

**FEDERAL AID ANNUAL RESEARCH  
PERFORMANCE REPORT**

ALASKA DEPARTMENT OF FISH AND GAME  
DIVISION OF WILDLIFE CONSERVATION  
PO Box 115526  
Juneau, AK 99811-5526

**Alaska Department of Fish and Game  
Wildlife Restoration Grant**

**GRANT NUMBER:** W-33

**SEGMENT NUMBER:** 9

**PROJECT NUMBER:** 6.14

**PROJECT TITLE:** Effects of snowshoe hare population cycles on demography of Dall sheep and their predators

**PROJECT DURATION:** 1 July 2003–30 June 2012

**REPORT DUE DATE:** 1 September 2011

**PRINCIPAL INVESTIGATOR:** Stephen M. Arthur, ADF&G

**COOPERATOR:** Laura Prugh, University of California-Berkeley

**WORK LOCATION:** Unit 20A, Central Alaska Range

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**I. SUMMARY OF WORK COMPLETED THIS SEGMENT ON JOBS IDENTIFIED  
IN ANNUAL WORK PLAN**

*OBJECTIVE 5:* Data analysis, report writing, and travel.

Final review was completed on a manuscript submitted to the *Journal of Wildlife Management*. Manuscript was published in the November 2010 issue. In addition, an invited paper was presented on this topic at the Alaska Bird Conference in Anchorage on 17 November 2010.

**III. PUBLICATIONS**

ARTHUR, S. M., AND L. R. PRUGH. 2010. Predator-mediated indirect effects of snowshoe hares on Dall's sheep in Alaska. *Journal of Wildlife Management* 74:1709–1721.

**IV. RECOMMENDATIONS FOR THIS PROJECT**

Long-term monitoring of the sheep population in Unit 20A should be continued. Follow-up studies to determine sheep population responses to changes in predator populations are recommended. A proposal for additional studies was developed and submitted to the U.S. Department of Defense in cooperation with J. Mason, Colorado State University Center for Environmental Management of Military Lands.

**PREPARED BY:** Stephen M. Arthur

**DATE:** 2 August 2011