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REDESCRIPTION AND NOTES ON AMBLYSEIUS CUCUMERIS
(OUDEMANS)
(ACARINA : PHYTOSEIIDAE)

BY

Robert O. Schuster and Roberto H. González.

Oudemans (1930) described this species without illustration. Nesbitt (1951) published Oudemans’ drawings along with an English translation of the original description. MacGill (1939) described as new, Typhlodromus thripsi, a species that Evans (1952) placed in synonymy with T. cucumeris. Womersley (1954) described this species as Typhlodromus bellinus. Because of the similitude of their spermathecae, Dosse (1957) placed T. bellinus as a synonym of T. cucumeris, and Athias-Henriot (1960) accepted Dosse’s conclusion. Chant, in his revision of the family (1960), considered T. bellinus and T. cucumeris to be distinct species. However, Chant apparently applied the name T. bellinus to T. cucumeris and the name T. cucumeris to a species unknown to us. During a visit to Davis, Miss Elsie Collyer did not recognize California specimens as the form commonly accepted to be A. cucumeris in Europe. In view of the diversity of opinions regarding the identity of A. cucumeris and since it is perhaps the most frequently cited species of Amblyseius, its redescription from the holotype seems to be worth-while at this time.

The inability of authors to agree on the characteristics of this mite must be due partly to the fact that they did not examine the type. The type, a poorly mounted specimen, has been remounted in modified Hoyer’s. The setae indicated as missing in the redescription have been estimated from other specimens and included on the drawings.

Amblyseius cucumeris (Oudemans)


1. University of California, Davis.


Holotype female. Dorsal shield reticulate, 380 μ long × 200 μ wide. Vertical setae 25 μ; dorsocentrals I unknown, II 17 μ, III 23 μ, IV 25 μ; clunals 12 μ; prolaterals I 34 μ, II 30 μ, III 30 μ, IV 40 μ; postlaterals I 30 μ, II 39 μ, III unknown, IV 36 μ, V 72 μ; promediolaterals 18 μ; postmediolaterals unknown; prosublaterals 30 μ. Postlaterals setae V are very faintly serrate.

Sternal plate almost as long as wide (95 μ × 90 μ), with three pairs of sternal setae. Metasternal setae occur on small but distinct platelets, the latter about six times the area of setal socket. Genital plate 75 μ wide. Ventrianal plate 100 μ wide × 130 μ long, reticulate with three pairs of preanal setae and a pair of pores. One elongate and one smaller round platelet present on membrane at each anterolateral corner of ventrianal plate. Three pairs of ventrolateral setae 19 μ long, and one pair of ventrocaudal setae 47 μ long occur laterad of ventrianal plate. Primary metapodal platelets 27 μ long × 5 μ wide; accessory platelets 2 μ to 3 μ. Spermatheca with cervix 18 μ long, 12 μ wide at base, atrium slightly over 3 μ long. Chelicera with three teeth between apex and pilus dentilis of fixed digit; movable digit with a subapical tooth.

If the lengths of the prolateral setae of *A. cucumeris* are placed as the numerator and the distance between their insertions as the denominator, interesting fractions result. They are 34/34 = 1, 30/39 = ± 3/4 and 30/44 = ± 2/3. This somewhat fits *T. bellinus* in Chant's 1960 key but could not possibly lead to *T. cucumeris*.

Of particular interest, then, is the identity of the species considered by Womersley and Chant to be *T. cucumeris*.

We have not seen the type of *T. bellinus* Womersley. However, the senior author has seen specimens of the California population which C. E. Kennett collected and sent to Womersley for comparison with *T. bellinus* (reported by Kennett, 1958). These specimens, determined as *bellinus* by Womersley, are conspecific with *Amblyseius cucumeris* Oudemans. It is obvious from an examination of Table I why Womersley considered the California population to be *T. bellinus*. In reproducing the setal lengths given in the description of *T. bellinus*, we have changed the length of prolateral IV from 28 μ to 38 μ. These setae were illustrated by Womersley as the longest, not the shortest, of the prolateral series.

One further point should be made although it doesn't pertain to the identity of *A. cucumeris*. This species was chosen by Donald De Leon (1959) for the type of the subgenus *Typhlodromopsis*. One of the characteristics of the subgenus was “M2 and ultimate lateral seta usually strongly pectinate.” In respect to this character, *A. cucumeris* was a poor choice for the type species, or else *Typhlodromopsis* was based on a species other than *A. cucumeris*.

We gratefully acknowledge the loan of the type specimen by the Rijks-museum van Natuurlijke Historie, Leiden.
Fig. 1-4, holotype *Amblyseius cucumeris* (Oudemans). 1. Dorsal shield. 2. Chelicera. 3. Spermatheca. 4. Ventral plates and setae.
Table 1. Measurements of lateral setae (microns)

<table>
<thead>
<tr>
<th>Seta</th>
<th>A. cucumeris</th>
<th>A. cucumeris</th>
<th>T. bellinus</th>
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</table>

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DE LEON (Donald), 1959. — Seven new Typhlodromus from Mexico with collection notes on three other species (Acarina : Phytoseiidae). Florida Ent. 42 : 113-121.


1. Minimum, mean, and maximum for 10 specimens, various localities.