 1905: 53**Type locality.** Puerto de Pajares, Cantabrian Mountains, Spain.**Type material examined.** LECTOTYPE [designated here], 1 ♂: **SPAIN: ASTURIAS:** Puerto de Pajares, 43°N 5.76666°E, G. C. C. (AMNH\_PBI 00257680) (FMNH). PARALECTOTYPES: **SPAIN: ASTURIAS:** Puerto de Pajares, 43°N 5.76666°E, G. C. C., 12 ♂♂ (AMNH\_PBI 00266867, AMNH\_PBI 00313022), 5 ♀♀ (AMNH\_PBI 00257680, AMNH\_PBI 00266867) (FMNH).**Additional material examined.** **SPAIN: ASTURIAS:** Puerto de Pajares, 43°N 5.76666°E, G. C. C., 1 ♂ (AMNH\_PBI 00315007), 1 ♀ (AMNH\_PBI 00315007) (HNHM). Puerto de Vegarada, 43.03333°N 5.48333°W, 1520 m, 02.vii.1965, Gonzalez, 2 ♂♂ (AMNH\_PBI 00145219) (JRBS).

**Redescription. Male:** Brachypterous, oval, total length 1.4–1.7 mm. COLOURATION (Fig. 1): **Head:** Uniformly dark brown to black, sometimes with tiny yellowish spot on vertex; eye dark brown to black with hind margin somewhat paler; labium dark brown to black; antennal segment I and II dark brown to black, segments III and IV of same colour or somewhat paler. **Thorax:** Pronotum, scutellum, pleurites, evaporatorium, coxae, and femora dark brown, fore and middle femora with yellowish apices, hind femur uniformly dark brown to black or with apex somewhat paler, tibiae, tarsi and hemelytron uniformly dark brown to black. **Abdomen:** Dark brown to black. SURFACE AND VESTITURE: As in generic description, hemelytra rugose or with shallow punctation. STRUCTURE AND MEASUREMENTS: Body 1.9–2.3× as long as width of pronotum. **Head:** Shape, position of antennal fossa and length of labium as in generic description; eye not protruding, in contact with anterior margin of pronotum; head 1.4–1.5× as wide as high; vertex 2.0–2.5× width of eye; antennal segment II 0.6–0.7× as long as basal width of pronotum, 0.6–0.7× as long as width of head; segments III and

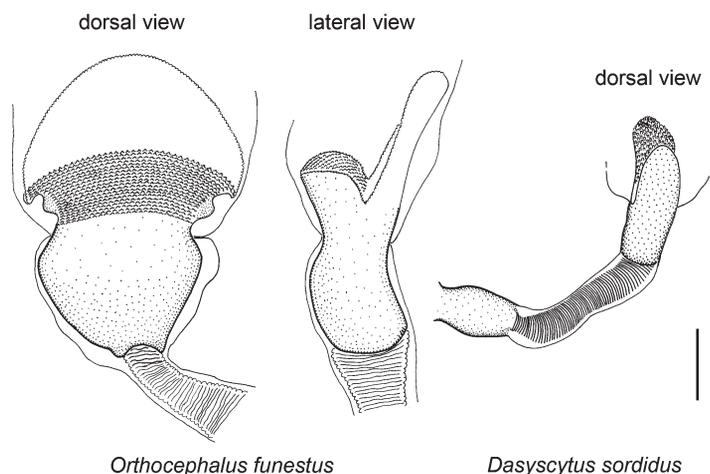


Fig. 3. *Orthocephalus funestus* Jakovlev, 1881: dorsal and lateral view of distal part of ductus seminis. *Dasyscytus sordidus* Fieber, 1864: dorsal view of ductus seminis. Scale bar: 0.05 mm.

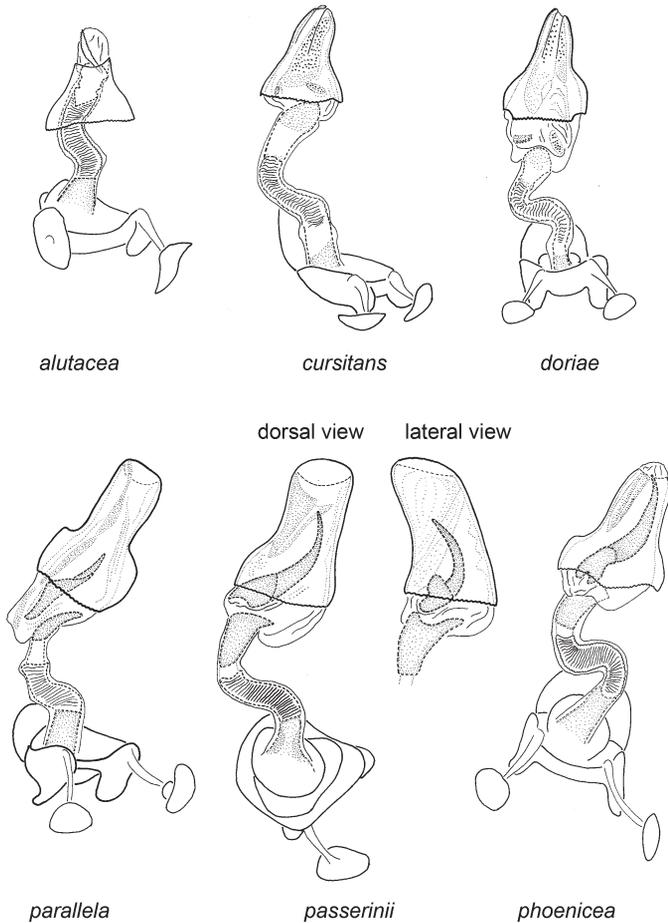


Fig. 4. Dorsal view of aedeagus: *Pachytomella alutacea* (Puton, 1874), *P. cursitans* Reuter, 1905, *P. doriae* (Reuter, 1884), *P. parallela* (Meyer-Dür, 1843), *P. passerinii* (A. Costa, 1842), and *P. phoenicea* (Horváth, 1884). Scale bar: 0.05 mm.

IV combined, as long as or longer than segment II. **Thorax:** Pronotum 2.2–2.5× as wide as long and 0.9–1.0× width of head, with posterior margin straight or concave; mesoscutum not exposed; hind femur distinctly swollen; length of hemelytra ranging from reaching sixth abdominal tergum to reaching eighth tergum, hemelytra in contact with each other, claval commissure longer than scutellum; posterior margin of hemelytron rounded, clavus not delineated. **GENITALIA:** Right paramere with apex truncate (Fig. 5); apical process of left paramere basally with triangular process directed upward (Fig. 5); dorsal wall of theca with apical depression (Fig. 4); basal portion of ductus seminis membranous distally (Fig. 4); distal portion of ductus seminis bowl-shaped, with dorsal wall somewhat longer than ventral wall (Fig. 2); endosoma with one large and two small denticulate areas (Fig. 4).

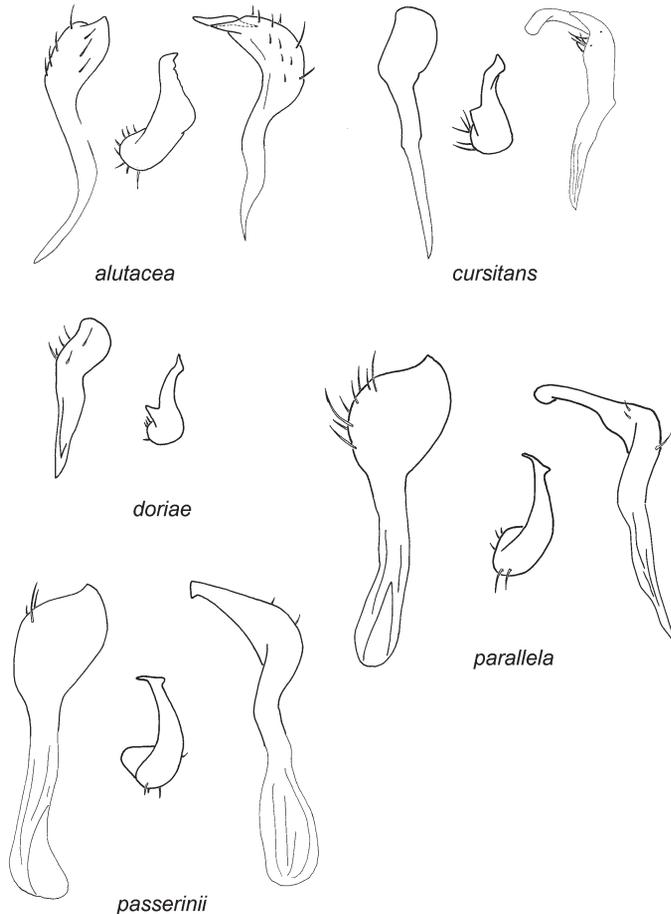


Fig. 5. Parameres: *Pachytomella alutacea* (Puton, 1874), *P. cursitans* Reuter, 1905, *P. parallela* (Meyer-Dür, 1843), and *P. passerinii* (A. Costa, 1842): right paramere form dorsal view, left paramere from behind, left paramere from dorsal view; *P. doriae* (Reuter, 1884): right and left parameres from dorsal view. Scale bar: 0.05 mm.

**Female:** Brachypterous, oval, total length 1.7–1.9 mm. COLOURATION: As in male, vertex always with a distinct yellowish spot. SURFACE AND VESTITURE: As in males. STRUCTURE AND MEASUREMENTS: Structure as in generic description. **Head:** Somewhat broader than in male, 1.3–1.5× as wide as high; vertex 2.4–2.7× width of eye; antennal segment II 0.3–0.4× as long as basal width of pronotum, 0.3–0.4× as long as width of head; antennal segments III and IV combined, equal in length to segment II. **Thorax:** Pronotum 2.5–2.6× as wide as long and 1.0× width of head; posterior margin of pronotum somewhat concave; hemelytra in contact with or at a small distance from each other, reaching abdominal tergum V or VI, with truncate posterior margins; claval suture shorter than scutellum; clavus not delineated. **GENITALIA:** Sclerotised rings of dorsal labial plate relatively large, 1/3<sup>rd</sup>–1/4<sup>th</sup>

width of dorsal labiate plate; sclerotised areas near sclerotised rings indistinct (Fig. 6); posterior wall with single trapeziform sclerite (Fig. 7).

**Differential diagnosis.** Distinguished by the small body, brachypterous male, vertex uniformly dark brown to black, eye in males in a contact with anterior margin of pronotum, antennal segment II in males short, 1.1–1.3× as long as width of vertex, tibiae dark brown to black, apical process of left paramere with triangular process at base (Fig. 5), dorsal wall of theca with apical depression (Fig. 4), endosoma with denticulate areas (Fig. 4), sclerotised ring 1/3<sup>rd</sup>–1/4<sup>th</sup> width of dorsal labiate plate and dorsal labiate plate without sclerotised area near those rings (Fig. 6). Can be confused with *P. doriae*, but females of that species differ by the yellowish tibiae, dorsal labiate plate with narrow sclerotised area near sclerotised rings, and sclerotised rings each 1/4<sup>th</sup>–1/5<sup>th</sup> width of dorsal labiate plate (Fig. 6). Males of *P. doriae* are recognized by having eyes located at a small distance from anterior margin of pronotum, antennal segment II 1.5–1.7× as long as width of vertex (Fig. 5). Male genitalia of *P. cursitans* seemingly are not separable from that of *P. doriae* (Fig. 4).

**Distribution.** The species is known only from Spain (REUTER 1905, WAGNER 1974, KERZHNER & JOSIFOV 1999).

**Discussion.** *Pachytomella cursitans* and *P. doriae* are very similar in both the external view and male genitalia. Both species possess the set of characters that distinguishes them from other species of *Pachytomella*. These characters are: brachypterous males, very short antennal segment II, apical process of left paramere with triangular process at base, dorsal wall of theca with apical depression, and endosoma devoid of spicules, but armed with areas of small denticles.

REUTER (1905) noticed the similarity in the original description of *P. cursitans*, but did not discuss it. WAGNER & WEBER (1965) included both species in the key where *P. doriae* is erroneously separated from *P. cursitans* as a species with macropterous males. However, WAGNER (1974) wrote that both species were brachypterous and could be distinguished by the length of antennal segment II in relation to width of vertex and length of antennal segment III. According to my observations, these two species can be separated by the ratio of antennal segment II to width of vertex, structure of female genitalia, colouration of tibiae in females and other characters indicated in the diagnosis. Males of *P. cursitans* and *P. doriae* seem to have identical male genitalia and can not be reliably distinguished.

### *Pachytomella doriae* (Reuter, 1884)

(Figs. 1, 2, 4–7)

*Orthocephalus doriae* Reuter, 1884: 480.

*Pachytomella doriae*: REUTER (1890): 253 (revised generic placement).

*Pachytomella nitens* Reuter, 1894: 137 (synonymized by REUTER (1902: 174)).

**Type locality.** Tunisia.

**Type material examined.** *Pachytomella nitens*: LECTOTYPE: ♂, SYRIA: Homs, 34.73333°N 36.71667°E, 08 May 1952–14 May 1952, Seidenstücker (AMNH\_PBI 00145127) (FMNH) (designated by KERZHNER (1997)).

**Additional material examined.** FRANCE: PICARDIE: AISNE Co.: Clairfontaine, 49.98333°N 3.98333°E, Sahlberg, 1 ♀ (AMNH\_PBI 00311224) (HNHM), 1 ♂ (AMNH\_PBI 00334005), 2 ♀♀ (AMNH\_PBI 00313869, AMNH\_PBI 00314433) (FMNH). MOROCCO: OUJDA: Taforalt, 34.82°N 2.4°W, May 1962, without collector, 1 ♂ (AMNH\_PBI 00312826) (RLRF). SPAIN: VALENCIANA: Villajoyosa, 30 km NO Alicante, 38.509°N 0.238°W, 03 May 1971,

Eckerlein, 1 ♂ (AMNH\_PBI 00145222) (JRBS). **TUNISIA: EL QASRAYN:** Djebel Bireno, 35.45°N 8.63333°E, 1150 m, 19 May 1991, A. Carapezza, 1 ♀ (AMNH\_PBI 00307366) (ACPI), 1 ♂ (AMNH\_PBI 00307365) (ZIN).

**Redescription. Male:** Brachypterous, oval, somewhat elongated, total length 1.8–2.1 mm. COLOURATION (Fig. 1): As in *Pachytomella cursitans*, but vertex always uniformly dark brown to black. SURFACE AND VESTITURE: As in generic description, hemelytra somewhat rugose. STRUCTURE AND MEASUREMENTS: Body 2.3–2.8× as long as width of pronotum. Head: Shape, position of antennal fossa and length of labium as in generic description; eye slightly protruding, located at some distance from anterior pronotal margin; head 1.3–1.6× wider than high; vertex 2.0–2.1× width of eye; antennal segment II 0.8–0.9× as long as basal width of pronotum, 0.7–0.8× as long as width of head; segments III and IV combined, longer than segment II. Thorax: Pronotum 1.9–2.1× as wide as long and 0.9–1.0× width of head, with posterior margin slightly concave; mesoscutum somewhat exposed; hind femur swollen; hemelytra reaching abdominal tergum VII, not in contact with each other, claval commissure longer than scutellum, posterior margin of hemelytra rounded, clavus not delineated. GENITALIA: Right paramere with apex truncate (Fig. 5), apical process of left paramere with triangular, dorsally projected process at base (Fig. 5, as in *P. cursitans*); structure of aedeagus as in *P. cursitans* (Fig. 4).

**Female:** Brachypterous, oval, total length 2.0–2.3 mm. COLOURATION (Fig. 1): Similar to male, but tibiae and anterior margin of hind femur yellowish or pale brown. SURFACE AND VESTITURE: As in male. STRUCTURE AND MEASUREMENTS: Structure as in generic description. Body 2.3–2.6× as long as width of pronotum. Head: 1.3–1.5× wider than high; vertex 2.4–2.5× width of eye; antennal segment II 0.5–0.6× as long as basal width of pronotum, 0.5–0.6× as long as width of head; antennal segments III and IV combined, longer than segment II. Thorax: Pronotum 2.2–2.3× as wide as long and equal in width to head with posterior margin straight, mesoscutum partly exposed; hind femur somewhat swollen; hemelytra reaching abdominal tergum VI, in contact with each other, claval commissure as long as scutellum, clavus not delineated. GENITALIA: Sclerotised ring 1/4<sup>th</sup>–1/5<sup>th</sup> width of dorsal labiate plate; sclerotised areas near sclerotised rings distinct, fused along midline (Fig. 6); posterior wall with single trapeziform sclerite (Fig. 7).

**Differential diagnosis.** Distinguished by the small body, brachypterous male, vertex uniformly dark brown to black, eye in males at a small distance from anterior margin of pronotum, antennal segment II 1.5–1.7× as long as width of vertex, yellowish tibiae of females, apical process of left paramere with triangular process at base (Fig. 5, as in *P. cursitans*), dorsal wall of theca with depression at apex (Fig. 4), endosoma with denticulate area (Fig. 4), sclerotised ring 1/4<sup>th</sup>–1/5<sup>th</sup> width of dorsal labiate plate and distinct sclerotised area near sclerotized ring (Fig. 6). This species can be confused with *P. cursitans*, but females of the latter species differ in the dark brown to black tibiae and dorsal labiate plate with larger sclerotised ring, 1/3<sup>rd</sup>–1/4<sup>th</sup> width of dorsal labiate plate, and sclerotised area ventral to ring (Fig. 6). Males can be distinguished in having eye in contact with the anterior margin of pronotum, antennal segment II 1.1–1.3× as long as width of vertex. Apparently not separable from *P. cursitans* by the structure of male genitalia (Fig. 4).

**Distribution.** Mediterranean species, known from France, Spain, Algeria, Morocco, Tunisia and Syria (KERZHNER & JOSIFOV 1999).

**Discussion.** This species is very similar to *P. cursitans*. Refer to the corresponding section of *P. cursitans* for discussion of the difficulties in separating these species.

***Pachytomella parallela* (Meyer-Dür, 1843)**

(Figs. 1, 2, 4–7, 8C)

*Capsus parallelus* Meyer-Dür, 1843: 57.

*Pachytomella parallela*: REUTER (1890): 253 (revised generic placement).

**Type locality.** Rigi Kulm or Mt. Staffel, Switzerland.

**Specimens examined.** **ANDORRA:** Pas de la Casa, 42.55°N 1.73333°E, 15 Aug 1982, J. Ribes, 1 ♂ (AMNH\_PBI 00253016) (ZIN). **FRANCE:** Gallia meridionalis, V. Jakovlev coll., 2 ♂♂ (AMNH\_PBI 00315348, AMNH\_PBI 00315349) (ZIN). **AUVERGNE: HAUTE-LOIRE Co.:** Fix-Saint-Geney's [Fix], 45.13333°N 3.66666°E, no details, 1 ♀ (AMNH\_PBI 00312821) (HNHM). **GERMANY: BADEN-WÜRTTEMBERG:** Breitnau, Schwarzwald [Mts.], 47.93333°N 8.06666°E, Jul 1907, Gulde, 2 ♂♂ (AMNH\_PBI 00313628, AMNH\_PBI 00314557), 1 ♀ (AMNH\_PBI 00313456) (HNHM); Feldberg, Todtnau (Schwaben), 47.86666°N 8°E, Sep 1950, Seidenstücker, 4 ♀♀ (AMNH\_PBI 00145123, AMNH\_PBI 00311125, AMNH\_PBI 00313484, AMNH\_PBI 00314290) (RLRF). **HUNGARY:** Csorna Kleva, 47.6°N 17.25°E, Pavel, 1 ♂ (AMNH\_PBI 00145215) (HNHM). **ROMANIA:** Marmaros [= Sighetu Marmatiei], 47.91666°N 23.91666°E, 20 Jul 1883, Popdvan, 2 ♂♂ (AMNH\_PBI 00312307, AMNH\_PBI 00313458), 2 spec. (AMNH\_PBI 00313496, AMNH\_PBI 00314461) (HNHM); Slopes of Pietros Mt., Zakarpatskaya Prov. (probably an error), 47.83°N 24.61°E, 21 Jul 1953, Roshko, 3 ♀♀ (AMNH\_PBI 00269064, AMNH\_PBI 00306281, AMNH\_PBI 00313007) (ZIN). **SPAIN: PROVINCIA DE GIPUZCOA:** Irupagoeta, Oiartzun [Elizalde], Gipuzkoa, 43.3°N 1.85°W, 625 m, 03 May 2003, S. Pagola Carte, 1 ♂ (AMNH\_PBI 00312593), 1 ♀ (AMNH\_PBI 00312592) (ZIN); Mairubaratza, Elizalde [Oiartzun], 43.3°N 1.85°W, 580 m, 03 May 2003, S. Pagola Carte, 1 ♂ (AMNH\_PBI 00312074), 1 ♀ (AMNH\_PBI 00312073) (ZIN). **UKRAINE:** Chernogory, Rakhov, Stanislav Dist., 48.17°N 24.5°E, 19 Jul 1953, Roshko, 1 ♂ (AMNH\_PBI 00306279), 2 ♀♀ (AMNH\_PBI 00306280, AMNH\_PBI 00315248), 8 spec. (AMNH\_PBI 00315249–AMNH\_PBI 00315256) (ZIN); Polonina Sheska nr Goverla Mt., Zakarpatska, 48.13333°N 24.51666°E, 22 Jul 1953, Roshko, 5 ♂♂ (AMNH\_PBI 00306276–AMNH\_PBI 00306278, AMNH\_PBI 00315346–AMNH\_PBI 00315347) (ZIN); Rivne [Rovno], Volynskaya Guberniya, 51.23333°N 23.8°E, 14 Jun 1951, Fasulati, 3 ♂♂ (AMNH\_PBI 00315343–AMNH\_PBI 00315345) (ZIN).

**Redescription.** **Male:** Macropterous, elongated, total length 2.8–4.0 mm. **COLOURATION:** **Head:** Dark brown to black, spot near each eye yellowish or brownish, sometimes indistinct; eye dark brown with yellowish posterior margin, sometimes pale brown with darker spots and with yellowish posterior margin; labium dark brown to black, sometimes brownish and paler than head; antenna dark brown to black. **Thorax:** Pronotum, scutellum, pleurites, and evaporatorium uniformly dark brown to black; coxae dark brown to black, same colour as pleurites or brownish, somewhat paler than pleurites; femora dark brown to black often with yellowish apices; tibiae dark brown to black, often yellowish basally, rarely femora and tibiae uniformly dark brown to black; tarsi dark brown to black. **Abdomen:** Dark brown to black. **SURFACE AND VESTITURE:** As in generic description, dorsum smooth, posterior margin of pronotum often somewhat rugose. **STRUCTURE AND MEASUREMENTS:** Body 2.9–4.0× as long as width of pronotum. **Head:** Shape, position of antennal fossa, and length of labium as in generic description; eye slightly protruding, not in contact with anterior angles of pronotum; head 1.4–1.6× wider than high; vertex 1.8–2.1× width of eye; antennal segment II 0.9–1.0× as long as basal width of pronotum, 0.9–1.2× as long as width of head, segments III and IV combined, somewhat shorter than antennal segment II. **Thorax:** Pronotum 2.1–2.5× wider than long and 1.1× as wide as head; posterior margin of pronotum straight or concave, mesoscutum partly exposed; hind femur not swollen. **GENITALIA:** Body of right paramere

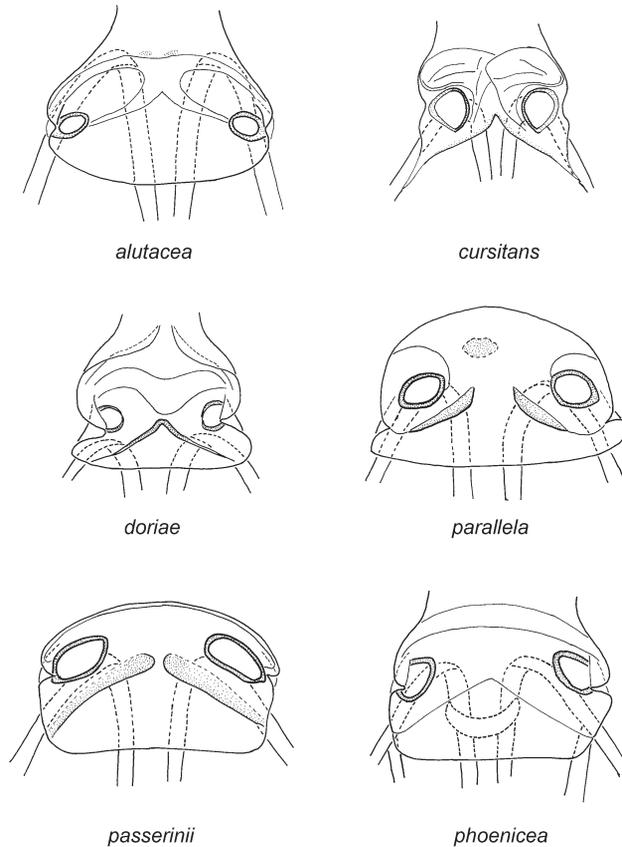


Fig. 6. Dorsal labiate plate. *Pachytomella alutacea* (Puton, 1874), *P. cursitans* Reuter, 1905, *P. doriae* (Reuter, 1884), *P. parallela* (Meyer-Dür, 1843), *P. passerinii* (A. Costa, 1842), and *P. phoenicea* (Horváth, 1884). Scale bar: 0.05 mm.

oval, apical process of left paramere slightly curved, without triangular process at base (Fig. 5); theca smooth, without apical depression on dorsal wall (Fig. 4); basal portion of ductus seminis uniformly sclerotised; distal portion of ductus seminis elongated, claw-shaped (Fig. 2); endosoma with two spicules, short spicule distinctly sclerotised, twisted, shorter than dorsal wall of theca; long spicule thin, distinctly longer than dorsal wall of theca, twisted, weakly sclerotised (Fig. 4).

**Female:** Brachypterous, oval, total length 2.0–2.3 mm. COLOURATION (Fig. 1): As in male, antennal segment IV sometimes pale brown or yellowish, paler than others. SURFACE AND VESTITURE: As in generic description, dorsum slightly rugose. STRUCTURE AND MEASUREMENTS: Structure as in generic description. Body 2.0–2.3× as long as width of pronotum. Head: Somewhat broader than in male, eye not protruding, in contact with anterior

pronotal margin; head 1.3–1.5× as wide as high; vertex 2.4–2.7× wider than eye; antennal segment II 0.4–0.5× as long as basal width of pronotum, 0.4–0.5× as long as width of head; segments III and IV combined, longer than segment II. **Thorax:** Pronotum 2.1–2.3× wider than long and 0.9–1.0× as wide as head; posterior margin of pronotum concave, mesoscutum partly exposed; length of hemelytra ranging from reaching abdominal tergum VI to reaching abdominal tergum VII, with posterior margin truncate or broadly rounded; clavus separated with shallow suture, cuneal commissure longer than scutellum. **GENITALIA:** Rounded sclerotised ring 1/4<sup>th</sup>–1/5<sup>th</sup> width of dorsal labiate plate; sclerotised areas near rings distinctly sclerotised and separated from each other, less than twice as long as sclerotised ring (Fig. 6); posterior wall with a pair of triangular sclerites projecting beyond anterior margin of posterior wall (Fig. 7).

**Differential diagnosis.** Distinguished by the macropterous male, relatively large body, femora often dark brown to black with yellowish apices, tibiae dark brown to black often yellowish basally, distinctly delineated clavus in female, apical process of left paramere without triangular process at base (Fig. 5), dorsal wall of theca smooth, without apical depression (Fig. 4), endosoma with two spicules and without denticulate area (Fig. 4), sclerotised ring of dorsal labiate plate roundish, and sclerotised area near sclerotised ring less than twice length of sclerotised ring (Fig. 6). Similar to *P. passerinii*, which can be distinguished from *P. parallela* by the smaller body size, uniformly dark femora and tibiae, and endosoma with a single spicule (Fig. 4), sclerotised ring distinctly oval, and sclerotised area near sclerotised ring more than twice length of sclerotised ring (Fig. 6).

**Distribution.** Widely distributed in European countries from Spain to Finland in the north and to Ukraine and Belarus in the east. Also recorded from Algeria (KERZHNER & JOSIFOV 1999).

**Discussion.** *Pachytomella parallela* and *P. passerinii* are very similar to each other in external view. WAGNER & WEBER (1965) and WAGNER (1974) noticed that specimens could be distinguished by the ratio of antennal segment II to segment III, size, and colouration of femora.

*Pachytomella parallela* is somewhat larger on average than *P. passerinii* and often has femora with pale apices and tibiae with a pale bases, but I have also examined small specimens of *P. parallela*, as well as specimens with concolourous femora and tibiae. However, these two species could be easily distinguished by the structure of male and female genitalia, as discussed in the diagnosis.

### *Pachytomella passerinii* (A. Costa, 1842)

(Figs. 1, 2, 4–7, 8A, E, 9C)

*Phytocoris passerinii* A. Costa, 1842: 288.

*Pachytoma minor* A. Costa, 1842: 289 (synonymized by COSTA (1853: 55)).

*Capsus minutus* Lucas, 1849: 85 (synonymized by PUTON (1873: 24)).

*Pachytomella passerinii*: REUTER (1890): 253 (revised generic placement).

**Type locality.** Mt. La Majell, Abruzzi, Italy.

**Specimens examined.** **ALGERIA:** **BLIDAH:** Blida, 36.479°N 2.836°E, 1861, A. Strauth., 1 ♂ (AMNH\_PBI 00315338) (ZIN). **CONSTANTINE:** Meridj nr Constantine, 36.35°N 6.6°E, 17 Dec 1972, Orlov, 1 ♀ (AMNH\_PBI 00306286) (ZIN). **ANDORRA:** Pas de la Casa, 42.55°N 1.73333°E, 15 Aug 1982, J. Ribes, 1 ♂ (AMNH\_PBI 00145218), 1 ♀ (AMNH\_PBI 00145218) (JRBS). **CROATIA:** **DALMATIA:** Split, 43.5°N 16.43333°E, 10 May

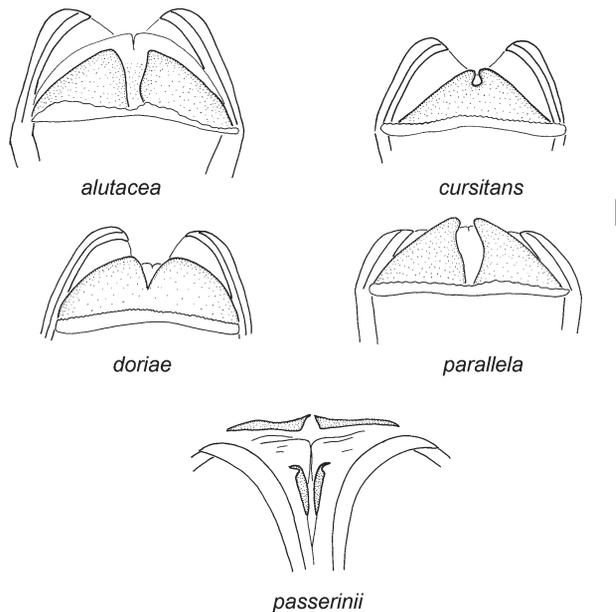


Fig. 7. Posterior wall of bursa copulatrix: *Pachytomella alutacea* (Puton, 1874), *P. cursitans* Reuter, 1905, *P. doriae* (Reuter, 1884), and *P. parallela* (Meyer-Dür, 1843). Sclerites near vulva: *P. passerinii* (A. Costa, 1842). Scale bar: 0.05 mm.

1946, Novak, 1 ♀ (AMNH\_PBI 00313077) (RLRF). **FRANCE:** Gallia meridionalis, V. Jakovlev coll., 2 ♂♂ (AMNH\_PBI 00315339, AMNH\_PBI 00315340) (ZIN). **MIDI-PYRÉNÉES:** Hejeres (Hyerres), 43.11°N 0.00169°E, Horvath coll., 1 ♂ (AMNH\_PBI 00313828), 1 ♀ (AMNH\_PBI 00311150) (HNHM). **PROVENCE-ALPES-CÔTE D'AZUR: Alpes-Maritimes Co.:** Cannes, 43.55°N 7°E, 1700, Signoret, 1 ♂ (AMNH\_PBI 00334018) (NHMW). Eze, 43.71666°N 7.36666°E, 12 Apr 1949, R. Mayne, 1 ♂ (AMNH\_PBI 00314025) (RLRF). **RHÔNE-ALPES:** Faramans, Gallia meridionalis, 45.88333°N 5.11666°E, Horvath coll., 1 ♂ (AMNH\_PBI 00311226) (HNHM). **GREECE: CORFU ISLAND:** Corfu, 39.61666°N 19.81666°E, 1700, Polatschek, 1 ♂ (AMNH\_PBI 00335466) (NHMW); 1903, Paganetti, 1 ♂ (AMNH\_PBI 00335465) (NHMW). **EVROS:** Delta Evros [Evrou], 40.86666°N 25.98333°E, 06 Jun 1982, Drosopoulos, 1 ♂ (AMNH\_PBI 00312819) (RLRF). **ITALY: CAMPANIA:** Positano, 40.62972°N 14.48611°E, 37 m, 14 Nov 1925, El. Miram, 1 ♀ (AMNH\_PBI 00314075) (ZIN); 15 Nov 1925, El. Miram, 1 ♂ (AMNH\_PBI 00315335) (ZIN). **EMILIA-ROMAGNA:** Altissimo Mt., 44.05°N 10.23333°E, 1958, R. Linnavuori, 1 ♂ (AMNH\_PBI 00312828), 3 ♀♀ (AMNH\_PBI 00313606) (RLRF). **FRIULI-VENEZIA GIULIA:** Trieste, 45.6486°N 13.78°E, Graeffe, 1 ♂ (AMNH\_PBI 00145099), 2 ♀♀ (AMNH\_PBI 00314451, AMNH\_PBI 00314464) (HNHM), 4 ♂♂ (AMNH\_PBI 00334015–AMNH\_PBI 00334016, AMNH\_PBI 00335470–AMNH\_PBI 00335471), 1 ♀ (AMNH\_PBI 00334015) (NHMW); Oct 1901, Graeffe, 1 ♂ (AMNH\_PBI 00334014), 1 ♀ (AMNH\_PBI 00334014) (NHMW); 14 Jun 1919, Graeffe, 1 ♂ (AMNH\_PBI 00334017) (NHMW). **LIGURIA:** Bordighera, 43.78333°N 7.66666°E, O. Schneider, 1 ♂ (AMNH\_PBI 00314456), 1 ♀ (AMNH\_PBI 00313608) (HNHM); San Remo, 43.81666°N 7.76666°E, O. Schneider, 1 ♂ (AMNH\_PBI 00315341), 1 ♀ (AMNH\_PBI 00315342) (ZIN). **ROMA:** Rome, 41.86666°N 12.48333°E, 30 May 1947–31 May 1947, Rubtsov, 1 ♂ (AMNH\_PBI 00306287) (ZIN); Rome, Villa Abamelek, 41.892°N 12.459°E, 30 May 1947–31 May 1947, Rubtsov, 1 ♂ (AMNH\_PBI 00315334) (ZIN); Roma, Trebontane, 41.1°N 12.48°E, 28 Oct 1930, Lurg, 1 ♀ (AMNH\_PBI 00314465) (ZIN). **SARDINIA:** Asuni, 39.86666°N 8.93333°E, May 1909–Jun 1909, Krausse, 2 ♂♂ (AMNH\_PBI 00315332, AMNH\_PBI 00315333) (ZIN). **SICILY:** Genova, 37.95°N 12.7°E, Aug 1966, J. Ribes, 3 ♂♂ (AMNH\_PBI 00145221) (JRBS); Palermo, 38.125°N 13.357°E, 21 Apr 1925, El. Miram, 1 ♂ (AMNH\_PBI 00315328) (ZIN); 23 Apr 1925, El. Miram, 6 ♂♂ (AMNH\_PBI 00306283–AMNH\_PBI 00306284,

AMNH\_PBI 00315325–AMNH\_PBI 00315327, AMNH\_PBI 00315329) (ZIN); 28 Apr 1925, El. Miram, 1 ♀ (AMNH\_PBI 00306285) (ZIN); 14 Nov 1925, El. Miram, 1 ♂ (AMNH\_PBI 00315330) (ZIN); 17 Nov 1925, El. Miram, 1 ♂ (AMNH\_PBI 00315331) (ZIN). **TRENTINO-ALTO ADIGE:** Karessee, 46.399°N 11.581°E, 1700, Handlirsch, 2 ♂♂ (AMNH\_PBI 00334012, AMNH\_PBI 00335472), 1 ♀ (AMNH\_PBI 00334013) (NHMW). **TUSCANY:** Vallombrosa, 43.73°N 11.53°E, O. Schneider, 1 ♂ (AMNH\_PBI 00315336) (ZIN). **SPAIN: ANDALUCIA:** Hi. m. Sierra Ronda, Grazalema, 36.75°N 5.36666°W, 1400 m, 16 May 1979–17 May 1979, Jelínek, 3 ♂♂ (AMNH\_PBI 00250385, AMNH\_PBI 00250385, AMNH\_PBI 00312780) (NMPC); Malaga, 36.71666°N 4.41666°W, 01 May 1955, N. Gyllensvard, 1 ♀ (AMNH\_PBI 00312818) (RLRF); 03 May 1955, N. Gyllensvard, 1 ♂ (AMNH\_PBI 00311344) (RLRF). **CANTABRIA:** Viliáfufre, Prov. Santandre, 43.26666°N 3.86666°W, 1700, H. Franz, 1 ♂ (AMNH\_PBI 00335467) (NHMW). **ISLAS BALEARES:** Ibiza Island [Insel Ibiza], 39°N 1.4°E, 1700, H. Franz, 1 ♂ (AMNH\_PBI 00335468) (NHMW). **PROVINCIA DE GUIPUZCOA:** Astigarragako [Astigarraga] Bentak, Erretereria, Guipuzkoa, 43.26666°N 1.95°W, 150 m, 25 May 2002, S. Pagola Carte, 1 ♂ (AMNH\_PBI 00311123), 1 ♀ (AMNH\_PBI 00310496) (ZIN). **PROVINCIA DE VIZCAYA:** Butroe, Gatika [Gatica], Bizkaia, 43.36666°N 2.86666°W, 75 m, 28 Apr 2003, S. Pagola Carte, 1 ♂ (AMNH\_PBI 00308850), 1 ♀ (AMNH\_PBI 00309492) (ZIN). **CANARY ISLANDS: GRAN CANARIA Co.:** No locality, 27.95°N 13.9°W, Becker, 1 ♂ (AMNH\_PBI 00314878) (HNHM). **TENERIFE Co.:** Las Mercedes, 28.515°N 16.284°W, 03 Mar 1949, H. Lindberg, 1 ♂ (AMNH\_PBI 00311120) (RLRF); Las Mesas, 28.2°N 16.64°E, 28 Mar 1964, J. Ribes, 1 ♂ (AMNH\_PBI 00145220) (ZIN). **TURKEY: BURSA:** Brussa [= Bursa], 40.18333°N 29.06666°E, 1882, Merkl, 1 ♀ (AMNH\_PBI 00314500) (HNHM).

**Redescription. Male:** Macropterous, elongated, total length 2.7–3.2 mm. COLOURATION (Fig. 1): **Head:** Dark brown to black, spot near eye yellowish or brownish, sometimes hardly visible; eye dark brown or brownish with yellowish hind margin; labium and antenna dark brown to black, antennal segment IV somewhat paler than other segments. **Thorax:** Uniformly and entirely dark brown to black. **Abdomen:** Dark brown to black. **SURFACE AND VESTITURE:** As in generic description, dorsum smooth and shiny, posterior margin of pronotum somewhat rugose. **STRUCTURE AND MEASUREMENTS:** Body 2.9–3.3× as long as width of pronotum. **Head:** Shape, position of antennal fossa and length of labium as in generic description; eye not protruding, at a small distance or in contact with anterior angles of pronotum; head 1.4–1.5× as wide as high; vertex 1.7–2.0× width of eye; antennal segment II 0.9–1.1× as long as basal width of pronotum, 0.9–1.1× as long as width of head; segments III and IV combined, as long as or shorter than segment II. **Thorax:** Pronotum 2.1–2.2× as wide as long and 1.0–1.1× width of head; posterior margin of pronotum straight or concave, mesoscutum partly exposed; hind femur not swollen. **GENITALIA:** Body of right paramere oval, apical process of left paramere slightly curved, without triangular process at base (Fig. 5); theca smooth, without depression on dorsal wall (Fig. 4); basal portion of ductus seminis uniformly sclerotised (Fig. 2); distal portion of ductus seminis bowl-shaped, with walls around secondary gonopore equal in length (Fig. 2); endosoma with more or less distinct sclerotised area apically and with single curved and twisted spicule, equal in length with dorsal wall of theca (Fig. 4).

**Female:** Brachypterous, oval, total length 2.0–2.2 mm. COLOURATION (Fig. 1): As in male. **SURFACE AND VESTITURE:** As in generic description. **STRUCTURE AND MEASUREMENTS:** Structure as in generic description. Body 2.0–2.3× as long as width of pronotum. **Head:** Somewhat broader than in male, eye not protruding, in contact with anterior pronotal margin; head 1.3–1.4× as wide as high; vertex 2.3–2.6× as wide as eye; antennal segment II 0.5–0.6× as long as basal width of pronotum, 0.4–0.6× as long as width of head, segments III and IV combined, longer than segment II. **Thorax:** Pronotum 2.1–2.5× as wide as long and 0.9–1.0× as wide as head; posterior margin of pronotum concave, mesoscutum

partly exposed; length of hemelytra ranging from reaching abdominal tergum V to reaching abdominal tergum VII, with posterior margin truncate or broadly rounded; clavus separated by shallow suture, cuneal commissure longer than scutellum. GENITALIA: Oval sclerotised ring  $1/3^{\text{rd}}-1/4^{\text{th}}$  width of dorsal labiate plate, sclerotised areas near sclerotised rings separated from each other, more than twice as long as sclerotised ring (Fig. 6); posterior wall with a pair of triangular sclerites projecting beyond anterior margin of posterior wall (Fig. 7).

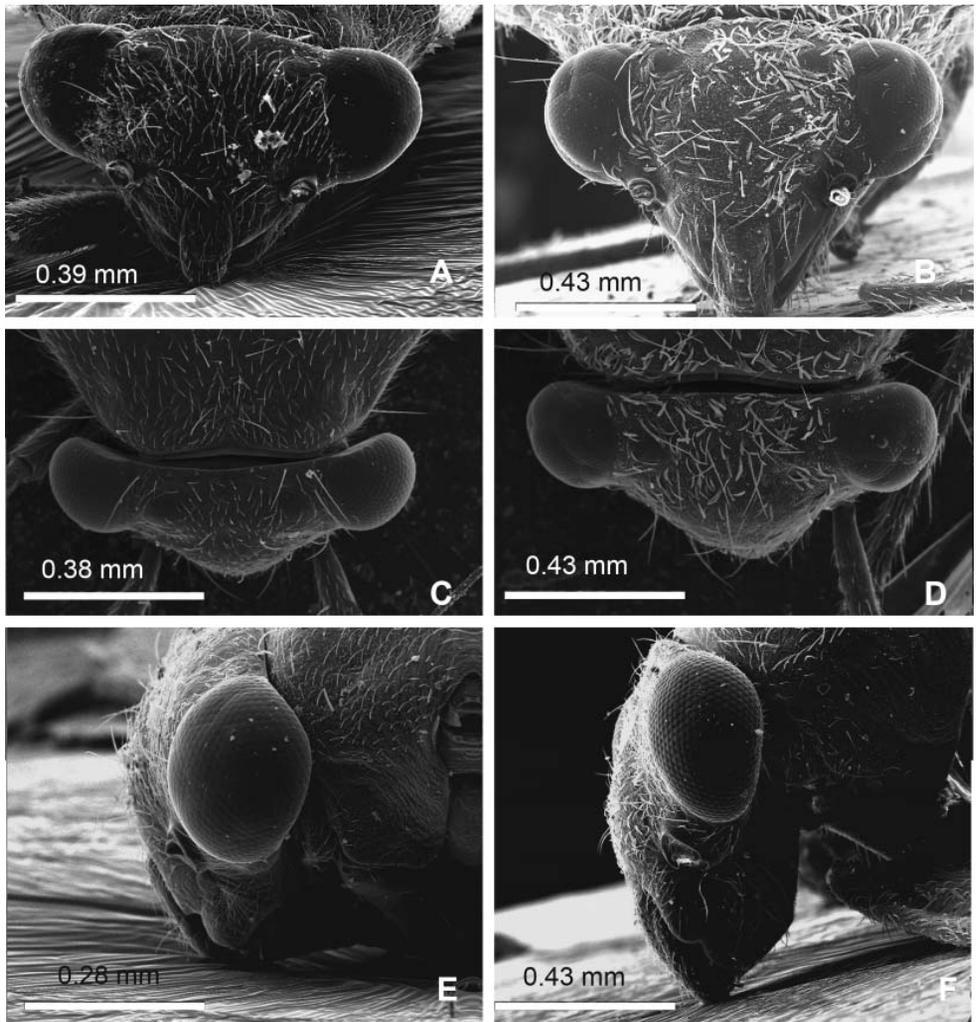


Fig. 8. A–B – Head from anterior view: A – *Pachytomella passerinii* (A. Costa, 1842); B – *Orthocephalus bivittatus* Fieber, 1864. C–D – Head from above: C – *Pachytomella parallela* (Meyer-Dür, 1843); D – *O. bivittatus*. E–F – Head from lateral view: E – *P. passerinii*; F – *O. brevis* (Panzer, 1798).

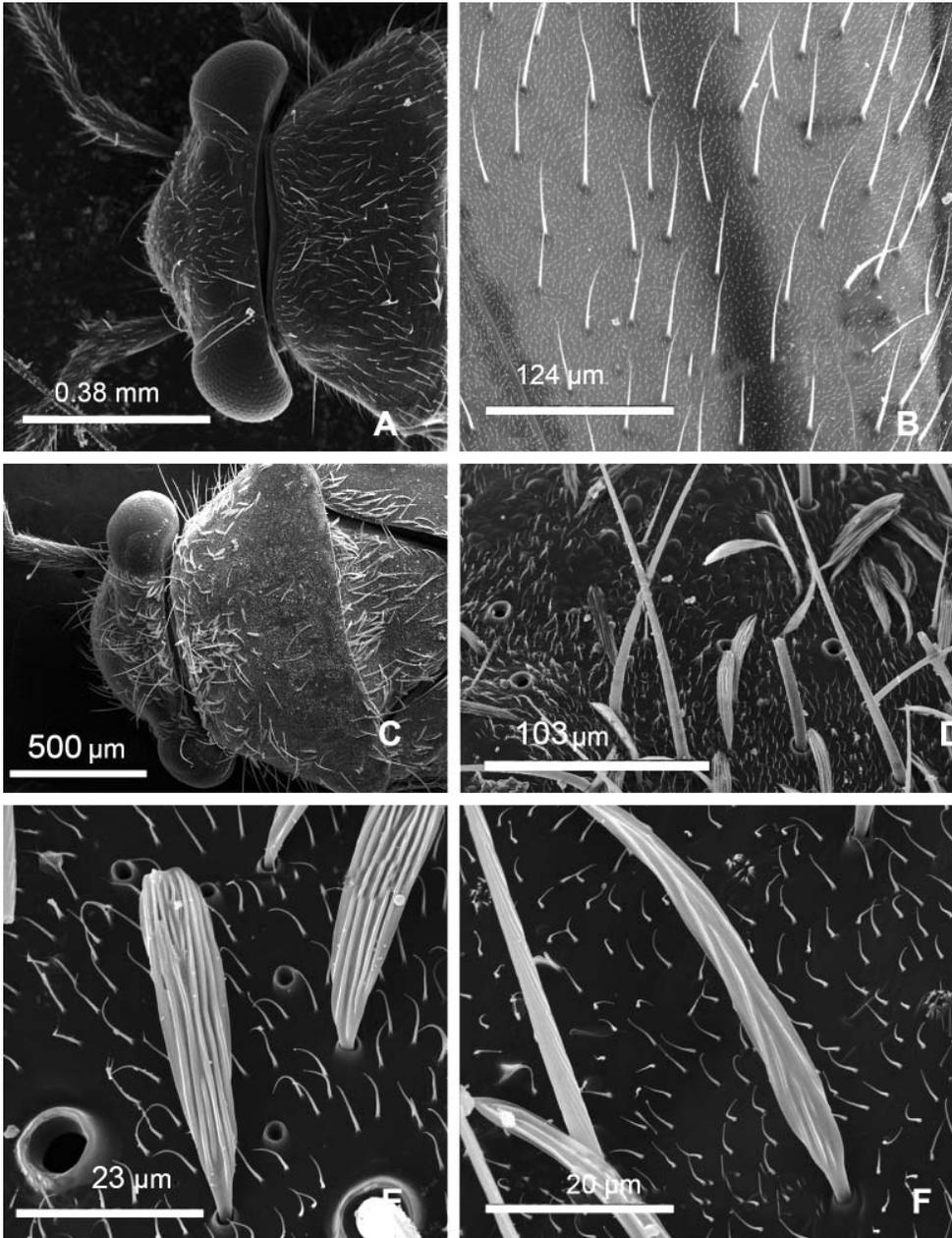


Fig. 9. A – *Pachytomella passerinii* (A. Costa, 1842): head and pronotum. B – *P. passerinii*: vestiture on hemelytra. C – *Orthocephalus bivittatus* Fieber, 1864: head and pronotum. D – *O. bivittatus*: vestiture on anterior part of hemelytra. E – *O. bivittatus*: scalelike seta. F – *O. medvedevi* Kiritschenko, 1951: flattened silver seta.

**Differential diagnosis.** Distinguished by the macropterous male, uniformly dark femora and tibiae, apical process of left paramere without triangular process at base (Fig. 5), dorsal wall of theca without a depression (Fig. 4), endosoma with a single spicule and wide sclerotised area, and without denticulate areas, scleroized rings of dorsal labiate plate distinctly oval, and sclerotised area ventral to each of those rings more than twice as long as sclerotised ring (Fig. 4). Similar to *P. parallela*, which can be distinguished in the longer body size, often femora with yellowish apices and tibiae with yellowish bases, endosoma with two spicules (Fig. 4), sclerotised ring of dorsal labiate plate roundish, and smaller sclerotised area of dorsal labiae plate (Fig. 6). Apparently not separable from *P. phoenicea* in the structure of male genitalia, but that species differs in having yellowish appendages.

**Distribution.** Known mainly from Mediterranean countries and Switzerland. The species has also been recorded from Turkey, Israel and the Canary Islands (KERZHNER & JOSIFOV 1999). New for Andorra.

**Discussion.** This species is very similar to *P. parallela* in appearance. Refer to the corresponding section for *P. parallela* for discussion of the difficulties in separating these species.

### *Pachytomella phoenicea* (Horváth, 1884)

(Figs. 1, 2, 4, 6)

*Labops (Orthocephalus) phoeniceus* Horváth, 1884: 14.

*Pachytomella phoenicea*: REUTER (1890): 253 (revised generic placement).

*Pachytomella phoenicea* var. *antennalis* Reuter, 1891: 164, **syn. nov.**

*Pachytomella phoenicea* var. *pedalis* Reuter, 1904: 15, **syn. nov.**

*Pachytomella phoenicea* var. *nigricornis* Reuter, 1904: 15, **syn. nov.**

**Type locality.** *Pachytomella phoenicea*: Haifa, Israel.

**Type material examined.** *Labops (Orthocephalus) phoenicea*: HOLOTYPE: ♀, **ISRAEL: HAIFA:** Haifa, 32.812°N 34.997°E, Reitter (AMNH\_PBI 00311296) (HNHM).

*Pachytomella phoenicea* var. *antennalis*: LECTOTYPE: ♀, **ISRAEL: JERUSALEM:** Jerusalem, 31.8°N 35.23°E, 1700, Reitter (AMNH\_PBI 00313485) (FMNH) (designated by KERZHNER (1997)).

*Pachytomella phoenicea* var. *nigricornis*: LECTOTYPE: ♀, **ISRAEL: TEL AVIV:** Tal Aviv, Sarona [HaKiryat], 32.06°N 34.76°E, 1700, Sahlberg (AMNH\_PBI 00352243) (FMNH) (designated by KERZHNER (1997)).

*Pachytomella phoenicea* var. *pedalis*: LECTOTYPE: ♀, **LEBANON:** Beirut, 33.88333°N 35.48333°E, 1700, Sahlberg (AMNH\_PBI 00145192) (FMNH) (designated by KERZHNER (1997)).

**Additional material examined.** **ISRAEL: HAIFA:** Haifa, 32.812°N 34.997°E, Reitter, 2 ♀♀ (AMNH\_PBI 00311918, AMNH\_PBI 00313606) (FMNH), 1 ♀ (AMNH\_PBI 00307363) (ZIN); Galilea, 32.68333°N 35.3°E, Sahlberg, 1 ♀ (AMNH\_PBI 00314554) (RLRF), 2 ♂♂ (AMNH\_PBI 00314285, AMNH\_PBI 00330394) (FMNH). **JORDAN:** Al Hammah [El Hamme], 32.68333°N 35.66666°E, 21 Mar 1945, Bytinski-Salz, 1 ♀ (AMNH\_PBI 00145229) (RLRF). **LEBANON:** Beirut, 33.88333°N 35.48333°E, 1700, Sahlberg, 1 ♂ (AMNH\_PBI 00307364) (ZIN). **SYRIA:** Homs, 34.73333°N 36.71667°E, 08 May 1952–14 May 1952, Seidenstücker, 1 ♂ (AMNH\_PBI 00334221), 5 ♀♀ (AMNH\_PBI 00310891, AMNH\_PBI 00330846) (FMNH). **TURKEY: MERSIN:** Tarsus, 36.9178°N 34.8917°E, 17 m, 1700, Sahlberg, 1 ♀ (AMNH\_PBI 00334225) (FMNH); 19 Apr 1955–23 Apr 1955, Seidenstücker, 2 ♂♂ (AMNH\_PBI 00314457, AMNH\_PBI 00315337), 4 ♀♀ (AMNH\_PBI 00313008) (FMNH).

**Redescription. Male:** Macropterous, elongate, total length 2.7–3.1 mm. COLOURATION (Fig. 1): Head: Dark brown to black with pale brown or brownish spot near each eye distinct, rarely invisible; eye dark brown with yellowish posterior margin; labium pale brown; antennal segment I yellowish with darkened base or uniformly dark brown, segment II yellowish with darker apex or uniformly dark brown, segments III and IV dark brown to black. Thorax: Dark

brown to black; pleurites and evaporatorium dark brown to black; coxae yellowish or pale brown with dark brown bases, paler than pleurite; femora uniformly yellowish, rarely fore and middle femora with a dark spot on apical part and hind femur with dark brown apex and spot medially; tibiae yellowish, often darkened at apices, rarely with a dark spot near bases; hind tibia sometimes uniformly brownish, somewhat darker at apex; tarsi pale brown or brown, darker than tibiae; hemelytron uniformly dark brown to black, sometimes corium yellowish with dark brown outer margin, rarely clavus also yellowish with dark brown inner margin. **Abdomen:** Dark brown to black. **SURFACE AND VESTITURE:** See generic description. **STRUCTURE AND MEASUREMENTS:** Body 3.2–3.4× longer than width of pronotum. **Head:** Shape, position of antennal fossa and length of labium as in generic description; eye not protruding, in contact with anterior angles of pronotum; head 1.4–1.5× as wide as high; vertex 1.7–2.0× width of eye; antennal segment II 1.0–1.2× as long as basal width of pronotum, 0.9–1.1× as long as width of head. **Thorax:** Pronotum 1.8–2.1× wider than long and 0.9–1.0× as wide as head; posterior margin of pronotum concave, mesoscutum partly exposed; hind femur not swollen. **GENITALIA:** See description of *P. passerinii*.

**Female:** Brachypterous, oval, total length 2.4–2.8 mm. **COLOURATION** (Fig. 1): **Head** dark brown to black; spot near eye brownish; eye dark brown, with yellowish posterior margin, uniformly yellowish or yellowish with brown spots; labium brownish, paler than head; antennal segment I yellowish, often with darker base, segment II yellowish with dark brown apical part, segments III and IV dark brown to black. **Thorax:** Dark brown to black; pleurite and evaporatorium dark brown to black; fore coxa yellowish, middle and hind coxae yellowish with darker bases; fore femur yellowish, middle femur yellowish, rarely with darker spots near apex, hind femur yellowish, rarely with dark brown spot medially, sometimes basal part also brownish; tibiae often yellowish sometimes with darker bases and apices; sometimes middle and hind tibiae somewhat darker than fore tibia or dark brown to black, rarely fore tibia also dark brown to black; tarsi dark brown to black; hemelytron dark brown to black. **Abdomen:** Dark brown to black. **STRUCTURE AND MEASUREMENTS:** Structure as in generic description. Body 2.3–2.7× as long as width of pronotum. **Head:** Somewhat broader than in male, eye not protruded, in contact with anterior pronotal margin; head 1.3–1.5× wider than high; vertex 2.3–2.6× as wide as eye; antennal segment II 0.5–0.6× as long as basal width of pronotum, 0.5–0.6× as long as width of head; segments III and IV combined, longer than antennal segment II. **Thorax:** Pronotum 1.9–2.2× wider than long and 0.9–1.0× as wide as head; posterior margin of pronotum straight or concave, mesoscutum often partly exposed; length of hemelytra ranging from reaching abdominal tergum V to reaching tergum VII, with posterior margin truncate or broadly rounded; clavus not separated or separated by shallow suture. **GENITALIA:** Dorsal labiate plate without sclerotised areas near each ring, sclerotised rings oval, 1/4<sup>th</sup>–1/5<sup>th</sup> width of labiate plate (Fig. 6); posterior wall with a single sclerite projecting beyond anterior margin of posterior wall (Fig. 7, as *P. parallela*).

**Differential diagnosis.** Distinguished by the macropterous male, vertex with a spot near each eye, yellowish antennae and legs, in darker specimens at least antennae or fore and middle legs pale brown or yellowish; straight apical process of left paramere without triangular process at base (Fig. 5 as in *P. passerinii*), dorsal wall of theca without depression (Fig. 4), endosoma with single long spicule, wide sclerotised area and without denticulate area (Fig. 4), sclerotized

Table 1. Body measurements of *Pachytomella* species.

Species		Length				Width		
		Body	Cun-Clyp	Pronotum	AntSeg2	Head	Pronotum	InterOcDi
<b><i>P. alutacea</i></b>								
♂ (N=1)	M1	3.2	2.73	0.48	0.95	0.90	1.08	0.45
♀ (N=5)	Mean	2.74	2.05	0.52	0.70	1.06	1.01	0.60
	SD	0.11	0.06	0.02	0.03	0.03	0.02	0.02
	Range	0.30	0.18	0.05	0.08	0.08	0.05	0.05
	Min	2.60	1.95	0.50	0.65	1.03	1.00	0.58
	Max	2.90	2.13	0.55	0.73	1.10	1.05	0.63
<b><i>P. cursitans</i></b>								
♂ (N=7)	Mean	1.59	1.34	0.31	0.45	0.75	0.73	0.40
	SD	0.11	0.05	0.01	0.02	0.02	0.01	0.02
	Range	0.30	0.13	0.03	0.05	0.05	0.03	0.05
	Min	1.40	1.28	0.30	0.43	0.73	0.73	0.38
	Max	1.70	1.40	0.33	0.48	0.78	0.75	0.43
♀ (N=6)	Mean	1.78	1.28	0.33	0.34	0.82	0.83	0.47
	SD	0.08	0.02	0.00	0.01	0.01	0.02	0.01
	Range	0.20	0.05	0.00	0.03	0.02	0.05	0.03
	Min	1.70	1.25	0.33	0.33	0.80	0.80	0.45
	Max	1.90	1.30	0.33	0.35	0.83	0.85	0.48
<b><i>P. doriae</i></b>								
♂ (N=5)	Mean	1.90	1.47	0.38	0.64	0.80	0.76	0.41
	SD	0.17	0.11	0.01	0.05	0.03	0.03	0.02
	Range	0.30	0.25	0.03	0.13	0.08	0.08	0.05
	Min	1.80	1.35	0.38	0.55	0.75	0.73	0.38
	Max	2.10	1.60	0.40	0.68	0.83	0.80	0.43
♀ (N=4)	Mean	2.13	1.48	0.41	0.48	0.91	0.90	0.50
	SD	0.15	0.03	0.01	0.02	0.01	0.02	0.00
	Range	0.30	0.05	0.03	0.05	0.03	0.05	0.00
	Min	2.00	1.45	0.40	0.45	0.90	0.88	0.50
	Max	2.30	1.50	0.43	0.50	0.93	0.93	0.50
<b><i>P. parallela</i></b>								
♂ (N=7)	Mean	3.69	3.04	0.42	0.98	0.91	1.00	0.45
	SD	0.18	0.11	0.02	0.07	0.02	0.02	0.02
	Range	0.50	0.30	0.05	0.23	0.03	0.05	0.05
	Min	3.50	2.93	0.40	0.88	0.90	0.98	0.43
	Max	4.00	3.23	0.45	1.10	0.93	1.03	0.48
♀ (N=7)	Mean	2.13	1.87	0.45	0.47	1.02	0.99	0.58
	SD	0.11	0.08	0.02	0.03	0.02	0.03	0.00
	Range	0.30	0.23	0.05	0.08	0.05	0.10	0.00
	Min	2.00	1.73	0.43	0.43	1.00	0.95	0.58
	Max	2.30	1.95	0.48	0.50	1.05	1.05	0.58
<b><i>P. passerinii</i></b>								
♂ (N=7)	Mean	2.96	2.49	0.45	0.91	0.93	0.96	0.45
	SD	0.17	0.08	0.02	0.08	0.03	0.04	0.02
	Range	0.50	0.20	0.05	0.23	0.08	0.10	0.05
	Min	2.70	2.43	0.43	0.85	0.88	0.90	0.43
	Max	3.20	2.63	0.48	1.08	0.95	1.00	0.48
♀ (N=7)	Mean	2.10	1.80	0.44	0.55	1.05	1.00	0.58
	SD	0.08	0.11	0.05	0.08	0.06	0.07	0.03
	Range	0.20	0.28	0.15	0.18	0.15	0.20	0.10
	Min	2.00	1.60	0.35	0.45	0.98	0.88	0.53
	Max	2.20	1.88	0.50	0.63	1.13	1.08	0.63

Table 1 (continued). Body measurements of *Pachytomella* species.

Species		Length				Width		
		Body	Cun-Clyp	Pronotum	AntSeg2	Head	Pronotum	InterOcDi
<i>P. phoenicea</i>								
♂ (N=7)	Mean	2.86	2.47	0.45	0.92	0.94	0.88	0.45
	SD	0.14	0.15	0.02	0.10	0.03	0.03	0.02
	Range	0.40	0.35	0.05	0.20	0.08	0.10	0.05
	Min	2.70	2.28	0.43	0.85	0.90	0.83	0.43
	Max	3.10	2.63	0.48	1.05	0.98	0.93	0.48
♀ (N=7)	Mean	2.56	1.96	0.51	0.63	1.11	1.03	0.61
	SD	0.13	0.09	0.02	0.05	0.03	0.04	0.02
	Range	0.40	0.23	0.08	0.10	0.08	0.13	0.05
	Min	2.40	1.85	0.48	0.58	1.08	0.98	0.58
	Max	2.80	2.08	0.55	0.68	1.15	1.10	0.63

ring oval, 1/4<sup>th</sup>–1/5<sup>th</sup> width of labiate plate, sclerotised area near each of those sclerotised rings indistinct (Fig. 6). Male genitalia apparently not separable from those of *P. passerinii*, but the latter species can be recognized by the uniformly dark tibiae and distinct sclerotised areas of the dorsal labiate plate (Fig. 6). Pale males are similar to those of *P. alutacea*, but that species differs in having a single spot on posterior margin of vertex, a short, twisted apical process of left paramere (Fig. 5), and an aedeagus with small denticulate spicule (Fig. 4).

**Distribution.** Known for the eastern Mediterranean region, namely, Turkey, Cyprus, Israel, Lebanon (KERZHNER & JOSIFOV 1999). New for Syria and Jordan.

**Discussion.** *Pachytomella phoenicea* can not be distinguished from *P. passerinii* by male genitalic structures. However, I treat *P. phoenicea* and *P. passerinii* separately, as these two species have non-overlapping characters in colouration and female genitalia. Namely, representatives of *P. phoenicea* possess yellowish appendages and a dorsal labiate plate without a sclerotised area ventral to each sclerotised ring, whereas *P. passerinii* is characterized by having uniformly dark brown to black appendages and a dorsal labiate plate with a distinct sclerotised area ventral to each sclerotised ring.

REUTER (1891, 1904) described the three following colour varieties: *P. phoenicea* var. *antennalis* Reuter, 1891, *P. phoenicea* var. *pedalis* Reuter, 1904 and *P. phoenicea* var. *nigricornis* Reuter, 1904. In his work (REUTER 1904) var. *typica* is distinguished by the antennae and labium being yellowish; the base of antennal segment I, apex of antennal segment II in female and entire antennal segment II in male, apical quarter of labial segment I, bases of coxae, apices of tibiae, and sometimes base of hind tibia being black; var. *antennalis* is distinguished by antennal segment II, apex of middle tibia in males or apex and base in both sexes being black, and colouration of other parts as in var. *typica*; var. *nigricornis* is distinguished by the entire antennae, base and apex of fore tibia and entire hind tibia being black; var. *pedalis* is distinguished by the entire antennae, apex of fore femur, stripe in hind femur, and tibiae being black, and colouration of other parts as in var. *typica*. All these varieties are similar in genitalic structure and examination has showed that there is no clear distinction in appearance between the varieties, as colouration of appendages can vary in different ways. On the basis of this evidence, I propose to synonymize all the varieties under the name *P. phoenicea*.

## Acknowledgements

I'm greatly indebted to Fedor Konstantinov (St. Petersburg State University, St. Petersburg, Russia), Celia Symonds (University of New South Wales, Sydney, Australia) and Thomas Henry (National Museum of Natural History, Smithsonian, Washington, U.S.A) for thorough review of the manuscript. I also thank Fedor Konstantinov for providing several illustrations of the ductus seminis. I appreciate the assistance of Dávid Rédei (Hungarian Natural History Museum, Budapest, Hungary), Armand Matocq, Dominique Pluot-Sigwalt (Muséum National d'Histoire Naturelle, Paris, France), Larry Huldén (Finnish Museum of Natural History, Helsinki, Finland), Herbert Zettel (Natural History Museum, Vienna, Austria), Petr Kment (National Museum, Prague, Czech Republic), Jordi Ribes (Barcelona, Spain), Attilio Carapezza (Palermo, Italy), and Rauno Linnavuori (Raisio, Finland) for lending material.

This research was funded by the Russian Foundation for Basic Research, project No 09-04-00968 and the NSF Planetary Biodiversity Inventories grant DEB-0316495. The equipment used during the work was funded by the Council for Grants from the President of Russian Federation and for State Support of Leading Scientific Schools (grant 3332.2010.4).

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