THE RHODODENDRON NEWSLETTER

JANUARY 2007

Published by the
Australian Rhododendron Society, Victorian Branch Inc. (A5896Z)
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AUSTRALIA DAY BBQ

SUNDAY 28TH JANUARY AT 5.00PM

AT THE RHODODENDRON GARDENS, OLINDA

BYO EVERYTHING AND ENJOY A WALK AROUND THE GARDENS

TRADING TABLE - BUY, SWAP OR SELL

IF YOU HAVE EXCESS PLANTS, GARDEN EQUIPMENT, BOOKS, ETC. BRING THEM TO THE
GENERAL MEETINGS TO SELL OR SWAP.

All goods must be priced, named and taken home if not sold. John Quinn will be in charge.

NEXT MEETING – FRIDAY 16TH FEBRUARY 2007 AT 8.OOPM

SPEAKER – GLENN MASKELL Parks Vic Team Leader
TOPIC – Progress Report of the Azalea Lace Wing (predator of Azalea Lace Bug) and the NRG

VIREYA SHOW 2007
OUR USUAL APRIL SHOW IS POSTPONED, THIS YEAR, UNTIL SEPTEMBER
With Stage 4 restrictions a virtual certainty, water for display is too divisive.
New dates have been reserved with Monash Council, subject to Committee decision.

PRESIDENT'S REPORT

"Whoso boasteth of a false gift is like clouds and wind without rain." **Proverbs**

Successive daytime temperatures in Melbourne this week of 35C, 41C, and 37C serve to compound the torment for we gardeners, and the forecast thunderstorms merely present us with a sound and light show, but nothing more!

The old wisdom in the Dandenongs was that if you can clearly see the Eastern Ranges, it was going to rain. If you could not see them it was already raining. Of late, it is far more likely that it is a curtain of smoke that shrouds those same ranges.

Rainfall records at Rhodoglen, The Patch

Total rainfall 2005	1167 mm
Total rainfall 2006	943 mm (The driest year since records commenced in 1990)
Average of the last 10 years	1196.8 mm
Average 1990-2006	1366 mm.

Traditionally, this area receives almost twice the rainfall of Melbourne, so I would be interested to hear from readers who keep records there. There is no doubt that this has been one of the most difficult years ever to maintain our gardens.

Here are a few techniques that may complement your bucket watering programs:

- Mulch is terrific to save the moisture, but we need to spread this judiciously in bushfire areas. Unfortunately, birds will constantly turn the mulch over in search of food, so it can be difficult to keep in place.
- Shade cloth as temporary cover, and/or as a break on the north side of plants.
- Small pots offer less insulation from heat. If they suffer, a larger volume of mix will help.
- Potting mix can become hydrophobic. These need to be stood in water to recover, as a light watering on top will not wet the mix.
- Very tall plants can be reduced in height. This will reduce the rate of transpiration.

Take care not to drown your Vireya. They are susceptible to over watering. Remember, too that established plants, that is, those which have been in the ground for say, two years, will tolerate a drier regime than one which was fairly recently planted.

Those of us who rise at 5.30 am on permitted watering days (2 per week), will not be amused that Stage 4 restrictions are due when storage levels fall to below 29.3% of reservoir capacity, which will probably occur sometime in March, unless there is a substantial change in the weather.
What may offer us a little consolation, though, is that some of the 'old-timers' observe that nature seems to be preparing for heavy rains. The very early flowering of eucalypts, and early breeding of kangaroo are two instances I hear cited by way of illustration. Let's hope they are right!

This weather pattern asks some interesting questions of our government, and communities:

- What sort of landscape will communities tolerate?
- What conservation strategies will be acceptable?
- Are State divisions adequate when devising conservation strategies? It is intriguing to see some claim ownership of water resources which fall in their particular State.
- What is the role of gardens in building and maintaining communities?
- What price should we be prepared to pay? Economic rationalists argue for an increase in the price of water to a level where demand falls, and supply therefore is adequate again.

Impact of restrictions on the ARS

- Special thanks to Simon and Marcia Begg, who are watering a large part of the ARS stock, particularly a portion of the NZ Vireya species.

- Parks Victoria converted our nursery from mains to dam water. This involved the installation of new lines at our expense to up-date the old lines. We are hoping that their allocation holds, as we have possibly 10,000 plants in the nursery. We have a couple of fallback positions, but we hope that it does not become necessary.

Lace Wing. The trial continues. There have now been two generations of this predator. Because they are principally nocturnal, it is difficult to gauge their impact, other than by visual evidence of lace bug damage.

Readers may be aware that **John Kenyon in NZ** has sold his Vireya nursery, to what he describes as 'lifestyle' services. This is a tremendous loss to the Vireya industry. His collection is one of the most significant worldwide. John holds the best of:

- Os Blumhardt's collection with several unique hybrids of saxafragoides, and Richard Currie's collection.
- Remnant collections of Duncan & Davies, including several of the doubles.
- The best Vireya he could collect from Australia.
- Many of his own unique hybrids.

At the instigation of **Kaye Hagen**, National Council President, the Victorian Branch has offered to purchase 100 of the best varieties at a cost of $1,000 NZ. These will be sent to Pukeiti Gardens to complement the significant collection already held there. Some may be propagated by seed here. As a long-term project, we will mount a case to Bio-Security for a resumption of the trade in Vireya to Australia.

At least a significant portion of John's collection will survive in the possession of a garden that has the skills to ensure its survival. After all, some of these plants took several generations to breed. John intends to settle and work in Perth. Perhaps in the future we may see the start of a new collection?

Congratulations to **Annette Zeally**, from Parks Victoria who has effectively resigned as of the 19 of January to take new employment with the Geelong Botanical Gardens. I am certain all Society members will join me in thanking Annette for all of her work and effort at the National Rhododendron Gardens, and wish her every success with those future endeavours.

M. McAlister

THE RHODODENDRON SPECIES COLLECTION.

History:

At it's inception, one of the main aims of the National Rhododendron Garden was to establish a comprehensive collection of rhododendron species. This idea was probably inspired by the great gardens of Wisley, Brodick, Exbury, etc.which all had extensive collections of species which were propagated and distributed to enthusiasts.

The original plantings at Olinda began around 1961 and the plants were generously provided by some of the original Society members including the Boulter family,Karel & Harry Van de Ven, Arnold Teese, Peter Damman, Jack O'Shannassy and others. Plants were later imported from England and the U.S.A. through the quarantine system which often resulted in significant losses.

Garden Layout:

Most of the species were planted as groups according to their series, such as the Arborea Bed, the Irrorata Bed, etc.This allows the plants within the series to be compared, and also makes it

easier to find a particular species. There are some odd exceptions to this arrangement, such as *mucronulatum* planted outside the Show-hall, and *venator* near the Kurume Bowl with a group of *racemosum*. The Maddenia Walk contains all types of species, probably because the shade and shelter gave a better chance of survival.

Numbering:

A simple numbering system was introduced at the beginning, with the first plant listed as R.S. 0001 – *ponticum*. A numbered tag was attached to the plant and the name was entered in the handwritten Species Register.

In 2003, Tom and Joan Noonan took on the huge task of typing up the original register onto an "Access" Database. (Currently some 10,380 entries). We are now able to quickly re-arrange the data in numerical or alphabetical order, sort the species into series, or revise the data as required.

G.P.S. Location

In October 2003, the Committee agreed to purchase a G.P.S. receiver (Global Positioning System) to enable the location of each plant to be recorded. The location is stored in the unit (as Easting and Northing co-ordinates) and later downloaded into the Data-base. So far this system has worked remarkably well, and to find a particular plant simply means walking to the G.P.S. location and reading the nearest tags. The accuracy can vary from 1 to 2 metres in the open, to 5 metres under a tree canopy.

Vireyas:

At present the Asiatic and Vireya species are on the same Data-Base, but can be separated if required.

Future Developments:

Most of the work on locating the original species has now been completed (Around 1500 plants).Over 10,000 plants of species have now been planted in the Garden, but many of these are mass plantings of seedlings, and it is only necessary to select the best forms.

At present, further development is concentrated on the following:

1. Raising new plants from imported seed
2. Propagation of rare species from cuttings. In many cases we have only one or two plants of a particular species so we need some back-up to allow for losses. With the aid of the fog propagator, we have been able to propagate plants such as *baileyi, carneum, boothii ,liliiflorum, cinnibarinum Roylei ,*and *leptothrium.*
3. Identification of unmarked or misnamed species can be a problem, but we are attempting to do this when the plant is in flower. Any help from experienced species enthusiasts would be much appreciated.

Acknowledgements:

This project would not have been possible without the involvement of our intrepid plant-hunter, Elizabeth Xipell, our computer wiz., Tom Noonan, and the other members of the volunteer group.

Alan Kepert.

THE SPECIES COLUMN.

R reticulatum, -Section Brachycalyx "Reticulatum Alliance".

Rhododendron reticulatum is one of the Japanese deciduous azaleas and is quite sun-hardy and heat-tolerant. My plant in East Ringwood is around 40 years old and produces a mass of purple flowers in Spring.

Name:
The name refers to the reticulated or netted pattern on the leaves.

Distribution:
Widely distributed in Japan from Yakushima in the South to North-East Honshu. It grows from near sea-level to 1800 metres on rocky slopes, hillsides, and forests, often in relatively dry places.

Characteristics:
A generally tall plant, up to 10 metres in the wild, and prefers a warm Summer.
Leaves to 5 cm. long, bristly when young, and reticulate beneath. The flowers vary from lilac to purple or magenta, or rarely white. This is a variable species and many different forms have been given the status of distinct species(a dubious practice) These forms are listed below:

decandrum – Ten stamens
..dilatatum – Five stamens
gracilescens – Rosy purple flowers
kiyosumense – smaller leaves and flowers.
lagopus – solitary purple flowers.
maybarae – probably a variety of nudipes.
nagasakianum – Five stamens. There is a large plant of this in the Azalea species garden.
nudipes – Flowers deep rose. Seed from Japan has been grown on and the flowers are quite attractive. [Nudipes means – glabrescent (mostly hairless) twigs as 'bare feet'.]
viscistylum – Reddish-purple flowers with sticky glands on the style.
wadanum – similar to reticulatum.
reticulatum v. albiflorum. A very attractive plant if grown in semi-shade. The pure white flowers are borne on bare branches, giving a light and graceful appearance. We have been able to strike this from cuttings.

Hybrids:
None worth mentioning. Crosses between the white and rosy-purple forms could be worthwhile. These species will not hybridise with the pentaphyllum (Mollis) group.

Where to See These Plants
Most of the reticulatums are planted in the lower part of the "Horseshoe Bed" which is past the "Lyrebird Lookout". There are also some older plants in the Azalea species bed about 100 metres past the Camellia Garden.

Alan Kepert.

THE VIREYA SPECIES COLLECTION

History

Vireyas had been grown in Melbourne, and, presumably, Ferny Creek for seven or eight years when Arthur Headlam wrote in the Quarterly Bulletin of the American Rhododendron Society in April 1969. The early copies of "*The Rhododendron"*, for example Vol 4, 1965, indicated that Vireya species were available for sale to members.

So the history of Vireyas at the National Rhododendron Garden needs to be written, or at least narrated, by a member who was a member at the beginning of the Society, was, and is, interested in Vireyas and is still active. Finding such a person in 2007 is very difficult indeed. Nearly 50 years later there are few potential candidates. Lyn Craven, Peter Dammon, Brian Clancy, Graham Snell, Graham Price and Jack O'Shannassy are possible. Unfortunately many of the pioneers have died. Some are in poor health. All, necessarily, are elderly or nearly so. One clear leader was John Rouse, a physicist by profession, who developed an acknowleged expertise in Vireyas. Indeed he is described as legendary. Unfortunately John has died but his son Andrew is a botanist by training and has a very good Vireya collection. Andrew and his mother may be valuable sources for an historian of Vireyas at NRG.

In the early days successful Vireya growing suffered from some misconceptions; that Vireyas from New Guinea required 12 hours sunlight and that they should be grown in orchid mix and would not grow in ordinary soil. Back in the early 1960s frosts at Olinda were a much more frequent occurrence than they are today. So planting in ground at NRG was a cautious exercise. In the early days many members were nurserymen. Perhaps because of competition between business rivals there were legendary stories of members failing to share plant material with each other and of 'poaching' of cuttings or plants. Only a contemporary knows the accuracy of these stories and the early history of Vireyas at NRG. When time permits I shall try to source a history at NRG.

While Vireyas were grown in ground at NRG, plantings were not as extensive nor as successful as was the case with azaleas and asiatics. Nor was the in ground collection, or even the glasshouse collection, properly maintained. Society vicissitudes led to loss of many early species. Members including John Rouse, Lyn Craven Brian Clancy and Graham Snell had better collections than NRG. Only in the last few years has there been a renewed ARSV interest in Vireyas and an attempt by the Society, led by Murray McAllister and Bill Taylor, to collect all available Vireya species. Many species have been sourced from New Zealand, being the only place from which Vireya plant material, other than seed or, perhaps, tissue culture, could lawfully be imported. Even this source has now closed due to *phytophera kernoviae* being discovered at a North Island nursery. Species have also been sourced from Australian collections, notably those of Andrew Rouse and his late father, John Rouse and from Neil Puddey. Seed has been collected from RBGE, RHS and the Species Foundation, Seattle. Cuttings and seed have been grown at NRG's glasshouse and by Murray and Andrew. When numbers permitted plants have been distributed to Vireya Group members and they in turn have propagated further cuttings.

Species now held by the society

Murray compiled a list of the New Zealand collections of Vireyas at the time he and Bill collected them. He has maintained that list and updated it, though with the qualification that strict accuracy may be lacking. See his note at the end of the list. Species in members hands are not included. Nevertheless the list is worth sharing.. It includes the survivors of cuttings imported from New Zealand, cuttings and plants provided by members and surviving Vireyas, in pots, from earlier years.

Members should compare their collections with the list. Then they can identify species they lack.

SWB

PLANT NAME	No/ of Cuttings	Bundle Number	Date Taken	DETAILS OF PROVENANCE	SOURCE (INIT.)

abietifolium	2	157	8/03		Binney
aequabile	2				JLR (NRG)
acrophyllum	3	255	8/03	seedlings	Currie
acuminatum					NRG
adinifolium	5	122	8/03	Gunang Kemiri Nth. Sumatra	Binney
alborugosum	2	25	8/03	D Binney, George Argent Collection	GS
alticolum				cuttings & seedlings	Andrew Rouse
alticolum				cuttings	LC
anagaliflorum				cuttings	LC (NRG)
apoanum				cuttings	B.T.
archboldianum	3	159	8/03		Binney
arfakianum	3	44	8/03	Strybing Arboreteum G. Snell	G.S. **DIED**
armitii				seedling	Andrew Rouse
armitii	4	149	8/03		Binney
asperum	3	243	8/03		Currie
aurigeranum	3			Fine Form	JLR
baconii				cuttings	B.T.
baenitzianum	4	154	8/03		Binney
baenitzianum	1	241	8/03		Currie
bagabonum					NRG
beyerinckianum				cuttings	Andrew Rouse
beyerinkianum	3				JLR (NRG)
blackii	3	7	8/03	Laigam-kandep Rd.,PNG VS386C-83	GS **DIED**
blackii	3	8	8/03	Laigam-Kandep Rd.,PNG V386B-83	GS **DIED**
blackii	2	9	8/03	Laigam-Kandep Rd., PNG V386A-83	GS **DIED**
bloembergenii	2	120	8/03		Binney
borneense ssp villosum	10	15	8/03	Keith Adams Sarawak Batu Lowei	GS
borneense v. borneense	7	31	8/03	Adams Bukut Lumut Sarawak	GS **DIED**
brookeanum	2	162	8/03	Bako Island, Sarawak	Binney (NRG)
brookeanum	1	236	8/03		Currie
brookeanum Binney	2	232	8/03		Currie **DIED**
brookeanum gracile	5				JLR (NRG)

burtii				cuttings	LC (NRG)
buxifolium				cuttings	Andrew Rouse
buxifolium	6	156	8/03		Binney
caliginis (Cream)	7	43	8/03	Mt. Miap PNG 04721	G.S. (NRG) **DIED**
Caliginis x Vitis idaea	3	35	8/03	Mt Miap 1986, G Smith Natural Hybrid	GS
carringtoniae	4				JLR (NRG)
christianae	3	137	8/03		Binney
christi (large leaf)	4	144	8/03		Binney **DIED**
citrinum	6	124	8/03		Binney **DIED**
commonae	10	37	8/03	PNG John Rouse	GS (NRG)
commonae (cream)	5	56	8/03	Kain Swamp PNG 1986 Oz. Blumhardt	G.S. **DIED**
crassifolium	8	16	8/03	George Argent Gunang Alab Borneo	GS
crassifolium	3				JLR (NRG)
crutwellii				cuttings	Andrew Rouse
crutwellii	5				JLR (NRG)
culminicolum v culminicolum	5	38	8/03	Paul Corres K105 76 Bulldog Rd PNG	GS
culminicolum (Scarlet)	8	48	8/03	Mt. Gahavasukar PNG G Smith 01413	G.S.(NRG) **DIED**
dianthosmum				cuttings & seedling	Andrew Rouse
dielsianum	8				JLR (NRG)
emarginatum	8	51	8/03	Alan Clark, Vietnam 446	G.S.
ericoides	7	26	8/03	Dr. Phillipson, ex Borneo	GS
exuberans	1	160	8/03		Binney **DIED**
fallacinum	11				JLR (NRG)
fastigiate	7	143	8/03		Binney
gardenia					NRG
goodenoughii				cuttings	Andrew Rouse
goodenoughii	4	146	8/03		Binney
gracilentum				seedling	Andrew Rouse
gracilentum pink				cuttings	LC
gracilentum Aseki				cuttings	LC
helwigii	30				JLR (NRG)
herzogii (pink)	3	235	8/03		Currie (NRG)
herzogii (white)	3	242	8/03		Currie (NRG) **DIED**
herzogii (Pink)	10	47	8/03	Mt. Gahavasukar G Smith PNG 01713	G.S.

herzogii	8				JLR
himantodes					NRG
hyacinthosmum	2			plants	LC (NRG)
impositum	3	132	8/03	Rantemario Sulawesi	Binney
inconspicuum				cuttings	Andrew Rouse
inconspicuum	3			seedlings	LC
inundatum				cuttings	Andrew Rouse
jasminiflorum	3				JLR (NRG)
jasminiflorum v. oblongiflorum	5	2	8/03	Pukeiti ex Sarawak	GS **DIED**
jasminiflorum v. heusseri	6	111	8/03	ex Edinburgh	D Binney
jasminiflorum v. oblongiflorum	6	117	8/03		Binney
javanicum	6				JLR (NRG)
kawakami					NRG
kochii	3	246	8/03		Currie
konori				cuttings, JLR	Andrew Rouse
konori	6				JLR (NRG)
konori (pink)	3	225	8/03	Cullinan's form	Currie
Konori natural hybrid	9	54	8/03	Edie Creek PNG Paul Corres K11576	G.S.
konori White Giant	1			plant	LC
laetum	3				JLR (NRG)
lanceolatum	5	155	8/03		Binney
leptanthum inudatum	4				JLR (NRG)
leptanthum				cuttings	Andrew Rouse
leptanthum				cuttings	LC
leptanthum Aseki				cuttings	LC
leptobrachion	1	227	8/03		Currie **DIED**
leucogigas sleumer form PLANT NAME	2	254	8/03	seedlings	Currie
leucogigas Hunsteins				large seedlings	LC
lineare				seedling	Andrew Rouse
lochaie ARS NQ	3				JLR
longiflorum				cuttings	Andrew Rouse
longiflorum	2	161	8/03		Binney
loranthiflorum				seedling	Andrew Rouse
loranthiflorum	7			Sri Chimmoy	JLR (NRG)
lowii c.i.w.				seedling	Andrew Rouse
lowii	1	141	8/03		Binney (NRG)

lowii	1	27	8/03	Keith Adams Collection, Kinabalu 1980	GS

luraluense	2				JLR (NRG)
luraluense	1			plant	LC
macgregoriae (red)	3	55	8/03	Laiagam PNG G Smith 4986	G.S.
macgregoriae (red)	3	238	8/03		Currie
macgregoriae autumn flowering				cuttings	LC
macgregoria orange lobe	4				JLR
Macgregoria x Rarum	12	41	8/03	Natural Hybrid 1983 PNG, G Smith, Mt Gahavasuka	GS
madulidi	4			seedlings	LC
malayanum				seedling	Andrew Rouse
malayanum	3				JLR (NRG)
malayanum				seedlings	LC
maxwellii	5	17	8/03	Ex Binney	GS
meijeri	6	139	8/03		Binney **DIED**
meliphagidum	13	125	8/03	Central Indonesia via Edinburgh	Binney
micromalayanum	6	22	8/03	Keith Adams 92109	GS
multicolor					NRG
multinervium (white)	3	145	8/03		Binney
multinervium				cuttings	Andrew Rouse
multinervium	6				JLR
nervulosum	4	231	8/03		Currie
notiale					NRG
orbiculatum (pink)	3	147	8/03	Mt Kinabalu Blumhardt	Binney
orbiculatum	3				JLR (NRG)
pauciflorum	11	123	8/03	Malaysia	Binney
pauciflorum				seedling	Andrew Rouse
pauciflorum	6				JLR (NRG)
perakense	20	30	8/03	Adams 7909 Gunang Brinching Malaysia	GS
perakense	5	151	8/03		Binney
phaochitum	3	87	8/03		Nursery near O.B. (NRG)

phaopeplum					NRG
pingianum	5	60	8/03	Seed batch HU 8199 S871479	G.S.
planecostatum	8	163	8/03		Binney
planecostatum				seedling	Andrew Rouse
planecostatum	4			Mt Kinabalu	JLR (NRG)
planecostatum				cuttings	LC
planecostatum				struck cuttings	Geraldine
pleianthum	2	148	8/03		Binney **DIED** (NRG)
pneumonanthum	6	28	8/03	Keith Adams Gunang Murud Borneo	GS
pneumonanthum	2	150	8/03		Binney
polyanthum				cuttings	LC (NRG)
praetervisum	7	32	8/03	Oz Blumhardt, Mt Kinabalu 1984	GS
pudorinum	1	136	8/03		Binney
pudorinum	1	250	8/03	plant	Binney
pudorinum				seedlings	LC
pulleanum	7	57	8/03	Laiagam Kandep Rd., PNG G Smith 4183	GS **DIED**
pulleanum	6	127	8/03	Michael Cullinan	Binney
quadrasianum (red)	17	130	8/03		Binney
quadrasianum	7				JLR
rarelepidotum (bronze foliage)	5	113	8/03	Gunang Kemiri	Binney
rarilepidotum	5	131	8/03	Sibayak near Madan	Binney
retivenium	5	21	8/03	Kinabalu Borneo 1981	GS
retivenium				seedling	Andrew Rouse
retivenium	1				JLR (NRG)
retusum				cuttings	Andrew Rouse
retusum				cuttings	LC
rhodoleucum					NRG
rhodopus	1	64	8/03		G.S. **DIED**
rhodopus	1	88	8/03	rooted cutting	G.S.
rhodopus	4	133	8/03		Binney **DIED**
rhodopus	2	233	8/03		Currie **DIED**

rhodopus	1			SOJ01 seedling	LC
robinsonii (yellow Jav.)	5	33	8/03	Adams 1986 Gunong Brinching Malaysia	GS
robinsonii				Cuttings and seedlings,	Andrew Rouse
rousei	6	119	8/03		Binney
rubineiflorum				seedling	Andrew Rouse
rugosum c.i.w.				cuttings	Andrew Rouse
rugosum					JLR (NRG)
rugusom	1	29	8/03	Adams Kinabalu 1986	GS
rugosum (1)	2	158	8/03		Binney
rugosum (2)	4	165	8/03	Mt. Kinabalu	Binney
rushforthii				needs verification	NRG
ruttenii	1			plant	
salicifolium				cuttings & seedlings	Andrew rouse
salicifolium	6	116	8/03	ex G Snell	Binney
santapaui				seedlings	LC
saxafragoides	1	83	8/03	rooted plant	Jury
saxifolium				cuttings	Andrew Rouse
scabridibracteum	6	39	8/03	Oz Blumhardt Mt Gahavasukar PNG	GS (NRG)
searleanum	11	45	8/03	R.S.F. 80/148 1986	G.S **DIED.**
searleanum	3	135	8/03	G Snell	Binney
searleanum	2	226	8/03		Currie **DIED**
sessilifolium				cuttings	Andrew Rouse
sessilifolium	4	24	8/03	Ex Oz Blumhardt	GS
sessilifolium	2	112	8/03	Samosir Island Sumatra	Binney
sessilifolium	5	118	8/03	ex G Snell	Binney
shoddei				seedlings	LC
solitarium	6	49	8/03	Paul Corres Bulldog Rd., PNG K10376	G.S.
solitarium	7			seedlings	LC
spondylophyllum				seedling	Andrew Rouse
stapfianum	6	10	8/03	Borneo ex. Binney	GS
stenophyllum v. augustifolium	1	18	8/03	Batu Lowei Adams 92108	GS **DIED**
stenophyllum v. stenophyllum	3	109	8/03	Most verifiable through Edinburgh	D Binney
stenophyllum	2	114	8/03		Binney (NRG) **DIED**

stevensianum	4	46	8/03	Mt Gahavasukar, Oz Blumhardt	G.S.
suaveolens				seedling	Andrew Rouse
suaveolens	7	23	8/03	Ex Oz Blumhardt Kinabalu	GS
sumatranum				seedling	Andrew Rouse
sumatranum	2			plants	LC
Sumatranum x Retusum	4	19	8/03	Natural Hybrid Graeme Snell Sumatra	GS
superbum	4	50	8/03	G Smith Mt. Miap PNG 2983	G.S.
superbum (Pink)	3	53	8/03	Seed grown ex Mt Gahavasukar G Smith 12717	G.S. **DIED**
superbum	3	134	8/03	Mt Giluwe	Binney
superbum 'misty pink'	2	228	8/03		Currie
superbum Binney	2	230	8/03		Currie **DIED**
superbum	1	237	8/03	ex Bill Moyle	Currie
superbum				2 plants yet to flower?	NRG
taiwanense	7	129	8/03		Binney
taxifolium	3	77	8/03		Jury
ternstroemia	5	13	8/03	Ex Oz Blumhardt	GS
truncicolum				cuttings	Andrew Rouse
truncicolum	3	229	8/03		Currie **DIED**
tuba	3				JLR (NRG)
unidentified Kinabalu				cuttings & seedling	Andrew Rouse
vaccinoides	3	91	8/03		D Brown **DIED**
vaccinoides	5	121	8/03	Edinburgh 87/2106	Binney **DIED**
vaccinoides				cuttings	LC
vanderbiltianum	2	142	8/03		Binney **DIED**
vanvuurenii				seedlings	LC
versteegii				seedling	Andrew Rouse
versteegii					NRG
verticillatum	5	110	8/03		D Binney
viallii	3	62	8/03	S1985 1985	G.S.
villosulum	3	153	8/03	T3-0812	Binney
vitis idaea	1	34	8/03	G Smith Mt. Yakopimanda 1986	GS **DIED**
vitis idaea	5	128	8/03	72/2383	Binney **DIED**

warianum	1			plant	LC
wentianum	4			seedlings	LC
williamsii	2	76	8/03		Jury
williamsii	4				JLR (NRG)
womersleyi					NRG
wrightianum	18	126	8/03		Binney
wrightianum	5				JLR (NRG)
yelliottii	9	138	8/03		Binney
yongii				cuttings	Andrew Rouse
yongii	3				JLR
zoelleri "island sunset"	3 S3	104	8/03		J Kenyon
zollingeri	20	20	8/03	Keith Adams (Sulawesi) 1996 ex Gunang Sessean	GS
zollingeri				seedlings	LC
Unknown rare	2				JLR
Species No 13				Goroka Arisumi	JLR
large yellow unnamed	1	249	8/03	plant (Thought to be new species?) seed grown	Currie
114 Sulawesi	4			seedlings. Monitor	LC
large yellow unnamed	1	249	8/03	plant (Thought to be new species?) seed grown	Currie

(Subject to further check of NRG PLANTINGS)
:

Species on order

christianae, javanicum Bako Island, javanicum teysmanii, luraluense, leptanthum, orbiculatum, praetervissum,retivenium, sessilifolium, salicifolium, wentianum, baenitzianum Puddey has sent cuttings of all of these, but some require more time to develop suitable root system. They have not been added to the above list yet.
vaccinoides (Geraldine) Bill has ordered these.
baconii, and apoanum (Bill Taylor)

January 2007

- ***baconii*** and ***apoanum*** turned out to be incorrect.
- ***vaccinoides*** is being held at my glasshouse about 6 or 7 plants. LC has flowered it.
- ***baenitzianum*** is a devil to grow, and I need to look at the original to check it.
- we have received seed of many species since the list was originally written, and these have not been added, and will not, until they reach maturity.

- there are some basic spelling errors on this list which need correction, so I advise the use of Argent's book to cross check. There are also one or two 'mythical' entries amongst the list, just to confuse readers! Sorry.

M McA

CLIMATE CHANGE AND GLOBAL WARMING

Newsletter is indeed fortunate to have two articles addressing the vital issues of global warming and climate change. And doubly fortunate that both authors, Peter Fisher and Mike Hammer, are Society members and both are well qualified to write. Peter teaches environmental economics at Central Queensland University. Mike is a research scientist for a Melbourne based high technology manufacturer and major exporter. As a science graduate from Melbourne University more than 50 years ago I appreciate both the issues Peter and Mike raise and the diverse choice of perspective they bring.

When I graduated I thought science was objective; a researcher in a given field either recorded facts, [perhaps temperatures at a particular place at different times, or perhaps how many rats developed cancer when exposed to a particular proposed drug] and then sought an hypothesis to explain the observations, or postulated an hypothesis and then devised a means to test it. Did the hypothesis explain **all** the observed data? Was the test rigorous? Did the test consider all the data the researcher and all his peers considered relevant. Because of the risk of bias did the test also consider all data known opponents thought relevant? If the hypothesis didn't fit **all** the observed data, **no matter how small the discrepancy,** it represented a potential flaw in the hypothesis unless the discrepancy could be satisfactorily explained. It was never acceptable for a scientist to ignore **any** data that did not fit an hypothesis. In physics we were taught that tiny discrepancies in expected measurements led to discovery of new sub-atomic particles. Much insight can be gained from seemingly tiny discrepancies. If researching cancer in rats following exposure to a suspected carcinogen has development of cancer in non exposed rats been measured? In the climate change/global warming debate, much as in the cancer tobacco and asbestos debates, there is a lot at stake; the future of the world as we know it or millions of people suffering ill health or premature death. When the stakes are high the need for quality debaters increases. A comparison of Mike's and Peter's articles brings out different views of fundamental facts. Is there, really, global warming? Are the oceans rising? Do increased carbon dioxide levels in the atmosphere cause global warming or does warming of the oceans cause increased carbon dioxide levels? If the latter, is man's part in increased carbon dioxide levels a major or minor one? You, the readers, are asked to think. Test what you read. Be skeptical. That is good. Let me know what you think. What is bad is the temptation towards bias that big issues, and big money, brings. If Mike is right some data is suspect, or major pieces of data are not being considered. If Peter is right about global warming is he right also about the consequences? We need to know the answers without delay so future planning and action happens fast. Read Michael Crighton's *State of Fear*. Michael is an entertaining novelist. He is also a medical doctor who has a keen interest in major world issues. Of course he writes to put across a particular view. But he researches thoroughly for his books. Look up the myriad references he cites for the message in *State of Fear.* Again think.

SWB

COLD COMFORT IN CLIMATE CHANGE

January 6, 2007 – SMH by Dr Peter Fisher, an environment industry specialist who teaches environmental management at Central Queensland University. Peter is one of our members.

Much of Australia has again suffered an extremely hot and dry year thanks to climate change. But these conditions could turn around with savage speed, writes Peter Fisher.

Climate change has customarily been viewed as a gradual, creeping process - not entirely human-friendly but unlikely to turn the world into an unruly, totally horrid place. That idea has been shaken by Hurricane Katrina, road-melting European summers, the drought and now cataclysmic wildfires sweeping down from the Victorian Alps. Even so, much of government and corporate thinking remains steeped in the idea that no matter how significant the changes turn out to be there will be enough time - maybe 30 years, maybe 50 or more - for social and economic adjustment.

A similar assumption underlies the rather leisurely search for technological solutions under AP6 (Asia-Pacific Partnership on Clean Development and Climate) signed in Laos in July 2005 and recent emission reduction projects announced by the Federal Government. This has occurred against a backdrop of a United Nations weather agency report that levels of heat-trapping greenhouse gases in the atmosphere hit a record high last year and are likely to keep rising unless emissions are radically cut.

In the circumstances, governments and business would be well advised to take a long, hard look at the growing body of research into the astounding, often unsuspected connections between the regular physical transformations of the planet's weather systems.

Chemical analyses of the tiny bubbles of air in Greenland ice cores establish that the last ice age started to teeter about 14,700 years ago. As it gathered momentum, melt-water poured into the oceans, raising levels by half a metre or more each decade. The sea moved inland like a slow tsunami at a rate of up to 450 metres a year.

But after a hesitant couple of millenniums of warmer conditions, the cold was back with a vengeance, turning western Asia and Europe into ice empires. This event, dubbed the Younger Dryas (after a plant that suddenly reappeared in Scandinavia), returned the planet to cool and dry conditions in the space of a few decades, with the average northern hemisphere temperature plummeting 7 degrees.

Just as rapidly, after 1300 years, warm and wet conditions resumed. Another abrupt but lesser cooling which converted the Middle East into a dust bowl began 8200 years ago, but it lasted only a century.

Both events are thought to have been caused by an interruption to the Gulf Stream, or "ocean conveyor", through large volumes of melt-water entering the North Atlantic. (The Younger Dryas probably stemmed from a cataclysmic collapse of an ice dam across Canada's Lake Agassiz.)

In fact, the Earth's geophysical history has so many climate flips that these can be considered normal rather than aberrant. James Hansen of NASA's Goddard Institute for Space Studies says it is our own "relatively static experience of climate that is exceptional". The paleoclimatologist Peter deMenocal warns "that the climate system has much greater things in store for us than we think". Steven Mithen, in his book After the Ice, has even re-created the climatic maelstroms our forebears must have endured, while Brian Fagan provides a similar historical appraisal in The Long Summer. Since the cold snap that began 8200 years ago, the world's climate appears to have been remarkably stable. But about AD540 the Earth ran into a cosmic swarm, clouding the sky and leading to prolonged cold (possibly triggering the Dark Ages). It was so sudden that even the scribes abandoned their quills to concentrate on survival. Another cooling ran from the 14th to the mid-19th century, the biting cold of that period often being portrayed on Christmas cards. New research points the finger at the Gulf Stream, which slowed by 10 per cent during this period. And the climate between ice ages may not have been so drab as commonly thought.

Researchers at the Woods Hole Oceanographic Institute in America reveal in a recent issue of the journal Science that sea levels (linked to the age of coral terraces) rose and fell by as much as 30 metres over intervals of 3000 to 9000 years between 70,000 and 240,000 years ago. A study of a fossilised West Australian coral reef has similarly deduced that the warming that occurred during the middle of the last interglacial period 125,000 years ago caused a catastrophic melting of ice and a rapid sea level rise of 3.5 to 4.5 metres. A glimpse of the scale and ferocity "climate transit" can assume comes from Philip Allen and Paul Hoffman in a paper in the journal Nature, with their reconstruction of a deglaciation of 635 million years ago when icesheets poured directly into warm seas. They inferred that the ripples in sediments deposited during this period of sea level rise corresponded to giant, long (21- to 30-second) waves "feeling the bottom", 200 to 400 metres below. These waves were estimated to have been produced by winds blowing at speeds of 20 metres a second over the water. On shore, they created huge dust storms, much of the debris layering into the sea. The course of past climate transitions from cooler periods suggests that they can be extremely rapid - perhaps within a matter of decades rather than a century or centuries. For instance, new research published in Nature has found that the glacial climate in the North Atlantic can swing very quickly, with temperatures rising by 8 to 16 degrees in just a few decades at the end of each ice age. Such disturbances stem from the elliptical nature of the Earth's orbit and variations in its tilt and spin. Life has long been at the mercy of these happenings, as demonstrated by a horrendous 10,000-year drought in Africa during the Pliocene epoch 2.5 million years ago, which devastated the gorilla population in southern Zaire (later providing a niche for a new breed of chimps) and no doubt brutally affected proto-humans.

Add to these natural cataclysmic events the potential effect of climate forcing from rising carbon dioxide levels, and the outlook becomes much more unpredictable. James Lovelock, in his book The Revenge of Gaia, posits that the planet has already been pushed over the brink, with rapid rises in temperature of as much as 8 degrees now likely.

Hansen, one of the US President's most respected (if not loved) climatologists, doesn't go quite that far. He concludes in an article in Climatic Change on the storing of heat in the oceans that "any increase in global temperature beyond 1 degree could trigger runaway melting of the world's icesheets". Shrinking ice means less sunlight gets reflected and more gets absorbed, exacerbating the problem of warming. "Even 1 degree additional warming may be highly undesirable; 2 to 3 degrees is clearly a different planet," he says. The first act looks to have played out in the Arctic Circle this northern summer, when large freshwater lakes formed on the Greenland icesheet and then drained away to the depths. Fred Pearce, writing in Britain's The Guardian, records how scientists observed, within hours of the lakes forming, that the vast icesheets rose up, as if floating on water, and slid towards the ocean. The Penn State University glaciologist Richard Alley commented: "We used to think that it would take 10,000 years for melting at the surface of an icesheet to penetrate down to the bottom. Now we know it doesn't take 10,000 years; it takes 10 seconds." Pearce says: "This highlights why scientists are panicky about the sheer speed and violence with which climate change could take hold. They are realising that their old ideas about gradual change - the smooth lines on graphs showing warming and sea-level rise and gradually shifting weather patterns - are not how the world's climate system works." (New research on the Ross Ice Shelf reveals that collapses over the past 3 million years have taken place very rapidly, with sea levels rising by between 7 and 17 metres.) The quickening pace of that understanding is proving daunting to climate-change science watchers (but not, it would seem, the politicians). Hansen stresses the urgency of the policy response. "I think we have a very brief window of opportunity to deal with climate change, no longer than a decade," he said last year. If he is right we now have nine years at most, and there has been no let-up in emissions growth since then. And the latest UN conference on climate change could not even agree on a timetable for vital decisions on curbing emissions. Bill McKibbin, reviewing Lovelock's book in The New York Review of Books, says: "Our problem now is that there is no way forward, at least if we're serious about preventing the worst ecological nightmares, that doesn't involve working together

politically to make changes deep enough and rapid enough to matter. A carbon tax would be a very good place to start."

Meanwhile, our governments continue to canvass solutions that invoke long lead times - 15 years or more to come fully on stream - which prudence suggests is time we simply don't have. With climate transit looking to be in full swing (in the lead-up to a flip?), extreme extremes in weather patterns due to rising sea levels will force even the most obstinate to take stern action.

GLOBAL WARMING

Mike Hammer is a Society Member and a frequent point of reference when scientific issues are topical; for example sourcing a digital camera/microscope and enlightening us about DNA and genetic modification **ED.**

My name is Michael Hammer and for the last 30 years I have worked as a research scientist for a high technology manufacturer and major exporter based in Melbourne. My output is measured not in papers or theories but in commercial patents and new products brought to market. So far my work has generated over 20 patents and more than $500 million in high tech exports for Australia. To do this I have had to work across a broad range of fields and often challenge entrenched wisdoms.

Like all of us I have heard increasingly dire doomsday predictions from the global warming advocates; sea levels rising by many metres, Europe plunged into an ice age, climate tipping points, and the like. From my knowledge physics and feedback systems, these predicted outcomes seem to me to be extreme and indeed strike me as more reminiscent of "people with a cause to push" than serious science. My response has been to look at the available data for myself. I write this article to present to you some of my findings and resultant concerns.

There is overwhelming data available showing that the earth's weather is highly variable. We are all familiar with the year to year variability from personal experience and the geological time scale variations from historical reports however we need to remember that apparently random variations occur at all time scales. Global warming websites refer to several significant warming and cooling periods in the last 2000 years. The same sites also present graphs showing data in support of warming from 1910 to 1940, cooling from 1940 to 1970 and warming again from 1970 to 2000 (indeed some of the current global warming activists were apparently global cooling activists in the 1970's). All the previous climate variations occurred without human contribution. If the claimed warming between 1970 and the present is real, we need to be very careful about jumping to the conclusions that this is uniquely due to human activity and is uniquely the start of a one way slide into a doomsday outcome.

We need to know firstly; are we seeing the start of a significant long term change in climate and secondly; if so is it due to human activity?

Global warming claims suggest future temperature rises of up to 8–10 C; an alarming prospect. Currently reported data to date however only supports claims of an 0.3 C rise [1]. I question whether such a modest rise, even if true, can be responsible for the current climatic events being attributed to global warming. However even this modest rise is the subject of significant controversy. The calculations are based on data from ground based weather stations. For convenience such stations are located in towns and cities. Towns and cities have fewer trees, more masonry buildings, more roads and more heat emission from home heating, cars and industry all of which make the city hotter than the surrounding countryside. As the town grows, this temperature difference increases. This is called the urban heat island (UHI) effect and is

typically several degrees for a city. Because cities were smaller and less affluent in the past, their heat island effect was smaller. Thus a direct comparison between recorded temperatures today and a century ago would show clear temperature increases even in the absence of any global warming. The UHI effect is much larger than the magnitude of the claimed global warming. Global warming calculations claim to make some adjustment for UHI effects but even a few percent error in such adjustment is enough to create or deny global warming of the magnitude currently claimed. Reference [1] shows a particularly interesting graph where the amount of warming found is plotted against the size of the town (plotted on a logarithmic axis). The data shows a linear relation between the two with zero warming for towns of less than 10,000 people. Since 1970 we also have temperature data from satellite borne microwave sounding units. These measure temperatures averaged over a large area thus greatly reducing the UHI problem. It is interesting that this data seems to show less and in some cases negative global temperature rise [1]. Of course, if you live in a city (or down wind of a city), as most of us do, then your immediate environment has almost certainly warmed but it is overwhelmingly a local, rather than global, phenomenon and due to UHI not CO2 emissions. Such warming may well have some effect on local weather (for example, I recall reading a report several years ago which suggested warming cities may have reduced the incidence of tornados in the US tornado alley) but is extremely unlikely to have any global impact.

If the above mentioned temperature rise is both real and significant, what is the likely cause? Current popular wisdom suggests rising levels of CO2 due to fossil fuel use. We know for sure that CO2 levels are rising, I believe the Muana Loa measurements can be relied on [1]. Also we know that CO2 is a green house gas, it strongly absorbs between 14 microns and 15 microns, which is near the maximum emission wavelength for the earth's surface. We also know that CO2 emissions from burning fossil fuels represents about 3% of the total annual CO2 generation on Earth [5]. This is not a dramatic increase but it is also not trivial. One way of testing the above hypothesis is to calculate the change in energy absorption with increasing CO2 levels. Having some knowledge of spectroscopy I have done this and I find that, even at 280 ppm CO2, more than 99.9% of all the energy in the CO2 absorption band has been absorbed within the first 50 metres. This absorbed energy is then transferred via collisions to the oxygen and nitrogen molecules which radiate it away at other wavelengths. Subsequently I found a paper [6] which does a similar analysis in more depth and comes to the identical conclusion. The situation is akin to putting a sheet of metal over a window to block out the light and then thinking that putting a second sheet of metal over the first will make it still darker. It won't because the first already blocks all the light. Ref [8] also comes to the same conclusion. Another way to test the hypothesis is to look at the correlation (cause and effect relationship) between CO2 levels and reported temperature rise. The two graphs are given in [1]. They show;
between 1890 and 1940 temperature rose 0.5 C; CO2 rose from 295 to 310ppm.
between 1940 and 1970 temperature fell 0.2 C; CO2 rose to 330 ppm
between 1970 and 1990 temperature rose 0.3 C; CO2 rose to 350 ppm.
This is almost zero correlation. The greatest temperature rise preceeded most of the CO2 rise and there have been both significant temperature falls and rises reported in the face of rising CO2 levels. Indeed we need to question cause and effect. The oceans store a colossal amount of CO2 dissolved in the water. Rising water temperature reduces CO2 solubility releasing more to the atmosphere so, does rising CO2 cause rising temperature? or is it the other way round?

CO2 causation of global warming also predicts that the troposphere would warm before the surface of the earth since this is where the CO2 absorbs the re-radiated energy and it must warm before it can warm the surface. Yet the data suggests the troposphere has warmed less than the surface. It also does not explain earlier warming periods when human CO2 emissions can be

ruled out. I believe there are grounds to be cautious in accepting CO2 emissions as causing global warming.

There are also other hypothesised causes for potential global warming. To mention two, reference [1] shows a graph comparing sun spot activity with global temperature for the period 1750 to 2000. If the data is accurate the correlation is interesting. Another possible cause documented in [5] is that a hot spot in the earth's rotating magna moves under an ocean. This heats the ocean, which in turn raises global temperatures and CO2 levels. Interestingly, if true, it could also be a very good explanation of ice ages since warmer oceans increase water evaporation and thus cloud cover, cooling the land (the oceans being heated from below are less affected). A warmer ocean and cooler land encourages water transfer from ocean to land collecting as ice near the poles.

Another concern is that global warming will lead to very rapid melting of the polar ice caps leading to massive sea level rises and coastal flooding. Predicted sea level rises range from significant fractions of a metre to many metres. These claims are backed up with claims of rapid glacier retreat, melting ice shelves and massive icebergs. From what I can find, however, measurements show essentially no change in sea levels over the last few decades. At most a few mm rise or fall depending on the measurement site chosen [1]. (the variation is not surprising, sea level is measured relative to a coastline and tectonic plate movements means some land is rising, some sinking). More recently, it has also become possible to measure sea levels via satellite altimeter and these measurements show essentially zero change [1].

With regard to melting polar ice, one must remember that only melting of ice on land can contribute to sea level rise since ice on water already displaces its own weight of water. 90% of the world's ice on land is in Antarctica with a further 6-7% in Greenland. The ice over water in both Antarctica and Greenland, (particularly around the Antarctic peninsula which is significantly warmer than the rest of Antarctica) is indeed melting but inland ice, far from melting, is increasing in thickness [5] [11]. This fact is rarely mentioned by global warming activists. Of course one could argue that increasing temperature will cause this ice to start melting as well. However, the average temperature in inland Antarctica is – 50C and even at the height of summer it does not rise above about -30C. Ice only melts at 0C so that many degrees of warming would be necessary for such a scenario.

Another frequently cited doomsday scenario is that the melting northern hemisphere polar ice will stop the gulf stream and that stopping the gulf stream will plunge Europe into ice age conditions. I have found rather technical papers on the web disputing both these predictions. The matter is too technical for the available space here, however consider two simple points. First if the above scenario were correct, the gulf stream slowed and Europe started to cool, such cooling would increase ice deposits. Wouldn't that reverse the very process acting to stop the gulf stream? Second, if the gulf steam is the dominant effect giving Europe a balmy climate at latitude 50 to 55 north how come Seattle and Vancouver at around 49 north also have a balmy climate without the benefit of the gulf stream yet New York at latitude 42 north has a much more extreme climate?

I admit I do not know whether significant long term global warming is real or not but what I have tried to show in the above material is that the reality of global warming, human activity as a causative factor and the predicted outcomes are nowhere near as well supported by hard data as global warming proponents would have us believe. In reality we are trying to find and quantify very small data trends buried beneath very large natural random variations and then trying to draw profound conclusions from extrapolations of the extracted data. This is a risky process and one exceptionally susceptible to bias on the part of the researcher. Such bias can come about in many ways. I have referred to slight under or over estimations of UHI effects earlier. Another

way is to select only a part of the complete data, that best matches the hypothesis or only those measurement sites which match the predictions. A good example is documented on page 14 of [1]. Sadly I see possible bias from both sides.

Science has evolved ways to combat such problems. Firstly by free debate in the literature between proponents of each side forcing theories to be continuously challenged and rigorously tested. Secondly by judging hypotheses according to their ability to correctly predict future events. Thirdly by the use of double blind experiments. And this leads me to my very great concern over the current situation.

As far as I have been able to ascertain none of the global climate models has successfully predicted climate even a few years into the future let alone being the basis of valid predictions out a century or more. Yet this has not stopped calls for such model outputs to be the basis for extreme action.[3],

I see strong action on the part of global warming proponents to suppress debate even to the point of personally attacking those seeking to present an alternative point of view. For example [7] [10], Bjorn Lomborg presented a statistical analysis of experimental data in a book titled *The sceptical environmentalist*. The global warming community first put pressure on his publisher not to publish and, when that was not successful, formally accused him of scientific fraud (he was eventually acquitted). A major scientific journal then sought and published strenuous criticisms of his work while, at the same time, denying him an effective right of reply. When he sought to answer these criticisms on his own website the same journal threatened him with legal copyright action for citing parts of the material they had published. Richard Lindzen [3] (professor of Meteorology at MIT) gives a detailed record of the suppression of global warming critics dating back to the 1980's. He gives specific references to researchers who have lost their funding and even their jobs for publishing findings not supportive of global warming. He cites researchers subject to personal criticism and denigration for their lack of support for global warming and cases where major journals have rejected papers critical of global warming, claiming lack of public interest, without the step of peer review of the material. It is worthwhile reading for anyone interested in this sad history. David Demming [2] gave evidence before the US Senate committee of his personal experience of deliberate pro global warming bias by both scientists and the media dating back to the 1990's. I personally read a review of Michael Crichton's book *State of Fear* [11] in "New Scientist" where the author was made out to be grossly irresponsible – almost criminal – in daring to put his point of view to the public.

I find such tactics indefensible and appalling. To me they are more reminiscent of an organisation focused on imposing their ideology on society than serious scientists seeking truth.

Nor is the media blameless in these proceedings. Every undesired climatic event is presented as proof of global warming even though the events at issue are not necessarily atypical in either severity or frequency. Hurricane Katrina, for example, was not a particularly powerful hurricane nor is it abnormal for New Orleans to experience hurricanes. The extreme damage seems to be more due to government apathy towards hurricane preparations, despite warnings, than the severity of the storm itself. In fact more objective analyses of Atlantic hurricane frequency and severity suggest both have been decreasing [1]. As another example, 2005 was claimed as the hottest year on record. 2006 was clearly cooler but what was reported was the hottest spring on record. This change of reported parameter allows the media to again use the "hottest on record" label but it encourages a false comparison and thus represents bias. If 2007 is cooler again will we maybe hear about the hottest February the 23rd on record? Such reporting acts to inflame the

situation, promoting an emotional response when what is needed more than anything is a careful rational approach.

Reducing our reliance on fossil fuels through research into alternative energy sources is clearly desirable. However precipitous significant reductions of CO2 emissions is almost certain to be both expensive and significantly damaging to our society.
It may also severely curtail our ability to respond to the possible scenario of global warming being real but not related to human activity. Surely it is worth doing every thing we can to find out the truth before such extreme action. We need to know more and that can only happen by welcoming free and open debate. I would encourage readers to look at the web references below. They in turn give further references and represent a good starting point for personal exploration of this topic.

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1. Michael Crichton *State of Fear* Harper Collins 2004 ISBN 0 7322 8094x
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JOTTINGS

'**Vireya' – name origin**. I was interested to read in 'The Azalean' (Azalea Society of America Winter 2006 Newsletter) that vireyas were named by a medical doctor, Carl Blume, who travelled widely in Borneo and Java. In 1826 he published an account of 5 species of rhododendron from S.E Asia and named them in honour of a French pharmacist friend, Vireya. It was never accepted as a botanical name, but 'is used loosely as a common reference for Malesian rhododendrons'. John Lindley who worked at Wisley Garden in Surrey U.K. referred to Vireyas as 'perhaps the most gorgeous native plants'. *Rhododendron jasminiflorum* was the one of the first to be cultivated and exhibited at Chiswick, U.K. in 1850 where it was reported 'that few plants excited greater attention among the visitors'.

Research student at Edinburgh. The RHS magazine 'The Plantsman' September 2006 acknowledged the financial support given by the Australian Rhododendron Society Vic following the appeal by the RHS Rhododendron, Camellia and Magnolia Group to fund a Ph.D student at Royal Botanic Garden Edinburgh for taxonomic studies on genus *Rhododendron*. Enough money

has been raised and a student will be starting shortly. It is hoped that further funding will allow for the permanent appointment of a *Rhododendron* taxonomist.
The RHS magazine 'The Rhododendron, Camellia and Magnolia Group' also acknowledged our support and announced that a German student, Tobias Marczewski, had been appointed to the position. 'He has an outstanding excellent academic record…….studies in systemic botany at organic and molecular levels and field experience in Chile and Peru. He has strong interests in speciation and ecology'. We look forward to hearing of his research.

Watering. It is amazing how many plants whether in pots, hanging baskets or in ground that can be watered with a simple, inexpensive dripper system. We have one at our back door which has 54 drippers on it! A half inch black poly pipe clips on to a timer on the tap at the back door and loops around the patio. Each pot has a dripper which is on the end of thin tubing that is joined to the poly pipe. The pots are not in direct sun. Black plastic pots get hot so a lot of ours are standing in concrete pots which helps insulate them. An alternative is to stand them on saucers as long as these are removed in winter or the roots may rot. Large pots do not dry out as quickly as small ones and adding water saving crystals to the potting mix also helps. Trial and error (drooping or dead plants!) will tell how long to turn the timer on, probably 20mins in stage 3 restrictions will suffice.

Grey water. The other day after bathing the dogs in the bath (a once a year experience!) I tried bucketing the water onto the garden. I slopped the water and nearly slipped on the wet floor. Images of broken legs and hips flooded my mind. Since then I have thought of a better way of emptying the bath.
If I installed a small tank or barrel, with a tap at the bottom, just outside the bathroom I could pump the water out of the bath using a small submersible pump like those used in water features. A tube could lead from the pump outlet through the window and into the tank. If the tank is raised off the ground enough to put a bucket under the tap I could easily bucket water or even attach a hose. If anyone tries this method I would love to hear how it works! Why not have baths instead of showers and use the grey water?

***Phytophthora kernoviae* – A new threat to our trees?**
Found in Cornwall, UK, in 2003 *Phytophthora kernoviae* infects rhododendrons, magnolias, oaks, pieris, beeches, liriodendrons, michelias and probably many other trees. It is a fungus which causes extensive leaf blight and die back of rhododendron and large necrotic, occasionally bleeding, cankers on several beeches. It appears to be a potentially serious threat to woodland environments. Symptoms have been found on Rh. ponticum (no great loss as it is a noxious weed in UK!) and hybrids. They include blackening of the leaf petiole that often extends into the base of the leaf. This necrotic lesion can gradually extend across the whole leaf. Both old and young leaves are liable to be infected and the whole bush may be killed in severe infections. It seems to be spread via water splash or in airborne mist droplets also by movement of contaminated material, soil, etc. destruction of affected plants is so far the best way to eradicate the disease.

Plant Hunters, misadventure and disease –Sir George Watt discovered the magnificent *Rh. macabeanum* with its bold foliage and rounded trusses of yellow blooms on Mt. Japvo in the Naga Hills in March 1882 and named it after the then British High Commissioner in the Naga Hills of Assam DCMcCabe. Forty-five years later it was introduced to cultivation by Frank

Kingdom Ward, another plant hunter. McCabe was killed in the late 19th century in an earthquake.
Many plant hunters died violent deaths. David Douglas, in 1834, aged 35, suffered a gory end when he fell into a pit occupied by a wild and angry bull in Hawaii. Ivan Ivanovitch Redowsky discovered *Rh. redowskyanum* , a choice carpeting species with rose-purple blooms, in China in 1807 and was killed as a spy. In 1882 William John Gill was killed by Bedouins in the Sinai at the age of 39. In the early 19th century two brothers died in Australia. Alan Cunningham died of tuberculosis and Richard was speared by aborigines after discovering *Araucaria cunninghamii* (Moreton Bay Pine). Richard Oldham collected fine specimens of *Rh. schlippenbachii* but died of dysentery off the China coast in 1864. George Forrest died from a heart attack in 1932, Reginald Farrer from pneumonia, another was killed by a tiger and still others under mysterious circumstances! Certainly a dangerous profession!

Lyrebirds in the 'garden'. I heard the distant familiar clacking sound at the same time as my terrier. I strained to listen. She knew it was an intruder. I grabbed the camera and headed into the wilderness of our neighbours property. A few steps from the cottage next door the male lyrebird was strutting through the undergrowth and calling to his mate as a kookaburra, whip bird, parrot, blackbird, currawong and other sounds unrecognisable. Once I thought I even heard a chain saw! Living in this area of tall trees he would have had plenty of opportunity to listen and mimic a chain saw. To my absolute amazement two more lyrebirds appeared out of the untamed weeds. Mother and young? They flitted into the huge old *Liriodendron* with him in hot pursuit, higher and higher, mimicking all the way. My final view was of the three of them gliding off into the next tallest tree. I silently thanked my neighbours for their untamed wilderness.
Marcia Begg

WATER RESTRICTIONS

Stage 3 Restrictions for Gardens
Melbourne is now on Stage 3 restrictions. According to Yarra Valley Water's website, restrictions enforceable by law include:

lawns cannot be watered by residents, businesses or Councils.
Garden watering days are twice a week, either Saturday and Tuesday, for even numbered houses, or Sunday and Wednesday for odd numbered houses.
On the watering days residents may use:
*manual dripper systems between 6am and 8 am and 8 pm and 10 pm
*automatic dripper systems between midnight and 4 am and
*hand held hoses fitted with a trigger nozzle, watering cans and buckets between 6 am and 8 am and 8 pm and 10 pm
Penalties for breach, if caught, start with a warning then follows prosecution and/or restricted supply. There are water patrols and, of course, one's neighbors, who abide by the restrictions, must be expected to report offenders.

Industry and Government are not restricted save in respect of their gardens. Everyone is exhorted to save water even where its use is not unlawful. Holding multiple hoses at lawful times is, it seems, not unlawful, though frowned upon. Some special exemptions can be granted for gardens of significance and certain playing fields.
There can be no doubt that the current situation is dire and there is need both for restrictions and voluntary restraint as well.
However I ask:

*how did we get into this mess; are we the victim of an unforeseen, once in a thousand year event? Or has Government failed to plan?

*are the restrictions fairly shared?
*what does Government propose, for the future, to increase supply?
*what does the future hold for garden lovers?
*what action should garden lovers take?

Stage 4 Restrictions

These would be triggered, according to current published data [Melbourne Water website], when Melbourne's storages reduce to 29.3% capacity. At the moment, 15 January, levels are 37.7% capacity, which is above the stage 3 trigger point. At a usual usage, of 0.1% capacity per day, the stage 4 trigger will be reached in 84 days unless rain falls or usage drops. The latter won't happen because, when faced with loss of garden, the level of voluntary restraint will decline dramatically. 9 April is my present estimate unless something beneficial happens or, conversely, Government decides on an earlier trigger. Today's estimate, from a contact, is 1 March unless there is torrential rain. This, I gather, was decided in November by the relevant water Authorities. I assume this was before the last election. No wonder this decision was not published! Another contact says end March will be the date.

Under stage 4 restrictions all watering of gardens and sportsgrounds will be banned [presumably, though, only from the use of Yarra Valley Water]. Curious, isn't it, that Melbourne Water's and Yarra Valley Water's websites are very coy about the detail of Stage 4?

Much of Victoria, indeed Eastern Australia, is already at stage 4. In Bright, which is at stage 4, gardening watering is not banned, but is very severely restricted. At New Year, in Bright, most azaleas, many rhododendrons and even a number of camellias had died. Bright's famous tree avenues were, then, coping well. However cotoneasters in the bush had died! Would we be so lucky!

In essence what Government is promising is that gardening in Melbourne should cease. Melbourne suburbs will join their Sydney counterparts where only a minority of residents bother with a garden. For the majority a privet or so and lots of agapanthas; a few weeds and, perhaps, a neglected tree or two and a few straggling callistemons is standard fare. A minority of garden lovers will battle on with tanks, grey water and even a bore. Or become vilified as 'conscientious objectors' who flout restrictions.

How did we get into this mess?

Government would have us believe that our current plight was unpredictable and unprecedented. Unpredicted by Government seems true. Unpredictable is false. I am no water expert but I foresaw exactly this situation 4 years ago when the last Melbourne water crisis was developing. Being a garden lover, and having the means, I set out to provide for exactly what has occurred. I installed a bore [sadly just run dry] and tanks. A large tank, filled and judiciously used, would ensure survival of an average suburban garden. Lawns no. In mine and Marcia's case, with 8 acres of garden, the lawns must go and significant garden areas as well. Our tanks will keep our pots alive and as many small plants as we have the capacity to handwater. What made the current mess inevitable is:

*new housing every year at an ever increasing rate, every one of which uses water
*no increase in supply- indeed a decrease both by decommissioning dams and reduced catchment rainfall at least since 1995 [this may be attributed to global warming or it may merely be cyclical- but the reduction is real enough]
*waste on an ever increasing scale- leaking pipes, wasteful use on freeway tunnels, in government buildings and in industry [waste mostly attributable to Government]
*inadequate recycling [lack of Government action- talk, yes; do, no]
*so far as I can tell an absence of planning [again much talk; no do]
*lack of water accountability of all the major users
*failure to address climate change, assuming climate change to be real, not cyclical, so as to anticipate reduced catchment rainfall

I don't limit blame to the present State Government. The previous one was just as bad, worse even- it wasted Melbourne's water supply on generating electricity! Our Federal Government, ostrich like, denied climate change on ideological grounds until well past the point where climate change or cyclical change [whichever] reality was obvious. In reality planning stopped with the Thompson Dam, finished in the early 1980s.

Are the restrictions fairly shared?

Given a shortage of supply, restrictions should apply in proportion across every water user, gardeners, business and Government. If it is said that limiting industry supply affects jobs then limiting or banning gardens costs horticulture jobs. Besides, I need to be convinced that, to industry, alternative water supply isn't just money- bearing the cost of harnessing recycled water or desalinating water or whatever. As between householders there are no restrictions on house use nor is the gardening ration in proportion to garden size. I gather our metering equipment dates back to the 1930s. Thus it is not presently possible to give each water customer an allocation to be used at the customer's discretion. Modern equipment that would permit this does exist but our Governments have not seen fit to mandate its supply. Subdividers should be required to provide for water supply, of both household water and recycled water for garden use, and if that means a desalination plant, so be it. Who are the really large water users is not readily available knowledge. Why not? How much Thompson water goes to East Gippsland farmers? Are they restricted? Some water use should be banned outright and for ever. Not just washing cars and streets and the like, but water intensive farming operations- rice, cotton and no doubt others. Let us acquire such produce from places with surplus rainfall, especially those which receive increased falls with climate change.

What does the Government propose for increased supply?

In a word 'talk'. A spin doctor's picnic. There has been talk for some years past. Recycling is 'in' and 'big'. We are to get recycled water from Latrobe Valley electricity generation. And from sewage. Bendigo is to have a pipeline from the drought stricken Murray. A decommissioned dam is to be recommissioned. Never mind that water is heavy and it will cost a fortune to pump recycled water from Morwell. Why was the decommissiond dam decommissioned rather than repaired? There is no reticulation system to supply potential users with recycled water. I have not seen the contractors out there building the system. However on the news this evening, 15 January, the Minister is quoted as saying that new outer Melbourne subdivisions will be provided with recycled water and residents will have to use it outside. Will it really happen? Thus far its been all talk, no do. If it does happen it's a very small step in the right direction. I actually asked my local member what he proposed to do about water before the election and before the previous 2 elections. I got bullshit the first time and no answer after that. The latest, just broken, news from the Minister is that the Government will 'consider' desalination [borrowed from the Opposition election strategy]. What it means is talk.

Our Federal Government has got into the talkfest with a water summit. What has happened? Nothing!

Of course the problem is Australia wide, country and city. I think Governments have a duty to supply every household, city and country, with adequate water for gardening as well as drinking. In good times and bad, whatever it costs. Geelong has been in crisis for years and nothing done. Bendigo has almost run out. Irrigation farmers also have a problem. They have no, or reduced, water allocations. Industry is not restricted at all- just voluntary restraint. There must come a point when very big users, farming and industry, cannot be provided with water. What that point is and how limited supply should be rationed should be decided fairly after open debate, not dictated by nameless and faceless 'officials' or, worse, spin doctors based on likely voter reaction.

What does the future hold for garden lovers?

Judged by our members, garden lovers comprise a high proportion of retirees. For healthy retirement interests outside work are essential. Gardens take long lead times to plan and grow. It

is not surprising that retirees, facing loss of their special interest in their gardens, are, according to the Age garden writer, reduced to tears. Many do not have the physical capacity to hand water to save their treasures. I have gone around photographing our garden 'as it used to be', to treasure if, in future nothing is left. Government statements and action [and inaction] say loud and clear that gardens and gardeners have no [electoral] value. Even if new subdivisions are provided with recycled water, retirees mostly don't live in them. The Government assumes that retirees are not a cohesive voting group and, so, are not to be feared. On present trends garden lovers' futures are bleak. It makes me very angry. I want to punish the culprits. I need the means.

What Should Garden Lovers do?

Garden lovers face choices. They can find new interests. In Niagara, Canada the local Rhododendron Chapter reports that the landscaping trend is paving and stone, rather than plants! Alternatively gardeners can become active lobbyists. Garden Societies, Elderly Citizens Groups and Probus Groups could wield a lot of voting power if they got together. They have significant lobbying potential. They could make the Government fear them. Saving gardens won't happen the Government's way. I doubt that even regular twice daily full sized lawful baths will do the trick! There is such a mess that, on current form, it will take many years, if ever, for water supply again to become available to gardeners. Let's change the dynamics. Make the Government spend the money to supply gardening water, desalinated or recycled or whatever. Better that than get caught breaking the rules, as many gardeners will be tempted to do, or, simply, to give up.

I conclude by recording that the above are my opinions. They have no Society approval.

Simon Begg

BENCH DISPLAY 17 NOVEMBER 2006

Writing this six weeks after the event it is very difficult to remember the quality of the blooms. Vireyas were displayed in all classes, also azaleas. Asiatics were sparsely shown in a few classes. This was not unexpected with the climate being so dry and hot. The flowering season has been very early this year but surprisingly the blooms have been very good with not a lot of petal blight. Simon Begg again scored high with his vireyas, notably – *loranthiflorum, christii* and 'Penny Whistle'. Alan Walker won a class with *polyanthemum* x 'Dr. Sleumer' x *herzogii*. My 'Moonwood' was chosen winner in another class. Other place getters were Elizabeth Xipell and Bill Taylor.

The only azaleas exhibited were 2 plants – 'Kairakia' and 'Shochinzan' (Satsuki's).

Murray Mc Alister gained most points with his asiatics – 'Diaprepes', 'Maddenii' and 'William Avery', but John Quinn won the exhibit of the night with a very good truss of 'Diaprepes' (*fortunii*).

The non-rhododendron section had a few exhibits with a hanging basket of *sarcohilus hartmanii*, an Australian native orchid, being chosen. I was very happy as luckily this happened to be mine.

Len Sloggett

FAREWELL LILLIAN SANGSTER

Lillian Janet Sangster died in Huon Elder Care, Tasmania on 4 January 2007 from cancer. She was one day short of her 94th birthday. Lillian was an honorary member of the Society. She was a tireless worker in the very early days of the National Rhododendron Garden. Older members will remember her enthusiasm. She features in many of the early photographs of NRG. Her husband Ralph is shown on the Society tractor. Marcia and I visited Ralph and Lillian in Berwick just before they moved to Tasmania. Marcia's account of our visit is in *Newsletter* for September 2005. Ralph and Lillian supplied Marcia and I with their account of the early days and identified members in the photographs. The Society extends its sympathy to Ralph and his and Lillian's family.

SWB

FAREWELL JIM WESTCOTT

Peter Dammon alerted me to the passing of Jim Westcott on November 16, 2006. He was 94. Jim was a forrester with the, then, Forrests Commission. He was very helpful to the Society in the its early days and the early days of NRG. Also, Jim was largely responsible for establishment of both William Ricketts Sanctuary and The Hamer Arboretum. Jim is survived by his wife of almost 70 years, Bess, 4 children, 9 grandchildren, 8 great grandchildren and a sister. The Society extends its sympathy to them. I have posted a copy of Jim's obituary on the Society's Picasaweb site at http://picasaweb.google.com/ARSVic

SWB

ANTICIPATED PROGRAMME FOR 2007

JANUARY - :SUNDAY 28TH Australia Day BBQ 5.00pm

FEBRUARY - FRIDAY 16TH General Meeting – Glenn Maskell, Plans for NRG in 2007 & Azalea Lace Wing progress report

MARCH – FRIDAY 16TH General Meeting -
SATURDAY 10TH , Vireya Group in Lunch Room from 1.30pm

APRIL – FRIDAY 20th General Meeting

MAY -SATURDAY 12TH, Vireya Group in Lunch Room from 1.30pm
FRIDAY 18th General Meeting –Vireyas

JUNE – FRIDAY 15th General Meeting

JULY – SATURDAY 14TH, Vireya Group in Lunch Room from 1.30pm
FRIDAY 20th General Meeting – Terry Nisbet, Iris Cultivation (plants for sale)

AUGUST – FRIDAY 17th General Meeting – Ken Gillanders, topic to be decided.

SEPTEMBER – SATURDAY 8TH, Vireya Group in Lunch Room from 1.30pm
FRIDAY 21st General Meeting
Vireya Show, if the committee accepts a recommendation to it.

OCTOBER – FRIDAY 5TH, SAT 6TH AND SUN 7TH ABC GARDEN SHOW at CAULFIELD RACECOURSE
SATURDAY 6TH & SUNDAY 7TH AZALEA DISPLAY in Hall
FRIDAY 19th General Meeting
FRIDAY 23RD ? HOBART CONFERENCE AND NC AGM

NOVEMBER – FROM SAT. 3RD TO TUES. 6TH, RHODODENDRON SHOW in Hall.
FRIDAY 16th AGM

DECEMBER – CHRISTMAS FUNCTION – 1ST OR 2ND weekend.

CULTURAL NOTES FOR JANUARY AND FEBRUARY

• The warmer weather brings out pests such as Lace bug and Red Spider. Keep looking at leaves for any damage. Control the pests using a systemic insecticide such as Confidor.

• December, January and February are the main months for setting cuttings for propagation of new plants. Set cuttings from growth that is semi-ripe, not too early, (cuttings will be very soft and bend easily), and not too late, (cuttings will be stiff and difficult to bend).

• These months are a good time to re-pot plants. Re-potting provides thermal insulation from the sun and, assists water absorption. Depending on vitality of the plant, re-pot to a pot that is two inches larger. Add a sprinkle of time-release fertilizer such as Osmocote Plus.

• Keep plants trimmed to stimulate new growth and shape. Don't cut back plants too hard in the hotter weather as the summer heat can burn new growth.

• Perform general feeding, not too heavy handed, to pots and in-ground plants.

• Try and keep potted plants reasonably watered. Plants that dry out, especially those tight in their pots, may need some soaking in a tub of water.

• Watch for rust and powdery mildew. Spray with copper oxychloride and wettable sulphur. This can be incorporated into a mix of insecticide when spraying for insect pests.

Bill Taylor and Tom Noonan

Australian Rhododendron Society Vic Branch Committee 2006-7

President – Murray Mc Alister, Ph: 9756 6327
Vice President – Bill Taylor, Ph: 9754 8275
Vice President, Treasurer – Neil Webster, Ph: 9859 3622
Secretary – Marcia Begg, Ph: 9751 1610
Simon Begg – 9751 1610 (Newsletter Editor)
Val Marshall – Ph: 9803 4434
Len Sloggett – Ph: 9808 6484
Mike Hammer – Ph: 9755 2176
Tom Noonan – Ph: 9752 2211
John Quinn – Ph: 5968 1027

There are 2 vacancies on the committee. Volunteers will be welcomed.

SOCIETY PICASAWEB SITE

I have carried out the committee decision to increase the available memory to 6 gig at a cost of a modest US$25. Visit http://picasaweb.google.com/ARSVic for the latest pictures.
Additions since the November Newsletter are

- The Society Xmas Party; see John Quinn's fabulous "Gardenia Oddyssey"
- Jim Wescott's obituary
- The Society Rhododendron Show, cup weekend 2006

For the latest on the "Beechmont" Picasaweb site visit http://picasaweb.google.com/simonwbegg
SWB

CHRISTMAS LUNCH

Forty members and guests enjoyed a delightful lunch at Lady Chatterley's Restaurant at Cloudehill Nursery and Garden in Olinda. The garden contains many of the original plants from the Woolrich era including two very large Weeping Maples, an avenue of Copper Beech, a forest of twisted Rhododendrons and other large exotic trees. All this and the distant hills can be seen from the restaurant.

During the meal Jeremy Francis who owns and designed the Cloudehill garden told us some of the history of the garden but this was overshadowed by a magnificent bloom brought by John Quinn. Named 'Gardenia Odyssey' it was a very large rich cream vireya with twenty-three florets. A photo is in the newsletter and on the website (address page 29).

MNB

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