

Endangered Species

Some Pennsylvania native plants and animals have declined to the point they are listed as endangered and threatened species, either federally, at the state level or both. Some of these species declined during years there were no regulations and agencies protecting the species. Others are still declining today. (Since the inception of agencies such as the Pennsylvania Game Commission and the adoption of hunting and trapping regulations over the last 100+ years, regulated hunting and trapping has not contributed to the demise of a species, rather hunters have helped to sustain and reintroduce many species into Pennsylvania and throughout the United States.) These species are beset by the same problems that threaten biodiversity around the world-something we call the HIPPO dilemma. "HIPPO" is an acronym for the five major problems threatening the Earth's biodiversity: **H**abitat loss, **I**ntroduced species, **P**ollution, **P**opulation growth (can include humans and domestic/wild organisms), and **O**ver-consumption (which includes poaching).

All species are subject to these problems, yet not all species become endangered. Why are some species more prone to becoming endangered or even extinct? Although there is no absolute list, some species have features or behaviors that make them more susceptible to the HIPPO dilemma. For example, some species require very specific foods or nesting sites or only live in one very specific habitat. Species with very specific needs are referred to as *specialists* and are often more prone to becoming endangered than the generalists. *Generalists* are species that are very adaptable, live in a variety of habitats, can eat a variety of foods and take shelter in a variety of areas, etc. In addition, some species migrate, or nest in colonies or hibernate in colonies. While others are attractive and prized by people or conversely feared by people. A combination of these innate attributes as well as "outside pressures" such as natural or human-caused environmental changes make some species more prone to becoming endangered than others.

Species More Prone to Becoming Endangered

Species with very specific needs (Specialists), for example, species with specific habitat, food and/or nesting requirements are more vulnerable than species that eat a wide variety of foods and can raise young in a variety of habitats and locations. These "specialized" species cannot quickly adapt to change. This makes them very sensitive to changes in the environment.

Species that migrate depend on several different habitat locations and, sometimes, even types. Not only are there risks in the migration itself, but there are more

habitat requirements. In addition to the original habitat, they also rely on staging and resting areas along their route and a destination habitat.

Species that have low reproduction rate. These species may take years to reach reproductive maturity or have long gestation periods, produce small broods or have seeds that germinate under very special conditions.

Species that are "prized" by people or conversely, interfere with people. Many large predator populations were destroyed because they killed livestock, ruined crops or competed with people for food. While still other species, like the Great Egret and Bog Turtle were prized by collectors or valued for their feathers

Species that are naturally rare. Some plants and animals are not common to begin with. They may have small geographic ranges, for example, a plant species found only on 1 island in the Pacific Ocean. Or, they may occur in small, scattered populations. These rare species are very vulnerable to changes in the environment.

Who is responsible?

State

In Pennsylvania, the responsibility for protecting threatened and endangered species lies with three separate agencies. The *Bureau of Forestry* with the Department of Conservation and Natural Resources is responsible for protecting all plant species. The *Pennsylvania Game Commission* is responsible for birds and mammals. The *Pennsylvania Fish and Boat Commission* has jurisdiction over fish, reptiles and amphibians. Species to be listed are proposed to these agencies by a variety of sources including the Pennsylvania Biological Survey and the Pennsylvania Ornithological survey.

Federal

The Endangered Species Act (ESA) was passed by Congress in 1973. Under the terms of the act, the *U.S. Fish and Wildlife Service* within the Department of Interior is responsible for protecting most species. Marine species and anadromous fish (fish that spend part of their life in fresh water and part in salt water) fall under the jurisdiction of the Department of Commerce through the *National Marine Fisheries Service*. The ESA has been very successful because it mandates a very specific process through which species are protected.

International

The Convention on International Trade in Endangered Species of Wild Fauna and Flora

CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora) is an international agreement between Governments. Its aim is to ensure that international trade in specimens of wild animals and plants does not threaten their survival. This is a voluntary trade agreement. The United States is part of this agreement

The IUCN Red List of Threatened Species™

[IUCN - The World Conservation Union](#) or The International Union for the Conservation of Nature and Natural Resources. through its [Species Survival Commission \(SSC\)](#) assess the conservation status of species, subspecies, varieties and even selected subpopulations on a global scale in order to highlight taxa threatened with extinction, and therefore promote their conservation. Recommendations on conservation status and management are made to CITES and to countries throughout the world.

Please use this information in addition to information found on PGC website regarding threatened and endangered species.