December 2016

PO Box 296 Olinda Vic 3788
http://www.rhododendron.com.au

Newsletter of the ARSV

Vale Jack Morris

On the 14th November 2016 our society lost Jack Morris. Jack had been in ill-health on a number of fronts, following a stroke six years ago.

I met Jack one day in 1997, a few weeks after I had retired. I was visiting the Rhododendron Garden to seek information on a Rhododendron problem that I had at home. Luckily for me, it was a Tuesday. I was directed down to the glass house where I would find a group of knowledgeable volunteers who would help me. I was met by Jack who proceeded to advise me on my problem and show me other tricks. Jack explained that he had been volunteering for eight years and suggested to me that I should return the following week and make sure that I brought a lunch. I remember being impressed by Jack's depth of knowledge and that, if he was able to gain that much from his eight years, I should consider coming back each week. I've now passed my eight years, actually going on twenty years, and I'm not sure how much has rubbed off in that time, I realise now that Jack set a pretty high bar.

My recollection of Jack is a person of great practical ability, probably resulting from his profession of carpentry and being a quality house builder. Apart from his considerable horticultural skills, Jack made a significant contribution to the National Rhododendron Garden at Olinda by various structural items up there, e.g. the Laburnum Arch, potting shed and balustrading around the garden. Jack was fastidious about the things he involved himself in and was an authority on the spelling of plant names, both species & hybrids.

Jack and his late wife Marion became closer friends as the years progressed and one of the last things that he did for me was to have his daughter, Lynne, ring me and let me know that author, Michael Connelly, had released a new book. That was three days before he passed away. That was the nature of the man. Nearly all of those people I met back on that day in 1997 are gone now. I am very grateful for the contribution they made to my life over the years and I place Jack high in that group. Our sympathy goes to Lynne, Jane, John and their families.

Tom Noonan

Rhododendron in focus: *R. latoucheae*

Subsection Choniastrum.

The Choniastrum species come from the warmer parts of China and South-East Asia and are relatively rare in cultivation. Curiously, *R. latoucheae* was named in 1899 but not introduced into cultivation in Australia until the 1990's.

R. latoucheae comes from the forests of South-East China at 1000 to 2700 metres where it grows as a shrub or small tree up to 7 metres high. The flowers are pink or white to purple and appear as a solitary flower from each axillary bud, however the buds are produced prolifically from multiple stems, so our plants in the rockery put on an impressive show. (See photo).

R. amamiense of Japan and *R. wilsonae* are synonyms for this species. The Flora of China considers *R. ellipticum* of Taiwan and the Ryukyus to be synonymous which would mean the species is widely distributed but Cox and Cox in the "Encyclopaedia of Rhododendron Species" considers *R. ellipticum* to be synonymous with *R. moulmainense*.

We have six plants of *R. latoucheae* in the Garden, mostly grown from seed, but have lost many in the Maddenia Walk, probably due to drought. In my opinion this species is heat-tolerant but not drought-tolerant.

Alan Kepert.

Committee							
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New National Council Committee

This year's National Council AGM saw Simon Begg's term as President come to an end. His two-year term saw significant changes and advancement of the National body. Simon has managed to install a new constitution, rejig the branch subscription arrangements, get Emu Valley back into the fold and initiate discussions with Black Heath to rejoin in the future. The new committee was elected as follows.

President -Jeff Jenkinson

Vice President - Andrew Rouse

Secretary/Treasurer- Graham Price

The National body is responsible for producing the Rhododendron Journal, maintaining the website, running the occasional conference and acting as a united front for significant projects. It joins the various state groups together and it provides an opportunity for members to meet and exchange material with fellow rhodo-philes from other states.

I congratulate Simon on a job enthusiastically and very well done. I also wish the new National committee members all the best and thank them for volunteering to take an active part in progressing our interests.

John O'Hara

Origin of *Rhododendron agastum*

Rhododendron agastum Balf. f. & W.W. Sm. is listed as a species in the Flora of China, The Plant List and McQuire and Robinson's Pocket Guide, but is not mentioned by Cox and Cox in their Encyclopedia of Rhododendron Species. It seems to have been considered a hybrid between *R. delavayi* and *R. decorum* by Peter Cox in 2004 and by Chamberlain (2003) and this is mentioned in the Flora of China. A recent morphological and DNA study by Zhang et al. (2007) concluded that *R. agastum* is indeed a natural hybrid - between a female *R. delavayi* and a male *R. decorum.*

The plot thickened, however, with another genetic study, this time by Zha *et al.* (2010). They concluded that the *R. agastum* they collected was a natural hybrid – but this time between *R. delavayi* and *R. irroratum*! Since they thought their hybrid matched the type of *R. agastum* they said it should have the name *R. x agastum* while the *R. agastum* hybrids found by Zhang *et al.* needed a new name. Confusing? It is even more so in that *R. agastum* is recorded as having two subspecies. *R. a. var. agastum* and *R. a var. pennivenium.*

Jing-Li Zhang *et al.* 2007. Natural hybridization origin of Rhododendron agastum (Ericaceae) in Yunnan, China: inferred from morphological and molecular evidence. *J Plant Res* 120:457–463.

Hong-Guang Zha *et al.* 2010. Asymmetric hybridization in Rhododendron agastum: a hybrid taxon comprising mainly F1s in Yunnan, China. *Annals of Botany* 105: 89–100.

Companion animal – Golden Bowerbird

On the Society NQ expedition, members came across the massive bowers of the Golden Bowerbird (*Prionodura newtoniana*). This beautiful bird is a north Queensland endemic found only in the mountain rainforests between Townsville and Cooktown. The males, pictured, build massive structures of sticks arranged around two saplings to form two towers or maypoles, one tall – up to 2 m high and a shorter one. These are connected by a stick platform. White, grey-green or pale lichen, snail shells, flowers and fruits are used to decorate the structure. Each bower is built by one male and is used to attract females for mating. The species is a lekking species i.e. the males gather in aggregations to compete for the attention of females. In the Golden Bowerbird's case bowers are organised relatively close to each other (100-150 m apart) so the females can move amongst the bowers and choose their mate. Females do not build their nests on the bowers but rather in the forest at some distance away.

The bowers can take two or three years to build and are maintained year after year. The average bower lasts about 9 years but the record is over 20. The males display at the bowers and are excellent mimics, like most bowerbirds. Bowerbirds are longer lived than many birds their size, the oldest Golden Bowerbird so far lived 23 years. Bowerbirds are only found in Australia and New Guinea. Australia has eight species that build bowers of various kinds and New Guinea has eight. The family also has 11 species of catbirds that do not build bowers.

Photo David Cook
https://www.flickr.com/photos/kookr/4955334455

ARSV member Dale Schubert at a bower on Mt Finnegan

Sunday 11 December Xmas BBQ and plant propagation day

The committee thought this years Christmas gathering could also provide an opportunity to be combined with a propagation day (cutting gathering). The plan is to meet at the Olinda Gardens ARS lunchroom in the morning, tour the Garden collecting cuttings for propagation and pot the cuttings up and then go and have a sausage. We have the pots, media, labels and space in the propagation house.

This is an opportunity to propagate species or varieties you particularly like to enhance your collection, for plant sales and to expand plantings in the Garden.

Meet at the Olinda ARS lunchroom at 10 am for tour and cutting collection (bring your secateurs and plastic bags) followed by Christmas BBQ to start at 12:30 pm, we'll supply the meat and bread, bring your own drinks and salad.

Come for one or both

Vireya Hybridisation Project Progress

I have been away recently so progress has been slow. Thus far we have collected pollen from 17 Vireya species and we have made 14 species to species crosses. As summer advances we expect to continue collecting pollen and a wider ranges of primary crosses will become possible. We should soon be collecting seed pods and cleaning seed ready for sowing. Andrew Rouse has advised of his growing appreciation of hybrids produced from R. *goodenoughii*, two of which he has recently sent in for registration. He said *"The plant in the Olinda glasshouse is probably a few years from flowering - we should keep an eye out for when it does."*

My continued limited availability until after the New Year means that collecting pollen and crossing species will be taken over by other members of the project – Darren Hynes and Ray Weeks. We definitely need more team members to help with these expanding tasks.

Please contact us if you are interested in helping out and have some time available.

Graham Price (lithic01@bigpond.net.au)

Life Membership and the Society Medal to Barry Stagoll

Most present members of the Australian Rhododendron Society know Barry Stagoll as one of a shadowy pair who have produced *The Rhododendron* each year from 2000; Barry as Chair of the Editorial Committee and Richard Francis as Editor. But the high quality of *The Rhododendron* defines the reputation of the Society internationally. In my memory, until this year, the editorial Committee was something of a myth. It was Barry. A number of us will remember being cajoled into producing articles befitting a learned journal. This year the cajoling has fallen to Andrew Rouse and for the first time in many years there is an Editorial Committee

Barry and Gay were foundation members of the Fern Society of Victoria, and Bill Taylor joined that Society a few years later. Barry, Bill, and Gay were on the FSV Show committee together for many years, and Bill often tried to get Barry and Gay interested in joining the Rhododendron Society. They grew a few rhododendrons and azaleas and when they moved to "Mirrabooka" in Park Orchards they had room to grow more. While on a visit to the Olinda Rhododendron Garden in 1993 Barry and Gay did join the Society. That was about the time Marcia and I joined.

In 1994, during a conference associated with a National Council meeting, Val Marshall asked Barry if he would take on the position of National Secretary to succeed her husband Lionel, then National Secretary. Barry agreed and continued in that position, with distinction, from 1995 to 2002.

During that time he rewrote the rules of the Society at the request of National Council. Later, Barry originated the Society`s first National website which served the Society for many years.

In October 2000 Barry was Convenor of the ARS International Conference "Rhododendrons Down Under" organised for ARS by its Victorian Branch. That was the first Rhododendron Conference Marcia and I attended. Speakers included George Argent, Peter Cox, Peter Valder, Hilary O'Rourke and Jack O'Shanassey. It was a grand affair, though at the end of the era where everyone in Melbourne grew rhododendrons and, consequently, rhododendron nurseries abounded.

From 2000 to the present he has had the role of Editorial Committee Chair of "The Rhododendron", annual Journal of ARS. It is a distinguished journal rightly recognised worldwide.

Marcia and I met Barry and Gay at about this time. We visited Mirrabooka and marvelled at Barry and Gay's efforts to create Gondwanaland in such inhospitable conditions, little knowing we would later try on a much smaller scale at Montrose. Little did I know that I would, for a time, be ARS secretary and president. Barry was for a time *de facto* president when Allan Kerr Grant was indisposed. I followed Barry, also, in rewriting ARS rules. Marcia did not know then that she would organise the Golden Anniversary Rhododendron Congress in 2010

I recall Barry telling me that J. B. Were copied his house name "Mirrabooka' as the name for an investment vehicle.

Barry has served the Society with distinction, ably supported by Gay. It is fitting, as Barry steps down from his long held role as Chair of Editorial Committee, that the Society honour him with the Society Medal and Life Membership

Simon Begg

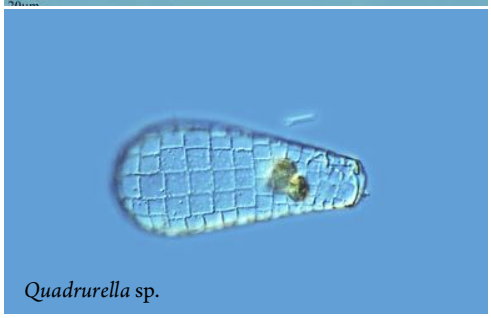
Just when you thought it was simple – more on mycorrhizae

Rhododendron kotschyi in Transylvania Photo by Adina Raul https://www.flickr.com/photos/adina-ana/9339516416

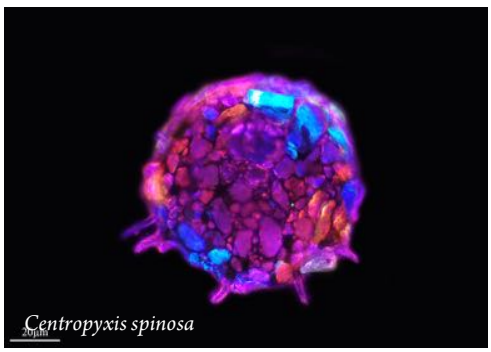
The picture shows a view of *Rhododendron kotschyi* (= *R. myrtifolium*) in the Carpathian mountains of Transylvania, probably Bucegi Natural Park. This, and two other species *R. hirsutum* and *R. luteum*, were the subject of a fascinating investigation involving a potentially new player in the game of how Rhododendron's, and other plants, get their nutrients. You may remember in the October 2015 newsletter Alex Pottage wrote on mycorrhizae, the symbiotic fungi essential to plant nutrition. In that article a mention was made of a mycorrhiza that lures and kills small soil insects, to get nitrogen, which it then passes on to pine trees. It seems a range of other animals/mycorrhizae/plant interactions remains to be uncovered.

Scientists in the Czech Republic have been studying mycorrhizae and "testate amoebae". You remember the amoebas you saw pictures of at school? Well there are a range of them that form shells and so are called testate amoebae. The pictures show three species from a website called Proyecto Agua (https: www.flickr.com/photos/microagua). As you can see, although tiny, just a fraction of a millimetre, they can be quite pretty.

Pamphagus hyalinus



Quadrurella sp.



Centropyxis spinosa

The shells of most testate amoebae (TAs) are not made of calcium carbonate but of organic matter such as protein or chitin. Some species incorporate sand grains or diatoms into the organics shell matrix. Their shells thus could be a source of nutrition to plants via mycorrhizae and this is what the Czech scientists investigated.

First they surveyed roots of the three Rhododendron species for TAs in the rhizophere i.e. the fuzz of root hairs and fungal hyphae surrounding the roots. They found abundant TAs from 13 genera. They then did a series of experiments that showed that mycorrhizae colonised dead shells and used them for food. Thus TAs would be able to be broken down to get nitrogen and other nutrients which can then be passed on to the plants in exchange for carbon. This forms what the researchers called a "TA–root symbiotic fungi–host plants" system.

Testate amoebae may have two roles – one as a source of nitrogen and other nutrients for mycorrhizae and hence plants; and the other as transporters of fungal spores. It appears the fungi attach readily to the shells and the amoebae would provide an active means for mycorrhizal spores to get dispersed.

It may be that in the generally acidic and poor soils that Ericaceous plants grow in, animal protein, in this case from millions of amoebas, may be a significant source of nutrition thanks to mycorrhizae that can process it to a point plants can use it. What hasn't been determined is whether or not plants actually need the testate amoebae in the soil or it is just another food source.

M. Vohník & Z. Burdíková & J. Albrechtová & M. Vosátka. 2009. Testate Amoebae (Arcellinida and Euglyphida) vs. Ericoid Mycorrhizal and DSE Fungi: A Possible Novel Interaction in the Mycorrhizosphere of Ericaceous Plants? *Microbial Ecology* 57:203–214