October 1984

**Pseudachorutes (Pseudachorutes) Orientalis**
(Collembola: Hypogastruridae), New Species From New York

Steven J. Loring
*Michigan State University*

Follow this and additional works at: [http://scholar.valpo.edu/tgle](http://scholar.valpo.edu/tgle)

Part of the **Entomology Commons**

**Recommended Citation**
Available at: [http://scholar.valpo.edu/tgle/vol17/iss3/1](http://scholar.valpo.edu/tgle/vol17/iss3/1)

This Peer-Review Article is brought to you for free and open access by the Department of Biology at ValpoScholar. It has been accepted for inclusion in The Great Lakes Entomologist by an authorized administrator of ValpoScholar. For more information, please contact a ValpoScholar staff member at scholar@valpo.edu.
**PSEUDACHORUTES (PSEUDACHORUTES) ORIENTALIS**  
(COLLEMBOLA: HYPOGASTRURIDAE), NEW SPECIES FROM NEW YORK

Steven J. Loring

While examining pitfall samples collected at the Brookhaven National Laboratory's "Gamma Forest" in 1968 by Dr. George E. Klee, I encountered an unknown species of *Pseudachorutes*. The purpose of this paper is to describe that species.

_Pseudachorutes (Pseudachorutes) orientalis_ new species

**COLOR DESCRIPTION:** Dorsum greyish-blue, ventral surface cream colored; legs speckled; dens lightly colored greyish-blue on dorsal and ventral surfaces.

**MORPHOLOGICAL DESCRIPTION:** Ocelli 8–11 subequal, on black patches. Postantennal organ (PAO) elongate elliptical with 9–11, usually 10, tubercles; about 1.5 × length of nearest ocellus (A) (Fig. 1). Antennal segment (ANT) III and IV partially ankylosed—suture visible ventrally. ANT IV with distinct single-lobed apical bulb and eight blunt setae (Figs. 2–3); two distal ventral blunt setae thin and may be mistaken for normal setae. ANT III with two dorsal sense clubs and a long, ventral seta (Figs. 2–3). Mandible with two distal teeth (Figs. 4–5). Mandible with two distal teeth (Figs. 4–5). Mandible with two distal teeth (Figs. 4–5). Mandible with two distal teeth (Figs. 4–5). Mandible with two distal teeth (Figs. 4–5).

**Diagnosis**

Using Christiansen and Bellinger (1980), _Pseudachorutes orientalis_ keys out nearest _P. subgrassoides_ Mills, 1934; nearest _P. simplex_ Maynard, 1961 in Massoud (1967); near _P. subcrassus_ Tullberg, 1871 in Gisin (1960); and near _P. lunatus_ Folsom, 1916 using Stach (1949). _Pseudachorutes orientalis_ may be separated from these species by the following characteristics:

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>orientalis</th>
<th>subgrassoides</th>
<th>simplex</th>
<th>subcrassus</th>
<th>lunatus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clavate tenent hairs</td>
<td>absent</td>
<td>absent</td>
<td>absent</td>
<td>absent</td>
<td>present</td>
</tr>
<tr>
<td>ANT IV apical bulb lobes</td>
<td>1</td>
<td>3</td>
<td>2–3</td>
<td>3</td>
<td>unknown</td>
</tr>
<tr>
<td>PAO lobes</td>
<td>9–11</td>
<td>8–14</td>
<td>14–17</td>
<td>8–10(11)</td>
<td>10–12</td>
</tr>
<tr>
<td>Mandibular teeth</td>
<td>2</td>
<td>4–5</td>
<td>4</td>
<td>4</td>
<td>unknown</td>
</tr>
<tr>
<td>ANT IV blunt setae</td>
<td>6–8</td>
<td>5</td>
<td>6</td>
<td>5–6</td>
<td>unknown</td>
</tr>
</tbody>
</table>

1Department of Zoology, Michigan State University, East Lansing, MI 48824.
The number of mandibular teeth and lobes of the antennal apical bulb distinguish *P. orientalis* from *P. simplex*, *P. subcrassoides*, and *P. subcrassus*. These features have not been seen in *P. lunatus*, but the presence of a clavate tenten hair on each leg will separate it from *P. orientalis*.

The posterior body setae of *P. orientalis* appear to be very weakly clavate, but may be mistaken for acuminate setae. One aberrant specimen had three mandibular teeth instead of two.

**TYPES:** Holotype and 45 paratypes in alcohol; eight paratypes on slides. Holotype and paratypes deposited in the Entomology Museum, Michigan State University, East Lansing. All specimens were collected by Dr. George E. Klee in New York, Suffolk County, Brookhaven National Laboratory, Sections 9 and 10 of oak-pine woodlot containing a radiation source, 28 June, 2-5, 8-11, and 23-29 July, and 11-17 August 1968.

Figs. 1-9. (1) Right ocellar pattern and PAO; (2) ANT III & IV, ventral view; (3) ANT III & IV, dorsal view; (4) normal mandible; (5) abnormal mandible; (6) maxilla; (7) hind unguis; (8) left side of furcula, dorsal view; (9) male genital plate.

**ACKNOWLEDGMENTS**

I thank Dr. Richard J. Snider, Michigan State University, for laboratory facilities and criticism, and Dr. George E. Klee, Kent State University, for providing specimens.
LITERATURE CITED


