



Eucryphia

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Robertson Environment Protection Society – to promote the protection and enhancement of the Robertson environment.

PO Box 3045, Robertson NSW 2577

www.reps.org.au

PUBLIC MEETING

Friday, 11th April at 7.30
Robertson Community Hall

Our guest speaker will be Dr Lin Sutherland, School of Science & Health, University of Western Sydney and Geoscience & Archaeology, Australian Museum, Sydney.



Lin Sutherland next to the Holtermann gold model at the NSW stand at the International Geological Congress, Brisbane, 2013.

All welcome, informal discussion, light refreshment, gold coin donation

UNDERNEATH ROBERTSON

Geological foundations Origins and landscapes

Dr Sutherland will be talking to us about the origins and foundations of our Robertson landscapes – from the 'beginning', through the changes in position of our continental mass over the millennia, on to the present day.

Did you know that the mantle underlying Robertson was once part of Rodinia and we were nestled next to Kansas, USA?

So many changes have happened since then.

Come along to the meeting and you will be able to talk to him about it all.

Dr Sutherland has outlined some of these changes in his article below:

In Depth Robertson: Its geological foundations, their origins and landscapes.

The Robertson area was conceived in the condensation of the Solar planetary system, when Earth condensed from dust and gas into the Third Planet. Fragments from this Hadean time still visit the area, as meteorites torn out of the Asteroid belt. The underlying ancient mantle and crust beneath embryonic Robertson voyaged across the globe in its earlier stages. It joined in various assemblies and break ups of early continental and super-continental masses, such as Rodinia where it nestled next to Kansas, USA in the northern hemisphere. Parts of these Archean foundations have surfaced as mantle fragments torn off and brought up in very much later lava flows and vents

that still prevail within the present Robertson landscape.

The crustal cradle under Robertson is made up of Paleozoic fold belt rocks and granitic emplacements that formed within former mountain ranges of the Gondwanan and Pangea supercontinents. These worn down remnants are now exposed around the edges of The Sydney Basin, which started to subside as a large trough running from the southern coast of New South Wales into the New England area. The unsteady collapse of the crust generated volcanic chains of potassium-rich lavas near the base of the basin, about 280 million years ago. Spectacular columnar flow remnants of these eruptions are exposed around Gerringong and Kiama and are probably buried below Robertson. At this stage the Sydney Basin was being encroached by cold seas with floating icebergs, as Australia then lay close to southern polar ice-caps. Glacial melt water deposits and sea shells of Permian age characterise the lower levels of these early basin deposits.

The Sydney Basin underwent a cataclysmic climate change just before 250 million years ago. This produced the greatest extinction of Life on Earth, when over 90% of species vanished from the fossil record. The vegetation and evolution of animals changed. Mighty rivers washed down huge amounts of sand and clay stripped from distant Antarctic mountain ranges, filling the Basin with deposits from huge deltas of braided rivers and peaty backwater swamps. These now form the massive Triassic sandstones and inter-bedded shales and coal seams that form the coastal escarpment and plateau that Robertson stands on. Little is left of the succeeding Jurassic and early Cretaceous landscapes around Robertson, as the area underwent a prolonged period of erosion over that time, which may have stripped off a kilometre or so thickness of the cover rocks.

What is left from some prominent topographic features, mainly igneous bodies that may have been higher flows and vents. Mount Gibraltar syenite is the best example of these remnants and was a favoured quarry stone for Sydney buildings. Then, dramatic rifting about 100 million years ago dropped down the Tasman Sea Basin, which developed as a spreading ocean floor. This forever separated the New Zealand and Lord Howe Rise continental slivers from eastern Gondwana. The rifting and later Tasman seafloor spreading history up to 50 million years ago was accompanied by widespread basaltic volcanism, which continued on until 20 million years ago in

the Southern Highlands. Former valleys overflowed with lavas, forcing drainage systems into new erosive channels. Weathering of the basalts produced rich fertile soils like those well known around Robertson. Today, its landscapes and underlying geology represent the culmination of a steeped geological history.

Dr Lin Sutherland - Biography

Dr Lin Sutherland is presently an Adjunct Professor in the School of Science, University of Western Sydney, North Parramatta, and a Senior Fellow in Geoscience at the Australian Museum. He is a Fellow of the Australian Institute of Geoscientists, a Fellow of the Geological Society of Australia and a Life Member of the Mineralogical Society of New South Wales. He graduated from and gained his MSc from the University of Tasmania, Hobart, and was awarded a PhD from James Cook University of North Queensland, Townsville. He joined the Australian Museum in 1973 as Curator of Mineralogy and Petrology and was a Principal Research Scientist on his retirement in 2001. He was appointed an Adjunct Professor at The University of Western Sydney in 2002.

His professional career has included the study of Australian minerals, rocks and geological features and his particular interests include gem minerals, volcanic rocks and geological settings of eastern Australia. He has written many scientific and popular contributions, including the books: *Gemstones of the Southern Continents*, *The Volcanic Earth*, *Earthquakes and Volcanoes*, and *Gemstones and Minerals of Australia*. He has been involved in a number of major geological exhibits including The Planet of Minerals and Chapman Mineral Galleries. He has attended many overseas conferences and field collecting trips, and retains an active interest in Australian geology.



Lin signing his *Gemstones of the Southern Continents* at the Australian Museum Bookshop.

REPS rainforest walk at Anna and Tony's property – report by Judith Mee



On the morning of Saturday 15th February David and I awoke to the sound of rain on the roof. No surprises there, you might say – after all, we do live in Robertson. Just the same, we weren't the only ones whose hearts sank at the realisation that the day had started off wet. Many REPS members had been hoping for a fine morning, as we had all been looking forward to the planned walk through the wonderful remnant rainforest that crowns White Birch Farm, the property of REPS members Anna Hewgill and Tony Williams in Lemmons Road, Robertson. Our anticipation had been increased by their interesting article and tantalising photographs in the last edition of *Eucryphia*.



Determined that at least two people would turn up, and undeterred by the lingering fog and threat of more rain, we walked up the road at the appointed time to find several similarly determined members of the Committee and other REPS stalwarts in rain gear already gathered around Anna and Tony, with more arriving by the minute. By the time copies of their carefully prepared map

of the rainforest track had been distributed and protected from the wet by plastic sleeves, an enthusiastic group of about 21 people was ready to enter the eerie gloom of the mist-shrouded rainforest. The background accompaniment of braying from the remaining three of the farm's original four donkeys added to the surreal atmosphere.



It was immediately evident how much work our hosts had put into constructing the clearly-marked track, edged on both sides with mossy and lichen-covered rocks from the abundant supply on the forest floor. We were even more impressed with this achievement when Tony told us that in building the track he had not had to remove or damage any plants, but always managed to wind the path around them. We were also impressed with the very professional, meticulously researched and highly informative metal signs labelling significant features of this patch of rainforest – not only the vegetation which included a wide variety of trees, shrubs, vines, and ferns, but also evidence of how the animal inhabitants had helped to shape the landscape, eg termite mounds and wombat excavations. In addition to the list of botanical features on the back of our maps, Anna had prepared a comprehensive list of birds she had sighted in the area, for those with an interest in matters ornithological.

In fact, Anna's research was so up-to-the-minute that some of the name plates surprised even those among us with expert knowledge of Robertson rainforest plants, as we discovered for example that *Citriobatus pauciflorus* (Orange Thorn) has now been renamed *Pittosporum multiflorum*. In the ensuing discussion about whether botanists have enough to do, and

speculation about why they are always pulling the rug from under us by making us learn new names for familiar plants, it was agreed that the change from *Citriobatus* to *Pittosporum* was easier to fathom than the change from *pauciflorus* (lit. ‘with few flowers’) to its opposite, *multiflorum* (‘many-flowered’)!



The wealth of plant and tree species that we passed on our walk gave rise to many other interesting discussions, including comparisons with the species in the Robertson Nature Reserve. As we dawdled our way along the track, deep in mist and in conversation, a small group would suddenly gather around some feature of particular interest, such as a cluster of tiny, brightly-coloured fungi, or an uncommon bird or insect, and each time there was someone in the group who had some nugget of knowledge to share about it.

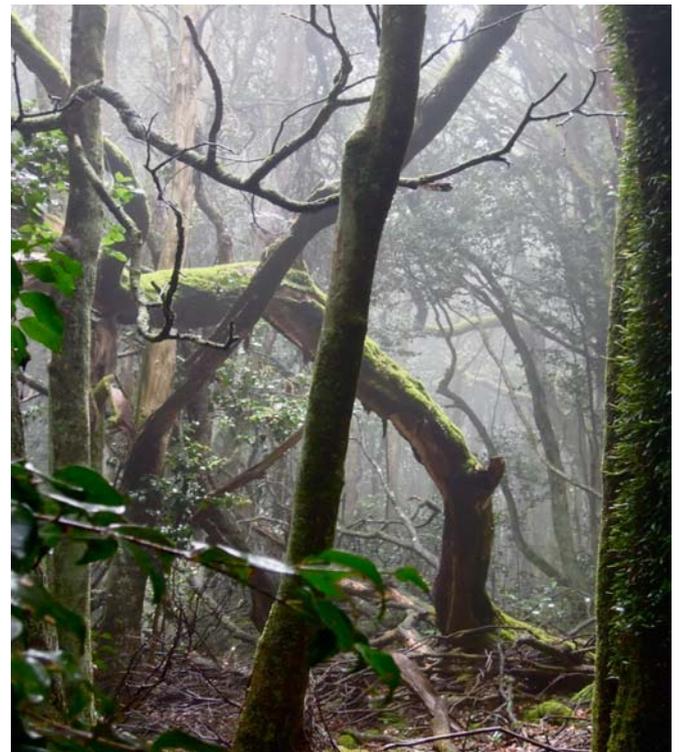


Bob McInnes was particularly pleased to find an example of a sawfly which had laid its eggs on the underside of a native raspberry leaf and then stayed on the leaf to guard them. (See separate article from Denis Wilson with more detail about this.) Every now and then a particularly

magnificent specimen, such as the giant Wonga Vine (*Pandorea pandorana*) pictured on the front page of the last *Eucryphia*, and the tree with two of the largest Bird’s Nest Ferns I have ever seen in the wild, suddenly loomed in front of us through the mist with heightened dramatic effect.

Remarkably, while the thick mist persisted, the rain held off all morning. Although we didn’t get to experience the beauty of sunlight filtering down through the forest canopy as many of us had hoped, and missed out on seeing the distant view of Pigeon House Mountain which is visible on a clear day from a vantage point on the southern edge of the rainforest, all present agreed that our walk through the forest in the mist had been an authentic and thoroughly enjoyable ‘Robertson experience’.

Our thanks to Anna and Tony for their generous hospitality.



President's Report

Dear Members,

Since the visit to Anna and Tony's rainforest last month, many things have been happening. Firstly, the walk in the rain and fog was a great experience for all those brave souls who made it. Not too much rain, fortunately, while we were walking. Such lovely places as this are one of the many reasons that our society for environment protection has such a role to play. It is so worth protecting.

Our committee meeting in March was attended by everyone on the committee - a full house. Discussion was lively. Beforehand we had some visitors who encouraged us to put in an application to council for a Community Grant. I am pleased to report that an application from REPS was submitted in time, but it will take a while to find out if we were successful. The grant request is about making Pinkwood Park a focus in Robertson for public art, and also somewhere to sit and admire the Pinkwoods, Waratahs, etc. Watch this space for more details as they emerge.

March has been a very wet month. Just two recent days contributed more than 150mm. The kikuyu is too wet to mow and getting very long. The days are drawing in, as we are now past the equinox. No cold weather yet, but it won't be long.

At a meeting at the CTC on Monday 24th March, two officers from Wingecarribee Shire Council presented to a group of representatives from Robertson clubs and societies a program for benefiting our town. Apparently a pilot program was provided for Wingello and Balmoral a year ago. These two villages are much smaller than Robertson. Over the next few years larger villages are to have a similar program, with Robertson and Hilltop being chosen to start. The idea is that the residents fill in questionnaires and attend meetings, so that the community determines what it wants/needs and the priorities involved. There may not be a lot of money, but the process could be very valuable, so you may like to start thinking on what would most improve our village. The focus is not on things like roads, but on social benefits. Once again, this will develop over the coming months. A suggestion, for example, was a two-week weed blitz on the road verges, involving volunteer residents with council staff and equipment.

On Friday April 11th our next meeting is at the Community Centre in Robertson, starting at 7:30pm. A distinguished geologist and mineralogist, Dr. Lin Sutherland, will be speaking

on "Underneath Roberston". It has been a while since we have had an earth scientist talk to us and give us an appreciation of the shaping of our landforms. It promises to be a very interesting evening, so invite all your friends and neighbours and publicise the talk.

Cheers

David Mee March 2014

Sawfly

At Tony and Anna's rainforest, during a REPS walk which I could not attend, Bob McInnes found a leaf with a Sawfly sitting on it and eggs underneath. Bob came to me later to photograph it.



Sawfly guarding eggs (leaf from below).

Well it has turned into quite a story. The life story of these Bramble Sawflies is well documented, it seems. The Sawfly is well reported to "guard" its eggs and larvae. In the case of a closely related species, the guarding behaviour is described as follows:

"Females place their eggs in groups of 30-40 on the leaf underside on both sides of the midvein and later position themselves at the base of the leaf that the larvae feed on, with the head directed towards the stem."

Females of *Philomastix* species pierce the leaf from above and place the egg on the underside of the leaf (Macdonald & Ohmart 1993). All species of this genus exhibit maternal care. Females stand near their egg mass and young larvae, or near the leaf petiole with the head directed to the stem and when disturbed they shake and create a buzzing sound with their wings (Macdonald & Ohmart 1993, Naumann & Groth 1998). This behaviour lasts until they die.

Source: <http://www.pergidae.net/philomastix.htm>

Imperial Hairstreak Butterfly

Recently I was amazed to find a butterfly I had read about, but never seen before, on the iconic plant of Robertson, *Eucryphia moorei*, also known as Pinkwood. There are a few growing well in Pinkwood Park near the Robertson Post Office. These young trees are growing well, having been planted there a few years ago by members of REPS under the guidance of Dr David Tranter.



Sawfly guarding eggs that are underneath leaf.

There are tiny cuts in the upper surface of the leaf; presumably each cut relates to where the egg is underneath. Does she protrude her "ovipositor" through the leaf? That's the only thing which makes ergonomic sense; otherwise it would require the female to go to both sides of the leaf and match up the cut with the egg. Ockhams Razor would rule that out.



Sawfly head shot.

More can be by visiting my blog at:

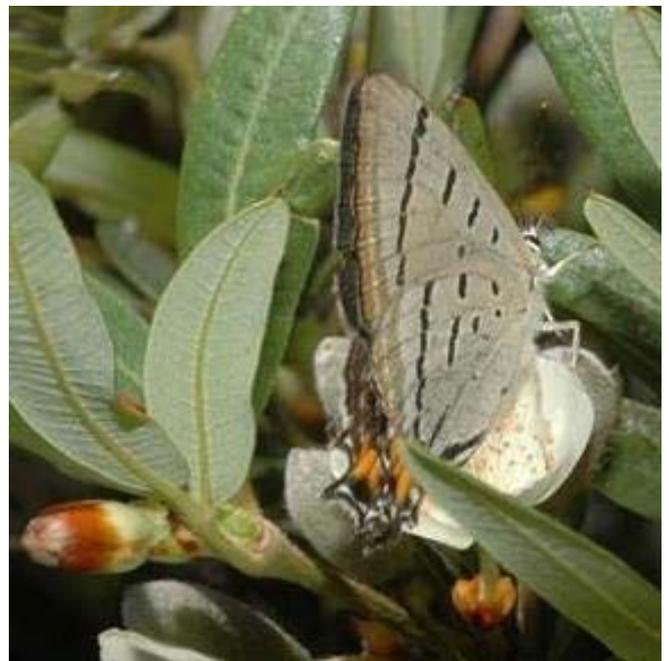
<http://peonyden.blogspot.com.au/2014/02/sawfly-guarding-eggs-on-rubus-nebulosus.html>

I hope you find it as fascinating as I did.

Denis Wilson



Rubus nebulosus 5 – foliate leaf.



Read about lifestyle and association with ants at:
<http://peonyden.blogspot.com.au/2014/02/imperial-hairstreak-butterfly-in.html>

Denis Wilson

Poetry Corner

Edited by Peter Glass

To commemorate ANZAC day 2014, 100yrs since the start of hostilities.

The 1st World War Gallipoli campaign of our troops failed to achieve its objective. 7,600 of our troops were killed and 19,000 wounded. Told on 7th Dec 1915 to evacuate Gallipoli by the night of 20th December, the entire force had been evacuated - with only 2 casualties.

The ANZACS were amazed and unbelieving when told they must leave the peninsula. Some were angry, some turned to poetry. A sergeant wrote these lines of verse to capture the poignant hurt to those who were leaving behind their dead comrades:

Not only muffled in our tread
To cheat the foe
We fear to rouse our honoured dead
To hear us go
Sleep sound old friends, the keenest smart
Which more than failure wounds the heart
Is thus to leave you, thus to part.

A Summer Night

Athwart the Starlit Midnight sky
Luminous fleecy clouds drift by,
As the mysterious, pallid moon
Sinks in the waveless still lagoon
Now that the queen of night is dead
The starry commonwealth o'erhead
(Softer and fairer than gaudy day)
Sheds lustrous light from the Milky Way;
While the Dog Star gleams, and the Sisters Seven
Float tremulously in the misty heaven.
Faintly, afar, the horse-bells ring;
Myriads of awakened crickets sing;
And the spirit voices of the night
Sing snatches of fairy music bright,
Old-world melodies----lang syne sung-
Recalling days when the heart was young,
Whose wonderful cadences fall and rise,
As the wind in the Casuarina sighs;
And the world seems 'gulfed, this summer night,
In a flood of delicious, dreamy light.

This is the final poem for now by
Harry (Breaker) Morant.

Feedback

*Methane and mammoths
imprisoned in permafrost
ready to escape.*

Fossil Fuels

*Coal from old forests,
and oil from Antarctic krill
buried long ago.*

Greenhouse

*Soaks up the sun's warmth
like a closed car in the sun.
No way to escape.*

Snakes

The sun comes out and they appear
To fill a person's heart with fear
They slither from their hiding place
The look of terror is on my face.
God's creatures all they say to us
Live with them, don't make a fuss
The chance of that is very slim
It's going up to live with HIM!

Written by Mrs. Christine Robertson of Moss Vale

These 3 Haiku poems on climate by David Tranter

If you have a poem, we would welcome your contribution - send to Peter Glass, 65 Vandenberg Rd, Robertson, 2577

Future REPS Meetings in 2014

The dates for this year's future public meetings are listed below. They will be at 7.30 pm in the Community Hall. All are welcome.

Friday 11th April – speaker Dr Lin Sutherland

Friday 13th June – Dr John Black AM will speak about saving the ancient rock art on the Burrup Peninsula in WA from industrial encroachment.

Friday 8th August – speaker TBA

Saturday 11th or 18th October - Bushwalk

Friday 14th November - Annual General Meeting

Thanks

The work of Monica Engel as editor of *Eucryphia* for many years is gratefully acknowledged. Monica and her son, Tas, have moved to Orange and they were farewelled by lots of friends at a luncheon at the Robertson Pub in January. REPS members will remember her valued contribution to the society and wish her well.

Leech Mystery

What can be more annoying than finding one of these parasitic worms that has feasted on one's blood, leaving a wound that may at best be an itchy nuisance for several days or, at worst but rarely, be infected. In our rainforest patch on Fountaindale Road at about 650m they are prolific in the warmer months but inactive during winter. It is fascinating that these troublesome animals have not been seen at Tony and Anna Williams' property on Lemmons Road, which REPS members visited recently. The reason for this is, as yet, unknown. Could there be a predator eating them? Could it be the higher altitude? The fauna and vegetation are similar to elsewhere. I would be interested to know whether there are other leech-free properties in the district. Please contact Allan Stiles if you know of one.

Working Bees

Pinkwood Park, Sat 26th April

Caalang Creek, Sat 31st May

9:30am onwards, subject to the weather. Please come and join us for as long as you are able. Don't forget water, hat and gloves. We now have tools available, but bring your own if you can. At Pinkwood Park Waratahs will be planted.

Pinkwood Park is between the Old Milk Factory and the Post Office.

Caalang Creek volunteers meet at the footbridge in Hampden Park

Queries to Steve Douglas 4271 4957 or Leon Hall 4888 2222.

Help Care for Our Nature Reserve

1st Wednesday of each month (**next is May 7th**) from 9:30am till noon. Please bring garden gloves. More volunteers would be greatly appreciated. Everyone is welcome. Details: Helen Tranter 4885 1394 or NPWS in business hours: 4887 8253.

Australian Plants Society –Sun 4th May

Easy walk at Cave's Creek, Hilltop. Meet 10am at the carpark. Details: Helen Tranter 4885 1394

Railway Station - Sunday 13th April

At the Historic Car Day on April 13th there will be a display, in the parcel office of the station building, about what Robertson was like 100 years ago in 1914. Who lived here then and what were they doing? There was a saddler, a wheelwright, a bank manager and an auctioneer. There are interesting accounts from the "Robertson Advocate" which came out twice a week and it is hoped to collect more facts over the coming year from other sources.

Come and have a look and also visit the Gallery to see the **Heritage Art Prize** paintings including the one by REPS treasurer, Anne Wilson, which won one of the prizes.

Contact REPS

Those who are interested in supporting our aim are welcome to join REPS. Our aim is to promote the preservation and enhancement of the Robertson environment. We welcome contact with individuals and other community groups. For further information and subscriptions please contact: The Vice-President – Karen Guymer, PO Box 3045, Robertson, NSW 2577 or President – David Mee on 4885 1483

Articles for *Eucryphia* may be sent to the editor, Allan Stiles, on stilesaljen@bigpond.com
