

Virginia Department of Conservation & Recreation



## Virginia Natural Heritage E-News Spring/Summer 2008

### Conserving Virginia's Biodiversity through Inventory, Protection and Stewardship

The Virginia Natural Heritage Program was established in 1986 to protect the state's diversity of life. The program focuses on the identification, protection and stewardship of Virginia's natural communities, and rare plant and animal species.

### **CROW'S NEST NATURAL AREA PRESERVE!**

The protection of Crow's Nest has been one of Virginia's highest land conservation priorities for more than ten years. On April 18, the Virginia Department of Conservation and Recreation (DCR) and Stafford County purchased 1,770 acres on the eastern end of the Crow's Nest peninsula, the first phase of a two-phase land purchase to protect Crow's Nest as Virginia's 54<sup>th</sup> state natural area preserve. Funding for this purchase came from DCR, Stafford County, the Virginia Department of Environmental Quality and the Aquatic Resources Trust fund of the U.S. Army Corps of Engineers and The Nature



Conservancy.

By December 2009, DCR and its conservation partners hope to acquire an additional 1,101 acres on Crow's Nest which is under a purchase contract. Successful purchase of the Phase 1 and Phase 2 parcels will result in the permanent protection of nearly 2,900 acres of significant coastal habitat. The property will be managed by DCR's Natural Heritage Program to restore and

maintain the globally rare forest communities and other natural heritage resources it supports, and when staff and management resources are secured, the property will be open to the public for compatible and appropriate uses as a state natural area preserve.

### **THE CHANNELS STATE FOREST AND NATURAL AREA PRESERVE**

The Channels became the 53<sup>rd</sup> State Natural Area Preserve in March. Funding came primarily from the Virginia Land Conservation Foundation and the General Assembly for the Va Dept of Forestry to purchase the 4,836 acre property. With the state's purchase, 720 acres of the upper slopes, an area that contains the Channels – a unique, extensive fissured sandstone formation – has been dedicated as The Channels Natural Area Preserve. This is the first state natural area preserve to be dedicated on state forest lands.

DCR acquired two critical natural area preserve additions on Tuesday August 12<sup>th</sup>. The Kirk tract, aka Horse Swamp Pine Barrens, a 92-acre tract supporting a native long leaf pine community and numerous rare plants was added to the Anticoh Pines Natural Area Preserve, Isle of Wight County. This tract has been a Natural Heritage Program acquisition target since 1991. Persistence pays off. Also closing on Tuesday was the donation of 145 acres at Grassy Hill Natural Area Preserve, Franklin County. The tract supports multiple rare communities and species and was donated by Dr. Alice Melchor to the Western VA Land Trust for transfer to DCR's Natural Area Preserve System. The Antioch

Pines NAP now contains 1,016 acres and Grassy Hill has been expanded to 1,449 acres.

### **DOT FIELD - EASTERN SHORE SOIL AND WATER CONSERVATION DISTRICT EDUCATOR OF THE YEAR**

Dot Field, Eastern Shore Natural Areas Steward has been named the Eastern Shore Soil and Water Conservation District Educator of the Year. The award usually honors a K-12 educator who implements innovative soil and water conservation activities for reaching students and other audiences. Dot works with Eastern Shore high school students in the Envirothon Program, teaches a section on landscaping with native plants for the Eastern Shore Master Gardener Program, implements Phragmites control workshops for private landowners, presents lectures on Natural Heritage resources, leads numerous field trips to Eastern Shore Natural Area Preserves, and acts as advisor and instructor for the Eastern Shore Master Naturalist Chapter.

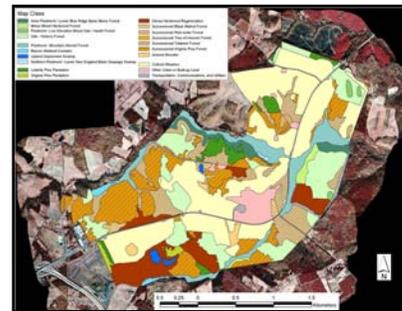


Dot Field (on left) receiving District Educator of the Year Award

### **MID-ATLANTIC NATIONAL PARK VEGETATION MAPPING AND CLASSIFICATION COMPLETED**

DCR Natural Heritage Ecologists, under contract to the Northeast Region of the National Park Service, have been working since 2002 to map and classify the vegetation on over 23,000 acres of National Park land in the Piedmont and Coastal Plain of Virginia. Seven reports have been completed that describe and map the

vegetation on Appomattox Court House National Historical Park, Booker T. Washington National Monument,



Colonial National Historical Park, Fredericksburg and Spotsylvania National Military Park, George Washington Birthplace National Monument, Petersburg National Battlefield, and Richmond National Battlefield Park. Over the course of the project, over 32 examples of globally rare or exemplary natural communities were documented on the seven parks; 20 of these were new occurrences. Vegetation data collected from the seven national parks were combined with over 2000 existing plot samples from throughout the Mid-Atlantic Piedmont and Coastal Plain and analyzed to refine the United States National Vegetation Classification for the Mid-Atlantic region. The vegetation maps and vegetation classification will provide the foundation for resource management activities in these parks, thus influencing the conservation and management of the natural heritage resources found there.

### **VA LEAST TRILLIUM REDISCOVERED**

The globally rare plant and US Fish and Wildlife Service Species of Concern, Virginia least trillium (*Trillium pusillum* var. *virginianum*) G3T2 / S2) was rediscovered in Dinwiddie County by a Natural Heritage field botanist surveying several tracts for Hancock Forest Management. Virginia least trillium, a member of the lily family, is found only in Virginia, Maryland, West Virginia,



and North Carolina. Habitat includes margins of swamps, hummocks within swamps, or in areas of ground-water seepage. In Virginia 33 occurrences have been found in both the coastal plain and mountains, but 12 are historical and 2 have been extirpated. David Green, Virginia Area Manager for Hancock Forestry Management, visited one of the colonies shortly after its discovery and worked with the Field Botanist to buffer the colony from the effects of a planned pine thinning immediately upslope from the colony.

### FLORA OF VIRGINIA UPDATE

The Foundation of the Flora of Virginia is working to produce and publish a comprehensive manual to all vascular plants found as both natives and naturalized within the Commonwealth. Strong financial progress towards publication of the Flora of Virginia was made during this period. Four 2008 Foundation grants totaling over \$60,000 supplemented substantial support received in 2007 through a large grant from the Virginia Environmental Endowment. These funds have enabled the Project to move forward on illustrations and text needed for the manual and some funds are being used to revamp the Project website. Natural Heritage scientists Chris Ludwig and Johnny Townsend are co-authors on the Flora along with UNC herbarium curator Alan Weakley.

### GLOBALLY RARE ANIMALS FROM SW VIRGINIA

Recent zoological field surveys produced several globally rare species in Russell and Tazewell counties. In Ward Cove, Tazewell County staff zoologists found the globally rare Cherokee clubtail dragonfly (*Gomphus consanguis* G2G3 S2), Sable clubtail (*Gomphus rogersi* - DNH watchlist), two rare birds, the Loggerhead Shrike (*Lanius ludovicianus* G4 S2B/S3N, State Threatened), and the Alder flycatcher (*Empidonax alnorum* G5 S1B, State Special Concern). Another record for Loggerhead Shrike

and a breeding population of a rare grassland bird, the Bobolink (*Dolichonyx oryzivorus* G5 S1B) were found just outside of Ward Cove.

At Clifton Farm in Russell County, the globally rare Alleghany Snaketail dragonfly (*Ophiogomphus incurvatus alleghaniensis* G3Q S1) was discovered along the Little River, along with the Rapids clubtail (*Gomphus quadricolor* G3G4 S1), and the state rare Appalachian jewelwing (*Calopteryx angustipennis* G4 S2). Cave surveys at this site were also successful, producing several potential globally rare species, including cave beetles (*Pseudanophthalmus* sp.), and dipturans (*Litocampa* sp.), and the Federally Endangered gray bat (*Myotis grisescens* G3 S1), as well as a host of other cave fauna. Species identification is pending for cave invertebrates. Funding for the work was provided by The Nature Conservancy.

### JAMES RIVER DRAGONFLIES

Numerous members of the Division of Natural Heritage participated in surveys during late April for two spring-active, rare dragonflies along the James River. The target species were the Spine-crowned Clubtail (*Gomphus abbreviatus* G3G4 S2S3), and the globally rare Wisconsin Snaketail (*Ophiogomphus susbehcha* G1G2). The Spine-crowned Clubtail was found at 18 sites on the James ranging from Belle Isle in Richmond to James River



State Park in Buckingham County. It was also documented near the mouth of the Appomattox River in Petersburg and along the Rivanna River in Fluvanna County. The Wisconsin Snaketail (or close relative) was found at 13 sites on the James ranging from North Bank Park in Richmond to several sites in Albemarle County. Both species are apparently common and widespread in the James River, but neither was

detected during surveys of the Rappahannock River, and they are both reportedly very rare in the Potomac River. Adult and larval specimens of the *Ophiogomphus* from the James River population will be compared with Wisconsin Snaketail specimens to determine their taxonomic status.

### **MOST ENDANGERED SPECIES LACKING FEDERAL PROTECTION**

The Natural Heritage Program is nearing the completion of a project to evaluate the plant and animal species in Virginia, most in need of federal protection for the US Fish and Wildlife Service's Virginia Field Office. Task 1, completed in Dec 2007, reviewed 7,500 species in Virginia and selected 208 G1 and G2 species from that set. This list was further refined and Task 2 focused on developing and applying a scoring method to assess the rarity, threat, and population trends for 91 of the rarest species in Virginia. In addition, expert recommendations from Virginia Department of Game and Inland Fisheries, Virginia Museum of Natural History, Virginia Tech, Old Dominion University, Roanoke College, and other Natural Heritage programs were compiled and factored into the final list. The result was a list of 15 species deserving the highest conservation attention possible. The final phase of this project will rank the 15 species from highest to lowest priority. Watch this space.

### **POTOMAC CONSERVANCY USES NATURAL HERITAGE INFORMATION FOR LAND CONSERVATION PLANNING**

The Potomac Conservancy, a land trust dedicated to protecting the health, beauty, and enjoyment of the Potomac River and its tributaries is harnessing the statewide Virginia Conservation Lands Needs Assessment (VCLNA). The VCLNA provides spatial summaries of data that allow for the identification of important landscapes for land protection in the Conservancy's targeted subwatersheds. Prior to the VCLNA the Potomac Conservancy conducted

their own analyses using land cover data (2001 National Land cover data) and hydrology data to broadly identify the lands associated with forested streams and tributaries in which they might focus their efforts. "The VCLNA data does that for me and more," says Seth Coffman, Conservation Program Associate for the Potomac Conservancy "now using the VCLNA data I can identify those areas in the subwatershed of high value regarding aquatic and terrestrial ecological integrity and water quality benefits provided by forests. Then looking at the locations of these lands relative to streams, other protected lands, national forest, and state parks I can further tease out of the data, information pertaining to habitat connectivity and continuous forest cover." The Potomac Conservancy then matches this up with their landowner information so they can talk to landowners about the special resources and services contained on and provided by their property.

The Potomac Conservancy is setting an illustrative example of how local land trusts can reap the maximum benefits of their efforts. By simply integrating free, state level VCLNA information into their local analyses, their results allow decisions that are both comprehensive and relatively easy.

### **NATURAL AREA PRESERVE VOLUNTEER GROUPS FORM**

Volunteer stewardship committees have recently been formed at the Pinnacle NAP, Russell County, Grassy Hill NAP, Franklin County, and Savage Neck Dunes NAP, Northampton County. The committees help with visitor outreach, public use monitoring, updating species lists, assisting with field trips, and trail maintenance, along with other stewardship activities as needed. These preserves, along with Buffalo Mountain, Dameron Marsh and Hughlett Point, all of which already had VSC, are the focus of increased visibility and community interaction to help raise awareness of the Natural Heritage Program and the visibility of these little know treasures. Successful committees require active full-time

Natural Heritage stewards to work with, which we are fortunate to have at these locations.

### **FIRE PROGRAM UPDATE**

Prescribed burns are critical for achieving DCR's natural area preserve management goals since they restore habitat for rare fire-adapted species and maintain fire-dependant ecological communities. From the fall of 2007 to the early summer of 2008, ten units encompassing 596 acres on state-owned or managed natural area preserves were burned under controlled conditions. Outside partners helped to make this accomplishment possible. Due to budget shortfalls, Natural Heritage was unable to contribute funding support to the interagency seasonal fire crew in 2008. Even so, DCR's key fire management partners, the U.S. Fish and Wildlife Service (USFWS) and The Nature Conservancy (TNC), stepped up and generously made the interagency crew resources available to the Natural Heritage fire program. This skilled fire crew was present on all Natural Heritage burns in 2008 and also assisted with burns with the USFWS, TNC, U.S. Forest Service, National Park Service, and on private property collectively

burning a total of 6,321 acres. This included TNC's first ever 1,000 acre landscape level prescribed burn at the Warm Springs Mountain Preserve in Bath County, Virginia. Fire crew from DCR's State Parks Division as well as AmeriCorps volunteers also made important contributions toward 2008 Natural Heritage prescribed fire accomplishments. Natural Heritage staff also assisted on numerous burns with USFWS and TNC, and assisted the Virginia Department of Forestry and USFWS by responding to wildfires in Dinwiddie and Surry Counties and at the Great Dismal Swamp National Wildlife Refuge.



Natural Heritage and State Park crew joined by TNC and Americorps volunteers at Difficult Creek Natural Area Preserve restoring habitat for the federally endangered smooth coneflower.

### **KARST EDUCATION**

Natural Heritage Karst Education Coordinator Carol Zokaites hosted the 4th Chesapeake Bay Mountain Academy June 16-19 at Douthat State Park. The Mountain Bay Academy, run through the Virginia Resource Use Education Council and funded by the National Oceanic and Atmospheric Agency, provides training for secondary teachers in earth science and biology on the mountain headwaters portions of the Chesapeake Bay watershed in Virginia. This year's academy was a great success, with 21 teachers from around Virginia learning how to teach their students about water quality, aquatic fauna, geology, and karst topography.

Staff also led a Karst workshop for interested citizens and local government officials in Loudoun County. Using many of the Karst education activities, the 21 participants learned about sinkholes and surface water and the interactions of groundwater in Karst areas. They discussed many of the development issues in Karst areas as they worked through a land planning activity.

## **CAVE CLEANUP**

Natural Heritage Karst staff coordinated a clean-up trip to Gilley Cave, a state designated significant cave in Lee County. Volunteers from the Mountain Empire Grotto of the National Speleological Society also participated in the cleanup, which removed approximately 7 large bags of trash from Gilley Cave, including environmental hazards such as broken glass and spent batteries.

## **PHRAGMITES MAPPING & HELICOPTER CRASH**

DCR Natural Area Stewardship staff Kevin Heffernan, safe, after helicopter crash. Between 1 and 2 pm Friday July 11, a small (2-seater) helicopter operated by Chesapeake Bay Helicopters, Inc. out of Hampton Roads Airport in Chesapeake, VA...which was under contract to DCR to conduct aerial mapping of Phragmites...was flying at about 100-ft over private property south of Dameron Marsh Natural Area Preserve, Northumberland County. DCR Stewardship Biologist Kevin Heffernan was in the aircraft with the pilot, and things had gone normally over the previous 2-3 hours of work. Without warning, the helicopter began spinning and losing altitude. The pilot managed to "hard land" the helicopter in a big briar patch with quite a few young pines, which cushioned the impact. The craft landed with the gas tank down so fuel did not leak over the engine. Kevin and the pilot suffered scratches from the greenbriar, and tick and chigger bites, but no injuries from the crash. They landed about 1000 feet from the Bay (not IN the Bay as one of the news stories reported) but in a remote, inaccessible and thick tangle of vines that prevented them from walking out to a road, about 1/2 mile away. Kevin had the presence of mind to stay with the craft, and not risk heat exhaustion by attempting to walk out. The emergency beacon on the aircraft was activated, they reached the owner of Chesapeake Bay Helicopters via cell phone, and a local citizen made contact that resulted in the Coast Guard showing up in a helicopter to airlift them

out...they were hoisted up from the "crash site" one by one in a rescue basket. The exact cause of the crash remains under investigation.

In July and August, Natural Heritage stewardship staff led Phragmites control workshops for landowners on the Eastern Shore. Participants were informed on the ecology and natural history of Phragmites, the scope of Phragmites invasion on the Eastern Shore, and strategies for control of this highly invasive wetland grass. These were the 14 and 15<sup>th</sup> workshops conducted by Natural Heritage staff over the past four years, all of which have been components of the Seaside Heritage Program funded by NOAA through DEQ's Coastal Zone Management Program.

## **NATURAL AREA PRESERVES & YOUTH**

On June 30 through July 3rd, 13 members of a YCC crew based out of nearby Staunton River State Park assisted Mountain/Piedmont Region natural areas stewardship staff working at Difficult Creek Natural Area Preserve. Over four days, the YCC crew helped to construct firelines needed for conducting prescribed burns and also helped to mark and maintain 11 miles of boundary lines.

Natural Heritage Eastern Shore Stewardship staff utilized a Youth Conservation Corps (YCC) crew based out of Kiptopeke State Park to implement a variety of projects on Eastern Shore Region Natural Area Preserves. The crew cleared overgrown vegetation from the Cape Charles Coastal Habitat NAP boardwalk, posted property boundaries at Magothy Bay NAP, and assisted the Eastern Shore Master Naturalist Chapter with a public trail project at the Onancock School. The all female crew worked diligently on all the projects and have received praise from local residents for their efforts.

A DCR Youth Conservation Crew from Kiptopeke State Park worked very hard and cleaned up the hiking trail and boardwalk at Cape Charles Coastal Habitat NAP. A citizen responded to the work with: "I wanted to let you

know that we visited the trail. I commend the wonderful job that was done there, there was visibly a lot of work and effort put into the maintenance that was done. Thank you again for your attention to this matter so that we can enjoy the trail.”



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