

PALÆOLESTES GOREI, n.s.

AN EXTINCT BIRD.

By C. W. De VIS, M.A.

Pl. ii, figs. 4-6.

WHILE engaged in watching the progress of workmen employed in sinking a well at Yandilla, Mr. Gore, the owner of the station, and one of the few who are alive to the interest felt by many besides themselves in the fossils of the Darling Downs, took unusual pains to assure himself that not one present in the beds disturbed should escape his notice. His reward could hardly have been greater in numerical meagreness. His sole find was a single small bone, the subject of the following memorandum. Naturally curious to learn what it was that gave him so much trouble to procure, Mr. Gore brought it to the Museum for examination, and eventually was good enough to leave it there.

The bone occurred in clay at a depth of 40 feet. It has the colour and state of mineralization familiar to handlers of fossil exuviae from the Darling Downs; of its contemporaneity with them there is consequently not the shadow of a doubt.

A glance at its facies is sufficient to assure one that it is a phalanx from the foot of a bird. Apart from size and proportions there is a pervading similitude amongst the greater number of the toe-joints of birds which stamps them individually as avian. But at the same time this likeness is apt to render them unsatisfactory guides when we wish to ascertain precisely the particular group to which any one of them belongs. Nevertheless, an endeavour to follow the track of this phalanx may not be altogether to be deprecated. The bones of birds are of the rarest, and it is surely better to see through a glass darkly than to shut our eyes because we cannot see all we would.

DESCRIPTION.—The phalanx is a stout bone of moderate length (18·5 mm.), with a maximum breadth (9·5 mm.) rather more than

half its length. Placed in the attitude proper to it with its dorsum in view (Pl. iii, fig. 6), the contraction of its distal end is in striking contrast with its expansion at its opposite end, a contrast duplicated by the sharp relief of its distal features. The trochlear groove is here deeply incised, and its convex sides rise into ridges which, continuing beyond the groove, converge and meet together on the mid point of the dorsum. Between the ridges and immediately proximal of the articulating convexities the surface for the insertion of the dorsal ligament is sunken, roughened, and pitted. The left side of the bone, as it lies, is broader than the right one; it begins to expand gently from its distal end to about the middle of its length, then rapidly until it approaches the proximal border to join which it suddenly contracts. On the right side it begins to dilate about the middle of its length, whence it extends widely outwards to reach the proximal border, which on that side is tumid. The proximal trochlear excavation (Pl. iii, fig. 4) is on its upper edge almost semicircular; its surface trends downwards, inwards, and laterally from the right to the left side, and reaching the plantar surface encroaches upon it to the extent of one-fourth of its length; below the upper edge and following its transverse curve is the surface specialised for adaptation to that of a preceding bone, a smooth uninterrupted band dilated and curled upwards at its right extremity, less broad and directed inferolaterally at its left. Within the curve of this surface is a large and deep pit whose surface shows that it was the seat of ligamentous insertion. The plantar surface (Pl. iii, fig. 5) is simply a broad and deep trough formed by the rise from it of a ridge on each side.

A bone of this description must necessarily be a basal phalanx, and it is almost needless to add the basal phalanx of a first toe. Its bilateral dilatation, narrow transverse articulating facette, inferior ligament, and provision for the defence of a powerful flexor tendon, are a concurrence of characters which leads to no other than the latter conclusion.

The inevitable inquiry, To what bird did it belong? cannot be so readily answered. After elimination of the families of birds which have either no hind toe or one in a rudimentary condition, or are so elongate and slender as to bring its toe joints entirely out of parallel with the fossil, there followed a strict comparison of the

latter with all the remaining Australian families. It is not proposed to recapitulate the differential features observed in the subjects of these comparisons; this is a procedure less calculated to increase knowledge than to display it. The results of the inquiry were that no recent bird could supply a replica of the fossil phalanx, and that the nearest approach to it was to be found among the Accipitres, to what family of the Birds of Prey is altogether uncertain. If this phalanx should prove to belong to an extant bird which has become extinct in Australia, the proposal now made to let it bear the name of *Palæolestes gorei* may be excused since foreign materials of research of the kind are but scantily at the service of the writer.

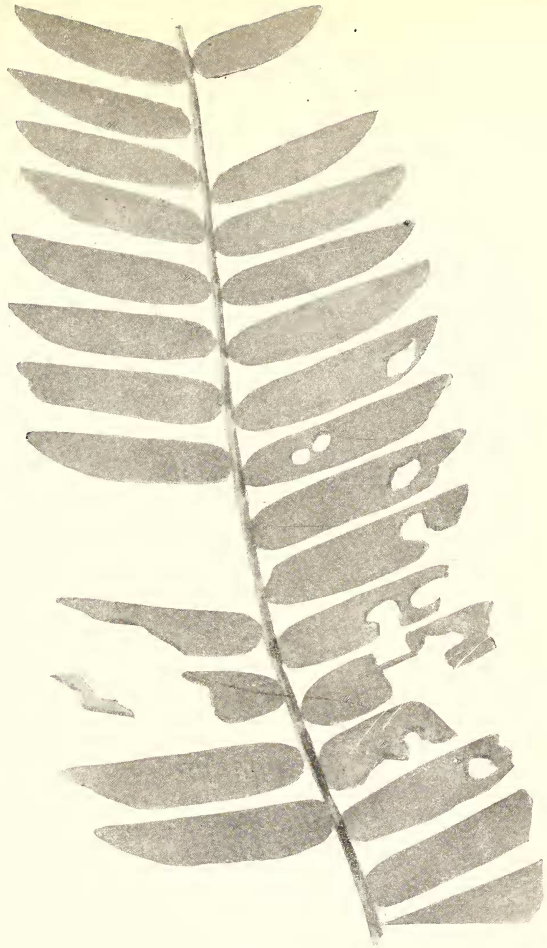


Fig. 1 (Natural Size).



Fig. 2

PTEROPHYLLUM MUCRONATUM, n.s.

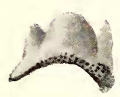


Fig. 3.

HYBODUS INCUSSIDENS.



Fig. 4.

PALEOLESTES GOREI, n.s.



Fig. 5.



Fig. 6.

(All Natural Size.)