

## Symphyleona (Insecta: Collembola) from the Northern Mariana Islands, Micronesia

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**Abstract** Four species of symphyleonid Collembola are recorded from the northern Mariana Islands, and taxonomic comments and information on the geographical distribution are given.

**Key words:** Collembola, Symphyleona, northern Mariana Islands.

Though there are many reports dealing with collembolan species from the Pacific Islands, nothing is known about the sminthurid Collembola of the Mariana Islands. *Dicyrtomina trukana* is the only sminthurid species reported from Truk Island which is close to the Marianas (Uchida, 1944).

This paper deals with the collembolan species of the suborder Symphyleona collected during the biological expedition to the northern Mariana Islands organized by Natural History Museum and Institute, Chiba, during the period from May to June, 1992. The symphyleonid collection comprises four species, *Neelus* (*Megalothorax*) *minimus*, *Sphaeridia pumilis*, *Sphaeridia biniserrata* and *Bourletiella* sp., of which the first three are newly recorded from this region.

The specimens used in the present study are deposited at the Natural History Museum and Institute, Chiba.

### List of Collected Species

#### Family Neelidae

##### 1. *Neelus* (*Megalothorax*) *minimus* (Willem, 1900)

*Megalothorax minimus* Willem, 1900

*Neelus* (*Megalothorax*) *minimus*: Gisin, 1944

**Material examined.** Many specimens; ANATAHAN (CBM-ZI-33277), ALAMAGAN (CBM-ZI-33278), PAGAN (CBM-ZI-33279), AGRIHAN (CBM-ZI-33280-82) and ASUNCION (CBM-ZI-33283), T. Kurozumi leg.

**Distribution.** Cosmopolitan (new record for

Mariana Islands).

#### Family Sminthuridae

##### 2. *Sphaeridia pumilis* (Krausbauer, 1891)

*Sminthurus pumilis* Krausbauer, 1891

*Sphaeridia pumilis*: Stach, 1956

**Material examined.** 1♂, 6♀; PAGAN, west coast (CBM-ZI-33284-89), 55 m alt., May 24, 1992; SARIGAN, east slope (CBM-ZI-33290), 270 m alt., May 15, 1992, T. Kurozumi leg.

**Remarks.** It is well known that this species includes a complex of forms (Christiansen and Bellinger, 1981). The present form shows variation in relative pigmentation, shape of the mucronal apex, serration on the tibiotarsal sex setae and the relative size of the furca.

**Distribution.** Cosmopolitan (new record for Mariana Islands).

##### 3. *Sphaeridia biniserrata* (Salmon, 1951)

*Sphyrotheca biniserrata* Salmon, 1951

*Indothea biniserrata*: Stach, 1956

*Sphaeridia biniserrata*: Massoud & Deboutteville, 1964

**Material examined.** 1♂, 1♀; ANATAHAN, south west slope (CBM-ZI-33291, 92), 60 m alt., May 12, 1992, T. Kurozumi leg.

**Remarks.** The Y-shaped sex seta on the hind tibiotarsus of the male is the characteristic identifying feature.

**Distribution.** Singapore, India, Hawaii (U.S.A.), and Mariana Islands (new record).

##### 4. *Bourletiella* sp.

**Material examined.** 5♀; URACAS (CBM-ZI-33293-97), 50 m alt., June 6, 1992, T. Kurozumi & S. Miyano leg.

*Remarks.* If there are male specimens, identification is easy from the species-specific structure of the complex secondary sex organ on the dorsum of the sixth abdominal segment, but determination of the female depends on association with the male.

The present form is characterized as follows: Ground color yellowish white, with purple pigment scattered on the dorsal half of the body and head. Eye field and antennae are intensely pigmented. Ant IV has 8 subsegments. Tenaculum with 2 teeth beyond the basal appendage. Hind tibiotarsus without modified strong setae. Unguiculi of all legs subequal, with thick and apically blunt axial seta surpassing the unguis. Manubrium with 8 + 8 setae dorsally. Dens with setae 7L, 7ID, 8E and 3Ve<sup>1</sup>, 2Ve<sup>2</sup>, 1Ve<sup>3</sup>, 1Ve<sup>4</sup>, and 1Ve<sup>5</sup>. Mucro broadly lamellated. Subanal appendages paddle-shaped.

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