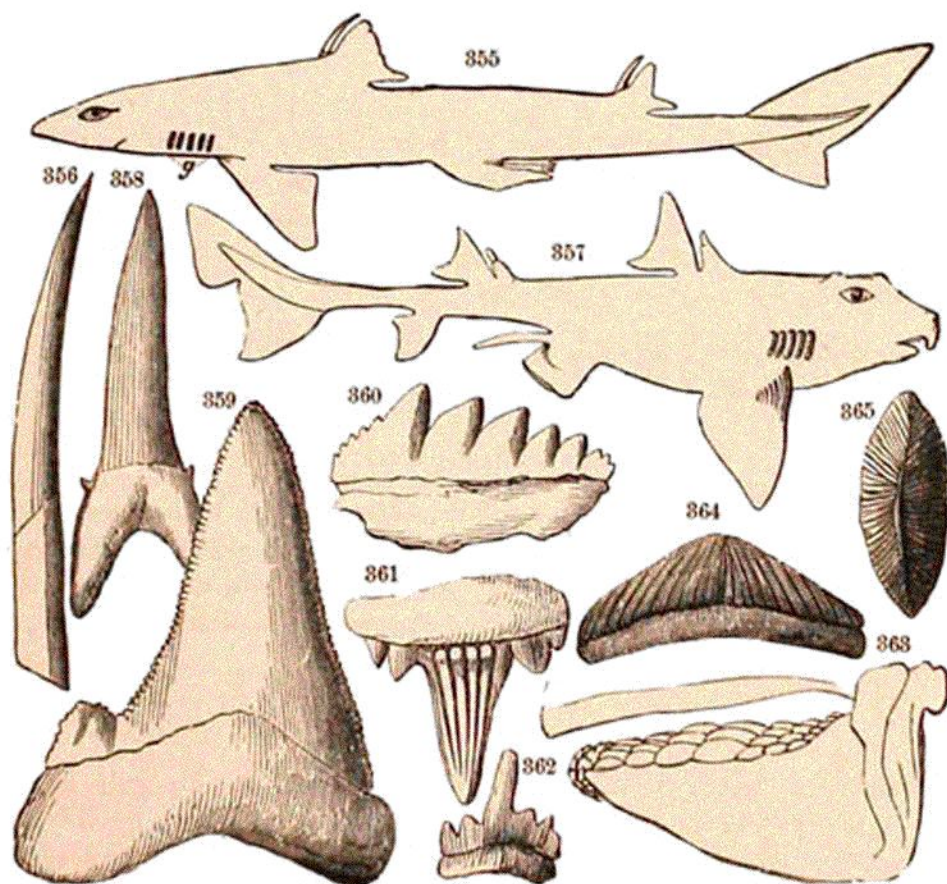


similar form to the preceding, but round or blunt-edged (Figs. 361, 362); another, the *Cestracionts* (Fig. 357), an ancient type, of which only one genus now exists, has a pavement (Fig. 363) of small bony pieces (Figs. 364, 365) in the mouth (for grinding up shell-fish, etc.), and a series of smaller teeth at the margin, with the mouth and cavities of the nostrils confluent. Many ancient Sharks, like a few of the modern, had large spines connected with, and usually along the anterior margin of, the fins (Figs. 355, 356). As these fishes have the vertebral column imperfectly ossified when not cartilaginous, the fossils are mostly teeth, spines, fragile vertebrae, and occasionally shagreen.

In the lowest group, the *Chimærids*, there is a cartilaginous notochord multijlicately subdivided, the sheath of which is partly ossified. The species have a few very large teeth, and a single gill-opening, which is covered by a fold in the skin. To this group are referred the *Acanthodians*, which were formerly supposed to be Ganoids. They have very small rhombic scales, a spine along the front margin of the fins, and are apparently without teeth.

355-365.



SELACHIANS.—Fig. 355, *Spinax Blainvillii* ($\times \frac{1}{2}$); 356, Spine of anterior dorsal fin, natural size; 357, *Cestracion Philippi* ($\times \frac{1}{2}$); 358, Tooth of *Lamna elegans*; 359, id. *Carcharodon angustidens*; 360, id. *Notidanus primigenius*; 361, id. *Hybodus minor*; 362, id. *Hyb. plicatilis*; 363, Mouth of *Cestracion*, showing pavement-teeth of lower jaw; 364, Tooth of *Acrodus minimus*; 365, id. *Acrodus nobilis*.

2. Ganoids or Gars (Figs. 366 and 375).—The Ganoids have the skeleton cartilaginous in the earlier kinds, but more or less ossified in the later and in the few modern species; one gill-opening; a gill-cover, and gills free; an air-bladder, having a pneumatic duct; embryo sometimes with external gills. Skin covered commonly with thick bony scales, like Reptiles or ancient Amphibians (whence *ganoid*, from the Greek *γάνος*, *shining*), or with bony plates, somewhat turtle-like; scales often rhombic and set together like tile (Figs. 366, 375); and interlocked by projecting points (Figs. 367, 368); sometimes cycloid and imbricate. Tails of ancient species vertebrated or *heterocercal*, like