

8. On a remarkable Sexual Peculiarity in an Australian Species of Duck. By ALFRED NEWTON, M.A., F.R.S., V.P.Z.S.

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It is now getting on for nearly a year since I received from the Secretary the bodies of two Australian Ducks which had recently died in our Gardens. The species to which they belong is that known as "*Anas punctata*, Cuvier" \*—a name I take as given, not having satisfied myself that it is one which ought to be used.

The specimens, the skins of which I now exhibit, were in the diverse plumage which has been fully described as characterizing the two sexes; and I confess that from such knowledge as I had of the internal structure of the section of the family *Anatidæ* to which this species obviously belongs I never anticipated finding any thing sufficiently novel in the present case to justify me in bringing it to the notice of the Society. How agreeably disappointed I was will be seen.

Being much engaged by other occupations, and, as I have said, not expecting any remarkable feature to be presented, I sent the specimens to Mr. Baker of Cambridge, requesting him to skin them, ascertain the sex of each, and prepare the sternums and tracheas. This he did; and when I add that I have known Mr. Baker for more than twenty years to be a man on whom I can fully rely, I trust no suspicion of the possibility of error may cross the minds of zoologists in consequence of my not having myself made the dissections.

The sternum of every species of freshwater Duck that I have previously seen presents at its posterior end a deep fissure on either side; but this fissure is occasionally so much bridged across by the prolongation of its inner margin in an outward direction that I have been fully prepared to find the junction completed in some specimen, either as a characteristic of the species, as it is in some of the diving Ducks, or even as an individual peculiarity. I was therefore not much surprised to see complete fenestration effected in one of the

\* Two perfectly distinct species have had the name *Anas punctata* applied to them—the subject of this notice, and one from South Africa described by Burchell in 1822 (Travels, &c. i. p. 283, note). The earliest publication I can find of "*Anas punctata*, Cuv.," is by Mr. G. R. Gray in 1844 (List of &c. *Anseres*, p. 134); but whence he obtained the information he cannot, as he kindly tells me, recollect. Lesson in 1831 (Tr. d'Orn. p. 634) has an "*Anas punctata*, Gal. de Paris," which, though he suggests it may be one of Horsfield's species, is probably the same as the one meant by Mr. Gray, since Dr. Pucheran (R. Z. 1850, p. 549) has identified the specimen which bore that name in the Paris Museum with the Australian species figured under the same designation by Mr. Gould (B. Austral. vii. pl. ). In Dr. Hartlaub's 'Index' to Dr. Pucheran's valuable paper (J. f. O. 1855, p. 419) notice of this case is unfortunately omitted. Unless it can be shown that Cuvier's name was published before Burchell's (and this is extremely unlikely), *punctata* must of course be kept for the South-African bird, with which (as Mr. Gray has suggested to me) Sir Andrew Smith's subsequently designated *Querquedula hottentotta* (Zool. S. Afr. Aves, pl. 105) seems to be identical; and the Australian bird will take up with its next synonym—standing then as *Anas castanea* (Eyton).

sternums (that of the male) of the species now before me, though the other (that of the female) retains the normal fissures of a freshwater Duck. However, it may be gathered from remarks which I once contributed to make elsewhere\* that I do not attach much importance to this feature. In other respects the sternums present no characters on which I need dwell; that of the female is somewhat smaller than that of the male; but it will be worth ascertaining whether the fenestration in the latter is constant.

Fig. 1.

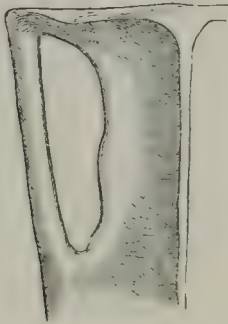


Fig. 2.



Fig. 1. Left side of posterior end of sternum of *Anas punctata*, ♂, seen from above.  
2. Corresponding view in the female.

My surprise, however, was great when I came to see the tracheas. Accustomed as I had been to find in all the freshwater Ducks the trachea of the male with its usual bony enlargement or labyrinth (*bulba ossea*) situated immediately above the bronchial tubes, and

Fig. 3.



Fig. 4.

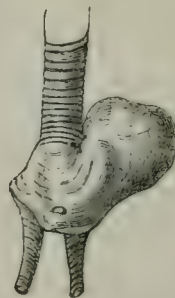


Fig. 3. Lower part of trachea of *Anas punctata*, ♂.  
4. The same, ♀.

this, with the single exception of the Garganey (*Anas querquedula*, Linn.), of uniform pattern throughout the whole group, the trachea

\* Phil. Trans. 1869, p. 337.

of the female being invariably devoid of such enlargement, it very much interested me to see that in the present species, while the male retained the normal and characteristic structure of this organ, the female enjoyed the same appendage, and that in a degree only slightly less developed. In either sex the trachea is somewhat enlarged above the *bulla ossea*, and then, as usual, rapidly tapers; and in both the *bulla ossea* is outwardly of the same general form as it is in the male of *Anas boschas*, Linn. I have inquired of Mr. Bartlett whether any peculiarity was observed in the call-note of the female bird during her captivity in our Gardens, but I cannot learn that such was the case.

I abstain from making any comments on the curious fact I have mentioned, which is, so far as I am aware, unique; but it would be easy to enter upon some speculations as to its bearings on the important question of "Sexual Selection" which is now being agitated. I will, however, say that, though I know not how far other ornithologists are likely to agree with me, I conceive that, if we wish for a natural subdivision of the two large groups of *Anatidæ* formed by what are generally termed the *Anatinæ* and *Fuligininæ*, the characters afforded by the trachea ought to be fully studied; and I venture to refer to some suggestions on that question which I published some years ago in America\*. It should be one of the first objects of every collector in foreign countries to examine the trachea of each bird that he skins; and nowhere is this more necessary than with members of the *Anatidæ*.

I am much averse to inventing new groups; but I think it very possible that this species, being thus shown to differ so singularly from any Duck with which we are acquainted, will be made the type of a new genus or subgenus; and as some enthusiast may wish when conferring a name on a section so established to celebrate that of some notable person of the gentler sex who is gifted with masculine attributes, I think it as well to anticipate such a proceeding, and therefore suggest that if a new division be found expedient it should bear the appellation of *Virago*†, as a tribute to the virile characteristic of the ladies in question and of the female of this species of Duck.

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November 21, 1871.

Professor Flower, F.R.S., V.P., in the Chair.

Mr. Sclater exhibited and made remarks on a fine skin of *Ateles variegatus*, Wagner (= *A. bartletti*, Gray), which had recently been received by Madame Verdey of Paris in a collection from Oyapok, situated on the river of the same name on the eastern limits of

\* Report of the Smithsonian Institution for 1860, p. 420.

† *Virago* e genere *Anatino* cujus fœmina eadem quæ mas organa vocis habet.