

## THE SMALL BITTERN AT MEREMERE

By P. J. HOWARD and H. R. McKENZIE

The identity of the bird, described in *Notornis* 10, p. 317, as Little Bittern (*Ixobrychus minutus novaezelandiae*) is now considered to be doubtful. In *Notornis* 10, p. 412, Dr. R. A. Falla, Director of the Dominion Museum, Wellington, has made some comments on New Zealand bitterns. These have led us to a close review of the sightings of the Meremere bird, and, for purposes of comparison, to a study of the Australian Bittern (*Botaurus stellaris poiciloptilus*), common to Australia and New Zealand and perhaps better known as the Brown Bittern. Museum specimens and much literature have been studied. It is now deemed best to tabulate the evidence "For" and "Against" which will explain our taking the bird to be a Little Bittern and at the same time help with any further investigation.

### EVIDENCE FOR

#### (1) Size:

The seven men who saw it closely are agreed that it was about half the size of a Brown Bittern. In the first edition of Oliver, "New Zealand Birds," p. 367, the measurements are, with those of Brown Bittern in parenthesis: length 38 (76); bill 5.5 (7); wing 15.8 (37); tail 5 (13); tarsus 5.3 (10). Except for the bill it seemed by these measurements to indicate to us at the time that the estimate of half size should be about correct. At Easter, 1964, Brian and Mrs. V. Adams, of Redhill, Papakura, saw near Whata Whata, Waikato, an adult Brown Bittern leading four young across the road in front of their car. The young were a little more than half grown and looked very awkward, being "all legs and feet" so to speak, a description very different from that of our trim small bird.

#### (2) Colour and Feather Pattern:

See *Notornis* 10, p.p. 318-319, and note report by R. T. Adams on p. 319. The overall colour was lighter than as described by Oliver for the Little Bittern so it was thought that it was perhaps a young female. It was later found that the female of *Ixobrychus cinnamomeus* is described by G. M. Henry in "A Guide to the Birds of Ceylon" as: "Slightly larger than the last (*I. sinensis*) . . . the plate shows the male; the female is browner, mottled with buff on the wing coverts and streaked with dark brown on the under parts; a dark, broken streak down the centre of the throat, neck and breast." This is close to a skin of *sinensis* from Fiji in the Dominion Museum and to Miss Gina Blanshard's drawing of it. However we still have the problem of the lack of the throat stripe on our bird, though the Fijian skin and Miss Blanshard's drawing of it show the streak to be more diffuse and less definitely coloured than in the other species.

#### (3) Leg Colour:

On p. 317 this is described by P.J.H. as yellowish green; but it is recorded that the light was failing. When seen on 17/9/63 (p. 319) in full light by John Kendrick, H. R. McKenzie and P. J. Howard the leg colour was a bright green with no tinge of yellow. This green was another of the features given by Oliver which led to the belief that the bird was a Little Bittern.

(4) *Tameness:*

(a) When seen from a dinghy by G. Whitburn in the first week of May, 1963, it was standing on a log about three feet above water level and was in the erect "freeze" stance, side-on. Although only ten yards away, it stood its ground, then moved slowly into undergrowth. This latter action would not be expected of a Brown Bittern.

(b) Seen five weeks later by P.J.H., it was only fifteen yards from his car which was alongside the road fence. It did not fly or walk away.

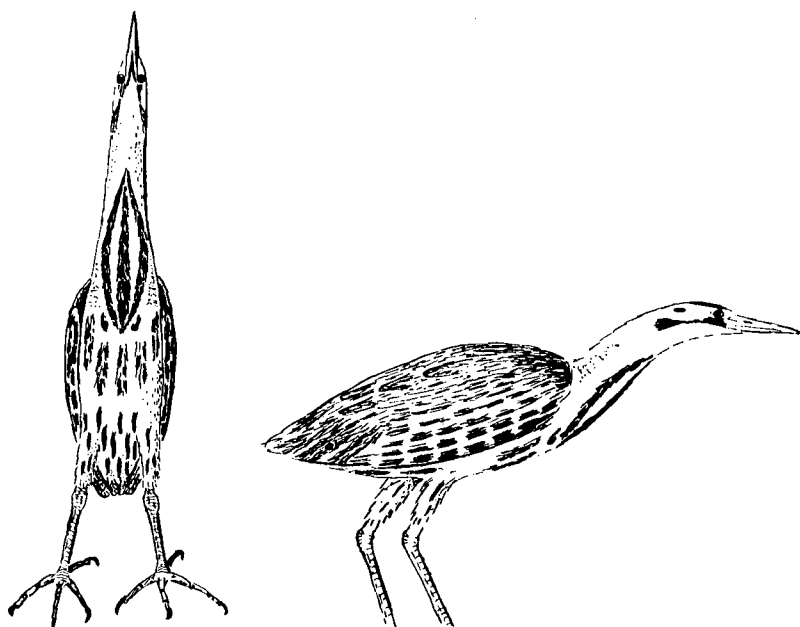
(c) It was mid-June also when it was seen by T. Clark and two other men at about twenty yards in the same swampy strip which runs parallel to the road. Taking it for a Kiwi (*Apteryx australis*) the driver stopped the car and backed. The party climbed the fence with the bird still twenty yards from them. It ran as they approached, gaining on them and was about twenty-five yards away when it flew. A Brown Bittern would be expected to fly at once. (d) On 17/9/63 it was again observed from a car by the road fence which is along a bank about seven feet above the swamp. At thirty yards it "froze," then relaxed. The car was then moved closer. It moved towards the car to within fifteen yards in full view and fished unconcernedly, with J.L.K., P.J.H. and H.R.McK. moving about in the car. Tameness is emphasised by Oliver.

(5) *Locality*

In New Zealand, Little Bitterns have been found mostly along the timbered edges of streams, and, presumably, lakes. G. Whitburn's sighting was well back under willow trees on the bank of the Waikato River. All of the seven observers in this case are well acquainted with the habits of the Brown Bittern and none recollect seeing one in such a place. The other sightings were all at the base of tree growth on the edge of the swampy lagoon by the road. In such a locality a Brown Bittern would not ordinarily move into cover when disturbed at close range, but would take flight in a blind panic.

(6) *Comparison with immature Brown Bittern*

(a) When it was known that Dr. R. A. Falla, on our description, considered the Meremere bird to be more likely a young Brown Bittern (his opinion being published in *Notornis* 10, p. 412), it was decided that we make a study of the young Brown Bittern. P.J.H. found a parent and two young, the young being respectively about 90 and 80% of the size of the adult, the larger lighter than it and the smaller darker. H.R.McK. found a similar trio, the young being nearer the size of the adult and again a light and a dark one. P.J.H. photographed an injured young one and examined another brought to him. These young birds had no definite front pattern, being flecked and short-streaked with dark markings somewhat resembling those of the front of a Morepork (*Ninox novaeseelandiae*) with buff areas only on the upper sides of the throat and heavy markings forming a broad throat line. (b) The Meremere bird had the clear "canoe" pattern on the lower throat and definitely no brown stripe extending to the chin (see sketches). There is a further difference in that throat and breast patterns of adults of both Brown and Little Bitterns have blurred edges to the pattern lines, whereas the "canoe" lines on the Meremere bird were clear cut.



The Small Bittern at Meremere, as sketched by P. J. Howard

(7) *Date and Association*

The first week in May would be a late date for a half-grown Brown Bittern and it is noteworthy that no change in either size or plumage from then until 17/9/63 was observed. Recent limited studies of Brown Bitterns indicate that at least one parent remains closely associated with the young until they are fully grown or practically so, while this bird was absolutely alone at all times seen; and yet was only about half the size of a Brown Bittern.

(8) *Habit of Being Alone:*

The New Zealand specimens have apparently all been found alone. The Meremere bird was never seen when any big Brown Bitterns were present.

(9) *Pattern*

Many of the pictures in the literature are of birds side-on or partly so and the artists may have used colour for the neck outline, thus showing a central throat stripe where no colour should be. If this should have happened two of the Chinese Little Bittern (*I. s. sinensis*) in Dr. Kuroda's "Birds in Life Colours," Vol. 2, plate 78, No. 579 would come very close in pattern to our bird. A New Zealand Little Bittern skin in the Dominion Museum, No. D.M. 4779, drawn by Miss Gina Blanshard, shows a large three-stripe pattern on the front, somewhat like the "canoe" pattern of our bird but with the marking blurred. It is not much like our bird otherwise and is different from the other Little Bitterns there. There is perhaps room for considerably more variation than has been found so far.

## EVIDENCE AGAINST

(1) *Size:*

Comparative size is difficult to estimate at a distance. The Meremere observers estimated half size of a Brown Bittern and Oliver's measurements for New Zealand skins largely bear this out, but the skin specimens of Little Bittern do look smaller, Dr. Falla, *Notornis* 10, p. 412, going so far as to say that body size, except when the neck is stretched, is not larger than in a Californian Quail (*Lophortyx californica*). If in appearance it should look so small as this in the field, it would indicate that this Meremere bird was too large to be a Little Bittern. Eastern skins of *I. minutus* examined in the Auckland War Memorial Museum appeared even smaller than those from New Zealand in the Dominion Museum.

(2) *Colour:*

The available skins and mounted specimens of New Zealand and overseas Little Bitterns and herons, together with the illustrations and descriptions which we have since been able to study, do not throw any light on the identity of the Meremere bird. In general colour it is light, much the same as an adult Brown Bittern. The general difference between it and the N.Z. Little Bittern could perhaps be said to approach the difference between a hen and a cock pheasant. If it is not a female Little Bittern it may be a female Cinnamon Bittern (*Ixobrychus cinnamomeus*) or it may be a freak.

(3) *Pattern:*

A search of some of the literature of Europe, North America, Asia (particularly Japan), Australia and New Zealand does not indicate any bittern with the "canoe" pattern on the front and the all-buff or creamy white from the top of the pattern up to the chin with no dark mid-line whatever. All illustrations seem to show at least one brown line up to the chin.

## DISCUSSION

The bird, with its well proportioned form and clear markings gave the impression of its being full-grown, even if not adult.

It may have been a vagrant in an unusual or transient form of plumage. After further details were submitted to him, Dr. Falla suggested that it may be an immature Green Bittern or Little Green Heron (*Butorides striatus*).

If a New Zealand Little Bittern, it would be at a stage not hitherto encountered, which, in view of the very few occurrences, may by a faint possibility be the case.

It is therefore considered that the identity of this bird must remain unconfirmed until further evidence is obtained, either in the field or in the literature.

Sincere thanks are proffered to Dr. R. A. Falla, Director of the Dominion Museum, Wellington, and Mr. E. G. Turbott, Asst. Director of Canterbury Museum and latterly Director of the Auckland War Memorial Museum, for generous assistance and to Miss Gina Blanshard of Little Barrier Island for several excellent and most useful drawings of study skins at the Dominion Museum.