



Land for Wildlife Queensland: Note A1

A Beginner's Guide to Observing Wildlife

How do Land for Wildlife property Owners know if their efforts to maintain and enhance bushland and biodiversity are having the desired effect? How do they know if their bushland provides habitat for native animals? This Note will assist landholders to observe and record wildlife on their land.



It can be difficult to spot nocturnal animals such as this Powerful Owl that was found on a Land for Wildlife property. However, evidence such as scats, pellets and tracks, and their calls, can help you determine the nocturnal species on your property.

Photo by Neil Anderton.

It is rewarding to take the time to observe and get to know the wildlife that lives on or visits your property. This knowledge can also contribute to a valuable record of changes in biodiversity over time.

While wildlife surveys carried out by trained field ecologists can be extremely valuable, they can also be very expensive and are often time-constrained. Thankfully, you can do much yourself to record wildlife on your property, either through opportunistic sightings or systematic, planned surveys. Opportunistic sightings are those exciting and often unexpected moments when you see wildlife on your property by chance. Such sightings may occur stepping outside your backdoor and watching an unfamiliar bird fly off, or stopping your car to investigate a mysterious lizard sunning itself on your driveway. Planned surveys, on the

other hand, are organised for a set day and time and target a specific group of wildlife using a structured technique.

It is important to note that all native wildlife is protected under the *Nature Conservation Act 1992* and that all surveys must not harm wildlife.

What do I need?

Some basic equipment to get started may include:

- A notebook and pen.
- Zip-lock plastic bags for specimens such as scats (droppings), feathers etc.
- Binoculars.
- Relevant field guides (see *Land for Wildlife Note R1 - Information Reference List* for a list of good field guides).
- Spotlight or torch for night surveys.
- Camera.

Where do I start?

Observing wildlife involves many of your senses. Sight, hearing and smell can be used together or alone to help identify what animals might be present. Would-be detectives can also apply their survey skills to look for other more cryptic clues, such as animal tracks, nests or scats (animal droppings). It is important to remember that in planned surveys, different techniques are used for different animal groups. The weather will also influence the success of your survey. For example, rain after a long dry period will often bring a range of wildlife out of hiding to feed, or even breed, if conditions are right.

Before setting out to find animals, it is best to first think about the animal's habits and biology. What does it eat? What time of day is it most active? What does it sound like? What time of year does it breed? Answer these kinds of questions by looking at field guides, listening to animal call CDs or talking with your local Land for Wildlife Officer. Preparation and practise will help to hone your observation skills for your property survey.

Birds

Most birds are active during the day and have distinctive calls, making them one of the easiest groups of animals to observe and learn to identify. It is best to look for birds in the early morning or in the late afternoon. Some birds, such as owls, are largely nocturnal and can be observed using the spotlighting technique described on page four or by learning their calls.

Mammals

There are numerous diurnal (i.e. active during the day) mammals that you may observe on your property such as kangaroos, wallabies, Koalas at rest, roosting flying-foxes and the Short-beaked Echidna. However, most of Australia's mammals, such as native rodents, antechinus, dunnarts, bettongs, possums, gliders and quolls are nocturnal (i.e. active at night). You will need to go out at night to observe them using the spotlighting technique.

Frogs

Frogs are most active at night and after rain. They are usually difficult to see and most easily identified by the calls made by males. Frogs are most commonly found around water bodies such as dams and creeks.

Diurnal (daytime) reptiles, such as this Bearded Dragon, seek shelter and prey in leaf litter, fallen timber and rocks and can be best observed sunning themselves in the mornings to warm their blood.



Invertebrates, such as this St Andrew's Cross Spider, can be excellent indicators of environmental health as they perform a range of ecological services such as predation and decomposition.

Invertebrates

Invertebrates (creatures without a backbone such as insects, spiders and snails) make up about 98% of all animal species on Earth and can provide useful information on the health of ecosystems. As a result, invertebrates are often referred to as "bio-indicators". Invertebrates provide numerous ecological functions such as pollination, decomposition (e.g. snails and dung beetles), seed dispersal (e.g. ants), predation (e.g. spiders and dragonflies) and soil formation (e.g. termites and beetles). They are a fascinating group of animals to observe. Insects such as bees, flies, butterflies and beetles can be readily observed on flowering plants.

Reptiles

Reptiles are usually best observed in and around rocks, leaf litter and fallen timber. Some reptiles (e.g. skinks and dragons) are best observed in the cool of the morning when they are seeking out sunshine to warm their blood. Other reptiles, such as some geckos and terrestrial snakes, are more active on warm humid nights when they emerge from hiding to feed on nocturnal prey such as frogs, moths and small mammals. Some reptiles, such as Burrowing Blind Snakes, are so cryptic (camouflaged, hidden or very shy) that only specific survey and trapping methods will determine their presence.



Keeping a property diary

Before you get started, it's a great idea to set up a diary, notebook or a spreadsheet on your computer so you can record all your wildlife observations. Keeping a record is essential if you want to know how the diversity and abundance of wildlife on your property changes over time. Regardless of whether you see an animal opportunistically or as part of a planned survey, the sort of information you should collect includes:

- Date and time.
- Location on your property (you might like to mark this on a property map).
- Habitat type (e.g. forest, open grassland).
- Species name if known, or type of animal.
- Number observed for each species.
- Weather conditions (e.g. fine, raining).

You will be amazed at how your list of wildlife grows and changes over time!



Chewed *Casuarina* cones - often a sign that Glossy Black Cockatoos are present.



Owls regurgitate indigestible material such as bones and fur and these can be used to identify the bird's prey. Shown here is a Powerful Owl pellet. Photo by Deborah Metters.

Animal traces

Many animals (especially mammals) are more readily identified by the traces they leave, such as tracks and scats, than by direct observation. Below is a list of animal traces to keep a look out for:

- **Scats** - Animal droppings can tell us both the identity of the animal and what it has been eating (e.g. Koala scats have a strong eucalypt smell when broken apart). Be sure to wear gloves and wash your hands thoroughly with anti-bacterial soap if you are collecting scats for later identification.
- **Tracks** - Some animals, such as kangaroos and goannas, leave obvious tracks on the right surface (e.g. sand or gravel). Sand pads can be laid across likely animal thoroughfares to make footprint identification easier.
- **Diggings/ground scratchings** - Many ground-dwelling animals, such as bandicoots, echidnas and button-quails are identified by the marks that they leave behind after foraging for food. Small conical holes may indicate the presence of bandicoots, while echidnas dig large irregular holes when searching for ants.
- **Scratch marks** - Tree-dwelling animals can be identified by the scratches that they leave behind after climbing a tree. Yellow-bellied Gliders also leave characteristic 'scars' on eucalyptus trees after feeding on sap.
- **Nests** - Keep an eye out for bird nests, burrows in the ground for freshwater crayfish and pardalotes, hollows in trees, and nests under logs and in rocky crevices for invertebrates, small mammals and small reptiles. By observing nests, you have the opportunity to learn about breeding and parenting activities of adults and their young and may observe defensive behaviour to ward-off predators.
- **Eating habits** - Some animals can be identified by the mess they leave behind when they eat! Glossy Black Cockatoos are often identified by the chewed Forest She-Oak (*Casuarina torulosa*) and Black She-Oak (*Casuarina littoralis*) cones on the ground under these trees. Small bundles of fur and bones around the base of large trees are a good sign that owls or raptors are roosting above. Chewed leaves and larvae droppings may indicate caterpillars and emerging butterflies.



Scats (droppings) can be a good indication of what animals are present. Shown here are some Common Brushtail Possum scats.



Koala scratch marks on a smooth barked gum.

Simple survey techniques

If you are interested in planned wildlife surveys, it is worth contacting your Land for Wildlife Officer to discuss what you would like to do and make sure you are working within the guidelines of the *Animal Care and Protection Act 2001*. Some activities such as trapping, handling of animals and spotlighting using a powerful light can be intrusive and/or dangerous to animals and require a permit.

Planned surveys are usually conducted at the same time each season or year (e.g. the first week of spring and autumn annually) and over a number of days. This allows for meaningful comparisons to be made about the abundance and variety of wildlife over time. Planned surveys include walking surveys, point surveys and/or spotlighting.

Walking surveys are a census of all the species seen and/or heard when following a particular route for a set period of time. They are most commonly used for birds, diurnal mammals (e.g. kangaroos and wallabies), reptiles and invertebrates. Ideally, your chosen path would include a range of different vegetation types and water bodies on your property. In your notebook, record actual sightings and make notes of other animal traces (e.g. scats or diggings). You can photograph unidentifiable animal traces for later identification.

Point surveys record wildlife from fixed points for a set radius (e.g. 20 metres) and for a set period of time (e.g. 20 minutes). They are used for the same animal groups as walking surveys. Point surveys can be useful for densely vegetated areas, such as rainforest and thick heathland where animals are often difficult to see.

Spotlighting. Forested areas are a hive of activity at night-time. When spotlighting, be sure to check not just the canopy for arboreal (tree dwelling) animals such as gliders and owls, but also tree trunks and leaf litter for ground-dwelling mammals, reptiles, frogs and invertebrates. Many of these animals are only active and visible at night. If you plan to undertake spotlighting on your property make sure you do not use a powerful spotlight as a bright beam may be unnecessarily intrusive. A good torchlight should be sufficient. A spotlight survey is best done using the same route as your daytime survey. When spotlighting, look for eyeshine to indicate an animal's presence. Once you have located an animal, cover the torch with red cellophane to reduce harm to the animal's eyes.

What is it?

Identifying what you see, hear or smell can be a daunting task but with practice and perseverance you'll learn quickly. Wildlife identification books and CDs of bird and frog calls are available from your local library or good book stores (see *Land for Wildlife Note R1 - Information Reference List*). The Department of Environment and Resource Management's website *Wildlife Online* (www.derm.qld.gov.au/wildlife-ecosystems/wildlife/wildlife_online) is useful for generating a list of species of wildlife that have been recorded in your local area. Dead specimens or photographs can also be sent or taken to the Queensland Museum for identification. Contact the Queensland Museum on 07 3840 7555 or visit www.qm.qld.gov.au.

What you can do

- ✓ Learn what wildlife species occur in your area.
- ✓ Start a wildlife diary.
- ✓ Record seasonal and climatic conditions.
- ✓ Join a wildlife interest group (e.g. Field Naturalists or Faunawatch).
- ✓ Join ClimateWatch (www.climatewatch.org.au) and contribute observations to a national community based program.
- ✓ Join a specialist wildlife group through Wildlife Preservation Society of Queensland to report sightings on quolls, gliders and Platypus.

Some useful tools of the trade for observing wildlife.



Land for Wildlife is a voluntary program that encourages and assists landholders to provide habitat for wildlife on their properties. For more information about Land for Wildlife South East Queensland, or to download *Land for Wildlife Notes* free of charge, visit www.lfwseq.com.au

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