

Original Post to NEOORN

From: Steve Smith <smithsm@sciborg.uwaterloo.ca>
Subject: Audio playback: impact on Neotropical birds?
To: NEOORN-L@LISTSERV.LSU.EDU
Date: 22 March 2005

Dear NEOORN colleagues:

Recently I had a conversation with the manager of an ecolodge in Central America. This lodge is situated within a region of very highly significant conservation value and is immensely popular with both birders and natural-history enthusiasts.

The lodge is reconsidering its policy with respect to the use of sound playback, including the human voice, to “attract” birds — i.e. the solicitation of responses to aural stimuli by the resident avifauna and hence to “make visible” otherwise reluctant or retiring birds. The lodge is considering a new policy that might ban the use of playback use by visiting tourists and birding groups. A number of policies are possible:

1. Unrestricted permission to use playback devices.
2. Absolute prohibition of playback devices.
3. Restriction on the use of playback devices to certain times of the year or on a subset of trails.
4. Restrictions on playback to some species deemed particularly vulnerable to negative effects of playback.

Given the “demands” on birding-tour leaders to find target birds for clients, a ban is a potentially controversial decision from an economic standpoint and the management would therefore like to base its policy on sound science. I was asked about this but I am not a professional ornithologist. I recommended to the manager that I solicit the input of the professionals on this list.

So, what I need is some defensible input from ornithological professionals on this issue, preferably backed up by citations to peer-reviewed literature. Is the use of playback devices harmful or harmless to Neotropical birds and if harmful, under what conditions?

This query is likely to generate a lot of responses, so list members may wish to respond to me privately off list (to smithsm@sciborg.uwaterloo.ca); I will undertake to provide an edited (but unexpurgated) summary to the list in a few weeks.

With thanks, in advance, for your advice and pointers to the literature.

--

Steve Smith, Biology, Univ. Waterloo, Waterloo, ON Canada N2L 3G1
This address is for information only. I make no claim that my views
are those of the Biology Department or of the University of Waterloo.

Comment by SMS

Most comments by SMS are shown inside a box like this one and are shown in a gray, 9-point Arial font, rather than 11-point, black Times Roman, which is used for the text of responses by NEOORN subscribers and from workers I wrote to personally. Where a box is not used, the same gray, 9-point Arial font is used to identify my inserted, parenthetical comments. I have done some minor editing of the comments, replacing CAPS by italics and correcting some minor spelling and punctuation errors.

Responses to the NEOORN Post

Reply #1

Date: 22 March 2005

From: Bruce Miller, WCS — Belize <batsncats@DIRECWAY.COM>

Subject: Re: Audio playback: impact on Neotropical birds — NO QUESTION HERE

I can verify that many bird species formerly common are no longer to be found in the same locations where some guides who appear to be more driven to increase a bird list than protecting resources, play tapes for 15–20 min without stop. Having kept records of sightings at the varied locations around where this specific lodge is located (I am assuming this is the same one) for >14 yr it is clear that in areas where there has been heavy and unrestricted use of tape playback the birds are simply no longer there, but are still found in other similar habitats where birding guides without tapes are frequenting.

One could also use mist nets to show groups elusive species in the hand, but that is rarely used with birding groups. Perhaps in order to see species like a Tody Motmot or other “elusive” birds in the forest more skill and cunning or patience can be rewarded with the rare sighting and talked about over cold drinks at the end of the day for a long time to come. At the end of the birding day when the reading of the list is conducted there will be that special moment shared between the guide(s) and those who saw the bird.

Jaguars are also frequently seen in and around this lodge. Artificial means could also be used like packs of dogs to ferret out the cats so the “guide” could virtually always show the visitor a live wild large cat. *But*, one would assume 99.9% of the tour group would object as they clearly see this as an invasive tactic, but seem not to understand that tape playback appears to be perhaps as invasive in a non-obvious way. Guests are lucky to get a glimpse and often long looks of minutes or more and there have been for the past 10 yr roughly one sighting per week. However, just like big cat sightings with birds it is up to the guides to educate the groups that there is *never* a guarantee in nature.

There have also been other recommendations for this lodge to simply ban the use of tape playback in and around the lodge trails and allow it on further outlying areas with less traffic.

This way the “birding resource” will not be driven off at the expense of the other lodge visitors. This will provide at least a chance that the “non-tape-playing birders will still have a chance to see them. Birds are an economic resource in this instance and to exploit them in such a manner that is disruptive to their lives and potential breeding territories does a disservice to all. Including the lodge.

If tape playback were not a problem why is the practice banned in some North American parks and frowned on very heavily by the American Birding Association in its ethics statements?

Comment by SMS

I replied to Bruce immediately, asking him for the names of the North American parks where playback is banned; I received no reply. This matter is still worth a follow-up.

Section 1(b) of The American Birding Association *Principles of Birding Ethics* (ABA member handbook, 2003, p. 24) states:

“Limit the use of recordings and other methods of attracting birds, and never use such methods in heavily birded areas or for attracting any species that is Threatened, Endangered, or of Special Concern, or is rare in your local area.”

This is an interesting directive! The very birds likely to be subjected to recordings are indeed threatened, endangered, or of special concern or that are rare; as well, the use of recordings is likely to be intense at birding lodges (i.e. “heavily birded areas”) that cater to group birding.

Bruce W. Miller, Ph.D., Associate Conservation Zoologist, Wildlife Conservation Society, Gallon Jug, Belize

Reply #2

Date: 22 March 2005

From: Jack C. Eitniew <CSTBINC1@AOL.COM>

Subject: Re: Audio playback: impact on Neotropical birds

(In response to Bruce Miller)

> play tapes for 15–20 min without stop

Interesting details, Bruce, on what appears to be a rather negative practice but 15–20 min seems excessive! Would one have the same impact if you only used playback a couple times a day for 30 s – 1 min at a time? Or is it an all-or-none policy due to lack of enforcement?

Jack Eitniew, CSTB Inc.

Reply #3

Date: 24 March 2005

From: Paul Coopmans <coopmans@ECNET.EC>

Subject: Re: Audio playback: impact on Neotropical bird

(In response to Jack Eitniew)

Indeed, I have seen people — rather than leaving a bird alone when it’s been enough, carrying on and on and on in the sound playback, with poor birds flying back and forth zillions of time. There should be a limit, and unfortunately those who go over the limit give the whole playback concept a bad name ...

Reply #4

From: Alvaro Jaramillo <ajaramillo@sfbbo.org>
Subject: Re: Audio playback: impact on Neotropical birds?
Date: 22 March 2005

The issue is complicated but there really is no good research on this. I guess one could cite papers that have used playback in a behavioral context and see if it has correlated with anything negative such as leaving territory, nest failure, decreased reproductive success. Perhaps the early papers by Bruce Falls on neighbor recognition may have some of this. As a person who has used playback on tours as well as a scientific context I can say that it does not seem to have a significant adverse affect ... but I could not prove it to you. It's experience gathered from years of doing it. I think it is a minor annoyance, but certainly less so than habitat trampling to get a good view of birds. There are publications on penguin colonies that show that access to the areas by observers do have negative effects on them. Penguins and tropical birds are apples and oranges, but some basic issues probably apply.

The real problem is to enact policies where there is no good information one way or the other. Are they seeing declines in their birds? Is this the concern, or is it something else. Perhaps the lodge would be interested in hosting people to do the research and answer the question of how harmful the practice is? Do they use bird feeders, such as hummingbird feeders there? These are assumed to be positive — but are they? I am not suggesting they should take down their feeders, but there are many logical arguments as to why unnaturally dense hummingbird populations caused by feeders may be bad; however logic doesn't cut it; one needs good basic research to be able to answer these questions. My personal opinion is that tape playback is harmless, the territory holder always "wins" the confrontation with the intruder in fact. This is an alternation (*sic*; i.e. change) of behavior, but then it is much better than people trampling vegetation or trying to sneak up on birds, and folks will do this. We always have impacts on the local birds, the mere existence of a lodge there is a huge impact, but I wouldn't argue they should tear it down. I encourage the work they are doing, letting people enjoy the local birds.

Comment by SMS

Al asked about the use of hummingbird feeders: "they are assumed to be positive — but are they?". The lodge in question uses no feeders of any kind for *any* animals — a good policy in my opinion. However, based on my own experience in Belize, Costa Rica, Panama, and Trinidad, feeders for hummingbirds and frugivorous species are very commonly used. Even at high-quality and well-staffed lodges they're quite often poorly maintained and astonishingly dirty, with bacteria, fungi and yeasts in the sugar and on the walls of the sugar feeders, and on the fruit platforms. Personally, I find them distasteful and just too "artificial" and one does worry about aggressive encounters among the birds, particularly the hummers.

An honest disclosure: I use hummingbird and oriole feeders at my home in southern Canada. They are scrupulously washed in hot, soapy water at least once a week in cool weather and more often in hot weather — they are never topped up without first being washed. Occasionally I have taken them down for short periods to reduce conflict among male Ruby-throated Hummingbirds. Baltimore Orioles occasionally "fight" over these resources but in my experience most of those fights are vocal; fights among the hummingbirds, however, can be physically brutal!

Alvaro Jaramillo, Biologist, San Francisco Bay Bird Observatory, PO Box 247, Alviso, CA 95002
<http://www.sfbbo.org>; chucaso@coastside.net

Reply #5

Date: 22 March 2005

From: Dennis Rogers <cinclus@RACSA.CO.CR>

Subject: Re: Audio playback: impact on Neotropical birds?

No matter the conservation value of the area in question or the science available to judge impact of playback use, the fact is a *tiny* proportion of the local or global population is likely to be affected. So the conservation importance is negligible. A possible exception in Central America would be quetzals, but here disturbance of nests, likely a more serious problem, would continue.

A few years back the station managers at La Selva, one of the most heavily birded sites in Costa Rica, debated whether they needed a policy on tape use and decided it was still so light as to not be an issue. The lodge in question might still consider if a bird-friendly policy for its property brings enough PR value to balance the risk that tape-dependent guides will take their business elsewhere.

Reply #6

From: David O. Matson <d.matson@charter.net>

Subject: Audio playback: impact on Neotropical birds?

Date: 22 March 2005

This is not exactly cogent: I had an interesting conversation with a Chief Ranger at a national park in Argentina. That individual noted my tape recorder and microphone and indicated that even recording a species in a national park is a “take”, equivalent to hunting.

If I had to make a recommendation to the owners, I would suggest restriction of playback for certain species.

You might contact Gary Graves who locally has dealt with this issue in his audio survey for Swainson’s Warbler in the Dismal Swamp. He has data on playback response rates, although I think he inferred in a newspaper column a drop in response rates was attributable to Swamp visitors using playback. I personally have been to the Swamp many times and not yet seen anyone using tape playback there but Gary.

David O. Matson, Suffolk, Virginia

Reply #7

Date: 25 March 2005

From: M & R Honig — lists <mandrhonig-lists@SBCGLOBAL.NET>

Subject: Re: Audio playback: impact on Neotropical birds

(in responses to posts by Bruce Miller and Dennis Rogers)

A couple of comments on this thread:

Bruce Miller wrote:

> ... tape playback ... [is] frowned on very heavily by the American Birding Association in it’s [sic] ethics
> statements.

This is not entirely true. ABA’s Code of Birding Ethics (<http://www.americanbirding.org/abaethics.htm>) does not frown on tape playback in general; rather it promotes an ethical approach by attempting to establish responsible limits to tape playback. The ABA Code does frown on tape playback in some situations. The pol-

icy states: "Limit the use of recordings and other methods of attracting birds, and never use such methods in heavily birded areas, or for attracting any species that is Threatened, Endangered, or of Special Concern, or is rare in your local area." Beyond the ethics issue, note that in the United States, using recordings (or any other sounds) for attracting a species listed as Threatened or Endangered is illegal (a violation of the Endangered Species Act).

Dennis Rogers wrote:

- > No matter the conservation value of the area in question or the science available to judge impact of play
- > playback use, the fact is a *tiny* proportion of the local or global population is likely to be affected. So
- > the conservation importance is negligible.

Regardless of whether or not this is true in a given location, there is an issue of attitudes. We need to consider the lessons we are teaching our participants and the behaviors they may adopt as a result of their experiences. I contend that one of the lessons all guides should convey is respect for the resource. And guides are in the perfect position to teach by example.

Consider the following excerpt from the Statement of the Committee on Collecting Policy of the Dragonfly Society of the Americas (DSA) (published in *Argia*, 8(2):36–37, 10 August 1996): "Collecting of Odonata ... must be done in a manner and spirit that embodies a respect for the environment and for dragonflies as species *and individuals*." (emphasis mine) This language is directly analogous to observing birds as well, and I propose that birding-ethics polices should incorporate such direct, succinct statements of this sentiment. (The ABA policy embodies this general spirit of respect for the resource, but not such an explicit statement.)

However ethics policies will inevitably contain gray areas. They cannot state exactly how much playback is OK. Is it 20–30 min? I'd say this is clearly over the limit. But should it be just a few minutes, or 1 min, or 30 s? All we can do is to establish ethical principles in policies such as the ABA's. Then it is up to each individual (who by the way will be generally unpoliced) to determine how those guidelines translate into responsible behavior in the field.

Bob Honig, Houston, TX, USA

Reply #8

Date: 25 March 2005

From: Alvaro Jaramillo <chucaco@COASTSIDE.NET>

Subject: Re: Audio playback: impact on Neotropical birds

(In response to Honig)

These arguments and discussions about tape playback have gone on for so many years and they never get resolved. They never get resolved because they are all based on opinion and on very little hard fact. I think it is about time that someone did a good controlled experiment(s) to try and answer the question of how much, if any, disturbance is caused by tape playback. It is a great project for a student interested in bird conservation, bird-related tourism, and applied value to their research. It would be a great way to finally get some answers about this.

Alvaro Jaramillo, Half Moon Bay, CA
Field Guides — Birding Tours Worldwide
<http://www.fieldguides.com/home.htm>

Reply #9

Date: 27 March 2005

From: David Logue <dlogue@lamar.colostate.edu>

Subject: Re: Audio playback: impact on Neotropical birds?

The following study shows big changes in reproductive behavior after song playback:

Mennill, D.J., Ratcliffe, L.M. and Boag, P.T. 2002.
Female eavesdropping on male song contests in songbirds.
Science, **296**: 873.

And of course, the speaker-replacement studies initiated by Krebs (1977) clearly demonstrated that song playback affects space use in free-living birds. You should look at work by Wingfield and his students (including Shallin Busch (shallin@u.washington.edu) showing that song playback affects levels of stress hormones in birds. Similar work has been done with Spotted Antbirds and Buff-breasted Wrens by the Hau group at Princeton (e.g. <http://www.princeton.edu/~hau/VirginieCanoine.htm>).

I think you're doing a good thing here. Good luck on your campaign and let me know if I can help.

David Logue, Visiting Professor, Department of Biology, Colorado State University, Ft. Collins, CO 80523. (970) 491-6932

Comment by SMS

That is the end of the comments I received as a result of my posting on NEOORN. In addition to that posting I solicited comments in 2 other ways:

- a. I wrote directly to 3 people well known to me in the ornithological-research field: 1. Dr Bruce Falls, Dept of Zoology, University of Toronto, undoubtedly well known to many of you as a long-time researcher of birds and bird song, especially in Algonquin Park, ON; 2. Dr Bridget Stutchbury of York University, coauthor of *Behavioral Ecology of Tropical Birds*; 3. Dr Philip Taylor, one of my former graduate students, and now at Acadia University and Associate Chair of the Atlantic Cooperative Wildlife Ecology Research Network.
- b. I did a search on ISI's *Web of Science* for recent literature (last 5 yr), reporting the use of audio playback in ornithological research. I then wrote to 25 researchers discovered in that search, saying:

I am writing to you as a researcher who has been using audio playback in research on birds. I'd very much like your advice and input on a policy issue.

I've appended a posting I made recently to the Neotropical Ornithology Discussion Group (NEOORN); the background is explained there.

So far I've been unable to find pointers to specific literature that deals with the *impact* of playback on birds. So, if you can, I'd much appreciate your input on this issue. Please keep in mind that I am *not* concerned about occasional use of playback in a research setting — I am concerned about the use of playback in a birding situation in which shy, reclusive birds that are much sought by bird watchers, such as the Tody Motmot (*Hylomanes momotula*, Momotidae) may be subjected to playback by groups of people (2–16) up to twice a day, almost every day for the period November – April.

If you write back, let me know if you'd like to receive a summary of the discussion that I will eventually post on the NEOORN list.

Responses follow.

Responses to e-mail Enquiries

Reply #1

From: Bridget Stutchbury <bstutch@yorku.ca>
Subject: Re: Audio playback: impact on Neotropical birds?
Date: 28 March 2005

I agree that playback should be discouraged, unless it is specifically for formal bird census and/or scientific research. Recreational playbacks for birding can be harmful if done repeatedly to the same pairs of birds; and it's unnecessary ... "real" birders will use their instincts and patience to track down the bird the natural way.

I'll ask around to find out if there is evidence/studies on this.

Reply #2

From: Bruce Falls <jbruce.falls@utoronto.ca>
Subject: Re: Audio playback: impact on Neotropical Birds?
Date: 31 March 2005

The question you raise is not easy to answer. As you know I used playback to study functions of song and to map territories in the Park. It is a valuable research tool and also as a means of censusing birds. For example a limited amount of playback is used in Owl surveys and marsh monitoring organized by Bird Studies Canada. It may also help to locate rare or endangered birds for conservation purposes. Used in moderation for such purposes, I think it is quite justified. Any downside seems to me to be slight in relation to the benefits. I'm not aware of detailed studies on the effects of playback on breeding success but I am not up on all the recent literature. My impression for what it's worth is that the effect of our playback on White-throated Sparrows and Meadowlarks was negligible — no more than a slight addition to natural encounters. There was no other bird to fight with and the exposures were brief. One thing I did observe with several species is that, not finding a real intruder to interact with, birds quickly lost interest — they habituated. Use of different songs or sites would restore their responses but only briefly.

I have been on tours where playback was used and tours where it was not — I enjoyed both kinds. No doubt without playback we missed species. If the leader knew songs well I could gain satisfaction from hearing birds that I did not see. Sometimes I recorded them — thus having a take-home souvenir — even better! There are positive values to ecotourism both to the host community and the tourist. The latter gains satisfaction and an appreciation of biodiversity that may result in support for conservation. But what of the downside? As I indicated above I think the damage done by a little playback — increasing energy expenditure and risk for the recipient — is negligible. However, I do have concern for rare birds that are repeatedly assaulted by playback from a succession of groups at the same site. Habituation may limit the damage but I would prefer to err on the side of caution. Restriction to certain times of the year is a problem with tropical birds that may not have clearly defined breeding seasons. Also in the off season birds may not respond at all. It might be possible to make certain species or trails off limits, i.e. protect rare species (of course these are the ones birders want to see) or have sanctuary areas (this latter seems practical). It should also be impressed on tour leaders to use minimal exposure and common sense.

I looked at my bird books and also books on birdsong and found little or nothing on the subject of nuisance playback. It was mentioned in the National Geographic guide that the American Birding Association (ABA) has published ethics for birders. I am not a member and don't have their publications. In any case the question remains whether any of this is based on studies of the effects of playback.

Reply #3

From: Phil Taylor <philip.taylor@acadiiau.ca>
Subject: R: Audio playback: impact on Neotropical birds?
Date: 24 March 2005

Personally, I don't think careful use of playbacks are a big issue. However, compounded by tons of people, or focused on particular individuals or pairs repeatedly, I'm sure that they are disruptive or even detrimental.

The big problem is that it would actually be very difficult to measure any effects — it is difficult enough to get good measurements of survivorship and recruitment even for simple boreal systems, let alone more complex tropical ones.

As you know, lots of tropical birds respond readily to focal species — the drongos in Africa; I forget the equivalent in CA — so that suggests that they are used to moving about in response to vocalizations in the forest.

All of that isn't much help from a defensible scientific view; we have our field class coming up in Belize in a few weeks — maybe I'll dream up some experiment we could do ... what would be the response? Any ideas?

Reply #4

Subject: Re: Audio playback: impact on Neotropical birds?
Date: 25 March 2005
From: Katie Sieving <sievingk@wec.ufl.edu>

I'm sure there are impacts. But I don't know of literature that specifically addresses the impacts. One main reason for this is that we use playback to observe birds that are hard to observe otherwise. Therefore, the control group, for a study of playback impacts, would not be observable ...

The one impact I can speak to is increased risk of predation on individuals responding to playbacks (singing, approaching edges (where people stand) and giving visual displays to potential intruders). The one thing I can give you is 'unpublished data' with one published reference to these types of data.

The data are: in south-temperate Chile, where I have done playback-research studies of various kinds, I observed 7 different attacks (unsuccessful while I was watching) on responding birds (all tapaculos, family Rhinocryptidae) that had approached me in forest, or to forest edge, in response to conspecific territorial calls broadcast over portable speakers. Two attacks were made by *Accipiter bicolor* at forest edges — one on a Black-throated Huet-huet, the other on a Chucao Tapaculo. The other attacks were made by the Austral Pygmy-Owl on smaller species of tapaculos. On 3 of those occasions, the owl approached the playback site before the responding individual did. I had the distinct impression that the owls keyed in on the territorial calls as much as the conspecific territory defenders did. One owl sat by my shoulder (within 3 feet) waiting with me. On 2 occasions, I watched the owls continue to follow and hunt birds that had responded after the playback was over.

In all 7 cases, the responding bird was not touched, but all had to utilize escape cover and escape tactics while responding to playback. The one reference is in this paper:

Sieving, K.E., Willson, M.F. and De Santo, T.L. 2000.
Defining corridor functions for endemic birds of south-temperate rainforest.
Conservation Biology, **14**: 1120–1132. (p. 1128.)

Good luck! I think that there must be more creative ways to see birds without making it so easy for bird watchers. Though I have to confess I use it, too. Please keep me in the loop, because more and more people will be using this technology, and we have to moderate it at some point.

Kathryn E. Sieving, Associate Professor, Wildlife Ecology and Conservation, University of Florida, Gainesville FL 32611-0430
<http://www.wec.ufl.edu/faculty/SievingK/>

Reply #5

Date: 29 March 2005

From: Paulo Gama Mota <pgmota@antrop.uc.pt>

Subject: Re: Audio playback: impact on Neotropical birds?

I have never imagined that such a massive playback could be going on with a bird species. But, I can tell you that it will certainly affect their behavior. How it will affect, is a question with a less obvious answer. I can only give you information from my experience.

We designed an experiment to test whether male song would affect female nesting behavior. And we found that females spent 30% more time working in their nest than control females. The playback was continuous for up to 9 d before laying, during 5 h in the morning.

You can check for yourself. I add a PDF of the paper published in *Ethology*.

Comment by SMS

The paper Paulo referred to is as follows (let me know if anyone wants a copy):

Mota, P.G. and Depraz, V. 2004.

A test of the effect of male song on female nesting behavior in the Serin (*Serinus serinus*): a field playback experiment. *Ethology*, 110: 841–850.

Abstract

It is well established, through laboratory experiments, that male song in birds can stimulate female reproductive activity, affecting their behavior and physiology, such as follicular growth, nest building and egg laying. However no clear demonstration has yet been provided that this effect works under natural conditions. Previous work in natural populations of Serins showed that female nest-building behavior correlated with male singing time. Furthermore male Serin song peaked exactly in the day that rapid follicular growth was estimated to start in females, suggesting that in this species song may also serve to stimulate the female's reproductive development. Direct causal evidence, however, was lacking. We conducted field playback experiments to investigate how song can influence female nesting activity during nest building. Our results show that females who listened daily to playbacks of Serin songs, during the nest-building stage, spent more time nest building than females that were not exposed to additional songs. Moreover, the singing behavior of the mated males was not affected by the playbacks, suggesting that the song-playback treatment had a direct positive effect on female nesting behavior.

Paulo Gama Mota, Departamento de Antropologia, Universidade de Coimbra, 3049 Coimbra codex Portugal

Reply #6

Date: 25 March 2005
From: Jeff Lucas <jlucas@bilbo.bio.purdue.edu>
Subject: Re: Audio playback: impact on Neotropical birds?

I'm afraid that I have little to offer. I don't think much about the impact that playbacks have on populations because we try to minimize their effects by reducing the rate of playbacks per site and the duration of time the birds are subject to playbacks. I also don't know of any literature that deals with this issue — though this is mostly because I haven't sought this sort of thing out.

Having waffled: I do share your concern. It is very common for us to instigate territory disputes in Carolina Chickadees (the birds that are the focus of almost all of our studies). This is because responses that we elicit from one neighbor are usually reacted to by other neighbors. So even if our playbacks, *per se*, are having no effect, the increased interaction between birds caused by frequent playbacks could potentially disrupt the social system. The work on communication networks makes this even more problematic. For example, Mennill *et al.* (2002, *Science*, **296**: 873) showed that female chickadees pay attention to fights between males (or pseudo-fights between their male and a playback). If their male is made to be subordinate (which can be done with a number of different aspects of the playback), she is more likely to seek extra-pair copulations that if her male is made to be dominant. The point is that there are lots of ways to disrupt a social system through playbacks, and to do this in order to let some people see a rare bird seems a bit much.

Jeffrey R. Lucas, G-308 Lilly Hall, Dept of Biological Sciences, Purdue University, West Lafayette IN 47907
765-494-8112; fax: 765-494-0876

Reply #7

From: Shallin Busch <shallin@u.washington.edu>
Subject: Re: Audio playback: impact on birds?
Date: 29 March 2005

In many territorial birds who breed in temperate and arctic regions, exposure to playback increases the sex hormone testosterone. There are a large number of studies looking at this effect in a wide range of species. I suggest that you do a literature search using the key words “simulated territorial intrusion” and “testosterone”. You might also look at the publications by my advisor, John Wingfield, at his website:

http://faculty.washington.edu/jwingfie/alt_publications.html

since he has been involved in most of these studies.

However, not much work on endocrinology has been done in the tropics. From the limited amount of work that has been done there, we can generalize the playback (sometimes with a decoy) does not cause a rise in testosterone as it does in more northern birds. This was true for the two species that I have worked with (Song Wren and Rufous-collared Sparrow), and the Spotted Antbird does not show a rise in testosterone unless it experiences a playback lasting longer than a couple of hours (*see* Ela Hau and Martin Wikelski's work for that study). In summary, we are not seeing the endocrine response to playback in these species that we do in northern birds.

Reply #8

Date: 1 April 2005

From: Dirk Platzen <d.platzen@anu.edu.au>

Subject: Re: Audio playback: impact on Neotropical birds?

I have used playbacks only in a research context and unfortunately have no knowledge about any literature on the topic. Nevertheless, my intuition tells me that the problem in your case is not the playbacks, which I personally think are harmless if done properly, but the disturbance created by the visitors. Especially during the mating / breeding season continued disturbance could potentially have negative effects. So my hunch would be to restrict the access to vulnerable bird species to the times outside of breeding and to avoid repetitive playbacks in the same territories. If individual birds get a playback every couple of days rather than twice a day it would make a big difference in terms of impact. There are many more problems in terms of the type of playbacks and loudness etc. but I figure you will get quite some response and will leave it with these general remarks.

Recommendation

(Posted to NEOORN on 16 May 2005)

In late March I posted a request on the NEOORN list asking for advice on the impacts of audio playbacks on birds. I had specifically in mind the impacts on Neotropical species, but, of course, the potential impacts extend to all ecosystems.

I've assembled the responses I received in a single document. Browse to

<http://sciborg.uwaterloo.ca/~smithsm>

and download the file [playback.pdf](#). This "web site" is a bare-bones site I use only for file exchanges — your browser will simply show a directory listing.

Here's a summary of what I found and what I'll be recommending:

1. There is almost no hard literature on the impacts of playback on Neotropical birds. Clearly there is a real need for research here, although I agree with some of the correspondents that designing such research won't be easy. Perhaps someone with playback skills could combine research support from the conservation community and pair it with 2 or 3 of the more ecologically sensitive lodges and do some hard research on the topic.
2. There is a *strong* consensus of opinion that limited playback in a research setting is both entirely appropriate and of little impact. Even considering the possible conflict of interest here, I agree strongly with this consensus, so lodges that permit research on their properties should continue to grant permission for this type of playback activity.
3. There is a less strong but majority consensus that repeated, high-intensity playback, particularly involving large groups, *may* be harmful to some species at some times. Certainly a *lot* of correspondents expressed concern here.

The lodge I had in mind when I posted my original request attracts a *lot* of birding groups and these groups can be persistent and intrusive in their repeated attempts to find choice targets for clients. There were some anecdotal reports of the possible impact of playback on predation pressures.

Recommendation

My recommendation to the lodge will be to invoke the Precautionary Principle — in the absence of evidence that the activity is harmless, act on the assumption that it is harmful. So I'll be recommending to this lodge that playbacks be restricted but not eliminated entirely. I think that it is unnecessary that playbacks be banned — the lodge has to be economically viable and paying bird watchers are an important source of income. However, I think it is also reasonable that the lodge ask visitors to behave in an ecologically cautious manner.

Some years ago when I visited the Asa Wright Center in Trinidad, I visited their Oil Bird colony. I remember feeling distinctly ill-at-ease during my visit — I really felt like an intruder, and clearly the presence of people in the grotto was stressful to the birds. I was, however, impressed with the tough stand this lodge took on visits to this highly sought bird — visits were restricted to twice a week, the group size was kept small and all visits had to be led by a local guide — you were not allowed to take that trail on your own. I judge this to be a sensible compromise — and something similar could be worked out for playbacks ... restrict the trails on which they can be done and the frequency with which they can be used.

Of course, as always, the tough job is supervision and enforcement!

I thank everyone who took the time to respond to my request for help and information.