The Little Bittern (Ixobrychus minutus).

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Where the reeds, rushes, cumbungie and cats'-tails grow in the swamps and marshy areas of Australia, the Bittern is usually to be found. Since these birds live principally on shrimps, small fish, frogs, yabbies, mud-eyes and other small-fry of the water, it is but natural that one should find them in the vicinity of their food supply. Most of the Bitterns are nomadic; for the marsh-lands and swamps, particularly those adjacent to the River Murray, the greatest waterway in Australia, are liable to dry up in the autumn, thus compelling the Bitterns to seek other swampy areas from whose waters they can obtain their food.

The Bittern is a bird of stealth. It depends largely on its stealthiness for success when pursuing its prey and also to escape observation when danger threatens it. It catches most of its food by watching and patiently waiting for it at the water's edge. When it espies its prey, the long neck gradually, almost imperceptibly, elongates further and further. Each change is so deliberate that the Bittern appears to be motionless. When the bill of the bird is close to the water and the neck is stretched almost to its fullest extent, there is a sudden dart and the neck is rapidly withdrawn when the bill holds its prey. There is a pause as if to squeeze the prey and partially kill it, and then the captured creature is tossed into the throat and swallowed with a single gulp.

When disturbed, and should they elect to flee, they usually run away with head lowered and body couchant. Occasionally they fly away, but as they are poor fliers they will do so only under great provocation, since they appear to be afraid of the attack of birds of prey. When the Bittern is standing in its reedy habitat it is remarkable how closely its plumage merges into the background and how difficult it is to see the This is stressed by the attitude its adopts as it stands on one leg with the other tucked up out of sight under its body-feathers; and with head and neck stretched to the fullest length it points its bill skywards, thus simulating the reeds surrounding it. The striped markings of the plumage further aid the bird in the deception brought about. When in this posture, both eyes are looking intently in the direction of danger and binocular vision is obtained by the bird, which is better protection for it than the use of a single optic. It is a singular fact that many of our birds use only one eye, when looking either for food or when danger approaches.

Both the upper and the lower mandible of the Little Bittern are slightly hooked, the better to hold its slippery prey. In its movements this bird usually keeps its head and neck erect and rigid and only moves the lower part of its neck. This appears to be adopted the better to enable it to escape observation by keeping the bird continually rigid like the lower part of a reed-stem. This movement makes it look grotesque, and

rather like a mechanical toy in action.

The Little Bittern, as its name implies, is the smallest of its tribe and is a veritable pigmy when compared with the size of the common large Brown Bittern (Botaurus poiciloptilus). Owing to its size, the inaccessibility of its habitat, and the bird's stealthy habits, very few Australian ornithologists have seen this bird alive, and to most of us it has been a rara avis. For many years its nest remained undiscovered, and there have been few records of its discovery since. The nest is situated on a platform in the reeds and swamp vegetation and the clutch laid is usually four dull white eggs, quite distinct from the beautifully-tinted eggs of the larger species.

Taking all factors into consideration, the Little Bittern is a handsome bird. The feathers of the lower neck hang down in a tidy and attractive pectoral train, which when the bird is in repose adds considerably to its appearance. In life its legs are of a light greenish hue, whilst the pupil is an intense

black with a light yellow iris.

I have not yet been able to discover whether the Little Bittern makes the deep booming note that is made by the large Brown Bittern. The only sound that I have detected is a note produced when the bird is angry; this note resembles "quark" and is uttered with a throaty timbre. The booming note of the Bittern when issued at night is supposed to have given the impression to the Australian aboriginals that a fearsome monster, the bunyip, existed in swamps.

Calls of the Frogmouth.—The Podargus has been very musical lately in the trees about my cottage, doubtless owing to the warm evenings of late September and the vicinity of the nesting-season. The male calls with a series of notes sounding to me something like "Did-did-doo! Did-did-doo!" repeated a couple of dozen or twenty times. The first two very rapid and slurred, the "doo!" strongly accented, and sometimes there is a sort of echo or response after the latter note, perhaps uttered by the female. If it is so, she gets in very promptly and in excellent time, reminding one of the female Whip-Bird coming in with the "double-chuckle" the instant her lord has finished his explosive phrase. above call of the male Podargus is different from the "Oom!" sound, uttered while quietly sitting on an old paling-fence or low gum-bough at dusk. The former seems to carry more excitement, and was so strongly uttered during a couple of nights while rain was brewing that the whole atmosphere appeared to vibrate.-H. STUART DOVE, West Devonport, Tasmania (October 2, 1927).



LITTLE BITTERN, SHOWING RIGID, STEALTHY POSITION WHEN WALKING. Photo. by A. H. Mattingley.