

Watershed Observer



NEWSLETTER OF THE AMERICAN CHESTNUT LAND TRUST - VOLUME 26 NO. 1, WINTER 2012

CONTENTS

IN LOVING MEMORY OF RALPH H. DWAN, JR.	1
FROM THE PRESIDENT'S DESK	2
ANNUAL DINNER & AUCTION	3
GREENS SALE & HAYRIDE	3
THANK YOU TO SUPPORTERS OF THE ANNUAL DINNER & AUCTION	4
2011 OUTSTANDING VOLUNTEERS	4
VOLUNTEER SPOTLIGHT	5
GEOLOGY BELOW THE PARKERS CREEK PRESERVE (PCP) AREA: A PRIMER	7
CALENDAR OF EVENTS	9
CONTRIBUTIONS AND NEW MEMBERS	10
SAVE THE DATES	11

COMING UP ON THE CALENDAR

February 2012

18 **WINTER HIKE AT DOUBLE OAK FARM**
(1:30 - 3:30 P.M.)

18 **VINE VINDICATOR WORK DAY** (9:00
A.M. - 12:00 P.M.)

March 2012

10 **ANNUAL MEMBERSHIP MEETING** (9:30
A.M. - 12:00 P.M.)

31 **HIKING TRAIL MAINTENANCE DAY**
(9:00 A.M. - 12:00 P.M.)

SEE THE FULL 2012 CALENDAR ON PAGE 9
AND ON THE WEB.

In Loving Memory of Ralph H. Dwan, Jr.

It is with great sadness that we report the passing of an individual who has made an indelible mark on the American Chestnut Land Trust. Ralph Dwan passed away on Sunday, December 18, 2011. Ralph was among a handful of individuals responsible for the establishment of ACLT in 1986. He served as the Chairman of its organizing meeting on December 6, 1986 and, at that meeting, was elected as the first President of the ACLT Board of Directors. He served as President in 1986-1987, as Secretary from 1988-1990, as Treasurer from 1991-1992 and was re-elected as President from 1994-1998. He continued to serve in various capacities, including as co-chair of the Administration and Fundraising Committee and as a member of the Land Acquisition/Preservation Committee. He was a regular feature at the ACLT Annual Meetings of the Membership.

Ralph's legacy to ACLT has been tremendous. He was an outstanding leader who had a remarkable talent for finding the right person to do whatever needed to be done and then persuading them that they were eager to get started on the task! I personally witnessed this talent when I was elected to the board of ACLT and Ralph told me he needed me to be involved in governance issues. My involvement in those issues continues to this day. I am sure that many others can attest to Ralph's recruitment of them for a particular ACLT need. It was hard to say no to Ralph!

He was also a true philanthropist who cared deeply about the causes he supported and yet would never have wanted any recognition for his generosity. Nevertheless, his generous spirit was obvious to all. His example inspired many individuals to follow in his footsteps in their donation of time, talent and financial resources in support of ACLT and its mission to preserve land and provide public access to its preserved properties. No one, other than his wife Mary, probably knows how many individuals and charitable organizations Ralph has financially supported over his lifetime. But, as his sister wrote recently to us, "of all his charitable pursuits (and there were many) the American Chestnut Land Trust was closest to his heart."

Ralph Dwan worked tirelessly to ensure the success of this organization throughout its formative first twenty-five years and ACLT would not be where it is today without him. He was clearly the right person at the right time to set this organization on its path to success. Our thoughts and prayers go out to his wife and extended family. He will be greatly missed.

Karen H. Edgecombe, Executive Director



Ralph H. Dwan, Jr. participating in the panel discussion "Creating the ACLT: A Conversation with Four Active Participants, 1986-87" at ACLT's 2005 Annual Membership Meeting. Photo by Bruce Armstrong.

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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 911 acres, manage 1,780 acres owned by the State of Maryland, and hold conservation easements on 374 privately-owned acres.

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From the President's Desk

Since ACLT was founded 25 years ago, science has been central to many of its activities. There have been numerous terrestrial and aquatic studies in and around the Parkers Creek watershed, consistent with ACLT's mission statement which includes the sentence: "We provide environmentally sustainable public access to our preserved properties for educational, scientific, recreational and cultural purposes."

Recent discussions among members of the ACLT community and the ACLT Board have focused on how science could be used even more effectively to help shape its role in fulfilling ACLT's mission. ACLT can claim and promote many treasures in the land it has preserved and the activities it sponsors but of them all, one of its most understated treasures is the scientific expertise it has in its membership and on its Board.

As a result of these discussions, the Board decided to develop a formal way to reach out to the scientific community within its membership and beyond by creating an Ad Hoc Committee on Science. Its goal is to provide public education and outreach, encourage scientific research, and ensure that the best information is available and used to evaluate policies that may affect the Parkers Creek and Governor's Run watersheds.

The Board asked Ted Graham to chair this committee. Joining him in this effort and serving on this committee are Joy Bartholomew, Denise Breitberg, Dave Farr, Steven Gaines, Lora Harris, Jake Hosen and Peter Vogt—a truly stellar collection of individuals with decades and decades of scientific experience among them.

The first task this committee has undertaken is to commit to a regular column in the ACLT newsletter, entitled "Science in the Watershed". The inaugural column in this edition of the newsletter is authored by Peter Vogt, a geologist, on the origins of Parkers Creek. This committee has also been instrumental in organizing a very important panel of scientific experts to make a presentation on the water quality of Parkers Creek for our Annual Membership Meeting on March 10th.

As many of you know, ACLT has been collecting water quality data from Parkers Creek for over decade. The goal of this program is to maintain a continuous record of the health of the stream and Parkers Creek's contribution to the water quality of the Bay. ACLT volunteers have been trained to take these samples on a regular basis. While most of the measurements suggest threatening substances have remained at safe levels, there are several findings that raise some concern, such as high levels of sediment after rainstorms. In addition to ACLT's volunteer monitoring program, the State of Maryland has also conducted biological surveys of the creek and rates various tributary streams leading into Parkers Creek as ranging from "fair" to "very poor" on the state's web site.

The panel's topic, "Water Quality in Parkers Creek—from the headwaters to the Bay", will help us better understand the accumulated data both from a biological and chemical perspective. The panelists will also suggest possible research objectives for the area as well as raise public policy questions that may need to be addressed.

ACLT is very fortunate to have such a talented membership and to be able to enlist them to create such an important presentation. I hope you will be able to join us at the Annual Meeting and take part in this important discussion.

Pat Griffin, President
(Pgriffin@griffinhome.com)

Around ACLT

Recent Happenings

Annual Dinner & Auction

This past year we have been celebrating ACLT's 25 years of successful land conservation which culminated in our annual Dinner & Auction, *Celebrate! Parkers Creek Preserve*. The dinner and auction was held at St. John Vianney for the second year in a row. After checking in at registration, guests were welcomed by Steve Kullen and Denise Breitburg, two ACLT board members, at the door with either a glass of wine or sparkling water to kick off the party. Guests gathered in the beautifully transformed gymnasium designed to feature the creek, woodlands and barns that dot the ACLT landscape to bid on silent and live auction items generously donated by local artists and businesses. There were rave reviews for the delicious food stylings of Expressions Caterings (mmm... that crab dip was good!) and dancing to the live music of Scott Hymes.

We would like to thank our sponsors who donated generously to help defray the costs of the event so that the net proceeds generated from the sale of donated auction items (approximately \$22,600) can be used throughout the year to support ACLT's land preservation, land management and public outreach programs. More than just a fundraiser, the event is also a celebration of ACLT's members, volunteers and supporters. The event is planned and executed with the help of a team of dedicated ACLT volunteers and is always a highlight of ACLT's annual calendar of events. We couldn't have done it without you! *Celebrate! Parkers Creek Preserve* was a fun and lively event that truly captured the essence of ACLT.



Left: Auction monitor, Chris Reynolds confirms Glenn and Karen Edgecombe as the highest bidder for a live auction trip to the Bahamas. Photo by Bruce Armstrong
Right: Charles and Sandra Burton dance to the tunes of Scott Hymes. Photo by Bruce Armstrong



Greens Sale and Beach Hayride

On Saturday, December 10th, ACLT friends and neighbors visited Warrior's Rest Sanctuary for the annual event that helps generate funds to maintain the property. This year we had a wide variety of wreaths and swags and a steady flow of visitors despite the chilly weather. Thank you to everyone who came out on Saturday and especially to the volunteers who helped during the event and on the two work days to trim evergreens and make the beautiful decorations for the fundraiser. We hope you all enjoyed the beautiful greenery on your homes and had a joyous holiday season!



Kathy Ellwood, pictured here with her "Cee Lo" sunglasses, braved the cold to help make swags for the annual Greens Sale. Photo by Joy Woppert.

Check us out on Facebook. Become a fan of the American Chestnut Land Trust today!



<http://www.facebook.com/pages/American-Chestnut-Land-Trust/250928382473?ref=ts>

Thank you to everyone who donated auction items for ACLT's 16th Annual Auction & Dinner, Celebrate! Parkers Creek Preserve, and who came to support our annual fundraiser. We regret that we cannot list the hundreds of you who regularly support this event with your donations and your attendance!

ACLT would also like to thank those who made monetary contributions in support of our annual fundraiser:

Ms. Lelia Blackwell & Mr. John Watson - Mr. & Mrs. David Bonior - Mr. & Mrs. Frank R. Caldwell, Jr. - Ms. Ann C. Dunnington - Ms. Ethel Dutky & Mr. Alvin Wilson - Mr. & Mrs. Michael Ellwood - Ms. Lynn Ferris - Mr. & Mrs. Edwin Ford - Mr. & Mrs. Carlton M. Green - Mr. & Mrs. Art Guarinello - Dr. Edward HacsKaylo - Mr. & Mrs. Daniel M. Head - Mr. & Mrs. Daniel Hildebrand - Mr. & Mrs. Steven Kullen - Mr. & Mrs. Ron C. Magnussen - Mr. & Mrs. John P. McGahey - Mr. & Mrs. Thomas Rymer - Ms. Leslie Saville - Mr. Daniel Sampson - Mr. & Mrs. Joseph Swinton

We would also like to thank our business supporters and sponsors of the 16th Annual Dinner & Auction:

Habitat Protector Sponsor

Jeff & Nancy Klapper
Cove Point Natural Heritage Trust

Land Conservator Sponsor

Banana Banner

Land Protector Sponsor

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Jeffery Quesenberry, Edward Jones
Sisk Auto Body, Inc. (John Douglas & Terri Sisk)
SMECO
Wentworth Nursery

Land Saver Sponsor

Bill Chambers

Special Thanks to

Buehler's Wine Shoppe
Calvert Artists' Guild, Inc.
Expressions Catering
Nick's of Calvert
Scott Hymes

This event would not be possible without the generous donation of volunteer time in the weeks and months leading up to and following the event.

Thank you to the hosts of our Pre-Auction Cocktails & Grazing party:

Paul & Dianna Dennett - Joy Bartholomew & Mark Edmondson - John & Betsy Saunders - Dale Manty & Elizabeth Tuckermanty

And special thanks to all our Dinner & Auction Volunteers:

Jack Andrews - Dave Barta - Stan & Barbara Benning - Paul Blayney - Sarah Boynton - Denise Breitburg & Mark Smith - Tina

Bryan - Diane Daly - Dave & Helen Didion - Mark Edmondson - Isa Engleberg & Allan Kennedy - Taren Evans - David & Ellen Farr - Marcy Graham - Pat Griffin - Ed Haack - Mary Hollinger - Ed Kobrinski - Steve Kullen - Mimi & John Little - Sandra & Gary Loew - Cheryl Place - Chris & Maggie Reynolds - Jess Riesett - Elise Schryver - Suzanne Shelden - Sue Simon - Steve Stadelman - Peter & Jennie Stathis - Randi Vogt - Ann White - Rick & Nan Woppert

2011 Outstanding Volunteers!

In 2011, our volunteers reported over 5,300 hours donated!! We would like to acknowledge those volunteers who dedicated over 100 hours of service last year and Jeff Klapper for being the first volunteer to donate over 1,000 hours (pictured below with intern Taran Evans)!

The following is a list of those volunteers and the activities, programs and committees they serve on with ACLT:

Paul Berry - Board of Directors, Treasurer, Budget and Finance Committee, Personnel Committee, and Administration and Fundraising Committee.

Jeff Klapper - Double Oak Farm Manager, Bee-keeping, Land Management Committee, Earth Day, Weed Whacking Wednesdays, Vine Vindicators, Equipment Maintenance, and ACLT Stationery & Event Invitations.

Ginny Murphy - Membership Coordinator, Outreach and Membership Committee, Water Quality Monitoring, Mowing, and Earth Day.

Ken Romney - Weed Whacking Wednesdays, Vine Vindicators, Land Management Committee, Hiking Trail Maintenance Day, Double Oak Farm CSA, Facilities & Equipment Maintenance, Earth Day, and the Greens Sale and Hayride.

As always, we send a sincere and heartfelt **Thank You** to all our wonderful volunteers!

Joy Woppert
Community Relations Coordinator



Volunteer Spotlight Randi & Peter Vogt

Let's take a moment to imagine a world where the American Chestnut Land Trust doesn't exist. Are you picturing housing developments at Double Oak Farm and private docks on Parkers Creek? Okay, stop! Luckily, because of people like Randi and Peter Vogt, we don't have to do that. The ACLT just celebrated its 25th Anniversary and we have many people to thank for that—including these two dedicated supporters and volunteers.

But let's start from the beginning of their story. Peter and Randi met while they were both attending the University of Wisconsin—Randi for her undergraduate degree and Peter for his PhD. Peter had attended CalTech (California Institute of Technology) for his undergraduate degree in geophysics and Randi later attended the University of Maryland, College Park for her Masters in Urban Studies.

When Peter and Randi were in their 20's they moved to Calvert County; this was apparently against the flow of traffic of people the same age. Most young people were moving out of the county for jobs, while Peter was hired to work for the Naval Oceanographic Office at a branch then located in Randall Cliffs, just south of Chesapeake Beach.

The Vogts moved to the Scientists' Cliffs Community in 1969 and raised two boys, Erik and Jason. Peter went on a number of expeditions as part of his job as a civilian researcher for the US Navy, including ocean voyages in a Russian *MIR* submersible, the US Navy's *Submarine NR-1*, the drill ship *Glomar Challenger*, and the big Coast Guard icebreaker *USCGC Healy*. He even spent some research time out on the Chesapeake Bay, including sediment coring into the now-buried Ice Age channel of Parkers Creek, at a site only a mile from its present mouth.

Randi got involved in the local community by joining the Calvert League of Women Voters and was appointed 'Land Use Chairman'. She learned about the economic and political realities behind the county's rapid loss of prime farm and forest land, which in 1976 led her to the idea of using TDRs (transferable development rights) for farm land preservation in Calvert County. At that time, no one could foresee that TDRs would someday also help a local land trust preserve ecologically valuable forest land.

The idea was quickly adopted by the county, making us the first county in the United States to use TDRs for that purpose. This program later played a huge role in ACLT's success. Besides the League, Randi volunteered with the Calvert County Planning Commission, the Calvert County Housing Authority, and a branch of what is



Peter and Randi Vogt on ACLT's Turkey Trail. Photo by Joy Woppert.

now known as ARC of Southern Maryland, Chesapeake Properties, all of which drew her into choosing to become a land use planner in county government.

The history of ACLT is intertwined in the Vogts' story and it all started with a small group of individuals from the Scientists' Cliffs Community (SCA) wanting to preserve the Gravatt property across the street from the community. Peter was one of the key players who brought the ACLT into being. In February 1986 Peter was appointed head of SCA's *ad hoc* Environmental Preservation Committee (EPC), and he gave a presentation to the SCA board about the need to preserve the Gravatt property. Throughout the year there were numerous discussions among the dozen or so committee members and others, as well as trail walks on the Gravatt property, to encourage support from other community members and raise awareness for the cause.

It wasn't until October of the same year that the 'local land trust' option was suggested in a letter to the committee from Sandy Hillyer of the Chesapeake Bay Foundation. After a subsequent presentation by a CBF staffer, the EPC decided that this was the right (and only) way to proceed. The American Chestnut Land Trust was officially incorporated in Maryland in December 1986 and

was able to preserve the Gravatt property by collecting donations of \$2,500 or more from each of the “charter” members to cover the down payment for the property.

When the ACLT was founded, the County Agricultural Preservation District (APD)-TDR Program was almost a decade old, and had already preserved a number of valuable Calvert County farms. (To date, more than 12,000 acres of mostly private farm and forest land have been permanently preserved by this program throughout our county.)

ACLT’s Gravatt property was the first largely forested tract found eligible for Agricultural Preservation District status. Once the Gravatt property qualified for TDRs, ACLT sold those and thereby ended up with extra funds, which were promptly reinvested to buy two additional parcels of forest land. One of those, the ‘Russell Tract’, was directly on Parkers Creek. The TDR revenues from those parcels were in turn plowed back into further land preservation, and together these efforts ended up convincing the state of Maryland (via the Nature Conservancy) to invest about \$10 million to purchase some large parcels, including key waterfront property ACLT could not possibly afford. The upshot was that the ACLT was able to leverage about \$1 million in private donations and TDR income into a much larger nature preserve, now totaling 3000 acres, of which about 1/3 is owned by the trust and the rest owned by the state of Maryland. However, for this leveraging to succeed, ACLT agreed to manage the state-owned lands at no further cost to Maryland taxpayers.

Peter served as Vice President of the ACLT Board of Directors from 1986-1994 and was also a member of the board in 1998. Today, Randi and Peter are still both active land trust volunteers. Randi currently serves on the Board of Directors and Peter serves on the Land Preservation Committee as well as leading guided hikes on ACLT trails.

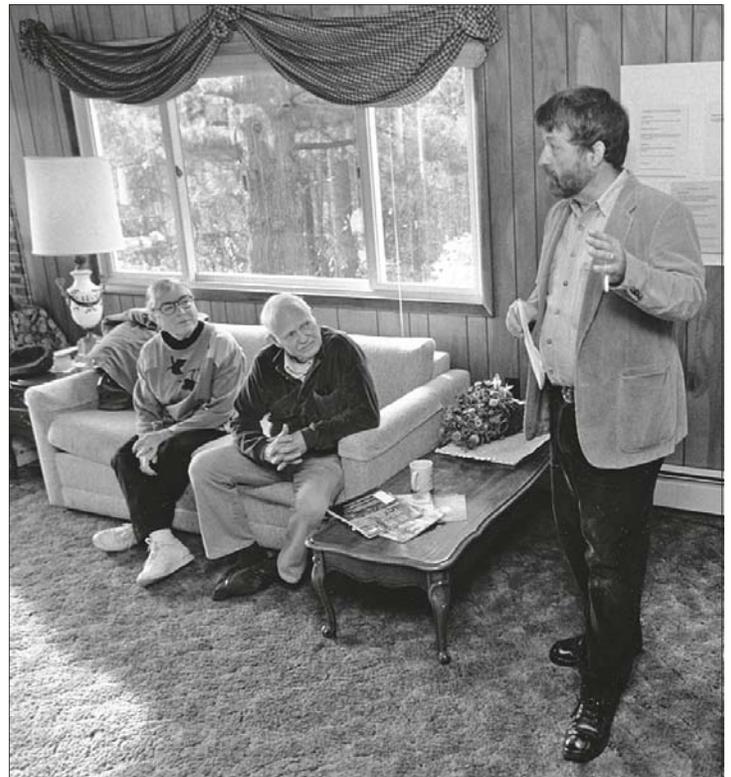
Peter, although “retired” from his job as a marine geophysicist, still finds time for research; a technical article relating to the Miocene strata exposed in the Calvert Cliffs was just published with the help of ACLT member Mary Parrish. He has also authored two children’s books involving local Miocene fossils (*The Monster Shark’s Tooth* and *A Most Mysterious Fossil*). Peter continues the battle against invasive plants on the adjacent Scientists’ Cliffs open space and enjoys making things with local wood. His work with invasive bamboo has led him to find some amazing uses for that plant, including organizing dinner parties around enjoying the tender new shoots.

When asked if there was anything they would want to share with the ACLT membership, Randi answered,

“Mary Dwan and I commiserated with each other from time to time as wives of two of the founders of ACLT. Standing on the sidelines, we saw first-hand how much work and effort those two, and many others, put into establishing ACLT. I’m still amazed and impressed.” Peter wanted to impress on ACLT that we should continue “to focus on saving more land, whether by fee simple or easement purchase, and to raise awareness and funds for that purpose.” As if right on cue, Peter is always there to focus our attention to continue land preservation and remind us that our mission of the past is still a relevant mission of the future.

To Randi and Peter—THANK YOU for starting ACLT out on the right foot and for continuing to walk with us through this journey of land preservation.

Joy Woppert
Community Relations Coordinator



Peter Vogt presents at an ACLT meeting in 1998 while Mary and the late Ralph Dwan look on. Photo by Carl Fleischhauer

Don’t forget to record your volunteer hours online by going to <http://acltweb.org/Administration/volunteer/index.cfm>.

Science in the Watershed

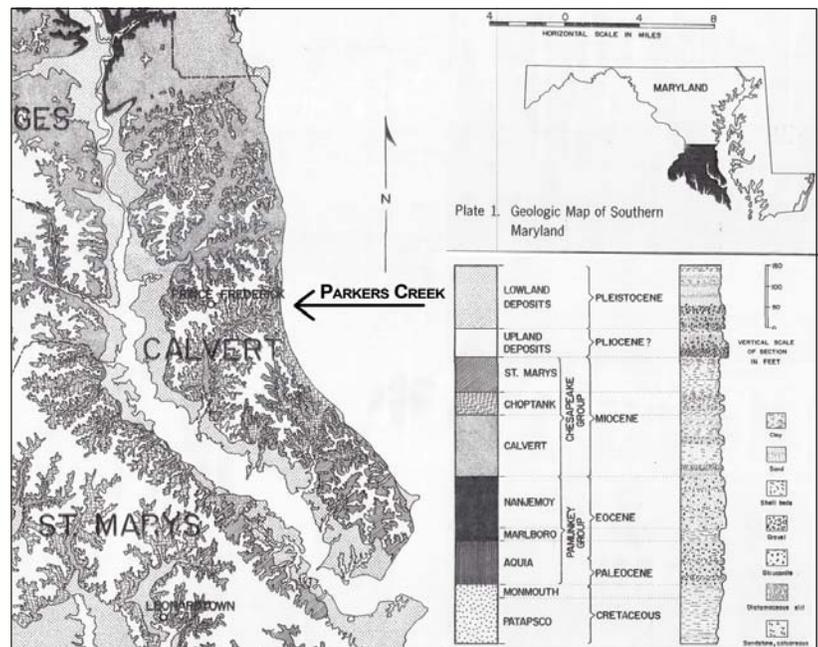
Geology below the Parkers Creek Preserve (PCP) area: A Primer

by Peter Vogt

A geological overview of the Parkers Creek Preserve (hereafter PCP, which includes the small Governors Run watershed) seems a proper way to introduce a regular science column in the ACLT newsletter. After all, geological processes—with changing climates—have been sculpting our rolling terrain, the nearly flat marsh, the sandy beach, and the steep Calvert Cliffs. These processes have also created the medium, the potting soil if you like, for the forest and other ecosystems we have been struggling for 25 years to preserve. Finally, geology has left us two environmental ‘diaries’ to read: A long diary, most easily read in the cliffs bordering the Parkers Creek beach on both sides, covers about 5 million years of time (from about 16 to 11 million years ago), when the PCP area was mostly a shallow warm to even subtropical seafloor, yet close enough to land for animal and plant remains to have washed this far out into the ocean, some preserved for us as fossils. And a far shorter diary, covering only the last 2000 years, is left in the ten feet of mud underlying the modern marsh of Parkers Creek. This record, once fully read from sediment cores yet to be taken, offers us the environmental history of a small wooded watershed—long uninhabited by humans save for occasional hunting camps—and what happened in the 350 years since first English settlement. And yes, the mud has also registered sea level rise!

As described in Pat Griffin’s “President’s” column, the ACLT Board has approved the creation of a new science committee to provide science information, advice and outreach to the ACLT community. Beginning with this newsletter, there will be a “Science in the Watershed” column designed to be informative and stimulating. Peter Vogt has written the inaugural science column, which follows. We trust our readers will enjoy this addition to the newsletter.

Ted Graham, Chair
ACLT Science Committee



Adapted from Fig. 1 of Glaser, J.D., 1971, Geology and mineral resources of southern Maryland: Maryland Geological Survey, Report of Investigations no. 15, 84p. Viewing this map online on our website (click on the link for the current newsletter on the right hand side of our home page, <http://www.acltweb.org>) is recommended in order to zoom in to view details. For those readers who do not have that capability, the stream beds are characterized as lowland deposits from the Pleistocene epoch; upland deposits (shown in white) are Pliocene; and the slopes and stream banks are Choptank from the Miocene epoch.

The Parkers Creek Preserve occupies a tiny patch of a *physiographic province* called the Atlantic Coastal Plain, which stretches south from the New York Bight to Florida, then continues west as the Gulf Coastal Plain. Most of the Coastal Plain is nearly level—Calvert County is atypical in the degree of dissection by valleys and ravines, with local relief exceeding 100 ft. This has made the PCP land harder to farm and harder to develop, but also more diverse in habitats and more interesting to hikers. I’ll write some more about the *geomorphology* in a later newsletter—how and when the land was sculpted into the form we have today and how Parkers Creek once flowed west into Battle Creek!

Geologically, the coastal plain extends seawards beyond the *present* coastline to include the continental shelf. I emphasize the word ‘present’ because the location of coastlines is ephemeral: they migrate over time, as we can observe even along the present-day Calvert Cliffs shoreline, forming the eastern margin of the PCP. Yes, the Parkers Creek Preserve is shrinking in size due to shoreline cliff erosion—a natural process appreciated at least by certain tiger beetles and geologists!—at roughly a half

foot per year. At that rate roughly two acres of PCP land has been claimed by the Chesapeake since the founding of ACLT in 1986.

During the most recent glacial age, which maxed out during the period 22,000-18,000 years ago (merely yesterday to most geologists), sea levels were up to 350-400 ft lower than today, the Atlantic shoreline lay 50 miles east of the present Virginia Capes, and the Chesapeake Bay did not yet exist. But, at other times in our geological past, the Atlantic shore lay to our west, at times near the present sites of Washington and Baltimore. At such times the area of the PCP was under water, as we know well from the fossil-bearing shallow-water marine sediments currently exposed along the PCP part of the Calvert Cliffs.

For the time interval recorded—albeit with gaps—by marine sediments in the entire Calvert Cliffs (18 to 8 million years ago), the deepest the ocean ever got here was still just a couple hundred feet—probably represented by the ‘Parkers Creek Bone Bed’, a ca. 1-2 ft thick chocolate-brown layer just above the beach at the south edge of the PCP (Gate E, Scientists Cliffs), but rising gradually to more than 5 ft above the water below the Freeland farm. This sediment layer was deposited about 15 million years ago, during the so-called Middle Miocene Climate Optimum (an ironic choice of term, given concerns about future warming), when higher greenhouse gas concentrations reduced Antarctic ice sheet volume, thus largely causing the high sea levels.

Geologists have known for a long time that the coastal plain forms the modern top surface of a massive wedge of sediment (sands, silts and clays in various mixtures, plus or minus fossils), about 2000 ft thick under the PCP area. The thickness of this sediment wedge is known from scattered deep boreholes (the nearest one to the PCP was drilled at Lexington Park in 1983), and from seismic reflection, which is analogous to echo-sounding but uses longer-wavelength ‘sound’ waves. Sediment cores through the upper parts of the wedge—especially off New Jersey—have allowed geologists to reconstruct many rises and falls of sea level, suggesting most reflect changing Antarctic ice sheet volumes and ancient climates. The three prominent shell beds seen in the cliffs adjacent to Parkers Creek were laid down roughly a million years apart, and represent shallower water preferred by the mollusks, with the shell-poor layers in between laid down in somewhat deeper water. A professional colleague of mine (Prof. Tanya Atwater, UC Santa Barbara) and I computer-animated this process, along with growth of the Atlantic by plate motion, and the recent formation of the

Chesapeake, for the Calvert Marine Museum in Solomons.

The sediment wedge thins to zero at the ‘Fall Line’ in the west (several East Coast cities were founded along the Fall Line, including Philadelphia, Baltimore, Washington, and Richmond, because that’s about the landward limit of ship traffic). The sediments thicken seawards, gradually in the west, more abruptly beginning in central Delmarva, to exceed 7 miles in the sediment-filled ‘Baltimore Canyon’ under the continental slope. Whenever all or parts of the coastal plain are above sea level, erosion removes older sediment, and no entries are made in the ‘diary’, except locally where sediment is deposited in stream valleys.

With the discovery of plate tectonics in the late 1960s, the origin of the sediment wedge made sense—it’s simply the accumulated debris—‘mountain bones’ if you like—eroded from ancient (several hundred million to a billion year old) metamorphic and igneous rocks in the Piedmont and Appalachians, during the ca. 180 million years since North America began to separate from Africa. Since that dramatic split, we became a tectonically boring ‘passive margin’ (unlike ‘active margins’ such as California or Japan). The original rift mountains bordering the young Atlantic—while it still resembled the modern Red Sea—were gradually worn down, and the heated rupture cooled and contracted, so the Atlantic rim of North America began to subside. The margin sank even more under the load of debris—the sediment wedge—delivered by ancient rivers, the ancestors of the Potomac and Susquehanna. The geological ‘basement’ under the sediment wedge is composed of hard old rock similar to that still exposed in the Piedmont and Appalachians. The most complete environmental record (the ‘diary’) of the time since breakup is to be found by deep offshore boreholes. In the PCP location in the middle of the Coastal Plain, the land was above the sea and eroding—as it is today—for much of the time. The 2000 ft of sediment under the PCP has many gaps, and the oldest sediments are likely only 130 million years old, some 50 million years younger than the time of breakup. Our area was simply eroding, just like the present Piedmont, for those first 50 million years.

Stop on one of your ACLT hikes and pick up a handful of subsoil—likely a mix of clay, silt, and fine sand at trail elevations below 100 ft above sea level. At higher elevations—and down in the stream beds—your sample would likely include some coarser sand and scattered white quartz pebbles. The clay is just the solid residue from weathering—a chemical process—of minerals such as feldspar or pyroxene in those ancient Piedmont rocks to our west. Most of the silt, sand and gravel

is composed of quartz, which also once crystallized from ancient molten or semi-molten rock deep in the earth. Because quartz is very stable at the earth's surface, it does not generally 'weather', and thus may be recycled repeatedly in and out of sandstones or quartzites.

Although subtle to non-geologists, the change in PCP subsoil at about 100 ft elevation is ecologically very important, and should be incorporated in ACLT land preservation priorities. That elevation marks the highest (and thus youngest) marine sediments from the Miocene epoch. Sediments deposited after the sea withdrew around 10 million years ago were *fluvial*—deposited by streams and rivers, probably including the Potomac while it still meandered its way across our area—before shifting course to southerly upon exiting the Piedmont. These fluvial sediments—including coarse sand and gravel—are called the Upland Deposits, plausibly laid down during the period 10 to 2.7 million years ago. Fossils are scarce, so precise dating is difficult.

The Upland Deposits offer a subsoil generally dry and low in pH and nutrients. When a farm field is abandoned, pines are the common pioneers there, often with mountain laurel, and later oaks (originally and maybe in the future American chestnuts) succeeding the pines. Many beautiful and unusual wildflowers thrive in these 'poor' conditions. Where streams have removed the Upland Deposits, marine Miocene strata are exposed, offering a richer, moister soil and commonly sprouting up in tulip poplar, with local natural 'liming' by shell beds. Because the top of the Upland Deposits is a nearly flat, high surface (the 'Sunderland Terrace'), it has been easily and heavily developed for roads and subdivisions. As a consequence the current PCP is under-represented in 'dryland' habitats, including the few remaining undeveloped PCP tributary headwaters. Here's where the ecology reflects the geology and impacts land preservation priorities!

ACLT Calendar of Events 2012

February

- 18 **Winter Hike at Double Oak Farm** (1:30 - 3:30 p.m.)
- 18 **Vine Vindicator Work Day** (9:00 a.m. - 12:00 p.m.)

March

- 10 **Annual Membership Meeting** (9:30 a.m. - 12:00 p.m.)
- 31 **Hiking Trail Maintenance Day** (9:00 a.m. - 12:00 p.m.)

April

- 21 **Earth Day** (8:30 a.m. - 12:00 p.m.)
- 28 **Spring Guided Hike on Gravatt East** (9:00 a.m. - 11:00 a.m.)
- 28 **Children's Guided Hike** (1:00 p.m. - 3:00 p.m.)

May

- 19 **Guided Canoe Trip** (1:00 p.m. - 4:00 p.m.) (*Sunday Rain Date*)
- 19 **Vine Vindicator Work Day** (9:00 a.m. - 12:00 p.m.)

June

- 2 **Guided Canoe Trip** (12:00 p.m. - 3:00 p.m.) (*Sunday Rain Date*)
- 9 **Parkers Creek to Flag Ponds Paddle** (7:30 a.m. - 12:00 p.m.)
- 16 **Guided Canoe Trip** (12:00 p.m. - 3:00 p.m.) (*Sunday Rain Date - Father's Day*)
- 30 **Guided Canoe Trip** (10:30 a.m. - 1:30 p.m.) (*Sunday Rain Date*)

July

- 21 **Guided Canoe Trip** (4:00 p.m. - 7:00 p.m.) (*Sunday Rain Date*)

August

- 4 **Guided Canoe Trip** (3:30 p.m. - 6:30 p.m.) (*Sunday Rain Date*)
- 18 **Guided Canoe Trip** (3:00 p.m. - 6:00 p.m.) (*Sunday Rain Date*)
- 25 **Walk Along the Bay Membership Event** (tentative date)

September

- 15 **Holly Arboretum Work Day at Warrior's Rest** (9:00 a.m. - 12:00 p.m.)
- 15 **Guided Canoe Trip** (3:30 p.m. - 6:30 p.m.) (*Sunday Rain Date*)
- 29 **Vine Vindicator Work Day/Training** (9:00 a.m. - 2:00 p.m.)

October

- 6-7 **Patuxent River Appreciation Days** (10:00 a.m. - 5:00 p.m.)
- 6 **Guided Canoe Trip** - (tbd) (*Sunday Rain Date*)
- 20 **Guided Canoe Trip** (tbd) (*Sunday Rain Date*)
- 20 **Vine Vindicator Work Day** (9:00 a.m. - 12:00 p.m.)
- 28 **Fall Foliage Hike at Double Oak** (1:00 p.m. - 3:00 p.m.)

November

- 3 **Silent Auction & Dinner**

December

- 9 **Arboretum Work Day at Warrior's Rest** (1:00 p.m. - 4:00 p.m.)
- 15 **Greens Sale & Beach Hayride** (11:00 a.m. - 2:00 p.m.)

Thank you for your support ...

New Members

ACLT would like to welcome the following new members since the Fall 2011 newsletter:

Mr. James M. Barker
Mr. & Mrs. Bill Bierbower
Ms. Regina Driver
Ms. Constance Dunkerson
Mr. & Mrs. Ryan Estabrook
Ms. Sandra Foley
Mr. James Gregg
Mr. & Mrs. Alvin Gregorio
Mr. Scott Hite
Mr. Josh Insel & Ms. Crystal White
Ms. Sandra Lauffer
Mr. & Mrs. David Leach
Mr. & Mrs. Jacques Mauche
Ms. Pat McKay & Mr. Michael Frew
Mr. & Mrs. Donn Mielcarek
Mr. & Mrs. Thomas Morton
Mr. Robert Roof
Ms. Christina Sams
Mr. Greg Silber
Ms. Catherine Stirling &
Mr. Don Morris-Jones
Ms. Anne Sundermann
Mr. Keith Takacs
Mr. & Mrs. Philip Werner

Gift Memberships

Dr. Christine & Col. Daniel Boesz
Mr. & Mrs. Randy Estabrook
Mr. & Mrs. Patrick Griffin
Mr. & Mrs. Thomas Insel
Ms. Nancy McK. Smith
Mrs. Carol Hanke Teich &
Mrs. Emily Hanke vanZee,
Walden Three Heritage III

General Contributions and Designated Gifts

Thank you to the following for your generous gifts and support:

Ms. Ellen M. Berry
Ms. Deborah Daniel
Ms. Rachel Graham
Mr. and Mrs. Tom Harkin
Mr. & Mrs. Russell McKnight
Mr. & Mrs. Tony Morella
Messrs. Jeffrey & Greg Owens
Ms. Mary Parish and Mr. Sherman Suter
Mr. Tim Scheirer
Mr. Wilmer Waller
Ms. Emily Hanke van Zee

Through the Maryland Charity Campaign:

Mr. Matthew Abbot

Mr. Pereppadan Cherian
Ms. Lilani C. Cuya
Mr. Allen R. Garey
Mr. Edward S. Gertler
Mr. Robert C. Hayden
Mr. Charlie E. Hickmon
Mr. Ronald J. Klauda
Mr. Peter Lee
Mr. Kirk G. McClelland
Mr. Jonathan McKnight
Mr. Douglas Meade
Ms. Rebecca Morehouse
Mr. Richard O'Connor
Mr. Arvind D. Patel
Mr. Marc W. Pound
Mr. David Rogers
Ms. Elizabeth A. Rogers
Mr. John H. Sadler
Mr. Jesse N. Salter
Ms. Mary E. Serra
Mr. Andrew M. Shaw
Ms. Laurie A. Toepfer

Through America's Charities:

Mrs. Dorothy Howe

Through IBM Workplace Giving:

Ms. Kimberly Democko

Memorial Contributions

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

In Memory of Contributions

In memory of **Ralph H. Dwan, Jr.** who was a Charter Member and one of the founders of the ACLT. Ralph served as ACLT's first President, and over the years served on the board as Secretary, Treasurer, and again as President, along with serving on numerous committees throughout the years:

Mr. & Mrs. Stan Benning
Mr. & Mrs. Paul Berry
Dr. Christine & Col. Daniel Boesz
Ms. Maureen Burns & Mr. Peter Beck
Mr. & Mrs. John J. Delaney
Mr. & Mrs. Paul Dennett
Mr. & Mrs. David Didion
Ms. Majel Dunn
Mrs. Elaine Dunkle & Mr. Peter Cochran
Mr. & Mrs. Robert Douglass
Mrs. John Dwan
Dr. & Mrs. Glenn Edgecombe
Mr. & Mrs. Samuel M. Ellsworth
Mr. James M. Fallon, Jr.
Mr. & Mrs. Philip Fleming
Mr. & Mrs. Thomas Gannon

Mr. & Mrs. James C. Hollowell
Ms. Shirley Mihursky &
Mr. Robert Pfeiffer
Ms. Mary McGahey & Mr. Todd Sheldon
Ms. Annie Moore &
Mr. John F. Williams III
Capt. & Mrs. Patrick Murphy USN (Ret.)
Ms. Margaret Niland
Mr. & Mrs. James Parker
Ms. Roberta Safer & Mr. Klaus Zwilsky
Mr. & Mrs. Joseph Steller
Dr. & Mrs. Robert E. Ulanowicz
Ms. Helen Vasilus
Mr. & Mrs. A. Duncan Whitaker

In memory of **Mrs. Rosa Edgecombe**, the mother of Dr. Glenn Edgecombe and a longtime member:

Mr. & Mrs. Patrick Griffin

In memory of **Mr. George Mlinaric** who was a longtime member and supporter of the ACLT:

Mr. & Mrs. Steve Stanford

In Honor of Contributions

A Christmas gift in honor of **Dr. Glenn Edgecombe**, Sustaining Member and longtime supporter:

Ms. Lindsay Edgecombe & Mr. Lev Brie

In honor of **Mr. & Mrs. Paul Wilson**, longtime members and supporters of the ACLT:

Ms. Jane Wilson

In honor of **Mr. & Mrs. Jon Warner**, Charter Members and longtime supporters:

Ms. Sylvia Warner

A holiday gift in honor of **Mr. & Mrs. Ernest Imoos, Mr. & Mrs. Christopher Laning, Dr. & Mrs. Robert Rudin, Mr. & Mrs. Paul Dennett** (Sustaining Members) and **Col. Caroline Van Mason, USA (Ret.)** (Charter Member):
Dr. Christine & Col. Daniel Boesz

Fall Appeal

The Staff and the Board of Directors wish to thank the following for their contributions to the 2011 Fall Appeal:

Mr. & Mrs. Louis Amtmann
Mr. & Mrs. William Arms
Ms. Janet Ashby
Mr. & Mrs. Don Baier
Mr. & Mrs. John Bailey
Mr. & Mrs. Ronald Bailey
Dr. & Mrs. Robert L. Bartlett
Mr. & Mrs. Stanley Benning

Ms. Marsha Berry
 Mr. & Mrs. Paul Berry
 Mr. & Mrs. Jim Bodycomb
 Mr. & Mrs. David E. Bonior, M.C. (Ret.)
 Mr. & Mrs. Taylor Bowen
 Mr. & Mrs. Sean Buckley
 Mr. & Mrs. Frank R. Caldwell, Jr.
 Mr. & Mrs. James T. Cavanaugh
 Mr. & Mrs. Ty Clark
 Capt. & Mrs. Freeman Dodsworth
 Mr. & Mrs. Robert M. Douglass
 Mr. & Mrs. Curtis A. Drumm
 Dr. & Mrs. Glenn Edgcombe
 Mr. & Mrs. Samuel M. Ellsworth
 Amb. Patricia Lynch Ewell
 Mr. Carl Fleischhauer &
 Ms. Paula Johnson
 Ms. Vicki Florian & Dr. Allan Shneron
 Mr. & Mrs. Glynn H. Frank
 Mr. & Mrs. D. Duncan Frazer
 Mr. & Mrs. William I. Gay
 Dr. & Mrs. Edward U. Graham
 Mr. & Mrs. Edward P. Greene
 Mr. & Mrs. Patrick J. Griffin
 Ms. Margo Coffin Groff
 Mrs. Barbara E. Grosvenor
 Mr. & Mrs. Timothy Hackman
 Mr. & Mrs. Howard Hammack
 Mr. & Mrs. Daniel M. Head
 Mr. & Mrs. Stephen A. Howerton
 Mr. & Mrs. Taysir Jaouni
 Mr. & Mrs. Michael Khalili
 Mr. & Mrs. Martin Kilpatrick
 Ms. D. Jane Klemer
 Mr. & Mrs. Ellis Knox
 Mr. & Mrs. Steven Kullen
 Dr. & Mrs. Mark Kushner
 Mr. & Mrs. Gregory W. Locraft
 Macy's Foundation
 Mr. Howard J. McDonald
 Mr. John P. McGahey, Jr.
 Mr. John J. McNeely
 Mr. & Mrs. Joseph A. Mihalcik
 Ms. Pamela-Jeanne Moran
 Mr. Kevin Murphy
 Mr. & Mrs. Edwin A. Noell
 Mr. & Mrs. Frank Nutter
 Col. & Mrs. Geoffrey Parker
 Mr. & Mrs. Stephen Phillips
 Dr. & Mrs. Austin Platt
 Mr. & Mrs. Warren Prince
 Mr. & Mrs. Dominic B. Raino
 Mrs. Eleanor Rickel
 Mr. & Mrs. Michael J. Rubino
 Ms. Loretta Schaeffer &
 Mr. Gian Carlo Guarda
 Commissioner Susan E. Shaw
 Mr. & Mrs. Steven P. Stadelman
 Ms. Leslie Starr & Mr. Joseph Turner
 Mr. & Mrs. Peter Stathis
 Mr. Bart Stichman &
 Ms. Patricia Davis
 Mr. Stephen M. Straka

Ms. Elaine Strong
 Col. & Mrs. Harry C. Teich
 Ms. Marcia Van Gemert
 Col. Caroline VanMason, USA (Ret)
 Ms. Christina Van Pelt &
 Mr. Donn Ahearn
 Ms. Mary C. Walker
 Ms. Anne Warner &
 Mr. Michael Makuch
 Mr. & Mrs. Linden H. Welch
 Ms. Kathryn Wilber &
 Mr. James O'Reilly
 Mr. Alan E. Wilson
 Ms. Louise Woerner &
 Mr. Don H. Kollmorgen
 Dr. and Mrs. D. Montgomery Wood
 Mr. & Mrs. Richard D. Woppert
 Mr. & Mrs. Albert W. Zahniser
 Mr. Klaus Zwilsky &
 Ms. Roberta Safer
 Mr. & Mrs. Robert Zwissler

Spring Appeal

The Staff and Board of Directors wish to thank the following for their contributions to the 2011 Spring Appeal since the Fall 2011 newsletter:
 Mr. & Mrs. Samuel M. Ellsworth
 Macy's Foundation

Land Management Endowment Fund

Ms. Joy Bartholomew
 Dr. Sandra Bell and Mr. Charles Erskine
 Mr. & Mrs. Paul L. Berry
 Ms. Denise Breitburg & Mr. Mark G. Smith
 Cove Point Natural Heritage Trust
 Mrs. Ellen Farr
 Mr. & Mrs. Philip A. Fleming
 Mr. & Mrs. Patrick Griffin
 Ms. Elizabeth Johnston
 Mr. & Mrs. Steven T. Kullen
 Mr. & Mrs. John M. Lucas
 Macy's Foundation
 Mr. Ewing H. Miller
 Mr. & Mrs. Mark Nisonger
 Ms. Leslie Starr & Mr. Joseph Turner
 Mr. & Mrs. Joseph D. Steller, Jr.

Special thanks to those who have reached Land Management Endowment Fund – Land Steward Level since our last newsletter:

Ms. Joy Bartholomew
 Mr. & Mrs. Paul L. Berry
 Cove Point Natural Heritage Trust
 Mr. & Mrs. Patrick Griffin
 Mr. Ewing H. Miller
 Mr. & Mrs. Joseph D. Steller, Jr.

Save the Dates

Annual Membership Meeting Saturday, March 10, 9:30a.m.

ACLT's new Science Committee has put together a panel of experts to tackle the topic "Water Quality in Parkers Creek ~ from headwaters to the Bay". We hope that you will attend and learn, along with the ACLT Board of Directors, ways that we might become more effective stewards of Parkers Creek and Governors Run for the benefit of current and future generations.



Hiking Trail Maintenance Day Saturday, March 31, 9:00 a.m.

Earth Day Clean-up Saturday, April 21, 8:30a.m.

Join ACLT for land management work days in March and April as we spruce up our little corner of Calvert County. Work with ACLT volunteers, friends, and neighbors to prepare trails for the upcoming hiking season, clean-up trash and debris and other selected projects. Picnic lunch to follow on both work days!"



Come Join Us!

Detach and Mail to: The American Chestnut Land Trust, Inc., P.O. Box 2363, Prince Frederick, MD 20678

Name _____ e-mail _____

Address _____

Phone _____ I (we) learned about ACLT from _____

Regular Membership

Corporate Membership

___ Land Saver—\$35.00

___ Habitat Protector—\$500.00

___ Land Saver Corporate—\$150.00

___ Land Protector—\$60.00

___ Trustee of Land—\$1000.00

___ Land Protector Corporate—\$250.00

___ Land Conservator—\$150.00

___ Sustaining—\$2500.00

___ Land Conservator Corporate—\$500.00

The American Chestnut Land Trust is a 501 (c) (3) charitable organization. A copy of the current ACLT financial statement is available on request. Requests should be directed to the American Chestnut Land Trust, Inc, P.O. Box 2363, Prince Frederick, MD 20678 or call (410) 414-3400. For the cost of copies and postage, documents and information submitted under the Business Regulation Article of the Annotated Code of Maryland are available from the Secretary of State.



American Chestnut Land Trust, Inc.
Post Office Box 2363
Prince Frederick, MD 20678

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