



CLAY NESTS AND COMMUNITY

A Creative Plan to Help Cliff Swallows

BY JILLIAN KILBORN

Hiking, hunting, observing wildlife, or managing land for wildlife are all ways to connect with the natural world. As a biologist, facilitating these relationships is an unexpected and rewarding part of working for the New Hampshire Fish and Game Department. Recently, cliff swallows have exposed me to an amazing network of people who are connected to the places they live and the wildlife around them.

My work with these remarkable cliff swallow stewards began almost 10 years ago while I was conducting a Breeding Bird Survey (BBS) from Clarksville Pond to northern Pittsburg. The BBS is a monitoring program that has been used to track bird population trends since 1966. For the survey, an observer stops and listens for a 3-minute period at 50 different locations and identifies any birds by sight and sound. Cliff swallows, considered “hawkers” in the aerial insectivore family of birds, feed exclusively on insects while in flight. Many of our aerial insectivores, such as cliff swallows, bank swallows, and barn swallows, are declining here in the Northeast. This may be due to competition with non-native species such as house sparrows and a decline in our insect abundance, but researchers are not yet sure. The cliff swallow is similar in size to other swallows such as the tree swallow, which many people are familiar with, however they have distinctive chestnut-colored cheeks with a white “cliff” on their forehead. Blue facial accents add to the beauty of these birds and make them easily distinguishable. The cliff swallow song, described as a “chur,” is difficult to differentiate from the louder symphony of other birds. So in 2014, when I saw and heard cliff swallows at one of my survey points, I was very interested in figuring out why they were there.

After completing the survey, I returned to the vicinity of where I had encountered the cliff swallows and knocked on the door of the Partridge Cabins. This is when I first met Cathy Boutin and her husband Jerry. If my hunch was right, the Boutins were hosting cliff swallows on their property. Cliff swallows are colony-nesting birds that build funnel-shaped nests out of mud, often under the eaves of houses and other buildings, and even bridges. After some conversation, Cathy confirmed that they had been supporting a colony of cliff swallows, which had been building their nests under the eaves of their home for more than 10 years. Cathy recalls that at one point there were more than twenty active nests, but the

numbers had declined to some eight nests the previous summer.

The Boutins were in the process of re-siding their house, and Cathy was concerned that the birds would no longer build their nests on the side of their home, but she definitely wanted to keep them! The cliff swallows' arrival in the spring, the different stages of nesting, and the eventual fledging of chicks were all seasonal milestones that she uses to track the fleeting summer months in Pittsburg. Cathy spoke eloquently about wanting to help the birds while maintaining her daily reminder to enjoy every day of summer as the swallows moved through their nesting season.

In an attempt to assist Cathy and Jerry, I reached out to New Hampshire State Ornithologist Pam Hunt for some advice and ideas. Hunt has been tracking bird populations in the Granite State for years and had recently read a study on the use of artificial swallow nests in Massachusetts. She quickly put me in touch with Mara Silver, the author of the paper, who had been making clay-fired, artificial cliff swallow nests as a tool to maintain or enhance colonies in western Massachusetts. Silver, a lifelong bird enthusiast, is an amazing artist who had found her own way to aid the birds she loved so much.

With the help of Conservation License Plate funding, or “Moose” plate revenues, the New Hampshire Fish and Game Department’s Nongame and Endangered

Wildlife Program purchased ten pre-made clay nests and then paid to have Silver come up and evaluate the site that was under consideration for placement—Partridge Cabins. Five of the new nests were installed in the spring of 2015. The more cliff swallow activity and sounds the birds hear the better, so to entice them into using the new nests Cathy broadcast cliff swallow songs through a window just below the clay pots throughout the spring. In addition, the Boutins would add water to their dirt driveway, just below the nests, to make sure the birds had a reliable source of mud if the weather was dry.



Each spring before the birds return, the artificial nests are removed and cleaned to prevent the build up of nest parasites that can kill cliff swallow chicks.

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Clockwise from above: Roy Amey holds the ladder as the author installs a board with two artificial nests mounted on it. With all the artificial nests occupied, the author adds two more to increase the nesting opportunity. An adult cliff swallow builds a natural nest.



The cliff swallows quickly took to their new homes, with four of the artificial nests being used and an additional two natural nests being constructed. Since 2015, we have been successful at maintaining this colony with the hopes of expanding it to make it more stable.

During the summer of 2019, while monitoring other local cliff swallow colonies in Pittsburg, we documented significant mortality because of an especially dry spring and summer. As the season progressed, the natural but brittle mud nests fell to the ground under the increasing weight of the chunky nestlings. By the end of the season, we learned that most of the nestlings at three of the largest colonies in the state had died because of this nest failure.

To prevent the loss of these important cliff swallow colonies, it was determined to be critical to help support them as we had at the Partridge's property. We again partnered with Silver and acquired an additional 50 artificial nests for installation statewide—and I knew just the landowners to work with. Roy and Laurel Amey had for years watched and nurtured the cliff swallows nesting just below the eaves of their farmhouse and barns. The evidence of multiple generations of cliff swallow activity is apparent on the sides of all of their buildings. Roy, now in his mid-70s, told me stories about the birds that had nested at this site for over 50 years, and he loves watching the birds flying and darting above the fields, eating bugs on the wing. He also knows there is a direct relationship between the insect abundance around his house and the adult cliff swallows feeding their young who will also eventually fledge and sustain themselves in the same way. In the late summer, just before the birds begin their long journey to South America, the cloud of birds feeding in the area is impressive. I can only imagine what the magnitude of this sight was like 50 years ago when the birds were almost twice as abundant as they are today.

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With the addition of so many artificial nests, Pam Hunt wanted to monitor each of the colonies to get a better understanding of how they were being used and what the reproductive output of each one was over time. While I love watching birds, I simply did not have as much time as the monitoring would require. In my travels, I met a couple who were very engaged in wildlife photography. Could this be a good way to check up on the nests? I contacted Diane Seavey to see if she would be willing to visit four to six of the colonies in Pittsburg on a weekly basis to take photos of the nests throughout the summer. 2022 was our first attempt at monitoring the colonies this way, and what we documented was amazing! This monitoring method allowed us to record what nests were being used, if birds were incubating, if there were chicks, and approximately when the chicks had fledged. Throughout the next

breeding seasons, our strategy will continue to evolve as we work to figure out the best ways to track each of the colonies and what new protocols might add to the research. The volunteer work of visiting the nests each week will greatly expand the knowledge we have about each of these colonies and these fascinating birds.

It is the dedication and curiosity of the people who I have met through this exciting work that make me hopeful that cliff swallows will always be a part of bird diversity in New Hampshire as we continue to build on our prior success one clay nest at a time. 🏠

An avid birder, Jillian Kilborn is a wildlife biologist with the New Hampshire Fish and Game Department whose interests range from Canada Lynx to bog lemmings to cliff swallows.



HOW CAN YOU HELP?

Have you seen cliff swallows? Report your sightings to **eBird.org**.

PHOTOS (LEFT AND RIGHT) © DIANE SEAVEY

Clockwise: A cliff swallow "renovates" an artificial nest by adding additional mud at the entrance. A cliff swallow feeding chicks in the nest. Cliff swallows gathering mud to build their nests.

