

comparison of the anatomy of the species examined with that of *Eudyptes chrysocome* from Tristan d'Acunha. By this means I trust I have made the most of the material at my disposal, and although, as it turns out, the anatomy of one species, in its leading features, to a large extent represents that of all, yet it must be remembered that this fact could only be elicited by means of a somewhat tiresome and laborious investigation into the anatomy of every member of the group. The satisfaction, moreover, remains that the work undertaken has been accomplished once and for all, and that the time and labour of other anatomists need not be expended in repeating the task.

Among others who have assisted me in various ways, I have to acknowledge my obligations more especially to Mr. P. L. Selater, F.R.S., for identifying several of the species examined, and for placing at my disposal fresh specimens of various species of Penguins which died from time to time in the menagerie of the Zoological Society. I am also indebted to the kindness of Mr. W. Forbes, prosector to the Zoological Society, for the brain of an *Aptenodytes longirostris*, which he kindly removed for me immediately after the death of the bird.

I.—OSTEOLOGY.

The salient and distinctive osteological features of the Penguins have long been known, and numerous references to them are to be found in the systematic works of Cuvier,¹ Meckel,² and Owen.³ In the article of the last-named author on the anatomy of birds, in "Todd's Cyclopædia of Anatomy"⁴ especially, an excellent account is given of the skeleton of the Penguin as compared with that of other birds.

In 1835 Reid⁵ published an elaborate account of the anatomy of the Patagonian Penguin, in which, along with a consideration of the anatomy of the soft parts, he directs special attention to the modifications in form of the various parts of the skeleton.

In 1871 Hyatt⁶ published a catalogue of the ornithological collection of the Boston Society of Natural History, and communicated therein a number of important observations made by Dr. Elliot Coues on the osteology of the various species of Penguin contained in the collection of that society.

In 1872 Dr. Elliot Coues⁷ published a monograph on the Spheniscidæ. In this monograph he directed attention to the varying form of the cranium in the different genera of Penguins, and pointed out the value of these differences in the determination of the various genera. In the plate which accompanies the monograph he figures the skulls of

¹ Leçons d'anatomie comparée, vol. i.

² Traité général d'anatomie comparée, vol. iii.

³ Anatomy of Vertebrates, vol. ii.

⁴ Cyclopædia of Anatomy, vol. i., Art. "Aves."

⁵ Proc. Zool. Soc., 1835, p. 132.

⁶ Proc. Boston Soc. Nat. Hist., 1871, p. 237.

⁷ Proc. Acad. Nat. Sci. Philad., 1872, p. 170.