J&L Garden Center

The All Season Gift and Garden Center

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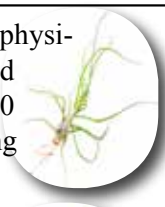
Air Plant Care

Tillandsia - 'Air Plants' - are among the most fascinating, and care free plants that a person can grow, both inside the home, or outdoors in the gardens. There are many, many completely different looking species and cultivars to choose from, each with it's own unique appearance. However, all of them have one thing in common, they are very simple to take care of; they need good light, and adequate moisture.

The name "air plant" is actually a bit misleading. Members of the Tillandsia genus are not called air plants because they can thrive on air. They are called air plants because they do not require soil to grow; they produce a small root system just to anchor themselves onto trees, rocks etc. However, assuming that Tillandsia only need air to survive is one of the most common mistakes made when people try to grow them. While they may need minimal care, it is still important to maintain Tillandsias properly, and with proper care, you can grow them almost anywhere, even hanging from a string above your kitchen sink.



Tillandsia are named for the Swedish physician Elias Tillandz, a well known botanist and physician in the 1700's. There are over 500 known species of Tillandsia, and more are being discovered every year.

Airplants are unique in that they don't live planted in soil. They have adapted to rely solely on their leaves, instead of their roots, to absorb their nutrients and moisture.

They are called Epiphytes; plants that grow on other plants, rocks and structures, and don't need soil to live. Epiphytes are not parasites. They do not take nutrients or moisture from their host.

The internal structure and anatomy of Tillandsia have adapted to survive on all kinds of hosts; both alive and not. Their leaves are able to pull moisture from the air very efficiently. Some have developed a camel-like ability to store water, and survive in areas prone to drought. Living up in trees, or on rocky cliffs, protects these plants from damage done by foraging animals, flooding or erosion on the ground.

Light: From April - October Tillandsias need bright, but filtered sunlight. They should not be put in the direct sun during the summer months, or the plants may be sunburned. Tillandsias can sometimes tolerate direct sun from November - March.

Air plant will survive in low light conditions, but in order to thrive, air plants need bright, indirect light. Rooms with southern or eastern facing windows are good because these rooms are brightly illuminated for most of the day. Rooms with north-facing windows can work well, as long as the plant is placed close to the window, and the window isn't blocked by trees or buildings. Western light tends to come late in the day, and can be very hot and intense, so be careful placing the plants too close to a window.

You can also grow an air plant in an office or in a basement, where it won't get any natural light, but there are a few specific guidelines to follow, to ensure your plant's success.

You will need to supply full-spectrum (fluorescent) light. Regular incandescent bulbs don't emit the quality of light these plants need for photosynthesis. Your Tillandsia should be placed no further than 3 feet from the light source. Also, if you're going to use fluorescent lights, the plants will need 12 hours of light per day. Be sure to use a timer, setting it to a 12 to 16-hour ON, and an 8 to12-hour OFF cycle, so your plant gets all the light it needs to survive.

Water: Watering air plants is tricky because the needs of each plant can vary dramatically, depending on the space in which it is placed, and the time of year.

The first step to watering your air plant correctly is to evaluate your space. How much light is your plant receiving? What is the temperature in your home at this particular time of year? Is the space very dry (is your plant near a heat vent, window, or fireplace)? Is it in a very humid location (is your plant near a sink, or in a bathroom)?

Watering an air plant properly is the hardest part of taking care of it. Some people swear by misting, other insist on soaking, and still others use a combination of both misting and soaking in their air plant care regimen.

There is not one hard and fast rule for watering, just many different suggestions.

Thoroughly wet your Tillandsia, by misting them, 2-3 times per week; more often in a hot, dry environment; less of-

ten in a cool, humid one. In conditions of extreme drying, and moisture loss, Tillandsia cannot get replacement water from their roots, like a rooted plant, or draw from internal reserves, like a succulent. You have to supply all of their water needs, on a regular basis, directly to their leaves.

In addition to misting, you should submerge the plant in water for 2-3 hours about every two weeks during the summer, or once a month in cooler weather.

The Water you use is important. NEVER USED DISTILLED WATER! Softened Water is also a NO NO, because of the salt content.

Filtered water, tap water that has set long enough for the chlorine to dissipate, or bottled water are all fine. Pond Water and aquarium water may also work well.

Watering Tillandsias outdoors during the summer is generally easy. A basic rule of thumb is to water them every time you water your other plants. In any area where the humidity is less than 50%, it is difficult to overwater the plants, unless it is very cold. Generally, the warmer and/or drier the air, the more frequently you will need to water. However, once Tillandsia leaves are wet, more water doesn't help. Wet them and leave them to dry. This makes watering quick, easy, and efficient.

Watering Tillandsias Indoors is a little more difficult than outdoors because you cannot use a hose, so it takes more time to water, and you have to be more precise. The most common mistake is to under water them. Misting-only CAN be sufficient, but it can also be TOO much, or TOO little. With a little experience, you can get the feel for it.

The plants can look dry, but they can actually be moist in their crucial center area; the meristematic tissue where new cells are produced. If this area remains too moist, for too long, the plant may rot.

Likewise, one can mist plants regularly but, in the end, it may not be enough to prevent a gradual dehydration that normally manifests itself with the edges of the leaves curling up and "pinching." Under-watering shows up by an exaggeration of the natural concave curve of each leaf.

Extremely dehydrated plants need to be soaked overnight in a tub of water. Most of the time, these plants will rehydrate, and be restored to good health.

Although spray misting may be insufficient as the sole means of watering, it is very beneficial, between regular waterings, to increase the humidity in dry climates.

IMPORTANT NOTE: After wetting your plants thoroughly, turn them upside down and gently shake them; water that collects near the base is detrimental if left too long.

One last thing about watering your air plant. It is much better to water them in the morning, than at night. Most plants will breathe throughout the day and night. Air plants breath at night, not during the day time. If the plant is wet, it cannot breathe. So, unless your plant can dry quickly at night, morning mists are better for the plant.

Another, less common way to water air plants, is to submerge them for a twelve hour period. When the plants are under water for this length of time, they have enough water available, for a long enough period of time, to completely rehydrate. A soaking in this manner should be sufficient for ten days, to two weeks, in average conditions.

Mounted plants: Mounted plants tend to dry out quicker than potted plants. Sometimes, a little misting is not enough, you should mist, or drench the plants, to the point of runoff whenever they are dry.

If a mounted plant is too big to submerge, try attaching a velcro dot to the plant and to the mounting item. That allows the plant to be easily removed, so that it can be rehydrated. If this isn't practical or possible, mist the plants more often, and try to monitor the state of hydration as best you can.

Once you have the right system down that works in your given situation, watering is a breeze.

Humidity: A range of 50% to 70% is ideal. Mounted plants need higher humidity than potted plants. When the humidity falls below 50%, plants will need to be watered more often or more heavily. Good air circulation is essential for good disease free growth. As the humidity and temperature increase so should the air circulation.

As a general rule of thumb, the higher the humidity in your room, the more light your plant can tolerate. This means that if you're putting your air plant where it will receive loads of light, you should plan to mist it more often - twice a week, or even daily. A sunny bathroom makes a happy home for an air plant, because the humidity from your shower will take care of most plant misting for you.

Air Circulation: Following each watering, Tillandsias should be given enough light and air circulation to dry in 4 hours, or less. Do not allow them to dry too quickly though; less than 1-2 hours.

Wind can be a detriment if the plant dries too quickly. If the plant dries within a very short period of time, it may not be hydrating enough. However, if the air is hot, a breeze acts to cool the plant and keep it from becoming overheated.

Do not keep plants constantly wet or moist. Tillandsias will not survive in standing water.

Temperature: Optimum temperature range for tillandsias is 50 - 90 degrees F. during the day, and 50-60 degrees at night. They can tolerate tem-

peratures in the low 30s for brief periods of time if given some protection. They do not mind hot, sunny summers, when the temperature climbs over 100 degrees for a few days, if they are misted and watered properly.

Fertilizer: Most plants will survive fine with little or no fertilizer, but if you want to see them grow and bloom, they need food on a regular basis. A very diluted fertilizer every time you water would be ideal, but it is not always practicable.

Use a Bromeliad or an Orchid fertilizer twice a month. It is great for both blooming and reproduction. Other water-soluble fertilizers can be used (20-20-20 Houseplant Fertilizer, Miracle-Gro All Purpose Plant Food, etc.) if Bromeliad fertilizer is not available.

Dilute the fertilizer to 1/4th or even 1/8th strength, and spray it onto the leaves every two weeks while the plants are actively growing. It is best to avoid fertilizers that contain urea or fish emulsion, as these fertilizers need bacteria in the soil to break them down into a form of nitrogen that the plants can utilize.

Mounting and Containers: Plants can be mounted on wood (not pressure treated wood that is impregnated with copper; copper will kill your plant), or on any nontoxic substance. They will grow on almost anything: branches, roots, seashells, grapevine wreaths, rocks, pottery, and even a piece of mono filament fishing line. The main requirements are that the material does not rot quickly, and that it is substantial enough for the plant to be firmly attached to it.

Plants that wiggle will not send out roots and attach themselves to the mounting piece. Mono filament fishing line, strips of nylon stocking, water proof glue, nails, or staples can be used to attach plants to the mount; they must be tied, glued, or nailed so that they do not move. DO NOT staple your plant on its fleshy parts as it will kill it.

Almost any waterproof glue, or a Hot Glue gun, allowing the glue to cool for 5 seconds, will work. However, Tilly Tacker, a styrene based glue, is very safe and affective. It dries within an hour, is non toxic to the plants, and you can remove the plant later if you choose. Tilly tacker can also be used for most other household projects.

Do not use superglue, or copper wire, as they will kill your plant.

Most Tillandsias are grown mounted; if you want to try growing a few in pots, choose plants that have symmetrical rosettes of leaves, and use a small pot with a well drained mix of rocks or pebbles.

Don't forget that you have to be able to water it, and it has to be placed somewhere that it will get sufficient light.

Try not to put Tillandsias in containers that hold water, they need to dry out. If you do place your plant in something that holds water, empty out the excess after watering your plant. The same thing applies when mounting your plant; don't mount it on something that retains water.

Be careful using sphagnum moss, or similar media. They are often used as cosmetics, to help hide wire or glue. Do not surround your plant with too much moss, and do not water the moss. It will hold too much water, and may rot your plant.

Glass globes: Water your plant, when you first receive it, by soaking it for 20-30 minutes.

Allow your plant to almost dry completely before placing it in the globe.

Mist your plant every 4-5 days. Use 1 squirt for plants inside tiny globes, 2-3 squirts for globes 3-5 inches, 4 to 6 squirts if the plant is in a large globe.

The key is to judge the drying time; the smaller the globe, the less circulation, the longer the plant will hold the moisture. If you over water the plant, it will die.

REMEMBER what your plant looked like right after soaking? If it has lost that happy, healthy look, take it out and soak it for 30 minutes to an hour, shake it, and allow it to almost completely dry, before replacing it in the globe.

Do not place your globes directly in front of a window where they get direct sun. Glass will intensify the sunlight and the heat. Indirect light is best, but some will even grow in low to moderate light.

Insect and Disease: Plants with good growing conditions seldom are bothered by insects or fungus. The major insect problems are scale and mealy bugs. Another is the larva of a small moth that feeds on the roots of Tillandsia clumps. Examine your plants on a monthly basis and if you see any damage, treat with an Insecticide.

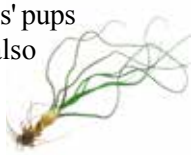
Occasionally you may notice the center of your plant starting to rot, which can be caused by keeping the center too wet. Unless the entire plant is dead, you can gently pull the bad leaves from the center. Once all the bad part is removed, and if there is still healthy leaves, and if a good portion of the plant is left, keep it.

You may also see a por-

tion of the base start to become soft or mushy. Take a knife and remove that portion, making sure that you remove all of the bad tissue. Keep the base dry until it can callus over, and then treat it as usual.

Although not a disease, pressure treated wood is deadly to Tillandsias. Since they absorb almost all of their nutrients through their leaves, they are very sensitive to the copper and other metals that leach out of treated lumber. It is best to avoid having any treated lumber near your Tillandsias.

Propagation: Although Tillandsia reproduce by seeds, they also produce new plants around the parent plant. After flowering, Tillandsia produce the next generation of airplants as 'offshoots' or 'pups'. With most species these baby plants appear at the base of the parent plant. A small number of species grow babies from the center of the plant around the flower spike, while other species' pups are produced on short stems. There are also a handful of species that produce pups on the spent flower spike itself.



These baby airplants can either be left with the mother plant, eventually forming a larger attractive clump, or removed, when they are at least half the size of the mother plant, to grow as new airplants.

Flowers: Many Tillandsias flower annually. The length of the blooming cycle of air plant varies significantly between species. Some plants bloom early in their life cycle, other species can take many years to reach its blooming stage. Some species have flowers that are produced over several weeks, with an floral bract that can remain attractive for several months, others may have short lived flowers. Some species even have flowers that are scented.

During their flowering season, many varieties of air plant also take on an attractive leaf color.

More resources:

http://www.rainforestflora.com/welcome/tillyCare/
http://bromeliadsocietyhouston.org/genera-intro/tillandsia/
http://www.rainforestflora.com/

'Genus Tillandsia, The World's Most Unusual Airplants', by Paul T. Isley III