

fifteen cervical and nine dorsal vertebræ; in a third skeleton small ribs were attached to the so-called fifteenth cervical vertebra, making ten pairs of ribs; but these ten ribs do not correspond, or arise from the same vertebra, with the ten in the above-mentioned Labrador duck. In the Call duck, which had small ribs attached to the fifteenth cervical vertebra, the hæmal spines of the thirteenth and fourteenth (cervical) and of the seventeenth (dorsal) vertebræ corresponded with the spines on the fourteenth, fifteenth, and eighteenth vertebræ of the wild duck: so that each of these vertebræ had acquired a structure proper to one posterior to it in

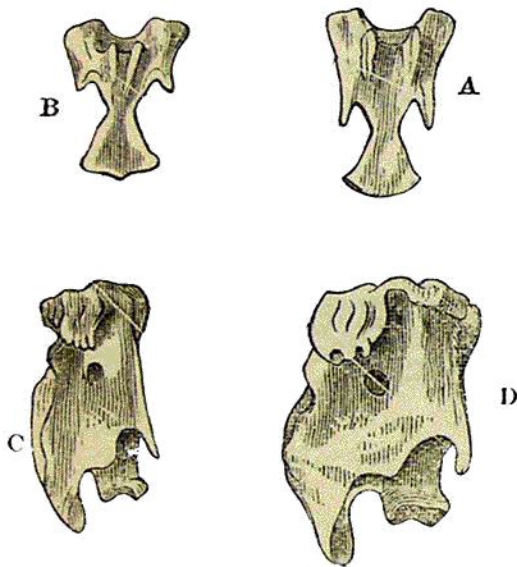


Fig. 40.—Cervical Vertebræ, of natural size. A. Eighth cervical vertebra of Wild Duck, viewed on hæmal surface. B. Eighth cervical vertebra of Call Duck, viewed as above. C. Twelfth cervical vertebra of Wild Duck viewed laterally. D. Twelfth cervical vertebra of Aylesbury Duck, viewed laterally.

position. In the eighth cervical vertebra of this same Call duck (fig. 40, B), the two branches of the hæmal spine stand much closer together than in the wild duck (A), and the descending hæmal processes are much shortened. In the Penguin duck the neck from its thinness and erectness falsely appears (as ascertained by measurement) to be much elongated, but the cervical and dorsal vertebræ present no difference; the posterior dorsal vertebræ, however, are more completely ankylosed to the pelvis than in the wild duck. The Aylesbury duck has fifteen cervical and ten dorsal vertebræ furnished with ribs, but the same number of lumbar, sacral, and caudal vertebræ, as far as could be traced, as in the wild duck. The cervical vertebræ in this same duck (fig. 40, D) were much broader and thicker relatively to their length than in the wild (C); so much so, that I have thought it worth while to give a sketch of the twelfth cervical vertebra in these two birds. From the foregoing statements we see that the fifteenth cervical vertebra occasionally becomes modified into a dorsal vertebra, and when this occurs all the adjoining vertebræ are modified. We also see that an additional dorsal vertebra bearing a rib is occasionally developed, the number of the cervical and lumbar vertebræ apparently remaining the same as usual.

I examined the bony enlargement of the trachea in the males of the Penguin, Call, Hook-billed, Labrador, and Aylesbury breeds; and in all it was identical in shape.

The *pelvis* is remarkably uniform; but in the skeleton of the Hook-billed duck the anterior part is much bowed inwards; in the Aylesbury and some other breeds the ischiadic foramen is less