**The Latham’s Snipe Project:** **Counting instructions**

Thank you all for contributing to the Latham’s Snipe Project. The data obtained is invaluable for understanding relative abundances of Australian snipe around their important wintering grounds, to aid conservation efforts. All data will be stored in the project’s database housed at Federation University, as well as being entered into the BirdLife Australia Atlas of Australian birds for use in future studies and is thus open to anyone.

**Aim:** *The general aim is to walk a fixed route transect to count Latham’s Snipe as they flush from the grass/wetland vegetation. (Sounds easy right?!)*

**Summary of method:**

* Surveys are conducted by walking a transect (“fixed route”) through a wetland / snipe site counting snipe as they flush
* Pause periodically during survey, helps improve detection of snipe
* Follow the same route each time
* Spread out 40m apart with multiple counters
* Record your track with a GPS, draw it on a map or charm one of us into visiting so that we can do it ourselves!
* Record your transect distance, and start and end times

(Who thought that counting birds could be so complicated!)

**Details:**

The method we use has been refined over time to try and maximise detection probability of snipe. The method closely aligns with the “fixed-route” monitoring method of BirdLife Australia. Using this fixed route transect method (as we call it) allows us to determine a density of snipe present because we can calculate the area surveyed from your transect. And it also enable counts to be reported to the BirdLife Atlas in a standardised format so that others can use the data in future.

The idea is that the same route is surveyed each time, which is probably what most people are doing. But if not, it is important to walk the same path along the transect (depending on conditions of course, ie water levels etc). So think about your route(s) not just as the site you are surveying now looks but also how it will potentially look as the season goes on as environmental conditions change, such as when the wetland starts to dry out. As you survey, pace yourselves… No need to hurry and no need to survey every possible route. Pick a few that are manageable over the long run rather than burning out in one season.

Ideally we’d like to know the names of the people involved, but more importantly, we need to know the number of people so that we can figure out the area covered and the effective effort. To do this we are making a standardised recommendation that if you are walking a fixed-route with multiple people spread out in a line, that they are **spaced 40m apart**. This comes from experience in this study that birds flush on average at about 20m. They may flush from lesser of greater distances (5m to 100m) but if we work on 20m, then people placed 40m apart means that we can be fairly confident any birds present are flushed. It is a good idea to pause every now and then, as birds that may be sitting tight will often get nervous and flush if you stop walking. It is also important to calibrate that 40m before starting the count with each other, so pace it out or use a tape measure until you get your eye in.

NB: If you are an individual walking a fixed route it is no problem as we will assume that you cover an area of 20m either side of the transect.

The final and most important aspect that makes the method standardised and repeatable by anyone is to somehow map or measure the distance of the route. As we have mentioned before, anyone that has a GPS and can record the route walked and email the track file to us that would be great, but we realise that this is not an option for everyone. An alternative method would be to print out a Google Map of the area and mark on it the route walked, then scan and email it to us. In the longer term we hope that one of us will be able to visit each site at some stage, perhaps in conjunction with a talk or workshop with your local community or bird group and have each of you take us on a site visit so that we can GPS it ourselves. It really doesn’t matter if we have this particular piece of information just yet because it can be obtained retrospectively but if any of the above is possible that would be great!

**Datasheet fields:**

Try and record most of these before you start your survey, as it is easy to forget after you have finished.

* Site name
* Date and time start/end
Important to know how long was spent surveying a site.
* Distance travelled
This is one of the most important measures after date, snipe count and time surveyed. If you have a **GPS or fitness tracker**, switch them on before you start and make sure they are recording your path. If you don’t have access to a GPS then you could draw your path on a hard copy or google map from which, we can retrospectively estimate distance travelled.
* Counters
Important to include the number of people, and their names if possible.
* Wind speed and direction
You can use the Beaufort scale for wind speed provided over the page if you wish or a more general description such as; still, light breeze, breezy, windy, strong wind or gusty etc…
* Cloud cover
% of sky covered by cloud e.g. 10%. Usually a score out of 3, where 0 is no cloud and 3 is 100% cloud.
* Temperature
Record if estimated, measured or looked up online
* Precipitation
e.g. mist, spitting, showers, heavy etc. It could also be relevant if it has been raining the night before, or during the day if you are surveying in the afternoon so record that if you remember.
* Wetland area
This is useful to know if the snipe are actually using areas with surface water. Sometimes they don’t. An approximation is fine, ie. is it full, half, dry, flooded etc…
* Wetland depth
Again, this is just to get a rough idea about the types of wetlands snipe are hanging around. It is usually impossible to know for sure without wading, but you can get an idea of the difference between say 20cm and 2m by floating vegetation and other wading birds.
* Fringing vegetation
Some notes, if you can, about the dominant vegetation at the wetland - vegetation type such as introduced grasses (like kikuyu), saltmarsh, rushes, sedges, shrubs, trees etc.
* Photos
If you’ve got a camera, photos are super helpful as we can sometimes work out vegetation, water area and even estimate depth from a good set of photos. If you have time and inclination, photos taken each time you walk the route and from the same position helps us build up a catalogue of photos showing changes over time (bonus points for marking the location that you took the photo on your GPS track!)
* Disturbance and others notes:
Snipe are funny birds, and some will be easily disturbed by human activity whilst others won’t. And nearby predators like birds of prey or foxes sometimes will disturb birds. So, any comments regarding the level of disturbance at the site is helpful, such as the amount of recreational use it receives and what type, numbers of cars, walkers, cyclists, people with dogs running free etc… and any local knowledge or evidence of predation pressure in the area.

**Record during counting:**

* **As each bird flushes** record the number (sometimes more than 1 bird flushes from a single spot). If you are able to estimate how far away the bird was from the observer, that is really useful information, although we understand that estimating distances is tricky. If you can record the type of habitat it flushed from (ie. Low grass, saltmarsh, muddy bank) and how high the vegetation is at that spot (if vegetation is present), that would be much appreciated too.
* If you have access to a handheld GPS, mark a **waypoint** at the start and the end of each sites transect on your GPS. And you have time, mark a waypoint for locations where birds were flushed. This is useful information but not critical.

**Other tips and points:**

* The **transect** itself can be either be straight or meandering through/around the wetland. Walk slowly and stop every 50 m or less and stand still, as sometimes birds will not flush unless you stop moving as mentioned above. The main purpose is that it covers all the potential Snipe habitat or at least that which you as the observer has decided is practical and achievable over time.
* If you have **multiple counters**, considerallocating one as a scribe and the other(s) as counters toensure all birds are counted. The most difficult aspect with counting Snipe, especially when there are multiple sites that you are surveying nearby is the risk of double counting. We take a very conservative approach and if there is any chance of a count being a repeat we discount it. So stop when you flush birds and watch where they go… sometimes they will re-settle 20 to 50m away (often where you intend to walk!), sometimes they circle over the site for a while before re-settling and sometimes they depart completely to find another roost. In areas where there are multiple sites close together that may form a network, make estimates of how many birds fly to each of the other sites from the one you are counting and later take that number off the count at the other site. This can get really complicated in places like Peterborough where you have a network of 5 sites virtually next to each other!
* **Marking waypoints on your GPS** - This is usually done just by hitting enter on a handheld Garmin and selecting “Mark”. You are then given an option to enter a name or number for that waypoint. The waypoint section on the data sheet is for recording that name or number given to each of the waypoints at the start and end of the transect. You can also write down the co-ordinates of those waypoints if you wish but it’s not necessary if it is recorded on the GPS.

**NB:** Ideally these **start and finish waypoints** and **distances travelled** won’t change once the fixed-route for each site is established, so the hard work only needs to be done once and then it is just a matter of repeating the same thing each time.

**What to do with your datasheets:**

* You can either **enter your data** directly into the electronic datasheets provided (on a mobile device) or print and fillout a hard copy. Hard copies can be photographed on a mobile phone and texted to Birgita (0428591810) or scanned and emailed to Birgita Hansen (b.hansen@federation.edu.au).
* If you have any **GPS tracks and waypoints** you can downloadthem (preferably in Basecamp, as it is the easiest) and email them to the above addresses. If you use a Garmin GPS, you can download Basecamp for free which will allow you to download your data relatively easily.
http://www.garmin.com/en-AU/shop/downloads/basecamp
* **Email your photos** similarly to the above addresses.
* Feel free to record other birdsfor your own interest or for submission to the ATLAS, but this is not required.

**Most Importantly**

**Please remember to Stay Safe and have fun out there! –** The number one priority is to look after yourselves and others as your safety during involvement in the project is your own responsibility. We recommend counting in groups, wearing appropriate clothing for protection from the sun/cold/snakes etc, whatever the conditions present. Be Sun Smart and stay hydrated and make sure you have the ability to call someone in an emergency or at least tell someone where you are going. Remember, the counts are important (and hopefully fun!) but safety takes priority over collecting data.

NB: Make sure you have permission from the landholder if you plan to undertake counts on Private Property.

## Beaufort Wind Scale (http://www.bom.gov.au/lam/glossary/beaufort.shtml)

**Please note:** Beaufort scale numbers and descriptive terms such as 'near gale', 'strong gale' and 'violent storm' are not normally used in Bureau of Meteorology communications or forecasts.

| **Beaufort scale number** | **Descriptive term** | **Units in km/h** | **Units in knots** | **Description on Land** |
| --- | --- | --- | --- | --- |
| 0 | Calm | 0 | 0 | Smoke rises vertically |
| 1-3 | Light winds | 19 km/h or less | 10 knots or less | Wind felt on face; leaves rustle; ordinary vanes moved by wind. |
| 4 | Moderate winds | 20 - 29 km/h | 11-16 knots | Raises dust and loose paper; small branches are moved. |
| 5 | Fresh winds | 30 - 39 km/h | 17-21 knots | Small trees in leaf begin to sway; crested wavelets form on inland waters |
| 6 | Strong winds | 40 - 50 km/h | 22-27 knots | Large branches in motion; whistling heard in telephone wires; umbrellas used with difficulty. |
| 7 | Near gale | 51 - 62 km/h | 28-33 knots | Whole trees in motion; inconvenience felt when walking against wind. |
| 8 | Gale | 63 - 75 km/h | 34-40 knots | Twigs break off trees; progress generally impeded. |
| 9 | Strong gale | 76 - 87 km/h | 41-47 knots | Slight structural damage occurs -roofing dislodged; larger branches break off. |
| 10 | Storm | 88 - 102 km/h | 48-55 knots | Seldom experienced inland; trees uprooted; considerable structural damage. |
| 11 | Violent storm | 103 -117 km/h | 56-63 knots | Very rarely experienced - widespread damage |
| 12+ | Hurricane | 118 km/h or more | 64 knots or more | Very rarely experienced - widespread damage |