

STORKS

Family CICONIIDÆ

THIS group is distinguished from the herons and bitterns by the absence of the "powder-down" patches on the sides of the body, these being areas of degenerate feathers the tips of which are continually breaking down into a fine powder, often matted by an oily secretion.

The bill is stout and straight, with the nostrils in a slit, not a groove, near the base; the base of the lower mandible is often thickened and corrugated. The legs are long, covered with hexagonal scales and usually bare for some distance above the tibio-tarsal joint; wings long, rather pointed; tail short.

The plumage is black, white and grey, or some combination of these colours, the black often glossed with a metallic sheen. The sexes are the same, or not materially different, nor are the juvenile plumages very distinct.

The nests are large clumsy structures of sticks, usually built in tall trees, sometimes on rocks or cliffs, or on buildings. The eggs vary in number, from one or two to as many as eight (not in any local form). They are always white or slightly tinted, never spotted or blotched. The young are hatched helpless and remain in the nest for some considerable time.

The family consists of from twenty to twenty-five species, spread over the tropical and warmer temperate zones of the whole world; the Malay list contains five species, commonest in the northern part of the area, the only form at all abundant in Southern Malaya being here described.

Leptoptilus javanicus

The Lesser Adjutant Bird

Ciconia javanica, Horsf., *Trans. Linn. Soc.*, xiii., 1821, p. 188 (Java).

Leptoptilus javanicus, Kelham, *Ibis*, 1882, p. 190; Oates, in Hume's *Nests and Eggs Ind. Birds* (2nd ed.), iii., 1890, p. 264; Blanford, *Faun. Brit. Ind., Birds*, iv., 1898, p. 374; Sharpe, *Cat. Birds, Brit. Mus.*, xxvi., 1898, p. 317.; Oates, *Cat. Birds' Eggs, Brit. Mus.*, ii., 1902, p. 109.

Malay Name.—Burong botak, burong babi.

Description.—A bony plate on the crown; head and neck, naked, or nearly so; under tail coverts, silky, soft and disintegrated, with stiff shafts.

Adult in breeding plumage.—Upper surface, including the tail, blackish, with a metallic greenish gloss, the feathers of the back, mantle and scapulars with numerous transverse rays, and in fresh plumage powdered over with grey; a coppery bronze band on the wing formed by large subterminal spots on the outer webs of the median coverts. Primaries oily metallic green, secondaries darker, more bluish, the inner ones with narrow, very clearly defined, pure white edges. Tail as the primaries. Inner aspect of wings and under surface of tail, greyish, the under wing coverts, greyish black. Head with a patch of brownish feathers at the back of the bony plate. Beneath white, feathers at the base of the neck with broad grey tips; under tail coverts falling not far short of the tip of the tail, pure white, without dark tips.

Adult in non-breeding plumage.—Darker, without the powdery grey appearance, the inner secondaries not, or only indistinctly, edged with white, and the coppery bar on the wing not developed.

Immature.—The neck with loose downy and hairy feathers; dark parts, browner, not so glossed; otherwise as the non-breeding adult.

Soft Parts.—Iris, white or bluish grey; neck, chrome-yellow, paling towards the base, where it is mottled with litharge-red; legs and feet, black; tibio-tarsal articulation, pale pinkish brown; bill and top of head, pale yellowish white (Davison).

Dimensions.—Total length, 48 to 52 in.; wing, 23.5 to 27 in.; tail, 9.5 to 11.3 in.; tarsus, 9 to 9.8 in.; bill from gape, 9.75 to 11 in. Females are smaller than males.

Range in the Malay Peninsula.—Throughout the Peninsula. Rare on the islands but recorded from Junk Zeylon, Penang and Singapore.

Extralimital Range.—The Indian Peninsula, except the western side; the Indo-Chinese countries to Laos and Cochin-China, Sumatra, Borneo and Java.

Nidification.—In the Malay Peninsula breeds in the first four months of year in colonies of six or seven pairs. The nests are big structures of sticks placed in very tall trees, often dead ones, on the shoreward edge of the mangrove forests or along the banks of tidal rivers. Eggs from the Malay Peninsula are not on record. In Pegu and Ceylon the clutch is two in number; the eggs are elliptical oval in shape, dull white, and closely but finely pitted. Pegu eggs average 3.05 by 2.23 in. Ceylon ones are slightly smaller, 2.84 by 2.09 in.

Habits.—The lesser adjutant is found sparingly along the coasts of the Peninsula, especially where these are flat and muddy, and in the ricefields when these are of large extent. It does not like rocky country nor is it found along the rivers away from tidal influence. Except in its breeding places, where it is more or less gregarious, it is a solitary bird, shy and suspicious and difficult to approach, and when once put to flight does not settle for long distances. Young birds taken from the nest are, however, readily domesticated, and make amusing pets.

In the wild state the food is fish of all kinds, crustacea and frogs, but, as Blanford notes, it is not, like its larger relative, *L. dubius*, a carrion feeder. In captivity it will eat almost anything, including young chickens, ducks, rats and its own relatives.

The adjutant, from the structure of its larynx, has no definite call, but will often utter a kind of grumbling croak, and makes a good deal of noise by clashing its mandibles together, especially in a domesticated state, when it is molested by dogs, or human beings with whom it is not acquainted.

The Indian adjutant, *Leptoptilus dubius*, recognizable by its much larger size, the broad grey band on the wings and the possession of a pouch at the base of the throat, may possibly occur at times in the northern parts of Malaya, though up to the present its existence within our limits has not been authenticated.