Summer 2004

Pineywoods Native Plant Center, Summer 2004

SFA Gardens, Stephen F. Austin State University

Follow this and additional works at: https://scholarworks.sfasu.edu/sfa_gardens_newsletters

Part of the Botany Commons, and the Horticulture Commons

Tell us how this article helped you.

Repository Citation
SFA Gardens, Stephen F. Austin State University, "Pineywoods Native Plant Center, Summer 2004" (2004).
SFA Gardens Newsletters. 64.
https://scholarworks.sfasu.edu/sfa_gardens_newsletters/64

This Book is brought to you for free and open access by the SFA Gardens at SFA ScholarWorks. It has been accepted for inclusion in SFA Gardens Newsletters by an authorized administrator of SFA ScholarWorks. For more information, please contact cdsscholarworks@sfasu.edu.
Hidden Treasures
By Dawn Stover

Gingers have long been part of our East Texas gardening palette. Most of us at one time or another have grown a Butterfly Ginger and praised it for its fragrant flowers or cursed it for its spreading nature. The Butterfly Gingers are but a small part of the Zingiberaceae or ginger family. Within the last few years, the arboretum has begun an interesting and fun journey down the road to ginger Nirvana. With around 47 genera and over 1000 species, we have a long road ahead of us, but are looking forward to our mission.

One of the best surprises for us in this world of Zingiberaceae has been with the genus Curcuma. This genus is best known as Hidden Ginger or Surprise Ginger and has beautifully exotic flowers often appearing at the base of lush foliage. This genus has been a surprise not only for the flowers, but also for their ease of growing and hardiness. Most Curcuma are native to tropical parts of Asia like India, Thailand, and Sri Lanka, and at least one species is native to Australia.

The flowers of Curcuma are actually quite small, but are borne in colorful, waxy bracts that can be pink, white, orange, or lavender. The inflorescence often resembles unusual looking pine cones. They make long lasting cut flowers, and breeders are now hybridizing Hidden Gingers to produce longer stems for the cut flower trade. Some species bloom in the spring, while the great majority bloom in mid to late summer.

The earliest to bloom is the Giant Plume Ginger, Curcuma elata. Each inflorescence has soft pink bracts and can reach 1 foot tall. In mid July, the bright pink inflorescence of the Aussie Plume Ginger, Curcuma australasica, are beginning to show along with the white inflorescence of Curcuma petiolata.

One of the most surprising things about Hidden Gingers is the variety of foliage. Many can be grown from 1 foot to 8 feet depending on the species. Curcuma elata can be used in smaller parts of the garden. The foliage can grow from 1 foot to 8 feet depending on the species. Curcuma petiolata "Emperor" offers foliage with beautiful white margins as well as stunning white flowers

Curcuma is not difficult to grow if you know a few key points before planting. These gingers have a true dormant cycle and cannot be forced to keep their foliage even in a hothouse. Leaves will turn a buttery yellow before total senescence, and can be removed when papery and brown. Dormancy occurs in the drought cycle of their native climate, and as a result, the rhizomes need to be kept very dry in our winters. This can be a challenge as our winters often offer plenty of rain. Amending your soil with sand or composted bark is often enough to combat overly wet winter soils. Don’t forget to add plenty of organic matter, since the plant must be cross pollinated. A plant will not produce seed unless pollinated from another plant because of the timing dichogamy.

I invite and encourage you to find a Hidden Ginger that fits your garden. Visit the arboretum to find the one that is right for you.

Who is Big Jack?

Big Jack is Amorphophallus titanum - the infamous Titan Arum or Giant Corpse Flower and it is found exclusively in the equatorial rainforests of Sumatra, Indonesia. The plant is said to grow in openings in the rainforest on limestone hills. The plant was discovered by Italian botanist Odoardo Beccari in 1878. The plant is endangered in the wild and very few exist in cultivation.

How rare is this blooming event?

After its discovery in 1878, seeds from the wild resulted in the first blooming of this species in cultivation at Kew Gardens in England in 1889. The first recorded bloom in the U.S. was at the New York Botanical Garden in 1937. There have been only about 2 dozen recorded flowering events in the U.S. since then. A flowering event is often turned into a giant extravaganza for those few botanical gardens and arboreta that have been blessed with a plant that survives and actually flowers successfully. This Texas plant proudly joins the list.

The plant grows from a large corm which reaches weights up to 200 lbs. in the wild. Typically, the corms are smaller in cultivation but often top 75 lbs. or more. For most of their lives, corms produce solitary, highly dissected leaves over 12' high and 10' across. Leaves persist for about a year and senesce. The plant then enters a dormant phase of several months. A replacement leaf emerges and the plant begins growing a new root system and adding to the size of the corm. After a year or so, the process is repeated. Infrequently, instead of a replacement leaf, the corn will generate the blessed event: a flower. In that season, the leaf will emerge only after the flower has collapsed. The entire cycle of leaf growth, flowering and dormant periods is botanically strange, considering that these plants are found only in warm equatorial jungle habitats. Equally curious, in the wild, the stages are evidently quite randomly spaced, with some plants in various stages of growth at any given time.

The evolution of this plant is a matter of great debate. The plant is known to live 40 years or more and can flower several times in its life cycle.

What’s the big deal about this flower?

First, let’s be correct. Titan Arum had the title of the largest “flower in the world” but technically, the “flower” is really an inflorescence, or a cluster of flowers. The spadix can reach over 6 feet tall (the tallest ever recorded was over 10 feet), and when fully open the spadix can reach about 3 feet across. Thousands of true flowers are hidden inside at the base of the spadix (the fleshy central column). The large frilly-edged leafy structure enclosing the spadix is called the spathe. Male and female flowers are separate and in a ring around the base of the plant, with the female flowers below and receptive first, the male flowers above and releasing pollen the next day. This means that the plant must be cross pollinated. A plant will not produce seed unless pollinated from another plant because of the timing of stigma receptivity and pollen release. We call this dichogamy.

Fabulous Fall Festival
Plant Sale
October 2, 2004
9:00 a.m.-2 p.m.
SFA Intramural Fields

SFA Mast Arboretum
Summer 2004

“Big Jack,” Rare Amorphophallus titanum, Blooms at SFA Mast Arboretum!

By David Creech, Ph.D.

Who is Big Jack?

Big Jack is Amorphophallus titanum - the infamous Titan Arum or Giant Corpse Flower and it is found exclusively in the equatorial rainforests of Sumatra, Indonesia. The plant is said to grow in openings in the rainforest on limestone hills. The plant was discovered by Italian botanist Odoardo Beccari in 1878. The plant is endangered in the wild and very few exist in cultivation.

How rare is this blooming event?

After its discovery in 1878, seeds from the wild resulted in the first blooming of this species in cultivation at Kew Gardens in England in 1889. The first recorded bloom in the U.S. was at the New York Botanical Garden in 1937. There have been only about 2 dozen recorded flowering events in the U.S. since then. A flowering event is often turned into a giant extravaganza for those few botanical gardens and arboreta that have been blessed with a plant that survives and actually flowers successfully. This Texas plant proudly joins the list.

The plant grows from a large corm which reaches weights up to 200 lbs. in the wild. Typically, the corms are smaller in cultivation but often top 75 lbs. or more. For most of their lives, corms produce solitary, highly dissected leaves over 12' high and 10' across. Leaves persist for about a year and senesce. The plant then enters a dormant phase of several months. A replacement leaf emerges and the plant begins growing a new root system and adding to the size of the corm. After a year or so, the process is repeated. Infrequently, instead of a replacement leaf, the corn will generate the blessed event: a flower. In that season, the leaf will emerge only after the flower has collapsed. The entire cycle of leaf growth, flowering and dormant periods is botanically strange, considering that these plants are found only in warm equatorial jungle habitats. Equally curious, in the wild, the stages are evidently quite randomly spaced, with some plants in various stages of growth at any given time. The evolutionary significance of this is a matter of great debate. The plant is known to live 40 years or more and can flower several times in its life cycle.

What’s the big deal about this flower?

First, let’s be correct. Titan Arum had the title of the largest “flower in the world” but technically, the “flower” is really an inflorescence, or a cluster of flowers. The spadix can reach over 6 feet tall (the tallest ever recorded was over 10 feet), and when fully open the spadix can reach about 3 feet across. Thousands of true flowers are hidden inside at the base of the spadix (the fleshy central column). The large frilly-edged leafy structure enclosing the spadix is called the spathe. Male and female flowers are separate and in a ring around the base of the plant, with the female flowers below and receptive first, the male flowers above and releasing pollen the next day. This means that the plant must be cross pollinated. A plant will not produce seed unless pollinated from another plant because of the timing of stigma receptivity and pollen release. We call this dichogamy.
On Tuesday morning Jack was still in fine shape but the spathe had moved upward a bit, as if he wanted to close. On Wednesday, pollen was extruded from the anthers and looked like tiny strands of grated cheese. That was carefully collected with a spatula, quickly placed in a bag with powdered milk to World where another Titan Arum was about to do its thing. So the pollen chain continues! From what I understand, the University of Connecticut had just finished flowering. The pollen arrived July 12, 2004. Connecticut had just endured an exhausting three-week event that was mailed on to Jim Thompson at Disney World’s Animal Kingdom conservatory; a plant there is about to bloom! The pollen from this plant will be sent to Atlanta Botanical Garden where a fourth Amorphophallus flower is developing. The pollen chain will continue until there is an Amorphophallus in every household in America! Stay tuned.

How do we take care of Jack?

Essentially Jack has had to live his life on much the same regimen as all the other plants that surround him. We have a good organic substrate for him to live in. We fertilize him modestly and try to keep him moist. Even during the dormant period, the corm should be kept slightly moist.

What’s Jack’s Status?

There’s no humidity here! Jack finished up at 61º tall and started opening on Monday July 12, 2004 around 1:00 PM. So we put out a Web alert that said we “think” he’s opening. At 3 PM, we knew we had an event and the announcement went out. The bloom opened to its finest that night around 8 PM and Jack began cranking out a stench that withered the crowd. The delightful smell of spoiled meat was detectable over 100 yards away. Flies made their way to our house. Jack was reeking in the middle of a crowd of admirers.

Around eight that night we cut a small rectangular window in the side of the spadix and we blown on, blew on and chanted on pollen mixed in a little powdered milk. The pollen had arrived from Connecticut only a few hours before, a gift from the University of Connecticut via Clinton Morse. We sealed up the window with duct tape, turned on a little Jungle Blues music, and baby Jacks. On Wednesday, we collected Jack’s pollen and that was mailed on to Jim Thompson at Disney World’s Animal Kingdom conservatory; a plant there is about to bloom! The pollen from this plant will be sent to Atlanta Botanical Garden where a fourth Amorphophallus flower is developing. The pollen chain will continue until there is an Amorphophallus in every household in America! Stay tuned.

On Tuesday morning Jack was still in fine shape but the spathe had moved upward a bit, as if he wanted to close. On Wednesday, pollen was extruded from the anthers and looked like tiny strands of grated cheese. That was carefully collected with a spatula, quickly placed in a bag with powdered milk to World where another Titan Arum was about to do its thing. So the pollen chain continues! From what I understand, the University of Connecticut plant failed to set fruit and the plant withered away. But we have three chances left here to get viable seed: SFA’s “Jack”, Disney World’s “Claire”, and Atlanta Botanical Garden’s corpse flower. At this writing, Jack is nearing the end of his life. On Thursday night July 15º, the spadix flopped over around 9 PM. That meant that Jack’s spathe had been erect for about 77 hours from the signs of opening. Evidently the spadix collapse normally takes place after 48 hours, but Jack fooled all of us. On Friday July 16º, Dr. Shiyu Li, Director of SFA’s Center for Medicinal Plant Research, collected a section of the spadix for analysis. Perhaps Jack’s contribution will continue as a cure for cancer or a disease.

We are sooooooo proud of Jack. He’s done well. We know he wasn’t the biggest corm ever. Let’s face it: at 26 lbs he was a small corm in the world of Amorphophallus corms. Everyone here can attest that he hasn’t had a plush lifestyle the last four years. But he’s a Texan. He’s an SFA Lumberjack. He loved the attention. The kids, the crowds and he’ll always be a memory to this wonderful garden in the Pineywoods of East Texas.

2004 Les Reeves Lecture Series

Mark your calendars now and plan to attend the remaining Les Reeves Lectures scheduled for 2004. Hear great horticulturists from all over the United States. The lectures are free and open to the public. No registration required. A rare plants raffle is held afterwards.

September 16: Dawn Stover, SFA Mast Arboretum, “Ginger and Spice and Other Things Nice.”
November 18: Jim Berry, PDSI, Alabama, “Tomorrow’s Plants Today.”
December 16: Dave Creech, SFA Mast Arboretum, “End of the Year Review.”

Volunteers played a crucial role in making the camp a success. Fifty volunteers donated over 1000 hours to create this exceptional learning environment for the campers.

Here are a few quotes from campers overhead by leaders throughout the camp:

“Golly, Mr. Mike, this is the best time I ever had!”
“Wow, this is someplace I can get dirty and no one tells me I can’t.”
“I caught a salamander, I caught a salamander, I CAUGHT A SALAMANDER!!!”
“I’m amazed!”

For information about Mill Creek Gardens or 2005, please contact the SFA Mast Arboretum Education Office at 936-468-1832.