



A PLACE

for Wildlife

LAND CONSERVATION FOR BIODIVERSITY

BY Madeline Bodin



A rough-skinned newt is relocated by Nisqually Land Trust volunteer interns rescuing newts and other critters from an old ditch before it was filled in as part of a restoration project.

CHARLY KEARNS

The quaint New England town of Stonington, Connecticut, may not be the first setting that comes to mind when thinking about core habitat for an imperiled species. But southeastern Connecticut has one of the few remaining populations of New England cottontail, which was being considered for listing under the federal Endangered Species Act.

“People think of Connecticut as a densely populated state because of the big cities and the interstate,” says Beth Sullivan, Avalonia Land Conservancy’s volunteer chair for the town of Stonington. But Sullivan’s Connecticut is still a place of forests and rocky coastlines, thanks in part to the 3,500 acres Avalonia has preserved in eight towns in southeastern Connecticut.

In 2011 the U.S. Fish and Wildlife Service and the Connecticut Department of Energy and Environmental Protection identified two Avalonia preserves connected to a powerline right-of-way as the perfect place for New England cottontails—a species with different habitat needs than its more adaptable non-native relative, the Eastern cottontail—if only they had more of the shrubby, tangled thickets or young forests that these animals require.

Avalonia agreed to create this habitat on 28 acres in the two preserves, using guidance from the agencies, funding from federal and private sources and its own volunteer labor. To turn an old forest into a young one means cutting trees, and Sullivan admits it was hard to see that first tree fall in 2013. But she knew that converting a small part of the area’s abundant forested land would benefit not only this species, but other local species, too.

Educating preserve visitors, conservancy members and adjoining landowners about this seemingly illogical conservation strategy is crucial to its success, says Sullivan.

The new habitat isn’t expected to be ripe for New England cottontails for several years, but the land trust and the agencies regularly check for the droppings that will provide DNA evidence of their appearance. In the meantime, the shrubland is providing habitat for butterflies, dragonflies, turkeys, snakes, ruffed grouse and dozens of species of songbirds, including blue-winged warblers.

Best of all, says Sullivan, this and other efforts to preserve land and create habitat for the New England cottontail saved it from being listed as an endangered species in a September 2015 decision.

Land trusts like Avalonia know that when it comes to saving biodiversity, preserving land is a vital tool enriched by a strong scientific foundation, a variety of funding sources and collaborations and a choice of land conservation strategies.

A PLACE for *Wildlife*

The Vital Ground Foundation

While Avalonia Land Conservancy was a typical land trust that took on wildlife conservation work, the Vital Ground Foundation was a wildlife conservation organization that became a land trust as land conservation became one of the focuses of its work.

The Vital Ground Foundation (accredited) was founded by the bear trainers Doug and Lynne Seus as a way to honor the animals they've worked with. If you've seen a grizzly bear on a television show, such as "Game of Thrones" or in a movie like "We Bought a Zoo," chances are you've seen their work. Before committing to the land trust model in 2005, Vital Ground was mostly a grant-making organization funding grizzly conservation projects, says Executive Director Ryan Lutey.

But what grizzlies need more than just about anything is room to roam—in other words, land. The U.S. Fish and Wildlife Service established six grizzly bear recovery zones in Washington, Montana, Idaho and Wyoming. Vital Ground aims to conserve land for grizzlies in these recovery zones and protect linkages between habitats, says Lutey.

Lutey feels conservation easements are the organization's most efficient tool for this. Core capital funding comes from local initiatives and state and federal agencies, some of which is tied to the species' listing as a federally threatened species and state-level priorities. "Projects need to be anchored by a public source of funding, and then we work with our network of private foundations," says Lutey. He also credits about 4,000 individual donors nationwide for "keeping the lights on and keeping the organization moving forward."

In addition to preserving land, the organization also works to reduce conflicts between grizzlies and people through fencing projects and "bear aware" community safety projects. Over the past 26 years, Vital Ground has helped conserve and enhance over 618,000 acres of grizzly bear habitat.



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The Vital Ground Foundation knows that grizzly bears need room to roam.



U.S. FISH AND WILDLIFE SERVICE

Nisqually Land Trust

"Salmon are our DNA," says Joe Kane, executive director of the accredited Nisqually Land Trust, based in Washington state. "We came into being as the habitat acquisition arm of the Nisqually River salmon recovery project."

The land trust works in a region that covers the Nisqually River watershed, from its headwaters in Mount Rainier National Park, throughout its 78 miles to the Billy Frank Jr. Nisqually National Wildlife Refuge, where the river delta meets Puget Sound.

The biodiversity conserved in the watershed includes two birds that depend on old-growth forests: marbled murrelets (seabirds) and northern spotted owls. Because of their cultural, ecological and economic importance in the region, however, salmon drive the land trust's work. The regional salmon recovery plan is rooted in Native American rights to the fish. The land trust's work for Chinook salmon and steelhead trout is directed by the recovery plans created by the Nisqually Indian Tribe.

Like Vital Ground and other organizations working with federal- and state-listed species, critical funds often come from federal and state sources. "Full fee-title land acquisition, as opposed to conservation easements, is the most important tool for our work because it allows us to manage and restore habitat to its full ecological value," says Kane. "It's expensive, but it's critical for salmon recovery."

After 27 years of focusing on freshwater salmon habitat, the land trust recently expanded its reach to the fishes' marine habitat. "These fish are getting hammered out in the Pacific and in Puget Sound," says Kane. To accomplish this, Nisqually joined a coalition of 14 land trusts and conservation organizations to form the Shoreline Conservation Collaborative, a project of the Washington Association of Land Trusts.

Weeks Bay Foundation

In 1990 the Weeks Bay Foundation was created as the friends group for the Weeks Bay Reserve in Alabama, one of 28 sites in the National Estuarine Research Reserves System. This partnership between the National Oceanic and Atmospheric Administration and state governments preserves biodiversity hotspots in estuaries. Weeks Bay—an estuary of Mobile Bay—is a hotter spot than most, for both wildlife and people.

Alabama has the most biodiversity of any eastern state. A variety of animals call the reserve home, including gray and red fox, bobcat, river otter and American alligator. Approximately 19 endangered or threatened species have been identified in reserve habitat.

The Weeks Bay ecosystem contains many freshwater and marine fish and invertebrate species. Collectively, these species support large commercial and recreational fishing industries. The estuary is a particularly important nursery ground for shrimp, blue crab and fish, such as spotted sea trout, red drum and flounder.

But the sun-splashed shores of Mobile Bay are popular with people, too. Baldwin County, where Weeks Bay is located, is the fastest-growing area in Alabama.



RODNEY KILGORE



JAMES C. LEIPOLD/USFWS

Pronghorn are sometimes called antelope but are another speedy, hoofed animal unique to North America.

“Protecting the wetlands that are important to the watershed is challenging,” says Yael Girard, the foundation’s stewardship and outreach coordinator. “People want bayfront and riverfront views, but development along the banks of our waterways is part of why they are so severely degraded.”

As the foundation grew, it realized that land protection was one of the most powerful tools it could use to be a friend to the reserve and to the ecosystem. “We wanted to do conservation at the highest level, so we became an accredited land trust in 2009,” says Girard (the foundation recently achieved renewal).

Today the foundation is using its ability to raise private funds to reach out to local landowners through conservation easements that protect both wetlands and water views, and educate them about what’s at stake and what can be done. Land acquisitions, through fee simple purchases or donations, are another important conservation method. Some of the land acquired becomes part of the reserve.

In return the reserve provides the foundation with scientific data and public outreach to the community. Girard says that the complementary strengths of the foundation and the reserve make for a strong partnership that could work for other biodiversity conservation projects.

Jackson Hole Land Trust and Green River Valley Land Trust

Just 3% of the land in Teton County, where the accredited Jackson Hole Land Trust operates, is private property. But the land trust was founded in 1980 on the premise that conserving this 3% was critical to protect the mostly intact ecosystem and preserve connectivity between the two national parks, three national forests, the national wildlife refuge and other public lands that make up Teton County, says Laurie Andrews, executive director of the Wyoming-based land trust.

This philosophy was reinforced when scientists discovered that a 100-mile-long migration route of pronghorn wound its way from Sublette County in the south through Teton County.

A 2000 study of the migration path showed bottlenecks where the pronghorn were being stopped by fences or hemmed in by development. “The big thing is pronghorn won’t go around. Other animals will, but not pronghorn,” says Andrews. “So when there were these bottlenecks, if we couldn’t secure the land, we didn’t know what would happen.”

“Local landowners love their wildlife,” she says, so the land trust’s main tool is conservation easements. “We are all about the carrot, not the stick,” she says. The easement may require a rancher, for example, to take down the top rail of his or her fencing when the pronghorns are passing through. The fact that all the easement conditions are based on scientific research makes it easier to inspire the ranchers to comply, Andrews says.

Compared to Teton County’s 3% private land, Sublette County to its south, home of the Green River Valley Land Trust (GRVLT), has 20% private land. Sublette’s natural gas fields, while a boon to

the economy, place a tremendous amount of pressure on the resources of the county in the form of well pads, access roads, fences and sprawling housing developments. Some landowners cashed in on these needs and divided up lands that had previously been rangeland and wildlife habitat.

GRVLT and its partners, including Jackson Hole, recognized the imminent threat of loss of historic family ranches, rangelands, wildlife habitat, corridors and vast viewsheds at the base of the area’s mountain ranges. This region is the heart of greater sage-grouse country and provides crucial habitat for elk, Shiras moose and mule deer, as well as the pronghorn. GRVLT and partners put great effort into localized conservation easement and wildlife-friendly fencing programs, in addition to a youth-oriented Nature Camp, says Conservation Coordinator Summer Schulz.

Through 2012, in coordination with willing landowners, grant-paid contractors inventoried over 878 miles of fencing for condition and permeability (height, wire spacing, carcass counts). Based on these inventories, over 154 miles of fence segments were prioritized so that dilapidated, non-wildlife friendly fences were modified or removed, with a contractual agreement that fence owners would maintain the fences in good condition for 20 years.

The two land trusts’ success with the Path of the Pronghorn campaign has given them the confidence to tackle a new migration project. Scientists at the University of Wyoming recently delineated the Red Desert to Hoback mule deer migration corridor, rivaling that of the pronghorn’s. These deer have been declining in the West, so wildlife managers and landowners, through the newly formed Red Desert to Hoback Partnership, are addressing the challenges posed to the route, ensuring that the deer continue using this generational migratory path. It’s another wildlife conservation project that will require savvy land conservation skills.

As Andrews sums it up, “When we think of biodiversity, we think, ‘What can we do to provide a safe and consistent environment for the animals that live among us—animals that were here long before us and that we want to be here long into the future?’”

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