

## Bloedel Plant Profile – The Aluminium Plant



Aluminium plants have small green leaves that seem to be splashed with drops of aluminium paint – hence their name. Most variegated-leaf plants are less vigorous than their plain green cousins. Their smooth pale leaf patches have less chlorophyll and so take in less light energy.

If you touch aluminium plant leaves, you will find that they are *not* smooth. They have little silver ‘bumps’ or ‘blisters’. This is the rare ‘blister’ or ‘reflective’ variegation and it helps the plant.

The clear upper layer of the leaf (epidermis) blister is separate from the coloured layer below. This causes an air pocket to form. Light reflecting from the membranes of the transparent air pocket cause the area to appear silver.<sup>1</sup> The same process causes a crack through clear glass to look silvery and a mirage to appear on hot days. The patches are due to a physical structure that is part of the plant’s genetic makeup. The offspring produced by seed, cuttings etc. will all show the variation. This is not true for all variegated plants where cuttings and seeds often give a plain green plant.

Nature produces many mutations and the helpful ones are most likely to survive. Two ideas have been suggested for the value of the ‘air blister’ mutation.

"Since most of the plants with air blisters were already somewhat shade adapted, these phenolic cells may serve as a substitute shade during times when natural shade is absent."<sup>2</sup>

Their function may also be similar to that described for some begonias:

"Some cells in the upper surface of their leaves are transparent and act as tiny lenses gathering the feeble light and focussing it on to the grains of chlorophyll within."<sup>3</sup>

The name ‘Aluminium Plant’ is a ‘common name’ used in English throughout most of the world. One problem is that a ‘common name’ in one place is less common elsewhere. The element usually called ‘Aluminium’ is referred to as ‘Aluminum’ in the USA and Canada. This may imply that in Canada it unambiguously should be called ‘Aluminum’. It is not quite that simple. A reference comparing Canadian English, American English and British English<sup>4</sup> states:

“*Aluminium* has the edge in scientific writing even in North America. This is primarily because several influential scientific organizations and publications prefer the spelling.”

<sup>1</sup> <https://davesgarden.com/guides/articles/view/4629>

<sup>2</sup> [http://kb.osu.edu/dspace/bitstream/handle/1811/22736/V080N6\\_280.pdf?sequence=1](http://kb.osu.edu/dspace/bitstream/handle/1811/22736/V080N6_280.pdf?sequence=1)

<sup>3</sup> **The Private Life of Plants**, Attenborough, David, p 48, ISBN 0563 37023 8,

<sup>4</sup> <http://grammarist.com/spelling/aluminium-aluminum/>

In Canada, both *Aluminium plant* and *Aluminum plant* are acceptable names. Neither is 'wrong'. Another option would be to use another 'common name': Watermelon Pilea.<sup>5</sup> Having numerous names for the same plant was the reason Carl Linneaus (1707-1778) suggested the system now used for plant and animal names. In his binomial system every plant should have just one name.<sup>6</sup> He gave plants and animals names in a neutral language: Latin. The 'official' name for this plant is *Pilea cadierei*.

*Pilea* comes from modern Latin, from Latin *pileus* 'felt cap' from the shape of the female flowers.<sup>7</sup> *Cadierei* honours Père Léopold Michel Cadière (1869–1955). He was a French Catholic priest who spent most of his life in Vietnam - the plant is native to Vietnam. He worked on language, history and ethnography. He is the founder of ethnological studies in Vietnam. He sent thousands of plant specimens to the Museum of Natural History in France and wrote to correspondents around the world.<sup>8</sup>



The plants can be annuals or perennials. There are insignificant pinkish flowers which are not freely produced. Plants do not need pruning and are generally pest-free. They are best propagated by stem tip cuttings. They may grow to 10-50 cm high and 10-50 cm wide after 2-5 years. Plants grow in moist but well-drained acid, alkaline or neutral soil. They grow best in sheltered conditions, with full or partial shade.<sup>9</sup>



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<sup>5</sup> <https://austinbotany.wordpress.com/2014/04/26/pilea-cadierei-aluminum-plant-watermelon-pilea/>

<sup>6</sup> Confusingly, the originator of the 'one name system' is known as *Carl Linneaus*, *Carl von Linné*, *Carolus Linnæus* and *Carolus a Linné*!

<sup>7</sup> <http://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?kempercode=b612>

<sup>8</sup> [www.efeo.fr/biographies/notices/cadiere.htm](http://www.efeo.fr/biographies/notices/cadiere.htm) Translated via Google translate - paste website address into the search box at <https://translate.google.com/>

<sup>9</sup> <https://www.rhs.org.uk/plants/details?plantid=1474>