Growing Bromeliads Epiphytically in the Subtropical Home Garden

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Most bromeliad growers I know, and know of, cultivate their plants in pots under shade cloth, or some form of protective structure. This is necessary when climatic conditions do not replicate the bromeliads' natural habitat. However, for those lucky gardeners who live in a subtropical climate, as I do, growing bromeliads in trees of the home garden can be successful and very effective.

I have many established trees in my garden, thanks to the previous owners. Moving here from a cool-temperate region, I was greatly impressed and inspired by a huge flowering clump of the common *Billbergia pyramidalis,* climbing the trunk of an old Silky Oak (*Grevillea robusta*). Since then, my trees have become living sculptures – embellished with their ornaments, it's like Christmas all year!

With each new bromeliad purchase, I research its origin and growth habit in the literature available (pre internet access and the realm of international forums and facebook!), and decide where and under which conditions it might thrive. When tying a bromeliad onto the branch or trunk of a tree, I do not use sphagnum moss around the root area of the plant. Sometimes, a purchased pot-grown bromeliad already has an established root ball including pine chunks. This can be easier to secure to a branch, especially if the plant is not stoloniferous. Well-grown pups, with an obvious stolon, can be tied directly onto the upper side of a branch very easily. I cut dark-brown stretchy fabric (like "ribbing" or "lycra") into 2cm (3/4") wide strips, and wind it around the base/stolon of the plant and branch. Once the bromeliad has rooted firmly to its host, the tie can be removed. If the tie is unpleasantly obvious, *Tillandsia usneiodes* (Spanish moss), draped around the base of the plant, is an attractive camouflage. Some bromeliads' roots take longer than others to establish, and strong wind might cause another trip up the ladder to retie.

A newly-purchased bromeliad has usually been pampered under shade house conditions. Therefore, when initially exposed to the natural elements, the plants will deteriorate slightly – although subsequent pups will be tougher. Their vases will also fill with leaves and other debris, and spider webs are likely decorations. These are insignificant detractions, when viewing the overall effect. An occasional clean-out makes a difference – including pulling or cutting off dead lower leaves and old plants which are past their use-by date. From experience, the number 1 natural enemy of bromeliads in the landscape is <u>frost</u>, then <u>hail</u>, (number 3 is a big black possum!).

Moisture and humidity requirements for epiphytic bromeliads are similar to those in their natural habitat. In subtropical regions, natural rainfall in warmer months will usually suffice, although in unseasonably dry, hot weather, supplementary watering/misting is necessary for healthy growth. Brief, gentle rain showers will be beneficial to bromeliads growing in open, less-densely foliaged trees, but any bromeliads growing under a dense canopy will miss out. I hand-water with a

hose spray, about twice a week, when there is no decent rainfall in the warmer months. Early morning or late afternoon is the best time to water. Brown tips and inward-rolling of leaves are indicators of low humidity and inadequate moisture. In subtropical areas, winter is usually dry. I rarely water in winter. Root growth is obvious in autumn, with the constant moisture of the wet season.

If limited space is a subtropical gardener's plight, then going up can be a happy alternative, adding a new dimension to the garden. The form of each bromeliad is enhanced and unimpeded when grown epiphytically, if size and spacing are taken into account. Contrasting forms, size, foliage colour and patterning compliment each other if they are positioned artistically. The growth habit of each species or hybrid needs to be considered, regarding its future development. Most bromeliads seem to grow slower, and are more compact, when grown this way.

There are many factors to consider when choosing the best tree for that special bromeliad, as are listed below:

- Multi-branched trees, especially at lower ground level, are ideal. Horizontal, or diagonally-angled branches, are more aesthetic and attachable than vertical trunks and branches (exception – the fibrous trunk of a tree fern)

- Tree forks are good, especially for vriesea sp., and are often easier to secure large plants in the desired position.

- Rough, permanent bark onto which roots more easily fasten are best – trees which shed their bark are unsuitable, as the bromeliads might also fall off with the bark (exceptions – pine sp. and paperbarks).

- Judicious pruning of selected branches, in as natural or creative an effect as desired, allows more choice when positioning and tying bromeliads to the trees.

- Deciduous/semi-deciduous and evergreen trees may be suitable. Deciduous trees which are bare in winter allow the weaker sun to brighten the bromeliads' foliage. However, cold conditions might damage susceptible plants, without a canopy as protection.

- Some deciduous and semi-deciduous trees, e.g. *Bauhinia sp.* (Orchid tree) and *Calodendron capense* (Cape chestnut), lose most or all of their leaves late winter, and do not commence regrowth until late spring, or even summer. Care should be taken when selecting bromeliads for these conditions, as shade-loving plants will likely suffer, unless they are low down and near the centre of a well-branched tree. The bromeliads in my bauhinia are stretched to the limit of their sun tolerance, until the tree finally grows lush new foliage in mid to late summer. The bromeliads show their obvious relief by starting to change in form and leaf colour, due to the shadier conditions.

- The denseness of foliage, the size, and the shape of each tree will affect the light factor. Evergreen trees with a large, dense canopy would suit shade-loving bromeliads, both in the tree, and underneath it. Keep in mind that light rainfall will not penetrate a dense canopy.

- Aspect is of great light significance. A large tree will have different light conditions within it, e.g., a specimen tree, surrounded by lawn, will have brighter light on the outer branches of the northern and eastern sides of it, compared to the inner and south-facing branches (southern hemisphere – vice verse for northern hemisphere).

- Light conditions will also differ when other trees, or buildings/structures/walls, are nearby. Every garden is unique, so its owner needs to look carefully at his/her trees, and all the variables which affect them.

- Another important consideration is each potential bromeliad tree's exposure to wind. Bromeliads like plenty of ventilation, which they will receive, in most cases, by growing on any outdoor tree. However, extreme exposure to very strong wind may cause serious damage to the leaves of vulnerable bromeliads, such as soft-leaved vrieseas, guzmanias, and some aechmeas. Strong winds and dry conditions, such as we experience in northern N.S.W., Australia during early spring, necessitate extra protection for certain bromeliads – like choosing a more suitable micro-climate. The tougher-leaved aechmeas and stiff billbergias, once rooted to a branch, survive harsher conditions – in fact, many thrive on neglect.

Some trees on which to grow bromeliads

The following list comprises of trees on which I have either grown bromeliads (most), or have seen used successfully. Many other trees are likely to be suitable, if the previously-mentioned factors are considered.

Acer negundo (Box elder maple)
Banksia sp.
Bauhinia sp. (Orchid tree)
Buckinghamia celsissima (Ivory curl)
Calliandra haematocephala (Red powder-puff)
Callistemon sp. (Bottlebrush)
Calodendrum capense (Cape chestnut)
Citrus sp. (Grapefruit, Lime, Mandarin)
Cotoneaster sp.
Cyathea sp. (Tree fern)
Delonix regia (Royal Poinciana)
Ficus sp. (Fig)

Grevillea sp. (Silky oak, Sandra Gordon, other small tree varieties)
Jacaranda mimosifolia
Melaleuca sp. (paperbark and rough bark)
Omalanthus populifolius (Bleeding heart)
Pinus sp. (some pines and other conifers)
Plumeria sp. (Frangipani)
Prunus sp. (Peach, Plum)
Syzygium and *Acmena sp.* (Lillypilly)
Tibouchina sp. (Lasiandra)

Bromeliads NOT suitable for epiphytic culture

- Terrestrial genera – those which grow in the ground.

The ***Pitcairnioideae*** subfamily (and other newly classified terrestrial subfamilies) contains the most ancestral bromeliads and many resemble the grass family from which they evolved. Almost all are terrestrial and rely on an extensive root system for their moisture and nutrients.

e.g. ***Deuterocohnia, Dyckia, Hechtia, Pitcairnia,*** and ***Puya.***

- ***Cryptanthus, Ananas,*** and ***Bromelia*** are terrestrial, some saxicolous, and therefore unsuitable.

- Many of the tropical ***Guzmania,*** and other Amazonian species from torrid micro-climates, are difficult to grow well epiphytically – if rainfall/watering and humidity are insufficient, and winters too cool.

Recommended bromeliads for epiphytic culture

Most bromeliads which grow epiphytically in their natural habitat should be suitable in the subtropical home garden, **IF** specific requirements of each species or variety can be closely met or replicated.

The winning genera for epiphytic culture in my garden are:

Aechmea, Billbergia, Canistropsis, Canistrum, Catopsis, Neoregelia (especially the small-growing and stoloniferous types), ***Nidularium*** (low in tree), ***Quesnelia, Tillandsia, Vriesea, Wittrockia*** and several **bigeneric** cultivars.

NB. Only genera within the ***Bromelioideae*** and ***Tillandsioideae*** subfamilies grow as epiphytes in their various natural habitats of Southern U.S.A., Central and South America.

Of the many different varieties of bromeliads grown epiphytically in my garden, I have agonized over choosing only 40 to recommend. They are mostly species. Hybrids and species cultivars, with any of the listed plants as a parent, are also recommended for epiphytic culture.

Revised TOP 40 Hit Parade

- *Aechmea caudata*
- *Aechmea chantinii*
- *Aechmea cylindrata*
- *Aechmea lueddemanniana*
- *Aechmea nudicaulis* (all varieties)
- *Aechmea orlandiana* (all cultivars)
- *Aechmea racinae*
- *Aechmea recurvata* (all varieties)
- *Aechmea retusa*
- *Billbergia alfonsi-joannis*
- *Billbergia amoena* (all varieties)
- *Billbergia sanderiana*
- *Billbergia vittata*
- *Catopsis morreniana*
- *Canistrum fosterianum*
- *Canistrum seidelianum*
- *X Canmea* hybrids
- *X Neomea* 'Strawberry'
- *Neoregelia compacta*
- *Neoregelia Fireball*
- *Neoregelia olens*
- *Neoregelia pascoaliana*
- *Neoregelia pauciflora*
- *Nidularium procerum*
- *Quesnelia edmundoi*
- *Quesnelia marmorata*
- *Tillandsia deppeana*
- *Tillandsia juncea*
- *Tillandsia stricta*
- *Tillandsia tricolor*
- *Tillandsia usneoides*
- *Vriesea carinata*
- *Vriesea flammea*
- *Vriesea gigantea*
- *Vriesea hieroglyphica*
- *Vriesea philippo-coburgii*
- *Vriesea platynema*
- *Vriesea simplex*
- *Vriesea vagans*
- *Wittrockia cyathiformis*

Tools of the trade