

Bat TAG Recommendations for Using Live Bats in Educational Programs

Bats are among the most misunderstood animals commonly encountered by people. Education programs are one of the most effective means available to help change public attitudes toward these beneficial animals. The following recommendations have been developed to educate the public while using live, captive bats in educational programs.

1. The Bat TAG recommends that individuals handling bats for educational purposes, including volunteers, be previously immunized against rabies and have an acceptable titer. The audience should also be informed that the presenter has received the recommended pre-exposure rabies immunizations in order to work with wildlife. Bats used in educational programs should have been in captivity at least one year or be the captive-born offspring of bats that have been in captivity for at least one year and should be permanently marked and identifiable. Bats used in education programs should be maintained in separate rooms from rehab animals. The TAG also highly recommends speaking with your institutional veterinarian to discuss immunization for all bats within your zoo.
2. Handlers should wear a glove when holding a bat during a program. No one other than trained handlers should be allowed to touch a bat. This is not a requirement, but a Public Health recommendation. The Bat TAG recommends that handlers follow requirements of local regulatory bodies. The TAG strongly recommends that bats be displayed in a clear box (plastic or Plexiglas) rather than be held in a hand while being carried around a classroom so that the audience can get a close look. This is especially true if the bat is small and difficult to see from a distance of six feet or more.
3. The audience should be told that the bats being used for the presentation are acclimated for presentations and familiar with the presenter. Emphasize that the bats are not tame. Bats in the wild will, like any wild animal, bite in self-defense when handled or frightened.
4. Audiences should be told that while they have nothing to fear from bats feeding in their neighborhoods, bats lying on the ground should never be touched. Not only bats, but ANY wild mammal that can be approached close enough to touch should be avoided. These animals are behaving abnormally, and therefore may be ill.
5. Audience members should be instructed that children should never attempt to touch or handle a bat. Only adults should remove a bat, always while wearing leather gloves or using a container that prevents direct contact with the bat. Preferably, a state wildlife department, local Humane Society, animal control officer, or wildlife rehabilitator should be contacted for help in relocating a bat. Only trained rehabilitators should attempt to "rescue"(hand rear or rehabilitate) a downed bat. See "a bat in my house" under the section, Frequently Asked Questions.
6. It is illegal in most states to keep native wildlife without a permit. Bats are wild animals and should not be kept as pets even though they are sold through pet shops in some parts of the country. Their housing and food requirements alone make them difficult to care for properly in captivity.
7. You can include a story about a child who picked up a bat that appeared to be injured, was bitten and had to receive shots, and the bat had to be destroyed. Then, to reinforce the message, ask the audience what they would have done differently had they been the one to find the bat.
8. Only non-native species or non-releasable native bats should be used in education programs. Non-releasable status is assigned to orphans, captive-born bats and non-suffering permanently injured bats. It is recommended that bats reside in captivity one year or more without any exposure to newly arriving

bats or other potential vectors, such as skunks, raccoons or foxes, before being used in education programs.

9. Using both insectivorous bats along with frugivorous bats is beneficial for demonstrating the diversity of roosting habits, size, color and diet. However, excellent presentations can be given using only one or two of the same bat species. Old World and New World species should not be housed together due to the increased possibility of fatal disease transmission between these groups.

10. Bats should be familiar with the presenters and should have developed a sense of trust before being used for public presentations. Bats that trust their presenters will respond and relax to the sound of their voice during times of stress. Bats that are not accustomed to their presenter will be noticeably frightened during educational programs and should not be used in programs until properly acclimated. Acclimation should include familiarizing the bat(s) with both the display cage (if one is used) and the transport carrier to be used. A normal tone of voice, combined with food rewards should be offered to calm the bat throughout the conditioning/acclimation period.

11. It is preferable that colonial and/or social bat species be accompanied by a familiar roost-mate during the conditioning period and during bat presentations, especially if the bats are to be away from the colony overnight.

12. Never allow any member of the audience to touch the bat. A bat that has been touched by an individual may be subject to euthanasia and testing for rabies by the state health department, regardless of the extent and nature of the exposure or minimal likelihood of the bat being rabies positive.

13. Bats should never be permitted to fly or otherwise be loose during public programs.

Transport Carriers/Display Cages for Program Bats

1. The Bat TAG suggests using a hard-sided display cage or carrying crate, for transporting bats in a vehicle. It is recommended that this carrier be appropriately modified so as to be functional for use with a seat belt. The carrier should be covered on the outside with a properly ventilated cover that provides insulation and a sense of security for the bat. Neither transport carriers nor display cages containing bats should be handled by anyone other than the presenter or a trained assistant. Crevice-dwelling bats may be transported in cloth bags (pillowcases) inside a crate or Styrofoam box or, if being transported indoors, in a rodent carrier with a towel inside for the bat to hang from.

2. Display cages should provide surfaces that allow bats to hang upside down. If a standard Plexiglas animal carrier is used, three sides and the top should have screen attached to provide an adequate surface for the bat to climb and hang. Frame-style display cages without Plexiglas should have a screen or mesh attached to both the outside and the inside of the frame, creating a space between the walls where bats cannot be readily touched from the outside of the cage by curious individuals.

3. Temporary display cages for a "traveling exhibit" used during programs should be clean and enhanced with simulated natural habitat appropriate for the species displayed and in keeping with the wild-animal presentation, state regulations and minimum requirements. Simulated natural habitat may be made of natural or artificial materials and may include fabric, silk foliage, bark, small tree limbs, etc. These materials should be clean, free of odors, sharp edges, dirt or parasites. Simulated habitat should be secured against cage walls. Watch for wire ends in silk foliage. Crevice-dwelling species should be allowed to remain somewhat "hidden" within their simulated habitat, but in a way as to not obscure a view of the bat.

Frequently Asked Questions

1. What do I do if I find a bat in my house? A bat found inside a home should be kept in sight while all doors leading to other parts of the house are closed. Then, windows or doors leading outside should be opened to allow the bat to leave on its own. It is not necessary to turn off the lights in the room. If the bat does not find its way out, or if there are no openings to the outside in the room, the bat should be captured and released outdoors. To do this, watch where the bat goes and let it rest for about 30 minutes. After that period of time, its body temperature will typically drop and it will not be able to fly immediately upon being approached. Approach the bat slowly to avoid frightening it back into flight. Clamp a cardboard box or empty coffee can, etc., over the bat and gently slide a piece of cardboard between the wall/resting spot and the opening to trap the bat inside. ALWAYS WEAR LEATHER WORK GLOVES when trapping the bat. It is advisable that a state wildlife department, reputable pest control company, local Humane Society, animal control officer, or wildlife rehabilitator be contacted for help in relocating a bat.

2. How do I prevent bats from entering my house? Bats that have suddenly appeared in people's living quarters have usually entered through predictable routes: open doors or windows, non-grated chimneys and loose-fitting screen doors. A piece of half-inch mesh hardware cloth over the top of the chimney or a tighter fitting screen door will usually exclude unwanted bat visitors. Young bats are less skilled fliers and will sometimes crawl under doors leading to attics. A draft guard will solve this problem. Bats can also enter through less conspicuous entry points. Any hole more than a half-inch in diameter or any crack of at least a quarter of an inch by a half-inch should be closed, especially those leading to outer walls or an attic. Air intakes may need a screen covering and open spaces around plumbing can be closed by simply stuffing them with steel wool. Even duct tape can be used to exclude bats, because unlike rodents, bats do not chew holes in walls nor do they gnaw electrical insulation.

3. What do I do if I find a bat on the ground? Bats that can be caught, especially those found on the ground, are far more likely to be ill or injured and should never be touched with a bare hand. Children should especially be warned NEVER to pick up a bat. Ideally, only bat rehabilitators should rescue downed bats. If a rehabilitator is not available, contact your local wildlife rescue agency, animal control agency, or Humane Society. If neither agency can help, contact your local zoo. If none of the above can help, proceed per item #1.

4. Don't all bats carry rabies? Like most mammals, bats can contract rabies; however it is a misconception that most bats are rabid. Less than one-half of 1 percent of bats contract rabies, a frequency no higher than seen in many other animals. Like other animals, they usually die quickly from the disease. Unlike dogs and cats, rabid bats seldom become aggressive.

5. What about histoplasmosis? Histoplasmosis is a disease caused by a fungus that prefers soils enriched by bird and bat droppings. Human infection occurs through breathing dust containing contaminated spores. The fungus is occasionally present, but uncommon, in droppings found in hot, dry attics where bats roost and can be common in caves where there are large numbers of bats.

6. Can I attract bats to my neighborhood? Bats are important indicators of a healthy environment. Insectivorous bats are insect-eating machines. Most bats in the United States include mosquitoes in their diet. In lab experiments, it has been proven that bats can catch and eat hundreds of insects in an hour. Bats also eat many other agricultural pests like corn borers, grain and cutworm moths, potato beetles and grasshoppers. One way to invite bats to your yard is by putting up a bat house. Several factors are critical to the success of bat houses, including the daily temperature, the size and shape of internal roosting spaces, roughness of the surfaces to which the bats cling and the distances to drinking and feeding areas. Another roost for a few bats can be provided without a bat house. An 18-inch wide piece of tar paper or

similar material can be wrapped and stapled around a tree trunk so that it is tight at the top and flares out about 2 inches at the bottom. This permits bats to select shady or sunny sides as their temperature needs change over the day and season.

7. Where can I get bat house plans? There are numerous organizations that have design plans and sell houses via their websites. These organizations can also provide a great source of information relating to bats, houses, WNS, conservation, volunteering, and education programs. Please visit these websites for more information:

Lubee Bat Conservancy - www.lubee.org

Bat Conservation International - www.batcon.org

Organization for Bat Conservation - www.batconservation.org

BatsLIVE - www.batslive.pwnet.org

Your local zoo may also have copies of bat house plans.

Bats Recommended for Use in Education Programs

The Bat TAG recommends the following species of bats for use in education programs:

1. Big brown bat (*Eptesicus fuscus*)
2. Evening bat (*Nycticeius humeralis*)
3. Tri-colored bat (*Pipistrellus subflavus*)
4. Silver-haired bat (*Lasiorycteris noctivigans*)
5. Little brown bat (*Myotis lucifugus*)
7. Mexican free-tailed bat (*Tadarida brasiliensis*)
8. Seba's Short-tailed fruit bat (*Carollia perspicillata*)
10. Pallid bats (*Antrozous pallidus*)
12. Egyptian fruit bat (*Rosettus aegyptiacus*)
13. Jamaican fruit bat (*Artibeus jamaicensis*)
14. African Straw-colored fruit bat (*Eidolon helvum*)

Acknowledgements and Sources:

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