

# Titan Arum

*Amorphophallus titanum*

*Amorphophallus titanum* (Titan arum, corpse plant) is native to the rainforests of Sumatra, Indonesia, where its habitat is threatened by deforestation. It has the largest unbranched flowering structure (inflorescence) of any plant. In cultivation, it generally takes 7-10 years for the first bloom.

What looks like a giant flower, green on the outside and deep red-purple on the inside, is actually a modified leaf, called a spathe. The column-like structure in the middle of the plant is the spadix. Groups of small male and female flowers are located at the base of the spadix, hidden by the spathe surrounding it. It takes about six weeks from the time the inflorescence first emerges until full flowering.

## What's that smell?

When the flowers are ready for pollination, the spadix emits a powerful odor which smells like rotting flesh. Simultaneously the Titan arum generates heat, which helps to diffuse the odor, moving it upward and advertising the bloom to pollinators far and wide, such as carrion flies and beetles.



The female flowers open first, and are only able to be pollinated for one day. The male flowers open on day two and provide viable pollen also only for about one day. Titan arums cannot self-pollinate, so they rely on carrion flies and other insects to carry pollen from one plant to another. If pollination is successful, orange-red fruits develop. In the wild, these are eaten by giant Hornbill birds, which help to disperse the seeds.

Typically, after two days, the spathe will begin to wilt and the spadix to collapse. After flowering is finished the plant goes dormant. Then a single, tree-sized compound leaf emerges from the corm, an underground bulb-like structure. That leaf grows for a year or more, recharging the corm to fuel the next flowering.



## Cornell's Titan Arum Story

In 2012 one of Cornell's two mature Titan arums – named 'Wee Stinky' by popular vote – famously bloomed for the first time. Titan arum flowerings were relatively rare at that time of that first flowering, which attracted more than 10,000 visitors who stood in line for an hour or more to catch a glimpse – and get a whiff. But since then, the species has become popular in conservatories around the world.

During that first flowering, Wee Stinky was pollinated by hand with pollen provided by Binghamton University, and Cornell distributed dozens of the resulting seeds and seedlings.

In 2015, Wee Stinky's sibling Carolus was the second Titan arum in Cornell's Liberty Hyde Bailey Conservatory Collection to bloom.

Since those first flowerings, greenhouse growers from the Cornell University Agricultural Experiment Station have been able to coax both of Cornell's mature plants to bloom about every two years or so. The massive bulb-like corms of both plants weigh more than 100 pounds each.

Cornell's Titan arums are part of the Liberty Hyde Bailey Hortorium in the Plant Biology Section of the School of Integrative Plant Science (SIPS). The blooms offer researchers and students at SIPS a great opportunity to study the complex biology of this unique reproduction.



[conservatory.cals.cornell.edu](http://conservatory.cals.cornell.edu)

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# Titan Arum Lifecycle

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The diagram below is from the July 2001 flowering at the University of Wisconsin-Madison. Cornell's Titan arums were grown from seeds from this flowering.

