

the physical changes produced on the earth's surface by their agency, in Mr. Lyell's *Principles of Geology*, Vol. III.; and to these works the student is referred, that more space may be allotted for the examination of the fossil species.

1. FOSSIL SPONGES.—The terms *Amorphozoa*, (*signifying animals of indeterminate forms*), and *Porifera* (*animals beset with pores*), are employed by modern naturalists to designate the Sponges, and other analogous structures, which occupy the boundary line that separates the animal and vegetable kingdoms. The true nature of the Sponges, is still a disputed question; for, while many distinguished naturalists contend for their animal organization, others equally eminent affirm, that neither in structure nor functions, do they differ from vegetables in any essential particular. Thus Professor Owen remarks, “that if a line could be drawn between the animal and vegetable kingdoms, the Sponges should be placed upon the vegetable side of the boundary.” But I concur in the opinion of the author of a beautiful and charming work on British Sponges,* that there is nothing to forbid the belief,

* A History of British Sponges, &c. by Dr. George Johnston, Edinburgh. 1843. One vol. 8vo. with twenty-five plates. A previous work of Dr. G. Johnston, “A History of British Zoophytes,” with forty-four plates, from drawings by the accomplished lady of the author, cannot be too highly commended.