

Ketterson / Nolan Research Group Collection

This document is part of a collection that serves two purposes. First it is a public archive for data and documents resulting from evolutionary, ecological, and behavioral research conducted by the Ketterson-Nolan research group. The focus of the research is an abundant North American songbird, the dark-eyed junco, *Junco hyemalis*, and the primary sources of support have been the National Science Foundation and Indiana University. The research was conducted in collaboration with numerous colleagues and students, and the objective of this site is to preserve not only the published products of the research, but also to document the organization and people that led to the published findings. Second it is a repository for the works of Val Nolan Jr., who studied songbirds in addition to the junco: in particular the prairie warbler, *Dendroica discolor*. This site was originally compiled and organized by Eric Snajdr, Nicole Gerlach, and Ellen Ketterson.

Context Statement

This document was generated as part of a long-term biological research project on a songbird, the dark-eyed junco, conducted by the Ketterson/Nolan research group at Indiana University. For more information, please see IUScholarWorks (<https://scholarworks.iu.edu/dspace/handle/2022/7911>).

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PHASE III, May 16-June 6, 1999

- **Mapping the study area for adult locations and nest locations**
- **Implanting males (one more week of targeting)**
- **Finding and following nests, including hatching order and sex ratio (?)**
- **Bird care**
- **Sub-projects including GPS/GIS/Tracking (Diane & Davey), setting up captive immune experiment (Joe), egg masses (Bill), Nestling projects**

Implanting began 19 April, by 2 May we had implanted 107 birds, by 15 May we had implanted 120, an excellent effort. Phase III goals are similar to Phase II, with the exception that sub-projects have begun in earnest. Val and I leave today. Eric will keep the fieldwork coordinated and Joe will keep us in supplies and insults. *Please, for Eric's health and sanity, enter your field information as the day progresses, so he can get some rest.* Good luck to all of you, we wish you success.

Mapping

Our maps are taking shape and soon Eric will produce a summary of who to expect where around the study area. As soon as he does, please test it out and help to correct mistakes, add pairs, etc. Meanwhile, please take along a list of the color bands of all the birds we have handled this year (made by DZ/EK, may need to be updated). We need to locate all implanted and unimplanted or unbanded birds as soon as possible.

Because the failure rate has been higher than we expected, many of the nests we have found have not been associated with pairs, so this job has not progressed as rapidly as hoped. This says that when you find an incubating female it is more pressing than last year to identify the pair before the nest fails. You may need to wait for the female to return to the nest and perhaps play a tape to get the male's attention. The adverb here if you use the tape is to play it "judiciously," which means as briefly as possible. We have a number of experiments this year that could involve playback so we don't want to habituate our males.

For a while longer pairs can be identified at net sites as they forage, so it might be worth putting in some time watching nets in the morning or evening.

As described in the last handout for Phase II, during the fertile period females will make chips and trill sounds as they fly and forage. Males may make faint songs or loud, rapidly delivered ones. If the female is laying, you are not likely to be able to use her behavior to find the nest, but you can get her color bands, who she is mated to, etc. Incubating females forage fast. In general, they are off the nest for 20 min for every 40 min they are on eggs. When the females finally start incubating, males will move up in the trees some to sing. You will then be able to ID males by their bands. Record all identifications on your sighting sheets, implant logs, and on the maps.

Implanting males (one more week of targeting)

Implanting is officially over and we should take down the nets so noone steals them. It's still OK to target for a little bit longer if you find an unimplanted bird in the middle of the study area, but it's no longer a priority. Let's hope we got them.

Before you take down the nets and traps, **be sure that Davey has gotten the GPS information on them.** On WVN, many of the net sites are not traditional, so Davey, please get fixes on the locations on the traditional sites as well and label them differently, e.g., pre-1999. [Thank you]

Finding and following nests

If you haven't already, please read Licia Wolf's description of how to find nests. Also please re-read the document, "So you found a nest". When you do find nests, note them on the daily list so Eric knows **and** also record the nest ID on the implant log **and** make a nest log. See document on nests for what information to record. If the adults have been bled, enter their blood numbers. If they have not, add them to the daily list so we know to capture and bleed them. Follow instructions from daily list and on the nest instruction sheet. Diane/Davey please be sure to make nest logs for the nests you are working with even if you need to keep them for yourselves

If we get to busy, we may need to re-think what information we collect from each nest, and cut things out. But at a minimum we need to know GPS location, number hatching, success/failure, and number of young leaving the nest. We also need to collect DNA for paternity. Depending on the preliminary results from the sex ratio, we may also need to bleed on day 2 for sex. If need be, we can skip day 3 visit, measurements of growth except fledging mass, and catching parents at fledging (unless Joe wants them).

For nests found during laying, Bill will be marking, weighing, and measuring eggs, so please keep him informed of such nests. If possible, I would **love** to have some hormone blood samples from females during laying.

Please re-read the instructions for hatch checks. For those nests where eggs are marked during laying, we need to know order of hatching. Please don't miss any opportunities to get these data.

Bird care

Bird care will need to be done daily all summer long. Joe will oversee, but for now, please share this equally among yourselves. The key to good bird health is clean water dishes. Joe is working on ways to make this as easy as possible.

Sub-projects including radio-tracking (Diane/Davey), immunity (Joe), egg masses (Bill), nestling attributes (Ethan), REUs

Ethan and Diane are ready to go. The REUs are due during the last week of May. Joe's cage should be done by Monday and he will begin to put in his males. Please read Goals.99.long, so you know what each group hopes to accomplish. Diane and Davey need fertile females. Ethan and Joe need nests with nestlings. Bill needs to know about any laying females so he can obtain egg masses. I want everyone's projects to succeed, and the key to this is finding nests and communication. Please stay aware of one another's progress and problems. It is more fun that way, but it's also necessary. Good luck! Val and I are feeling very pleased to be working with such a talented and nice group of people.