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Dedicated to Professor Dr. H. Engel

Studies on neotropical Collembola, II A new *Ceratophysella* from Guatemala

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ABSTRACT

Ceratophysella engeli n. sp. is described from Guatemala. The species belongs to the *communis*-group, and is closely related to *C. succinea* (Gisin, 1949) and to *C. orizabae* Yosii, 1962.

In a previous paper I described some Collembola from Guatemala, Cuyo-tenango (Province of Suchitepequez). The material was collected by Messrs. J. M. Campbell and K. G. Eveleens, in a large detritus cavity of an *Atta*-nest, on January 21st, 1966. Apart from the species already described, the sample contained three specimens of an apparently new *Ceratophysella*. I am very pleased indeed to dedicate this new species to Professor Dr. H. Engel, on the occasion of his 70th birthday.

Ceratophysella engeli n. sp. Figs. 1—13.

Length. — 1.1 mm.

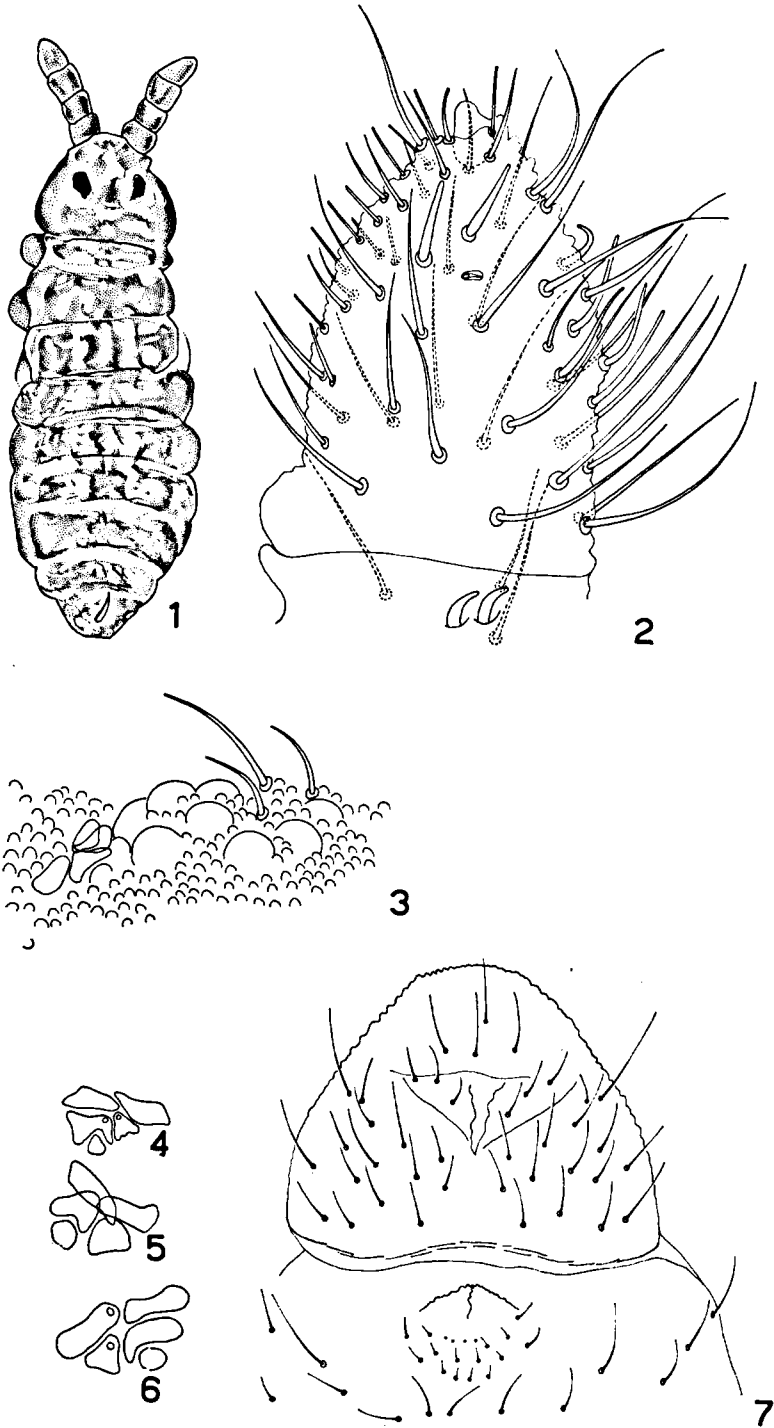
Pigmentation. — Very fine pigment granules are dispersed all over the body. The pigment is violet-grey in colour. On the dorsum the pigment forms an irregular pattern of ill-defined patches. The feet and furca are very sparsely pigmented. The eye-patches are black (fig. 1).

Integument. — Granulation is rather regular. Granules are moderately fine on dorsum, on abd. V and VI a little coarser. The granules on abd. V form regular transversal rows. Between p_1 at either side of abd. V are 10 granules, between p_1 and the hind margin of the tergite are 2 or 3 granules (in Yosii's notation: $a = 10$, $b = 2,3$).

Ocelli. — 8 + 8 (fig. 3).

Postantennal organ. — The four usual elements are irregular in shape. The postero-external vesicle is curved in a hook-like way in front of

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FIGS. 1—7. *Ceratophysella engeli* n. sp. — 1, habitus (note the single, aberrantly placed anal spine in this specimen); 2, antenna IV; 3, eye-patch in lateral view; 4, postantennal organ; 5, postantennal organ in dorso-lateral view; 6, postantennal organ; 7, abd. V and VI in ventral view, with male genital papilla.

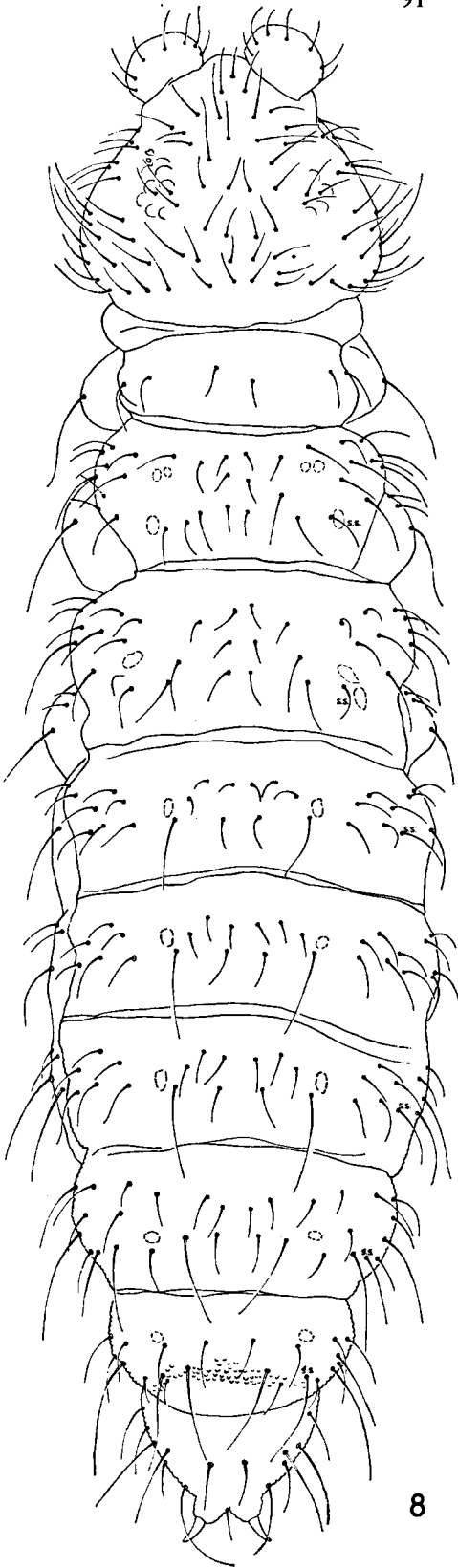


FIG. 8. *Ceratophysella engeli* n. sp.
— 8, dorsal chaetotaxy.

the accessory tubercle (figs. 4, 5, 6). Longest element about as long as diameter of nearest cornea.

Antenna. — Eversible sac present. End bulb simple. Ant. org. III with two parallel curved sensillae. Ant. IV bears the usual 7 blunt, curved, thickened sense hairs, 12 peg-like setae and a lateral sensory rod in a groove (fig. 2). Ant. I with 7 setae.

Chaetotaxy. — The chaetotaxy is of the *communis*-type, p_1 on abd. IV being shorter than p_2 (fig. 8). All setae are smooth, apart from some very sparse, hardly visible serrations on the strongest setae. All setae are finely pointed, except p_1 on abd. V, which is blunt (this seta is 71μ in length). Abd. VI bears posteriorly a pair of very long curved hairs in latero-dorsal position. Setae sensuales on th. II—abd. V (except on abd. II) have a characteristic, very thin, finely pointed aspect. However, the setae sensuales are not differentiated by a wider hair-ring. Spine-like hairs are absent.

Anal spines. — Strong, pale yellowish, pointed, feebly curved, about 42μ long and about as long as unguis 3. The anal spines are situated on contingent papillae which are about as high as half the length of the spines.

Retinaculum. — Quadridentate. Corpus without setae.

Ventral tube. — With $4 + 4$ setae.

Furca. — Dens with two longitudinal rows of 3 setae of subequal length, except the proximo-external seta, which is 1.8 times longer. All setae are equally thick. Mucro stout, boat-shaped, 23μ in length, $m/d = 2.3$ (figs. 11, 13).

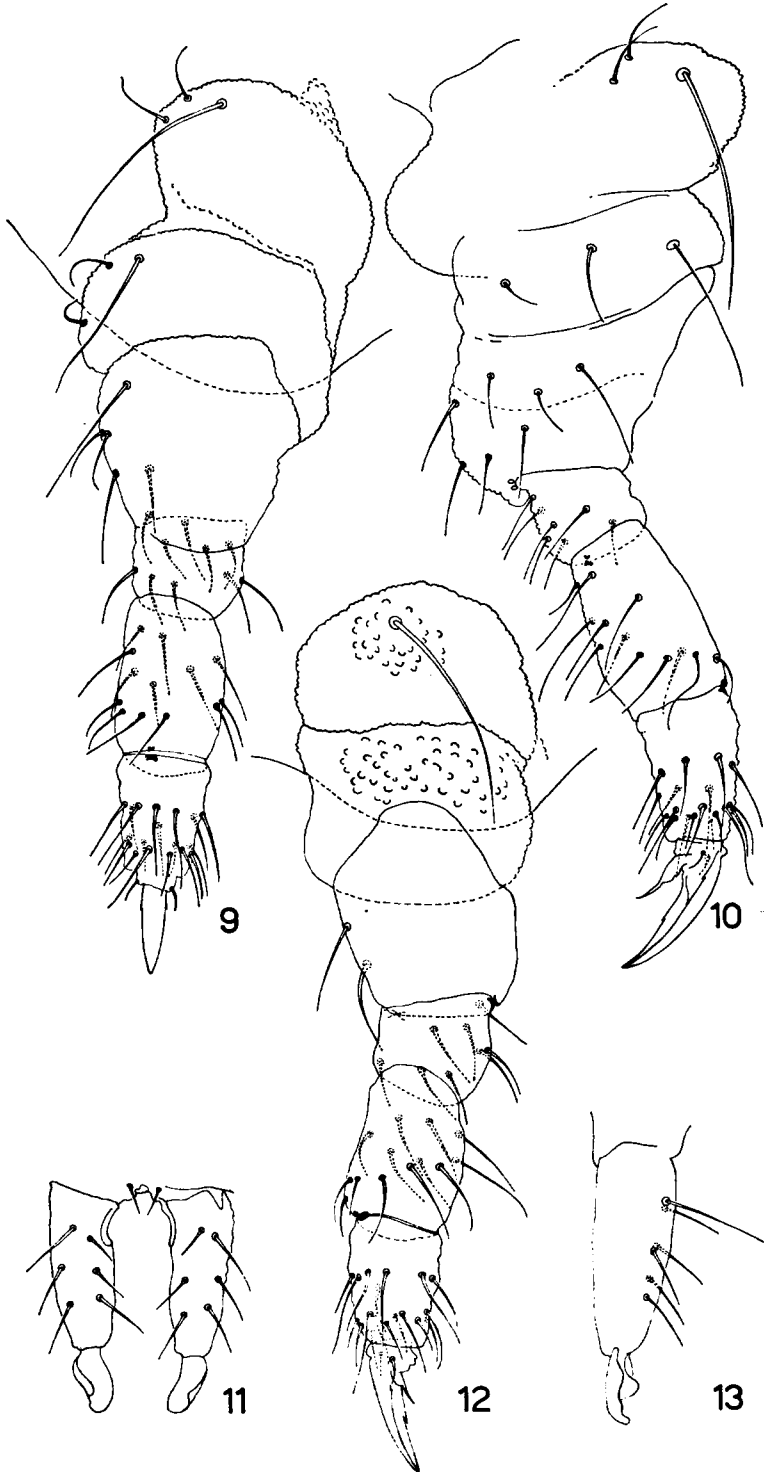
Feet. — Tenent hairs not differentiated. Unguis with small lateral teeth and a ventral tooth about half-way. Unguis 3 41μ long. Unguiculus with inner lamella and ending in a hair. Unguiculus about half as long as unguis (figs. 8, 9, 10).

Male genital papilla. — With two concentric rows of setulae and more centrally a third row of fine points, probably hair-rings of extremely fine setulae (fig. 7).

Material. — 3 ♂♂ (including the holotype, all preserved in the Zoologisch Museum, Amsterdam).

Remarks. — The holotype is slightly aberrant, as the right group of ocelli lacks the anterior four eyes. One paratype has an anomaly on abd. VI, as there is only one anal spine, placed medially (fig. 1). This anomaly is still more pronounced in the second paratype, where both anal spines are missing.

The *Ceratophysella* species of the *communis*-group with 6 setae at the dens and lacking a tergal lobe are the Japanese species *C. fukugakuchiana* (Yosii, 1956) and *proserpinae* (Yosii, 1956), the European *C. succinea* (Gisin, 1949) and *norica* Cassagnau, 1964, and the Mexican species *C. duodecimocellata* (Bonet, 1945) with the forma *sedecimocellata* Yosii, 1962, and *C. orizabae* Yosii, 1962. *C. fukugakuchiana* has a reduced eye number; *proserpinae* lacks the outer lobe to the mucro. The strongly swollen dens of *duodecimocellata* has a very strong proximo-external seta. *C. norica* has the retinaculum tridentate.



FIGS. 9—13. *Ceratophysella engeli* n. sp. — 9, P₂; 10, P₃; 11, dentes in posterior view; 12, P₁; 13, dens in external view.

C. engeli seems to be closely related to the remaining species *succinea* and *orizabae*. It differs from both by the long curved setae on abd. IV. The principal difference with *succinea* is the irregular shape of the postantennal organ. Moreover, the anal spines are about as long as unguis 3 (in *succinea* 1.2 to 1.4 times unguis 3), not very strongly curved; the pigment is violet-grey, not brown. It differs from *orizabae* by the presence of peg-like setae on ant. IV and by the regular arrangement of integumental tubercles on abd. V. In *orizabae* these tubercles are irregular in shape.

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