

# Orchids or orchidaceae

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Orchids Introduction Being tropical plants, orchids are among the most common living organisms globally existing in nearly every climatic condition apart from the glaciers. The family orchidaceae has widespread and diverse families of flowering and often fragrant plants. Among the regions they habit include Asia, South and Central America including the state of Texas among many others. The region has a cool and wet climate that ranges from extremely cold winters and warm and humid summers all of which are conducive for the growth of the plant. The most common subfamily of the plant in the region is Cypripedioideae even though others such as Vanilloideae, Epiphyllanthoideae and Orchidoideae are also present. Among their evident characteristics are extremely small seeds, modified petals, supinate flowers and joined stems (Pridgeon & Haegsater, 1996). The lifecycle of the plant begin from the extremely small seeds readily dispersed by wind. Once the ovaries mature into small fruits full of the seeds, they dry up and pop open, the popping process disperses some of the seed but the most established agent of dispersion is wind that blows the seeds to different regions. The seeds attach themselves on the top soil and easily germinate into smaller plants. Just as any other seed, the plant's seeds require favorable environment consisting of air, water and warmth. However, since the seed are very tiny they lack endosperms and must therefore join symbiotic relationships with other organisms mostly fungi to germinate. The chances for the seeds to attach themselves are always minimal thus making only a fraction of the seeds dispersed to germinate. An after attaching themselves on the fungi, orchid seeds require an average of three weeks to germinate. After germination, the plants grow gradually until maturity. The

growth process is reliant on the availability of nutrients and favorable climatic condition. The growth initiates different changes to mark specific stages of the growth. The plant develops the first two soft and delicate leaves, which it later drops as it begins to grow. At maturity, the plants blossom into different colored flowers that produce mild fragrance. The leaves of the plant and their petals open up revealing delicate anthers with pollen grains. The colorful and fragrant flowers are attractions to bees; butterfly among many other animals that aid cross-pollination. The pollen grains are sticky and readily attach themselves on the wings among other parts of the animals waiting the free transportation to other plants (Walker, 2009). While most orchids exhibit the sexual mode of reproduction, others rely on asexual reproduction. Such species produce offshoots and plantlets along their stems. The plants produce the plantlets from the stems along is stem as they progresses their growth. Owing to the accumulation of growth hormones at the stems, the plantlets thus proceed to maturity. Orchids are recurrent herbs; they lack an enduring woody stem in their structures. However, they have a simulation of a stem, which is a series of leaves stemming out of each layer. The shoot thus from a single bud that opens up to a pair of leaves thus initiating the growth of successive leaves. The plants have small long leaves, shallow roots and just as stated earlier flower at maturity. The lack of a woody structure limits its need for food owing to its small structure. Its roots are shallow to trap light showers of rain thus sustaining itself. The plant forms a reservation for its nutriment in its roots that churn into balls. The reproductive system of the plant is specifically designed and has adapted to ensure its continuity. Despite being small, the

plant produces very large flowers that can readily accommodate a bee or a butterfly. The multicolored flowers produce fragrance that attracts the agents of pollination. They have long anthers that hang loosely and produce sweet nectars. The sticky pollen grains stick on the animals thus enabling cross-pollination. Every fertilization produces many small seeds, an adaptive feature that ensures the continuity of the plants since it increases the chances of the seeds falling on a fungi thus germinating. Most of the seeds do not attach themselves on fungi thus die. The production of smaller seeds is yet another adaptive feature since the plants are small and lack strong woody structures to support the weight of large seeds (Cullina, 2004).

Orchids have existed for more than a hundred million years. Evidence indicates that the plants coexisted with dinosaurs. This implies that the plants have adapted through time to better their survival features as the ecological factors have changed through time. Among most evident evolutionary features of the plants, include the production of numerous seeds to increase the chances of germination. The population of fungi has greatly reduced since humans are more conscious of their environment. This infers that unlike in the past when the plants and organisms would die and decay openly thus increasing the population of fungi which consequently increased the chances of the seeds germinating. Interestingly, there are so many families and species of the plant that some are completely different from others. References Cullina, W. (2004). *Understanding orchids: An uncomplicated guide to growing the world's most exotic plants*. Boston: Houghton Mifflin. Walker, D. (2009). *Adaptation and survival*. London: Evans. Pridgeon, A. M., & Ha? gsater, E. (1996). *Orchids*. Gland, Switzerland: IUCN.