

regard to the length, thickness, and curvatures of the tusks, I find considerable differences in the series of crania in the Anatomical Museum of the University. As a general rule they diverge from each other so as to be two, three, or even four inches further apart at the tip than at the root, but in one very fine specimen with long and relatively thin tusks projecting 15 inches beyond the alveolus, the distance between their tips was a trifle less than that between their roots; it may be a question therefore if this character is more than individual or perhaps sexual. As to the front profile and the relation of the transverse plane of the anterior border of the nasals to the base of the tusk, I find that in my specimens this plane sometimes corresponds with the posterior border, at others it extends up to or indeed a little in front of the middle of the base of the tusk, so that it is obviously a variable feature.

Mr. Allen also refers, though without attaching so much importance as with the other characters, to a difference in the intermaxillaries in these animals. Usually, he says, in the Pacific Walrus the intermaxillæ extend posteriorly for two-thirds the length of the nasal, whilst in the Atlantic animal these bones do not enter into the dorsum of the skull, but end at the anterior border of the nasals. In those of my specimens, in which these bones had not yet ankylosed with their neighbours, I noticed considerable variation; in four each premaxilla articulated with the anterior two-thirds of the outer border of the nasal, in two each premaxilla reached the anterior border of the nasal and then seemed to terminate, but an elongated sutural bone was intercalated on each side between the superior maxilla and about the middle third of the outer edge of the nasal; in one the left premaxilla articulated with the anterior two-thirds, whilst the right bone only reached the tip of the nasal, but beyond it was a sutural bone similar to that above described. This intercalated bone obviously represents the detached upper end of the premaxilla. It is obvious that a bone presenting such variations in arrangement in the skull of the Walrus as does the premaxilla cannot have much importance attached to it for purposes of classification.

As regards the external features of difference Mr. Allen states that the two animals are similar in size and probably in general contour, though the facial outline is modified by the differences in the skull already considered, but the mystacial bristles are shorter in the Pacific than in the Atlantic Walrus.

On the whole I think it is doubtful whether these animals should be regarded as specifically distinct; I would rather consider them as varieties of one species.

#### OTARIIDÆ.

In no family of mammals, probably, have more diversities of opinion been expressed by zoologists, both with respect to the number of species in the family and their arrangement in genera and subfamilies, than in the Otariidæ. These divergences are to be seen