

Northern Yellow Bat

Lasiurus intermedius

Contributors: Mary Bunch, Wendy Hood, Susan Loeb, Mary K. Clark and David Webster

DESCRIPTION

Taxonomy and Basic Description

Northern yellow bats (*Lasiurus intermedius*) are foliage roosting bats, along with three other bat species in South Carolina: red (*Lasiurus borealis*), Seminole (*Lasiurus seminolus*) and hoary bats (*Lasiurus cinereus*) (Webster et al. 1985). Foliage roosting bats hang under leaves and branches, or, in the case of northern yellow bats, often under Spanish moss (*Tillandsia usneoides*) (Barbour and Davis 1969). The yellow bat differs from the red, Seminole and hoary bats in that the tail membrane is not well furred entirely to the bottom and the ears are somewhat pointed, not rounded. These bats typically have two to four young in a single birth per year (Webster et al. 1980).



Northern yellow bats were once known as *Dasypterus floridanus*, but are currently accepted as *Lasiurus intermedius*, as described by H. Allen in 1862. The subspecies recognized in South Carolina is *Lasiurus intermedius floridanus* (Barbour and Davis 1969; Webster et al. 1980).

The second largest bat in South Carolina, the northern yellow bat weighs between 14 and 20 g (0.49 to 0.7 ounces) and has a total length of 127.6 mm (5 inches). The fur is a silky yellow-orange with a faint wash of brown or gray on the tips (Webster et al. 1985).

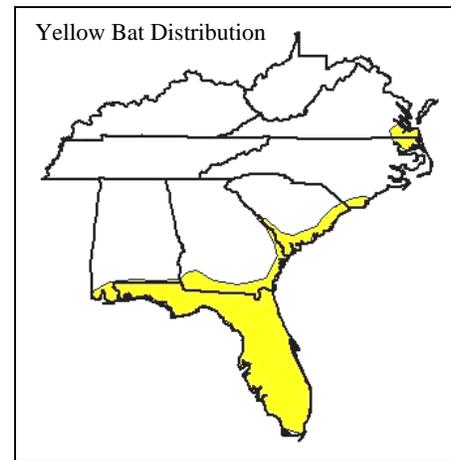
Status

The status of the northern yellow bat in North and South Carolina is unknown (S?). Georgia and Mississippi regard the species as imperiled. Alabama ranks the northern yellow bat as critically imperiled. The species has a global status of apparently secure (G4/G5) (NatureServe 2004). Because little information is available concerning the status of this species, South Carolina biologists rank this species of greatest conservation priority for terrestrial mammals.

POPULATION SIZE AND DISTRIBUTION

The distribution of northern yellow bats is poorly known. They have been found in coastal New Jersey and Virginia, but the accepted range is typically farther south (Barbour and Davis 1969). They occur in the outer coastal plain of South Carolina and into the inner coastal plain along the Savannah River (Coleman 1948, Golley 1966; Menzel et al. 2003a). Northern yellow bats are also found southward in the coastal plain of Georgia and Alabama and into Florida (Barbour and Davis 1969; Webster et al. 1980; Menzel et al. 2003b).

Northern yellow bat density estimates are not available. In some locations in Florida, the northern yellow bat is the predominate bat species and feeding aggregations of more than 100 individuals, mostly females, have been reported in mid- to late summer. Males may congregate in the winter in Florida (Barbour and Davis 1969). The aggregation behavior of northern yellow bats in the Carolinas is unknown. The home range of a single bat in Georgia was reported as 10.5 ha (25.9 acres) in oak-dominated oak and pine habitat (Krishon et al. 1997). The species is not known to be migratory.



HABITAT AND NATURAL COMMUNITY REQUIREMENTS

The northern yellow bat occurs in the inner and outer coastal plain and coastal zone of South Carolina. Most information about this species has been discovered in Florida (Barbour and Davis 1969). These bats forage over open areas, such as fields, pastures, golf courses, marshes and along lake and forest edges. In the sandhills of Florida, roosting habitat includes oak forests and long-leaf pine (*Pinus palustris*) stands. Additionally, live oak (*Quercus virginiana*) hammocks also provide roosting habitat for northern yellow bats. Roosting sites are usually in clumps of Spanish moss or under old palm fronds (Mirowsky 1997).

CHALLENGES

Northern yellow bats are one of the least known mammalian species in South Carolina. Without knowledge of the demographics or life history requirements for this species in this state's habitats, biologists can only base threats on those known in other parts of its range or threats to bats in general (Tuttle 2004a).

Loss of habitat represents the greatest challenge to this species. Lack of essential data on this species in the Carolinas and Georgia results in little information available to the public, land managers and decision-making processes, which influence the habitat of Northern yellow bats. Habitat loss is partially due to development as habitat is converted to urban uses. Additionally, roost sites are lost when old palm fronds are removed for cosmetic reasons and through Spanish moss harvests (Barbour and Davis 1969). Collisions with towers (Crawford 1981) and potential collisions with wind turbines (Erickson et al. 2002; Tuttle 2004b) also represent potential threats.

CONSERVATION ACCOMPLISHMENTS

No significant conservation accomplishments are known at this time.

CONSERVATION RECOMMENDATIONS

- Retain Spanish moss and old palm fronds on public lands to preserve roosting habitat for northern yellow bats.

- Encourage retention of Spanish moss and old palm fronds on private lands to preserve roosting habitat for northern yellow bats.
- Conduct surveys to determine northern yellow bat distribution, roost sites and habitat requirements. Monitor populations, once identified.
- Conduct molecular research to determine the validity of northern yellow bat subspecies designation and the variation within the species across its known distribution.
- Determine if the northern yellow bat is threatened by pesticide and/or heavy metal contamination.
- Educate homeowners and landowners about the importance of northern yellow bats and other bats.
- Create demonstration areas on publicly owned site(s), leaving old fronds uncut on palms in a highly visible area with prominent signage explaining that old fronds provide important roosting habitat for northern yellow bats.

MEASURES OF SUCCESS

As research and management needs are identified, projects should be proposed and prioritized by those with the greatest conservation applicability. Surveys and density estimates in the southern region should provide some population estimations that will be used to more accurately rank the species and prioritize future management needs. It is important to determine important roost site locations to provide long-term habitat for the species.

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