

## Flower characteristics



Orchids have the most complex and beautiful floral structure of any plant.

Orchids have a highly specialized and complex floral structure that is adapted for pollination by insects.

The orchid flower is highly complex and has a long history of being used in traditional medicine.

Orchids have a long history of being used in traditional medicine and are still used today for their medicinal properties.

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## Natural selection Of Orchids

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Orchids have a special adaptation in the roots, stems, leaves and seeds. They absorb nutrients from the surface of the soil and rainwater. Orchids also have enlarged stems, that are used for water and carbohydrate storage. This allows orchids to flourish with rain seasons and floods. Orchids also have a modified photosynthetic pathway for the dry places. And also orchids are adapted to windy habitats.

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## Phylogenetic tree



Phylogenetic tree of the orchids.

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Phylogenetic tree of the orchids.

## Todd Krasnow: Orchid Partners (Video) DVD



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# Orchid Ancestor

Archaeofructus Liaoningensis is the ancestor that is 125 million years ago. There is evidence on pollen on rocks that believe 400 million years ago was when plants first evolved.

There is evidence that the Gigantopterids are an ancestor of the orchids. Even though that they didn't flower the structure of the leaves and of the stem are very similar.

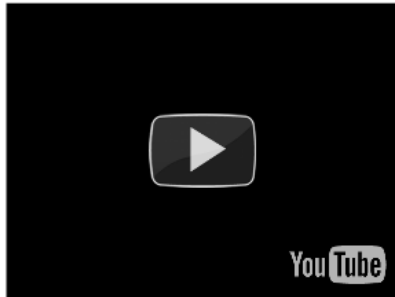


[http://darwin200.christs.cam.ac.uk/pages/index.php?page\\_id=g2](http://darwin200.christs.cam.ac.uk/pages/index.php?page_id=g2)



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source of picture: [http://www-tc.pbs.org/wnet/nature/files/2008/10/na\\_img\\_obsession\\_flower.jpg](http://www-tc.pbs.org/wnet/nature/files/2008/10/na_img_obsession_flower.jpg)

“In my examination of Orchids, hardly any fact has so much struck me as the endless diversity of structure...for gaining the very same end, namely, the fertilization of one flower by the pollen of another.” Charles Darwin

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# Phylogenetic tree



## *explanation of the tree*

Eukarya: Domain  
Plantae: Kingdom  
Magnoliophyta: Phylum  
Liliopsida: class  
Orchidales: Order  
Orchidaceae: Family  
Vanilla: Genus  
Planifolia: Species

[http://bioweb.uvax.edu/bio203/s2009/ruud\\_kirs/Classification%20identification.htm](http://bioweb.uvax.edu/bio203/s2009/ruud_kirs/Classification%20identification.htm)

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The phylum scientists believe have a quarter of one million species of angiosperms. The flowers ovules contain with the megasporophylls. Self pollination is common in this plants and double fertilization is in the phylum. The liliopsida is home to about 60,000 (sixty-thousand) angiosperms. The family is mainly tropical and terrestrial plants.

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Orchids have  
the Males and the  
females reproductive  
system

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It has a highly modified petal called a lip, or a labellum. They almost come in every color size and shape that exists.

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All orchids needs:

Light, Water,  
nutrients, and air.

Orchids prefer a warm  
temperature of 55-60  
degrees F.

Orchids like every plant depends on bees to live. Bees pollinates the orchid so they can reproduce, and the bees get the fragrance. The bees evolved before the orchids, research shows that at least 12 million years before

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There are more than 25,000 species of orchids but few fossilized specimens have been found. A bee was discovered in 2007 and have been researched that it was from 100 million years ago, that means that orchids also lived with dinosaurs

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# Natural selection Of Orchids

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