Brazilian Free-tailed Bat (*Tadarida brasiliensis*)

Protection Status Notes

T. brasiliensis is widely regarded as one of the most abundant mammals in North America, and is not on any Federal lists. However, its proclivity towards roosting in large numbers in relatively few roosts makes it especially vulnerable to human disturbance and habitat destruction. Documented declines at some roosts are cause for concern. It is considered a Species of Special Concern due to declining populations and limited distribution in Utah.

Description

The Brazilian Free-tailed Bat is a medium-sized bat with broad ears, large feet, and the end of its tail free. They have short, velvety, reddish to black-colored fur. For more information, see **Frankie, the Free-Tailed Bat**
(**PDF (Adobe Portable Document Format)** 1641 KB (kilobytes)).

Life History

Dozens to millions of Brazilian Free-tailed Bats roost closely together in dark, dry retreats. Because of their use of roof underhangs, attics, and narrow spaces between signs and buildings, Brazilian Free-tailed Bats are often called "house bats." Millions arrive in central Texas each spring and take up residence in a few particular caves in the Balcones Escarpment and the Edwards Plateau. They migrate to Mexico, Central America, and possibly South America for the coldest winter months. However, in East Texas, these bats are non-migratory and are year-round residents.

At dusk, just before dark, Brazilian Free-tailed Bats emerge from their roosts to feed. Their flight is rapid and forceful, similar to swifts. Their long, angular, narrow wings and relatively large size make them easy to identify. Insects such as moths, beetles,

flying ants, and June bugs are their sole source of food. It is estimated that house bats eat 6,000 to 18,000 metric tons of insects annually in Texas.

Brazilian Free-tailed Bats can live up to 11 years in the wild. Their residency in central Texas is marked by the birth and development of their young. Females born in Texas are almost all pregnant when they return the summer following their birth. Most mating in the Texas population takes place each spring before the bats' return journey to the Texas caves. Male house bats outnumber females at the caves only briefly, in early spring. However, by mid-June, adult females outnumber adult males more than three to one.

Each female gives birth to only one baby per year. Bats are born without fur and unable to fly. They are placed together on specific areas of the ceiling in continuous colonies and are not taken along on their mother's nocturnal feeding flights. Remarkably, female house bats, when they return from their nightly activities, can recognize and locate their own young among the swarms of millions of bats and their offspring. Within a month after birth the majority of babies have fur, are nearly full-grown, and can fly outside of the cave to find their own food. Because the baby bats grow up so quickly, the caves become extremely crowded in a very short period of time. To cope with the congestion, the adult bats leave the caves to the fledglings and move completely out of Texas.

Habitat

These bats utilize caves, mine tunnels, old wells, hollow trees, human habitations, bridges, and other buildings as daytime retreats.

Distribution

T. brasiliensis is one of the most widely distributed mammalian species in the Western Hemisphere. There are nine recognized subspecies, two in the United States. *T. b. mexicana* is primarily western, occurring from southern Oregon to eastern Nebraska, and south through Mexico. *T. b. cynocephala* is primarily a southeastern species, from eastern Kentucky into South Carolina and south through Florida. *T. brasiliensis* ranges southward through most of Central America. In the western United States, *T. brasiliensis* is most commonly associated with dry, lower elevation habitats, yet it also occurs in a variety of other habitats, and is found up to at least 10,000 feet in some of the western mountain ranges.

Threats and Reasons for Decline

Besides the human disturbance and habitat destruction, or alteration of suitable caves, mines, bridges, and old buildings noted above, there are problems with pesticide poisoning and deliberate eradication attempts. Human rabies deaths attributed to *T. brasiliensis* foster attitudes for the destruction of *T. brasiliensis* roosts and colonies.

Ongoing Recovery

T. brasiliensis ranks among North America's most ecologically and economically important animals, consuming staggering numbers of insects nightly, a large proportion of which are agricultural pests. Nevertheless, this species appears to be in alarming decline. A population decline in Eagle Creek Cave was documented from over 25 million in 1963 to just 30,000 six years later, and the famous Carlsbad Caverns population, estimated to contain 8.7 million in 1936, had fallen as low as 218,000 by 1973. Organochlorine pesticides have been implicated as important causes of mortality.

In addition, *T. brasiliensis* lose roosting habitat as old buildings are destroyed. Human disturbance and vandalism of key roosting sites in caves are likely the single most serious causes of decline. Grossly exaggerated media stories about rabies have led to the intentional destruction of large colonies. One of the most cost-effective ways to help this highly beneficial bat is through key roost protection, public education, and provision of "bat-friendly" bridge designs and other artificial roosts.

Other

This bat is a known carrier of rabies. Although the proportion of rabies cases caused by Brazilian Free-tailed Bats is minuscule when compared to the size of their population as a whole, caution should be exercised when one of these bats is encountered, or any species of bat for that matter.

For more information

Refer to the online version of

— The Mammals of Texas

for additional details on the **Brazilian Free-tailed Bat**.

Back to Top

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Advisory Committees

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