



Guidelines for the Development of Bird Habitat

User: Domestic Gardeners

Why design gardens for birds?

Birds are the most obvious and frequently encountered wildlife found in manmade landscapes. Whether taking a walk through a park or simply sitting in a garden, we have the opportunity to observe birds on a daily basis. They can be joyful, beautiful, funny, cute, melodic or raucous and provide us with an amazing opportunity to connect with the natural world, even that which is just outside our front door.

They play a myriad of important roles in an ecosystem, assisting with pollination, seed dispersal, the control of insects and the recycling of nutrients. Some do the gardening for us, turning over leaf litter and soil while searching for worms and other soil fauna. So valuable are they to the health of ecosystems, including urbanized ones, that their status forms part of the Australian Government's "State of the Environment" report. In Europe and the United Kingdom, the status of birds is used by Governments to determine levels of sustainability. This is known as the *Population of Wild Birds Quality of Life Indicator* and it is read together with other sustainability indicators such as the GDP.

While we do have an amazingly diverse range of birds living in urbanised habitats, the bird communities are changing. Our small native birds such as the Red-browed Finch and Superb Fairy-wren are becoming less common, replaced by dominant and aggressive species. In NSW these include the Noisy Miner, Pied Currawong and the Rainbow Lorikeet, but other states may have a different mix.



For more detailed guidelines for creating habitat for birds in the urban environment, please refer to the *Scientific Report* available at: www.birdsinbackyards.net/spaces/guidelines.cfm

As we remove more and more natural vegetation and as our climate changes, urban habitats are going to become increasingly important for many birds. When combined, domestic gardens are one of the largest patches of vegetation left in manmade landscapes. Therefore they have huge potential to be important bird conservation locations. However our gardens are not always friendly to birds. We expose them to a wide range of potentially harmful disturbances and habitats that provide few resources. The following step-by-step directions will help you to create a more bird-friendly garden.

How to create a bird friendly garden

1. Assess your garden and its current bird life and consider these questions:

- *What vegetation is currently available? Is it very simple such as open lawn and a few scattered trees or is the site structurally complex with lots of layers of different vegetation eg trees and shrubs of different heights, grasses, ground covers, leaf litter?* A more structurally diverse garden will support more bird species. In understanding the habitat currently available you can then select the plants needed for your garden.
- *What birds are using the garden and are in the area? Know which species you are trying to target, for example small birds or parrots. You should be trying to encourage birds that occur in the area around your garden and are realistically going to use the site. It is no good creating a habitat for Superb Fairy-wrens if they haven't been seen anywhere near the site in 20 years. However if they are located a short distance away then creating a habitat for them has a much greater chance of success. Local bird clubs, councils or community groups may have bird lists for your area but it is easy to complete your own surveys. The *Birds in Backyards* surveys are ideal for this: <http://www.birdsinbackyards.net/surveys/>. You will not only be able to monitor your own garden before, during and after you make changes to it but you can also contribute to a database of gardens Australia-wide and provide important information.*

2. Prepare a plan for your garden

Before beginning any work to restore or develop habitat in your garden plan and outline what you need to do and what you want to achieve. Consider each individual piece of work that must be completed such as an assessment of the current vegetation and bird life, planting of new vegetation, weed removal and disturbance minimisation and ongoing maintenance. However enjoy the experience of creating and maintaining a garden that is used by a wide range of native birds.



Consider:

2a. What do the birds require?

While the amount and type might vary greatly, all birds need food and water, shelter and a safe place to nest, whether that is a dense thicket, tall tree or hollow. Most of these requirements can be met by the availability of suitable vegetation. In most cases locally native vegetation is best for birds, although exotic vegetation can also be important and should not be automatically removed. Domestic pets can disturb or prey upon native birds. Cats should be kept indoors or in a cat run and an area of the yard should be kept away from dogs.

Because urban habitats are so fragmented, one garden will not be large enough to provide all of the requirements that a bird will need. However, each garden is vital in forming the web of habitat that birds use.

2b. What and how to plant?

- *Assess the current vegetation:* Most vegetation can provide habitat for birds. Before removing any vegetation, weeds or otherwise, be sure to observe usage by birds.
- *Wherever possible do not remove vegetation immediately:* instead wait until new vegetation establishes (produces flowers and/or fruit). Some weeds, such as Lantana in NSW, are popular with birds and provide important habitat so their removal should be carefully planned and staged. If removing weeds or undesirable plants, remove only small patches of vegetation at a time and replace it immediately with new plantings. Be aware that it can take years for new vegetation to establish but many birds may abandon the garden, or be preyed upon if all or large portions of the intact vegetation are removed too quickly.
- *What to plant - species:* We recommend locally native vegetation be planted. This vegetation was traditionally used by birds in the area and is best suited to the conditions of the site. Once established, many Australian native plants are also drought tolerant. Use a variety of different species throughout the planting rather than a single, or select few plants. Gardens that contain a broad range of plant species, are more likely to support a broad range of bird species. Plant clumps of 5-7 plants of the same species together so there is enough of the resource (food or shelter) available to be used by the birds. Numerous groupings or thickets of different plant species is also better for overall aesthetics and design. Local plant lists can be obtained from most local councils and some councils have programs that provide assistance to residents.



- *What to plant – structure:* The key is to create structural diversity – so lots of plants and lots of different layers. Having a mix of trees, shrubs of varying heights, grasses and ground covers will maximise the numbers of birds using a site. Gardens do not have to have trees to attract birds, therefore if space is an issue a garden consisting of shrubs and grasses can still be effective. Retaining patches of open grass is also important for some birds such as the parrots and finches to forage on.

Gardens with tall trees and grass but without shrubs are more likely to have large and aggressive birds in them like Noisy Miners and Pied Currawongs. Restoring this shrub layer is key for providing a habitat that small birds can use.

- *Native plants and gardens do not need to look messy:* Small birds like dense shrubs. A more formal and neater garden can be created by the use of pruning to shape these shrubs and most native plants respond very well to pruning. Pruning also encourages a much denser growth pattern, which provides good protection for small birds. Hedges which provide privacy from neighbours as well as bird habitat can be made using native plants.

Therefore there is a wide variety of gardens that can attract birds, from what are considered typical 'native' gardens filled with native shrubs and trees without lawn through to pruned and trimmed neat gardens consisting of shrubs and open lawn space.

Use local native plants rather than hybrids such as the popular hybrid grevilleas. These large flowering plants may encourage large and aggressive honeyeaters such as Noisy Miners and Red Wattlebirds that can chase away smaller birds. Select plants with smaller flowers, ones that small honeyeaters can fit their beaks into but large ones cannot.

- *Maintenance:* Maintaining garden beds is much less time consuming than mowing vast areas of lawn. Pruning is very quick and rarely has to be done, heavily mulching the beds reduces the need to weed and also provides a source of insects for insectivores and mowing can simply occur around the beds. Creating beds with edges (rectangular or square), makes mowing around them more efficient.





Photograph: Dense shrubs are prevalent throughout the Davidson's garden in Victoria, providing great small bird habitat. Photographer: Diane Snape from *The Australian Garden* by Diane Snape (Blooming Books 2003).



Photograph: A range of native grasses, shrubs and trees including *Lomandra longifolia*, *Dianella* spp, *Themeda australis*, *Bursaria spinosa*, *Hakea sericea*, *Melaleuca nodosa*, and *Dodonaea triquetra* have been planted in this garden in Bexley North, a suburb of Sydney. A total of 46 species of birds have been recorded visiting this garden in the past 7 years. Photographer: Debbie Little.





Photograph: Dense plantings of natives including several Grevillea and Acacia species; prostrate Banksia and Dendrobium speciosum beneath the canopy of Eucalyptus botryooides have been used in this garden bed at Callala Bay, NSW. Red and Little Wattlebirds, Rainbow and Musk Lorikeets, White-cheeked Honeyeaters, and Eastern Spinebills feed on the nectar-bearing shrubs. Superb Fairy-wrens, White-browed Scrubwrens and Eastern Whipbirds work the leaf litter underneath. Photographer: Lesley Oliver.



2. c. Requirements of different birds

Bird Type	Food Source	Habitat Preference
Large Nectarivores (nectar feeders) Honeyeaters and some parrots e.g. Noisy Miners, Red and Little Wattlebirds, Rainbow and Scaly-breasted Lorikeets	<i>Banksia</i> , <i>Callistemon</i> (Bottlebrush), <i>Eucalyptus</i> , <i>Grevillea</i> , <i>Hakea</i> , <i>Melaleuca</i> (Paperbark)	Shrubs and trees for foraging, perching and nesting Some require hollows for nesting
Small Nectarivores Honeyeaters e.g. Eastern Spinebill, New Holland Honeyeater, Brown Honeyeater	<i>Banksia</i> , <i>Callistemon</i> (Bottlebrush), <i>Eucalyptus</i> , <i>Grevillea</i> , <i>Hakea</i> , <i>Melaleuca</i> (Paperbark), <i>Epacris</i> , <i>Correa</i>	Spend most time foraging and perching in shrubs but also use trees. Generally nest in dense shrubs
Granivores (Seed Eaters) Parrots, finches and pigeons e.g. Eastern Rosella, Pale-headed Rosella, Galah, Sulphur-Crested Cockatoo, Common Bronzewing, Red-Browed Finch, Double-Barred Finch, Chestnut-breasted Manikin	Trees and shrubs: <i>Acacia</i> (wattle), <i>Casuarina</i> (she-oak), <i>Leptospermum</i> (tea-tree) Grasses: <i>Lomandra</i> , <i>Themeda</i> , <i>Poa</i>	Utilise shrubs and trees for perching, nesting and foraging but also forage on mature grasses
Frugivores (fruit eaters) Pigeons and cuckoos e.g. Wonga Pigeon, Common Koel, Silvereye, Satin Bowerbird	<i>Ficus</i> (figs), <i>Syzygium</i> (Lillipillies), <i>Eleocharpus</i> (Quandong)	Shrubs and trees important habitat
Insectivores e.g. Superb Fairy-wren, Eastern Yellow Robin, Spotted and Striated Pardalotes, Willie Wagtail	Insects and other invertebrates either on the bark and foliage of shrubs and trees or on the ground	Dense shrubs important for protection and nest sites as well as some open areas for foraging
Carnivores (Meat Eaters) e.g. All species of Currawongs, Laughing Kookaburra, Grey and Pied Butcherbirds, Powerful Owl, Black-shouldered Kite, Peregrine Falcon	Other birds, reptiles, frogs, mammals, invertebrates	Tall trees for perching, roosting and nesting. Some require hollows for nesting



2. d. What else can you do?

There are a great number of other factors that can encourage, or discourage birds from your garden. We would encourage you to:

- *Avoid feeding birds:* The birds we feed are usually those that do not need our help such as Rainbow Lorikeets, Pied Currawongs or Australian Magpies or introduced birds like the Common Myna, Spotted Turtle-dove or House Sparrow. Some of these birds can be aggressive or predatory on smaller native birds and we may be increasing their numbers. Many of the foods we provide especially fatty meat, bread and honey/water mixes are also very bad for birds and encouraging huge numbers of birds to congregate in a small area can spread disease amongst a population.

A bird-friendly garden can provide food that is natural and beneficial for a diverse bird community. We would therefore recommend that creating such a garden be encouraged, rather than supplementary feeding, as any potential benefits to the birds are outweighed by the damage done by feeding larger and aggressive birds, feeding incorrectly and using unhygienic practices. However, if you do feed birds we would advise that:

- Birds are fed infrequently. This will encourage birds to find their own food and are not reliant solely on you.
- Stations are placed out of the reach of cats and other predators.
- Stations are cleaned daily and food removed after an hour. Vary the time of day in which you provide the food.
- Good quality food is used such as commercial nectar mixes or seed mixes. The cheaper supermarket seed does not contain sufficient nutrition for birds.
- Cease feeding if large flocks (20+) birds begin feeding at the same time.
- Pets are fed indoors or remaining food is removed. Common Mynas and other birds regularly eat pet food so we should limit their access to it.

A garden that provides natural food for birds such as one with native grasses to provide seed, mulch to encourage insects and small-flowering locally native shrubs to feed honeyeaters is much better for our whole bird community than one that feeds only a few potentially problem birds.



- *Provide a bird bath:* Most birds need access to water and in times of drought many birds are more likely to come into gardens in search of it. Bird baths should:
 - Be clean and scrubbed daily with water. Soap or detergent should not be used.
 - Be placed in dappled shade either by suspending from a tree or using a pedestal bath
 - Be relatively exposed so birds can view with safety but
 - Have shrubs nearby that the birds can retreat to if threatened
- *Build a nest box:* Natural hollows are used by many different types of birds like parrots, kookaburras and pardalotes. However natural hollows are in short supply as once a tree is old enough and large enough to develop hollows, it is usually considered dangerous. Nest boxes may be a viable alternative to these hollows and are a great way to observe birds in all their life stages in your garden. Take the following tips:
 - Different birds require different shaped boxes. See this website; <http://www.birdsaustralia.com.au/infosheets/nestbox.html> for nest box dimensions for a range of birds and the heights at which they must be placed. Some hollow-nesters are already very common in many places (such as Rainbow Lorikeets). Create a nest box for a less common bird that you have seen in your area.
 - Face the nest-box away from prevailing winds. This usually means they should face north-east and place them out of the direct midday sun. Also ensure the box is waterproof and drill drainage holes in the bottom.
 - Place tree-guards or exclusion collars around branches around the nest box to stop cats and rats reaching the box.
 - Secure mesh on the inside from the opening to the floor. This gives the baby birds something to grip onto when they are ready to climb out of the nest.
 - Be aware of invasion! Feral honeybees as well as introduced birds like the Common Myna and Common Starling will often try and set up home in a nest box. Make sure you have easy access to your nest box and can destroy honeybee nests or remove the nesting material and eggs of introduced birds.
 - Monitor your nest box. Record usage, breeding success or failure, predation or aggression by introduced birds. Building up a data set over seasons and eventually over years provides invaluable information on the breeding success of native birds in suburbia. This can be submitted to your local bird club, local council or Birds Australia.

Enjoy sharing your garden with birds. Make it a place where they can feel safe visiting. Create thickets or hedges with local native shrubs, put in a bird bath in and build a nest box. Become familiar with what is visiting and keep records, they can be very valuable.





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