

	Adult <i>Mesoplodon</i> <i>layardi</i> .	Young <i>Mesoplodon</i> <i>layardi</i> .	<i>Mesoplodon</i> <i>sowerbyi</i> .	Shetland <i>Ziphius</i> <i>cavirostris</i> .	New Zealand <i>Ziphius</i> <i>cavirostris</i> .
Breadth of cranium between zygomatic processes of squamosals,	17 $\frac{1}{8}$	11 $\frac{1}{8}$	11 $\frac{1}{2}$	21	...
Breadth between antorbital notches,	9	6 $\frac{3}{4}$	7 $\frac{3}{4}$	15 $\frac{1}{2}$	...
Breadth of middle of rostrum,	2 $\frac{7}{8}$	1 $\frac{3}{4}$	2	5	5 $\frac{1}{4}$
Breadth of occipital condyles,	5 $\frac{1}{4}$	4 $\frac{1}{4}$	4 $\frac{1}{4}$	6 $\frac{7}{8}$	...
Præmaxillæ, greatest width behind anterior nares	6 $\frac{3}{4}$	5	5	...	...
Præmaxillæ, least width opposite anterior nares,	5 $\frac{1}{8}$	3 $\frac{1}{2}$	4 $\frac{1}{4}$	...	...
Præmaxillæ, greatest width in front of anterior nares,	5	3 $\frac{1}{8}$	4	...	...
Width of anterior nares,	2 $\frac{5}{8}$	2	1 $\frac{3}{4}$	4 $\frac{1}{4}$	5 $\frac{3}{8}$
Length of tympanic bone, . . . . .	...	1 $\frac{8}{10}$	...	2 $\frac{4}{10}$	...
Greatest breadth of tympanic bone, . . . . .	...	1 $\frac{4}{10}$	...	1 $\frac{7}{10}$	...
Mandible, length of ramus, . . . . .	...	17 $\frac{3}{8}$	18 $\frac{1}{2}$	25 $\frac{1}{2}$	27
„ length of symphysis,	11 $\frac{3}{4}$	4 $\frac{5}{8}$	9 $\frac{1}{2}$	7	7 $\frac{3}{4}$
„ greatest vertical height of ramus, . . . . .	...	...	4 $\frac{1}{2}$	6 $\frac{1}{2}$	...

The length of the entire cranium of the younger specimen was 2 $\frac{1}{2}$ inches less than that of the beak of the adult. The crest at the vertex in both was formed of the nasals, frontal, supra-occipital, and the upper ends of the præmaxillæ and superior maxillæ, but in the younger specimen a thin lamina of each parietal could be traced upwards to the vertex, where the laminæ from opposite sides became fused together (Pl. I. figs. 1, 2).

The beak was about twice as long in the adult as in the young. Its apex in the latter was formed entirely of the two præmaxillæ, but in the adult the anterior end of the mesorostral bone seemed to be fused with the tips of the præmaxillaries, though the absence of sutures prevented the exact determination of their place of union. In the adult, the interval between the præmaxillaries was filled up as far as the base of the beak by the solid mesorostral bone, which, as in Professor Owen's description, "rises as a smooth, dense convex ridge, 1 $\frac{1}{4}$ inches across at its broadest part, gradually contracting to a breadth of half an inch, when it has traversed one-third of the length of the rostrum." In the younger skull this bone was absent, and an elongated mesorostral furrow, empty in the macerated skull, was seen. This furrow was occupied in the un-macerated state by a bar of cartilage, and the conversion of this cartilage into the dense mesorostral bone is accompanied by the remarkable elongation of the beak, which constitutes one of the most noticeable features of difference in the dimensions of the younger and adult crania. As the beak of specimen *B* had been sawn through 20 $\frac{1}{2}$ inches from the tip, the extremely dense porcellaneous character of the mesorostral bone, and its intimate fusion with the vomer, the superior and præmaxillary bones were seen on the surface of section. Whilst the vomer and præmaxillæ partook of the same porcellaneous character as the mesorostral bone, the superior maxillæ again possessed a