



## Featured Species Habitat Management Guidance for Spruce Grouse

**Latin Name:** *Falci pennis canadensis*

**Scope:** Upper Peninsula

**Rationale** - *why we value the species and the problem for the species:*

Spruce grouse (SPGR), are listed as special concern species and SGCN. They primarily inhabit mixed conifer stands with low lying groundcover (Robinson et al., 1969). These mixed stands tend to occur at lowland margins where upland jack pine meets lowland spruce. Jack pine harvest boundaries tend to include the transitional margins of lowland or riparian areas where mixed conifers occur. Jack pine management tend to produce a mono-culture, selecting against the mixed conifers that SPGR need. In fire dominated systems, SPGR typically occupy stands within a mosaic of small patches on the landscape at maximum densities for 10-15 years. Forest management can only mimic these conditions if forest stands are kept small, interspersed with optimal habitat (Boag & Schroeder 1992), and linked with corridors across the landscape.

**Habitat Need** - *the cause & effect relationship between habitat and species and its primary limiting habitat need:*

SPGR were most prevalent on the Yellowdog Plains where black and white spruce were a significant component of jack pine stands and overall stem densities were lower (134 trees/acre) than current jack-pine management (800-1,000 trees/acre) (Robinson et al., 1969). In addition, SPGR can be found in low-lying areas of mixed conifers comprised of black spruce, balsam fir, tamarack, and cedar. They tend to avoid areas with only one conifer species and areas with tall groundcover such as ferns, sedges, and grasses (Robinson et al., 1969).

**Habitat Objectives** - *the treatment or management to address the primary limiting habitat need:*

In jack pine harvests: 1) leave mixed conifer retention strips along riparian corridors and lowland margins; 2) maintain spruce seed trees through retention, especially at lowland margins; 3) maintain or increase diversity of conifer stands by implementing seed tree/shelter-wood prescriptions and limiting the use of herbicides, especially along lowland edges; and 4) since large clearcuts may isolate populations (Boag 1992), landscape-level planning may need to take into account the species' need for low-density mixed-conifer travel corridors.

**Priority Geographic Areas** – *the specific geographic areas where we should focus management for the species:*

The 8 Upper Peninsula Regional State Forest Management Plan Management Areas (Cyr Swamp, Sands Plains, Yellowdog Plains, Charcoal Grade, Danaher-Kingston Outwash, Fox River Complex, Tahquamenon River Patterned Fens, and Whitefish-Vermillion Point), which identify spruce grouse as a featured species.

**Priority Landscapes** – *the landscape, setting, or cover-type where we should focus management within the areas above:*

Mixed conifer and jack pine at lowland or riparian margins.

**Population Goal** - *the goal for the species, its habitat, or a stakeholder's actions:*

An increase in the population of SPGR in the designated priority management areas is the ultimate goal. However, current populations of this bird are uncertain and it may be difficult to gauge trends in actual numbers. Therefore the presence of spruce grouse at 75% of surveyed sites is desirable.

**Evaluation Method** - *the monitoring method to measure progress towards the goal above:*

1) Breeding bird surveys, Michigan Breeding Bird Atlas, Christmas bird counts, and proposed point counts at a sample of sites if time and budget allows. 2) Proposed annual assessment of potential habitat and proposed follow-up cover-type treatments per compartment review process 3 years post treatment at a minimum.

**Incidental Species** – *other species which may benefit from management for this species:*

Snowshoe hare and white-tailed deer.

**References** - citation for documents referenced in this guidance:

- Boag, D. A. and M. A. Schroeder. 1992. Spruce Grouse (*Falcapennis canadensis*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: <http://bna.birds.cornell.edu/bna/species/005>
- Michigan Department of Natural Resources (DNR). 2015. Michigan Department of Natural Resources (DNR) online list of Frequently Asked Questions on the 2009 Revision of the State Endangered Species List. < [http://www.michigan.gov/dnr/0,1607,7-153-10370\\_12141-213610--,00.html](http://www.michigan.gov/dnr/0,1607,7-153-10370_12141-213610--,00.html) >. Accessed 9 Sept. 2015.
- Monfils, M.J. 2007. Special animal abstract for *Falcapennis canadensis* (spruce grouse). Michigan Natural Features Inventory, Lansing, MI. 4 pp.
- Robinson, W.L. 1969. Habitat Selection by Spruce Grouse in Northern Michigan. The Journal of Wildlife Management, 33 (1): 113-120.