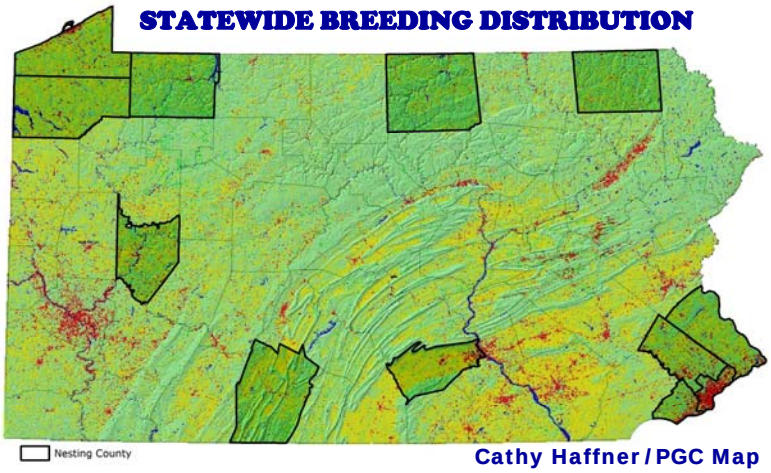
CURRENT STATUS: In Pennsylvania, the least bittern is listed as state endangered and protected under the Game and Wildlife Code. Although not list as endangered or threatened at the federal level, the least bittern is a species of high concern in the North American Waterbird Conservation Plan and is a U. S. Fish and Wildlife Service migratory bird of conservation concern in the Northeast. All migratory birds are protected under the Migratory Bird Treaty Act of 1918.

POPULATION TREND: Least bitterns (*Ixobrychus exilis*) are locally uncommon breeders in the John Heinz National Wildlife Refuge (Tinicum Area) of Philadelphia and Delaware counties, at Presque Isle State Park in Erie County, and in larger emergent wetlands in the state's northwestern counties. They are rare in suitable habitat elsewhere in the state. Only four confirmed breeding sites statewide were identified during the 2nd Pennsylvania Breeding Bird Atlas (2004-2008). Least bitterns are declining in areas where their largest historical populations have been found. At Tinicum, only a few pairs have been nesting in recent years. In the late 1950s, however, as many as 27 nests were recorded there. Least bitterns were first designated as a threatened species in 1979. In 1997, the species was downgraded to endangered.

IDENTIFYING CHARACTERISTICS: The smallest member of the heron family, the least bittern is 11 to 14 inches in length and has a 16- to 18-inch wingspan. This primarily black and tan bird has a blackish-green cap and back, brown neck and underparts, and a white throat. The least bittern is most readily identified in flight by conspicuous, chestnut-colored wing patches. A rare, darker phase also exists. Males have a darker back than females. When disturbed, the least bittern is more likely to run than fly, and like its relative, the American bittern, it also has the habit of freezing with its bill pointed straight up when alarmed. To further camouflage itself, the bird will sway back and forth, seeming to act like a reed swaying in the wind. Despite their cryptic plumage and stealthy ways, least bitterns can be easily detected in spring migration and the nesting season by hearing their persistent vocalizations. The male's advertising song is a dove- or cuckoo-like repetitive, wooden cooing. Least bitterns also call with a ticking sound, perhaps a contact communication between members of a nesting pair. Occasionally they can be seen flying weakly over the wetland, showing off their brightly-colored buffy neck and wing patches.

BIOLOGY-NATURAL HISTORY: The least bittern nests in wetland areas throughout the eastern United States and along the Pacific coast. It spends the winter from our southern states

south to Colombia, South America. This species is a regular migrant through the state, but it nests regularly in our northwest and southeast corners only and possibly in a few other scattered locations, but not regularly or in significant numbers. The least bittern arrives in Pennsylvania in April and builds its platform nest of reeds and grasses near open water. Four or five pale blue or green eggs are laid in the six-inch nest in mid or late May. Both adults incubate eggs and care for young. The young hatch over a period of about three weeks (17-20 days). The chicks grow quickly and leave the nest to forage on their own at about two weeks of age. They will not fly, however, until they are four weeks old.



Cathy Haffner/PGC Map

PREFERRED HABITAT: Least bitterns thrive in dense marshland ecosystems containing cattails and reeds, along the coast and inland, where they feed primarily on small fish, amphibians, insects and small mammals. They visit and nest in brushy wetlands more frequently than their larger cousin, the American bittern. They will use their feet to cling to woody vegetation, rushes, or cattails, making them difficult to see.

REASONS FOR BEING ENDANGERED: Nesting opportunities for this species in Pennsylvania are limited and decreasing as the wetland habitat it needs has been extensively drained or impounded. Loss of tidal marshes along the Delaware River has been key to the bird's decline in Pennsylvania. Its future is largely dependent upon safeguarding the state's remaining large marshes. Least bitterns need stable wetlands where water levels do not vary considerably or become dry. They tend to be found in larger wetlands, so wetland size may be a limiting factor.

MANAGEMENT PROGRAMS: Areas where this species is known to nest should be uncompromisingly protected. Surveys to further determine where least bitterns nest are ongoing. Marshland habitats, when possible, should be managed to provide additional nesting habitat. For least bitterns and other species preferring dense vegetation and low to moderate water depth (2-4 inches), water should be drawn slowly in late spring to allow for seed germination and to create a mixture of mud flat, shallow emergent vegetation, and decaying plant matter (which is rich in aquatic invertebrates) in deeper areas. Re-flooding after germination would promote least bittern habitat. Maintaining high, stable water levels during the nesting season will enhance the species' breeding success. Also, removing invasive plant species (purple loosestrife, for example) and protecting wetlands from sediment and chemical pollution will benefit least bitterns and other wildlife. In general, larger wetlands and wetland complexes are more likely to sustain populations of this and other wetland-obligate species. Bigger is better, even for our smallest heron.

Bob Moul Photo

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8/19/14