

*Small outdoor water features,
or,
How I learned to stop worrying and learned to build a
pico pond.*



Containers - Use your imagination (& some common sense).

Purely Pico:

Ensure all have open surface areas, are water proof and dishwasher safe. Small submersible pumps or air stones can be used to increase oxygenation and water movement.

- Earthenware dishes or pots e.g. glazed earthenware, pottery
- Ceramic crockery e.g. cups, trays, tureens, teapots, jugs, baking dishes
- Glass items e.g. bowls, urns, vases, carafes

Larger containers:

Ensure all are waterproof, and have fish/plant safe interior. If not, choose painted glaze or pond lining.

- Half cut wine barrels
- Large pots
- Old porcelain fixtures like bathtubs, sinks (even old toilet!)
- Ceramic crockery e.g. cups, trays, tureens, teapots, jugs, baking dishes
- Metal containers, buckets or troughs – must be lined & can heat fast in the sun

Pumps, air stones, fountains, water movement and heaters.

- Water movement recommended to oxygenate and prevent stagnation....
- ...however, good planning and water changes can circumvent it
- Small pumps, submersible impellers VS air driven
- Air stones
- Heaters



Plants & stocking ideas

- Floating plants e.g. *Azolla*, duckweed, frogbit, water lettuce, bladderwort, hornwort, *Riccia* etc
- Emergent plants and air plants for interest eg. 'Lucky bamboo' (*Dracaena braunii*), *Tillandsia* & dwarf *bromeliad* air plants,
- Small rooted plants with floating leaves, Aussie Nardoo, Water Poppy, Dwarf *Nymphaea* Lilly
- Larger rooted plants with floating leaves e.g. *Nymphaea* lily,
- Medium to large upright 'spiky' plants e.g. small Sedges, dwarf Sweet Flag, dwarf Egyptian Papyrus, Water Iris, dwarf rushes (e.g. Japanese Dwarf Rush, Dwarf Horsetail Rush), dwarf Bamboo varieties, Canna lily (roots submerged only) etc
- True aquatics e.g. *Elodea/Anacharis*, *Milfoil*, any tropical plant if conditions permit
- NO WATER HYACINTH - & BE CAREFUL WITH DISPOSAL OF CUTTINGS.



Planting and feature ideas

- Setting plants on raised platforms, bricks, pots with holes for fish cover, ensure the height raised to is correct for your plant
- Creating contained bog areas & 'beaches'
- Islands and platforms etc
- Planting a pico pond in a planter
- Novelties e.g. Safe ceramic ornaments, bath toys, croc heads, fake ducks, toy boats etc



Fish and inverts

- Goldfish, will eat many soft plants and shoots.
- White Clouds
- Zebra Danios
- *Galaxias maculatus* - **native**
- Rosy Barbs
- Mosquito fish (*Gambusia affinis*) - **pest fish**
- Paradise fish
- Pond snails
- Yabbies/fresh prawns, note yabbies can dig and crack some pots!



The dish garden



A better use for a 'betta tank'



Half barrel feature



Sunken bucket & barrel children's fantasy garden



Wildlife to expect and ideas for protection

- Insects e.g. butterflies, dragonflies
- Small birds, consider a perch or close complimentary feeder nearby
- Frogs and lizards
- Possums
- Cats
- Dogs
- Protected area for the pico pond, with netting etc to protect fish from larger birds, cats etc.



Maintenance and long term care

- Partial water changes, 10-50%.
- Use your chemistry kits – keep it 40ppm nitrate or below, KH 4 - 5 degrees (71.6 - 89.5ppm) or above.
- Siphon for bottom mulm, take care of planted substrate.
- For bad algae build up, drain to 1/3, scrub sides, fill, clean filter in a few hours and the next day to prevent ammonia spikes. Limit extra fertilizers unless necessary, check your stocking and reduce sun exposure to prevent algae.
- Divide plants outside their growing period, or as recommended.
- Ensure sun, wind and frost protection.

Q&A?

Thanks for listening

Have neat picture to wake you up....

