



Golden-winged Warbler Conservation in Minnesota:

from the Ground Up

When I first talked to ABC contractor Peter Dieser, he was trudging through several feet of snow in the frigid woods of northern Minnesota, confirming boundaries for a new project area. Even though Golden-winged Warblers were then thousands of miles away in the tropics, work to conserve this species continued. It's a year-round, full-time job, involving hours of planning and field surveys, visits to job sites with contractors, meeting with land managers at upcoming project sites, and training foresters.

This rapidly declining species requires a particular habitat to breed successfully: early successional or "young" forests. Dieser, with the support of a grant from the Minnesota Lessard-Sams Outdoor Heritage Council, works with public organizations that manage deciduous forest lands in Golden-winged Warbler breeding areas in the state. These include the Minnesota Department of Natural Resources, Four Brooks Wildlife Management Area, Tamarac National Wildlife Refuge, and various counties.

One of Dieser's main goals is to figure out how more Golden-winged Warbler habitat can be conserved or created. The work lies in adjusting how the forest grows over time.

"The areas where I work—already-established forest canopy gaps, or shrub/wetland interfaces on public lands—would naturally become overgrown with shrubs or become single-species stands of aspen trees. This reduces resource availability to understory plants that are important to this ground-nesting bird," he says.



By Gemma Radko, Communications and Media Manager, ABC

"Once we assess the areas, we go in and remove overly dense shrub and aspen undergrowth using prescribed fire or mechanical treatments," Dieser continues. "This mimics natural processes such as tree blow-downs, tornados, and low-severity forest fires, which leave a good mix of habitats behind."

Over time, this work will preserve and improve habitat for bird species of interest, including game birds such as Ruffed Grouse and American Woodcock, as well as the Golden-winged Warbler.

While the warblers, woodcock, and grouse share habitat, they don't compete for resources. Golden-wings nest on or near the ground, preferring spots at the base of goldenrods and other broad-leaved plants that often host caterpillars, a major food source for the warblers. Once their chicks fledge, the male and female warblers split up their brood and lead the young birds into older deciduous forests with a more complex vegetation structure, which provides cover and foraging habitat.

"Golden-winged Warblers are very faithful to patches of habitats in or near where they nested the previous season," Peter says. This makes for very interesting land-management strategies. "At Tamarac National Wildlife Refuge, we know that Golden-winged Warblers have nested in a certain area, so we have to manage the surrounding land with that in mind. We can't just create a young forest patch that's not close to previously occupied spots; if it's too far away, the warblers won't use it."

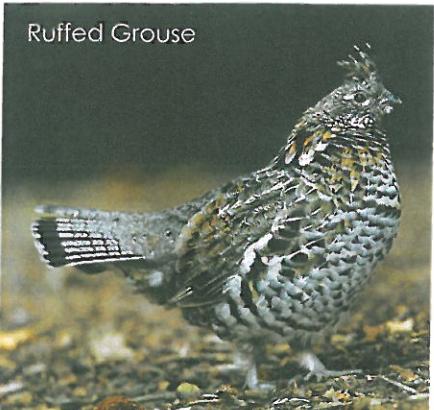
Creating Habitat on Public Lands

One of Dieser's goals is to establish productive relationships with the forestry divisions that manage these public areas. "Historically, forest management plans tended to clear-cut expansive areas of aspen," he says. "Clear-cuts greater than seven to 10 acres have very little usefulness for most wildlife species. We are hoping to generate interest in a more balanced harvest approach that can allow both timber harvesting and wildlife habitat maintenance."

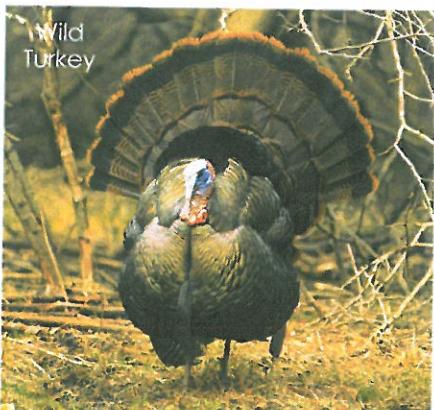
This strategy can be accomplished in a number of ways. One is to harvest smaller "patches" of fewer than 10 acres within diversified forests, which will help establish and maintain a continuous source of second-growth habitat for Golden-winged Warblers and other forest wildlife. This approach would also result in a more balanced forest in terms of both age and cover types, distributed among aspen stands, mixed hardwoods, boreal pine forests, and open shrubby areas.



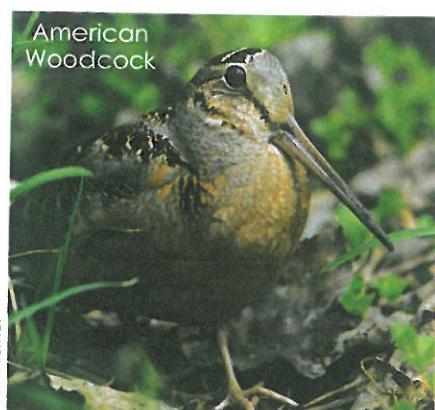
Kevin Sheppard with a truckload of pulp wood, harvested to help increase forest health and create second-growth habitat for game species and threatened bird species such as the Golden-winged Warbler. Photo by Jerry Havel



Ruffed Grouse



Wild Turkey



American Woodcock

Other Birds Found in Golden-winged Warbler Habitat

A second strategy is to leave more trees standing when timber is harvested, especially in harvests exceeding 10 acres. This approach has the benefit of creating additional forest “edge” that can be used by wildlife.

“This new approach is still evolving,” Dieser admits, “but conscientious foresters prefer to maintain forest quality, which will sustain its usefulness for people and wildlife over the long-term.”

Progress on Private Lands

While Dieser focuses on optimizing public land use for the Golden-winged Warbler, ABC’s Kevin Sheppard concentrates on privately-owned lands. Private lands comprise a major percentage of the forests in northern Minnesota.

Sheppard’s work is part of a partnership between ABC and the U.S.

Department of Agriculture’s Natural Resource Conservation Service (NRCS). As part of the federal Farm Bill, NRCS has money available to help private landowners implement conservation practices on private forestland.

“One of our gaps has always been that we don’t have a seasoned forester on staff that can meet with landowners to put these types of plans together,” says Will Bomier, Area Resource



Golden-winged Warbler habitat a few years after mechanical operations have finished and the land has had some time to regenerate. Golden-wings won’t use habitat until some regeneration has taken place. Photo by Peter Dieser.

Conservationist with NRCS. "When ABC first contacted us about putting together this type of partnership it was like music to my ears. With Kevin, we'll really be able to increase the amount of young forest habitat in targeted areas across the state—something that will benefit not only wildlife like the Golden-winged Warbler, but will also increase forest health and resiliency."

Private land conservation deals with much smaller properties; the areas Sheppard assesses are typically tracts of 40 to 600 acres. Landowners contact Sheppard about establishing and managing habitat for deer and small game such as grouse, turkey, and woodcock, or for forest management training to increase aspen, which is harvested for pulp and paper. Judicious harvesting of aging aspen habitat can help landowners meet both financial and game-management goals, plus will create the second-growth forest stands that Golden-winged Warblers prefer. Plots of 10 acres have proven ideal for such project sites—and are also a good size for Golden-wing territories.

"These early-successional habitats take a few years to establish," Sheppard says. "And Golden-winged Warblers do not use them right away. Years three to 12 are the optimal times that these created sites are used by

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Jeff Larkin, Range-wide Breeding Habitat Coordinator for Golden-winged Warbler

the birds for breeding; then they are overtaken by a more closed-canopy forest once again."

This new program is off to a strong start. "We have a lot of landowners showing interest," Sheppard remarks, "but first we need to assess potential sites to make sure they are suitable." He makes these initial assessments using GPS coordinates and aerial photos to determine property boundaries, then meets with the landowners to walk around their land.

"Right now, with -20 temps and 40 inches of snow, we can't get land-

owners out," he laughs. "But more people will want to go out once spring arrives!"

"I want to make sure that landowners have a good healthy, deciduous forest in place," Sheppard continues. "When I'm on the ground and do my job right, I teach landowners not just forestry facts but about tree species, micro-habitats, and how to maintain productive and dynamic landscapes."

Partnerships Beyond Minnesota

Another ABC expert is also working to reverse the decline of the Golden-wing, in Minnesota and beyond: Jeff Larkin. Larkin is our Range-wide Breeding Habitat Coordinator for Golden-wings; he's also a Professor of Wildlife Ecology and Conservation at Indiana University of Pennsylvania.

"We have developed a strong partnership base in Minnesota over the past year," says Larkin. "Our initial success on public and private lands is evidence of that strong partnership. The Minnesota program is modeled after the Pennsylvania program, which has been in place for nearly three years.

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Photo by Mike Parr, ABC

Gemma Radko is Communications and Media Manager at ABC. She is an avid birder and member

of the Maryland Ornithological Society, and often leads field trips for members. She is a licensed bird bander and ran a MAPS (Monitoring Avian Productivity and Survivorship) station for nine years. Gemma also teaches ornithology classes at The Graduate School in Washington, DC.



Photo by Erin Loeffler

Peter Dieser (right) received a M.S. in Natural Resources Science and Management from the University of Minnesota. His thesis research included trend analysis and database integration for the Cloquet Forestry Center Continuous Forest Inventory. He comes to ABC from Eagle Bluff Environmental Learning Center.

Kevin Sheppard (left) has nearly two decades of experience practicing forestry in northern Minnesota. Kevin operated his own consulting forestry business before starting at ABC, and has experience working in both the USDA Forest Service and county forestry departments.