

# The BEAVER DEFENDERS



Unexpected Road sans bridge and spillway - looking toward “Miller Pond”

Fall 2013

*Beavers are as much a part of the waterway as the water itself.*

# The BEAVER DEFENDERS

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PO Box 765, Newfield, NJ 08344  
Telephone (856) 697-3541  
[www.unexpectedwildliferefuge.org](http://www.unexpectedwildliferefuge.org)  
Editor: Sarah Summerville

## Good News

I don't know if you all remember the torrential rain storm that I wrote about in the July 2007 Beaver Defenders. On April 15<sup>th</sup>, South Jersey received approximately 12" of rain in a twenty-four hour period. Dams, roads and bridges throughout the area were blown out by swollen streams and rivers. Unexpected Road was breached when the force of the water scoured out a huge crater in the roadbed, spewing dirt and stone hundreds of yards into the woods.

Main Pond immediately began to drain as a result, and our brave beavers hightailed it out of there and relocated up into Main Pond. Many people suffered flooding when dams gave out, forcing them from their homes, like our beavers. Many lawsuits against dam-owners followed! Thankfully, no one downstream was flooded by our waters - this tributary of the Great Egg Harbor River flows into the Cedar Lake Wildlife Management Area in Monroe Township.

Since that fateful day, Miller Pond has been verdant marsh meadow decorated with a Pinelands stream meandering through it like a coffee-colored ribbon. This expansive green vista is filled with cattails, sedges and wild flowers that bend and sway in the wind. Herons, eagles and redwing blackbirds stalk, perch and fly across the soft gently moving blanket of vegetation. But no beavers live there.

After the rain stopped, Buena Vista Township came to the rescue, repairing the broken bank with sheet piling. However, in addition to the breach, the old wooden spillway under the bridge had failed. By

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the end of the month, the pond was gone for good. Instead of holding back the water, the spillway allowed it to escaped beneath the structure. This situation made it physically impossible for our beavers to build an effective dam. Miller Pond became a memory.

*However, one must try to think like a beaver.* If the bridge and spillway were removed, the stream would flow freely across the abandoned road. An *IDEAL* spot for a beaver dam!

The township and county both got on board when I suggested that we *not* fix the road (which would have cost the taxpayers almost \$1,000,000 for a road design that would NEVER impound water). We decided in the best interests of all those involved - the Refuge, the township, the county, the taxpayers and the beavers - to vacate Unexpected Road. That means the township gives up ownership of a road to whomever owns the land on either side of the road. Since the Refuge is the landowner on either side of Unexpected Road, the land would revert to Refuge ownership. We would then make the road part of our trail system, available for all to enjoy. We had an engineer design the bridge deconstruction plans and began the long slow process of getting the necessary permits from the State.

Finally, six years later, the Atlantic County and Buena Vista Public Works Departments began removing the bridge decking, guardrail, spillway and pilings per the approved plans. Thankfully, much of what was removed was recycled for other uses by both departments. At this point, all existing materials have



been removed and the roadbed has been graded down to the stream. They spread stone rip-rap to prevent erosion on the slopes, and now the stream flows freely, unimpeded. Just like the plan! All we need to do now is drop large boulders at intervals across the water so hikers can hop across. We eagerly wait for spring, when the young beavers venture out looking for new homesteads. Miller Pond has always been a smorgasbord of culinary delights for our beavers, so it is only a matter of time.

*Speaking of beavers....* Susan Russell, APLNJ Wildlife Policy Director, gave me an update on the horrendous Beaver Bill that was explained in the last issue of *The Beaver Defenders*. She says that Senator Bob Smith (D17) wrote the League of Humane Voters regional director Merrilee Cichy, that he will not be hearing the beaver bill in the Senate Environmental and Energy Committee. So it is thought that the bill is dead for the time being. Thanks to all of you who took the time and effort to contact your representative to protest this bill. We may have to do it again, so I will keep you posted!

Thanks also to those of you who gave that little extra for the new septic system. We have the money we need, and we have contracted with East Vineland Construction to do the work. Unfortunately, we will have to hold off on the actual installation until deer season is over due to increased traffic in and out for patrolling. If you have ever been back here, you know that our half mile-long, one-lane dirt driveway is daunting as it is, with very little room for maneuvering. The septic system installation will involve movement of equipment, dirt fill, stone and piping in and out of the site, so we will wait until things calm down before we start that process. We received grant money from our longtime supporters



Chemglass, The Binky Foundation and of course, Conservation Resources, Inc. Just a shout out to the gang at CRI who have embarked upon a new adventure at Duke Farms in Hillsboro, NJ. Thank you so much to Michael, Jon and Julie for all the technical, financial and moral support over the years. I could never have done so much, so well, without your help. Best of luck!

#### **Join the Patrol...**

Six-day shotgun season begins at sun up, Monday, December 9<sup>th</sup>.

**Six-day lasts all that week and ends at sunset on Saturday, December 14th. But it is bow hunting season now, and it will continue until the end of January.** The best times to join us are early in the morning or in the afternoon until dusk.

Please join us for another year of patrolling this Refuge, and protecting the animals who call it home. If you have a few hours to spare, please consider taking a hike or sitting in a strategic spot for a bit. Bring your camera. Bring a friend. Enjoy the fall weather. Hot food, refreshments and snacks will be provided during six-day shotgun week.

**Please call me at (856)697-3541** or email and make your appointment to support this unique and special sanctuary. The deer are counting on us to make our presence known to any would be trouble-makers.

With this copy of *The Beaver Defenders*, you should be receiving an EMAILED copy of this issue. Call it a test. Unless you have specifically requested that you keep receiving paper copies, this will be your last mailed issue of *The Beaver Defenders*. Please contact me if you do not get your emailed copy!



## A Tribute to Augie

[August Sexauer, December 24, 1923 ~ June 1, 2013]

*August Sexauer was one of our oldest and dearest friends, who volunteered at Unexpected. He was one of the first to arrive and help the Buyukmihcis protect the Refuge with patrols back in its infancy.*



The following are memories from a few of the members who shared many a time in the field with Augie. Compiled and submitted by Nels Anderson.

Today the Prothonotary Nest Box trails remain much the same as when Augie began and maintained them through many years. As current nest box "caretakers" (along with Nels A. and Emily K.), my husband, Pat, and I are often struck at how beautiful - almost poetic - the locations are that Augie often chose to establish each nest box and the care in how he placed and afforded protection: baffled and facing east to capture morning warmth and protect from afternoon rising heat. The results of these placements have proved to be both popular and successful throughout the 18 years of their existence. From the first 4 boxes and 9 fledglings in '96, to 15 boxes and 44 fledglings in '98, to a high of 21 boxes and 47-51 fledglings in 2008, the latest season had a 16-box total of 57-59 fledglings for 2013! 10 of the 16 boxes were used for actual nesting (a 63% occupancy rate) and "false" or "starter" nests were in 4 of the other 6 boxes. This is an amazing legacy, wouldn't you agree? Thank you Augie - Pat and Margaret

I was privileged to work closely with Augie, during the Bear Swamp acquisition of the Foote property in the mid 1990s. What a patient and kind man, a true gentleman! Augie expertly guided Audubon Wildlife Society, as their generous

assistance with the Ingersoll Fund was absolutely crucial. And all the while, Augie kept his eye on the prize – the expansion of preserved habitat for the Prothonotary nest box trail! To me, Bear Swamp at Red Lion will always be "Augie's Swamp." His quiet, steadfast spirit will be there every spring, when the ringing song of his golden birds bursts from the thickets of sweet pepperbush and swamp azalea. –Dr. Emile DeVito

There are not many ways to describe Augie that do not include birds and nature. He would willingly withstand whatever the elements would throw his way including wet, wind, cold, hot, snow with an extensive hike through the same, always looking for the special bird or unusual view of nature. In the past twenty five years I have walked many miles with Augie and saw many interesting things. One year the first creature we saw on the Christmas Bird Count was an otter. In 1996 Augie called and asked if I would watch over his Bluebird Trail for the summer as he was going on a trip to Alaska with Sally in their camper. I experienced a steep learning curve minding the nest boxes that summer. Interesting though, he never took back the reins of that twenty



box trail which has grown substantially over the years. He wanted to focus on his Prothonotary trail in Bear Swamp. I would sometimes help him there to spruce up and relocate nest boxes. One spring morning we were in the swamp fussing with a nest box when we heard a male Prothonotary singing. We were trying to spot it through the leaves when suddenly a flash of yellow appeared and perched not a dozen feet away. That male sat displaying himself in his brilliant golden splendor and looked us over. I'd like to think it was his way of saying, "

Thanks Augie." We participated in the Pinelands CBC for many years. I recall one count with rain and then snow with all our stuff so fogged up we were lucky to see the road when Augie's admission, "I think I have had enough" was welcome to me although I did sense this was more than the end of a day for him. He was in his early 80's then. He has opened many doors for me and at times the "feelings" are so elusive it is difficult to put them into words. He is still out there roaming around but we won't see him with his heavy coat, hat, gloves and favorite bins. We will see him in the sunrise, wind pushing through the pines, ripples on the water's surface and so forth. He is gone but not forgotten. I would like to think his spirit and love of nature continue on somewhere, somehow; Perhaps within so many of us who knew him well, each in a special way. - *Nels Anderson*

My favorite recollections of Augie were during a study of Prothonotary Warblers or Golden Swamp Warblers as Augie referred to them. These studies were carried out in April through July from 1998-2002 at Augie's nest box trail off Hawkins Road. One object of the study was to determine if individual Prothonotary Warblers could be identified by song. To do this each individual male had to be captured, color-banded, and its song recorded and analyzed. Only about 37% of the males return in successive years, the remainder likely perishing on their long journeys or during their winters in the tropics. A favorite visual image of Augie was of him holding a Golden Swamp Warbler in his hand. He was always mesmerized by the wonder of the bird and its journeys whether it was his first time in 1998 or his last time in 2002. He described the experience best in a report he wrote titled Big World-Little Creek: "We all know about migration but to actually stand on the bank of Little Creek and witness first hand the arrival of this individual back to this tiny spot on a vast planet; well, that is something else again! I cannot describe the feeling I experienced at that moment except to say, welcome back old friend!" Augie was

the ultimate witness to nature. All of us who were privileged to share in his passion are poorer for his passing. -*Don Jones*

The singular, zweet, zweet, zweet, sound from a male Prothonotary Warbler was like a beautiful dream come true. I owe that first introduction to this brilliant yellow bird and Bear Swamp to Augie. He taught me to slow down and sharpen my senses between navigating over the waist high fallen logs in our hip waders. He tuned my ears to the subtle nuances of life thriving in the deep shadows. And as much as I looked forward to the occasional staring contest with the resident Barred Owl, it was Augie who held my attention as he described the language of Bear Swamp that only a keen observer of this environment can decipher. Augie was philosophical about his skills as a naturalist. It was through a series of ideas and understandings that could only be gotten out of experiencing the natural world first hand. He showed me the visible design of the invisible that we call Nature. Thank you Augie. -*Steve Greer*

It was a winter day in the mid 80's and we recently moved to Shamong. While driving along our road toward home one day we saw a gentleman standing in the roadway. He was wearing a cap that included flaps to cover the ears and his eyeglasses were spotted with water and speckled with debris. He was dressed warmly in winter garb. We stopped to see if he needed assistance. "No", he said. After introducing himself as Augie, he asked us directly whether we could hear the call of a particular bird and he immediately imitated the sound. The bird call was an evening grosbeak. Not knowing this sound, we informed him we had several grosbeaks on our property. Augie's face lighted up and he requested that he be able to come see for himself. When he did, he was thrilled to see the many grosbeaks at the feeders. After that, Augie was a regular visitor to Bear Pond. We often watched from the window to see Augie and Nels drive up the driveway on a weekend day. Armed with binoculars and bird guide (to help us



learn about the birds we saw) he spent time on his weekend route identifying birds and water fowl. He invited us to ask questions and he helped us to identify various birds. We did not become experts, nor are we today. However, Augie was instrumental in making us aware of the Earth's creatures and the beauty they can add to one's life. I'm sure his birder friends, on seeing or hearing a particular bird, think that Augie has "sent" something special to them that day. -Nancy Tinucci

My favorite memory of Augie, my guide and mentor in Bear Swamp where he shared his Prothonotary trail with me, took place one April morning on Hawkins Bridge Road. Augie arrived at the bridge early and while waiting for me witnessed a pair of Louisiana Waterthrush mating. He was bursting with pleasure at this unexpected early morning treat, excitedly saying that he would have to write this up for the Burlington County Science Club which he did. My treat was to witness and share in his excitement that morning and many other mornings walking with him in Bear Swamp. I remember the morning when he spotted the Black and White Warbler pluck a tuft of deer hair from the trail and head for its nest site, when he spotted the Hooded's nest in a low shrub, or a tiny pile of lichen on a branch which turned out to be a Blue Gray Gnatcatcher nest under construction. Augie, a lifelong birder, retained the enthusiasm of a novice birder as he shared with others his favorite spots for Woodcock courting, Nighthawk booming or Whip-poor-wills calling. These forays are among my very best memories in the world. Thank you Augie. -Emily Kingsbury

I met Augie on June 3, 2000. He sat in on Unexpected Wildlife Refuge's Board of Trustees meeting that convened for my initial interview. He was quiet and thoughtful and asked if I liked to go

birding. And although I am more an administrator than a birder, we formed a friendship that lasted over a decade. When Augie came down to the Refuge, we always got into something. He would ask what I was up to and then he would find himself in the thick of it. On a warm spring Saturday, he was mere minutes ahead of a group of children that, unbeknownst to him, would be his class out in the woods. They gathered around him and listened to him explain nature, one piece at a time. One day we were standing in the barn, and the next thing you know we were turning an old door into a workbench (which is still there today). On days we couldn't go out and get into something, we would sit on the porch and watch the pond. He always kept a running list of the birds he saw. He usually wrote them down, but sometimes he would just say the name out loud. But he counted



other things too, like otters and beavers and snakes, collecting them as memories of our time on the porch out of the rain. When I told him that I would be moving into the old Miller House and taking up residence, he told me he used to have a painting company. You don't say! The next thing you know, Augie offered up his services to paint with all enthusiasm and sincerity. When we walked through the old dump, his shoulders slumped and I could see that he was so very sorry for making the offer, even if he did not say it. As we ambled through the debris and trash strewn about the rooms, he would quietly note the patch, repair or limitless sanding and spackling that would be necessary before we even opened a can of paint. I put my hand on his shoulder and explained that time was of the essence, and all we were going to do was paint – the rest could wait until another day. His smile reappeared, and once again, Augie was in the thick of it. -Sarah Summerville

**They All Call it Home,** By  
Hope Sawyer Buyukmihci,  
1970



One May evening at our wildlife refuge in New Jersey, I watched Greenbrier, a father beaver, working on his lodge. Inside were four newborn kittens which his mate, Whiskers, was nursing. I could hear their eager “mew-mew-mew.”

Greenbrier was busy with repair work. Swimming quietly out from the lodge, he dived deep and dug up an old cedar root. He towed it over to the base of the lodge. With his black tail waving he made another dive, coming up with paws and arms full of mud. He took the cedar root in his teeth and rose on his hind legs. Holding the mud under his chin, he waddled up the steep side of the lodge. He looked like a plump man climbing stairs with a hue bag of groceries.

Near the top he put his materials down and began to work. He jabbed the root into the mud-and-stick wall and arranged fresh mud around it, using his nose and paws as a trowel. Then he patted the mud into place. After looking over the job, he reached over and nipped of the end of a protruding stick and tucked the piece into the lodge wall. Then he turned and ambled down the side and slid smoothly into the water.

On the lodge were four muddy paths showing where Greenbrier had made trip after trip up the sides. He never put mud at the top. The center of the lodge top was an open lacework letting air through. In winter I had seen steam rising from the top like smoke from a chimney.

The lodge was beautifully landscaped. Red flowers of swamp maples made a gay canopy overhead. Rich yellow spears of golden club poked through the water nearby. In summer, purple loosestrife and sweet pepper bushes would grow from

the lodge walls. The water all around would blossom with white water lilies, which are tasty. Ask any beaver!

Greenbrier came and went, bringing mud and sticks, and ripping cedar bark from the base of a tree to carry inside. From within the lodge came the mewing of the little beavers and the snip-snip of sharp teeth as Whiskers shredded the bark into bedding for them.

For an hour I sat 20 feet from the lodge, watching and listening. It was almost dark when with a light splash, a small brown creature came from the other side and swam away. She looked like a young beaver, except for her pointed nose, eyes set close together and slender tail wagging. This was a muskrat about the size of a half-grown cat. It swam to a tuft of swamp grass and began hungrily nibbling the fresh shoots.

Satisfied, she dived and brought up a mouthful of tender grass roots, then returned home. She dived again to be greeted by excited mews. The cries of her young were higher-pitched than those of the beaver kittens.

All was quiet after the first greeting. Then a small nose piked out of the water on my side of the lodge and a rat-sized youngster swam toward me. The young muskrat came right up to my boots. Rising in the water, he sniffed curiously at the rubber. Then he turned away and swam off among the grass and water plants.

Meanwhile another tenant of the beaver lodge, living in an airy penthouse apartment, was about to retire. This was a mother tree swallow, whose nest was in a hollow snag jutting up among the branches at the lodge center. After lining the hole with wild duck feathers, the mother bird had laid six white eggs. For two weeks she and her mate would take turns sitting

*(cont. on page 8)*

*(from page 7)*

on the eggs. She sat now at the door of her home while her mate glided in the air above her.

As the sun went down, a chill settled over the stream. A water snake who had been feeding on insects in the water came to the edge of the lodge. He looked around, then slipped quietly into a hole just his size in the thick dark wall.

Dusk fell and all was silent. The male tree swallow had found a roosting place and his mate had gone back to her eggs. Greenbrier was still doing repair work on his dam, and the muskrats were eating among the lilies - Whiskers nibbling with them. Inside the lodge the kittens were napping after their meal.

From a tiny crevice near the chimney of the lodge there appeared a mini-face with beady eyes and quivering whiskers. The face belonged to a furry, short-tailed mouse, who peeked this way and that before coming out. She looked like a little old lady stepping into traffic.

For half an hour I watched her come and go, tugging at pieces of grass and leavers and scampering back inside with them. Muffled squeals meant beds were being made for the young mice.

All of these creatures call the beaver lodge "home". Canada gees often nest on its top. Mink have been known to burrow in the walls and the tiny winter wren chooses a cranny for her mossy nest.

Greenbrier doesn't seem to mind. He builds his home, maintains it and goes his way. He lives in harmony with those who share it with him.

**Wetlands on the Mend**, by Charles Oliver, from The Dalton Daily Citizen, 10/19/13

Local officials may not have the money yet to restore the wetland near Lakeshore Park. But they do have something almost as good: beavers.

"Beavers have moved back in. They've built a dam and raised the water level, and the wetland is in much better shape than it was before," said John Lugthart, professor of biology at Dalton State College.

Lugthart and others at DSC have been working with the Dalton Parks and Recreation Department and other agencies to restore the wetlands and make other changes at Lakeshore that will improve the environmental health of the park as well as make it a more attractive place to visit. Lugthart and some students spoke Friday on those efforts to a meeting of the board of the Dalton State College Foundation.

Two years ago, local officials reached out to the Archway Partnership, a University of Georgia program that connects communities with experts to help solve their problems. Archway brought in two students from the College of Environment and Design at UGA who helped draw up a master plan for the park. That plan included a walking trail around the park with an overlook at the wetlands, a fishing pier at the lake, an outdoor classroom, a walkway to Brookwood Elementary School as well as restoring the nearby streams.

Lugthart said that so far they haven't been able to get grants to fund that work. But they've gotten help from local beavers, and several DSC students have been doing research at the park for the past three years, taking various measures of the health of the lake, the wetlands and the surrounding area.

"This is a very complex lake, with many different interconnections," he said. Cris Shelton, a DSC biology student, has been studying turtles at the lake. He said the size and diversity of the turtle population reflects the overall health of the lake and wetlands.

He said that in 2013 alone, DSC students and faculty captured 287 turtles from several different species, including 213 that had not been tagged in previous years and 68 juveniles. They were tagged and returned to the lake.



## Note from An Unexpected Visitor

Dear Sarah,

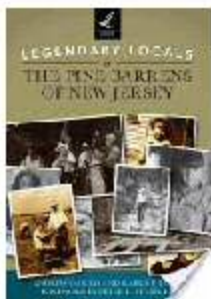
Mike and I had a wonderful visit yesterday. We arrived at just about 5:00 and stayed till about 8:00. We walked the blue trail all the way to the western end of the Refuge and back, stopping at the Otter Dam viewing point (is there a beaver dam there? I didn't see one). A few distant birds and a frog who leapt away as we walked along the planks are the only animals we saw there, but we re-placed the two chairs, one of which was hanging off the side of the platform and the other was underneath a small fallen tree. As we walked further, we encountered a bird who flew off a snag next to the trail right as I walked past it, another fast-jumping frog, and we heard an owl hoot in the distance. We also saw about five wild turkeys cross the trail far ahead of us. But I was surprised not to see deer or turtles.

We then walked back past the house and, close to sunset, walked along the beaver dam at the main pond. It is the biggest beaver dam I've ever seen up-close, in terms of height. We reached the beaver lodge and tried to walk around it without disturbing, but the crunching of the sticks under our feet made the beavers stir. We first saw two swimming out into the pond to the left, and one slapped his/her tail, I presume trying to scare us away. After walking a short ways on the trail on the other side of the pond, we returned to the lodge and saw two more beavers swim away, this time to the right, with one giving a single tail slap. We then heard the sound of beaver chewing on the other side (downstream) of the dam. The sound seemed close, but the foliage was too thick to see the beaver. By then, it was getting too dark to see much, so we carefully walked back along the dam to the house, and sat on the pond-side chairs at the house for 20 minutes or so before leaving.

On your porch, I took some of the cards with poems about beavers (I didn't want to take a whole packetful, so I took about half of a packet). I also took a "The Beaver

Defenders--Bravo Beaver" button and a copy of the latest Beaver Defenders newsletter. I had earlier sent in membership dues to The Beaver Defenders, so I look forward to receiving future issues.

Mike and I hope to come visit again in the not-too-distant future and we hope to meet you then. Keep up the good work. - Malcolm K.



~~Now Available from Amazon Books,~~  
**Legendary Locals of the Pines**, by Karen Riley and Andrew Gioulis

Our country's first national reserve, the Pine Barrens, harbors a wonderful secret unknown to most outsiders. This 1.1-million-acre treasure trove of pitch pine and sugar sand is home to many rare species and almost 17 trillion gallons of the purest water on earth. It was in this forest that men like Leland Champion logged trees and built sawmills. It was along these waterways that craftsmen like Gary Giberson made prized decoys. And it was in these woods that Stanley Switlik built a tower from which Amelia Earhart jumped, testing his parachute so it could be used in World War II. These woods yielded inventors whose products we enjoy today: cultivated blueberries, cranberry sauce, and Welch's grape juice. It was here that Bob Buchanan reached for the mooring lines as the Hindenburg ended its final, fated voyage. And it was here in Buzby's General Store that John McPhee penned his classic book, *The Pine Barrens*, setting into motion legislation to preserve this area for future generations.

Karen F. Riley developed a passion for the Pine Barrens and its people, history, and culture. This is her third book on the area, and she is deeply indebted to the residents who shared their photographs, stories, and history so others may learn about this jewel of New Jersey. Sadly, right after this book was published, Karen passed away from terminal cancer.

**Beavers, the Unsung Warriors in the Fight Against Climate Change**, by Kristina Chew, from Care2.com, July 24, 2013

The number of beavers in North America fell sharply throughout the 20th century, from an estimated 60 to 10 million to 6 to 12 million. The U.S. park service is now seeking to reintroduce them and the sooner, the better. The dams that beavers that build, and the wetlands that are produced, sequester carbon - beavers, that is, play a small but crucial role in fighting climate change.

Hunted almost to extinction in the 19th century for their fur, beaver populations are coming back in many parts of North America and in Europe thanks to legal protections and reintroduction programs that began at the end of the 20th century.

This is indeed good news as recent research by Ellen Wohl of Colorado State University in Fort Collins reveals. Beaver dams cause rivers to overflow their banks and form what are called beaver meadows, wetlands rich in sediment and organic material, explains Wohl. Should a dam break, the meadows dry up and release the carbon as all the organic material becomes exposed to the air.

In a recently published article in a journal about geophysical research, Wohl reports the findings of her study of the total organic content in dried-up beaver meadows in 27 drainage basins in Rocky Mountain National Park. These now-abandoned beaver meadows account for 8 percent of the carbon in landscape. But, says Wohl, when the meadows were flooded, they were able to store as much as 23 percent of the carbon, showing that the disappearance of beavers has had a measurable impact on the environment.

As Joseph Wheaton of the department of watershed sciences at Utah State University in Logan explains to

New Scientist, “beavers can transform systems extremely quickly and the long cascading list of feedbacks and impacts of their ecosystem engineering is extensive.”

In Scotland, Simon Jones oversaw a program to reintroduce beavers under which four families of Eurasian beavers were reintroduced on that country’s southwest coast in 2009; the program has so far been successful. Jones emphasizes that beavers play a crucial role in maintaining ecosystems:

Beavers are a keystone species: the dams they build and the ponds they create help to improve biodiversity, because they provide the conditions for many other wetland species to flourish. Beaver dams can also trap sediment, pollutants and regulate water flow at times of flood or drought.

Attempts to reintroduce beavers have been met with opposition. In Scotland, people mistakenly feared their dams would affect fish populations, even though beavers are herbivores.

Beaver dams can be “incompatible with modern farming, forestry and fishing in some places and will need removing. But as Jones notes, we can figure out ways to “mitigate the problems that beavers cause and [allow] the species to co-exist with us.” For instance, water-leveling pipes can be inserted through beaver dams at places where they may be causing damage to commercial crops or tree plantations.

In another sign that the beaver is back, one was recently spotted in Devon in Britain, the first time a wild beaver has been seen in 800 years. As Wohl’s research about the carbon storage capacity that beaver dams create reveals, beavers play a crucial role in fighting against climate change that has resulted from our — not their — activities. Far from being pests, beavers play an essential role in making this planet a healthy place for all of us to live.





## Pinelands Bluebird Trail Report 2013, by Nels Anderson

Again it was a good year for Bluebirds in the pines. Spring was wet and cool with almost 20" of rain measured here in June but that didn't slow things down. The first Bluebird egg was observed April 2 and the first to fledge did so the week of May 5. Over the past five years numbers have been steady with 1,039 fledged and much of that is due to the consistency yard placed boxes offer. Since yards are usually manicured they provide a more stable nesting area, year to year. Thanks to all of you who provide room and support this effort. In Wharton a clear cut is great for a few years but as things grow and become unsuitable for Bluebirds they will move elsewhere. On the other hand Chickadees don't mind the growth and will take over those boxes. The sharp increase in the number of Chickadees this year indicates something is going on. Moving things around to favor Bluebirds is an ongoing process.



Male Eastern Bluebird - photo by August Sexauer

Predation wasn't a big factor this year. A few nests were abandoned though with no signs of foul play and that could be for a number of reasons but still a disappointment. On the other hand opening a box and seeing an empty flattened nest with a few poops but no feathers or bodies is as good as it usually gets indicating the brood has successfully fledged. Some birds such as chickadees and titmice roost in cavities during bad weather and they will use nest boxes as well. A tell tale sign of this is an accumulation of droppings in the bottom of the box. Sarah at Unexpected Wildlife reported several Bluebirds entering a box at dusk and emerging in the morning so check once in a while for evidence of guests. Mice, flying squirrels, bats, frogs, toads, wasps, hornets, ants, snakes and of course birds have all been found in nest boxes.

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Bluebird nests	60	36	35	28	51	49	64	68	69	63	69	66
Bluebird fledged	150	91	95	66	152	159	206	195	219	207	212	206
Chickadee fledged	38	62	104	95	72	47	53	75	44	59	28	79
Tree Sw. fledged	29	27	28	36	45	29	35	20	33	41	39	20

11-7-2013 NA

Ninety boxes monitored 20 times = 1,800 data points.