



Insider's Look at Grand Canyon

Webisode #36 – Interview with spotted owl researcher Tim Bowden Transcript

Ranger Patrick Gamman: Welcome to another Webisode of Insider's Look at Grand Canyon. I'm Ranger Patrick and I'm here with one of our research rangers, Tim Bowden. Tim, could you tell our audience a little bit about your education background, what your position is here at Grand Canyon and what you study.

Researcher Tim Bowden: Hey, Pat, thanks for having me on your program. Yeah, I've been working for the park since 2001 and I've primarily focused my research on Mexican spotted owls. I got my undergraduate working at Humboldt State University and then did a master's at Montana State University. For the past ten years, I've been focused mostly on spotted owls.

Patrick: Well, Tim, as I understand it, there are three populations of spotted owls here in North America. What is the population of spotted owls here at the Grand Canyon?

Tim: Yeah, that's true. There are three subspecies of the spotted owl: the Northern, the Californian, and the Mexican. The population that we have here in the park is part of the Mexican spotted owl subspecies.

Patrick: So, Tim, when I think of spotted owls- I'm actually born and raised in Oregon- and it was really highly controversial when we heard about spotted owls where I'm from. You know, they were listed as threatened and what I found out it was due primarily to loss of old-growth forest and habitat fragmentation. But is that the kind of (*unintelligible*)...Grand Canyon and the desert or is it one of the other ones?

Tim: No, that's true. The spotted owl you were speaking of is the Northern spotted owl and they were listed primarily due to having large tract, a large band of forest that started becoming fragmented and patched up through forestry practices. Here, the subspecies is in a range that is naturally fragmented; they didn't have the large tracts of forest like the Northern spotted owl did. They had patches of habitat that were interspersed with desert landscapes throughout most of their range, which placed a greater emphasis on them as a disperser. So the Mexican spotted owl has largely been viewed as a better disperser than the other species of the owl.

Patrick: So, if I get this right- and you know, I'm not a scientist here- is that the strategy down here in the desert is you've got to spread yourself out: more likely to get food, more likely to have enough room to find space to survive. Is that what you're saying?

Tim: Yeah, I think that's true. I think the emphasis on the bird's ability to move from one patch to the next, and they do this primarily right after they disperse from their natal area. During that first year of life is when they're really moving and trying to find a place where they can breed, and in this landscape, it really puts an emphasis on these birds that are able to locate new areas for breeding.

Patrick: So, these Mexican spotted owls, their strategy for survival is dispersing. But, when they're dispersing here in the desert, what kind of area are they looking for?

Tim: We find the Mexican spotted owls nesting in a greater variety of habitats than the Northern and the Californian- in canyons, desert canyonlands, which is different than the other two subspecies. But if you think about how these canyons are situated, they do provide many of the same features that the forested habitats do provide. So in some of these narrow canyons, they offer shade, above-ground places for the birds to place nests, there's (*unintelligible*)...for potential predators. As well, there's pockets of water back in these canyons and provides both for the owls' prey but also, these owls will take the water directly.

Patrick: So, Tim, you go out into the desert, in these side canyons, looking for spotted owls. How do you actually find them? I would think that locating an owl would be very difficult.

Tim: Yeah, to find the owls, we primarily will- well, at least we start from the Canyon rims. We'll go over canyons that we're interested in and we broadcast their calls, mimicking their vocalizations into the canyons, and then they will respond territorially to defend their canyon, and we get a sense of where they're located inside of these canyons before hiking.

Patrick: Trying to do calls to get owls' attentions, is that a recording you bring or is it something you do or is it a device? And could you actually do an owl call for us?

Tim: Yeah, we just mimic them ourselves, and the owls are pretty forgiving in what they'll respond to. *(Tim making owl calls.)*

Patrick: That's great, Tim! Well, I was curious. Are there other ways that you can locate an owl?

Tim: We get into an area that we've identified the birds using and we'll go place these bal-chatri traps in their roost area. And a bal-chatri trap is just a wire-mesh cage with fishing line nooses tied to the top. And then we place live gerbils inside as an enticement for the owl and back away from the trap and wait for the owl to come down. The owl will land on top of the cage, caught in the fishing line nooses, at which point we'll come up and gently restrain the owl, put a hood on it, and remove it from the fishing line nooses, and we can tie on our transmitter or place our bands on the bird at that point. The gerbils remain in the cage and they're not hurt or harmed at all during the process.

Patrick: Good to know, Tim. You mentioned that you put on a tracking device. But being a smaller bird, how does that work? Does this device stay on them a long time? How much does it weigh? And how would you ever get that off of them?

Tim: So, yeah, as part of a home-range telemetry study here, we did place these transmitters on their tail feathers. And the way it works with the spotted owls, we use a light transmitter- weighs about 5 grams- tie that onto the central tail feathers. And eventually, about once a year, the owl sheds these feathers- all their feathers naturally- and in the process they drop off...*(and here the sentence also drops off...)*.

Patrick: Tim, what is the process of study you and your colleagues have gone through?

Tim: So, initially in the late 1990s we began to locate where in the park we have populations and through this effort we located around 40 territories, which was more than we had anticipated originally. Territories were located primarily in tributary canyons off the Colorado, spread out throughout the Canyon.

Patrick: Your colleagues and you, you've done all this work- finding them, surveying them, studying their breeding habits and how they gather food- but what's in the future for the owls here at Grand Canyon? And how does that fit into the big picture of spotted owls?

Tim: Well, what we'd like to do next, if we can secure funding for it, will be a dispersal study where we're looking at putting some of these small transmitters onto juveniles prior to their leaving their natal area. This way, we can track and see where they go and see how they're connected to other populations surrounding the park. And this is important in nations south of us. These are the populations that have been primarily affected by large-scale fires and loss of habitat through our forestry practices. In this way, we want to know are the birds that are coming from our population here supporting this forested population.

Patrick: It sounds like there is a chance there could be something really positive out of this, from your research about the owls in the desert here and fill gaps where the populations have been declining. You know, I find the work that you've been doing here with the spotted owls really amazing. I wonder what you'll find out during the next stage of research.

Tim: Thanks much for having me on your show.

Patrick: Thanks for joining us. We'll catch you next time on Insider's Look at Grand Canyon.