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SERTITYMPANUM, A NEW GENUS OF AMEROSEIIDAE 
(ACARINA, MESOSTIGMATA) 
TAKEN FROM RODENTS IN THE UNITED STATES: 
INCLUDING DESCRIPTIONS OF THREE NEW SPECIES IN THE GENUS

BY P. ELSEN* and J. O. WHITAKER, Jr.**

**SUMMARY:** A collection of mesostigmatic mites belonging to the family Ameroseiidae, near the genus Kleemannia, was taken on several rodents in the U.S.A. Its study shows the existence of three new species all belonging to a new genus: Sertitympanum gen. nov.

**RÉSUMÉ:** Une série d’acariens mésostigmatisques de la famille des Ameroseiidae et proches du genre Kleemannia a été récoltée sur divers rongeurs aux États-Unis. Son étude fait ressortir l’existence de trois espèces nouvelles appartenant toutes à un nouveau genre, Sertitympanum gen. nov.

Among ectoparasites taken by WHITAKER from a variety of rodents in the United States, there was a small series of mites tentatively classed as Kleemannia sp. on the basis of the key published by EVANS (1963). Nevertheless, the mites described here present a very particular aspect of the sternal shield: a triple cog-like configuration. This to our knowledge has been mentioned with publishing a drawing only by ALLRED and BECK (1966), but we do not agree with the classification used by these authors. They separate the genus Kleemannia from other Mesostigmatids only on the basis of the particular cog-like configuration of the sternal plate. To the present, all described Kleemannia, including even the type, lack this character, except for K. plumosus (Oudemans, 1902) which presents an unique and very incomplete cog-like configuration in place of the three well developed by the species described here.

More, in K. plumosus it is not constant, some specimens lacking that character (HUGHES, 1976). Although the three species here described are near the genus Kleemannia, they differ from it by a series of distinctive characters among which the most important are excrescences on the legs, the peculiar cog-like configuration of the sternal plate, and the presence ventrally of a pair of large lateral lenticular shields behind coxae IV. We therefore establish a new genus for the species. These mites have all been found in association with rodents of the families Heteromyidae, Geomyidae, Cricetidae and Sciuridae. We have no information on whether any of these occur in the nests of the rodents but we can expect so because many ameroseiids are phoretic mites, and up to now they have not been found on hosts other than the rodents indicated here.

The types are deposited in the U.S. National Museum, Washington, D.C. U.S.A.

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Fig. 1-2: Female dorsal side of *Seritympanum exarmatum* (1) and *S. separationis* (2). Enlargement of i i (1a).
Family AMEROSEIIDAE Evans, 1963

Genus Sertitympanum gen. nov.

Definition: (fig. 2, 3, 4, 5 and 10): Dorsal shield strongly sculptured and prolonged forwards by a bifid spur supporting setae \( i_1 \); the latter deeply modified with a wide thick membrane on each side and a longitudinal crest of strong denticles; 28 or 29 pairs of dorsal setae; apotele bifid; corniculi tridentate; chelicera with fixed digit armed with three large median teeth, the movable digit undulated facing the teeth of the fixed digit; both cheliceral digits with a minute pre-apical tooth; femur I with a ventral exoskeleton like an anvil, coxae II and III with a strong posterior spur; chaetotaxy of the legs as in the genus Kleemannia; sternal shield with two pairs of setae and three cog-wheel-like structures giving a gear-like configuration to the shield; \( st \_3 \) on platelets; genital shield with a trough-like median process; five pairs of opisthogastric setae, of which two are on the ventrianal shield; peritremal shield extending around coxae IV posteriorly, a small well chitinized organ with an oval opening (probably a pore) is situated on the outside edge of the peritremal shield at the intercoxal II-III level.

Type species: Sertitympanum separationis spec. nov.

1. Sertitympanum separationis spec. nov.

FEMALE (HOLOTYPE)

Dorsal: (Fig. 2). Shield 400 \( \mu \)m long (range 390 to 426) with a well marked irregular polygonal ornamentation and 28 pairs of spatulate setae except for \( i_1 \) (see genus definition) and \( i_2, z_2 \) and \( J_2 \) which are short and spinelike; the spatulate setae may be simple or dentate; \( Z_2 \) missing; anterior spur short.

Ventral: (Fig. 3). Sternal shield with the three cog-wheel-like structures separated from each other, the anterior one being scalloped only in its posterior half; genital shield with anterior edge flat and the trough-like median structure spatulate anteriorly, its sides well marked and widening posteriorly; ventri-anal shield with an irregular polygonal ornamentation, the lines being delicately sinuous, each polygon of the anterior half provided with several irregular patches the latter having their sides clearer than the rest; lateral shields small and elongate.

Legs: (Fig. 10): femora I, II and IV with a ventral anvil-like exoskeleton; femur III with a ventral spur-like exoskeleton; edges of coxae I to IV minutely denticulate with moderate ornamentation.

Host and localities: Holotype (N° 4057) female and four female paratypes taken 20 September 1969 on Spermophilus tridecemlineatus (Sciuridae) at Terre Haute, Vigo County, Indiana. Two female paratypes taken 6 May 1964 on Peromyscus maniculatus (Cricetidae) from Indiana and JOW #9284, taken 15 June 1975 in Johnson Co., N. Buffalo, Wyoming. One female paratype taken by R. VEAL on Onychomys leucogaster (Cricetidae) in Oklahoma.

2. Sertitympanum exarmatum spec. nov.

FEMALE (HOLOTYPE)

Dorsal (Fig. 1): Shield of 472 \( \mu \)m long (450 to 520 for the paratypes) with an irregular polygonal ornamentation more marked than on the former species, and hardly punctuated; 29 pairs of setae, all of them thick and elongate, and a few of them spatulate at their tips and without denticulation; anterior spur well marked and long.

Ventral (Fig. 6): Sternal shield with the three cog-wheel-like structures contiguous, the anterior one being scalloped only in its posterior half;
FIG. 3-7: *Sertiympanum separationis* female, ventral side (3) and chelicera (4). *S. exaratum* female, gnathosoma (5) and ventral side (6). *S. contiguum* female, ventral side (7).
FIG. 8-10: Femora I to IV (a, b, c, d) and coxae I to IV (e, f, g, h), *Seritympanum exarmatum* (8), *S. contiguum* (9), *S. separationis* (10).
genital shield with anterior edge deeply notched forming two strong triangular points directed anteriorly; trough structure of the genital shield with parallel sides weakly marked; ventrianal shield as in the former species, but the patches are smaller and clear; lateral shield greatly elongate.

Legs (Fig. 8): Femora II, III and IV lacking ventral excrescence; femur IV distinctly longer than broad; in the two other species they are as long as broad; coxae I to IV deeply denticulate at their edge and with heavy ornamentation ventrally.

Hosts and locality: Holotype (No 4058) female taken 24 June 1979 on Thomomys talpoides (Geomysidae) at the foot of the Medicine Bow Mountains in Wyoming. Eleven female paratypes, three on Onychomys leucogaster (Cricetidae), 27-29 Aug. 1976 6.5 miles SE of Whitehorse Ranch in Oregon; four on Dipodomys ordii (Heteromyidae) 11 September 1976 at Crowley Guard Center, in Oregon; two on Perognathus parvus (Heteromyidae) taken 29 and 31 Aug. 1976, one 6.5 miles SE of White Horse Ranch, the other 3 mi NW of New Road Reservoir; two on Lagurus curtatus (Cricetidae) 29 and 31 Aug. 1976 in Oregon, Malheur Co. near McDermitt.

3. Sertitympanum contiguum spec. nov.

FEMALE (HOLOTYPE)

Dorsal: Shield measuring 400 µm long (424 in the paratype) with ornamentation and anterior spur similar to those of S. separationis spec. nov.; 29 pairs of thick smooth setae, more slender than in the former species.

Ventral (Fig. 7): Sternal shield as in S. exaratum but with the anterior cog-wheel-like structure entirely scalloped; genital plate with anterior edge bifid as in S. exaratum but the trough-like structure with sinuous well marked sides but not diverging backwards; ventrianal shield as in the two other species but with the clear patches replaced by ill-defined pebbled netting; lateral shields as in S. separationis.

Legs (Fig. 9): Ventral excrescence anvil-like in femora I and IV and spur-like in femur III; femur II have no ventral excrescence but a seta implanted on a strong rounded projection; coxae I to IV as in the former species.

Host and locality: Holotype (No 4059) female and a female paratype taken 11 Sept. 1976 on Dipodomys ordii (Heteromyidae) at Crowley Guard Center, in Oregon.

Key to species of Sertitympanum

1. Cog-wheel-like structures separated from each other and with the anterior one scalloped only in its posterior half. Genital shield with anterior edge flat...... S. separationis
   Cog-wheel-like structures contiguous; genital shield with anterior edge deeply notched forming two strong triangular points directed anteriorly...... 2

2. Anterior cog-wheel-like structure scalloped only in its posterior half; trough-like structure of genital shield with weakly marked parallel sides............. S. exaratum
   Anterior cog-whell-like structure entirely scalloped; trough-like structure of genital plate with well marked sinuous sides................. S. contiguum

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