

“WHITEHEADS are versatile in their feeding and possess some of the special skills often associated with titmice (Paridae) ... of the Northern Hemisphere.” So wrote John Gibb in a 1961 article, a time when so little was known about whiteheads that he had to guess their weight – “Whiteheads probably weigh about 25g.” In 1983 I met Ian McLean (now of Canterbury University) and we discovered our common ambition of colour banding whiteheads on Little Barrier Island to see what we could learn about the lives of these elusive birds.

The whitehead or popokatea (*Mohoua albicilla*) occurs only in the North Island – in the South Island it is replaced by its slightly larger relative the yellowhead, and by the brown creeper which may have arisen as an alpine equivalent. On the mainland, whiteheads are largely restricted to fairly heavy bush, although in the Wellington area they move into settled areas adjacent to bush, and they have shown some ability to adapt to central North Island pine forests. Though they live in noisy groups they are not easy to see in tall, dense bush, and are not familiar birds to most of us. On the mainland north of a line from about Hamilton to Te Aroha, whiteheads died out last century, and in recent decades they disappeared from Great Barrier Island and its offlier Arid (Rakitu) Island. However, on Little Barrier Island whiteheads remain the commonest bird, and they are also common on Kapiti Island.

In 1984 and 1985 Ian and I banded nearly 180 whiteheads within a kilometre of the bunkhouse on Little Barrier Island. We were greatly assisted by Dick Veitch of the Wildlife Service, who was catching stitchbirds for transfer and whose netting teams caught many whiteheads. Each bird received a metal band and a unique combination of three plastic colour bands so that individuals could be recognised at a distance by those with the patience to follow such restless and fast moving birds. Ian concentrated on studying the breeding of whiteheads during two summers, whereas I kept long-term records of resightings. During five years I amassed some 2,000 records of individual whiteheads seen in particular grid-squares in particular months to help elucidate their population dynamics, a project sponsored by the Lottery Board. In 1986 David Allen began a study of the vocalisations of whiteheads, and two groups’ use of space, for an M.Sc degree.

Sparrow-sized

Whiteheads are a little smaller than sparrows. The back, wings and tail are pale brown, and the underparts and head are white or whitish. Males are supposed to have brighter white heads than females. As we caught birds we wrote down their presumed sex, but later behavioural observations of the same individuals showed that we were often wrong – numerous dull-headed birds turned out to be males. Our measurements of birds later sexed from their behaviour showed that

whiteheads weigh 12-20g with a very distinct separation of females (less than 16g) from males (16g or more). Certainly the birds with bright white heads and black legs were males, but so were many with dull heads and brown legs. It seems only the dominant breeding males have the bright colours.

Whiteheads feed mainly from leaves, twigs and branches at intermediate levels within the forest’s vertical structure. They have long legs. The ratio of tarsus length to wing length is 0.40 in whiteheads compared with 0.34 in silvereyes. With their strong legs whiteheads are masters of the dense twiggy foliage in which they hunt meticulously for arthropod prey, particularly beetles, caterpillars and spiders. Like tree creepers, they easily scramble up and down vertical trunks probing the crevices for food. Like titmice and chickadees they can hang upside down if necessary, and use a foot to grasp foliage in which food is hidden. They can use a foot to pin down items while they break them apart with their beak, and they use their solid bill to prise off fragments of bark under which prey shelter. They supplement their diet with the fruits of native trees such as hangehange, puta-putaweta, mahoe and rimu.

Outside the breeding season, whiteheads forage in mixed flocks with silvereyes, grey warblers, fantails, tits, chaffinches, saddlebacks and red-crowned and yellow-crowned parakeets. Whiteheads are endemic to New Zealand at the subfamily level, so their ancestors arrived here a very long time ago. Whiteheads seem perfectly good fliers when you see them moving about within the forest, but at the edge of the bush they are reluctant to fly from tree to tree across open ground. When they do they lose height as they fly suggesting that they have started on the road to flightlessness down which many New Zealand land birds have travelled.

Communal Breeders

In his 1925 book *Bird Life on Island and Shore*, Guthrie-Smith reported his observations of whiteheads nesting on Little Barrier Island, and declared that “The particular mystery connected with the nidification of the Whitehead was the number of individuals in attendance upon a single nest.” He found that “the vast proportion of Whiteheads’ nests are administered by four birds, not two birds” and he wondered whether the “quartettes” comprised two pairs or a cock and three hens. In 1966, Mr Blanshard, the Little Barrier ranger, published observations that he and his daughter made near their house where they saw three adults systematically visiting a whitehead nest.

Ian McLean’s observations of banded whiteheads in the first two summers soon confirmed our suspicions that the mystery at the whitehead nests was a form of what ornithologists now call communal breeding. This is a breeding system in which birds additional to the breeding pair help to feed the nestlings and fledglings. The more closely

ornithologists have looked for it in the past two decades, the more examples they have found, especially in the Australasian region. Other New Zealand birds known to breed communally are the pukeko, rifleman and yellowhead.

The clutch-size of whiteheads on Little Barrier Island is small (2-4, mean 2.8) so it is likely that only one female lays and that there is only one father at each nest. Some pairs raise a brood unaided, but in most cases there are up to six other birds actively feeding the young or more loosely associated. In most cases the extra attendants at the nest are probably young from previous broods. They are helping to feed their own siblings and so propagate many of their own genes.

This was certainly the case with the group living near the bunkhouse on Little Barrier, which we monitored for four years. The breeding pair was constant throughout. One nestling survived the 1984-85 summer and this young male helped feed nestlings and fledglings the following summer, only one of which survived. In the third summer of observation, both the latter bird and the young male helped feed the breeding pair’s latest progeny – their own siblings – three of which survived to the next summer.

I was able to calculate that whiteheads have an average life expectancy of about six years once independent of their parents – quite long for a small bird. The density of whiteheads in forest near the bunkhouse on Little Barrier Island is very high; perhaps 50-60 birds per hectare. Presumably there is pressure for breeding space and young birds may do best by remaining in extended families until a breeding opportunity becomes available, perhaps several years after they fledged.

The whitehead is a host of the migratory long-tailed cuckoo, a common bird on Little Barrier Island during spring and summer. We hoped to collect information on parasitism by this species, but in the summers when Ian was closely following whitehead nests on the lower slopes near the bunkhouse, none was parasitised. Yet when he went to higher altitudes he saw several young cuckoos being raised by whiteheads. It seems the cuckoos breed only higher up the island, a phenomenon we do not understand.

Future Prospects

The yellowhead has declined alarmingly in recent decades. Whiteheads remain widespread on the North Island mainland but there is no information on precisely how well they are doing. The liberation of whiteheads on Tiritiri Matangi Island in September 1989 offers hope that a viable population can be established there enabling many more New Zealanders to meet these charming birds. 🐦

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