

Survey Techniques

When completing any Survey Record for the Atlas & Birddata, the "Survey Type" must be specified. This document will help familiarise you with the types of surveys that produce useful and scientifically valued information.

There are six methods of bird surveys categorised as **systematic bird surveys**, **unstandardised bird surveys** and **species lists**. The value of the survey data depends upon the survey type.

Most Valuable



Systematic bird surveys (population & occurrence trend value)

- | | |
|---------------------------|----------------------------------|
| 1. 2-ha, 20min Search | } Embedded Surveys
(Combined) |
| 2. Area Search (500m/5km) | |

Unstandardised Bird surveys (occurrence value)

3. Incidental Search
4. Fixed Route Search

Species lists (recreational value only)

5. Bird lists

Less Valuable

Data from **Systematic Bird Surveys** (2-ha, 20 minute Search, 500m and 5km Area Searches) provide the most beneficial information of bird occurrences and population changes. **Embedded surveys** allow you to combine 2-ha, 20 min Search and an Area Search in one survey. This provides twice the data value in just one survey. **Unstandardised Bird Surveys** (Incidental and Fixed Route searches) provide basic information regarding only the geographical occurrences of species. **Bird lists** have limited scientific value as they are not standardised in observation time or area surveyed.

Selecting Survey Type

Simply click the drop down box and select the relevant survey type as shown below. Remember to also specify the number of observers helping with the survey. Note*: Embedded survey is not available in the Birddata app.

Survey type Number of observers

Select survey type...

Systematic bird survey (preferred option)
 2ha, 20 minute search
 500m area search
 5km area search

Embedded survey (two surveys in one)
 2 ha, 20 min + 500m area search

Unstandardised bird survey (useful in certain applications)
 Incidental search
 Fixed route search

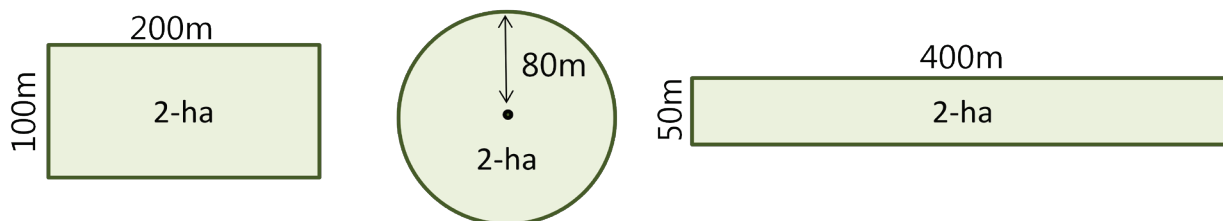
Bird list (recreational value only)
 Bird list

Systematic Bird Surveys

- 2-ha, 20 min Search
- Area Search (500m/5km)
- Embedded Surveys (Two surveys in one)

2-ha, 20 min Search

This involves searching for birds in a two-hectare area for 20 minutes. The recommended shape for the two hectares is 100 m x 200 metres. You can use other shapes, such as a circle with a radius of 80 metres, or a strip 400 m long x 50 m wide. Only record birds within the two-hectare area (though see Embedded Survey below). Birds flying over the search area should be included.



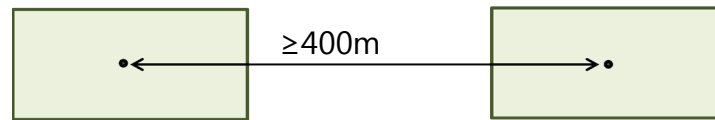
Choosing a 2-ha search area

Do not automatically choose a site which yields the most birds. On occasion choose a site where birds may not be as prevalent. This provides us with a good cross-section of data.

Try to introduce a degree of randomness into your site selection. A good way to do this is to choose a site on a map before you arrive so your choice will not be influenced by the surroundings. You could also randomly choose from sites with similar habitat and management conditions.

Your site should be representative of the particular habitat you are surveying. As much as possible, avoid mixing habitat types (e.g. half grassland/half forest, or half grazed/half ungrazed) in the same 2-ha search area. If you are surveying two nearby 2-ha areas on the same day make

sure that the centre of the two areas are at least 400 metres apart, so there is no overlap between them.



If you intend to conduct repeat seasonal surveys in the same 2-ha search area, we would like you to fill out an Atlas habitat form (Habitat Form). These optional forms are issued on request. If a major change occurs at the site, such as a large fire or clearing, a new Habitat Form should be completed. After you complete this form, we will give you a site number for that particular 2-ha search area. You can use this number for each survey at this site to save you time when submitting your results.

Area Search

There are two scales of Area Searches:

- 500-meter Area Search
- 5-kilometres Area Search

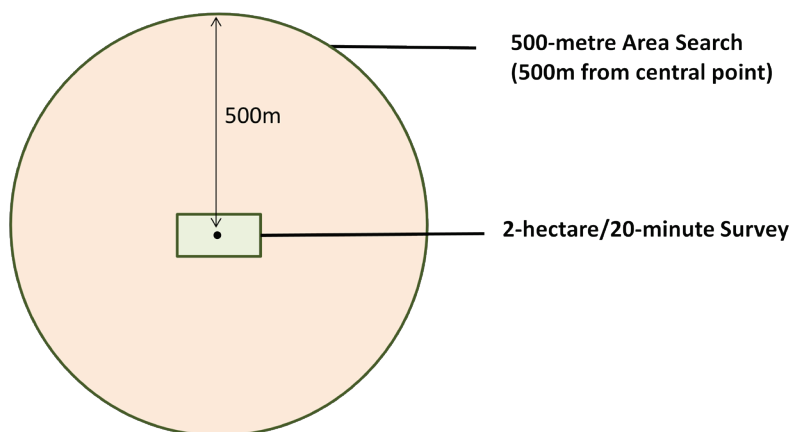
The Area Search is more flexible than the 2-ha search — you can search any area, listing the birds seen around a central point. You may do a small Area Search, within 500 metres of a central point, or a larger one that extends beyond 500 metres but is within 5 kilometres of a central point (you must indicate which size of area you searched when submitting your results). The search area can be any shape. Search for at least 20 minutes, but not more than one week, though you may submit calendar-monthly lists by submitting 12 lists per year, one for each calendar month (this is primarily for people who survey a site continuously).

Wetland sites

The Area Search method is usually appropriate for surveying wetland sites. You can survey the whole of a wetland if it remains within 5 kilometres of a central point. This method is also useful for conducting seabird surveys, or producing a bird inventory for small islands.

Embedded Survey

Embedded surveys combine a 2-hectare/20 minute Search and 500-metre Area Search.



Embedded survey

Begin with a 2-ha, 20 min survey around a central point and extend the search after 20 minutes to a 500m Area Search. Birds observed outside of the 2-ha area in the first 20 minutes must be noted separately to the 2-ha, 20min search observations. Birds should not be double counted.

Recording an Embedded Survey

When recording observations from an embedded survey, birds recorded within the 2-ha, 20 min survey should be recorded separately to birds outside of the 2-ha area (without double counting). The data entry system will automatically sum counts within and outside the 2-ha area to calculate the 500 m Area Search totals (see example below).

Entering embedded surveys in Birdata web portal*

Recording embedded surveys in Birdata separates the 2-hectare/20-minute Search + 500-metre Area Search Surveys. Birdata will automatically combine the 2- ha, 20 min observations and outside 2-ha observations to determine the 500 m Area survey totals.

*Embedded Survey not available in the Birdata app

$$[\text{individuals within 2-ha, 20min}] + [\text{individuals outside 2-ha}] = [\text{individuals in 500m Area Search}]$$

Embedded survey record

	Count (within 2-ha, 20 min)	Count (Outside 2-ha)	500 m Area Search Count
Common Myna	2	5	7
Red Wattlebird	1	2	3

Sightings entry section for an embedded survey in Birdata

PROGRAM LOCATION DETAILS **SIGHTINGS** REVIEW & SUBMIT



Search by species name SHIFT + RETURN to search

Sort by: [Common Name](#) [Scientific Name](#) [Taxonomy](#) [Order Added](#)

Common Myna <small><i>Sturnus tristis</i></small>	Count (in 2ha) <input type="text" value="2"/>	Breeding Activity (in 2ha) <input type="text" value="None"/>	Count (out 2ha) <input type="text" value="5"/>	Breeding Activity (out 2ha) <input type="text" value="None"/>
Red Wattlebird <small><i>Anthochaera carunculata</i></small>	Count (in 2ha) <input type="text" value="1"/>	Breeding Activity (in 2ha) <input type="text" value="None"/>	Count (out 2ha) <input type="text" value="2"/>	Breeding Activity (out 2ha) <input type="text" value="None"/>

Review page of an embedded survey

SIGHTINGS

Species	Count (in 2ha)	Breeding activity (in 2ha)	Count (area)	Breeding activity (area)
 Common Myna	2	None	7	None
 Red Wattlebird	1	None	3	None

Unstandardised Bird Surveys

Incidental Search

Records of one-off sightings of uncommon or unusual species, surveys of a specific group of birds such as waders or waterfowl, or surveys of less than 20 minutes duration should be recorded as Incidental Searches. If you see an unusual bird, you may be asked to complete an Unusual Record Report Form, so take a note of how you identified the bird and how you eliminated similar species.

Fixed-Route Monitoring

This method allows you to conduct repeat surveys at your favourite birding spot. It doesn't matter where it is —your local park, a wetland, a patch of forest or a paddock. All you have to do is register your survey site, establish a birdwatching route through it and count the birds that you see along the way.

It's easy, but there are a few simple rules to keep your surveys consistent:

- Make sure you keep to the same route on each survey (it can be as long as you like)
- Conduct your surveys at the same time of day
- Take the same amount of time to do each survey
- Ideally, conduct your surveys once a month

Bird list

Bird lists are simply the list of bird species observed at a location. This survey type has limited scientific value as they are not standardised in duration or area surveyed, preventing useful comparisons between surveys. These lists can be used for recreational purposes regarding the general occurrence of bird species.

Shared Sites (Group Atlas Sites)

We are looking to set up a network of shared survey sites around the country which other birdwatchers can visit, to optimise the amount of data that can be generated at individual sites.

If you want to get involved, you can visit an existing Shared Site, or with the help of the Birdata team, you can establish your own. Click [here](#) to see existing Shared Sites. Click on an individual site to view all the information you need to know — the site's co-ordinates, a map with the site's boundaries, directions of how to get there, instructions on the preferred method of surveying (e.g. 2-ha, 20 min search), and a list of the species recorded there. If you'd like to set up and register your own Shared Site, please contact Atlas & Birdata program manager, Andrew Silcocks at birdata@birdlife.org.au