

First record of the subfamily Oxytorinae (Hymenoptera: Ichneumonidae) in Mexico, and description of a new species

DMITRI R. KASPARYAN**

ENRIQUE RUIZ-CANCINO*

Resumen. Se registra la subfamilia monotípica Oxytorinae en México. Se describe e ilustra una nueva especie, *Oxytorus woolleyi* y el macho de *O. isabellae* Gauld. Se ilustra el ovipositor de *O. woolleyi* con muesca dorsal subapical, típico de endoparasitoides koinobiontes.

Palabras clave: Ichneumonidae, *Oxytorus*, nueva especie, Tamaulipas, México.

Abstract. The monotypic subfamily Oxytorinae is recorded for the first time in México. *Oxytorus woolleyi* and the male of *O. isabellae* Gauld are described and illustrated. The ovipositor of *O. woolleyi* is illustrated, it has a well-developed dorsal subapical notch, typical of koinobiont endoparasitoids.

Key words: Ichneumonidae, *Oxytorus*, new species, Tamaulipas, Mexico.

*Universidad Autónoma de Tamaulipas, UAT Agronomía y Ciencias, Ciudad Victoria, Tamaulipas, 87149. México.

**Zoological Institute of the Russian Academy of Sciences, St. Petersburg 199034. Russia.

Introduction

Oxytorinae is a small monotypic subfamily of Ichneumonidae; it previously included nine Palearctic and three Nearctic species (Dasch 1992; Yu & Horstmann 1997); recently, some new species were described from Costa Rica (Gauld 2000). Two species, one of them new, are recorded from Mexico. Both were collected at the Biosphere Reserve El Cielo, Canindo, at an altitude of 1400 m (México, Tamaulipas, about 10 km W Gómez Farías). The biology of *Oxytorus* and the systematic position of Oxytorinae are uncertain. It is interesting that the ovipositor of *O. woolleyi* (Fig. 5) has a distinct subapical dorsal notch (Wahl 1990), typical of a koinobiont endoparasitoid. Thus, the relation of this subfamily with Ctenopelmatinae where *Oxytorus* has traditionally been considered, must not be excluded.

Type material of the new species is deposited in the Insect Museum, UAT, in Ciudad Victoria, Tamaulipas, México.

Key to Mexican species of *Oxytorus*

1. Head (and body), fulvous with weak brownish spots on vertex. Hind tarsus and tibia uniformly colored, fulvous. Median and lateral longitudinal carinae at the base of the propodeum vestigial or absent; areola (area superomedia) narrowed to base of propodeum, confluent with basal area (Fig. 6); costulae absent. First metasomal segment subcylindrical in basal half, weakly widened apically (Fig. 3)..... *O. woolleyi* sp. nov.
1. Head black (body fulvous). Hind tarsus whitish, light brownish in basal third of basitarsus and with blackish fifth segment. Median and lateral longitudinal carinae of propodeum developed; areola about parallel-sided, slightly widened on costulae, separated from basal area by carina (Fig. 10). First metasomal segment distinctly depressed, widened from spiracles to hind margin (Fig. 9)..... *O. isabellae* Gauld

Oxytorus woolleyi n. sp. (Figs. 1-7)

Female (holotype). 6.5 mm; front wing length 5 mm. Flagellum 5.25 mm with 26 segments; first flagellar segment about 4.5 times as long as wide; first and second flagellar segments together 1.2 as long as maximal diameter of eye. Face 0.49 as wide as head, mat, parallel-sided. Malar space 0.7 as long as basal width of mandible, lacking a groove from eye to mandible. Mandible strongly tapered from base to basal 0.37, then rather narrow, about parallel-sided, with thin carina on lower margin at basal sixth; lower tooth shorter and a little wider than upper tooth (Fig. 2); basal half of mandible with long hairs, apical half smooth. Clypeus wide, convex basally, flat and weakly concave apically, its apical margin sharp and truncate. Lateral ocellus

separated from eye by about 1.1 its maximal diameter. Temple moderately short (about 1.9 as long as greatest diameter of lateral ocellus), almost flat and strongly convergent posteriorly. Mesosoma distinctly granulate on mesopleurum, metapleurum and propodeum; speculum granulate. Epomia very weak and short. Notauli almost lacking. Scutellum with lateral carina present only on its base. Dorsal end of prepectal carina not reaching margin of mesopleurum, ending on the level of lower third of hind margin of pronotum. Propodeum without costulae and any longitudinal carinae on its basal third; pleural longitudinal carina developed; areola elongate, fused with basal area, its lateral sides parallel, in basal third convergent anteriorly; basal area incomplete; apophyses minute. Wing venation as in Figure 1. Hind coxa mat, finely granulate; hind femur about 4.8 as long as high; hind basitarsus 0.65 as long as hind tibia. First and second metasomal segments mat, weakly granulate, polished centrally in apical 0.12; first segment rather strongly curved, without noticeable dorsolateral carinae; petiole subcylindrical; postpetiole weakly widened posteriorly, about 1.6 as long as wide; remaining segments polished. Third metasomal sternite sclerotized, weakly membranous medially; remaining sternites (4-6th) sclerotized. Ovipositor sheath short and wide; ovipositor with distinct subapical dorsal notch (Figs. 4, 5).

Coloration. Fulvous. Antenna with flagellum blackish, 10-13(14)th flagellar segments whitish, 1-2nd segments reddish-brown. Fuscous on vertex between lateral ocelli and eyes, on occiput; mesonotum centrally behind the middle with fuscous rectangular spot; weakly fuscous (reddish-brown) on the genae, on pronotum, below the subtegular ridge, on scutellum and postscutellum, on base of propodeum, on middle and hind coxae posteriorly; narrowly blackish on the base of hind tibia. Pale yellow on propleura, mesosternum, entirely on fore, middle coxa, and on hind coxa anteroventrally.

Male. Similar to female, but antenna with 31-32 flagellar segments; flagellum 1.2 as long as front wing; first and second flagellar segments together as long as maximal diameter of eye. Coloration as in female, but without infuscation on the genae and pronotum.

Variation. Most of females have the upper part of the vertex, mesonotum, scutellum, propodeum, sometimes first metasomal segment basally and most part of second tergite dark brown. One male has the flagella black, without white ring; in other characters, this specimen is similar to other males, but the claspers of the male genitalia are narrower.

Material examined. Holotype: female, México, Tamaulipas, Gómez Farías, Canindo, 1400 m, Malaise trap, 94051 Ed. Z. 20-21-VII-94, J.B. Woolley. Paratypes: same locality, 3 females, 4 males (2 females, 3 males-93/028, 1 male-93/031), 28-30-VII-1993, 3 females (94064, 94067, 94070), 21-22-VII-94, J.B. Woolley.

Comments. This species may be distinguished from *O. isabellae* and from all Nearctic species by its pale brown (fulvous) body (except for a few brownish dorsal spots), lacking costulae (Fig. 2) and all longitudinal carinae of propodeum basally.

Etymology. This species is dedicated to Dr. James B. Woolley, a distinguished chalcidologist, who collected the specimens.

***Oxytorus isabellae* Gauld**
(Figs. 8-11)

Gauld, 2000: 429, female, Costa Rica.

Male (nov.) 7 mm; front wing length 6.1 mm. Flagellum 8.2 mm with 34 segments, about 1.35 as long as front wing; first flagellar segment about 4.2 as long as wide; first and second segments together 1.16 as long as maximal diameter of eye. Face 0.41 as wide as head, mat, parallel-sided. Malar space 0.6 as long as basal width of mandible, lacking groove from eye to mandible, but with a superficial impression from eye through clypeal fovea to clypeal margin. Mandible strongly tapered from base to basal third, in apical 0.67 narrow, parallel-sided, in apical 0.35 polished and without hairs (Fig. 8). Clypeus convex in basal half, weakly concave apically. Lateral ocellus separated from eye by about its maximal diameter. Temple moderately wide, about 2.2 as long as greatest diameter of lateral ocellus, almost flat and strongly convergent posteriorly. Mesosoma granulate with more fine granulation on upper part of mesopleura, smooth on speculum and between dorsal longitudinal carinae of propodeum. Epomia weak and short. Notauli superficial. Dorsal end of prepectal carina not distinctly reaching margin of mesopleurum, ending on the level of lower 0.37 of hind margin of pronotum. Propodeum mat with basal area, areola and area petiolaris smooth, carinae complete; areola elongate, about parallel-sided, weakly widened anteriorly to costulae; costulae joining the areola at its basal 0.2; apophyses minute. Wing venation as in *O. woolleyi*. Hind coxa mat, finely granulate; hind femur about 5.6 as long as high; hind basitarsus about 0.53 as long as hind tibia. All abdominal tergites smooth, weakly polished, very obscurely and finely granulate on first and second tergites; first segment flat, depressed, almost straight; dorsolateral carinae distinct on postpetiole; postpetiole strongly widened posteriorly, about 1.3 as long as wide (Fig. 9). Parameres with more narrow apical lobes and dorsobasally more strongly concave than in *O. woolleyi* (compare Figs. 7 and 11).

Coloration. Fulvous with black head. Antenna with flagellum black, 9-14(15)th flagellar segments white; scapus, pedicellum entirely and first flagellar segment ventrally pale fulvous. Clypeus and mandible brownish. Fuscous on pronotum, mesonotum, on the sides of scutellum, weakly fuscous under subtegular ridge, on apex of postcutellum and dorsally on front and middle tarsi. Pale yellowish on palpi, anterior margin of pronotum, tegula, wing basis, fore coxa and fore

trochanters anteriorly. Mesonotum with a pair of rufous stripes anterolaterally. Hind tarsus from basal 0.35 of basitarsus to fourth segment whitish; fifth segment blackish.

Material examined. Mexico, Tamaulipas. About 10 km W Gómez Farías, "Canindo, Malaise trap 94050, 20-21-VII-94, J.B. Woolley", 1 male.

Comments. This species may be most easily recognized by its characteristic propodeal carination: areola almost parallel-sided, costula joining the areola at its basal 0.2 (Fig. 10) and by combination of a black head and whitish hind tarsi with an almost uniformly fulvous body.

Acknowledgements. To Conacyt, for the economical support to the first author, through 'Cátedras patrimoniales de excelencia' Program. To Conacyt project "Taxonomía de cuatro familias de Hymenoptera parasítica importantes en el control biológico de plagas en México".

Literature cited

- DASCH C.E. 1992. The ichneumon-flies of America north of Mexico: Part 12. Subfamilies Microleptinae, Helictinae, Cylocheriinae and Oxytorinae (Hymenoptera: Ichneumonidae). *Memoirs of the American Entomological Institute* 52.
- GAULD I.D. 2000. The Ichneumonidae of Costa Rica. III. *Memoirs of the American Entomological Institute* 63.
- YU D.S. & K. HORSTMANN. A catalogue of world Ichneumonidae (Hymenoptera). Part II: Subfamilies Orthocentrinae to Xoridinae. *Memoirs of the American Entomological Institute* 58(2): 764-1558.
- WAHL D.B. 1990. A review of the mature larvae of Diplazontinae, with notes on larvae of Acaenitinae and Orthocentrinae and proposal of two new subfamilies (Insecta: Hymenoptera: Ichneumonidae). *Journal of Natural History* 24 (1):27-52.

Recibido: 26.I.1998

Aceptado: 12.VIII.1999

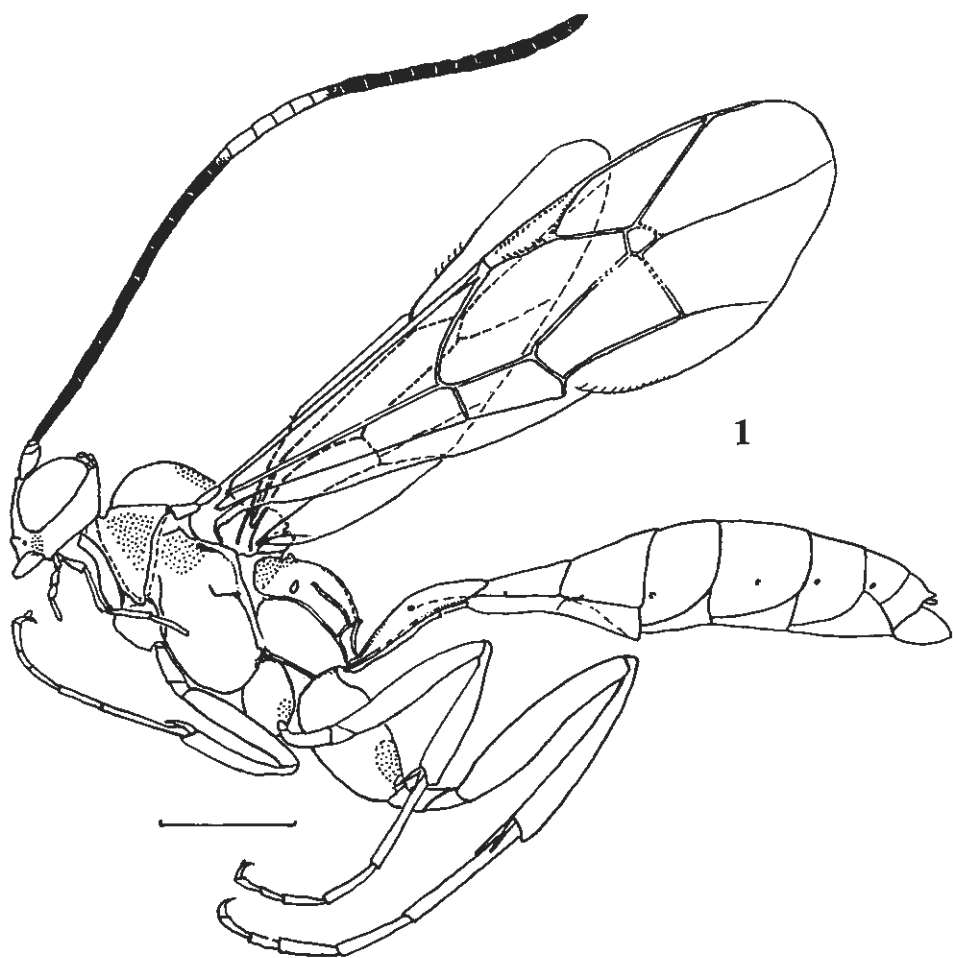
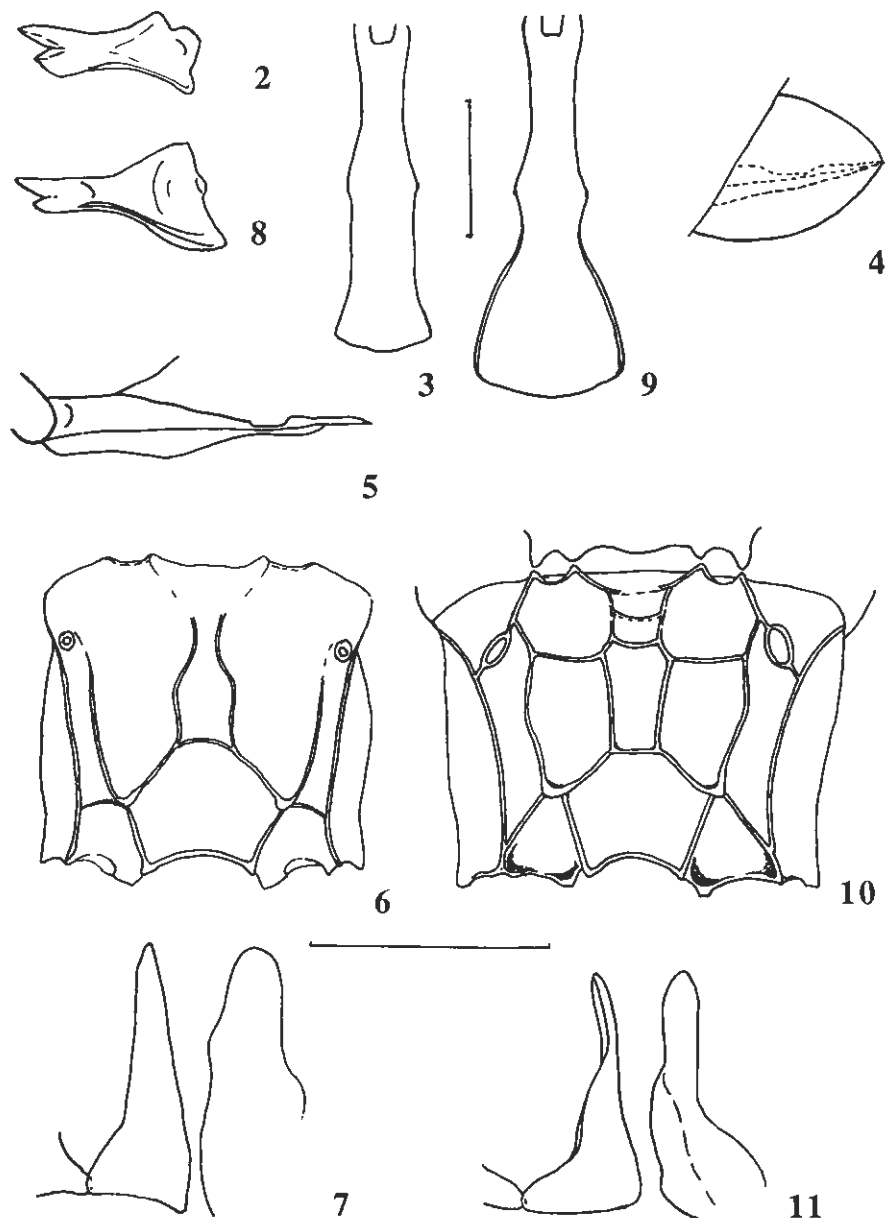


Fig. 1. *Oxytorus woolleyi* n. sp. (female), habitus and colour pattern (fuscous spots on head, thorax and coxae are designated by punctures). Scale: 1 mm.



Figs. 2-11. *Oxytorus woolleyi* n. sp. (2-5 female, holotype; 6,7 paratypes): 2, mandible; 3, first tergite; 4, ovipositor sheath (ovipositor translucent); 5, ovipositor; 6, propodeum; 7, paramera of male genitalia (a - dorsal view, b - lateral). 8-11. *Oxytorus isabellae*, male; 8, mandible; 9, first tergite; 10, propodeum; 11, paramera of male genitalia (a - dorsal, b - lateral). Scale: 0.5 mm (vertical scale for figs. 3,9, horizontal scale for the remaining figures).