

## Review of the Mexican species of the genus *Corsoncus* Townes, 1971 (Hymenoptera: Ichneumonidae: Anomaloninae)

### Обзор мексиканских видов рода *Corsoncus* Townes, 1971 (Hymenoptera: Ichneumonidae: Anomaloninae)

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КЛЮЧЕВЫЕ СЛОВА: Ichneumonidae, *Corsoncus*, новые виды, Мексика.

ABSTRACT: Six species of the genus *Corsoncus* are considered; five of them are recorded for México. A key to the world species, and the description of two new species, *C. fuscipennis* and *C. trochanteratus* spp.n., collected in the State of Tamaulipas, México, are given.

РЕЗЮМЕ: Рассмотрены 6 видов рода *Corsoncus*, 5 из них найдены в Мексике. Даны ключи к видам мировой фауны рода и описания двух новых видов, *C. fuscipennis* и *C. trochanteratus* spp.n., собранных в штате Тамаулипас, Мексика.

#### Introduction

The genus *Corsoncus* Townes is one of the typical genera of the Madrean fauna. The majority of the species are registered from México (five from six). Only one species, *C. marianoi* Gauld, which was described from Costa Rica is not known, but its existence on Mexican territory is also quite possible. In this paper, two new species, *C. fuscipennis* sp.n. and *C. trochanteratus* sp.n. are described from the Sierra Madre Oriental (México, Tamaulipas).

Types of the new species are deposited in the Insect Museum-UAT in Cd. Victoria, Tamaulipas, México.

#### Genus *Corsoncus* Townes, 1971

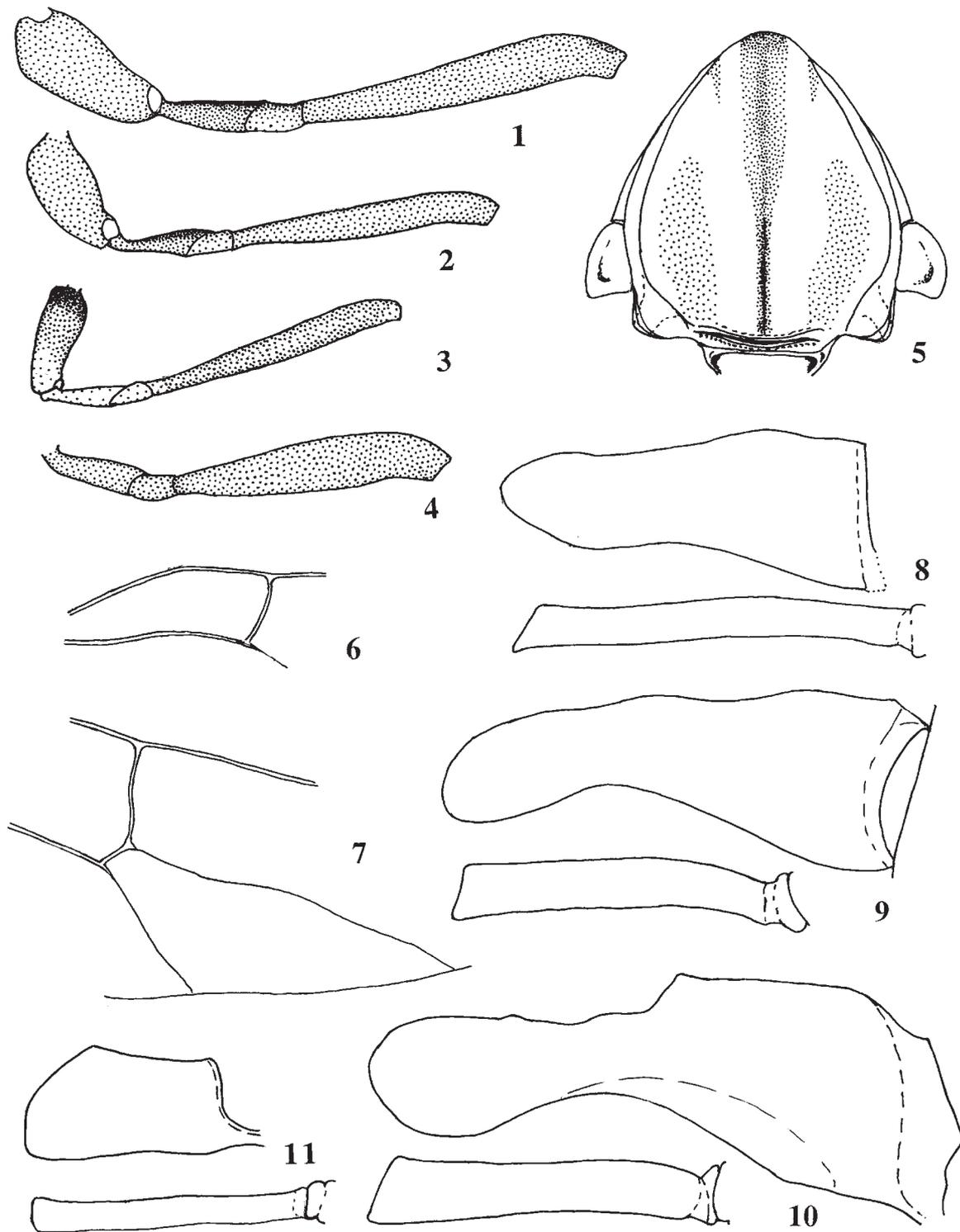
Townes 1971: 141; Dasch, 1984: 157; Gauld, 1997: 101.

Type species: *Anomalon magum* Cresson. Original designation.

#### KEY TO THE SPECIES OF THE GENUS *CORSONCUS*

1. Nervellus not broken; discoideella absent (Fig. 6). Scutellum flat on hind slope and with weak lateral carinae. Male paramera rather short, subtruncate apically (Fig. 11). Mesopleura distinctly and rather coarsely punctate (3. *minori* species group). 6. *C. minori* Gauld et Bradshaw  
— Nervellus broken below middle; discoideella present (Fig. 7). Scutellum convex, without lateral carinae. Male param-

era with long apical lobe (Fig. 8–10). Mesopleura obscurely punctate ..... 2  
2. Clypeal margin lacking median tooth. Flagellum short, a little more than front wing, with about 35 segments. Mandibular teeth subequal. Frons without vertical carina running up from antennal sockets. Postpetiole 1.3–1.5 as long as wide (1. *curvulus* species-group) ..... 3  
— Clypeal margin with median tooth. Flagellum 1.4–1.6 times as long as front wing with 44–60 segments. Mandible with lower tooth distinctly shorter than upper tooth. Frons with vertical carina running up from margin of antennal socket and with distinct concavity outward of this carina. Postpetiole 1.4 (in *C. trochanteratus*) or 2.2–2.5 x (in other species) as long as wide (2. *magus* species-group) ..... 4  
3. Nervellus broken near hind end; *rs-m* meeting *M* basad of second recurrent vein ..... 1. *C. curvulus* Dasch  
— Nervellus broken on its lower 0.3–0.4; *rs-m* meeting *M* slightly distad of second recurrent vein .....  
..... 2. *C. marianoi* Gauld et Bradshaw  
4. Hind trochanters completely yellow. Mesoscutum yellow with three wide fuscous stripes (Fig. 5); hind coxa basally and laterally blackish or brownish, yellow ventrally. Mesonotal flange behind tegulae very high, same width as tegula. Flagellum with 44–46 segments. Mesoscutum almost polished, without distinct notauli. Hind femur 8–9 x as long as wide .. 5. *Corsoncus trochanteratus* sp.n.  
— Hind trochanters partly fuscous or rufous. Mesoscutum rufous; hind coxa rufous. Mesonotal flange behind tegulae not so wide. Flagellum with 49–60 segments. Hind femur 5–9 x as long as wide ..... 5  
5. Hind femur 7.6–9 x as long as wide. Flagellum usually brownish fuscous. Wings lightly fuscous. Front wing 6.6–9.6 mm long ..... 3. *Corsoncus magus* (Cresson)  
— Hind femur 5–7 x as long as wide. Flagellum yellowish-rufous. Wings distinctly darkened, brownish. Front wing 9.5–12 mm long ..... 6  
6. Hind trochanters fuscous dorsally. Hind femur about 6.5 as long as wide. Flagellum fuscous apically. Wings strongly darkened ..... 4 *Corsoncus fuscipennis* sp.n. (♀)  
— Hind trochanters rufous. Hind femur 5.3 as long as wide. Flagellum not darkened apically. Wings slightly brownish .... 4. *Corsoncus* sp. (?male of *fuscipennis* or ?sp.n.)



Figs. 1-11. 1-4, part of hind leg: 1 — *C. fuscipennis* sp.n. (♀), 2 — *C. magus* (Cresson) (♀), 3 — *C. trochanteratus* sp.n. (♀), 4 — *C. «fuscipennis»* (♂). 5 — *C. trochanteratus* (♀), mesoscutum. 6 — *C. minori* Gauld, part of hind wing. 7 — *C. fuscipennis*, part of hind wing. 8-11, parameres of male genitalia and first flagellar segment: 8 — *C. trochanteratus*, 9 — *C. magus*, 10 — *C. «fuscipennis»*, 11 — *C. minori*.

Рис. 1-11. 1-4, часть задней ноги: 1 — *C. fuscipennis* sp.n. (♀), 2 — *C. magus* (Cresson) (♀), 3 — *C. trochanteratus* sp.n. (♀), 4 — *C. «fuscipennis»* (♂). 5 — *C. trochanteratus* (♀), среднеспинка. 6 — *C. minori* Gauld, часть заднего крыла. 7 — *C. fuscipennis*, часть заднего крыла. 8-11, парамеры гениталий самцов и первый членик жгутика: 8 — *C. trochanteratus*, 9 — *C. magus*, 10 — *C. «fuscipennis»*, 11 — *C. minori*.

1. *Corsoncus curvulus* Dasch, 1984

Dasch, 1984: 160, ♀, ♂. Holotype: ♀, "13 mi S of Tucson, Ariz., July 31, 1924, E. P. Van Duzee" (Mus. San Francisco). México (paratype): ♀, Minas Nuevas, Sonora, Aug. 7, 1952, J. et P. Vaurie (Mus. New York).

DISTRIBUTION. U.S.A.: Arizona. México: Sonora.

2. *Corsoncus mariano* Gauld et Bradshaw, 1997

Gauld, Bradshaw, 1997: 107 (in: Gauld et al., 1997): ♀, ♂. Holotype: ♀: Costa Rica, Guanacaste Prov., Santa Rosa National Park (Mus. INBio).

DISTRIBUTION. Costa Rica, Guatemala.

Material (in UAT): ♀, paratype, Guatemala, Zacapa, Río Hondo: August 1987, M.J. Sharkey.

3. *Corsoncus magus* (Cresson, 1874)

Figs. 2, 9.

Cresson, 1874 (1873): 377, ♀, ♂ (*Anomalon*). Lectotype: ♀, Córdoba, México (Mus. Philadelphia) examinavi; Dasch, 1984: 159 (descr., figs., distr.).

=*concolor* (Szépligeti, 1906: 126), ♂ (*Agrypion*). Type: ♂, México (Mus. Budapest).

DISTRIBUTION. According to Dasch [1984: 160] the species "is known only from Arizona, Costa Rica, Guatemala, Honduras, and México".

Material (in UAT). México, Tamaulipas. R. El Cimarrón, Villa de Casas, pastos, 28.XII.1986 (E. Ruíz C.), 1 ♀; Llera, Ej. La Libertad, 21.IX.1990 (J. A. Muciz V.), 2 ♂♂; Xicoténcatl, zacate, 10.II.1989 (S. Calderón M.), 1 ♀; Gómez Fariás: 16.VIII.1990 (J. A. Muciz V.), 1 ♀, 17.XI.1998 (D. Kasparyan), 1 ♂, tr. Malaise, 19.XII.1998–20.II.1999 (S. Hernandez), 2 ♂♂ 30 ♀♀. Veracruz: Tuxpan, Higueral, citricos, 31. X.1995 (M. Molina V.), 1 ♀.

4. *Corsoncus fuscipennis* Kasparyan et E. Ruíz-Cancino, **sp.n.**

Figs. 1, 7.

This species is easily recognized by strong infuscation of the wings, big sizes and stouter femora and tibia.

Female (holotype). Length of body 18.2 mm, front wing 10 mm. Antenna with 57 flagellar segments; common length of 1<sup>st</sup> and 2<sup>nd</sup> flagellar segments 1.1 times as long as maximal diameter of eye. Minimal distance between eyes 0.49 as wide as width of head (in *C. magus* this index about 0.45). Malar space 0.42 as long as basal width of mandible. Face and frons smooth, punctures thin and dense on face and sparser on frons. Lower tooth of mandible about 0.33 as long as upper tooth. Clypeus at apical margin with median tooth. Frons with a weak vertical median carina and with two strong short lateral carina extending upwards from outer rim of antennal sockets. Ocelli moderately large; eye-ocellar distance 2.14 as maximal diameter of lateral ocellus. Temple strongly convex, about as long as maximum width of eye in profil. Thorax 1.74 as long as height, smooth, obscurely punctate. Notauli long, not deep. Transverse groove before prescutellar groove distinct. Metapleurum reticulate. Fore wing with nervulus opposite of basal vein; postnervulus broken on upper 0.2. Hind wing with nervellus broken on posterior 0.22, discoidella complete, curved (in most paratypes nervulus distad of basal vein, nervellus broken in posterior 0.25). Hind coxa elongate, polished, obscurely punctate. Hind femur about 7 times as long as wide and 0.8 times as long as second tergite. Hind tibia rather stout, 17 times as long as its width at the middle (in *C.*

*magus* tibia more elongate, this index about 25). Hind basitarsus 0.5 as long as hind tibia. Petiole 9.0 times as long as wide; postpetiole 2.4 times as long as wide. Second metasomal segment 10 times as long as wide; remaining segments strongly compressed.

Rufous. Yellow on head (except of middle of frons, vertex and upper half of occiput), scape ventrally, propleuron, lower corners of pronotum, tegulae, wing bases, scutellum, fore coxae, fore and middle trochanters, anteriorly on apex fore and middle femora, and middle coxae, laterally on fore tibia, and all tarsi. Fuscous around ocelli, spot on scape laterally, pedicel, base of first flagellar segment, apex of flagellum, dorsally on hind trochanters, hind tibia at apical 0.3, second segment of abdomen dorsally, segments 6-8 apicolaterally, partially hypopigium, and ovipositor sheath. Wings strongly infuscate, brownish-black. Pterostigma dark brownish, only before radial vein pale (in *C. magus*, pterostigma uniformly pale yellowish brown).

Holotype: ♀, México, Tamaulipas, Ciudad Victoria, Canyon Novillo, 3.VI.1985 (BMI). Paratypes: Cd Victoria, 2.VI.1981 (E. Ruíz C.), 2 ♀♀; same place, canyon Novillo, 15.VI.1984 (J. Huerta), 2 ♀♀; same place, canyon La Libertad, 21.IX–23.XI.1985 (J. Hernández R.), 4 ♀♀; Hidalgo, El Carmen, 4.XI.1985, 22.II.1986 (R. A. Domínguez), 2 ♀♀.

DISTRIBUTION. México, Tamaulipas: mountains west of Ciudad Victoria and Hidalgo.

Male (1 specimen, without geographical label). We suppose that this specimen may be is the male of *C. fuscipennis*, but not consider it among paratypes, as in many aspects it differs from the female (see key) (Figs. 4, 10).

5. *Corsoncus trochanteratus* Kasparyan et Ruíz-Cancino, **sp.n.**

Figs. 3, 5, 8.

This species differs from other species by the yellow thorax (with three fuscous stripes on mesoscutum), completely yellow hind trochanters, partly fuscous hind coxae and thin hind femora (8.5 as long as wide); the last peculiarity links it with *C. magus*, which has another coloration, more segments in antenna, longer male paramera (much longer than first flagellar segment — compare Figs. 8 and 9).

Male (holotype). Length of body 15 mm, front wing 8.5 mm. Antenna elongate, with 48 flagellar segments; common length of 1<sup>st</sup> and 2<sup>nd</sup> flagellar segments 1.25 as long as maximal diameter of eye (more than in other species). Minimal distance between eyes 0.45 as width of head; malar space 0.5 as long as basal width of mandible. Face and frons smooth, punctuation very thin and dense. Lower tooth of mandible 0.7 as long as upper tooth. Clypeus with transparent apical margin and with a strong apical tooth. Frons with a weak vertical carina medially and with a pair of strong short vertical carinae extending upwards from outer rim of antennal sockets to level of lower 0.4 of frons where they transformed in two carinae; one of them sharply curved medially and the another outward. Both these carinae border two pairs of concavities lying above the antennal sockets. Ocelli moderately large; eye-ocellar distance 1.46 as maximal diameter of lateral ocellus. Temple moderately convex, about as long as maximum width of eye in profile. Thorax 1.57 as long as high, smooth, obscurely punctate, longitudinally striate under the subtegular ridge. Mesoscutum almost polished, without notauli, with a median longitudinal groove on its posterior 0.4. Mesonotal flange behind of tegulae larger than in other species, same size as tegulae and semitransparent with yellow median basal spot.

Transverse groove before prescutellar groove not distinct, hidden between some transverse striae. Metapleurum reticulate. Fore wing with nervulus distad of basal vein; postnervulus broken on anterior 0.32. Hind wing with nervellus broken on posterior 0.38, discoidella complete, strongly curved in the middle. Hind coxa elongate, polished, obscurely punctate. Hind femur about 8.2 times as long as wide and 0.8 as long as second tergite. Hind tibia rather stout, about 18 x as long as its width at the middle. Hind basitarsus 0.47 as long as hind tibia. Petiole 5.8 times as long as wide; postpetiole 1.4 times as long as wide. Second metasomal segment about 10 times as long as wide; remaining segments strongly compressed.

Head, thorax and legs mainly yellow; black dorsally on pedicel and base of the 1<sup>st</sup> flagellar segment, medially on frons, around ocelli, on upper half of occiput; rufous to brownish-rufous on flagellum (more fuscous apically), dorsally on lateral lobes of pronotum, three lines on mesoscutum (Fig. 5) — one median stripe and a pair of posterolateral stripes, prescutellar groove, speculum, a pair of large anterolateral spots on mesosternum, on suture between metanotum and propodeum, hind coxae dorsally and laterally (brownish basally), hind femora and tibia (tibia more infuscate in apical 0.4). Abdomen mainly rufous with yellow petiole (postpetiole rufous dorsally) and with blackish genitalia and second tergite dorsally. Pterostigma pale yellowish-rufous. Wings hyaline.

**VARIABILITY.** Second male rather similar to type, but antenna with 45 flagellar segments and spots on the thorax (rufous in holotype) almost black.

Female unknown.

Holotype: ♂, México, Tamaulipas, Canyon Novillo, 5 km W Ciudad Victoria, 19.VII.1985 (A. Del Valle). Paratype: ♂, El

Madronyo, 25 km SW Ciudad Victoria, bosque *Quercus*, 2.III.1985 (E. Ruíz C.)

#### 6. *Corsoncus minori* Gauld et Bradshaw, 1997

Figs. 6, 11.

Gauld, Bradshaw, 1997: 104 (in Gauld et al., 1997): ♀, ♂. Holotype: ♀, Costa Rica, Guanacaste Prov., Guanacaste National Park, Estacion Pitilla (Mus. INBio)

**DISTRIBUTION.** Mexico, Costa Rica.

*C. minori* differs from other species by complex of essential characters: 1) nervellus not intercepted and 2) its discoidella absent, 3) scutellum more flat and with lateral carinae, 4) male genital clasper short, without long apical lobe, 5) mesopleurum with medium size punctures.

Material (in UAT). México, Tamaulipas: Tampico, 11.XII.1989 (M. Aquino S., S. Calderón M.), 5 ♀♀, 6 ♂♂; Gómez Farías: 3.VII.1981 (E. Ruíz C.), 29.VII.1989 (L. Martínez P.), Alta Cimas, 16.VII.1990 (E. Ruíz C.), 3 ♀♀, 5 ♂♂; Llera, Ej. La Libertad, 21.IX.1990 (L. López, S. Varela F.), 2 ♂♂; Cd. Victoria, X.1979, 1 ♂. Veracruz: Tuxpan, Higueral, 31.X.1995 (R. Herrera), 1 ♀, 1 ♂.

#### Literature

- Dasch, C.E. 1984. Ichneumon-flies of America North of Mexico: 9. Subfamilies Theriinae and Anomaloniinae // Mem. Amer. Entomol. Inst. Vol.36. 610 pp.
- Gauld, I.D. et al. 1997. The Ichneumonidae of Costa Rica, 2 // Mem. Amer. Entomol. Inst. Vol.57. 485 pp.
- Townes, H. 1971. Genera of Ichneumonidae 4 // Mem. Amer. Entomol. Inst. Vol.17. 372 pp.