

surfaces corresponded to the direction of the surfaces of their transverse processes, which surfaces were flattened and not rounded. The eighth and ninth dorsal vertebræ had no transverse process projecting from the side of the neural arch, but instead a massive process was directed horizontally outwards from the side of the body nearer the anterior than the posterior surface. This process was nearly three times as big in the ninth as in the eighth vertebra, and in both it had a large articular surface at its outer end for the head of the corresponding rib. Zygapophyses were present as far back as the anterior pair of the sixth dorsal vertebra, but behind that they had disappeared, and a pair of well-developed metapophyses projected forwards, from the laminæ of the seventh, eighth, and ninth dorsal, to overlap and articulate with the laminæ of the vertebra immediately in front.

Compared with Dr von Haast's specimen this animal has one vertebra less in the dorsal series. This does not invalidate the opinion that they are of the same species, as it is well known that in the Cetacea variations to the extent of a vertebra and a pair of ribs may take place in the thoracic region. In *Mesoplodon grayi* and *Mesoplodon sowerbyi* there are also ten dorsal vertebræ, whilst in *Mesoplodon australis* the number is only nine. The transverse processes in my specimen were not rounded as in Dr von Haast's animal, and the articular surfaces for the heads of the ribs did not appear to rise quite so far above the base of the neural arch as he describes.

The *lumbar vertebræ* were almost uniform in shape, but increased in size from before backwards. The bodies were keeled on their inferior surface. At the anterior and posterior ends of the series the longitudinal and transverse diameters of the body were almost equal, but in the intermediate vertebræ the longitudinal was greater than the transverse. The transverse processes were not so long as the width of the body except in the anterior vertebræ. The base of the process sprang from the anterior half of the side of the body in series with the transverse processes of the eighth and ninth dorsal vertebræ—the processes projected forwards and outwards, and the free end was convex. The spines were long, laterally compressed, and sloped slightly backwards: the length of the eighth lumbar spine was 6 inches. A pair of broad lamelliform metapophyses projected forwards from the anterior border of the laminæ close to the root of the spine, but did not articulate with the vertebra in front, from the posterior edge of the laminæ of which a pair of much smaller processes projected backwards. As in Dr von Haast's specimen, the neural arches sprang from the centre of the bodies.

The *caudal vertebræ* diminished in size from before backwards. The first was $9\frac{1}{2}$ inches high and 7 inches between the tips of its transverse processes. The last was 9-10ths of an inch in greatest breadth, and 7-10ths of an inch in height. In the anterior four vertebræ the spines were massive, and these processes were present as far back as the tenth caudal, in which the neural arch and spine formed a slight ridge, and the spinal canal was diminished to the diameter of a goose-quill. The transverse processes were strong in the