

***Lycaste* the Beautiful Sister of Helen of Troy**

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Lycaste have been a popular orchid since Victorian era. *Lycaste* (now *Sudamerlycaste*) *ciliata* was the first species discovered in 1798. *Lycaste skinneri* was described in 1843 and remains the most popular species. There are 35 species in five sections. For horticultural purposes, these can be sorted into two groups based on their growing requirements, Evergreen & Deciduous. *Lycaste* breeding and cultivation is in a state that parallels the 1970's phase of *Cattleya* hybridization. Hybrids are now into as many as 12 generations, the majority of hybrids are repeated backcrosses of *L. skinneri* back on to the complex hybrid.

General Cultural requirements:

- **Light:** Very bright shade to partial sun, about the same light as *Cattleya*, approx. 2000 to 4500 ftc. Under lights growers can compensate for lower light intensities by using 18 hour day & 6 hour night.
- **Air movement:** good air movement is essential, especially if leaves receive any direct sun, air movement keeps the thin leaves from sun burn. Use a small fan in the growing area, leave it on 24/7. The right amount is; there should be some movement of leaves at all times.
- **Temperature:** most species are intermediate growers, most will tolerate cool temps, though cool is not required, most species will tolerate summer heat with good air movement. For most at least 10 months of the year night temperatures should drop below 68 F. The ideal range at night would be between 50 and 65 F. A few warm nights are not an issue. Daytime temperatures can be 10 to 20 degrees warmer. Protect from direct sun when temperatures are above 95 F. To keep roots cool, place the pot with the *Lycaste* into an empty clay pot that is at least one inch larger in diameter than the pot the plant is in. The outer pot will stop the sun from heating up the potting mix and roots. The empty air space between the outer pot and the inner pot will insulate the inner pot from the heat of the sun.
- **Potting mix:** any water retentive mix with good air voids will work. Fir bark with Perlite is preferred by many. Use a fine seedling mix for pots less than 5 inches diameter. Use a medium bark mix for larger pots. Sift out the fines over a piece of window screen or 1/8th inch mesh. Discard anything that is finer than 1/8th inch. Many growers are using New Zealand long fiber sphagnum moss, either as the sole potting media, or as part of the mix. The large amount of water retained by the sphagnum is appreciated during the rapid expansion of new growths.
- **Repot in spring** when new growth is one to two inches tall. (about the height of the previous year's pseudobulb. Repotting out of season can cause problems, but if it is necessary, repot. Do not allow mix to get stale. If the *Lycaste* drops all its leaves right after repotting, don't panic, keep watering the plant. New growth will start, usually within 2 months, but it may take longer.
- **Water:** Keep moist all year round, do not dry out between waterings. If you keep the plant moist, water quality is not an issue. Never let the mix become bone dry between watering. When in active growth *Lycaste* want to be almost (but not quite) as wet as Phragmipedium. They have a high demand for water during active growth. This is the way to keep evergreen species like *L. skinneri* and all *Sudamerlycaste* (formerly *Ida*) species happy. Deciduous species will need a dry rest in LATE winter, usually beginning middle of January, through February and often into March. Don't start the dry rest too early. Deciduous species need time to mature in fall and early winter. The dry season coincides with the height of the tourist season for Gulf Coast Florida.
- **Fertilizer:** *Lycaste* are moderate feeders, dilute high nitrogen fertilizer all year round. My personal recommendation is the K-Lite modification of the MSU formula at ½ to 1 teaspoon per gallon, every 3rd time one waters. I personally dose my plants to between 75 and 125 ppm nitrogen K-Lite MSU with every watering, this is ¼ to ½ teaspoon per gallon. Do not use high phosphorous fertilizers at any time.

Lycaste are easy to grow, they develop into wonderful display specimen plants. All have very large thin leaves. As a general rule, the thin leaves do not last much more than one year, even on the evergreen species. If you have an evergreen species, such as *Lycaste skinneri* or its hybrids, and it loses all its leaves, don't dry it out completely. Check to see if there are problems you can identify. Insect infestations can cause leaf drop. Drying the plant out during the time of year that it should be growing actively will cause leaf drop. Take care of any obvious

problems and then keep the plant slightly moist with good air movement. New growth and new leaves should appear within a few months. Many text books will tell you that *Lycaste* require cool temperatures. I have personally had several plants of *Lycaste skinneri* survive more than 15 years of Chicago area summers, without air conditioning. I believe if you provide good air movement *Lycaste* will survive the summers experienced in the Midwest without any problems.

The following is a list of all the evergreen *Lycastes*. These species and the hybrids from them will appreciate the culture recommendations above.

Evergreen *Lycaste* Species:

Lycaste dowiana (Endres & Reichenbach) 1874 - Guatemala, Costa Rica, Nicaragua,

Lycaste leucantha (Klotzsch) 1850 - Costa Rica, Panama

Lycaste skinneri (Lindley) 1843 - Guatemala, Mexico, Honduras, El Salvador

Lycaste skinneri alba

Lycaste skinneri armeniaca

Lycaste skinneri from Ipala (syn *L. guatemalensis* ?)

Lycaste skinneri rosea

Lycaste powellii (Schlechter) 1922 - Panama

Lycaste schilleriana (Reichb. f.) 1855 - Panama, Peru, Colombia, Suriname

Lycaste virginalis (Scheidweiler) Linden 1888 (correct name is *skinneri*)

Lycaste virginalis alba (Scheidweiler) 1842 (correct name is *skinneri alba*)

Lycaste xytriphora (Linden & Reichenbach) 1872 - Ecuador, Colombia

Lycaste macrophylla represents a “super species”, a single widespread species with many geographic variants, where found it seems every valley has its own color form. Some authors treat this as a swarm of very closely related species. It is a geographically wide spread species, each of the subspecies listed below may be found listed in some references as a species in its own right, or by other authors variously sunk back to variety level or simply geographic races. All variants have big wide leaves, many flowers with wonderful fruity fragrances. Often used in hybrids to bring in a wonderful range of colors. It is in the ancestry of nearly all modern red & sunset colored *Lycaste* hybrids.

Lycaste macrophylla (Poepp. & Endl.) Lindley 1843 Centr./South America - Peru

Lycaste macrophylla subsp. *Desboisiana* (Cogniaux) Fowlie 1964 - Costa Rica; Panama

Lycaste macrophylla subsp. *desboisiana* f. *alba* (Cogniaux) Fowlie 1964 - Costa Rica

Lycaste macrophylla subsp. *filomenoi* (Schlechter) Fowlie 1964 - Peru

Lycaste macrophylla subsp. *macrophylla* (Lindley) Fowlie 1964 - Peru

Lycaste macrophylla subsp. *measuresiana* (Williams) Fowlie 1887 - Amazonas

Lycaste macrophylla subsp. *neglecta* (Schlechter) Fowlie - Bolivia

Lycaste macrophylla subsp. *orinocoensis* (Fowlie) 1964 - Colombia

Lycaste macrophylla subsp. *panamanensis* (Fowlie) 1964 - Panama

Lycaste macrophylla subsp. *plana* (Lindley) Fowlie 1964 - Costa Rica; Panama

Lycaste macrophylla subsp. *puntarenasensis* (Fowlie) 1964 - Costa Rica; Panama

Lycaste macrophylla subsp. *viridescens* (Oakeley) 1991 origin?

Lycaste macrophylla subsp. *xanthocheila* (Fowlie) 1964 - Costa Rica

Lycaste lasioglossa (Reichb. f.) 1872 - Guatemala - this is a distinct species in the same subgroup as *macrophylla*, lovely fuzzy yellow lip. This species is evergreen, retaining leaves year round, as does *macrophylla*, though some texts do list *lasioglossa* as deciduous, in my conditions it is definitely evergreen.

The Deciduous *Lycaste*

These species come from areas of Central and South America that experience seasonal wet and dry periods. As a “vague but true” generalization from Florida to Colombia along the Caribbean-Atlantic coast there is a dryer season starting in January, lasting through February, usually ending late March. There is often some rain, but no where near as much as there usually is the rest of the year. The Central American Pacific coast dry season timing is similar. For both areas some local regional exceptions exist that are beyond the scope of this article. The following species are considered deciduous:

Lycaste aromatica (Graham ex Hooker) Lindley 1843 - Mexico, Nicaragua, Guatemala

Lycaste bradeorum (Schlechter) 1923 - Honduras, Costa Rica, Nicaragua - (prefers warmer temperatures)

Lycaste campbellii (C. Schweinf.) 1949 Panama, Colombia (I-W temps – true miniature)

Lycaste cochleata (Lindley) 1850-51 - Mexico, Guatemala (I-W temps)

Lycaste consobrina (Reichb. f.) 1852 - Mexico

Lycaste crinita (Lindley) 1844 - Mexico

Lycaste cruenta (Lindley) Lindley 1843 - Mexico, Guatemala, El Salvador (really prefers intermediate to cool, not very warmth tolerant)

Lycaste deppei (Lodd.) Lindley 1843 - Mexico, Nicaragua, Guatemala

Lycaste deppei var. *praestans* (L. Linden) 1898

Lycaste deppei var. *punctatissima* (Reichb. f.) 1881 (population of *deppei* with gene introgression from *L. skinneri*, could be considered a natural hybrid)

Lycaste luminosa (Oakeley) 1991 - Costa Rica (?)

Lycaste macrobulbon (Hooker) Lindley 1846 - Colombia (I-W temps)

Lycaste brevispatha (Klotzsch) 1851 - Costa Rica, Nicaragua

Lycaste candida (Lindley) 1851 - Costa Rica, Nicaragua, Panama

Lycaste x micheliana (Cogniaux) 1900 = natural hybrid of *cochleata*

Lycaste saccata (A. Richard) 1848 - Mexico, Guatemala

Lycaste suaveolens (Summerhayes) 1931 - El Salvador

Lycaste tricolor (Klotzsch) 1852 - Costa Rica, Panama

Lycaste x mitchellii – natural hybrid possibly from *L. cochleata*

As a general rule the deciduous *Lycaste* tolerate warm temperatures better than *Lycaste skinneri*. Which means that in all but the hottest areas of the country these species should do fine. For ten months of the year grow these *Lycaste* as you would the Evergreen species as described above. For two months in the late winter give them a dry rest. The best time to start this rest is when all the leaves start turning brown. Stop watering. The mix will dry. The leaves will completely brown and fall off. This normally will happen beginning or middle of January. Large specimens in 4 inch pots or larger can simply be left bone dry until new growth is up out of the mix ½ inch or more in Spring. Small plants with small pseudobulbs might benefit being watered once a month or so to prevent excessive shriveling. Some plants may go dormant as early as late November; some won't naturally go dormant until early March. It is important to not force dormancy too soon. I have killed a few *Lycaste aromatica* by forcing dormancy in September. The new pseudobulbs had not matured, the seedlings did not survive. Fall in Wisconsin is not the same time of year as Fall in Costa Rica.

You may encounter the occasional plant that does not seem to want to go dormant. I have an *L. cochlearis* and an *L. deppei* var. *punctatissimum* that seldom drop their leaves. There is variation from individual plant to plant. One of my *L. cochlearis* drops its leaves on schedule, the other clone hangs on to its leaves. If they seem to keep growing, keep watering them. Let the plant tell you what it wants to do. If for some reason a deciduous *Lycaste* drops its leaves in mid-summer, likely it got too dry between watering or it has root trouble. Check the plant out, spray for pests if needed, repot and then keep the plant moist. It should start another growth right away. Don't dry out a deciduous *Lycaste* in the summer, even if the problem plant has no leaves. Always begin watering your deciduous *Lycaste* by the beginning of June. If it hasn't broken dormancy by then it should. The beginning of Hurricane Season in Florida is the reminder in the news that the rain has returned to the Caribbean. Again as above, the best time to repot is when new growths are 1 to 2 inches tall. For miniature species repot when the new growth is the height of the previous growth's pseudobulb. For *Lycaste campbellii* this will be about ½ inch.

The Sudamerlycaste (formerly *Ida*, and before *Ida*, they were called *Lycaste*)

Sudamerlycaste is the third group of *Lycaste* that are fairly widely grown. They used to be referred to as the *Fimbriata* section of *Lycaste*. Botanically, these are somewhat different from *Lycaste skinneri*. Eric Christiansen moved all the *Fimbriata* group into *Ida*, out of *Lycaste* a decade ago. Then after discovering a publication that preceded the description of *Ida*, moved them to *Sudamerlycaste* in 2008 & 2009. Most vendors still list them as *Lycaste*. Taxonomy is in flux, names are certain to change in the future.

Horticulturally the *Sudamerlycaste* are “Evergreen *Lycaste*”. They have a heavier leaf that seems to last 4 or 5 years instead of just one or two. They definitely want less sun than the *skinneri* type *Lycaste*. *Phalaenopsis* bright is adequate to bloom the *Sudamerlycaste* group

well. They do not like it as wet as *L. skinneri* does in active growth, and they definitely do not want to dry out for any length of time. Dry for a day or two is not a problem. In all other aspects treat these like *Lycaste skinneri*. The *Sudamerlycaste* generally prefer intermediate temps. A few are cool growers, a few are warm growers. Most have green and white flowers, many with strong night time fragrances. Some of them have, to be kind, industrial fragrances, some have very pleasant spice fragrances. This group hybridizes with the *Lycaste skinneri* group, the hybrids are interesting and becoming somewhat popular. One feature of the (*Sudamerlycaste* x *Lycaste*) hybrids is that the fairly sharp seasonality of the *Lycaste* bloom habit is broken. The hybrids tend to bloom off and on all year round.

Sudamerlycaste (Lycaste) andreettae (Dodson) 1982 - Ecuador, Colombia
Sudamerlycaste (Lycaste) barbifrons (Lindley) 1845 - Peru
Sudamerlycaste (Lycaste) barringtoniae (J.E. Smith) Lindley 1793 - Jamaica
Sudamerlycaste (Lycaste) barringtoniae var. *grandiflora* (Hooker) 1868
Sudamerlycaste (Lycaste) ciliata (Ruiz & Pavon) Lindley 1798 - Bolivia, Colombia, Ecuador, Peru
Sudamerlycaste (Lycaste) ciliata rossyi (Hoehne) Fowlie 1937 - Brazil
Sudamerlycaste (Lycaste) cobbiana (Hort. ex Williams/Reichb. f.) 1885 - Bolivia, Ecuador, Peru
Sudamerlycaste (Lycaste) costata (Hooker) 1868 - Peru & N. Colombia
Sudamerlycaste (Lycaste) denningiana (Reichb. f.) 1876 - Peru, Ecuador
Sudamerlycaste (Lycaste) dyeriana (Sander ex Rolfe) 1895 - Peru
Sudamerlycaste (Lycaste) fimbriata (Poepp.& Endl.) Cogniaux 1898 - Ecuador, Peru
Sudamerlycaste (Lycaste) fimbriata var. *peruviana* (Rolfe) C. Schweinf. 1944 = *Ida (Lycaste) peruviana*
Sudamerlycaste (Lycaste) fowliei (Oakeley) 1994 (*portilliae* may be a later synonym) Latin America
Sudamerlycaste (Lycaste) fragrans (Oakeley) 1994 - Ecuador
Sudamerlycaste (Lycaste) fulvescens (Hooker) 1845 - Colombia
Sudamerlycaste (Lycaste) gigantea (Lindley) 1843 - Peru, Ecuador, Colombia
Sudamerlycaste (Lycaste) grande (Fowlie ex Oakeley) 1970 - Venezuela, Ecuador, Peru, Colombia
Sudamerlycaste (Lycaste) hirtzii (Dodson) 1982 - Ecuador, Colombia
Sudamerlycaste (Lycaste) jarae (Bennett & Christenson) 1996 - Peru
Sudamerlycaste (Lycaste) lata (non Rolfe) Dodson & Bennett 1989
Sudamerlycaste (Lycaste) linguella (Reichb. f.) 1871 - Ecuador
Sudamerlycaste (Lycaste) locusta (Reichb. f.) 1879 - Peru
Sudamerlycaste (Lycaste) longiscapa (Masters) 1928 - Ecuador, Peru
Sudamerlycaste (Lycaste) mathiasae (Kennedy) 1978 - Peru
Sudamerlycaste (Lycaste) mezae (Bennett & Oakeley) ? - new species
Sudamerlycaste (Lycaste) nana (Oakeley) 1994 - Latin America
Sudamerlycaste (Lycaste) peruviana (Rolfe) 1910 - Peru
Sudamerlycaste (Lycaste) reichenbachia (Gireoud ex Reichb. f.) 1856 - Peru
Sudamerlycaste (Lycaste) trifoliata (Lehmann ex Masters) 1895 - Peru

Most *Sudamerlycaste* species become rather large plants. *Sudamerlycaste denningiana* matures out at a size requiring a laundry basket for a pot. However there are some charming compact species. Smallest are *Sudamerlycaste fowliei* and *portilliae*. *Sudamerlycaste linguella* is quite compact also. *Sudamerlycaste reichenbachia* & *nana* are medium size plants which will start blooming in 3 or 4 inch pots. Also my favorite *Sudamerlycaste andreettae*, is a medium size plant with copper colored flowers that have a hinged lip that moves in the slightest breeze.

The genus **Anguloa** (Ruiz & Pavon) 1794 – these are the tulip orchids. There are ten species that are closely related to *Lycaste*. Culture for the *Anguloa* is identical as that for *Lycaste skinneri*. *Anguloa* species do like temperatures on the cooler side of intermediate, though they can be grown well in intermediate temperatures. *Anguloa* are often used in hybrids with *Lycaste*, creating the hybrid genus *Angulocaste*. This genus and the wonderful *Angulocaste* hybrids are worthy of their own lecture, a project the author will take on at a future date.

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