A New Species of *Psylliodes* (Coleoptera: Chrysomelidae) and Key to the Wingless Species from the Iberian Peninsula

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ABSTRACT A new species of *Psylliodes* (Coleoptera: Chrysomelidae: Galerucinae: Alticini), *P. cervinoi*, is described and illustrated from Galicia, northwest Spain. The new *Psylliodes*, a wingless montane species, is compared with related micropterous taxa, and its relationship with the *P. picinus* Marsham species group is hypothesized. A key to the seven wingless species of *Psylliodes* occurring in the Iberian peninsula is provided, along with figures showing the spermathecae of all species. Male and female genitalia of *P. gougeleti* Allard, an Iberian wingless species, are illustrated for the first time.

RESUMEN Se describe e ilustra una nueva especie de *Psylliodes* (Coleoptera: Chrysomelidae: Galerucinae: Alticini), *P. cervinoi*, de Galicia, noroeste de España. Se compara el nuevo *Psylliodes*, una especie micróptera de montaña, con otros taxones micrópteros próximos y se establece su relación con el grupo de especies de *P. picinus* Marsham. Se aporta una clave para las especies micrópteras de *Psylliodes* presentes en la Península Ibérica, con figuras de la espermateca de todas ellas. Se ilustran por primera vez las genitalias masculina y femenina de *P. gougeleti* Allard, una especie ibérica micróptera.

KEY WORDS Chrysomelidae, *Psylliodes*, Iberian peninsula, taxonomy

THE GENUS *Psylliodes* (Coleoptera: Chrysomelidae: Galerucinae: Alticini) is distributed worldwide, and it is comprised of ≈200 species (Konstantinov and Vandenberg 1996), 125 of them occurring in the Palaearctic region. Heikertinger (1921, 1926) reviewed the wingless and nonmetallic species, and Leonardi (1970) established 10 species groups in the genus, mainly based on the morphology of spermathecae. However, no revision of all Palaearctic species nor of the Iberian species is available.

In the Iberian peninsula, the number of endemic Chrysomelidae is significantly higher compared with other regions of Europe, but the total diversity of leaf beetles is lower than expected, partly because of sampling deficiencies (Vela and Bastazo 1999). For this reason, research on the diversity of Iberian Chrysomelidae is greatly needed. During the study of Chrysomelidae from Galicia, northwest Spain, two specimens of *Psylliodes* belonging to an unknown species were found. The purpose of this work is to describe this new taxon and to provide an identification key to the micropterous species from the Iberian peninsula.

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Psylliodes cervinoi Baselga & Novoa, sp. nov.

Type Material. HOLOTYPE FEMALE: SPAIN: Ourense, Viana do Bolo, Pradorramisquedo (UTM 29TPG6768), 1150 m altitude, 5 April 1993, G. Cerviño *leg.* (deposited in the Museo Nacional de Ciencias Naturales, Madrid, Spain. Type Catalog No. 9089). PARATYPE FEMALE: SPAIN: Ourense, Carballeda, Casaio (UTM 29TPG8490), 1,400 m altitude, 3 June 2000, A. Baselga *leg.* (deposited in the collection of the Departamento de Biología Animal, Universidad de Santiago de Compostela, Spain).

Description. Habitus (Fig. 1). Body highly convex, less than two times longer than wide. Length 2.0 mm. Color black with bronze luster, including ventral side and femora; tibiae, tarsi, antennae, anterior border of labrum and maxillary palpi light yellow brown. *Head.* Mostly hidden under pronotum in dorsal view. Labrum with four large setiferous punctures near posterior margin. Interantennal space flat and not punctate, antennal callus absent, supracallinal sulcus absent, orbital sulcus not joining supraantennal sulcus, but pointing to middle of frons. Vertex dull, strongly shagreened and with few minute punctures hardly visible between microreticulation. First antennomere longer than following two segments combined, second as long as third, fourth 1.5 times longer than third, fifth as long as third. *Pronotum.* 1.2 times broader than long,

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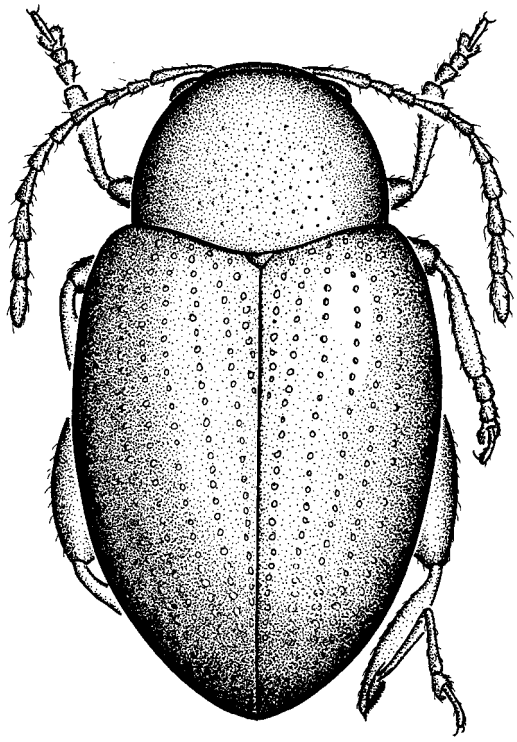

Fig. 1. Dorsal habitus of *Psylliodes cervinoi*, holotype female. Length = 2.0 mm.

highly convex. Anterolateral callosity poorly developed, not visible in dorsal view. Sides regularly rounded and narrowly explanate, basal border convex and weakly marginate. Surface dull, strongly shagreened, with punctures hardly visible between microreticulation. Punctures extremely fine and shallow on disc, slightly more coarse on lateral declivities. *Scutellum.* Slightly broader than long. *Elytra.* Very convex, 1.3 times longer than broad, widest in basal third and attenuate posteriorly. Humeral callus not developed, micropterous. Lateral margins narrowly explanate, apex truncate. Surface dull. Punctation arranged in 10 distinct striae, scutellar stria very short. Punctures coarser than those of pronotum, but effaced toward apex. Interstriae slightly convex, minutely punctate. *Metatibia.* Straight with apical short spine. Metatarsus inserted in metatibial distal third. *Spermatheca* (Fig. 2). With receptacle and pump clearly delimited, duct short and straight. Vaginal palpus (Fig. 3) elongate, anterior sclerotization subtriangular, posterior sclerotization bearing six sensory setae near apex. Tignum (Fig. 4) with posterior sclerotization lanceolate, poorly delineated.

Paratype Female. Length 2.1 mm. It does not differ appreciably from the holotype.

Male. Unknown.

Diagnosis. *P. cervinoi* differs from all other Palaearctic *Psylliodes* by the following combination of characters: micropterous species; color black with bronze luster, including ventral side and femora; head hardly visible in dorsal view; antennal callus absent; orbital sulcus not joining supraantennal sulcus; vertex strongly shagreened and covered with minute punctures; pronotal punctures fine and shallow, smaller than those on elytral striae; elytral interstriae minutely punctured; spermatheca as in Fig. 2 (receptacle and pump clearly delimited, duct short and straight).

Distribution and Ecology. The new species may be endemic to Sierra Segundera (Ourense province, northwest Spain). Specimens were collected from two mountain meadows at altitudes above 1,100 m. The host plant is unknown.

Etymology. We name this new species for Gumersindo Cerviño, in gratitude for the loan of his collection of Chrysomelidae from Galicia.

Discussion

P. cervinoi belongs to the *P. picinus* (Marsham) species group (Leonardi 1970) because the spermatheca has a simple duct and the orbital sulcus does not join the supraantennal sulcus. Based on the absence of wings and the head that is hardly visible in dorsal view, *P. cervinoi* is close to *P. petasatus* Foudras from the Pyrenees and *P. schwarzi* Weise from the Alps. However, the shape of the spermatheca provides an accurate diagnosis for each species (Figs. 2, 5, and 6). Additionally, *P. cervinoi* is separated from *P. schwarzi* by the lack of antennal callus and the dark pro- and mesofemora, and from *P. petasatus* by the punctures on the vertex and elytral interstriae.

Based on the shape of the spermatheca (Fig. 7), the new species is also close to *P. belarbii* Döberl from the Moroccan Atlas Mountains. This taxon was considered to be close to *P. cucullatus* (Illiger) by Döberl (1990), although the spermathecal receptacle and pump are clearly delimited in *P. belarbii.* We believe that *P. belarbii* cannot belong to the *P. cucullatus* species group based on this character state and that it should be included in the *P. picinus* group. *P. cervinoi* is distinguished from the Moroccan species by the absence of antennal callus, the light yellow-brown antennal apex, the pronotal punctures that are smaller than those on elytral striae, the convex basal margin of pronotum (straight in *P. belarbii*), and the shorter elytra.

Key to the Wingless Species of *Psylliodes* from the Iberian Peninsula

In the Iberian peninsula, there are six wingless species and one subspecies: *P. vindobonensis* Heikertinger, *P. petasatus, P. cervinoi, P. cucullatus heydeni* Weise, *P. pyrenaeus* Heikertinger, *P. gibbosus* Allard, and *P. gougeleti* Allard. These taxa belong to different species groups (Leonardi 1970), but the micropterous condition is a striking character and was repeatedly used in the construction of keys to the species of *Psylliodes* (Heikertinger 1921, Mohr 1966, Doguet 1994). Taking into account these works and considering that there is no key to Iberian taxa, we provide

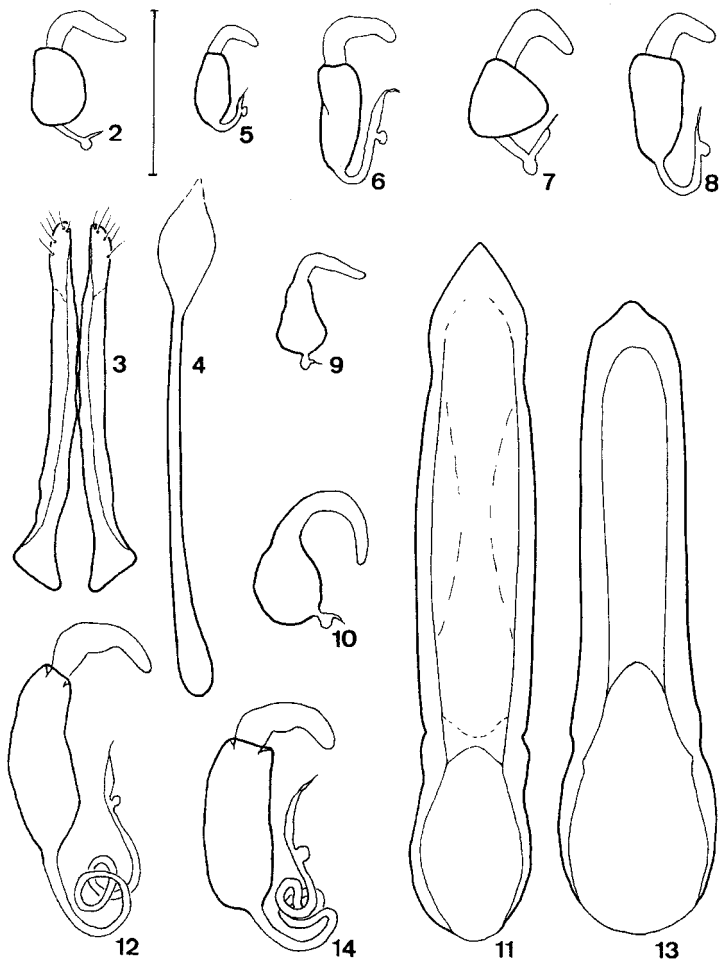

Fig. 2–14. *P. cervinoi*: (2) Spermatheca, (3) Vaginal palpi, (4) Tignum; Spermatheca of *Psylliodes* spp.: (5) *P. petasatus*, (6) *P. schwarzi*, (7) *P. belarbii*, (8) *P. vindobonensis*, (9) *P. pyrenaeus*, (10) *P. cucullatus heydeni*; *P. gibbosus*: (11) Median lobe of aedeagus, ventral view, (12) Spermatheca; *P. gougeleti*: (13) Median lobe of aedeagus, ventral view, (14) Spermatheca. Bar = 0.25 mm. Figs. 5, 6, 9, 11, and 12 after Doguet (1994). Fig. 7 after Döberl (1990).

the following key to the wingless species and subspecies occurring in the Iberian peninsula. We illustrate the spermathecae of all taxa. Male and female genitalia of *P. gougeleti* are illustrated for the first time.

1. Head mostly hidden under pronotum, hardly visible in dorsal view. Orbital sulcus not joining supraantennal sulcus 2
   Head not covered by pronotum, visible in dorsal view. Orbital sulcus joining supraantennal sulcus. Spermatheca as in Fig. 8 . *P. vindobonensis*
2. Pronotal punctures coarse. Vertex shiny and covered with obvious punctures 3
   Pronotal punctures fine and shallow. Vertex dull, strongly shagreened, with fine punctures (hardly visible between microreticulation) or without punctures 6
3. Spermathecal receptacle and pump not delimited, ductus extremely short (Figs. 9 and 10) 4
   Spermathecal receptacle and pump clearly delimited, ductus longer than receptacle showing numerous loops (Figs. 12 and 14) 5
4. Body length 1.7–2.3 mm, ovoid. Spermatheca (Fig. 9) with receptacle narrower apically than basally . . . . . *P. pyrenaeus*
   Body length 2.0–3.0 mm, elongate and attenuate to apex. Spermatheca (Fig. 10) with almost spherical receptacle . . . . *P. cucullatus heydeni*
5. Aedeagus acute at apex (Fig. 11). Spermatheca (Fig. 12) with first loop of duct running in front of the remaining loops . . . . *P. gibbosus*
   Aedeagus rounded at apex (Fig. 13). Spermatheca (Fig. 14) with first loop of duct running behind the remaining loops . *P. gougeleti*
6. Vertex and elytral interstriae minutely punctured. Spermatheca (Fig. 2) with receptacle 1.5 times longer than wide, ductus straight . . . *P. cervinoi*

Vertex and elytral interstriae without punctures. Spermatheca (Fig. 5) with receptacle twice longer than wide, ductus arched . . . *P. petasatus*

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