

## MMS ENVIRONMENTAL STUDIES PROGRAM: ONGOING STUDIES

**Region:** Alaska

**Planning Areas:** Beaufort Sea

**Title:** Foraging Ecology of Common Ravens (*Corvus corax*) on Alaska's Coastal Plain (AK-93-48-51)

**MMS Information Needs to be Addressed:** This study is collaboration among MMS, the University of Alaska CMI, the North Slope Borough and Phillips Petroleum to address an issue that has been increasing in relevance to environmental assessment of potential effects of oil and gas development. MMS will possibly have to address mitigation needs in the event that structures, pipelines or other factors related to oil or gas development are shown to enhance certain predation. Information from this study will also be useful for analysis of the cumulative effects of offshore development on the fauna of the OCS and Alaskan Coastal Plain. Information will be used for NEPA analysis and documentation for Beaufort Sea Lease Sales and DPP's

**Total Cost:** \$205,000

**Period of Performance:** FY 2003-2007

**Conducting Organization:** CMI, UAF

**MMS Contact:** [Chief, Alaska Environmental Studies Section](#)

### **Description:**

*Background* The impact of avian predators, including the common raven, on the North Slope has been assumed to be higher in areas with oil development or human habitation due to increased availability of food and nest sites associated with human-made structures. Predator management on the Alaska North Slope is an issue that has arisen in many contexts. For example, the Steller's Eider Recovery Team has recommended killing ravens in Barrow to benefit the threatened Steller's eider (*Polysticta stelleri*), and this recommendation has been implemented to a limited extent. More generally, the U.S. Fish and Wildlife Service has attempted to reduce predator access to human food waste in the oilfields and villages through its authorities under the Clean Water Act.

It is clear that common ravens (*Corvus corax*) on the North Slope are utilizing anthropogenic factors both as nesting sites and to obtain sufficient food to overwinter on the outer arctic coastal plain. However, the associated impact of raven predation on other tundra-nesting birds has not been studied. Data on summer diet and raven productivity are needed to assess whether increased raven numbers pose a threat to other species, particularly the threatened spectacled (*Somateria fischeri*) and Steller's eiders.

*Objectives* The objective of this study is to document summer foraging ecology, and distribution and abundance of ravens nesting within areas of oil development, in and near villages, and in semi-natural habitat (DEW Line sites) on Alaska's North Slope.

### Methods

1. Use biological surveys and obtain anecdotal information from local residents to document the distribution and abundance of ravens breeding in the oil fields, in and near villages, and in semi-natural sites using surveys and local knowledge. A GIS map will be produced showing the locations of nests and/or breeding pairs.
2. Document the summer diet of nestling ravens using video camera monitoring stations, by direct observation at nests, by examination of pellets and/or fecal remains, and by collection of prey remains at nests.
3. Monitor nests to assess fledging and nest success of ravens in and outside of the oil fields.
4. Use very high frequency (VHF) and satellite telemetry to document the movements of ravens from nesting sites to foraging areas, and between breeding and non-breeding seasons on Alaska's North Slope.

### **Current Status:**

Request for no-cost extension received on May 16, 2006. Extension granted May 31, 2006 with extension through 31 Dec. 07.

**Final Report Due:** March 2008

**Publications Completed:** No peer-reviewed papers to date.

### Presentations:

Backensto, S. A., G. Kofinas, and A. N. Powell, C. Gerlach, and E. Follman. 2006. The common raven through the eyes of oil field workers: Local knowledge in Alaska's North Slope oil fields. 9 February, 11th Alaska Bird Conference, Juneau, AK.

Backensto, S., A. N. Powell, G. Kofinas, and C. Gerlach. 2004. The common raven on the North Slope of Alaska: wildlife management and the human dimension. 17 March 2004. Alaska Bird Conference, Anchorage.

Backensto, S. A. and A. N. Powell. 2003. The Common Raven (*Corvus corax*) on the North Slope of Alaska: wildlife management and the human dimension. Annual Meeting of the Cooper Ornithological Society, Flagstaff, AZ.

**Affiliated WWW Sites:** <http://www.sfos.uaf.edu/cmi/>  
<http://www.mms.gov/alaska/>

**Revised Date:** February 2007