

Cymbidium Chatter



Cym. Bellissimo 'Orange & Lemon'

Issue 35 (Vol. 3 No. 1): February 2022

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Latest News

Welcome to the first issue for 2022. The year is off to a rough start, with the sad news of Julian Coker's passing on the 24th of January. Julian and his wife Frances operated Atlantis Orchids for over forty years until his declining health forced its closure in 2018. He was a founding member of the COSV, as well as the Patron of OSCOV and an Emeritus Judge on the OSCOV Judging Panel. In 2018 he was awarded an [Award of Honour by the Australian Orchid Foundation](#) in recognition of his contributions to the orchid community, followed by a [John Pascoe Gold Medal Award](#) in 2021. Many of his articles can be found on the [OSCOV website](#). Julian and his son Michael were also featured on Gardening Australia in 2018: <https://www.abc.net.au/gardening/factsheets/my-garden-path/9525016>

Julian loved his orchids and would often name some of his best selections after family and friends, such as Kirby Lesh 'Frances' or Sarah Jean 'Helen'. He will be missed by many and our condolences go to his family and friends.

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Cym. Leopard-Lady 'Mary Smith'

I was fortunate enough to have met and conversed with Julian over the past few years, as well as to have acquired just a small number of plants from his considerable collection. A few of these shown here.



Cym. Nicky 'Kuring-gai'



Cym. Lowgrinum

Plant Profile: *Cym. Edward Marshall 'Mali'*

Cymbidium Edward Marshall was registered in 1925 as Albatross X Doris, making this grex 97 years old. It is composed of just four species – *insigne* (37.5%), *hookerianum* (25%), *tracyanum* (25%) and *eburneum* (12.5%). To the best of my knowledge only one named clone is still in circulation in Australia – 'Mali'. Julian Coker of Atlantis Orchids recounted its story to me when I bought a piece of the plant from him a few years ago. A lady had brought in a large plant of Edward Marshall and asked for assistance dividing it, after which she gave him a piece of the plant. As it had no clonal/variety name, Julian suggested naming it after her. Since then, multiple divisions have been distributed around the country and still appear on eBay on a regular basis.



Cym. Edward Marshall 'Mali'



Cym. Gottianum (4n example courtesy of Andy Easton) and *Cym. hookerianum* make *Cym. Albatross*, one of the parents of *Cym. Edward Marshall*.



EM 'Mali' is still occasionally used in hybridising, as both Springfield Orchids and Royale Orchids have used it and it can produce some wild spotting when paired appropriately (e.g. the unregistered Edward Marshall X Alnwick Castle). From my own experience, it is fertile both as a pod and pollen parent. The plant grows well and is reasonably compact considering the size of the flowers (which are on the upper end of the small standard range). It produces high-arching spikes of up to ten scented flowers which last around two months.

A typical *Cym. Doris*, the other parent of Edward Marshall.



An Interview with Jim Frame of Surf Coast Orchids

Editor: *It is my hope to feature an interview with a grower, enthusiast, hybridiser, or nursery operator in each issue. For this issue, Jim Frame has kindly agreed to an interview.*

Having bought our first Cymbidium in 1982, my wife Jill and I have been growing and collecting for nearly 40 years. We have over 3000 plants in our collection and, like most enthusiasts, we are always trying to find the ultimate prize-winning orchid.

Our collection consists of some of the best standard mericlones available and the latest standard seedlings crosses with genetic show bench potential, from Australia's top hybridisers. Surf Coast Orchids is located on the Great Ocean Road facing the Southern Ocean, where our Mediterranean climate provides excellent growing conditions for Cymbidium orchids.

Editor: *How did you become interested in growing Cymbidiums and how long have you been growing them for?*

I caught the cymbid bug from my father who grew orchids in North-Eastern Victoria. My father collected Cattleyas, Vandas, Miltonias, Dendrobiums, Phalaenopsis, Slippers and of course Cymbids. As a teenager it was my pocket money job to water and fertilise them. The cymbids were the easiest to grow, so I renewed my interest when moving to Richmond in 1982, where 100 plants were grown in a shade house on the roof of our commercial building. This continued throughout my commercial textile career until we bought a farm in 2001, where they have been grown since.



Seedling 218134 Khan Fury 'Nerolie' x Kuranulla 'Maestro'

Editor: *What groups or types of Cymbidiums are your favourite and what do you like about them in particular?*

Our favourite cymbids are large, cupped standards, preferably arching. As a result, we don't grow with yo-yo's, preferring instead to let the plant flower according to its natural habit.

The best thing about cymbids is their long flowering period – often 4 weeks on the plant and then 4 weeks in a vase, although we have had some varieties last twice as long. All saleable size plants are grown in pine bark with undyed stakes to maintain our sustainable, natural approach to growing cymbids.

Editor: *What is the climate like where you live? Have you had to create any special microclimates to grow your preferred Cyms?*

As mentioned earlier, we have a Mediterranean climate, which is ideal for growing cymbids. They are grown in tunnel houses under 50% shade cloth in full sun, with the exception of smaller plants that are grown under 75% shade cloth, all with automatic overhead watering.



Editor: *What challenges have you encountered whilst growing your Cyms and how did you overcome them?*

Discovering viruses was our biggest surprise, which only happened when we started to expand our collection by purchasing larger plants from commercial growers. These days we only grow from flask and regularly test any suspect plants for viruses, which has all but eliminated them.

To minimize fungal infection, we use Mancozeb twice a year and spray regular white oil just before the buds leave the sheath, which makes the leaves shiny and healthy and means we don't have to clean them for sale.

We also have a secret weapon for aphids – the frogs hop across to the shade houses from the adjacent water supply dam, which is covered in water lilies to minimize evaporation while creating an excellent microclimate. The water is high in nutrients that the cymbids seem to thrive on.



Lily Pond Water Storage

Editor: *What has been the easiest and the most challenging Cymbidiums for you to grow?*

Some of the new hybrids have presented a challenge at the flask to 50mm tube stage, but we put this down to getting our watering right, as they are grown in 10mm coir and No. 3 Perlite. They are then transitioned through 100mm and 150mm pots with 20mm pine bark added on their way to 200mm pots in 100% pine bark for sale in our local Farmers Markets.

Seedlings are by far the easiest to grow; you never know what you are going to get, which for us is the most appealing thing about growing cymbids. Seeing a cymbid flower for the first time, as it slowly opens over a couple of days (I call it orchid foreplay), is one of the most rewarding experiences.



Surf Coast Orchids stall at Torquay Farmers' Market

Editor: *What prompted you to consider making your own hybrids?*

To date we haven't had time to try hybridising, but we intend to. Our dream is to create a "black" standard cymbid and one the colour of WA's vivid blue wildflower *Lechenaultia*.

Editor: *Is there anything you'd do differently if you were starting out in the hobby today, but knowing what you know now? Alternatively, if you were giving advice to a newcomer just starting out in the hobby, what key things would you want them to know?*

Starting with seedling flasks would have saved 7 years, but when you start it's hard to know where you want to be in 7 years. All the trials along the way, with advice from growers, club members and fellow hobbyists, make the journey all the more enjoyable.

If you are just starting out, join an orchid club as the members will give you all the tips you need to make growing cymbids a lifelong stress-free hobby.

Editor: *Just for fun, what's the oddest or most interesting piece of Cymbidium-related trivia you've come across?*

String of Pearls, first hybridised in 1949 in the UK for the Queen, was the second cymbid we bought and still remains one of our favourites. Unfortunately, it was lost to a virus, so if anyone has this variety, please let me know.

I would like to take this opportunity to thank the OSCOV Members for their comradery, in particular Glenda Coutts who helped with our first orchid show and Colin Gillespie, who provided invaluable info that has enabled me to turn a part time hobby into a successful small business.

Dream in green, with explosions of colour.

Jim Frame, OSCOV Member

<https://www.surfcoastorchids.com.au/>



Cym. String of Pearls

TeePee's Treasures



Above are four selections of *Cym. Regal Princess*; clockwise from top left they are 'Cycleman', 'Eight', 'Pink Ice' HCC and 'GR8'. Below are two selections of *Cym. Amber Splash* - 'Smile' (left) and 'Tee Pee' (right).



More photos from Terry Poulton's 2021 flowering season. This time I have selected some sibling groups from the photos Terry kindly provided to illustrate the differences within a grex.

Regal Princess = Kirby Lesh X Regal Flames. For at 'GR8' at least, the specific parentage was (Kirby Lesh 'Pink Ice' X Regal Flames 'CG'). I also suspect the clonal name for 'Cycleman' is supposed to be 'Cyclamen', but that is what was printed on the label...

Amber Splash = Foxfire Amber 'Dural' X Roger Roger 'Sims'



Two selections of the unregistered hybrid (Fair Delight 'Polar Bear' X Spring Surf 'Blushing').



Three selections of the unregistered hybrid (Green Elation 'Scion' X Kimberley Valley 'Malibu').

Albinism in Cymbidiums

Some readers may have noticed that in Issue 33's article on flower patterns, albas (aka pure colours) were conspicuously absent. Rather than just write a short section this subject, I wanted to put together a longer piece discussing the complexities involved in this particular group.

Firstly, what is albinism when referring to Cymbidiums? Most readers are no doubt familiar with albinism in humans (an inability to produce melanin) and variegated plants, where there is a reduction in chlorophyll production. In the case of orchids, though, a genetic alba is incapable of producing the anthocyanin pigments that appear red, orange, brown, pink, or purple. This results in flowers that are white, yellow, green or a combination thereof.

Historically, the terms for albinism have been regularly confused and a clear, concise descriptor is still lacking. The Latin word alba (or album, in the case of the Cymbidium genus), means "white" and so has been applied to many plants that are not genetic albas (i.e., they can produce the anthocyanin pigments but typically do so at a reduced intensity to the regular colour form). This is especially the case for the Cattleya Alliance, where plants are regularly labelled "semi-alba" or similar. Then there is the term "concolor" (Latin for "same colour throughout") which has ended up being applied to Cyms that do not exhibit pigmented lip markings.



Cym. Tiger Tail – this can flower with a concolor lip (clean white) or with the occasional red spot, depending on environmental conditions.

The result of this confusion is that several Cymbidium species have confusingly labelled colour forms:

- *Cym. floribundum* var. *album* is not an alba but does have much-reduced anthocyanin expression (faint spots are visible on the lip).
- *Cym. insigne* var. *album* FCC/RHS is a near-white form of the species but isn't an alba; to confuse matters more, there is a true genetic alba!

Albinism is also a recessive trait and there are at least two alba groups within the Cymbidium genus. To explain how this all works, I'm going to briefly cover some concepts from genetics.

- A **chromosome** is a long DNA molecule that contains part of the genetic information for a plant or animal. Cymbidiums, as mentioned in Issue 31, are diploid ($2n$) in nature and have a base number $n = 20$. This gives them 40 chromosomes in total, 20 from each parent. Fortunately, the chromosome count is consistent across the genus, something which is not the case in other genera (such as *Paphiopedilum*).
- **Homologous chromosomes** are chromosomes that have the same genes and are the same size and shape, i.e. they pair nicely together when you breed two different parents. **Non-homologous** chromosomes, however, differ and do not match up properly in hybrids (this is important because *Cym. floribundum* has chromosomes that are non-homologous with the rest of the genus).

- A **locus** (plural **loci**) is the location of a specific gene on the chromosome. These often correspond to different traits.
- An **allele** is a specific version of a gene. For example, humans have multiple alleles for eye colour, skin tone and many other traits.
- **Genotype** refers to the set of genes an organism carries, whereas **phenotype** refers to the observable set of traits. The distinction becomes important when trying to plan alba breeding, as a plant may have an alba-carrying genotype but exhibit a regular colour phenotype.



The problem child of the genus – Cym. floribundum var. album, which not only often introduces fertility problems in its progeny, but also messes with alba inheritance.

The Cymbidium genus appears to have at least two loci for the alba trait and potentially three alleles at the most common alba locus – normal anthocyanin expression, reduced anthocyanin expression and no anthocyanin expression. The reduced anthocyanin allele shows up in some species such as *Cymbidium eburneum* and Greig Russell covers it in more detail in his article in the CSA Journal, vol. 3 (1), pp. 6-11, Jan-Feb 2003, or online at <http://www.geocities.ws/pennypoint9/albescent.html>.

Below is a table noting which species fall into the different alba groups as well as the more well-known species that lack true alba forms.

Main Alba Group (I)	Finlaysonianum Group (II)	Ungrouped (Not Part of the Main Group)	No Known Alba Form
<i>Cym. canaliculatum</i> * <i>Cym. chloranthum</i> <i>Cym. ensifolium</i> <i>Cym. erythraeum</i> var. <i>flavum</i> <i>Cym. erythraeum</i> var. <i>erythraeum</i> <i>Cym. erythrostylum</i> * <i>Cym. goeringii</i> <i>Cym. insigne</i> <i>Cym. lowianum</i> <i>Cym. madidum</i> <i>Cym. sinense</i> <i>Cym. suave</i> * <i>Cym. tracyanum</i> * These are presumed to be in the main group.	<i>Cym. aloifolium</i> <i>Cym. finlaysonianum</i>	<i>Cym. dayanum</i> <i>Cym. kanran</i> These species are presumed to be in Group II, but this has yet to be confirmed.	<i>Cym. changningense</i> <i>Cym. devonianum</i> <i>Cym. eburneum</i> ** <i>Cym. floribundum</i> ** <i>Cym. hookerianum</i> <i>Cym. iansonii</i> <i>Cym. iridioides</i> <i>Cym. mastersii</i> ** <i>Cym. parishii</i> <i>Cym. sanderae</i> <i>Cym. seidenfadenii</i> <i>Cym. tigrinum</i> <i>Cym. wenshanense</i> ** These species have an albinistic form with reduced anthocyanin expression.

Cym. finlaysonianum was the first species (that I am aware of) to be identified as separate to the main alba group – Andy Easton reported no albas in any of the crosses involving it. *Cym. dayanum*

and *Cym. kanran* followed, with no albas produced from crosses with the main group either. In 2019, the alba form of Hanalei (*aloifolium* X *finlaysonianum*) was flowered by Duy Nguyen of Sorella Orchids and featured on their Facebook page, demonstrating that these two species are in the same group.

The existence of multiple loci for the alba allele complicates the matter of breeding for albas in certain lines. As previously mentioned, albinism is recessive and mixing alba groups can make it difficult to determine which group(s) a plant belongs to.

For those interested in breeding albas, Punnett Squares (named for their inventor, Reginald Punnett) are a useful tool and there are several websites that allow you to play around with them. They are a useful way of easily visualising the rules of inheritance first identified by Gregor Mendel.

Let us use the letter "A" to represent a particular locus with "A" representing normal anthocyanin production and "a" representing the recessive alba trait. For the typical diploid Cymbidium, this gives us four possible combinations of these alleles:

1. AA = regular colour genotype, regular colour phenotype
2. Aa = alba-carrying genotype, regular colour phenotype
3. aA = alba-carrying genotype, regular colour phenotype
4. aa = alba genotype, alba phenotype

We can use Punnett Squares to visualise what happens if we cross two different plants **A** and **B** (again, we will use uppercase for the regular colour allele and lowercase for the recessive alba allele). We use a 3x3 grid and put the alleles for one parent across the top and the other down the side:

	A	a
B	AB	aB
b	Ab	ab

As you can see, the cross of two alba carriers **Aa** and **Bb** produces four possible outcomes. This gives us useful information – statistically, 25% of the offspring will be the regular genotype, 50% will be alba carriers and 25% will be the alba genotype **ab**. So only 1 in 4 plants out of the cross of two diploid alba carriers will be albas.

We can extend this process to tetraploid (4n) plants, which are common in modern breeding. Tetraploid Cyms breed as allotetraploids, which mean that the chromosomes are always grouped in pairs and there are only 16 possible combinations (not the 36 that would occur in autotetraploids where any two of the four chromosomes could be inherited).

Let us consider the cross of two 4n alba carriers **AaAa** and **BbBb**, which you could produce either from the conversion of 2n to 4n or from crossing a 4n alba genotype (aaaa) with an 4n regular genotype (AAAA).

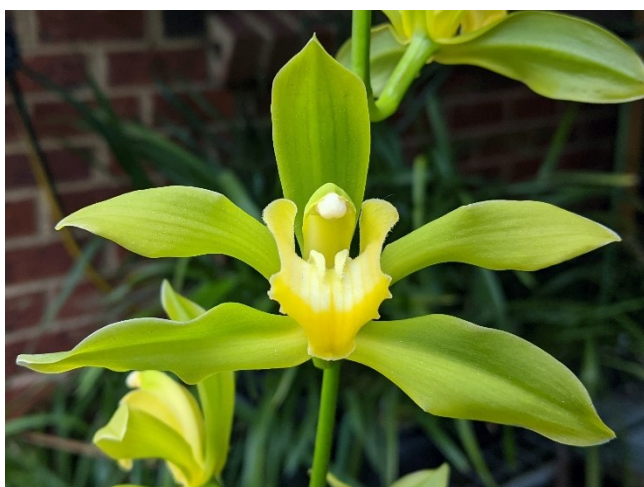


Cym. dayanum f. *album* is not part of the main alba group.

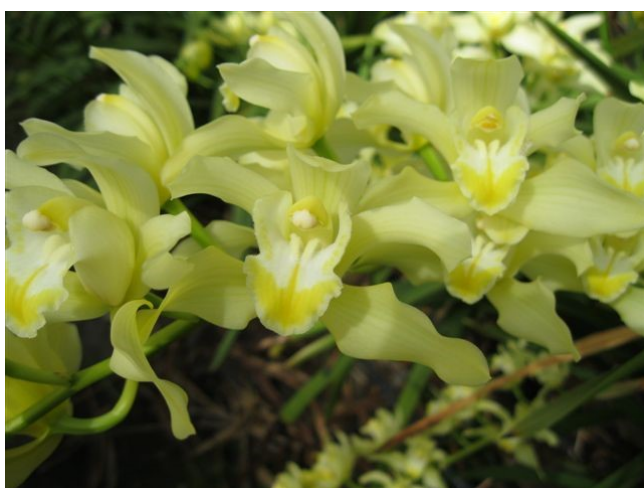
	AA	Aa	aA	aa
BB	AABB	AaBB	aABB	aaBB
Bb	AABb	AaBb	aABb	aaBb
bB	AAbB	AabB	aAbB	aabB
bb	AAbb	Aabb	aAbb	aabb



Note that we only end up with 1 in 16 plants that are the alba genotype and phenotype! Because of the way the chromosomes are paired, only 50% will be useful alba carriers. The other two combinations have the alba alleles locked away such that they will never be passed onto their progeny without being paired with a non-alba allele (and hence never produce any alba offspring).



Albas are often weaker than their regularly coloured counterparts, especially those derived from *Cym. insigne*. As history would have it, most modern alba hybrids today trace back to just two species – *Cym. insigne* and *Cym. lowianum*. Unfortunately, this has tended to result in inbreeding and a focus on the *insigne*-derived albas (for the upright spikes and white base colour). To avoid weakening alba lines, some breeders will outcross one alba line to vigorous regular lines to produce alba carriers, then cross these with a second alba or alba-carrying line to produce a mix of carriers and albas. Andy Easton even remade Pauwelsii as alba several decades ago to use its hardiness and longevity in his alba lines. With all this in mind, one can start to see why, especially at the tetraploid level, it can take several generations and growing a lot of seedlings to maturity to find a quality 4n alba.



One of the key advantages for albas – and the main reason why they appeal to the cut flower industry – is that the lack of anthocyanin means that the lip does not discolour or turn pink if the anther cap is disturbed. White albas are particularly valuable from a commercial standpoint, and it is this type that Bert Ruiter interested in, as they sell well both as pot plant and cut flower.

The alba forms of Cym. insigne, Cym. lowianum (aka var. concolor) and the primary hybrid Pauwelsii 2n (photo courtesy of Andy Easton).

Bert's alba lines started with a 4n mutation of Falling Passion (Portuguese Passion X Golden Cascade) that he found amongst a bench of cut-flower plants (note that one of Golden Cascade's parents is *Cym. lowianum*). This selection of Falling Passion was used by Andy to create Bone China (X Minuet 'NH') and by Bert to create White Dream (which used an *insigne* made by Andy by crossing the alba and album forms). Bert is now working to extend the alba flowering season with his Isabel Sander line as well as an alba-carrying *tigrinum* line.



Falling Passion 4n compared with the 2n form. Photo courtesy of Bert Ruiter.



Left: Cym. insigne (album x alba); Right: Cym. White Dream. Photos courtesy of Bert Ruiter.

Andy Easton has developed a number of alba lines, many based on his remake of Pauwelsii. Belgian Therapy (Beyond Therapy X Pauwelsii 'NH') has been made available commercially for the pot plant market as well as used in at least four other lines: Lockerbie Memories (X Minuet), Viscount Nigel (X Joseph Schmidt), Cara Mia (X Magic Passion) and Baby Blue (X Atlantes Dream). All of these (excluding the cross with Minuet) were with alba carriers and would have produced a percentage of alba offspring. Interesting, Andy noted that the alba percentage of Viscount Nigel seemed to be much weaker (possibly due to his conditions) and meant that he selected out most, if not all of them! *Cym.*

canaliculatum is the suspected culprit here and so may be more challenging to get albinistic hybrids from (despite existing as an alba in nature).



Cym. Bone China 'Andijk', courtesy of Bert Ruiter.



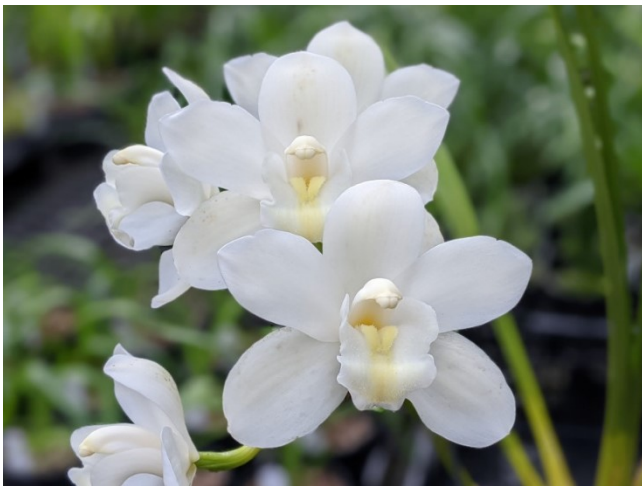
Cym. Belgian Therapy 'Easter', courtesy of Andy Easton.



"*Novoflor Citronelle*", courtesy of Andy Easton.

Andy has also developed commercial alba lines for the cut flower market, such as "Novoflor Citronelle" (a tradename alba Cym). He notes that "interestingly, [it is] unrelated to nearly all of our other alba lines. The inflorescences are self-erect carrying in excess of 15 blooms. It cuts and keeps very well."

Australia has also had its share of alba breeding. Many of the "Sleeping" lines (alba and alba-carrying hybrids) originated in Australia, with the well-known Cym. Sleeping Beauty registered in 1970 by Alvin Bryant. Some of the Sleeping Beauty selections have been converted to 4n, such as 'Sarah Jean' (a white alba which was used in the original Cym. Sarah Jean cross). Sleeping Beauty 'Vivid' (a green alba diploid) was acquired by Andy Easton and used in some of his alba lines. Sleeping Beauty 'Golden Queen' (a yellow alba diploid) was used by Julian Coker to remake Cym. Sarah Jean, from which the red 'Helen' originated.



Cym. Sleeping Beauty 'Sarah Jean' 4n.
Photo courtesy of Nado Lenkic.



Cym. Sleeping Beauty 'Golden Queen' 2n. Unfortunately, I lost this plant to rot the year after this photo.

Valley Orchids used Sleeping Beauty extensively, registering 20 different hybrids (most with R. Vandyke as hybridiser). Graham Morris notes that the Sleeping Dream (registered in 1973) selection 'Tetragold' was one of the standout selections from the grex, being marketed around the globe and used in many hybrids. Andy Easton was similarly prolific, however, with 16 hybrids to his name (one being the aforementioned Beyond Therapy).



Cym. Sleeping Ransom, a Valley Orchids backcross of Sleeping Dream to Sleeping Beauty.



Cym. Esmeralda 2n, often confused with Cym. lowianum var. concolor. Photo courtesy of Nado Lenkic.

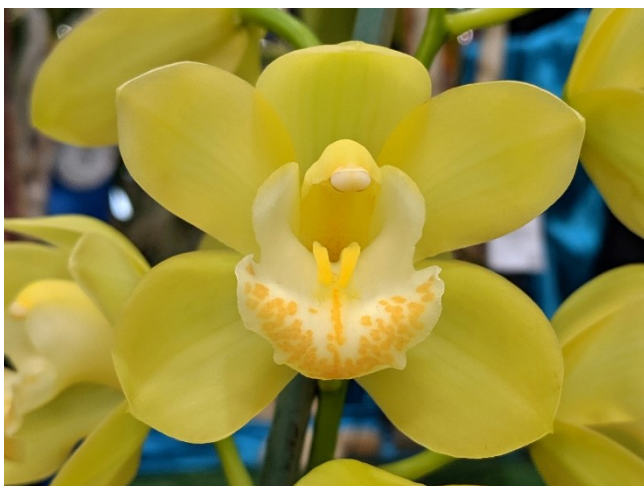
Another important alba parent is *Cym. Esmeralda* (*lowianum* X *Venus*), registered in 1937 by McBean's. Despite its age, it has been used for 80 years in hybridising! The *lowianum* parent gave it hardiness and longevity not seen in many other albas. The grex has been converted to 4n and both forms still exist, although are no longer common. Nado Lenkic, of Springfield Orchids, most recently used it to create *Cym. Lowmeralda* (*lowianum* X *Esmeralda*) and *Charismatic* (*Lowmeralda* X *Esmeralda*), two very elegant *lowianum*-style hybrids.



An alba selection of Cym. Charismatic.
Photo courtesy of Nado Lenkic.



Cym. Dolly 'Featherhill' 4n. Photo courtesy of Andy Easton.



Cym. One Tree Hill 'John's Quest'.



Cym. Portuguese Passion 'Atlantis'.
Photo courtesy of Nado Lenkic.

A number of alba-carrying grexes with Esmeralda also exist – recently Nado Lenkic made Uncle Bob (X *tracyanum*, registered in 2019 in memory of a friend) with it, whilst many Australian growers are probably familiar with Evonne (X *suave*, registered in 1973 and seemingly sterile, given the absence of any progeny). *Cym. Dag* (X *floribundum*), despite the large number of offspring, unfortunately suffers the usual *floribundum* influence on alba genetics.

Amazingly, despite having *Cym. floribundum* as a parent, Dolly 'Featherhill' is alba carrier whose progeny follow the normal Mendelian ratios. Over 80 hybrids are registered with Dolly as a parent, of which Andy Easton hybridised most. It has been a valuable parent for miniatures and intermediates. *Cym. One Tree Hill* (Dolly 'Featherhill' X Coraki 'Margaret') is one of the more well-known Dolly hybrids and number of alba selections exist. They are still seen at shows and exhibitions in Australia.

Portuguese Passion, which has Sleeping Beauty as a grandparent, is another standard alba still extant in Australia. Like many alba hybrids in Australia, though, it is not a fast grower. The original cross was reported to have produced 100% diploid albas and there have been tetraploid conversions of some selections, including 'Atlantis' (one of the late Julian Coker's selections). 'Pure Ice' is one of the selections still in existence and is reported to have larger blooms than 'Atlantis' and is a reliable bloomer. To date, there are 43 registered hybrids from PP, with the previously mentioned Falling Passion (X Golden Cascade) and Magic Passion (X Tethys) being the main two lines descending from it.

Many of the other alba lines in Australia descend from Wondabah's Wyanga (reg. 1964) and Melinga (reg. 1978). The cross of these two, Pure Jungle, is still seen today, but was not widely used in hybridising. Some of Bert Ruiter's work with Melinga was discussed in Issue #29, but here it is its descendants via Culpaulin that are most relevant. Culpaulin was used by quite a few different Australian hybridisers and produced over 50 registered hybrids, including the well-known Margaret Thatcher (reg. 1991) and Valley Legend (reg. 1992). Neither have produced any alba lines of significance, although both have 20 registered offspring to date.

Wyanga's influence was predominantly through crosses with Sleeping Beauty or its offspring, such as Sleeping Nymph (heavily used by Foxfire Orchids and Valley Orchids), Eastern Star (mostly used by Bailey's Orchids) or Pure Lamb (used by Valley Orchids and Bailey's Orchids). One of the only alba lines not to involve Sleeping Beauty was Pure Ice, registered in 1983 by Valley Orchids. Pure Ice offspring are regularly seen today, including Dural Snow (2004), Ice Nymph (2008), Kulnura Snow (2008) and Loch Watten (2007).

Kulnura Snow was taken forward by Barrita Orchids and there are nine registrations to date (most involving crosses to Sleeping Beauty lines). However, one of the most recent of these is Barrita Trend (Little Rod X Kulnura Snow), which does not include any Sleeping Beauty ancestry and has produced small standard albas.

In closing, I hope that this article has been useful to the hobbyist or hybridiser looking to work with alba Cyms. The three key takeaways I would like to leave the reader with are these:

- 1) Look for albas that have a diverse genetic background (or, conversely, avoid inbred lines that cross back upon themselves). It's a good idea to research any albas you are planning to buy and find out how well they perform before investing in them.
- 2) Aim to have a significant proportion of *lowianum* in the genetic makeup to aid in hardiness, longevity and cutting ability.
- 3) Be aware of *Cym. floribundum*'s influence on alba inheritance! If your focus is miniatures, look for known alba breeders (such as Dolly 'Featherhill').



Cym. Kulnura Snow 'Tee Pee'.

Acknowledgements and Contributions

I hope you have enjoyed this issue. If you have any feedback or would like to contribute (whether it be just one or two photos, an idea for an article, or to volunteer for an interview), please get in touch! I can be reached at jwhite88@gmail.com.

Previous issues are available at <https://www.cosv.com.au/publications-and-resources>. All material is copyright © the original owners and used with permission. Thanks to all those who have contributed to this issue, including Andy Easton, Jim Frame, Nado Lenkic, Terry Poulton and Bert Ruiter.

The next issue is planned for April 2022.