a similar relation to the external femoral condyle. On the outer side of the latter is situated a concave articular surface for the reception of the head of the fibula.

The two anterior tibial crests present the usual arrangement. The internal, the more extensive, is sharp and extends along the upper fourth of the bone, while the external, confined to the upper end of the tibia, terminates in a blunt tubercle. Both the tibial crests rise above the level of the articular surfaces of the upper end of the tibia, and are united together by a transverse osseous lamella, to the anterior border of which is attached the ligamentum patellæ. Between this lamella and the articular surface of the upper end of the bone is a hollowed surface, which in the recent state affords attachment likewise to the patellar ligament.

The tibial crests, together with the upper portion of the shaft of the bone form the boundaries of a deep groove which affords attachment to the extensor longus digitorum muscle. The outer surface of the external anterior tibial crest is likewise deeply hollowed, and allows of the passage downwards of the femoral head of origin of the tibialis anticus muscle.

The shaft of the tibia is prismatic at its upper third, but lower down the angles disappear, and the shaft becomes more nearly cylindrical in form.

Close to the junction of the shaft with the lower end of the tibia is a well-marked osseous bar, which bridges over a groove on the anterior surface of the bone. Through the canal thus formed passes the tendon of the extensor communis digitorum muscle.

The lower extremity of the bone, as usual among birds, is expanded to form two condyles for articulation with the metatarsal bone. Of these the internal is more prominent than the external. The two condyles unite together posteriorly to form a shallow, grooved, pulley-like surface.

The tibia presents the same form in every species of Penguin. The measurements of the bone are given in inches in the table on the following page.

The Fibula.

The fibula of the Penguins agrees with that of the majority of water birds in being relatively longer than in other birds. In the Penguins as a rule it is about four-fifths of the length of the tibia, and tapers gradually from its upper to its lower end. The upper extremity of the bone, as usual among birds, is provided with two articular facets, of which one, on its inner surface, is deeply concave, and articulates with the external condyle of the tibia, while the other, situated on the upper end of the bone, is adapted to the groove on the lower surface of the external femoral condyle. The anterior surface of the upper end of the fibula presents a deep groove, which, passing obliquely downwards and backwards, disappears on the outer surface, half an inch below the upper extremity of the bone. This groove, when the bones of the leg are in position, is continuous with the oblique patellar groove, and lodges the tendon of the