Three-Year Plan for Game Lands 33 and Green Lane Research

PRINCIPAL RESEARCHER: **Dr. Carol Mahan, Penn State University**

By Kristin Wild, Asplundh Tree Expert Co.

After 62 years of research and demonstration on the State Game Lands 33 (SGL 33) project in central Pennsylvania, you may be wondering if there is anything new to be learned. The same thing could be asked about the 29-year-old Green Lane Research and Demonstration site in southeastern Pennsylvania.

For good or for bad, herbicide products, application technology, climate, and ecology are constantly changing. Because of this, the research projects' cooperators believe there are still plenty of reasons to continue to measure the effect of herbicide applications and other vegetation management approaches on plant communities and wildlife groups. Early successional (meadow-like) habitat is dwindling, especially in the northeastern U.S., and rights-of-way (ROWs) can provide critical habitat for numerous species of conservation concern.

Earlier this year, a formal agreement was created between the Pennsylvania State University and the cooperators (Asplundh, FirstEnergy, PECO, Dow, and the Pennsylvania Game Commission). A major part of that agreement is a three-year research plan designed by Dr. Carol Mahan, a professor of biology and environmental studies at Penn State.

"I'm excited about re-energizing the projects," said Dr. Mahan. "We'll be making long-term improvements by establishing control plots, permanently marking and GPS mapping the study sites, and using GIS software to track treatments. We will establish a more consistent schedule for our studies and we'll be developing a project website that will be hosted at Penn State, to share data and techniques regarding ROW maintenance."

Dr. Carolyn Mahan (center), a professor of biology and environmental studies at Pennsylvania State University, paused for a photo while conducting a plant survey last July on the State Game Lands 33 (SGL 33) plots. Assisting her were Rich Yahner (L) of NAROW Consultants (he is also the son of the late Dr. R.H. Yahner) and Brad Ross (R) who is an instructor and research assistant at Penn State. All three have been involved in this research project in the past.

In addition to the continuation of vegetation surveys, Dr. Mahan and her research assistants will conduct transect surveys for breeding birds at both sites. A survey protocol for bees and other insect pollinators will be developed for implementation in 2016, and there will be a complete analysis of the various "host" plants available on the research plots for butterfly, moth eggs, and larvae.

If you saw Dr. Mahan's presentation at the Environmental Concerns in ROW Management 11th International Symposium in September 2015, you may remember that three years ago she moved informally into a leadership role when the previous research leader, Dr. Richard H. Yahner, had to step back for health reasons. Sadly, he passed away on July 8, 2015 at the age of 66 after battling a rare neurological disease in his later years called progressive supranuclear palsy (PSP).

Fortunately, Dr. Mahan was already familiar with the SGL 33 and Green Lane projects as she had worked as a research assistant in the early 1990s under the original researcher, Dr. William Bramble. Almost 10 years later, she also worked with Dr. Yahner on SGL 33 and more recently with his son, Rich, who collected plant and wildlife data for his dad to maintain the continuity of the research during the transition.