

another takes place simultaneously with the forward or backward movement of the organ as a whole.

A tendency to this flattening of the alar skeleton is met with in the Auks and Guillemots, but in these birds it is never developed to the same extent as in the Penguins.

Lastly, in the Penguins the first or radial metacarpal bone is inseparably ankylosed with the second, and this, combined with the absence of phalanges appertaining to the former, renders the wing of the Penguin destitute of the free "pollex" met with in the majority of birds.

THE POSTERIOR EXTREMITY.

The Pelvic Bones.

The pelvis as a whole (Pl. VII. figs. 7 and 8) is very narrow and much elongated. The pre-acetabular portion of the ilium is flattened from above downwards. Both its surfaces are smooth and almost flat. The anterior border of the iliac bone reaches as far forwards as the tubercle of the eighth vertebral rib. Its pre-acetabular portion narrows gradually from the anterior extremity backwards nearly to the acetabulum, immediately in front of which, however, it is slightly expanded. It articulates with the twelve lumbo-sacral vertebræ already described. The post-acetabular portion of the iliac bone is flattened from side to side. Its upper margin forms a thin sharp crest of bone, from which the biceps femoris arises. The lower border of the post-acetabular portion of the ilium is ankylosed with the ischium, and in part forms the upper boundary of the sciatic foramen. The latter is of large size and oval in form. The acetabulum presents in the macerated bone a wide perforation, which, as usual among birds, is filled up by fibrous membrane. The upper border of the acetabulum is provided with a very prominent "antitrochanter" for articulation with the great trochanter of the femur.

The ischium is broad and flat. Its posterior border presents a sharply-defined V-shaped notch, which forms the posterior border of the pelvic bone.

The pubis is almost straight, and does not converge posteriorly towards its fellow of the opposite side. It is a narrow but stout bone, which, except at its anterior extremity, is of equal thickness throughout. The obturator foramen corresponds to the entire length of the pubic bone, the latter, except where it enters into the formation of the acetabular cavity, not coalescing with the ischium at any point. The anterior portion of the obturator foramen is rounded, and transmits the tendon of the obturator internus muscle. The circumference of the posterior portion of the obturator foramen is formed exclusively by the fibrous membrane which attaches nearly the whole length of the pubic bone to the lower margin of the ischium. It ought, however, to be observed, that although the ischium and pubis are nowhere ankylosed, except in front, they come into very close relation with one another immediately behind the anterior dilated portion