



Two corpse flower (*Amorphophallus titanum*) plants, also known as titan

the U.S. Botanic Garden. It was the first bloom for both plants, which were 8 and 4 years old. Photo at right shows the two blooms' growth as of September

**As the Conservatory is currently closed due to COVID-19, visitors were able to watch the corpse flower blooms growing on high-definition live video feed below. A timelapse will be posted.**

## About the 2020 Corpse Flower Plants

### 2020 Bloom #1

The first *Amorphophallus titanum* to begin blooming in 2020 (on right in live video feed, USBG accession #2012-0297) was acquired by the U.S. Botanic Garden on January 9, 2012 from a donation by plant grower Gary Meltzer of Hawaii. The seed parent is from the Milwaukee Public Museum and the pollen parent is from the University of Chicago. The U.S. Botanic Garden has three plants grown from the three seeds from this acquisition. One of the other plants from this group bloomed in 2019 (dark-colored bloom). The third plant has not yet bloomed.

The 102-inch-tall inflorescence began opening around 2:00 pm on September 7, 2020. The spathe measured 57" across at peak, and the spadix reached 102" in height. The temperature was 75 degrees F. The strongest smell was noted at 12:30 a.m. Sept 8, and the spathe began closing at 5:30 am. The female flowers were hand-pollinated at 6:00 am. The pollen parent plants (two plants from Chicago Botanic Garden and one from Lauritzen Botanic Garden). Pollen was collected from the male flowers and sent to the University of Chicago Botanic Garden for preserving for future conservation use.

### 2020 Bloom #2

The second plant to begin blooming this year (USBG accession #2012-0296 A) was an offshoot (a clone) from the dark-colored bloom at the U.S. Botanic Garden (USBG accession #2012-0296). This offshoot was separated from the parent corm in 2016, when that parent corm was 5 years old. This plant is a clone of the sibling plant that first bloomed in 2019. The flower currently in bloom.

The 107-inch tall inflorescence opened on September 15, 2020. The female flowers were hand-pollinated at 7:00 p.m. the same day, using pollen from the male flowers from the Chicago Botanic Garden. Pollen was collected from the male flowers on Sept. 17, and sent to Chicago Botanic Garden for preserving for future conservation use.

## Corpse Flower and Aroid Conservation

The corpse flower (*Amorphophallus titanum*) is listed as Endangered by the International Union for Conservation of Nature (IUCN), with an estimation of fewer than 100 individuals remaining in the wild. IUCN estimates the population has declined more than 50% over the past 150 years. The main reasons for the decline are the loss of and conversion of the plant's native forest habitat to oil palm plantations.

The U.S. Botanic Garden is participating in conservation work related to *Amorphophallus titanum* and aroids plants. Diversity amongst the gene pool is important for the conservation of endangered plants held in *ex situ* conservation collections such as at botanic gardens. The U.S. Botanic Garden helped fund a conference on the U.S. Botanic Garden Conservation International on aroid conservation in 2018 that was attended by botanic garden professionals from around the world. As a result, many botanic gardens are participating in a national *A. titanum* conservation project that is underway, headed by Chicago Botanic Garden.

The goal of the project is to identify and create a database of the genetic makeup of *A. titanum* plants currently in botanic garden collections. This information will allow for a broadening of the gene pool by creating diversity amongst new offspring by cross-pollination of diverse parent plants. The USBG has gathered and submitted samples from our *A. titanum* collection to be added into the database. We hope to be able to acquire pollen based on this project to create diverse offspring. The Garden also has collected pollen from this plant to store for future use by other botanic gardens in this project.

## What Makes the Corpse Flower Special?

The allure of the corpse flower comes from its great size (it is the largest unbranched inflorescence in the plant kingdom), powerful stink, and fleeting presence. Plants frequently grow up to 8 feet tall in cultivation. Referred to as the corpse flower or stinky plant, its putrid smell is most potent during peak bloom at night into the morning. The odor is often compared to the stench of rotting flesh. The inflorescence (a collection of flowers acting as one) also generates heat, which allows the stench to be carried. The combination of heat and smell efficiently lures corpse-attracted pollinators, such as carrion beetles and flies, from across long distances.

The corpse flower does not have an annual blooming cycle. The bloom emerges from, and energy is stored in, a huge underground stem called a "corm." It only blooms when sufficient energy is accumulated, making time between flowering unpredictable, spanning from a few years to more than a decade. It requires very specific conditions including warm day and night temperatures and high humidity, making botanic gardens well suited to support this strange plant outside of its natural range.

This plant is native to the tropical rainforests of Sumatra, Indonesia, and first became known to science in 1878. In its natural habitat, the corpse flower can be seen in bloom. Public viewings of this unique plant have occurred a limited number of times in the United States. The U.S. Botanic Garden has displayed blooming corpse flowers in 2007, 2010, 2013, 2016, and 2017 (three blooms).

## Watch the Live Stream

**The live stream has ended. A timelapse will be posted.**

Join gardener Stephen to find out what clues he used to determine this year's bud was a bloom and not a leaf:

**Corpse Flower Lifecycle Infographic** (click to see large version):

# Corpse Flower

## *Amorphophallus titanum*



UNITED STATES  
BOTANIC GARDEN

### LEAF STAGE

**CORM**  
Sprouts after several  
months of dormancy

### FLOWER STAGE

**LEAF BUD**  
Develops into  
a leaf

Leaf Blade

Petiole

**LEAF**  
Leaf blade emerges  
from the bud

**FLOWER BUD**  
Develops into a flower

Spadix

**FLOWERS**  
Male and female  
flowers are separate  
and mature on different  
days to avoid  
self-pollination

Spathe

**INFLORESCENCE**  
Fully developed after  
about 2 weeks, spathe  
opens for up to 3 days

**POLLINATOR**  
*Diamesus osculans*

**FRUITS**  
Contain  
1-2 seeds

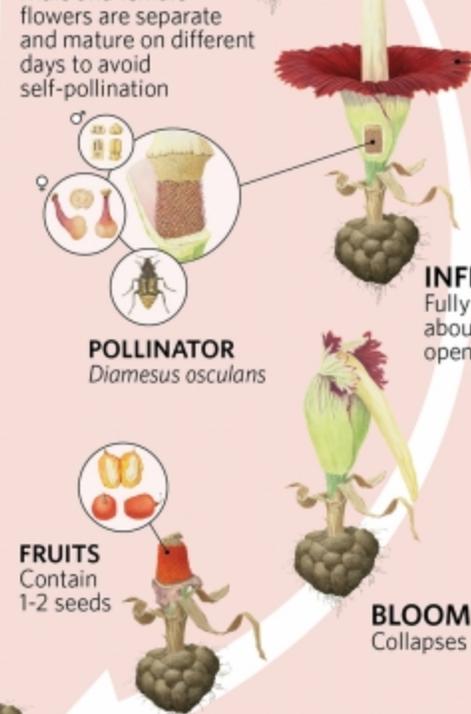
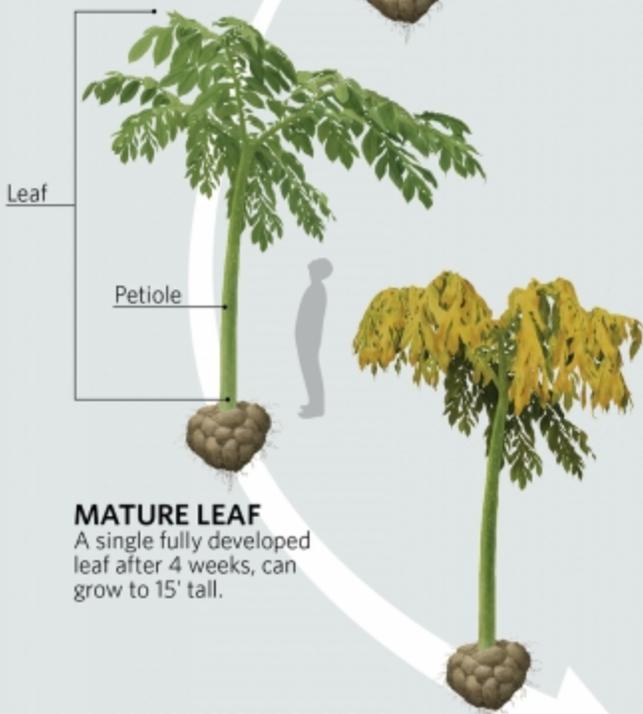
**BLOOM**  
Collapses after 2-3 days

**INFRUCTESCENCE**  
Cluster of fruits mature  
in 6-12 months

**CORM**  
Goes dormant for  
about 6 months

**AGING LEAF**  
Dies back after  
12-18 months

**MATURE LEAF**  
A single fully developed  
leaf after 4 weeks, can  
grow to 15' tall.



### Chemistry of its smell

Want to learn a bit more about the plant and its unique smell? Check out this great video we helped create:

### Corpse flower lifecycle and pollination

Check out this great video we helped create about the corpse flower's lifecycle, smell, and reproduction:

We shared the 2016 plant's life cycle via a live webcam, which has now ended. In addition to this video from the morning it started opening, Aug 1, find all the live webcam videos on our YouTube channel. If you visited, find your date and see yourself with the corpse flower!

*Photo of 2*



The U.S. Botanic Garden has displayed blooming corpse flowers in 2003, 2005, 2007, 2010, 2013, 2016, and 2017 (three blooms). More than 130,000 people saw the last bloom in person, and more than 650,000 viewers accessed the live webstream.

[Learn more about the three 2017 blooms.](#)

[Learn more about the 2016 bloom.](#)

[Learn more about the 2013 bloom.](#)

**Source URL:** <https://m.usbg.gov/corpse-flowers-us-botanic-garden>