







Mallard Ducks

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The French Creek watershed is renowned for the diversity and abundance of its aquatic resources, including 89 species of fish and a remarkable 26 species of mussels. This great diversity reflects a healthy ecosystem with clean water, good soil, and a varied landscape composed of forests, perennial grasslands, wetlands, and agricultural lands. These same qualities that make the watershed outstanding for fish and mussels also provide great habitat for birds. Currently, 265 bird species occur regularly in the French Creek watershed, as year-round residents, summer breeders, or spring and fall passage migrants.

Birds are found throughout the French Creek Watershed, but four areas stand out enough that they were named as Important Bird Areas (IBAs). These areas are: the Erie National Wildlife Refuge, the Hemlock Hill Research Area, the Cussewago Bottoms and the Conneaut-Geneva Marsh. The IBA program is coordinated by the National Audubon Society. Pennsylvania has 86 Important Bird Areas encompassing 1,456,467 acres.

The IBA program was started by Birdlife International in Europe in the 1980s. Birdlife International is a global coalition of partner organizations in over 100 countries. The National Audubon Society is the U.S. Partner Designate of Birdlife International and administers the IBA program in the United States. An IBA is a site that is part of a global network of places recognized for their outstanding value to bird conservation. An IBA can be large or small, public or private, and must meet one of several objective criteria. Since the IBA program is voluntary, there are no legal or regulatory restrictions.



To qualify as an IBA in Pennsylvania, a site must satisfy at least one of several criteria, as follows:

Blue Heron by Brian Bechtolo

- Any site having exceptional concentration or diversity of birdlife
- Sites with a significant population of state or federally endangered or threatened species
- Sites supporting a significant population of one or more species on Pennsylvania's "special concern" list
- Sites containing representative, rare, threatened, or unique habitats, with birds characteristic of those habitats
- Sites where long-term avian research or monitoring is ongoing

The IBA program is a vital conservation initiative designed to help combat threats to bird habitats. By focusing attention on the most essential and vulnerable areas, the Important Bird Area program helps promote proactive habitat conservation, which benefits birds and biodiversity.



Important Bird Areas

ERIE NATIONAL WILDLIFE REFUGE

The Erie National Wildlife Refuge (ENWR) was established in 1959 amid a mixture of forests, farms and rural residential land in central Crawford County. ENWR contains over 2,500 acres of wetlands, including beaver floodings, marshes, swamps, creeks, wet meadows, and man-made impoundments. It is owned and operated by the U.S. Fish and Wildlife Service. The Refuge consists of two separate divisions; the Sugar Lake Division and the Seneca Division.

The **Sugar Lake Division**, located near Guys Mills is the larger (5,206 acres) and more heavily managed and frequently visited division. It lies in a narrow valley that includes the hydrologic divide between Lake Creek, which becomes Sugar Creek, and Woodcock Creek. Both are major tributaries of French Creek.

The 3,753 acre **Seneca Division** is located several miles east of Cambridge Springs, and ten miles north of the Sugar Lake Division. It is situated in a forested valley with wetlands associated with low-gradient, meandering Muddy Creek and Dead Creek. Their confluence is at the western-most edge of the Seneca Division.

Together, the two ENWR Divisions have a wide range of forest, grassland, and wetland habitats including a five-acre shrub fen. These habitats are home to a number of plant and animal species that are threatened, endangered, or otherwise of special concern. A total of 226 bird species have been recorded at ENWR with 112 species believed to nest there.

Erie National Wildlife Refuge qualified as an Important Bird Area on several counts: It is an important migratory stopover for waterfowl. Up to 2,500 ducks and 4,500 migratory Canada geese use the Ref-



uge during spring and fall migration, as do small numbers of tundra swans. In addition to migrants, the Refuge hosts significant numbers of breeding ducks, particularly wood ducks and **hooded mergansers**. These ducks nest in tree holes, and the Refuge has some nest boxes that supplement natural cavities. Sandhill Cranes also nest on the property.

ENWR is also an important migratory stopover for shorebirds, and



up to 200 individuals can be found during migration periods. The **American wood-cock**, an upland shorebird popular with hunters and birdwatchers alike, breeds on the Refuge. Portions of the Refuge are maintained

in reverting field and brushy habitats favored by woodcock.

At least three pairs of bald eagles nest on the Refuge, as



do several other Pennsylvania Breeding Birds of Special Concern (sedge wren, northern harrier, pied-billed grebe, common snipe and marsh wren). Numerous others occur at times, some with frequency (American bittern, great egret, peregrine falcon, black tern, common tern, **short-eared owl**, osprey, upland sandpiper, yellow-bellied flycatcher, black-crowned night heron, **green-winged teal**, northern goshawk, American coot, Swainson's thrush, prothonotary warbler, long-eared owl and saw-whet owl).



ENWR welcomes visitors. A small visitor center houses displays and other educational and interpretive materials. A well-maintained system of trails, overlooks and observation blinds invites bird watching. Blue bird boxes and purple

martin houses are also on the property. A Refuge map and checklist of birds are available. Hunting is permitted at ENWR in accordance with federal and state regulations.

John James Audubon, namesake for the National Audubon Society, a well known naturalist and bird artist, might himself have approved the designation of four Important Bird Areas in the French Creek Watershed. Audubon's journeys brought him to the Watershed in 1820.



"The country through which they passed was covered with glorious trees, principally evergreens—the pine and cucumber trees being loaded with brilliant fruits, and the spruces throwing a cool shade over the land which harmonized admirably with the other details of the picture. At length they came in sight of a stream called French Creek, and soon afterwards, they reached Meadville."

Anonymous. 1886. The Story of Audubon the Naturalist. T. Nelson and Sons, New York. p 120.

Important Bird Areas

Hemlock Hill Research Area is located adjacent to Erie National Wildlife Refuge in central Crawford County. Hemlock Hill itself is a vibrant and verdant 440 acre forested slope comprised of hemlocks and mixed hardwoods such as beech, maple, ash, oak, and black cherry. Unlike many of Pennsylvania's forests that have been ravaged by over-abundant white-tailed deer, the forest at Hemlock Hill has a healthy understory comprised of regenerating hardwoods, viburnums, spicebush, black berry, black cohosh, and other low growing species of plants. This multi-layered structure of the forest makes ideal habitat for a variety of forest dwelling birds, and several species nest in large numbers. This property is also under an FCVC conservation easement to be permanently protected.



American Redstart by Shawn Collins



Based on intensive observations of marked birds, it is estimated that Hemlock Hill supports 120 pairs of **red-eyed vireos**, 100 pairs of **American Redstarts**, 75 pairs of hooded warblers, 30 pairs each of magnolia warblers, blackburnian warblers, and **wood thrush**, 20 pairs each of Acadian flycatchers, black-throated green warblers, and blue-headed vireos, and lesser numbers of many other species. By anyone's standards, these are remarkable numbers, and a testament to the quality of this well-managed forest.

To minimize disturbance of the birds and the scientists studying them, Hemlock Hill is closed to the public during the spring and summer. Bird watching, hunting, and other forms of non-motorized recreation are permitted during the fall and winter. Directions: Rt. 408E from Cambridge Springs, cross Erie National Wildlife Refuge on Swamp Road, then south one mile on Teepleville Flats Road.

eagles nest there, and additional individuals frequent the area. The forested wetlands and shrub-scrub swamps adjacent to the open, emergent marsh host good numbers of many species of flycatchers, warblers, vireos and thrushes.

The Conneaut - Geneva Marsh is a large (5,559 acre) wetland complex running approximately 13 miles from the outlet of Conneaut Lake almost to French Creek. About one third of the Marsh is covered by emergent marsh vegetation such as cat-tail and spadder-dock. This is the largest emergent marsh in Pennsylvania. Forested wetland and shrub-scrub swamp comprise most of the remainder of the Marsh. A number of rare plant species can be found in the Marsh. The view from the Interstate 79 bridge near Exit 141 gives one an appreciation for the botanical composition and extent of Conneaut-Geneva Marsh.



Conneaut-Geneva Marsh is especially important to wetland birds. Up to 10,000 waterfowl use the Marsh during spring and fall migration. **Ring-necked duck**, black duck, mallard, American wigeon, and hooded merganser are common during migration. **Wood ducks** nest in large numbers. Several species of wetland birds uncommon in Pennsylvania also nest at Conneaut-Geneva Marsh, including American bittern, least bittern, black tern, **prothonotary warbler**, and marsh wren. Two pairs of bald Conneaut - Geneva Marsh, (also known as State Game Lands 213), is owned almost entirely by the Pennsylvania Game Commission. The wetland is open to the public except for seasonally



closed areas around bald eagle nests and a propagation area shown on maps. Starting with US Route 322 at Conneaut Lake, various roads (Brown Hill Road, Watson Run Road, US Route 19, Towpath Road and Mercer Pike) cross the Marsh and afford good access. However, foot travel from these points can be very difficult because of water and dense vegetation. Serious birdwatchers and hunters often access interior portions of the Marsh by canoe or kayak. Boat launches are available at three locations. The Marsh is one of the more popular birding destinations in western Pennsylvania.

To get to Conneaut-Geneva Marsh, take I-79 to exit 141. For more information on the Marsh (State Game Lands 213), call the Pennsylvania Game Commission at 814-432-3188.



Important Bird Areas

Cussewago Creek, its floodplain, and adjacent uplands comprise the 4,200 acre Cussewago Bottoms Important Bird Area. A low-gradient stream, Cussewago snakes its way south-southeast through a long (16 miles) and narrow (one mile) glacial outwash



valley, joining French Creek at Meadville. Through the natural processes of stream meander, many cutouts, oxbows and backwaters have been created in the Bottoms. Side streams dammed by beavers and frequent flooding maintain the Bottoms' abundant wetlands. Emergent herbaceous wetlands occur in the Bottoms, but most of the area is woody wetlands.



Cussewago Bottoms was selected as an Important Bird Area for a number of reasons. It has an exceptional diversity of species. Characteristic bottomland and wet forest species such as yellow -throated vireo, warbling vir-

eo, northern water-thrush, veery, and cerulean warbler, (a species in decline over much of its range,) are found in the Bottoms. Ovenbirds, scarlet tanagers, rose-breasted grosbeaks and other mature forest-dwelling neotropical migrants nest there. Common yellow-throat, yellow warbler, chestnut-sided warbler, blue-winged warbler, and indigo bunting are common to abundant in the brushy fields and early-successional forests along the Bottoms. Common snipe, lesser yellowlegs, greater yellowlegs, dunlin and other shorebirds, some bound for distant Arctic nesting grounds, can be found in the flooded pastures and fields during spring migration. Waterfowl occur during all but the coldest part of winter, and they are abundant during the



spring when Canada geese, tundra swans, and 12 or more species of duck can be found. Bald eagles frequent the Cussewago Bottoms, and at least one pair regularly nest there. Sandhill cranes have also been observed in the Bottoms.

Although best known for birdlife,

Cussewago Creek and the Bottoms have diverse and abundant populations of mammals, amphibians, fish, and mussels. Some fish found in Cussewago Creek, for example the central mudminnow, redfin shiner, and brook silversides, are species of special concern. One species, the pug-nosed minnow, is found nowhere else in PA.

Most of the Cussewago Bottoms is privately owned, and access varies. Fortunately, though, for the bird watcher or hunter, nearly 700 acres of PA Game Commission's State Game Lands 269 are open to the public, with more than a mile of the Creek accessible.

The small lake off Lake Road on Game Lands 269 is the single best place in the Cussewago Bottoms to see water birds. It is just large enough to attract the occasional common loon, Caspian tern, horned grebe, or long-tailed duck during spring migration. A bald eagles' nest at the north end of the lake is easily observed from the parking area on the west side of the lake.

To get to State Game Lands 269, take State Highway 98 north or south along the west side of the Valley to West Road. Go east 0.5 miles on West Road, crossing over Cussewago Creek to Lake Road, then 1.0 miles north on Lake Road to SGL 269. From Highway 98, Rogers Ferry Road, State Highway 198,

Creek Road, and Center Road, also cross Cussewago Creek, but with the exception of Center Road, do not offer public access. The Pennsylvania Fish and Boat Commission maintains a public access site on the lower Cussewago at Meadville. Birding by canoe or kayak on Cussewago Creek can be rewarding, but often hazardous because of fallen trees in the wa-



COMMON BIRD SPECIES of FC

Alder Flycatcher **American Kestrels** American Redstart **American Robin** American Widgeon American Woodcock **Bald Eagle Baltimore Oriole Barn Swallow Black Capped Chickadee**

Black Duck Blackburnian Warbler

Blue Jay

Blue-headed Vireo Blue-winged Teal **Bobolink**

Canada Goose Cardinal

Cerulean Warbler **Chimney Swift Common Grackle**

Common Moorhen Common Snipe

Common Yellowthroat Dark-eyed Junco **Downy Woodpecker**

Dunlin

FRENCH CREEK VALLEY

Eastern Kingbird Eastern Meadowlark **European Starling**

Field Sparrow Grasshopper Sparrow Great Blue Heron

Greater Yellowlegs Henslow's Sparrow Hooded Merganser **Hooded Warbler** House Finch House Wren Indigo Bunting Killdeer Lesser Yellowlegs

Magnolia Warbler Mallard

Northern Water-Thrush

Osprev Ovenbird

Pileated Woodpecker Red-eyed Vireo Red-tailed Hawk Red-winged Blackbird Ring-necked Duck Rose-Breasted Grosbeak Rufous-sided Towhee Savannah Sparrow Scarlet Tanager

Sora

Tufted Titmouse Tundra Swan Veery Vesper Sparrow Virginia Rail Warbling Vireo Whip-poor-will

White-breasted Nuthatch

Wild Turkey Willow Flycatcher **Wood Duck Wood Thrush Yellow Warbler** Yellow-Throated Vireo

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