Mottled Duck Monitoring Standard Operating Procedures

NOAAFirebird Project

Version 3.0 (February 2022)

Description

We are surveying for breeding Mottled Ducks in high marsh across Texas, Louisiana, Mississippi, and Alabama to better understand how prescribed fire in those wetlands impacts these birds. These surveys will be done from elevated platforms looking for different types of Mottled Duck flight behaviors.

Safety

NOAAFirebird Project Priorities

1 - Human Safety, 2 - Bird Safety, 3 - Equipment Safety, 4 - Data Collection.

Human Safety - Survey should not be completed during hazardous weather (thunder/lightning). Those traveling by boat to sites will wear life jackets as appropriate whenever on a moving boat. When traveling by boat, a float plan should be completed and filed with at least one person, located on the mainland, who will serve as the primary contact should an emergency occur. Float plans should include, at a minimum, contact phone numbers and emergency contacts for all persons on the boat, launch location, description, including license plate number, of the vehicle used to pull the boat/trailer and expected return time, etc. Each survey team should carry at least one cell phone with them for emergency communication. Field radios will be carried when available and dispatch is available. A first aid kit will be available/kept in each vehicle and boat. If at any time a person doing fieldwork feels unsafe continuing, they get to say so, and fieldwork stops, be that person a volunteer, a field tech, or a PI. No one will be punished for making the safe choice.

Equipment

- Binoculars (recommended 8X42 or better)
- Elevated platform - tower/ladder
- Cell phone or tablet with Avenza maps loaded with call survey points OR GPS Unit, with appropriate maps loaded, and Batteries
- Clipboard/sheet holder
- Field Datasheets, on *Rite-in-the-Rain* paper
- Kestrel Wind Meter
- Writing Utensil - #2 lead pencil (including pencil sharpener or extra leads if using mechanical pencil) or *Rite-in-the-Rain* waterproof pen
- Sighting (Mirrored) Compass
- Rangefinder
- Snake chaps where appropriate (Turtleskins brand works well)

Procedures

Pre-Survey Tasks

Load GPS Points/Avenza
Charge Batteries or have spare batteries

Survey Tasks

From February-July these observations will be done in the morning (i.e., 30 minutes before sunrise to 3 hrs after sunrise) or in the evening (i.e., 90 minutes before sunset to 30 minutes after sunset). Each survey will be conducted for 10 minutes at each survey location. Each point will be revisited at least 6 times during the season, with a goal of 3 morning and 3 evening surveys when logistically feasible. Survey points will be spaced a minimum of 1000 m apart.

Mottled duck surveys may be conducted concurrent with BLRA surveys for a field crew of two (combined species surveys for paired observers). The survey will be conducted with one member of the field crew focusing on the BLRA survey and the other on the MODU survey. Surveyors should focus solely on one species and not assist each other during the survey. Observers will be randomly assigned (flip coin) to each species per route.

For a field crew of one, combined species surveys for solo observers: this involves sequential and alternating mottled duck and rail broadcast surveys. If this survey methodology is used, observers should alternate which species is surveyed first (e.g., first survey point- conduct mottled duck survey first ten minutes and rail second ten minutes; second survey point- conduct black rail survey first ten minutes and mottled duck second ten minutes, third point- same sequence as survey point one).

MODU surveyors will arrive at the site either by boat, on foot, or by truck. Upon arrival at the survey sampling, they should set up an elevated observation platform at 4-5 feet above ground level. The observation platform may be a ladder, a truck bed, UTV bed, altered retriever platform, etc.. The observer should be able to stand on the elevated observation platform and scan (360 degrees) the surrounding area without concern for tipping over. The observer should continually and consistently scan the surrounding area with the naked eye and binoculars to a distance of up to 500 m. Record a GPS coordinate of the elevated platform. If combined with BLRA surveys, the platform should be located 5-20 m from the location where BLRA surveys are conducted to avoid obstruction of sound during call back surveys.

When a surveyor observes a pair or individual MODU, they should immediately estimate and record the estimated distance and bearing to where the bird(s) were detected. It is especially important to take a bearing and distance to MODU locations if observed entering or leaving vegetation (e.g., possible nest).

For drop flights, the surveyors should immediately estimate and record the distance and bearing to the drop location (i.e., where the bird(s) disappeared down into the vegetation). Further, they should also record the minute during the survey when the drop (i.e., the birds disappeared into the vegetation) occurred.

For chase flights, record every minute of the survey when the flight was observed.

Record environmental data once a survey period at the beginning of each sampling period.

For vegetation surveys associated with mottled duck locations, priority should be given to first detection locations, over multiple detections at a single location (i.e., more points across the landscape vs higher frequency of points at a single survey location).

For more details on different MODU behaviors please refer to this powerpoint built by Joe Lancaster.

Post-Survey Tasks

After field work is complete for a given survey period and field crews have returned to their lab or lodging site, the data recorded on the Breeding MODU point count survey data sheet should be entered into the Firebird database (see Firebird data entry reference guide for information regarding data entry). Ideally this should be done on the same day that the data were collected. Once data are entered into the Firebird database, the surveyor should scan, photocopy, or take pictures of the data sheets and email them to Peter Kappes (pk565@msstate.edu).

References

If this protocol needs to be changed/updated, please contacted Auriel Fournier (auriel@illinois.edu; 419.307.6261)