

HOYA: THE PORCELAIN FLOWER.
BY REGINA GARDINO (GARDINO NURSERY)



Top: *Hoya praetorii*. Image by Regina Gardino.

Bottom: *Hoya australis*. Image by Marina Rybka (Toptropicals.com).



Hoyas are one of my favorite plants because of the unique shape of the flowers and their fragrance. They also have interesting leaves with many different shapes, colors, and textures. Moreover, hoyas are easy plants to grow, allowing most people to enjoy them regardless on where they live. Hoyas are wonderful in so many ways, gardeners are discovering, collecting, and falling in love with them. Hoyas are now becoming so popular that many beginner gardeners are familiar with the name ‘Hoya’ and even recognize a hoya when they see one.

I started collecting hoyas twelve years ago, and at that time, most of the hoyas available were cultivars of *Hoya carnosa* (green, variegated, and Indian Rope) sold at garden centers and grocery stores. Later, with help from the Internet, many gardeners started discovering other species and began collecting them. The genus *Hoya* was named by botanist Robert Brown, in honor of his friend botanist Thomas Hoy.

Hoyas are tropical vines or shrubs that belong to the Apocynaceae Family (formerly Asclepiadaceae). Hoya is a genus that now contains close to 300 species and there are many more to be discovered. They come from Southern Asia, Australia, and Polynesia. In their native habitats, they usually grow in shady tropical forests, but some succulent types grow in the deserts of Australia. In the wild, vines climb up trees 30-40 feet. Some hoyas are more terrestrial and grow more like shrubs. We can say that most hoyas are epiphytes, like orchids and bromeliads, usually hanging from tree branches. In cultivation, trees are not always available and the weather outside may not always be



Robert Brown (1773 – 1858) was a Scottish botanist who made important contributions to botany largely through his pioneering use of the microscope. His contributions include the discovery of the plant cell nucleus; the first observation of Brownian motion, which confirm existence of atoms and molecules; early work on plant pollination and fertilisation, including being the first to recognize the fundamental difference between gymnosperms (pines and conifers) and angiosperms (flowering plants). He also made numerous contributions to plant taxonomy, including the describing of a number of plant families that are still accepted today. *Image courtesy of Wikimedia Commons.*

favorable, therefore, hoyas are grown in hanging baskets or in little pots with small trellises. The soil for hoyas should be porous and be able to hold a little bit of moisture. Each grower has their own favorite mix. One that is working really well for me consists of a blend of good quality potting soil and orchid mix (bark, perlite, and charcoal). The percentages vary depending on the species and how much water the plant is going to receive, but generally I use about 2/3 of potting soil and 1/3 of orchid mix.



Hoya imbricata. Image by Regina Gardino.

You can add more perlite for the succulent species.

Fertilization for hoyas is easy. Slow release fertilizers work well and liquid fertilizer can work even better as long as you use it correctly. Any orchid fertilizer should work for hoyas as well. Most hoyas are considered to be succulents and do not need much water. Let the soil dry between watering, especially during the winter. Pay close attention to those that have thin leaves and the ones from the Philippines. They come from humid rain forests and they get rain showers almost daily, but the water also drains really fast. The most important thing is to use common sense.

Hoyas are tropical plants and they can not survive in low temperatures. Most species should be comfortable in 60°F or above, although some species can tolerate near freezing temperatures for a short period of time. All *Hoya carnosas*, *Hoya pubicalyx*, Hoyas from China, and some from India in the high altitude areas can take some lower temperatures.

Hoya flowers are very interesting and sometimes they do not even look real. They can look like they are made out of wax or glass. The botanical term for this type of flower is “glabrous”. Some flowers are very fuzzy and look like they are made out of “velvet” like on *Hoya lacunosa*. Other flowers are very hairy and the botanical term in this case is “pubescence” like on *Hoya praetorii* or *Hoya caudata*.

Hoya flowers consist of three parts:

1- Calyx is the part that unites the petals.

2- Corolla is the outer part of the petals forming a star shape (five lobes total).

3- Corona is the center part, just in the middle of the corolla, a star shape and much smaller (five lobes as well).

The flowers can be described in five different shapes:

1- Revolute: the corolla curves all the way back forming a little ball shape— *Hoya wayetii*.

2- Reflexed: the corolla reflexes back, but not curving in— *Hoya mitrata*.

3- Flat: the corolla and corona stay flat showing all details— *Hoya nummularioides*.

4- Cup: the flower is a perfect cup shape— *Hoya wallichii*.

5- Urn: only the tips of the corolla lobes fold back a little bit, looking like



Left: *Hoya kerrii variegata*. Image by Regina Gardino.



Right: *Hoya archboldiana*. Image by Regina Gardino.

miniature Japanese lanterns— *Hoya heuschkeliana*.

The hoya flowers start in the apex of a little peduncle that can become as long as seven inches for some species, then the flowers usually come in a cluster spreading out or staying all together forming a round ball shape. One interesting thing about hoyas is that they can flower repeatedly from the same peduncle. I had an old *Hoya megalaster* that bloomed eleven times in one year from the same peduncle, therefore never cut off a hoya peduncle because you may lose the next blossom.

Hoya flowers can be displayed in clusters of 80 to 100 flowers like on *Hoya fungii* and *Hoya latifolia*. They can also be displayed with only one or two flowers, for example *Hoya retusa*.

Hoya flowers can vary in size as well. The smallest individual flower is about 1/8 inches in diameter (*Hoya bilobata*). On the other hand, the biggest can reach three to four inches in diameter (*Hoya imperialis*, *Hoya macgillivrayii*, *Hoya megalaster*, and *Hoya lauterbachii*). The color of the flowers can range from pure white to beige, different shades of pink, dark to light yellow, yellow-pink, orange, green, mauve, purple, burgundy, brownish-red and brown. There is a species with flow-

ers so dark (red/brownish) that when the flowers became old they turn black in color. This is the case on *Hoya ciliata* and for this reason it is also nicknamed 'Black Hoya'. The only color not found in hoya flowers is blue. What amazes me the most about hoyas is the amazing fragrance of their flowers. Just one small cluster of *Hoya shepherdii* is sure to fill up a whole room with its wonderful perfume. Others with powerful fragrances are: *Hoya australis*, *Hoya lacunosa*, *Hoya cembra*, *Hoya pallida*, and *Hoya nummularioides*. Unfortunately, not all hoyas have a good fragrance, some actually have an unpleasant odor. Despite their beautiful flowers, both *Hoya cinnamomifolia* and *Hoya vitellina* have an unpleasant fragrance. The fragrances of hoyas can vary from chocolate (*Hoya carnosa*), honey (*Hoya sp DS-70*, formerly *Hoya tsangii*), caramel (*Hoya incurvula Sulawesii*, *Hoya kerrii*), spicy (*Hoya crassicaulis*), citrus (*Hoya pentaphlebia*, *Hoya cystiantha*), tropical fruit (*Hoya cumingiana*), peanut butter (*Hoya ciliata*), and musk (*Hoya latifolia*).

Hoyas are usually more fragrant at night when the pollinating insects are around. The pollinators are attracted by scent, nectar, and color. Some of the insects that pollinate hoyas are moths,



Hoya fungii. Image by Regina Gardino.

butterflies, houseflies, and perhaps even mosquitoes. My daughter recently asked me: “What are hundreds of mosquitoes doing around the flowers of my *Hoya nummularioides*?” My answer was: “They are most likely feeding on nectar, and do not be surprised if your hoya starts developing a seed pod soon.”

Hoya leaves are also interesting and they vary in size, color, venation, shape, and texture. They can be small as 1/4 inch in diameter (*Hoya pubera*) or big as 12 x 8 inches (*Hoya latifolia*). *Hoya meliflua ssp. fraterna* have the longest leaf in the genus, 14 inches or longer.

The leaves can vary from dark green to very light green, yellow-green, brown, brown/reddish, pink, and some have white margins. When exposed to the sun, they can turn a reddish color. Some leaves have markings that are often seen in the upper leaf surface. These markings can be silver, pink or white. During the winter, many hoyas change the color of their leaves. Lower temperatures can give them a spectacular rose/reddish coloration. You see

this often with *Hoya obscura*, *Hoya pentaphlebia*, and *Hoya nicholsoniae*.

Some species have beautiful raised leaf veins like *Hoya pentaphlebia* or colorful dark veins like on *Hoya vitellinoides*. Spider web veins give a very artistic look to the leaf of *Hoya finlaysonii*.

Hoyas can show a lot of variation in their leaf shape. They can be round (*Hoya obovata*), oblong (*Hoya sp. square*), lanceolate (*Hoya bella*), needle-shaped (*Hoya linearis*), V-shaped (*Hoya shepherdii*), heart-shaped (*Hoya kerrii*). *Hoya kerrii* is nicknamed the “Sweet-heart” or “Valentine Hoya” in the USA due to its heart shaped leaves. Some hoyas have very twisted leaves like on *Hoya compacta Indian Rope*.

Most hoyas have very thick leaves and can store water for several days. *Hoya australis ssp. rupicola* is the perfect example of this type of succulent hoya. Living in such a harsh environment, they develop skills to survive with their thick leaves. Some hoyas like *Hoya multiflora* come from humid forests and have thin and delicate leaves. Some hoya leaves have a leathery texture, others are waxy on the surface (*Hoya carnososa*) or fuzzy and hairy like on (*Hoya calycina*).

Another interesting fact about hoyas is that some species can modify some of



Regina Gardino got a psychology degree in Brazil, but she always had a connection with plants. She started a plant nursery in the USA with her husband Sid Gardino seventeen years ago. They specialize in rare and unusual tropical plants. In her opinion, the relationship between people and their plants goes well beyond gardening. It gives people something good to focus on other than the problems of the modern life. It is actually a form of therapy. At the nursery, she takes care of her Hoya collection along with her bonsai trees; two of her great passions.