

Short Communication

A SOUTH AMERICAN MARINE OTTER *LONTRA FELINA* PREYS UPON CHICKS OF THE PERUVIAN DIVING PETREL *PELECANOIDES GARNOTII*

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The Peruvian Diving Petrel *Pelecanoides garnotii* is endemic to the Humboldt Current that follows the west coast of South America. Its population, once abundant and widespread, has been greatly diminished by the effects of guano collecting and introduced mammalian predators such as foxes *Canis* sp. As a consequence breeding colonies are now restricted to only a few islands off Peru and Chile (Araya & Duffy 1987, Hays 1989, Carboneras 1992, BirdLife International 2000). Here we give the first account of a South American Marine Otter *Lontra felina*, a native predator, actively preying upon chicks of the Peruvian Diving Petrel.

The World Conservation Union lists the Peruvian Diving Petrel as Endangered, with an overall declining trend (BirdLife International 2000, Hilton-Taylor 2000). In Peru, the species now occurs only on two islands, Isla San Gallán (13°15'S, 76°28'W) and Isla La Vieja (14°16'S, 76°11'W), supporting an estimated overall population of 13 270 breeding pairs (Jahncke & Goya 1998). The situation in Chile is unclear and little data have emerged in recent years. A small number (220 pairs) of Peruvian Diving Petrels breeds on Isla Pan de Azúcar (26°09'S, 70°41'W); other Chilean colonies have been reported from Isla Choros (29°15'S, 71°32'W) and more recently from Isla Grande (27°14'S, 70°58'W) and Isla Pajaros (29°32'S, 71°33'W) (Carboneras 1992, Vilina 1992, BirdLife International 2000, Simeone *et al.* ms). A previously known colony on Isla Chañaral (29°01'S, 71°34'W) has become extinct after human introduction of foxes (Araya & Duffy 1987).

Mainly avian predators have been identified to take Peruvian Diving Petrels. Amongst these Burrowing Owls *Athene cunicularia* have probably the greatest impact on reproductive efforts, as they mainly take breeding birds in their colonies (Hays 1989, Meichßner 2001, pers. obs.). Peruvian Diving Petrel burrows are relatively well protected from avian predators but are especially vulnerable to terrestrial assaults (Araya & Duffy 1987).

During fieldwork on Isla Choros we observed and filmed a South American Marine Otter actively preying upon at least two Peruvian Diving Petrel chicks. The observation was made on 15 December 2001 at around 20h45 in a petrel colony (>15 burrows) located on a plateau some 50 m above sea level in the mid-western section of the island. We discovered an otter sitting in front of a petrel burrow eating a freshly killed petrel chick. After a while the otter left the remains and started searching several surrounding

burrows until it found an active nest. The otter dug to enlarge the burrow entrance then entered to its full body length and emerged with a wing-flapping chick. The otter did not kill the chick on the spot but moved towards the cliff edge, carrying the chick by its head.

After this observation, we noticed more otter signs (footprints, tail drag marks) in another Peruvian Diving Petrel colony (>30 burrows) on the southern plateau of Isla Choros. Additional otter tracks were discovered in the southern colony during a visit to the island in March 2002.

The South American Marine Otter has a similar distribution range as that of the Peruvian Diving Petrel and is also rated as Endangered (Hilton-Taylor 2000). It is considered to be an obligate marine mammal that predominantly feeds on marine invertebrates (crustaceans and molluscs) and to a smaller extent fish (Ostfeld *et al.* 1989). It generally forages exclusively in the marine environment; inland excursions are thought to be a rare occurrence (Ebensperger & Castilla 1992, Medina 1995). Terrestrial members of the mustelid family are known to have impacts on various species of ground-breeding seabirds (e.g. Ratz *et al.* 1999, Hocken 2000, Kemp 2001) but accounts of active seabird predation by aquatic mustelids (river, sea and marine otters) are rare or anecdotal (Reid *et al.* 1994, Duffy 1995, A. Simeone pers. comm.). However, a previous study of the Peruvian Diving Petrel on Isla Choros noted marine otter marks in one petrel colony at sea level and suggested that the South American Marine Otter may prey upon Peruvian Diving Petrels that breed close to shore (Meichßner 2001).

Faeces of the South American Marine Otter have been reported to contain avian remains (Siefeld 1989), but this could indicate scavenging behaviour. On Isla San Gallán, Peru, where the diving petrel and otter also co-exist, no evidence of petrel predation by otters was discovered. In approximately 200 otter scats examined only the remains of one Inca Tern *Larosterna inca* chick were found (R. Sanchez Scaglioni pers. comm.). Although avian prey seems to play a minor role in the diet of the South American Marine Otter, its overall opportunistic feeding habits allow considerable variation in prey composition between localities (G. Medina pers. comm.).

The frequency and importance of predation by South American Marine Otters on Peruvian Diving Petrels remain unknown, but given that both predator and prey are Endangered and occur together on the same islands, a better understanding of their interactions may be essential for their conservation.

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