

SOUTHERN ONTARIO ORCHID SOCIETY

June 2018, Volume 53, Issue 6 Meeting since 1965

Next Meeting Sunday, June 3, 2018, Floral Hall of the Toronto Botanical Garden.

★ **Vendor sales noon to 1pm**

★ **Program at 1pm Orchid Round Table.** Knowledgeable members will discuss cultural topics in small group formats around several tables in the hall. The intent is that everyone will be able to rotate to all of the sessions during the meeting. Tentative topics are: Repotting, Potting media, Summering plants, and Terrarium culture. There will also be session on using computerized orchid information systems.

★ **Member plant table.** Bring in your flowering plants for show and tell and points

★ **Raffle**

President's Remarks Welcome Orchid Enthusiasts, It has been a colder than usual spring, and if you haven't moved your plants outdoors for the summer yet, please consider doing so now. Mine have been braving the elements since the last weekend in April (2 weeks after the freakish mid-April snowstorm). The fresh air, natural air movement, humidity and stronger light levels are all bonuses for the plants and the lower costs (no lights and fans to run) are a bonus for your wallet. For our June meeting we will be having our annual round table presentations, including mine where I will discuss the aforementioned "summering orchids outdoors". Other topics include potting mediums, repotting and terrariums. Terry Kennedy will also give two brief presentations on navigating;

1. the Orchid Roots (formerly Blue Nanta) website (<http://www.orchidroots.com/orchid/>) a website that I have been using for a few years in researching hybrid crosses, and
2. the OrchidWiz Orchid Database Software, which some of our member have on their computers (<https://www.orchidwiz.com/>).

These topics were narrowed down from an informal member's poll at a recent SOOS meeting, so hopefully you will find them useful and enjoyable. I hope that you were able attend John Alexander's and Peter Kaelgren's (<http://www.alexanderarts.ca/>) wonderful presentation at our May meeting, on

their pursuit of finding and photographing Canadian orchids in the wild. They shared lots of great photos and anecdotes. An edited copy of Peter's part of the presentation is in this newsletter. We thank Peter for providing the original, Other speakers at upcoming meetings, which Terry Kennedy has arranged as our Program Director, are listed below;

June 3: Orchid Round Tables

July 8: Orchid Summerfest, Robert Fuchs, R.F. Orchids (Florida)
<http://rforchids.com/>

September 2, Fred Clarke, Sunset Valley Orchids (California),
<http://sunsetvalleyorchids.com/>

October 7, Jason Fischer, Orchids Limited (Minnesota) www.orchidweb.com

Preordering information for the July 8 and September 2 speakers is as follows:
www.rforchids.com (sales@rforchids.com) July 8 meeting

1 You may order of their current "mail order" sale flyer, with some heavily discounted new arrivals (hybrids and species, mostly). This will represent the best value for our members; (the flyer is downloadable on their website, on the "News" page)

2. There will be no further discounts from these prices, but there will be no shipping or document charges.

3. Members can also order anything from the online catalog at www.rforchids.com, The shopping cart does not work for non US orders so one should make a list and send it directly to (sales@rforchids.com)

4. Be sure to stipulate that this is an order for Bob to bring to Toronto. for July 8th.

5. .Deadline for pre-orders is June 30

Sunset Valley Orchids
www.sunsetvalleyorchids.com September 2
meeting

For pre-orders:

1. Order from the website as this is the most current listing. < fred.clarke@att.net> directly mentioning that the order is for his SOOS visit September 2nd.

3. No further discounts as Fred is paying for shipping and documentation etc. so there are no added cost to the price of the plants.

4. At the meeting he prefers payment in US funds or you can use Paypal or Credit card if you would like to prepay.

5. He will start accepting orders for the Sept meeting on July 1st and the cut off date is August 20th

The treats for the June meeting "social break" fall to the members with the last names beginning with begin with the **letters M and N**. Thank you to the members **with the letter L** who brought treats for our previous meeting.

We will see you soon.

John Vermeer

We are on facebook at:
<https://www.facebook.com/groups/298874747302722/>

And
www.facebook.com/SOOSOrchid/
On instagram at
instagram.com/soosorchid/

Wanted!!! A Volunteer to lead the SOOS Show committee, dedicated to producing our annual show. Peter Poot wants to retire to a less demanding and less responsible role, but will remain available to advise and assist. Interested? Speak to Peter Poot or John Vermeer .

Coming Events 2018

June

2, TJC Monthly AOS Judging at TBG.

3, SOOS meeting, Toronto Botanical Garden, sales 12 noon, program 1 pm, Floral Hall

16, Monthly Montreal AOS judging, Jardin botanique de Montreal

July

8, TJC Monthly AOS Judging at TBG.in the Morning and SOOS Orchidfest Garden Hall in the afternoon.

21, Monthly Montreal AOS judging, Jardin botanique de Montreal

August

4, TJC Monthly AOS Judging at TBG.

18, Monthly Montreal AOS judging, Jardin botanique de Montreal

September

1, TJC Monthly AOS Judging at TBG.

2, SOOS meeting, Toronto Botanical Garden, sales 12 noon, program 1 pm, Floral Hall

15, Monthly Montreal AOS judging, Jardin botanique de Montreal

29,30, Central Ontario Orchid Society Show, Cambridge, Ontario.

October

6, TJC Monthly AOS Judging at TBG.

7, SOOS meeting, Toronto Botanical Garden, sales 12 noon, program 1 pm, Floral Hall

13, Monthly Montreal AOS judging, Jardin botanique de Montreal

20,21, Windsor Orchid Society Show.

November

October 31- November 4, AOS Member's meeting in Florida

3, TJC Monthly AOS Judging at TBG.

4, SOOS meeting, Toronto Botanical Garden, sales 12 noon, program 1 pm, Floral Hall

10,11, Niagara Frontier Society Show, Buffalo.

17, Monthly Montreal AOS judging, Jardin botanique de Montreal

December

1, TJC Monthly AOS Judging at TBG.

2, SOOS meeting, Toronto Botanical Garden, sales 12 noon, program 1 pm, Floral Hall

8, , Monthly Montreal AOS judging, Jardin botanique de Montreal

Conservation Corner

Your society has a group of enthusiastic members that meet regularly to discuss orchid conservation issues and develop conservation

action plans. This group is under the active chairmanship of Tom Shields.

Plant of the Month *Ascocentrum miniatum*

Doug and Terry did a beautiful job flowering this species! The plant was grown without any medium in a plastic basket, high up in their greenhouse and got water and fertilizer with all the rest of the plants in their high humidity greenhouse.



Doug suggested the “roots in a clear bottle method” demonstrated by Alexsi Antanaitis for those of us without a continuously damp atmosphere. They have several more plants of this species available for sale. So you can all try to beat their success in covering the plant in at least 10 inflorescences of small orange flowers! Well done Kennedys!

AOS Judging Results

Toronto Judging Centre May 5, 2018

Paphiopedilum thaianum ‘?’ AM/AOS 85 points, Stanley Luk

Judging Centre meeting, Toronto Botanical Garden.

Agenda June 2, 2018

10.00am Presentation by Cédric Anne on the ‘cute’ *Holcoglossum flavescens*.

10:20am Semi annual Judging Centre Business Meeting . 12:15pm Lunch

1:00pm: AOS Judging

AOS Judging is a service of the American Orchid Society and is open to all! Bring us your flowering orchids

Ribbons in SOOS Display at the Ottawa Show

1st Place Winners

Vascostylis Viboon Velvet 'Crownfox' HCC/AOS Synea Tan

Phragmipedium giganteum Linda Satchwell
Phalaenopsis Chia E. Yenlin Inge & Peter Poot

Dendrobium Hybrid Linda Satchwell
Dendrobium Spring Dream 'Apollon' Synea Tan

2nd Place Winners

Cattleya Aloha Case 'Ching Hua' AM/AOS, Synea Tan
Phalaenopsis equestris 'Orange' Synea Tan

Cymbidium sinense 'Grand Stone Gate' Jay Norris
Oncidium Lois Posey Synea Tan
Epidendrum Rose Valley 'Cardinal' Inge & Peter Poot
Phalaenopsis cornu-cervi Don Wyatt
Phalaenopsis Taisuco Mickey 'Burgandy' Synea Tan
Dendrobium SOOS Celebrates 50 'Synea' AM/AOS Synea Tan
Rossioglossum ampliatum Inge & Peter Poot
Phalaenopsis Brother Sara Gold Synea Tan
Dendrobium unicum Sue Loftus
Phalaenopsis Brother Redland Spots 'Synea' AM/AOS Synea Tan

3rd Place Winners

Phalaenopsis Yu Pin Polar Bear Synea Tan
Phalaenopsis Chia E. Yenlin Don Wyatt
Dendrobium parishii Sue Loftus
Cymbidium ensifolium Dai-Kwok-Quing Jay Norris
Epidendrum Carribean Dream Synea Tan
Phalaenopsis Hybrid 3 Jocelyn Webber
Cattleya Kazuko Takamatsu 'Seto Blue' BM/JOGA Synea Tran
Phalaenopsis Leopard Prince 'Red Fission' Inge & Peter Poot
Display Jocelyn Webber
26 or more plants Jocelyn Webber
Miltonidium Melissa Brianne 'Dark' Don Wyatt
Paphiopedilum Hsinying Citron Linda Satchwell
Cattlianthe Doris & Byron 'X'mas Rose' Jocelyn Webber

WEIRD, WILD AND WONDERFUL

Carnivores, Parasites and Other Interesting Plants (as delivered May 6, 2018) Reproduced by permission of the author. The numbers in brackets indicate an image accompanied the text at this spot during the original presentation . Replacement Images were found on the internet, by your presentation editor, Inge Poot for some of the images.

Orchids are one of the most fascinating plants in the world. Growing on every continent except Antarctica, they constitute the largest family of blooming flowers in the world with over 25,000 species and more than 100,000 varieties. Their numbers continue to increase as new varieties are discovered or hybridized. Orchids range from tiny miniatures 2.5 to 5 cm high to a metre or taller. The *Orchidaceae* as the family is now commonly called consists of perennial, monocotyledonous plants. Grasses and lilies are their closest relations. Most orchids have oval or blade-shaped green leaves. The majority of orchids grow in the tropics, usually without soil and with exposed roots, as *epiphytes* on trees or as *lithophytes* on rocks. The classic orchid blossom consists of three sepals and three

petals with the middle one enlarged into a lip and having a different shape and colour. Varieties in cooler climates like Canada are terrestrial or grow in the ground. Over seventy varieties have been documented as growing in Canada. Interestingly, the British Isles are home to only about fifty-five, many of which are threatened or endangered due to poaching and habitat loss

Although John and I have both been engaged with nature our entire lives, our interest in orchids was awakened six years ago by Alison and David Stein who had retired to Arnprior, Ontario. Alison's uncle Charles Macnamara (1870-1944) was an avid botanist whose notes and photographs of native orchids in Ontario are preserved in the local archives. The Steins encouraged us to pursue a new passion: finding and photographically documenting all of the orchids that grow in Canada. Because many of these plants are rare or endangered, this quest has been a matter of research, persistence, luck, advice from knowledgeable naturalists, and enjoying whatever we encounter along the way. We are not trained botanists. We are simply enthusiastic amateurs open to learning more about the beauties of Canada and how to conserve and appreciate them. I am going to begin our talk by introducing unusual plants we have discovered along the way. John gets to finish the presentation by showing you the treasured native Canadian orchids that we have been fortunate enough to see.

In planning this talk, we thought it might be good to begin with something you can get your teeth into. So, we settled on **carnivorous plants. (2)**

We also chose these because all of them can be found in bogs, fens and marshes where they often grow in close proximity to native orchids. Using a variety of techniques, these plants attract and catch insects from which they absorb much-needed nutrients to survive. The wet areas where they grow often host large populations of mosquitoes, black flies, gnats, and other small insects. So, in effect, these carnivorous plants are saving humans and other living things from annoying insects.

(3) Perhaps the largest of the carnivorous plants is the Pitcher Plant named for its long, bulbous leaves which are open receptacles. Inside at the bottom is water and covering the inner surface of the leaf are tiny, downward-pointing hairs. If an insect enters, lured by the water, once it lands it cannot get out and slides

down to the liquid below where it drowns and is digested.

Sarracena purpurea

(4) The Pitcher Plant, is the provincial floral emblem of Newfoundland where it thrives in the many bogs and fens. It grows at a number of locations in Ontario. These views from the fens on the west side of the Bruce Peninsula around



Oliphant show the small islands of plants that often form around a Pitcher Plant. Tall White Bog Orchids occasionally grow on these islands. Another orchid, the Rose Pogonia, can be prolific around a Pitcher Plant. Occasionally one sees one or more white Lady's Tresses Orchids with them and at the bog at Petrel Point, a couple of colonies of Loesel's Twayblade Orchids, which are easy to spot once you become familiar with their peculiar yellowy-green colour. These little islands stand out even more when the water evaporates in the summer and the surrounding bottom is dry and cracked earth. There seem to be several different varieties of Pitcher Plants growing on the Bruce: most are tall but some are low to the ground and small in size and a few are even miniatures. Pitcher Plants should never be dug up for the garden as it is impossible to grow them outside of a bog or fen. Greedy poachers have decimated their population in some areas of Algonquin Park.

(5) Most people do not notice Sundews because of their small size and stature. We have seen some plants the diameter of a loonie along the path to the beach at Kilbear Provincial Park on Georgian Bay. The colouration of their tiny hairs with sticky sap



creates a reddish haze, especially in large colonies, and can be helpful for locating single plants growing on



clumps of green sphagnum moss. Three of the species that grow in Ontario are the Spatulate Leaved Sundew with leaves shaped somewhat like a wooden spoon, the round-leaved Sundew which seems to favour mossy locations, and

the Linear Leaved Sundew with oblong leaves. (6) Flies and other small insects become attached to the sticky hairs, die and are



digested.

(7) The Horned Bladderwort is a carnivorous plant with the daintiest diet. Diminutive in size, it floats at the surface of reasonably calm water in ponds, fens, marshes and bogs. All one sees is the vibrant yellow

flower on a small wiry stem, either singly or in tightly-packed clumps. Below the surface of the water is a network that includes small sacks that trap microscopic water life like amoeba and water fleas which are digested for nutrients. It is interesting that the name does not focus on the attractive flower but on the bladder or trap. The last part of the name comes from the



Old English "wort", sometimes spelled "wyrte" which traditionally referred to a root, herb or plant but came to mean an herbaceous plant.

(8) But, let's get rid of all the worts while we are at it.

In 2014, at Oliphant Fen, at a distance from the board walk, we saw small plants with bright yellow-green leaves. They had small purple blossoms, somewhat like the house plant *Streptocarpus*, held high on thin wiry purple stems. The colour combination was striking. Fortunately Oliphant Fen has a story board with pictures that help to identify



all of the plants and provide blooming times. (9) This plant is a Butterwort, named because people in the past thought the colour of the leaves resembled home-churned butter. I like to refer to it as "Nature's fly paper."

In the spring and early summer, when mosquitoes and other insects are plentiful, the leaves secrete a sticky liquid. This makes them look like they are covered with rain water or dew. Thirsty flies and insects come down for a drink and stick on the surface of the leaf, much like the hanging coils of old-fashioned sticky fly paper. Old-fashioned celluloid fly paper had a tendency to curve inwards: the edges of the butterwort leaves act similarly and bend in to digest the insects. The leaf then unfurls and sheds the remains of the insect bodies.

(10) Butterwort grows in damp areas along the Bruce Peninsula including the high tide mark of beaches. John was able to photograph some dense colonies at such a location in 2015.

(11) Evolution is a logical process. Even plants know that they need insects to deliver pollen from a wide produce healthy hybrids. The blossoms of both Sundews and Butterworts are borne on stems well above the leaves to ensure that mosquitoes and other pollinators can do their job rather than becoming lunch. By early summer, the Butterworts seem to have almost no insects adhering to their leaves and they look less shiny. Having gorged on insects earlier in order to produce blossoms and seeds, perhaps by July they are

deriving more of their nourishment from photosynthesis and building reserves for the winter.

(12) Plants that are **parasites** constitute a diverse group. Each seems to be associated with a specific host plant and frequently with a particular ecosystem. In most cases, the host plants are larger as in specific species of trees. There are some that you look at and would never guess are parasites. Let's begin with the more unusual looking ones that can be found in the forest. These can be difficult to discover. They only appear under ideal conditions and often all one can find is one or two stray examples which may not be in very good condition. Remember searching for uncommon or rare plants is not like going to a flower shop or buying plants from a nursery. These plants are not developed by large companies to thrive in your garden and coddled along the way by commercial growers. Having said that, 2015 seemed to have been an ideal year for finding parasites in the woodland. Perhaps they benefitted from the weather and the precipitation. We found interesting examples at a variety of locales in Ontario.

(13) Indian Pipe is perhaps the best known and most distinctive of the parasitic plants. It is so named because the shape of the stem and blossom approximates the stem and bowl of the type of white clay



tobacco pipes that were used by smokers from the late 1500s up to almost 1900. It is also representative of a group of plants that do not do any photosynthesis to produce food. As a member of the species *Monotropa*, its growth is supported by a fungus that derives all the necessary nutrients from the roots of surrounding forest trees. In most cases, these seem to be deciduous, often beech, maple or birch. John and I have usually found Indian Pipe growing along the Marl Bed Trail on Flowerpot Island off the tip of the Bruce Peninsula. This small clump growing at the base of a birch tree had just begun blooming and was irresistible in the morning sunlight. Mostly one sees them with black spots and blemishes and when they have died down, small wiry stems and seed

heads sticking up to 22 cm above the forest floor.

The Indian Pipe is classified as "*Monotropa uniflora*", a plant with a single flower. Its closest relative the Pine Sap, *Monotropa hypopithys* looks very similar which often leads to confusion.

On closer examination, the Pine Sap is usually smaller and has two or more blossoms on a stem making it look a bit like a Lily-of-the-Valley. It can be more colourful having a yellow, red or pinkish tone.



Ideal growing conditions occur in dry coniferous forests, such as the stands of pine that were commonly planted as part of reforestation in the past century. In 2015, we discovered prolific stand so Pine Sap at a conservation area north of Belleville. **(15)** These images make the comparisons more obvious. The Pine Sap on the right were growing among grass and other green plants. There may not have been any green foliage growing around Indian Pipe. The Indian Pipe on the left were one of fifty or more clumps along the path at Mill Pond Conservation Area north of Highway 7.

(14) In August, 2014, John and I were walking back to the highway along a little-used road on the Bruce Peninsula. Our usual practice when looking for wildflowers is for John to look at the right side of the path or road on the way out while I inspect the left side. Depending on the light and visual obstructions like branches and leaves, we often discover things only on the return trip when we change sides. This time I saw something that looked like small cobs of densely-packed whitish corn kernels growing among the dead leaves at the side of the road.



At first I saw only a few but as our eyes became familiar with this strange new plant, we discovered more growing on a side path under large beech trees. Certain of the dead, dry brown ones emitted a cloud of brown powdery spores when you tapped on them. John was able to identify the plant as Cancer Root, so named because it is a parasite growing on the roots of deciduous trees, particularly oak, in mature forests. Cancer Root is a perennial plant that can grow as tall as 25 cm or 10 inches. In June, 2015, we made a point of re-visiting the same locations. Although the number of plants did not seem to be as many as the previous year, there were clumps of yellow blossoms. The resemblance to a pine cone resulted in the name *Conopholis americana*. On the left, you can see the little corn cobs of seed capsules that first caught our attention the previous August. I suspect that most Canadians don't even know this plant exists.

(17) Beech Drops is possibly the plainest and most unassuming of all of the parasitic perennial plants. It grows on the roots of beech trees in established forests. The flowers are small and understated. Those on the lower stem remain closed and self-pollinate to form seeds. The upper ones are small open trumpets but apparently sterile. Often all you see as evidence of these plants is the dry brown wiry stems rising as high as 45 cm or 18 inches at the foot of the tree. We have observed Beech Drops both in Ontario and at a park in Fredericton, New Brunswick.



(18) Now, it's time to leave the forest and walk into the sun-dappled glades and fields in search of parasites. One-Flowered Broom Rape grows in well-drained areas among low grasses near conifers on the Bruce

Peninsula. It survives on the roots of various plants species. The single flowers on stems between 10 and 25 cm tall (4 to rarely 10 inches) appear as if out of nowhere from late May to July. The texture of the stems looks a bit like a cross between a pipe cleaner and lint. Most flowers are a washed out white but some are more pinkish with a yellow centre. The flower form resembles an English Primula or Cowslip but has only one flower to a stem and no leaves.



(19) John and I first encountered Wood Betony, *Pedicularis canadensis* along the far side of the parking lot at Rondeau Provincial Park. In late May, 2013, large clumps appeared there in lovely colours ranging from off-white, yellow to brownish reds. It usually appears as a ground cover no more than 7 cm tall. Wood Betony is a perennial that is semi-parasitic, though the books don't seem to suggest host plants. It favours sandy or well-drained oak, oak-pine or deciduous forests and looks particularly attractive in large colonies. We have found it growing along the Bruce Trail on the east side of the Bruce Peninsula.



(20) One of the most flamboyant parasites that grows out in sunny environments like dry tall grass prairies, moist clay fields, beach edges on the Bruce, and alvars is the Painted Cup. It is sometimes called the Indian Paintbrush, *Castilleja coccinea* because its flower head looks like a painter's brush



dipped in colour. Painted Cup receives part of its nourishment by attaching its roots to host plants, probably in most cases grasses. It can be an annual or a biennial that blooms the second year and appears any time between May and late August. The majority of the plants produce red or orange-red flowers but yellow flowers appear occasionally.

(21) The number of plants varies from year to year. In the spring of 2014, John Alexander saw fields on the Bruce which appeared red from the profusion of Painted Cup. Individual plants can be anywhere from 4 cm to 25 cm tall.

(22) I get to cover all the weird and unusual plants and flowers. Falling into this category are the Coral Root Orchids, (Early coral root shown here) so named because their root formations look like tiny clumps of marine coral. The black and white image shown in the presentation is a photograph taken by the amateur botanists Charles Macnamara (1870-1944) of Arnprior, near Ottawa.



Charles Macnamara was a skilled amateur photographer who, among other things, recorded native Ontario orchids between about 1910 and 1940., compiling the results of his research in a typed album with 50 photographs. Today, only a botanist with a government permit would think of digging up an orchid to view its root system. His niece, the late Alison Stein, deposited the papers of Charles

Macnamara in the Archives and Library at Arnprior.

As you may be able to see from the



photographs, Coral Root Orchids grow in the heart of established forests. A Spotted Coral Root *Corallorhiza maculata* appears above and the more common Striped Coral Root, *Corallorhiza striata* below. Like all orchids, microscopic spores of the Coral Root partner with a specific fungus to get the plant established. However, Coral Roots are different. They do not have green leaves but are

saprophytes, which means that their nutrients are secured by the fungus from the decaying matter in the forest floor.

(23) Only the Early Coral Root, *Corallorhiza trifida* (shown on previous page) which grows in temperate zones in northern areas around the world, does any photosynthesis with sunlight to create food and that only on a partial basis. Perhaps that is understandable. It blooms in the early spring, the only time significant sunlight reaches the forest floor before the leaves are fully out on the trees. Early Coral Root seems to be 15 cm or about 6 inches or even shorter in stature.

The Autumn Coral Root, *Corallorhiza odontorhiza* is even smaller. Specimens we have observed in Rondeau Provincial Park ranged in height from 3.5 to 10 cm and in some cases were almost miniature plants. It appears in September. Some of its blossoms do not open but simply self-pollinate while others are likely pollinated by ants and other tiny insects.



(24) While the Autumn Coral Root has a fairly nondescript appearance, its cousins the Striped Coral Root and the Spotted Coral Root are larger and more attractive. Both of these specimens can be photographed in June or July on Flower Pot island which is part of Fathom Five national Park at the tip of the Bruce Peninsula. Striped Coral Root can grow up to two feet tall in clumps of three to five blooming stalks.

(25) I feel like the Friend of the Friendless in the Salvation Army Band. John also gave me the

Stinkers to talk about. (26) The Skunk Cabbage is

the poster child for this group of foul-scented flowers.

Its hooded blossom often emerges when the last of the snow is on the floor of the forest or swamp. The blossom generates enough heat to melt the snow



SKUNK CABBAGE ~*Symplocarpus foetidus*

around it and is there to attract beetles and other insects that can pollinate it before there are more beautiful and distracting flowers to catch the attention of insects. Ultimately the large round leaves grow out and are able to make food through photosynthesis with the assurance that the plant has already been pollinated and is producing seed. On our quest for native orchids, we have often encountered Skunk Cabbage in ecosystems where Show Lady Slippers thrive, especially around Stratford in Perth County.

(27) Our experience has been that Red Trilliums are less common than the varieties of White Trilliums. Although



I have never detected a scent on White Trilliums, some of the Red Trilliums I have smelled did not have a pleasing scent. Some writers have

described their scent as similar to decaying meat or a wet, dirty dog. Either way, I don't get too close to them. Our biggest problem in photographing Red Trilliums has been the position of the blossoms. Most of them seem to be drooping over so that the form and details are not readily visible.

(28) Possibly our most significant scent bulletin concerns the One-Leafed Rein Orchid or *Platanthera obtusata*, a rather plain orchid with a single oval leaf at ground level and off-white or greenish blossoms. Its

range and distribution are wide, extending from the northern U.S.A. through all of Canada and up to Alaska. Scientists became interested in the Rein Orchid because its primary visitors are mosquitoes.

These apparently were serving as the pollinators. When the formula that creates the subtle scent of the Rein Orchid was chemically analyzed, researchers

discovered that it included chemicals identical to those that produce human body odour. These chemicals stimulate

electrical activity in a mosquito's antennae

which attracts it to the Rein Orchid. By visiting the orchid blossom, female mosquitoes gather nourishing nectar and at the same time transport pollen from blossom to blossom which leads to more seed pods and more orchid plants. The results of this scientific study were presented early in 2016 at the annual meeting of the Society for Integrative and Comparative Biology. You can read all about it in *Orchidata*, the publication of the Royal Botanical Gardens Orchid Society, February 2016 issue, pages 4 and 5. Our native orchids may seem an obscure topic to most members of the public. However, research like this could result in new ways of preventing mosquitoes from biting humans and transmitting diseases like malaria and the Zika Virus. Who said that garlic and onions were the only stinky plants useful to humans!



(29) And now, just to make sure that you are still awake, we are going to talk about **flowers and**



sex. At Orchidfest in Tobermory, early June, 2015, we were treated to an extremely interesting talk on the subject by Dr. Spencer C. H. Barrett. Dr. Barrett is a Professor in the Department of Ecology and Evolutionary Biology at the University of Toronto. Essentially,

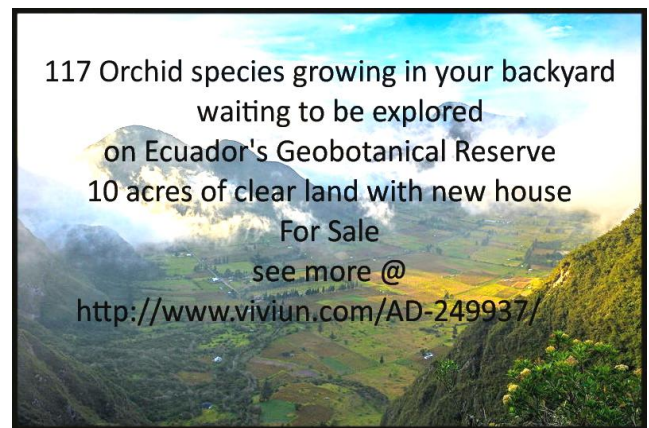
flowers reproduce by self-pollination, pollination by insects and by subdividing or sending out shoots or runners that establish new plants in a territory. Pollination by insects is the best long-term solution because this ensures that different genetic material from a range of the same flower type can hybridize to form new varieties that can be more resistant to diseases or pests or adapt better to environmental changes. **(30)** Most of us have always found the form of the Jack-in-the-Pulpit blossom unusual and different. What I am about to tell you will put them into an entirely new category.

According to Professor Barrett, the Jack-in-the-Pulpit, *Arisaema triphyllum* has an unusual reproductive mechanism. It has male and female flowers. The younger plants are all male. It is only when blooming plants reach an age of seven years, that the plant changes sex and becomes female. Only plants with superior genetic material would grow to be older and bigger and capable of producing quantities of seeds. This means that there is a large and diverse pool of young males available to fertilize the females. If the number of young male plants declines, it has been discovered that some old, mature plants can revert to being male. Little wonder that one finds profuse patches of Jack-in-the-Pulpits in certain areas of Ontario's deciduous hardwood forests.

There are probably other sexual issues with Ontario plants that could be discussed but we have yet to discover them. **(31)** Meanwhile, I am going to let John take over and show you all the wonderful orchids we have discovered and recorded over the last six years.

To be continued soon.

Available used Light setups from Julia and Ted Thomas at 235 Tampico Road, Richmond Hill, phone 905 737 3428, email Julia235@gmail.com
The stands are furniture grade, two with 4 ft fluorescent lights and wheels and 3 smaller ones without lights. Good price for quality units.



Property for Sale

About SOOS

Web site: www.soos.ca ; SOOS Facebook group: <https://www.facebook.com/groups/298874747302722/> Member of the Canadian Orchid Congress; Affiliated with the American Orchid Society, the Orchid Digest and the International Phalaenopsis Alliance.

Membership: Annual Dues \$30 per calendar year (January 1 to December 31). Surcharge \$15 for newsletter by postal service
Membership secretary: Liz Mc Alpine, 189 Soudan Avenue, Toronto, ON M4S 1V5, phone 416-487-7832, renew or join on line at soos.ca/members.

Executive: President John Vermeer,; 905-823-2516 Vice-President ? Treasurer, Cathy Dunn, Secretary, Sue Loftus 905-839-8281; Past President Laura Liebgott, 905-883-5290

Other Positions of Responsibility: Program, Terry Kennedy; Plant Doctor, Doug Kennedy; Meeting Set up, Yvonne Schreiber; Vendor and Sales table coordinator, Lynda Satchwell ; Library, Liz Mc Alpine ; Web Master, Max Wilson; Newsletter, Peter and Inge Poot; Annual Show, Peter Poot; Refreshments, Joe O'Regan. Conservation Committee, Tom Shields; Show table, Synea Tan, Cultural snapshots, Alessi Antanaitis, Directors at large Marion Curry, Jay Norris, Judy Palmer, Sherry Xie, Anne Antanaitis.

Honorary Life Members: Terry Kennedy, Doug Kennedy, Inge Poot, Peter Poot, Joe O'Regan, Diane Ryley, Wayne Hingston.

Annual Show: February 9-10 , 2019.

May 6 2018 Show Table Ribbons

Class	First	Second	Third
Class 1 Cattleya Alliance	Epicattleya Pixie Charm Joe DiCiommo	Epi Shinfong City Sue Loftus	Cattleya luteola Michael Huang
Class 2 Paphiopedilium		Paphiopedilum thaianum Doug & Terry Kennedy	
Class 3 Phalaenopsis and Vanda Alliance	Ascocentrum miniatum – Doug & Terry Kennedy		Renanthera John Losgar Joe DiCiommo
Class 6 Dendrobium	Dendrobium chrysotoxum Michael Huang		Dendrobium lichenastrum x prenticei Doug & Terry Kennedy
Class 7 All Others	Stanhopea Goodwood Peter & Inge Poot		
Class 9 Baskets and Displays	Basket display Erika Lorincz	Lepanthes tsubotae Alessi Antanaitis	



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japanese orchids and orchid species

Terry Kowalczyk

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