

## How to make nests for Reed bees – Bundles

*Exoneura* species, or Reed bees, are thought to be among the most numerous bees within the Sydney region, aside from the social European honey bees (*Apis mellifera*) and Australian stingless bees (*Tetragonula carbonaria* (formerly *Trigona*)).

*Exoneura* bees range in size from 5 to 8 mm in length and live in semi social groups, with two or more reproductive females (queens) within a single nest. As with all solitary or semi social bees, *Exoneura* do not store honey in their nests. Adult female bees burrow into the pithy centre of dead plant stems, such as the exotic weed *Lantana* or native *Tibouchina*, and make a nest. *Exoneura* are unusual in that they mass rear their young within a single cavity (Figure 1) and do not create individually partitioned cells for each off spring, as do most solitary bees.



Figure 1. *Exoneura* bees, adult and immature stages, within a single cavity of a plant stem.

Like most bees, *Exoneura* use nectar and pollen to feed their young and collect these resources from a wide variety of flowering plants. While collecting these resources, they pollinate flowers, which generates seed development for further plant production. Bees promote seed production in both exotic and native plants, thus supporting food production and biodiversity.

The natural nesting habit of *Exoneura* is in dead and rotting plant stems (Figure 2).



Figure 2. Two *Exoneura* adults nesting in rotting stems.

In an effort to keep our gardens tidy, we remove most dead plant material, thus removing the natural habitat of these bees. However, it is possible to keep our garden tidy as well as providing natural habitat for our native Reed bees. This is how...

- Find a supply of plant stems with pithy centres (Figure 3). These can include
  - Lantana
  - Hydrangea
  - Tibouchina
  - Grape vine
  - Any pruning from plants with pithy centres ( see what you might have in your garden )



**Figure 3. Suitable stems (*Lantana*) for Reed bee habitat, with pithy centres.**

- Wear gloves if working with thorny plants such as roses or *Lantana*.
- It is easiest to harvest and cut the branches when they are alive.
- Cut the branches, of various diameters, into lengths of about 20 cm (8 inches).
- Choose about a dozen stems and bundle them together using a malleable wire (approx 25 cm, 10 inches) and secure them at each end (Figure 4).
- Choose a wire that can be easily twisted and tightened. Fresh stems will dry out with time. This will make them shrink, causing them to fall out of their wire frame. So check the bundle occasionally to ensure they are still secure in the wire. If necessary, remove the bundle from its tree limb and tighten the stems. Then resecure. Once the stems are totally dried out they won't need to be resecured.



**Figure 4. Bundle of *Lantana* stems, tied together with malleable wire.**

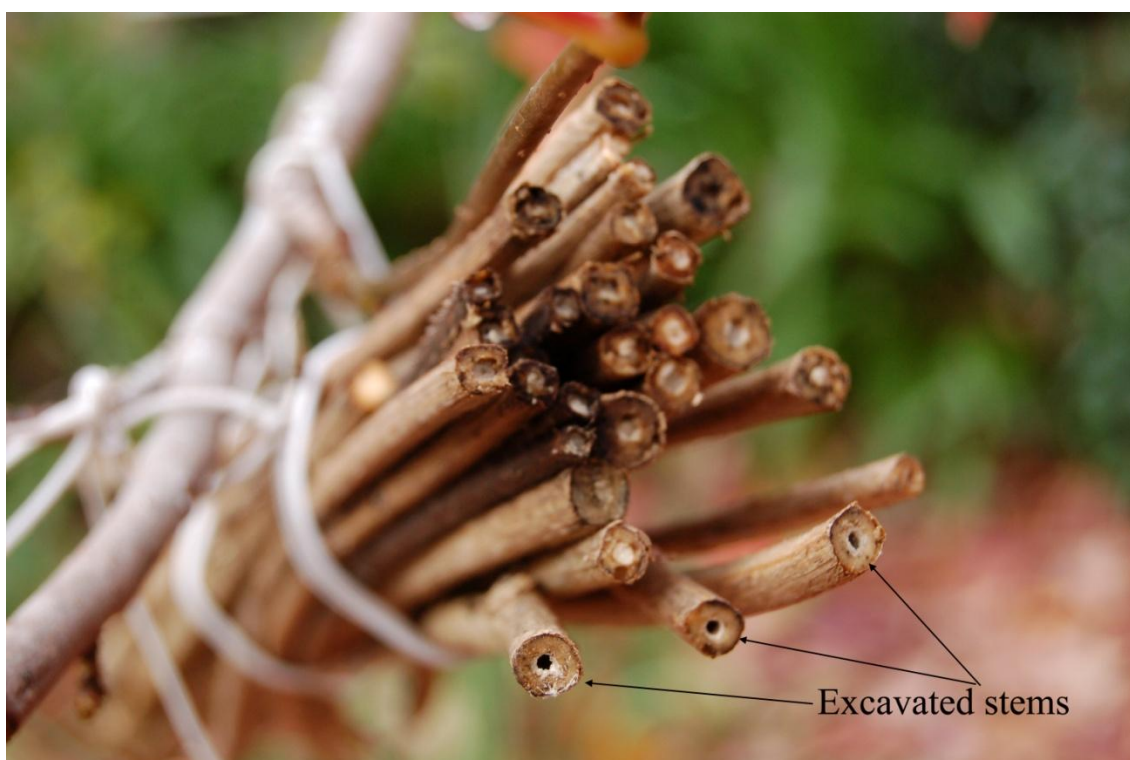
With the extra wire provided by the bundle ties, or with additional wire, secure the bundle on the underside of a tree branch, slightly protected by the tree's leaves (Figure 5). When securing to the tree, remember you may need to get to the bundle to tighten it in the near future so don't over do it.





**Figure 5. Bundles secured to small tree limb.**

Hopefully, by the end of the reproductive season (spring / summer) you will see signs of bees inhabiting your nesting bundles, with some of the pithy centres having been excavated (Figure 6).



**Figure 6. Newly located bundle with signs of resident bees. The pithy centre of the three bottom stems have been burrowed out.**

It may take a season for the native bees to take on this new habitat, so be patient and enjoy.