

the present state of our knowledge, no one can say whether *Pteridophora* is a Bower-builder or a true Bird of Paradise. *Xanthomelus*, placed by recent observers on the border-land of the *Paradiseidæ*, may turn out to be actually a Bower-builder; and in this way, in default of anatomical or osteological characters, the last link for separation between the *Paradiseidæ* and *Ptilonorhynchidæ* may be broken down.

It is also not an easy matter to define the distinctive characters between the *Paradiseidæ* and the *Corvidæ*. Taking, for example, the gaudy decorative plumage of the Birds of Paradise as their highest characteristic, which it undoubtedly is on a first acquaintance, one may ask where this feature becomes of value in the dull-coloured genus *Lycocorax*, whose plumage is more sombre than that of many Jays and Magpies belonging to the Family *Corvidæ*. It may be as well, therefore, at once to confess our ignorance on the subject of the division of these groups of Birds and to content ourselves with such characters as are to hand, leaving to the future the discovery of more exact definitions of the Families, when ample material may be available.

Sundevall ('Tentamen,' p. 42) separates the *Corvidæ* from the *Paradiseidæ*. The former belong to his "Phalanx 3, *Altinares*," with 10 primaries, the first decidedly long, reaching for a long distance beyond the coverts; the nostrils placed high; the bill straight from the base; the toes as in most *Oscines*, the outer toe a little longer than the inner one and not much exceeding the first joint of the middle toe; the hind toe moderate.

For his Phalanx 4, *Idiodactylæ*, Sundevall gives the following characters:—Quills 10, the first elongated. The outer toe a little shorter than the middle one, but the inner toe much longer; the hallux of great size, equal, with its claw, to the middle toe with its claw; the third joint of the outer toe equal to the second joint of the middle toe. Here he places the Birds of Paradise.

The Bower-Birds he places far away from the *Corvidæ* and *Paradiseidæ* in his *Cichlomorphæ* (p. 19). Thus the characters of these three Families are defined by Sundevall as follows:—

Cohors I. CICHLOMORPHÆ. Bill hooked or awl-shaped, with the nostrils placed low down in the bill, nearer to the cutting-edge of the mandible than to the culmen.

The Bower-Birds constitute his Fam. 29, *Ptilonorhynchinæ*. "Birds of the Australian Region, of somewhat large size, with a nearly Corvine aspect; the first quill long, a little shorter than the secondaries. Bill of varying dimensions, generally stout, always somewhat arched. The tail moderate and nearly equal as regards length of feathers, emarginate or well rounded."

According to Sundevall the Crows belong to his Cohors III. COLIOMORPHÆ, with the bill rather strong and of large size for the most part, either not deflected at all or only slightly so; the angle of the chin produced in front of the nostrils. . . . Feet generally powerful and of large size, with the middle claw oblique.

In the third volume of the 'Catalogue of Birds,' I separated the *Paradiseidæ* from the *Corvidæ* on the proportion of the toes (p. 4), as follows:—

Toes normal; the hallux very strong, but, with its claw, not so long as the middle toe  
and claw . . . . . CORVIDÆ.

Toes abnormal; outer toe a little shorter than the middle one, longer than the inner one;  
hallux very large, with its claw equal to or longer than the middle toe with its claw. PARADISEIDÆ.

The Bower-Birds were placed by me far away from the above-mentioned Families in the sixth volume of the 'Catalogue.' This was undoubtedly a mistake.

Taking, therefore, the typical *Corvidæ*, such as Rooks, Crows, and Ravens, we can separate them from the Birds of Paradise and the Bower-Birds by the characters given below; but the aberrant *Corvidæ*, the Jays and Magpies and their kin, especially the Nutcrackers and Choughs, have many