The manner of using the tarsal hair tuft, it should be noticed, is very difficult to observe satisfactorily, as the active bug moves its legs very swiftly when swimming. At times, however, either through exhaustion from long-continued rowing, or through weakness in partly drowned individuals, they move the legs more slowly, so it is possible to see the use of the hairs plainly, of which, when swimming fast, it is possible to get only the merest glimpse. The ciliated hairs (figs. 3, 4 and 5), are extended fan-wise (fig. 4), as may sometimes be seen in dried specimens.

The tarsus is in contact with the water along its entire length, with the slit vertical to the surface. When in this position the spread tuft of hairs projects beneath *into* the water, and is a powerful auxiliary in swimming. When swimming under water the hair tuft is also expanded, and is of great assistance. The necessity for an aid in swimming at the surface is explained by the fact that *Rhagovelia* is to be found in the swiftest part of streams, where it may be seen zigzagging against the current in little schools, which in June and July are made up principally of the sexes in copulo. The very young nymphs betake themselves to sheltered and still nooks along the banks.

In cop. the ♂ is above, as is usual with insects. When the ♂ first seizes the ♀ she endeavours to throw him off, and flings herself on her back with the ♂ under her. After a moment's struggle they right themselves. During this the ♂ sets the hind femora at right angles to his body, bending the tibiæ under, and, by means of them, holding the ♀'s second and third pair of legs straight and close to her body. Once he is firmly on her, he releases this hold, but maintains his position by the anterior legs, which clasp the ♀ over the prothorax. He is not connected with the ♀ continuously while on her back. To complete the act, he seizes her as at first, by means of the hind legs. At other times he merely lies on her back quiescent, with his second and third pairs of legs extended, but not touching the surface. As long as the ♂ is on her the ♀ does all the swimming.

It is known that *Rhagovelia* swims freely under water, and to my disgust the individuals I had persisted in diving. They were taken in the afternoon, and being put in an aquarium, when night came, they took to diving. By 11 p.m. they were all actively swimming under water. To penetrate the surface film they put the head down at the surface, and, by means of a few vigorous swimming-strokes with the intermediates, they force themselves under. When under water they swim about freely and rapidly by means of the intermediates, the tarsal swimming-tuft being fully