

A NEW SPECIES OF THE GENUS *CHELETOPHYES* OUDEMANS, 1914  
(PROSTIGMATA : CHEYLETIDAE) FROM THE NEST  
OF A CARPENTER BEE IN PANAMA

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ABSTRACT : *Cheletophyes panamensis* spec. nov. inhabiting the nest of the carpenter bee *Xylocopa frontalis* in Panamá is described and figured.

Mites of the genus *Cheletophyes* Oudemans, 1914 live in association with carpenter bees of the subfamily Xylocopinae. There have been five species described to date : *C. vitzthumi* Oudemans, 1914 from the nest of *Xylocopa (Koptortosoma) caffra* from Africa ; *C. eckerti* Summers & Price, 1970 found on *Xylocopa (Koptortosoma) aestuans* from India ; *C. clavipilis* and *C. apicola* Fain et al., 1980 both from the nest of *Xylocopa (Platynopoda) latipes* from Malaysia and *C. indicus* Smiley & Whitaker Jr., 1981 on an unspecified carpenter bee in the subfamily Xylocopinae from India. SMILEY & WHITAKER Jr. redefined the genus and presented a key to the species. An undescribed species was found by one of us (E. MÉNDEZ) associated with the nest of the Central American bee *Xylocopa (Megaxylocopa) frontalis* from Panamá. This species allows us to modify some generic concepts as follow : palptibial spine with 2 to 4 basal teeth (2 to 3 in definition) ; all dorsal setae may be inserted on small platelets (8 to 9 platelets in definition). The females are the first known of the genus in America and can be

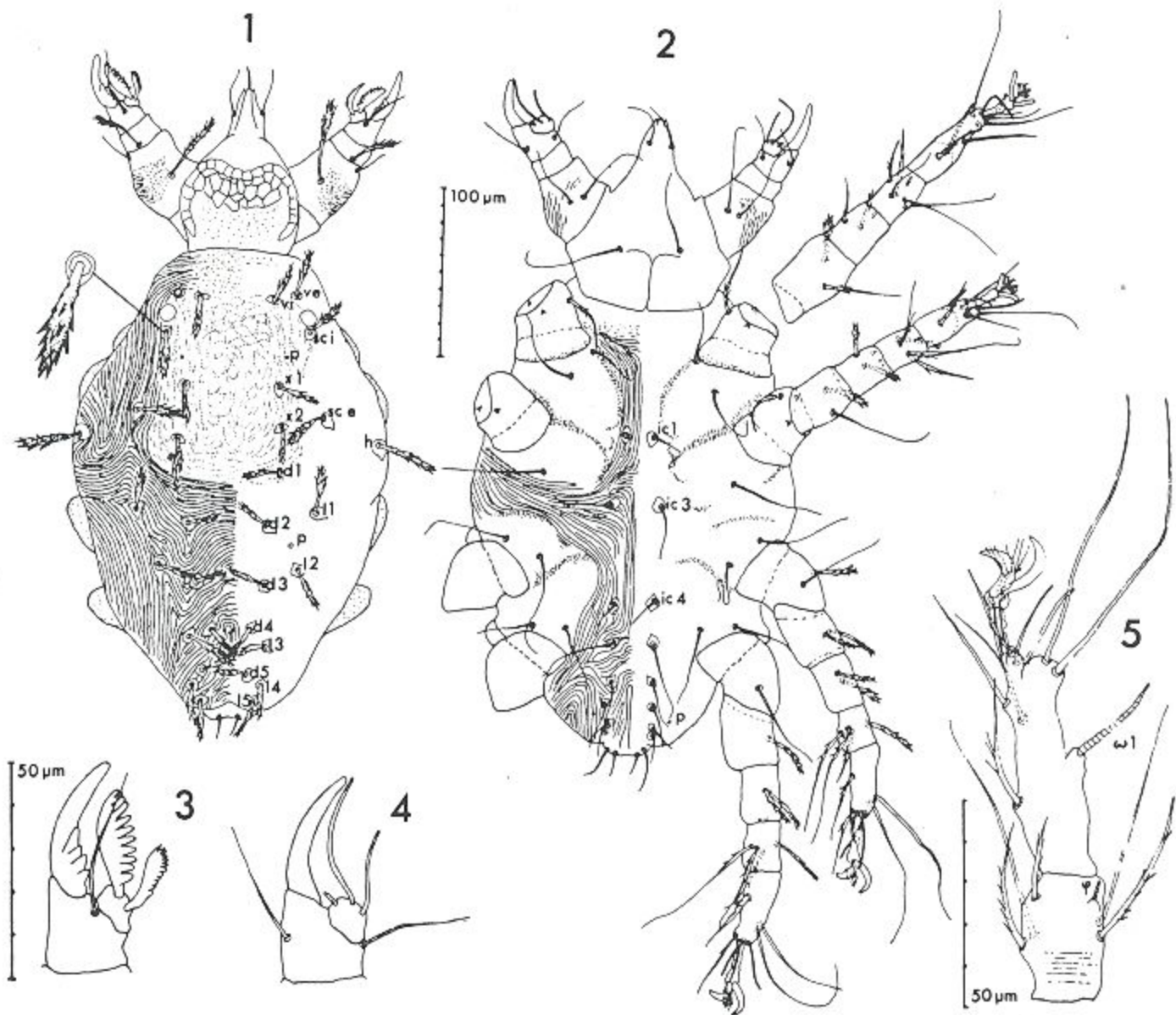
distinguished from all other species by the following features : palptibial spine with 4 basal teeth ; propodonal plate distinctly longer than wide ; all dorsal setae short (20-40) with rounded tips. In the following description all measurements are given in micrometers ( $\mu\text{m}$ ).

***Cheletophyes panamensis* spec. nov.**  
(Figs. 1-5)

■ FEMALE. Length of idiosoma in holotype 336, in 4 paratypes 363 (353-376) ; width in holotype 192, in paratypes 184 (168-194). *Dorsum* (Fig. 1). Peritremes M-shaped, conspicuous, each side with 10 chambers of unequal size. Propodonal plate distinctly longer than wide, convex on posterior margin and with coarse reticulations. It covers 70 % of propodosomal tergum. Pygidial plate very small, without setae. Cuticle with punctate striation and two pairs of pores (P). Eyes large. Setae short and broad, with thick barbs and rounded tips. All dorsal setae inserted

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FIGS. 1-5 : *Cheletophyes panamensis* spec. nov.

Female : dorsum (1) and venter (2) ; palptarsus and palptibia : dorsal view (3) and ventral view (4) ; distal segments of leg I (5).

TABLE I. Some measurements on *Cheletophyes panamensis* n. sp.

	Holotype	Average (n = 5)	Range
Length of idiosoma	366	363	353-376
Width of idiosoma	192	184	168-194
Length propodonal plate	112	109	105-112
Width propodonal plate	84	84	78-89
<i>vi</i>	26	26	25-27
<i>ve</i>	31	32	31-33
<i>sci</i>	29	28	26-29
<i>sc e</i>	29	28	27-29
<i>d 1</i>	25	22	20-25
<i>d 2</i>	24	22	20-24
<i>d 3</i>	25	22	20-25
<i>d 4</i>	21	18	14-21
<i>d 5</i>	22	24	22-25
<i>l 1</i>	30	29	26-30
<i>l 2</i>	28	27	23-31
<i>l 3</i>	28	28	27-29
<i>l 4</i>	24	25	24-27
<i>l 5</i>	30	27	25-30
<i>x 1</i>	26	23	22-26
<i>x 2</i>	25	22	20-25
<i>h</i>	40	42	38-44
<i>ic 1</i>	26	33	26-38
<i>ic 3</i>	31	37	31-43
<i>ic 4</i>	26	29	28-35
Length leg I	192	183	177-192
Length tarsus I	52	53	52-54
Length solenidion on tarsus I	29	28	25-29

on small, poorly sclerotized platelets. Dorsal (*d 1* — *d 5*) and lateral (*l 1* — *l 5*) setae complete. Two pairs of neotrichial setae present (*x 1*, *x 2*), probably near the *d 1* setae. *h* setae long, *sh* setae absent. *Venter* (Fig. 2). Epimera weakly sclerotized. Coxal fields bare, all others parts of venter striated. One pair of pores near genital setae. Number of setae on ventral surface : coxae 2-1-2-2 ; *ic 1*, *ic 3*, *ic 4* ; 5 pairs of genital setae ; 3 pairs of anal setae. Intercostal and genital setae on small platelets. All ventral setae smooth and setiform. *Palps* (Figs. 3, 4). Palptibial spine with 4 unequal teeth. Outer comb on palptarsus with 10-11 bluntly rounded teeth, smaller inner comb with 11-12 teeth.

*Legs* (Fig. 5). Tarsus I hardly elongated : length in holotype 52, in paratypes 53 (52-54).  $\omega$  I long, on prominent nipple and without guard seta. *tc* and *addorsal tc* (SUMMERS & PRICE, 1970 : 95) both on another nipple. Chaetotaxy : trochanters 1-1-2-1, femora 2-2-2-1, genua 2-2-2-2, tibiae 5-4-4-4, tarsi 8-7-7-7. Solenidiotaxy : genua 1-0-0-0, tibiae 1-0-0-0, tarsi 1-1-0-0. Most dorsal and lateral setae on legs barbed. All tarsi bear well developed claws and multirayed empodia. Measurements in Table 1.

■ TYPE DATA : Holotype ♀ and 4 ♀ paratypes ex nest of *Xylocopa* (*Megaxylocopa*) *frontalis* (Olivier, 1789), Panamá : Capira : Aguacate, 23-VIII-1982, V. HERRERA. Nest found in tree, *Luehea seemannii*. Holotype deposited in Bernice P. Bishop Museum, Honolulu, Hawaii Nr. BPBM 12, 935. Paratypes deposited in National Museum of Natural History (Smithsonian Institution), Washington, D.C. and in collection of authors.

## LITERATURE CITED

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