

## New records of two rare species of the genus *Phytodietus* Gravenhorst, 1829 (Hymenoptera: Ichneumonidae: Tryphoninae) from Mexico

### Новые находки двух редких видов рода *Phytodietus* Gravenhorst, 1829 (Hymenoptera: Ichneumonidae: Tryphoninae) из Мексики

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KEY WORDS: Neotropical region, Chiapas, Mexico, new records, Phytodietini, Tryphoninae.

КЛЮЧЕВЫЕ СЛОВА: Неотропики, Чиapas, Мексика, новые находки, Phytodietini, Tryphoninae.

PALABRAS CLAVE. Región Neotropical, Chiapas, México, nuevos registros, Phytodietini, Tryphoninae.

**ABSTRACT.** Two rare alpine Costa Rican species of the genus *Phytodietus*, *Ph. (Neuchorus) maximoi* Gauld and *Ph. (Ph.) securai* Gauld, are recorded from Mexico for the first time. Both species were collected from mountainous areas in the southern State of Chiapas, at altitude between 1800 and 2750 m. Colour photos of these two species are given for the first time.

**РЕЗЮМЕ.** Из Мексики впервые отмечены два редких высокогорных костариканских вида рода *Phytodietus*: *Ph. (Neuchorus) maximoi* Gauld и *Ph. (Ph.) securai* Gauld. Оба вида собраны в горных районах южного штата Чиapas на высоте между 1800 и 2750 м. Впервые даны цветные иллюстрации этих видов.

**RESUMEN.** Dos especies raras del género *Phytodietus*, de distribución alpina en Costa Rica, *Ph. (Neuchorus) maximoi* Gauld y *Ph. (Ph.) securai* Gauld, se registran para México por primera vez. Ambas especies fueron colectadas en áreas montañosas del sureño Estado de Chiapas, a una altitud entre 1800 y 2750 msnm. Fotografías a color de esas dos especies se presentan por primera vez.

#### Introduction

*Phytodietus* Gravenhorst, 1829 is a moderately large tryphonine genus of worldwide distribution [Yu et al., 2012], comprising 31 species in the USA and Canada [Loan, 1981], 11 species in Costa Rica [Gauld et al., 1997], and 12 species in Mexico [Kasparyan & Ruíz-Cancino, 2004; Kasparyan, 2007; Kasparyan & Khalaim, 2013].

Twelve Mexican species are distributed into three subgenera — *Neuchorus* Uchida, 1931 (7 species),

*Phytodietus* s. str. (4 species) and *Weisia* Schmiedeknecht, 1907 (1 species). Among them, nine species are known to occur only in Mexico; one species, *Ph. (N.) obscurus* (Ratzeburg, 1852) (= *rufipes* Holmgren, 1860), is widely distributed in the Holarctic region and also was recorded from the State Coahuila in northern Mexico; and two species of the subgenus *Phytodietus*, *Ph. sylviae* Gauld, 1997 and *Ph. yamilethi* Gauld, 1997, have a range that extends from tropical Mexico south to Costa Rica (both species are alpine, occurring between 1300 and 2800 m above sea level).

The aim of this study is to report finding of two rare alpine Costa Rican species, *Ph. (N.) maximoi* Gauld and *Ph. (Ph.) securai* Gauld, from southern Mexico. Colour pictures of these two species will be given for the first time.

#### Material and Methods

About 220 specimens of Mexican Ichneumonidae from the collection of the Essig Museum of Entomology, University of California, Berkeley, California, U.S.A. (EMEC) were examined. Among them, two rare alpine species of the genus *Phytodietus*, previously known only from Costa Rica, were found. Both species are represented by a single specimen collected in the State Chiapas in the tropical part of Mexico, in a high mountainous areas between 1828 and 2743 m.

Photographs were taken at Instituto de Biología, Universidad Nacional Autónoma de México, D.F., Mexico with a Leica DFC295/DFC290 HD digital camera attached to a Leica Z16 APO-A stereoscopic microscope; partly focused images were combined using Leica Application Suite program.

## Results

Subfamily Tryphoninae

Tribe Phytodietini

Genus *Phytodietus* Gravenhorst, 1829

Subgenus *Neuchorus* Uchida, 1931

*Phytodietus* (*Neuchorus*) *maximoi* Gauld, 1997

Figs 1–3.

MATERIAL EXAMINED. Mexico, Chiapas, Municipio Motozintla, ridge between Cerro Boqueron & Niquivil, 2438–2743 m,

15.XII.1976, coll. D.E. & P.M. Breedlove, 1 female (EMEC).

DISTRIBUTION. Costa Rica (900–2100 m) and southern Mexico (Chiapas, 2400–2750 m). **First record from Mexico.**

REMARKS. Rare species previously known only from a few localities in Costa Rica. The female from Mexico exactly corresponds with the original description of the species [Gauld et al., 1997: 355] only with minor variation in colour pattern.

*Phytodietus maximoi* is very similar to *Ph. mexicanus* Cresson, but unless this species it has basal flagellomeres more strongly swollen (Fig. 2) and mesosoma laterally more extensively black marked (Fig. 3). Moreover, all specimens



Figs 1–5. *Phytodietus* spp., females (Mexico): 1–3 — *Ph. maximoi* Gauld; 4–5 — *Ph. securai* Gauld; 1, 4 — habitus, lateral view; 2, 5 — head and base of antennae, frontal view; 3 — head and mesosoma, lateral view.

Рис. 1–5. *Phytodietus* spp., самки (Мексика): 1–3 — *Ph. maximoi* Gauld; 4–5 — *Ph. securai* Gauld; 1, 4 — габитус, сбоку; 2, 5 — голова и основание антенн, спереди; 3 — голова и мезосома, сбоку.

of *Ph. mexicanus* were collected between 800 and 1400 m in the states Veracruz and Tamaulipas in northeast and central Mexico, while the only Mexican representative of *Ph. maximo* was obtained much higher, at 2400–2750 m in southern Mexico.

Subgenus *Phytodietus* s. str.

*Phytodietus* (*Phytodietus*) *segurai* Gauld, 1997

Figs 4–5.

MATERIAL EXAMINED. Mexico, Chiapas, Municipio de Ocosingo, second ridge NE of Las Margaritas, above La Soledad, 1828 m, 1.VII.1981, coll. D.E. & P.M. Breedlove, 1 female (EMEC).

DISTRIBUTION. Costa Rica (1950 m) and southern Mexico (Chiapas, 1830 m). **First record from Mexico.**

REMARKS. This rare species was known only from the holotype female, collected over 20 years ago in Costa Rica. Here we report the second female of this species from southern Mexico. The Mexican specimen almost exactly corresponds with the original description [Gauld et al., 1997: 362] with no obvious variation.

*Phytodietus segurai* is immediately distinguishable from other Mexican and Central American species of the genus by its almost immaculately black head and mesosoma, orange metasoma, strongly darkened wings and black legs (Fig. 4).

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