

WILDLINES

New Hampshire Fish and Game's quarterly newsletter of the Nongame and Endangered Wildlife Program



WINTER 2022



Nests Installed for CLIFF SWALLOWS

A recent NH Audubon survey documented about 20 active colonies of cliff swallows scattered throughout the state, mainly north of Concord, supporting about 150 breeding pairs of birds. Cliff swallows are one of the most rapidly declining bird species in New Hampshire. Threats to cliff swallows as listed in the NH Wildlife Action Plan include climate change, insecticides, and changes in food supply.

To provide additional nesting opportunities for cliff swallows in the Granite State, NH Audubon and the Nongame and Endangered Wildlife Program purchased several dozen artificial nests. These were placed in areas where cliff swallows are known to nest communally. The clay pots resemble the natural dried-mud structures that cliff swallows build and then use for multiple years. A reused nest, or a well-placed clay version, provides a stable structure less



prone to collapse. Shifts in summer weather patterns may contribute to poor nest stability if nests are built during drought conditions in early spring.

NH Fish and Game Biologist Jillian Kilborn and NH Audubon Conservation Biologist Pamela Hunt placed 30 artificial nests with the help of private landowners in towns in northern New Hampshire.

Ongoing monitoring indicated that the birds utilized the new structures and appeared to have increased success over the summer, fledging many chicks during the 2021 nesting season. At one site in Pittsburg, all of the 12 artificial nests installed had some use, and chicks were fledged successfully in 8 to 10 of the nests. The artificial nests were purchased through the New Hampshire Conservation and Heritage License Plate Program, funded by purchases of "Moose Plates." 🦌

Promising Eastern Box Turtle Discoveries

Uncovering the secrets of New Hampshire's fragmented population of eastern box turtles continues to keep biologists busy. In 2021, Nongame and Endangered Wildlife Program biologists monitored three populations of the state-endangered turtles in southern New Hampshire using radio telemetry. The known statewide population has more than doubled this season, with a total of 12 box turtles now being tracked. Biologists were able to document habitat use, movement, and behavior. As the state's only terrestrial turtle, box turtles are not associated with ponds or wetlands.

"This year we found our first juvenile that was about two to three years of age," said Nongame Program Biologist Joshua Megyesy. "Over the past two years, we have observed four mating pairs at two sites. The extent of successful reproduction has been a big question since the first population in an area with more than just one known box turtle was documented in 2014. Given these observations, we can deduce that reproduction is happening, but we do not yet know about nesting and hatching success or juvenile survivability."

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AMERICAN BLACK DUCK

(Anas rubripes)

During the winter months, American black ducks are commonly seen dabbling in coastal marshes and on Great Bay. These large-bodied ducks are mottled dark brown with paler brown heads. Females typically have olive-colored bills while males have yellow-colored bills. During flight, their wings are visible as bright white and their upper wing feathers, called secondaries, are purple.

Habitat and Distribution: Coastal and freshwater habitats, including brackish marshes, estuaries, rivers, lakes, and pond edges, wetlands, and open boreal and mixed hardwood forests.

Threats:

- Impacts from climate change, including sea level rise and increased springtime precipitation, which can lead to poor reproductive success.
- Hybridization with mallards, which tend to be more tolerant of development and disturbance.
- Habitat loss from development.
- Declining water quality.

Conservation Actions:

- Permanently conserve and manage shrub wetlands and saltmarsh habitat, as well as the surrounding uplands where black ducks nest.
- Support upgraded, larger culverts that allow natural tidal flow and flooding.

AMERICAN MARTEN

Research in the White Mountains

New Hampshire Fish and Game biologists have been monitoring the expansion of the American marten, a solitary and difficult-to-locate mammal that lives in the northernmost regions of New Hampshire. Related to skunks and other weasels, marten are considered arboreal, spending their time in mature forests of spruce and fir.

Marten are a unique species because they are considered a furbearer, yet were also one of the first animals to be placed on New Hampshire's Threatened and Endangered Species List in 1979. Unregulated trapping and intense logging reduced their numbers dramatically. As a mammal that requires large, undisturbed areas of high-elevation forest, marten are considered an ecosystem health monitor (also called an umbrella species) for other wildlife that use similar habitats. In recent years, observations of marten have increased. They were delisted as state

threatened in 2017.

Biologists wanted to better understand the size and density of the marten population in New Hampshire, estimates of which had never been determined. In 2018, funding from the New Hampshire Conservation and Heritage License Plate (Moose Plate) Program and Pittman-Robertson federal funds allowed NH Fish and Game's Nongame and Endangered Wildlife Program to purchase motion-activated cameras to photograph marten.

The remote cameras produced over 46,000 images of marten in the state, and researchers were able to identify 116 individuals by their uniquely shaped orange-colored throat patch. "One of the most significant findings of this research was that the White Mountain National Forest (WMNF) is extremely important for marten," said NH Fish and Game Wildlife Biologist Jillian Kilborn. "Based on these results, the



WMNF is likely home to more than 40% of the state's marten population."

"When we combine these observations with data collected from the lynx project, we now have a dynamic map of northern flora and fauna, called boreal biomass, that can efficiently represent the growth stage of the forest on a large scale, indicating forest swaths with large-diameter, older trees—a predictor of marten occurrence," Kilborn further explained. "This is an excellent tool to track marten and predict future changes, especially when updated over time." Partners that supported other components of this important research include the US Fish and Wildlife Service and the American Wildlife Conservation Foundation. 🦊



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MEMORIAL GIFTS

to New Hampshire Fish and Game's Nongame and Endangered Wildlife Program

Donating a gift to conservation in memory of a loved one is a purposeful, lasting way to honor them and protect New Hampshire's wildlife and wild places. The NH Fish and Game Department recognizes with gratitude the following individuals, their families, and friends for leaving a conservation legacy for future generations:

- *Clarence and Gertrude Sleeper* of Littleton enjoyed skiing in New England, gardening, and being outdoors with their three dogs. In April of 2021, the couple left a large sum to NH Fish and Game to be distributed between the Nongame and Endangered Wildlife Program and the Department's K-9 Program.
- *Scott Sedgwick* of Fairfield had a special connection with Lake Winnepesaukee where he enjoyed fishing, boating, and spending time outdoors. He is remembered as someone who would do anything for his family and friends.
- *Arthur F. Card* of New Hampton was a business owner with ties to Plymouth, Meredith, Lincoln, and Tilton, where he showcased an appreciation for nature and nature-inspired craftsmanship. He is remembered as someone who enjoyed exploring the wilds of New Hampshire and Maine.
- *Richard Austin* of Londonderry is remembered as a generous volunteer and member of the Long Island Land Owners Association and Timberland Owners Association, as well as a supporter of NH Fish and Game. He enjoyed hunting, fishing, and boating in Moultonborough.
- *Richard Hughes* of Exeter was a family man who enjoyed playing games, riding waves at the beach, and bird watching. His particular love of ospreys, eagles, and terns led him to regularly volunteer for NH Audubon and to become a long-term supporter of NH Fish and Game.
- *Thomas Mears* of Manchester was particularly dedicated to the conservation of butterflies, milkweed, and wildflowers and was passionate about sharing his knowledge of the natural world with others. Tom is fondly remembered by constituents of the Manchester Community College Library for his donation of pollinator books and for gifting a subscription to *American Butterflies* magazine. He was the inspiration behind a 2019 project to raise and release monarch butterflies in Nashua. Tom will be remembered as a humble person who had an incredible impact on the community. 🦋



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JANUARY

- Some adult butterflies overwinter in sheltered areas across the state, such as the eastern comma, question mark, and Milbert's tortoiseshell.

FEBRUARY

- Flying squirrels huddle together in cold weather, effectively reducing the area of heat loss by becoming a larger mass, sometimes in groups of more than 20 animals!

MARCH

- Keep careful watch for the return of tree swallows to New Hampshire's open habitats. These streamlined birds dart and glide with pointed wings and flashes of blue.

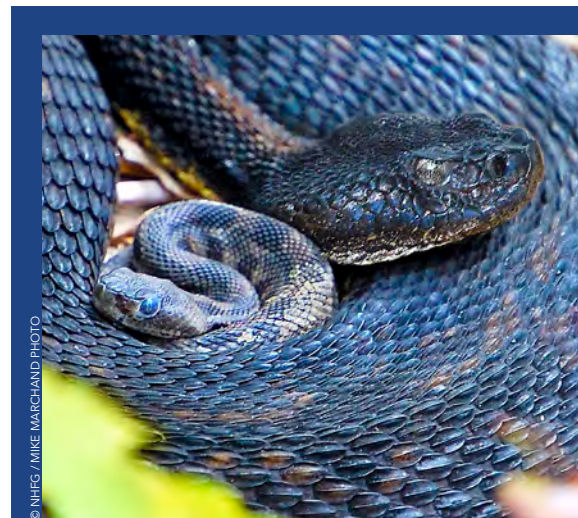


BOX TURTLES *continued from page 1*

Recruitment—the successful addition of young animals into a population—is often used to measure the effectiveness of current conservation actions.

To efficiently address the eastern box turtle's conservation needs, the Nongame Program has plans to develop a population estimate and construct a picture of demographics, genetic diversity, nesting success, and home ranges.

“One thing is for certain—these animals need unfragmented, protected land that has a mixture of forest, shrublands, and open sandy areas for nesting,” added Megyesy. As large areas become increasingly less available because of development, the Nongame Program ensures protections for this endangered species while developing long-term conservation plans to maintain their populations into the future. 🐢



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New Hampshire's timber rattlesnakes give birth to 5–20 live young in late summer or early fall. To locate their winter den, newborn rattlesnakes follow the scent trails of other rattlesnakes in the area. Mothers give birth every 3–4 years, and it will take newborn females a decade before they can first reproduce. Documenting successful reproduction is an important part of how biologists assess the health and stability of a wildlife population, guiding the direction of conservation actions.