

*Notice of some Bones which appear to have belonged to the Dodo, a species of Bird extinct within the last Two Centuries.* Read at the Academy of Sciences, 12th July 1830, by BARON CUVIER.

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THE Dutch Navigators who, in 1598, discovered the Mauritius, saw there a bird of great size and remarkable form; the body was gross and unweildy, and covered with soft grayish feathers; the wings were small, and provided with feathers resembling those of the ostrich, instead of quills; the rump was also furnished with curly feathers of a yellowish gray colour; the feet were short and strong; the toes four in number, one of which was placed posteriorly. The head was heavy, covered anteriorly with down, and at the superior and posterior parts with short feathers, which formed a sort of hood,—an appearance from which the bird has since received the inappropriate name of *Cygnus cucullatus*. The beak was large, strong, deeply grooved, swelled out, and curved at the point. In 1605, Clusius published a figure of this bird, from a drawing made by a person who accompanied the vessels which discovered the Mauritius. From the description which he has added to this figure, it appears that the stomach always contained stones, like the gizzard of the *Gallinæ*. The flesh was blackish, fat, and very thick on the breast, so that a single bird was sufficient food for twenty-five men; it had a very bad taste, was hard in old birds, and of a disagreeable smell. Nuremberg, after Clusius, described this animal. Bontius also afterwards gave an account of it, with a better figure than Clusius'. His plate was engraven after an oil painting, which subsequently passed into the possession of Sir Hans Sloane, and then of Edwards, who bequeathed it to the British Museum, where it is still preserved.

The Dutch gave this bird the names of *Dronte* and *Dodars*, in reference to its weight. Of *Dodars* other naturalists have made *Dodo*, and Linnæus formed the name *Didus*, which he applied to a genus composed of three species, *Didus ineptus*, *D. solitarius*, and *D. nazarenus*. These three species were established on bad descriptions of the same bird, and every thing leads to the opinion, that the Isles of France and Bourbon have never possessed more than the single species first described by Clusius.

In 1626, Herbet spoke again of the *Drontes*; but it seems that these birds, too clumsy to escape from their pursuers, and too large to hide themselves easily, were completely destroyed shortly after the establishment of Europeans on the Isles of France and Bourbon. For a long time they have never been seen, and some naturalists have even pretended that they never existed, and that this species was formed from erroneous descriptions of auks and penguins. The skin of a dodo is, however, in existence; the British Museum has a foot, and the Ashmolean Museum at Oxford has another foot, with a head in a very bad state. We had long despaired of ever obtaining any other part of the animal, when M. Cuvier made a most unexpected discovery. M. Julien Desjardins, of the Isle of France, having sent home some bones which he had found in this island under beds of lava, and which belonged principally to that great land tortoise, incorrectly named *Tustudo indica*, M. Cuvier observed amongst them many bones of a bird, and soon determined that they must belong to the species of which we are speaking. These parts are a cranium, a sternum, and some bones of the wing and leg. The sternum has a prominent crest, which distinguishes it from that of the cassowary or the ostrich, in which we can scarcely discern a median process; its anterior angle is very obtuse,—a character which allies it to the sternum of the *Gallina*. The bird to which these bones belonged, is also connected with this family by the form of the cranium. The tarsus has processes corresponding to three fingers and a thumb, as they are figured by Clusius and Edwards. The humerus and fore-arm are short, and show that the animal makes no use of its wings. M. Cuvier came to the conclusion, from considerations founded on the structure of these parts, that the dodo must be classed with the *Gallina*.

M. de Blainville remarked, after the termination of the reading of M. Cuvier's memoir, that for three years he had been engaged in attempting to determine to what order of birds the dodo must be referred; he had procured a drawing of the portions of this bird, preserved in the Museum of Oxford, and of the head as represented in the painting from which Clusius' figure had been taken. His conclusions differ from those of M. Cuvier, as he considers the dodo to belong to the vultures; he remarked that this bird has been found in places where there is no grain to serve for its food, and offered the conjecture that it lived principally upon fishes. He thought that the bad quality of the flesh is another proof that it feeds upon living prey rather than upon grain; and he considered that there was no proof that the bones produced by M. Cuvier had really belonged to the dodo, for the prominence of the crest of the sternum in-

licated an animal provided with powerful pectoral muscles, and it could not be supposed that such muscles would have belonged to a bird that could not fly.

M. Cuvier replied that, without entering into a discussion on the general results which may be drawn from the prominence of the crest of the sternum, in the determination of the genus of a bird, we may rest assured, in the present case, that the dodo was unable to fly, and that it nevertheless possessed very thick pectoral muscles. Its absolute incapacity for flight was attested by all travellers who had visited the Mauritius, and the observations of the same persons inform us how the chest of this bird was covered with muscles.

M. Geoffroy St. Hilaire observed that there was not so much real difference between the two opinions as might be supposed; for the *Gallinæ*, by their structure and some of their habits, are considerably related to the vultures, and it might be admitted that the dodo was placed between them so as to establish the connection.

M. de Blainville, however, on the 30th August last, read to the Academy of Sciences a very detailed memoir on this subject. He then stated his opinion to be that the dodo must be placed amongst the *Palmipeda*, next to the penguin. He supposes that this doubtful bird, which has only been found in the Isle of France, may nevertheless exist in other countries. He thinks, moreover, that the portions of structure which we possess, prove, by their differences, that there are many species of dodo.—*Bull. des Sciences Nat.* xxii. 122.

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