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**FIRST NEW WORLD RECORD FOR *BADONNELIA TITEI*
(INSECTA: PSOCOPTERA: SPHAEROPSOCIDAE)**Edward L. Mockford¹**ABSTRACT**

Badonnelia titei Pearman (Psocoptera: Sphaeropsocidae) was found in a laboratory building at Soldotna, Kenai Peninsula, Alaska. This is the first Western Hemisphere record of this domestic (i.e. dwelling in human habitations) species. The history of knowledge of this species is reviewed.

This note reports the first discovery of *Badonnelia titei* Pearman (Psocoptera: Sphaeropsocidae) in the Western Hemisphere. Data for the find are as follows. USA: ALASKA: Soldotna (N 60.461°, W 151.073°). Ski Hill Road, Kenai National Wildlife Refuge headquarters building. Crawling on floor of laboratory. 12 December 2005. M.L. Bowser. The material consists of a single well-colored female agreeing in form and color with prior published descriptions (Pearman 1953, 1958; Günther 1974a, 1974b; Lienhard 1998).

Badonnelia titei is in the psocopteran family Sphaeropsocidae, which is unique in that females have elytriform forewings and lack hindwings, while males are completely wingless. Thus, the females resemble minute beetles, while the males look like book-lice of the closely-related family Liposcelididae. Sphaeropsocidae is represented by three genera and 15 extant species (Lienhard and Smithers 2002). Only *B. titei* is domestic in the sense of being known only from human habitations.

Knowledge of this species has had an interesting history. The original description (Pearman 1953) was based on a single female kept alive in the hope that it would reproduce and augment the sample. It was found in the back binding of the loose cover of an atlas in the Zoological Museum, Tring, England. Subsequently, additional specimens were found in the same museum and a more detailed description, including both sexes, was published (Pearman 1958). Günther (1974a, 1974b) recorded the species from Belgium, Germany, France, and Switzerland, and noted that it is univoltine. By examination of digestive tract contents, he found that it feeds on fungal spores and body parts of (presumably) dead arthropods. Lienhard (1998) summarized the known distribution at the time, noting that it had been found in ten European countries (in addition to the five already noted, they were Finland, Ireland, Luxembourg, Norway, and Sweden).

The European records of this species are mostly northern (see references listed by Lienhard and Smithers 2002). The southernmost record is from Geneva at just north of 46° N lat. From there it ranges north into Norway and Finland at localities north of 60° N lat. Although it is not clear how to interpret these distributional data for a domestic species in a biologically meaningful way, they suggest that the species may be expected in domestic situations in Canada and perhaps the northernmost portions of the USA.

Badonnelia titei appears to be a member of a small cohort of psocids (and other Arthropods) known only from domestic situations, their natural habitats remaining undiscovered. It was not recorded in the entomological literature until 1952 (Beaumont, 1952, cf. Lienhard, 1977:470), when it was mis-identified as *Embidopsocus enderleini* (Ribaga). Thereafter it started to appear in the

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localities mentioned above. As several of the localities are natural history museums and other institutions devoted to zoological research (including the Alaska locality) its presence is interpretable in two ways: 1) personnel of such institutions are likely to observe and collect such obscure insects, and 2) these insects may have become introduced into these domestic situations with samples under investigation.

Other species of *Badonnelia* are known from Chile, where they are found as free-living members of the soil fauna (Badonnel 1963, 1972).

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