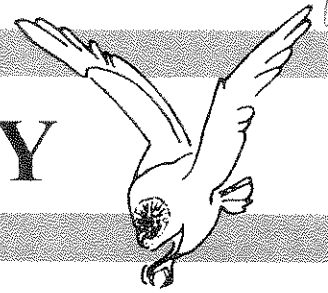


NATURALLY KENTUCKY

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Freshwater mussels of the Licking River drainage

By Ellis L. Laudermilk

Kentucky's rich freshwater mussel fauna is exceeded in number of species by only Alabama and Tennessee. This diversity may be attributed to the presence of at least three distinct mussel assemblages in different river systems, a diverse fish fauna (mussels are dependent on fishes to complete their life cycle), geological heterogeneity, and the numerous major rivers found within or along the state's border.

During 1991, I conducted a survey for mussels in the Licking River mainstream and selected tributaries downstream from Cave Run Lake as part of my thesis requirements at Eastern Kentucky University. The Licking was chosen

because comprehensive distributional information was lacking, and several rare species were known from its waters. Originating in Magoffin County, the Licking River flows northwesterly approximately 496 km (308 miles) to its confluence with the Ohio River near Covington. The river drains all or a portion of 21 counties, and encompasses 9,601 km² or about 10% of the Commonwealth. Cave Run Lake, located near Morehead and impounded in 1974, is the only main-stream reservoir. Downstream from Cave Run, the Licking remains free-flowing to near Visalia (Kenton-Campbell counties), a distance of approximately 154.7 miles, before backwaters of the Ohio River begin to influence its velocity.

Of the 103 native mussel species known from Kentucky, 53 (51%) were found during this study or historically occurred in the Licking River drainage. Six (fanshell, catspaw, northern riffleshell,

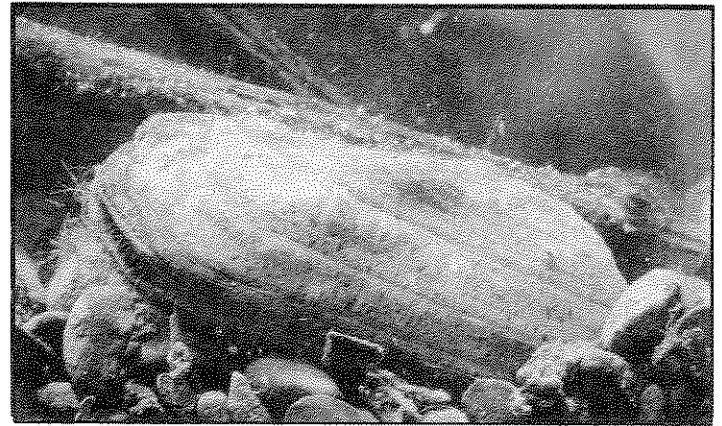
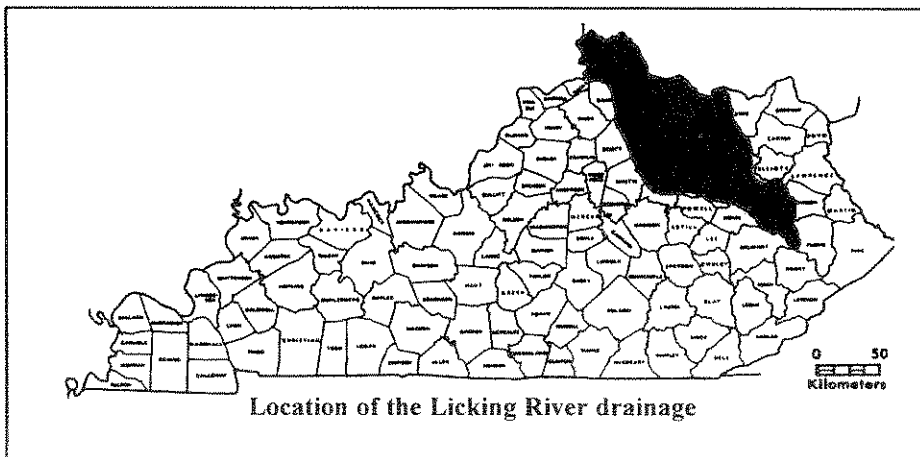


Photo by Wendell Haag

Rabbitsfoot (*Quadrula cylindrica*), a KSNPC Threatened species known from the Licking River

tubercled blossom, clubshell, and rough pigtoe) are currently listed as endangered by the United States Fish and Wildlife Service (USFWS). Nine others (elktoe, snuffbox, long-solid, sheepnose, pyramid pigtoe, rabbitsfoot, salamander mussel, rayed bean, and little spectaclecase) are currently being evaluated for listing as threatened or endangered by the USFWS, or are considered rare in Kentucky by the Commission.

Based on all mussel observations and collections made after 1979, the fanshell may be the only endangered mussel still living in the river. And several species are in danger of being extirpated, especially with the likely invasion of the non-native zebra mussel which is already threatening mussels elsewhere. In fact, the



Location of the Licking River drainage

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KSNPC Staff updates

This staff photo, promised in our last newsletter, was taken on December 5, 1994, following the fourth-quarter Commission meeting. In the forward row are Deborah White (Botanist), Martina Hines (Data Specialist), Kristin Snyder (Assistant Preserve Manager), Gary Libby (Botanist), and Melissa Richey (Data Specialist). From the left in the center row are Brainard Palmer-Ball (Terrestrial Biologist), Cindy Campbell (Stewardship Assistant), Dot Marek (Secretary), Judith McCandless (Commission Chair), Edwin Sutton (Commissioner), Martha Brent (Executive Asst.), and Ronald Cicerello (Aquatic Biologist). In the back row are Mary Jean Eddins (Fiscal Officer), Joyce Bender (Stewardship Coordinator), Kenneth Jackson (Commissioner), Robert McCance, Jr. (Director), O.D. Hawkins (Commissioner), Hugh Archer (Commissioner), and Ellis Lauder milk (Aquatic Biologist).

Notably absent are Tom Bloom (Information Systems Manager), Landon McKinney (Land Protection Specialist), and Marc Evans (Botanist/Ecologist).

Also, Laurel McNeil was unable to attend this photo opportunity having given birth to her first child three days earlier. She and her son Jared Christopher are so enjoying family life at home that Laurel does not plan to return to the Commission. We acknowledge her five years of exemplary service as a Data Specialist and wish her the best in her exciting new life.

Other changes in staff include the mid-January resignation of Fiscal Officer Mary Jean Eddins. Mary Jean has taken a part-time job with the cabinet's Finance Branch in order to have more time for her family. Although Mary Jean was with us for only four months, her hard work will benefit the Commission for some time to come.

Due to the brevity of Mary Jean's service, we were able to fill the



KSNPC Staff and Commissioners

Fiscal Officer position with a candidate from our September '94 interviews. Dan Russell began work with the Commission effective January 16, transferring from the cabinet's Budget Office.

Dan has a degree in accounting from Western Kentucky University and brings 16 years of state experience to us in the areas of accounting, budget, and administration. We are fortunate to have someone with Dan's credentials join the well trained staff of KSNPC. ☺

An Invitation to Exhibit

Environmental Expo '95

20th Governor's Conference on the Environment

To be held:

October 26-28, 1995
Heritage Hall, Rupp Arena
Lexington, KY

Sponsored by:

KY's Natural Resources and Environmental Protection Cabinet

To receive an application for exhibit or further information:

Send a request which includes your company name, address, phone, fax, and contact name to the attention of Roger McGann, Natural Resources and Environmental Protection Cabinet, 5th Floor, Capital Plaza Tower, Frankfort, KY 40601. Fax requests to (502)564-6131. ☺

priority and to the Governor's Office of Policy and Management for concurring with our requests.

(4) Provide for the Needs of Staff--Our move to a new office was probably the single greatest benefit provided to staff, but there were many other smaller gains this past year including the purchase of new desk top terminals for office staff and lap top computers for most field staff. By early spring the Commission's data network which now links KSNPC staff to each other will also allow the Commission access to cabinet and Internet systems. Many cooperative projects have suffered because the Commission lacked the communications system it had grown to need.

(5) Provide Better Information about KSNPC to Leaders and Supporters--Not enough progress was made on this goal this past year, but strong support from the NREPC Cabinet, conservation groups, and our volunteers helped offset a generally status quo operation by staff. Increased checkoff promotion also helped somewhat. We will work harder in this goal over the next year.

(6) Make Better Use of Data--A new data services brochure that reflects a somewhat changed data services policy was adopted this spring. It will allow KSNPC to more actively promote data use and help us recover associated costs.

Special thanks go to Tom Bloom and previous Commission Chairman Hugh Archer for their efforts on this goal. KSNPC data are recognized as the best source of rare species data in the Commonwealth. The time and cost savings received by government agencies and the private

sector justify the cost of collecting and distributing this information.

(7) Continue to Build the State Nature Preserve System--Preserve management staff members Joyce Bender, Kris Snyder, and Cindy Campbell, with support from seasonal employees and volunteers, managed to provide adequate care to our existing landbase with totally inadequate financial support.

A few small tracts were added to the preserve system, including purchases at Flat Rock Glade, Terrapin Creek, and Raymond Athey Barrens. On April 12, 1994, KSNPC signed an option to purchase about one-half of Blanton Forest in Harlan County. If we are successful at privately raising \$500,000 to match an equal amount appropriated in the budget bill, we will be able to accomplish the single most important purchase in KSNPC history.

Insufficient progress was made in our efforts to inventory the Commonwealth for high-quality natural areas because so much of our resources are put into grant and contract work that basically meets the needs of other entities.

In July and August KSNPC analyzed our data base and selected over sixty sites for immediate study. After preliminary research and investigation staff have reduced this number to 35. Staff will develop preserve designs and determine whether these sites should be proposed to the Commissioners as prospective nature preserves. This data analysis helped all staff refocus on our mission of protecting the Commonwealth's best natural areas.

I believe that the past year has largely been a success for

KSNPC, and I hope that you will agree. We have a very long way to go if we are to accomplish our mission, and time is not on our side, but we are making good progress. ☺

Freshwater Mussels

Continued from page 1

catspaw, clubshell, ebonyshell, lilliput, northern riffleshell, pink papershell, pyramid pigtoe, rabbitsfoot, rayed bean, rough pigtoe, and tubercled blossom are precariously holding on, or have already been extirpated from the drainage.

Along with personnel from EKV, we have worked with the Kentucky Division of Water to designate the river between miles 18.9 and 65.0 as an Outstanding Resource Water (defined as waterbodies supporting federally threatened and endangered species or supporting diverse and unique aquatic flora and fauna). Although extremely important, these patchwork protection measures are probably inadequate to preserve the big river water quality and habitat required by many of the Licking's species. A watershed protection approach is needed to educate private landowners and communities about the Licking River's significant aquatic fauna and to encourage them to contribute to its preservation through best management practices. Perhaps the most crucial aspect of all is the preservation of remaining free-flowing conditions--in not only the Licking but in all of Kentucky's large rivers--if their unique aquatic faunas are to survive. Without such protection in the near future, many of the species that comprise Kentucky's big river faunas may be doomed for extirpation or extinction. ☺

Blanton Forest update

by Marc Evans & Martha Brent

KSNPC is very pleased to announce that a partnership has been formed with the Mountain Association of Community Economic Development (MACED) to raise the funds needed to acquire, protect, and manage Blanton Forest. MACED is a private, nonprofit organization created in 1976 to provide opportunities and resources to help citizens build sustainable, healthy, equitable, democratic, and prosperous communities in Kentucky and Central Appalachia.

Thanks to a \$20,000 donation from Blanton Forest Steering Committee Member Burt Lyons, MACED was able to hire Amanda Hiley as Director of Development. Amanda has done fund raising for several organizations, and she will be working exclusively on the Blanton Forest Project.

KSNPC's alliance with MACED carries the serendipity of involving the first director of KSNPC in the Commission's current efforts. Donald F. Harker, president of MACED, was director of KSNPC from 1978 to 1982, and his foundational planning, methodologies, and goals still shape the Commission today. Mr. Harker has continued to be a supporter of KSNPC, and his experience as former director makes MACED an ideal partner in this effort.

KSNPC and MACED plan to encourage the involvement of other groups such as the Harlan Revitalization Association, the Camp Blanton board, and the other cooperative

organizations that have expressed interest in this project.

Much more remains to be done as KSNPC and MACED work to increase public awareness of the Blanton Forest Project and seek support from foundations, businesses, organizations, and citizens. Matching

preserving the quality of Kentucky's environment. The report states that, "Recent research has identified a strong correlation between environmental integrity and income growth in states, challenging long-held assumptions and suggesting the need for a new paradigm for development" (99).



Photo by Marc Evans

Past and present coexist in Blanton Forest where young saplings compete for breaks in the canopy formed by trees predating settlement in Kentucky. Scale is lent here by Department for Natural Resources Commissioner William Martin seen in the mid-ground of the photo.

funds of \$500,000 must be raised quickly in order to accept the allotment offered by the 1994 Kentucky Legislature. The option to purchase the first old-growth tract must be exercised by July of 1995.

If Blanton Forest is to be saved for the future, much more support is needed than the generous offerings received up to now. The recently released report of The Kentucky Long-Term Policy Research Center titled The Context of Change recognizes the validity of

Since 1976 KSNPC has advocated progress through preservation. The Blanton Forest project is another attempt to keep Kentucky ahead of its time by protecting the past. We need your help.

If you have support, suggestions, or comments to offer please send them to the KSNPC office, or contact Amanda Hiley at the MACED office at (606)986-2373. MACED's mailing address is 433 Chestnut Street, Berea, KY 40403. ☺