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Common Name: RAFINESQUE'S BIG-EARED BAT

Scientific Name: *Corynorhinus rafinesquii* Lesson

Other Commonly Used Names: eastern big-eared bat, southeastern big-eared bat, eastern lump-nosed bat

Previously Used Scientific Names: *Plecotus rafinesqui* Lesson, *Plecotus macrotis* Leconte

Family: Vespertilionidae

Rarity Ranks: G3G4/S3?

State Legal Status: Rare

Federal Legal Status: None

Description: The dorsal hair of Rafinesque's big-eared bat is brownish-gray in appearance. Individual hairs are dark brown to blackish at the base and pale reddish to brownish at the tips. The belly fur is dark at the base, contrasting sharply to whitish tips. Hairs on the feet project noticeably beyond the toes. The ears are very large, usually exceeding 30 mm (1¼ inches) in length, are joined at the base, and are curled similar to the horns of a ram when the bat is roosting. There are two distinctive side-by-side humps on the snout. The total length is 85 - 105 mm (3⅜ - 4 inches), the forearm length is 38 - 45 mm (1½ - 1⅞ inches), the wing spread is 26 - 30 cm (10 - 12 inches), and the weight is 8 - 13 grams (¼ - ½ ounce). There is an accessory cusp on the upper incisor, and females are somewhat heavier than males.

Similar Species: Townsend's big-eared bat (*Corynorhinus townsendii*) does not occur in Georgia but is similar, particularly in that it also has very large ears. However, the belly fur of Townsend's big-eared bat has buff tips that do not contrast sharply with the dark color of the base, the hairs on the feet do not extend beyond the toes, and the upper incisors lack the accessory cusp.

Habitat: Rafinesque's big-eared bats are typically found in forested habitats. Roosting sites are usually in or near areas of mature forest, including bottomland and upland hardwoods and pine flatwoods with water nearby; the sites are usually dimly lit sheltered areas such as dilapidated buildings, bridges, hollow trees, loose bark, rock shelters, and the entrance zones of caves and mines. In coastal plain bottomland areas, large, hollow cypress and gum trees with openings near the base appear to be favored. Big-eared bats forage among the canopies of large trees. They are especially adapted to slow, maneuvering flight and are known to hover at times. In the open, they would probably be highly vulnerable to predation.

Diet: The diet is comprised entirely of night-flying insects, mostly moths.

Life History: This species is perhaps the least known of any southeastern U.S. bat. In late fall, they gather in small groups to mate, then hibernate, in caves, rock shelters, mines, and similar structures with relatively stable winter temperatures. When the bat is roosting, its large ears are coiled alongside the head. In the spring, females form small maternity colonies of up to 100 individuals in relatively well lighted sites, typically in old buildings and rarely in caves and mines, to bear their single young in late May to early June. The young can fly at 3 weeks of age and are fully grown at 4 weeks. The males are solitary or form small groups during the summer, usually roosting in buildings and hollow trees away from the maternity colonies. They emerge to forage well after dark, so they are rarely observed or collected during periods of activity. They are known to live at least 10 years.

Survey Recommendations: This species can be difficult to capture using standard mist nest sets. Roost sites can be located by searching potentially suitable locations, including hollow trees with basal openings, outbuildings, dilapidated structures, bridges, etc.

Range: This secretive bat ranges widely throughout the southeastern U.S. but is abundant nowhere. It possibly occurs statewide throughout the year, but records from the Piedmont are lacking.

Threats: Little is known about the overall population status, but this species is infrequently encountered. Apparent declines are probably due to pesticides and alteration of forested habitats, including removal of hollow cull trees. Apparent rarity might be the result of few observations or collections of foraging bats due to their highly nocturnal nature. Recent surveys revealed many more locations than had previously been reported and extended the known range into the upper coastal plain. Unlike most bats, which become active well before dark, big-eared bats do not emerge from their roost until complete darkness has arrived. They are easily disturbed and are quick to arouse and take flight when discovered on the roost.

Georgia Conservation Status: Though details about the status of this species are not well known, it is likely that populations continue to be impacted by the elimination of mature forest habitats, particularly coastal plain river bottom forests. Additional survey efforts might likely continue to indicate that this species is more common and widespread than had been documented until recently.

Conservation and Management Recommendations: Additional areas of occupied habitat need to be identified through surveys. Suitable habitat on public lands should be managed to maintain foraging and roosting sites, and these same practices should be recommended on private lands where applicable. Artificial roost structures might be beneficial where hollow trees are in short supply.

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Author of Account: Jim Ozier

Date Compiled or Updated:

J. Ozier, Aug. 2008: original account

K. Owers, Sept. 2009: updated status and ranks, added picture