

humeral index 72.4. M. Broca¹ obtained 73.9 as the mean radio-humeral index of nine Europeans, five men and four women. M. Hamy,² who measured the maximum length of the humerus, obtained a mean of 72.1 in European skeletons. M. Topinard gives³ the mean radio-humeral index of one series of eighty-five European male skeletons as 72.5, of another series of fifty-five as 73, and of a third series of ten as 74.7; the mean of the whole being 73.4; whilst the mean in twenty-six European women was 72.4. Professor Flower⁴ states that the mean of fourteen European skeletons which he measured was 73.9, and this number corresponds exactly with the results obtained by M. Broca from the measurements of his nine skeletons.

In my series of six male Australians the radio-humeral index varied from 78 in the Eucla skeleton to 74 in that from Perth, and the mean of the series was 76.5, whilst in the single female the index was 77. The mean index of three Australians recorded by Topinard was 76.6, that of eleven skeletons measured by Flower was 76.5, that of four skeletons measured by Spengel in the Blumenbach collection in Göttingen was 76.4, in Ecker's young Australian the index was 73, and in Keferstein's old skeleton 79. From the measurements, therefore, of the above twenty-seven skeletons, we are in a position to state with some certainty that the mean radio-humeral index in the aboriginal Australians lies between 76 and 77, and that in this race, as in the Negroes, the radius is longer in proportion to the humerus than in Europeans.

The radio-humeral index in two of the Oahuan female skeletons which possessed the upper limbs was 79 and 75 respectively, the mean being 77; and in two male New Zealanders it was 75 and 78, with a mean of 76.5. The measurements of the bones of the upper limb of some Pacific Islanders have also been taken by M. Topinard, who gives the mean radio-humeral index of eight New Caledonians at 76, and five Polynesians also at 76. Barnard Davis has given the radio-humeral index of a male Loyalty Islander as 77, of a male Tannese as 83, and Spengel⁵ has recorded this index in an "Alfuru" as 79.7. Spengel has also given the mean lengths of the humerus in Fijians⁶ as 315.5 mm., and that of the radius as 264 mm., which yield an index 83.6. E. Tüngel states⁷ that the mean length of the humerus in the skeletons collected by Dr. A. B. Meyer in the neighbourhood of Rubi, at the south end of Geelvink Bay, New Guinea, was 313.8 mm.,

¹ M. Broca measured the length of the humerus from the head to the radial articular surface, which is somewhat less than the maximum length; so that the radio-humeral index which he obtained is a little higher than when the maximum length is taken.

² Les proportions du Bras and de l'Avant-bras in *Revue d'Anthropologie*, t. i. p. 91, 1872.

³ *Anthropology*, English Translation, 1878, and *Éléments d'Anthropologie generale*, Paris, 1885.

⁴ The references to authorities on the Bones of the Limbs, except when otherwise stated, are the same as those given in the Bibliography of the Pelvis, pp. 3, 4, 5.

⁵ See Table, p. 96, in Supplement to *Thesaurus Cranium*, by Barnard Davis.

⁶ *Journal des Mus. Godeffroy*, Heft. iv., 1873. I quote the mean length of the humerus and radius from Tüngel's Memoir, which yield the index stated above, though Tüngel himself places the relation of the radial to the humeral length as 79.3.

⁷ Messungen von Skeletknochen der Papuas, *Mittheil. aus dem K. Zoolog. Museum zu Dresden*, Heft. i., 1877.