

Nest-box Know-how



Connecting Landscapes with Communities

A summary of information collected at a nest-box forum in Violet Town, Victoria, May 25, 2012.

Nest-boxes have many uses, including:

1. Providing shelter within the habitat occupied by the target species and where food sources occur nearby;
2. Breeding quarters where food sources are reliable;
3. Somewhere safe for dispersing juveniles to rest while en-route to new territories and
4. Research- collecting information that will improve our understanding and management of hollow-dependent fauna.
5. Allowing us humans to see, learn and appreciate some of our exquisite and precious wildlife.

There's no right or wrong way to provide these benefits, but years of experience from several nest-box projects in the Goulburn Broken Catchment provide plenty of good advice. The points listed below are suggestions, not instructions. Most nest-boxes in use in the Goulburn Broken Catchment are in the woodlands and forests of the northern plains (Regent Honeyeater Project, Whroo & Broken Boosey Conservation Management Networks), where gliders and phascogales are the primary target species. So, the discussion during the workshop and the summary presented here focus on nest-boxes of that size.

Improving Our Knowledge-base

Learn from your endeavours and share your gained knowledge and experience with others, so that future nest-box projects become ever more successful. When checking nest-boxes, record your observations (date, time, location) and submit wildlife records to, for example, DSE's Biodiversity Atlas.

Design & Construction

1. Any box is better than no box.
2. Access holes can be almost anywhere, top, bottom, front, side, just ensure the target species can easily get to the hole and see 'Installation' point 4 (below).
3. Position hinges and box to ensure lid opens easily once box is attached.
4. Incorporate drainage holes, or an inexactly fitting floor.
5. Attachment to tree: use 100 mm bullet-head 'bright steel' nails to secure the nest-box attachment plate to the tree-trunk; they'll last for decades. Bullet-head nails allow removal of the nest-box, without removing the nail, if necessary.
6. Alternatively, use wire with end-springs, rather than nails, to attach boxes to trees, especially if there's concern about damaging the tree, or if the tree is too small for the 100 mm nail or the plate.
7. Don't use screws; they're more awkward to use and may be zinc-plated/anodised (potentially toxic to plants). Weight of the nest-box produces vertical pressure, so little advantage in using screws. 'Bright steel' nails are more than adequate for attachment and will last for decades embedded in the tree.
8. Avoid using gal/zinc plated nails unless you're certain they won't harm the tree.

9. Success of carpet on inside of lid to deter bees is equivocal – bees have made nests in plenty of boxes that have carpet. But, if you have the carpet on hand and it's straightforward to install, it can't hurt.
10. For mammal boxes and if you have the option, include a baffle on the inside of the hole, to discourage birds from using the box. The disadvantage is that a baffle reduces the floor area and space available for the nest.
11. Don't make the eaves on nest-boxes too wide, especially those over the entrance hole, as this can hinder smooth, quick entrances/exits for the animal using the box.
12. Don't go out of your way to use hollow logs: generally too heavy & cumbersome to install/monitor easily. Leave them as habitat on the ground.
13. Don't go out of your way to use high grade, expensive materials. With regular maintenance (which is essential), well-painted, untreated rough-sawn timber boxes are likely to last for several decades.

Installation

1. Concentrate boxes where there are likely to be few natural hollows.
2. Select trees/sites with good canopy cover for improved shelter from the elements and protection from potential predators. Look skywards to assess canopy density; how much 'blue-sky can you see. Select a cluster of trees, if individual trees provide scant cover.
3. Locate boxes on the east or south-east side of the tree-trunk as high off the ground as you can safely climb using your ladder, ideally no less than 3 m off the ground. Boxes higher off the ground will generally be better protected by the canopy, safer from terrestrial predators (& interference) and afford the occupants easier, less risky access to cover after emergence from the box.
4. Locate the hole away from the prevailing weather (eg east or SE) to improve the box's thermal functioning.
5. Make sure you can get a good look at the box, especially the hole, from an angle on the ground, whilst still locating the box in a sheltered position.
6. Install nest-boxes in a variety of habitats, including habitat that might be considered suboptimal (eg. drier slopes, ridge-tops), to provide shelter for animals that need to traverse these areas.
7. Consider moving boxes that show no signs of use after 2-3 years. Installing nest-boxes where hollows are limited will allow the hollow-using fauna population to grow and this may take several seasons.
8. Avoid trees that already have hollows in them. Ideally place in young eucalyptus trees with trunk diameter of 300- 400 mm and with no existing hollows.
9. Don't space nest-boxes less than approx. 50-100 m apart; further apart in drier habitat where territories are larger, a little closer in more productive habitat.
10. Don't place a box where it is easily seen, or damaged.

Monitoring & Results

1. Every box should be monitored at least twice per year for maintenance, as well as to see what's using the box.
2. Check for bee-hives in boxes before climbing the ladder.
3. Ferals should be evicted from the box.
4. Maintenance of nest-boxes is a higher priority than using expensive, high quality materials. Paint the box and maintain it in good condition!

5. Collect all nest-box results on existing database recording sheets (eg. Victorian Biodiversity Atlas/DSE), to facilitate submitting your information to a State or National fauna databases.
6. Take a photograph of each box at installation and record its GPS location.
7. Avoid monitoring during breeding seasons and don't disturb occupant(s) any more than necessary, otherwise the box may be abandoned.
8. No loud noises, eg. banging ladders against boxes, dropping the lid, or yelling during monitoring.
9. Minimise number of viewers per box eg. maximum of several lid-liftings per monitoring session.

Nest-box Projects

1. Collaborate with nearby nest-box projects, where possible - learn from and assist each other.
2. Don't bite off more than you can chew (make sure you can monitor and maintain all the boxes you install & evict ferals).
3. Make a start and learn from your experiences.

Nest characteristics

Squirrel Gliders: a well-developed Winter nest is a beautifully woven bowl of eucalyptus leaves (no bark). To keep cool in Summer Squirrel Gliders just have a flat bed of leaves rather than a bowl shape.

Sugar Gliders: in Summer Sugar Glider nests are similar to Squirrel Glider nests, often little more than a flat bed of leaves, but in winter the nest is closed over at the top, leaving a central cavity for use.

Phascogales: a 'mattress' of strips of bark, moss, fur (eg rabbit, sheep) and feathers. Sometimes shaped like a bowl, or else quite flat. There are usually scats in the corner of the box.

Antechinus: nests are not well structured, a jumble of leaves at most that they burrow into. If a burrow or tunnel is visible down the side of a larger nest, then it may indicate that Antechinus have moved in and are using a nest constructed by another species.

Be aware that tree creepers also make a shredded stringy-bark nest, but the bark-strips tend to be finer. Birds occupying nest-boxes may be identified via their eggs, if they are absent during monitoring.



(Above) Unoccupied Sugar Glider nest of leaves.



Occupied Sugar Glider nest. (Photos O.T.)



(Above) Sugar Glider nest of leaves and bark.



Partially constructed glider nest. (Photos O.T.)



(Above) Occupied Squirrel Glider nests, with the bushy tail characteristically being used like a blanket. (Photos R. T.)



(Above) Phascogale nest of leaves & shredded bark.



Phascogale nest of bark, with scats in the corner. (Photos O.T.)



(Above) Phascogale nest of leaves and feathers. (Photo O.T.) Occupied Phascogale nest. (Photo D.W.)

Photo credits: O.T. - Orlando Talamo; R.T. - Ray Thomas; D.W. - David Wakefield.

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Prepared by Bertram Lobert, July 2012.

For more information about nest-box projects in the Strathbogie Ranges CMN area, go to <http://www.strathbogierangescmn.com/projects/landscape-linkages-project/nestboxes-for-wildlife/>



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