



FASCINATING BROMELIADS

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The plants have their instinct nature for developing diverse survival strategies against adverse soil and environmental conditions. They have evolved various curious and fascinating mechanisms to ensure their survival under adverse situation. One intriguing example of such adaptation is observed in Bromeliads. They are thought to have originated in the tepuis of Guiana Shield approximately 100 million years ago. The greatest number of extant basal species are found in the Andean Highlands of South America. Carl Linnaeus, named it in the honour of Olof Bromelins, a Swedish Physician and Botanist. They are monocot flowering plants and belongs to the pineapple family 'Bromeliaceae'.

Bromeliads are mostly herbaceous perennial plants though a few have tree like habit. Many of them are more or less succulents in nature. They are epiphytic and terrestrial in nature. The bright coloured and alien shape of longlasting blooms against the strappy green leaves give the plants an artistic and gorgeous look that rivals many other plants.

Bromeliads are very hardy and tough plants having an incredible and unique adaptation for storing water. They can store water in the vase or cup shaped structure formed by their tightly overlapping leaf bases. The plants have a clever trick up their sleeves when it comes to collect water. Their leaves form a rosette-shaped structure that creates a central reservoir, known as a 'Tank' capable of storing water. The leaf like structure called 'Trichomes' are the forms of hairs or scales which allow the bromeliads to

capture or gather dew and water in cloud forests and also help to reflect sunlight in desert environment. Epidermis of the leaves of them contain silica.

The largest bromeliad is 'Puya raimondii' which is known as "Queen of the Andes" reaches upto the height of 3-4m with giant shaped flower spike. The smallest bromeliad is 'Neoregelia lilliputiana' that can be found deep hidden in the rainforest. From time to time it rewards the nature with gorgeous purple flowers.

The flowers of bromeliads are aggregated in inflorescences of different forms. The flowers have bracts of different attractive colours. The flowers have nectaries. Bright colour and sweet smell of nectaries attract various pollinators like bees, bats, butterflies and also humming birds for pollination.

Bromeliads need plenty of sunlight. But prefers to grow in shade, where a few hours of sunlight is available. They cannot tolerate full sunlight for long time as it will cause burning of the plants. They cannot withstand too much moisture as their roots get rotted. Well drained fertile soil which is acidic in nature is good for most of the bromeliads.

The bromeliads are propagated by division of offsets from the mother plants. After the dying of flowers, the original mother plants will produce offsets. These offsets can be divided and separated from the mother plants for use as new plants.

As a coveted house plant, bromeliads are also a prized ornamental for growing indoor as well as outdoor environment. They are used as bedding plants for outdoor planting in gardens and parks. Fascinating anatomical trait and ecological adaptation makes bromeliads a key player in tropical ecosystem. They are friendly house plants which are grown in pots and hanging baskets. They not only add living colour inside the room but can also remove pollutants from the air. Being a CAM plant, bromeliads absorb carbon dioxide at night hence it would be appropriated for bed room. Bromeliads grown as indoor plants can be moved outdoor to enjoy natural rainfall and humidity during summer.

Spectacular colourful bracts which are modified leaves at the base of the flower last for several months. True flower has 3 petals and 3 sepals. The inflorescences may be elongated spike, a panicle or raceme or flowers may occur in the centre of the rosette. Blooming takes place when the plants get maturity. It grows and blooms year-round. Bromeliads are slow growing and take 1-3 year to mature and flower. The flowers last for few (3-6) months. They have both striking foliage and flower.

Bromeliads are popular ornamental plants which are attractive and can be grown and maintained easily. Due to presence of trichomes they are drought tolerant and so dislike over watering. During summer months 1-2 times watering per week can be done. In winter once watering after 2-3 weeks is advocated. Bromeliads rarely need fertilizer application. Repotting should be done after every 2 years with fresh soil mixture and allow to draw nutrients from its medium. A balanced house plant fertilizer diluted by half once per month from spring until the following growing season comes should be applied. The Container should be wider than the plant and have several drainage holes.

***Billbergia pyramidalis*:**

It is the fastest growing bromeliad which is named after the Swedish Botanist Gustave Billberg. Rosettes have only a few leaves which form a narrow tube or vase. Leaves are spined along the edge. Silver white spots or brands are found specially on the underside. It is grown specially for leaves rather than flowers. This plant looks very nice in hanging basket. It is easy to grow but needs bright light.



***Aechmea fasciata*:**

This is a slow growing flowering epiphytic bromeliad native to Brazil. It is often grown as house plant. Height of the plant is 30-75cm. The plants have broadly bowl shaped, rosette with arching leaves. The leaves are elliptic to oval shaped, leathery and strap like having sharp teeth on the margins. Cylindrical cone like upright inflorescence with colourful bracts remain in bloom for weeks or even month. The flowers are pink in colour. This plant is easy to grow but needs bright light.



Cryptanthus

bromelioides: This is a terrestrial or ground bromeliad. It is grown only for foliage. The leaves are succulent, flat and star shaped rosettes that do not hold water. Leaves have toothed and wavy margins and are strongly banded with white and grey colour. The flowers are inconspicuous with white or pink colour that remains in the centre of the rosette.



Guzmania lingulata:

This is a perennial, epiphytic flowering plant. *Guzmania* plant is valued for its flamboyant colour, mesmerizing blooms and exotic personality.



The foliage grows in a star shaped basal rosette culminating in an orange and red bracted inflorescence. This is a commonly cultivated type of bromeliad producing flowers in shades of red, orange, pink and maroon. This plant grows well in partial to full shade and does well under artificial light. Application of water is needed during summer months. It has exquisite flowers that are extremely beautiful and have longer life.

Vriesea splendens:

This type of bromeliad is popularly known as "Flaming Sword". It is a flowering bromeliad. Leaves are smooth margined with brown band growing into rosette, usually producing bright red



inflorescence in a flatted spike. This house plant should be kept in bright and indirect light indoor. In winter some direct morning or afternoon sunlight may be allowed.

Neoregelia carolinae:

This blushing bromeliad is a flowering plant. It is noted for its centre turning red when it is about to flower. This an epiphytic evergreen



perennial that has the native to tropical rainforest of South Eastern Brazil. Narrow leathery, shiny,

spine-tipped, lance shaped leaves (25-30cm long) appear in funnel shaped rosette.

Tillandsia fasciculata:

This is an evergreen perennial flowering plant. This type of bromeliad can grow without soil. They are also known as air plants because they absorb water and nutrients through their leaves. Their leaves more or less silvery in colour and are covered with specialized cells (trichomes) capable of absorbing water rapidly that gathers on them.

