Bromeliads: From potted collection to the landscape – an under-used resource in garden design

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Bromeliads are a group of plants constituting the Bromeliaceae family.

According to Wikipedia (https://en.wikipedia.org/wiki/Bromeliaceae), there are about 80 genera and 3,700 known species native mainly to the tropical Americas. The most well-known is the pineapple.

Most people encounter bromeliads today in garden centres or florist shops where plants in flower are sold for home decoration. Many of those buyers have little experience or knowledge of what they are buying but are attracted by the beautiful colours of what's on offer and are not aware of their plant's garden potential. There is a huge variety of bromeliads being offered in this way these days but growing up in Wellington in the 1960s I remember being struck when I saw the lovely pink and blue-flowered, grey-striped leaved *Aechmea fasciata* which was being offered as a special and unusual pot plant. Years later, in Auckland, I was amazed to find one put aside in a garden where it was growing and flowering quite happily.

Apart from the pineapple (*Ananas comosus*), which was introduced to Europe in the 16th century, bromeliads were not introduced into Europe until the 18th century and the range of species was initially quite small. It wasn't until the late Victorian period that serious hybridising began but this was severely curtailed by the upheavals of the first world war. In the 1950s bromeliads started to become popular again and hybridising resumed.

At this stage they were still primarily collectors plants in New Zealand and that trend continues with strong bromeliad societies that regularly gather to show and display plants. It is notable that with so many of the more traditional plant societies in New Zealand having all but disappeared, bromeliad groups, along with orchid societies, continue to be strongly supported.

But the main point here is that bromeliads were mostly grown as houseplants or as potted collections.

I was surprised to learn recently that when the Bromeliad Society of New Zealand was formed in 1962, a list of all known species in NZ was compiled and that, in addition to the 162 listed, there were also estimated to be more than 150 different tillandsias in NZ – a total of over 300 species. Thus, there was an enormous range of plants available with considerable differences in appearance and growing preferences and yet few were planted out as garden plants.

During the 1990s and early 2000s, the growing interest in subtropical gardening led to the trial of many interesting pot plants as possibilities for the open garden and bromeliads were included in these experiments. In addition, the work of Brazilian landscape architect Roberto Burle Marx (1909–1994) was beginning to be known in New Zealand by then and, while some of his most innovative ideas centred on physical design, he used bromeliads extensively in his planting, and his use of them was new and exciting.

With the shift to a garden setting, a changed awareness of the foliage qualities of bromeliads needed to emerge. While some, such as neoregelias and vrieseas, had always been grown primarily for their patterned leaf colour, it now became important to consider the foliage qualities of all bromeliads to ensure that when used in the garden they become part of a larger picture, rather than specimens to be seen in isolation.

In the early years of the Heroic Gardens Festival, which ran annually in Auckland from 1997 until 2019, we often heard criticism from visitors who said "there's too many bromeliads" or "if I see another damn brom" which showed both the popularity of bromeliads with innovative gardeners, and that they were still unfamiliar to many garden visitors and so stood out. Such comments were rarely heard about roses during the Trinity Garden Festivals which ran in the 1990s and where roses were near universal in the gardens that opened.

Apart from the possible overuse of distinctive looking plants, the problem with the developing bromeliad craze as garden plants was their indiscriminate use without considering how they fitted into the larger landscape. I grow many bromeliads in our home garden (Fig. 1) as part of a varied palette of plant forms from many plant groups but unless you are a bromeliad fanatic, it simply doesn't work to use too great a proportion of them. However, when you're trying to create a textured and nuanced garden scene in a frost-free or nearly frost free area, judicious use will add greatly to the interest of the garden.

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Having said that, I must acknowledge a garden in East Auckland owned by a serious bromeliad grower where the garden is primarily composed of massed bromeliads in pots – these are moved around to paint striking and effective scenes which are reminiscent of Roberto Burle Marx's approach.

Fig. 1 Bromeliads in the author's garden border.

Uses

There is a greater variety of form in bromeliads than most people realise and this variation means that there are more ways of using them than most imagine. Many people think of bromeliads as open vase-shaped plants with leaves much longer than their width and with foliage that is coloured or patterned, but there are several very useful species with narrow, arching leaves that make nice grass-like clumps which periodically send up colourful flower spikes – *Tillandsia kirchhoffiana*, *T. punctulata* and *Wallisia lindenii* are good examples. These species look good at the front of a border where the form of the plant can be used to advantage, either as a ribbon edging or in place of small grasses with the advantage of producing colourful flowers.

Secondly, there are selections with a more 'typical' bromeliad foliage shape but with plain green leaves. Many of these will clump up rapidly forming a dense groundcover, 20–30 cm tall, that periodically produces colourful flower spikes. Others in this group produce flowers low in the vase-shaped rosette of foliage and are more useful near to a path where the flowers can be looked down upon. Two species of pitcairnias (*Pitcairnia integrifolia* and *P. xanthocalyx*) make somewhat untidy heaps of strappy foliage and need a more casual setting, but their flowers justify their inclusion. All of these green foliaged groups may be thought of as alternatives to more usual groundcover plants such as *Ajuga*, *Liriope*, *Ophiopogon* (mondo), grasses, and sedges, and there are varieties to suit a wide range of situations.

Thirdly, there are the more familiar looking bromeliads with coloured or patterned leaves. The smaller growing of these can also be used as ground cover plants but much more care is required in their use as they can draw the eye to too great an extent – a good ground cover is one that sets off its neighbours rather than competing with them.

Larger growing, patterned leaf bromeliads make very good accent plants. By keeping them as single rosettes, selections such as *Alcantarea imperialis* or *Vriesea hieroglyphica* can make dramatic and colourful exclamation points. There are a large group of *Vriesea* hybrids developed from several species that look great as single rosettes until they flower when their flower spikes can look, somehow, odd. But when allowed to form clumps of rosettes the patterned foliage and the flower spikes become an interesting addition to a border.

Many of the plants described below will happily grow either in the ground or on trees, but I have prioritised the former use as I'm primarily concerned here with landscaping on the ground. However, many gardens will have medium to large trees in settings where they may be enhanced by having epiphytes growing on them.

In the wild, epiphytic bromeliads can be found in many different environments. At one extreme, silver-leaved tillandsia, often known as 'air plants', can be found in full sun growing on bare trunks of trees and palms, or amongst rocks. Some of these have adapted to urban environments in their native countries and can be seen growing on power lines in the middle of the city – an extraordinary sight when they burst into flower. This resistance to drought can be utilised in the garden to great effect.

Other epiphytic bromeliads are found growing naturally in shaded or semi-shaded forest environments accompanied by ferns, orchids, and mosses, and this look can be replicated in the garden where suitable large trees are growing and there is some wind shelter.

For convenience I will describe different types of bromeliads in four groups: the plain leaved plants that more easily take the place of the typical ground cover plants that are often used, the patterned foliage ones that are striking but need more careful placing, and the two groups that may be used as epiphytes.

I will discuss only a limited number of the many species and selections that could be used but hope to show the possibilities of these interesting and beautiful plants as garden subjects.

Description and photographs of bromeliad types[2]

Plain green leaves

Aechmea apocalyptica (Fig. 2), *A. gamosepala* (Fig. 3A–B), and *A. winkleri* (Fig. 4) all look similar in leaf but have distinctly different flowers. *A. apocalyptica* has, in keeping with its name, narrow flower spikes of a fiery red with small clear blue flowers – you might fancifully think of a blue flame above burning coals. *A. gamosepala* has a narrow pink spike with small blue flowers, but the pink predominates and as the flowers themselves fade the pink bracts darken and stay colourful for months. *A. winkleri* has a more pyramidal shaped flower spike where the red spike and yellow flowers are in colour harmony, and then after the yellow flowers finish the bract takes on a new character in a tawny-orange shade. All three species grow easily, clump rapidly, and have attractive flower stems for months. They look best in semi-shade where the foliage colour is mid-green but will tolerate sun although with some leaf bleaching.

[2] All photographs in this article were taken by and are copyright of the author.

Fig. 2 *Aechmea apocalyptica*.

Fig. 3 *Aechmea gamosepala*. **A**, narrow, colourful flower spikes, and plain green leaves typical of the species. **B**, variegated leaves of the cultivar *A. gamosepala* 'Lucky Strike'.

Fig. 4 *Aechmea winkleri*.

Billbergia nutans (Fig. 5) has been widely grown in gardens and is often unrecognised as a bromeliad. It has a slim funnel-form growth habit with narrow leaves that arch out at the top and usually lurks unnoticed until it sends up its pink spikes with hanging tassels of pink, green, and deep blue flowers that are lovely for picking. It grows very easily and clumps quickly but if wanted for picking some snail-baiting may be required.

Fig. 5 *Billbergia nutans* (Queen's-tears). Close-up of flowers and pink spikes.

Guzmanias tend to prefer warmer conditions than many of the bromeliads I'm mentioning here but there are some that do well enough. As a genus they come from well-drained shady forest conditions growing in humus and leaf litter so they make great plants for growing under trees. There are few species readily available in New Zealand but countless *Guzmania* hybrids have been produced by European nurseries and any that can be found in garden centres are worth trying.

Nidularium procerum "Rubra" (red form) (Fig. 6) has uncomfortably sharp spines on its leaves, but despite this, is worth growing as a ground cover where regular grooming is not critical.

Fig. 6 *Nidularium procerum* "Rubra".

The long narrow leaves are a mid-green above with purple flushed undersides and the flower head which nestles at the centre of the leaf rosette is a complementary red. The whole effect is a muted richness which is only noticed when nearby but which adds greatly to a tree and shrub border.

There are three *Pitcairnia* species which I have found to be good garden subjects. They all have plain green leaves, narrow in the first species and broader with silvery undersides in the other two. *P. flammea* (Fig. 7) grows to about 30 cm and has plume-like flower spikes of rich red which contrast beautifully with the light green leaves. *P. integrifolia* (Fig. 8) and *P. xanthocalyx* look the same in leaf and have similar looking flower spikes – the first a lovely soft apricot, the second a soft yellow. I can't be sure that *P. integrifolia* is the correct name for the plant we grow in New Zealand but that seems to be the consensus of opinion.

Fig. 7 *Pitcairnia flammea*, showing bright red upright inflorescences that likely inspired the common name 'flame bromeliad'.

Fig. 8 *Pitcairnia integrifolia*.

Quesnelia imbricata (Fig. 9) is unremarkable when not in flower. It grows to about 30 cm and clumps quickly. The leaves are a little spiny but the flowers justify its inclusion where the spines won't be a problem. The flower spike is a short, broad pyramid shape, held about level to the top of the leaves, and is bright orange-red from which bright pink flowers are produced. It may sound like an odd combination but it works – it has a quietly flamboyant effect in the garden, but that apparent contradiction has to be seen to be understood.

Fig. 9 *Quesnelia imbricata*. Close-up of short and brightly coloured flower spike.

Tillandsia kirchhoffiana (Fig. 10) has fine narrow pale green foliage, increases steadily, and sends up long thin red spikes bearing tubular yellow flowers. It looks very good as either a clump or a ribbon and seems happy either in the ground or low on a tree trunk where moisture and humus can gather.

Fig. 10 *Tillandsia kirchhoffiana*.

Tillandsia punctulata (Fig. 11) also has fine foliage but of a darker green and could be taken for one of our native sedges until a closer examination shows the more familiar bromeliad structure inside. It is a plant that is equally happy as an epiphyte but looks very good in a semi-shaded border with good drainage and is especially nice as an edging plant where the form of the plant can be enjoyed. The spectacular flower spikes emerge bright red from within the clump and develop a bright green upper half from which small deep purple flowers are produced. The plant is quick to pup and the flowers hold good colour for many months.

Fig. 11 *Tillandsia punctulata*.

Vriesea philippocoburgi (Fig. 12) produces large rosettes about 1 m high and makes a stunning addition to a subtropical garden. The green leaf colour varies with light intensity and the tips are beautifully marked with rich red to almost black in higher light. The handsome flower spikes are up to 1.5 m tall, branched, with large bright red bracts and yellow flowers.

Fig. 12 *Vriesea philippocoburgi*.

Vriesea 'Poelmanii' (Fig. 13) is an old hybrid and typical of many similar selections that are often available. Shortish clumps of mid-green leaves live quietly until the production of long flat paddles of bright red flower spikes that last well.

Fig. 13 *Vriesea* 'Poelmanii', an old cross (*V.* 'Van Geertii' × *V.* 'Gloriosa') raised in 1896 and still grown.

Vriesea vagans (Fig. 14) only grows to about 20 cm high but makes a densely spiky-looking ground cover quite quickly. The low growth forms a mat over which hovers the long, branched, bright red flower spikes that carry small yellow flowers.

Fig. 14 *Vriesea vagans* used as a ribbon edging.

Two other small growing vrieseas that are sometimes available are *V. erythrodactylon* (Fig. 15) and *V. maxoniana* (Fig. 16). Both have plain green leaves and attractive flower spikes and *V. erythrodactylon* looks particularly good when the sun is behind it.

Fig. 15 *Vriesea erythrodactylon* illuminated by the sun shining through its flower spikes.

Fig. 16 *Vriesea maxoniana*.

Wallisia lindenii (Fig. 17) was formerly called *Tillandsia lindenii* and is often still sold under that name. It has also been considered a synonym of *Wallisia cyanea*[3] (Fig. 18). The leaves of *Wallisia lindenii* are narrowly tapered with a light purplish striation at their base and a purple suffusion beneath giving an extra richness to the 30 cm high clump. An established plant throws up a good number of tall, pinkish, flattened flower spikes that produce large blue flowers successively over many months. It is easy to grow in light shade or partial sun, either in the ground or as an epiphyte where humus is available, and is a glorious addition to any suitable situation.

Fig. 17 *Wallisia lindenii*.

Fig. 18 *Wallisia cyanea* (pink quill).

Patterned and coloured leaves

Aechmea fasciata is a beautiful plant but needs careful placing. Its leaves are grey-green with silver banding and in my opinion looks best in a setting with grey and dull green leaved plants. It flowers with a wide spikey pyramid of very bright pink and blue flowers. It is easily grown in the ground or as an epiphyte and increases quickly when happy.

Alcantarea imperialis 'Rubra' (Fig. 19) has become very popular amongst landscapers and enthusiasts for its size and the rich red colour of its leaves when grown in full sun. Foliage can easily reach 1.5 m tall and wide and makes a dramatic statement even without the 2.5 m high flower spike that can take 10 years or more to appear. When it does flower the large cream flowers are rich in nectar and tūī will eagerly perch and feed.

Fig. 19 *Alcantarea imperialis* 'Rubra'. The red colour of its leaves become more pronounced when grown in full sun.

There are a number of *Billbergia* species and hybrids with beautifully patterned leaves in a narrow upright vase shape. Their pendulous flower spikes are large and colourful but unlike many other bromeliads only last in good condition for a couple of weeks. *B. vittata* (Fig. 20A–B) and *B. zebrina* are typical of the genus in cultivation but most plants available are hybrids. Their narrow growth habit means they are better seen rising above lower growing plants but they are also very happy growing on trees where the flowers can hang out and be easily enjoyed.

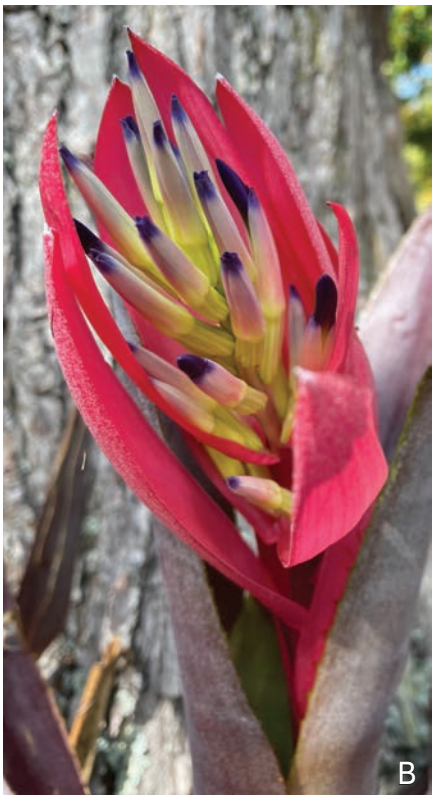

Fig. 20 *Billbergia vittata*. **A**, plant habit. **B**, close-up of emerging flower.

Neoregelias all produce their small flowers inside the vase of their leaves and are primarily grown for their foliage alone. They fall into three groups for landscaping purposes.

1. Some have plain green leaves but the centre part of the vase changes colour when the flowers are produced. This centre colour may be pink, red, or purple, is very eye-catching, but less pleasing to my eye than other forms.

[3] Although botanically *Wallisia lindenii* is now considered a synonym of *Wallisia cyanea*, as grown in New Zealand these are quite distinct plants (compare Fig. 17 & 18) with different horticultural uses so for this article I have kept the names under which they are known and grown.

2. *Neoregelia* ‘Hojo Rojo’ typifies the group that has uniformly deep burgundy leaves, are low growing, and can make a spreading mat threading around bigger plants. They look best in full sun where the colour is brightest.
3. The most widely grown neoregelias have patterned or mottled foliage in shades of green and red that spread quite rapidly and grow from 20 to 30 cm tall. They are mostly derived from *N. marmorata* (Fig. 21), are visually strong plants that need some care with placement, but when used well can be very effective.

Fig. 21 *Neoregelia marmorata*.

Another large group with visually striking foliage are the *Vriesea* hybrids (Fig. 22), derived from the species *V. fenestralis*, *V. fosteriana*, *V. gigantea*, *V. hieroglyphica*, and *V. platynema*. These are generally larger plants growing to around 80 cm high with tall flower spikes of marginal interest rising to perhaps 1.5 m. Enthusiasts generally keep these to single rosettes but if allowed to clump, and kept groomed, they can be a striking addition to a shade border where coloured and patterned foliage is wanted.

Fig. 22 *Vriesea* hybrid with spectacular markings on its foliage.

Epiphytes for shade or semi-shade

There are a huge number of bromeliads which naturally grow as epiphytes. They can be used to extend a garden upwards into trees where they make great companions for orchids and ferns in a dense planting, or as isolated specimens. Some of the best are found in the *Aechmea*, *Neoregelia*, *Tillandsia* and *Vriesea* genera, and many are described earlier. One not previously mentioned is *Tillandsia* (*Pseudalcantarea*) *viridiflora* (Fig. 23), a species with purple suffused green leaves and upright purple flower spikes bearing beautiful lime green flowers.

Fig. 23 *Tillandsia viridiflora*. Close-up of spike and flowers.

The species with pendant flower spikes are particularly effective when grown on trees and species which are reasonably obtainable include *Vriesea guttata* (Fig. 24) and *V. simplex* (Fig. 25) both of which grow well when attached to rough-barked branches.

Fig. 24 *Vriesea guttata* showing the flower spikes and the nicely spotted leaves. A random flower spike from *Vriesea simplex* is shown towards the right.

Fig. 25 *Vriesea simplex*.

Aechmea ‘Foster’s Favorite’ (Fig. 26) is another excellent plant with glossy dark red leaves forming a neat vase shape from which is produced a hanging spike of bright red berry-like flowers.

Fig. 26 *Aechmea* ‘Foster’s Favorite’.

The billbergias mentioned earlier are generally larger plants that look better when placed below eye level.

There is a particularly beautiful species which is worth noting despite not being readily available and which requires slightly warmer temperatures and good humidity. I grow *Goudaea ospinae* var. *ospinae* in a short hollow ponga stump in a ‘jungle’ setting and, unlike most bromeliads, it forms stems and short branches making a clump of rosettes of delightfully marked leaves. In late summer branched paddle-shaped flower spikes are produced of a lovely dense yellow (Fig. 27).

Fig. 27 *Goudaea ospinae* var. *ospinae*.

Epiphytes for full sun

While some *Billbergia*, particularly *B. vittata* (Fig. 20A–B), are very happy in full sun, the classic bromeliad for these conditions are the silver-grey *Tillandsia*. Often known as air plants, the best of this group will form spikey masses of silvery foliage from which very colourful flowers emerge. *Tillandsia aeranthos* (Fig. 28), *T. stricta* and *T. tenuifolia* (Fig. 29) are amongst the best. *Tillandsia ionantha* (Fig. 30) and *T. mallemontii* (Fig. 31) are also good.

Fig. 28 *Tillandsia aeranthos*.

Fig. 29 *Tillandsia tenuifolia*.

Fig. 30 *Tillandsia ionantha*.

Fig. 31 *Tillandsia mallemontii*.

Fig. 32 *Tillandsia usneoides* (Spanish moss).

Mention should also be made of *Tillandsia usneoides*, Spanish moss. Usually seen as a thick hanging mass of fine wiry leaves, it also can be used to create curtains to great effect (Fig. 32). It is fine in full sun but is equally happy in a light shade.

The plants described in this article are only a small selection of those that could be used but I have tried to give an idea of the possibilities of using bromeliads in landscape and garden design.

Resources

The best New Zealand book on growing bromeliads is *Bromeliads for the Contemporary Garden* (2003–2011) by Andrew Steens which discusses plants that are available in NZ and describes many more particular ways of using them.

The Bromeliad Society of New Zealand publishes monthly journals which are archived online (www.bsnz.org/journals).

There was frequent mention of bromeliads and their uses in New Zealand in the Subtropicals magazine (2002–2006) and these can be accessed at www.rnzih.org.nz/pages/Subtropicals_Magazine.htm.

Several Facebook groups are also useful sources of information (e.g., Bromeliads New Zealand at www.facebook.com/groups/bromsocnz/ and New Zealand- Group for Unusual, Rare & Exotic Plant Growers at www.facebook.com/groups/702790653240118).