

THE ROYALS OF TAIAROA

A CONSERVATION PROJECT

Albatrosses on remote storm-bound islands have little to fear, but when these large, conspicuous birds nest near a city it presents a very different situation. Between 1914 and 1919 royal albatrosses were known to land at Taiaroa Head and in 1920 the first egg was found there. Beginning in 1937, the Otago Branch of the Royal Society of New Zealand and Dr L. E. Richdale, an ornithologist of Dunedin, strove to protect the colony from interference. Their efforts were rewarded in 1938 when the first Taiaroa-reared chick flew. In 1951 a full-time field officer was appointed to act as caretaker of the albatross colony and as wildlife ranger for Otago Peninsula.

From 1937 Dr Richdale studied these and other birds, especially yellow-eyed penguins, and published his findings in several books, scientific papers and pamphlets. His studies, and those since, include the banding of nesting albatross and chicks. The numbered band, clipped loosely about the leg, allows the life story of each bird to be recorded. Since all Taiaroa birds and chicks are banded, they can be distinguished from other albatross that are sometimes attracted to Taiaroa Head and may stay to breed. The size of the colony has slowly increased and now consists of 90 to 100 birds.

It has been difficult to protect the birds from introduced predators (cats, dogs, ferrets and stoats) and the natural curiosity of visitors can have a damaging effect. Rabbits threaten soil and vegetation, fire is an ever-present danger and the variation of climate and food supply have their indirect effect. These problems have been largely overcome by erecting and maintaining fences to prevent unauthorised public access and by the vigilance of the local field staff.

The first public reception centre and viewing observatory was opened in 1972. The Otago Peninsula Trust has been given authority by the Department of Conservation to operate tours into the colony area at certain times of the year. The numbers of visitors using the observatory are strictly controlled to ensure that the birds continue to remain free from disturbance and, given this protection, the colony will continue to grow. Tour fees are used for a number of conservation projects on the peninsula, including assistance to the Department of Conservation for research and management of the colony.

The breeding birds arrive at Taiaroa Head in September. The nest, built during early November, is formed by a bird sitting down and pulling vegetation and earth around itself with its bill. The white egg weighing up to 500

grams is laid during the first three weeks of November. The parents share incubation duty in spells of two to eight days over a period of 11 weeks - one of the longest incubation periods of any bird. The incubating bird sleeps much of the time its mate is away. When the chick has hatched, the parents take turns at guarding it for the first 30 to 40 days and the feeding of the chick is also shared by both parents. Nearly 12 months after their arrival at Taiaroa Head, having cared for egg and chick over a period of some 300 days, the parents will leave the colony to spend a year at sea before returning to breed again.

The chicks hatch during late January and early February. It takes about three days to finally emerge from the egg after making a hole in the shell. For the first 20 days the chick is fed on demand, then meals decrease to three or four times a week. At 100 days the chick's down reaches a maximum length of 12 centimetres. At this age the chick is fed with larger meals, up to two kilograms at a time, of more solid substance.



From early August the chick is fed lighter meals and in September when fully fledged it wanders from the nest testing its outstretched wings and eventually takes off with the aid of a strong wind. The young albatross will spend the next three to six years at sea and may then return to this unique headland to start another generation of Royals of Taiaroa.

FORT TAIAROA

Taiaroa Head (originally known as Pukekura) has served as a natural refuge and defensive position from the earliest human occupation. The first Maoris visited this coast around 700 years ago for seasonal food gathering, until eventually the occasional visits turned into permanent occupation and a fortified village (Pa) was built on the headland.

From the early days of European settlement, signalmen and pilots were based at Taiaroa Head. In 1864 the lighthouse was built and the lighthouse keepers joined the growing community. When New Zealand became a British Colony in 1840 England was expected to provide protection from enemies, however in the 1870's New Zealand was made responsible for its own land defence and a scheme was prepared to defend the major ports. In 1885 as a result of the threat of war between Britain and Russia over the Russian invasion of Afghanistan, the construction of Fort Taiaroa began. The addition of barracks and militiamen meant that by the turn of the century there were over 100 people living permanently at Taiaroa Head.

Six gun batteries were installed between 1885 and 1905. The batteries were equipped with eight guns, including

three 64 Pounder Rifled Muzzle Loaders with a range of 3,500 yards, one seven inch, seven ton RML with a range of 4,000 yards, the six inch Armstrong Disappearing Gun with a range of 8,800 yards. To combat fast enemy torpedo boats, there was one six pounder and two 12 pounder quick firing guns.

These gun emplacements were concealed with earth parapets, as earlier gun emplacements constructed overseas in the classical stone fort style had proved to be vulnerable. The stone forts were easily visible and with advances in optics the enemy gun layers could get an accurate range by focusing on the sharp outlines of the structure. Forts of stone and masonry construction proved to be more dangerous under bombardment than the new system, as incoming shells penetrated the soft earthen material and caused much less injury when exploding.

The Armstrong Disappearing Gun

This six inch breech loading gun on a hydro-pneumatic carriage; in total weighing approximately 18 tons, was manufactured in 1886 by W. G. Armstrong & Co. at Newcastle-upon-Tyne, England and was tested at Taiaroa Head in June 1889. The retracting carriage was invented in 1879 by Moncrieff and Armstrong had improved it by using a hand pumped water and air ram system to raise the gun to the firing position above ground level. On firing, the ram system was recompressed as the gun recoiled into the gun pit for reloading. Such was the pace of change in armaments at the time that, despite being the latest in technology in 1885, the Armstrong Disappearing Gun was quickly overtaken by more effective guns and was virtually obsolete by 1912.

The restoration of Fort Taiaroa's Gun started in 1972, initiated by the Otago Antique Arms Association.

Technical detail of the 6 Inch Rifled Breech Loading Armstrong Gun and Hydro-Pneumatic Carriage:

Serial No:	4809
Manufactured:	1886
Calibre:	6 inches
Weight:	5 ton barrel
Length:	17ft 6"
Projectile:	100 pound
Range:	8,800 yards (5 miles)
Rate of fire:	1 round per minute
Elevation:	15 degrees Max.
Depression:	5 degrees Max.
Detachment:	9 personnel.

