

## NOTES

### Apparent River Otter Predation at an Aleutian Tern Colony

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**Abstract.**—Two dead Aleutian Terns (*Sterna aleutica*) were found dead along river otter (*Lutra canadensis*) trails in a colony on an island in Sitkalidak Strait, Kodiak Island, Alaska. A review of the literature suggests river otter predation on seabirds in the northeastern Pacific is widespread and that "surplus killing" of more prey than can be consumed is a frequent aspect of such predation; however, seabird colonies appear to persist despite such pressures. Received 23 August 1994, accepted 20 November 1994.

**Key Words.**—Alaska, Aleutian Tern, *Sterna aleutica*, River Otter, *Lutra canadensis*, predation, surplus killing

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On 24 July 1994, I visited Cub Island (57° 12.7'N, 153° 12.3'W) in Sitkalidak Strait, Kodiak Island, Alaska with J. Sherburne and T. Sanborn. The island is used for nesting by Black-legged Kittiwakes (*Rissa tridactyla*), Glaucous-winged Gulls (*Larus glaucescens*), Aleutian (*Sterna aleutica*) and Arctic (*S. paradisaea*) Terns, and Horned (*Fratercula corniculata*) and Tufted (*F. cirrhata*) Puffins (Alaska Natural Heritage Program, unpubl. data; Baird and Moe 1978). The island is surrounded by 2-5 m cliffs, with an interior covered by low grasses and shrubs. Several breaks in the cliff on the south side of the island allow access to the interior.

During the visit, I found a series of approximately 0.5 m-wide trails of flattened grass, salmonberry (*Rubus spectabilis*), and other low vegetation. The trails began at the cliff breaks and led to the top of the island. Several areas approximately 2 m wide occurred along the trails. At the top of the island, one trail broke into a series of narrower paths that ended at clumps of grass or at the bases of bushes.

No scats were seen. No soil was exposed along the trails where tracks could have been left, suggesting that the trails were the results of a brief visit rather than extended activity.

The trails appeared similar to those made by river otter (*Lutra canadensis*), observed elsewhere in the region, where tracks

had allowed identification (J. Sherburne pers. obs.). The wider areas observed on the trails may have been "couches," the above-ground resting places of otters (Channin 1985: 92), but no dens were seen during a limited search.

While following one trail, I came across a dead adult Aleutian Tern with a partially eaten body cavity. On this trail, I also found a dead and partially decomposed nestling of the same species.

I estimated 50 adult Aleutian Terns to be present on Cub Island (AKNHP unpubl. data). I do not know the percentage taken by the otters.

I found no evidence of predation on the other nesting seabird species. The burrow-nesting puffins and ground-nesting Glaucous-winged Gulls and Arctic Terns would presumably have been vulnerable to such predation. Harris (1984) reported European Otters (*L. lutra*) taking puffins. Hayward *et al.* (1975), Footitt and Butler (1977), and Verbeek and Morgan (1978) documented river otter predation on Glaucous-winged Gulls elsewhere. Nysewander and Hoberg (1978) noted predation on Arctic Terns at Chiniak Bay, Alaska, approximately 60 km north of Cub Island.

Although otters are not known for "surplus killing" in excess of consumption (Channin 1985: 59-60), such excess kills may be

relatively common when nesting seabirds are the prey. Seabirds may be one of the few prey that are vulnerable in sufficient numbers to provide otters with opportunities for surplus killing.

At a regional level, we do not know the frequency and significance of otter predation on Aleutian Terns, which had a population of at least 20,000 birds in Alaska in the 1980's (Lensink 1984). Wetmore (in Murie 1959) noted that otters frequently visit offshore islands in southwestern Alaska. Baird and Moe (1978) did not report predation by otters on Aleutian Terns on islands in Sitkalidak Strait during their study in 1977, but Nysewander and Hoberg (1978) reported such predation in Chiniak Bay at a mixed colony of Arctic and Aleutian Terns in the same year.

Despite otter predation, seabird colonies persist on islands in Washington State (Speich and Pitman 1984), British Columbia (Footitt and Butler 1977), and Chiniak Bay, Alaska (Nysewander and Hoberg 1978). This suggests that surplus killing is rare.

Such predation may be responsible for local extirpation of smaller colonies, an event unlikely to be observed and reported. Perhaps most predation by otters on seabirds is the result of opportunistic encounters when otters are searching for terrestrial resting places, while surplus killing is done by a few specialist individuals (cf. Verbeek and Morgan 1978). Whatever the mechanism, the effects of river otters on seabirds in Alaska appear minor and sporadic compared to the well-documented damage caused by introduced predators (Bailey and Kaiser 1993).

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