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## Field Report

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# Coyote kills harp seal

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## Abstract

This note details the killing of a harp seal *Pagophilus groenlandia* by an eastern coyote *Canis latrans* on Cape Cod, Massachusetts. It is believed to be the first documentation of a canid killing an adult or nearly full-sized phocid.

## Introduction

Coyotes are known to consume a diverse array of foods (Andelt 1985, Parker 1995) including animals much larger than themselves such as deer (*Odocoileus* spp. - Patterson et al. 1998) and elk (*Cervus elaphus* - Gese and Grothe 1995). Coyotes specialize on certain food types in different regions and seasons. For example, coyotes fed on raccoons *Procyon lotor* on an island in Maine (O'Connell et al. 1992), snowshoe hares *Lepus americanus* and white-tailed deer *Odocoileus virginianus* in New Brunswick (Parker and Maxwell 1989), hares in the northern boreal forest in Yukon, Canada (O'Donoghue et al. 1998), woodchucks *Marmota monax* and fruits in Quebec (Crete and Lemieux 1996), livestock

where available (e.g. Sacks et al. 1999), fruits in various regions and small mammals throughout its range (e.g. Hidalgo-Mihart et al. 2001). Coyotes have even been documented to consume allochthonous food supplies from the sea (Rose and Polis 1998). However, marine mammals (e.g. phocids) have not been considered to be a significant food source for coyotes, although they have been recorded killing seal pups and/or scavenging seal (any age class) carcasses (both harbor seals *Phoca vitulina* and ringed seals *P. hispida*) on beaches (Steiger et al. 1989).

Other terrestrial predators known to prey on seals include polar bears (*Ursus maritimus* - see Furgal et al. 1996 for a review), brown hyaenas (*Hyaena brunnea* - Skinner et al. 1995), domestic dogs (Lucas and Stobo 2000), grey wolves (Meiklejohn 1994), black-backed jackals (*Canis mesomelas* - Oosthuizen et al. 1997), Arctic foxes (*Alopex lagopus* - Furgal et al. 1996), red foxes (*Vulpes vulpes* - Andriashek and Spencer 1989). However, we are not aware of any literature that describes canid predation on adult or nearly full-sized phocids. Meiklejohn (1994) believed, but did not document, that wolves

could sneak up on seal hauling sites to catch harbor seal pups (and possibly adults) during the summer.

This note describes the events of an individual coyote successfully catching and killing a nearly full-sized harp seal on Nauset Beach in Orleans (Cape Cod), Massachusetts, USA.

## Results

On 27 January 2002 at 05:55h, the second author (JH) was standing near the east end of the Nauset Beach trail crossover (marked as "Number One") when he heard a guttural scream and a deep canine growl. He observed a coyote struggling with an animal larger than itself that was dragging the coyote around the beach in an attempt to escape. The coyote attempted to drag an adult or yearling-sized harp seal carcass into the protective cover of the dunes. As the observer approached to within approximately 100m, the coyote dropped the seal then ran into the dunes. The seemingly dead seal then rolled approximately 7m down the berm towards the water and the observer waited for one hour, but the coyote did not return. Visual inspection revealed no traces of the coyote except for tracks heading away from the beach (Figure 1).



Figure 1. Aftermath of the coyote attack on the harp seal. Note all of the coyote tracks in the foreground.

The beach is normally 100-200m wide, which allows the seals to haul up just above the high tide line yet rest a good distance (ca. >50m) from the cover of the dunes. However, massive erosion during winter 2002-2003 nearly eliminated this buffer zone so the seals were re-

quired to haul themselves out very close to the dunes. Post-attack track evidence on the ground indicated that this seal was resting approximately 10m from the dune and 20m from the water. The attack occurred during low tide.

The seal thrashed and dragged the coyote around an area of at least 225m<sup>2</sup>. That area included tracks of both animals and a large volume of the seal's blood. The seal came within 7m of reaching the water.

Visual and photographic evidence of the wound indicated that upon contact the coyote immediately grabbed the seal's throat, maintained a firm grip, and efficiently severed its jugular vein. There were no other wounds found on the carcass (Figure 2).



Figure 2. Dead harp seal. Note neck wound.

Upon post-mortem inspection, the seal was found to be still warm 80 minutes after being killed despite an outside temp of 0°C (-29°C with windchill). The seal's length was estimated at approximately 120-140cm and 50kg in weight, which is considerably heavier than coyotes captured on Cape Cod (~15-20kg - Way 2000). There was no evidence to indicate that this seal was not in good health prior to the attack.

## Discussion

Prior to this observation, JH twice saw dead seals that were killed in a similar manner during the winter months but originally attributed them to a marine predator (e.g. shark - Lucas and Stobo 2000) rather than a terrestrial one. Injured and dead seals on Cape Cod with wounds that were possibly caused by canids have also been observed by others on Cape

Cod (Peter Trull, Centre for Coastal Studies; Kristen Patchett, Cape Cod Stranding Network; and Pieter deHart, University of Alaska). Future research should document if coyotes from Cape Cod and other coastal regions commonly prey on phocids.

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