

TWO NEW SPECIES OF *CHELETOPHYES* Oudemans, 1914 (PROSTIGMATA: CHEYLETIDAE) FROM THE NEST OF A CARPENTER BEE IN MALAYSIA

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----- ABSTRACT—Two new species of *Cheletophyes* Oudemans, 1914, are described from the nest of a Carpenter bee, *Xylocopa* (*Platynopoda*) *latipes*, in Malaysia. A key to *Cheletophyes* is given. -----

The mites which are described below were found in the nest of a Carpenter bee, *Xylocopa* (*Platynopoda*) *latipes*, from Kuala Pilah, Negri Sembilan, Malaysia.

Up to now two species were known in the genus *Cheletophyes* Oudemans, 1914: *C. vitzthumi* Oudemans, 1914 from *Xylocopa* (*Koptortosoma*) *caffra*, at Willowmore, South Africa and *C. eckerti* Summers & Price, 1970, from the pouch of a Carpenter bee *Xylocopa* (*Koptortosoma*) *aestans*, Punjab, Ludhiana, India.

Genus *Cheletophyes* Oudemans, 1914

This genus has been redefined by Summers & Price, 1970. We give here a key to 4 species known in this genus.

Key to the genus *Cheletophyes* (Females)

1. All dorsal setae 39-75 μ m long; all or most of them have the apical third distinctly spatulate. Propodonal plate coarsely reticulate and distinctly longer (156 μ m) than wide (130 μ m). Cuticle of the dorsum striate-punctate. Pygidial plate very short, striated and bearing two pairs of setae. Base of palptibial spine with 2 or 3 unequal teeth *C. clavipilis* sp. n.
- Dorsal setae not spatulate. Propodonal plate either wider than long or approximately as long as wide 2
2. Propodonal plate 1, 3 times wider than long and without reticulation; its posterior border with three lobes, the median being the largest. Pygidial plate without reticulation and bearing two pairs of setae. Cuticle of dorsum with non-punctate striations. Palptibial spine with 2 unequal teeth. Outer comb with 6-7 thick teeth, inner comb with 4-5 small teeth. Setae h 110 μ m long *C. apicola* sp. n.
- Propodonal plate approximately as long as wide, bearing a coarse reticulation. Pygidial plate with a reticulation. Setae h 40 to 75 μ m long 3
3. Dorsal setae 31-43 μ m long. Dorsal seta of palpfemur shorter than this segment. Outer comb (of palptarsus) with 8-9 short bluntly rounded teeth, inner comb with 6 thick teeth ..
..... *C. eckerti* Summers & Price, 1970.
- Dorsal setae 35-75 μ m long. Dorsal seta of palpfemur longer than this segment. Outer comb with 11-12 long and narrow teeth, inner comb with 8-9 short teeth (from holotype)
..... *C. vitzthumi* Oudemans, 1914.

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Figs. 1-3: *Cheletophyes clavipilis* (female)—1, dorsal view; 2, palptibia and palptarsus dorsally; 3, palptibia and palptarsus ventrally. Figs. 4-6: *Cheletophyes apicola* sp. n. (female)—4, dorsal view; 5, palptibia and palptarsus dorsally; 6, palptibia and palptarsus ventrally.

1. *Cheletophyes clavipilis* spec. nov.

FEMALE (Figs. 1-3)—Idiosoma in holotype 405 μ m long and 240 μ m wide. Total length, including gnathosoma 564 μ m. Cuticle of dorsum striate punctate. Propodonotal plate longer (156 μ m) than wide (130 μ m), bearing a coarse reticulation. Eyes large. Pygidial plate very short. All dorsal setae barbed, most of them are spatulate apically; longest is *h* (75 μ m) and shortest are *d* 2, *d* 3 (35-40 μ m). Dorsal setae complete (*d* 1 to *d* 5) and a neotrichial pair of setae in dorsal series present probably that situated immediately behind *d* 1. Coxae well-formed and punctate. Number of setae of ventral surface: coxae 2-1-2-2; *ic* 1, *ic* 2 and *ic* 3. Genitals 5 pairs and anals 3 pairs. Legs long, with well-developed claws. Leg chaetotaxy (number of setae) as in *Cheyletus trouessarti* (see Fain, 1979). Solenidion of tarsus I 30 μ m long, flanked by a very short guard seta (4-5 μ m long), very close to solenidion and difficult to see.

HETEROMORPHIC MALE (Fig. 7)—Idiosoma in allotype 320 μ m long, total length including the gnathosoma 540 μ m. Propodonotal plate 155 μ m long, 129 μ m wide. Dorsal setae as in female but shorter, *h* 63 μ m long. Gnathosoma with very long palps, palp femur 150 μ m long and ventrally with two basal rounded projections each of which bearing a thin seta. A similar projection also

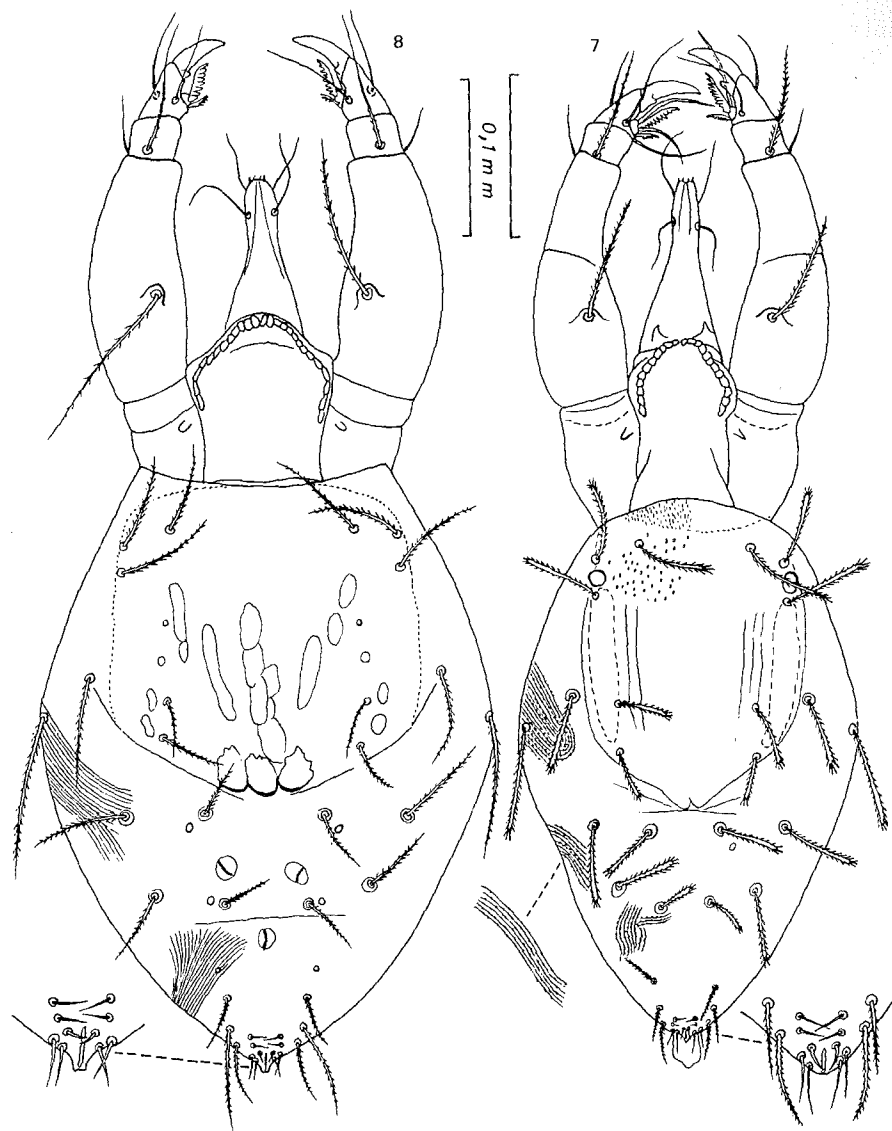


Fig. 7: *Cheletophyes clavipilis* sp. n. - Male; Fig. 8: *Cheletophyes apicola* sp. n. - Male.

present dorsally. In another male, less heteromorphic, palpfemur $90\mu\text{m}$ long. We have not seen homeomorphic male. Apical spine of palptibia with one basal teeth. Outer comb with 10 teeth, inner comb with 4-6 teeth.

HOST AND LOCALITY—In the nest of a Carpenter bee, *Xylocopa (Platynopoda) latipes* Drury, 1773 at Kuala Pilah, Negri Sembilan, Malaysia. Holotype and 8 paratype females, allotype and 17 paratype males all heteromorphic and 18 nymphs. Holotype in British Museum (Nat. Hist.) London n^o. 1980. 8. 1-3. The nest was found inside the timber roof support of an abandoned house.

2. *Cheletophyes apicola* spec. nov.

FEMALE (Figs. 4-6)—Idiosoma in holotype $420\mu\text{m}$ long and $305\mu\text{m}$ wide. Total length including gnathosoma $585\mu\text{m}$. Cuticle of dorsum with not punctate striations. Propodonotal plate wide ($225\mu\text{m}$) than long ($168\mu\text{m}$) without reticulation structure. Pygidial plate $75\mu\text{m}$ long, $57\mu\text{m}$ wide, without reticulation. All dorsal setae barbed and attenuated apically, their lengths varies from $39\mu\text{m}$ to $110\mu\text{m}$. Ventral setae as in *C. clavipilis*. Gnathosoma large. Peritreme M-shaped

with 15-17 segments. Palptibial spine with 2 unequal basal teeth, rarely with 3 teeth at one side. Outer comb with 7-8 thick teeth, inner comb with 5-6 small teeth. Legs narrow. Solenidion of tarsus I $40\mu\text{m}$ long, a guard seta has not been observed. Leg chaetotaxy (number) as in *C. clavipilis*.

HETEROMORPHIC MALE (Fig. 8)—Idiosoma in allotype $350\mu\text{m}$ long, total length (gnathosoma included) $590\mu\text{m}$; width $285\mu\text{m}$. Dorsal plate wider ($210\mu\text{m}$) than long ($177\mu\text{m}$). Shape of dorsal setae as in female but slightly shorter. Palps as in *C. clavipilis* but outer comb with 8-9 teeth, inner comb 3-5 small teeth. Palpfemur $145\mu\text{m}$ long, with 3 projections as in *C. clavipilis*. In another, less heteromorphic male, palpfemur $110\mu\text{m}$ long. Aedeagus $75\mu\text{m}$ long.

HOST AND LOCALITY—In the same Carpenter bee nest in association with *C. clavipilis*. (Holotype and 20 paratype females, allotype and 3 paratype males, all heteromorphic, 5 nymphs). Holotype in British Museum (Nat. Hist.), London (n^o 1980. 8. 5. 4-5).

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