

Spanning the Gap

Biodiversity

Biological diversity refers to the variety among species of plants and animals and the ecological systems in which they occur. Biological diversity is important because the more variety there is in an ecosystem, the more stable that ecosystem will be. Take away too many species of plants or animals, and all animals and plants may be in danger of extinction. So, in the case of biological diversity, variety is not so much the **spice** of life as it is the **essence** of life.

Usually extinction of species is a slow process, with new species replacing the old over thousands of years. Increasing demands of human society, however, have led to habitat destruction and over-exploitation of natural resources, both of which bring on an abnormally high loss of biological diversity. In the last two hundred years, the rate of species extinction has greatly accelerated. Species loss is already greater than species replacement: the variety of life forms on our planet is diminishing. Equally as catastrophic is the loss of a variety of entire ecosystems.

Human activity is causing losses in biological diversity at a cataclysmic rate, and the loss of diversity is a worldwide problem of enormous proportions. A great variety of living things supply us with food to sustain us, fibers to clothe us, energy to warm us and transport us, resources for industry, and medicines to heal us. When a species and its environment disappear, so does its untold potential for supplying human needs. In addition, the beauty, wonder and variety created over thousands of years



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Species preserved in the recreation area:



Parkwide inventories of the **bog turtle** (*above*), which is on the federal threatened species list, were mapped and specific wetlands were targeted for invasive plant management, including the introduction of biological controls for purple loosestrife (*Lythrum salicaria*).



Inventories of the **tumbler rattlesnake** (*above, mother with a brood*) and (*below*) identified key habitat along the Appalachian Trail. Cooperators such as the

is lost.

Trying to prevent such loss in this country is one of the greatest challenges of the National Park Service, whose mission is to preserve and manage a variety of significant natural resources for present and future generations. parks play a vital role in maintaining our country's biological heritage. **At least half of United States plant species and a higher percentage of animal species live in national parks.**

Scientists from both within and outside the National Park Service are conducting research in the parks to gain a better understanding of all aspects of biological diversity. Ongoing research determines what the parks have lost, and finds methods to preserve what remains.

Appalachian Mountain Club developed strategies with the recreation area for reducing hiker-rattlesnake encounters and possible disturbances to nests.

