

# What to Do with Dendrobium Keikis

SAOS Beginners Culture Class - 2019 09 September

## Dendrobium Keikis, What Causes Them to Appear?

Excerpted from Ricardo's Blog - <http://ricardogupi.blogspot.com/2012/11/dendrobium-keiki-what-causes-them-to.html>



Dendrobium harveyanum keiki producing a second cane, because it has substantial roots it can be removed with little fear that it will die.



Keikis from unbloomed stem of Dendrobium Yellow Chinsai, probably caused by too much nitrogen in the fertilized applied late in the growing season.



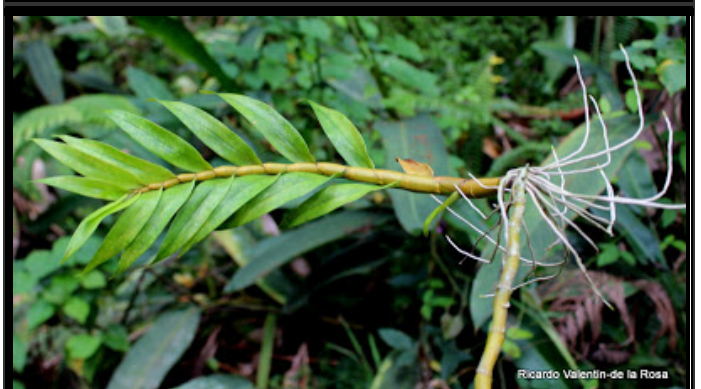
Dendrobium anosmum keikis, these are tiny and have little green tissue to support independent growth removing keikis this size is not advised.



Dendrobium anosmum keiki, this plant has a good size for a keiki and a significant growth of roots. It can be removed with confidence that it has enough reserves to start growing independently.



These Dendrobium anosmum keiki have three canes with means they are over due for removal from the cane, the original cane has decayed completely.



Dendrobium fimbriatum oculatum keiki. This keiki is quite large and can be treated right away like an adult plant once it is removed from the cane.

One characteristic of some *Dendrobium* species is that they have the capacity to produce plantlets from the meristematic tissue that lies in the form of small buds along the sides of the canes of the adult plants. Most of the year these buds lie dormant, but if they are activated by hormonal changes in the plant they can turn into floral stems or into little plantlets. In the hobby these little plants are known as keiki, this is the Hawaiian word

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for baby. I will use the term keiki to refer to this form of propagation on the rest of this article. Keikis are plantlets produced vegetatively by the mother plant, it is an asexual type of reproduction which means that the little plants will be exact copies of the mother.

There are several circumstances that can stimulate the production of keiki. A relatively common occurrence is the production of keiki instead of flowers. Normally canes will not produce keiki in their first year, before they have bloomed. If a mature cane produces keiki instead of flowers when its blooming season comes around, this means something has disrupted the sequence of metabolic processes that produce the hormonal changes that turn the resting vegetative buds into floral buds. In *Dendrobium* descended from *Den. nobile* and related species, if the plant is given a fertilizer with a high nitrogen content during the latter part of the growing season or the resting plant experiences too high temperatures, this can "short circuit" the blooming response and then it can either not bloom or it can produce keiki where blooms would have been expected. I have seen plants produce keiki all along the cane where flowers should have been. In rare cases a plant can both produce keiki and some flowers. A few days ago a friend showed me one of his *Den. nobile* hybrids where the plant had produced keikis instead of flowers and then some of these keiki had produced a single flower from the tip of their tiny canes.

Some plants will produce tiny keikis at the very tip of the canes. These keiki are typically one to two inches long and depending on the parent species, can have a substantial quantity of roots or almost none. Keikis that are smaller than two inches are a special case. They are much more fragile than those that are over two inches and might not survive being detached from the cane. If they have few roots they will need care that addresses their particular needs and it may be more than the average grower might want to provide, also they will take a long time to reach maturity. In my experience that hardiness and vigor of these tiny keiki vary depending on the species. Keiki of *anosmum*, *cucullatum*, *crumenatum* and *primulinum* larger than two inches long, are quite hardy and survive very well if given appropriate care and an environment with high air humidity. I have not been so lucky with small keikis of the *Phalaenanth* section and of the "antelope" *Dendrobium* of the *Spatulata* section. In my experience keiki from these groups take more time to grow larger, produce roots more slowly and succumb to rot more readily. Admittedly this is probably due to the particular environment in which I keep the keiki in my orchid growing area, some people elsewhere might have a different results.

I have observed that older canes sometimes produce keiki even in the absence of any of the issues that I have detailed previously. My guess as to what causes this is that keiki production in older canes is probably related to the loss of the roots that are connected to that particular cane. In these cases the plant still has a healthy root system in his younger canes and all the canes receive moisture from those roots, so this keiki production is not related to any distress from the part of the plant. I don't cut out these keikis until they have at least two canes and a significant number of roots.

If a cane losses its vascular connection with the rest of the plant it can start producing keiki. This may happen if part of the stem rots or is damaged. If the base of the stem is buried in the media the death of the base of the stem might not be evident to the casual observer. Also even though the cane connection to the vascular system is severed there still might be a substantial amount of dead but not decayed tissue holding the cane together with the rest of the plant. When this happens to my pendent *Dendrobium* I may cut the cane in the part that has decayed and plant the keiki, still with the cane attached, in another container or mount. This often makes a huge difference in the speed in which the keiki reaches adults size, as the piece of cane can provide, if large enough, with enough support to allow the keiki to produce a substantially larger new cane in its next growth phase.

## Additional Links:

Dendrobium Culture, Sue Bottom - <https://staugorchidsociety.org/PDF/DendrobiumCulture.pdf>

## Short Videos:

Remove a Dendrobium Keiki, Orchid Talk Orchid Forum - <https://www.youtube.com/watch?v=nzpYu0B2X28>

How to Remove a Dendrobium Keiki, Miss Orchid Girl - <https://www.youtube.com/watch?v=4KbUL7Le0hg>

Potting a Keiki, American Orchid Society - <http://www.aos.org/orchids/aos-video-library/potting-a-keiki.aspx>