The Habitat Network

Getting people involved in small bird habitat conservation in developed landscapes

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Local extinctions of small birds and other native fauna are happening in our suburbs and fragmented bushland areas, and people aren't sure what to do. The Habitat Network is helping people understand the situation and put habitat back in gardens, schools etc, and improve the habitat values of bushland and linkages.

The Habitat Network project started when International Environmental Weed Foundation (IEWF), a Sydney based not-for-profit organisation, (see www.iewf.org), received a grant in 2008 to run community workshops about understanding and restoring local natural capital (native flora, fauna, soils, water quality, air quality and general landscape function). These workshops and subsequent discussions revealed that many of us have noticed the disappearance of small native birds from our gardens—and in some cases from our local bushland. From these ideas and other observations and advice the Habitat Network was created. We focus on small birds as a way of connecting with people, and of reconnecting people and habitats for the benefit of our native flora and fauna—and of course for people's enjoyment. The Habitat Network now has around 600 members including schools, businesses, councils, community groups as well as families and individuals. Members, although mostly in Sydney, can now also be found in other states (in urban and rural areas), and we have had contributions to our website and interest from overseas.

We encourage all land managers, bushland workers and home gardeners to consider how to help small native birds and to create and reconnect habitat areas. We provide advice and support to complementary habitat projects and grant applications.

Support materials, brochures and information can be found and printed from our website www.habitatnetwork.org. Around Sydney you will find us doing displays at sustainability, fauna events and organic markets, attending environment days at schools and the bushcare stand at the Easter Show, giving talks for community groups, schools and councils. Our materials are widely used by councils and other habitat projects.

We cannot guarantee that you will be able to attract small birds to your garden but if one comes your way it is nice to know that it may find a safe haven. Of course lizards, insects (such as native pollinators) and other animals may also visit your habitat areas.

What happened to habitat?

Small native birds, such as the superb fairy-wren, variegated fairy-wren, red-browed finch, eastern spinebill, eastern yellow robin, spotted pardalote, white-browed scrubwren, silvereye and other 'lbbs' (little brown birds), are the birds that people 'used to see around'.

Conversations about the loss of small birds in our urban and rural areas inevitably go along the lines of: 'we used to get small birds in our garden but now all we see are noisy miners, Indian or common myna, currawongs, ravens and/or magpies'.

Sometimes people say 'We had small birds visiting us until our neighbour took out the overgrown vegetation at the back of their garden' or 'Until the land manager cleaned up the bushland behind our property.'

And then they all ask 'What happened to our small birds?' or 'Where have the small birds gone?'

Habitat with the right structure and complexity for small birds is disappearing through 'death by a thousand cuts'. Increasingly the suitable areas for small birds are becoming isolated with no protective connections with other bushland or habitat areas. Every time we subdivide our land, and build bigger houses with neater gardens, we lose habitat and connections between habitat areas. When we remove that dense area of vegetation from our garden we lose habitat. When sufficient time for regeneration in our bushland is not allowed during weed removal, we put small birds under stress. When we widen another road or build another business park surrounded by concrete we lose more habitat and connections.

Small birds forced out into the open through loss of sufficiently dense habitat or by social necessity can be attacked and killed by larger birds and animals (such as dogs, cats, rats, fox, owls, etc.). Young females or males (depending on the species) are forced out of a family to find a mate in another family. They will die if they have no protective cover to move through safely or are too distant from another population. Many wrens and other small birds are fairly weak flyers and do not travel far. Some like the silvereye do travel long distances, however they still need suitable habitat on arrival.

Also when the last breeding area (i.e. area with suitable structure) is removed within bushland or an urban area, small birds may survive a season or two, but soon the population is lost due to no new recruitment, predation and/or competition from aggressive species such as noisy miner, common myna or the carnivorous grey butcherbird.

Think back to our parents' or grandparents' gardens. 'Down the back' of the garden may have been the garden shed, the veggie patch, the climbing roses, some native plants, a bit of a wild area with perhaps some fruit trees and even some weeds. Here might have lived small birds, lizards, frogs and a wide variety of insects and perhaps even a snake. This interesting area with its microhabitats may also have provided a safe passage for small birds to safely move from property to property. The possums may have been happy there too as they would not have been reliant on finding a gap in the roof of the house to find shelter. What does your garden look like? What does your garden offer for habitat?

What can we do for small birds?

Next time you are out walking, listen for the sounds of small birds. You may not be able to see them initially but may hear their sweet little calls. Stop and look to see where the sound is coming from. Consider the structure and type of the habitat, and think about the size of the area that these birds might be using. You may be surprised. Watch where they are feeding (often out in the open or in the canopy of tall shrubs or trees) and where they flit back to for safety (the dense midstorey).

The complex vegetation structure, with its many microhabitats in the upper, mid and lower layers, is what we need to protect and rehabilitate. The midstorey with its associated understorey of small shrubs, grasses and herbs; vines; rocks; fallen, hollow and decaying logs and branches is what we aim to recreate for linking small bird habitat areas.

When creating any habitat area we also need to consider the predators and other threats to small birds.

The model we promote has recently been developed, with assistance of bird experts, from observing the types of habitat that small birds use. It includes habitat buffers and habitat havens, and the protection of weedy habitat. The aim is to create habitat corridors and expand existing habitat areas.

Habitat buffer

Steve Anyon-Smith (a bird expert with long-term observation experience), planted a dense wall of spiky Hakea species along one edge of the reserve in Jannali, NSW where he works as a volunteer. Hakeas grow to about three metres in height, and due to their close spiky foliage allow only small birds to pass through. This habitat buffer, which is about two metres deep, not only provides food and shelter for small birds but also a nesting site for the red-browed finch (observed to house as many as 23 nests in one breeding season).

The habitat buffer also prevents bigger birds from flying directly into the lower areas of the bushland. Where the foliage reaches the ground it reduces access by dogs and cats (which may attack birds, lizards, etc) from neighbouring houses. The result is a bushland area behind the habitat buffer being a haven for small birds and other native animals.

A habitat buffer can also be used to restrict access by people into sensitive areas. Habitat Buffers can also be used to expand bushland areas near mown areas and to protect embankments along water courses and roads.

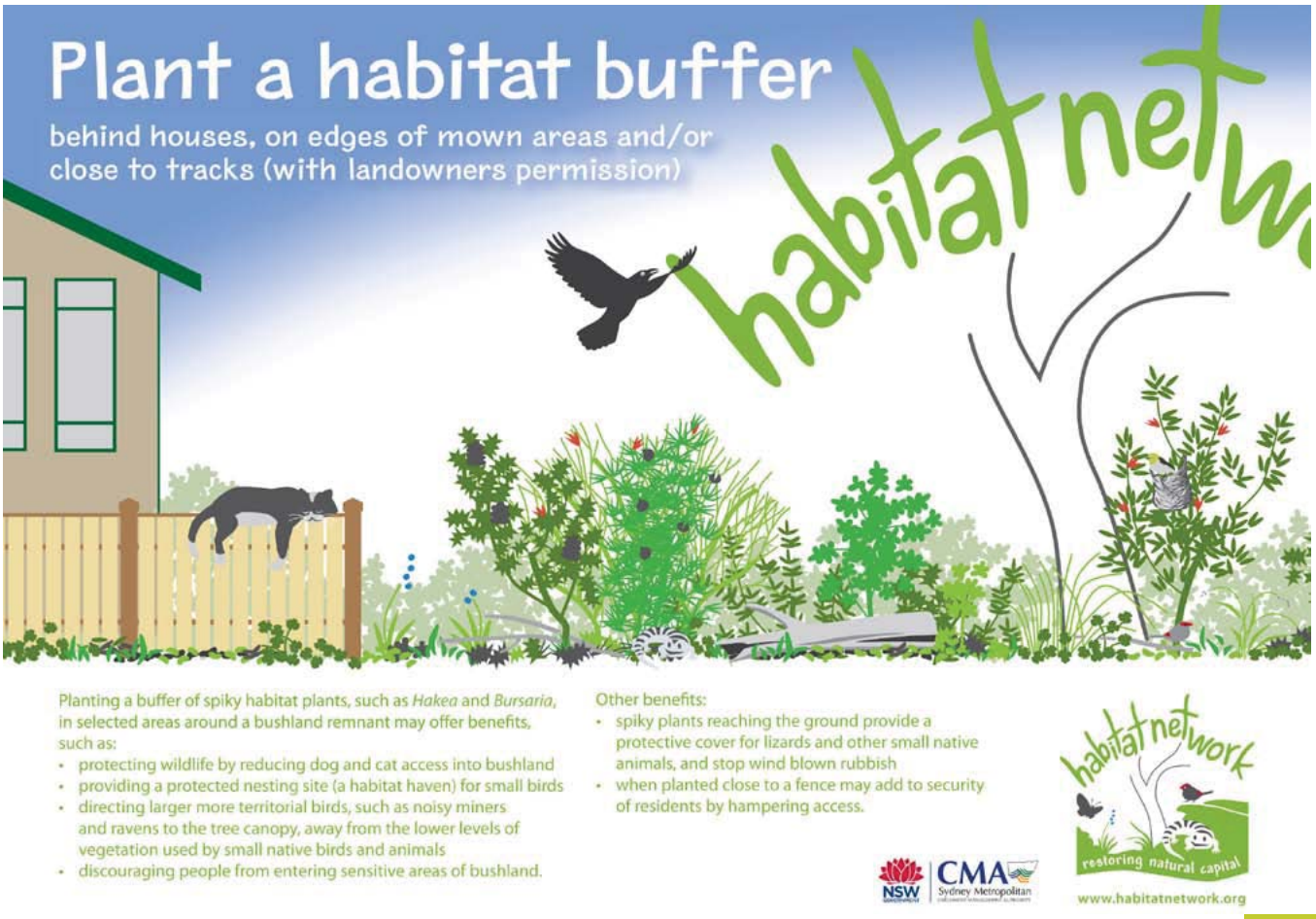
In a garden this idea is easily reproduced by planting habitat plants along fence lines or even simply inter-planting within existing garden beds. Using spiky and/or dense local native species of plants, you can create a protective buffer for your garden. This buffer may discourage some of the larger, more territorial birds such as noisy miners from entering your garden.

Plants that we recommend for the Sydney Region include species of *Hakea*, *Bursaria*, *Banksia*, *Lambertia*, *Woollsia*, *Styphelia*, *Epacris*, *Daviesia* and *Dillwynia*, and also the prickly *Acacia ulicifolia*. The general principles will apply to other areas, and we suggest people ask local experts, such as the local council or Landcare group, for a list of local native plants with similar qualities.

Asset protection zones behind dwellings need to be considered. If it is not appropriate to plant a habitat buffer because of the fire risk, an alternative may be to encourage native grasses as a food source. Native grasslands with scattered shrubs can provide excellent food and foraging opportunities for small birds.

Habitat haven

In the absence of continuous bushland, we need to connect bushland areas by creating either linear connections or islands of habitat. Small birds need protective cover to be



able to move from one habitat area to the next. Young female fairy-wrens, for example, must move from the area where they were born to another in order to find a mate (and food supplies). A habitat haven (refer to diagram below) can be defined as a simplified re-creation of the structure and species composition of native vegetation required by small birds.

Small birds need a dense, closely planted, central area of tall shrubs in which to roost, possibly nest and to use as a refuge. Within and outside of this area they need a diverse mix of smaller shrubs, grasses and ground covers in which to forage for food. A small island of vegetation can also benefit from a vine scrambling over the top to create a protective cover. The central area does need a few spiky plants for added protective value. Consideration should also be given to minimising human disturbance and the threat from cats, dogs, rodents and bigger birds.

The size of this habitat haven can vary from a single paperbark tree, which in itself offers a dense canopy in which small birds can hide, to an area as large as you can manage. Paperbarks (*Melaleuca*) are excellent habitat plants for street tree plantings where there is sufficient space for their roots not to damage paving. The habitat haven diagram (below) describes a circle seven metres in diameter. The seven metre size is based on a typical planting in a school setting, which requires around 100 plants, but really, a habitat haven can be of any size or shape. Intermixing the layers is good too.

We encourage bushland managers to focus on existing plantings and to 'infill plant' with habitat specific plants. By using infill planting in the centre of your planted area you can create pockets of suitably dense habitat for small birds in a short time. You can either infill plant throughout the entire area or just pick one or a few areas to thicken up. In a home garden you can infill plant with spiky shrubs within or around existing plants to create a dense protective area. By also planting a variety of native shrubs and ground covers in amongst your garden plants, you offer a wider selection of food opportunities for native bird and animal visitors to your garden.

Home gardens, verandas and courtyards can all contribute to creating corridors of habitat between bushland areas. Importantly they also provide corridors for the movement of our native pollinators such as native bees and bats, as well as many other organisms.

Protection of weedy habitat

When you go walking, even in relatively good bushland, take note of where the small birds can be heard and seen. Stop, look, listen and consider. Most small native birds by necessity are using the overgrown weedy areas not only for protection but also as a food source. Often the small birds are living in an area, with a cover of Lantana and maybe some weedy vines, and when they come out to feed may choose the seed or nectar of weeds, such as *Bidens pilosa* (farmers friend) or (for small native honey eaters) *Cestrum parqui* (green cestrum). Privet stands can provide shelter for small birds, some of whom love the shady environment.

It is important to ensure that these habitat areas, are managed appropriately. Of course, we need to reduce weed numbers and stop their spread, but not at the expense of our biodiversity, i.e. our small native birds. Quiet and considered observations should be made **before** starting to remove the weedy vegetation. Try to protect the habitat which is in use until native habitat with similar attributes is available and being used for shelter and nesting. We cannot assume that if we remove the weedy habitat that the small birds will be able to find somewhere else nearby that provides refuge and a suitable nesting site.