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).

Blood Samples for DNA, April 22, 1996

For adults, take a maximum of 3 microhematocrit tubes per bird, try to get at least two; for nestlings try to get two. The first one will be the 'a' tube, the second the 'b' tube, and the third, the 'c' tube. If one tube has less blood in it than the others, make it come later in the series, i.e., either the b or the c tube (b if only 2, c if 3).

While in the field or lab, never mix up a bird and it's blood sample!! It's as simple as that; it's essential. There is no way to correct an error of this kind. Thus, put the microhematocrit tubes in marked vials, keep notes, etc.

If you plan to use the blood for hormones too, cap with clay sealant because we will need to spin the tubes down in the microhematocrit centrifuge (see separate instructions for the handling of blood smears, hematocrit, hormone samples). If sample is for DNA only, then cap with crit-o-caps or don't cap at all (if you are already in the lab).

If blood is for DNA only, dispense it directly from the microhematocrit tube into an autoclaved 150 ul eppendorf tube containing 500 ul of Longmire's solution (using gravity or using air pressure). Recall that Longmire's solution has sodium azide in it as an anti-bacterial agent and it is poison. Treat it with respect (wear gloves, wash hands).

It is important that the DNA transfer be done cleanly (no human DNA from your hands, no mixing between avian blood samples), because some day we might wish to amplify this DNA using PCR and small snippets of DNA could become a big problem. Fact is, the way the samples are processed now (multi-locus DNA fingerprinting), minute contamination would not matter, but we are collecting samples for the future as well.

The eppendorf tubes should be prepared in advance and labelled by sample # and a, b, c. Throughout the summer this is a job that almost always needs doing, and life is easier when we stay ahead of this job.

Please record **all** data requested on the data sheet. This seems tedious at the time, e.g., repeating the color combinations, but it helps us recover from mistakes, e.g. when the band number, nest ID and colors don't all match, we can figure out which is likely to be wrong.

Add the band number to the eppendorf tube along with the sample number and date.

Wrap tops of tubes in parafilm (also helpful if prepared in advance) and place the a, b, and c samples in Nunc boxes. If there is no b or c sample, leave a space for it in the box (easier to find things later). When the boxes are full, store them in a refrigerator (not a freezer).