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Morphology of juvenile instars of Ameronothridae (Acari: Oribatida)

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Abstract

Juvenile instars of four species of the oribatid mite family Ameronothridae— *Alaskozetes antarcticus intermedius*, *Ameronothrus lineatus*, *Halozetes crozetensis* and *Pseudantarcticola georgiae*—are described and illustrated in detail. Known juvenile instars of the family are compared, new diagnoses are given when possible, and identification keys to genera of known nymphs and larvae are presented.

Key words: Oribatida, morphology, juvenile instars, ontogeny, Ameronothridae, diagnosis, key

Introduction

The oribatid mite family Ameronothridae (Acari: Oribatida: Ameronothroidea) comprises eight genera and 38 species that are collectively cosmopolitan, but many of them are distributed mostly in the Antarctic region. This family is unusual in that most species are associated with either marine littoral environments or small, temporary bodies of freshwater. The genera include: *Alaskozetes* Hammer, 1955 (three species and two subspecies), *Ameronothrus* Berlese, 1896 (13 species), *Aquanothrus* Engelbrecht, 1975 (one species), *Capillibates* Hammer, 1966 (one species), *Chudalupia* Wallwork, 1981 (one species), *Halozetes* Berlese, 1916 (16 species and five subspecies), *Podacarus* Grandjean, 1955 (one species and one subspecies), and *Pseudantarcticola* Balogh, 1970 (two species).

At present, the juvenile instars of only a few species of ameronothrid mites have been studied. While these relate to seven of the eight genera (none for *Capillibates*), in most cases the papers deal with only selected instars such that our knowledge is incomplete.

Juvenile instars of *Alaskozetes antarcticus* (Michael, 1903) have been studied by two authors. In the original description, Michael (1903) very briefly described and illustrated the dorsal side of a nymph of the type subspecies, *A. a. antarcticus*. Wallwork (1962, 1965, 1967) briefly described the juvenile instars and illustrated the dorsal side of a tritonymph of the same subspecies, and (1967) also distinguished juvenile instars of *A. a. antarcticus* from those of *A. a. intermedius* Wallwork, 1967 in an identification key.

Juvenile instars of *Ameronothrus* of several species have been studied. Michael (1882, 1888) briefly described and illustrated the dorsal side of nymphs of *A. maculatus* (Michael, 1882) and *A. bilineatus* (Michael, 1888). Schubart (1970) briefly described and illustrated the dorsal side of the larva of *A. schusteri* Schubart, 1970, and later (1975) briefly described the juvenile instars and illustrated the dorsal side of tritonymphs of *A. bilineatus*, *A. lapponicus* Dalenius, 1963, *A. lineatus* (Thorell, 1871), *A. marinus* (Banks, 1896) and *A. schneideri* (Oudemans, 1903).

Juvenile instars of each of the two monotypic genera associated with temporary freshwater environments have been studied. Engelbrecht (1975) described and illustrated all instars of *Aquanothrus montanus* Engelbrecht, 1975. Wallwork (1981) described and illustrated the tritonymph of *Chudalupia meridionalis* Wallwork, 1981.

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