

What sparked your interest in orchids?

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Introduction – sowing the seed of interest

This may sound incredible! Looking back, our interest in orchids began a long time ago, in our childhood. It was inspired by the teachings of Confucius, the greatest philosopher and teacher of China of all time. Growing up in Hong Kong, we all studied the teachings of Confucius. Central to his teachings is the striving to be persons of virtue. According to Confucius, orchid emboldens many virtues that we should learn and practise in life. Even today, we still remember the story of Confucius once travelled with his students in a remote part of China. They were all feeling depressed for once again failing to convince the kings/warlords of the day to adopt his philosophy of how to govern a country. After sensing the fragrance of orchids growing far away in the valleys in the neighbourhood, Confucius told his students that they should learn from the orchid: striving for excellence, to be persons of virtue and not be bothered even if not noticed by other people. Confucius even considered himself to be an orchid compared to his unworthy contemporaries. So, from that age on, we know that of all the flowers in this world, orchids are somehow unique and have a very special place in the plant kingdom (and in Chinese culture). The seed of interest in orchids was then sown! The irony is that we had not seen an orchid in the wild until we left Hong Kong.

First encounter

We moved to Australia to further our education, and eventually made the decision to stay. For the next 30 years, we were both preoccupied with our careers and raising a family. Even though we are both interested in plants and enjoy gardening, growing orchid as a hobby was far off our mind at the time. We had this preconceived idea that orchids are difficult to grow, something best left to the 'experts.' However, this did not stop our first contact with orchids.

We lived fairly close to the long-closed Wondabah Orchids Nursery which we visited from time to time to enjoy the orchids on display (mainly cymbidiums, but also some others). Occasionally, we could not resist coming away with a couple of plants from the sales corner. We did not have a shade house at that time and so just put them around the garden under trees. Some quickly perished. Quite a few hung on but did not appear to do much until we had our first family puppy. That puppy was obsessed with the pots and every day when we arrived home, we would find the pots had all been shaken up, with the orchids half-hanging out and lying around the garden. As a last attempt to salvage the orchids, we transferred the remaining plants to the front garden under a couple of camellia trees. They were there out of danger from the dog but with the exception of the very occasional watering, were forgotten for many years. Only two plants survived, a *Paphiopedilum insigne* and a *Miltonia spectabilis* which we rediscovered during a front garden clean up. We brought them back to the backyard and nursed them back to health.

Around this time, approaching retirement, we joined a local orchid society. We enjoyed going to meetings, seeing many species and hybrids of different genera. To our surprise, the *Paph. insigne* won the novice championship of the first show that we participated! Who says orchids are difficult to grow? That was when we developed a budding interest in orchids and in growing them.

Exposure to Australian native orchids

What really sparked our interest in orchids happened only when we first encountered the world of Australian native orchids. At the time (1970s), when people in Sydney mentioned orchids, they referred to cymbidium because that was the orchid on sale in ordinary nurseries and commonly found growing in suburban gardens. A lady at work with Sau-wan, Chanh-Op, started taking pots of pretty flowers to work and placed them in the reception area for other colleagues to enjoy. They immediately caught the eyes of Sau-wan. The flowering plants were largely a mixture of dendrobium hybrids, viz. *Den. Delicatum* and *Den. Bardo Rose*. They were colourful, dainty and very floriferous, and vastly different from the orchids we had seen before. Sau-wan was surprised to find out that they were orchids. In fact, they were Australian native orchids, something she had never seen before. Chanh-Op was already a member of the Australasian Native Orchid Society (ANOS Sydney), which we soon became members of in 2010.

At that time, there were many very experienced native orchid growers in the club who were very knowledgeable and generous in sharing their knowledge with novices like us. We learnt a lot during monthly meetings, monthly benching, shows and excursions. We soon discovered that many Australian native orchids are unique even amongst orchids. For example, we learnt that many of them cannot be grown in culture and so can be admired only in the field. It was at those field excursions when we first encountered orchids in their natural habitats. With the desire to learn more about native orchids, we soon joined the ANOS Judges training course and eventually became fully qualified ANOS judges.

We soon realised the multifaceted activities associated with native orchids. We managed to integrate our newly acquired orchid pursuits with our ongoing activities and interests of gardening, bush walking, photography and travelling. These orchid pursuits added considerable depth to our previous hobbies. Furthermore, they provided unexpected fodder for our inquisitive minds. From then on, whenever we go bush walking, we would also be looking for orchids and taking photographs. Even for overseas travelling, we selected destinations and timing when we would also see orchids either in shows or on the tours: like to Taiwan in 2013 to attend the Taiwan International Orchid Show; to Singapore in 2016 to attend the 20th World Orchid Conference; and to China in 2017 to look for *paphiopedilum* in their natural habitats. Even when we visited our daughter in London in 2015, we took the opportunity to attend the International Orchid Show in Malvern and visited the Royal Botanic Gardens, Kew. We were impressed by the Australian orchid collection there.

Growing orchids and our orchid collection

Once our interest in orchids had been sparked, things happened very quickly and our orchid collection ballooned in size. With the increasing number of orchids, Yin started getting busy building more and more 'structures' to accommodate them. Quickly, most of our backyard was taken up by orchid houses and sheds of various kinds. Then one day a friend came over for lunch and remarked "where is your backyard?" This suddenly made us realise for the first time that we might have got the 'orchid bug.' We did quite well in shows and soon started winning prizes in competition. We still remember the thrill of winning the first grand champion in a *Sarcanthinae* Show with *Sarco*. Bessie which was also awarded a HCC/ANOS. We decided to name it after our first granddaughter and gave it a clonal name of 'Yunlan' meaning 'lively pretty orchid.'



Sarco. Bessie 'Yunlan' HCC/ANOS

Photography and orchid calendar

We both enjoy taking photographs on our trips. Sau-wan takes a particular interest in photographing interesting plants and botanical curiosities that we encounter and in trying to identify them after the trips. When we started growing orchids more seriously after our retirement, we set the goal of trying to have at least one orchid flowering every month of the year in our collection. This was achieved two years later, in 2012, more of an indication of our rapidly increasing orchid collection than our expertise in growing them!

Sau-wan used to photograph every orchid that flowered during the year as a record but we soon had this idea of sharing our 'achievements' and joy with relatives and friends. At the end of each year, we would sit down together with all the photographs of flowering orchids taken during that year, selected the 'best' orchid for each month and compiled a calendar of flowering orchids for the past year. Often not an easy consensus decision but a lot of fun for us. Sending this orchid calendar was the way we communicated with our friends who mostly do not grow any orchids, something to share with them and to stay connected.

Bush walking and 'orchid hunting'

We soon realised how fortunate we are, as orchid lovers in Australia. We have the luxury of seeing native orchids in their natural habitats. In Sydney, we do not have to travel very far to do this. In addition, in Australia, there are many very unusual orchids not found in any other parts of the world. Many of them cannot be grown successfully in culture in orchid houses, namely, many of the Australian terrestrial orchids. We went on many field trips on our own to look for and enjoy native orchids. Seeing orchids flowering in their natural habitats is one of the most enjoyable things for us. We still have very fond memories of the orchids we saw in their natural habitats and the occasions when we encountered them over the years.

(A). Sighting of Flying Duck Orchid (*Caleana major*)

This is supposed to be the most photographed Australian native orchid. Shortly after we became interested in orchid, we got an email from Sau-wan's sister, Sau-shan who lives in Hong Kong with a picture of the Flying Duck Orchid, asking if we had seen it and were growing it. Making enquiries around and to our surprise, many of our members in fact had not seen this orchid and so we decided to look for it ourselves in the bush. We can still remember the joy and excitement of eventually seeing a large colony of Flying Duck Orchids in full bloom, after many futile attempts.



A colony of
Caleana major
we found

(B). *Den. tetragonum* 'capitisyork'

Armed with instructions from a native orchid old-timer, we managed to locate *Den. tetragonum* 'capitisyork' in north Queensland. It was a small colony growing on trees and well hidden from the road. On that day, there was only one single open flower but blooming in its full glory glistening in filtered sunlight through thick bush and swaying in the gentle breeze. Who say you cannot locate a needle in a haystack? With dedication and good information, we managed to locate one single flower over 2000 km away!



A single flower of *Den. tetragonum*
'capitisyork'

This can be found only in limited locations in NSW growing in cracks on sandstone cliffs. The funny thing is that we found it on the route along a bush track we had travelled a few times before but had never noticed it. From that time on, whenever we walked past the area, we would keep our eyes open to look for this orchid and see how it was going, just like greeting an old friend!

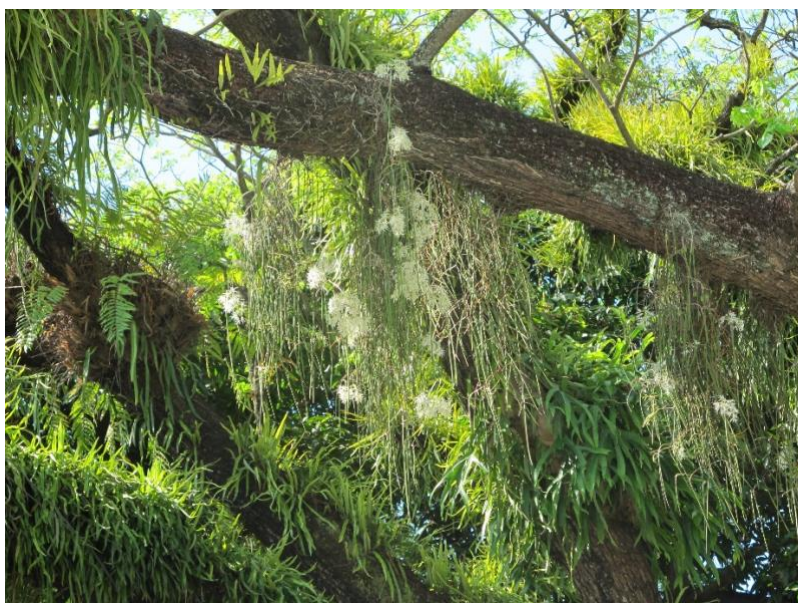
(C). Seeing *Rimicola elliptica* in flower



Rimicola elliptica growing on cliff rock

(D). Sighting of *Den. calamiforme*

One day on an orchid trip to northern Queensland, we took a day off to do a bit of touristic sightseeing and found ourselves in the busy Cairns Esplanade Market. Probably still armed with our orchid-spotting eyes, we detected many huge colonies of *Den. calamiforme* growing on some ancient trees scattered around the market. There were clouds of white flowers hanging down from the trees against a blue sky above, swaying in the gentle breeze and sending a mild fragrance characteristic of this orchid. Naturally, we were mesmerised by this unexpected discovery and craning our necks, started taken many photographs. Before long, many tourists around us also raised their heads, looked surprised at what they saw and also started taking photographs. What an extraordinary and memorable scene we had inadvertently created!



Den. calamiforme hanging down from tree

Fodder for our inquisitive minds

We have always been keen to find ways to improve the culture of native orchids. Despite the fact that most orchid friends were helpful to offer their advice and opinions, we soon found that solutions were not always available and quite often confusing and contradictory. Many were just personal experience and opinions, not backed up by scientific evidence. Old habits die hard! With our science background and involvement in research in all of our working lives, we soon started trying to find the answers for ourselves.

(A). Using clear pots to grow *sarcochilus*

We know that to grow these orchids well, keeping the roots healthy is vital. We learnt that most of them grow on trees and rocks in their natural habitats but in culture, their root systems are often found trying to grow out of the pots. Knowing that they are related to *phalaenopsis* which are commonly grown in clear plastic pots, we hypothesised that *sarcochilus* orchids might also prefer such environment. We conducted a comparative study and demonstrated that compared to opaque black pots, the roots were more abundant and healthier when grown in clear plastic pots. This was also accompanied by better vegetative growth.

(B). Liming as a cultural practice for growing *Den. speciosum*

Den. speciosum is a very popular orchid amongst native orchid growers. It came to our attention that lime was applied as a routine practice to this orchid without obvious reason to do so. Some experienced growers claimed that it is the way to grow this orchid well. While we know that lime is commonly used to treat acid soils/acid soil problems to improve plant growth in agriculture/horticulture, we are not certain if that is the reason for applying lime in growing this orchid. Just to satisfy our curiosity, we started firstly by finding out the natural pH of the habitat of this orchid and then undertook a comparative study of orchid growing without lime as compared to those with lime application. The results turned out to be quite unexpected. Firstly, all the substrate samples collected from the orchid habitats had acidic pH (<7.0) with an overall mean of 5.4 and a range of 4.9-5.9 across all five sites which stretch from NSW to Queensland. Secondly, we did not

detect any significant growth response of this orchid to lime treatment over a period of 5 years. Therefore, our findings caution the indiscriminate use of applying lime for growing *Den. speciosum*.

(C). *Sarcochilus* flowering under increasing warmer temperatures

Sarcochilus is our favourite orchid in our collection and as time progresses, we accumulate quite a large collection of both species and hybrids. In 2018/2019, we had a very disappointing season, with poor flowering as well as delay in flowering by up to one month. A major Sarcanthinae Show in Sydney was cancelled in that year because of insufficient orchid entry.

We tried to unravel the underlying cause of this by first analysing the long-term climatic data in our area of Sydney and compared those with the 2018/2019 season. We found that 2018/2019 had the hottest summer as well as autumn on record. These together could account for the poor growth (therefore flowering) and the delay in flowering. Then, we conducted an experiment to demonstrate the effect of cooler autumn temperature in promoting earlier flowering. Our results showed that cooling treatment in March encouraged formation of floral buds which led to earlier flowering. We used this cooling treatment to enable our *sarcochilus* to flower earlier to be exhibited at the St Ives Show held in Sydney in August, i.e. two months earlier than the usual flowering season for this kind of orchid. We did this for 4 years, winning all the hybrid classes in this category at St Ives Shows. Our research therefore highlights the possible adverse consequence of continuing global warming on the survival of this unique native orchid and the need to improve our cultural practice to mitigate this adverse effect in areas like Sydney.



Our *sarcochilus* hybrids at St Ives Show, 2020

In order to share our findings with fellow native orchid growers, we have published them in orchid journals, newsletters, and magazine.

Concluding remarks

The seed of our interest in orchids was sown during our childhood, but it was really our first exposure to Australian native orchids that had sparked our long-term and sustained interest in orchids. We are attracted to these orchids, not just by their beauty, but also for their unique and alluring attributes as well as the unusual ecology of many of them. In the world of Australian native orchids, we continue to learn and discover new things which sustain our interests. Our involvements with these orchids in so many ways have really enriched our lives. The spark is still burning bright.

Acknowledgements

We stumbled into the world of Australian native orchids, and along the way we made a lot of friends who have been very generous in introducing us to these amazing plants and in sharing their knowledge with us. Particularly we would like to thank the following people, Chanh-Op Shaw, Graeme Russell, Ken Russell, the late Ted and Barb Gregory, Mike Harrison, Gerry Walsh, Tony Clarke, Col Fitzsimmons, George Oehm and Greg Steenbeeke. They have all helped in sustaining our interests in orchids over a long period of time.