

THE BROWN TEAL IN THE AUCKLAND PROVINCE

By H. R. McKENZIE

The Brown Teal, or Brown Duck *Anas aucklandica chlorotis*, has obviously been an inhabitant of New Zealand from early times, many millenia before the advent of man. Oliver, 1955, records that the Brown Duck (Brown Teal) was collected about 1840 by P. Earl, who sent specimens to the British Museum, and that Potts found the first recorded nest in Canterbury in 1870. Oliver describes the species fully.

This fine little duck, plentiful throughout the lower country in the nineteenth century (E. G. Turbott, 1967) has, like so many other species, suffered severely through European settlement so that it is now represented only on Great Barrier Island in fairly good numbers, on Little Barrier Island by a few birds, in Northland by scattered small flocks and small parties, in the Waikato and perhaps the Bay of Plenty by odd pairs and by a few in South Fiordland and on Stewart Island.

HABITS AND HABITAT

Seldom would this bird be found in streams where the flow was rapid, or even steady. Bends in creeks and the lagoons formed in old watercourses were favoured. Ponds, lakes and open water in swamps were used if they had loafing stands and cover about them.

In winter and spring, in my experience of 1902 to 1915 at Clevedon, South of Auckland, and at Wayby, near Wellsford, north of Auckland, dusk would bring them flying down from the rough gully-heads and small swamps of the hills to land on any small body of water and walk out onto the grass to feed. At this time of year many of these would be breeding. G. K. McKenzie (pers. comm.) spent the years between 1919 and 1935 mostly on the high country about Waipu, latterly farming along the top of the Brynderwyn Range, up to c.1300 feet, on the south side of the Waipu basin. On all of the high country the Brown Teal occupied the gully-heads right to the tops, one of his sheepdogs often catching them there. These birds probably flew down to the grassed flats of Waipu at evening. This habit seems to have died away, most likely because the small numbers latterly had not so much pressure on the nesting sites and could breed about the several creeks. Wildlife rangers with well trained dogs, have, in recent years, not found any in the high gullies.

The Brown Teal is very innocent and prefers not to fly. When encompassed by watchers it will disappear under overhanging cover and crawl onto land under rank growth for several yards, where it will remain motionless. This has been experienced more than once when someone has stepped inadvertently on the bird.

FEEDING

The Brown Teal is a dabbling duck so is fond of shallow, still, or slow-flowing water with aquatic vegetation and swampy growth. Its fondness for feeding over grass paddocks is of course an adaptation following the clearing of the bush. The late Maurice E. Fitzgerald, who studied this bird exhaustively, held that it was well worth encouraging for the good work it would do in taking large quantities of harmful insects and their larvae on the pastures. It feeds at night when the pests are abroad. In my sixty-nine years of knowledge of the Brown Teal I cannot recollect seeing it feed in daylight, but A. T. Edgar (pers. comm.) has noted aquatic feeding occasionally. In the pre-European settlement days it must have been quite restricted in its feeding range, except in the larger swamps. Where swamps were scarce it could well have depended considerably on the tidal flats. I have a record of seven in a party on 15/2/46 at 10.30 p.m., seen in moonlight and heard calling, from the footbridge over the Ruakaka estuary, feeding on the exposed mudflat. It possibly fed also to some extent on the floor of the native forest where is used to occur on landslip dams in creeks many miles from open country.

The Auckland Island sub-species *Anas aucklandica aucklandica* and the Campbell Island sub-species *Anas aucklandica nesiotis* feed on the seashore and in the kelp as well as inland and in fresh water.

FLOCKING

Flocking is a habit important to this duck, perhaps almost vital to it. After the extended breeding season it used to be common to see flocks of 300 or more in creeks and rivers at the tidal limit and on lakes, lagoons, ponds and sluggish streams. The flocking period was from part way through November to April and into May. When the great decline happened in the early 1900s the flocks nearly all melted away to small groups or nothing at all. Where the species did not completely disappear the birds of the small parties left seemed to lose the social comfort of the flock and become lost as to locality. In recent years single birds and a very few small lots of up to six have turned up in places not inhabited for many years. This has been particularly noted in North Auckland, Auckland and Waikato. Instances have been: (a) North Auckland, at Kaiwaka and Port Albert (see Recording Scheme); (b) at the sewage ponds at Mangere six were found on 28/12/64. They soon dwindled, the last one staying for some time, but not seen after 11/1/67; (c) in the Waikato district no flock or party is now known, but odd ones keep turning up, usually shot in error or in ignorance; (d) the small surviving remnants about the upper Coromandel Peninsula seem to provide an example of such dispersal. D. V. Merton (pers. comm.). Besides the pitifully thinly scattered birds of the upper peninsula odd ones have turned up further down the coast but have not permanently established.

In no case have small lots and odd wanderers been known to become established and to have increased. Larger parties (in Northland) can appear in new places as a result of a change in locality to more favourable conditions. Increase by breeding can result only where there is suitable environment and strict protection. A clear instance of this is provided by the appearance on new dams on the property of A. T. Edgar (pers. comm. and Recording Scheme)

at Kerikeri of 9 birds on 12/2/62, then on to 20 up to 1963 and 29 in February, 1970. The rise was not steady, numbers fluctuating throughout the period from 0 to 29, indicating the unfortunate habit of moving away from protected areas. Had they stayed altogether on these protected dams the natural increase could well have been considerable. Even so the result is good, the numbers having been more than maintained over a period of eight years. It is to be noted however that this initially was a transfer in number. To think that odd birds appearing in odd places indicates an increase and spread of population is quite unjustified.

THE GREAT DECREASE

Old records tell little of the numbers present when the Europeans came to New Zealand, but it is known that almost all of the lower country was occupied. The clearing of the land, prior to the large-scale draining of the swamps, must have increased the food supply and consequently the population for the time being, say up to the late 1880s. Trouble then came from the increase in introduced vermin, closer settlement, wholesale draining of swamps and a great increase in shooting, so that in the early 1900s their numbers were under pressure.

Then came the disastrous step downward. It may well be that in addition to the above causes an introduced poultry disease struck the Brown Teal at the same time as some such fatal factor struck the Weka. This was somewhere in the period 1916 to 1921. In the case of both birds there appeared to be a spread of trouble from the centre outwards, leaving free, or comparatively so, a large area north of Wellsford and Port Albert. For the Teal Great Brarier Island was not affected, while a few were left at and about the top of the Coromandel Peninsula, with very small lots elsewhere. The Weka faded right out from Waipu to Gisborne. The great Teal populations of North Auckland, Auckland, Waikato, Coromandel area, Bay of Plenty, Gisborne and Wairoa simply vanished. It would seem that a virulent virus behaved in the same way as did the "Great Flu" (influenza epidemic) of 1918, which in its case started violently at a centre (Auckland) and eased as it spread out. The few Teal left in the affected areas seemed to lack the necessary vigour to stage a recovery.

The Northland population may have suffered too to some extent from the same cause at this time, but was nevertheless quite well maintained. Then it was hit by the second step downward for the species. This was irregular as to locality and lasted over a lengthy period, from about 1930 to about 1965.

Mrs. Madge Hows, of Awanui (pers. comm.), writes to the effect that at Takou and Otoroa in the Mangonui area and at Parua Bay, near Whangarei, the Brown Teal were in their hundreds about the late 1920s and 1930s. At Parua Bay they used to fly down from the bush to the bay after dark and ducks and ducklings would wander about the home garden, also after dark. Very soon they decreased and were quite scarce. The Weka was plentiful there also but about 1937-38 it failed. A neighbour, of "Stony Mountain," found dead ones under boulders and other cover. This could indicate that a common disease had hit both the Weka and the Teal in this district.

C. W. Kokich, of Kokopu, near Whangarei (pers. comm.), states that about 1925 to about 1930, when he was a youth, a stretch of about a third of a mile upstream from the Mangere Falls, on the Mangere River, carried about 500 Teal and oldtimers said there had been more. Other flocks were scattered along this small river, right up to its source in the Western Hills, just west of Whangarei. The crash came from about 1930 to 1935 or so and they faded right out, except for small lots visiting at times, but not staying. The Kokich property and some others were closed to shooting, but not those on each side of the Mangere Falls area and some of those further upstream. The Pukeko was then so rare as to be not a destructive factor. Mr. Kokich has made extensive studies of duck rearing in the wild on his farm.

In 1958 I carried out a survey in an arc up to about 20 miles from Whangarei, including Mangapai, Maungakarama, Tangihua, Titoki, Parakao, Aponga and Purua. Every informant said he used to have plenty in his creek or on his farm but none seen for two, four, six or eight years now. In 1934 there were still about six in a small creek near Onerahi and three were seen in the Otaika River, but these soon disappeared.

Kaeo, Northland, is a well known haunt which in its river had in the 1950s a flock of up to 200. No doubt the flock would have been 500 or so in the early days. On 4/2/55 R. B. Sibson and V. M. Rutherford had c.120 (*Notornis* 6, 199). In August 1955, a winter count, T. M. Roberts (pers. comm.) had 39. On 31/3/56 J. and A. Prickett, 60 and on 20/4/57, 184. On 15/1/58, R. B. Sibson, 90. Early 1958, W. M. Garner, 80+. A. T. Edgar (pers. comm. and Recording Scheme), records of several visits each year from 1961 to 1970 showed the maximum counts to decrease from 62 in 1961 and 1962 to 30 in 1970.

At Helena Bay, at Teale's farm, about 1955, with J. and A. Prickett, I saw a flock of 17 and in April, 1965, D. V. Merton (official Wildlife Report) 32. I have heard that it was shot out by campers.

The whole of Auckland is covered in a comprehensive official report, 19/5/64, by D. V. Merton, now Chief Conservation Officer of the Internal Affairs Department. Numerous localities are treated and information has been painstakingly gathered. He concluded that the decline has been extensive and is continuing in peripheral areas. The subspecies must therefore be regarded as endangered even though some remnant colonies elsewhere appear to be relatively stable.

For Whitianga, D. V. Merton (pers. comm.) reports, 10/3/65, "None heard of for many years now. Numbers decreased 35 years ago" (W. McLeod). In the late summer of 1909 I saw a flock of c.75 at the tidal limit of the Kaimarama River. I heard of other flocks in the streams running into the Whitianga estuary.

At Katikati, Bay of Plenty, G. Henry (pers. comm.) remembers the species to have been plentiful in the many creeks leading quickly down from the hills to the sea, each with its slack water estuary. *Only the long-standing residents can now remember it.*

At Te Araroa, near East Cape, in 1952, I met Mr. O. J. McLachlan, an old settler there of early days, who told me that the Brown Teal was once plentiful but now long absent.

Evidence that this Teal was once plentiful about Auckland is supplied by labelled skins of the 1880s in the Auckland War Memorial Museum from Ellerslie, Remuera and St. John's Lake. There are also two purporting to have come from Mayor Island in 1931.

In addition to the known causes of decrease there is much speculation as to the part played in this respect by the Pukeko *Porphyrio melanotus*. C. W. Kokich (pers. comm.) has told of Pukeko eating the cast eggs of Mallard about his farm steading, whereas at one of the dams back up the farm they did not touch the eggs in a prepared nest in their view. He also states that when the Kokopu flock in the Mangere River near his home dwindled to nothing from c.500 there was hardly a Pukeko to be seen. Mrs. A. Sundstedt wrote, in response to my letter in the "Northern Advocate," "I noticed in yesterday's 'Advocate' a piece relating to the disappearance of the native Brown Duck, so thought this might interest you. Most of my life I lived on a little farm at Umawera where we had a small creek running through it. Well, years ago there were numerous specimens of this duck, but of late years they became less and less. Several times during spring I used to hear cries of distress amongst these duck, so investigated the cause and found that Pukekos were killing and eating the little ducklings and we even had our three-quarter grown Indian Runner ducks killed by these birds. This no doubt accounts for one reason why the birds are disappearing." The Pukeko is evidently variable in its predatory habits.

There is some evidence that disease caused trouble in Northland but it was certainly not general. Relentless pressure from clearing and draining of habitat, predators and intensive shooting were no doubt the principal factors in this second decline, which left patches here and there, some fairly substantial, but now worn down to a dangerous level.

INQUIRIES AT WAIPU

When it was realised that the Brown Teal had gone completely from about Auckland, Waipu became quite a "Mecca" for the local ornithologists, it having the nearest approachable Brown Teal habitat. By this time numbers were becoming low and concern was felt for the future. The Internal Affairs Department made the lower five miles or so of the Waihoihoi Stream a "Closed Game Area" to stop shooting. Its Wildlife Branch officers started counting the teal on it from 28/8/50.

Counts were 28/8/50, 23; 23/1/52, 65; 9/9/53, 45; 14/1/55, 52; 22/2/56, 40; 30/10/56, 52. It is to be noted that the winter and spring counts are lower, the species being an early breeder and therefore scattered. Flocking after breeding accounts for the higher summer counts.

I strongly suspected that these counts of the lower Waihoihoi did not indicate the populations of the unprotected creeks in the Waipu watershed and that the total population could be alarmingly low. In 1958 I conceived the idea of taking a full census of the district to test this. I approached G. K. McKenzie of Clevedon, formerly of the Waipu area and fully acquainted with its people and the terrain. With a busy time on the telephone at long range

he arranged billets and permission to cross farm properties, at the same time gathering much up-to-date information. I called for ornithological volunteers and arranged transport and the teams to work the several creeks. I invited the Controller of Wildlife to have staff join us and this was accepted. I cannot speak too highly of the gracious hospitality and co-operation of the people of Waipu, both for this 1958 census and that of 1963.

This census of 18-19/7/58 gave a count of 19 for the 5 miles or so of the Waihoihoi Closed Game Area and 58 for the other 60 or so miles of creeks. Wildlife Waihoihoi counts following this were 26/8/59, 18; 2/2/61, 9; 10/8/61, 6.

The second census of 30-31/5/63 produced 13 for Waihoihoi and 35 for the rest of the area. Further Waihoihoi Wildlife counts were 8/7/64, 2; 9/10/64, 2; 3/3/65, 4; 21/7/65, 0; 1/9/65, 5. This shows the futility of counting rare species and doing nothing else.

The 1958 census, as pointed out by Logan C. Bell (pers. comm.), was in the early part of the breeding season so not entirely satisfactory since if it had been taken earlier higher numbers would have shown the decline to the 1963 count to have been more severe.

PUBLICITY

On 13/1/53, after I had made the survey around inland from Whangarei, I wrote to the Whangarei Native Forest and Bird Protection Society, urging attention to the loss of the bird in so much of the area and suggesting publicity. Nothing resulted from this and further correspondence. Mrs. O. Cullen, of Whangarei, took the matter up earnestly and her death was a loss to the cause. Mrs. A. Sundstedt contributed useful information, as did C. W. Kokich.

On 16/1/53 the newspaper "The Northern Advocate" printed for me the following letter:

"VANISHING DUCK. The Teal Duck, now known as the Brown Duck *Elasmonetta chlorotis*, appears to be in grave danger of becoming extinct. Numerous throughout the country about 30 years ago, it suddenly disappeared, except for remnants in Northland, the south-west Sounds of the South Island and Stewart Island. Now, though protected by law, it seems to be fading again in Northland.

A recent partial survey by the writer of the farming districts about Whangarei, from Mangapai to Pipiwai, makes a sad story. The invariable response to enquiries was that the teal had been plentiful a few years ago but had not been seen now for two, four or six years. It is still present at Waipu and Ruakaka, where strict protection has been practised.

It is hoped that any farmers finding this bird on their property will get their neighbours to co-operate in saving it, preventing illegal shooting and warning legal sportsmen of its presence. To keep this harmless and engaging little native duck from dying out should be worth considerable effort.

H. R. McKenzie, Clevedon."

This letter was of course too late, as the teal had already practically died out in the Whangarei area, but more could have been done about Waipu and Ruakaka; also further north.

THE FUTURE

The provision of protection is the only hope for the species. C. W. Kokich, Kokopu, Whangarei, with his set of dams, has amply proved that Grey Duck and Mallard can, without other help, withstand the pressure from natural enemies if given suitable habitat and safety from shooting. No doubt the same would apply to the Brown Teal. In its case one of the chief obstacles is its habit of moving from one area to another so that a very large range is required. Ordinarily this can be provided only by having a group of large farms, with suitable water and cover, closed to shooting. Some Teal would of course wander over the boundary and be shot, but there would still be a nucleus at least.

Absolute protection is the answer to the near-miracle of the presence of this bird on Little Barrier Island, where there is no open water, swamp or mudflat. A detailed account of its residence and breeding is given by R. H. Blanshard (Notornis 11, 49-51).

The position at Great Barrier Island is good at present, with only moderate shooting, but danger lies ahead in the form of the development which is sure to come.

The dams on A. T. Edgar's farm at Kerikeri have not enough neighbouring closed country to ensure much increase, but as long as he owns the property there will be a nucleus. Properties changing hands is a menace to the group-of-farms scheme, which nevertheless is the right policy to be pursued. We have no sanctuaries large enough or suitable for the species. Wildlife has raised some Brown Teal at its Mt. Bruce establishment and a few have been put on Kapiti Island, where at least one brood has since been observed. The aim is to have the species breed under protection there and then to spread naturally to the chain of lakes, lagoons and swamps along near the west coast of the Wellington Province. The plan is good but the heavy shooting over that area may well defeat it.

Breeding by farmers and others, under permit, on closed groups of farms should be preferable to transfers of adult birds. Ducklings hatched and reared by a domestic duck may feel the place to be their home base, even if they move away at first. A. T. Edgar (pers. comm.) has had the experience with Brown Teal breeding on his dams of the young, when full grown, leaving the area sooner than the parent. It is not of course known whether the same ones return later. Experiment is urgently necessary. Private persons, if advised of the unhappy prospects for the Brown Teal, would surely be glad to give a helping hand if they had permission and encouragement.

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