

Collembola

The order Collembola (springtails) is one of the five orders of the subclass Apterygota (has no wing).

- Apterygota --
 - Protura
 - Collembola
 - Diplura
 - Thysanura (bristletails)
 - Microcoryphia (jumping bristletails)

Collembola species have two types of body shapes -- globular (suborder Symphypleona), and elongated (suborder Arthropleona). Shown in Figure 1 are Arthropleona species. They were found jumping among the rotten leaves under the tree, where there are many number of them.



Figure 1.
Left: Entomobryidae Side View
Right: Poduridae (above) and Entomobryidae (bottom), Length 3.5mm

The amazing capability to jump of Collembola, to several centimeters, is due to their appendage at its tail called furcula (Figure 2) which serves as a spring. The tip of the furcula is bisected, and curls outward when it is dry (Figure 2b).

2a. Side View



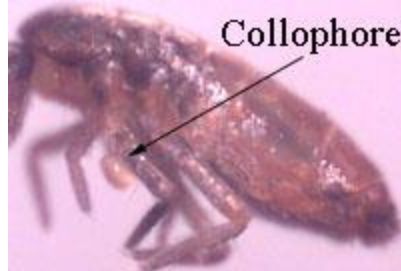
2b. Dried State



Figure 2. Furcula

When it is at rest, the furcula is held by an apparatus called tenaculum on the third abdominal segment. Collembola species have a tube called colophore located between the metathoracic legs (Figure 3) which plays a role in water regulation.

3a. Side View



3b. Ventral View



Figure 3. Collophore (f. Entomobryidae)

Collembola mouths are entognathous (mouth part hidden) (Figure 4). The bristle on the prothorax is the characteristics of the Poduridae family.



Figure 4. Entognathous Mouth Part

On the other hand, the Entomobryidae prothorax has no bristle. It is not as developed as that of

Poduridae and are not visible from above.
Another characteristics of Entomobryidae is their long fourth abdominal segment (Figure 3).

The most unforgettable characteristics of those Collembola probably is (along with their jumping capability), the gracious movement of their long antenna. They are flexible, and can be coiled (Figure 5).



Figure 5. Antenna (f. Entomobryidae)

Collembola species do not have compound eyes, and eyes are absent in some species (Onychiuridae). Their tarsi are one segmented and their legs look curiously primitive. They are rather fragile and their body can not retain water for too long in dried condition.

The seashore springtail (*Anurida maritima*), found numerous on sea shore also belongs to Poduridae family.

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