

and is normally folded under the insect with the free forked end towards the head. The dentes terminate in curious hooked and toothed pieces (the mucrones) plainly designed to give the insect a firm purchase for its leap; and with the same object in view, the underside of the dentes are often studded with spike-like setae. The acme of stinginess is reputed to have been reached by a man who used a wart on the back of his neck for a collar button. Without accusing the springtail of parsimony, it must be stated that it adopts much the same means to hold its furcula in place. On the third abdominal segment is a curious little double-fingered protuberance (the tenaculum) which, when the furcula is folded in place, projects between the dentes. The fingers of this excrescence each provided with three or four teeth to ensure a firm grasp—bending outwards against the dentes, serve to hold the furcula close along the belly, where it is under considerable tension from the muscles of the manubrium. When the fingers of the tenaculum are relaxed, these muscles pull the furcula strongly downwards and backwards, and the insect is flung upwards into the air. Any one who remembers that homely toy, the goose-bone jumping jack, that used to delight the children of a past generation, will readily understand how a springtail leaps.

The length of a jump may be as much as five or six inches. An *Achorutes socialis*, one millimeter long, easily springs four inches or 100 millimeters, and *A. socialis* is by no means one of the most active species. In proportion to the size of the insect, these are prodigious leaps. It is as if a man could cover a mile in nine or ten bounds.

While in the air, the insect folds the furcula back into place again, so that on alighting it is immediately ready for another leap, and it almost invariably comes down on its feet. Only a few species, however, such as *Tomocerus flavescens*, jump several times in quick succession. Generally there is an interval of half a minute or more between the leaps. And, as a rule, leaping is only resorted to in order to escape from danger. The usual mode of progression is walking or running by means of the legs; although the migrating kinds when on the march, keep leaping from time to time, but apparently largely at random.

While the springing apparatus is the most noticeable structure of the majority of the Collembola, it is not the distinguishing mark of the Order, for, as already mentioned, a good many species are entirely without it. It is the possession of the mysterious organ known as the "ventral tube" that decides the springtail lineage. This organ, situated ventrally on the first abdominally segment, is in some species merely a cleft tubercle, the sides of which open back like the jaws of a steel trap, exposing a wet, stickily-looking disc within. In other species it takes the form of a relatively long, projecting tube, from which (among some of the Symphypleona) can be protruded two lengthy, slender, transparent filaments, thickly studded with circular glands.

Dissection does little to explain the use of the organ, but Sir John Lubbock named the order Collembola—literally "glue-insertion"—from the idea, common to most entomologists of his day and apparently still held by some writers, that the ventral tube enabled "the creature to attach or glue itself to the body on which it stands." That this is the special function of the organ seems very doubtful. Springtails do not appear to be in any particular need of attaching themselves so securely to surfaces. They do not habitually live upside down,