

## PRELIMINARY OBSERVATIONS

ON THE OBJECTS CONTAINED IN PLATE VIII., ENTITLED "LIVING ILLUSTRATIONS OF FOSSIL CONCHOLOGY," ETC.

MAN, when he becomes the historian of the animal kingdom, generally considers his own structure as a type of the most perfect organization; and regards those animals that depart the most from this type, and have the smallest number of organs and senses, as the least perfect. Strictly speaking, every animal is perfect, that is, so organized as to answer the purposes for which it was created: yet with reference to ourselves, we may, without much impropriety of language, call those animals which have the smallest number of organs and senses, the most imperfect. The very earliest inhabitants of the ancient world appear chiefly to have belonged to those orders of imperfect animals, that had little power of locomotion, and few organs of sense: many of them were without heads or eyes, and were, like the oyster, confined in shells, which they could merely open and close. Of these there were such immense multitudes, that calcareous mountains of vast magnitude and extent, are sometimes chiefly composed of their remains.

From what we see of the present animal creation, we have reason to believe, that creatures of every species, when free, and provided with the aliment they require, derive pleasure from the very action of their organs, and from existence itself. Of the kind or extent of the happiness enjoyed by a creature enveloped in darkness, and without head, heart, or eyes, or the power of removing its habitation, we can, however, form no idea; yet for any thing we know to the contrary, the inhabitant of a bivalve shell, may be far happier, than the monk immured in his stony cell, or than other individuals of the highest order—Man—who, however perfect their physical organization, make but little use of the intellectual and moral organs, figuratively called the head and the heart.

Dr. Paley, in his "Natural Theology," has some beautiful reflections on the apparent happiness enjoyed by shoals of young shrimps, that were bounding into the air from the shallow margin of the water, or from wet sand. He observes: "If any motion of a mute animal could express delight, it was this." We cannot take cognizance of the actions of creatures enclosed in bivalve shells; but a distinguished philosopher was so fully convinced of the happiness enjoyed by testaceous animals, that he calls calcareous mountains, filled with their remains, "monuments of the felicity of past ages."

It is with a view to excite the curiosity of the geological student, and to direct his attention to something beside the external form of shells, that I offer the following observations, and not with the design to teach fossil conchology, which the limits of the present volume would not admit of.

The reader who is entirely unacquainted with conchology may form some general idea of a shell, if he be told that it is univalve, like a snail or a perriwinkle; or bivalve, like the muscle or cockle.

There are, however, numerous fossil bodies classed with shells, of which the general reader can form no notion whatever from the names;—such are the orthoceratite, the scaphite, &c. These are