

is roughened in some manner, as well as the portion of joint mentioned, on the areas of friction. This mechanism cannot be properly explained without a dissection, hence the insufficiency of the preceding.

To stridulate, *Ranatra* holds the first pair of legs in the same plane as the body, perfectly straight, and somewhat separated at the extremities, in such a manner as to press the coxæ against the inner surface of the outer wall of the coxal cavity. The insect jerks its legs while in this position back and forth, and thus causes the vibration. Both legs may be in motion at once, independently of each other; or one only may be waved about. Each leg, therefore, stridulates without reference to the other, as *Ranatra* jerkily moves it about in anger or excitement.

In the literature and references that I have been able to look up, no mention is made of this peculiarity of *Ranatra*, although it cannot have passed unnoticed by students of these hemipterous groups. In his "*Catalogus synonymicus et topographicus Rhynchotorum aquatilium hucusque in Italia repertorum*," Dr. A. Griffini gives a very full bibliography of the aquatic Rhynchota, and he records only one essay on the subject in question, "On Stridulation in the Hemiptera Heteroptera," by O. H. Swinton, which mentions *Nepa*, but makes no reference to *Ranatra*. Mr. G. W. Kirkaldy, F.E.S., also has had a paper on "The Stridulating Organs of Water Bugs (Rhynchota), especially of Corixidæ," treating principally of the last named. At some future date I shall endeavour to give a fuller account of the organs in *Ranatra*, together with a bibliography. Meantime, a few random notes on habits may not be without interest.

The way in which *Ranatra* seizes its prey is very characteristic. I feed mine on living flies, which are presented with a forceps under water. When the fly attracts its attention, *Ranatra* very slowly, almost imperceptibly, moves its fore-legs, with the knife-like tarsus away from the tibia, toward its prey. When the tibiæ are almost, or quite, touching the victim, the movement is so sudden and quick that one is aware of it only by seeing the prey seized. Sometimes its hold is not satisfactory, and then it will let go, first with one tarsus, get a firmer grip with that, and then do the same with the other. Once it has the fly securely held, *Ranatra* slowly approaches it to its extended beak, with which it seems to touch and feel it until it finds a suitable spot, and proceeds to a leisurely meal. From this it might seem that *Ranatra* depends for its food not on such inhabitants of the water as swim by, but on the unwary ones that come to