

# Chapter XVIII —Class Collembola



## (Springtails)

- (Williams & Feltmate, 1992)
  - Superphylum Arthropoda
    - (jointed-legged metazoan animals [Gr, *arthron* = joint; *pous* = foot])
  - Phylum Entoma
  - Subphylum Uniramia
    - (L, *unus* = one; *ramus* = branch, referring to the unbranched nature of the appendages)
  - Superclass Hexapoda
    - (Gr, *hex* = six, *pous* = foot)

The class Collembola, which contains semi-aquatic species, was formerly included in the Apterygota, a primitive subclass of Insecta. Recent taxonomic works generally treat Collembola as a separate class and recognize from one to five orders. Three families of Collembola have genera with semiaquatic species. Collembolans are wingless. Collembolans are ametabolous, i.e. with no metamorphosis. They occur on the surface of both lentic and lotic waters, and submerge only accidentally. Their small size (rarely larger than 3 mm) and hydrophobic body surface prevent them from breaking through the surface film. They tend to leap off the surface of the water when disturbed, hence collecting specimens may be tricky.

Reported to feed on detritus, algae, fungi, or dead animal matter, semiaquatic collembolans typically specialize on the particular foods available on the water surface. The mouthparts of some species are modified for consuming the lipoprotein layer of the surface film or the underlying bacterial populations.

All collembolans are characterized by the colophore on the venter of the first abdominal segment. Most aquatic species also possess a jumping organ (furcula), located on the venter of the fourth abdominal segment. The third abdominal segment has a catchlike spring holder (tenaculum) that holds the furcula in place when the animal is at rest. Collembolans are generally distinguished by body shape and segmentation, features of the furcula, coloration, setation, structure of antennae, mouthparts, and eyes.

### Checklist of the families and genera in Northeastern North America

Isotomidae Agrenia Isotomurus	Poduridae Podura	Sminthuridae Bourletiella Sminthurides
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### References

- Peckarsky, Barbara L., Pierre R. Fraissinet, Marjory A. Penton, and Don J. Conklin, Jr. 1990. Freshwater Macroinvertebrates of Northeastern North America. Cornell Univ. Press. xii, 442pp.
- Williams, D. Dudley, and Blair W. Feltmate. 1992. Aquatic Insects. CAB International. xiii, 358pp.

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