

A NEW SPECIES OF PREDACEOUS MITE
(ACARINA : CHEYLETIDAE)
FROM GALLERIES OF BARK BEETLES IN MISSOURI ¹

BY

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ABSTRACT.

Nodele coccineae, n. sp. (Acarina : Cheyletidae) is described from galleries of bark beetles in scarlet oak (*Quercus coccinea* Muench.). The mites were observed to be predaceous on beetle larvae in galleries of *Pseudopityophthorus minutissimus* (Zimmerman), (Coleoptera : Scolytidae), a suspected vector of the causal organism of oak wilt (*Ceratocystis fagacearum* (Bretz) Hunt).

During the fall and winter of 1965, an investigation was made of the acarine fauna present in the galleries of the bark beetle, *Pseudopityophthorus minutissimus* (Zimmerman), (Coleoptera : Scolytidae) in scarlet oak (*Quercus coccinea* Muench.). These beetles have long been suspected to be vectors of the oak wilt pathogen, *Ceratocystis fagacearum* (Bretz) Hunt. Little is known of the role of mites in the microsphere of bark beetle galleries. As a result of this investigation, a new species of predatory mite of the family Cheyletidae was found. The mite was observed to be predaceous upon the larval stages of these beetles, as well as upon other larvae present in the galleries.

The new species described here belongs to the genus *Nodele* and may be separated from other members of the genus by the following key :

Genus *Nodele* Muma 1964.

Nodele Muma 1964, Florida Ent. 47 (4) : 252.

Key to Species of *Nodele*.

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|---|------------------------|
| 1. Guard seta on tarsus I longer than solenidion..... | <i>calamondin</i> Muma |
| Guard seta on tarsus I only half as long as solenidion..... | 2 |

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Acarologia, t. X, fasc. 2, 1968.

2. First pair of dorso-submedian hysterosomal setae reaching only to bases of third pair..... *philippinensis* (Baker)
First pair of dorso-submedian hysterosomal setae reaching to bases of fifth and sixth pairs of marginal setae..... *coccineae* sp. nov.

Nodele coccineae n. sp.

(Figs. 1-3).

FEMALE. — Palpal femur about as long as wide, slightly swollen externally, dorsal seta rodlike, serrate; genual seta rodlike, serrate, inserted on posterior margin of segment; tibial setae simple; a single tooth on median portion of tibial claw; outer comb about one-third longer than inner, outer with 16-20 teeth and inner comb with 18-23 teeth. Rostrum with shield as figured; each arm of peritreme three-chambered. One pair of eyes. Dorsal body setae long, rodlike, serrate; propodosomal setae 115-210 microns long. Propodosomal and hysterosomal shields large, coarsely striated, with indistinct margins, covering entire dorsum; two pairs of dorsal submedian and four pairs of marginal setae, three pairs near the eyes and one pair in posterior corner of propodosomal shield; humeral setae 210 microns long, serrate; hysterosoma with six pairs of marginal setae and three pairs of dorsal submedian setae; the first pair of dorsosubmedian setae reaching the bases of the fifth and sixth pairs of marginal setae. Legs I, 525 microns long, legs II-IV shorter. Tarsi I with sensory seta three-fourths as long as simple guard seta and about one-third as long as tarsi; tibiae I with a short sensory seta and four long serrate setae. Length of body 490 microns, including rostrum 665 microns; width 350 microns.

MALE. — Similar to female except anterior dorsal shield not covering all of propodosoma; with four pairs of long, rodlike, serrate marginal setae; and two pairs of dorso-submedian setae, half as long as the marginal setae. Hysterosomal shield bearing five pairs of marginal setae and two pairs of dorso-submedian setae. Hysterosomal setae subequal except first pair of marginals which are about twice as long as the dorso-submedian setae. Legs I, 648 microns long; legs IV, 455 microns, and legs II and III about 350 microns long. Length of body 420 microns, including rostrum 630 microns; width 236 microns.

Holotype female and allotype, 15 miles east on Mo. 32 and one mile north of Salem, Missouri, February 13, 1965, S. E. Thewke, in galleries of *Ps. minutissimus* in *Quercus coccinea* Muench. Paratypes: Six females, data same as holotype; two males, Salem, Missouri, May 18, 1965 on *Quercus coccinea* Muench.; and one male, Salem, Missouri, November 3, 1964 on *Quercus coccinea* Muench.

Location of types: The holotype and allotype will be deposited in the U. S. National Museum. Paratypes will be deposited in the collections of the U. S. National Museum, the University of Kansas, and the University of Missouri.

The species name is derived from that of its host, *Quercus coccinea* Muench.

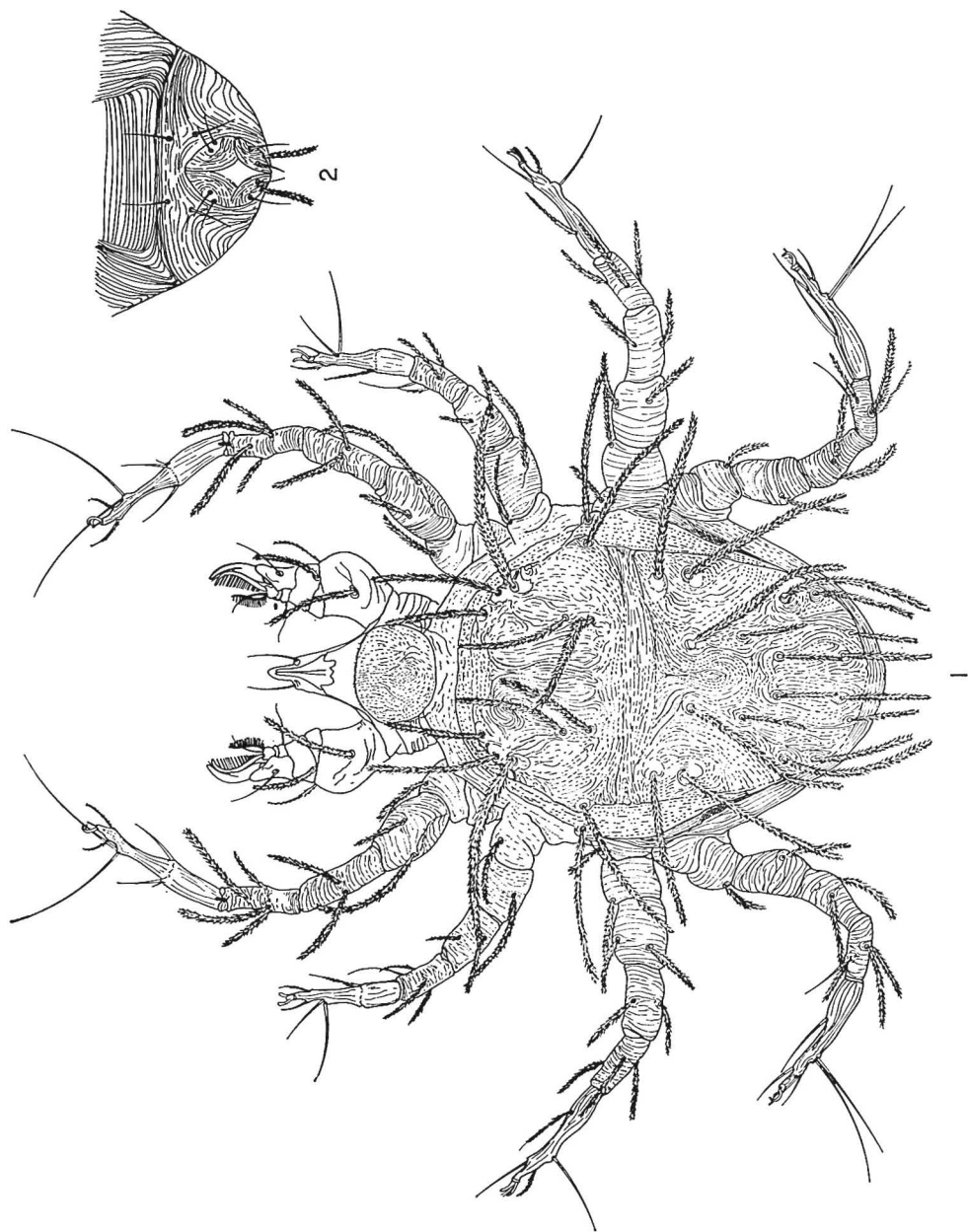


FIG. 1-2 : *Nodele coccineae* n. sp., dorsal view of female (1),
genital region of female (2).

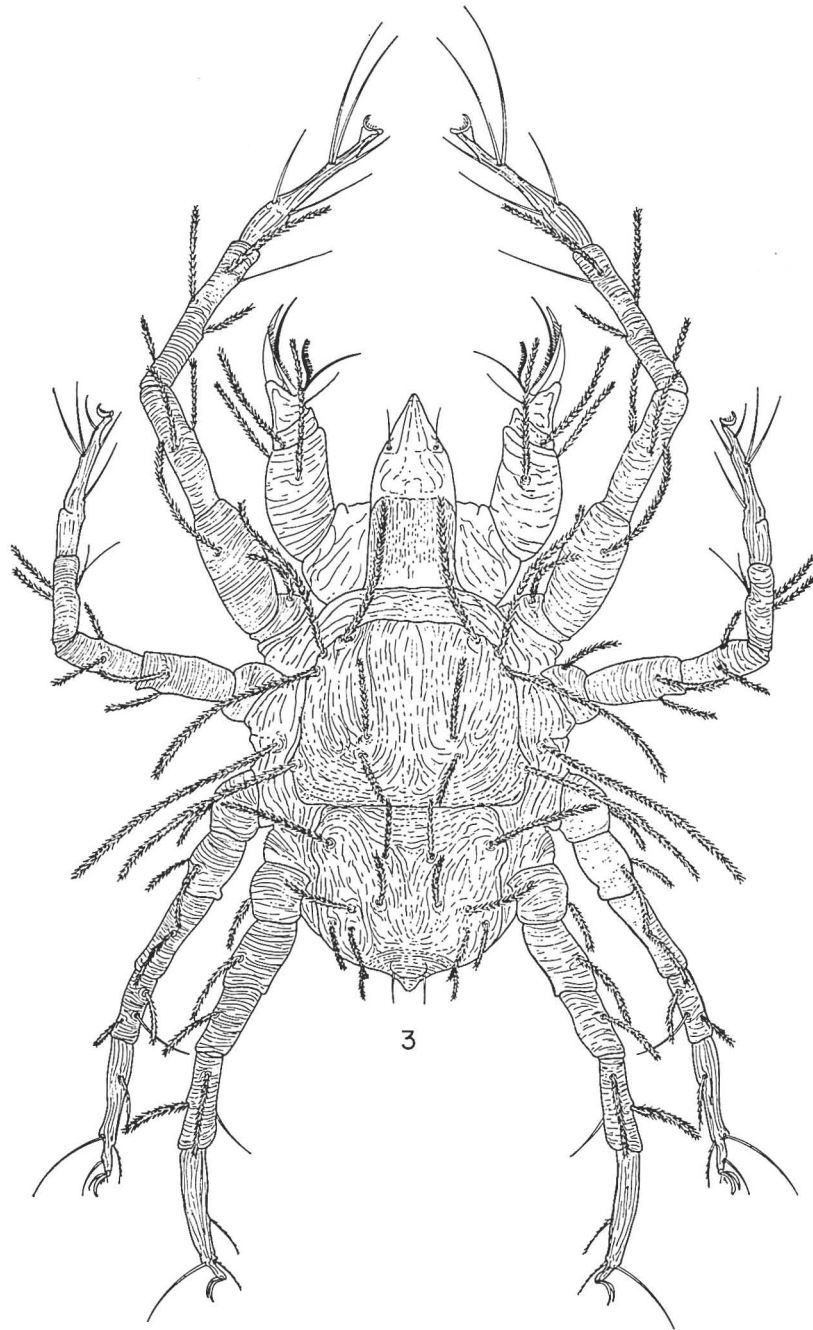


FIG. 3 : *Nodele coccineae* n. sp., dorsal view of male.

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