Aspidichthys belonged also to a bony plated fish as large as *Dinichthys*; but its plates, as far as known, are covered with large, hemispherical, smooth, enameled tubercles.

In the Corniferous Limestone we find also quite numerous bones and teeth of fishes. They all belong, however, to those orders which include the modern Sharks and Gar-Pikes or Ganoids. No trace of soft-scaled fishes is certainly known below the Mesozoic. Some of these sharks had enormous bayonet-like spines inserted in front of certain of their fins; and the Ganoids were armed with strong, conical teeth, and protected by bony enameled scales.

Every one has read or heard of the "Old Red Sandstone." In some parts of this Scottish formation were found fish remains which Miller described years ago, in a popular and fascinating style which attracted much attention. This was one of the earliest attempts to interest the public in fossil remains—and we might even add, in any branch of geology. Hugh Miller was a mere quarryman, and Agassiz was so surprised to find such a man doing good work in science, that his praise contributed much to Miller's fame. The renowned fishes of Scotland were mostly Placoderms, like *Dinichthys*. One of them has been called *Ceph-al-as'-pis* (shield-head), for it had a broad flattened head shaped like a saddler's knife in outline, with a tapering conical body. Another is *Pter-ich'-thys* (winged fish) since its only fins stood out at right angles like wings. But no European fishes possess any greater interest than our own.

XXXII. ANCESTRY OF THE PEARLY NAUTILUS.

SILURIAN REMAINS.

THE Pearly Nautilus still lives in the deep waters of tropical seas. This is not the Paper Nautilus or Fairy Sailor, of which Byron wrote:

> "The tender Nautilus who steers his prow
> The sea-born sailor of his shell canoe.