

Tropiflora care for **TILLANDSIAS IN THE TERRARIUM AND VIVARIUM**

***Tillandsias* hold a special fascination because of their exotic shapes and beautiful blooms. As epiphytes *Tillandsias*, add a third dimension, an upper story, to a normally earthbound setting. Choosing *Tillandsias* for use in terrariums is largely a matter of taste, but some knowledge of their requirements will insure success.**

General Considerations

Tillandsias live in a variety of environments from cool, moist, mesic habitats to xeric, hot and dry. There are *Tillandsias* that will adapt to nearly any terrarium habitat that affords at least some ventilation.

Light levels are important in helping determine which *Tillandsia* species to choose for your terrarium. Many *Tillandsias* thrive in desert-like conditions and will do well in a brightly lit, dry vivariums. Many species are very adaptable and will thrive in a variety of habitats from lower light and moist to bright and dry. Typically, those species tolerant of lower light are also more moisture tolerant. However, with few exceptions, to have success with *Tillandsias* in terrariums or vivariums, they must be grown epiphytically. That is, the plants should be attached to a limb, rock or other substrate that will completely dry between watering. Even though a species may tolerate moist conditions, they typically do not like to remain wet for extended periods.

Light levels from 1,000 to 3,000 footcandles for ten to twelve hours per day are recommended for the majority of *Tillandsia* species. Certainly, many will survive outside of those bounds. For best results, locate your terrarium in bright, indirect light. Lighting fixtures are available for terrariums that can enable the use of wider variety of *Tillandsia* species.

Moisture, next to light, is the most important factor in the terrarium environment. True terrariums are sealed to prevent moisture from escaping, and are often so humid that water beads on the interior glass walls. Ferns and mosses thrive in this environment, but few *Tillandsias* can tolerate this excessive moisture. Open terrariums or vivariums may have no top or a well vented one, increasing air movement and lowering humidity, thus enabling the maintenance of a much broader selection of plant material.

Terrariums often contain open water or moist earth, but evaporation alone is insufficient to maintain your *Tillandsias*. Supplemental watering by spraying or sprinkling will be necessary to keep moisture levels up.

Other Considerations

Tillandsias do not like wet feet! If well drained or not constantly wet, a few of the mesic *Tillandsia* species may be planted directly in the terrarium soil. If the substrate is too wet, these same *Tillandsias* may be kept in their own containers, which need not be large and can easily be disguised with stones, wood or other smaller plants. The best and most dramatic results may be had when *Tillandsias* are grown epiphytically on small limbs, adding a different dimension to the mini landscape.

Size is a consideration, and there are many smaller species to choose from, but even large growing ones work well when young. Keep in mind that when *Tillandsias* bloom, some produce flower spikes that may be taller than the space available. Blooming plants may have to be removed or trimmed.

Mounting Your *Tillandsias*

In choosing a mount, aside from choosing one that is pleasing to look at and large enough, some good qualities are a coarse texture and a shape accommodating to the growth of the plant.

Methods for attaching *Tillandsias* vary, but several basic techniques are most commonly used. We recommend a combination of wire and adhesive. First, arrange the plant where you want it to be when finished. Make a mark on the substrate where the attaching wires should be, usually at the woody base. The wires (not bare copper, it's toxic!), can be fastened to the substrate with small staples, passed through drilled holes or the wires can be fastened around entire smaller branches. After securing the wire, a bead of adhesive (we recommend 'Liquid Nails' or an equivalent construction adhesive) is placed between the plant and the substrate. The wires are then passed around the plant and tightened snugly. When set, the glue will hold the plant fast, thus promoting rooting. The wire prevents heavier plants from tearing loose from the glue. Smaller plants, up to 3-4", can be attached with adhesive only, using a wire or a rubber band to hold them in place until the glue sets.

Other methods include using a hole bored into the substrate large enough to accommodate the base of the plant, nested in glue. This method is especially handy when using rock, as fastening wires to rock can be challenging.

Putting any media between the plant and mount is not necessary. The use of moss or fiber may delay the plant from attaching its roots to the mount. Further, there is the risk of rot in species that do not like to be kept moist.

Maintenance And Trouble Shooting

Tillandsias are relatively trouble free in terrariums. Problems which may occur are almost always related to overly wet conditions or poor air circulation. Any specimens showing signs of fungus problems should be removed at once from the terrarium for treatment with a fungicide, not containing copper, and allowed to dry out.

Tillandsias thrive with an occasional spray of liquid fertilizer (we recommend 20-10-20) about half strength, will suffice. Terrariums do not have drain holes, thus preventing the leaching which would normally occur when watering potted plants. Fertilizers and other chemicals introduced into the terrarium environment tend to remain and accumulate. You may be well advised to remove the plants from the terrarium for a good feeding from time to time if practical, to prevent contamination.

Mesic or lower light and moist.

Tillandsia cyanea

Tillandsia leiboldiana

Tillandsia flabellata

Tillandsia variabilis

Moderate light and moisture.

Tillandsia abdita

Tillandsia brachycaulos

Tillandsia bulbosa

Tillandsia concolor

Tillandsia funckiana

Tillandsia geminiflora

Tillandsia harrisii

Tillandsia ionantha

Tillandsia juncea 'Stolonifera'

Tillandsia neglecta

Tillandsia pseudobaileyi

Tillandsia stricta

Tillandsia tricolor

Xeric or dry and bright.

Tillandsia albida

Tillandsia duratii

Tillandsia ixioides

Tillandsia mitlaensis

A little planning and TLC will make your terrarium a delight and adding *Tillandsias* will make it a showpiece.

Tropiflora, LLC 3530 Tallevast Road, Sarasota, Florida 34243

Phone: (941) 351-2267 Fax: (941) 351-6985 Email: sales@tropiflora.com

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