

ing to it the name of *Reptilia*. In the presence of these embryonic structures, the Serpents, Lizards, and Tortoises, agree therefore with Birds, Mammalia, and Man.

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CLASS IV.—PISCES.\*

TEGUMENTARY SYSTEM.

THE skin and other tissues belonging to the tegumentary system in the class of Fishes, exhibit very numerous diversities of structure; they have not, however, been so carefully investigated as hairs and feathers.

An *Epidermis* is always present, lubricated frequently by a copious viscid secretion, and occasionally entirely devoid of scales, as in the Cyclostomi, *Lophius piscatorius*, *Muraenophis*, and others, while, on the other hand, many Fishes that appear almost smooth and scaleless, such as the *Burbot* (*Gadus Lota*), are in reality provided with small scales. The scales are usually disposed in an imbricated manner upon the body of the Fish, and adhere by one extremity being implanted in a sacciform depression of the corium.

The *Scales* generally exhibit great varieties of form, being either round or angular in their contour, and frequently provided with jagged edges. They usually consist of transparent, or highly refractive laminæ like mother-of-pearl; upon their external surface we observe a series of circular lines, which are disposed concentrically around a common nucleus or spot, which is not always

\* Class PISCES.

Sub-Class 1. Pisces Ossei s. Ostacanthi.

- Order I. ACANTHOPTERYGII.—Ex. *Perch, Bream, Mackerel.*  
 II. MALACOPTERYGII.—Ex. *Carp, Pike, Salmon, Herring.*  
 III. PLECTOGNATHI.—Ex. { *Diodon, Tetronodon, Orthagoriscus, Ostracion, Balistes, &c.*  
 IV. LOPHOBRANCHII.—Ex.—*Syngnathus, Hippocampus.*

Sub-class 2. Pisces Cartilaginosi s. Chondropterygii.

- V. PLAGIOSTOMI.—Ex. *Rays and Sharks.*  
 VI. ELEUTHEROBRANCHI.—Ex. *Sturgeon, Chimera.*  
 VII. CYCLOSTOMI.—Ex. *Petromyzon, Ammocetes, Myxine, Bdellostoma.*

Sub-class 3. (Provisional). Pisces Anomali.

- VIII. AMPHIBIOIDEI.—Ex. *Lepidosiren.*  
 IX. HELMINTHOIDEI—Ex. *Amphioxus, s. Branchiostomæ.*