TWO NEW PARASITIC MITES (ACARI) FROM NORTH AMERICAN MAMMALS

by A. FAIN (2), F.S. LUKOSCHUS (3) and J.O. WHITAKER jr (4)
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While in the United States in 1981 F.L. found two new species of parasitic mites on North American mammals.

Zumptiella tamias sp. n. was found by Lukoschus and Whitaker in the nasal cavities of the Eastern Chipmunk, Tamias striatus, from the Juniata College Biological Field Station at Huntingdon, Pennsylvania. Leporacarus (Leporacaroides) sylvilagi sp. n. was recovered from Cottontail Rabbits, Sylvilagus bachmani. This species has already been described in a short preliminary note (Fain, Whitaker & Lukoschus, 1981). A more complete description with figures is given herein.

HALARACHNIDAE (MESOSTIGMATA)
ZUMPTIELLINAE FAIN, 1962

Genus Zumptiella FAIN, 1962

Zumptiella tamias sp. n.

This species is known only from female specimens.

Female (fig. 1-2): Holotype 468 μ long (idiosoma), 260 μ maximum wide. Cuticle finely striated. Dorsum: Dorsal plate 295 μ long and 205 μ wide (maximum) bearing 7 pairs of microsetae. Anus terminal situated in the anterior part of a punctate

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Fig. 1. — Zumptiella tamias sp. n. Female holotype, ventral surface (1); extremity of palp in dorsal (1a) and ventral (1b) view; chelicerae, movable digit (1c)
Fig. 2. — Zumptiella tamias sp. n. Female holotype, dorsal surface
plate. *Venter*: Sternal plate scaly and punctate, wider (90 μ) than long (60 μ), bearing the three pairs of sternal setae. Epigynial plate narrow, not bearing setae. Opisthosoma with two pairs of posterior setae. Legs well developed with strong claws. The tibia, genu, femur and trochanter bear a ventral rounded and transverse crest. All the articles bear thin hairs, only tarsi II-IV bear in addition two or three small anterior spines. Gnathosoma almost entirely ventral, only the apical segments of the palps are visible from above, its base forming a very strong sclerotized ring containing thick chelicerae. These chelicerae are poorly sclerotized; their base is large, but the fingers are small. The movable digit is tapering and forked apically and bears near its base two strong barbs. A distinct fixed digit has not been observed. Hypostoma short, with one longitudinal median row of 5 to 6 deutosternal teeth.

*Host and locality:*


*Remarks:*

The genus *Zumptiella* contained until now five species of which two are nearctic: *Z. citelli* CLARK and CLIFFORD and *Z. bakeri* (FURMAN). We have examined the holotype of *Z. citelli* and we give herein a new figure of the ventral surface of this specimen (fig. 3). *Zumptiella tamias* is clearly distinct from that species by the scaly aspect of the sternal shield, the modified and more inflated aspect of the base of the gnathosoma and the more ventral situation of the gnathosoma.

We were not able to compare our specimens with the type specimens of *Z. bakeri* (FURMAN, 1954) as they are not in the U.S. National Museum and are probably lost. From the description and original figures by Furman, our species differs from *Z. bakeri* by the smaller size of the body, the more ventral position of the gnathosoma, the more inflated aspect of the gnathosomal base and the greater number of deutosternal teeth.
We give here a key to the known species of the genus Zumptiella.

Key to species of the genus Zumptiella (females):

1. Sternal shield wider than long and with a scaly-like structure 2
   Sternal shield punctate without scales, either well-developed and longer than wide or as wide as long or vestigial . . . 4

2. Base of gnathosoma very broad forming a thick and sclerotized ring. Hypostome very short. Palps almost completely ventral, only the tarsus is visible from above. Deutosternum with a
single longitudinal median row of 5-6 teeth. Length of body 468 μ (holotype). From Tamias striatus, North America. Z. tamias sp. n. Base of gnathosoma not forming a sclerotized ring. The three or four apical segments of the palps visible from above. Hypostome much longer. 3


LISTROPHORIDAE (ASTIGMATA)

Genus Leporacarus Fain, 1970
Subgenus Leporacaroides Fain, 1971
Leporacarus (Leporacaroides) sylvilagi Fain, Whitaker and Lukoschus, 1981

We have briefly described this species but without giving figures. We complete here this description and give the first figures.
Fig. 4-5. — *Leporacarus sylvilagi* sp. n. Holotype male in dorsal view (4); paratype male, hysterogaster (5)
Fig. 6. — *Leporacarus sylvilagi* sp. n. Paratype female in lateral view
Male (fig. 4-5): Holotype 460 μ long (idiosoma) and 190 μ wide. Postscapular shield finely striate-punctate, 70 μ long in midline. Anterior half of hysteronotum bearing very numerous small triangular cuticular scales; the posterior half is covered by a large finely striated shield. Opisthosoma relatively short divided into 2 lobes longer (45 μ) than wide (36 μ) and bearing a seta l 5 relatively thick and short (95 μ). Other characters as in L. brevicaudatus.

Female (fig. 6): Length 440 μ, width 215 μ (in latero-ventral position). Postcapular shield striate-punctate as in the male. Hysteronotum striated, without scales. All the dorsal setae are very thin and short. Most of them are 5 to 15 μ long. The longest are 30 μ long. Ventral surface and legs as in L. brevicaudatus except that the striations on opisthogaeter are much less numerous and the posterior legs are shorter.

Host and locality:


Key to the genus Leporacarus (males):

1. Anterior half of hysteronotum striated, without scales. Posterior half of hysteronotum with a scaly plate. Opisthosoma with a long, rectangular prolongation divided in 2 lobes which are about 1.5 times as long as wide. From the rabbit Oryctolagus cuniculus. . . . Subgenus Leporacarus FAIN, 1970
   One species: L. gibbus (Pagenstecher, 1862)
   Anterior half of hysteronotum striated and bearing very numerous small triangular scales; posterior half covered by a non-scaly shield. Opisthosoma much shorter and divided in 2 lobes. From hares. . . Subgenus Leporacaroides FAIN, 1971 . 2

2. Postscapular plate punctate, without striaations. On Lepus saxatilis, South Africa . . L. leporicolus (LAWRENCE, 1951)
   Postscapular plate punctate and striate . . . . . . . . . 3

3. Posterior lobes longer (45 μ) than wide (36 μ), bearing seta l 5 95 μ long and with basal half thick and cylindrical and apical half very thin. From Sylvilagus bachmanni, U.S.A . . . . . . . L. sylvilagi FAIN, WHITAKER & LUKOSCHUS, 1981
Posterior lobes wider (30 μ) than long (26 μ). Setae 15 180 μ long with a base (45 μ long) slightly thickened and cylindrical. From Lepus timidus and Lepus europaeus, Europe . . . . . . . . . . L. brevicaudatus (ULLRICH, 1939)

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Abstract

Zumptiella tamias sp. n. (Acari, Halarachnidae) is described from the nasal cavities of Tamias striatus in USA. The description of Leporacarus (Leporacaroides) sylvilagi FAIN et al. is completed and figures given for the first time.

Bibliography
