

# THE WESTERN AUSTRALIAN ORCHID BULLETIN

THE OFFICIAL JOURNAL OF THE ORCHID SOCIETY OF WESTERN AUSTRALIA  
FOUNDED 1946. A MEMBER OF THE AUSTRALIAN ORCHID COUNCIL.

VOLUME 57 NO 4



APRIL 2017

**NEXT MEETING** of the Orchid Society of Western Australia (Inc.) will be held at the **Manning Senior Citizens Activity Centre, Manning**, on **Friday 28th April, 2017**, commencing at **7:30 pm**.

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**THIS MONTH'S MEETING ITEM:**

WAOS (BRUCE LARSON) +  
ENTERING PLANTS IN SHOWS  
(MAXINE GODBEER AND IAN DUNCAN)

**MAY MEETING DATES:**

OSWA Committee 7:30 pm Friday 5th  
General Meeting 7:30 pm Friday 26th

**INSIDE THIS ISSUE:**

GENERAL NEWS	2
CULTURAL NOTES - CYMBIDIUM	3
CULTURAL NOTES - CATTLEYA	3
CULTURAL NOTES - PAPHIOPEDILUM	3
MONTHLY PLANT COMPETITION	4
MINUTES	4
HUMIDITY (PART 1)	5

**We acknowledge assistance from Lotterywest for the printing of this Bulletin**

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**Birthdays**

April: 7<sup>th</sup> Rosemary McGrath, 10<sup>th</sup> Bernadette Campbell, 12<sup>th</sup> Karen Carless, 17<sup>th</sup> Mike Burgess, 24<sup>th</sup> Rod Pohl, 29<sup>th</sup> Ian Duncan.

May: 7<sup>th</sup> Dorothy Walton, 9<sup>th</sup> Ellen Dixon.

Best wishes to anyone else celebrating Birthdays or Anniversaries. To any member on the sick list we wish you a speedy recovery & may you soon be well.

**New Member**

Welcome to Margaret Rathbone. We hope you have many rewarding years ahead with our Society.

**Tropical Colours Orchid Nursery Visit + Bus Trip**

The nursery is at 558 Gossage Road, Oldbury. Our visit is on **Saturday 22 April**, starting at around 10 am. We have organised a free bus, which will leave from Manning Senior Citizens Activity Centre at 9:30 am. Places on the bus are limited — to book a seat, call Rosemary on 0401 508 667, otherwise you can drive or car pool and meet at the Nursery at 10 am.

**Waterford Plaza Community Day**

We will be setting up a display and sales table at the Waterford Plaza Community Day, **Thursday 27 April**, from 10 am - 4 pm. Helpers are most welcome, to support OSWA and show off our club to the public.

**Shed Clean Up Day**

Our annual shed clean up day to prepare for the upcoming show season will be on **Sunday 30th April**, at McDougal Park, Como, starting at 10am, to be followed by a sausage sizzle supplied by the Society. The park provides a pleasant environment for a BBQ so this will be a nice social activity.

**Neutrog Bulk Order**

Orders will be available for pick up from Rosemary's home, 2 Morrish Place, Como, on **Saturday 29th and Sunday 30th April**. Coincidentally, Sunday April 30 is Shed Clean Up Day, and Rosemary lives nearby, so if you have placed an order, why not come along to the Shed Clean Up Day and collect your order en route?

**Orchiata Potting Bark Bulk Order**

OSWA has made another bulk purchase of Orchiata bark from Garden City Plastics. It comes in 40 litre bags in four grades: large (18-25 mm); medium (12-18 mm); small (9-12 mm); and mini (6-9 mm). To purchase (at a very competitive price for OSWA members), contact Rosemary on 0401 508 667. There is a limited number of bags, so be quick or miss out on the good price. The bark is stored in our shed, so why not order a bag and come along to the Shed Clean Up Day to pick it up?

**Meetings and the Monthly Plant Competition**

Members benching plants at monthly meetings are requested to have their entry business completed by 7:30 pm so that the meeting can start on time and visiting speakers are not left waiting. The Registrar, Ian Duncan, is available before the start of each meeting to assist members with questions about what class(es) their plant(s) should be entered in to.

**For your calendar — OSWA Christmas Dinner 2017.**

This year's Christmas Dinner has been booked for Wings Restaurant, RAAF, Bull Creek, for Saturday 9th of December.

**Home Visits.**

If you would like to host a home visit, please see Lynn Brooks at a meeting or send her an email (contrarymiss@hotmail.com). It doesn't seem to matter the of year, home visits are always very popular. Already Rosemary has volunteered to host a home visit on Sunday 25 June.

**CYMBIDIUM CULTURAL NOTES (APRIL/MAY 2017) based on notes from Roy Brown**

Now that the cooler months are coming, a start can be made on repotting. It's always good idea to make an early start on the job of repotting, especially if you have a fairly large collection of cymbidiums. A start can be made on small plants, as well as divisions, that are not expected to flower this year. Any plants that are already showing signs of flower spikes are better left until after the flowers have been cut off. April is the month when most of the Spring flowering plants send up their spikes. Cymbidium spikes are produced from the base of the pseudo bulb, or sometimes they appear between the lower and second leaves. The early flowering cymbidiums have already produced their spikes and these will continue to grow at a fast rate, in some cases the flower buds can be seen already. Take care of these new spikes, they are easily damaged, and keep all snails, slugs and insects away from the buds. Use Baysol to keep the snails and slugs away, and for all other biting insects, use a powder form of insecticide on the flower buds. Don't use liquid insecticide or you could cause bud drop or malformed flowers once they finally open. Watering will probably be needed once a day from now on, preferably in the morning depending on weather conditions. The regular feeding programme can be continued with the addition of a little extra potash to help form the newly developing flower spikes.

**CATTLEYA CULTURAL NOTES (APRIL/MAY 2017) based on notes from Henry Eaton**

We have experienced a long summer and there is very little sign of letup as yet. This should, however, be just around the corner. Until such time continue with your summer culture. When the true autumn weather arrives it will need a change in culture. As it ought to be cooler and more humid, the frequency of watering can be reduced, as well as stopping any watering in the evenings, so as to allow the plants to dry out before nightfall. The necessity to water a plant can be gauged by lifting up the pot and comparing the weight of a recently watered plant with what it felt before watering. Cattleyas in general do not like to have their roots wet all the time, but prefer a wet/dry cycle. Remember too, that the plant is only as good as its root system. Fertilisation with a high potassium, low nitrogen formulation can be used fortnightly as growth will be slowing down with winter approaching. Mature pseudo bulbs should be staked erect so that any buds or flowers will present well. If you use a malleable stake, take the stake to the errant bulb, rather than the other way round, as the latter could cause the bulb to fracture. Over a couple of days or a week or two, gradually straightening the stake can move a pseudo bulb from almost a flat position to an upright one, without damaging the bulb. If circumstances dictate that a plant has to be moved, try and place it in its new position at the same angle to the brightest light source as it was previously. If the weather turns, becomes more cloudy and there is a decrease in sunlight, you can also think about removing some of the shade applied in summer. Keep a close lookout for pests and deal with them promptly. Any unfinished potting on or repotting should be completed by mid-May.

**PAPHIOPEDILUM CULTURAL NOTES (APRIL/MAY 2017) by Trevor Burnett**

With the development of cooler conditions, any summer shading can be gradually removed. As the conditions cool, reduced watering will also be necessary. Personally, I reduce my watering back to twice a week, but am always mindful that we could still get some of those unexpected hot days when watering will need to be monitored. As the plants growth starts to slow, the fertilizer programme needs to be adjusted, going on to a fortnightly or monthly basis for small plants, depending on your time constraints, at  $\frac{1}{4}$  to  $\frac{1}{2}$  strength. Over the past few years I actually cut out all fertilizing for flowering size plants, as I have found that more plants tend to send up flowers if they are not receiving fertilizer in this period. This is also the time of the year that we start to see and enjoy the fruits of our year's growing, with plenty of the early flowers now beginning to appear. As flower spikes appear, mark the pot with a wooden skewer with a piece of foam on the top, so you are aware of all the plants that are going to flower. This also serves as a reminder to be careful when moving or cleaning nearby plants so as not to knock the valuable, long awaited buds off. With buds appearing, this is the time to flush out any snails or slugs that may be in hiding, just waiting for your prize plant to bloom so they can start their festive season with nice flowers to munch. If you do not wish to use chemical based baits, you can simply cut up some lemons and place them around the benches. The lemon does not kill any snails or slugs, but it does attract them. Once you know their whereabouts, you can easily eradicate them with a number 10 shoe, or in my case a number 7. Continue to remove any dead leaves from plants and also have a general cleanup of the area. I would ensure that all my small plants that are not expected to flower are repotted to ensure they have a nice clean open mix before going into winter. Winter and wet feet do not mix.

**MONTHLY PLANT COMPETITION (March 2017)****OPEN**

1A	(1)	1	Maxine Godbeer	<i>Brassavola nodosa</i>
1B	(1)	1	Ian Duncan	<i>Rhyncholaeliocattleya</i> Tribute 'Independence Day'
3B	(1)	1	Rod Pohl	<i>Paphiopedilum</i> Rowena ( <i>bellatulum</i> x <i>chamberlainianum</i> )
4C	(1)	1	Ian Duncan	<i>Dendrobium</i> Chela Color's FCA
7A	(1)	1	Maxine Godbeer	<i>Aerangis fuscata</i>
10B	(2)	1	Maxine Godbeer	<i>Dendrochilum longifolium</i>
		2	Maxine Godbeer	<i>Dracula felix</i>
11B	(3)	1	Maxine Godbeer	<i>Bulbophyllum</i> Pranom Prutpongse
		2	Maxine Godbeer	<i>Promenaea</i> Cachaca
		3	Courtney Rogasch	<i>Zygoneria</i> Adelaide Oval

**NOVICE**

15B	(1)	1	Jack Krishnan	<i>Rhyncholaeliocattleya</i> Tribute 'Independence Day'
15C	(1)	1	Jack Krishnan	<i>Rhyncholaeliocattleya</i> Brilliance
16D	(1)	1	Dana Mitchell	<i>Cymbidium</i> Golden Elf 'Sundust'

**POPULAR VOTE**

<b>OPEN</b>	Maxine Godbeer	<i>Aerangis fuscata</i>
<b>NOVICE</b>	Dana Mitchell	<i>Cymbidium</i> Golden Elf 'Sundust'

**SCHOKMAN TROPHY** Ian Duncan *Rhyncholaeliocattleya* Tribute 'Independence Day' (70 points)  
(Laelinae)

### Minutes of the OSWA General Meeting held in the Manning Senior Citizens Activity Centre, Manning, on 24 March 2017

**Welcome:** The President, Courtney Rogasch, opened the meeting at 7.30 pm welcoming visitors, members.

**March Birthdays & Anniversaries:** Happy Anniversary to John & Dorothy Walton, Birthday wishes to Merril Brechin, John Walton, Jack Rensen, Raye McIntosh, Lorna Dodd, Kaye Baylis, Peggy Stacey.

**Apologies:** As per register.

**Meeting Item:** Importing Orchids – Quarantine & Inspection, by Ian Ladner, for information on the conditions for importing orchids refer to the WA government BICON website for bare rooted & tissue cultured plants. Individuals can bring 6 flasks per person into Australia if it is in the accompanying luggage. The flask must be sealed & show no forms of contamination.

**Break for tea and popular vote.**

**Minutes:** Moved L Brooks, seconded R Pohl that the Minutes of the February meeting be accepted. Carried.

**Business arising:** None

**Correspondence:**

- Shona Macskasy, offering us free space for a display and sales table at the Koi Show (Sunday 28 May, 10 am - 2 pm, Willowpond Function Centre, 459 Nicholson Rd, Canning Vale – refer to Committee.
- Nikola Willis, re display and plant sales at Waterford Plaza Community Day Thursday April 27th 10am to 4pm Sales – Ian Duncan & Rosemary McGrath, plants in flower needed either for Display or Sale.

- Helpers – Kirsty Bayliss, Lyn Brooks, Lorna Dodd, Jacqui Bateman. OSWA banner – Kirsty Bayliss to organise.
- Stocklands Riverton re space, Licence Agreement & rules; M Baker sent OSWA Logo + orchid pics.
  - WAOS 2017 – Theme “Scarborough Fair”. Newsletter Confirmed Area 10 for OSWA Display, confirmed OSWA to sponsor Laeliinae. Photo Competition, Sales Slips, WAOS to send speaker (B Larson) to April GM. Show Schedule use Standard WAOD&W Schedule as for Busseton 2016
  - Incorporated Associations Details Murray Baker updated
  - Haydn Gunningham re trial of charcoal in orchid potting medium
  - New Secretary of the Cymbidium Society of Victoria Inc. – Julie Forrest
  - WAROO Financial Statement & Agenda 26th March
  - Bunnings Monthly Garden Club invitation March 14th – L Brooks attended
  - Responses to email enquiries from members of the public about where to buy orchids, show dates, etc.
  - Received: Society Bulletins and junk mail.

**Business arising:**

- J Bateman & L Brooks are trialling charcoal as a potting medium

**Confirmation:** Moved J Baylis seconded C Ottobriano that Correspondence be endorsed. Carried.

**Financial Statement:** prepared by K Bayliss

**Confirmation:** Moved P Kissell, seconded R Pohl, that the Financial Statement and Accounts for Payment endorsed. Carried.

**New Members:** Bob Buckleton Cloverdale, Enid & Laura Chelva Applecross were welcomed into the Society

**General Business:**

- Neutrog Orders closing date for orders is tonight 24th March. Pick up from 2 Morrish Place Como on 29th or 30th (after 11.00am) April, Rosemary’s Ph. No. 0401 508 667
- Waterford Plaza Information & Sales Day Thursday 28th April - helpers needed from 9am to set up. Plants for sale need to be in flower if possible. Dismantle 4pm. Rosemary is organiser.
- Riverton Forum Autumn Show Schedule, Sales Sheets & Entry cards available. A query table to be set up if unsure of class, etc., as once plants are benched they will not be changed. Kaye Baylis Show Marshall
- Annual Koi Show 28th May – Organiser & helpers needed to set up & man information Display Unsure as to size of area as yet.
- Visit to Tropical Colours Saturday 22nd April Community Bus will leave Manning SC at 9.30am (seats 18) BYO drinks & morning tea Names of those wishing to go were recorded

**Raffle:** Raye McIntosh, Courtney Rogasch, Merril Brechin, Jim Baylis, Merril Brechin, Lorraine Stronach, Judy Brabin, Harry Ashton. Courtney generously donated his prize to a visitor.

**Popular Vote:** Open: *Aerangis fuscata*, owner Maxine Godbeer

Novice: *Cymbidium Golden Elf “Sundust”*, owner Dana Mitchell

**Badge Prize:** Enid Chelva

**Meeting Closed:** 9.16 pm

## Humidity, Part 1. Mechanical Humidity Gauges

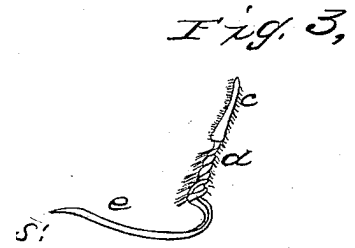
Most orchids like high humidity. There are various tricks for maintaining humidity around orchids, such as using evaporative coolers, misting, sitting orchid pots on pebbles in trays partly filled with water, damping down the floor of the shadehouse, covering the floor of the shadehouse with sawdust, and growing orchids in an orchid house with solid walls (as distinct from shadecloth walls). Humidity is measured using a device known as a hygrometer ("humidity gauge").

There are many types of hygrometers. The most common type is a mechanical device that indicates humidity by the position of a needle on a dial. The dial has a scale (usually marked from 0 to 100). Mechanical hygrometers contain a fibre that responds to changes in humidity. If the humidity increases, the fibre absorbs moisture from the air and becomes longer. If the humidity decreases, fibre dries out a bit, and becomes shorter. The change in length is relayed to the needle on the dial. The way the fibre changes length as it absorbs water is not uniform — dry fibre that absorbs a bit of moisture changes length much more than moist fibre that absorbs a bit of moisture — so the scale on the dial is not uniform, and the tick marks are far apart near the 0 mark and get closer together as you approach the 100 mark.

The first hair-based hygrometer was invented in 1783 by Horace Bénédict de Saussure, a Swiss geologist and physicist. The type of



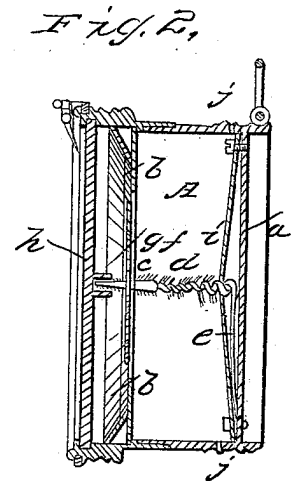
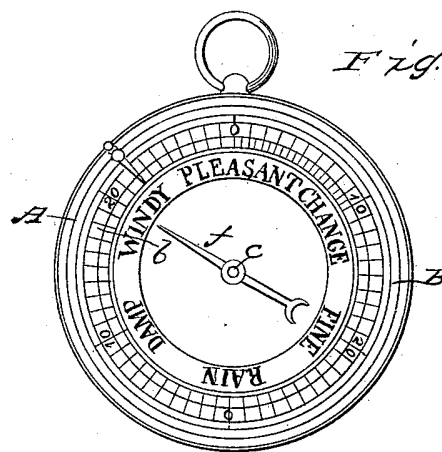
mechanical hygrometers that we see these days are based on a design patented by Louis S Ullman of Nashville, Tennessee, in 1859. For the humidity-sensing component, Mr Ullman used a piece of a plant he called "*Geranium erodium*". Fig. 3 is a sketch of the seed, taken from Mr Ullman's patent. The nomenclature here seems to be a bit confused and there doesn't appear to be a species known by the name "*Geranium erodium*". Nowadays, taxonomists recognise *Erodium*, *Geranium*, and *Pelargonium* as three closely-related genera. The names come from the Greek names of various birds, apparently because the seed capsules resemble the shape of their bills: *erodios* = heron, *geranos* = crane, *pelargos* = stork. But I digress...



The photo at left shows several seeds of *Erodium cicutarium*. The seeds of *Erodium* and related genera must have fascinated early botanists. These seeds have an appendage that changes shape with humidity. When wet (like it is in the green seed pod), the appendage is straight, but when dry it adopts a coiled spring shape (labelled d in Fig. 3). In a seed pod, bunches of seeds are held tightly together, and their appendages are held together in a tight straight bundle. As the seed pod dries out, stress builds up in these bundles because the dry seed appendages try to adopt the coiled spring shape. Eventually the stress becomes too much and the bundle breaks up. The individual seeds are flung out by their springy appendages. The plant cleverly uses this change of shape caused by changing moisture content as a seed dispersal mechanism. But there is more! The appendage remains attached to the seed. When the seed is lying on the ground, changes

in humidity cause the appendage to coil and uncoil, and the seed moves around a bit. Eventually the seed gets lodged in a small crevice and then continued coiling and uncoiling of the appendage "screws" the seed into the soil. So, this humidity-responsive appendage also serves as a seed planting mechanism. Awesome.

Mr Ullman's approach to making a humidity gauge was also very clever. He was aware that the seeds of "*Geranium erodium*" had a coiled appendage that changed shape with humidity. His idea was position the seed at the heart of the humidity gauge so that the seed head and the coiled part of the appendage served as the axle for the needle, and the end of the seed's appendage was fixed to the back of the gauge, (at the point labelled j in Fig. 2). The needle to indicate humidity was fixed to the seed head (labelled c in Fig. 1 and Fig. 2). As humidity decreased, the seed's appendage coiled more tightly, which caused the axle to turn, and moved the needle anti-clockwise around the dial. As humidity increased the seed's coiled appendage loosened, causing the axle to turn in the opposite direction, to move the needle clockwise around the dial. Mr Ullmann called his hygrometer the "Oriental and Occidental Weather-Indicator". Modern mechanical hygrometers work on the same principle as Mr Ullmann's hygrometer, but use a synthetic fibre in place of "*Geranium erodium*" seeds.



#### References:

<https://en.wikipedia.org/wiki/Hygrometer> (Includes photo of mechanical hygrometer, by Daniel FR.)

L.S. Ullmann, US Patent 25457 (1859). (Fig. 1, Fig. 2, and Fig. 3 come from the patent.)

[https://en.wikipedia.org/wiki/Erodium\\_-\\_Taxonomy](https://en.wikipedia.org/wiki/Erodium_-_Taxonomy) (For info about the genera *Erodium*, *Geranium*, and *Pelargonium*.)

[https://en.wikipedia.org/wiki/Erodium\\_cicutarium](https://en.wikipedia.org/wiki/Erodium_cicutarium) (For photo of *Erodium cicutarium* seeds, by Didier Descouens.)

D Evangelista, S Hotton and J Dumais, "The mechanics of explosive dispersal and self-burial in the seeds of the filaree, *Erodium cicutarium* (Geraniaceae)", *The Journal of Experimental Biology*, 2011, 214, 521-529.

For a video of an *Erodium cicutarium* seed screwing itself into the soil, see: [www.youtube.com/watch?v=TOJG5mF6OLs](http://www.youtube.com/watch?v=TOJG5mF6OLs)