NEWSLETTER



Editor's Note: The newsletter is distributed electronically (blind copied so addresses remain private) to all members for whom we have an email address. If you do not receive an emailed newsletter please email info@saskorchids.com to update your contact information.

Future Meeting Dates:

Saturday, Mar 18, 2023 **Lakewood** Civic Centre Saturday, Apr 22, 2023 Lawson Civic Centre Saturday, May 27, 2023 Lawson Civic Centre

SOS Executive

President: Tracey ThueVice-President: Shayne FeltisPast President: Bob LucasSecretary: Jenn Burgess

Treasurer: Donna Carlson-O'Keefe

Social: Shirley Keith

Lynn Campbell

Plant Orders: Heather Anderson

David Schwinghamer

Resources: Don Keith

Tom Kondra

Librarian: Deb Huculiak

Newsletter: Tracey Thue

Tobi Fenton

COC/AOS Rep: Tom Kondra

Speakers: Heather Anderson

Webmaster: Calvin Lo Facebook: Calvin Lo

Web Address: www.saskorchids.com

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facebook: https://www.facebook.com/

saskorchidsociety?

Mail Address: SOS, Box 411, Saskatoon, SK

S7K 3L3

February Meeting - Saturday, February 25, 2023 1:30 pm CST

In-person at <u>Lawson Civic Centre Multipurpose Room</u> (see address on page 2) Set-up will begin at 1:00pm for a prompt 1:30 start. Parking and access at the back of the building.

Guests are always welcome!

Please see page 3 of this newsletter for the link to the Zoom meeting if you are unable to attend in person.

ANNOUNCEMENTS

MEETING AGENDA:

Meeting starts @ 1:30pm

Announcements

Problem corner

If you bring a sick plant for advice, please put it in a plastic bag to protect other plants at the meeting!

Show & Tell

Break - OSPF plant sales, 50:50 ticket sales, Resources sales

Presentation - Dave Nixon

OSPF Plant Sale

Members Plant Sale

50:50 Draw

Adjournment

The meeting will be presented on Zoom for those unable to attend in person.

February Guest Speaker: Dave Nixon

President, Orchid Species Preservation Foundation, Edmonton, Alberta

Topic: Orchid conservation, and the state and future of the Orchid Species Preservation Foundation

Dave, along with his wife Lois, first became addicted to the fascinating world of orchids in 2011 when they received a Phalaenopsis as an anniversary present from Lois' mum, in the same week that the OSPF was holding a "How to look after your Orchid" event at the Muttart Conservatory. As part of the event, if you purchased three or more orchids, you received a free membership. That is how, the following Wednesday, Dave found himself down in the greenhouse being taught how to repot an orchid by Gordon Heaps. The bait was swallowed, hook, line, and sinker.

Dave became president of the OSPF in 2013, with a focus on improving the relationship with the Muttart management and setting a new direction for the OSPF. Leaving the orchid growing to his wife Lois, Dave focused on developing the Education and Conservation aspects of the OSPF. His talk will focus on the OSPF's approach to conservation, the current state of the program, and its future direction.

Dave will be bringing plants from the OSPF collection, for sale to SOS members.

Our February 25, 2023 meeting will be held at: Lawson Civic Centre 602 Briarwood Road, Saskatoon

Masking is encouraged.

Please, if you are experiencing any cold, flu or Covid-19 symptoms (cough, fever, sore throat), please stay home, even if you have tested negative with a rapid test.

ANNOUNCEMENTS



SOS Plant Pre-Order

Two of the vendors attending the OSA Orchid Show have provided plant lists for pre-orders. Lists were distributed to SOS members by email Feb 14. Check your inbox!

Email your orders and any questions to Heather and David at orders@saskorchids.com

From Feb.15 until March 1 at 12:00 noon.

Ecuagenera

Plant prices are listed in **US dollars**. Traditionally there is a \$2/plant handling fee. Depending on the size of the order, there may be a discount on the plants. Please mention the order number (located on the left side of the list) when ordering, as well as the price listed.

Ten Shin Gardens

Plant prices are listed in **Canadian dollars**. There are no additional costs for these plants. Please list the price of each plant with your order.

Please don't list the plants you are ordering on the pre-order sheets.

Tentative date for distribution of plants will be on **Monday, April 3**, from Heather's home. Details will be shared at a later date.



ANNOUNCEMENTS



- Plant orders to: orders@saskorchids.com
- General requests
 or queries to:
 info@saskorchids.com

New SOS Email address for purchases by e-transfer

Starting January 12, 2023 please send all e-transfer purchases to:

payment@saskorchids.com

Specify in the message section of the e-transfer what the transfer is for (plants, membership, supplies, calendar, etc.).

Upcoming Speakers and Events

February 25, 2023 - Dave Nixon, Orchid Species Preservation Foundation (bringing plants to sell)

March 18, 2023 - Monica DeWitt, AOS Judge (Pacific Northwest) (bringing plants to sell)

March 24 -26, 2023 - Gardenscape, SOS Display

March 31 - April 2, 2023 - Orchid Society of Alberta Orchid Fair, SOS display entry and AOS judging

April 22, 2023 - SOS Annual Silent Auction







Saturday, February 25, 2023 @ 1:30 PM CST

If you are unable to join the meeting in person, please join on Zoom with this link: https://usask-ca.zoom.us/j/99373162633?pwd=VHBFV2ZXUnpkdUp6ZktwalBFeklaUT09

Resources

Our Resource directors are reducing the amount of materials brought to each meeting. Is there something you urgently need to buy?

Email Don with your request and he will arrange for it to be available for purchase at the meeting.

Please be specific!

Understanding Light

Robbie Henderson has generously made available to the membership his January slide presentation on growing orchids under lights. See the SOS website for the link.

https://www.saskorchids.com/index.html

GARDENSCAPE

March 24 - 26, 2023

We are entering a society display this year!

We will need SOS members to bring their flowering orchids for the society display.

Think about what is in your collection that might be flowering at that time. Start grooming them now, to help them look their best! Please label the pots with your name and bring them to Prairieland Park on Friday, March 24 in the late afternoon. (Details will be discussed at the March General Meeting.)

We need volunteers to sign up for 2 or 3-hour shifts to "work" at the

display. This is a great way to meet people, talk about our orchids and spread the love of orchid growing! You don't have to be an experienced grower. At least 2 people are assigned to each shift, and new growers are paired with a more experienced grower. A volunteer signup sheet will be circulated at the February General Meeting.

You will receive a FREE PASS to Gardenscape for the day you volunteer to work the SOS plant display!

Upcoming Plant Sales

Guest speakers for February and March are bringing plants for sale!

There will be no pre-order lists, so bring your own wish-list!

There will still be an SOS members' plant sales table at these meetings, so you can bring your own plants to sell.

But please see the adjacent announcement!

SOS Members' Plant Sales

If you're thinking about bringing plants to sell at the February or March General Meeting plant sales table, please consider keeping them until

April's Annual Silent Auction.

Help raise money for your society!

ORCHID SOCIETY OF ALBERTA ANNUAL SHOW AND SALE

ORCHID FAIR

March 31 - April 2, 2023

Moonflower Room, Enjoy Center, 101 Riel Drive, St. Albert, Alberta

Plant Displays

Plant Sales: local, national and international vendors

Photographers

Annual Photography Competition

Annual Art Exhibition and Competition

Plant Care Sessions

This is one of the BIG orchid events of western Canada!

Are you interested in attending? Helping? We will need flowering orchids to enter in the display. Details to come.

https://orchidsalberta.wildapricot.org/page-18133

JANUARY GENERAL MEETING MINUTES

DATE January 21, 2023, 1:30 PM CST

LOCATION Briarwood Recreation Centre, Saskatoon

NUMBER IN ATTENDANCE 34, plus 2 via Zoom

ANNOUNCEMENTS

Tracey Thue chaired the meeting. She welcomed two new members, Jessamy Foulds and Linda Foulds. She thanked her husband, Marlow Thue, who provided tech support for the meeting; and Valerie Martz, who took minutes for the Secretary, Jenn Burgess.

UPCOMING SPEAKERS AND EVENTS

The location of the February meeting is to be announced. The March meeting is booked to be held at the Lakewood Civic Centre.

50/50 tickets will be sold at the Treasurer's desk for 10 tickets for \$5.00 with half the proceeds going to the Society.

Gardenscape will be held March 24-26. Deb Huculiak will coordinate the Society's display, the first since 2019. There will be a sign-up sheet for volunteers to work a two- or three-hour shift during the event.

The annual Alberta Orchid Show will be held March 31 to April 2 at the Enjoy Centre in St. Albert, AB. There will be an SOS display, so members with plants for display are encouraged to enter them. More information will be provided in the coming weeks.

This year is the 40th anniversary of the Society. The Board will discuss the commemoration of the anniversary.

LIBRARY Deb Huculiak has on hand some American Orchid Society journals relevant to today's presentation.

PROBLEM CORNER A member presented a *Cattleya* in need of repotting. Since most of the roots were not in the pot, many were dry and dying. It was recommended that, since there were new roots, the plant could be repotted. The plant needs a larger pot and could be divided, provided there are viable roots on both divisions. Pat Randall, who grows many Cattleyas, recommended soaking the plant in a pail of water before dividing and repotting in new media. She suggests using clear pots, since the roots photosynthesize. One can use seaweed liquid to stimulate root growth.

A member asked about a Phalaenopsis with a spike, which had been received in an order in October. The spike is still green but no longer growing. Bob Lucas recommended cutting off the spike and waiting for a new one. In his experience, the spike will not continue to grow.

GENERAL MEETING MINUTES, CONT.

SHOW AND TELL

Bob Lucas

Phragmipedium Houge Point Yellow and red, regular bloomer; grows in a mix oof coir, perlite and with a water reservoir.

Phalaenopsis **American Red Beauty 'Candy Apple'** A new registration. Grows in HP Promix and watered when the top of the media turns brown.

Phalaenopsis **Memoria Horst Bohne** In memory of a Phil breeder from Edmonton, Horst Bohne. Bob has had the plant for 20 years. He grows it in Orchiata bark.

Pat Randall

Rhyncattleanthe **Young-Min Orange** A small Cattleya, Pat grows it in bark under lights, fertilizes regularly, and flushes with water once per month.

Cody Hamilton

Sophrolaeliocattleya (Slc.) **Itsy Bitsy** A first bloom, from Sunset Valley Orchids. *Potinara* **Showcase** First bloom, from Sunset Valley Orchids.

James Wood

Cattleya Circle of Life x Walgery From Paph Paradise.

David Schwinghammer

Dendrobium Yuki Sakura David has been experimenting with using a larger pot but with a smaller pot upside down inside. The leaves drop on the plant, leaving a "collection of sticks." Cut back on the watering to force blooming.

Tracey Thue

Paphiopedilum Vixen x Thunder Cat Grown in Orchiata bark in an east-facing window. It blooms once a year. Traditionally called a bulldog orchid due to the large round flower.

Paphiopedilum Fairly Galaxy *Paph. fairrieanum* is one of the parents and this species doesn't like to be dry but, in winter, she decreases watering to about once per week. All of Tracey's Paphs have been switched to Orchiata bark and are doing well.

Cattleya Kathryn Rollke One parent is an epiphyte from south east Brazil and the other is a lithophyte from Brazil. Obtained from Paph Paradise. Tracey grows it under lights in a southfacing window. Most of Tracey's collection goes outside in the summer.

GENERAL MEETING MINUTES, CONT.

PRESENTATION

Understanding Light Levels for Orchid Growing, Both Natural and Artificial Setups Presented by Robbie Henderson

Robbie is a new member of the Society. He is currently a Medical Resident in Diagnostic Radiology at the University of Saskatchewan, having recently received his M.D. He also has a PhD in Physics. Robbie has been growing orchids for two years under grow lights.

Key References: Some of the information for the presentation was taken from these sources: Let There be Light! by Kelly McCracken, in Orchids: *The Bulletin of the American Orchid Society* Volume 90 No. 7-11, 2021.

- Part 1: An Introduction to PAR and PPFD: Why you should forget lumens. p. 520 (July, 2021).
- Part 2: Target PPFD for Orchids and Tropical Plants. p.596 (August, 2021).
- Part 3: Measuring Artificial Light Without a Quantum PAR Meter. p. 676 (Sept., 2021).
- Part 4: Setting up your LED Lights How High, How Far Apart and How Many You Need. p. 758 (October, 2021).
- Part 5: Spectrum and Photoperiod. p. 840 (November, 2021).

Robbie's presentation outlined how to simplify and optimize growing plants under light. He provided an introduction to natural and artificial lights; the various definitions for light with respect tot growing plants; light levels for low, medium, and high light orchids; how to measure light levels in your growing spaces; types of artificial lighting; how to set up artificial lighting sources; and what he described as more "adventurous lighting strategies."

Robbie first discussed some basics of the physics of light and the terms used to measure light: **Light**, consisting of particles (photons) that also behave like waves, measured per unit of time, provides energy to plants for photosynthesis. The energy delivered is dependent upon the wavelength (colour) and the intensity (brightness) of that light. The intensity is dependent upon the power of the sources, such as light bulbs, and the distance from the plant. The gold standard for light is sunlight, which provides a smooth spectrum of light. Sunlight spans a large range of energy (wavelengths) with only a narrow part of that in the visible range.

Artificial light is generated by various bulb types. These, and how they generate light, include the following:

Incandescent - from heat; continuous spectrum

LED - electricity is passed through a semi-conductor device; more closely approximates sunlight and is suitable for plants. LED colours include red (more for flowering) and blue (for seedlings).

Fluorescent - contain specific elements that emit a characteristic wavelength of light. Some are better than others for plants.

Definitions of intensity of light, to help us know how much light is falling on a plant:

Lumen - unit of luminous flux, relevant to human vision.

PAR - Photosynthetic Active Radiation

PPFD - Photosynthetic Photon Flux Density, the unit of measure for PAR. It's a measure of the light available for use by a plant; the light falling on a surface expressed as the number of photons within an energy range per second over a square meter (µmol/sec/m²).

Practical aspects of PPFD include how to measure it, the plant's lighting requirements, and how to adjust the lighting.

Key factors include the total energy delivered over the spectrum per day. Sunlight is not consistent during the day and year, so a 12 hour on/off cycle is recommended for grow lights.

PPFD FOR SPECIFIC ORCHID TYPES					
Category	Low Light Plants	Medium Light Plants	High Light Plants		
PPFD range (µmol m·² s·¹) [12hr cycle]	40 – 60	100 – 150	200 – 250		
Examples	Phalaenopsis, jewel orchids, some paphiopedilums (also begonias, African violets)	Oncidiums, phragmipediums, some dendrobiums	Cattleyas, brassavolas		

How to measure PPFD

Expensive option: Quantum PAR meters

Easier solution: photographic light meters and phone apps

Note: EV is exposure value

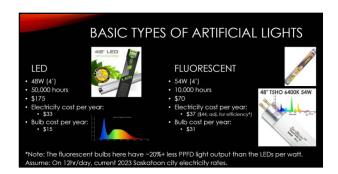
				f/8 @ ISO
Shutter Reading	EV	Lux (ignore)	PPFD (Sun) (lux x 0.017)	PPFD (FS LED/fluor) (lux x 0.014)
1/20 s	10.3	3152	53	44
1/40 s	11.3	6303	107	88
1/60 s	11.9	9554	161	132
1/80 s	12.3	12607	214	176
1/125 s	13	20480	348	287
1/160 s	13.3	25214	429	352

BACK TO: PPFD FOR SPECIFIC ORCHI TYPES – EXPOSURE CONVERSIO					
Category	Low Light Plants	Medium Light Plants	High Light Plants		
PPFD range (µmol m ⁻² s ⁻¹)	40 – 60	100 – 150	200 – 250		
Photography exposure reading (shutter, at f/8, ISO 100)	1/20 s – 1/30 s	1/60 s	1/100 s		
Examples	Phalaenopsis, jewel orchids, some paphiopedilums (also begonias, African violets)	Oncidiums, phragmipediums, some dendrobiums	Cattleyas, brassavolas		

EXPOSURE LIGHT METER CONVERSION Comparison of phone with PAR meter					
Reading	Photone App (PPFD)	PAR Meter (PPFD)	App overestimates by:		
1	114	93	23%		
2	287	207	39%		
3	282	200	41%		

Annual cost of LED vs Fluorescent lights was provided, assuming a 12 hour day and current 2023 City of Saskatoon electrical rates.

Although it's more expensive to buy, the LED lights are cheaper to operate, have more light output than fluorescent bulbs per watt, and have a longer lifespan.



For information about LED light placement and PPFD mapping, see the experiment by <u>vegetableacademy.com</u>. One can then place plants with different light requirements accordingly on the same shelf.

Suggestions for placement of artificial light:

Use a full spectrum LED source - multiple bulbs as needed.

12 hrs. on/off cycle

Suspend the light(s) at a height to achieve desired light level at the plant(s). Use a pulley system to adjust the height.

Think about vertical as well as horizontal (lateral) distance from the light(s).

Adjust as the plant responds. You have more control with artificial light.

For natural light:

Consider daytime and yearly changes in light levels.

Use sheer curtains, other plants, etc., to control light levels.

A few questions about Sunblaster T5 fluorescent bulbs and LEDs followed.

End of presentation.

50/50 DRAW: Vicki Wiley won \$47.50

MEMBER PLANT SALE: Seven plants sold.

ADJOURNMENT: 3:30 pm. Valerie Martz (Recorder)

JANUARY SHOW AND TELL

Photographs by Tracey Thue





Phalaenopsis American Red Beauty 'Candy Apple' Grown by Bob Lucas



Paphiopedilum Memoria Horst BohneGrown by Bob Lucas

Phragmipedium Belle Hougue Point Grown by Bob Lucas



Potinara ShowcaseGrown by Cody Hamilton



Sophrolaeliocattleya (Sic.)
Itsy Bitsy
Grown by Cody Hamilton



Rhyncattleanthe Young-Min Orange Grown by Pat Randall



Cattleya Circle of Life x Walgery
Grown by James Wood



Dendrobium Yuki Sakura Grown by David Schwinghamer



Paphiopedilum Vixen x Thunder CatGrown by Tracey Thue



Paphiopedilum Fairly Galaxy Grown by Tracey Thue



Cattleya Kathryn Rollke Grown by Tracey Thue

JANUARY PHOTOS FROM MEMBERS



These plants are photographed by the grower, unless otherwise stated.

Oncidium NOID

Grown by Inger Almquist

I bought this a few years ago at Bill's House of Flowers. It grows in a south window exposure with full water culture. No scent is noted.

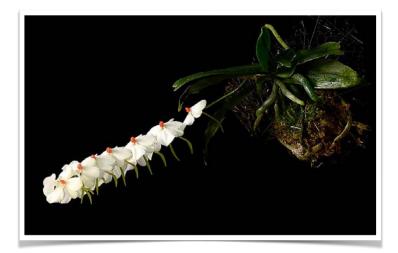


Cymbidium Blazing Fury x Ruby Eyes
Grown by Tracey Thue
Photographed by Sara Thue



Clowesetum Diane Drisch Grown by Tracey Thue Photographed by Sara Thue





Aerangis luteo-alba var. *rhodosticta* Grown by Sara Thue



Papiopedilum Cocoa Lovely 'Big' x Cocoa Green 'Full Moon' Grown by Lynn Campbell



Phragmipedium Hanne Powpow Grown by Tracey Thue Photographed by Sara Thue



*Lycaste virginalis*Grown by Shayne Feltis



*Chysis limminghei*Grown by Shayne Feltis

This colour pattern is one of my favourites. The flowers are waxy and substantial, lasting about a month.







Anguloa uniflora Grown by Shayne Feltis

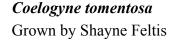
After a brief rest, the flowers emerge with the new bulb. The flowers are large, waxy and have a beautiful, powerful scent of spice, vanilla and mint. The uniflora species grows to between 3 and 4 feet, and some of the leaves are nearly 12 inches across.



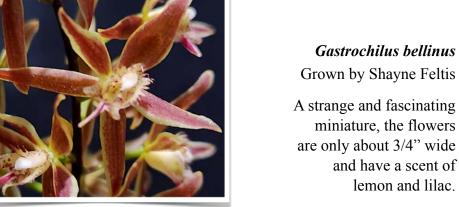
Dinema polybulbon Grown by Shayne Feltis



Macrodenia multiflora Grown by Shayne Feltis



This spike was 3 feet long and produced 40 wonderful, honey and mahogany-coloured flowers. Watching the buds as the spike matures is as rewarding as the blooms themselves.







Cattleya leuddmanniana 'Tipo' x self

Grown by Leslie Neilsen

Taken with my cell phone in bright morning light; the fragrance is so intoxicating I want to tape the bloom to my nose! This orchid was part of the Ching Hua order in 2021.



Cattlianthe Doris and Byron 'Christmas Rose'
Grown by Leslie Neilsen



Rhyncattleanthe Young-Min Orange Grown by Leslie Neilsen



Paphiopedilum hirsutissimum var. esquirolei Grown by Leslie Neilsen

Adventure at the Bottom of the World

By Tobi Fenton Photographs by Pat Randall



Cuernos del Paine from Lago del Toro Torres del Paine National Park, Patagonia, Chile

Patagonia. The Strait of Magellan. Penguins and Darwin's rhea. Torres del Paine (*towers of blue*). Are there any words more likely to prickle the back of the neck and foment dreams of South American exploration? European maritime explorers of the sixteen century would have dreamed feverishly of navigating routes to this distant world. And botanical explorers would likewise have burned for the chance to be on one of those sailing ships.

The Portuguese explorer, Ferdinand Magellan, entered the frenzy of European exploration in 1519. He left Spain with five ships, searching for fame and a western maritime route to the Spice Islands of Molucca (in modern day Indonesia). If successful, he would be the first to circumnavigate the globe. It triggered a fierce competition between Spain and Portugal for control of the lucrative markets of cloves, nutmeg and mace that are native only to the Molucca Islands. It's a long and gruesome tale and certainly didn't result in the dreamed-of glory for Magellan. In 1521, just short of his goal, he stopped off in the Philippines and befriended the locals of one of the islands. They convinced Magellan to help them in a battle with the people of a neighbouring island. He agreed, led the charge, and was shot with a poisoned arrow. He died. Two of the original five ships of Magellan's fleet reached Molucca later that year; only one ship returned to Europe.

Before the disaster that befell him, Magellan accomplished some extraordinary maritime feats. The fleet headed west from Europe and crossed the Atlantic Ocean in about a month, then turned south down the coast of South America, looking for the mythical passage through the bottom of the continent. (Mutiny and shipwreck by ferocious Atlantic storms reduced the fleet to four ships.)

In October, 1520 Magellan found the passage that separated Tierra del Fuego from the rest of South America. It was a cold and arduous route and the crew of another ship mutinied and turned back for home. (Down to three ships.) Traversing the passage took a month. When they exited the strait, they became the first Europeans to see the great ocean, which Magellan named "Par Pacifico" because its water looked so peaceful after that of the strait behind them. It then took the fleet three months to cross the Pacific, landing in Guam in March, 1521, then on to the Philippines and the fateful arrow.

Magellan may have failed in personally gaining fame in the global spice trade, but the voyage did reverberate into the future. The Strait of Magellan is perhaps the most famous eponym to make its way onto the world map. It became an important sailing route between the Atlantic and Pacific Oceans before the Panama Canal was completed in 1914. It shortened the route by several thousand miles and, although it could be treacherous itself, was much safer than the unpredictable storms of the Drake Passage between Cape Horn and Antarctica.



Gentoo Penquins, Antarctica



Emperor Penquins, Antarctica

A crater on Mars and one on Earth's moon; the Magellanic Clouds; a NASA spacecraft; and two Chilean telescopes are names in the astronomic field that honour Magellan's accomplishments. Other eponyms in various fields of human endeavour include a railcar in the US, a navigation company, a container ship, and an American project to circumnavigate the world by submarine.

Magellan's influence is also seen in the botanical realm; the number of plants that carry his name is impressive. A bog sedge, a Sphagnum moss, a strawberry, a Fuchsia, and an aven, are only a few of the native plants given the species epithet "magellanica."



Chlorea magellanica Hook.

Magellan Strait Orchid

The world's southern-most forest is found in southern Chile and Argentina and is called the Magellanic Subpolar Forest. Intertwined with this forest is an ecological zone called the Pre-Andean Shrub Land, which harbours durable shrubs that can withstand the fierce winds of Patagonia. And here, on the cold end of the continent, is an orchid, *Chlorea magellanica*, locally called Orquide Porcelana, the porcelain orchid. The Magellan Strait Orchid.

SOS member Pat Randall and her husband Art had their own enviable adventure this past December when they travelled to Antarctica, Argentina, and Chile. While battling the fierce, cold spring wind in Torres del Paine National Park, near the Strait of Magellan, they found this tough terrestrial orchid.

The porcelain orchid can tolerate temperatures as cold as -20C and snow cover for eight months of the year. With tulip-like strappy leaves, it grows to 14 inches tall. Serendipitously for Pat, it blooms in spring as the snow melts, with scentless white flowers that are intricately sketched with green lines. Because it has adapted to the cold mountain climate of southern South America, the Magellan Strait orchid will not tolerate warmer environments. Which leads one to wonder and worry about its fate as the climate of the southern polar region shifts with global climate change.

This species was surveyed by the French botanist Claude Gay, who was hired in 1828 by the Chilean government to survey the natural history of the country. His work contained the first complete orchid flora of Chile. (For fascinating reading, see this article of his life and work in Chile from 1828 - 1842: https://www.researchgate.net/publication/365379773 Orchids of the Southern Cone 1830-2000 - Part I Claude Gay's physical and political history of Chile

Chlorea magellanica was first officially collected by Charles Darwin in 1834. He collected the type specimen on Elisabeth Island at the entrance to the Strait of Magellan. (A type specimen is the particular plant that is used to describe and name a new species of plant.) It was later formally described by the great 19th Century plant explorer, Sir Joseph Hooker. It is extraordinary how a robust little plant at the bottom of the world, busy with its own exquisite existence, was touched by these distant travellers whose work, like Magellan's, echoed into the future.

And before the Europeans found it? What did the indomitable nomadic people of Patagonia call this plant 4,000 years ago, as they wandered the edges of the Southern Patagonian Ice Field? Did they dream through the long winter nights of its shining hieroglyphic flowers? Was it the central entity in their spring celebrations? Did their wise women have premonitions of danger coming in the shadows of time when the glaciers melted and their massive fresh water reserves would be threatened? What then would become of their porcelain harbinger of spring?



The Randalls land on Antarctica. The G Expedition cruise ship awaits their return.