

familiar "*Gerris*" in structure and habits, and they skip about in the net when caught in just the same manner. They are apterous, and covered with silky bluish-white down, which carries down a supply of air to serve them when they dive beneath the surface, which they do very readily on the approach of the net. They are only seen when the sea is perfectly calm. I tried to keep two or three in a large bottle of sea-water, but they very soon died."

That all the species do not avail themselves frequently of this power of diving (if indeed they possess it) seems evident from the fact that it was only on one occasion that Mr. Murray had an opportunity of seeing it, and that Dr. Hay, who at my request observed the habits of *Halobates hayanus*, and kept specimens in captivity, never saw them dive.

From these notes it would seem that the habits of *Halobates* are probably much the same as those of the allied genera so frequently seen on the surface of fresh water in this and other countries, which, like *Halobates*, may often be seen congregated round any small recently dead animal (such as a fly) floating on the surface. The attraction is of course the juices of the animal, which they obtain by first piercing its integuments with the aid of their mandibles, and then sucking the fluid by means of the maxillæ.<sup>1</sup>

Some of the species occur close to the shore, but others are found in mid-ocean many hundred miles from land. In both situations they are gregarious to a greater or less extent. Their mode of progression is probably the same as that of the more closely allied fresh-water genera, which by means chiefly of the long middle and hind legs run rapidly (skim or scud) on the surface of the water, or when alarmed, progress by long jumps. These fresh-water species are said to be able to dive, but I do not think that this can be a common habit, for I have never seen it done by any of the thousands of specimens that have come under my observation. Some of the fresh-water species (*Gerris*) are said to be able to swim,<sup>2</sup> but this seems open to question. On the other hand, the long fringe on the middle tibia and tarsus of *Halobates* seems to be intended for something more than merely to support the animal on the surface. This supposition is strengthened by the fact that it is the middle and *undermost* legs that are provided with the fringe. It may be that the use of the fringe is not wholly, nor even mainly, for swimming, but for enabling its possessor to resist the action of the wind, by taking hold of the water, which it would do by submerging these legs. The fringe is often seven or eight times longer than the breadth of the tarsus, and the hairs which compose it are fine and flexible. At their base is a shorter fringe of stouter hairs, curved at the apex. It is possible that the animal can exercise some control over the position of the fringe, keeping it adpressed to the limb, so as not to impede its progress, when scudding over the surface; or extending it at right angles to the limb when this is immersed. The shorter fringe

<sup>1</sup> They also catch and kill living insects.

<sup>2</sup> Kirby and Spence, *Entomology*, p. 470.