

State scientists 'pulse' local plant communities

North Carolina Vegetation Survey organizers Robert Peet (UNC Chapel Hill), Thomas Wentworth (NC State University), Mike Schafale (NC Natural Heritage Program) and Forbes Boyle (UNC Chapel Hill) and volunteer scientists from around the state recently visited the region in an intensive effort to catalogue local vegetation.

The scientists were hosted by Chowan University during their stay and joined by John Dilustro, an ecologist and biology professor at Chowan University.

Volunteers spent 12 or more hours a day working in sometimes hot and inhospitable conditions with biting insects and poison ivy in an attempt to better understand the natural vegetation of the state. This work is called a "pulse".

The plots setup during pulse events are typically 1,000 square meters and are surveyed using GPS. Plots are permanently marked to ensure an accurate determination of location for future monitoring to determine any changes in these plant communities over time. All tapes, flags and flagging used during the survey are removed prior to leaving the sites.

A baseline of knowledge is necessary to understand how plant communities may change with climate change and sea level rise.

"We've been trying to systematically study the vegetation of the Carolinas for 21 years now," Peet said. "We're trying to document that vegetation for a number of reasons, one of them is to provide a target for restoration, another is to monitor rare species and assess the condition of the state, still another is to discover what's out there because there's so much around the Carolinas that nobody's really looked at."

Peet continued, It's been a great collaboration with the North Carolina Natural Heritage Program, The North Carolina Botanical Garden and so many universities. We've had maybe 800 volunteers over the 20 or so years and we look forward to tying a bow around it in about four years to have a first approximation of what's here."

Every day scientists met in the lobby of Dunn Hall at Chowan University and teams were assigned and scientists spread out throughout the surrounding counties. Interesting plant communities were examined with the consent of private landowners and timber companies. The volunteer scientists set up permanent plots where there is a complete inventory of plants and soil. This is logged into a database with the ultimate goal of a statewide natural community inventory.

Also accompanying the team of scientists was David Blevins, a Raleigh based author and nature photographer. Blevins has the unique perspective of being both a professional photographer and holding a PhD in forest ecology. He accompanies the scientists on pulse events and is



Contributed Photos / DAVID BLEVINS

Above: A team of scientists scout an area near Margarettsville for a North Carolina Vegetation Survey "Pulse" plot. The team, pictured from left, includes Mike Turner, John Dilustro of Chowan University and Robert Peet of UNC

Chapel Hill. Below: A team collects vegetation data from a swamp along the Meherrin River. Pictured from left are Forbes Boyle of UNC Chapel Hill and Thomas Wentworth of North Carolina State University.



midway through his book on the natural plant communities of North Carolina. As the Carolina Vegetation Survey has been working through the dif-

ferent plant communities, David has photographed this journey.

"The fieldwork that they're doing is very botany based, but

once that data is collected and analyzed altogether for all the plots in the region then they can put that together to look at the plant communities and landscape level questions and that is where it connects with the book I am doing," Blevins noted.

Schafale commented on the biological richness of the region.

"I'm with the Natural Heritage Program and my job is to look after the community level of biodiversity," Schafale said. "Most people when they think of biodiversity they think of how many species you have. While this is certainly true, communities are biological entities of their own sort that are ecologically and scientifically significant."

Schafale continued by saying, "This is a really interesting area. You have all these exten-

sive wetlands and these wind tidal swamps. They are in other places but the most of anywhere are in this part of North Carolina.

"Other things we've sampled that were really great include upland hardwood forests, which we had a good bit in the coastal plain and it's mostly gone because unlike the wetlands it's even easier to destroy," Schafale added. "The largest expanse of upland hardwoods left in the entire coastal plain of North Carolina is located near Ahoskie."

He concluded, "The wetlands in general are great for various reasons, but this region does have some kinds of wetland that you hardly have anywhere else. This is the world center for pocosins. This is the world center for wind tidal swamps. This is northeastern North Carolina."