Alabama Wildlife
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Imperiled Amphibians, Reptiles, Birds, and Mammals

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GRAY MYOTIS

Myotis grisescens Howell

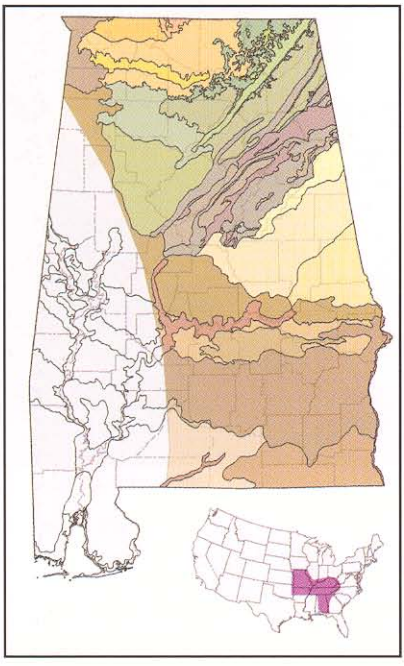
Photo—J. Scott Altenbach

OTHER NAMES. Gray Bat (Tuttle 1976, 1979; Harvey *et al.* 1999).

DESCRIPTION. One of the largest (total length, 90-110 mm [3.5-4.5 in.]; weight, 8-14 g [0.25-0.50 oz.]) species of *Myotis* (Choate *et al.* 1994; Decher and Choate 1995). Can be distinguished from the southeastern myotis, little brown myotis, northern long-eared myotis, and Indiana myotis by uniformly colored fur, which is gray or brown from base to tip, by wing membrane, which attaches at the ankle instead of the base of the toe, and by presence of a notch on the toenails (Barbour and Davis 1969, Decher and Choate 1995).

DISTRIBUTION. From Illinois to northern Florida and from eastern Oklahoma to western Virginia and North Carolina. There are two population centers: one in northeastern Oklahoma, southern Missouri, and northern Arkansas, and the other in Tennessee and adjacent Kentucky and Alabama. Common near the Tennessee River in northern Alabama and there are small populations in the central and southern parts of the state (Decher and Choate 1995).

HABITAT. With few exceptions, a cave-roosting species. Colonies also have been reported in a barn, in a dam, and in storm drains. Closely associated with water, where it drinks and forages for night-flying insects. In winter, hibernates primarily in deep vertical caves with large rooms acting as cold-air traps (5-11°C [41-52°F]). In summer, colonies of a few hundred to many thousands of individuals are formed, often in large caves containing streams. Maternity colonies occur in caves that, because of their configuration, trap warm air (14-26°C [57-79°F]) or provide restricted rooms or domed ceilings capable of trapping combined body heat from clustered individuals. Because of their specific habitat requirements, less than 0.1 percent of available caves are suitable for the gray myotis (Barbour and Davis 1969; Tuttle 1976, 1979; Decher and Choate 1994; Choate *et al.* 1995; Best and Hudson 1996).



LIFE HISTORY AND ECOLOGY. A migratory species known to move up to 775 kilometers (465 miles) from sites of hibernation to summer roosts. May travel more than 50 kilometers (30 miles) per night to and from summer foraging sites. In summer, reproductive females form maternity colonies, and males and nonreproductive females form bachelor colonies. Depending upon when females arrive at maternity roosts, young are born between early May and late June. When born, single hairless young have eyes closed and a full complement of deciduous teeth; birth weight about 3 grams (0.11 ounces). Young begin to fly

three to four weeks after birth, but rate of growth depends upon roost temperature; rate of growth is greatest in larger maternity colonies. Life span may exceed 14-15 years. Forages over open-water habitats. When roosts away from large bodies of open water, either goes cross-country, or to streams and follows them to such areas. Diet, which varies significantly through time, composed of various night-flying insects, including moths, beetles, mayflies, and midges. Predators include snakes, owls, raccoons, and opossums; crayfish reportedly feed on dead young bats (Barbour and Davis 1969; Tuttle 1976, 1979; Decher and Choate 1994; Choate *et al.* 1995; Best *et al.* 1997; Harvey *et al.* 1999; Thomas and Best 2000).

BASIS FOR STATUS CLASSIFICATION. Reasons for decline in populations in Alabama, and elsewhere, are disturbance by humans and vandalism, as well as large-scale destruction of habitat and pesticide pollution. About 95 percent of these bats hibernate in only nine caves, one of which is located in northern Alabama (Fern Cave), making them extremely vulnerable to destruction (Tuttle 1976, 1979; Decher and Choate 1995; Harvey *et al.* 1999). **Listed as *endangered* by the U.S. Fish and Wildlife Service in 1976.**

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