

# Lancaster County 2020 Junior Envirothon

## Field and Meadow Study Materials

Birds	
Loggerhead Shrike	Barn Owl and call
Short-eared Owl and call	Eastern Bluebird and call
Northern Harrier	Eastern Meadowlark
American Kestrel	Eastern Kingbird
Ring-necked Pheasant	Bobolink
Northern Bobwhite and call	Grasshopper Sparrow

### Bird Call links

1. Short-eared Owl: [https://www.allaboutbirds.org/guide/Short-eared\\_Owl/sounds](https://www.allaboutbirds.org/guide/Short-eared_Owl/sounds) Listen to the third down "Song and wind clap"
2. Northern Bobwhite: [https://www.allaboutbirds.org/guide/Northern\\_Bobwhite/sounds](https://www.allaboutbirds.org/guide/Northern_Bobwhite/sounds) Listen to the first one "Song (Eastern)"
3. Barn Owl: [https://www.allaboutbirds.org/guide/Barn\\_Owl/sounds](https://www.allaboutbirds.org/guide/Barn_Owl/sounds) Listen to the first one "Calls (American) from Florida in 2004 and the third from New York in 1960"
4. Eastern Bluebird: [https://www.allaboutbirds.org/guide/Eastern\\_Bluebird/sounds](https://www.allaboutbirds.org/guide/Eastern_Bluebird/sounds) Listen to the "Sound (Eastern)"

**Loggerhead Shrike:** In Pennsylvania, the loggerhead shrike is classified as an *endangered* species. For uncertain reasons, ranging from pesticides to changes in land use, loggerhead shrike populations have experienced significant declines across their North American breeding range, particularly in the northeastern and north-central regions. Historically, loggerhead shrikes were common nesters in northwest Pennsylvania in the late 1800's. By 1940 loggerhead shrikes no longer nested regularly in Pennsylvania and were designated *extirpated* by the Biological Survey of 1985. Surprisingly, active nests were found in Adams County in 1992, therefore upgrading the species to *endangered* status. Males display their hunting skills by impaling prey on thorns or barbed wire. This behavior may also serve as a means of storing excess food.



**Short-eared Owl:** Also called the marsh owl, the short-eared owl visits Pennsylvania mainly in winter. It is a crow-sized owl with long wings (up to a 42" wingspan). This owl is the most *diurnal* of the owls observed in Pennsylvania. During the snow goose migration in early-March, short-eared owls can be observed hunting fields at Middle Creek Wildlife Management Area. By winter's end, most of the



species leave the state and head north. Mice form over 75% of this owl's diet, but it also preys on shrews, rats, and small birds. Listed as an *endangered* species by the Pennsylvania Game Commission, this owl is also considered a species of concern nationally. Short-eared owls have suffered, as have many other species associated with grasslands, from a decline in farmed land and changes in farming practices.

**Northern Harrier:** Harriers, also known as marsh hawks, have a white rump patch and a ruff of feathers around the face, much like the facial discs of owls. Males are bluish grey with dark bars. Females are brown above, light brown with dark streaks below; tail is barred black and grey. Northern harriers inhabit fresh or saltwater marshes, wet meadows, bogs, and flat, open farmland. They prey on mice, insects, small birds, and rabbits. The marsh hawk hunts by flying low and slow over grasslands, striking when prey is located. This *raptor* is listed as a species of special concern, because of its low population and vulnerability to mowing and loss of wetlands.



**American Kestrel:** Kestrels, also known as sparrow hawks, have rusty red caps, backs and tails, and a black and white face pattern. Males have blue-gray wings, females brown wings. The kestrel is the smallest falcon that nests in Pennsylvania. Its flight is uneven and it will often perch on telephone lines or hovers in one spot with rapidly beating wings. Voice is a shrill *killy, killy, killy*. In summer, kestrels take insects and occasionally birds; in winter, they prey mainly on mice. The American kestrel prefers open woods, orchards, and fields, and breed throughout the eastern United States. They nest in old tree cavities, abandoned woodpecker holes, old buildings, and in nest boxes.



**Ring-necked Pheasants:** An introduced (*non-native*) species, ring-necked pheasants is the hunter's bird-imported, stocked, and transferred to suitable habitats throughout the nation by wildlife agencies. Today, the ring neck benefits everyone, providing opportunity for hunters, birdwatchers and nature lovers of all types. An adult male weighs 2.5 to 3.5 pounds, an adult female, 2 pounds. Males are called roosters, cocks, or cockbirds; females are hens. The rooster is brightly colored featuring scarlet cheek patches, a white neck ring usually interrupted in the front, a bright greenish-gray or bluish rump and lower back. Wildlife managers have long believed that habitat loss and land-use changes have caused a significant decline in pheasant populations. In recent years, thousands of farmland has been lost to development. Changing farming practices also include an increased use of pesticides and herbicides, which kill the insects and weedy cover vital to pheasants.



**Northern Bobwhite:** The northern bobwhite quail is one of the most popular game birds in North America. Since the mid-1960's, the bobwhites range and population have declined dramatically. Northern bobwhites were relatively common across southern Pennsylvania farmland and brush lands until 1945. Populations declined rapidly between 1945-1955, but made a recovery in the early 1960's. Since 1966, the range and populations of bobwhites have declined to the point that most counties in the state no longer have bobwhites as a breeding species. In response to this continued decline, in 2011 the Pennsylvania Game Commission closed the hunting of quail in 6 Wildlife Management Units, all located in southeastern and south-central Pennsylvania.



Pennsylvania is on the northern fringe of the bobwhite's range. Two factors affect the state's quail population: habitat and climate. Without adequate habitat, the population will not succeed; and when winters are hard and long, bobwhite numbers plummet.

**Barn Owl:** The barn owl is a long-legged, light colored bird with a white, heart-shaped face. It is sometimes called the monkey-faced owl. A barn owl has neither of two characteristics often associated with owls: "horns" or hooting-type calls. Its calls include a long, drawn-out whistle, loud hisses, and snores. Barn owls nest in barns, hollow trees, old buildings, silos,



and church towers. Barn owls hunt open fields, flying low over the ground in search of prey. Biologists studied 200 disgorged pellets from a pair of barn owls that nested in a tower of the Smithsonian Institute in Washington D.C. The pellets contained 444 skulls, including those of 225 meadow mice, 179 house mice, 20 rats, and 20 shrews. The Pennsylvania Game Commission began the Barn Owl Conservation Initiative in 2005, to improve habitat conditions for this *nocturnal* predator. If one should discover barn owls nesting please contact the Regional Office of the Pennsylvania Game Commission.

**Eastern Bluebird:** This songbird species nests across much of the East and winters south to Nicaragua. The male features a vivid blue back and wings and a ruddy breast. They favor semi-open habitats: orchards, pastures, hayfields, fence rows, open woodlots, and suburban gardens and parks. Bluebirds eat crickets, grasshoppers, beetles, caterpillars, and many other insects,



and they take spiders, centipedes, earthworms, and snails. In fall and winter they turn to fruits like the berries of sumac. The population of bluebirds in Pennsylvania probably peaked around 1900, when farmland covered two-thirds of the state; the number of bluebirds declined for many years as unproductive farmland was abandoned and grew back to forest. *Non-native* species like the European starling and the English house sparrows have also had a negative impact on bluebird populations. Fortunately, bluebird numbers have risen over the last several decades, thanks to thousands of bluebird boxes put up and maintained by people.

**Eastern Meadowlark:** Both males and females have a brown-streaked back and a bright yellow breast with a prominent black V; the outer tail-feathers are white. Meadowlarks are actually a member of the blackbird family. They live in pastures, hayfields, and strip mines that have been replanted in grass. Each spring, the eastern meadowlark can be observed in the fields at Middle Creek Wildlife Management Area. In summer they eat grasshoppers, crickets, beetles, ants, caterpillars, and many other insects; they also feed on seeds and waste grains. Males arrive 2 to 4 weeks before the females and stake out territories, which average 7 acres. The males perch on telephone poles, trees, and fence-posts, singing their sweet, slurred, whistling song. 60 to 80% of the males have two or three mates. The population has declined in the Northeast over the past 40 years as development has wiped out agricultural land and formerly farmed areas have grown up into brush and woods.



**Eastern Kingbird:** This bold, aggressive flycatcher breeds in open country across North America. Look for kingbirds in scattered trees along roads and streams, orchards, fencerows, and forest clearings. The bird gets its name because it dominates other birds, including many larger than themselves, driving them away from its territory. Kingbirds are one of the easiest flycatchers to identify; they are 8" long and are dark gray and white, with a white-tipped tail and a small red streak on the head. Kingbirds feed on beetles, wasps, bees, winged ants, grasshoppers, honeybees, and many other insects. Kingbirds often attack crows, hawks, and owls, flying high in the air, getting above the larger birds, and diving at them repeatedly. After driving off another bird, a kingbird may perform a display known as "tumble flight", in which it glides back to earth in stages, sometimes tumbling in mid-air.



**Bobolink:** During the mating season, male and female bobolinks rarely interact with one another. For the most part, males perform aerial displays and sing their bubbly, tinkling songs from exposed grassy perches while the females carry out the nesting duties. Once the young have hatched, males become scarce. In early May, bobolinks are readily seen in the fields found at Middle Creek Wildlife Management Area. Bobolinks once benefited from increased agriculture in Pennsylvania, but modern practices, such as harvesting hay early in the season, continue to impact this songbird's population. At first glance, the female resembles a sparrow, but the male, with his dark belly and his gold and black upperparts, is colored like no other songbird. Feeds on a variety of insects and also eats many seeds.



**Grasshopper Sparrow:** The grasshopper sparrow is named not for its diet, but rather for its buzzy, insect-like song. This sparrow is an open country bird that prefers grassy areas free of trees and shrubs. Grasshopper sparrows breed in widely scattered populations along the southern border of Canada and south across most of the United States. They breed widely in Pennsylvania but are more common in the southern half.



These sparrows have benefitted from the reclamation of strip mines to grasslands. Due to habitat loss, nesting has not been documented recently where it had occurred in the Philadelphia area, such as Tinicum Marsh at the John Heinz National Wildlife Refuge.