NEWSLETTER

Volume 22 Number 2 Editor: Ian E. Efford and Siggi O. Kemmler February 2011

President's Message

Wow, 2011! Where did the last year go? I trust that you had a great Christmas and Holiday season. For Sharon and me, things were a little 'ramped up' this year with a granddaughter who was almost seven.

I know that some of you have probably been spending the early weeks of the year pouring over the plant and seed catalogues to see if there is anything that excites you. Might as well stay inside, with the weather we have been having! It is always a pleasant task to cozy up with a good cup of tea and thumb through the pages of a booklet looking for all those interesting possibilities. For myself, I must admit that I am distracted with other things right now. We are doing a major kitchen reno that is coming together as I write this. Good grief, what a lot of decisions which have to be made! And the mess! We are camping out in our house for the two or so weeks it takes.

From a rhododendron point of view, they are resting nicely. Albeit, getting a lot of rain on them! We only had to worry about them if we got some snow like we had at mid-month. Heavy wet snow can break branches. If you can manage it, it is best to go out and shake off the heavy snow if and when it comes. Luckily, mine are fine. How about yours?

On my walk around the neighbourhood the other day, I did notice that there were a few yellow aconites poking their heads out of the ground, and some snow drops also. Let's hope that the snow is over with for this winter so we can look forward to spring.

See you at the February meeting.

David Annis

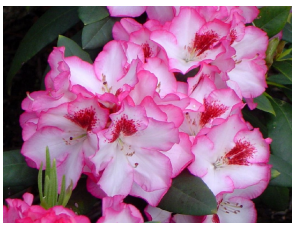
Christmas Party Report

Thank you to all of the members that came out to the CVRS Christmas Party last December 1st. There were only twenty eight of us in attendance but we had a fun and festive evening. (We only broke two wine glasses!!!) The food was terrific as usual. So many tasty choices!

The next meeting will be at 7:30 p.m. on Wednesday February 2nd

Ken Webb will present a show on Rhododendron Gardens in Germany

The pictures are of some of the gardens the Webbs and Kemmlers visited in May last year during the Convention of the German Rhododendron Society



Thank you to Janet for the table decorations. You did a fabulous job of the designs! Thanks also go to Roy for arriving so early to get set up. Here I thought that I would arrive at 5, just before him, and there he was already parking his truck in the yard! You do a great job in getting out the tables and chairs. Thank you to Deb and Richard that arrived early to help get things organized. Due to all of you that came early, we were mostly ready in 45 minutes. Thank you also to Siggi for buying the wine. There must be someone else that I needed to mention. If I forgot to include you, I apologize.

Okay, I also apologize for the first game. Because I inadvertently put some of the cards in my pocket, some of you couldn't find your match readily. And I did forget the 's' in Bob's Blue on the crossword. I hope you had some fun with the two of them anyway and did not tear out too much of your hair in frustration!

The raffle raised $250 which was split between the Salvation Army and the Food Basket here in Duncan, two of the many charities that do good works in the valley. There was also some food items donated and Ian arranged to get them to the Food Basket.

Once again, to everyone, a BIG thank you.

David Annis

Mrs. Ellen Hailey's Prized Rhododendron Collection
60 Years Old and Doing Fine

by Patrick McIntosh
Landscape Horticulturist, City of Nanaimo

Nestled under a canopy of large fir, cedar and maple trees, lurking above an understory of sword ferns, huckleberry and salal, lies a vast collection of rare and mysterious Rhododendron species and hybrids. Wandering over boardwalks and rustic pathways through this well established garden of broad leaved floral wonders, one cannot help but get the impression that they have ventured somewhere almost prehistoric.

The first of these epic bloomers starts to show in February and they continue to lavishly display until the last ones finish in July. The Prime time to witness this ancient ritual of spring is in late March to early June. During this time your senses and imagination will become immersed in a stunning sea of dark rich reds, airy blues and purples, bold whites and yellows as well as a multitude of fragrant pinks. Some of the larger specimens can stand as high as twenty five feet and are covered in over a thousand large beautiful blooms.

If ever I have company fortunate enough to visit Vancouver Island or Nanaimo in the spring time, The Hailey's Rhododendron Grove is a definite "no brainer" on the must see list. Everyone from horticulturaly deprived Albertans to seasoned west coast garden aficionados can all agree that this collection is amongst the most impressive anywhere. As for myself, not only do I have the good fortune of living in very close proximity to the site, but as a city horticulturist maintaining this stunning and unique gem is part of what I do for employment.

Rhododendrons and Azaleas are from the plant family Ericaceae. Azaleas are Rhododen-drons classified in a subgenus. There are literally thousands of different Rhododendron and Azalea species which originate from all over the world, including several native to Canada. Most of the cultivated hybrid and species varieties found in the Hailey's collection originated in Asia, particularly in the foothills of the Himalayas. Luckily for us our west coast climate is ideal for the cultivation of such Rhododen-drons.

Theories suggest that plants are able to adapt characteristics and features in order to attract humans much like bees or other insects in order to do their bidding. This would appear to be evident by the manner in which we humans have aided in the development, reproduction and global distribution of these mesmerizing plants. Just like bees we have been drawn to the colorful shows and natural beauty provided to us by Rhododendrons.

One such bee, entranced by the allure of Rhododendrons was Mrs. Ellen Hailey. By about 1950 Mrs. Hailey began collecting Rhododendrons for her first garden in Vancouver. She toured nurseries and greenhouses all over the lower mainland and Washington State in search of rare and unique hybrids and species. In 1967 Mrs. Hailey's husband Alfred was transferred to Nanaimo, so the family's lives and Rhododendrons were literally "uprooted" and shipped to Nanaimo on two flat bed trucks. A new home for her hundreds of Rhodos was established in Hammond bay. Due to the death of her husband and her failing health in 1975 she was no longer able to care for her prized collection. It was at this time Mrs. Hailey donated some of her species collection to Van Dusen gardens in

Vancouver, and her remaining hybrids and species were donated to the Nanaimo Parks Department. The Rhododendrons, numbering approximately three hundred and fifty were then planted in Bowen Park where most of them remain today, the oldest of which are over sixty years old.

The Garden does however carry undertones of mystery. At the time of donation many of the plants were not tagged or the tags had been lost so the exact identities of many of the garden's residents remain unclear. Many experts and enthusiasts have worked very hard to uncover and identify the garden's various species. There have been quite a few Rhodos identified and catalogued based on leaf characteristics, flower colour, structure, bloom time, firsthand accounts and remaining acquaintances of Mrs. Hailey. Nevertheless many of the plants appear to be one of

a kind, and despite the best efforts of many experts will probably remain forever unidentified. In spite of this, do not despair as it does not prevent us from enjoying them for what they are.

The Rhododendron Grove Today

The collection has belonged to the people of Nanaimo for over thirty five years. Currently there are around two hundred and fifty Rhododendrons and Azaleas most of which are from Mrs. Ellen Hailey's original collection. As mentioned, some of the specimens are over sixty years old; it is hard to find such an elaborate, established collection of Rhodos anywhere. All of this, coupled with a serene natural, native setting, provides for an otherworldly ambience. The grove continues to be maintained by City of Nanaimo Parks staff, and every year draws thousands of visitors. The Rhododendron collection is located in Nanaimo's Bowen Park and is one of its

many attractions. Bowen Park is a 70 acre recreational paradise in the heart of Nanaimo; it contains manicured gardens, kilometers of nature trails, massive trees, waterfalls, and every recreational facility one can think of, such as tennis courts and a world class disc golf course.

I highly recommend that you do yourself a favor this spring and visit, it is worth the trip – from wherever you may be coming. The park is free to visit so bring your guests or come witness it for yourself. And take my word for it, every visit is better than the last.

Anthracnose on Rhododendrons

Bernie Dinter (P. Ag.)
B. Dinter Nursery Ltd.

Gardeners in the Pacific Northwest are fortunate they do not have many serious diseases affecting Rhododendrons. Powdery Mildew and other leaf spot diseases are generally mild and do not require

treatment. Removing damaged leaves and improving the air circulation helps control the problem. The growth cycle of Rhododendrons has the oldest and lowest leaves on the stem becoming necrotic and falling off; a perfectly normal occurrence that can cause concern for those not familiar with the life cycle of evergreen leaves.

In early spring of 2010, our nursery received a shipment of 1 gal and 2 gal Rhododendrons from a nursery specializing in Rhododendron production. The plants arrived looking healthy, but soon showed large brown blotches on the upper leaves. It was spread across a wide range of hybrids, not favouring any particular group. Testing was immediately done for Phytophthora ramorum, which would have been the worst case scenario, but the results came back negative. Further testing was done for Anthracnose which was positive.

The recommended treatment for Anthracnose is to pinch back the stems, remove infected leaves and fertilize to stimulate new growth. Application of a fungicide will protect from further spread of the disease. Fertilizer will increase the vigour of the plant and reduce its susceptibility to disease.
We did one application of 'Daconil 2787' (chlorothalonil) in May, after pruning the plants. Manzate (maneb) is also recommended. For the home gardener, copper spray may be the only product available, although it is not specifically mentioned on the label. Spraying is most effective if applied before the symptoms appear, but this would require some foresight by the grower. If spraying is not an option, sanitation and keeping the foliage dry should control the disease.

We followed this program from late April to May and by late summer, had a strong flush of healthy new leaves, as seen in the attached photo. The drawback for the nursery was that the plants missed the busy spring sales season and had the expense of being carried over to the next season. In a garden setting, this would be the loss of a season's enjoyment of the plant.

Anthracnose is a very common leaf and twig disease, attacking a wide range of trees and shrubs. It is most common in spring when susceptible new growth appears. Moisture is required on the leaf surface to initiate infection. The spread of infection is regulated by temperature, but does spread in cool temperatures. These conditions are common during spring in the Pacific Northwest, but our dry summers make the disease less common. Overhead irrigation can contribute to infection. Keeping an open canopy, that allows good air circulation and light penetration will reduce the disease. Sanitation, involving the removal of severely infected leaves and infected leaf litter reduces the spore load that the plant is subjected to. Anthracnose also infects small twigs, causing lesions that can kill the twig. These should be pruned off.

A healthy, well grown plant should easily handle an attack of Anthracnose. A few spotted leaves or partial defoliation would not be a setback for the plant. A gardener should also be used to seeing leaf spot on their plants and not have to resort to special measures, except in very moist years. It is better to focus on the growing conditions of the plant, ensuring that it is well fed and mulched, receives adequate moisture and has good air circulation. Good, basic garden practices, creates healthy plants.

Rhododendron in late summer with flush of healthy leaves above infected leaves

Editorial Note: I have just been reading the two books by Linda Chalker-Scott of the University of Washington that were recommended to me by Sandra Sanderson. In the first one, "The Informed Gardener" there are a couple of chapters on the role of mulch and mulch tea in suppressing diseases in plants. With reference to Bernie's article, above, she states that there are a number of scientific articles on the disease-suppressing properties of composts (especially bark), which have been found effective in suppressing soil diseases. Among those listed are two of particular interest to rhododendron growers:

Colletotrichum orbiculare [anthracnose] and *Phytophthora cinamomi* and *P.catorum*. Further on in the chapter, she states that aerated compost extracts [compost teas] have also been shown to be effective against *Phytophthora infestans.*

The book makes a strong plea for extensive mulching rather than wasting money on fertilizers and it is clear that mulching with wood chips or bark can help control some diseases and help avoid using pesticides.

An Update on the October Propagation Workshop at the Webbs.

Ken & Madeleine Webb report:

Just an update here on the propagating situation. Most of the cuttings you guys put in the propagator are still viable and some of them, I think, are rooted and putting on new growth. I think that Keiko's *Lady Chamberlain*s are having a little trouble, but one cutting is still hanging in there. Also Dave McIntosh's *John Blair* is not looking well, but we expected that right at the beginning because it is an azalea and need to be taken really early, so it can root and put on some new growth to gain strength to live over the winter.

Notice some of the colour in the other propagator - always exciting at this time of year - and some of the new growth starting already.

And what about the big buds on *R. nutallii* and goreii. It's really exciting. The first propagator has almost 1200 cuttings and everything seems to be just fine. Hardly any dead ones yet. This is the most we've ever put in there. Maybe they like being cuddled. It might turn out to be a good year. The second one, where your cuttings are, we are still putting a few in.

Please keep in touch. We really want to get you all doing this. If you have any questions or comments, just email or phone."

Photos are of the propagator at the Webbs and of the cuttings, taken by the workshop participants, that are growing in it..

One or two of the participants took their cuttings home to be raised in their own system. One, in particular, left the cuttings for a couple of days without moisture.

The sad result is shown below.

The lesson is that rhododendrons must have moisture at all times!

Grafting Rhododendrons onto Unrooted Understock

by Bruce Clyburn
New Waterford, Nova Scotia

After reading advice on grafting procedures, I decided to try my first attempt at grafting rhododendrons. This is the method I settled on; it incorporates a combination of procedures from 3 JARS articles, study images on Jens Birck's Picasa web album and the files of the Société Bretonne du Rhododendron concerning grafting.

I chose to graft Leach's Spellbinder. A report was given on this hybrid at an ARS conference circa 30 years ago. Blooming at a time when few elepitode rhododendrons are in flower, the rhododendron has frosty pink high-domed trusses and is as hardy as a white oak seedling. But it has two strikes against it: It is extremely difficult to root, and its huge leaves take up too much valuable space on the propagating bench. The understock chosen was County of York because of its wide-spread use for such purposes.

Used in collecting and preparing the top and understock cuttings: Gardener's secateurs, marking pen, rooting hormone (0.8 IBA), rubber electric tape, vernier calipers to match the stem diameters, utility knife and poly zip lock bags.

Cuttings from both sets were soaked in a 10% Chlorox solution for 20 min. The Spellbinder cutting had all but 3 leaves removed and these were cut in half. The stems of those cuttings were trimmed to a wedge shape in preparation for a cleft graft. The COY cutting had all but 3 leaves removed and these were cut in half as well. The top vegetative bud was removed and the stem split down the center at a length sufficient to receive the Spellbinder stem's

wedge. The black wrap in the photo was made by cutting a strip of 20 mm rubber electrical tape to length and down the center to give two 10 mm wide strips. This is pulled enough to stretch it a good amount during the wrapping. The tape is thick but

thins out during the stretching. It stays stretched and in place even though it doesn't have noticeable adhesive. A stretched piece of tape does not try to pull itself all the way back to its original size like a rubber band would. Very easy to work with, I will wait and see if it remains secure for the period it takes the graft to grow a good callous tissue.

Prepared cuttings were wounded and dipped in rooting hormone then stuck in a 3" pot contained moistened 50:50 peat:perlite. They were covered with a poly bag and placed under fluorescent lights. Now we wait. My main concern is whether the high humidity inside the poly bag will provide enough moisture to keep the top scions plump enough for

good callous formation. Simple cuttings root like a charm this way.

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Just before going to press, Bruce sent an up-date on his success:

"Here's a photo to confirm the method works. The COY understock cutting has struck roots to the stage where they're emerging from the drainage holes in the pot bottom. A week ago I removed the leaves from the COY cutting and any visible, dormant lateral buds, then unwrapped and removed the rubber electrical tape. The graft unions had all callused well. Sometime in March I would expect to see some top growth breaking."

The Mystery of the Disappearing Franklinia alatamaha

Most rhododendrons like some shade although those from the tops of mountain ranges, usually low-growing, evergreen and small leafed, live their lives exposed to a great deal of bright sun during parts of the year. In the Cowichan Valley, the usual shade trees are Douglas Fir, Garry Oak or Western Red Cedar. To add colour, especially during the late summer and autumn, one can select trees that have spectacular flowers, leaf-form, or colour. Some, such as *Stewartia*, combine all three.

Some of the shade trees that we plant are of great interest because of their history as well as their colour and form. There are three trees in this group that have extraordinary evolutionary interest as they were only known from the fossil records until discovered, relatively recently, in very isolated locations. These are *Gingko*, *Metasequoia* and the Wollemi Pine.

Gingko biloba is fairly common in gardens around the world and there are some lovely specimens in Duncan which display the most beautiful yellow orange foliage in autumn and then drop their leaves almost in a rush to form a skirt around the tree. One must remember, however, that this genus was spread over much of the world at one time and is common in the fossil records, but is known from only one location in the wild, in the northwest of Zhejiang province in the Tianmu Shan mountain reserve in eastern China. Even in this location, genetic studies suggest that the two known clumps of trees have been maintained by monks and may not be natural stands. What most people do not know about the gingko is that the tree is dioecious [i.e. it has male and female trees] and fertilization occurs via a large motile sperm, as in cycads, ferns, mosses and algae. Many gardeners recommend only male trees, as the fruit, the size of a small plum, are said to stink. We had a large tree in Ottawa which produced an abundance of fruit, although I never knew where the male was. The fruit did not smell particularly obnoxious. I did find that by far the best way to clean the seed for distribution at garden clubs was to have dogs. They love to eat the fruit and using a garden hose after the dogs are done, one can produce a bag of shiny clean seeds with little effort!

Metasequoia glyptostroboides, the **Dawn Redwood** is another of these very interesting shade trees that are common in gardens around the world. Despite their wide distribution today the genus was know solely from fossil records until the 1940s when a small forest of 5000 trees and a few additional clumps were found in an isolated area of Sichuan-Hubei region of China. The interesting question is why this deciduous conifer had such a limited distribution in the wild and was on the way to extinction. This is despite the fact that it grows very well in gardens and can tolerate a wide variety of soil types including growing in standing water. If it is that versatile, why did it not flourish in the wild?

Wollemia nobilis, the Wollemi Pine, is another of these fascinating fossil trees that is know from the Cretaceous period, about 100 million years ago and has been extinct every since, or so we thought. The story of finding it alive is one of the most exciting biological discoveries in recent history.

Many visitor to Sydney take a day trip to the west of the city to visit the edge of the Blue Mountains. When Sydney was discovered, travel to the west was almost impossible because of an extensive area of hills which were separated by extremely steep-sided and convoluted canyons. It took many years before

a pass could be found through this maze. David Noble was an extremely fit outdoors man who spent many years climbing down into these canyons and wandering through the thick forest of trees and dense undergrowth that is the result of the protection from the wind and the retention of moisture. In 1994, on one of his frequent expeditions into a new canyon with a couple of other experienced climbers, he discovered a fairly open area with a grove of 23 trees that he had never seen before. He took a small sample of the leaves and after a lot of research by Jan Allen based at the Mount Tomah Botanic Garden (one of three very large gardens that make up Sydney Botanic Garden), it was determined that these trees were an entirely new genus and species that were the descendants of trees from the time of the dinosaurs! *Wollemia nobilis* is in the same group of ancient trees that includes the monkey puzzle tree found in many gardens. A few additional *Wolllemia* have now been found in other canyons and the whole area is strictly protected to stop damage from disease reaching the trees. Seed have been taken and a nursery in Queensland is producing a large number of trees to go to botanic gardens and to sell to individuals. In this way, the species will be protected from extinction as long as the genetic diversity is there. At the moment, there are not many of these trees on our Island but they will become more available over time.

Thus, three shade trees, all thought to be extinct, discovered in the last couple of centuries one of which seems to have survived all this time in the wild and the other two may have survived only because of the direct intervention of, in all probability, Chinese monks.

Franklinia alatamaha, is the fourth shade tree with a beautiful flower and dark red autumn foliage – and an even more mysterious history. In the 1700s there was an enormous demand among the landed gentry in England and on the continent for exotic trees and plants to grow on their estates. The person who supplied many of these new finds was a farmer in Pennsylvania called John Bartram. He spent years exploring the unknown areas of the eastern US seeking new plant material and sending seed, herbarium specimens and live plants to England, for which he was paid. In 1765 he explored the area on the border of Georgia and Florida and found a small stand of trees that were new. Unfortunately, they did not have seeds, and it was not until 1777 that John's son, William, found the stand and collected seeds. In 1803, John Lyon found six or seven trees in the same area, and the species has never been seen in the wild since that date! All the plants that are found in our gardens today are descendants of the seeds collected by William Bartram.

Franklinia alatamaha
Photographer: Réginald Hulhoven

The mystery thickens, however, as it has been shown that this autumn flowering species does not grow too well in the Georgian climate, and it prefers cooler weather, and some cold weather before the seeds will set. In fact, it has been proposed by Gayther Plummer that *Franklinia* never was a native tree but one that was introduced during this period of exploration for unknown trees that went on throughout the world. The area was near to an active trading port at that time and it has been suggested that seeds or plants were carried from South America, Africa or the far East and somehow landed on shore and thrived for half a century. If that is the case, what was the original source of the tree? It has never been found anywhere else despite exploration in just about every nook and cranny throughout forests of the world. Its closest relatives are in the Camellias family (Theaceae) but that does not help a lot, as they are found in the wild throughout SE Asia, the SE of the United States and down into Central America. This distribution does not allow us to pinpoint the possible origin of *Franklinia*

There are three possible explanations to the origin of *Franklinia*;

1. One day someone may come across a grove of this species living in its native habitat somewhere in the world thus proving that it was a chance introduction into Georgia;

2. It might have been a native in Georgia that was on the verge of extinction. If so, pollen core analysis from local lakes or bogs should be able to show if there is pollen from this tree at some time over the past 10,000 or so years;

3. The species might be a cross between a couple of the local trees that are somewhat similar such as *Gordonia, Schima* and *Camellia*. This could be proven by DNA testing of the possible ancestors.

These are four trees that have mysterious pasts. They are worth planting as shade trees in our rhododendron gardens, and they would add both enjoyment and interest to our gardens. Furthermore, by growing them, we act in a small way to prevent yet more species going extinct

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If the subject interests you, I suggest the following four, very readable references as an introduction to a fascinating topic.

Rowland, Lucy. M. "America's 'First' Rare Plant, The Frankin Tree" 2006 see

http://www.terrain.org/articles/18/rowland.htm

Slaughter, Thomas P. "The Nature of John and William Bartram"1996

Woodford, James "The Wollemi Pine" 2002

Wulf, Andrea "The Brother Gardeners; Botany, Empire and the Birth of an Obsession" 2008

A more general account of the biogeographical origins of the plants is:

Grimshaw, John "The Gardener's Atlas: The origins, discovery, and cultivation of the World's most popular garden plants"1998

I have a copy of an academic study of *Franklinia* that can be borrowed:

Plummer, Gayther L. " *Franklinia alatamaha* Bartram ex Marshall: The lost *Gordonia* [Theaceae]

Proceedings of the American Philosophical Society [121] 6 1977 475-482.

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