

ferences in the texture of their natural food. In the *Turkey*, the two muscles which compose the gizzard are of unequal strength, that on the left side being considerably larger than that on the right; so that while the principal effort is made by the former, a smaller force is used by the latter to restore the parts to their situation. These muscles produce, by their alternate action, two effects; the one a constant trituration, by a rotatory motion; the other a continued, but oblique, pressure of the contents of the cavity. As this cavity is of an oval form, and the muscle swells inwards, the opposite sides never come into contact, and the interposed materials are triturated by their being intermixed with hard bodies. In the *Goose* and *Swan*, on the contrary, the cavity is flattened, and its lateral edges are very thin. The surfaces applied to each other are mutually adapted in their curvatures, a concave surface being every where applied to one which is convex: on the left side, the concavity is above; but on the right side, it is below. The horny covering is much stronger, and more rough, than in the turkey, so that the food is ground by a sliding, instead of a rotatory motion, of the parts opposed, and they do not require the aid of any intervening hard substances of a large size. This motion bears a great resemblance to that of the grinding teeth of ruminating animals, in which the teeth of the under jaw slide upwards, within those of the upper, pressing the food between them, and fitting it, by this peculiar kind of trituration, for being digested.*

§ 6. *Deglutition.*

THE great object of the apparatus which is to prepare the food for digestion, is to reduce it into a soft pulpy state, so as to facilitate the chemical action of the stomach upon it: for this purpose, solid food must not only be subjected to mechanical trituration, but it must also be mixed with a cer-

* Home, Phil. Trans. for 1810, p. 188.