

### Predation of Yellow-eyed Penguin by Hooker's sealion

Little is known about marine predators of the Yellow-eyed Penguin (*Megadyptes antipodes*). On the Otago Peninsula of the South Island, New Zealand, Richdale (1942)\* found that "Enemies...seem to be almost non-existent", although he implicated the fish barracouta (*Thyrsites atun*) as a possible cause of penguin injuries. He later wrote that penguins "appear to be very anxious to reach shore before darkness overtakes them, giving the impression that they have enemies in the water" (Richdale 1951). In his overview of the predators of penguins, Spellerberg (1975) stated that for Yellow-eyed Penguins "it is likely that large fish and marine mammals are predators at sea." Ainley & DeMaster (1980) noted that predation by Hooker's sealions (*Phocarctos hookeri*) occurs "but has been reported very infrequently."

While studying Yellow-eyed Penguins on Campbell Island (660 km south of New Zealand) from October 1987 to October 1988 (Moore & Moffat 1990), we had the opportunity to observe the relationship between penguins and Hooker's sealions. Penguins were generally very wary of sealions, both on land and at sea. Sealions, particularly if they were awake and active on the landing beaches or swimming nearby, caused penguins to delay their departure for sea in the morning or arrival to the beach in the evening. When departing, small groups of penguins gathered on the shore until the sealion(s) became inactive or moved away or until one of the penguins initiated a "running of the gauntlet." When returning to the beach penguins often turned back to sea, porpoising above the water to increase speed, then waiting at a safe distance offshore before returning. At the more populous landing sites, both for penguins and sealions, small groups of penguins gathered offshore before landing en masse. Occasionally, penguins landed away from their usual area if sealions were active there.

Hooker's sealions usually showed little interest in Yellow-eyed Penguins, but on rare occasions they chased them. Although both swam at similar speeds, the penguins always avoided capture by using their greater manoeuvrability. Most pursuits were brief and, judging from the sealion behaviour, were not in earnest.

On 14 August 1988, one of us (RM) saw a male sealion kill at least two penguins and pursue others as they came ashore at Middle Bay, part of Northwest Bay. The sealion lay in ambush behind a rock in the shallows. The penguins passed the rock on the way to the beach and the sealion attempted to intercept them in shallow water, where they could neither swim nor run effectively. Once captured, the penguins were taken out into deeper water, shaken vigorously and thrown through the air two or three times. Skins or skin fragments of four penguins were found washed up on the shore during the evening. When the area was visited one month later, a sealion, which appeared to be the same individual, was seen swimming and seemingly hiding behind rocks in the shallows. More skins and skeletons were found on the shoreline, indicating an unusually high level of predation. This level

\* RICHDALE, L.E. 1942. A comprehensive history of the behaviour of the Yellow-eyed Penguin (*Megadyptes antipodes*) Homb. and Jacqu. Unpublished document, Hocken Library, Dunedin.

of disturbance caused a marked decrease in numbers of penguins using the landing site.

The main breeding ground of Hooker's sealions is at the Auckland Islands (460 km south of New Zealand), but individuals range south-west to Macquarie Island. During the late 1940s and early 1950s it was reported that sealions, particularly one individual, were killing and eating large numbers of Gentoo Penguins (*Pygoscelis papua*) on Macquarie Island, presumably because their normal food was not available there (Gwynn 1953, Csordas 1963). Rare instances of predation of Yellow-eyed Penguins by Hooker's sealions have also been observed on the Auckland Islands, both on land and at sea (M Cawthorn, pers. comm.). At Sandy Bay, Enderby Island, where large numbers of sealions gather during the breeding season, penguins sometimes have to pass between sealions which are lying only a few metres apart on the beach (PM, pers. obs.). Observations at Campbell and Auckland Islands suggest that predation levels are generally low, but that some individual sealions may learn this predatory behaviour.

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#### Shearwaters and Saddleback as prey at a Morepork ground nest

A Morepork (*Ninox novaeseelandiae*) nest was observed at close range during a field expedition to Red Mercury Island 26.11.91 - 3.12.91. The nest was on the ground in the shelter of a rock and consisted of a shallow depression with no nesting material. Similar ground nests have been recorded previously on Red Mercury (R. B. Sibson, pers. comm.) and on Stanley Island in a petrel burrow (T.G. Lovegrove, pers. comm.) and under the roots of a pohutukawa (P. Thompson, pers. comm.), which may indicate a lack of mature forest with tree holes. Ground nests have also been reported in the Mackenzie Country (Imboden 1985).