

front. The second bronchial ring is the last entering into the composition of the triangular pessular box behind, the third and fourth rings remaining free.

In *Diomedea brachyura* and some of the allied species, the bronchi seem to be, according to the late Mr. Swinhoe's notes, long and convoluted, in a way reminding one of that which occurs in *Ciconia nigra*. I have not observed such convolutions in any Albatross or other Petrel dissected by myself. I herewith append the descriptions given by Swinhoe of this peculiarity.

*Diomedea brachyura*.—"In the male of this Albatross the bronchi on leaving the trachea bulge considerably as they run horizontally, then contract, and bend forwards and downwards, and lastly, turning sharp round, rise upwards and bulge again before entering the lungs" (Swinhoe, Ibis, 1863, p. 431).

"A female *Diomedea brachyura* had the swollen and convoluted trachea which I thought before was peculiar to the male" (*t.c.*, 1867, p. 227).

*Diomedea nigripes*.—"In this species the trachea of the female is simple, but that of the male is terminated by large, swollen, convoluted bronchi. In a male specimen, procured in May, the bronchi ran down right and left, almost straight for about  $1\frac{7}{10}$  inches, then took a bend forward for a short space, and narrowed, and lastly bending inwards and upwards, bulged largely and entered the lungs" (*l.c.*, 1863, p. 432).

In five adult males of *Diomedea derogata* examined, all had contorted bronchi. These "bulge and go downwards and sideways, then bend under the ribs on each side into a large globe, pressing between itself and the ribs as each enters the lung at the back" (Proc. Zool. Soc., 1873, p. 785).

## 6. OSTEOLOGY.

M. Alphonse Milne-Edwards having described at length, with figures, the osteology of the Tubinares in his classical work on fossil birds (*vide supra*, p. 7), whilst other points of their osseous structure have been elucidated by Brandt, Huxley, Reinhardt, and others, as already mentioned in the introductory part, there is not the same necessity for dwelling here on this part of the organisation of the Petrels as was the case when describing the softer and more perishable parts. Moreover, no amount of detailed description of bones, however elaborate or well illustrated, can serve the purpose of scientific research so well as actual specimens, which can in most cases be comparatively easily obtained for, and permanently preserved in, museums.

My study of the osteology of the Tubinares has been chiefly based on the material enumerated in the subjoined list.