

third however being slightly the longer. There is a small foramen between it and the fourth.

In *Puffinus* there is a distinct osseous bridge, developed on the anterior and distal surface of this bone, external to the impression for the *tibialis anticus*, which I have also seen present (on one side only) in *Diomedea exulans*. Usually the bridge remains tendinous.

The three anterior digits are strong and well developed, the third and fourth being nearly equal in length. They have the normal number of phalanges, of which the basal one is always much the longest. In the Oceanitidæ the phalanx of the middle digit always exceeds the two succeeding ones, taken together, in length, whereas in the Procellariidæ it is always shorter, considerably, than these two.

The hallux is altogether absent in *Pelecanoïdes*, and is present only in the most rudimentary form, as already described (*supra*, p. 13) in the Diomedeinæ. In the Oceanitidæ and remaining Procellariinæ it is always present, though small, but is peculiar in consisting of only a single phalanx, which bears the claw (*vide* Pl. VI. fig. 14). It articulates, proximally, with a small metatarsal, which lies in its usual relationship to the cannon-bone formed by the conjoined metatarsals.

In the ordinary Petrels the only pneumatic bones of the skeleton are the skull, lower jaw (around its angle), sternum (very slightly), and the cervical, dorsal, and some of the more anterior sacral vertebræ. The limb bones are all filled with marrow. In the smaller forms indeed of both families only the skull, lower jaw, and a few of the most posterior cervical vertebræ seem to be pneumatic. As a rule there seems to be a gradual increase in the amount of pneumaticity of the bones correlated with the increase of size in the bird generally.

In the Albatrosses the whole of the axial skeleton (excepting some of the ribs, the scapula, furcula, caudal vertebræ, and uncinæ processes) becomes extensively pneumatic, the sternum being especially so. The humerus, moreover, becomes hollowed and filled by air, which enters through the pneumatic foramina developed at the bottom of the infra-capitular fossa.

The proportion of the hind, as compared with the fore, extremity, as well as those between different segments of those limbs, are very different, as may be seen from the appended table of measurements (in millimetres), in the Oceanitidæ and the Procellariidæ respectively. In the former the leg, as measured by the combined lengths of the femur, tibia, and metatarsus, and therefore excluding the toes, is longer than the wing (humerus + ulna + manus (omitting the carpals)). The tarsus is longer than the mid-toe or ulna, and at least twice as long as the femur. The tibia is at least twice as long as the humerus, and much longer than the manus.

In the Procellariidæ (including the Diomedeinæ and *Pelecanoïdes*) the leg, measured in the same way, is shorter than the wing. The tarsus is not longer than the mid-toe