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TWO NEW SPECIES
OF THE GENUS *CHEYLETUS* LATREILLE, 1976
(ACARI, CHEYLETIDAE) FROM SOUTH AFRICAN GERBILS

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A. FAIN and F. S. LUKOSCHUS

(With 14 figures in the text)

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During a field trip in Namibia, South Africa (October-November, 1980) organized by Professor X. MISONNE, Director of Institut des Sciences naturelles de Bruxelles, two new species of mites of the genus *Cheyletus* were collected from gerbils. They are described hereunder.

It is interesting to note that one of these species (*Ch. misonnei*) was collected on the skin of the back at the base of the tail. The pathologic role of the species of *Cheyletus* is so far not known but the repeated findings of these mites on the skin of rodents (FAIN, 1979; FAIN and NADCHATRAM, 1980) or birds (SUMMERS and PRICE, 1970) suggest that they probably can live on the skin of these hosts. Up to now pathogenicity in relation with the presence of these mites has not been related.

1. *Cheyletus misonnei* spec. nov.

This new species is named for Professor X. MISONNE who organized this field research trip in Namibia.

F e m a l e (Figs. 1-6). — Idiosoma in the holotype 350 μ long and 270 μ wide. Total length 468 μ . Measurements of idiosoma in 2 paratypes : 330 μ \times 240 μ and 325 μ \times 260 μ . **D o r s u m** : Dorsal plates with a very distinct network pattern. Propodonal plate wider (195 μ) than long (130 μ in the midline); hysteronotal plate large, slightly wider (145 μ) than long (135 μ), both plates are widely separated from each other.

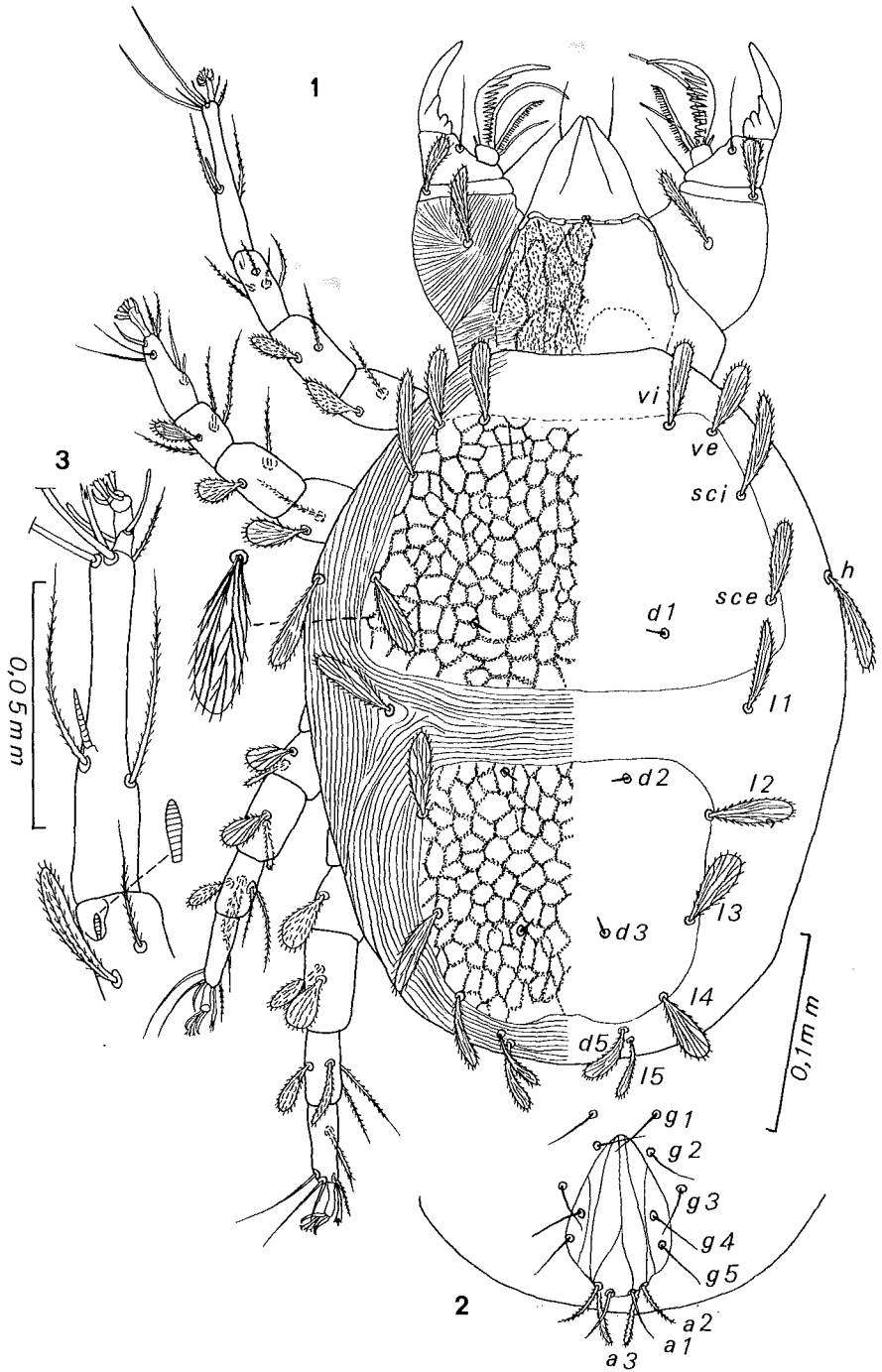


Fig. 1-3. — *Cheyletus misonnei* sp. n.

Female dorsally (1); genito-anal area (2); tarsus and apical part of tibia I dorsally (3).

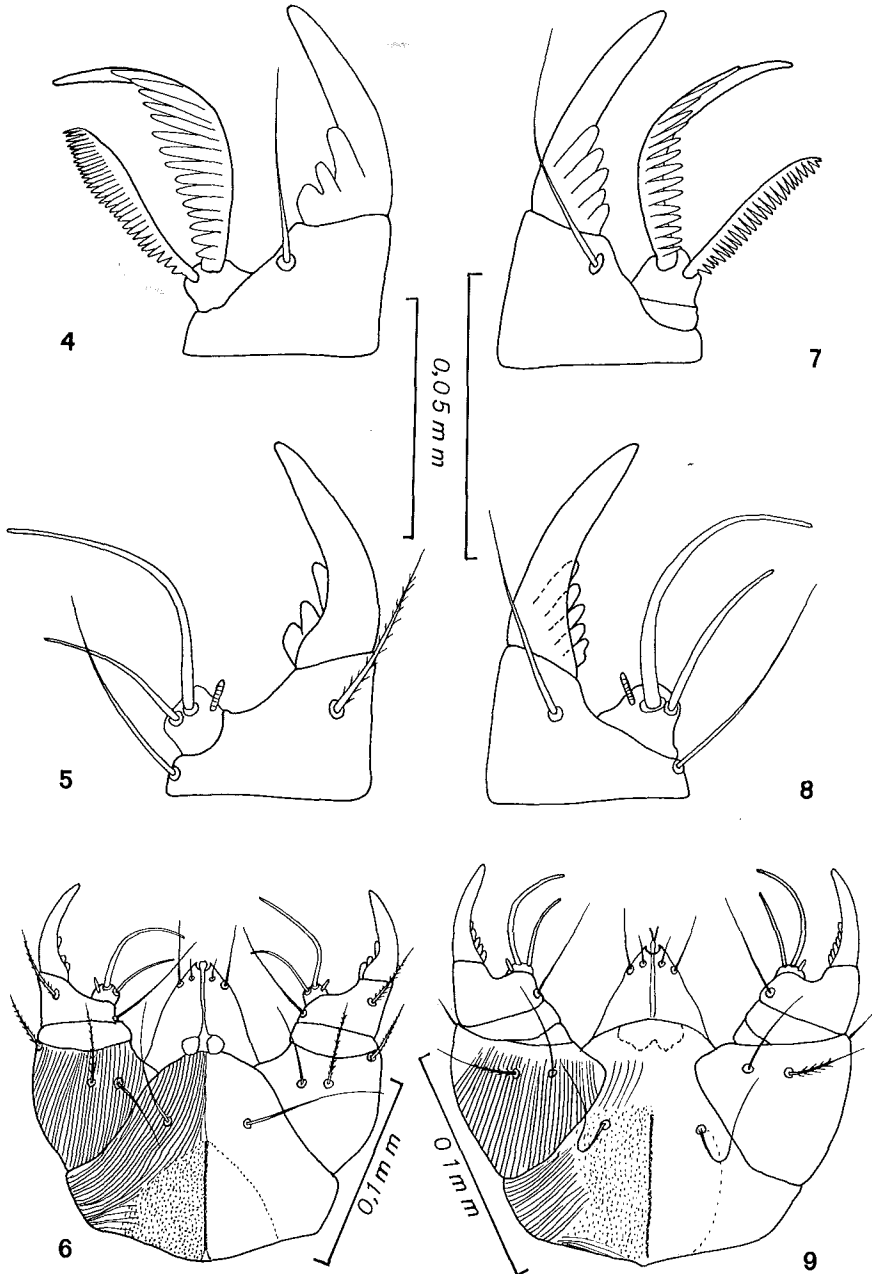


Fig. 4-9. — *Cheyletus misonmei* sp. n.

Female : Palptarsus and palptibia dorsally (4) and ventrally (5). Gnathosoma ventrally (6).

Cheyletus gerbillicola sp. n.

Female : Palptarsus and palptibia dorsally (7) and ventrally (8). Gnathosoma ventrally (9).

Setae *vi*, *ve*, *sci*, *sce*, *l1* to *l5*, *d5* and *h* flattened, fan-like 35 to 45 μ long and about 15 μ maximum wide. The setae *d1*, *d2* and *d3* are very small and 6-9 μ long. Venter : as usual for the genus. The external seta of coxa III is fan-like but relatively narrow. Gnathosoma : The base dorsally bears a network pattern. Peritremes with 7 links per side, proximal segments almost transverse, slightly angulate with lateral segments. Palp femur thick with a dorsal fan-like seta. Tibial spine (= palp claw) with 3 basal dissimilar teeth, the distal more or less cylindrical, the basal short and wide. Outer comb with 12-16 teeth, inner comb with 28-32 teeth. Legs : Number of setae (solenidia not included) : Coxae 1-1-2-1. Trochanters 1-1-2-1. Femora 2-2-2-1. Genua 2-2-2-2. Tibiae 5-4-4-4. Tarsi 9-7-7-7. Number of fan-like setae : 1 on coxa III, 1 on trochanter III, 1 on femora I, II and IV, 2 on femur III, 1 on genu I, II, 2 on genua III and IV, 1 on tibiae II, III and IV. Solenidion of tarsus I short (15-18 μ long) with a long (40 μ) barbed guard seta. Solenidion of tibia I elongate, slightly spindle-shaped.

Male. — Unknown.

Host and locality. — Holotype and 11 female paratypes from *Tatera* from Aminuis, Namibia, South Africa, 30-X-1980 (Coll. F. S. L.). All the mites were found on the skin of the dorsum close to the base of the tail. Holotype in Institut royal des Sciences naturelles, Belgique. Paratypes in Musée de Tervueren, in British Museum, London and in the collection of the authors.

Systematic position of *Ch. misonnei* :

This species is characterized by the fan-like shape of the dorsal setae and of some leg setae and by the presence of a network pattern on the dorsal plates. It is distinguished from *Cheyletus woodroffei* JEFFREY, 1980, by the following characters :

1. Presence of a network pattern on dorsal plates (without decoration in *Ch. woodroffei*).
2. Hysteronotal plate wider than long (longer than wide in *Ch. woodroffei*).
3. Dorsal setae wider, more fan-like than in *Ch. woodroffei*.
4. Dorsal seta of palpfemur fan-like (thin in *Ch. woodroffei*).
5. Presence of 1 fan-like seta on genua I-II, and tibia II and of 2 fan-like setae on genua III-IV, and tibiae III-IV. In *Ch. woodroffei* there are no fan-like setae on tibiae and on genua I and II and there is only one of such setae on genua III-IV.
6. Palpfemur larger.
7. Inner comb of palptarsus with \pm 30 teeth (for 15 teeth in *Ch. woodroffei*).

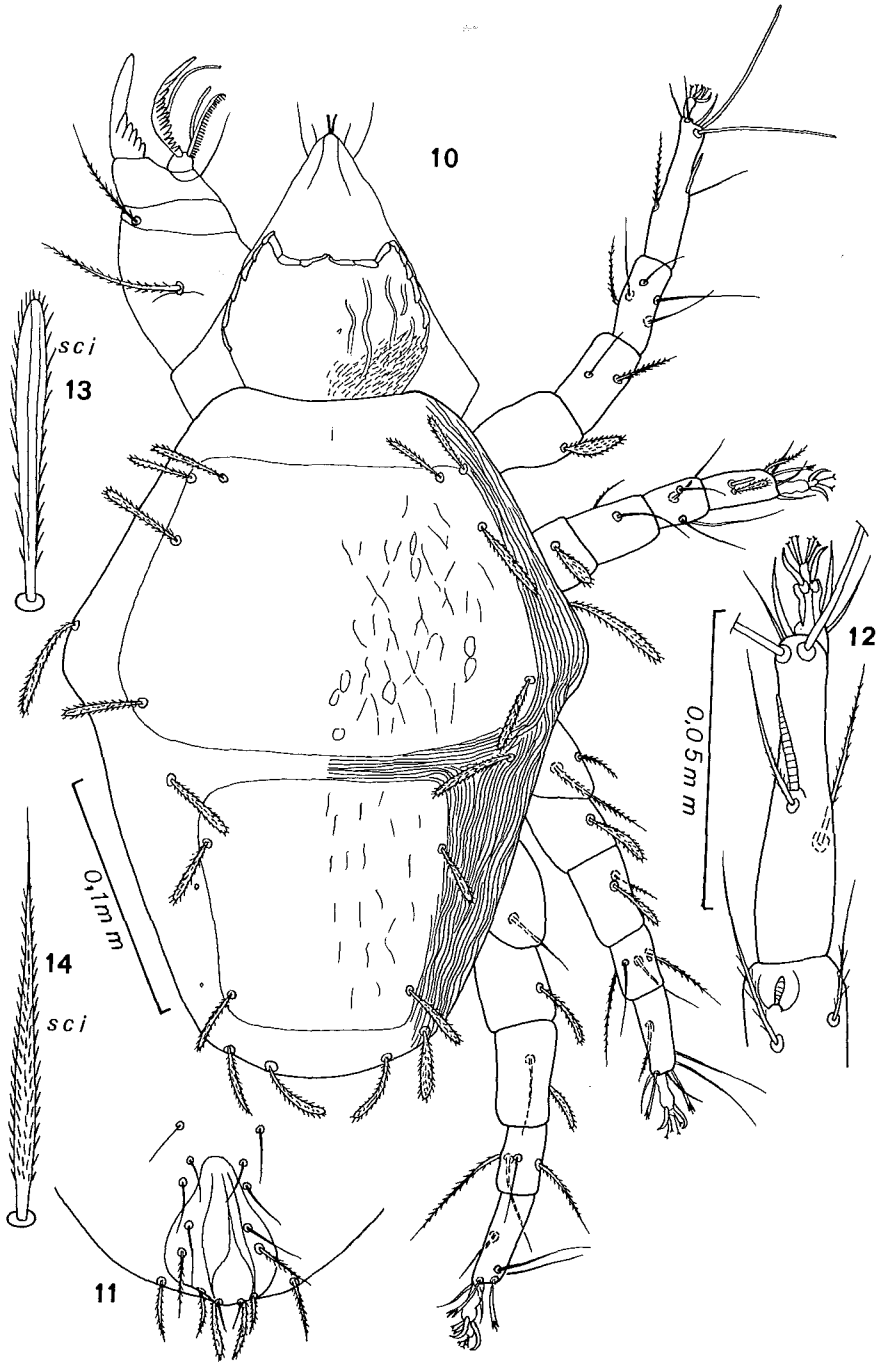


Fig. 10-14. — *Cheyletus gerbillicola* sp. n. Female dorsally (10); genito-anal area (11); tarsus and apical part of tibia I dorsally (12); setae sc i (13). *Cheyletus zumpti* FAIN — Female, seta sc i (14).

2. *Cheyletus gerbillicola* spec. nov.

Female (Figs. 7-13). — Holotype 270 μ long and 202 μ wide. Total length including gnathosoma 372 μ long. **Dorsum**: Dorsal plates with a few number of longitudinal very poorly distinct sinous lines not forming a network. Propodonal plate 110 μ long and 158 μ wide. Hysteronotal plate trapezoidal 103 μ long and 98 μ wide in its anterior fifth, minimum width 72 μ , bearing the setae *l2* and *l3*. Dorsal setae 27 to 40 μ , flattened (maximum width 5 μ) with rounded apex and completely barbed. Genital setae thin and bare except *g5* barbed. **Gnathosoma**: Base dorsally without a network pattern. Peritremes with 8 + 9 links; proximal segments straight in their middle and curved forwards in their lateral parts. Palpfemur with a long barbed seta. Tibial spine (= palp claw) with 5 unequal well-formed basal teeth. Outer comb with 14-15 teeth, inner comb with 24-26 teeth. **Legs**: Trochanters with 1-1-2-1 barbed setae. Femora with 2-2-2-1 setae, the ventrals are simple and bare, the dorsals barbed and flattened, more or less fan-like. Genua 2-2-2-2. Tibiae 5-4-4-4. Tarsi 9-7-7-7. Solenidion of tarsus I 16 μ long with a non barbed guard seta relatively short (22 μ). Solenidion of tibia I slightly spindle-shaped. Solenidion of tarsus II (ventral) 7,5 μ long.

Male. — Unknown.

Host and locality. — Holotype, and only known specimen, from the fur of a gerbil *Gerbillurus paeba* at Askham, South of Kalahari region, South Africa, 2-XI-1980. Holotype in Institut royal des Sciences naturelles de Belgique, Brussels.

Systematic position of *Ch. gerbillicola*:

Ch. gerbillicola is close to *Ch. zumpti* FAIN, 1972 a species which also is associated with Afrotropical gerbils.

It differs from this species by the following characters:

1. Setae *vi*, *ve*, *sci*, *sce*, *h*, *l2* shorter, flattened and wider, completely barbed and rounded apically. In *Ch. zumpti* these setae are thinner, not flattened, and some are strongly attenuated and bare in their apical fifth.
2. Body size much smaller.
3. Peritremes with only 8 + 9 links.
4. Anterior margin of hysteronotal plate almost straight (rounded in *Ch. zumpti*).
5. Absence of a distinct pattern on dorsal plates.
6. Dorsal seta of palpfemur distinctly barbed (with few and short barbs in *Ch. zumpti*).

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