These bones are evidently a portion of the skeleton of the *Balæna* or *Eubalæna australis*. In their form and appearance they closely correspond to the block of cervical vertebræ, figured by Van Beneden and Gervais, in Plates I. and II. fig. 19, as the cervical vertebræ of that animal. M. Van Beneden states that in *Balæna australis* there is no trace of inferior transverse processes in the last four cervical vertebræ, and that this constitutes a noticeable point of difference between this species and the *Balæna antipodarum*, in which all the cervical vertebræ, except the seventh, have an inferior transverse process. In the Challenger specimen, the inferior transverse process was absent in the seventh, sixth, and fifth cervical vertebræ, but present in the fourth, third, and second, so that in the presence of this process in the fourth vertebra, it differed from the specimen described and figured by M. Van Beneden. I am inclined to think from the appearance of his figure, that his specimen must have been from a younger animal, as the lines of demarcation between the spines and laminæ of the vertebræ are more distinct than in the Challenger specimen, and the first dorsal vertebra is not ankylosed to the seventh cervical. The absence, therefore, of an inferior transverse process in the fourth vertebra in M. Van Beneden's animal, may, perhaps, be due to the ossification not having advanced to a stage so far as was the case in the Challenger specimen.

Cetacean Bones dredged from the Bed of the Ocean (Pl. II.).

The dredge brought up in various localities, from a great depth, numerous tympanic and petrous bones of Cetacea, together with fragments of other bones of the skeleton. They have been all carefully picked out by Mr John Murray from the other contents of the dredge, and arranged according to their locality, and the depth at which they were obtained. The conditions under which they were found will be described by Mr Murray in his Report on the deep-sea deposits. At his request, and that of Sir Wyville Thomson, I undertook to determine, as far as possible, the generic and specific characters of these bones, and have compared them with the collection in the Anatomical Museum of the University of Edinburgh. In 1876 and 1879 I took a number of selected specimens to the Museum of the Royal College of Surgeons of England, and, along with Professor Flower, compared them with specimens in that magnificent collection.

The bones were almost without exception coated with a brown material consisting of a mixture of the peroxides of manganese and iron, along with earthy matters; sometimes only with a thin layer, but at other times imbedded in masses of these minerals,[1] which frequently assumed a nodulated or botryoidal arrangement, and the manganese had also penetrated into their substance. In attempting to peel this material, which for the sake of brevity will be spoken of as manganese, off the exterior of the bones, they

[1] See Mr Murray's paper in Proc. Roy. Soc. Edin., December 18, 1876, p. 257.