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A NEW SPECIES OF THE GENUS *PHYTODIETUS* GRAVENHORST, 1829 (HYMENOPTERA: ICHNEUMONIDAE: TRYPHONINAE) FROM MEXICO

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ABSTRACT

In the subfamily Tryphoninae, a new species *Phytodietus* (*Neuchorus*) *enriquei* sp. nov. is described from Tamaulipas Province of Mexico. The new species differs from all other Neotropical and Nearctic species of the genus by the combination of white postmedian ring on antennae and pale fulvous metasoma.

Key words: Hymenoptera, Ichneumonidae, Mexico, new species, *Phytodietus*, taxonomy, Tryphoninae

НОВЫЙ ВИД РОДА *PHYTODIETUS* GRAVENHORST, 1829 (HYMENOPTERA: ICHNEUMONIDAE: TRYPHONINAE) ИЗ МЕКСИКИ

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РЕЗЮМЕ

В подсемействе Tryphoninae описывается из Мексики новый вид *Phytodietus* (*Neuchorus*) *enriquei* sp. nov., который отличается от всех других неотропических и неарктических видов рода комбинацией двух признаков: белого кольца за серединой антенны и бледно рыжей метасомы.

Ключевые слова: Hymenoptera, Ichneumonidae, *Phytodietus*, Tryphoninae, Мексика, новый вид, таксономия

INTRODUCTION

Phytodietus Gravenhorst, 1829 is a moderately large genus of worldwide distribution (Yu et al. 2012). Species of *Phytodietus* are koinobiont ectoparasitoids of various Lepidoptera. Usual hosts are small and moderately concealed hairless larvae of Tortricidae, Pyralidae and others (Gauld et al. 1997; Yu et al. 2012). The Nearctic fauna of *Phytodietus*

was revised by Loan (1981) and comprises 31 species. Eleven species of the genus were found to occur in Costa Rica (Gauld et al. 1997). The Mexican fauna of *Phytodietus* was recently revised by the first author (Kasparyan and Ruíz-Cancino 2004; Kasparyan 2007) and comprises 11 species belonging to the subgenera *Neuchorus* Uchida, 1931 (6 species), *Phytodietus* s. str. (4 species), and *Weisia* Schmiedeknecht, 1907 (1 species). Here a new species, belonging to the subgenus *Neuchorus*, is described from Mexico.

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MATERIAL AND METHODS

A single female of the new species was obtained near Ciudad Victoria in Tamaulipas Province in the northern part of Mexico, in a dry mountainous area. The Malaise trap was operated near a streambed, somewhat below the top of the mountain covered with an oak-forest predominantly comprised of *Quercus rysophylla* Weath. and *Q. laurina* Humb. et Bonpl. The altitude is about 1450 m.

Taxonomy follows the catalogue Taxapad (Yu et al. 2012). Photographs were taken at the Zoological Institute of the Russian Academy of Sciences (St. Petersburg, Russia) with a DFC 290 digital camera attached to a Leica MZ16 stereomicroscope, and the partially focused images were combined using Helicon Focus software. The holotype of the new species is deposited in the Universidad Autónoma de Tamaulipas (UAT), Cd. Victoria, Mexico.

SYSTEMATICS

Family Ichneumonidae Latreille, 1802

Subfamily Tryphoninae Shuckard, 1840

Tribe Phytodietini Hellén, 1915

Genus *Phytodietus* Gravenhorst, 1829

***Phytodietus (Neuchorus) enriquei* Kasparyan et Khalaim, sp. nov.**

(Figs. 1–8)

Etymology. Named in honour of Dr. Enrique Ruíz-Cancino, in recognition of his unflagging efforts in development of the ichneumonid collection of UAT and studies of Mexican Ichneumonidae.

Type material. Holotype female (deposited at UAT), MEXICO, Tamaulipas, 15 km SSE Cd. Victoria, El Madroño, oak forest, 27 August – 7 September 2011 [Malaise trap], coll. E. Ruíz-Cancino and A. Rodríguez.

Description. *Female* (holotype). Body length about 6 mm. Fore wing 5 mm long. Flagellum 6.8 mm long.

Antenna with 36 flagellomeres; length of 2 basal flagellomeres combined 1.07 times maximum diameter of eye; flagellum 1.36 times as long as fore wing. Body smooth, shining, almost polished, finely punctate. Head, in dorsal view, strongly and almost straightly narrowed behind eyes, beyond the middle strongly curved to occiput. Upper half of face

laterally impressed, medially rather strongly convex. Clypeus very strongly convex, its lower margin in central half straight. Malar space about half as long as basal width of mandible.

Epomia present as rather short carina crossing the transverse pronotal impression. Notaulus sharp in anterior 0.4 of mesoscutum except for its anterior slope. Prepectal carina present ventrally, its dorsal end at level of ventral 0.2 of hind lateral margin of pronotum. Mesopleuron smooth, more or less evenly covered with fine and rather dense punctures, below subtegular ridge almost impunctate; speculum large, polished, without hairs. Metapleuron with very fine punctures. Submetapleural carina complete. Propodeum smooth and shiny.

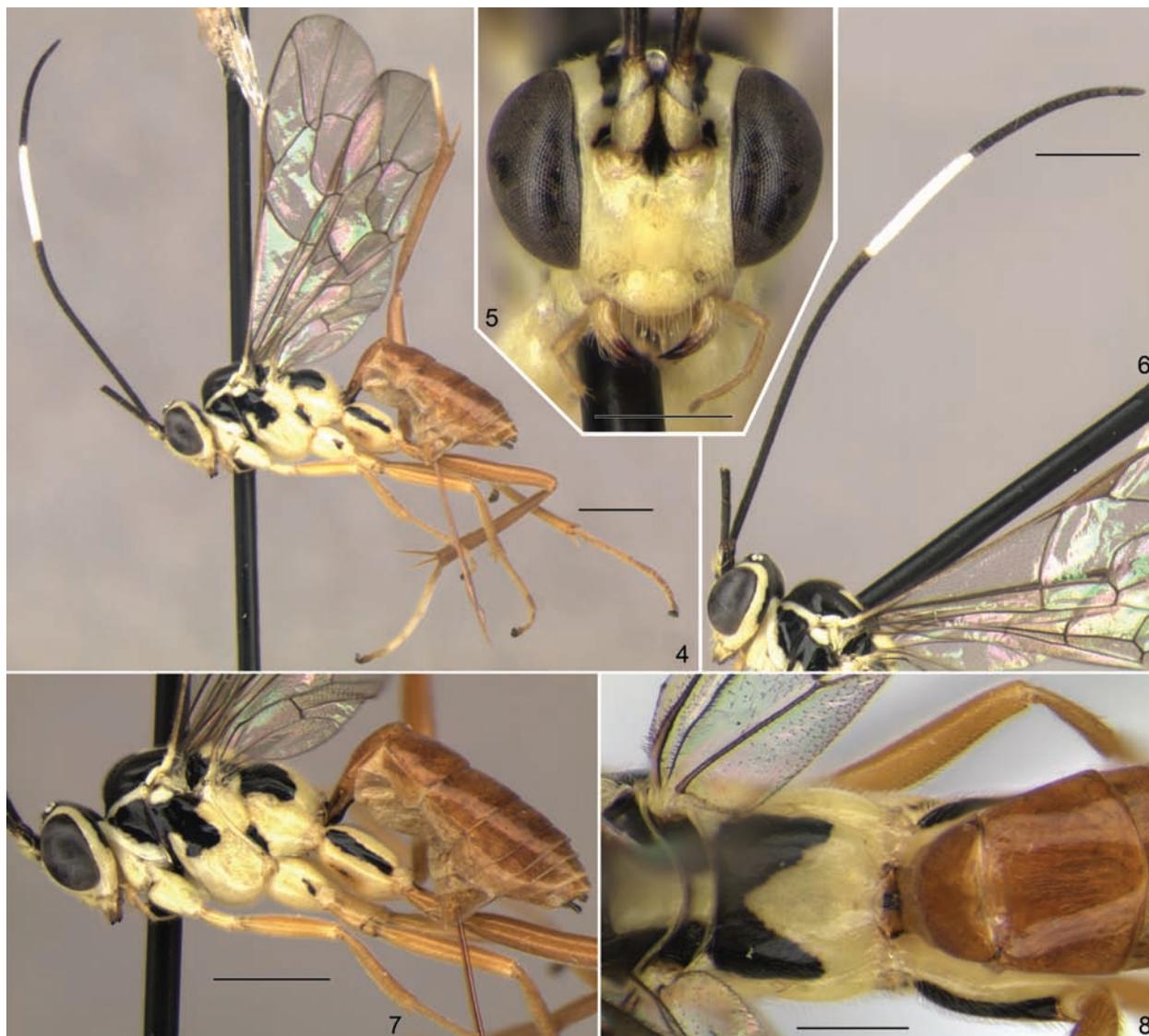
Hind femur 6 times as long as its maximum width. Proportions of tarsomeres of hind leg 8 : 3.7 : 2.3 : 1.3 : 1.6; third tarsomere 1.44 times as long as tarsomere 5, and second segment 2.3 times as long as tarsomere 5. Tarsal claws with 3–4 very high teeth (Fig. 3). Fore wing with nervulus interstitial. Hind wing with nervellus intercepted at lower 0.31.

First metasomal tergite 1.5 times as long as wide, weakly constricted before glymmae (Fig. 2); its dorsolateral margins sharp before spiracles and moderately sharp beyond spiracles; dorsal longitudinal carinae absent; glymmae very deep, their inner wall translucent. Second tergite 0.75 times as long as wide. Ovipositor sheath about 0.8 times as long as hind tibia.

Antenna blackish except as follows: scape and pedicel ventrally pale yellow, flagellomeres 12–20 white (Fig. 6). Head and mesosoma predominantly pale yellow with black markings (Figs. 4, 5, 7, 8); frons and vertex with black median longitudinal mark extending from upper margins of antennal sockets through ocellar area to occipital carina; this black area narrowly expands laterally on temples along the occipital carina; occiput black (except for postgena); palpi pale fulvous; mandible with reddish brown teeth. Mesoscutum black with postmedian central subquadrate yellow mark; prepectus with blackish median spot beyond fore coxa; prescutellar groove and lateral prescutellar carinae black; scutellum and postscutellum mediodorsally yellow, with lateral sides black and hind edge narrowly yellow. Metapleuron yellow with large wedge-like black marking in its lower anterior corner. Propodeum yellow with a pair of large triangle black marks merged medially at base (Fig. 8). Coxae predominantly whitish yellow,



Figs. 1–3. *Phytodietus enriquei* sp. nov., female (holotype). 1 – habitus, lateral view; 2 – first tergite, dorsal view; 3 – claw of hind tarsus. Scale bar for figure 1 = 1.0 mm.



Figs. 4–8. *Phytodietus enriquei* sp. nov., female (holotype). 4 – habitus, lateral view; 5 – head, frontal view; 6 – head with antenna, lateral view; 7 – body, lateral view; 8 – posterior part of mesosoma and base of metasoma, dorsal view. Scale bar for figures 4, 6 and 7 = 1.0 mm, for figures 5 and 8 = 0.5 mm.

mid coxa with small dorsoapical mark and hind coxa with wide dorsal black stripe and small brownish spot anteriorly. Legs beyond coxae uniformly pale rufous, hind tarsus whitish except base of basitarsus and 2 apical tarsomeres. Metasoma pale fulvous with sternite 1 blackish and sternite 2 yellowish. Ovipositor sheath black with brownish apex.

Male. Unknown.

Remarks. Ovipositor sheaths were broken and lost at their extreme base after preparation of the

description; they are present at Fig. 1, but absent in Figs. 4 and 7.

Differential diagnosis. *Phytodietus enriquei* sp. nov. is easily separated from all other Neotropical and Nearctic species of the genus by the combination of three rarely occurring characters: (1) white postmedian ring on antennae (Figs. 4, 6), (2) pale fulvous metasoma (Figs. 4, 7) and (3) entirely pale yellow mesosternum. The only other species of the genus that has a white band on the antenna and a fulvous

metasoma is the Mexican *Ph. thompsoni* Kasparyan and Ruíz-Cancino, 2004, but the mesosternum of *Ph. thompsoni* is completely black. In addition, by possessing a reddish metasoma, the new species resembles females of the Nearctic *Ph. rutilus* Krebs, 1969 which occurs in north-eastern United States and southeast Canada. The female of *Ph. enriquei* sp. nov. differs from both these species in having considerably smaller body size, shorter first tergite (Fig. 2), pale yellow eye orbits (interrupted with black on malar space and at upper part of temple in *Ph. rutilus* and *Ph. thompsoni*), and black anterior part of mesoscutum (in *Ph. rutilus* and *Ph. thompsoni* the mesoscutum has conspicuous anterolateral yellow spots [Loan 1981: Figs. 5, 6; Kasparyan and Ruíz-Cancino 2004: Fig. 2]).

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