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

BY J. S. H. KLOMPEN¹, E. MÉNDEZ ² & F. S. LUKOSCHUS¹

ABSTRACT : Cheletophyes panamensis spec. nov. inhabiting the nest of the car­
penter 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 Oude­
mans, 1914 from the nest of Xylocopa (Koptorto­
soma) 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. indi­
cus Smiley & Whitaker Jr., 1981 on an unspeci­
fied carpenter bee in the subfamily Xylocopinae
from India. This species allows us to modify
some generic concepts as follow : palpibial 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 fol­
owing features : palpibial spine with 4 basal
teeth ; propodonotal plate distinctly longer than
wide ; all dorsal setae short (20-40) with rounded
tips. In the following description all measure­
ments are given in micrometers (µm).

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). Dor­
sum (Fig. 1). Peritremes M-shaped, conspicuous,
each side with 10 chambers of unequal size. Pro­
podonotal plate distinctly longer than wide, con­
 vex on posterior margin and with coarse reticula­
tions. 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

¹. Department of Aquatic Ecology, Catholic University, Toernooiveld, 6525 ED Nijmegen, The Netherlands. Present address :
Museum of Zoology, The University of Michigan, Ann Arbor, Michigan, USA 48109-1079.
². Gorgas Memorial Laboratory, Apartado Postal 6991, Panamá 5, Panamá.

FIGS. 1-5: Cheletophyes panamensis sp. nov.

Female: dorsum (1) and venter (2); palptarsus and palptibia: dorsal view (3) and ventral view (4); distal segments of leg 1 (5).
TABLE 1. Some measurements on Cheletophyes panumensis n. sp.

<table>
<thead>
<tr>
<th></th>
<th>Holotype Average</th>
<th>Range</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>(n = 5)</td>
<td></td>
</tr>
<tr>
<td>Length of idiosoma</td>
<td>366</td>
<td>363-376</td>
</tr>
<tr>
<td>Width of idiosoma</td>
<td>192</td>
<td>168-194</td>
</tr>
<tr>
<td>Length propodonotal plate</td>
<td>112</td>
<td>105-112</td>
</tr>
<tr>
<td>Width propodonotal plate</td>
<td>84</td>
<td>78-89</td>
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<td>v₁</td>
<td>26</td>
<td>25-27</td>
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<tr>
<td>v₂</td>
<td>31</td>
<td>31-33</td>
</tr>
<tr>
<td>sc₁</td>
<td>29</td>
<td>26-29</td>
</tr>
<tr>
<td>sc₂</td>
<td>29</td>
<td>27-29</td>
</tr>
<tr>
<td>d₁</td>
<td>25</td>
<td>20-25</td>
</tr>
<tr>
<td>d₂</td>
<td>24</td>
<td>20-24</td>
</tr>
<tr>
<td>d₃</td>
<td>25</td>
<td>20-25</td>
</tr>
<tr>
<td>d₄</td>
<td>21</td>
<td>14-21</td>
</tr>
<tr>
<td>d₅</td>
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<td>i₁</td>
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<tr>
<td>ic₁</td>
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<td>26-38</td>
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<tr>
<td>ic₂</td>
<td>31</td>
<td>31-43</td>
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<tr>
<td>ic₄</td>
<td>26</td>
<td>28-35</td>
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<tr>
<td>Length leg I</td>
<td>192</td>
<td>177-192</td>
</tr>
<tr>
<td>Length tarsus I</td>
<td>52</td>
<td>52-54</td>
</tr>
<tr>
<td>Length solenidion on tarsus I</td>
<td>29</td>
<td>25-29</td>
</tr>
</tbody>
</table>

Legs (Fig. 5). Tarsus I hardly elongated: length in holotype 52, in paratypes 53 (52-54). ω₁ long, on prominent nipple and without guard seta, tc and addorsal tc (SUMMERS & PRICE, 1970 : 95) both on another nipple. Chaetotaxy: trochanter 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.


LITERATURE CITED


