

Six new species of the genus *Metaphycus* Mercet from Mexico (Hymenoptera: Encyrtidae)

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Six new species of the encyrtid genus *Metaphycus* are described from Mexico: *M. celticola* sp. n., *M. farfani* sp. n., *M. karwinskiae* sp. n., *M. sergueii* sp. n., *M. superbus* sp. n., and *M. tuxpan* sp. n. All new species belong to *insidiosus*-group. The soft scale insect *Differococcus argentinus* (Morrison), the host of *M. celticola*, is recorded from Mexico for the first time.

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Introduction

The genus *Metaphycus* Mercet, 1917 includes more than 230 hitherto described species and has a worldwide distribution. Most of species are known from the Palaearctic (80) and Afrotropical (80) zoogeographical regions (Guerrieri & Noyes, 2000). The Mexican fauna of this genus is very poorly studied. A total of 23 species are known from the Neotropical region and 48 species, from the Nearctic region; at the same time, only 10 identified species are recorded from Mexico (Trjapitzin & Ruíz Cancino, 1996; González Hernández, 2000). The known hosts of 9 species are Coccidae, and one species was reared from a whitefly (Myartseva & Ruíz Cancino, 2002). About 30 species have been used in the world for biological control of about 20 species of the families Coccidae and Diaspididae (Trjapitzin, 1989; Noyes & Hanson, 1996; Kennett et al., 1999).

Species of *Metaphycus* are divided into three separate groups on the basis of the number of segments of maxillary and labial palpi (Compere & Annecke, 1960; Tachikawa, 1963). Guerrieri & Noyes (2000) prefer to define these species groups according to the number of segments in the maxillary palpi only. Species of *zebratus*-group have 4-segmented maxillary palpi; their hosts are Coccidae, Kermesidae and Kerriidae. Species of *insidiosus*-group have 3-segmented maxillary palpi; their hosts are mainly Coccidae. Species of *alberti*-group have 2-segmented maxillary palpi; their hosts are mostly Diaspididae.

During the last five years, several species of *Metaphycus* were collected and reared in different states of Mexico; some of these species are new for Mexico, and some, new for science. In this paper, six new species of *Metaphycus* are described from four states of Mexico (Guerrero, San Luis Potosí, Tamaulipas and Veracruz). All new species have 3-segmented maxillary and labial palpi and belong to *insidiosus*-group of the genus *Metaphycus*.

The following abbreviations are used for depositories of the type material: UCRC – University of California, Riverside, California, USA; UAT – Universidad Autónoma de Tamaulipas, Ciudad Victoria, Tamaulipas, Mexico; USNM – US National Museum of Natural History, Washington, D.C., USA; ZISP – Zoological Institute, Russian Academy of Sciences, St.Petersburg, Russia.

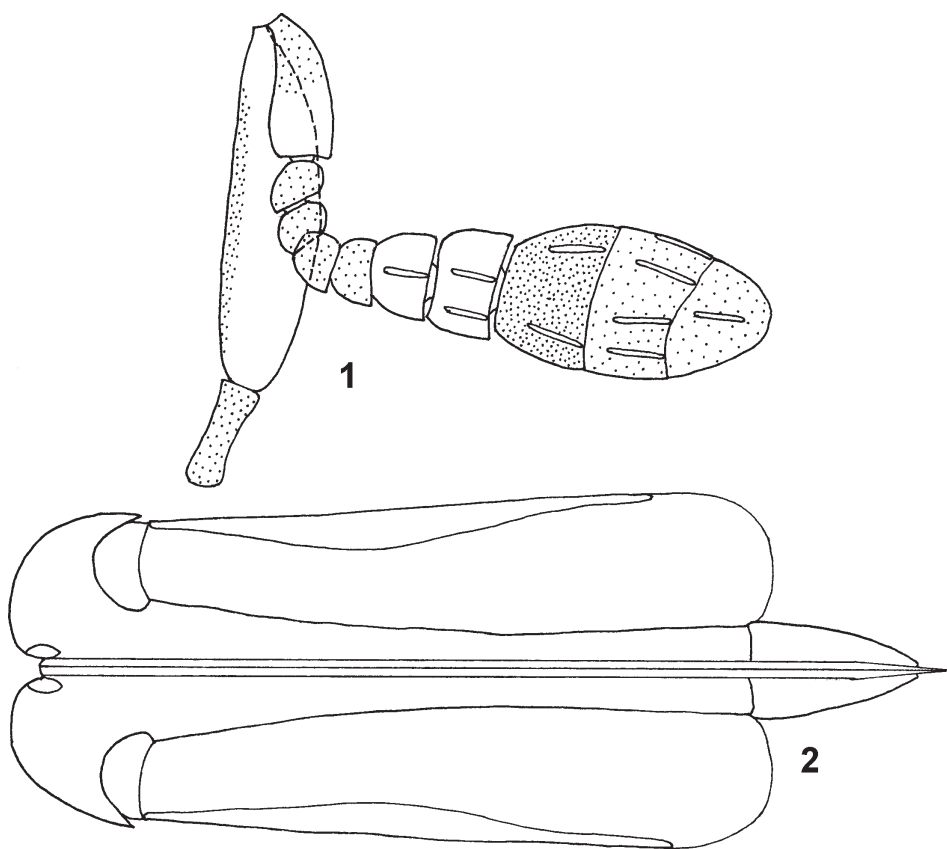
Metaphycus celticola sp. n. (Figs 1, 2)

Holotype. ♀, **Mexico**, Tamaulipas, San Carlos, reared from *Differococcus argentinus* (Morrison) on *Celtis pallida*, 12.II.2000 (S. Myartseva).

Paratypes. 4 ♀, with same data as in holotype.

The holotype and one paratype are kept at UCRC, one paratype (on slide), at USNM, one paratype, at ZISP, and one paratype, at UAT.

Description. *Female*. Body length 0.70 mm. Head slightly wider than high and about as wide as mesosoma. Frontovortex about 1.5 times as long as wide, its width about one-third of head width. Ocelli arranged in acute-angled triangle;



Figs 1, 2. *Metaphycus celticola* sp. n., female. **1**, antenna; **2**, ovipositor.

posterior ocelli separated from eye margins by about their diameter. Eye about 1.5 times as long as malar space. Antennae (Fig. 1) inserted ventral of lower margin of eyes. Distance between toruli about twice the distance between torulus and eye and about 4 times as long as distance between torulus and margin of mouth. Scape slightly widened, 4 times as long as its maximum width. Pedicel about twice as long as wide and slightly shorter than four proximal funicular segments combined. 1st-4th funicular segments subequal in length and slightly transverse, 5th and 6th longer and about 1.5 times as wide as long. Club wider than funicle, more than 1.5 times as long as wide and subequal to funicle in length. 5th and 6th funicular segments each with linear sensilla. Mesoscutum about twice as wide as long. Notauli incomplete, almost reaching the middle of mesoscutum length. Scutellum slightly longer than mesoscutum and wider than long, with fine reticulate sculpture. Fore wing 2.5 times

as long as its maximum width; linea calva closed on posterior margin of wing. Midtibial spur 0.9 times as long as basal midtarsal segment. Metasoma shorter than mesosoma. Ovipositor (Fig. 2) slightly protruded, about 1.3 times as long as middle tibia; third valvula about 0.25 times as long as second valvifer and 0.8 times as long as midtibial spur.

Head bright yellow; lower part of malar space and margin of mouth on sides marked with brownish black; frontovertex orange; occiput infusate. Antennae yellowish white; radicle dark, scape with a long narrow dark spot in middle part of dorsal margin, pedicel basally and first four funicular segments infusate, base of club brown. Mesosoma orange-yellow; posterior margin of pronotum and anterior margin of mesoscutum brown; metanotum and propodeum infusate. Mesopleuron yellowish white; tegulae whitish with dark apex. Legs whitish, with faint infuscation near bases of middle and hind tibiae. Fore

wings hyaline, setation slightly infusate. Metasoma yellow, strongly infusate dorsally. Ovipositor sheaths whitish.

Male unknown.

Comparison. *M. celticola* sp. n. is close to *M. luteolus* (Timberlake), which is also distributed in Mexico, and can be distinguished by the following characters. In female of *M. celticola*, the brown area on the scape is narrow, does not extend to its half-width; the scape is about 4 times as long as wide and 2.5 times as long as the pedicel; the mesoscutum is not bordered with brown, the tibiae are infusate near bases; the ovipositor is 1.3 times as long as the middle tibia; the third valvula is 0.8 times as long as midtibial spur. In female of *M. luteolus*, the brown area on the scape is wide, extends beyond its half-width; the scape is about 5 times as long as wide and 2.2 times as long as the pedicel; the mesoscutum is bordered with brown; the tibiae are immaculate; the ovipositor is 1.1 times as long as the middle tibia; the third valvula is subequal to midtibial spur.

The new species is close also to *M. stomachosus* Girault, described from the USA, and can be distinguished by the following characters. In female of *M. celticola*, the scape is 4 times as long as wide, uniformly flattened and has an elongate spot in the middle of dorsal margin; the malar space is marked with brown; the tibiae are infusate near bases. In female of *M. stomachosus*, the scape is 3 times as long as wide, widened in the middle, and has a short spot in the middle of dorsal surface; the malar space is yellow; the tibiae are immaculate.

Notes. *M. celticola* sp. n. was reared from the soft scale *Differococcus argentinus* (Morrison). This coccid species was known earlier only from Argentina on *Acacia* spp. and *Prosopis* spp. (Granara de Willink, 1999). Specimens of *D. argentinus* were collected in Mexico, San Carlos, on *Celtis pallida* (Ulmaceae).

Metaphycus farfani sp. n. (Figs 3-6)

Holotype. ♀, **Mexico**, San Luis Potosí, reared from *Ceroplastes* sp., 11.XI.1999 (S. Myartseva).

Paratypes. 6 ♀, 3 ♂, with same data as in holotype.

The holotype and three paratypes (2 ♀, 1 ♂) are kept at UCRC, two paratypes (1 ♀, 1 ♂), at USNM, two paratypes (2 ♀), at ZISP, and two paratypes (1 ♀, 1 ♂), at UAT.

Description. Female. Body length 1.2 mm. Head as wide as mesosoma, distinctly wider than high; frontovertex 0.3 times as wide as head. Ocelli in almost equilateral triangle; posterior ocelli separated from eye margins by about their diameter. Eye 1.5 times as long as malar space. Antennae (Fig. 3) inserted closer to mouth margin than to eyes. Scape widened in the middle

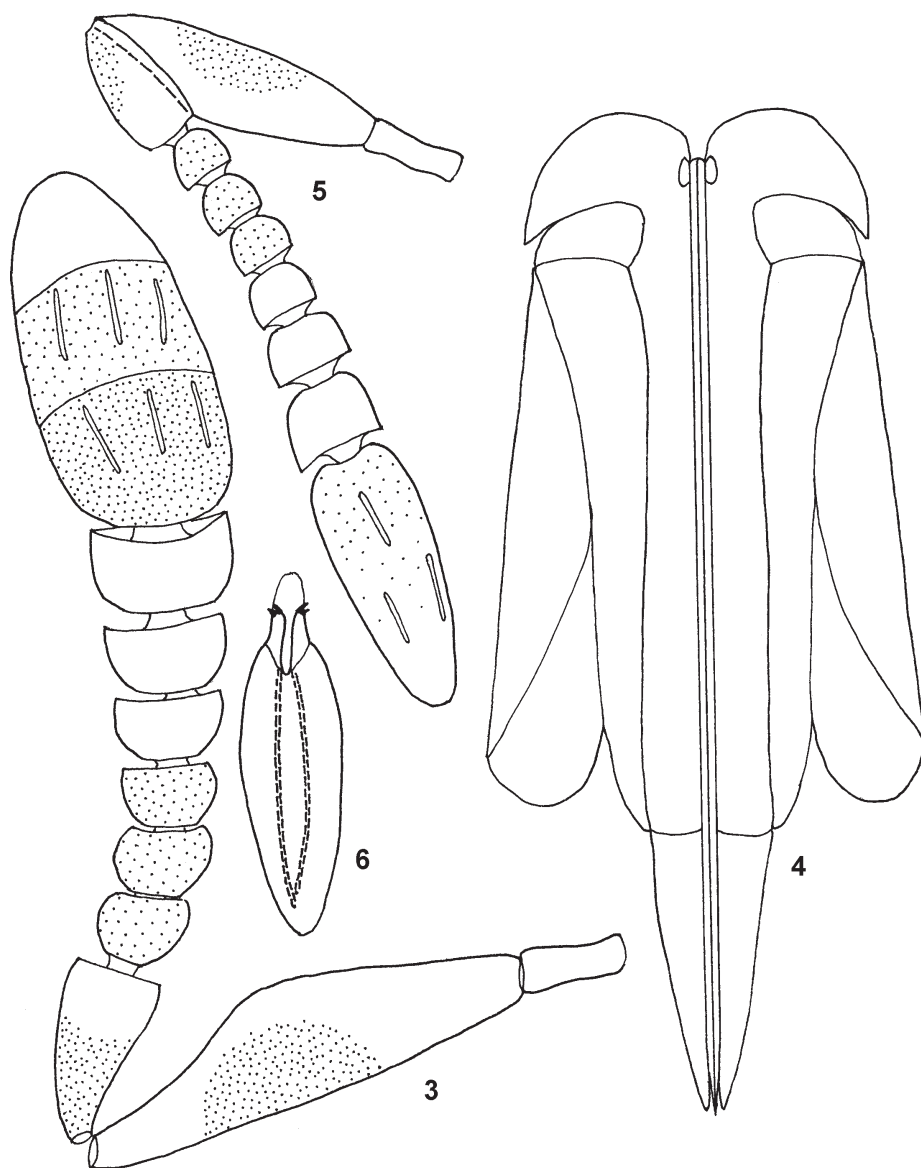
and narrowed to apex, 4 times as long as wide and 1.3 times as long as club. Pedicel twice as long as wide and slightly shorter than three proximal funicular segments combined. All funicular segments transverse; 1st segment slightly transverse, 2nd-6th about 1.5 times as wide as long, 5th and 6th segments slightly longer than 1st-4th. Club twice as long as wide and subequal to five distal funicular segments combined. Mesoscutum slightly more than 1.5 times as wide as long. Scutellum about as long as mesoscutum and slightly wider than long. Notauli incomplete, not reaching the middle of mesoscutum length. Mesoscutum and scutellum with reticulate sculpture; reticulae wide. Fore wing 2.2 times as long as its maximum width, with bare area at base. Linea calva closed on posterior margin of wing. Midtibial spur 0.8 times as long as basitarsus. Ovipositor (Fig. 4) very slightly protruded, a little longer than middle tibia; third valvula 0.4 times as long as second valvifer and 1.1 times as long as midtibial spur.

Head orange-yellow, lighter on face. Antennae whitish yellow; scape with median elongate black spot not reaching ventral margin; pedicel with brownish black base; three proximal funicular segments brownish; club with two proximal segments brownish black. Mesosoma orange-yellow, lighter on sides; pronotum marked with black; each side of propodeum with a median fuscous spot; mesopleuron yellowish; tegulae white. Legs whitish yellow, immaculate. Fore wings hyaline, venation slightly infusate. Metasoma yellow; tip of ovipositor dark.

Male. Body length 0.8-0.9 mm. Similar to female, except for structure of antennae and genitalia and darker coloration. Scape (Fig. 5) about 3 times as long as wide; club 2.5 times as long as wide. Eye slightly longer than malar space. Phallobase of genitalia (Fig. 6) about 3 times as long as wide; digital sclerites each with two equal teeth at apex.

Comparison. *M. farfani* sp. n. is close to *M. philippiae* (Masi). Viggiani & Guerrieri (1988) erroneously synonymized *M. philippiae* with *M. flavus* and *M. luteolus*, for which Guerrieri & Noyes (2000) also supposed the synonymy. Differences of *M. farfani* sp. n. from these three related species are given in the following key:

1. Middle tibiae with a dark ring at base; maxillary palpi 2-segmented; scape 3 times as long as wide, with dark spot reaching its ventral margin; metasoma yellowish brown; radicle dark; fore wing 2.5 times as long as wide ***M. philippiae*** (Masi)
- Middle tibiae immaculate; maxillary palpi 3-segmented; scape more than 3 times as long as wide, with dark spot not reaching its ventral margin; metasoma yellow or with brown suffusion; radicle light; fore wing less than 2.5 times as long as wide 2



Figs 3-6. *Metaphycus farfani* sp. n., female (3, 4) and male (5, 6). 3, antenna; 4, ovipositor; 5, antenna; 6, genitalia.

2. Dorsum of gaster yellow; scape widened in the middle and distinctly narrowed to apex, 4 times as long as wide; fore wing 2.2 times as long as wide, with distinct bare area on base; linea calva closed; 6th funicular segment without sensillum; third valvula 0.4 times as long as second valvifer . . . **M. farfani** sp. n.
- Dorsum of gaster with brown suffusion; scape almost cylindrical, about 5 times as long as wide. Fore wing 2.4 times as long as wide, without distinct bare area on base; linea calva opened; 6th funicular segment with sensillum; third valvula 0.2-0.3 times as long as second valvifer . . . 3
3. Mesosoma pale clay-yellow, sclerites of mesonotum bordered with brown; both sides of scape with a black spot **M. luteolus** (Timberlake)
- Mesosoma orange-yellow or bright sulphur-yellow, sclerites of mesonotum not bordered with brown; only outer side of scape with a black spot **M. flavus** (Howard)

Etymology. The new species is named in honour of Rabindranath Manuel Thompson Farfán, Mexican entomologist from San Luis Potosí.

***Metaphycus karwinskiæ* sp. n.**
(Figs 7-9)

Holotype. ♀, **Mexico**, *Tamaulipas*, San Carlos, reared from Coccidae on *Karwinskia humboldtiana*, 11.II.2000 (S. Myartseva).

Paratype. 1 ♂, with same data as in holotype.

The holotype and paratype of the new species (both on slides) are deposited at UCRC.

Description. Female. Body length 0.9 mm. Head wider than high; frontovertex 0.4 times as wide as head. Ocelli in slightly acute-angled triangle; posterior ocelli separated from eye margins by about their diameter. Vertex with distinct postocellar line situated close to ocelli. Eye slightly longer than malar space. Antennae (Fig. 7) inserted ventral of lower margin of eyes. Distances between toruli and eyes and between toruli and mouth margin subequal; each distance 0.4 times the distance between toruli. Scape slightly widened, 3.5 times as long as wide. Pedicel about twice as long as wide and subequal to three proximal funicular segments combined. 1st-5th funicular segments subequal in length, 1st-4th slightly transverse, 5th twice as wide as long, 6th about 1.5 times as wide as long and about 1.5 times as long as 5th segment. Club twice as long as wide and slightly shorter than funicle. 6th funicular segment with linear sensillum. Mesoscutum about twice as wide as long. Notauli incomplete and not reaching the middle of mesoscutum length. Scutellum slightly longer than mesoscutum and a little wider than long. Fore wing 2.3 times as long as its maximum width. Linea calva closed on posterior margin of wing. Midtibial spur subequal to basitarsus. Ovipositor (Fig. 8) not protruded, subequal to middle tibia; third valvula 0.1 times as long as second valvifer and 0.4 times as long as midtibial spur.

Head bright yellow; frontovertex yellow; occiput above foramen infuscate. Antennae pale clay-yellow, club slightly infuscate. Mesosoma bright yellow; anterior margin of mesoscutum and two spots on pronotum black; metanotum, propodeum and apex of scutellum infuscate; tegulae whitish with dark spot at apex. Legs whitish yellow. Fore wings hyaline, setation slightly infuscate. Metasoma yellow; middle part of tergites slightly infuscate, except for basal tergite.

Male. Body length 0.8 mm (on slide). Similar to female, except for antennae (Fig. 9) and genitalia. Eye subequal to malar space. Antennal toruli located immediately under lower margin of eyes. Scape 4 times as long as wide. Club 1.8 times as long as wide, subequal in length to four apical funicular segments combined. Phallobase of genitalia about 3 times as long as wide; digital sclerites each with two equal teeth at apex.

Comparison. *M. karwinskiæ* sp. n. is close to *M. flavus* (Howard), which is also distributed in

Mexico, and can be distinguished by the following characters. In *M. karwinskiæ*, the scape has no brown spot and is 3.5 times as long as wide; the 1st-3rd funicular segments are pale clay-yellow; the club is uniformly slightly infuscate; the head is 2.6 times as broad as the frontovertex; the ovipositor is equal to the middle tibia. In *M. flavus*, the scape has an elongate brown spot along dorsal margin and is 4.3 times as long as wide; the 1st-3rd funicular segments are brown; the basal part of club is blackish and apical part is yellowish; the head is 3.5 times as broad as frontovertex; the ovipositor is longer than the middle tibia.

***Metaphycus sergueii* sp. n.**
(Figs 10-13)

Holotype. ♀, **Mexico**, *Guerrero*, Acapulco, reared from Coccidae on *Leucaena* sp., 12.VI.2000 (S. Myartseva).

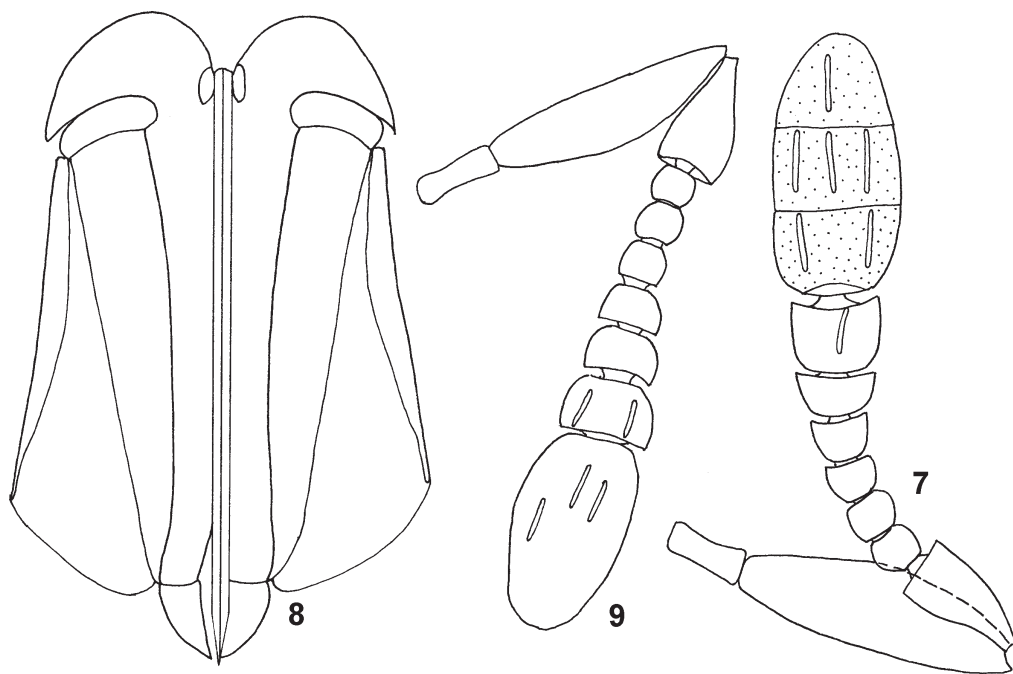
Paratypes. 2 ♀, 2 ♂, with same data as in holotype.

All specimens mounted on slides in Canada balsam.

The holotype and two paratypes (1 ♀, 1 ♂) are deposited at UCRC, and two paratypes (1 ♀, 1 ♂), at UAT.

Description. Female. Body length 1.1 mm. Head slightly wider than mesosoma and its own height; frontovertex about 0.3 times as wide as head. Ocelli in acute-angled triangle; posterior ocelli separated from eye margins by distance less than their diameter. Eye about 1.5 times as long as malar space. Antennae (Fig. 10) inserted closer to mouth margin than to eyes. Scape weakly widened in the middle, 4.3 times as long as wide and 1.2 times as long as club. Pedicel about twice as long as wide and subequal in length to three proximal funicular segments combined. 1st-5th funicular segments subequal in length, 1st and 2nd slightly wider than long, 3rd-5th more than 1.5 times as wide as long, 6th less than 1.5 times as wide as long and 1.5 times as long as 5th segment. Club about 2.5 times as long as wide and slightly longer than five apical funicular segments combined. 6th funicular segment with linear sensillum. Mesoscutum about 1.5 times as wide as long. Notauli short and not reaching the middle of mesoscutum length. Scutellum slightly longer than mesoscutum and a little wider than long. Fore wing 2.4 times as long as maximum wing width. Midtibial spur 0.9 times as long as basitarsus. Ovipositor (Fig. 11) not protruded, longer than middle tibia; third valvula about 0.2 times as long as second valvifer and about 0.6 times as long as basitarsus.

Head with yellow face and orange frontovertex; margin of mouth on sides and occiput above foramen infuscate. Antennal radicle dark; scape whitish yellow with black elongate spot along the middle of dorsal margin; base of pedicel and four proximal funicular segments brownish black, 5th and 6th segments whitish; club brownish



Figs 7-9. *Metaphycus karwinskiae* sp. n., female (7, 8) and male (9). 7, antenna; 8, ovipositor; 9, antenna.

black, except for apical segment brownish yellow. Mesosoma orange-yellow; pronotum brownish in the middle; mesoscutum with a brownish spot on each side and brownish anterior margin; scutellum posteriorly, metanotum and propodeum brownish, propodeum bordered with black. Fore wings hyaline, venation slightly infusate. Legs whitish yellow, femora near apices slightly infusate, tibiae with two dark rings, tips of tarsi infusate. Metasoma yellow; tergites infusate, except for sides ventral of spiracles and apex of gaster.

Male. Body length 0.9 mm. Similar to female, except for structure of antennae and genitalia and darker coloration of body. Scape (Fig. 12) 3.7 times as long as wide; club 1.9 times as long as wide, slightly shorter than five apical funicular segments combined. Fore wing 2.2 times as long as its maximum width. Phallobase of genitalia (Fig. 13) about 2.4 times as long as wide; digital sclerites each with two equal teeth at apex.

Comparison. *M. sergueii* sp. n. is close to *M. flavus* (Howard), but can be distinguished by the following characters. In female of *M. sergueii*, the tibiae are with two dark rings; the scape is slightly widened in the middle and less than 4.5 times as long as wide, and the third valvula is 0.2 times as long as the second valvifer. In female of *M. flavus*, the tibiae are immaculate; the

scape is cylindrical, 5 times as long as wide, and the third valvula is 0.3 times as long as the second valvifer.

Etymology. The new species, *M. sergueii*, is named in honour of the chalcidologist Dr. Serguei V. Triapitsyn (Department of Entomology, University of California, Riverside, California, USA).

***Metaphycus superbus* sp. n.**

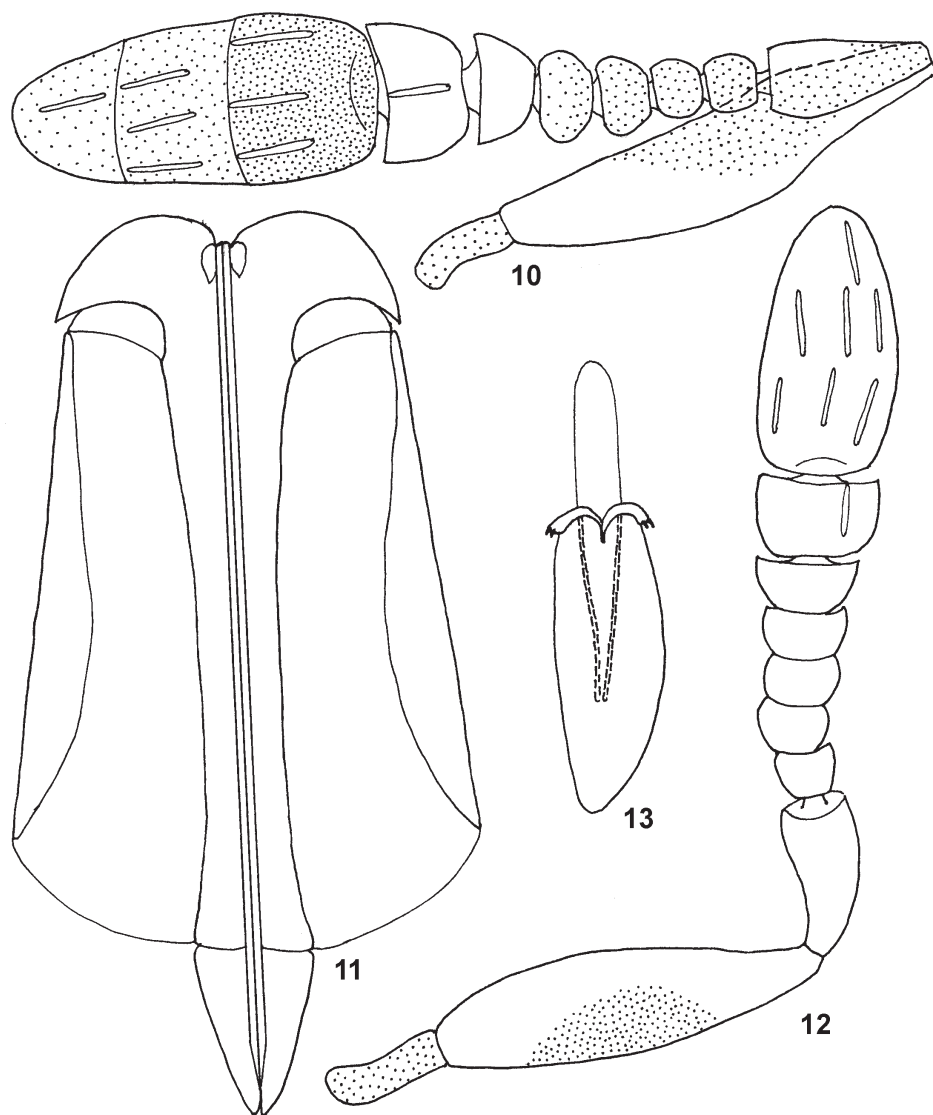
(Figs 14-17)

Holotype. ♀, **Mexico**, *Tamaulipas*, Miquihuana, reared from Eriococcidae on shrub, 12.V.2000 (S. Myartseva).

Paratypes. 2 ♀, 1 ♂, with same data as in holotype.

The holotype and two paratypes (1 ♀, 1 ♂) are deposited at UCRC, and one paratype (1 ♀), at UAT.

Description. Female. Body length 0.87-0.95 mm. Head about as wide as high, wider than mesosoma. Frontovortex 1.5 times as long as wide, about 0.3 times as wide as head. Ocelli in about equilateral triangle; hind ocelli separated from eye margins and occiput by a distance about 1.5 times as long as diameter of ocellus. Eye twice as long as malar space. Antennae (Fig. 14) inserted close to mouth margin. Scape widened distally, about twice as long as wide and about 1.5 times as long as club; pedicel 1.5 times as long as wide, subequal to three basal funicular

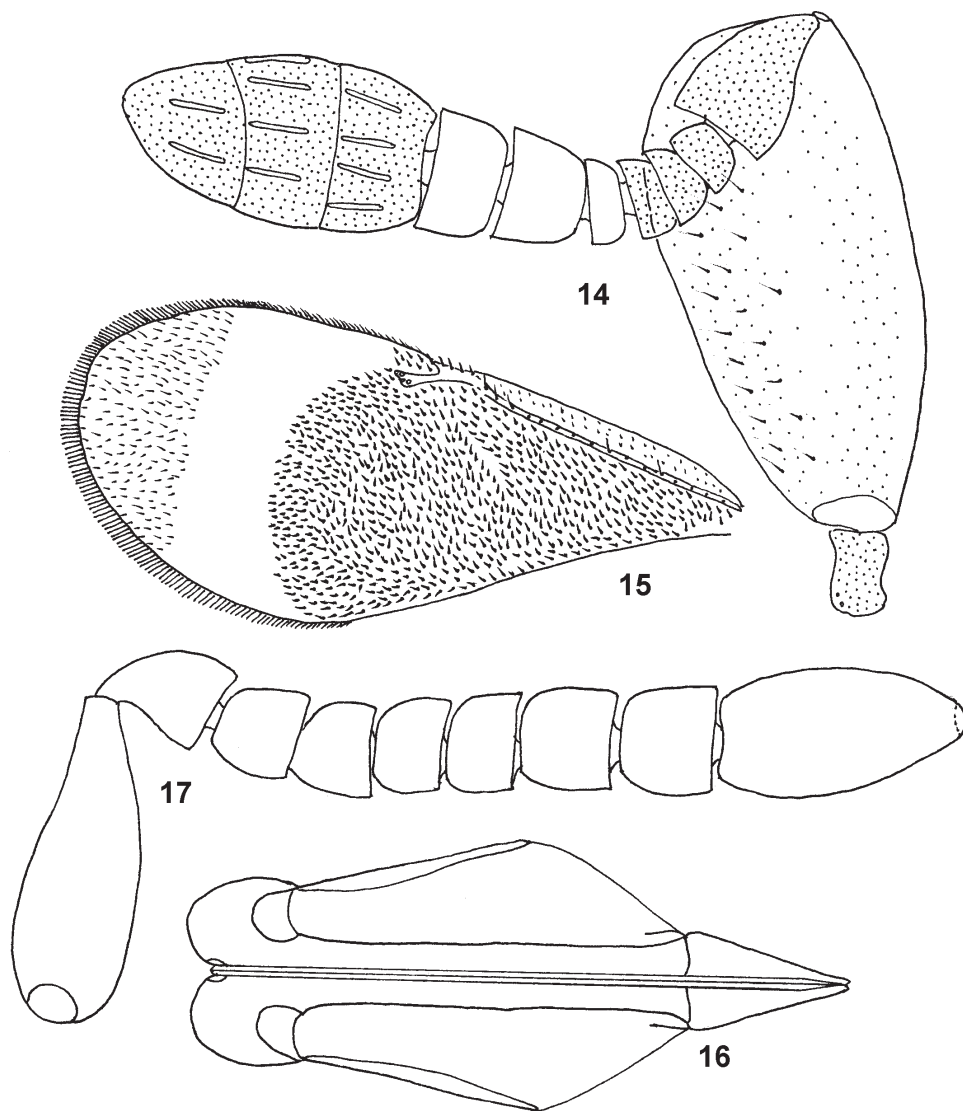


Figs 10-13. *Metaphycus sergueii* sp. n., female (10, 11) and male (12, 13). 10, antenna; 11, ovipositor; 12, antenna; 13, genitalia.

segments combined; all funicular segments transverse and widened distally, 1st-4th subequal in length, 3rd and 4th about twice as wide as long, 5th segment 1.3 times as wide as long and about twice as long as 4th, 6th slightly shorter and a little less than twice as wide as long; club about twice as long as wide and slightly shorter than funicle. Mesoscutum slightly longer than wide; notauli incomplete and not reaching the middle of mesoscutum length. Mesoscutum twice as wide as long; scutellum slightly longer than mesoscutum and slightly wider than long. Sculpture

of mesosoma, including mesopleura, finely reticulate, with small rounded cells. Fore wing (Fig. 15) slightly more than twice as long as its maximum width; marginal vein slightly shorter than stigmal vein; lineula calva extending to the middle level of disc. Midtibial spur about as long as basitarsus. Metasoma shorter than mesosoma. Ovipositor not exerted; third valvula 0.3 times as long as second valvifer (Fig. 16).

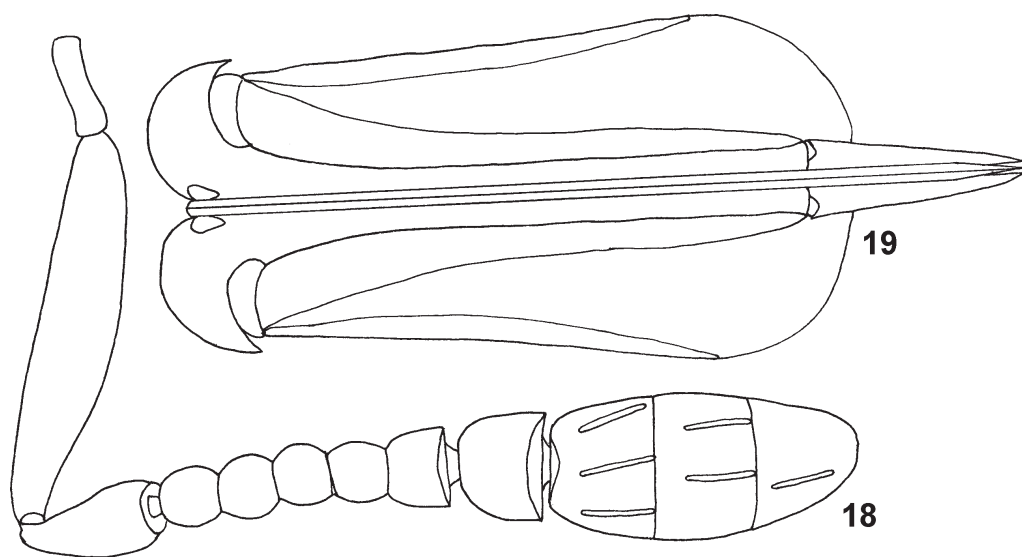
Head reddish orange; occipital margin narrowly white dorsally, between and behind eyes; face dark pink with white stripes on upper margin of



Figs 14-17. *Metaphycus superbus* sp. n., female (14-16) and male (17). 14, antenna; 15, fore wing; 16, ovipositor; 17, antenna.

facial cavity between lower margins of eyes, along upper margin of toruli and cheeks, and along upper margin of mouth (narrowest). Antennal scape black, with white dorsal margin and brownish inner side; pedicel black; 1st-3rd funicular segments black, 4th-6th white; club black. Mesonotum reddish orange; pronotum white, tegulae white with dark spot near apex; metanotum black except whitish middle part; propodeum black; mesopleura black with whitish base; setae on mesonotum silvery white. Coxae black, fore and middle ones with white

apices; all femora and tibiae white, banded and marked with black: fore and middle femora with two rings and a spot at base and at apex; hind femora black in basal half and with one ring and a spot near apex; tibiae with two rings and a spot near base and at apex; apical segment of all tarsi black. Fore wings weakly infuscate in basal half and contrasty banded with dark and pale cilia, which are stout in basal half, less strong in distal part and weak, pale in middle part of disc distal to stigmal vein. Metasoma black; ovipositor sheaths yellowish.



Figs 18, 19. *Metaphycus tuxpan* sp. n., female. 18, antenna, 19, ovipositor.

Male. Body length 0.80 mm. Head slightly more than twice as wide as long; frontovertex at the level of hind ocelli slightly wider than long. Ocelli in slightly obtuse triangle; hind ocelli separated from eye and occipital margin by distance of about one diameter of ocellus. Antennal scape (Fig. 17) widened basally, 2.8 times as long as wide; pedicel 1.2 times as long as wide, 1.3 times as long as 1st funicular segment. All funicular segments slightly transverse, 3rd and 4th segments the shortest, subequal in length and about 1.3 times as wide as long; 5th and 6th segments also subequal in length and only slightly wider than long; club about twice as long as wide, subequal to preceding three funicular segments. Setation of funicle not longer than width of segments.

Head and body black; face and legs as in female; fore wings hyaline; tegulae with white base; antennae brownish, scape slightly lighter at apex. Otherwise similar to female.

Comparison. *M. superbus* sp. n. is close to *M. calvus* (Compere), but can be distinguished by the following characters. In female of *M. superbus*, the scape is not marked with pink, the pedicel is black and subequal to three basal segments of the funicle, the 3rd funicular segment is black, the club is slightly shorter than the funicle; the frontovertex is 1.5 times as long as wide; the mesopleura are black. In female of *M. calvus*, the scape is marked with pink, the pedicel is mostly white and as long as two basal segments

of the funicle, the 3rd funicular segment is white, the club is as long as the preceding four segments of the funicle combined; the frontovertex is twice as long as wide; the mesopleura are pink.

The new species is similar also to *M. fuscipennis* (Howard), but can be distinguished by the following characters. In female of *M. superbus*, the head is reddish orange, the face has white stripes; the pedicel is entirely black and 1.5 times as long as wide; the mesonotum is orange-red, the sides and ventral part of the mesosoma are black, the sides of tergites are entirely black, the frontovertex is 1.5 times as long as wide. In female of *M. fuscipennis*, the head is mostly pale lemon-white, the face has no white stripes; the pedicel is black only at base; the mesonotum is black; the sides and ventral part of the mesosoma are broadly white; the sides of tergites are marked with white; the frontovertex is slightly more than twice as long as wide; the pedicel is twice as long as wide.

***Metaphycus tuxpan* sp. n.**
(Figs 18, 19)

Holotype. ♀, **Mexico**, Veracruz, Tuxpan, Ojito, reared from *Parasaissetia nigra* on palmetto, 14.III.1999 (S. Myartseva).

The holotype is deposited at UCRC.

Description. Female. Body length 1.0 mm. Head wider than high; frontovertex 0.3 times as wide as head. Ocelli in acute-angled triangle; pos-

terior ocelli separated from eye margins by about their diameter. Eyes distinctly pubescent, about 1.5 times as long as malar space. Antennae (Fig. 18) inserted closer to mouth margin than to eye margins. Scape cylindrical, 5 times as long as wide and slightly shorter than three proximal funicular segments combined; 1st-4th funicular segments subequal in length and width, slightly transverse; 5th and 6th slightly longer and transverse; club twice as long as wide, subequal to five distal funicular segments combined. Mesoscutum slightly longer than scutellum. Notauli short and not reaching the middle of mesoscutum length. Mesoscutum with thin, scutellum with deep reticulate sculpture. Fore wing 2.6 times as long as its maximum width, with bare area on base and setation finer than that on posterior half of disc. Midtibial spur 0.8 times as long as basitarsus. Ovipositor (Fig. 19) slightly protruded, 1.3 times as long as middle tibia; third valvula 0.3 times as long as second valvifer and 1.1 times as long as midtibial spur.

Head brown. Antennae whitish yellow, basal segment of club infusate. Mesosoma brownish black; tegulae black. Legs whitish, immaculate, except for weak infuscation at apex of femora. Fore wings hyaline, venation slightly infusate. Metasoma brownish yellow, with light yellow base and darkened sides below spiracles.

Male unknown.

Comparison. *M. tuxpan* sp. n. is close to *M. ater* (Mercet) widely distributed in Europe, and can be separated by the following characters. In female of *M. tuxpan*, the hind coxae and femora are whitish, the tegulae are dark brown, the 5th and 6th funicular segments are without linear sensilla, and the venation of fore wing is very faintly infusate. In female of *M. ater*, the hind coxae and femora are brown to black, the tegulae are white, the 5th and 6th funicular segments are with linear sensilla, and the venation of fore wing is brown.

Etymology. The name of the new species is derived from the city of Tuxpan, where it was collected.

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