

# Cattleya schilleriana Rchb.f 1857

SUBGENUS *Falcata* SECTION *Guttatae* [Cogn.] Withner 1989

Consul Schiller's Cattleya [German Orchid Enthusiast 1800's]



## Synonyms

*Cattleya aclandiae* var *schilleriana* Jenn. 1875; *Cattleya regnellii* Veitch ex R.Hogg 1860; *Cattleya schilleriana* var. *amaliana* L.Linden & Rodigas 1886; *Cattleya schilleriana* var. *concolor* Hook. 1859; *Cattleya schilleriana* var. *regnellii* B.S.Williams 1885; *Epidendrum schillerianum* Rchb.f 1861

## Description

Found in Brazil as a small sized, cool to hot growing, epiphytic, bifoliate orchid growing on hardwood thickets on cliff faces with summer seepage and a river below at elevations of sea-level to 800 meters yet there is no rain between summer and fall. This species has club-shaped, sulcate, often tinted reddish-purple pseudobulbs carrying 2 apical, elliptic-oblong, spreading, deep green above, reddish purple below leaves that blooms in the summer and fall on a terminal, short, long-lived, 1 to 5 flowered inflorescence carrying fragrant, waxy flowers.<sup>3</sup>

A species of semi-dwarf habit, with tough, red-spotted leaves and flowers of heavy substance. The flowers are 3-4 in. (7.6-10 cm.) across. The species was originally thought to be a natural hybrid of *C. aclandiae* and *C.* It is

not that closely related to *uclundiae*, however, in spite of the similar vegetative habit and spotted flowers and leaves. A study of the flowers indicated they are more like those species in the *Schomburgkoidea*: *elongata*, *violacea*, *bicolor* and *tenuis*.

There are rarely more than 2 flowers, the petals having waxy margins and being of variable colors, sometimes olive-green tinted with brown and heavily spotted with red-brown, often turning a deep rose-mahogany color when the spots are nearly confluent. The pale yellow lip base has purple stripes and shadings, and the middle lobe is purple-red edged with pink or white. A plant first appeared in the collection of Consul Schiller at Hamburg, Germany, in the fall of 1857; having been imported from Bahia, Brazil. As was so often the case with orchids, the first plant of a given *Cattleya* species was sent mixed in with other plants and not purposely included. Today one can only imagine what excitement a new flowering generated from such serendipitous events! Plants of this species have never been common in collections and are now being raised from seed, even in Brazil. Two years after the original flowering a plant in the English collection of Backhouse bloomed and was sent to Kew where Hooker described it as variety 'Concolor' since it lacked the usual spotting.

The flowers of this species usually appear in the late spring or early summer (the Hamilton Peak is in May). The plants like growing on plaques or in baskets with much light and air and excellent drainage for the thick roots. There is some evidence that there may be vegetative races of this species, some short, 4-5 in. (10-12.7 cm.) tall, and others taller, 8-10 in. (20-25 cm) high. Until more are grown side by side under the same conditions, it will not be possible to determine whether these differences are real or due to cultural conditions. Fowlie describes it growing in hardwood thickets on cliff faces where summer seepage and a river below help maintain high humidity despite summer heat. There is no rain in the area for three months, January through March, their summer in Brazil. Flowering takes place after heavy, spring rains.<sup>2</sup>

## Habitat

Brazil, in the State of Espírito Santo. Plants have been found only near the headwaters of the Rio Jucu near Domingos Martins. Plants are found at 800–2500 ft. (240–760 m), but they are quite rare above 1800 ft. (550 m). They grow on cliffs above the river on both moss-covered rocks and on mossy trees hanging off the sides of vertical rock faces. They are usually found where springs and small waterfalls are nearby to ensure high humidity even during the dry season. *Cattleya schofieldiana* Rchb. f. and *Cattleya velutina* Rchb. f. grow in the same area, sometimes even on the same trees. *Cattleya harrisoniana* Bateman and *Cattleya warneri* Moore also grow in this area, but they are usually found on trees near the river rather than on the cliffs above it. -- Source: Charles Baker<sup>4</sup>

## Awards

Origin	HCC	AM	FCC	JC	CCM	CHM	Total
	<b>28</b>	<b>68</b>	<b>1</b>	<b>4</b>	<b>6</b>	<b>1</b>	<b>108</b>
Years	<b>1969-2016</b>	<b>1983-2017</b>	<b>2017</b>	<b>1957-2005</b>	<b>1967-1014</b>	<b>1967</b>	

## F-1 Hybrids and Progeny

**Hybrids: Total of 5,106 to the 11<sup>th</sup> generation**

Generation	Before 1940	1940-49	1950-59	1960-69	1970-79	1980-89	1990-99	2000-10	After 2010
<b>F-1</b>	<b>44</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>12</b>	<b>7</b>	<b>14</b>	<b>19</b>	<b>15</b>
<b>F-1 Awards</b>	<b>47</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>17</b>	<b>16</b>	<b>3</b>

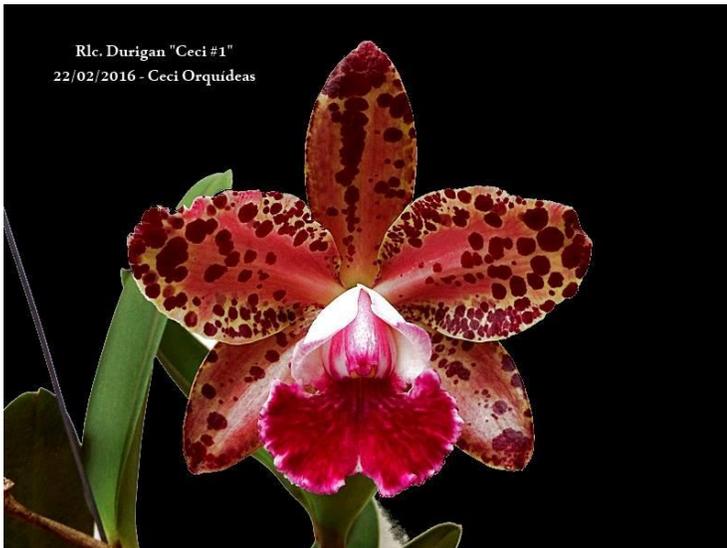
*Cattleya schilleriana* has been used in 113 F-1 crosses since 1876. The grex with the most F-1 offspring is Rlc. Tzeng-Wen Beauty, a 6<sup>th</sup> gen hybrid registered in 1997. The most awarded grex is Rlc. Durigan, registered in 2005, with 17 AOS Awards.



Rhyncholaeliocattleya Tzeng-Wen Beauty

Another old cross is *Cattleya highburiensis* made with *Cattleya cinnabarina* in 1896. It produced 13 F-1's and has a total progeny of 19. Its only award is a HCC in 1983.

## Cattleya Highburiensis HCC/AOS



### Breeding Strengths and Weaknesses

According to William Rogerson, Strengths? None. Weaknesses – “distinctive undulation, curving and crinkling on the edges exhibited by the sepals and petals of *C. schilleriana*. This characteristic turns out to be fairly dominant. This characteristic....makes the flower appear twisted and unshapely.”<sup>6</sup>

In the intervening years, *C. schilleriana* has gained more respect. The color pallet and spots are being used to advantage in many recent crosses. If the narrowness of the sepals and petals can be overcome, the ruffled edge of these elements can be interesting. The lip is the best feature.

### Culture

New growths emerge in early spring and blooming occurs after the growths mature in April through June. Generally, new roots do not emerge until immediately after flowering. In cultivation, it is not uncommon for plants to send up another growth or two during the summer. Infrequently, these summer growths will bloom over summer and autumn as they mature, but it is more typical that these growths will never flower. The plant appears to go into a dormant stage during autumn and early winter until new growths appear again in late winter or early spring.

### Temperature

*Cattleya schilleriana* basically grows well under conditions provided for cattleyas. The temperature range in its native habitat is apparently a little on the cool side of standard cattleya conditions. Summer temperatures never climb above the low 80s and winter temperatures fall as low as 46 F. Therefore, it might be advisable to look for a slightly cooler than average spot in the cattleya house, particularly during winter. *Cattleya schilleriana* grows well for me in a greenhouse where winter temperatures drop to 60° F at night. For many years I

successfully grew equally good specimens under lights in my home, where evening temperatures were higher and there was little temperature drop in the evenings.

## Watering

In its native habitat, there are four dry months during the summer when there is no rain, corresponding to June through September in the Northern Hemisphere. All of autumn and winter is somewhat rainy. Then the true rainy season begins in the spring. The plants begin their new growths and flower during the rainy season. Although there is no rain during the summer, the dews are extremely heavy, so that there is no extremely dry season for these plants in nature when they completely dry out.

Most successful growers of this species seem to grow their plants a little on the dry side during the autumn and winter. When plants are actively growing in spring and summer, they are given more water.

My experience has been that plants are larger and more robust when grown in containers, rather than on mounts. In order to allow them to dry out properly between waterings, pot in a porous medium such as plain medium fir bark. Do not attempt to grow this species in peat-based mixes. It may be that using a clay pot is also a good idea, but the most important thing is to use a porous mix such as plain medium-grade fir bark. For plants in 5- and 6-inch pots, I use clay and plastic interchangeably. However, for mature specimens in larger containers, I always use clay.

The only minor point of controversy regarding watering practices that I am aware of concerns how dry the plants should be grown over the summer months after blooming ceases. In their natural habitat, there is no rain for a three- or four-month period. However, there are heavy dews. My practice has been to water them like all of my other orchids during this period and to rely on the porous mix to keep them a little drier. This usually means watering 5-inch pots two or three times per week and 8-inch pots twice per week. In winter, I maintain about the same level of wetness by halving the amount of watering. Therefore, I do not try to create an extremely dry period in summer. Under this regime about half of my plants send up summer growths and the other half do not.

It is possible that there may be some advantage to trying to make the summers drier. One of the best growers of *C. schilleriana* that I know insists that this species must be given a distinct rest during summer after the blooming is over. He claims that the nonblooming summer growths observed by many growers only occur if the plants are not dried out properly, and that plants that produce these nonblooming summer growths do not bloom as well the following year. This type of regime seems extreme to me, and I settle for growing them a little on the dry side. There is room here for some controlled experimentation.

## Repotting

As for all bifoliate cattleyas, it is extremely important to repot these plants only when active roots are just beginning to appear. This would usually mean that plants would be repotted in early summer immediately after flowering. Plants of this species often suffer a setback for a year or so after being repotted. Therefore, it is best to delay repotting as long as possible. Plants of *C. schilleriana* are relatively compact so it is generally possible to keep plants in the same container for three or more years. Because they are grown in a fairly porous medium and kept on the dry side, I have never experienced problems with decomposing bark.

## Light

I grow all of my cattleyas in light intensities toward the high end of what is normally recommended for cattleyas and my plants of *C. schilleriana* seem to do fine under these conditions. The leaves and stems become heavily stained with dark anthocyanin pigments. I have observed that the coerulea forms of *C. schilleriana* are more susceptible to burning, and I generally grow them in slightly more shaded conditions. This is possibly because the coerulea forms all seem to lack noticeable anthocyanin staining in their vegetative parts. This pigmentation helps protect the leaves from burning in the non-coerulea forms.<sup>6</sup>

## References

**Aldridge, Peggy. 2008.** *An Illustrated Dictionary of Orchid Genera.* Selby Botanical Garden Press.

<sup>1</sup>**la Croix, Isobyl. 2008.** *The New Encyclopedia of Orchids.* Timber Press

**Meisel, Kaufmann, Pupulin 2014.** *Orchids of Tropical America.* Cornell University Press

<sup>2</sup>**Withner, Carl L. 1988.** *The Cattleyas and Their Relatives: Volume I* Timber Press

<sup>3</sup>[www.orchidspecies.com](http://www.orchidspecies.com)

<sup>4</sup>OrchidWiz.Database X4.3

<sup>6</sup>Rogerson, William P. *Cattleya schilleriana.* Orchids. September 1997