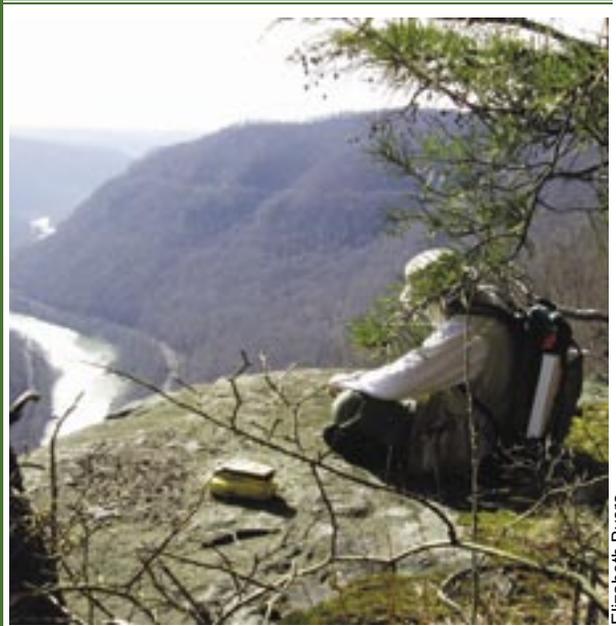


Natural Heritage Update



Elizabeth Byers

DNR biologist conducting a plant survey at New River Gorge National River.

Recently the Wildlife Resources Section completed a Wildlife Conservation Action Plan that addresses the conservation needs of animal species and habitats in greatest need of conservation. The Natural Heritage Program database of rare species information was a critical tool for understanding the distribution and status of the many species that inhabit the state. The database, which is constantly being updated and refined, was also used to determine the preliminary list of species and habitats (natural communities) on which to focus our limited conservation resources. An initial listing of 576 animals thought to be rare in the state was reduced to a list of 129 species or species groups that warrant our most immediate conservation attention. The rankings used by the National Natural Heritage Network were an important part of the decision-making process. This unit within the Wildlife Resources Section will continue to play an important role in updating our planning efforts. The Section has begun a similar planning effort for plants.

Summaries of some of the many projects that have been recently completed or are underway follow.

Natural Communities

The ecology group is currently working on several federally funded projects that will add to our knowledge of West Virginia's natural communities. Field work on a classification and conservation assessment of high elevation wetlands (*see Spring 2005 issue of West Virginia Wildlife for complete story*) is almost wrapped up. We are entering the final phase of data analysis and presentation. We are also mapping vegetation for all of the national parks in the state: New River Gorge National River, Bluestone National Scenic River, Gauley River National Recreation Area and Harper's Ferry National Historical Park. We are also conducting botanical inventories for the Bluestone and Gauley parks.

At the same time, DNR ecologists are looking toward new assessments of natural habitats that have been identified as conservation priorities by the new West Virginia Wildlife Conservation Action Plan, such as floodplain forests, red spruce forests and forests over limestone bedrock.

Aquatic Classification

Natural Heritage staff continued to collect data that will eventually

be used to classify aquatic communities and allow biologists to predict which fish species should occur in any given stream segment. Factors being considered as part of a classification model (in addition to fish species) include water chemistry, surrounding land use, stream bottom (substrate) characteristics and geology. Two field seasons of data have been collected and two more years are anticipated before an initial classification system can be developed. The classification system will be useful to determine which aquatic communities are in need of conservation and/or restoration.

Historic Distribution of Fishes

Significant effort has recently been directed toward determining historic distributions of fish species in the Mountain State. A review of historical West Virginia collections held in Michigan, New York, Pennsylvania and Washington, D.C. has added several new species to our state species list. Reviewers also noted records of fish species in watersheds from which they were previously unknown. Knowing the historic distribution of fish species will provide valuable insight into the process of assessing streams and setting restoration goals.

Zoology

A statewide volunteer program to survey dragonflies and damselflies was initiated in 2005. Approximately 35 volunteers from all over West Virginia participated in workshops and collected over 400 specimens this past summer. This is the first year of a three-year atlas program using volunteers to document the distribution and learn more about the biology of this understudied group of insects. Along with the dragonfly and damselfly atlas, the amphibian and reptile atlas led by Tom Pauley and students at Marshall University in Huntington, should be completed in 2006. This long-term project is designed to document the occurrence of all amphibians and reptiles in West Virginia, which will assist in determining which species are in need of conservation action.

The DNR has funded much of this effort along with many graduate student projects that focus on rare species. Noteworthy finds include new sites for the streamside and smallmouth salamanders. Both species were previously known from only one site each along the Ohio River. In the past two seasons, several more sites have been documented. In 2005, 14 rare species, including amphibians, mammals, butterflies, land snails and crayfish, have been inventoried and updated. In addition to surveys, over 20,000 existing records for invertebrate groups such as dragonflies, butterflies, crayfish, tiger beetles, moths and land snails have been gathered and entered into various databases so that an analysis of the status of these species and potential conservation needs can be made.

Botanical

The *Checklist and Atlas of the Vascular Flora of West Virginia* should be printed in early 2006. This will be the first book, since the *Flora of West Virginia* was published in 1977, to have a complete list of all the known native, naturalized, exotic and introduced vascular plant species in the state. The distribution of each group of taxonomically related plants is illustrated with county-level dot maps.

The team working on the revised national recovery plan for the federally endangered running buffalo clover has completed the final draft and sent it out for review. The plan defines the conditions under which running buffalo clover could be first down-listed from federally endangered to federally threatened, and then the conditions needed to take the species off the threatened



The American Yew is a low shrub that grows in cool, shady areas in the mountains. It can be distinguished from young hemlock and fir seedlings by its needles, which are lustrous dark green on both sides, and have sharp-pointed tips.

and endangered species list.

A number of changes have occurred to the flora of West Virginia over the course of the 11 years that data has been collected in the Curatorial Database System. Two changes of note involve sedges. The leafy-tussock sedge, or water sedge, was found in Randolph County.



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The ebony jewelwing damselfly is one species being surveyed by odonate survey volunteers.

This constituted a state record for this species, extending the range from Ohio and Pennsylvania into the mountains of West Virginia. In addition, Manhart's sedge was also found in Randolph County.

American yew may be threatened and declining in West Virginia. Natural Heritage database records indicate nine recent occurrences, 18 historical occurrences, and one extirpated occurrence. Upon review

of each record, only one occurrence in Pleasants County was noted as common in notes made by the collector. It is becoming increasingly difficult to find a population that is not significantly impacted by deer browsing. If you see this plant, please contact Paul Harmon in the DNR Elkins office.

Buffalo clover was found in 2004 in the Bluestone River gorge. The species had not been seen in the state for decades! This is not the famous federally endangered running buffalo clover, but a similar species often found on steep, disturbed sites.

Compiled by Natural Heritage staff.