

NEW ZEALAND NESTING OF THE WHITE-FACED HERON.

By Brian A. Ellis, Dunedin.

Since my reporting (N.Z. Bird Notes 1 (9) : 109-110) on the white-faced heron (*Notophox novae-hollandiae*) in the Shag Valley in January, 1945, I have had some years of searching for an occupied nest of this interesting species. I met final success this season when a nest was discovered on 24/10/53, with a young bird visible from the ground.

I had three pairs under observation at this time, and in widely separated districts, when from the back-yard of our farm house the purposeful manner of a heron's flight led me to a plantation of *Pinus radiata*. After two or three minutes it reappeared from the other side and returned in the direction of the Shag River, about half a mile distant. Going into the plantation I soon startled the other parent from its perch beside a nest high in a tree near the centre, and I was able to satisfy myself from there that the nest contained young.

Later in the day I climbed the only adjacent tree which I could manage to scale, to a point where the nest and its sole ungainly occupant could be examined and photographed from a distance of no more than 20 feet, though I must admit my hold was shaky. The nest was 72 feet from the ground (by measurement), placed close into the trunk of the tree and built entirely of pine twigs of about 3-16in. thickness. It was about 18in. in diameter, almost flat, and some 4 or 5 inches through, though open enough in construction for light to be seen through it from below. It was much fouled and smelly, and there were plowflies even at this height. Some feet of the tree below the nest were effectively "white-washed."

There was only one nestling, and a diligent search of the ground under the tree and inspection of the nest gave no evidence that there had been either addled eggs or dead nestlings ejected at any earlier stage. It was probably between two and three weeks old, with a partial covering of feathers, but still a fair amount of light grey down showing. The dark alar bar, which is so conspicuous in the adult bird in flight, and about the easiest feature for distinguishing it from the reef heron (*Egretta sacra sacra*) was easily discernible at this stage of development. Its long neck was curiously swollen to more than double thickness for most of its length, reducing to normal proportions just before it joined the body. This can be discerned in my photograph—whether it is a normality or not I cannot say, but at least I know that the chick continued in apparent health in spite of it. To the best of my knowledge it was some time since the young bird had been fed—I believe it was being fed only in the mornings at this stage: I saw no visits by the second parent later than 10 a.m.

The young bird was about 15in. in length, and when startled by my arrival it sat bolt upright in the nest with beak pointing skyward. This seemed to be its most convenient pose for focusing its eyes on me. When there was some extra noise from below it looked down by bringing its beak to the horizontal, but no lower. Compare the well-known "freeze" position of the bittern: does it see in the direction of the danger while pointing skyward, or does it point so in order to see best?

Although the parent had left its perch beside the nest as soon as we approached the foot of the tree, it did not go far, and while I was up in the tree I sighted it once or twice flapping about in the branches forty or fifty yards away.

Next morning I saw one heron flying out to the river at 10 a.m., and it had not returned an hour later—in fact, I did not see them both together all day. The other continued its guard by the nest, but it was not there at my last visit in the evening, nor could the young bird be seen, although the light was no longer good. On 27/10/53 a friend with binoculars could not identify the young in the nest, and neither parent was about. At 10.30 a.m. on 31/10/53 the young bird scrambled back on to the nest as I approached. I wondered if it had reached the stage of flying back

and forth, and this visit had just caught it at the nest. Now one week older than when first discovered, it was much larger and better fledged, though still retained the oddly-swollen neck.

On this day one of the parent birds spent three-quarters of an hour sunning itself and preening its feathers while perched in a macrocarpa of the homestead shelter trees, a much more amenable position than near the nest—about 400 yards away.

Next day (1/11/53) the young bird was not in the nest at 9.15 a.m. and at 3 p.m., nor was it the following day when the parent was at its perch again in the macrocarpa tree. The herons were seen about the district at odd times over the next three weeks, but the young was never identified, so I have really no definite record of the successful rearing of this chick. On several nights a bird was seen to return to the vicinity of the nest-site at dusk, on one occasion being net by another which flew out from the trees and accompanied it in.

I have been able to gain some scattered information about other nests in the coastal region of Palmerston-Waikouaiti-Waitati. In October, 1952, two young were reared from a nest 30 feet up in a bluegum tree which grew close to a farm house near Flag Swamp. This nest was placed close into the trunk of the tree and was completely obscured by leaves which had come away as a second growth: its location was confirmed only when the nestlings got to the stage of walking out on a branch as they gained strength. The parents were observed to fly off towards the coast after feeding the young, probably to the tidal flats, approximately four miles away.

Much interest has been aroused by recent notes on the red-legged phase in various species of heron, and Mrs. L. E. Walker has published observations (Notornis 5 (4) : 116) on *Notophox novae-hollandiae* in areas adjacent to those I have mentioned above. However, I have not found this red-legged phase in any of the birds I have studied, the legs in all cases being a rich yellowish-green colour. In keeping with a general excellence of plumage, the legs are a richer colour in the breeding season than at other times, but these observations of a nesting pair must contradict the suggestion that red legs are assumed by all species of heron in breeding plumage.

The herons abandon in the nesting season a very consistent habit by which they disturb the countryside at all other times of the year—that of giving a raucous call whenever coming to or leaving a perch.

In choosing a nesting site, the white-faced heron appears to favour a position which is quite some distance from its feeding grounds. Amongst places where they are known to nest, I know of none closer than a quarter of a mile from a waterway of any consequence and as it is likely that even at this time of the year much of their food is gained from the tidal flats at the coast, they would have to travel a distance ranging from three to five miles.

It appears that this species suffers from a high rate of egg and nestling mortality in the district in which I have studied it. From five nests of which I have had descriptions, there have been only seven young reared, one each from three nests, and two each from the other two. At two locations the finding of the remains of young birds was described by residents. A nest containing eggs has yet to be found here, but in Australia a clutch is commonly four or five eggs (Oliver, 1930), though in its native habitat the species apparently does not enjoy a highly successful nesting.

In an article on egg and nesting mortality rates in the Emu (Vol. 47: 321) P. A. Bourke gives the following information on three nests of *N. novae-hollandiae* which were covered by his investigations: "Clutch sizes: 4, 4, and 3. Young hatched: 4, 3, and 3. Young reared: 2, 3, and 2. One egg (from second nest) dislodged by bird leaving nest. Three nestlings (two in one nest and one in another) died in nest when several days old. Their bodies were not removed and were trodden into the nest by living nestlings." Though not wide enough in its scope to be really conclusive,

the above does show that this species suffers from an unusually high rate of nestling mortality in Australia. It would further appear from our present knowledge that this high nestling mortality rate is sustained or exceeded in New Zealand.

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A KEA'S NEST.

By L. W. McCaskill, Christchurch.

For a bird that has received so much publicity, it is surprising that we know so little about the nesting habits of the kea (*Nestor notabilis*). With the increasing number of mountaineers and trampers visiting the haunts of the kea we would expect that nests would be more commonly found than is actually the case. A recent experience would suggest that possibly we have been looking in the wrong place.

Potts gave us the following description in "Out in the Open": "It breeds in the deep crevices and fissures which cleave and seam the sheer faces of almost inaccessible cliffs, that in places bound as with massive ramparts the higher mountain spurs. Sometimes, but rarely, the agile musterer, clambering amongst these rocky fastnesses, has found the entrance to the 'run' used by the breeding pair, and has peered with curious glances, tracing the worn track till its course has been lost in the dimness of the obscure recesses, beyond the climber's reach. In these retreats the home or nesting place generally remains inviolate, as its natural defences of intervening rocks defy the efforts of human hands, unless aided by the use of heavy iron implements that no mountaineer would be likely to employ."

Marriner described a nesting site found in 1906 in a gorge of the Rakaia River. It was in a long, narrow tunnel among rocks near the top of a cliff. Young birds had been taken from this nest in August.

In January, 1908, Edgar Stead found a nest at Glenthorne, a station up the Wilberforce River. This nest was in a tunnel in a big rock slip and contained four eggs.

Apart from this record by Stead, it has been assumed that the kea's breeding season commenced about June with the eggs usually laid in July. Until recently, it has also been assumed that the nest always occurred in rocky country usually well above the bush line.

On January 29, 1954, I was inspecting part of the Arthur Pass National Park in company with the ranger, Mr. Ray Cleland. Returning from Lake Minchin to the Poulter River we were surprised to see a kea perch near us in dense beech forest. A few moments after we sighted her, the kea dropped to the ground, landing out of sight behind a bank. We hastened to the spot where she had landed but there was no sign of her except a few stray feathers and a small pile of droppings below the perch where we had first seen her. Further inspection disclosed the entrance to a tunnel with a well-worn track. The tunnel, about two feet long, passed under the arching roots of a beech tree, under some loose rubble disturbed by the fall of a tree long ago, and into a chamber about four square feet in area. In the chamber were the parent bird and three young in the down stage.



Photo.: B. A. Ellis.

NEST AND NESTLING OF WHITE-FRONTED HERON
Shag River District, October 24, 1953.