

SPRINGTAILS

ORDER : COLLEMBOLA (refers to collophore, tube-like appendage used for water uptake)

Suborders : Arthropleona and Symphypleona

IMPORTANCE Mainly scavengers. Enhance soil fertility by breaking down organic matter, cycling nutrients. Some predators. No forest tree pests. Very common soil arthropods, often found in high numbers (100,000/m² soil surface). Not often observed due to small size and concealed habitats.

DISTRIBUTION Worldwide: 620 spp. Canada: 520 spp. (36,87)

BIOLOGY Eggs laid singly or in groups, several times/lifetime. Egg to adult (5 or 6 instars): 2-3 months (temperature- and species-dependent). 3-4 generations/year. Ametabolous development (no metamorphosis: nymphs same as adults but smaller).

FOOD SOURCE Scavengers: algae, lichen, fungi, decomposing plant and animal material. Also bacteria, arthropod feces, pollen. Predators: nematodes, rotifers, protozoa, water bears, other small arthropods.

SEASONAL OCCURRENCE :

Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
X	X	X	X	X	X	X	X	X	X	X	X

MONITORING

Methods - Branch beatings, pitfall trap, visual inspection of habitat with hand lens.

Habitats - Soil, plant debris, and decomposition sites such as dung. Also in grass, flowers, other vegetation, under living or dead tree bark, freshwater pool surface.

CONSERVATION

Pesticide Toxicities -

Toxic (levels unavailable) : simazine, Safer's Soap™ (used as drench), fungal spores of *Cephalosporium* (= *Verticillium*) *lecanii*. (50,97)

RECOMMENDED READINGS : 13, 50, 92

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DESCRIPTION

Adults 1-6 mm long. Minute, wingless, soft-bodied. Slender and segmented (suborder: Arthropleona, Fig. 112), or squat and unsegmented (suborder: Symphypleona, Fig. 113). Grey, yellow, purple, black and mottled varieties common in Vancouver Island seed orchards. Short antennae, simple eyes, elongate chewing mouthparts. When disturbed use spring-like jumping organ, furcula, (referred to by common name) kept folded beneath body at rest. Order name refers to the collophore (tube-like appendage) under abdomen for water uptake, not for holding springtail on its perch, as previously believed.

Eggs Pale, smooth spheres.

Immatures Nymphs resemble small adults.

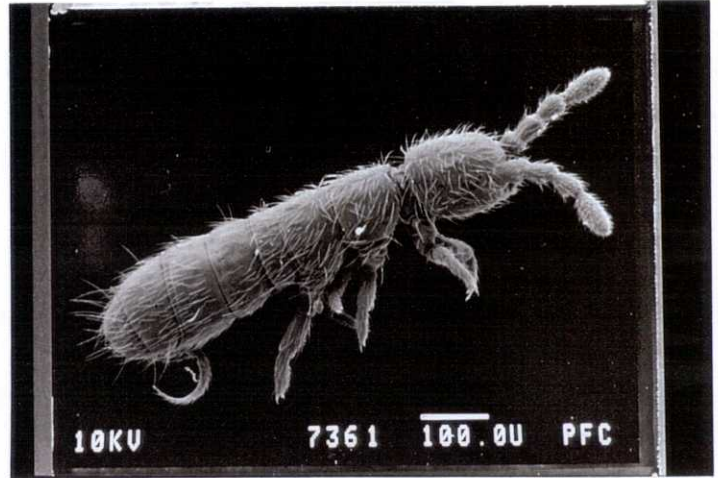


Figure 112 - Arthropleona springtail.



Figure 113 - Symphypleona springtail.