

ALASKAN HARE

Lepus othus Merriam, 1900
(Leporidae)

Global rank G3G4 (29Mar2006)

State rank S3S4 (14Nov2008)

State rank reasons

Restricted distribution in western Alaska. Rare, but with a tendency to fluctuate. Population numbers and range limits have declined in recent decades. Numbers low in core of distribution since population highs in the 1970s. Potential threats include high predator numbers following peak numbers of snowshoe hares (*Lepus americanus*) and possibly interference competition from snowshoe hares. Questionable taxonomy. Overall, lack of accurate population data makes it difficult to assess status.

Taxonomy

Lepus arcticus and *L. othus* formerly were included in *L. timidus*. Jones et al. (1992) and Hoffman (in Wilson and Reeder 1993) treated *L. timidus*, *L. arcticus*, and *L. othus* as separate species. Angermann (in Wilson and Reeder 1993) regarded *L. timidus*, *L. arcticus*, and *L. othus* as probably conspecific (in which case the specific name *timidus* has priority). Some evidence based on cranial variation suggests that only *L. arcticus* and *L. timidus* should be recognized (Baker et al. 1983). Phylogenetic relationships within *Lepus* determined from the mitochondrial gene cytochrome b suggest that *L. arcticus*, *L. othus*, and *L. timidus* are conspecific (Halanych et al. 1998, Walteri et al. 2004).

General description

One of the largest species of hares (Best and Henry 1994). During summer; dusky brown coat, grizzled with gray, darker on top of head; white under parts; dark cinnamon or buffy hair marking nose and mouth; white ring around dark eyes; dusky ears washed with gray and tipped with black. Winter; all white with black-tipped ears.

Length (cm): 63

Weight (kg): 4.5

Reproduction

Conception occurs in April. Gestation lasts about 46 days. Young born in late May-June, full grown by mid-August (Whitaker 1980) or September, weaned in about 5-9 weeks. Litter size generally 5-7 (average 6.3) (Best and Henry 1994). One litter per year.

Ecology

Basically solitary, except during late winter while there is still snow cover and the hares retain their white pelage. These aggregations, when groups of 20 or more have been observed, coincide with the mating season.

Food

Eats mainly green plants in summer, woody vegetation of shrubs (bark, twigs, and shoots) in winter and spring (Whitaker 1980, Best and Henry 1994). Also eats crowberry fruits.



Phenology

Hares observed emerging from thickets and feeding in the evenings at the west end of the Alaskan Peninsula (Murie 1938).

Habitat

Terrestrial habitats of Arctic and maritime tundra (Klein 1995). Tundra, alluvial plains, coastal lowlands, alder thickets, sedge flats, wet meadows; basically open tundra, but uses brush where it is available when they are not foraging. Young may be born in the open in small depressions or in thick shelter of willow or alder brush (Best and Henry 1994).

Global range

Western Alaska, from the Selawik-Kotzebue area in the north to the Cold Bay area in the south, including all of the Seward Peninsula, most of the Alaska Peninsula, and most of the western coast of Alaska; range often has been shown to include part of the North Slope, but apparently there are no verifiable records from that area (Best and Henry 1994). A tundra dwelling hare occurs in eastern Chukotka (Russia) that some taxonomists believe is *L. othus* (see Hoffman, in Wilson and Reeder 1993).

State range

Western Alaska, from the Kotzebue Sound area in the north to the tip of the Alaska Peninsula in the south, including all of the Seward Peninsula, most of the Alaska Peninsula, and most of the western coast of Alaska (Best and Henry 1994). Historically, reported on the North Slope from the Colville River westward (Bee and Hall 1956), but no specimens exist from the area to verify these reports and there are no reports from that region since 1951 (Klein 1995).

Global abundance

Rare, but with a tendency to fluctuate (see Buckley 1954). Considered rare on the Seward Peninsula during 1947 and 1948 (Quay 1951, Rausch 1953). An increase in population numbers was observed in Chevak-Hooper Bay area on the Yukon-Kuskokwim Delta in the early 1970s (Anderson 1974). Population numbers have been considered low ever since the recorded high in the 1970s (Klein 1995).

State abundance

Rare, but with a tendency to fluctuate (see Buckley 1954). Considered rare on the Seward Peninsula, late 1940s (Quay 1951, Rausch 1953). An increase in numbers was observed in Chevak-Hooper Bay area on the Yukon-Kuskokwim Delta in the early 1970s (Anderson 1974) as well as on the Seward Peninsula (local hunter's reports). Population numbers have been considered low ever since the recorded high in the 1970s (Klein 1995). Centers of abundance are the western Seward Peninsula and the Yukon-Kuskokwim Delta region, although numbers have remained low there since population highs in the 1970's (Klein 1995). Throughout its southern distribution on the Alaska Peninsula, tundra hare densities are currently low; high densities last reported in winter 1953-54 (see Schiller and Rausch 1956 in Klein 1995).

State trend

Rare; perhaps decreasing in range and numbers (see Hoffman in Wilson and Reeder 1993; Klein 1995). Last reported population high was on the western Seward Peninsula and in the Yukon-Kuskokwim Delta region in the 1970s; numbers currently low in those areas (Klein 1995). Throughout the hare's southern distribution on the Alaskan Peninsula, high population numbers have not been reported since winter 1953-54 (Schiller and Rausch 1956). Rare; perhaps decreasing in

range and numbers (see Hoffman in Wilson and Reeder 1993; Klein 1995).

State protection

Habitat is protected in Bering Land Bridge and Katmai National Parks, Wood-Tikchik State Park, and Yukon Delta, Selawik, Togiak, and Alaska Peninsula National Wildlife Refuges.

State threats

Scattered pockets of habitat loss associated with human communities; subsistence harvest (Salo 1970). Mining on the Seward Peninsula is increasingly fragmenting and altering tundra habitat. Potential interference competition with snowshoe hares (Svendsen 1990, Klein 1995).

State research needs

Research needed to provide basic information on life history, ecology, habitat types occupied, limits of range distribution, and threat identification. Clarification of systematic status needed.

State inventory needs

Data are currently insufficient to delimit periods of abundance and scarcity; range-wide population surveys required to assess current population and trend, and determine if range is continuing to contract.

State conservation and management needs

Assessment and regulation of mining expansion and oil development projects within the distribution of the tundra hare to assure protection of important habitats.

LITERATURE CITED

Anderson, H.L. 1974. Natural history and systematics of the tundra hare (*Lepus othus* Merriam) in western Alaska. Thesis. University of Alaska Fairbanks, Fairbanks, Alaska. 106 pp.

Baker, A.J. et al. 1983. Geographic variation and taxonomy of arctic hares. *Acta Zoologica Fennica* 174:45-48.

Bee, J.W. and E.R. Hall. 1956. Mammals of northern Alaska on the Arctic Slope. *Univ. Kansas Mus. Nat. Hist. Misc. Publ. No. 8.* 309 p.

Best, T.L., and T.H. Henry. 1994. *Lepus othus*. *Am. Soc. Mamm., Mammalian Species No.* 458:1-5.

- Buckley, J.L. 1954. Animal population fluctuation in Alaska a history. Pages 338-357 In: Nineteenth North American wildlife conference. No.19.
- Halanych, K.M., J. Demboski, B.J. Van Vuuren, D. Klein and J.A. Cook. 1998. Cytochrome b phylogeny of North American Hares and jackrabbits and the effects of saturation in outgroup Taxa. Pages 213-221 In: Molecular Phyogenetics and Evolution. Vol.11 No.2. Academic Press.
- Hall, E.R. 1981. The mammals of North America. 2nd ed. 2 vols. John Wiley and Sons, New York, NY. 1,181 p.
- Jones, J.K., Jr., R.S. Hoffman, D.W. Rice, C. Jones, R.J. Baker, and M.D. Engstrom. 1992. Revised checklist of North American mammals north of Mexico, 1991. Occasional Papers, The Museum, Texas Tech University, 146:1-23.
- Klein, D.R. 1995. Tundra or arctic hares. Page 359 In: E.T. LaRoe, G.S. Farris, C.E. Puckett, P.D. Doran, M.J. Mac (eds.) Our living resources: a report to the nation on the distribution, abundance, and health of U.S. plants, animals, and ecosystems. United States Department of the Interior, National Biological Service. Washington, DC. 530 p.
- Merriam, C.H. 1900. Descriptions of twenty-six new mammals from Alaska and British North America. Proc. Wash. Acad. Sci. 2:13-30.
- Murie, O.J. 1938. Family Leporidae. Pages 327-328 In: Murie, O.J. and V.B. Scheffer. Fauna of the Aleutian Islands and Alaska Peninsula and invertebrates and fishes collected in the Aleutians. Number 61. North America Fauna
- Quay, W.B. 1951. Observations of mammals of the Seward Peninsula, Alaska. J. of Mamm. 32(1):88-99.
- Rausch, R.L. 1953. On the status of some arctic mammals. Arctic 6:91-148.
- Salo, L.J. 1970. A comparison of management practices and economic importance of moose, muskrat, hare and ptarmigan in Alaska and Finland. M. S. thesis. Univ. of Alaska, Anchorage. 97 pages.
- Schiller, E.L., and R. Rausch. 1956. Mammals of the Katmai National Monument, Alaska. Arctic 9:191-201.
- Svendsen, C. 1990. Patterns of browsing in summer by moose, muskoxen and in winter by moose and snowshoe and arctic hares in riparian willow communities on the Seward Peninsula. Pages 43-84 In: Role of willow communities in the ecology of herbivores on the Seward Peninsula. 1990. University of Alaska Fairbanks, Alaska Cooperative Wildlife Research Unit.
- Waltari, E., J.R. Demboski, D.R. Klein, and J.A. Cook. 2004. Biogeography of arctic hares: a molecular perspective on the historical biogeography of the northern high latitudes. In press. 39 pp.
- Whitaker, J.O., Jr. 1980. The Audubon Society field guide to North American mammals. Alfred A. Knopf, New York, NY. 745 p.
- Wilson, D.E., and D.M. Reeder (eds). 1993. Mammal Species of the World: a Taxonomic and Geographic Reference. Second Edition. Smithsonian Institution Press, Washington, DC. xviii + 1206 pp.

Acknowledgements

State Conservation Status, Element Ecology & Life History Author(s): Gotthardt, T.A., and A. Jansen, Alaska Natural Heritage Program, Environment and Natural Resources Institute, University of Alaska Anchorage, Anchorage, AK, <http://aknhp.uaa.alaska.edu>.

State Conservation Status, Element Ecology & Life History Edition Date: 1Mar2004

Reviewer(s): Dr. David Klein, University of Alaska Fairbanks June 2004.

Life history and Global level information were obtained from the on-line database, NatureServe Explorer (www.natureserve.org/explorer). In many cases, life history and Global information were updated for this species account by Alaska Natural Heritage Program zoologist, Tracey Gotthardt. All Global level modifications will be sent to NatureServe to update the on-line version.

Element Ecology & Life History Edition Date: 21Sep1994

Alaskan hare

Element Ecology & Life History Author(s):

Hammerson, G.

Copyright Notice: Copyright © 2005

NatureServe, 1101 Wilson Boulevard, 15th Floor,
Arlington Virginia 22209, U.S.A. All Rights
Reserved.
