

## SPECIES AND COMMUNITIES OF CONCERN IN WEST VIRGINIA

### Information for Family Forest Owners

One of the environmental issues of concern today is the worldwide decline in forest habitat and the related loss of biodiversity. As a good land steward, it's important to be aware of plant and animal species and ecological communities of concern that are designated as "imperiled, critically imperiled, threatened, or endangered" and how forest management activities on your lands may affect these species or communities. Critically imperiled (G1) or imperiled (G2) species or ecological communities are globally rare or, because of some factor(s), especially vulnerable to extinction. They are designated as imperiled or critically imperiled by non-government organizations such as NatureServe (and its constituent Natural Heritage programs) or the IUCN (The World Conservation Organization). Threatened and endangered species are listed by government agencies under the U.S. Endangered Species Act or the Canadian Species at Risk Act and may also be listed under state or provincial laws; yet they may or may not be listed as critically imperiled or imperiled, globally.

The **West Virginia Natural Heritage Program** can provide information on species and communities of concern in your area. Log on to [www.wvdnr.gov/wildlife/wdpintro.shtm](http://www.wvdnr.gov/wildlife/wdpintro.shtm) or call the office at (304) 637-0245 x2036. NatureServe, [www.natureserve.org](http://www.natureserve.org), has additional information on species and communities of concern. NatureServe coordinates the management of inventories of biological diversity in the U.S. and Canada.

The Sustainable Forestry Initiative® (SFI) program ([www.aboutsfi.org](http://www.aboutsfi.org)) combines the perpetual growing and harvesting of trees with the long-term protection of wildlife, plants, soil and water quality. To meet the SFI Standard, program participants who procure wood from family forest owners provide outreach opportunities to family forest owners on conservation of biodiversity for imperiled species.

In West Virginia, the SFI program has partnered with Forests for Watersheds & Wildlife™ to provide you with a series of profiles on species and communities of concern native to West Virginia's forests. The species and communities featured in this profile are examples of many that depend on family forest owners for protection. To view other profiles, visit [www.forestedflyways.org](http://www.forestedflyways.org).

#### Elk River crayfish – *Cambarus elkensis*



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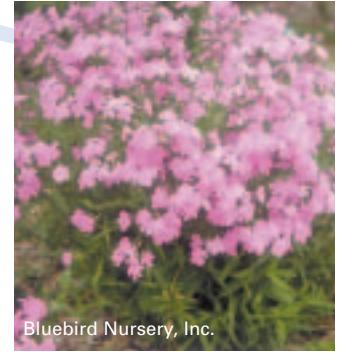
The Elk River has the highest fish diversity in West Virginia (68 species).

This globally imperiled (G2) species is found only in West Virginia. It is known from one river basin, the upper Elk River, where it has been documented in the Holly and Birch tributaries of Braxton, Nicholas, Pocahontas, and Webster counties. Within these medium-sized streams, it has been found under loose rocks in shallows or pools that have currents. Males are reproductive from the fall to spring, after which they shed their exoskeleton (a rigid outer shell) and return to a non-reproductive state. This is an ongoing cycle, leading to a yearly growth in size. Based upon the stage of growth and

gender, size (measured from the head to the mid-section) ranges from half an inch to 1.8 inches. The carapace, legs, and top of the main pincher are brown while the abdomen is a darker brown. Yellowish bumps are found along the margins of the claws and a black line is present between the head and upper body. A reddish color is apparent along the margins between the eyes and on bumps along the main pincher. Siltation, mining and other impacts to water quality are a threat to this species. Use of best management practices can help conserve the Elk River crayfish and other aquatic species.

## Sword-leaved Phlox – *Phlox buckleyi*

The Sword-leaved phlox, a globally imperiled (G2) and federally threatened species has been recorded in Greenbrier and Pocahontas counties in West Virginia and at sites in Virginia. This perennial has low-lying stems with narrow, “sword-shaped”, evergreen leaves that grow in clusters. An upright flowering stalk, up to 16 inches in height, grows from the cluster, and bears a small bunch of bright pink to purple flowers that bloom from May to June. The plant prefers open woods at the base and margins of shale barrens, where the soil is richer. Known West Virginia populations are very small (5-20 plants) and found in open areas along roads and trails near shale barrens. Threats include mowing, invasive species and canopy closure.



Bluebird Nursery, Inc.

Sword-leaved phlox flowers are slightly fragrant.

## Red spruce (Eastern hemlock) / Great rhododendron Saturated Forest – *Picea rubens* (*Tsuga canadensis*) / *Rhododendron maximum*



Brian P. Streets, WV DNR,  
Natural Heritage

The endangered Northern flying squirrel inhabits these forests.

This globally imperiled (G2G3) wetland forest community occurs in the bottomlands of high elevation (2000 feet and above) streams in the central and southern Appalachian Mountains as well as the southern Blue Ridge Mountains in North Carolina. The community is characterized by seasonally to semi-permanently saturated soils, the result of seepage or a high water table, not flooding. The relatively open canopy is dominated by evergreens—red spruce or both red spruce and Eastern hemlock. Other tree species, such as yellow birch and red maple, may also be present. The shrub layer is dense and also dominated by evergreens, primarily great rhododendron. Ground cover is sparse and consists of patches of ferns and sedges in sunny openings and sphagnum moss in shady areas and depressions. Alteration of the water table by beaver activity and the potential impact of acid rain on red spruce pose a threat to this community, which is already restricted to a narrow geographic and elevation range.

### Technical and Cost-share Assistance:

The Partners for Fish & Wildlife program of the U.S. Fish & Wildlife Service offers technical and financial assistance to landowners for restoration of native habitat types. Contact: (304) 636-6586 or go to [www.fws.gov/northeast/partners](http://www.fws.gov/northeast/partners).

The West Virginia Natural Resources Conservation Service, at (304) 284-7540, can provide information on federal cost-share opportunities and assistance.

If you want to develop a conservation strategy for these or other rare species or ecological communities or find out if they might occur on your land, contact the West Virginia Natural Heritage Program at (304) 637-025 x2036 or [www.wvdnr.gov/wildlife/wdpintro.shtm](http://www.wvdnr.gov/wildlife/wdpintro.shtm). In mid-2006, information on the Landowners Incentive Program, which will help landowners conserve species at risk, will be posted on their website.



Produced by Forests for Watersheds & Wildlife™ (FW<sup>2</sup>), a program of the American Forest Foundation.  
FW<sup>2</sup> works with partners and family forest owners to conserve and create critical habitat for imperiled wildlife species.

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