

The right radius was longer than the left in the Sikh, the Chinese, the Manly Cove, Perth, and Swan Hill Australians, both Oahuans, the Bush, two Andaman Islanders, the female Lapp, the three Hindoos, the male Esquimaux, two Negros, and one Negress. The left radius was longer than the right in the Riverina, Eucla, and West Victoria Australians, the Otago skeleton, male Lapp, female Esquimaux, and one Negro. The two radii were of equal length in the Queensland and an Andaman skeleton. The difference between the two radii was usually 1, 2, or 3 mm., but in one Negro it was 6 mm.; in another, viz., the one with the longest radius, it was 8 mm., and in the Otago skeleton 9 mm.

The right ulna was longer than the left in the Sikh, Chinese, Manly Cove, Perth, Queensland, and West Victoria Australians, one Oahuan, the Bushman, two Andaman Islanders, both Lapps, the male Esquimaux, the three Hindoos, a Negro, and a Negress. The left ulna was longer than the right in the Malay, Eucla Australian, Otago skeleton, female Esquimaux, a Negro, and a Negress. The bones were equal in length in the Swan Hill Australian, an Andaman Islander, and a Negro. The difference between the lengths of the two bones was usually not more than 1, 2, or 3 mm., but in the Chinese, Otago skeleton, and Bushman it rose to 6 mm.

That differences existed in the relative lengths of the forearm and the upper arm in the races of men was pointed out by Charles White at the end of the last century in a comparative study of the Negro and the European,<sup>1</sup> in which he found that the forearm in the former was longer in proportion to the upper arm than in the latter. Prof. Humphry also recorded, in his treatise on the Human Skeleton, a similar observation. M. Broca subsequently made more extended inquiries into this subject,<sup>2</sup> and showed that if the humerus were regarded as equal in length to 100, the mean length of the radius in fifteen Negros was 79·4, and in nine Europeans 73·9. I have, in estimating the proportionate length of the forearm to the upper arm in the same limb, in my series of skeletons, selected, when the bones were uninjured, the right limb, and have compared the maximum length of the humerus with that of the radius, the styloid process being included.<sup>3</sup> On the assumption that the length of the humerus was = 100, the proportionate length of the radius was obtained by the formula  $\frac{\text{radial length} \times 100}{\text{humeral length}}$ , the product is the *radio-humeral* or *antebrachial index*.

To furnish a standard of comparison for these exotic skeletons, I shall in the first instance state the indices obtained by the measurements of the bones of the shaft of the upper limb in Europeans as recorded by Humphry, Broca, Hamy, Topinard and Flower. Prof. Humphry's measurements of twenty-five skeletons gave a mean radio-

<sup>1</sup> An Account of the regular gradation in Man and in different Animals, &c., London, 1799.

<sup>2</sup> Sur les proportions relatives du Bras de l'Avant-bras, &c., in *Bull. de la Soc. d'Anthropologie*, April 3, 1862, t. iii.

<sup>3</sup> In Table XIV., p. 109, I have given the maximum length both of humerus and radius in my series of skeletons, the dimensions in most cases having been taken from the right limb.