

Newsletter of the ARSV

PO Box 296 Olinda Vic 3788

Renewal of Subscriptions for 2015/16

Renewals are now due. PLEASE RENEW NOW. This will be your last newsletter if you don't renew.

Excursion in October

Sunday 25th October Visit to Alistair Watt's collection at Lavers Hill. Alistair has an extraordinary collection of conifers many grown from seed he has collected in the wild. This is an opportunity to see very rare plants and get some tips on conifer identification. Please let us know if you are coming by contacting John O'Hara – (03 9593 1323 johnohara@optusnet.com.au).

Meet at Alistair's property at 10:30 am. It is located at 35 Lavers Hill-Cobden Rd, Laver's Hill; about 2.5 hours drive from Melbourne city. Take the M1 to Colac then head south on C155 to Lavers Hill then north on the Lavers Hill-Cobden Rd.

Bring your own lunch, but tea/coffee and cake will be supplied by the Society

Excursion in November

Sunday 29th November Toorak and South Yarra garden visits. This will be a visit to two or three old established gardens belonging to members. Bookings essential **contact Andrew Rouse on awrouse@bigpond.com**

R. davidsonianum at the NRG Olinda



This species flowering at the NRG Olinda in September and October deserves to be grown more often.

Health Warning

BEWARE. Viewing Rhododendrons has been found to cause feelings of relaxation, well-being, happiness and joy. In extreme cases sufferers have developed an acute sense of wonder and gratitude for the beauty of nature, leading to the delusion that there is more to life than work and worry.

This is highly detrimental to your functioning as a normal member of society and can inhibit your continuing development of the appropriate levels of outrage, angst and worry at the state of society and all your fellow humans. Worse still, it could engender a sense of superiority to those less fortunate who do not view rhododendrons.

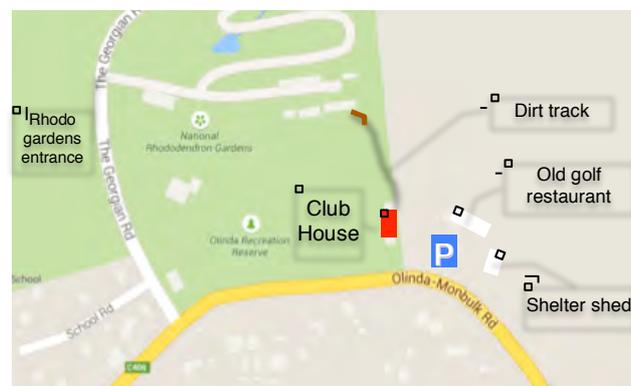
Working with these subversive plants – growing them, feeding them, tending them - exacerbates these symptoms considerably.

YOU HAVE BEEN WARNED.

Annual General Meeting

THE AGM will take place on Saturday 7th of November at 2:00 pm

Location: Clubhouse at the Olinda Golf course
Park at the old Golf Club car park.



Plant trip to China

Alistair Watt is organising a plant tour to China from 6th to 23rd September 2016 based on his travels in China over the last few years. The tour includes both gardens and the natural forest areas, which were explored by the plant collector Robert Fortune between 1843 and 1856. Fortune published 4 books describing his travels in this part of China, all of which are readily available to read online or as inexpensive reprints (see <http://www.abebooks.com>). Alistair's own biography of Robert Fortune will be published early in 2016.

The tour is in eastern China west of Shanghai and will include the Huangshan where Fortune collected many Rhododendrons. Anyone interested in going may contact Alistair direct on 03 5237 3263.

Committee							
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Rhododendron in focus: *Rhododendron ambiguum*



The Triflora Subsection species are generally small-leafed plants and come from the drier parts of the Himalayas. They grow well at Olinda but suffer from our hot dry summers in Melbourne suburbs, and in my experience these smaller types of species should be grown in pots where they can be moved to a cool shady position in summer. The Triflora Subsection has been divided into two groups: The purple and yellow species such as *augustinii*, *concinnum* and *ambiguum* form one group while the pink and white ones such as *yunnanense* and *davidsonianum* form the other. We have a very good plant of *ambiguum* growing in the Main Rockery (See Photo).

The name means ambiguous or doubtful. Apparently the early explorers had some difficulty with identification, but this species is easily distinguished from the other Trifloras.

The distribution is generally given as western to central Sichuan in thickets, rocks, and forests at 2300 to 4500 metres. The type locality is Emei Shan in central Sichuan and the "Atlas of Woody Plants in China: Distribution and Climate" shows a much wider distribution in Szechuan, Hubei and Anning. Either their map is wrong or there is more exploration going on in China that we know about.

This species is usually low growing and free flowering and makes an ideal rockery plant. The small leaves are densely lepidote on the underside, and the flowers are open funnel-shaped and are greenish-yellow to pale yellow. The flowers appear in trusses of 2 to 7. (Note: Not all Trifloras have three flowers per truss)

A few hybrids have been raised overseas, mostly with *cinnibarinum* or it's hybrids. Probably the only one we have here is "Biskra" A.M., raised by Lionel de Rothschild. (*ambiguum* x *cinnibarinum* v. *roylei*).

Where to See These Plants: We previously found two plants of *ambiguum* in our G.P.S. survey. One in the Main Rockery near the top of the steps, and I was unable to find the other near the stone bridge (possibly expired). Propagation of this plant is now top priority.

Alan Kepert



Do you know this one?

There are many species and varieties at the NRG Olinda that have lost their labels over the years or may not have been identified properly at some stage. This beautiful specimen on the left is one such, recorded in the database as #9959 "unknown".

It is a squat plant with pest resistance and is only 1.5 m high after 10 years. It flowers prolifically. Nobody in the Tuesday group seems to know it although all admire it. If anybody out there knows this one please contact Prue Crome (0419 659 741, prue@crome.net.au).

Companion animal - Star nosed Mole

The Star nosed mole (*Condylura cristata*) is a North American burrower whose range covers that of most of the Rhododendrons of northeastern America. It tends to be a lowland species so would be unlikely to overlap with e.g. *R. catawbiense* but would do with many of the deciduous azaleas. It is partially aquatic and eats invertebrates and small frogs and fish. It is reputedly the world's fastest eating mammal and can smell underwater. I haven't been able to find out if it can also eat fast underwater.



Photo: Brandon Motz ob Flickr creative commons

Don't try this at home

It is never a good idea to eat any plants you don't know are safe. This applies to Rhododendrons some of which are known to produce toxic phytochemicals. The famous intoxicating rhododendron honey of Turkey and the Caucasus is a case in point although more on this in the next newsletter. However, by the same token Rhododendrons are used in Asian herbal remedies. More unusual is the concoction of a drink from the flowers of one of the most famous of Rhododendrons – *R. arboreum*.

This brilliant red flowered tree is native of the Himalayas and China and occurs frequently on chocolate box photos of the region. However in the northern Indian state of Uttarakhand it is a bit of an icon. Uttarakhand is a montane state bordering Nepal to the northwest and a major centre for yoga study. *R. arboretum* is the state tree on account of its beauty, fame and utility. The wood is used for fuel, charcoal, tool handles, boxes,



saddles, plywood and posts and sometimes for building. The bark supposedly makes good snuff. However the flowers are used to make a red jelly-like drink called "Buransh" or "Burans", the latter the local name for the tree itself, which is developing a minor cult status on the web. It is

supposedly delicious, possibly intoxicating, and reminiscent of the chutneys made from the same flower. While the chutney has been produced traditionally the drink is apparently a recent development and has been commercialised - Burans squash is available from the local Uttarakhandi shops but travellers say that made in the villages is better as it has less added sugar.

(<http://www.dnaindia.com/lifestyle/report-buransh-the-delicious-and-intoxicating-rhododendron-juice-of-uttarakhand-1963552>)

Presumably the survival of Uttarakhandi consumers vouches for its safety.

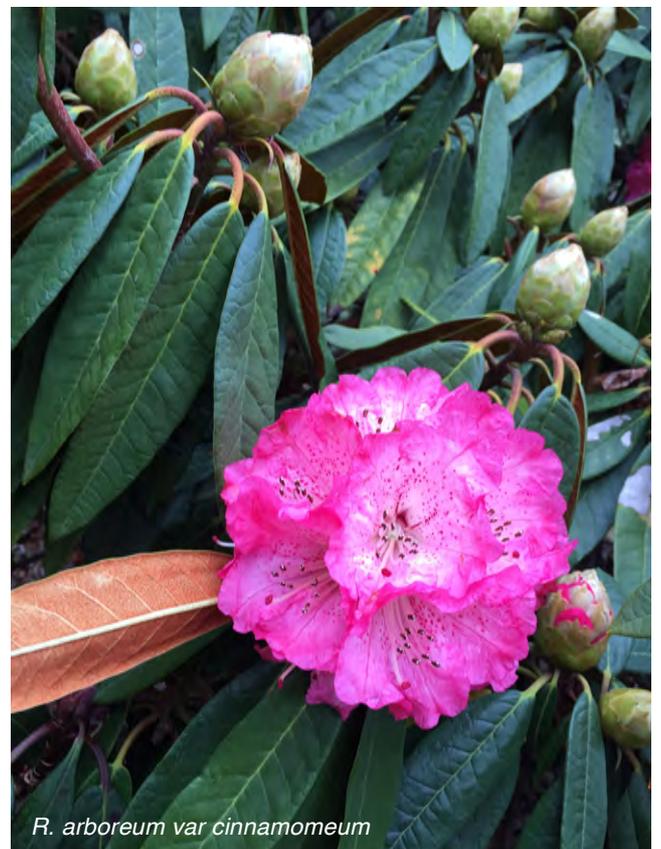
R. arboreum is a beautiful and hardy Rhododendron that began flowering in the Olinda gardens this year in late August. We have the normal species plus a beautiful variety *R. arboreum* var. *cinnamomeum* that has a double layer of indumentum on the underside of the leaf. It is found further east from eastern Nepal to southern Tibet.



R. arboreum



R. arboreum var *cinnamomeum*



R. arboreum var *cinnamomeum*

Mycorrhizae - not to be underestimated

The average gardener knows little about these organisms yet they are one of the most useful tools at their disposal. The word mycorrhiza (plural -zae) derives from the Greek words for “mushroom” and “root” and is the name given to fungi that form symbiotic relationships with plant roots. Some produce a fruiting body (mushroom) and some don't. Up to 95% of plant species have mycorrhizae - they are critical for plant growth and health.

The fungus derives carbohydrates from the plant, which, in turn, gets an increased capacity to absorb water and nutrients, particularly phosphorus. In some habitats mycorrhizae extract phosphorus directly from leaf litter and pass it to the plant, bypassing the soil completely.

Mycorrhizae can be between the cells (ectomycorrhizae) or penetrate the cells (endomycorrhizae), and cover the roots in a fine fuzz of fungal filaments (hyphae). There are thousands of mycorrhizal fungi and individual plants can have many species associated with them at the same time. One group, ericoid mycorrhizae, forms particular associations with the Ericaceae. They are known from *Rhododendron* and these fungi are capable of breaking down complex organic molecules and thus act as saprophytes. This likely enables plants to get nitrogen directly from decomposing material and to access organic forms of nutrients which have limited availability in the habitats occupied by many ericaceous plants.

A particularly weird discovery concerns the fungus *Laccaria bicolor* and Eastern White Pine in the USA. The fungus lures and kills springtails, small soil insects, to get nitrogen, which the pine can access. In one experiment the pine was found to get up to 25% of its nitrogen from springtails courtesy of the fungus. Mycorrhizal populations decline sharply under certain circumstances e.g. where ground has been left without plants for more than a few weeks, nursery grown plants in sterile media, heavily disturbed soil, salted or fertilised soil on a building site, ploughed fields, roadsides or landscaping projects. In these cases inoculation with mycorrhizae is necessary for plant health. The wrong mycorrhizae may sometimes explain why plants do not prosper, e.g. conifers and beech trees need ectomycorrhizae but grasses need endomycorrhizae. Planting these trees in lawns doesn't work too well – the fungi are the wrong ones.

Mycorrhizae form a network linking plants underground and it has been shown that nutrients can transfer between plants via this network. Mycorrhizae may also improve resistance to disease and insect attack in a population via this network. Recent research has shown that plants attacked by disease produce resistance chemicals that can pass along the hyphal network to other plants that, in turn, produce the chemicals. It has even been shown plants attacked by aphids produce defensive chemicals that are transmitted along the hyphal network to neighbouring non-infested plants that in turn release aphid-detering chemicals.

http://www.i-sis.org.uk/mycorrhizae_and_plant_communication.php

I now use a commercially available mycorrhizal additive regularly when potting up. I source it from BioCoat in Brunswick. I sprinkle the granules on the root ball but it is important that the roots come into contact with the fungus and to ensure that the granules are at least 15 cms below the surface as light kills them. Once the filaments begin to spread then the plant will gain the benefits. The mycorrhizal growth will depend on soil temperature and moisture and may take a few months at least.

By the way, these mycorrhizal networks are the hiding place for up to a third of the world's stored carbon.

Alex Pottage

Rhododendron hongkongense at the NRG Olinda

A lesser known and lesser-cultivated species is *R. hongkongense* a species endemic to Hong Kong island and the neighbouring mainland. We have two specimens in the rockery at the NRG Olinda. Both are growing well with very healthy leaves, which are red on the new growth, but they have never or rarely flowered. However, hiding in a hanging basket in the Vireya house is this beautiful specimen that is covered in flowers. A bit of warmth and good drainage can be quite effective.

