



Natural Heritage & Endangered Species Program

www.mass.gov/nhesp

Massachusetts Division of Fisheries & Wildlife

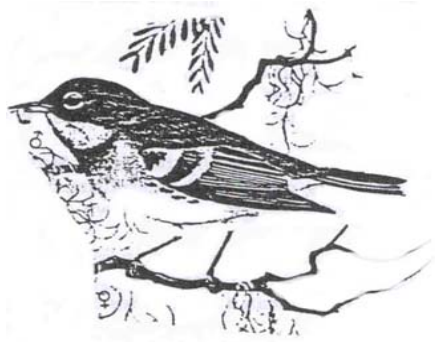
Northern Parula *Setophaga americana*

State Status: Threatened
Federal Status: None

DESCRIPTION: The Northern Parula is one of the smallest and most distinctly marked of the North American wood warblers. They are 10.8–12 cm (4 1/4 – 4 3/4 in) in length with a wing spread of 17.8–19.7 cm (7–7 3/4 in). The males are bright blue-grey above; white below; an olive patch on the upper back; and two bold white wing bars. They have a white eye ring broken by a black eye line; and a bright yellow throat with a dusky, red-brown chest band. Females and juveniles are similar but paler, and have little or no throat band.

SIMILAR SPECIES IN MASSACHUSETTS: The Black-throated Blue Warbler (*Dendroica caerulescens*) has similar blue-grey upper parts, but lacks the double white wing bar, and has a black throat and face, instead of the yellow throat of *Setophaga americana*.

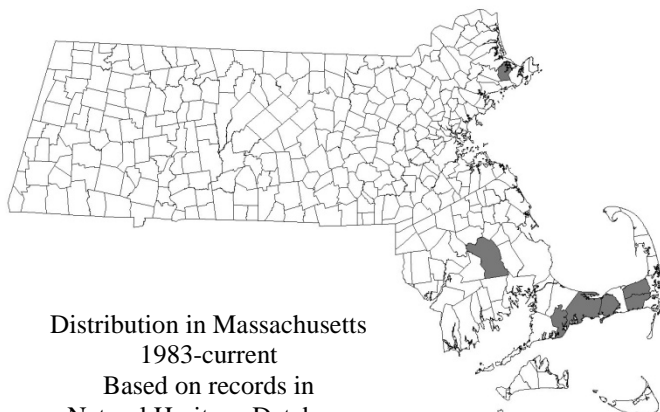
RANGE: The breeding range of the Northern Parula is from Nova Scotia to Manitoba, south to central Florida and Texas. It is generally associated in the north with the lichen Old-Man's Beard (*Usnea* spp.) and in the south with Spanish moss (*Tillandsia usneoides*). It winters primarily in Mexico, northern Central America and the West Indies.



Robbins, C., B. Bruun, and H. Zim. 1966. Birds of North America.

HABITAT IN MASSACHUSETTS: *Setophaga americana* is characteristically found in wet woodlands, such as Red Maple (*Acer rubrum*) or Atlantic White-cedar (*Chamaecyparis thiodes*) swamps, river margins, pond shores, or even small depressions. It usually nests in association with the moss-like lichen, Old-Man's Beard (*Usnea* spp.).

LIFECYCLE/BEHAVIOR: In the northeast, the Parula begins nesting in late May or early June. The nest is generally in a hollowed out bunch of hanging *Usnea* lichen in either a deciduous or conifer tree. Though predominately made of *Usnea* spp., the nest may be sparsely lined with finely shredded moss, fine grasses, plant down, or a few hairs. Upon completion, the nest resembles a hanging grey pouch with an opening at or near the top. The nest may also be constructed of other material, such as burlap, leaf fragments, or grass, but this is exceptional. The height of the nest varies from 4 to 40 feet above ground with the average being 25 feet. The same nesting site is often occupied in successive seasons with eggs being laid in the same nest or in another nearby. *Setophaga americana* lays only one clutch of 4 to 5 eggs each year. The eggs are white to cream, speckled with brown, and



Distribution in Massachusetts
1983-current
Based on records in
Natural Heritage Database

A Species of Greatest Conservation Need in the Massachusetts State Wildlife Action Plan

Massachusetts Division of Fisheries & Wildlife

1 Rabbit Hill Rd., Westborough, MA; tel: 508-389-6300; fax: 508-389-7890; www.mass.gov/dfw

Please allow the Natural Heritage & Endangered Species Program to continue to conserve the biodiversity of Massachusetts with a contribution for 'endangered wildlife conservation' on your state income tax form, as these donations comprise a significant portion of our operating budget.

www.mass.gov/nhesp

are incubated for 12 to 14 days. The young fledge in another 11 to 12 days.

The male sings during the nesting season into late July, and frequently during spring migration. It has at least three main songs, with a great range of variations. The most common is a buzzy, ascending trill, ending with an abrupt explosive note: “swee swee swee swee swee-Zip!”

Like others in its family, the Parula feeds on a variety of small insects such as cankerworms, hairy tent caterpillars, gypsy moth caterpillars, beetles and spiders. When feeding, it hops from twig to twig, inspecting leaves, often hanging upside down, much like a chickadee, or it may creep along trunks or branches like a nuthatch.

This species migrates south in September and October with other warblers, particularly the Blackpoll Warbler (*Setophaga striata*). *Setophaga americana* returns to Massachusetts in the beginning of May. It is more typically a migrant here than a summer resident.

POPULATION STATUS IN MASSACHUSETTS:

Since the turn of the century, the breeding population of the Northern Parula in Massachusetts has experienced a slow but steady decline. Since 1978, nine breeding locations have been recorded in the state. By 1986, though still a common migrant, the Parula was known to breed in only four locations on Cape Cod and the Elizabeth Islands (Harwich, Mashpee, Osterville, Naushon Island), nesting primarily in or on the edges of Atlantic White Cedar (*Chamaecyparis thyoides*) swamps. Each site was estimated to have 2–5 pairs of birds with the total state population thought to number less than 15 pairs (Nikula, 1986). To date, it is believed that the number of breeding pairs has declined even more dramatically, with only one remaining known breeding location (Osterville), where as few as 5 breeding pairs remain (Nikula, 1994). The species therefore appears to be in very serious danger of extirpation in Massachusetts and is currently listed as a state Threatened species.

Reasons for the decline in Northern Parula populations in Massachusetts and elsewhere in the northeast remain unknown. The decline coincides with the decline of its favored nesting material, *Usnea*, which may be sensitive to air pollution and acid rain. It is not clear to what degree the Northern Parula decline is associated with their dependence on *Usnea*. Additionally, its wintering grounds have experienced considerable destruction through deforestation and development, which may be significant in the decline of this species.

MANAGEMENT RECOMMENDATIONS:

Research on the nesting ecology, particularly with regard to the extent of the Parula’s dependence upon *Usnea*, is needed to determine what role, if any, that relationship has impacted the species’ decline. More information is needed on the Parula’s wintering ecology and the effects of habitat alteration on the wintering grounds.

If the Northern Parula is being adversely affected by changes in its wintering grounds or by air pollution on the breeding areas, any attempt on the state level through habitat preservation and/or management are likely to be ineffective. Though the state must make every effort to insure the continued existence of suitable breeding habitat, ultimately, the future of the Northern Parula in Massachusetts may depend upon political decisions made at the national and international levels (Nikula, 1986).

A Species of Greatest Conservation Need in the Massachusetts State Wildlife Action Plan

Please allow the Natural Heritage & Endangered Species Program to continue to conserve the biodiversity of Massachusetts with a contribution for ‘endangered wildlife conservation’ on your state income tax form, as these donations comprise a significant portion of our operating budget.

REFERENCES:

- Bushman, E.S., and G.D. Therres. 1988. Habitat Management Guidelines for Forest Interior Breeding Birds of Coastal Maryland. Wildlife Technical Publication 88-1. Annapolis, Maryland: Maryland Department of Natural Resources, Forest, Park and Wildlife Service; March 1988.
- Chapman, F.M. 1914. *The Warblers of North America*. New York: D. Appleton & Company.
- Forbush, E.H. 1927. *Birds of Massachusetts and other New England States. Vol. III: Land Birds from Sparrows to Thrushes*. Norwood, Massachusetts: Norwood Press/Berwick & Smith Company.
- Harrison, H.H. 1984. *Wood Warblers' World*. New York: Simon and Schuster.
- Petersen, W.R., and R.R. Veit. 1993. *Birds of Massachusetts*. Lincoln, Massachusetts: Massachusetts Audubon Society.
- Nikula, B. Harwichport, Massachusetts. Interview, February 10, 1994.
- Nikula, B.. "Northern Parula." Natural Heritage and Endangered Species Program. Boston, Massachusetts, 1986.
- Robbins, C.S., B. Brunn, and H.S. Zim. 1983. *Birds of North America*. New York: Golden Press.
- Terres, J.K. 1991. *The Audubon Society Encyclopedia of North American Birds*. New York: Wings Books.
- National Geographic Society. 1987. *Field Guide to Birds of North America*. Washington, D. C.: The National Geographic Society.

Updated 2019

A Species of Greatest Conservation Need in the Massachusetts State Wildlife Action Plan

Please allow the Natural Heritage & Endangered Species Program to continue to conserve the biodiversity of Massachusetts with a contribution for 'endangered wildlife conservation' on your state income tax form, as these donations comprise a significant portion of our operating budget.

www.mass.gov/nhesp