

Terrestrial Vertebrate Fauna Survey Field Data Sheets

July 2022 (V 1.4)



Prepared by: Queensland Herbarium and Biodiversity Science, Department of Environment and Science.

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June 2022 Version 1.4

Datasheets

Description and Purpose

All fauna survey or incidental sightings require certain minimum data (see table below) to be recorded. Depending on the project and its purpose, additional types of data will also be required.

Standardised data sheets containing the required data provide a convenient and effective way to ensure that the required data are recorded in a consistent manner. Information collected during surveys may have important historical ramifications and may be required for other applications in the future. Therefore the appropriate documentation and storage of key biological data is highly desirable.

It is recommended that datasheets should contain the following as a minimum:

- Fields for recording all essential data (including about the environmental conditions at the time of the survey) and specifying units if appropriate.
- Code descriptions, if codes are used in data recording.
- Extra space for recording notes that do not fit into specific categories.
- Capability to track progress of data entry, verification and storage. It is also important to be able to link the stored data back to the original, archived datasheet (see 'office use only section').

The datasheets attached have been developed by experienced zoologists and ecologists familiar with undertaking wildlife surveys. Some examples of particular datasheets have been used, fine-tuned and improved over a period of years or even decades. Others, particularly for newer technologies such as camera trapping or acoustic recording may require future refining. While designed by Queensland Government staff for use in their inventory, monitoring and research projects, we believe that that the datasheets may be useful for other practitioners. There is no requirement to use Queensland Government datasheets or return collected data to the Queensland Government (beyond permit requirements, such as 'return of operations' for scientific permits).

Minimum recommended data to be recorded for each survey site and/or sighting during the field survey.

Data required	Reason
Location description	Detailed description including a regional and local context. This ensures that coordinate locations can be verified.
Location coordinates	Latitude and longitude in decimal degrees or map grid reference (zone, easting and northing). Preferably recorded using a GPS (Global Positioning System).
Location Datum	This is the standard position or level that measurements are taken from (e.g. DES standard is GDA94; others are AGD84, AGD66). This is especially important to record if coordinates are from maps older than 10 years.
Location precision	Accuracy of the coordinate location, recorded in metres. The distance of the sighting/record from the coordinates may also need to be factored in. Location precision should also reflect the area around the coordinates over which records were collected.
Date	Including day, month and year of survey.

Observer Name/s	Name of the person/s responsible for the identification of the species.
Taxon Name	Species identification to the most precise level that can be accurately and confidently identified. In most cases this would include a scientific name with genus and species (e.g. <i>Macropus giganteus</i>). Subspecies should be recorded if known. In other cases recording to 'species pair' level (e.g. <i>Litoria jungguy/L. wilcoxii</i> , <i>L. serrata/L. myola</i>) where a species can be separated only by genetic analysis, is appropriate, or at generic level (Genus spp.) if there is any doubt about identification to species or 'species pair' level. For birds, common names are acceptable if using a standard checklist (e.g., Birdlife Australia maintain a current working list of Australian Birds).
Species code (optional)	A unique taxonomic coding system, such as the Census of Australian Vertebrate Species on the Department of Climate Change, Environment, Energy and Water website), to aid in rapid, accurate (spelling and taxonomy) entry of species data.
Number or Count of Individuals	Presence of the species assumes a minimum of one individual, so record the lowest number that can be accurately counted or estimated.
Observation Type	Whether the animal(s) were seen, heard, identified from remains, etc.
Reliability	Reliability of the sighting. Data should not be recorded when the identification of the species is uncertain unless a specimen or photo can be taken for later identification. Specimens lodged with public institutions attract the highest reliability. However, collection of specimens should occur only when the identification is uncertain, and identification cannot be made from photographs.
Survey Effort	Survey effort is especially important to record if using a standard or commonly used search method (e.g. area and/or time limited searches).
Time	The time when the sighting occurred or when the search was performed (e.g. 1600 – 1630)
Assessment Unit	Relatively homogenous unit usually based on vegetation type (e.g. RE), used for sampling the survey area
Habitat Description	The habitat where a species was recorded can change with time and disturbance (seasonal changes as well as clearing, fire, drought, etc). A minimum description should include the RE and broad condition state. If this is not possible, then a simple habitat description using a standard technique can help to verify vegetation mapping in some cases. The standard technique used should be reported (e.g. Tall closed <i>Eucalyptus grandis</i> forest - Walker and Hopkins 1998).
Prevailing survey conditions	Prevailing conditions refer to the climatic or an environmental variable that may influence the detection of fauna during surveys e.g. rainfall, wind, moon phase and flowering. These data can be standardised to allow analysis of the degree of influence.
Life History	Age, sex, breeding or reproductive condition of the individual, if known, can value-add sighting records.
Comments	Any extra information

List of Datasheets

- **Site information** – details of location, vegetation, site photos, disturbance and habitat characteristics. Should be used on sites where systematic fauna surveys are conducted without more detailed habitat assessment. If this datasheet is filled out there is no need to fill out the 'Locality Info' on the separate method datasheets.
- **Diurnal bird surveys** - for recording bird point and fixed area counts (Note: there is a specific waterbird and shorebird survey datasheet when targeting wetland environs).
- **Herpetofauna searches** - for recording reptile and amphibian searches (Note: there is a specific amphibian search datasheet if targeting frog habitat, such as a stream or pond).
- **Elliott, pitfall, funnel, cage and turtle trapping** – multiple trapping methods are usually employed on a site and can be recorded using this datasheet.
- **Arboreal spotlight and nocturnal call playback** – designed for 'on site' spotlighting and call playback. Vehicle spotlighting should use the 'vehicle and foot road transects' datasheet.
- **Incidental records on survey sites** – during all wildlife surveys some species on standard sites are only seen outside of generic surveys, these should be recorded here. This datasheet is also ideal for a species list at a particular point or area; and it can also be used to record data from targeted methods without a specific datasheet.
- **Incidental fauna sightings** – is designed to record fauna sightings made whilst moving throughout the project area. In particular, threatened and uncommon species, and those not recorded in association with a generic or targeted site should be recorded.
- **Bat trapping** – specifically for bat trapping methods including harp traps, mist nets and triplines.
- **Camera trapping** – specifically for camera trapping methods where camera settings and setup details are important.
- **Acoustic recording** – specifically for automatic sound recording systems, particularly when manually analysed.
- **Hair tubes** – specifically for hair tube results.
- **Scat and sign searches** – specifically designed for standard scat, track, and other trace searches. Signs detected during herpetofauna searches can be recorded on the 'herpetofauna search' datasheet.
- **Vehicle and foot road transects** – use when conducting spotlighting transects (by road or on foot) for arboreal species and road driving (or walking) for herpetofauna, when an accurate record of effort is required. Fauna detected commuting between sites should be recorded on the 'incidental fauna sightings' datasheet unless this commute is being conducted as a transect.
- **Amphibian search** – use when conducting targeted frog surveys in specific habitat (e.g. stream, pond, breeding habitat).
- **Waterbird/shorebird survey** – specifically for waterbirds and shorebirds where habitat attributes and breeding information is particularly important. Some species age (i.e. chick/young or adolescent/adult) can be difficult to differentiate; if this is the case then these columns can be grouped and clearly indicated.

BASIC SITE INFORMATION



Queensland Government

OFFICE USE ONLY

SITEID:

Surveynums:.....

Entered:..... Checked:..... Corrected:.....

SITE ALIAS (field code):

PROJECT:

DATE:

OBSERVERS

SITE INFORMATION (no need to fill this section out if revisiting an established site)

LOCATION (GPS reference)

Datum: AGD84 GDA94 (WGS84) OTHER: _____ **Location derivation:** _____

Road: zone: _____ **easting:** _____ **northing:** _____

Plot Centre zone: _____ **easting:** _____ **northing:** _____ **Accuracy:** _____ m

Altitude _____ **Altitude accuracy:** _____ m **Altitude derivation:** _____

Locality description:

.....

Tenure: _____ **Reserve or Property Name:** _____ **Reserve number:** _____ **Bioregion:** _____

Map number: _____ **Map name:** _____ **Subregion:** _____ **Parish:** _____

VEGETATION

Habitat Description:

.....

Regional Ecosystem (mapped) _____ **Regional Ecosystem (obs):** _____ **Broad veg group:**

Dominant/characteristic species

Layer^	Species	Layer^	Species	Layer^	Species

^Layer: Emergent (E), T1, T2, T3, S1, S2, Ground (G)

General Site comments:

.....

.....

LANDFORM **Situation:*** **Element:*** **Pattern:***

Slope Position:* **Slope Degree:** **Slope Aspect:**

SOIL (top soil)

Depth:* **Colour** · / **Munsell? (y/n):** **Texture:**

Soil notes:

GEOLOGY

Source: Map / Cutting / Core / Outcrop **Code:** **Geology unit** **Notes:**

SITE PHOTOS Photo No./s Photo No./s Other photo numbers and notes:

North: South:

East: West:

Current Site visit comments

.....

.....

INCIDENTAL FAUNA SIGHTINGS



Queensland Government

OFFICE USE ONLY	Refnum: <input type="text"/>
	Entered:..... Checked:..... Corrected:.....

Trip Dates:

General Area:

Siteid	Date	Species	Number	Observer/s	Zone	Easting	GPS	Other Info/Comments
Site Alias			Rec Type		Datum	Northing	Error	
Locality, Tenure and Habitat:								
Locality, Tenure and Habitat:								
Locality, Tenure and Habitat:								
Locality, Tenure and Habitat:								
Locality, Tenure and Habitat:								
Locality, Tenure and Habitat:								
Locality, Tenure and Habitat:								
Locality, Tenure and Habitat:								
Locality, Tenure and Habitat:								

Siteid	Date	Species	Number	Observer/s	Zone	Easting	GPS	Other
Site Alias			Rec Type		Datum	Northing	Error	Info/Comments
Locality, Tenure and Habitat:								
Locality, Tenure and Habitat:								
Locality, Tenure and Habitat:								
Locality, Tenure and Habitat:								
Locality, Tenure and Habitat:								
Locality, Tenure and Habitat:								
Locality, Tenure and Habitat:								
Locality, Tenure and Habitat:								
Locality, Tenure and Habitat:								
Locality, Tenure and Habitat:								

Incidental Record Type Codes

- | | | | | | | | |
|----|----------------------------------|----|---------------------------|----|-------------------------------|----|----------------|
| BU | Detected by presence of burrow/s | CR | Roadkilled | DN | Nest | DT | Tracks |
| C | Captured/Caught | D | Detected by other means | DP | Pellets | H | Heard |
| CC | Caught by hand | DC | Cast Skin | DR | Remains (skull, feathers etc) | S | Seen |
| CF | Found Dead | DF | Presence of Feeding Marks | DS | Scats | SH | Seen and Heard |
| CP | Predated | DL | Presence of Platelets | | | | |

VEHICLE / FOOT ROAD TRANSECT DATA SHEET



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OFFICE USE ONLY	SITEID:
Surveynums:.....	
Entered:.....	Checked:..... Corrected:.....

SITE ALIAS (field code):

PROJECT:

DATE ____ / ____ / ____

OBSERVERS

Transect Information:

Location Datum: _____ Location derivation:* _____ Bioregion:.....

STARTING POINT: zone: ____ easting: _____ northing _____ Accuracy:* _____

FINISH POINT: zone: ____ easting: _____ northing _____ Accuracy:* _____

Transect location description:

Distance travelled: Average speed: Activity: Road Herps / Arboreal Spotlight / Both / Other (describe below)

Road conditions: (describe road type, surface condition, traffic etc in relation to ease of seeing animals)

	Time (24hr)	Temp.	Wind Velocity*	Wind Direction	Cloud (8ths)	Precipitation*	Moon*	Night Light*
Survey Start:								
Survey Finish:								

RECORDS:

* see codes on reverse

SPECIES	No.	Record Type*	Sighting AMG (tick box in corner if GPS used)	Time (24 hrs)	OTHER INFORMATION/COMMENTS (e.g. Sex, Weight, Size, Habitat)
1			<input type="checkbox"/>		
2			<input type="checkbox"/>		
3			<input type="checkbox"/>		
4			<input type="checkbox"/>		
5			<input type="checkbox"/>		
6			<input type="checkbox"/>		
7			<input type="checkbox"/>		
8			<input type="checkbox"/>		
9			<input type="checkbox"/>		
10			<input type="checkbox"/>		
11			<input type="checkbox"/>		
12			<input type="checkbox"/>		
13			<input type="checkbox"/>		
14			<input type="checkbox"/>		
15			<input type="checkbox"/>		

RECORDS Continued...

SPECIES	No.	Record Type*	Sighting AMG (tick box in corner if GPS used)	Time (24 hrs)	OTHER INFORMATION/COMMENTS (e.g. Sex, Weight, Size, Habitat)
16			<input type="checkbox"/>		
17			<input type="checkbox"/>		
18			<input type="checkbox"/>		
19			<input type="checkbox"/>		
20			<input type="checkbox"/>		
21			<input type="checkbox"/>		
22			<input type="checkbox"/>		
23			<input type="checkbox"/>		
24			<input type="checkbox"/>		
25			<input type="checkbox"/>		
26			<input type="checkbox"/>		
27			<input type="checkbox"/>		
28			<input type="checkbox"/>		
29			<input type="checkbox"/>		
30			<input type="checkbox"/>		
31			<input type="checkbox"/>		
32			<input type="checkbox"/>		
33			<input type="checkbox"/>		
34			<input type="checkbox"/>		
35			<input type="checkbox"/>		

LOCATION DERIVATION

AGPS = Averaged GPS fix (5 min)
 ARCGIS = ArcView Map
 EST = Estimate from known position
 GPS = GPS (12 plus channels)
 MAP = Position taken from map

ALTITUDE DERIVATION

ALT = Altimeter
 DEM = Digital elevation model
 EST = Estimate from known height
 GPS = Global Positioning System
 KNO = Known height
 TOP = Topographic Ma

LOCATION ACCURACY

B = +/-0-10m
 C = +/-11-50m
 D = +/-51-100m (site)
 E = +/-101-300m
 F = +/-301-500m
 G = +/-501-1000m
 H = +/-1001-3000m
 I = >3000m

MOON

0 = No Moon or moon not up
 1 = up to 1/4 Moon
 2 = up to 1/2 moon
 3 = up to 3/4 moon
 4 = up to full moon
 5 = moon present (use if unsure of phase)

NIGHT LIGHT

1 = V. dark - 0 moon or heavy cloud
 2 = Dark < 1/4 moon or heavy cloud
 3 = Detail seen <1/2 moon 0 Cloud
 4 = Bright >1/2 moon + no cloud

PRECIPITATION

0 = nil
 1 = drizzle or light rain
 2 = med - heavy rain
 3 = No rain during survey period but drizzle or light rain in previous 24 hrs
 4 = No rain during survey period but med to heavy rain in previous 24 hrs
 5 = No rain during survey period but rain in previous 24 hrs
 6 = Fog/mist
 7 = Isolated Showers

WIND VELOCITY

0 = Calm
 1 = light, leaves rustle
 2 = moderate, moves branches
 3 = strong, impedes progress

RECORD TYPE

S = Seen
 H = Heard
 CC = Caught / handled
 CR = Road kill
 DT = Tracks
 DS = Scats
 DF = Feed marks

AMPHIBIAN SEARCH



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OFFICE USE ONLY	SITEID:
Surveynums:.....	Entered:..... Checked:..... Corrected:.....

SITE ALIAS (field code):.....

PROJECT:

Locality Info: (not required if site info datasheet already filled out)

Datum: _____ Location derivation:* _____ zone: __ easting: _____ northing _____

Accuracy:* _____ Altitude _____ Altitude accuracy: _____ m Altitude derivation:* _____

Locality description:

Tenure: _____ Reserve or Property Name: _____ Bioregion: _____

Habitat Description:

Habitat Conditions (e.g. stream flow, water quality, fire, pig or stock damage, weeds etc):

Other search notes (incl factors affecting detectability):

Search:	1	2	3	4
Date				
Time (start - finish)				
Observer/s:				
Air Temperature (D / W)				
Water temperature				
Water depth (cm)				
Relative humidity (%)				
Wind Velocity*				
Wind Direction				
Cloud Cover (8ths)				
Precipitation*				
Moon*				
Night Light*				
Effort (area or dist per time)				

Records Transect length (m):..... Transect direction: **Upstream / Downstream** *Codes on back of page ^Optional

SEARCH #	DIST [^]	SPECIES	Species code	No. indiv	Record Type*	Microhab Code* [^]	Age / Sex* [^]	Reprod Cond* [^]	Comments (e.g. SV, TL, HW, HL, weight, vial ID's etc) [^]

DIST = point along transect frog located (can also be a range e.g. 25-50m).

WATERBIRD/SHOREBIRD SURVEY



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OFFICE USE ONLY SITE ID/WIC ID: _____
 Surveynums: _____
 Entered: _____ Checked: _____ Corrected: _____

SITE ALIAS (field code): _____

PROJECT: _____

Locality Info: (not required if site info datasheet already filled out)

Datum: _____ Location derivation:* _____ zone: __ easting: _____ northing _____
 Accuracy:* _____ Altitude _____ Altitude accuracy: _____ m Altitude derivation:* _____
 Locality description: _____
 Tenure: _____ Reserve or Property Name: _____ Bioregion: _____
 Habitat Description (incl if waterbody is fresh/saline, if applicable) _____

 Site Visit comments (incl water levels/extent/depth and disturbance info): _____

Date		Site map/sketch Include details of wetland, showing area surveyed, significant habitat and other features (e.g. breeding areas)
Time (start - finish)		
Temperature		
Wind Velocity*		
Wind Direction		
Cloud Cover (8ths)		
Precipitation*		
Tide (if applicable)	L -- half -- H -- half -- L	
Survey type:	land -- boat -- air	
Observer/s:		
% site perimeter seen	0-25 26-50 51-75 76-100	
% site interior seen	0-25 26-50 51-75 76-100	

Records Count accuracy: Accurate Fair Estimate *Codes on back of page

Breeding species	Nests	Chicks	Young	Adolescents	Adults
Common name	Bonded pair/unoccupied active nest/nest w with adult/egg present (no visible chicks/young)	On or off nest, naked or downy.	On or off nest, pin feathers present on head/body, not fully feathered.	Fully feathered, plumage other than adult	Total number observed. Enter "P" for present w here a species was seen but not counted.
	Comment:				
	Comment:				
	Comment:				
	Comment:				
	Comment:				
	Comment:				
	Comment:				
	Comment:				
Non-breeding species	Count	Non-breeding species	Count		

Continued over page

