

of fossil encrinite is given, p. 164. : it is named the Lily Encrinite, because the arms, when folded, resemble the head of the lily. Indeed, the whole class, of encrinites and pentacrinites are called *crinoidea*, from *krinon*, the lily, by Mr. Millar, in his valuable work on these fossils. The arms of part of a Briarean pentacrinite are represented, p. 180.

In the encrinite, the stem is composed of numerous round plates, or vertebræ; the branches are also composed of numerous smaller, but similar plates, as may be seen by referring to fig. 17. and the cuts. The pentacrinite differed from the encrinite by the plates, or vertebræ, of the stem and branches being pentagonal. The stems of both were attached to rocks. They appear, like various polypi, to have increased by throwing out lateral stems (see the above fig.). The calcareous vertebræ that formed the stem and branches, were enveloped by a thin coat of animal matter, which must have possessed great muscular power, to have enabled the animal to move its arms with great facility, when seizing its prey.

In fig. 17. the expanded arms of the upper head of the pentacrinus expose the pentagonal aperture or mouth in the centre; and a little above this is a round tube or aperture, which serves for the excretion of the fæces. In fig. 18., which is a head with the arms removed, it will be seen, that the excreting tube projects a little above the mouth. One head of the pentacrinus is represented as folded, and another as partly collapsed. As these animals were enveloped in a thin fleshy covering, their calcareous remains may be regarded as portions of the skeleton. Some beds of mountain limestone, in Derbyshire, are almost entirely composed of broken stems and branches of encrinites, not uncommonly called entrochites. In a part of this work it was stated, on the authority of a letter sent to the Author, that the Lily Encrinite had been discovered in Ireland; but the cut subsequently given of it in Mr. Loudon's *Magazine of Natural History*, makes it doubtful, whether it is the true Lily Encrinite, or a species nearly resembling it.

The Author cannot conclude these remarks, without expressing a wish, that scientific voyagers and medical gentlemen, who visit tropical seas, would carefully examine the different species of sepia that may be caught. It is probable, that there are living species, with internal chambered shells, resembling more or less the figures in plate VIII. Cuvier says, that a little change in the structure of the oval internal shell of the cuttle fish, would convert it into the internal chambered shell of the spirula. It was with a view to excite the curiosity of voyagers, when near the coast of North America, that the Author has suggested the possibility of the ichthyosaurus visiting those seas, p. 213. Cuvier too hastily conjectured that no new living species of large terrestrial quadrupeds remained to be discovered. The gigantic tapir and new species of elephants have since been discovered in India. The Author considers it far from improbable, that the great mastodon may exist in some of the unexplored recesses on the western side of North America; and he would particularly recommend comparative anatomists to examine the structure of the Grisly bear, and compare it with the skeleton of the cavern bear, (*ursus spelæus*.) When Cuvier published the last edition of his *Règne Animal*, in 1829, he does not appear to have known any thing respecting the Grisly bear.