

worth as a pigment; and a drawing having been made with it and shown to a celebrated artist, he pronounced the sepia to be excellent, and inquired by what colourman it had been prepared.

One other peculiarity is worthy of attention. The cuttle-fishes are the most highly organized creatures of their genus, and seem to form the connecting link with the vertebrata. This is suggested by the existence in the squid or calamary of an elongated, flexible rod of horny material, when we lay open the back of the animal. This is called the cuttle-fish "pen," from its resemblance to a quill pen; in other forms similar to the squid, there is, instead of the "pen," a flattened plate of limy substance commonly called "cuttle-fish bone," and which is given to canary and other singing birds. The "pen" and the "cuttle-fish bone" foreshadow the typical chambered shell, on the principle known as "the law of homology," being constructed on the same fundamental and typical plan. Some naturalists recognize them as a rudimentary back-bone; and regard cuttle-fish as approaching nearest to the vertebrata.

It is remarkable that of the great division of cuttle-fish called *Tetrabranchiata* or "four-gilled," there is but one living representative, namely, the Pearly Nautilus, with numerous arms unprovided with suckers, no ink-sac, and an external many-chambered shell. All other cuttle-fish belong to the *Dibranchiata* or "two-gilled" order, and have either eight arms, as the octopus, or ten arms, as the calamary or squid. The geological record makes a remarkable disclosure regarding these great orders of cuttle-fish. During the Palæozoic ages, the oceans and seas swarmed with the "four-gilled" cuttle-fish, their beautiful external shells being now found as fossils, in the older rocks; but as the earth advanced towards its present condition, these curious forms slowly died out, leaving the pearly nautilus their only living representative. On the other hand, the "two-gilled" cuttle-fish have no representatives in the earlier periods of the earth's history, and only now seem to have reached their full development. The pearly nautilus occurs in almost the oldest rock-formations in which traces of living organisms are found, and still holds its ground in the great battle of life.

The cuttle-fishes commonly met with are inconsiderable in size. The squid is but six to eight inches in length. The Poulpe or Octopus, with its eight arms, usually measures about two feet from