



**October Meeting**

**Judge's Choice, Best Seedling overall, Best Intermediate Seedling  
Last Flight 'MoJo' (Mem. Amelia Earhart x Last Tango) Grown by Graham Morris**



# CYMBIDIUM NEWS

Published by the Cymbidium Orchid Club of South Australia Inc.  
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 Print Post Approved PP 100018071



**October meeting  
 Judge's Choice Best Overall  
 Best in Open Division  
 Open Div. First Intermediate other colour  
 Mem. Amelia Earhart x Pacific Sparkle  
 Grown by Shane Moeller**





**October meeting**

**Best in First Division  
First Division, Miniature Brown, First**

**Bermagui (Negrito x devonianum)**

**Grown by John Howard**

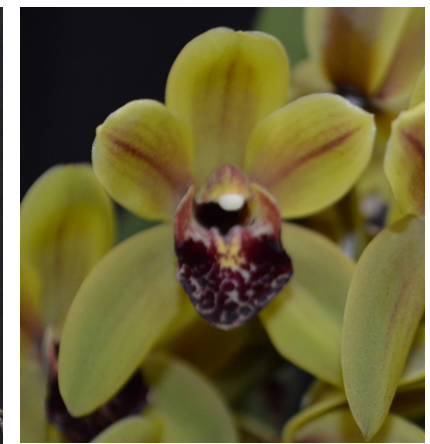


**October Meeting**

**Best in Second Division  
Miniature Other Colour First**


**Daddy's Girl 'Ann Michelle'**

**Grown by  
Susan and Gary Hollands**





Thank you to Terry Poulton for the recipe below for white oil  
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**Cymbidium News Volume 24 No. 10 November 2022**

The New Cymbidium News is published monthly, February to November inclusive and is the Official Newsletter of the **Cymbidium Orchid Club of South Australia Inc**

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 Ben Knobben # Brian & Shirley Brand, Barry Bailey, Peter Aigner Muehler  
 # indicates Deceased

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Our club Bank Details are as follows  
 Bank of South Australia BSB 105 108 Account number 022900640  
 Our Treasurer Christine Robertson Phone 08 8536 3948 or 0438 363 940



**President  
Graham Fear**

## Presidents Message November 2022

### Welcome to our November issue

The October meeting saw a good range of plants considering the time of year.

**Best in Open division**, also plant of the night, was Mem Amelia Earhart x Pacific Sparkle, grown by Shane Moeller

**Best in First division** was Bermagui, grown by John Howard.

**Best in Second division** was Daddy's Girl 'Ann Michelle' grown by Susan and Gary Hollands.

**Best Seedling** was Last Flight 'MoJo' grown by Graham Morris

The single flower competition was a tie between Adrian Bockmann and Laurie and Sue Carter. Sue and Laurie won using our unique countback system, which spoiled Adrian from winning in four months in a row.

Our entertainment for October was photos from this year's Cymbidium Orchid Club of Victoria's show in September, which we hope you all enjoyed. Some great displays and well grow plants were displayed from

our friends over the border, which was a good substitute for our programmed guest speaker who was unable to attend.

Don't forget the November meeting will be our end of year dinner at the Warradale Hotel on the 23<sup>rd</sup> November, 6.00pm for 6.30pm. If you would still like to attend, please give Christine a call on 0438 363 940 and let her know you are coming, and then pay her by direct debt.

Cost is \$50 a head for the dinner. You pay \$25 a head with the club paying the balance of \$25 per head for you and or your partner. There are around 50 coming at this stage, so don't miss out on a great night

Hope you all look after your Khanabono Jacinta gift plant, where all that attended the September meeting received a well grown plant. Again many thanks to Pauline and Kevin McLean for flasking the plants, and to Moss & Rosemary Bray for growing them on to the size they are now. Grow them well, as there could be a competition on the horizon for the best grow plants.

This is our last issue for the year, so thank you all for making this another very successful year for the club. Thanks also to the committee for all their hard work and support, many of them taking on multiple jobs to make your club better.

John Howard for all his work at the three shows, which without his contribution they would not happen, and being there to help with numerus things at every meeting. Elayne, Joan and Silvia and anyone else that helped provide supper this year, for a great job and great food over the year. Elayne again for the trailer storage and doing everything she can for the club, Moss and Rosemary for their continued support looking after the club's plants, Graham for a great job doing the magazine, photography and just helping with whatever is needed, and Sue for all the multiple hats that she wears and looks after.

Chee and Bill and the judges for doing a great job all year, Tony for looking after the meeting Trading Table and anyone else that has helped during the year, the club is only as good as what all of these members put in, so thank you all from not only me but your fellow members, because without your hard work, we wouldn't have a club.

I look forward to seeing you all on the 23<sup>rd</sup> November at the Warradale.

I wish you all and your families a very Merry Christmas and a happy New Year and look forward to seeing you all in February for the start of another great year for our club.

Kind Regards and stay safe and well.

Graham Fear (President)

## Neutrog are great supporters of our Club.

Please support them wherever possible and tell others about them

The Cymbidium Orchid Club of South Australia, was actively involved in developing and testing Strike Back for Orchids and endorses it's use.

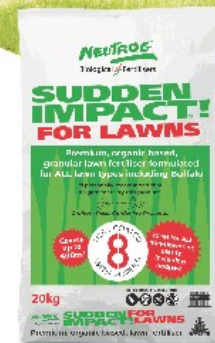


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21

This new product is getting good reviews from growers everywhere who have been using it for some time. Rodents cause lots of damage if not controlled. Be prepared. Have some on hand.





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20

Notice is hereby given, that the Annual General Meeting of the Cymbidium Orchid Club of South Australia will be held on 23rd February 2023, at the Burnside Assembly Hall, starting at 8.00pm.

All positions except the 2 year committee appointments from the 2020 AGM, will be declared vacant.

Elections will be conducted for all vacant positions.

Nomination forms are available from our Secretary, or President  
Nominations should be in the hands of the Secretary, before the start of the AGM, but nominations on the night, may be accepted.

The February General meeting of the club, will commence after the AGM

\*\*\*\*\*



The flower above is Khanebono 'Jacinta', the plant given to members present at the October meeting. It is a high quality plant. Grow it well. More information later.



**Many of our members (even long time members) have difficulty in understanding about ploidy of our cymbidium plants.**

It is all to do with the number of chromosomes in the genetic structure of each plant. I have put an article written by a very famous American grower Paul Gripp, in this magazine. It was written quite some time back, when there were very few known tetraploid plants in existence. Nowadays tetraploids are the most common form of large flowering cymbidiums in cultivation. A lot of miniatures are diploids, but there is also good numbers of tetraploid minis being grown.

**The next few lines are just a simple introduction. Following is the article by Paul Gripp.** Most species cymbidiums (those originally growing wild in the jungle), had 40 chromosomes. They were arranged into 2 pairs of 20 chromosomes and named diploids. When early growers started hybridising them, the resulting progeny were mostly diploid. However occasionally a plant was produced which was much superior to the majority of its siblings. It was later discovered that these superior varieties had doubled their chromosome number (to 80 chromosomes). They were arranged into 4 sets of 20 chromosomes, now named tetraploids.

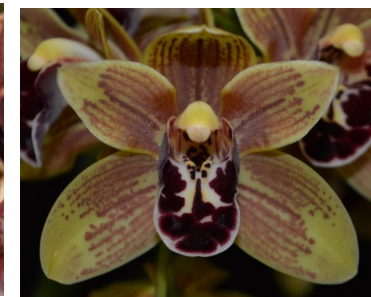
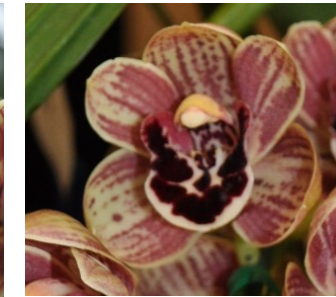
**Diploids** bred with **diploids** produced **diploid** progeny\

**Tetraploids** bred with **tetraploids** produced **tetraploid** progeny.

**Diploids** bred with **tetraploids** produced **triploid** ( 3 sets of 20 chromosomes) progeny

Plants with uneven sets of chromosomes are generally infertile

**I hope the Paul Gripp article helps you understand about ploidy.**



**Above Mem. Amelia Earhart 'No.6' and Spotted Madam 'Issa'  
Below them (still above here) are 3 of the first flowering seedlings from that crossing**

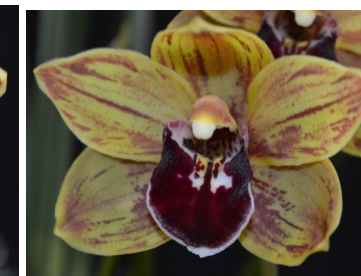
## Brief Look at Polyploidy

### Paul Gripp

One of the main features of orchids as a hobby is the wide range of interest that makes it a challenging, intriguing, and ever-searching endeavor. The study of plant genetics in reference to orchids is one of these fascinating sidelines.

Now, orchid genetics can be a very involved, technical subject, but for those of us interested in merely a working knowledge to help us in our estimate of expectations, there are a few basic facts which we should understand in order to be intelligent cultivators of this particular plant family. Perhaps the most basic-study that we, as orchid growers, should understand is that area dealing with chromosome numbers (or, levels of ploidy). Plants carry, in their anatomical make-up, a certain number of genetic carriers (chromosomes) which determine the characteristics of the plants and their future progeny.

An interesting fact about chromosomes is that, besides carrying the individual genes that determine specific characteristics, the degree of influence of an individual set of chromosomes is greatly modified by the number of sets (or level of ploidy) of the particular individual. Hence, the terms diploid (2n), triploid (3n), tetraploid (4n), pentaploid (5n), etc., refer to the number of sets or level of ploidy. Those in which the multiple is greater than the normal or diploid level are referred to collectively as polyploids. In trying to understand this, we should keep in mind that although plants of these various genetic groups do have certain specific characteristics, their main significance in breeding and heredity is their degree of influence in determining the characteristics of progeny. It is also true that the nature and significance of ploidy varies greatly among the various genera. In certain genera the rules of ploidy are fairly simple, with not too



**The above 6 flowers are separate & individual flowers of Last Flight 'MoJo'  
(Mem Amelia Earhart 'Royale' x Last Tango 'Royale') 19  
Flowers bred from Mem. Amelia Earhart are often accused of having flowers with flower colour breaks.**

**All the flowers on the spike were very similar (not identical)  
It shows a lot of promise for being a plant which could provide a new colour variation, reliably  
It is a tetraploid.**



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Ideally suited for establishing new plants (particularly bare-rooted roses) and for use on natives. Seamungus can also be used as a plant tonic to revitalise all your plants throughout the year. **1L bottle \$10**



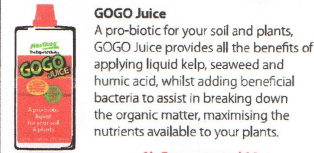
**Seamungus Green**  
The smaller crumble form makes Seamungus Green ideal for lawns and in dry conditions where more immediate breakdown is required. It can also be used as a plant tonic to revitalise all your plants throughout the year. 100% organic and ACO registered. **20kg bag \$22**



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many exceptions. In other genera, however, the rules are very much complicated by uneven chromosome numbers and ability to breed among even very irregular chromosome patterns.

Generally speaking, the rules for the genus *Cymbidium* are fairly simple and well worked out, and they serve as a good example on which to learn. Breeding in cymbidiums turns out to be a blending process influenced by the various traits of both parents and weighed in quantity by their particular level of ploidy.

**Diploids (2n):** - Most typical, normal, naturally occurring wild types are of a diploid level of ploidy. The diploid level is the standard in nature, even though mutations and resultant abnormal strains commonly occur. Diploids are characterized by typically good, natural vigor. Diploids have many good features that are important in the most modern hybrids, and often it is their agreeable complimentary compatibility that makes a good match when used with other levels of polyploids, particularly the tetraploids.

Good *Cymbidium* diploids are certainly of great importance. Because of the fact that many of the most famous polyploids in cymbidiums have been brought about by much inbreeding, there are some poor growth characteristics that have carried along, and it is often the free-growing habit of the diploid that influences the progeny into being good, free performers. *Cymbidium* diploids are also characterized by often having more flowers per spike than many of the more popular tetraploids. Together with this, popularity in the tetraploid line has centered around the full-shaped white tetraploid. In order to get other colors, we must draw from the diploid color genes.



*Cymbidium* Fanfare 'Sierra Spring', AM/AOS (1965) An example of a diploid (2n) flower.





*Cymbidium Fanfare 'St. Francis', AM/AOS An example of a tetraploid (4n) flower*

**Tetraploids (4n):** — Tetraploids originally occurred by freak happenings, the plants' cellular structure changing in such a way as to possess twice the normal number of chromosomes in their make-up. Though tetraploids are often characterized by slower growth and heavier texture, the significance to the naked eye may or may not be apparent. It is also questionable to say that tetraploids are always necessarily associated with desirable features, such as good form and other characteristics we look for. Their main significance lies in their breeding influence. Because of their doubled chromosome number, they assert double the influence that a normal diploid would. Thus, the tetraploid has led to the finest advances in orchid breeding. This is because certain plants of good quality have been discovered to be tetraploids and they have been used in breeding to exert the advantage of their added breeding influence.

**Triploids (3n):** — Triploids normally are the resultant progeny from the mating of a tetraploid with a diploid. These comprise the great bulk of present-day cymbidiums. They are distinguished by uniform good growing characteristics and freeness of performance. Their visual traits, of course, vary from the extremes of one parent to the other and combinations of both, with their typical average lying about one-third from the tetraploid parent and two-thirds from the diploid. The ideal is to find those few plants from a particular cross which exhibit the good features of both parents, and in these exceptional cases we find our improvements. We usually find that triploid cymbidiums are sterile and will not produce seed. There are, however, some exceptions which give rise to other categories of polyploidy.

**Pentaploids (5n):** — A still higher realm of polyploidy is sometimes found in orchid plants and this is the pentaploid. a type having five sets of chromosomes in the vegetative cell. Pentaploids have proven to be fairly useful breeders, although because of the mechanics of chromosomes, uniform growth and quality usually are not obtained and some of the resultant seedlings may be more difficult to grow and bloom. Many of our most famous plants, however, have pentaploid parents in their backgrounds.

**Aneuploids:** — Hybridizers are continually trying to do the unusual: therefore, there is an emphasis on abnormal types which has led to the development of a goodly number of orchid plants with uneven chromosome numbers. These are termed aneuploids. Aneuploids are usually derived from uneven and rather unstable crossings, when parents of semi-incompatible chromosome numbers are used. The seedlings of such aneuploid

## The next Meetings of the Cymbidium Orchid Club of South Australia Inc.

**On Wednesday 22nd November 2022, starting at 6.30pm  
Christmas Dinner at the Warradale Hotel  
Booking a position is required (Christine 0438 363 940 )  
There will be no special beginner's group meeting.  
Beginners are encouraged to attend**

**The next meeting after the dinner at the Warradale Hotel will be the AGM  
followed by February General Meeting on Wednesday 22nd February 2023**

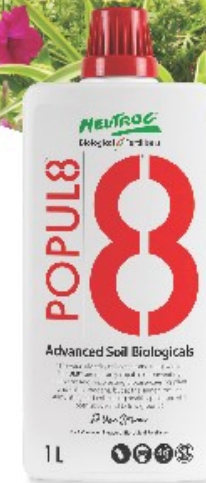


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better. He also said that the ones from Last Tango 'Royale', should have better colour than those from Last Tango 'Geyserland'

The Mem. Amelia Earhart crossing was later repeated using the converted tetraploid form of devonianum, and a few lucky growers were able to source known tetraploid forms of Mem. Amelia Earhart to use in hybridising programs.

I have noticed some unusually coloured flowers coming from Mem. Amelia Earhart as a parent. I have a plant of Mem Amelia Earhart 'Royale' and it sometimes produces unusual colour markings when it flowers, but not always.

When I mated Mem Amelia Earhart No.6 (from the tetraploid repeat crossing), with the spotted intermediate Spotted Madam 'Issa', I got not one spotted seedling from about 30 flowered so far, but lots of flowers with stripes. I am sure there has not been a mix up in the names.

Many of the Last Flight seedlings (Mem Amelia Earhart x Last Tango) have unusual colour breaks. I flowered one recently which is very unusually coloured and I think is amazing. I have never seen a flower like it, ever. I am sure some growers will love it. Others will not. I think it opens the possibility of producing some really unusually coloured flowers in future with careful breeding. It's name Last Flight 'MoJo'



Mem. Amelia Earhart 'Royale'  
See the splotches at the ends of the petals. They are not always present.

crosses are usually most irregular and will vary greatly as individuals from their brothers in almost every aspect – from exact chromosome number to flower and growth patterns. This irregularity is brought about because their individual chromosome numbers are not exact multiples of the typical base number of the parent plants. Because some of these may be close to that of tetraploids, sometimes these aneuploids will act as breeders, but their performance can only be proven by giving them a try to see the results. There are many fine plants among the aneuploids, and although their implications in breeding are definitely hit and miss, it assuredly makes for interest and speculation.

With these various levels of ploidy available for hybridizing, there are a variety of possible combinations and it is possible to anticipate some generalities about the resulting progeny. It is with these thoughts in mind that hybridizers propose hopeful crossings.

**Diploid X Diploid:** – In the early days when all or most cultivated plants were diploids, a knowledge of other types was lacking. Flowers were mated with little regard to genotype, and most of these happened to be diploids. Even though more advanced types of combinations have come about, certain hybridizers have worked hard in the diploid line and fantastic progress has been obtained. The results, although different from those obtained with polyploids, have shown characteristics that, while not necessarily comparable, have been equally spectacular. The uses of diploid crosses in cymbidiums at present are (1) to gain more desirable forms of colored types, which are more intense in diploids than other classes; (2) to provide a new assortment of genes for use as potential breeding with tetraploids; (3) to create early bloomers and; (4) to make miniature cymbidiums.

**Diploid X Tetraploid:** – The breeding method which has proven most satisfactory, with the largest and most prominent mass producers of seedlings for uniform high-quality progeny, has been the mating of the tetraploid of good form with the free and prolific diploid. The result is the triploid strain. There seems to be no doubt that for uniform high quality of shape, habit, and pleasing color, this seems to be one of the most satisfactory of genetic combinations. Because of the fact that the tetraploid parent influences twice as much as the diploid parent, its characteristics of form and color are more nearly approached. As new tetraploids of different types are brought into use, we will be able to greatly broaden our spectrum of hopefulness.

**Tetraploid X Tetraploid:** – An even more recent trend in breeding is the tetraploid-with-tetraploid mating. These have produced outstanding blooms. In addition, the resulting progeny are tetraploids, so this type of breeding has given rise to entire strains of tetraploid plants. Because there were only a few tetraploids in the beginning, there was much tetraploid inbreeding, with consequent undesirable characteristics perpetuated in the progeny. Some of the more inbred tetraploid types, even though characterized by excellent flower quality, have poor growing and blooming habits and are difficult plants to handle. Care must be used in selecting and mating tetraploids to guard against such bad features.

**Triploid, Pentaploid and Aneuploid Matings:** – When triploids, pentaploids and aneuploids are used in mating with their like or the more normal diploid or tetraploid, a wide number of combinations can occur. Because these "offbeat" types produce gametes (pollen and egg) that are often incomplete or uneven, crosses with them are characterized by irregularity and unevenness, if they take at all. Because they are lacking certain genes, many plants do not perform normally. Over the years, however, certain plants in the aneuploid or uneven polyploid levels (triploids, pentaploids, etc.) have become known as good parents as a result of the success of their progeny. Sometimes outstanding plants are obtained from these matings, but usually the resulting aneuploid plants are irregular growers and often the seeds are few. For commercial establishments who grow



large blocks of seedlings, this type of breeding is not practical. "Off-beat" breeding offers tremendous interest for the hobbyist, however. The hobbyist can't use many plants, and if he drops all his pods for the year, he has lost nothing. This opens up an infinite vista for attempts where the high percentage of failures will keep the hobby in line. The value to this type of breeding is that occasionally very fine varieties arise, and secondly, often the progeny that do arise are strange aneuploids themselves and sometimes breedable.

The subject of ploidy has many interesting facets, each of which can be magnified into a particular situation in a specific genus or group of plants. Cymbidiums have been used as a passing example because they are not only well worked out but simple in example. In some other genera things can be far more complicated. Although there are many variations and exceptions in the behavior of living things, most of these differences can be explained by subsequent modifications and rearrangements which do not change the underlying principles.

The ways of Mother Nature sometimes appear confused and complicated, but in reality they are orderly and pleasant, and these phenomena are brought forth most finely in our study of the orchids.

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**Editor's note.** This article above was written quite some years ago now. Things have changed a lot since then. We now have a huge bank of tetraploid plants, which have been selected to grow quickly and without problems. Triploids are much less grown nowadays, though large numbers of some superior, older varieties are still grown for cut flowers. The article should still help you understand the science around ploidy.

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## **Merry Christmas and a very happy and healthy year 2023 to all our members and friends.**

**Hope your cymbidium plants grow extremely well  
in the lead up to next flowering season**

**See you all in the new year**

**Note Our first meeting  
is on Wednesday 22nd February**

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**Hope to see you all there.**

**Try to bring a friend to introduce to cymbidium growing**

## **Has anyone noticed the success on the showbench of hybrids from Mem Amelia Earhart recently.**

**It has been the parent of the flower of the night for the last two months (Mem Amelia Earhart x Pacific Sparkle) No.5 in September, grown by John Moon, then a sibling (Mem Amelia Earhart x Pacific Sparkle) shown in October by Shan Moeller .**

**Mem. Amelia Earhart was registered in 1993. The breeding is Hazel Tyers x devonianum.**

**Hazel Tyers is a hugely famous and successful breeding plant. It is the parent of Valley Splash (Hazel Tyers x Vivacious), also Anna Szabo (Rod Stewart x Hazel Tyers), and many other really good cymbidiums.**

**There were a number of Hazel Tyers clones in circulation. I know of HT 'Santa Maria', HT 'Tia Maria' and HT 'Tinsell'. I have seen them all, and believe they are all in fact the same plant. This is probably because they were used by several different, prominent breeders, all wanting buyers to believe that their breeding plant of Hazel Tyers was uniquely theirs, and better than those of the other breeders. All the varieties were generally small standard sized flowers, held on medium length flower spikes. The spikes were very thin and needed support to display the flower well. The spikes were actually quite weak. They were amazingly pretty flowers. The lip was very attractive, and large percentages of the progeny, had lips like Hazel Tyers.**

**Mem. Amelia Earhart is from Hazel Tyers mated with the miniature species cymbidium devonianum.**

**devonianum is a very late flowering miniature producing very long decorative flower spikes, holding many, many flowers. The leaves on the plant are very wide. It does not like poor quality water. If you have rain water available to water it with, the plant is likely to grow better, and have less poor leaf markings. In Adelaide, where our mains waters supply contains large levels of dissolved salts, leaf tip dieback is very prevalent.**

**The original Mem. Amelia Earhart mating used the diploid form of devonianum with the tetraploid Hazel Tyers. The progeny should all have been triploid, and if so would have been sterile for breeding purposes.**

**The late Kevin Hipkins, from Royale Orchids, flowered many Mem. Amelia Earhart seedlings, and had two which were superior to the rest of the siblings. He suspected that they may be chance tetraploids (sometimes tetraploids are produced from mating a tetraploid to a diploid, but usually in very small percentages). He named them Mem Amelia Earhart 'Crash Landing' and Mem Amelia Earhart 'Royale' and successfully bred with them.**

**He used Mem Amelia Earhart 'Crash Landing' to produce Last Flight (crossed with Last Tango) and got many award quality plants. He used Last Tango 'Geyserland' also Last Tango 'Royale'. He later did a repeat crossing of Last Flight, but this time using Mem Amelia Earhart 'Royale'. When he did the repeat, he commented that the repeat using 'Royale', should be**





**October Meeting**  
**Open Division**  
**Intermediate**  
**Other colour 2nd**  
**Last Flight 'JoJo'**  
**Grown by**  
**Graham Morris**



**October Meeting**  
**Miniature**  
**Other colour**  
**Paradisian**  
**BullsEye**  
**X devonianum**  
**'Eureka'**  
**Grown by**  
**Shane Moeller**



**October Meeting**  
**Second Division**  
**Miniature Other**  
**Colour 2nd**  
**Miss Muffett**  
**Grown by**  
**Sylvia Jackson**



**October Meeting**  
**Best Miniature Seedling**  
**Open Division Miniature Pink First**  
**Vincent Pride 'Tinto'**  
**(Devon Shell x Mem. Amelia Earhart)**  
**Grown by**  
**Michael Willoughby and Oui Ju**



**October Meeting**  
**Open Division**  
**Large Standard White First**  
**Frosty Valley**  
**Grown by Shane Moeller**







**October Meeting**  
**Open Division Large Standard Yellow First**  
**Lemon Butter 'TeePee'**  
**Grown by Shane Moeller**



**October Meeting**  
**Open Division Miniature Red First**  
**Devon parish x Street Tango**  
**Grown by Shane Moeller**



**October Meeting**  
**Open Division Miniature Pink Second**  
**Mary Green 'Cutie Pie'**  
**Grown by Shane Moeller**



**October Meeting**  
**Open Division Miniature Yellow First**  
**Vincent Pride 'Poi'**  
**Grown by Michael Willoughby and oui Ju**

