Two new species of the genus *Barycnemis* Förster from Mexico (Hymenoptera: Ichneumonidae, Tersilochinae)

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Barycnemis tlaxcala sp. n. and *B. tamaulipeca* sp. n. from northern Mexico are described. A key to Nearctic species of the species group "*harpura*" is given.

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Barycnemis Förster is a Holarctic genus with 18 species: 16 are known from the Palaearctic Region and 7 from North America (5 species are Holarctic) (Townes, 1971; Carlson, 1979; Yu & Horstmann, 1997; Horstmann, 2001). Most species described by American authors are now considered to be junior synonyms of common Holarctic species: *B. bellator* (Müller, 1776) (= *slossonae* Cushman, 1922), *B. claviventris* (Gravenhorst, 1829), *B. exhaustator* (Fabricius, 1798), *B. gravipes* (Gravenhorst, 1829) (= *borealis* Provancher, 1877), *B. harpura* (Schrank, 1802) (= *elongatum* Provancher, 1886; = *canaliculatus* Viereck, 1903).

Only two really Nearctic species, *B. linearis* Ashmead, 1895 (= *simplicicornis* Viereck, 1912) and *B. rugosa* (Provancher, 1879) (= *boreale* Provancher, 1879), were known hitherto. Two Mexican species, *B. tlaxcala* sp. n. and *B. tamaulipeca* sp. n., are described here. The genus *Barycnemis* is for the first time recorded from Mexico (Ruíz-Cancino et al., 2002). Horstmann (1981) in his revision of the European Tersilochinae proposed division of *Barycnemis* into species groups. Both new species belong to the species group '*harpura*" characterized by the first metasomal segment slender (Figs 9, 10) and smooth laterally and sternaulus thin and linear, without rugulosity near anterior margin of mesopleuron (the latter character is shared with the species group "*bellator*").

I know *B. rugosa* only by its original description (Provancher, 1879). Its taxonomic position remains unclear and this species is not included in the key below. Mexican new species differ clearly from *B. rugosa* in the dark coloration of metasoma and body length less than 4 mm.

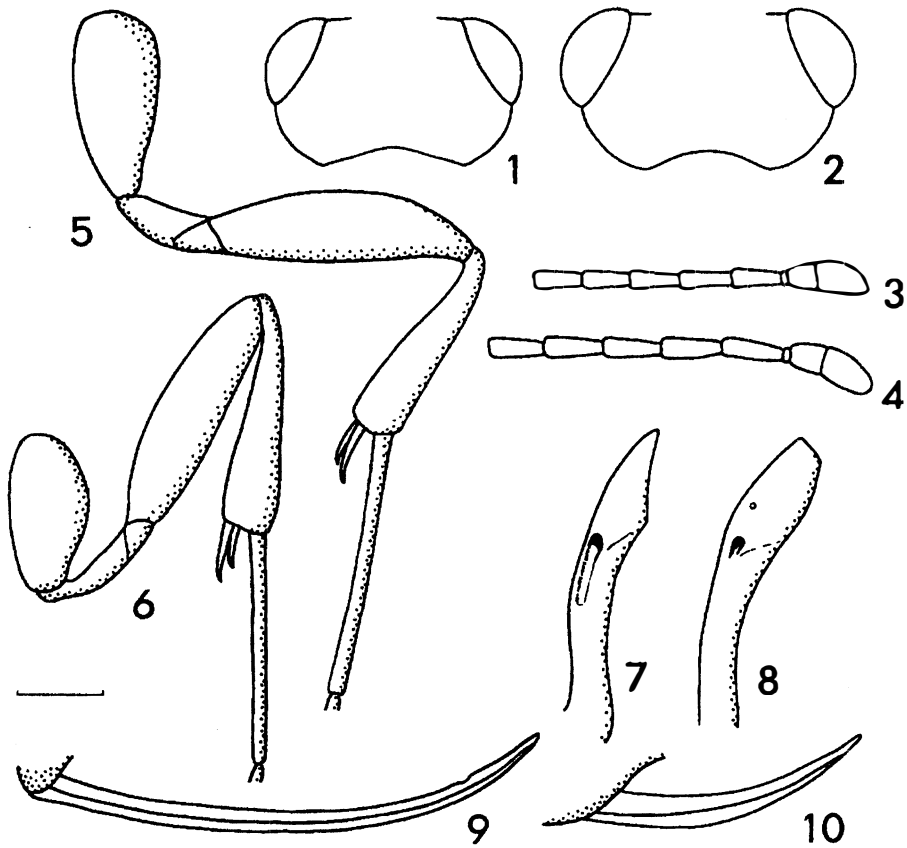
A key to females of Nearctic species of the species group "*harpura*" is given.

Hosts are known only for three species of this genus. The Holarctic *B. angustipennis* was reared from *Byrrhus* sp. (Byrrhidae) (Horstmann, 1981), the Palaearctic *B. blediator*, from *Bledius* sp. (Staphylinidae) (Aubert, 1970), and the Nearctic *B. linearis*, from *Pissodes* species (Curculionidae) (Viereck, 1912).

The holotypes of both new species are deposited at the Insect Museum of Universidad Autónoma de Tamaulipas in Cd. Victoria, Mexico.

Key to females of the Nearctic species of the species group "*harpura*"

1. Basal area of propodeum shorter than apical area; antenna with at least 26 segments; first segment of hind tarsus distinctly shorter than hind tibia ..... **B. harpura** (Schrank)
– Basal area of propodeum longer than apical area; antenna with no more than 25 segments; first segment of hind tarsus as long as or longer than hind tibia 2
2. Basal area of propodeum 2.5-3 times as long as apical area; sternaulus thin and linear, without rugulosity near anterior margin of mesopleuron; head entirely and mesopleuron smooth and shining 3
– Basal area of propodeum 1.5 times as long as apical area; sternaulus weakly S-curved, usually with rugulosity near anterior margin of mesopleuron; face and frons granulate; mesopleuron usually finely and sparsely punctate ..... **B. linearis** Ashm.
3. Hind femur, tibia and first tarsal segment the same length (Fig. 5); ovipositor very slightly tapered to apex (Fig. 9); first tergite with furrow extending anteriorly before glymma (Fig. 7) ..... **B. tlaxcala** sp. n.
– Hind femur longer than tibia, and tibia shorter than first tarsal segment (Fig. 6); ovipositor high basally, strongly tapered to apex (Fig. 10); first tergite without furrow extending anteriorly before glymma (Fig. 8) ..... **B. tamaulipeca** sp. n.



Figs 1-10. *Barycnemis*, females. **1, 3, 5, 7, 9**, *B. tlaxcala* sp. n.: **1**, head, dorsal view; **3**, basal segments of antenna, lateral view; **5**, hind leg, lateral view; **7**, first tergite, lateral view; **9**, ovipositor, lateral view; **2, 4, 6, 8, 10**, *B. tamaulipeca* sp. n.: **2**, head, dorsal view; **4**, basal segments of antenna, lateral view; **6**, hind leg, lateral view; **8**, first tergite, lateral view; **10**, ovipositor, lateral view. Scale: 0.2 mm.

Barycnemis tlaxcala sp. n.
(Figs 1, 3, 5, 7, 9)

Holotype. ♀, **Mexico**, *Tlaxcala*, Tlaxco, Los Llanos De Teopan, *Pinus*, 19.VII.1995 (C. Covarrubias, S. Hernández A.).

Diagnosis. See introduction and the key above.

Description. Female. Body length about 3.9 mm. Head width 0.6 mm; head roundly narrowed behind eyes in dorsal view (Fig. 1), entirely smooth and shining. Antenna with 23 segments (Fig. 3); middle segments twice and subapical ones about 1.5 times as long as wide. Mandible finely punctate on its basal half; upper tooth of mandible longer than lower tooth. Malar space a little shorter than basal width of mandible.

Mesosoma mostly smooth and shining; its length 1.25 mm, width 0.54 mm. Mesonotum very finely granulate, matt. Mesopleuron rugulose on its upper anterior part. Sternaulus moderately wide, linear, running along almost the whole length of mesopleuron, without apparent rugulosity near anterior margin of mesopleuron. Metapleuron, dorsolateral area of propodeum posteriorly and apical area more or less rugulose. Basal area of propodeum indistinct and widely rugulose, 2.5 times as long as apical area. Distance between propodeal spiracle and pleural carina less than one diameter of spiracle.

Fore wing length 2.75 mm. 2-mcu vein strongly postfurcal, almost entirely unpigmented. Metacarp not reaching apex of fore wing.

Hind femur length 0.57 mm; its maximum

width 0.14 mm. Hind tibia length 0.57 mm. First segment of hind tarsus length 0.57 mm. Hind leg moderately thick (Fig. 5). Hind femur, tibia and first tarsal segment the same length (Fig. 5). Hind femur 4 times as long as wide.

First tergite almost entirely smooth, its length 0.74 mm, posterior width 0.17 mm. Petiolus trapeziform in cross section, striate dorso-posteriorly. Glymma far beyond the middle of first tergite. This tergite with furrow extending anteriorly on 1/3 of tergite length (Fig. 7). Second tergite length 0.46 mm, anterior width 0.21 mm. Thyridia about 3 times as long as wide. Ovipositor very slightly tapered to apex, with very small dorsal subapical notch (Fig. 9); its sheath 0.71 mm, as long as first tergite.

Body black. Palpi, mandible (except for teeth apically), tegula and legs yellow brown. Hind coxa at basal 3/4 black. All tarsi darkened. Pterostigma brown. Metasoma dark brown to black.

Male unknown.

Barycnemis tamaulipeca sp. n.
(Figs 2, 4, 6, 8, 10)

Holotype. ♀, **Mexico**, *Tamaulipas*, Miquihuana, Km 21, La Peña to Joja larga, 2800 m, *Pinus*, 16.IX.2000 (C. Covarrubias Dimas).

Diagnosis. See introduction and the key above.

Description. Female. Body length about 3.6 mm. Head width 0.63 mm; head roundly narrowed behind eyes in dorsal view (Fig. 2), entirely smooth and shining. Antenna with more than 17 segments (tips are broken); segments 3-5 about 2.5 times as long as wide (Fig. 4), middle segments twice as long as wide. Mandible very finely punctate basally. Malar space as long as basal width of mandible.

Mesosoma mostly smooth and shining; its length 1.34 mm, width 0.5 mm. Mesonotum very finely granulate, matt. Sternaulus thin, linear, running along almost the whole length of mesopleuron, without rugulosity near anterior margin of mesopleuron. Metapleuron, dorsolateral area of propodeum posteriorly and apical area more or less rugulose. Basal area of propodeum indistinct and widely rugulose, 3 times as long as apical area. Propodeal spiracle adjacent to pleural carina.

Fore wing length 3.2 mm. 2-mcu vein strongly postfurcal, almost entirely unpigmented. Metacarp not reaching apex of fore wing.

Hind femur length 0.64 mm; its maximum width 0.16 mm. Hind tibia length 0.51 mm. First segment of hind tarsus length 0.61 mm. Hind leg moderately thick (Fig. 6). Hind femur longer than tibia, and tibia shorter than first tarsal segment (Fig. 6). Hind femur 4 times as long as wide.

First tergite entirely smooth; its length 0.76 mm, posterior width 0.16 mm. Petiolus trapeziform in cross section. Glymma far beyond the middle of first tergite (Fig. 8). Second tergite length 0.5 mm, anterior width 0.2 mm. Thyridia almost 3 times as long as wide. Ovipositor high basally, strongly tapered to apex (Fig. 10); its sheath 0.6 mm, almost as long as first tergite.

Body black. Palpi, mandible (except for teeth) and legs reddish brown. All coxae and tarsi black. Tegula yellowish. Pterostigma dark brown.

Male unknown.

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