tips. Turning the creature over on its back, we notice that underneath it is closely covered with tiny hairs, which in certain lights shine like polished silver, but in others appear of a dull grey. The legs are six in number, but the antennæ, lying close to the front pair, and almost equalling them in size, give the insect the appearance of having eight legs, like a spider; the front pair are short and rest upon the water at their tips, being extended beyond the head, where they are extremely useful in securing prey; the second pair are much the longest and constitute the rowing organs—they are slender, and look like stiff bristles bent twice at an angle; the third pair are similarly constructed, but, being shorter, do not in any way interfere with the powerful strokes of the others, and are used as rudders.

The attachment of the rowing legs to the body, instead of being placed underneath, as is almost universally the case with insects, is thrown well out at the sides, a peculiarity which enables the little rower to use its muscular power to the best advantage. The general appearance of the creature is not particularly attractive; in addition to the dinginess of its colour, the various modifications of its limbs give it, when off the water, an ungainly aspect, which seems to suggest that the owner of such slender appendages must have an anxious time of it to guard them from fracture; but Nature is always prepared to sacrifice elegance and symmetry for the sake of utility. inspection, however, reveals many points of beauty besides the silvery hairs, notably some coppery scales, dotted here and there over the upper surface. The eyes are prominent, and no doubt give their possessor a wide range of vision, which it greatly needs, for, living as it does at the junction of two media, it is exposed to the attacks of foes in the air above and in the water beneath.



Fig. 1. Gerris lacustris.

The Gernidæ live by sucking the blood of other insects, which they can catch by pursuing and leaping upon them. Even on the water they possess considerable saltatorial power, and when themselves fleeing from their persecutors, sufficient rapidity, they will expedite their flight by a few wild leaps.

Ten species of the genus inhabit the fresh waters of the British Isles, two of them occurring only in Scotland. The largest kinds can with fully outstretched rowing legs cover a width of 21 in. of water, and are gifted with propor-Hydrodromica, all the genus are gregarious, scores of the smaller kinds being often seen dotting the surface of a suit able corner of a pond. Insects somewhat similar are known hundreds of miles from land, they spend their whole lives. It is curious how very few insects proper are associated with salt water, though the function material abundant.

with salt water, though the fresh-water fauna is abundant. Closely allied to the Gerris group, but differing considerably in appearance and method of locomotion, is the strange insect named Hydrometra stagnorum (Fig. 2). This is one of the narrowest of all British insects, and reminds one of the exotic "walking-stick insects" on a small scale: its legs are as fine as bairs, and even its body, with a length of half-an-inch, does nct exceed, at its widest part, one-twenty-fourth of an inch in diameter. It does not jerk itself along after the manner of a Gerris, but actually walks or runs upon the surface of the water; it is most frequently found close to the margin of the pond, where it alternates between land and water, equally at home on both. In consequence of their extreme slenderness, they easily escape detection, and half-a-dozen may be walking on the water, just under one's eyes, without being noticed at all.



Fig. 2. Hydrometra stagnorum.

This insect exemplifies a remarkable peculiarity often met with amongst the Hemiptera. It will be remembered that the progress of development in bugs is such that no quiescent pupa stage intervenes between the active larval form and the adult insect; the pupa differs from the perfect form principally in the absence of wings, and from the larva in faint indications which form a suggestion or promise of those organs. Occasionally, however, the ultimate form does not acquire wings, but remains "undeveloped," thus greatly resembling a pupa, so much so, indeed, as to have deceived entomologists again and again, until it was discovered that these apparently immature forms were sexually mature, a condition that may usually be accepted as proof that an animal has reached its ultimate state. In all orders of insects there are apterous forms, but the Hemiptera are specially remarkable in two respects, viz., that there are various degrees of imperfect development in different species, ranging from an entire absence of wings to their perfection in all but some minute part, and that these conditions prevail in a large proportion of species. Out of a total of 420 species of British bugs, about 60 occur more or less imperfectly developed. Species thus imperfect when mature, occasionally, from causes at present undetermined, assume in certain individuals the completely winged form, but such instances are, as a rule, rare. The present insect possesses only the merest rudiments of wings.

