

# Watershed Observer



NEWSLETTER OF THE AMERICAN CHESTNUT LAND TRUST - VOLUME 29 NO. 3 SUMMER 2015

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## COMING UP ON THE CALENDAR

### SEPTEMBER

- 13 2ND SUNDAY FARMER'S MARKET, NORTH SIDE TRAILHEAD (1:00 P.M. - 4:00 P.M.)
- 26 GUIDED CANOE TRIP (12:30 P.M. - 3:30 P.M.) (SUNDAY RAIN DATE)

### OCTOBER

- 3 FALL HIKING TRAIL MAINTENANCE DAY (9:00 A.M. - 12:00 P.M., PICNIC LUNCH)

SEE MORE OF THE 2015 CALENDAR ON PAGE 7 OR ON THE WEB.

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## Notes on Caring for Our Common Home

There was a moment when leaders came together from across the political spectrum in the United States and enacted laws intended to fully integrate consideration of the environment into our public decision making. In the late 1960's and early 1970's, with the passage of the National Environmental Policy Act, the Clean Air Act, the Clean Water Act, and the Endangered Species Act, the U.S. led the world in taking responsibility for our environment by imposing national standards that applied to decisions about development and production.

While these laws continue to protect and restore our environment, they have become lightning rods for dissension and circumvention by industries that challenge each new application of them. The public seems to have forgotten the smog that hung in the air over "the Flats" and the Cuyahoga River that caught on fire during the years when I was growing up in Cleveland, Ohio. Pope Francis has reminded me that the environmental programs that the United States established at that time should be viewed as common core principles that are necessary to fulfill our responsibility as human beings to take care of our common home.

In this, my last article for the *Watershed Observer*, I would like to share with you my reading of Pope Francis' heartfelt Encyclical Letter "On Care for Our Common Home."<sup>1</sup> The Pope acknowledges that "the worldwide ecological movement has already made considerable progress," but he also astutely points out that "many efforts to seek concrete solutions to the environmental crisis have proved ineffective," either because of powerful opposition, denial of the problem, indifference, resignation, or blind confidence in technical solutions. In this Letter, in the strongest possible terms, the Pope pours out his urgent appeal for "a new dialogue about how we are shaping the future of our planet."<sup>2</sup> "It is my hope," he writes, "that this Encyclical Letter, which is now added to the body of the Church's social teaching, can help us to acknowledge the appeal, immensity and urgency of the challenge we face."<sup>3</sup>

Pope Francis, a chemist by training, took the name of Saint Francis of Assisi when he was elected Pope to remind him "just how inseparable the bond is between concern for nature, justice for the poor, commitment to society, and interior peace."<sup>4</sup> In his 70-plus page letter, the Pope tries to lay out a road map for how the world could develop some common core principles to guide us in caring for our common home. His approach is very broad, by design, as he continually reminds us that "everything is closely interrelated, and today's problems call for a vision capable of taking into account every aspect of the global crisis" including its human and social dimensions.<sup>5</sup>

He begins his discussion in Chapter One, "What is Happening to our Common Home", with the fundamental statement that the earth's climate is a common good about which we should all be concerned.<sup>6</sup>

The climate is a common good, belonging to all and meant for all. At the global level, it is a complex system linked to many of the essential conditions for human life. A very solid scientific consensus indicates that we are presently witnessing a disturbing warming of the climatic

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Published quarterly by the American Chestnut Land Trust. The ACLT is dedicated to the preservation of Calvert County, Maryland's Natural and Historical Resources. Since it was established in 1986, ACLT has preserved over 3,000 acres. We own 958 acres, manage 1,910 acres owned by the State of Maryland, and hold conservation easements on 374 privately-owned acres.

Editors: Ellen and David Farr

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# From the President's Desk

*"No act of kindness, no matter how small, is ever wasted." Aesop*

## The New CSA: Project Update

As you know, ACLT made a major decision at the end of last year to redefine the direction of our CSA. The first 5 years of the program were designed to raise a variety of produce with volunteer assistance and distribute them weekly to folks who bought shares at the beginning of each season. While this approach was relatively successful, there were a number of reasons why the ACLT Board sought to examine if this was the best use of the organization's resources. After completing that evaluation, with the input of ACLT members, farm volunteers and friends in the community, the Board decided that the CSA farm would be repurposed. It was decided that the produce that we could harvest at the farm would be shared with our friends and neighbors in the county who would otherwise have a difficult time getting access to fresh vegetables.

As a result, we have thus far this season delivered over 1300 pounds of fresh produce, in 28 different varieties, to St John Vianney's food pantry. Our success to date is a result of the leadership of our Farm Manager, RT West, our Volunteer Coordinator, Pam Shilling, along with the blood, sweat, and tears of 9 dedicated volunteers and many others who help on a part-time basis. Along with the help of these folks and many of you, ACLT has in a small but important way touched the lives of many of our neighbors by sharing the bounty of our land.

Our farm is also being used as a tool of community outreach and education. We have had regular participation of the ARC of Southern Maryland. As you may know, the ARC is a nonprofit organization that promotes independence for folks with intellectual and developmental disabilities. They have been helping us plant, harvest and weed on a regular basis.

We have also partnered with The Calverton School, The Tidewater School, 4H, and Huntingtown Elementary School to conduct educational tours of the farm and help them plant a row of their own vegetables. Each row is identified by their school's name. All are invited back to regularly tend to their planting throughout the season.

Another successful outreach effort we have conducted has been our Farmer's Market. We hold them on the second Sunday of each month. We have had two this season. We provide small festival style events where we offer farm and garden tours, live music, wine and beer tasting from local vineyards and breweries and freshly grown vegetables for sale. All proceeds of the sales go back into the farm program. The next two markets will be on August 9 and September 11. You really need to stop by.

We all should be very pleased and proud of our Farm Team's work on our behalf. The rainy weather has produced more crops ... and more weeds. Nevertheless, we believe they have exceeded most expectations. However, their continued success will be greatly enhanced by your assistance. While we could always use financial support, if not for this year, certainly for next, our real need for the rest of the season will be getting more hands in the field.

If you have the time and interest to help out intermittently or to make a weekly commitment of 5 hours a week or more, please contact Pam or RT directly. It is a simple and easy way to touch the lives of your neighbors, even if it is in a small way.

Sincerely, Pat Griffin  
pgriffin@griffinhome.com

## ACLT Announces New Executive Director

On behalf of the Board of Directors of ACLT, I am delighted to announce that the next Executive Director will be Greg Bowen. Greg is well known to all of us as a member of the ACLT Board and as a former, highly regarded Director of the County's Department of Planning and Zoning. A lifelong resident of Calvert County, Greg is passionate about land preservation and has a vast amount of experience working with landowners, stakeholders and land conservation organizations to expand the County's conservation and agricultural footprints. Through his Land Stewardship

Solutions consulting practice and his leadership in helping to form the Sustainable Calvert Network, Greg continues to build strategic alliances among diverse groups to advance the land preservation agenda in the County. His vision and experience will continue to drive and guide us forward. Welcome, Greg!

Karen and Greg will be working closely over the next few weeks to provide a smooth transition. While we welcome Greg into this new role, it is with considerable sadness and gratitude that we say goodbye to Karen. Her contributions have been enormous and we hope they will continue in new ways in the months and years ahead.

Pat Griffin, President

## Mark your calendar!

### ACLT Annual Dinner & Auction:

Saturday, November 7, 2015

The 2015 American Chestnut Land Trust Annual Dinner & Auction Committee invites you and your guests to our annual fall fundraising event on Saturday, November 7<sup>th</sup> at St. John Vianney Family Life Center in Prince Frederick, MD.

Managing and protecting over 3,000 preserved acres in Calvert County is an arduous task. Volunteers, working hundreds of hours, help keep the 19 miles of publicly accessible hiking trails open. The ACLT staff work tirelessly to make sure that future generations may enjoy the natural area we call Parkers Creek Preserve. Protecting and preserving this area would not be possible without the support of our members and friends and the annual Fall Dinner and Auction, which has come to be known as the premier fundraising event of the American Chestnut Land Trust.

To celebrate our 20<sup>th</sup> Anniversary of the Annual Dinner & Auction we're returning to our roots and hosting a **Chili Cookoff**!! While it won't be exactly like the cookoffs once held at the Community House in Scientists Cliffs, it will be a full-fledged "judged" chili cookoff and only a limited number of cooks will be able to participate for the honor of **Best Chili**.



More information about the cookoff will be on the ACLT website and Facebook in early September.

And let's not forget our popular silent & live auction. Please use page 11 of this newsletter to send us your auction item donations or download the form at <http://actweb.org>. Look for trips and vacations to wonderful places, pieces of original art, jewelry, dinners at local fine restaurants, special services, dinner parties and so much more. Once again, our well-known auctioneer will entice, embarrass and inspire you to "bid high, bid often" during the live auction. Look for items and their description to be posted on the ACLT website so you can be prepared. Live music will be performed throughout the evening, too.

As we look back at photos from years gone by we look forward to seeing you on November 7<sup>th</sup>—mark your calendar. More information regarding purchasing tickets, how you may donate an auction item, and participate in the Chili Cookoff will be posted online at: <http://actweb.org>.

And as always, the ACLT continues to accomplish much, but only with the help of you, our members and our friends. If you wish to donate your time to help us prepare for the event, please contact the ACLT directly. We can always use help setting up and organizing the event. We thank you for your support and look forward to seeing you on November 7<sup>th</sup>.

Steve Kullen, 2015 Dinner / Auction Chair

# Around ACLT

## Spring Was Hopping! Recent ACLT Events and Activities

The trees and flowers were in full bloom this spring for the host of events and activities that took place at ACLT.

### *Family Day*

For the first time in 4 years, ACLT hosted what will again be its “Annual Family Day!” More than 30 volunteers helped create a fun and festive afternoon for ACLT members and guests. ACLT member led activities included a hay ride, steered by Ken Romney, bluebird information from Sandy Foley, fossil hunting by Guy Tomassoni, a bee “house” craft by Land Manager Autumn Phillips, a live turtle display by Mary Hollinger, and nature games by Penny Moran.

The farm and educational garden were busy with volunteers as RT West and Ed Kobrinski took people on tours. In addition, Susan Kelley and our friends at “Calvert Cachers” shared information on geocaching and DNR’s Scales and Tales, brought three owls, a vulture and a hawk to visit. Finally, several of our Master Naturalists from the class of 2015 launched their Jr. Naturalists hikes. Beautiful weather, fun activities, Mrs. Moo’s ice cream and live music made the afternoon a delight and fun for kids and adults alike. Many thanks to all of our volunteers for making this day such a success!

### *School Groups at ACLT*

We were thrilled to have multiple schools visit ACLT this spring. Our ongoing friendship with The Calverton School continued this year, as their seventh grade spent several weeks nursing young plants on behalf of ACLT in their greenhouse. They then visited us for a lesson about farming and gardening, where they took time to plant their young sprouts!

Similarly, The Tidewater School—another old friend of ACLT—visited this spring. Though younger than our guests from Calverton, Tidewater’s students showed great interest and promise working in the garden. If you drop by the farm, be sure to look for the rows planted by our young friends which are marked by their school’s name. These students have been invited to drop by anytime to check on the progress of their plants!

We also had new guests visit this spring. On May 27<sup>th</sup>, the entire second grade at Huntingtown Elementary School came to ACLT for a field trip. With more than 110 students, teachers and chaperones, ACLT volunteers offered a wide variety of activities for the students to participate in. They received tours of the garden and the farm; learned about the bluebird trail, the honey bees, and the butterflies enjoying the milkweed; found out about bird migration and the life of lizards through “run around” games; and, finally, went on a hike to the beaver dam. It was quite a day filled with fun for all. None of this would have been possible without



Top to bottom:

Volunteer, Ken Romney, leads ACLT’s guests on a hayride while Liz Laher (not seen here) offered a guided tour of ACLT’s Double Oak Farm & North Side Trailhead on Family Day

Fun & Education at ACLT: Guy Tomassoni shared his knowledge of Southern Maryland fossils by having children search through the sand to find a fossil then identify it on the research charts.

RT West teaches local students about planting at ACLT’s Double Oak Farm.

Huntingtown Elementary School 2nd Grade Teacher, Willanette Thomas-Lohr, with a few of the 90 kids that visited ACLT for a field trip this spring.

the help of our dedicated volunteers! Thank you for sharing your love of the nature and the land with the students of Calvert County!

## Canoe Trips

Once again this year, ACLT's canoe trips are going strong! Four trips hosting more than sixty guests have paddled up the creek so far this summer. The persistent rainy weather postponed one trip and has made the water in the creek "higher than we've seen it in years," according to one guide. But it has also made the trees, grasses and flowers especially lush and has guests marveling at the beauty of the area. Be sure to sign up soon if you plan to join us on the creek this summer! Trips are filling up quickly. Thanks to all of our canoe guides for their hard work and dedication to this program.

## ACLT Trails News: Thank You Master Naturalists

Since 2013, ACLT has been a host site for the Maryland Master Naturalist program. In addition to teaching participants about the natural history of the coastal plain region, participants are required to do a group project and this year's class has taken on some impressive tasks. One of these projects was installing identification signs on trees along the North Side Turkey Trail and along the South Side Gravatt Lane Trail. Be sure to look for them and test your tree ID skills next time you are out on the trails!

Another current project underway at ACLT is to update our interpretive signage along the Turkey Trail. While the information gathering, designing, fabrication, and installation of these signs will span months, Master Naturalist volunteers are currently conducting visitor surveys to help us determine what types of information should be included in order to give visitors the information that they are hoping to receive when they stop by ACLT.

In an attempt to reach a younger audience, a handful of Master Naturalists have also started a Junior Naturalist program for children ages 6-12 and their families to learn about mammals, plants, insects, and birds. For its inaugural year, the program will be run as a guided hike on various Saturdays throughout the year. Additionally, two information boxes have been installed on the barn at Double Oak Farm near the trail sign in box. Inside these boxes are various materials for families to use while they hike at ACLT to help them learn about the sights and sounds around them. Some are meant to be used and returned at the end of your hike, while others can be

taken home with you at the end of the day. We hope you visit soon and utilize these new informational programs and resources!

Autumn Phillips  
Land Manager

## 2<sup>nd</sup> Sundays Farmer's Markets

On June 14, ACLT hosted its first ever "2<sup>nd</sup> Sunday Farmer's Market." The markets have several goals: to share fresh, naturally grown vegetables with members and guests, to introduce new visitors to ACLT, and to raise money to support the "Agriculture Supporting Community" program. All vegetable sale proceeds go back into the farm program which donates nearly its entire harvest to local food pantries. A small event, the first farmer's market was simply vegetable sales and tours of the gardens, but offered a taste of what the markets were imagined to grow into.

And grow it did when the second market was held on July 12. This time, the market had a small festival feel with live music, provided by local student Darien Pasch, a local wine tasting, including Friday's Creek Winery and Perigeaux Vineyards, organic ice cream by Mrs. Moo, garden tours for adults and activities for kids. With more than 150 visitors, the market was fun and successful.

The next "2<sup>nd</sup> Sunday Farmer's Market" will be held on August 9<sup>th</sup> and will once again feature Calvert County specialties. This time local breweries will be offering a beer tasting. Live music will be a highlight again as several local music schools will be sending their older students for an open mic performance. Due to their success and popularity, we are planning to host a market in September as well, which will be held on the 13<sup>th</sup>. Make plans to join us for a fun and festive Sunday afternoon!



Our amazing volunteers, Peyton Draper, BL Johnston, Sandy Foley and Connie Willoughby, are ready and waiting early for the crowds to arrive at ACLT's 2nd Sundays Farmers Market on July 12.

**ACLT's New Member Day**  
 September 12, 2015\*  
 12pm - 5pm  
 Port Republic, MD

- Take a walk along the bay with special guest experts
- Then join us for a picnic lunch & guided canoe trip on the beautiful Parkers Creek

\*This event is a special thank-you incentive to all new members who joined the American Chestnut Land Trust (ACLT) this year and have not yet taken their included canoe trip. New member registrations encouraged!

For more information contact  
 410-414-3400  
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(CONTINUED FROM PAGE 1)

system. In recent decades this warming has been accompanied by a constant rise in the sea level and, it would appear, by an increase of extreme weather events, even if a scientifically determinable cause cannot be assigned to each particular phenomenon. Humanity is called to recognize the need for changes of lifestyle, production and consumption, in order to combat this warming or at least the human causes which produce or aggravate it.

Although most of the media's attention focused on the hot button issue of climate change, Pope Francis' Encyclical Letter focuses on the totality of the natural environment as "a collective good" and "the responsibility of everyone".<sup>7</sup> In addition to climate change, he also discusses pollution, toxic waste, and our society's throwaway culture in which "our industrial system, at the end of its cycle of production and consumption, has not developed the capacity to absorb and reuse waste and by-products". He devotes a section to water as "indispensable for human life and for supporting terrestrial and aquatic ecosystems,"<sup>8</sup> and another section to the loss of biodiversity, noting that "[e]ach year sees the disappearance of thousands of plant and animal species which we will never know, which our children will never see, because they have been lost for ever."<sup>9</sup>

In Chapter Three, the Pope talks about "The Human Root of the Ecological Crisis." He acknowledges that "we are the beneficiaries of two centuries of enormous waves of change: steam engines, railways, the telegraph, electricity, automobiles, aeroplanes, chemical industries, modern medicine, information technology and, more recently, the digital revolution, robotics, biotechnologies and

nanotechnologies."<sup>10</sup> At the same time, the Pope laments that "[n]ever have we so hurt and mistreated our common home as we have in the last two hundred years."<sup>11</sup> Although he recognizes and appreciates the progress that industry and technology have brought, he warns us of the dominant role they play in shaping modern society, positing that new products are not simply "neutral" tools for us to utilize as we choose, but rather that they end up "conditioning lifestyles" and becoming *de facto* "decisions about the kind of society we want to build."<sup>12</sup> Pope Francis also views with skepticism a global economy that "accepts every

advance in technology with a view to profit, without concern for the potentially negative impact on human beings."<sup>13</sup> He concludes that the immense change wrought by technological development in the last two hundred years "has not been accompanied by a development in human responsibility, values and conscience."<sup>14</sup>

In Chapter Five, Pope Francis outlines his suggested "Lines of Approach and Action." He calls for a dialogue on the environment in the international community:<sup>15</sup>

Beginning in the middle of the last century and overcoming many difficulties, there has been a growing conviction that our planet is a homeland and that humanity is one people living in a common home. An interdependent world not only makes us more conscious of the negative effects of certain lifestyles and models of production and consumption which affect us all; more importantly, it motivates us to ensure that solutions are proposed from a global perspective, and not simply to defend the interests of a few countries. Interdependence obliges us to think of *one world with a common plan*. Yet the same ingenuity which has brought about enormous technological progress has so far proved incapable of finding effective ways of dealing with grave environmental and social problems worldwide. A global consensus is essential for confronting deeper problems, which cannot be resolved by unilateral actions on the part of individual countries. Such a consensus could lead, for example, to planning a sustainable and diversified agriculture, developing renewable and less polluting forms of energy, encouraging a more efficient use of energy, promoting a better management of marine and forest

resources, and ensuring universal access to drinking water.

The international community also needs to reach agreement about the responsibility for the costs of transitioning from fossil fuels “without delay”<sup>16</sup> and to establish a system of governance of the oceans and the whole range of so-called “global commons.”<sup>17</sup> Despite characterizing the “post-industrial period” as “one of the most irresponsible in history,” the Pope sees reason for hope that “humanity at the dawn of the twenty-first century will be remembered for having generously shouldered its grave responsibilities.”

While thinking globally, however, Pope Francis seems to be fundamentally calling on all of us to act locally. Even while espousing these high hopes for international and national dialogue, the Pope seems doubtful that these high level efforts will succeed without political pressure from local grassroots community efforts.<sup>18</sup>

[W]hile the existing world order proves powerless to assume its responsibilities, *local individuals and groups can make a real difference*. They are able to instil (*sic*) a greater sense of responsibility, a strong sense of community, a readiness to protect others, a spirit of creativity and a deep love for the land. They are also concerned about what they will eventually leave to their children and grandchildren. \* \* \* *Society, through non-governmental organizations and intermediate groups, must put pressure on governments to develop more rigorous regulations, procedures and controls. Unless citizens control political power – national, regional and municipal – it will not be possible to control damage to the environment.*

I say, “Amen” to that. To everyone associated with ACLT, I say, “you already *have* made a real difference.” Keep up the good work and thank you for your support! I have loved working for you and with you.

Karen H. Edgecombe  
Executive Director

<sup>1</sup>Encyclical Letter *Laudato Si'* (24 May 2015). [http://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco\\_20150524\\_enciclica-laudato-si.html](http://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html)

<sup>2</sup>Id. at paragraph 14.

<sup>3</sup>Id. at 15.

<sup>4</sup>Id. at 10.

<sup>5</sup>Id. at 137.

<sup>6</sup>Id. at 23.

<sup>7</sup>Id. at 95.

<sup>8</sup>Id. at 28.

<sup>9</sup>Id. at 33.

<sup>10</sup>Id. at 102.

<sup>11</sup>Id. at 53.

<sup>12</sup>Id. at 107.

<sup>13</sup>Id. at 109.

<sup>14</sup>Id. at 105.

<sup>15</sup>Id. at 164 (emphasis in the original).

<sup>16</sup>Id. at 165.

<sup>17</sup>Id. at 174.

<sup>18</sup>Id. at 179 (emphasis added).

## American Chestnut Land Trust 2015 Calendar of Events

### September

- 13 2nd Sunday Farmer's Market, North Side Trailhead (1:00 p.m. – 4:00 p.m.)
- 26 Guided Canoe Trip (12:30 p.m. – 3:30 p.m.) (Sunday Rain Date)

### October

- 3 Fall Hiking Trail Maintenance Day (9:00 a.m. – 12:00 p.m., picnic lunch)
- 10 Patuxent River Appreciation Days (10:00 a.m. – 5:00 p.m.)
- 23 Member Appreciation Night – Pumpkin Contest, Campfire & Storytelling (6:00 – 9:00 p.m.)
- 24 Guided Canoe Trip (11:00 a.m. – 2:00 p.m.) (Sunday Rain Date)

### November

- 1 Fall Guided Hike, location to be determined (1:00 p.m. – 4:00 p.m.)
- 7 20th Annual Auction & Dinner (6:00 – 9:30 p.m.)

### December

- 4 Wreath-Making Workshop at Warrior's Rest (10:00 a.m. – 3:00 p.m.)
- 5 Holiday Wreath & Greens Sale at ACLT South Side Barn (11:00 a.m. – 2:00 p.m.)



# Land Manager's Corner

## Beavers—the “Other” Ecosystem Engineers

Almost everyone has heard beavers referred to as ecosystem engineers. This is because beavers come in second only to humans in the ability to alter natural ecosystems. While human alterations typically have negative effects on natural ecosystems, the changes that beavers make have many positive impacts on wildlife and overall ecosystem health. While its impact on wildlife and ecosystem health is positive, beaver activity can cause difficulties to humans and how we may like to utilize an area.

Overtime, ACLT has had to work around the impacts that beavers have had on our properties, most notably, how they have impacted two of our trails which run near small streams. Beaver activity near the South Side Swamp Trail has resulted in sections of the trail from where it connects to the Cemetery Trail to where it connects to the Flint Trail to be flooded and impassable. As a result, the Girl Scout Switchback trail was created for hikers to navigate around the flooded area. This was intended to be a temporary fix, but the hydrology and topography surrounding the flooded area has left limited options for another trail to re-connect the Swamp Trail to the Flint Trail. On the North Side, a bridge that crossed the Horse Swamp Trail was flooded due to a beaver dam that was built downstream of the bridge site. A new bridge has been built to accommodate both hikers and the beavers; however, the beavers have periodically placed small sticks against the new bridge in what seems to be an attempt to expand their neighboring dam. Although the beavers have been the source of some inconvenience for ACLT hikers, staff, and volunteers, it is important to understand a bit about this interesting mammal and be aware of all of the positive ways they are improving the watershed in a way that actually ties in nicely with ACLT's own objectives for the Parkers Creek watershed.



ACLT photo showing the bridge on Horse Swamp trail that was flooded by beaver activity.

### *Beaver Life History*

Beavers typically build dams in streams in small valleys that will flood and cause an area that was once a small stream to turn into a

freshwater pond or wetland area (Beavers: Wetlands & Wildlife). Beavers build dams to flood an area in order to protect their lodges and enable underwater entry into them and to access their food supply and encourage the growth of favorable tree species (Washington Department of Fish and Wildlife). Beavers are herbivores and in the winter they prefer to eat the bark and cambium (soft tissue under the bark) of tree species such as sweetgum, ash, poplars, and maples (MD DNR; Nature Works). In the spring and summer they eat tubers, leaves, and other aquatic vegetation (MD DNR; Beavers: Wetlands & Wildlife). After eating the bark and cambium, beavers will often use the remaining sticks to build their dam or lodge. A beaver lodge consists of a feeding den, resting den, two underwater entrances to help escape from predators, and a vent to bring in fresh air. Both parent beavers, which usually mate for life, will live in the lodge with two generations of young, or “kits”. Kits are born in late spring and stay with their parents for two years before they leave the den to find a mate. During the second year, the first litter helps to care for the new litter of kits (MD DNR). Beavers rarely overpopulate because they limit their reproduction based on the amount of food that is available. They are also limited to a small area around streams, and kits, in particular, have a large number of predators including hawks, owls, dogs, and coyotes (Beavers: Wetlands & Wildlife).

Beavers also have a few interesting physical adaptations that allow them to excel in their aquatic habitat. They have a flat, hairless tail that stores fat and is used to smack the water to warn nearby beavers of potential dangers. They also have a transparent membrane that covers their eyes and allows them to see underwater (MD DNR). Beavers are the largest rodents in North America and are found across almost the entire continent excluding Mexico and the southwestern desert states, Florida, and the northern-most parts of Canada (Nature Works). Like most rodents, beavers' teeth keep growing throughout their entire lives and they keep them trimmed by chewing on woody vegetation. The inner part of the tooth is softer than the outer coating and therefore wears down faster, resulting in a sharp edge (Washington Department of Fish and Wildlife). They also have webbed feet that help them move through the water and are able to close their nose and ears to prevent water from getting in them while they are underwater. Beavers also



make their fur waterproof using an oily substance called castoreum which they secrete from their scent glands (Nature Works).

### ***Positive Outcomes of Beaver Activity***

When a beaver builds a dam in a stream, the area behind it becomes a freshwater wetland that can host an abundance of wildlife species. Schools of freshwater fish may live in the flooded area which can provide food for piscivorous mammals such as minks and otters. Other herbivorous mammals such as whitetail deer also use it as a source of water. Additionally, many song birds live in the trees surrounding the edges of the wetland and waterfowl such as wood ducks nest in freshwater aquatic habitats (Beavers: Wildlife & Wetlands). A few studies done in South Carolina show that many species of frogs increase in abundance along streams where beavers have built dams that resulted in ponds of freshwater. Some frogs may lay their eggs in the wetlands created by beavers; however if freshwater fish colonize the area, they will no longer lay their eggs there as the fish will eat their offspring. The same is true for some species of salamanders; however the same studies in South Carolina showed that many salamander species declined along streams where beavers built dams because they required the shallow, quick-moving water associated with small streams and seeps (Ecology.info).

In addition to creating a unique habitat that can support many wildlife species, beaver dams also help improve water quality. This is because beaver dams slow the flow of water, allowing sediments and pollutants to settle out of the water. These sediment particles accumulate in the pond created by the dam where they are broken down by microorganisms; therefore, water that leaves the dam is cleaner as it continues downstream (Beavers: Wetlands & Wildlife). Over a long period of time, the area behind a beaver dam eventually fills up with very nutrient rich soil that turns into a meadow when the dam is eventually abandoned by beavers and falls apart without the necessary constant repairs (Nature Works).

By slowing the flow of water, beaver dams also allow watersheds to retain more water for a longer period of time. This reduces flooding by slowly releasing water downstream over a period of days or weeks rather than rushing downstream in just a few hours. This slower water movement also reduces soil erosion and keeps a higher, more stable water level that can support a more diverse riparian vegetation buffer, which can in turn support an array of wildlife species (Brown & Fouty, 2011).

### ***Controlling Conflicts***

While beavers have many positive impacts on an ecosystem, their presence alone is often seen as a problem. Some common beaver-human conflicts include damage to trees and flooding of roads and properties near streams

where beavers build their dams. Beavers also defecate in the water which can transmit bacteria that causes the illness commonly known as Giardia to pets and humans if they drink the infected water (Washington Department of Fish and Wildlife).

When dealing with conflicts with beavers, be sure to ask yourself if the beaver is really causing an issue that requires some method of control. If you determine that it is necessary to remove beavers from an area, there are both lethal and non-lethal removal methods. Some lethal traps, such as those that drown beavers, are inhumane as beavers can hold their breaths for 10 minutes or more resulting in a slow death. Other “kill-traps” also pose issues because they are not selective and can kill pets or other animals. Live traps can be used to capture beavers and move them to a new location. This process is labor intensive as beavers left out of the water for more than a few hours in winter months can die of hypothermia. Additionally, removing beavers from an area will typically just result in new beavers colonizing the area. Despite these challenges, there are some projects that remove beavers from areas where they would be killed to areas where they are needed to help with water flow regulation (Beavers: Wetlands & Wildlife).

There are also some methods of minimizing the likelihood of human-beaver conflicts such as surrounding trees in wire or painting them in a sandy-paint mix to prevent tree damage. You can also apply repellent to areas you want to protect from beaver damage, though most have not been found to be very effective. There are also devices called beaver dam levelers that are constructed of 4”-12” PVC pipe that spans from at least 10 feet upstream of the dam to 20 feet downstream of the dam and prevents the water in the pond area behind the dam from exceeding a certain height (Washington Department of Fish and Wildlife).

Beavers are still seen as pests by many people when in reality they play an important role in improving wildlife habitat and water quality. It is up to places like ACLT to value and respect the fact that these forests are their homes and we, as hikers, are mere visitors that need to coexist with our fellow ecosystem engineers.

Autumn Phillips, ACLT Land Manager

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# Thank you for your support ...

## New Members

ACLT would like to welcome the following new members since the Spring 2015 newsletter:

Mr. Lawrence Michael Braswell  
Mr. Gary (Shawn) Buchanan  
Ms. Jackie Cutlip-Niles  
Ms. Yanitza Delgado  
Mr. Charles Gustin  
Mr. & Mrs. Charles Gauthier  
Ms. Shirley E. Hendley & Mr. Clarence Verdun  
Ms. Laura Kelly & Mr. Joel McCoy  
Mr. Keir Lieber  
Mr. & Mrs. David Sean Paxton  
Ms. Kimberly Sandsbury  
Mr. Robert P. Schmick  
Ms. Mary Kay Tucker

## Sustaining Membership

Congratulations to the following members who have reached the level of Sustaining Membership:

Mr. & Mrs. Charles Howe  
Mr. Robert O. Hardies  
Mr. & Mrs. Jeffery Quesenberry

## Gift Memberships

Thank you to the following who gave a gift membership since the last newsletter:

Ms. Kathleen McGillicuddy

## In Memory of Contributions

Thank you to the following members who made a memorial contribution since our last newsletter:

In memory of **Amb. Patricia Lynch Ewell** who was a Charter Member and past member of the ACLT Board of Directors:  
Ms. Loretta Schaeffer and Mr. Gian Carlo Guarda

## Spring Appeal

The Board of Directors and staff wish to thank the following for their contributions to the 2015 Spring Appeal:

Mr. Louis Amtmann  
Mr. Thomas Axley  
Mr. & Mrs. Steve Balinski  
Dr. and Mrs. Robert L. Bartlett  
Mr. and Mrs. Stanley O. Benning

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Mr. Gary P. Clarke  
Ms. Susan Duke  
Mr. & Mrs. Daniel M. Head  
Mr. and Mrs. Charles Howe  
Huntingtown Elementary School

## Double Oak Farm Program Donations

Thank you to the following for their donation to the farm program, providing agriculture to support the community:

Mrs. Ralph H. Dwan, Jr.  
Dr. Kathy Ellwood & Mr. Mike Ellwood  
RADM & Mrs. James B. Greene, Jr. USN (Ret.)  
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