

in that operation. Spallanzani, however, has called in question the soundness of this explanation, and has contended that the pebbles found in the gizzard are swallowed merely by accident, or in consequence of the stupidity of the bird, which mistakes them for grain. But this opinion has been fully and satisfactorily refuted both by Fordyce and by Hunter, whose observations concur in establishing the truth of the common opinion, that in all birds possessing gizzards, the presence of these stones is essential to perfect digestion. A greater or less number of them is contained in every gizzard, when the bird has been able to meet with the requisite supply, and they are never swallowed but in order to assist digestion. Several hundred were found in the gizzard of a turkey; and two thousand in that of a goose: so great an accumulation could never have been the result of mere accident. If the alleged mistake could ever occur, we should expect it to take place to the greatest extent in those birds which are starving for want of food; but this is far from being the case. It is found that even chickens, which have been hatched by artificial heat, and which could never have been instructed by the parent, are yet guided by a natural instinct in the choice of the proper materials for food, and for assisting its digestion; and if a mixture of a large quantity of stones with a small proportion of grain be set before them, they will at once pick out the grain, and swallow along with it only the proper proportion of stones. The best proof of the utility of these substances may be derived from the experiments of Spallanzani himself, who ascertained that grain is not digested in the stomachs of birds, when it is protected from the effects of trituration.

Thus, the gizzard may, as Hunter remarks, be regarded as a pair of jaws, whose teeth are taken in occasionally to assist in this internal mastication. The lower part of the gizzard consists of a thin muscular bag, of which the office is to digest the food that has been thus triturated.

Considerable differences are met with in the structure of the gizzards of various kinds of birds, corresponding to dif-