

WHAT IS A BROMELIAD?

The term “bromeliad” is a simplification of the scientific name Bromeliaceae, which covers any member of the pineapple family. Smith (1951) states that while we do not know who first used the term, it was probably a botanist or grower who was tired of using the cumbersome phrase “species of Bromeliaceae”. Other, less commonly used, terms include: “bromels”, “broms” or “brommies”.

Bromeliaceae was derived by combining the genus name Bromelia with the ending “ceae”. This action was taken by the French botanist, Jaume St. Hilaire, in 1805. In turn, the genus Bromelia was formally established by Dr. Carl von Linné (the Latin, and more commonly known, form of his name is: Linnaeus) in 1754. (The original idea to have a genus similar to this name came from Charles Plumier, an early French explorer of the West Indies.) The genus name honours Olaf Bromel, a Swedish botanist who was well known in Europe at that time (Palmer, 1964; Smith, 1951).

With practice, it is usually easy to distinguish most bromeliads from other plants. Luther (1995) p.64, has offered this advice:

“... There is a combination of characters, some of which are easy to see, some of which are very hard to see. If the plant has strap shaped leaves arranged in a rosette and those leaves have some type of scale or a scurf on them, if the flowers are [also] arranged in threes, and if the flowers have dissimilar sepals and petals [then the plant is almost certainly a bromeliad]...” In the article, Luther outlined some additional distinguishing characteristics, which I have not included here because of their technical nature.

Over time, it became necessary to divide the Bromeliaceae family into three sub-groups or sub-families. They are: Pitcairnioideae, Bromelioideae, and Tillandsioideae. According to the Bromeliad Society International’s website (BSI, 2003), the most recent listing of genera in each sub-family is:

Pitcairnioideae: Ayensua, Brewcaria, Brocchinia, Connellia, Cottendorfia, Deuterocohnia, Dyckia, Encholirium, Fosterella, Hechtia, Lindmania, Navia, Pepinia, Pitcairnia, Puya, Steyerbromelia.

Tillandsioideae: Alcantarea, Catopsis, Glomeropitcairnia, Guzmania, Mezobromelia, Racinaea, Tillandsia, Vriesea, Werauhia.

Bromelioideae: Acanthostachys, Aechmea, Ananas, Androlepsis, Araecoccus, Billbergia, Bromelia, Canistropsis, Canistrum, Cryptanthus, Deinacanthus, Disteganthus, Edmundoa, Fascicularia, Fernseea, Greigia, Hohenbergia, Hohenbergiopsis, Lymania, Neoglaziovia, Neoregelia, Nidularium, Ochagavia, Orthophytum, Portea, Pseudaechmea, Pseudananus, Quesnelia, Ronnbergia, Ursulaea, Wittrockia.

This list of genera will change over time. For example, the creation of new genera in Aechmea and Tillandsia appears likely, while most botanists consider Pepinia should be “combined” with Pitcairnia (from whence it originally came!)

Many bromeliad genera have been named to honour famous botanists or horticulturalists (Palmer, 1964; Lawrence, 1960). Examples are:

Billbergia: Gustave Johannes Billberg, a Swedish botanist; Cottendorfia: Baron Cotta von Cottendorf, German botanist; Fosterella: Mulford B Foster, United States' bromeliad explorer and horticulturalist; Guzmania: A. Guzman, Spanish naturalist; Lymania: Lyman B Smith, United States' bromeliad taxonomist; Neoglaziovia: A. Glasiou, collector of Brazilian bromeliads; Neoregelia: Edouard von Regel, director of the St. Petersburg (Leningrad) Botanic Gardens in Russia; Tillandsia: Elias Tillands, Finnish botanist; Vriesea: Dr de Vriese, Dutch botanist; and Wittrockia: V. Bracher Wittrock, Swedish botanist.

There are at least two genera with names derived from South American Indian languages. They are: Puya (meaning "point") from the Mapuche Indians of Chile, and Ananas from the Guarani tribe of Brazil (Smith, 1952).

The names of other genera are largely derived from classical Latin or Creek (Palmer, 1964; Smith, 1952). The derivation of some names is obvious. Examples are: Nidularium-nestbearer, referring to the cluster of "leaves" around the flowers; Canistrum-little basket, referring to the inflorescence in a basket of bracts; and Aechmea: spike or spear, referring to the long spines on the sepals of *Ae. paniculata*, the first species described in the genus.

However, the meaning of other genera names is unclear. For example, Orthophytum is derived from "ortho"-straight and "phytum"-plant, while Catopsis is Creek for view.

The Pitcairnioideae sub-family probably contains the most ancient bromeliads. Most are terrestrial in their growth habit, and rely on an extensive root system (as opposed to their leaves) to obtain water and nutrients (BSI, 2003). The most common genera seen in Queensland collections are Pitcairnia and Pepinia. A few species of Dyckia, Hechtia, and Puya are also occasionally seen.

The Bromelioideae sub-family's representatives all have berry-like fruit with seeds immersed in the fruit's "pulp" (Foster, 1951). Nearly all of them have leaves edged with spines of varying sizes. The majority of the commonly grown species are epiphytic (and thus obtain most of their water and nutrients through their leaves rather than their roots); although some are terrestrial. Many species have rosette-like shapes, which often form a water-holding tank in the plant's centre (BSI, 2003). The most commonly grown plant of this sub-family is undoubtedly the pineapple, *Ananas cosmos*. Other species often seen in Queensland gardens include: *Billbergia pyramidalis*, and *Portea petropoltina* var. *extensa*. Amongst bromeliad growers, popular genera are: *Aechmea*, *Neoregelia*, *Nidularium*, and *Portea*. Genera seen less often include: *Ananas* (ornamental forms), *Billbergia*, *Cryptanthus*, *Quesnelia*, *Ursulaea*, and *Wittrockia*.

The Tillandsioideae sub-family has more species than either of the other sub-families. Most species are epiphytes, and all have spineless leaves. All of their seeds have a plumose appendage (which look something like a dandelion flower's "hairs") attached to them. Many of the species with grey leaves can survive in very dry (xeric) conditions (BSI, 2003; Foster, 1951).

Spanish moss (*Tillandsia usneoides*) is still the most commonly seen species of this sub-family in Queensland, even though many clumps of this species' "common" type have recently died (possibly through fungal attack). In bromeliad collections, the genera most frequently seen are: *Guzmania*, *Tillandsia*, and *Vriesea*. Less commonly seen are: *Alcantarea*, *Catopsis*, and *Werauhia*.

Harry Luther, from the Marie Selby Botanical Gardens in the United States, has compiled a list of the species in each genus. The listing contains 2,885 species (Luther, 2000). It can be borrowed from the Society's library, and can also be accessed on the Selby Botanical Gardens' website at: www.selby.org

With the exception of hybrids, bromeliads are usually botanically "defined" or named by a combination of their genus and species' names. An example of this "binominal" combination is *Tillandsia* (genus) *usneoides* (species). Where there are botanically significant differences within a species, the species "epithet" is combined with (in descending order of botanical variation) sub-species (abbreviation "ssp."), variety (var.), and forms (forma). As examples, one has: *Tillandsia fuchsii* var. *fuchsii* forma *gracilis*, and *T. landbeckii* ssp. *andina* var. *rigidor*. All such variations which have been generally accepted by botanists are listed in Luther (2000).

Differences between plants which are, essentially, only of horticultural significance can be given a cultivar name. Cultivar names are shown at the end of the botanical description. An example is *Billbergia* 'Kyoto', which is a variegated form of *Billbergia pyramidalis*.

The choice of the cultivar name is determined by a set of rules, which should be followed if you wish to name a cultivar. The cultivar name should also be registered with the Bromeliad Society International, which is the registration authority for all bromeliad cultivars.

The naming of hybrids, of which there are many thousands, is a separate topic in itself, and is not covered in this article.

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