RELOCATION OF PIED SHAG COLONY IN NELSON CITY

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It may be necessary from time to time to relocate seabird colonies for a number of reasons. For instance, an existing colony may have become a nuisance to nearby residents or be endangered by human interference or predators; or one may want to re-establish a breeding species that has become locally extinct. Several seabird relocation projects are at present being carried out in New Zealand. This note deals with the relocation of a colony of Pied Shags (*Pharacrocorax varius*) in Nelson City.

For 30-40 years, Pied Shags have roosted with Little Shags (*P.melanoleucos brevirostris*) in Norfolk pine trees on the land side of Rocks Road, which runs beside the southern end of Nelson Haven (Owen & Sell 1985, Perrine Moncrieff, pers. comm. 1978). In 1979, three pairs of Pied Shags began nesting in the Norfolk pines. The colony then gradually increased, until 40 nests were counted in June 1988, all with young or eggs, and at night some 160 shags were roosting in the trees. In the early 1980s, the Nelson City Council became concerned about such a large colony because some residents living nearby were complaining about the smell, the drift of faecal matter, the noise, and an increase of rats attributed to the abundance of fish scraps under the trees. Low-flying birds were frequently hit by passing cars, and juveniles were maimed or killed walking across the road.

Brian D. Bell (Wildlife Service) was approached by the Nelson City Council to determine the best way to remove the colony. Bell suggested building a simple structure in Nelson Haven of upright poles with cross bars and easy access to and from the water, similar to one built in the Vernon Lagoon, Marlborough, by W.F. Cash (Wildlife Service). This structure had proved highly successful. Bell also promoted the idea of encouraging nesting on the adjacent Haulashore Island (Figure 1).

At the time the City Council took up neither of these options, although they did try to discourage the shags from using the site by erecting electric lights up through the trees. Apart from creating a Christmas-like atmosphere, the scheme did not succeed because shags go to roost before dark; indeed the shags seemed to enjoy the apparent warmth of the lights.

In 1989, the problem of juvenile shags which needed taking into care became too much for the local SPCA, and HFH put forward a further proposal to open up some of the radiata pines on Haulashore Island and erect wooden cut-outs of Pied Shags within the branches, at the same time removing one or two Norfolk pines being used for nesting to put pressure on the shags to seek an alternative site. The nests from these trees would then be placed within the pruned trees on the island. This proposal was sent to the then Minister of Conservation, Phillip Woolaston.

FIGURE 1 — Haulashore Island in foreground with Rocks Road running across photo alongside Nelson Haven. The Pied Shags were nesting in Norfolk pine trees immediately behind the road in the centre of the photo. They are now nesting in perimeter pines on the island.
Photo: Kerry Barton, DSIR, Nelson

Cut-outs of Pied Shags were made by HFH, who presented several to the local Department of Conservation to get them started. The Department liaised with the City Council, who made their tree specialist available, and a team of City Council staff and HFH began the task of pruning some of the pines at the southern end of Haulashore Island and placing the cut-outs in the branches. A liberal splashing of white paint made the pines resemble a shaggery.

With the help of the Department and the Nelson Harbour Board, the old wharf site near the harbour entrance was used to make an alternative site, but the shags have never used this site.

As the tops were cut out of the trees in Rocks Road, the nests were salvaged and placed in the pines on Haulashore Island. It was noted that the nests were largely constructed out of branches but also man-made material such as plastic fish-box strapping and plastic bags, pieces of netting, fishing lines together with fish hooks, wire, and even a dog lead. It was obvious that many of the nests had been used for a number of seasons and had become quite large, one even having a dead bird within its layers. Faecal material had cemented the nests into a solid mass, which could be dislodged from the trees only by cutting the branches. Nelson Pied Shags nest during most of the year with a break in the breeding in mid-summer (Serventy *et al.* 1972, Lalas 1979, Taylor 1987, Marchant *et al.* 1990). The removal of the tops of the Norfolk pines was therefore carried out during December and January.

A few birds, too young to survive on their own, were taken into care and later released. Unfortunately the rehabilitated birds became quite tame and used to beg for fish from children fishing on the wharves. People would catch these birds, presuming they were ill, and return them to the SPCA.

In 1990, a small colony became established in already dead and dying radiata pines at the northern end of Haulashore Island. As more trees on the mainland were cut, the pressure on nesting sites increased and shags began to breed in the pruned trees at the southern end and eventually in other trees around the perimeter of the island. When the top was cut from the second-to-last tree on one part of Rocks Road, one nest contained two juveniles too young to be released into the Haven. Rather than have the birds taken into care, the nest was placed in the last adjoining tree with the hope that the parents would continue feeding them. The nest was marked with dazzle to make it easy for a nearby resident to maintain a careful watch. It took 12 hours for the first adult to return and begin feeding the young birds, and within 18 hours both adults were feeding their young. The last tree at that particular site has since been removed, as have two trees further along the road, which were also being used by shags.

On 14 June 1991, JMH counted 56 nests, 58 adults and 116 juvenile birds on Haulashore Island between 0930 and 1100. Some of the nests may have contained eggs. Most of the adults and some of the juveniles were out feeding and roosting elsewhere. At that time only two nests remained in the Rocks Road trees. On an evening count with a spotlight some four days later, JMH and HFH counted 300 birds roosting in the island trees. On 2 October 1991, a further nest count showed an increase to 79 nests on the island.

Pied Shags have also begun nesting in two of the radiata pine trees on the Boulder Bank about 4 km from Haulashore Island, and 11 nests were counted there on 4 November 1991.

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SHORT NOTE

A Wandering Albatross with abnormal underwing plumage

During December 1988, the CSIRO research vessel *Franklin* was working in the subtropical convergence zone in the southern Tasman Sea between Tasmania and the South Island of New Zealand.

On the morning of 12 December in position 43°30′ S 160°35′ E, some 284 nautical miles (526 km) WNW from Dusky Sound, about 25 Wandering Albatrosses (*Diomedea exulans*) were following and accompanying the ship. One of these was seen by NGC to have abnormal underwing markings. This bird stayed near the ship for about an hour, and after much effort MJC obtained several photographs.

The upperparts of the bird including the bill appeared to be normal, being consistent with Wandering Albatross plumage stage 4, illustrated by Harrison (1983a). The underwings were abnormal, being white with symmetrical black markings very similar to the pattern of a lightly marked Laysan Albatross (*D.immutabilis*), as shown in photographs in Farrand (1983) and Fisher & Fisher (1972). The black marking was slightly less extensive than shown in Harrison's (1983a) drawing, more central on the inner wing and not nearly so intense as on the bird in the photograph in Harrison (1987).

The proportions and size of the bird seemed the same as for other nearby Wandering Albatrosses. The underwing had normal dark tips but the black trailing edge was wider than usual. The leading edge of the underwing had