MICHIGAN DEPARTMENT OF NATURAL RESOURCES – www.michigan.gov/dnr
Wildlife Division

Featured Species Habitat Management Guidance for

Blackburnian Warbler

Latin Name: *Setophaga fusca* **Scope**: Upper Peninsula

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

The Blackburnian warbler (BW) is listed as a Species of Greatest Conservation Need (Michigan DNR 2015) and a Partners in Flight stewardship species. Although BW populations have been stable over the past 46 years (Sauer et al. 2014) we do not know how severely numbers were reduced by timber harvests from pre-settlement conditions. Because of this species' dependence on mature conifer, it is assumed that BW numbers have dropped with the substantial decline of conifer. BWs typically occur in stands older than that attained by standard economic rotations for mesic conifers (Doepker et al. 1992). The primary concern is the continuing decline in the percentage of conifer and the continuing decline in the amount of mature conifer (Michigan DNR 2004; Davis 1997; Rhemtulla et al. 2009) suitable for these warblers.

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

BW breeding habitat is strongly associated with mature and old conifer (Collins 1983; Howe et al. 1997; Howe and Mossman 1995; Howe et al. 1995; and Yamasaki et al. 2000). They nest in conifer and mixed deciduous/conifer forests. Nest densities increase with increased percentage of conifers (Morse 1976) and are most abundant in mature forests and significantly less abundant in shelter wood cuts (Webb et al. 1977).

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

1) Increase the mesic conifer (hemlock, white pine, red pine, upland spruce-fir) component on state forests from the current 5% to 13% in the west Upper Peninsula (UP) and from the current 10% to 13% in the east UP by:
    a. Retaining a larger percentage of mesic conifer during harvests;
    b. Using silvicultural practices that encourage the regeneration of mesic conifer; and
    c. Where desired/feasible, underplanting hemlock, white pine, and white spruce in hardwood-dominated stands.
2) Increase the average age of mesic conifer by:
    a. Allowing 10% of mesic conifer stands to grow beyond standard rotation ages;
    b. including mature mesic conifers as within-stand structure retained during harvests; and
    c. Including mature mesic conifer stands as lands set aside as Special Conservation Areas.

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

The 9 Regional State Forest Management Plan Management Areas (Brampton Lake Plain, Cassidy Creek, Central Houghton, Green Bay Lake Plain, Groveland, Huron Mountains, Keweenaw Tip, Pesheke Highlands, Sand River Lake Plain, Eight Mile Corner, Carp River, Milakokia Lake, Pictured Rocks Buffer, Tahquamenon River Patterned Fens, and Two Hearted Headwaters), and the Lake LaVasseur Flooding SWMA, which identify BW as a featured species.

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

1) For increasing conifer component: northern hardwood or mixed deciduous-conifer stands dominated by hardwoods.
2) For increasing age: stands dominated by or containing a significant amount of mesic conifer.

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

The goal is to increase the number of BW in the UP above the current 1.5 per Breeding Bird Survey (BBS) route.

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

1) Annually assess regional trends in BW numbers and distribution using BBS.
2) Assess the amount of mesic conifer on state forests every five years.

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

American marten; gray jay; moose; northern goshawk; red crossbill; spruce grouse; and white-tailed deer.

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

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