

the range of 13 in the Admiralty Islanders was due to one skull having the unusually low vertical index of 64. As regards the sexes, my measurements generally confirm those made by preceding craniologists, who give to the female skull a less absolute and relative height than to the male. The gnathic index showed a much greater amount of variation in the several groups than the cephalic and vertical; in only five was the range below 10, whilst in the remaining seven it rose above that figure, and in the Admiralty Islanders was as high as 18. The greatest variation was, however, in the facial, nasal, orbital, and palato-maxillary indices, in which the range was seldom below 10; in several groups the range of one or other of these indices rose to 20, and in two instances to upwards of 30. In his important essays on the orbital and nasal indices¹ Paul Broca fully recognises the variations which may occur in these two indices, and, when writing on the nasal index, he states that it is subject more than most of the other characters to the perturbing influence of individual variations, so that valuable results can only be obtained by taking the average of a sufficiently large number of skulls. My observations on those groups, in which I had a sufficient number of crania of the two sexes, confirm the statement of Broca that in the same race the orbital index in the adult females is higher than in the adult males.

As the palato-maxillary indices in this Report are derived from the examination of the palato-alveolar arch in the crania of uncivilised races, it may be interesting to state the results of the length and breadth measurements of this region in a number of European crania. Twenty male skulls, consisting of ten Scots, five French, and five Germans, had a mean palato-maxillary index of 116·2, *i.e.*, they were brachyuranic, and the range of variation was from 103 to 138. Only three were below 110, *i.e.*, were dolichuranic; seven were between 110 and 115, *i.e.*, mesuranic, and the remaining ten were all above 115; one half, therefore, were brachyuranic, and as many of these had a high index, they raised the mean index of the crania measured. Eight female skulls, consisting of five Scots and three Slavonic skulls, had a mean palato-maxillary index of 115·6; and they also were in the mean brachyuranic, and the range of variation was from 108 to 121·6. Only one was dolichuranic, three were mesuranic, and the remaining four were brachyuranic. The male and female averages corresponded, therefore, very closely with each other. The greatest length of the palato-maxillary arch in the series of European skulls was 60 mm. (male), and the shortest arch was 47 mm. (male), the widest arch was 69 mm. (two males), and the most contracted arch was 56 mm., both in a male and a female. In no specimen was the length of the region equal to the breadth.

In the series of skulls tabulated in this Report the Australians possessed the largest palato-alveolar arches. The longest arch in this race was 68 mm., and the shortest 48 mm., whilst the widest arch was 74 mm., and the most contracted 53 mm. The New

¹ *Revue d'Anthropologie*, 1875 and 1876.