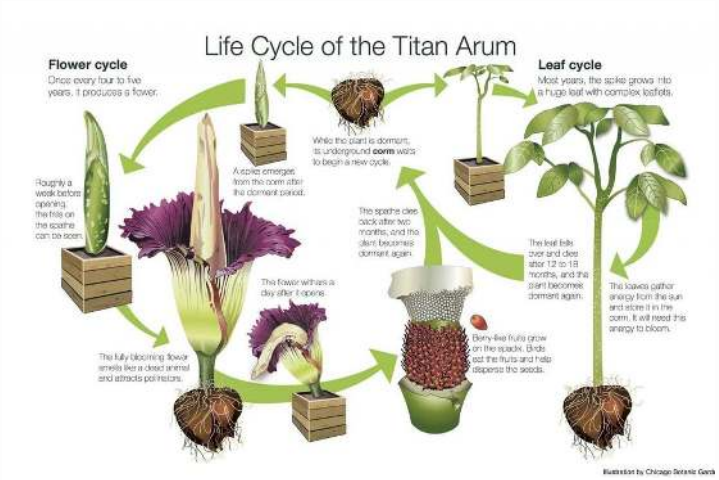

# Pretty Stinky

In the late afternoon of a hot summer day in June 2019, an extraordinary and rare flower began to bloom at the New York Botanical Garden (NYBG). A press release was immediately sent out as visitors had only 24 to 36 hours to the see the world's largest inflorescence (flower-bearing structure) in peak bloom. It was not just the size of the *Amorphophallus titanum*, however, that would attract hundreds of thousands of visitors. It was also the fact that, as its common name "corpse flower" suggests, this gigantic plant, when in bloom, smells like rotting flesh.

The putrid smell of the *Amorphophallus titanum* (or titan arum), which has been described by the Huntington Botanical Garden as a combination of Limburger cheese, garlic, rotting fish, and smelly feet, is actually a pollination strategy. The powerful scent emitted by the plant along with the crimson, meaty-color of its open spathe (the frilly leaf around the flower spike) are designed to attract insect pollinators – carrion beetles and flesh flies – that typically feast on dead animals.[1]

Corpse Flower (Amorphophallus Titanum) 1 of 5

Adding to the allure of the plant is the rarity and brevity in which it blooms. The corpse flower does not have an annual blooming cycle. On average, it takes the plant 5 to 10 years to store enough energy to flower. Despite the unpredictable nature of the plant's blooms, they are nothing short of spectacular. When the US Botanic Garden's *Amorphophallus titanum* went on display to the public Friday, July 22, 2016, it measured 3.5 feet tall. The bloom eventually opened early in the morning on August 2, and by the time it collapsed three days later, it stood over 7 feet tall.




Corpse Flower Lifecycle, USGB

Corpse Flower Bloom Time Lapse - USBG

It is easy to see why the corpse flower plant has become an attraction for the dozen or so US botanic gardens that boast one in bloom. Blooms at the NYBG, the United States Botanic Garden(Washington, DC),The Huntington (Pasadena, CA), Chicago Botanic Garden, Denver Botanic Garden, and Greater Des Moines Botanical Garden in the past few years that have attracted hundreds of thousands of visitors. Each institution also has numerous news stories and webpages dedicated to the plant along with live streams, time-lapse videos of their rare blooms, and educational programing, all of which are watched by millions more online. For these institutions, cultivating a giant smelly plant is an excellent way to attract visitors to botanic gardens, and hopefully inspire a new generation of botanist.

Crowds at the USBG line up to catch a glimps of a...

Recording: Corpse Flower 2020: Live Horticulture Q&A

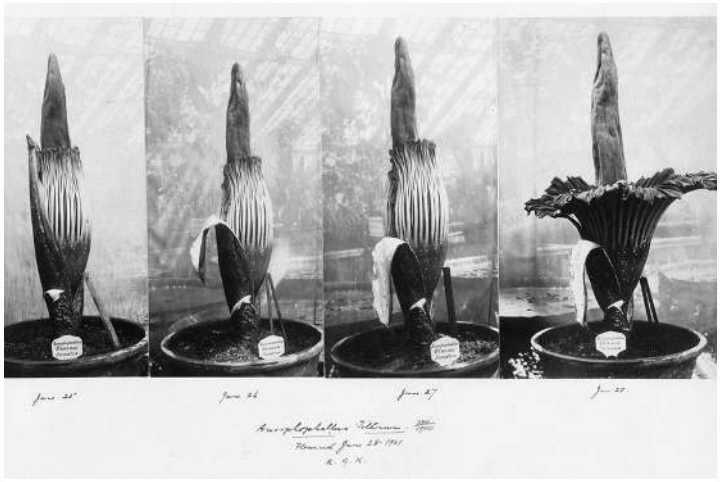
European botanists have long been fascinated with the study and cultivation of the *Amorphophallus titanum*. An Italian botanist, Odoardo Beccari, was the first European to encounter the species in Sumatra, where it is native, while traveling through Southeast Asia in 1878. Beccari sent seeds of the impressive plant back to his native Florence, where the plant was germinated.


Sumatra

Indonesian men pose with two Amorphophallus...

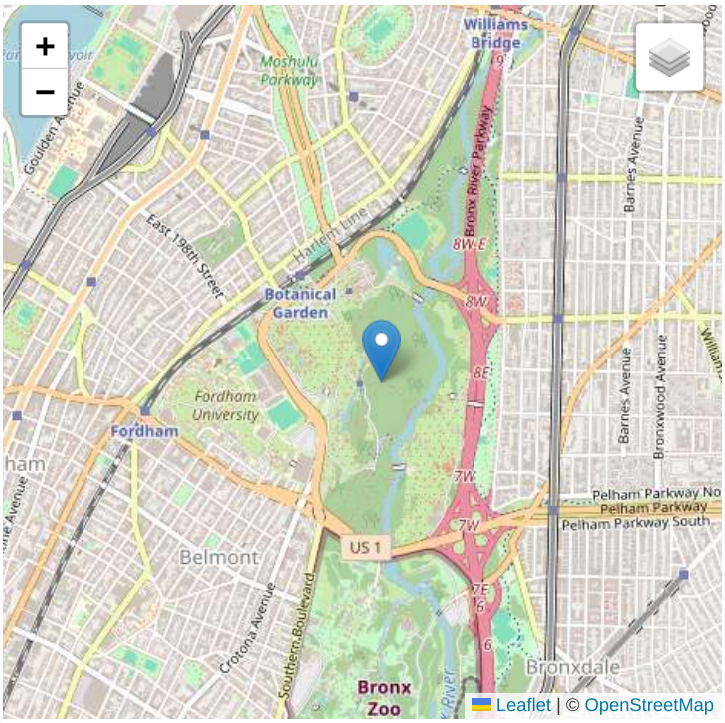
Eventually, one of the young plants made its way to the Royal Botanic Gardens Kew, where it finally bloomed, with great fanfare, in 1889. The plant bloomed again in 1901 and once more in 1926. By 1926, however, word of the strange and stinking corpse flower had spread, attracting crowds so large that the police had to be called in to control them.


Royal Botanic Gardens, Kew



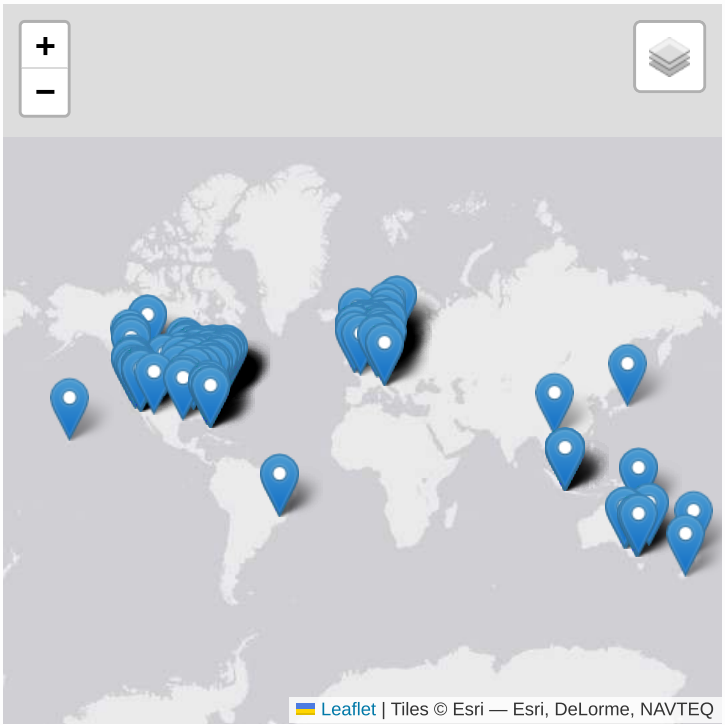
Corpse Flower Bloom, Kew, 1901

The story of the *Amorphophallus titanum* in the US begins in the Bronx. The NYBG was the first institution to successfully cultivate and bloom an *Amorphophallus titanum* in the Western Hemisphere in 1937. They had received the plant from Sumatra in 1932. Five years later, its first bloom would mob the NYBG Conservatory with visitors, photographers, and reporters. Clocking in at over 8 feet tall, the NYBG's first bloom remains the largest ever grown in cultivation.[2]

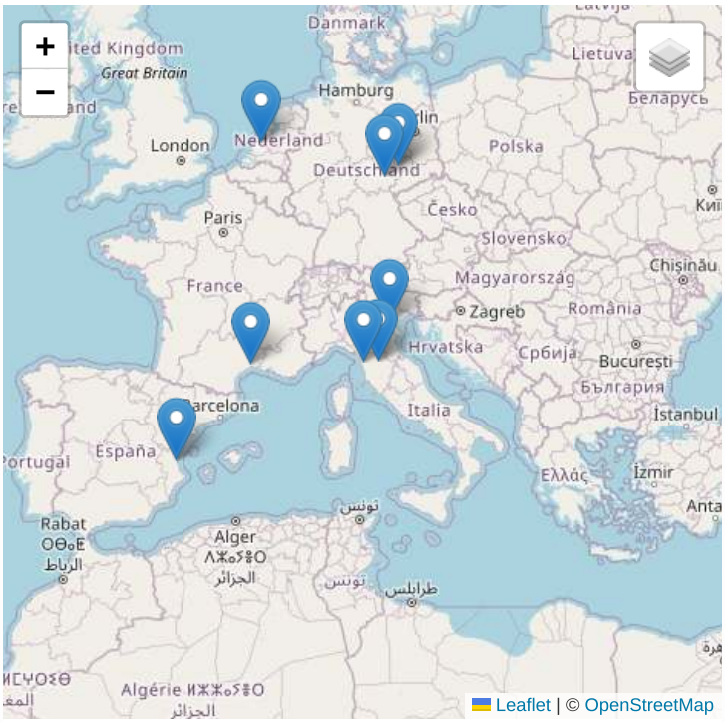



New York Botanical Garden

Throughout the twentieth century, specimens of *Amorphophallus titanum* and their blooms remained rare and infrequent. Over the past six years, however, US and European botanic gardens have seen a huge increase in the number of flowerings. In fact, Kew has stated that they have seen "more than three times as many titan arums flower in the last six years than in the previous 120 years!" It would appear that horticulturalists have finally unlocked the secret of the corpse flower. Too bad scientists and horticulturalists are not 100% sure what that secret is. Most hypothisize it is the product of the plants being cultivated in controlled and observed enviroments. Furthermore, as scientific institutions, botanic gardens also readily share successful cultivation strategies along with seeds and plant clones that have previously flowered.[3] Thus, more and more institutions have and are able to successfully cultivate and flower this rare plant.



The sharing of corpse flower clones and successful cultivation practices between botanic institutions is nothing new. In the early days of European botany, the exchange of plant knowledge and specimens between individuals and botanic institutions was common practice and one of the main avenues through which early botanic gardens and the field of botany developed. In the sixteenth century, the forerunners to modern botanic gardens were formed by professors of botany at medical institutions and universities. Viewed as a space to cultivate and learn about medicinal simples or therapeutic ingredients, these early gardens focused on the medicinal virtues of plants. This, however, began to change over the course of the sixteenth century. With the influx of exotic plants from the new world and the far east, the study of plants, or botany, began to establish its independence from medicine.




Pisa

Early influential figures in the burgeoning field of botany, such as Carolus Clusius (1526-1609), collected and exchanged plants within a circle of horticulturalists, naturalists, and physicians. The intellectual products and specimens of this network formed the collections of many of the earliest botanical gardens in Europe. Clusius for example, collected plants in Spain as well as Austria and famously received and propagated tulip bulbs from the Ottoman Empire. In turn, Clusius studied, cultivated, and distributed the plants he collected from the botanical garden he helped establish and directed in Leiden.[4] As European colonial ambitions grew, so too did their botanic gardens. By the nineteenth century, and thanks to colonial bioprospecting, the botanic gardens at Kew and Leiden featured rare plant specimens from across the British and Dutch empires.[5]

In addition to disciplinary tradition and a shared goal of increasing plant knowledge, the recent upswing in cultivation and plant sharing of the *Amorphophallus titanum* by US and European botanic gardens is also spurred by public interest. A blooming corpse flower brings media coverage and a massive increase in visitors, both in person and online. Today, botanic gardens play a vital role in not only the scientific study of plants, but also in educating the public on issues relating to plant conservation and sustainability. The impressive and stinky blooming *Amorphophallus titanum* captivates the public who, in turn, learn that the plant is threatened by poaching, deforestation, and land clearing for palm oil plantations in its native Sumatra. It is estimated that fewer than 1,000 mature plants remain in Sumatra as up to 72 percent of its natural habitat has been destroyed.

IUNC Red List Map Extant (resident) *Amorphophall...*

Back in the Bronx, the current Director of Glasshouse Horticulture and Curator of Orchids, Marc Hachadourian, continues to propagate corpse flowers. Unabashedly, he confesses it is because they spur incredible public interest and have the potential to inspire kids around the country, especially those in areas without exposure to exotic plant collections, to become botanists, horticulturalist, and conservationists. During a spring 2020 tour of the facility, Marc proudly showed off his 25 "grandchildren," small potted leaves of the *Amorphophallus titanum*, to Dumbarton Oaks' Plant Humanities Fellows. Marc's plan is to gift the plants to institutions across the country, just as he did with Dumbarton Oaks. Through remarkable plants like the corpse flower, botanic institutions across the globe hope to draw public attention to the unparalleled significance of plants to human culture and issues of contemporary "plant blindness" and environmental degradation one fascinating plant at a time–well, in this case, one fascinating and stinky plant at a time.

Mark Hachadourian with a Corpse Flower at the...

References


1. American Chemical Society. The Chemistry of the Corpse Flower's Stench 2013 ↩
2. "Observing Nature. The Correspondence Network of Carolus Clusius (1526–1609)," in *Communicating Observations in Early Modern Letters (1500–1675) Epistolography and Epistemology in the Age of the Scientific Revolution*, edited by Charles Burnett and Jill Kraye, The Warburg Institute: London and Turin, 2013, 43-72. ↩
3. Beckie Strum, "Botanists Sniff at Mystery of Smelly Corpse Flowers' Blooming," *Wall Street Journal*, July 29, 2016. ↩
4. Corpse Flowers at the USBG ↩
5. Londa Schiebinger, *Plants and Empire: Colonial Bioprospecting in the Atlantic World*. Cambridge, Massachusetts; London, England: Harvard University Press, 2004. ↩