Loggerhead Shrike

Lanius ludovicianus

Bob Moul Photo

CURRENT STATUS: In Pennsylvania, the loggerhead shrike is endangered and protected under the Game and Wildlife Code. It also 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: For uncertain reasons, ranging from pesticides to changes in land use, loggerhead shrike (*Lanius ludovicianus)* populations have experienced significant declines across their North American breeding range, particularly in northeastern and north-central regions. Pennsylvania is no exception. The species historically nested in the glaciated northwestern counties (Erie, Crawford, Mercer) where it was considered common in the late 1800s. Clearing forests for agriculture in the early to mid 1800s had created habitat for this denizen of open grassland habitat. By 1940, however, loggerhead shrikes no longer nested regularly in Pennsylvania and were ultimately designated extirpated as a nesting species by the Pennsylvania Biological Survey in 1985. Surprisingly, active nests were found in Adams County in 1992, therefore upgrading the species to endangered status. The loggerhead shrike was found nesting Adams County from 1992 to 1999, and in Franklin County in 1993, 1994 and 1996. After that no breeding activity was documented until 2004, when one nest was found in Franklin County near the Maryland border, and none has been documented since. The loggerhead shrike appears to be extirpated as a Pennsylvania nesting species again. They are also are seen rarely during migration in Pennsylvania. Northern shrikes are more likely seen in winter than loggerhead shrikes, but either species could be seen in wintery weather.

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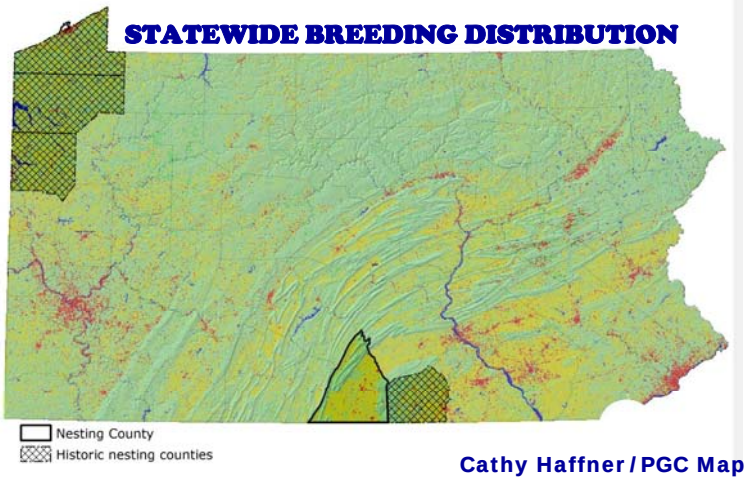
IDENTIFYING CHARACTERISTICS: Shrikes are robin-sized, gray-and-black birds with a white patch on each wing. The loggerhead shrike is similar in size and appearance to a northern mockingbird, however it has a heavier, hooked bill and a black mask that extends across each eye. The mockingbird's white wing patches are more extensive and do not contrast as much with the rest of the wing. Several characteristics distinguish the loggerhead from the northern shrike, a winter visitor to Pennsylvania. The loggerhead shrike has a darker gray back and has a more extensive black mask that covers or includes its small bill and above the eye. It is smaller than the northern shrike, but has a large head in proportion to its body (which is the feature that gives this bird its name). Both shrikes also have a distinctive flight. They tend to perch high on a lookout post (a tree or shrub, a wire, a pole) and then swoop low and fly up to

their next perch. This behavior allows identification even at a distance. Unusual for a raptorial bird, loggerhead shrikes sing on territory. Its song is a series of harsh two-note phrases that are repeated somewhat rhythmically. They also have other calls including a loud "shak" and other grating, harsh notes that can be heard at a distance.



Cathy Haffner/PGC Map

BIOLOGY-NATURAL HISTORY: Shrikes are passerines or "perching birds," a group that includes more familiar backyard birds; however the shrike is a formidable predator of small birds, mammals and insects. Its strong, hooked bill compensates for its relatively weak feet. A notch near the tip of their beak allows them to efficiently catch and snap the necks of their prey. Shrikes frequently impale their prey on thorns or barbed wire to facilitate dining and may stash their prey to retrieve it later. Because of this behavior, they have been referred to as the "butcher bird." Shrikes make up for their lack of strong talons by often taking their prey by surprise from behind.

Breeding birds arrive between the third week of March and the end of April. Egg-laying begins in April and extends through May. Nests are placed in dense thorn bushes, most often cedars or low hawthorns. A clutch of four to six white eggs, spotted with brown flecks, are incubated solely by the female and hatch in 16 days. Chicks fledge in as many days, with parental care diminishing after young leave the nest. Fall migration occurs from September to October; however breeding individuals residing in southern Pennsylvania counties may overwinter where they nested. Those leaving will spend their winter in the southern states and into Central America. Not particularly shy of people, shrikes are susceptible to being hit by cars as they flash across rural roads pursuing prey and flying to their next perch.

PREFERRED HABITAT: Loggerhead shrikes prefer short grass pastures with scattered shrubs and fencerows or small utility lines. They have been observed using agricultural landscapes, shelterbelts, cemeteries, golf courses and reclaimed strip mines in other parts of their range. Essential elements in suitable habitat include short grasses and forbs interspersed with perching locations for hunting and shrubs/small trees for nesting. Preferred nest trees include thorny species (hawthorn and locust, for example), presumably to deter predators from getting to the eggs. In winter, northern shrikes are more likely to be seen in Pennsylvania, though loggerhead shrikes could potentially be seen in habitat similar to that used during the breeding season any county.

REASONS FOR BEING ENDANGERED: The reasons for the decline in loggerhead populations, particularly in the northeastern United States, are not well-understood because suitable habitat remains in this region. Many factors likely contribute to declines including: pesticide use on breeding and wintering grounds that decreases prey abundance and can affect behavior and/or survivorship of adults and young; conversion of pastures to row crops or residential development; and direct mortality from car strikes or indirect mortality from human disturbance at nest sites. Most studies point to collisions with vehicles on country roads as a major factor affecting shrike populations.

Bob Moul Photo

MANAGEMENT PROGRAMS: When loggerhead shrikes were found breeding once again in Pennsylvania after a 50 year absence, the Pennsylvania Game Commission contracted with researchers from Lock Haven and Pennsylvania State universities to conduct intensive searches, nest monitoring, and habitat characterizations of several areas in Adams and/or Franklin counties from 1992 to 2002. In addition, habitat for this species was enhanced at four top-priority sites through

the planting of several eastern red cedars (*Juniperus virginiana*) and Washington hawthorns (*Crataegus phaenopyrum*) during this project. Research ceased for the last three years of the project when no birds were found between the two counties (2000-2002). Intensified annual surveys are needed to document reoccurrence of breeding loggerhead shrikes in the state. Similar research will be implemented at that time. Landowners are encouraged to manage their pastures, fencerows, and shelterbelts to favor loggerhead shrikes. The Game Commission's Private Landowner Assistance Program (PLAP) is a valuable resource to learn more about managing for this and other wildlife species.

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8/19/14