Rock Ptarmigan, Evermann's
*Lagopus mutus evermanni*

Class: Aves
Order: Galliformes

Conservation Status

<table>
<thead>
<tr>
<th>Heritage</th>
<th>Agency</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>G Rank:</td>
<td>USFWS/NOAA:</td>
<td></td>
</tr>
<tr>
<td>S Rank:</td>
<td>SOA: Species of Greatest Conservation Need</td>
<td></td>
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</tbody>
</table>

Final Rank

Conservation category: VIII. Yellow

<table>
<thead>
<tr>
<th>Category</th>
<th>Range</th>
<th>Score</th>
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</thead>
<tbody>
<tr>
<td>Status</td>
<td>-20 to 20</td>
<td>4</td>
</tr>
<tr>
<td>Biological</td>
<td>-50 to 50</td>
<td>0</td>
</tr>
<tr>
<td>Action</td>
<td>-40 to 40</td>
<td>-20</td>
</tr>
</tbody>
</table>

Higher numerical scores denote greater concern

**Status** - variables measure the trend in a taxon’s population status or distribution. Higher status scores denote taxa with known declining trends. Status scores range from -20 (increasing) to 20 (decreasing).

**Population Trend** (-10 to 10)

Historically declined. Populations increased one year following fox removal. Day counts increased 10 times from mid-1970s to 365 in 2000 (Gibson and Byrd 2007).

**Distribution Trend** (-10 to 10)

*L. m. evermanni* was eliminated from Agattu, Shemya, and Nizki-Alaid Islands in the early 1900s with the introduction of Arctic foxes for fur production and now occurs only on Attu Island (Ebbert 2004). A program began in 2003 to capture birds on Attu Island (Ebbert 2004) and birds were being tracked in 2006.

**Biological** - variables measure aspects of a taxon’s distribution, abundance and life history. Higher biological scores suggest greater vulnerability to extirpation. Biological scores range from -50 (least vulnerable) to 50 (most vulnerable).

**Population Size** (-10 to 10)

Population estimate about 1,000 (in 1999) prior to implementation of fox eradication program. Genetically distinct from all other Aleutian subspecies (Holder et al. 2004).

**Range Size** (-10 to 10)

Restricted to Attu Island (and historically on Nizki-Alaid, Agattu and Shemya) (Haflinger and Tobish 1977). Reintroduction to Agattu Island (ADFG 2005a). ~1100 km2 calculated in ARCMAP.

**Population Concentration** (-10 to 10)

Form winter flocks and males leave family groups and form flocks (Harrison 1978). Only occur on 2 islands.

**Reproductive Potential**

**Age of First Reproduction** (-5 to 5)

Known to breed as yearlings (Cotter 1999).

**Number of Young** (-5 to 5)
Typically between 5 and 10 eggs (Harrison 1978).

**Ecological Specialization**

**Dietary (-5 to 5)**

Throughout Alaska, dwarf birch (Betula nana and B. glandulosa) is one of the most important winter foods, as it is one of few relatively nutritious plants emergent above snow (Weeden 1969). In spring, remaining berries still on the bush from the previous autumn such as bilberry (Vaccinium uliginosum), crowberries (Empetrum nigrum), and cranberries are taken (Weeden 1969). On Amchitka Island, where birch and alder (Alnus spp.) are lacking, the year-round diet consists mainly of crowberry and horsetail (Equisetum arvense; Emison and White 1988). May also forage opportunistically on invertebrates such as caterpillars when abundant (Weeden 1969).

**Habitat (-5 to 5)**

Nests on tundra, barren and rocky slopes in Arctic and alpine areas. Nests in well drained habitat, hummocky arctic/alpine tundra with rocky ridges or outcrops and mixed vegetation (DRYAS-lichen ridges, solifluction zones, sedge meadows; NatureServe 2007b). Coastal grassy areas and on gentle to moderate slopes dominated by low forbs (ADFG 2005b). Nest in grassy meadows near stream drainages and in dwarf shrubs mats at higher elevations (Gibson and Byrd 2007).

**Action -** variables measure current state of knowledge or extent of conservation efforts directed toward a given taxon. Higher action scores denote greater information needs due of lack of knowledge or conservation action. Action scores range from -40 (lower needs) to 40 (greater needs).

- **Management Needs (-10 to 10)**
  - Reintroduction on Agattu Island and Fox removal. Habitat of all seven rock ptarmigan subspecies protected within the Alaska Maritime National Wildlife Refuge. L. m. evermanni is recognized as a species of special management concern by the U.S. Fish and Wildlife Service. Subsistence harvest is managed by the USFWS and tracked by the AMBCC (USFWS 2006c, AMBCC 2007). Sport hunting allowed for rock ptarmigan in GMU 10 and managed by ADFG (ADFG 2006a).
  
- **Monitoring Needs (-10 to 10)**
  - Population status of all Aleutian subspecies is unknown; accurate census data are needed.

- **Research Needs (-10 to 10)**
  - Natural populations were eliminated by introduced foxes on many islands, and this subspecies now remains only on Attu Island. This subspecies has been reintroduced on Agattu Island. Eradication and reintroduction has been successful. Lack of genetic diversity within the population raises additional concern for population stability and persistence over the long term (Holder et al. 2004).

- **Survey Needs (-10 to 10)**
  - A program began in 2003 to capture birds on Attu Island and release them on Agattu (Ebbert 2004). Birds were being tracked in 2006. The Agattu researchers found that translocated birds had made nests and raised chicks (Ebbert 2007).

**Supplemental Information -** variables do not receive numerical scores. Instead, they are used to sort taxa to answer specific biological or managerial questions.

- **Harvest:** Substantial, no regulations
- **Seasonal Occurrence:** Year-round
- **Taxonomic Significance:** Subspecies
- **% Global Range in Alaska:** >10%
- **% Global Population in Alaska:** >25%
- **Peripheral:** No

**Range Map**
References

Alaska Department of Fish and Game (ADFG). 2005a. Our wealth maintained: a strategy for conserving Alaska’s diverse wildlife and fish resources, a Comprehensive Wildlife Conservation Strategy emphasizing Alaska’s nongame species. Submitted to the U.S. Fis


