

Challenge to Award #20186042 *Laelia halbingeriana* 'Leucadia' AM/AOS

I am filing this challenge to the award granted to *Laelia halbingeriana* 'Leucadia' AM/AOS with the agreement and support of the exhibitors, James and Lauris Rose of Cal-Orchid. We now believe that this plant is *Laelia* × *oaxacana* Salazar & Soto Arenas, Phytotaxa 178: 162 (2014), which is the natural hybrid of *Laelias halbingeriana* and *anceps*.

Cal-Orchid owns both of the plants that have been awarded as *Laelia halbingeriana*, 'Puesta del Sol' CHM/AOS and 'Leucadia' AM/AOS. We believe the 2017 award to 'Puesta del Sol', which was confirmed by SITF, to be correct. In 2018, Cal-Orchid entered 'Leucadia' for judging under the name *Laelia halbingeriana*.

In 2019, I visited Cal-Orchid and James led me back to where both plants were blooming simultaneously for the first time. We were both struck by how very different they were. Unfortunately, I did not get a photo of them then, but I was intrigued. I reviewed the 2014 description, a copy of which is attached, and I acquired several *L. halbingerianas* and *L. × oaxacanas* over time.

I was not able to photograph the 2020 blooms at Cal-Orchid because of the pandemic, but in November, 2021 they both bloomed again and I was able to get photographs during two different trips. Since receiving the award, 'Leucadia' has been divided into at least three pieces, two of which are still at Cal-Orchid and one that is owned by Arnie Gum. Unfortunately, the two 'Leucadia' divisions still at the nursery bloomed this year on short inflorescences with very few flowers, possibly the result of an off-season repotting. One division bloomed before my visits, and the other bloomed only during my second visit. All of the November 2021 photographs are mine.



November 2021 photo comparing 'Puesta del Sol' on left, and the division of 'Leucadia' on right

Both *L. halbingeriana* and *L. × oaxacana* were described¹ at the same time in 2014, and the description clearly differentiates them from each other and from *Laelia anceps* and *Laelia superbiens*.

The attached description indicates that a key distinction between *L. halbingeriana* and *L. × oaxacana* is that the arrangement of the flowers on the inflorescence is spiraled on *L. halbingeriana* and is distichous on *L. × oaxacana*². The spiraled arrangement of the 'Puesta del Sol' inflorescence and the distichous arrangement of the 'Leucadia' inflorescence is apparent from the comparative 2021 photo above, their respective award photos below, and from the November 12 'Leucadia' photo below.



'Puesta del Sol' close-up award photo

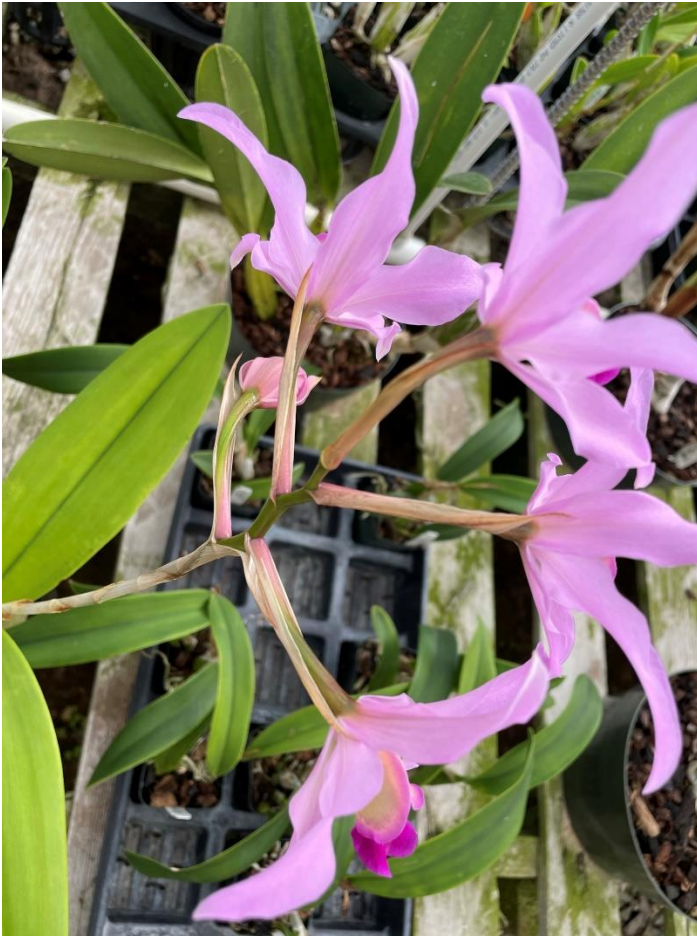


'Leucadia' award photo

Both award photos by Arthur Pinkers

¹ Gerardo A. Salazar, Rolando Jimenez-Machorro, Hector M. Huerta & Eric Hagstater. 2014. A new species and a new natural hybrid of *Laelia* (Orchidaceae) from Oaxaca, Mexico. *Phytotaxa* 178(1):161-170.

² *Ibid.* p.167&168



November 12, 2021 photo showing distichous arrangement of the inflorescence on the division of 'Leucadia.'

Some of the other distinctions between them that were highlighted in the description are more subtle. The petals of *L. × oaxacana* are described as being held in a vertical plane (like *L. anceps*), while the petals of *L. halbingeriana* are described as being held in a more horizontal plane³. The above 'Leucadia' award photo and the November 12 flower photo below clearly show the 'Leucadia' petals being held in a vertical plane. The slight rotation towards horizontal of the 'Puesta del Sol' petals is most evident by looking at the terminal flower in the above award photo.

The description indicates that the petals also differ in stance. *L. × oaxacana* petals are described as "spreading" like *L. anceps*, while *L. halbingeriana* petals are arcuate, or arching⁴. The spreading stance of the 'Leucadia' petals is quite obvious in its above award photo and in the November 12 flower photo below. The arching petals of 'Puesta Del Sol' are most easily seen in the apical flowers of both the comparative and award photos.

³ Ibid. p.168

⁴ Ibid. p.168



Flower of 'Leucadia' division, November 12, 2021

The description also indicates that *L. × oaxacana* petals and sepals are “proportionally narrower and more pointed” than those of *L. halbingiana*⁵. Unfortunately, 'Leucadia' neglected to read the “narrower” part of the description. The chart below shows that 'Leucadia's petals are proportionately wider than 'Puesta Del Sol'. The petals in all of the 'Leucadia' photos appear quite wide compared to the photo of *L. × oaxacana* in the description⁶. However, it is not at all surprising to me that some cultivars of this *L. anceps* hybrid would display wider petals, reflecting a stronger *L. anceps* influence, than others might. It seems reasonable to accept some variability in a natural hybrid where one parent has markedly wider petals, even in the photo of the wild specimen shown in the description⁷.

Comparative award measurements:

	'Puesta Del Sol'		'Leucadia'	
	<u>width</u>	<u>length</u>	<u>width</u>	<u>length</u>
nat. spread	15.2	15.0	13.5	14.0
dorsal sepal	1.8	7.8	1.9	7.4
petals	1.8	7.8	2.4	7.1
lateral sepals	2.0	7.6	1.6	7.0

⁵ Ibid. p.167

⁶ Ibid. p.165

⁷ Ibid. p. 165

All of the 'Leucadia' photos show a "pointed" petal apex, but it is not dramatically more pointed than the petals of 'Puesta del Sol.' However, this seems largely attributable to the fact that the petal apex of 'Puesta del Sol' is not as rounded as the petals in the *L. halbingeriana* photo⁸ included in the description. The photos of 'Leucadia' appear consistent with the description of *L. × oaxacana* in this regard.

The description indicates that the primary distinctions between *L. halbingeriana* and *L. × oaxacana* are the arrangement of the inflorescence and the shape and stance of the petals, as discussed above⁹. However, there are a number of other differences noted in the details of the two descriptions.

There are striking differences in the lips. The description notes that the side lobes of both Laelias are "vertical at each side of the column", but that the side lobes of *L. × oaxacana* are also "touching each other above it"¹⁰. This is clearly consistent with comparative and award photos of *L. halbingeriana* showing the far more open stance of the side lobes, and with the comparative, award, flower and lip photos of *L. × oaxacana*, all showing the side lobes almost completely enclosing the column.

The comparative and award photos also show that the keels are more prominent on *L. halbingeriana* than on *L. × oaxacana*. This is consistent with the description, which notes that the callus of *L. halbingeriana* has seven keels "running from the base of the labellum to about the middle of the mid-lobe", while the callus of *L. × oaxacana* "consists of an oblong thickening bearing 3 low keels running from the base of the labellum to the basal one-third of the midlobe"¹¹. The November 12 photo below of the lip on the 'Leucadia' division is completely consistent with the description of *L. × oaxacana*.

⁸ Ibid. p. 165

⁹ Ibid. p. 167&168

¹⁰ Ibid. p. 164&167

¹¹ Ibid. p. 164 & 167. I noted that the description of *L. halbingeriana* 'Puesta Del Sol' CHM/AOS indicates five keels.



Lip of 'Leucadia' division, November 12, 2021

Visually, the combination of the more open side lobes and the prominently longer and broader keels makes the lip of *L. halbingeriana* look very different than the lip of *L. × oaxacana*. It was primarily the great contrast in the lips of the plants that initially led both the exhibitor and me to question how these plants could be the same species, and my subsequent research and consideration of the other distinguishing characteristics in the description has led me to conclude that they are in fact not the same species.

The background of the plants is interesting, although it doesn't directly impact the identification issue. Cal-Orchid acquired both awarded plants from Andy's Orchids. Andy Phillips told me¹² that he had acquired all of his original plants in the 1990s. They were collected from the wild on the Isthmus of Tehauntepec, between Veracruz and Chiapas, which is consistent with the distribution map in the description¹³. The plants were sold to Andy as *Laelia superbians*, which they strongly resemble. When they started blooming, he realized that there were two distinct lines which were different from the typical *L. superbians*¹⁴. He kept the two lines separate from each other and from *L. superbians*, and began a program of seed propagation. His acquisitions predated the 2014 description of *L. halbingeriana* and *L. × oaxacana* by two decades. With the exception of some divisions and a small batch of seedlings recently sold by Cal-Orchid, Andy's Orchids has been, to my knowledge, the sole United States source of these plants.

¹² Pers. Comm. 11/18/2021

¹³ Ibid. p. 168

¹⁴ After carefully considering the distinguishing factors indicated in the description between *L. superbians*, *L. halbingeriana* and *L. × oaxacana*, I have concluded that both 'Puesta Del Sol' and 'Leucadia' are clearly not *L. superbians*.

The exhibitors and I have submitted the plant to SITF for verification of its identity as *L. × oaxacana*, as requested. If verified, the Pacific South judging center will then resubmit the plant to the original judging team for their consideration under this name.

Thank you for your consideration, and please let me know if you have any questions.

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