

ADDITIONAL NOTES.

1. *The Nature of Sponges.* Page 29.

I may fortify my opinion of the vegetable nature of these productions by the following quotation from the "Elements of Physiology" by Müller, the celebrated professor of anatomy in the university of Berlin.—"If, therefore, it is still a matter of doubt whether certain simple organized beings, such as the sponges and several so called alcyonia, are animal or vegetable, the absence of all voluntary motion in these bodies, whether of the whole or of individual parts of it, must determine the question, and they must more properly be numbered among the vegetable marine structures. It may certainly be said that the embryo of sponges, as Dr Grant has shown, like the embryo of polypes and corals, moves by means of cilia; but the distinctive marks between the embryo of sponges and marine infusoria are by no means certain, and similar motions have been many times observed in the embryo of true vegetables,—of the algæ, for example." p. 42. Lond. 1837.

Mr J. Hogg, in a letter dated June 25, states that the green colour of the fresh water sponge (*Spongilla fluviatilis*) depends upon the action of light,—as he has proved by experiments which shewed that *pale* coloured specimens became green when they were exposed, for a few days, to the light and full rays of the sun; while on the contrary *green* specimens were blanched by being made to grow in darkness or shade. Hence Mr H. infers the vegetability of this sponge; but he still leans to the opinion that the sea sponges are animals.

Dujardin, again, is a new advocate for the animality of all sponges! "M. Dujardin having repeated his observations on spongillæ or fresh water sponges, as well as others on marine sponges, thinks he has proved, that these ambiguous beings are positively groups of animals, capable of contraction and extension. If a piece be detached from a living sponge, and submitted to a microscope, it will be seen to groupe itself into irregularly rounded masses, and change the form of its edges incessantly: isolated portions, detached from the general mass, move slowly in the liquid, and creep along by means of their alternate contraction and expansion." Athenæum, June 16, 1838, p. 430.—I may remark on these experiments, that locomotion is no proof of animality. Several algæ are locomotive.

2. *The asexual character of Zoophytes.* Page 46.

This is contrary to the opinion of Professor Wagner. He says that double-ness of sex appears to be an invariable condition of all animals; and when the sexes are not separate individuals, there always exists a hermaphroditical organization. He has discovered masculine organs in the Actiniæ. "I found, last Autumn," he says, "in the isle of Heligoland, upon the *Actinia holsatica* and *rufa*