An Introduction to Tillandsia - Air Plants

Tillandsias, commonly known as **Air Plants**, are found anywhere and everywhere from dry deserts to humid rain forests and harsh mountain regions of southern parts of the United States, Mexico, Central and South America. In these, often difficult, habitats they have developed into plants that don't need much water.

These curious plants come from the Bromeliad family, which also includes a wide range of other plants, including the Pineapple. The bromeliad genus Tillandsia is named after the Finnish botanist Dr Elias Tillands and they are the most widespread type of bromeliad. With over 600 species currently known even more species are being discovered today as dedicated plant hunters seek them out.

Tillandsia are epiphytes, they do not have roots, live without soil, and take in water and nutrients through their leaves. If they are happy where they are, they will send out small, wiry anchor roots to hold them in the favourable situation that they find themselves in. They can live quite happily on trees and other plants without taking anything from them, and are just as happy to live on nothing, rocks or in the case of Spanish Moss, even telephone wires!

Taking water in through the leaves, air plants have adapted hair-like scales known as 'trichomes' to help them.

Air Plants adapted to living in hotter and dryer areas have more of these trichomes, which gives them a more silvery appearance. As well as helping plants take up water they also help prevent it drying out by dispersing sunlight away from the leaves and shading the minute pores in the leaves, by which gases and water enter or leave the plant. The more silvery, or 'fluffy' the plant appears, e.g. T. Tectorum 'Snowy', the more sunlight it can take.

The final part of the secret to their survival on such meagre water rations is the way they photosynthesize. Almost all other plants do this during the day, during which time gases and moisture will be released.

In extreme temperatures it is not ideal to release essential water vapour during the day, so Tillandsia have developed the ability to keep their pores closed during the day, and releasing their gases and moisture during the night when there is less risk to them, due to lower night time temperatures. (As a benefit to us, if they are releasing precious oxygen through the night, it makes them ideal for the bedroom, where they could very well help with a better night's sleep!