

## ***Aegeritella* (Deuteromycetes) Associated with Ants in America North of Mexico (Hymenoptera: Formicidae)**

by

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### ABSTRACT

The fungus *Aegeritella tuberculata* Bal. & Wis. is reported from Alaska, growing on the ant *Lasius sitkaensis* Pergande. An unidentified *Aegeritella* is also reported from Arizona on *Polyergus breviceps* Emery.

### INTRODUCTION

*Aegeritella* is an epizoid fungus growing on the cuticle and hairs of several ant species. It is known mainly from Europe (Espadaler & Wisniewski 1987), and single samples from Brazil (Balazy & Wisniewski, 1977) and North Africa (Balazy *et al.* 1991). Except for *A. roussillonensis* (Balazy *et al.* 1986), the fungus does not appear to affect the insects. Ants seem to exert a partial control over the spread of the fungus over their bodies (Espadaler & Wisniewski 1987; Espadaler & Suñer 1989). Here we report on two samples from the United States. Asia and Oceania are areas from which *Aegeritella* has not yet been collected.

### RESULTS

1. A short visit of one of the authors (X.R.) to Totem Bight Park, 20 km on the coast north from Ketchikan, Southeast Alaska on August 10, 1991, provided the opportunity to collect a sample of *Lasius sitkaensis*. The nest was at the base of two trees in a rather dense forest (Fig. 4), with a heavy layer of dead leaves. This agrees with what is known about the general ecology of this species (Wilson 1955). All workers (12), taken from within the nest, were infested at varying degrees with bulbils of *Aegeritella tuberculata* (Figs. 1-3). Since the ant occurs in a wide zone of U.S.A. and Canada (Wilson 1955) we expect that a careful examination of this species and others belonging to *Lasius* and *Formica* may provide additional records of *Aegeritella* spec. Two voucher ant specimens have been deposited in the Museum of Comparative Zoology, Cambridge, MA.

2. A sample of two mounted dry specimens of *Polyergus breviceps* from the Southwest Research Station, Cochise Co., Arizona; August 7,

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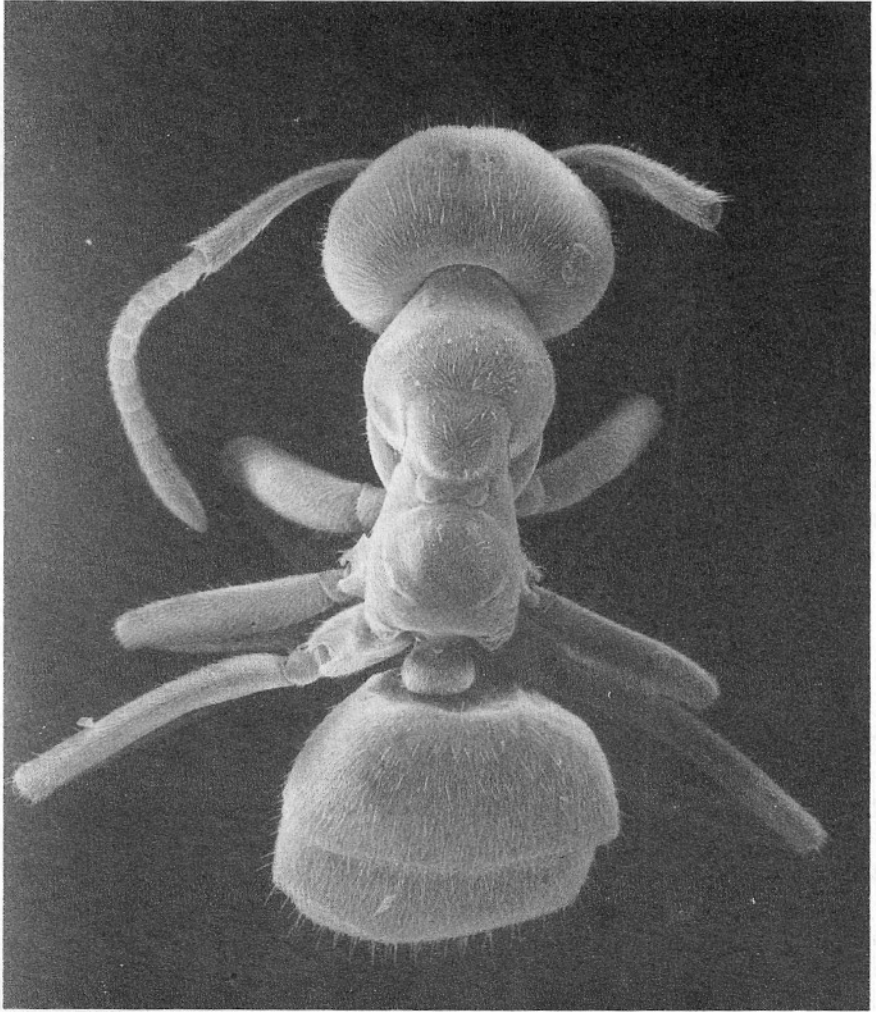


Fig. 1. SEM photograph of *Lasius sitkaensis* with bulbils of *Aegeritella tuberculata* from Ketchikan, Alaska.

1986, Collected by H. Topoff kindly sent by J. Trager, was also found infested with *Aegeritella* sp. Each specimen had a single bulbil, in one case at the anterior face of petiole, in the other at the right underside of second gaster tergite. Incomplete development of the bulbils pre-

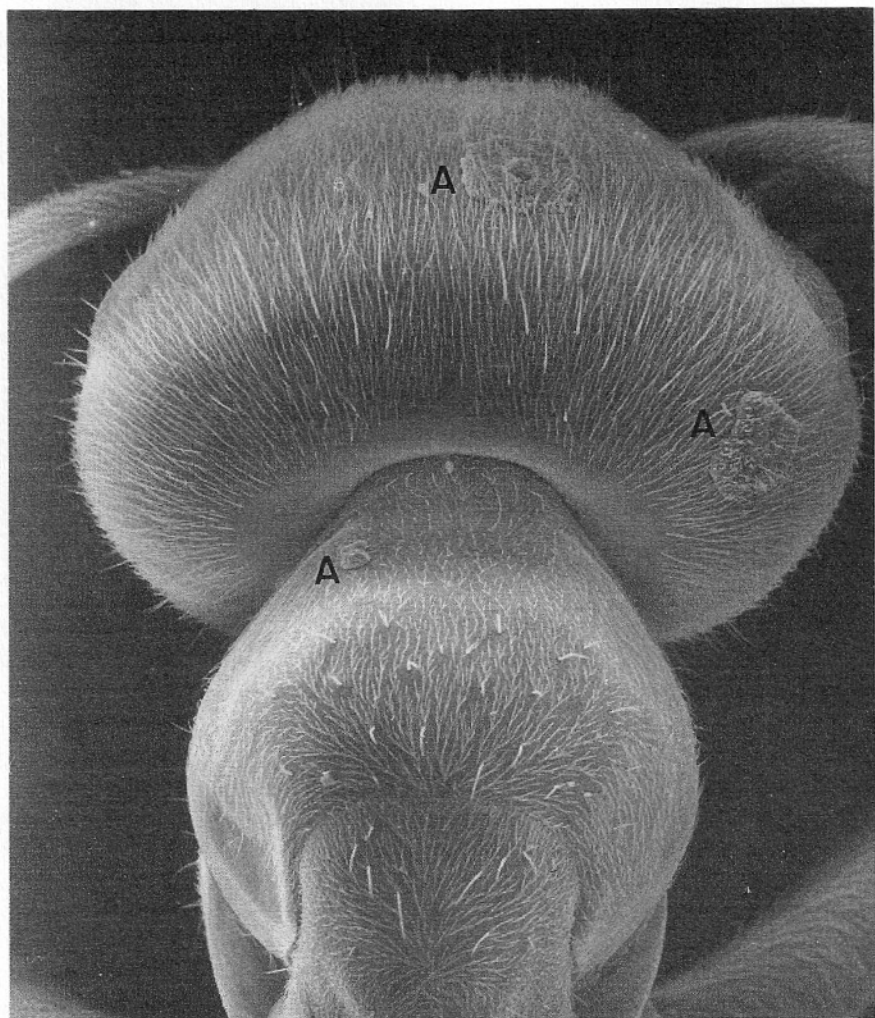


Fig. 2. Close-up view SEM photography of a head and thorax of *Lasius sitkaensis* with 3 bulbils (A) of *Aegeritella tuberculata* from Ketchikan, Alaska.

cludes a specific identification. This sample is interesting in being the first slave-making ant with the fungus. Slaves (*Formica gnava*), though not present in the sample, were the probable source of the infection. The

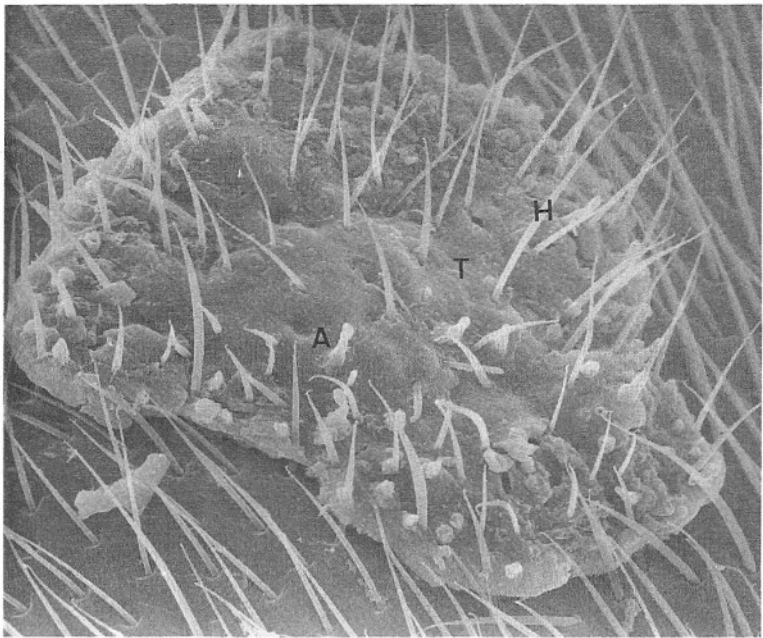


Fig. 3. Bulbil of *Aegeritella tuberculata*. A: aleuriophore; H: ant hair; T: thallus.

behavioral repertory of slaving ants is simplified. Depending completely on their slaves for feeding and brood care, the workers of *Polyergus* can autogroom themselves (Wheeler, 1910). We predict, then, that the level of infestation should be the same for both the slaves and slaving ants.

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Fig. 4. Totem Bight Park forest at Ketchikan, Alaska, where the sample of *Lasius sitkaensis* was collected.

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