

can best select their food among the sand, the mud, or the weeds at the bottom of the water; and their edges are frequently serrated, to allow the fluid to filter through, while the solid portions are retained in the mouth. The duck affords an instance of this structure; which is, however, still more strongly marked in the genus *Mergus*, or Mergansor, where the whole length of the margin of the bill is beset with small sharp pointed teeth, directed backwards: they are particularly conspicuous in the *Mergus serrator*, or red-breasted Mergansor. The object of the barbs and fringed processes which are appended to the tongue in many birds, such as that of the *Toucan* and the *Parrakeet*, appears in like manner, to be the detention of substances introduced into the mouth.

The beak of the *Hæmatopus*, or Oyster-catcher, has a wedge shape, and acts like an oyster-knife for opening bivalve shells.

In the *Loxia curvirostra*, or Cross-bill, the upper and lower mandibles cross each other when the mouth is closed, a structure which enables this bird to tear open the cones of the pine and fir, and pick out the seeds, by insinuating the bill between the scales. It can split cherry stones with the utmost ease, and in a very short time, by means of this peculiarly shaped bill.\*

Birds which dive for the purpose of catching fish have often a bill of considerable length, which enables them to secure their prey, and change its position till it is adapted for swallowing.

The *Rhynchops*, or black Skimmer, has a very singularly formed beak; it is very slender, but the lower mandible very much exceeds in length the upper one, so that while skimming the waves in its flight, it cuts the water like a plough-share, catching the prey which is on the surface of the sea.

The *Woodpecker* is furnished with a singular apparatus for enabling it to dart out with great velocity its long and

\* See a paper on the mechanism of the bill of this bird, by Mr. Yarrell, in the Zoological Journal, iv. 459,