

Cœlacanths in but the later geological formations, while the Acanths were restricted to the earlier, it might be argued by assertors of the development hypothesis, that the amply imbricated, slate-like scale of the latter had been developed in the lapse of ages from the shagreen tubercle, by passing in its downward course — broadening and expanding as it descended — through the minute, scarcely imbricated disks of the Acanths, and the more amply imbricated tile-like rhombs of the Dipterians and Palæonisci, until it had reached its full extent of imbrication in the familiar modern type exemplified in both the Cœlacanths and the ordinary fishes. But such is not the order which nature has observed ; — the two extremes of the ganoid scale appear together in the same early formation : both become extinct at a period geologically remote ; and the ganoid scales of the existing state of things which most nearly resemble those of ancient time are scales formed on the intermediate or tile-roof principle.

The scales of the Cœlacanths were, in almost all the genera which compose the family, of great size ; in some species, of the greatest size to which this kind of integument ever attained. Of a Cœlacanth of the Coal Measures, the *Holoptychius Hibberti*, the scales in the larger specimens were occasionally from five to six inches in diameter. Even in the *Holoptychius nobilissimus*, in an individual scarcely exceeding two and a half feet in length, they measured from an inch and a half to an inch and three quarters each way. In the splendid specimen of this last species, in the British Museum, there occur but fourteen scales between the ventrals, though these lie low on the creature's body, and the head ; and in a specimen of a smaller species, — the *Holoptychius Andersoni*, — but about seventeen. The exposed portion of the scale was in most species of the family curious-