



Neomachilis heteropus

Terrestrial Invertebrates

Jumping bristletails
Order Archaeognatha

ORDER INCLUDES:
1 Native Family
1 Native Genus
5 Native Species
5 Endemic Species and Subspecies

GENERAL INFORMATION: Jumping bristletails are primitive insects. They feed on algae, lichen, plant material, and possibly dead arthropods. Fertilization is external and may involve courtship. The order is poorly known in Hawai‘i. Compared to other invertebrate orders found in Hawai‘i, Archaeognatha is represented by very few taxa. Within the single-represented family, Machilidae, two endemic species and three subspecies of *Neomachilis* are described.

DISTRIBUTION: Bristletails are known from all MHI except Kaho‘olawe and Ni‘ihau.

ABUNDANCE: Unknown. A lack of systematic surveys prevents any population estimate. However, the loss of native habitats likely means species within the order are declining. One species, *N. insularis*, is common and widely distributed while the other two, *N. heteropus* and *N. perkinsi*, are very rare.

LOCATION AND CONDITION OF KEY HABITAT: Bristletails occupy a variety of habitats including leaf litter on forest floors, rotting logs and stumps, dead tree fern fronds, bunch grass, caves, and lava tubes.

THREATS:

- Loss or degradation of habitat.
- Insufficient information for species assessments.

CONSERVATION ACTIONS: The goals of conservation actions are not only to protect current populations and key breeding habitats but also to establish additional populations, thereby reducing the risk of extinction. In addition to common statewide and island conservation actions, specific management directed toward bristletails should include:

- Conduct surveys to determine the distribution and abundance of known bristletails and to document and identify new species.
- Preserve, maintain, and restore habitats supporting existing populations.

MONITORING:

- Continue monitoring the status of known populations.

RESEARCH PRIORITIES:

- Conduct studies to document the biology, habitat requirements, and life history of native species.

- Conduct and support systematic and taxonomic assessments of poorly known and understudied taxa. Review and revise genera in need of taxonomic scrutiny; work to identify and describe new species to science.

References:

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