

Elephant Ear Story

Cloudbridge Nature Reserve - Nature Notes No. 24

The species *xanthosoma robustum* is called “Elephant Ear” or “Poor Man’s Umbrella” – both apt descriptions.

Look alongside streams and in other wet, sunny areas for the huge leaves with a deep lobe at the base. When you’ve found a clump of the leaves, look amongst them for the flower (see picture).

If you find an open flower, you’ll see that it consists of two main parts. A spathe, or modified leaf, covers the spadix or stalk. The spadix is actually a cluster of tiny flowers, with the male flowers on top, female flowers on the bottom and a string of sterile flowers in between. This flower cluster carries an unusual secret – it can heat itself up!

The elephant ear is an aroid, and some members of the aroid family are capable of generating their own



Elephant's ear, *xanthosoma robustum*

heat. Unlike any other known plant, however, *xanthosoma robustum* can also regulate the time of its heating up. Studies at Monteverde suggest that the mechanism is triggered by light. Morning light signals the flower cluster to begin heating – and by approximately 18:00h the spadix reaches up to 42 degrees Celsius, and releases a strong scent that attracts scarab beetles.

The beetles, both male and female, enter the flower chamber and remain there for about 24 hours. The pollen that the beetle carries rubs off, and pollinates the female flowers. The beetles mate and consume the sterile flowers. When the beetle climbs back out of the chamber, pollen from the male flower rubs off on its back. On it flies, to the next open flower of the elephant ear, for the process to begin again.

The photos were taken near the entrance to Cloudbridge (leaves) and on Cloudbridge North (inflorescence).



Xanthosoma robustum flower