# **Heritage Rank Status Factors**

Elcode ABNSB12040

**Gname** STRIX NEBULOSA

Gcomname GREAT GRAY OWL

## **Number of Occurrences**

E = >300

Comments Holarctic range.

# **Number of Occurrences with Good Viability**

F = Very many (>125) occurrences with good viability

Comments Southern populations in the western U.S. are relatively stable. Northern populations and those at

the southern edge of the range in eastern Canada are less stable (Bull and Duncan 1993).

## **Population Size**

F = 10,000-100,000 individuals G = 100.000-1.000.000 individuals

Comments Guesstimated number of breeding pairs in Canada in

Guesstimated number of breeding pairs in Canada in the early 1990s was 10,000-25,000 (Kirk et al. 1995). See Johnsgard (1988) for listing of recent status studies in Manitoba, Saskatchewan,

California, Wyoming, Idaho, and Oregon.

## Range Extent

H = > 2,500,000 km2 (greater than 1,000,000 square miles)

Comments

Breeds from Central Alaska to northern Ontario, south locally in the mountains to California (vicinity of Yosemite), Idaho, Montana, Wyoming, central Saskatchewan, northern Minnesota, and south-central Ontario. Winters generally throughout its breeding range, wandering south irregularly to the northern U.S. Also found in the Old World. Usually uncommon, but sometimes may be locally abundant.

## **Area of Occupancy**

H = >20,000 km 2 (greater than 5,000,000 acres)

LH = >200,000 km (greater than 125,000 miles)

Comments Unevenly distributed and variable throughout its range. Average home range size for adults in

northeastern Oregon is 67.3 km2 (Bull and Duncan 1993).

# Long-term Trend in Population Size, Extent of Occurrence, Area of Occupancy, and/or Number or Condition of Occurrences

 $E = Relatively Stable (\pm 25\% change)$ 

Comments No evident population decline in the vast majority of the range; apparently stable, but actual

population data is lacking for many areas (Kirk et al. 1995).

# Short-term Trend in Population Size, Extent of Occurrence, Area of Occupancy, and/or Number or Condition of Occurrences

E = Stable. Population, range, area occupied, and/or number or condition of occurrences unchanged or remaining within ±10% fluctuation

Comments

No evident population decline in the vast majority of the range; apparently stable, but actual population data is lacking for many areas (Kirk et al. 1995).

#### **Threats**

F = Widespread, low-severity threat. Threat is of low severity but affects (or would affect) most or a significant portion of the population, occurrences, or area. Ecological community occurrences are not threatened severely, with changes reversible and recovery moderately rapid.

Scope High Severity Low Immediacy High

Comments

Timber harvest has the greatest potential impact on populations (Bull and Duncan 1993). Livestock grazing could potentially have adverse affects to the prey base. Development of campgrounds and associated disturbances in Yosemite National Park may have eliminated hunting areas. In California, habitat loss through logging of mature forest and overgrazing of meadows has been the primary cause for decline (California Department of Fish and Game 1990).

# **Number of Appropriately Protected and Managed Occurrences**

E = Very many (>40) occurrences appropriately protected and managed

Comments

On U.S. National Forest land, known nest sites are protected from logging (Bull and Duncan 1993); however, some interpretations of the no-harvest buffer around meadows and openings is limiting meadow restoration projects.

# **Intrinsic Vulnerability**

B = Moderately Vulnerable. Species exhibits moderate age of maturity, frequency of reproduction, and/or fecundity such that populations generally tend to recover from decreases in abundance over a period of several years (on the order of 5-20 years or 2-5 generations); or species has moderate dispersal capability such that extirpated populations generally become reestablished through natural recolonization (unaided by humans). Ecological community occurrences may be susceptible to changes in composition and structure but tend to recover through natural processes given reasonable time (10-100 years).

Comments

Rarely breeds at 1 year, occasionally at 2 years, more commonly at three years. One brood produced per year (Bull and Duncan 1993).

# **Environmental Specificity**

B = Narrow. Specialist or community with key requirements common.

Comments

Dense coniferous and hardwood forest, especially pine, spruce, paper birch, poplar; also second growth, especially near water, foraging in wet meadows; boreal forest and spruce-tamarack bogs in the far north, coniferous forest and meadows in mountains. Nests in the tops of large broken-off tree trunks (especially in the south), in old nests of other large birds, e.g., hawk nests (especially in the north), or in debris platforms from dwarf mistletoe; frequently near bogs or clearings. Nests are frequently reused (Franklin 1988). The same pair often nests in the same area in successive years. Areas with the necessary juxtaposition of nesting and foraging habitats have declining trends, and natural meadows are in decline due to encroachment of conifers and brush.

#### Other Considerations

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#### **Greasons**

Large circumboreal range; no decline is evident in the vast majority of the range, but little data is available for most areas.

### **BCD Sources**

California Department of Fish and Game. 1990. 1989 annual report on the status of California's state listed threatened and endangered plants and animals. 188 pp.

Franklin, A. B. 1988. Breeding biology of the great gray owl in southeastern Idaho and northwestern Wyoming. Condor 90:689-696.

Johnsgard, P. 1988. North American owls: biology and natural history. Smithsonian Inst. Press. 336 pp. Kirk, D.A., D. Hussell, and E. Dunn. 1994/95. Raptor population status and trends in Canada. Bird Trends (Canadian Wildlife Service) 4:2-9.

### **New Sources**

Bull, E. L., and J. R. Duncan. 1993. Great Gray Owl (Strix nebulosa). In The birds of North America, No. 41 (A. Poole and F. Gill, eds.). Acad. of Nat. Sci., Philadelphia, and Am. Ornithol. Union, Washington, D.C.