

Activity 1: Short-Eared Owl, *Asio flammeus***Identifying Characteristics**

The short-eared owl received its name from its lack of "ear" tufts. It's about the size of a crow, 13 to 17 inches high, and has a 38 to 44-inch wingspan. Color is variable, from light to dark brown. The dark patches on undersides of wings, and large buff-color patches on upper sides are most distinctive. There are also dark patches around the eyes.

Biology/Natural History

Short-eared owls are birds of open country. They may be found in Pennsylvania throughout the year. They nest on the ground, sometimes in colonial groups. The nest is a slight depression, sparsely lined with grass and feathers, often at the base of a clump of weeds or grasses. A normal clutch consists of four to seven white eggs. Young hatch about three weeks after egg laying, and are able to fly in about a month. Unlike most other owls, the short-eared is active at dusk, dawn and—at times—even in mid-day; therefore, they are seen more often than other owl species.

Preferred Habitat

These owls have been nesting in the southeast corner of Pennsylvania, in the marshland and meadows around the Philadelphia International Airport. Recently, they have been found nesting on reclaimed strip mine sites in Clarion County. Short-eared owls are more likely to be encountered here in the winter when several may be seen together, hovering or flying low and in circles over agricultural fields in search of their main prey, meadow mice.

Threat

Suitable nesting habitat for the short-eared owl is extremely limited in Pennsylvania, and intensive agricultural practices make many potential habitats unsuitable.

**Management Programs**

In Pennsylvania, most open lands are farmlands and, therefore, subject to repeated disturbance. Accordingly, the welfare of grassland nesting birds is threatened. This may be why the only known nests of short-eared owls were discovered in extensive and low-disturbance open lands such as strip mine reclaimed to grass. Future management, based on the needs for safe nesting habitat for all grassland nesters, should include the creation of large, herbaceous reserves suitable for all grassland nesters. Such reserves might include airports, reclaimed strip mines and large pastures. Primary management of these areas must assure a disturbance-free nesting season.

State Status

Endangered

Activity 1: Showy Lady Slippers, *Cypripedium reginae***Range**

Showy lady's slippers have been found in swamps, bogs and wet woods extending from Newfoundland and Quebec to North Dakota and south through New Jersey, Pennsylvania, Ohio, Indiana, Illinois and Missouri to the Appalachian Mountains as far south as North Carolina and Georgia. Pennsylvania populations historically occurred in alkaline wetlands from northwest through central to southeast areas of the state, but can be found today only in the glaciated northwest.

Appearance

Showy Lady's slipper orchids are named for the inflated pouch formed by the lower petal. The single or paired, 1 to 2 inch white and rose-pink flowers are the largest of our native orchids. Plants stand one to two feet high with 8 inch oval leaves clasping the stems.

Biology/Natural History

This species is a member of the Orchid Family (Orchidaceae). Plants of this genus are perennial herbs. Flowers bloom in June and July.

Threats

Loss of habitat from recreational and housing development in addition to water pollution from mineral extraction have taken their toll. Although 29 populations have been documented by historical collections, only five are known to exist here today. Threats include collection by nurserymen and misguided gardeners.



The probability of showy lady's slippers surviving a transplant from their wetland habitat is poor. Even casual picking of the flowers destroys the plant's chances of reproducing.

Management

One showy lady's slipper population is protected in a natural area owned by the Western Pennsylvania Conservancy. A second is located on a state game lands. Owners of the three other sites must protect the sites.

State Status

Threatened

Activity 1: *New Jersey Chorus Frog, Pseudacris feriarum kalmi***Identifying Characteristics**

This subspecies of the western chorus frog is similar in size (3/4 - 1 1/2 inches long), but is somewhat more robust. The outermost pair of the three dark stripes on the back start at the snout and continue backward through the eye and down each side. These may be variously broken. A prominent light line is present beneath each eye along the upper lip.

Biology/Natural History

New Jersey chorus frogs move to small, sometimes temporary, bodies of water to breed, anytime from February to June. Males may arrive at the ponds before females and call loudly from sedgy or grassy clumps in the open. The eggs are deposited irregularly in loose gelatinous masses on the stems of matted vegetation not far below the surface of the water. The 1 to 1.5-inch tadpoles are blackish to olive above with a bronzy belly. They transform to the adult stage within two months. Adults leave the breeding pools following mating and egg laying, and are only occasionally encountered in wooded areas.

Preferred Habitat

In Pennsylvania the New Jersey chorus frog breeds in small, relatively open bodies of water with a mixture of shrubby and herbaceous aquatic vegetation, or sometimes in the shallow backwater areas of larger bodies of water with similar vegetation.

Threats

The populations of the New Jersey chorus frog in Pennsylvania are small and threatened because of heavy



industrial use of the areas they inhabit. Many of the small breeding ponds and forested areas they require have been filled in or cleared. During breeding season, many amphibians are crushed by vehicles while crossing busy roads to get to breeding ponds.

Management Practices

The Fish and Boat Commission reviews projects in which possible threats to habitat of this small frog is concerned. The populations are monitored each spring.

State Status

Endangered

Activity 1: Bog Turtle, *Clemmys muhlenbergii***Range**

The historic bog turtle range runs from southern New England to northern Georgia. A 250-mile gap in Virginia separates the species into distinct northern and southern populations.

In Pennsylvania, the turtle is found mostly in the rapidly developing southeastern portion of the state. Turtle populations once found in the western part of the state are gone.

Appearance

The bog turtle is one of the smallest North American turtles with the adult shell measuring 3 to 4.5 inches in length. It is easily distinguished from other turtles by the large, conspicuous bright orange, yellow or red blotch on each side of its head. The upper shell is dark brown with yellow to orange markings and covered with ridged plates that are eventually worn smooth; the lower shell is dark brown or black, sometimes with scattered light markings.

Biology/Natural History

Bog turtles are active from spring to fall, and hibernate during the winter. They are most difficult to find in midsummer, possibly inactive during the hottest part of the year. When danger threatens, the turtle burrows rapidly into the mucky bottom. They eat a diet of beetles, insect larvae, snails, seeds and millipedes. Female bog turtles mature at 5 to 8 years of age. They mate in May and June, and in June or July the females deposit two to six white eggs on sphagnum moss or sedge tussocks that are exposed to sunlight. The eggs hatch after an incubation period of 42 to 56 days, and the young emerge in August or early September. Infertile eggs are common, and not all females produce egg clutches each year.

Preferred Habitat

Bog turtles live in wetlands which are shallow, spring-fed fen; sphagnum bogs; and swamps, marshy meadows and pastures with soft, muddy bottoms, slow-flowing water and open canopies.. They depend on this hydro-



logic mosaic, using shallow water in the spring and mud during winter hibernation. These wetlands gradually undergo succession and become a closed-canopy, wooded swamps unsuitable for bog turtle habitation. Historically, bog turtles probably moved from one open-canopy wetland patch to another, as succession closed wetland canopies in some areas and natural processes, such as fire, opened canopies in other areas.

Threats

The primary reason for the bog turtle's status is the draining or destruction of its habitat. Bog turtles have always been considered the rarest of North American turtles and are highly valued by turtle fanciers in this country, and possibly twice as much overseas. Many, therefore, have been illegally removed for commercial purposes. Because their habitats are widely separated, other turtles are not likely to move in and replace those removed.

State Status

Endangered

Federal Status

Considered for listing as a threatened species.