Amorphophallus titanum (titan arum)

Frequently asked questions

Royal Botanic Garden Edinburgh

- When was the plant first introduced to Europe?

The plant was first introduced to the western world by Italian botanist Odoardo Beccari who found it on an expedition in 1878 and sent seeds & corms back to Italy, which were then shared with other Botanic Gardens.

- Where is Titan Arum found naturally?

The Titan Arum is native to the rainforests of Sumatra, one of the largest islands of Indonesia.

- When did it first flower in cultivation?

Plants were grown at selected gardens from the first seeds collected by Odoardo Beccari, and RBGE Kew successfully grew theirs to produce the first flower in cultivation in 1889.

- Does it have a common name?

Amorphophallus is a scientific name, derived from Ancient Greek and means 'misshapen penis'. The plant has different common names, including 'titan arum' and 'corpse flower'.

- How old is this plant?

The seed was sown at Hortus Botanicus Leiden (in the Netherlands) and the resultant corm (a type of tuber) was gifted to RBGE in 2003, at the size of a small orange.

- Is it edible?

This species is not known to be edible, but corms of other *Amorphophallus* species are used as a food source. *A.konjac* is known for its soluble fibre flour used to make low calorie 'skinny noodles'.

- What is it related to in the plant kingdom?

It is a monocot (the same as grasses), and is closely related to *Monstera deliciosa* (the Swiss cheese plant), *Zantedeschia aethiopica* (calla lily), and *Spathiphyllum* spp. (peace lily).

- How heavy is the corm?

When it was last weighed in 2010, our corm came in at a massive 153.95kg – about the same weight as 2 fully grown adults – and the largest ever recorded. Since 2010 the corm has more than doubled in size; however it is too heavy to lift from the pot to accurately weigh it.

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- Can you grow this at home?

Amorphophallus titanum requires specific conditions of high humidity and high temperature, and as a leaf can grow to the height of 6 metres plus – it would be difficult (but not impossible!) to grow this successfully at home. We are growing it in a 1,000 litre pot in the Lowland Tropics glasshouse, which is kept at 21-25°C during the day (minimum 19°C at night) and approximately 80% humidity.

- What compost is it growing in?

At RBGE, we use a mix of free draining bark, pumice (volcanic rock pieces), sand, and charcoal. We feed the plant, when it is growing, with tomato fertilizer.

- How bad does the flower smell?

In Indonesia, the plant is locally known as the 'corpse flower', because it smells of rotting flesh. In the wild, the purpose of the smell is to attract pollinators (carrion beetles, flies and sweat bees) from miles away. The smell is strongest when the flower first opens and then quite quickly lessens so that it cannot be detected much the following day.

- Is it the biggest flower in the world?

The biggest true flower in the world is *Rafflesia arnoldii*, but the titan arum is the biggest unbranched inflorescence (cluster of flowers). The tallest titan arum flower recorded was grown in Cibodas Botanic Garden, Indonesia, in March 2016 with a flower over 3.7m tall.

- How long will the flower last?

The flower opens when the female flowers are receptive to pollen; if they are pollinated the flower will close, so it could only last for one day. The first flower at RBGE was not pollinated and it remained open for 4 days.

- Will you pollinate it this time?

We are going to pollinate the flowers this year. This will happen on the first night of the flower opening, when the female flowers are receptive. We will use pollen sent from gardens who have recently flowered their titan arums; Cambridge Botanic Garden, RBG Kew, Eden Project and Paignton Zoo.

- What happens after it flowers?

If pollination is successful, the plant will produce fruits, and seeds will develop over about 2 months. These can then be re-sown for future plants, or distributed to other botanic gardens. Usually, the energy the corm expends to produce fruits results in the death of the plant; however, it has been known for the corm to survive and live on to produce further leaves and flowers.

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- Will we see this flower again at the garden?

Yes. We took leaf cuttings from this plant in 2010, and they have already produced corms, and are currently in growth. We also have small plants that were grown from seeds produced at the Eden Project using pollen from our 2015 flower. However, it will be some time before they are big enough to flower.

- I thought this was only a once-in-10-years occurrence?

The plants are rare in cultivation, and can be difficult to grow to flowering stage. They take about 10 years to reach maturity, and only with the right cultivation and conditions can a flower be produced. Although RBGE has the necessary conditions, the plant is very unpredictable and it is uncertain when the next flower will arrive.

- How rare is the plant?

The plant is becoming more common in botanic gardens; however in the wild it is classified as Vulnerable (V) on the 1997 International Union for Conservation of Nature (IUCN) Red List of Threatened Plants, due to natural habitat loss. But its status has not been updated for 20 years.

- Is the plant studied at RBGE?

The *Amorphophallus titanum* is to be studied as part of a joint project between Bogor Botanic Garden and the RBGE to re-assess its IUCN status. The Garden has strong links with South East Asia, and in particular Indonesia; we have been working in this part of the world for about 70 years. RBGE scientists and horticulturists have visited Sumatra, home of the titan arum, several times and are studying many plant families from the region.