

As many of you know, Hickory Hollow Natural Area Preserve (HHNAP) is owned by the Northern Neck Audubon Society but designated and identified as one of the 63 Natural Area Preserves (NAP) by the State of Virginia under the Dept. of Conservation and Recreation, Division of Natural Heritage. The history of this unique ecological treasure is posted on the NN Audubon website under the “About Us – History” section. The purchase was in large part paid for by grant from the State with the understanding it would become a Natural Area Preserve and open to the public.

Although the State does some stewardship of the Preserve, much of the management falls on our chapter. In 2008, the Chapter and the State entered into a contractual Management Plan with the state with overriding goal at HHNAP of maintaining a functioning ecosystem with the matrix of communities native to the site.

The primary reasons why Hickory Hollow was designated and forever protected as an NAP are: 1) a population of a rare orchid, the Kentucky Lady’s Slipper, *Cypripedium kentuckiense*, and; 2) a unique ecological community, the Coastal Plain / Piedmont Basic Seepage Swamp (Cabin Swamp), which covers about 26 acres in Hickory Hollow and provides habitat for the Kentucky lady’s slipper and an unusual array of species that are more typically found in the mountains far to the west of this site.

The primary conservation objectives for Hickory Hollow include:

- Maintain and restore natural communities.
- Maintain or enhance existing hydrologic regime.
- Manage *C. kentuckiense* habitat to maintain or enhance *C. kentuckiense* populations.
- Manage habitat to benefit other natural resources, scenic resources and historic resources.
- Evaluate effects of management on plants, animals, and natural communities.
- Provide for natural resources protection.
- Ensure visitor safety and site-security.

The 34 page 2008 Management Document is now available on the Audubon website for all to review (under About Us – Chapter Documents. We plan to work with the state this year to review and perhaps revise the Plan as it is 10 years old. No current member of the Board was aware of this management plan prior to late November 2019.

The Management Plan indicates that the Chapter is to manage, among other things, both non-native species, such as Japanese Stilt grass, and native species such as the beaver. In the plan, it states “When natural processes have been altered sufficiently, native species can be allowed a disproportionate advantage that can result in negative impacts to the greater ecological community.”

Hickory Hollow has had issues with beavers since at least 2002. Beavers become a problem at HHNAP when they fell trees for food, dams and lodges and when they construct dam(s) across the swamp bottom and flood the rare seepage swamp. The Kentucky Lady’s Slipper only seems to grow on the hummocks that rise out of the swamp and when dams are constructed by the beaver, the hummocks are covered by water thereby threatening the orchids and the swamp

itself. At one time in the early 2000's, an area of the swamp downstream from the boardwalk, contained a colony of these orchids. Beavers constructed a dam which flooded the hummocks in that area. An attempt was made to allow the co-existence of the orchids and the beaver by setting up pond leveling devices to protect the area and still allow the beaver to co-exist. The devices did not work well and were eventually washed away after some period of time subsequently the beavers were trapped and killed by a trapper hired by the Chapter. Unfortunately, according to Virginia law, beaver cannot be relocated, they must be left alone or killed. The colony of orchids that were in this area of the beaver dam pond have never returned and it is surmised that the orchids perished after being subjected to flooding for too long a period of time.

Beavers have returned to Hickory Hollow every 5 to 7 years since 2000 and have had to be dealt with in one way or another. At least one time, the beaver dam was torn apart on a regular basis and eventually the beaver relocated elsewhere. The dam was small, the pond behind it was small and easy to access. Other times the beaver dam was large and the only practical method to protect the swamp was to trap the beaver(s).

On Nov. 26, the President and Past-president were notified by the State Steward for the Preserve, Zack Bradford, that he had found that beaver(s) had built a dam resulting in flooding the hummocks upon which the orchids grow. He broke apart a portion of the beaver dam but we found it rebuilt within a few days. Subsequent survey of the area indicated a dam that was between 150 and 200 feet across the swamp and difficult to access due to mud, deep water and the topography of the swamp bottom. Zach Bradford had sent a copy of the management plan to Vice President, Kevin Howe, on Nov. 28 and on Nov. 30 he forwarded it to every board member. It was not a document that was included in any materials received by any new board member, therefore it was not common knowledge. Zack has also stated that he thought the dam was likely in place since at least June 2018. But a group of native plant people monitor the flowering progress of the Kentucky lady's slipper and visited the site at least weekly in May and June to observe and note the bloom progress, number and site of the colonies; this has been done for more than 15 years. The group included Audubon Board members Kyle Langford, Betsy Washington and Kevin Howe. The last recorded date to visit the site was July 17 and there was no evidence of the pond nor dam that we found in November and December.

The Board held a meeting on Dec. 3 to discuss the situation. The Board could not reach a consensus at their meeting on the appropriate course of action. Over the next few days, President Melissa Gross consulted DCR, DGIF and Ecotone (a company that assists in beaver management) as well as the internet and other websites for possible alternatives to trapping. Former Board members were consulted about previous beaver intrusion; beavers had been trapped about every five to seven years for close to twenty years. Methods, other than trapping (pond levelers, harassment, dam removal), had been attempted but not to complete success. Other members assisted in this data gathering, sharing some specific experience with beaver and all information found was shared via email with all board members. Trapping was not the specific direction any Board member wanted to go.

Following the meeting, on Dec. 6, Melissa Gross invited board members along for a visit to the site. No one else came along. She found a 15 foot dam that created a large pond that covered about 200 sq. ft. She thought this was the main dam that Zack had broken through and that it had been rebuilt. She dismantled it and the water flowed freely. It turns out, unbeknownst to her, this was only a very small dam about 150 feet downstream of the main dam.

The next week, after inviting the board, Kevin Howe visited the site three times. No one went with him except Betsy Washington. They took pictures that showed extensive flooding (estimated at 2-3 acres) and extensive dam structures totaling an estimated 150 feet or more. They also counted and photographed 25+ trees taken down or compromised by beaver activity. Continued tree removal by beavers would alter the canopy of the site and potentially impact the swamp and orchid colony.

The key site visit was on December 11, 2018. Again, an invitation was extended to the entire board. Board members present: Melissa Gross, Kevin Howe, Nancy Garvey, Kyle Langford, Betsy Washington, and state recommended and licensed trapper, Jordan Merrill. Our intention was to assess the damage with another person (Jordan) experienced with beavers and their activity. What was found is described in the previous paragraph. The extent of flooding could be considered catastrophic for this particular colony area. The hummocks were fully under water, and who knows for how long and the damage to the surrounding woodland was significant. The portions of the dam that had been broken up by Zack, Melissa and Kevin had been rebuilt, indicating current beaver activity.

The board members who were present considered;

- the difficult conditions of the site (deep water, trees, mud),
- the size of the dam and pond
- past history of actions taken and ineffectiveness of said actions
- state law and the responsibility of protecting the Preserve because of the key resources
- timing and ecology of the beaver (upcoming breeding season)
- the timing of the next board meeting for a vote
- The possible pushback for making the decision without a vote.

This was not a decision made lightly. With the approval of the president and vice-president, the decision was made at that time to engage the trapper's services. We all felt that time was of the essence, and that trapping would be the only expedient, safe and likely method to protect the orchids and the swamp. It was also decided that the president was going to draft a letter to let the board members know what had transpired. The president failed to draft the letter which she regrets deeply.

Over a period of three weeks, during the Christmas holiday season, two adult beavers were trapped in Cabin Swamp. The traps were checked every day but Christmas, per state law. Kevin visited the site regularly and agreed with the trapper's assessment that after the second beaver was trapped, the dam building activity had stopped. The dam structure was fully torn apart and that emptied the flooded area.

Several Board members were/are in disagreement that actions were taken without all Board member concurrence. Two Board members have resigned because of these actions. The

management plan was not fully understood by all, as there were only a few days to study it. In addition, most of the Board members are not specialists in ecology, wetland systems and the animal ecology of the beaver nor had they visited the actual site. Although, Kevin Howe and Betsy Washington, both biologists had direct experience with beaver management in Fairfax County for nearly 20 years. Betsy, in particular, had worked with the US Humane Society professionals to protect the beavers in Fairfax County's Lake Barcroft. Zach Bradford's first email indicated that trapping would be necessary.

Because the issue was brought to the board initially, there should have been a vote, and timely notification of the minority Board decision that was made on the scene. Regretfully, these 2 things did not happen and apologies are offered by the president and vice-president. We have learned some hard lessons from these events and the Board is looking into requesting the State to take over the actual management of the Preserve. An all-volunteer, ever changing and mostly senior Board may not always be equipped for such decisions on short notice and, as such, we are exploring all matters relating to our management of Hickory Hollow.

We deeply regret the loss of two valued Board members. We are committed to doing the work that will change how this issue is managed in the future.

Melissa Gross, President

Kevin Howe, Vice President