

Photos courtesy of Ross Reserve

macroscope

Ross Biological Reserve Celebrates 60 Years as a Living Lab

Conservation ecology students at Ross Reserve study in what was once an open field. The reserve, now more fully wooded, serves as a living laboratory that showcases the capacity for renewal in forests and the accumulation of biological diversity as the system develops.

For more information, visit www.bio.purdue.edu/research/ross_reserve/index.htm



Alton A. Lindsey and colleagues in biological sciences established the Ross Biological Reserve in 1949 along the Wabash River, eight miles downstream from the Purdue main campus, on land donated by David Ross. In the six decades since, the Ross Reserve has fulfilled Lindsey's vision of a "living laboratory."



>> Lindsey was an accomplished plant ecologist who had been part of the second Byrd expedition to Antarctica. The Ecological Society of America (ESA) named him Eminent Ecologist of 1972 for his career accomplishments, which stretched from pole to pole and included desert and rain forest environments.

"Few investigators, past or present, have achieved excellence in such varied aspects of ecology," the ESA article noted. Lindsey would have been 102 in May. He lived to see the establishment of the A.A. Lindsey Field Laboratory dedicated in his honor 10 years ago.

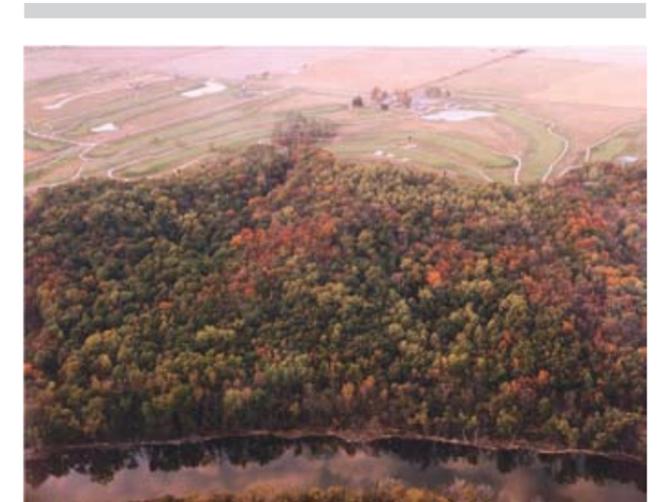
The 67-acre reserve has inspired thousands of students. It has been the focus of more than 16 PhD dissertations, dozens of scientific publications, master's and undergraduate honors theses, as well as countless independent studies and class projects. It has had a formative influence on many, including live-in graduate caretakers Scott Wissinger, now on the biology and environmental sciences faculty at Lindsey's alma mater Allegheny College; and Steve Austad, now at the Barshop Institute for Longevity and Aging Studies at the University of Texas Health Science Center, and a Distinguished Science Alumnus.

For a modern department of biological sciences, critical resources include access to a working ecosystem well stocked with interacting species no less than a library of published scholarship or banks of DNA samples and sequences. The fabric of a natural community like the forest of the Ross Reserve is both impossible to create by artifice and an impossible bargain in virtue of its capacity for regeneration, like a library whose journal subscriptions renew on their own.

The reserve was a patchwork of pastures and partially logged forest 60 years ago, but has since recovered to be as diverse (and well studied) as any forest serving as a field station in the Midwest. Biology courses in the ecology and evolutionary biology curriculum regularly use the reserve and the Lindsey Lab, as do outreach programs in biology. Fourth-graders, high school students and their teachers sample the hundreds of plant species and use the databases begun by Lindsey 50 years ago, including thousands of tagged trees. Courses and student projects based in other departments also use the reserve, currently including projects in forestry and natural resources and entomology.

In spite of advances in computer modeling and teaching technology, ideas in biology still need to be verified in living systems too large to replicate indoors. Students still need to experience natural complexity firsthand for "reality checks" on theories presented in textbooks and lectures. "Experiential learning" this is called today, but Lindsey also understood the importance of emergent properties like the beauty of a natural forest. Lindsey's pioneering insight and investment in this living laboratory have paid ample dividends to the Purdue community. ■

Kerry Rabenold, professor of biological sciences and director of the Ross Biological Reserve



Ross Reserve incorporates 67 acres on the shores of the Wabash River.