

Arizona Wildlife Podcast

Transcript: Episode 16 – Urban Bats

(Please note: this podcast was recorded live from a public presentation. It was not a rehearsed speech. This transcript attempts to capture the dialogue as it was spoken. At times when the speech was difficult to hear or understand, a good effort was made. These rare cases are noted in the text.)

The content for this episode came from an urban bat viewing workshop held on September 12, 2008 at the bat tunnel near the canal in Scottsdale. It was part of a series of summer outreach events hosted by the Arizona Game and Fish Department. The general public was invited out to the site to view the bats leaving their roost at night while Department staff interpreted the event.

Listen as Randy Babb, an information and education program manager for the Arizona Game and Fish Department discusses bat biology. Following the live recording, the audio was edited and Eric Proctor, a Department educator, interjected appropriate questions to link the content.

ERIC:

So Randy, we are located out near the canal in Scottsdale, waiting for dusk and the exit of thousands of bats from a nearby tunnel. What types of bats will we see?

RANDY:

The bats in this colony are Mexican free-taileds. And Mexican free-taileds are one of those species of bats that tend to form the largest colonies – Carlsbad, Bracken Cave, the cave, or the bridge you always read about over, uh, in Austin; those are all free-tailed bat colonies.

And biologists...when we're working with free-tailed bats, we know they're free-tailed bats right away before we even see them. They have a very distinctive smell. So we can walk into a roost site, a cave or...or something like this, and in just a couple of minutes, we know it's them just from the smell. It's very, very distinctive. It's kind of a...a musky, sweet smell. It's very different than other bat smells. None of them are particularly pleasant, but this is, you know, on a...on a grade of unpleasantness, this is up towards the better end.

There's also some pipistrelles¹, which are the smallest species of bat we have in the United States. They have a wing span of about eight inches, and they're very beautiful little bats. They look like Siamese cats to me. They've got little black faces and silver fur. They're very, very attractive. And they're the bat you typically see the first thing in the evening. So when you're out walking in the desert or up on Camelback or any place like that this time of day, and you see that bat flying around before its dark, those are almost always pipistrelles. And they roost in really bizarre places. We find...we have found them under rocks. We know that in sand dune habitats they'll roost in, uh, kangaroo rat burrows and under the bark of trees. They might be behind the shutters of your house. They're often solitary roosters. They're not big colonial roosters. Even though there may be several using a cave or rock crevice or something like that, they don't roost in a colony typically. So oftentimes when you see them, you'll just see a single bat fluttering around, or maybe one or two in the area, as opposed to a big flight of bats exiting like free-taileds do.

The free-tailed bats rely on this colony mentality for lots of different reasons. And one of them is to maintain humidity and temperatures. Bat roosts invariably are very uncomfortable. If you go inside of

one, they're always too hot for my, uh, to be comfortable in for human beings and they're often very humid, and that's important for bats' health and well-being, and they actually seek out those type of conditions. And, in fact, when we look at bat roosts, very few places are suitable for bats to roost and to raise young in. And that's why these colonies tend to be so big oftentimes because the conditions. They are very selective about the proper things that they're looking for and when they find them, then a lot of bats will be using those and they don't have an opportunity to be dispersed and have, uh, young like a rabbit or a mouse or a rat or something like that does just here and there. They've got to be very, very specific thing to keep those young alive.

ERIC:

Are these bats found here year round?

RANDY:

Free-tailed bats are migratory. So they're only going to be here for the next few weeks. And so on into October or so, and then these bats are going to leave just like, uh, white-winged doves and many of the other birds that migrate here. And they're going to fly down to Mexico and some of these are going to go way, way, way down into Mexico. And then they're going to show up. Typically they start showing up in April and they reach their full compliment...or their full numbers by May some time.

ERIC:

What do they eat?

RANDY:

About 80% of the bats found in the world are insectivorous. And all the bats that live in this roost are insectivorous. So they're eating moths and beetles and mosquitoes and all kinds of things that we generally find annoying and often consider pests. And bats are very important that way. Some of the bigger colonies, like the one out of Carlsbad Cavern or Bracken Cave, eat twenty tons of insects a night. Granted, that's a very big colony, but something like this is probably consuming several hundred pounds of insects every night, this...this colony alone. So they're very...again very, very beneficial, and, uh, they're animals that are greatly misunderstood. They're one of these type of animals that the more we understand, the better idea we've got of what they do, and what kind of threat or, uh, the role they play in the environment, the kinder we tend to be with them.

ERIC:

These bats eat insects. So I take it they won't really help with pollination?

RANDY:

These are not pollinators. The pollinating bats, the two species we have in Arizona, are the long-tongued² and the long-nosed bat³. And they're migrating back down to Mexico right now, even as we speak. So if you go down on the border canyons like in the Huachucas and the Chiricahuas, and you have a hummingbird feeder up or you visit some of these hummingbird feeders, you'll see swarms of bats around those at night as they're gassing up and fattening up for their last stage of the migration down to Mexico. The nectar-feeding bats don't come much north of Tucson in Arizona. So the saguaros up on this end of their range are pollinated by things like white-winged doves and thrashers and moths and a variety of insects.

ERIC:

How long do bats live?

RANDY:

Many species of bats are very long lived. As a matter of fact, some species live more than 30 years. And if they have a youngster, and they lose that youngster that year, they will not have another one. Uh, many species only produce one young a year. And that is one of the reasons we so jealously protect these bat roosts because if someone were to go in there and disturb the bats and make them use their...lose their young or, uh, frighten them away or something, it may take a long time for that bat colony to recover.

We had an incident many years ago. A friend and I were...were going down to net at a colony, uh, near Sycamore Creek and when we got there somebody had killed 555 bats and we actually collected a bunch of them. It was a big case. One gentleman went to prison for it. Another guy, uh, had a big fine. But that bat colony took many years to recover back and...and start building because that type of impact or that type of, uh, negligent behavior is very, very serious and bats do not get along well with that.

And, as a matter of fact, bat roosts that are perpetually disturbed, oftentimes bats leave them altogether. They'll just abandon them and we have that problem with many of the mineshafts and other things that we are monitoring. And that's why we put gates on them. Oftentimes you'll see mines or things like that that we put a gate on. That's usually a cooperative project with the Forest Service or other land management agency, and the idea is to keep people out so the bats are okay. But putting a gate oftentimes is a very tricky situation. You would think you would just be able to put something in there...on there that bats could get through, but even the gate over the entrance of the cave effects the airflow enough to where it might make it unsuitable for the bats to use it. That's how particular they are about the places they live. So we have specially designed bat gates that we put on these caves and these mines and things like that and there's a whole bunch of different designs, and we've got to find the right one for the right place to make it suitable.

ERIC:

Do we have any idea where these bats are going when they leave here at night?

RANDY:

They are going to your neighborhood. And so they are going...dispersing all out over this town, no doubt many of them are feeding right over this canal that is, uh, going to house a lot of insects. They're going to drink over the canal. But they are going to disperse. Some bats will fly 30, 50 miles or more each night to go out and feed. So they can cover a tremendous distance each evening, and so they're the bats you're probably going to be seeing around, although this species typically flies high enough to where you generally don't see them once they disperse.

ERIC:

So what do they do all night? Are they constantly flying around looking for insects?

RANDY:

What bats typically do, most species is they'll fly out and they'll feed very heavily for the first few hours of dark and then they're going to have what we call a night roost. And that might be on your porch. That might be under a bridge. It might be in one of these palm trees. And they're going to sit up there and they're going to digest their meal for a few hours, and then the last few hours of night they're going to move out and feed again real heavily, and they'll be returning here before daylight. It's a real typical pattern for many, many species of bat but they take a break in the middle of the evening or in the middle of the night for a few hours, most species will and relax.

ERIC:

With all these bats in located in one spot does it ever draw out predators looking for easy prey?

RANDY:

A lot of times with these big bat exits where you get thousands of bats leaving in a relatively short period of time you'll have things like sharp-shinned hawks and Cooper's hawks and even red-tails showing up and circling for the last few minutes of daylight catching bats as they leave. And some of the caves in New Mexico and stuff this is a pretty regular occurrence. Pretty...pretty neat thing to see predation in the wild. It's very unusual to actually get to witness that. I don't think we quite got the numbers to draw the predators yet.

ERIC:

As I've talked to people, it's occurred to me that bats seem to be one of the most feared animals. Is this fear justified or is it misguided?

RANDY:

Bats don't bite people unless they're handled. Uh, we don't have bats flying into people's hair or things like that. That's a...that's a wives' tale. But bats often will fly very, very close to you. So if you're out and you're standing around, it's not uncommon to have a bat...a bat fly within a couple inches of you because he's catching the insects that are attracted to your body heat and the CO₂ that you are giving off and things like that, and that tends to scare people. I have a lot...I know a lot of people that are frightened about being in their pools at night because bats come and drink out of their pools. And again those bats aren't going to run into you. They don't want anything to do with you. They're just going about their day-to-day activities.

What you don't ever want to do is, you don't ever want to pick up a bat fall...you find fallen on the ground because that is a sick bat. And when we have those bats tested, the ones that we find on the ground, which is very abnormal behavior, many of those bats have rabies or other diseases. And that's when people get in trouble is when they're picking up bats or anything like that that you shouldn't be...as a matter of fact, you should never handle a bat because even a healthy bat's going to bite you if it's upset. And, uh, that's very typical of most animals. When I was a kid my...my mom took me to the doctor once a week because I was getting bit by something I was catching, and that's just what animals do no matter what they are, whether they are lizards, snakes, or bats. And so the best things or bats do best if they're left alone and we do best bats...with bats if we leave them alone.

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Thank you.

¹ *Western pipistrelle*

² *Mexican long-tongued bat*

³ *Lesser long-nosed bat*