

SCALES OF FISHES.—The dermal plates or scales are composed of two substances, disposed in laminæ or plates ; the one cartilaginous or horny ; the other dense, and osseous, possessing the structure of bone. In most species the scales are imbricated, *i. e.* lie over each other like the tiles of a roof ; the margin of a front row partly covering the series immediately behind. From this arrangement, the apparent shape of the scales is very different from their true form ; the processes of attachment, and lateral angles, being concealed. The scales that are not imbricated are either very small, and imbedded in the substance of the skin so as to be imperceptible to the naked eye, as in the shagreen of *Sharks* ; or are disposed in the form of bosses or scutcheons, as in the Rays ; sometimes bristling equally over the surface of the body, as in the *Diodon* ; and sometimes covering it like mosaic work ; or forming particular series on certain regions of the body, while the other parts are garnished with different scales, as in the *Sturgeon*. There are a few genera destitute of scales. In almost all fishes there is a particular series disposed in a gently undulated line along each side of the body, and extending from the head to the tail, constituting what is termed the *lateral line* ; these scales are tubular, and serve an important purpose in the economy of these animals. Every one must be aware that the body in most living fishes is constantly covered with a kind of mucus, or slime, which serves to lubricate the skin, and defend it