

Note Books

The primary purpose of the notebooks is to provide Dr. Tuttle with a log of the behavioral observations you will make over the course of the field season. You will leave your notebooks behind and they will become references to the data collected throughout the season. It is therefore very important that you take very detailed notes, and that your notebooks follow certain standards. There will be notebook checks to make sure you are maintaining these notebooks in this fashion. You can “write in the rain” with these notes books if you use pencil. Do not use ball point pen, as the ink will run when you get wet. Below is a sample notebook entry. From a standard territory inspection / observation.

Important items to include in a notebook entry:

The time of the observations can be important

06:08 Enter NS3 6/14/2003

The time the territory is entered

06:12 KRKF Sings in North part of Territory

Drawing Maps and/or specifying approximately where in the territory these observations occurred

06:14 UBTF joins KRKF and they forage

06:21 KRKF and UBTF disappear

06:22 UBTF trills

06:25 KRKF and UBTF COPPULATE in big tree

Behaviors seen while in territory

06:21 KRKF and UBTF disappear

06:35 Large Snake Seen PREDATOR

06:40 Leave NS3 - 10 Flags placed

The time the territory is left and roughly how many flags were placed during the inspection

Special Observations such as copulations, solicitations, and predators should be stated and flagged in your notebook – Be sure to enter them in the Database as well

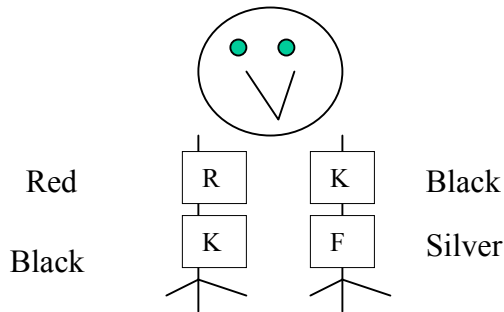
Note Books continued...

Other comments on the notebooks:

- Write as neat as possible. 4 years from now we will need to be able to know exactly what you observed
- Be sure to date every new entry
- Every observation should have a time in 24 hour time (military time)
- Be sure to differentiate between what you definitely saw and what you may have seen, or you speculate having seen
- Special observations include: chases, solicitations, trills, fights, seeing ANY predator in a territory, actual predation events, copulations, unknown birds in a territory, and any other interesting or unusual observation you see. Be sure to enter these in the database!!
- Fill up as many notebooks as you can throughout the summer
- Carefully record information on nests such as location, and description of the territory (see the section on NESTS for more information)
- Write EVERYTHING down right away. Take the time to write your observations and thoughts while you are in the field. Even if you have a perfect photographic memory. We need to be able to know what went on, and what you observed.

How to read leg bands of white-throated sparrows

- Every bird bander has their own way of reading color bands. We have been using this way for over 15 years, your observations rely on our bands being read THIS way.
- The order of the colors begins with the bird facing you the bottom left, top left, top right, bottom right. This is like a lower case “n” or an upside-down U.
- Every bird will have a silver Fish and Wildlife band. This is called “F”.
- The other colors are as follows
 - Blue = B
 - Red = R
 - Orange = O
 - Green = G
 - Black = K**
- So the bird below is KRKF: (Black, Red, Black, Silver)



Data Standards

UBWS – this means an unbanded white morphs of unknown sex

UBWF – this means an unbanded white female

UBWM - this means an unbanded white male

UBTS – this means an unbanded tan morph of unknown sex

UBTF – this means an unbanded tan female

UBTM - this means an unbanded tan male

UKTM – this means an unknown tan male (you did not see the bands) but you know it is a male

UK – you know it is a white-throated sparrow, but you saw no other information about the individual

UKM – You only know it is a male (you heard it sing)

KRXB – and “X” is used if there is a missing band (eg it fell off) This means that you have gotten a clear view of the legs and are sure that there is a missing band

KR?B – This means that you saw the legs, but you are unsure that the third band is. IT is acceptable to put something like this KR?B? because you only saw a blue band, and are unsure what position it is in

Band colors are as follows

Blue = B

Red = R

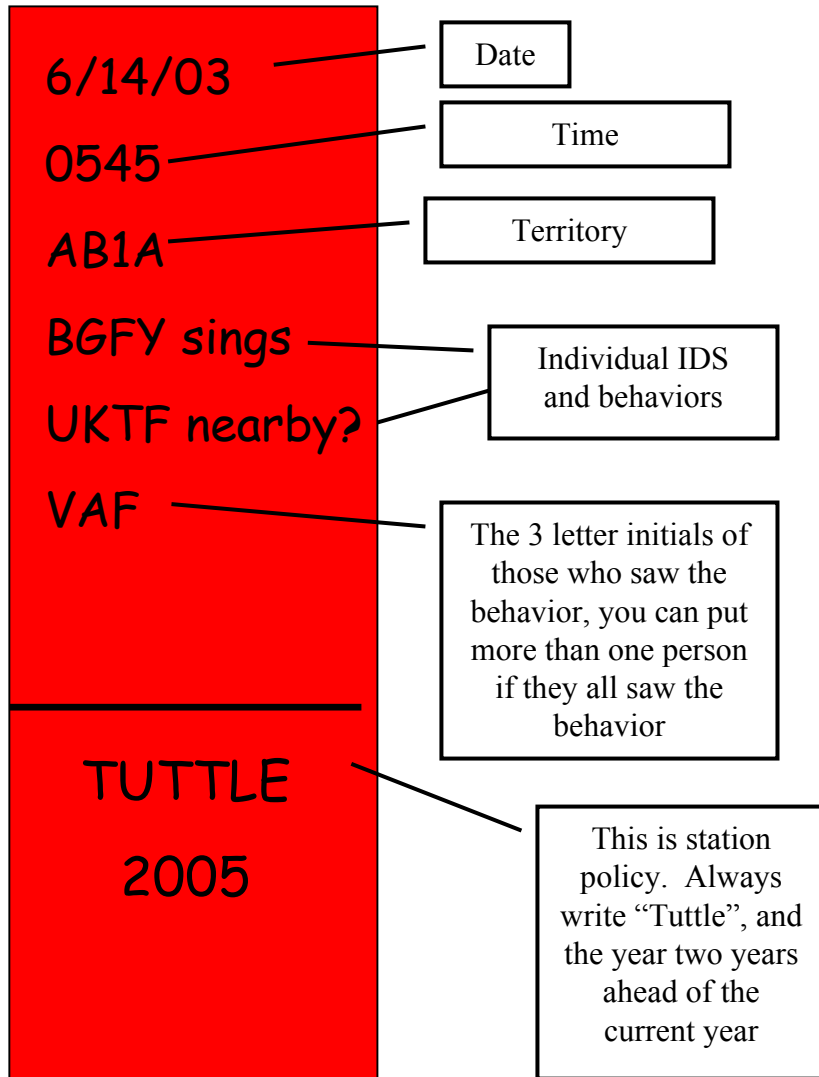
Orange = O

Green = G

Black = K

Silver = F

What goes on a flag



This Flag tells me that on the 14th of June 2003 at 545 in the morning Vince saw BGYF singing and he thinks that an unknown tan female is nearby. The "Tuttle 2005" tells station staff no to remove the flag until two years from the year it was placed.

Notes on writing flags:

- As with your notebooks be sure to specify what you are sure you saw and things you are speculating on
- Put as much information as you would like, as long as it has these minimum requirements.
- USE ONLY RED TAPE! For observations
- To flag a nest see the section on Nests!
- Use only fat Sharpies! DO NOT USE PENS or fine tip sharpies! They WILL wash off in the rain, and your data will be lost
- Tie the flag tightly and in a visible and reachable location
- Once a flag has been GPSed tie a piece of white tape to it
- Describe in detail any special observations seen here
- If there is a sequence of behaviors (eg a chase) that are flagged, you can number the flags so we see the order of events
- It is very important to specify if you see fledglings with the adults, fledglings alone, or even if you think fledglings are nearby...put this on the flag. This is important for drawing territory boundaries later

NESTS

Finding

Most nests are found with huge doses of patients and simple waiting. The first thing to know when looking for a nest is to be very careful! If you are in the vicinity of where you think a nest is, there is a VERY high chance that you may step on the nest. Remember these birds are ground nesters and so their nests may be flush against the dirt, or in a bush very close to the ground. If you step on a nest you will not only kill the baby birds and maybe the adult, but you will affect the fitness of those adults and those skew our data.

One way to find nests is by sheer luck. If you step near a nest the female will flutter off it in a rush of feathers and flapping. If this happens, STOP!! You are very near the nest and have a high probability of stepping on the nest. Look around for the nest especially under grass tufts and fern fronds. Also be aware that some females will run before fluttering to confuse you as to where the nest is.

In order to find the nest. The most efficient method is to sit far enough away and watch. Eventually the female will leave the nest, and if there are chicks, the father will bring food.

The final method is not preferred, but sometimes you have to revert to it. It is called nest beating. You take a light branch and hit an area around where you think a nest is. The hope is you will hit the female lightly on the head, or move vegetation near the nest, and the female will flutter off the nest. This does not work very often, and only works when you have a pretty good idea where the nest is.

Writing Nest information in notebooks

In your note books, write the following information about the nest:

- The territory it was found in
- Who you think the parents are
- Was the female was on the nest when you found it?
- How many eggs / chicks are in the nest
- Write specific directions on how to get to the nest.
- Write the same directions and distance from the nest flag that you wrote on the flag.
- Write the date and military time the nest was found with all of this other information

★ NEST FLAG

Found on 6/14/03

0756

AB1A

4 eggs

Female OFGY

Male UK

Nest is under fern frond at base of alder tree facing north. To get to nest go 150° for 3 meters.

Be careful hard to see!!

TUTTLE

2005

Flagging Nests

Place a flag on a nearby tree. This flag should be longer than other flags you place, and should be at a random location somewhere nearby. We have to be careful not to give an predators clues as to where the nests are. Foxes, and blue jays have figured out nests flags lead to nests, so we use the same red flags and random compass degrees to try and fool them.

The nest flag should have all of the information that you wrote in your notebooks plus compass directions and a distance to the nest. Also leave another flag to somewhere nearby in case someone is coming from another direction. Also leave a flag on the nearest trail with directions to these first flags. To the right is an example of a nest flag.

Entering the find in the database

Once you return after finding a nest you **MUST** enter the data into the nest section of the data base. You also need to fill out a nest check sheet in the data base. It is **VERY VERY** important to do this as soon as you return, because the computer schedules nest checks and banding when you enter the nest data.

Nest Checks

Sometimes nests are part of a chick growth experiment, and they are monitored every day, but if they are not, they need to be monitored every other day. Regardless of when, every time you check a nest, you must enter the data in you note book, and in the data base under nest check. Be sure to write down:

- Behaviors of the parents
- Where the female was
- The Number of chicks / eggs
- If the nest has been disturbed

Aging Nestlings:

You can tell the age of a nestling by a combination of its size and feather development.

- when they are born, white-throated sparrow chicks are about the size of a penny
- they grow about 1.5 times their body size EVERY DAY! (see chart below)
- feathers begin growing by the third or fourth day and the body should be almost completely covered with feathers by day 8 or 9
- the primary feathers (i.e. wing) and the tail feathers continue to grow even throughout fledging and so you may see young fledglings that cannot fly and have short stubby tails
- chicks should be banded at age 6 to 10 days (when they fledge). When they are younger than 6 days, their legs are too small to fit the bands and they are also too fragile to get a blood sample from. When they are much older than 8 or 9 days, they will tend to fledge prematurely when you try to put them back in the nest.
- the ideal age for banding is 7 days old. Always try to band at 7 days!
- a chick of 7 days old has 2-3 mm feathers emerging from the feather shafts of the primaries. Try to check this from a distance without touching the chicks in the nest as they might fledge prematurely.

Predation Events

If a nest has been disturbed or depredated, be sure to enter the data in the database under Nest Data and in the Nest Check Section. Also enter the data in a Special Observation sheet in the database. If one chick / egg is eaten, this counts as depredation and must be recorded in the special observation and in the Nest Data section of the database

Collecting Chicks / Eggs

DO NOT collect chicks or eggs unless specifically told to by Dr. Tuttle, Dr. Gonser or Vince. If you find a dead chick or a broken egg, radio someone in the field and get permission to collect the specimen. Upon returning to the Bio-Station immediately ask how to store the specimen and what to write on the container. Also be sure to enter the collection and death in the special observation and Nest Data and Nest Check Sections of the database.

Measuring Nests Post Fledging

In all measurements be sure to measure to the closest decimal place possible on the ruler, and then estimate on more decimal. If the distance measured is larger than the ruler, then estimate the distance and record that the measurement is a distance (e.g. 56 m to sucker brook (estimate)) Values may be 0 if nests are IN the object being measured.

Internal Diameter – (cm) this is measured in cm and is from one inside edge to the other. If the nest is oval, measure the smallest and largest distances. Enter the larger one in the notes section of the database.

External Diameter – (cm) follow the same rules for as the internal diameter

Depth – (cm) this measurement is in cm and is from the base of the cup to the top of the cup (inside)

Percent moss – (%) from 1 – 100 what percent of the composition of the nest is moss (dried or green)

Percent grass - (%) from 1 – 100 what percent of the composition of the nest is grass (dried or green) (note that moss and grass do not have to add up to 100, as there may be other materials used in the construction of the nests.

Soil Moisture – Choose one of the following to describe the soil directly around and below the nest: Standing water, very wet, wet, damp, dry, very dry, rock.

Distance to Nearest Tree - (m) this is measured in Meters and a tree is defined as a barked plant that is at least 2 meters high.

Distance to ground – (m) this is measured in meters and is measured as the distance from the base of the cup to the ground (dirt) DIRECTLY under the nest. If the nest is on a slope DO NOT measure to the bottom of the slope, but rather the dirt directly under the nest.

Measuring Nests Post Fledging continued...

Distance to water- (m) water is defined as any body of water larger than a puddle. This includes very large puddles, ponds, running streams, etc. Basically we are looking for bodies of water that may attract predators or produce large quantities of insects.

Distance to trail – (m) trail is defined as any trail we use to travel through the study site. Also record if it is a maintained trail, a temporary trail, or a deer trail.

Bush height - (m) the bush is the bush the nest is in. Measure from the dirt to the top of the bush. Sometimes, the word “bush” has a loose definition and can include grass clumps or ferns or moss clumps.

Distance to shrubbery - (m) this is the distance to the closest bunch of shrubs. This value can be 0 if the nest is in a clump of shrubs

Distance to Territory center- this will be calculated via GIS

What to Avoid doing in a nest

DO NOT Touch a nest when it has chicks or eggs in it.

DO NOT trample the Vegetation around a nest (predators will notice these things and eat the chicks!)

DO NOT touch the eggs! They will crack and the chick will end

DO NOT touch the chicks!

Spend as little time near the nest as possible, especially if the parents are feeding the chicks or it is very cold