



# Gardening Insights

July(ish) 2009

## *Do-it-yourself native bee habitats*

I've become obsessed with native bees. We have more than 1000 species of these solitary, stingless, master pollinators in southern Arizona and it's critical that we provide habitat to ensure their survival. I'm designing and building bee habitat sculptures with my friend Tidi Ozeri (Ozerimetaldesigns.com), but they are art pieces and cost more than purely functional habitats. So here are tips for making one at almost no cost with just a drill, some bits, and pieces of scrap wood. Native bees inhabit the entire US, so these tips are applicable across the country!

**Note:** *These habitats will **not** attract honeybees or killer bees and are safe to have near walkways, patios, and play spaces. The bees that inhabit them are not at all aggressive.*

- Use untreated scrap lumber or pieces of tree limbs and avoid cedar or redwood which contain natural pesticides. Check lumber stores for end cuts and waste materials.
- Drill holes in the wood with 3/16", 1/4", and/or 5/16" bits. Make the holes at least 3" deep and one inch apart and be sure they dead end! "Seeing light at the end of the tunnel" is not a good thing for bees.
- Drill the holes horizontally or tilted slightly up at the back to keep them from filling with water when it rains.
- Remove all sawdust from the holes.
- Glue or bolt small pieces together to create a larger habitat.
- Position the habitat in a place where it is protected from excessive wind and rain and attach it to a structure or tree where it won't shake, vibrate or move too much. Habitats can be in full shade, like under a patio, or in the part shade of a tree. They might get too hot if completely exposed, but larger pieces should be fine in full sun if painted a light color.
- Finish the wood, if desired, with a 50/50 mix of turpentine and linseed oil but don't get it in the holes.
- Sit back and watch the bees come. Observe how they cap the holes when finished with egg laying.
- Don't worry about cleaning the tunnels, the bees take care of that and seem happy to reuse the nest sites.

For more information on native bees in AZ and across the country, visit these sites:  
<http://nature.berkeley.edu/urbanbeegardens/index.html>



## Choosing Mesquite trees for landscapes

Mesquites are popular for landscaping in Southern Arizona and the default choice seems to be the South American hybrid version often called "Chilean mesquite" (above left). It is a favorite with contractors and many homeowners because it is cheap, grows quickly, and has no thorns. The foliage is pretty much evergreen. It sounds like a perfect landscape tree, but in this case, beauty is only bark deep and a better choice for most sites is our very own Velvet mesquite. Here are some side by side comparisons of [Chilean mesquite](#) and [Velvet mesquite](#).

[Usually shallow rooted and/or surrounded by surface roots that heave sidewalks and other infrastructure.](#)  
[Deep rooted. Rarely shows surface roots and not often a cause of heaving for hardscape.](#)

[Windthrow during periods of high wind is common. The most frequently blown over tree during the monsoon.](#)  
[Windthrow very rare on established specimens.](#)

[Often exhibits a growth defect called \*included bark\* that can lead to structural damage in mature trees.](#)  
[Included bark is rare in Velvet mesquite.](#)

[Requires monthly irrigation to thrive in typical urban conditions.](#)  
[Thrives on rainfall when established in SE Arizona. It will need irrigation in most Phoenix landscapes.](#)

[Hybridizes with Velvet mesquites and is altering the gene pool of the native species.](#)  
[Native. No problem with hybridization.](#)

[Anecdotal evidence from bird watchers suggests few bird species use Chileans for foraging.](#)  
[Foraged heavily by warblers, verdins, wrens and many other bird species looking for insects.](#)

Both species of mesquite are handsome landscape trees, but given the drawbacks of the Chilean version, it is preferable to choose the native for landscaping here. It is considered slower growing, but still grows very quickly and develops a more stable root system. Desert Survivors Nursery on Starr Pass Boulevard and Civano Nursery on Houghton both procure their seeds for Velvet mesquite from distant areas where hybridization is not a problem. You can count on their native mesquites to grow true to form.





## Plant(s) of the month

### Native desert ferns:

*Fern* and *Desert* are two terms that won't come up together in word association games. But what's surprising is that there are about as many fern species in the low elevations (<4500') around Tucson as there are cactus species! They are delightful little gems of plants with names like "Fairy sword" and "Lip fern" and are typically found in rocky places and canyons.

Russ Buhrow, Curator of Plants at Tohono Chul Park (TCP) is raising several species for sale at their nursery. The ferns grow well in containers and in the ground, but species vary in their requirements so the nursery provides information on care. They are drought tolerant, but according to Russ, it's important not to let their soil dry out completely as one can with cacti.

For more information, visit the nursery at TCP (520-742-6455 ext. 239) and have a look at the website below.  
[www.mineralarts.com/ferns/DesertFernsGuide.html](http://www.mineralarts.com/ferns/DesertFernsGuide.html)



## Opportunities

### Watershed Management: Rainwater Cistern Design Competition

WMG is seeking ideas for aesthetically pleasing rainwater cisterns. The winning vision will be announced in September and constructed by the organization in the fall.

The competition is open to all and any number of entries per person or team will be considered.

Entries will be judged on aesthetics, function, green design, and cost with design requirements as follows:

- Storage capacity near 800 gallons
- Material cost under \$1.50 per gallon of capacity
- Estimated construction time of 120 worker-hours or less to construct
- Design that is mosquito-proof and light-proof (to prevent algal growth)
- Made with materials that are locally available
- Design that is structurally safe with an expected functioning lifetime of at least 15 years

For more information see WMG's site:  
[www.watershedmg.org](http://www.watershedmg.org)

*(Photo above: Baobab tree hollowed out as cistern in SW Madagascar)*



## In the next issue

- Easy care container plants for drama, color, and fragrance
- Vary amin anana: a tasty and healthy Malagasy stew
- Acourtia thurberi: a pink summer beauty
- Ben's Bells: spreading love with simple acts of kindness



Past issues of this newsletter are available at [GardeningInsights.com](http://GardeningInsights.com).

Feel free to forward this letter to friends or have them contact me if they wish to be on the mailing list.



## GARDENING INSIGHTS - LANDSCAPE DESIGN & CONSULTING - "WHERE ART MEETS ECOLOGY"

Our LEAF\* design philosophy and practices include:

- \* Local plants, materials, artists, and architecture
- \* Eco-friendly ways to save water, avoid chemicals, and encourage wildlife
- \* Artistic, inspiring, and creative uses of plants, sculpture, and other elements
- \* Functional design for spaces that are easy to live in and easy to maintain

### COMMERCIAL & RESIDENTIAL PROJECTS

Greg Corman 520-603-2703 [greg@gardeninginsights.com](mailto:greg@gardeninginsights.com) [www.gardeninginsights.com](http://www.gardeninginsights.com)