

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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PROCESSING BIRDS IN EARLY SPRING, from Spring 1992, updated Spring 95 April 13, 1995

We should implant the birds as simultaneously as possible, which requires that we rotate regularly through the various sub-areas of the study area. It is not a good idea to treat all the birds on WPR and then move to the Hotel, etc.

Also, we want to avoid over-investing in areas early in the year that may dry up later, e.g., Jungle Trail which becomes almost unworkable because, at least in some years, the birds disappear and the nests are so difficult to find.

As much as possible, we want to space our nets evenly along the trails and use traditional net and trap sites, so we can compare samples across years. It is important to keep a record of net hours and trap hours, so we will have some index of the effort expended. Please see Zig's record forms on this. I am still agonizing about how to do the implanting....more on this tomorrow.

We also need to standardize the data we gather on birds, both in terms of the variables we measure and the way we make the measurements. **As always, we need to measure wing, tail, tarsus, mass, fat class, condition, covert molt, eye color, presence or absence of a brood patch, and cloacal protuberance** (after, Tuttle, length, depth, width, with calipers see diagram below). The data sheets prompt you for some of these items, but not for all of them, so you need to stay alert to be sure that you have collected all these data.

As always, decisions need to be made regarding each bird's sex (M, F) and age (N, J, A, Y, A, O). Jennifer H., Kris, Steve, and Michele should make conscious efforts to confirm that their methods are identical and that their data match Val's, Zig's and Ellen's. So they should measure each others' birds, calibrate an object of known mass against one another's pesola balances, fat class the same bird independently, etc. This will take a little while, so please keep at it, and continue to calibrate yourself against other people. They should also point out when they have been given conflicting instructions, since that will help us recognize where we are differing among ourselves.

Each time you handle a bird, you need to note whether you have done anything to harm it. If you think you have done something that makes it unlikely that the bird will be caught again - to take an extreme example, broken its heel - you must indicate this on the banding sheet at the time of capture. These decisions are very much harder to make later.

If we go out to catch a particular bird "on purpose," e.g., because we needed to bleed it or to know its mass at nest-leaving, or whatever, then we must make a note to that effect. This is so we can eliminate such birds from the sample when we analyze the data base later for seasonally varying population structure. Birds we set out to catch on purpose cannot be treated as caught at random.

Please follow all of Zig's guidelines about putting new captures on separate banding sheets than recaptures. This hugely simplifies the task of reporting our activities to the banding office and makes it easier to enter the data into the computer and to check it later for errors.

It is also important to record **ALL** encounters with birds on the banding sheets, even if the encounter is recorded in some other way. That is, if a bird is bled, then that fact is noted on a bleeding sheet, but that does not relieve one from the responsibility of recording the encounter on a banding sheet. I can't stress this one enough.

Sightings are one of the most difficult categories to deal with. Some birds may be sighted in early spring and never seen again; others are seen on a near daily basis and we grow weary of recording the fact. Sightings should be recorded on banding sheets that contain only other sightings, not captures, and recording them is most important in the early spring.

Sightings in early spring should have some statement regarding how certain the observer was about the identity of the bird seen, e.g., "perfect view of bands in excellent light," or "certain of left foot, but the red of the right foot could have been orange." We still need a way to deal with how to record the presence of birds we see continually, e.g., because it lives near the lab building, without overloading our data base.

CHECK LIST FOR SAMPLING

(1) First Capture of spring

1. If conditions permit, get a hormone sample. Unfortunately, conditions do not permit as often as we would like, but early spring is the time that we need samples the most, so please try to get some samples. If you bleed a bird for hormones, take hematocrit readings as well. This could be done early in the am, even if we were not implanting until later in the day.
2. Band if necessary and process to include all info requested on the banding sheet, plus a measurement of the clo pro and condition.
3. Regardless of sex, bleed for DNA.
4. If it's a male and Tracey wants to (when she arrives), take a sperm sample. I would like someone else to attempt to learn this method, and now is the time to learn new things.
5. If it 's a male, implant it.
6. Other variables of interest include fecal samples and blood smears.

(2) All later captures

1. Consider whether capture good for a hormone sample
2. Process bird on a recapture sheet. You can re-measure as time permits, but each time please be sure to write down the number and colors and be sure to get a weight and a fat class.
3. If conditions permit and Tracey wants to take a sperm sample.
4. **BE SURE TO CHECK THE BIRD'S IMPLANT STATUS AND MARK IT ON THE BANDING SHEET!**
If the implants have come out, bring the bird back for re-implanting.
5. When you return to the lab, enter the capture onto the implant log sheet or the nest log sheet, as appropriate.