

EXPERIENCES WITH PARADISE SHELDUCKS

By M. E. W. FITZGERALD

The note on the sexing of Paradise Shelducks (*T. variegata*) (*Notornis* XII, 244) has prompted me to submit the following notes which are based upon personal experiences on the "pumice plateau" lying to the north of Lake Taupo and including Lakes Rotomahana and Rerewhakaaitu. They concern numerous birds caught as downies or reared from eggs collected from nests, both wild and tame, and reared to adulthood.

BEHAVIOUR CYCLE

At Christmas-time the birds will be found on Rotomahana and other remote lakes, living in peace with each other. The adults are then in full moult and flightless. A few months later the urge to peg out territories will take a hand and (in at least one well authenticated case) a female will return to her accustomed nesting area accompanied by four or five males. Within a week or two there will be only one male with her. He may be the husband of last year or he may not. If all is well she will use the same nest as previously, but otherwise she may find a new spot more to her liking. If the first clutch meets with failure she will lose no time in laying again in the same vicinity. During November and early December the parents will be seen urging the chicks to use their wings and giving flying lessons. During the last half of December the whole family will repair to the tribal lake to complete the annual cycle.

INDIVIDUAL CHARACTERISTICS

My notes about development of chicks are based upon downies from at least two "wild" sources as well as eggs taken from another source and reared in captivity. There is therefore little likelihood that conclusions are the outcome of individual peculiarities. I formed the opinion that all pairs over a wide region commence to lay on the same day though the date may vary from year to year. This accords with reports that wild shelducks in remote parts of Europe and Asia are farmed by the peasantry according to a plan dictated by their priests. The story is that underground runways are built with an access lid over the nest cavity; after the ducks have laid the first egg the people are allowed to remove one egg per day, always leaving one in the nest, until about eight have been collected; the hens continue to lay until they have a normal clutch to sit on and rear.

MATING AND NESTING INSTINCTS

When the late Colonel Sawyer took over control of Auckland Zoo there were Paradise Ducks in a large enclosure which showed no inclination to breed. At the same time several pairs of Egyptian Geese had the free run of the whole park and regularly brought clutches down for caretakers and patrons to feed. At my suggestion the Colonel reversed matters; locking up the geese and disposing of the unwanted surplus and gave two or three pairs of Paradise the free run. Thereafter the Paradise brought forth an annual supply of chicks which were traded with overseas zoos for specimens which Auckland wanted. After his visit to New Zealand, Charles Darwin made special mention of the sex reversal in plumage behaviour of Paradise. European breeders have reported a pronounced tendency for females to go into eclipse. Some

have said that it is the female which selects the partner and that mating in captivity can best be accomplished by placing one female and several males in the same enclosure. My own experience points strongly in that direction.

CONSTANCY

The often expressed opinion that some birds mate for life has been applied to Paradise. I can well believe that there is a tendency for that to happen if there is no interruption to the marital tie. The older the birds are and the longer the relationship lasts the stronger the tie will become. I have seen it with pigeons I once owned. When an old and long married pair lose one, the other will usually fret and fade away, dying of a broken heart. The Paradise hen which was kept under close observation by a pumice land farmer and myself over a period of six or eight years (I am convinced it was always the same hen though not so sure about the male) used always to lay in the same hole in a rocky cliff above a small stream. The hole, no more than three feet long, was about 200 yards from the homestead. Members of the household walked past it almost daily and frequently looked in and spoke to the brooding bird. One season a batch of Indian Runner duck eggs was substituted for those of the Paradise. This was effected by blinding the hen by torchlight and giving her the previously warmed up runner eggs in exchange for her own. The domestic ducks were duly hatched and reared. It was truly ludicrous to see the efforts made by the parents to induce their children to become airborne. In the end they flew away, leaving the Runners behind.

It was inevitable that, as more and more people got to know about this nest someone should rob it in broad daylight and give the sitting hen a bad fright. The male should not have allowed this to happen. It was his duty and invariable habit to be on sentry go at some distance and to give a warning shout whenever strangers were approaching, to enable his mate to slip unobtrusively off the nest and decoy the intruders away. He had not done so for the simple reason that he was dead. His corpse was found later against a wire fence, into which he had probably crashed with fatal results. Now, it so happened that there was a tame pinioned Paradise drake in the homestead garden which was enclosed by wire netting. Within a few days the widow was seen to alight in the garden and to make friends with that male. She soon went to nest again at a new site. This nest was also robbed and again an erring husband had failed in his duty as sentry. The hen was not seen again for several days, but she then came back with about three males in attendance and a little later only one was with her. It is believed that she nested a third time but there is no concrete evidence to support that belief.

SEXING OF CHICKS

You are probably familiar with the contrasting stances of the adults when honking. Females hold the head high and at each clarion call flick the bill up. Males, by contrast, hold the head with bill horizontal and about two inches from the ground while uttering a deep toned grunt. This stance is also used when tame males are charging or threatening their human friend or his dog. On one occasion I had two bantams sharing duty as fosterers for twelve Paradise downies which came from a single clutch. Noticing that some of the

chicks (only a few days old) adopted the head-down stance when moving about, I resorted them, giving one hen six which used the head-down style and they all proved to be males. The other six, reared in a separate enclosure, turned out to be females. First feathers appear on breasts at the age of five or six weeks when females can usually be distinguished by a brownish tinge on their grey breasts — males being pure grey. First head feathers of both sexes are black and here the males frequently have a few random white flecks. In the females a well defined white edge appears against the beak at the age of nine weeks. At eleven weeks this white band has extended to about half way from edge to the eye and a white ring around the eye itself has begun to form.

My series of photos taken at the time shows the female of the pair at eleven weeks with patches of white appearing at random spots and another, when she is six months old, in full adult colours.

INCUBATION

In my experience, the period of incubation is thirty days dated from the time of placing a fresh cold egg under a hen or in an incubator. In nature the first egg of a clutch is left exposed to atmospheric temperatures for nearly twenty-four hours a day. As the days pass the eggs get a feather quilt which conserves the heat gathered from the laying hen and she spends an increasing amount of time on the nest. On laying the pen-ultimate egg she begins, at once, to sit in real earnest. Yet she will lay one more egg (which is never allowed to get cold) the next day (even two days later in the case of Scaup). In the case of the duck tribe, all eggs in the clutch hatch simultaneously. How come? When in doubt about the state of incubation of eggs in a newly discovered nest, the water test is recommended. Place the eggs in still water (in a glass bowl is best). Quite fresh eggs will lie horizontally on the bottom. By the end of the first week (if alive) of incubation, they will touch bottom with big end up and axis at an angle of 45 degrees. At about two weeks they will be perpendicular and tending to leave the bottom. At three weeks they will be breaking surface. During the last week they will float and assume an angle of about 45 degrees with a portion equal to about the size of the original air-space above the surface. Bad eggs will by now often assume an upright position with far too big a section above water level. Within three or four days from chipping each egg will show that the live chick within is moving (be careful to avoid disturbance by your breath or other breeze while observing) and during the final two days the chick will be giving distinct kicks. Be careful not to test once the egg has chipped. Else you may drown the chick.

AN INCIDENT

On one occasion I gave Paradise eggs to a broody Muscovy. The day after they hatched they escaped from their coop and went to a lone Paradise female running loose in our orchard. She promptly adopted them and, in due course, reared them. This female, which had always preferred my company to that of any of the males I had introduced to her, had never mated nor ever laid an egg.

[It is a pleasure to publish these comments from one of our very senior members. Mr. Fitzgerald has often been urged to describe his experiences with New Zealand waterfowl. To quote his own words: "The fact that I served with the 7th N.Z.M.R. in the South African

War will help to carbon-date me and go to show that at least part of my activities belong to that golden era when it was not a crime to rob nests and to rear the chicks as pets. There was the time when I had to show Guthrie-Smith my collection of live Brown Duck to convince him how plentiful they still were from Waipu northwards, where they were being called "Black Teal" and the occasion when I accompanied Edgar Stead to Waipu in order to convince him, too. I also set Stead on the road to breed hybrid Kakariki." — Ed.]



ITEMS OF SPECIAL INTEREST FROM THE 13th ANNUAL REPORT OF THE NEW ZEALAND BIRD BANDING SCHEME

On 1/4/62 the Dominion Museum, Wellington, assumed full responsibility for the Banding Scheme, which the O.S.N.Z. had initiated in 1946. As the scheme expanded, annual reports were issued. For the sake of continuity the present report is called the thirteenth. It covers 32 pages.

During the year ending 31/3/63, 80 species were banded including the following species not banded before with N.Z. rings:— Fulmar Prion, Wedge-tailed Shearwater, Black Petrel, Cook's Petrel, Gould Petrel, Red-tailed Tropic Bird, Stewart Island Shag, White-faced Heron, Australian Bittern, Antarctic Tern, Yellow-breasted Tit, South Island Robin, Cirl Bunting. The total of species now banded within the N.Z. scheme stands at 114. More details of a Gould Petrel which visited the Brothers Islands, would have been welcome.

The transit of the South Pacific by young Royal Albatrosses is further confirmed by three recoveries from Chile. Two White-capped Mollymawks were reported in South Africa, one more than five years after being banded off Cape Campbell. Six Cape Pigeons banded in Cook Strait were recovered more than six years later from widely scattered localities; and another ringed in August in the Tory Channel whaling station had travelled to Laurie Island, South Orkneys, within two months. Did it return to its breeding station by the E.S.E. or the W.S.W. route, 6000 miles either way? Two Giant Petrels banded as nestlings at Signey Island, South Orkneys, reached New Zealand within six months.

The usual crop of immature Gannets from the Australian coast between Queensland and South Australia is reported.

If we may leave the oceanic wanderers for a moment to mention a very much earth-bound species, remarkable perseverance in homing was shown by a young Weka which tramped 80 miles from Puketapu (H.B.) back to Manutuke (P.B.).

The pattern of gull and tern movements is slowly becoming clearer. While some young Black-backed and Red-billed Gulls wander southwards in their first autumn, there is a marked tendency for Black-billed Gulls to move northwards. Further evidence is provided for the northward movement of young Caspian Terns. Two more White-fronted Terns have been found in New South Wales at the end of their first year.

— R.B.S.