

Caithness, which seem to be very closely allied to Cyclostomata.

12. The *Elasmobranchi* (sharks and skates), with their immediate forerunners, the Acanthodi of the Devonian and Carboniferous age, are the first typical fishes. That they existed as far back as the Silurian age is proved by many enamelled spines of the dermal armour, chiefly from the dorsal fins. This higher stage is characterized by the possession of typical jaws, by visceral or gill-bearing arches, and by two pairs of limbs. None of the Elasmobranchs, fossil or recent, stands in the direct ancestral line ; but they are the lowest Gnathostomata, jaw - and - limb - possessing creatures, known.

13. Closely connected with the Elasmobranchs in a wider sense are the *Crossopterygii*, which begin in the Devonian age as a large group, but have left only two survivals, the African *Polypterus* and *Calamoichthys*. They are possessed of dermal bones and other ossifications, and are characterized by