

AUSTRALIAN PLANTS SOCIETY

Southern Highlands Group

...your local native garden club

President

Kris Gow
krislloyd2@bigpond.com

Vice President

Trisha Arbib
bundytrish@iprimus.com.au

Secretary

Kay Fintan
kaynbrian@bigpond.com

Treasurer

Bill Mullard
bfmullard@gmail.com

Newsletter Editor

Sarah Cains
sfcains@gmail.com

Communications

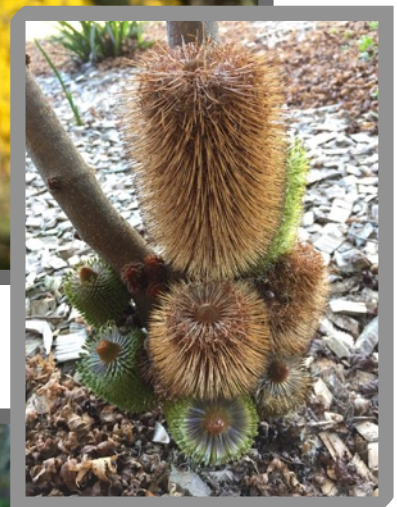
Erica Rink
erink@oracletelecom.net.au

Committee Member

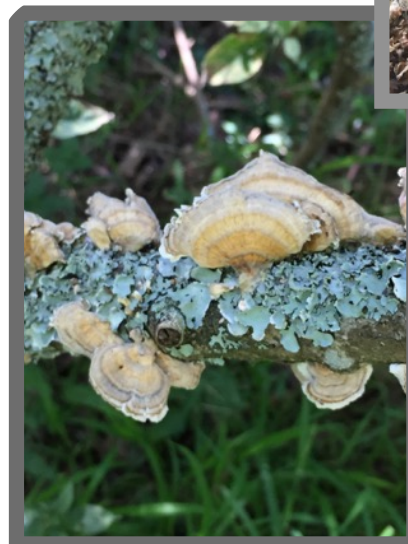
Louise Egerton
legerton@swiftdsl.com.au



Acacia baileyana



Banksia robur



Winter Beauty

*Lichen and fungi in
Mt Gibraltar Reserve*

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Diary Dates

August

Thursday 3rd at 2.00pm CWA MV: Speaker: Orchids with Alan Stephenson - see notes p4

Monday 21st at 2.00pm: Committee meeting (Erica's)

Sunday 27th: Day out with the Nowra APS Group - organised by Jenny Simons - see notes p5

September

Thursday 7th: Outing to garden owned by Sandy Berry and Ian Smith at 18 Ben Nevis Circuit, Bundanoon. Arrive at garden at 2.00pm. Car pooling from Bowral and nearby: meet at Bendooley St picnic table - Glebe St end of the Bradman Oval. Bushcarers will be eating their picnic lunches there after work on the Gib. Bring your lunch and join us - meet there at approx 12.30pm and we will car share from there (and back) to Bundanoon. Additional to enjoying Sandy and Ian's garden, drive all the way around Ben Nevis Ct to see lots of natives in front garden plantings.

Monday 18th 2.00pm: Committee meeting at Trisha's. Visitors welcome.

Sunday September 24th - Notes by Louise Egerton who has arranged this exciting garden visit for us.

11.00am visit to Tree Fern Lodge, 375 Tourist Road, Beaumont led by owners Frank Howarth and Peter McCarthy. This is really a day trip. If leaving from either Bundanoon or Bowral we suggest you leave one and a half hours prior to 11 o'clock. Parking is limited so we suggest you arrange car pooling with friends where possible or, if you need a lift, contact any member of the Committee. Bring your own morning tea. You might like to have lunch afterwards in Kangaroo Valley: either bring your own or there are lots of cafes to choose from.

This is a magnificent garden right on top of Cambewarra Mountain: about 550m, looking out over the coastal plain. When coming from Fitzroy Falls, drive a couple of kms out Kangaroo Valley township. Then turn left into Kangaroo Valley Road, signposted to Berry. Drive up a beautiful, narrow, twisty and steep road for 10kms. Turn right at Tourist Road, signposted to Cambewarra Lookout. About 2.8kms on, just after crossing a little white bridge, drive up and then down a slight hill. At the bottom of this small hill you will see no 375 signposted on the right-hand side. Drive about 150m past it and park on the left-side verge opposite a gap in the fence where the native garden begins.

See map: <https://www.facebook.com/treefern lodge> Any questions, feel free to contact Louise Egerton phone number 4883 6916.

Functions below - further details in September NL

October

21st 22nd Bundanoon Garden Ramble - includes Sylvia David's native garden/native plant sales. 21st birthday for this fun event featuring diverse open gardens, stalls, food and more. Contact a committee member to volunteer help at Sylvia's garden on the day.

23rd: Committee meeting at Bill's

Sunday 29th - Harper's Mansion Garden and Plant Fair. No involvement or plant sales from our SHAPS group this year. All our efforts going into the Bundy Garden ramble the week before.

November

2nd: AGM and social meeting - photos of ourselves and our outings / plants for sale /afternoon tea and fun.

20th: Committee meeting (Louise's)

December

3rd: Christmas Party

January 2018 Monday to Friday 15th / 17th - ANPSA NATIONAL CONFERENCE

The Australian Native Plants Society (Australia) Inc. (ANPSA) presents a national conference every two years, in conjunction with the ANPSA Biennial General Meeting. These rotate through the six states and the ACT. Tasmania is to be the host in January 2018.

Some of our members have already booked accommodation at Wrest Point where the conference will be held. Make your booking if you plan to come along. We have booked to arrive on the Sunday night before the conference and return home on the Saturday after it finishes. Keep in touch with Kristine or Sarah (Kris away August/Sept) re the booking of air fares if you wish to travel with the four already booked in, though we are all making our arrangements independently.

Snippets

Thanks to contributors to this NL: Jenny Simons, Fran Mullard, Robyn Kremer, Hugo McNamara - and also, thanks to Trish Arbib for her great presentation in June.

Alan W. Stephenson - our August speaker. Edited Notes from the Australian Orchid Foundation on his receipt of the Award of Honour in 2015.

Alan Stephenson's work in for the conservation of native orchids is unsurpassed. He has fought tenaciously for the protection of native orchids, lobbying all levels of Government and nominating threatened orchids to the NSW Scientific Committee. Alan has been Conservation Officer for the Australian Orchid Council and for the Australasian Native Orchid Society and his well-received papers on orchid conservation have been published in specialised journals.

Regularly he combs the bush looking for orchids and he has located numerous new populations of uncommon, rare and threatened species. He has willingly shared his knowledge and experience with community groups and orchid clubs, writing more than 300 articles for various Australian orchid publications and self-publishing the well-illustrated and authoritative book *Orchid Species of the Shoalhaven*. Alan is an accomplished photographer, using his own photographs to educate and support his talks.

Alan was made a *Fellow of the Australian Orchid Council* for his outstanding work on conservation. The endangered species orchid from Nowra, *Corunastylis stephensonii* D.L. Jones, has been appropriately named in his honour.

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SHAPS Committee letter to Southern Highlands Botanic Garden Committee, 11th October 2016

Dear Committee,

On behalf of the Australian Plants Society, Southern Highlands Group, I am writing to express disappointment that there has been no response to our earlier letter regarding the planting of natives at the Gardens.

Since the Garden's official opening in 2013, we have keenly awaited the proposed development of the Shale Woodland on the site and the planting of natives. The months and years pass and little progress in this area is made. Our suggestion for progress has been met with silence so now we will watch and wait.

Yours sincerely

Kay Fintan

Secretary APS Southern Highlands Group

Missing in Action: Natives at the Southern Highlands Botanic Garden - Louise Egerton for your SHAPS (Southern Highlands Australian Plants Society) Committee. Notes to inform you, our members, of committee exchange with SHBG since there has been no response from SHBG to our letter printed above.

When it was first proposed, members of SHAPS welcomed the advent of a Botanic Garden in the Southern Highlands. Many of our members are Friends of the Southern Highlands Botanic Garden today. Since the official opening of the Garden in 2013 we have been keenly awaiting the development of native plantings on the site and in particular, the proposed planting of a shale woodland.

In 2013 a collection of Box (*Buxus* spp.) and Birch (*Betula* spp.) were planted. These have been followed by additional plantings of exotics. All are doing well, but there is little evidence of native planting. We appreciate that it has been a long haul for the Garden's Committee and Friends to reach the point they have and they are to be congratulated on their achievements, but, as we all know, a shale woodland does not in a day grow!

As you will be aware, Our President, Kris Gow, has prodigious propagation skills. Over the last four years she has sold many thousands of her native plants at the Garden's Annual Plant Sale, thereby raising considerable funds which have all gone to the SHBG. We, the SHAPS Committee, feel these funds should be set aside and used to establish the proposed native plantings in the immediate future.

The Committee of SHAPS urges all members to write to the SHBG Committee to encourage them to give priority to establishing native sections of the garden.

Southern Highlands Botanic Gardens contact details:

PO Box 707, MOSS VALE, NSW 2577; Telephone: (02) 4861 4899; email: info@shbg.com.au

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The Amazing Grey Butcher Bird - a fascinating happening in the natural world. Look carefully to see what the Grey Butcher Bird has done with the moth it caught!

Explanatory text below from Birds in Backyards:

Grey Butcherbirds are aggressive predators. They prey on small animals, including birds, lizards and insects, as well as some fruits and seeds. Uneaten food may be stored in the fork or a branch or impaled. Grey Butcherbirds sit on an open perch searching for prey which, once sighted, they pounce on. Most mobile prey is caught on the ground, though small birds and insects may be caught in flight. Feeding normally takes place alone, in pairs or in small family groups.

Photo and research: Hugo McNamara (aged 13 years) Robertson.

An Invitation for Sunday, 27th August, from Jenny Simons (ph: 4861 1767)

When an article about my wattles was published in the journal 'Native Plants' the Nowra Group asked to visit my garden and a visit has been arranged for Sunday, 27th August. I have offered to give visitors morning tea when they arrive (at 10 o'clock) then a look around my garden. Visits to several members' gardens and lunch on Mt Gibraltar will follow; the details are below. Members of our Southern Highlands group are invited to join in, for all or any part of the day, and if convenient, to help serve the morning tea. If local members would like to join in, please let Jenny know, so she can arrange the catering. Itinerary below.

10.00am arrive at Jenny's (89 Osborne Rd, Burradoo) and have morning tea



10.30 View Jenny's garden

11.30 Drive to nearby garden to see wattles and many other native plants. The garden-owner is Philip Bodley, a member of our group.

12.30 Drive to Mt Gibraltar for lunch, short walk to Bowral Lookout and short drive around the other lookouts.

1.30 Drive to local garden belonging to our president Kris Gow. Kris has a tiny town garden full of native plants. She will unfortunately be away, but has authorised me to show you her garden.

2.30 Leave for home

Report - Visit to the Australian Botanic Garden, Mount Annan - Plantbank Thursday, 6th July, 2017

Fran Mullard

The Australian Botanic Garden Mount Annan was unveiled in 1988 to celebrate the Bicentenary of Australia. The largest botanic garden in Australia, it encompasses 416 hectares and is home to more than 2000 species of Australian native flora, including critically endangered Cumberland Plain Woodland. A vital component of the gardens is The Australian Plantbank Mount Annan, opened in October, 2013 by Her Excellency Professor Marie Bashir, the Governor of New South Wales at the time. Inside this impressive building work the scientists dedicated to ensuring the safety and perpetuity of our native flora.

The guiding principles of Plantbank are:

- . maintenance and conservation of rich diversity
- . collection and conservation of millions of seeds
- . investigation of adaptability and role within ecosystems
- . restoration of endangered habitats and
- . provision for a sustainable future. The seedbank contains 21% of Australian species, 45% of which come from New South Wales.

It seems only natural and fitting that the Plantbank building itself should reflect a similar thoughtful respect for its environment through its very construction, ethics and regard for sustainability. Designed by architects BVN Donovan Hill, the building integrates with and responds to its environmental and operational needs. Rainwater is harvested for use in the restrooms and to water the Lichen Garden. The orientation and design takes full advantage of natural light and wind movement and building materials such as concrete, steel and glass have been sensitively chosen for qualities such as insulation, sustainability, low maintenance, fire resistance and pest and rodent exclusion. Recycled Sydney

Sandstone from demolished Sydney buildings has also been used. The building also has two subterranean concrete thermal labyrinths through which external air can be directed. In summer and winter the external air can be pre-cooled or pre-heated by up to 7.5 degrees celsius before entering the internal air-conditioning system, making the building very energy efficient.



As we approach the entrance to Plantbank we pass by the aforementioned Lichen Garden, a striking recycled sandstone-paved slope, where lichen and ferns grow under a reflective ceiling, fed by harvested rainwater. Some other flora observed along the way are Australian Indigofera, climbing saltbush, *Pimelea spicata* and more. Inside at last, we were shown the following discrete areas.

Photo left/ by Kris Gow: Members stroll under the reflective ceiling of the Lichen Garden.

The Micrology Room: This area contains equipment which enables microscopic and x-ray examination of seeds. The viability of all seeds must be thoroughly checked to make sure that they are capable of germination. The x-ray also helps to detect any insects or larvae which may be inside the seed and able to consume it from within.

The Seed Germination Room: Again the focus is on testing the viability of seed. Using a thermo-gradient plate with a temperature range of 10-35 degrees celsius, the effects of of climate change, day and night, etc, on germination ability can be studied. Seeds must be viable enough for storage over time.

The Seed Processing Room: Objectives:

- .to fill any gaps in collections
- .to fulfil obligations relating to the partnership programme with The United Kingdom
- .to support research groups

The seed collection process is planned twelve months in advance. Timing is critical and is influenced by weather and climatic conditions. The collection area is selected by consulting a map of New South Wales and selecting the area on a needs basis.

The collection process has three criteria:

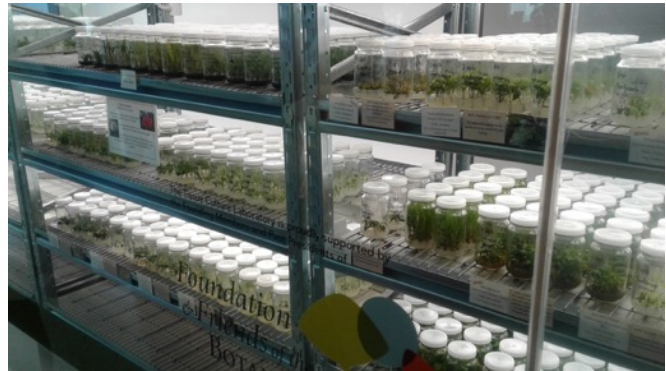
- . description of the species (health, features, habitat, soil type)
- . number of plants selected
- . maximisation of diversity

The Process: The seeds are dried and sieved by size. They are then winnowed using a machine called an aspirator, which separates the seed from other vegetation. The seeds are then soaked, separated and prepared for storage in the vault.

There will be 10000 to 20000 seeds in a collection.

The Seed Vault: Inside the vault over 100 million seeds are stored at temperatures of 4 degrees to minus 20 degrees. The idea of seed storage is to dry the seeds to a very low moisture content, vacuum-pack and freeze. Each packet is numbered and linked to other DNA related samples. The seeds are viable for several hundred years, some for much longer.

A duplicate set of seed is sent to The Millennium Plantbank in the United Kingdom for safety's sake.



The Tissue Culture Room: The seeds of some plants are unsuitable for processing and a lot of plants are reproduced using tissue culture, or cloning. Tissue culture is a collection of techniques which enable the growing of whole plants from very small pieces of plant tissue.

Small pieces of plant material (bud, shoot, tips, e.g.) are taken and grown on special nutrient media (agar) in sterile conditions. The plant material is collected and cleaned to limit contamination. The plant tissue is prepared and placed in the agar-based medium, which contains sucrose and other nutrients. The plantlets are grown in the laboratory.

This allows many plants to be reproduced from one original cutting. Each new plant is identical in every way to the original (a clone), which is advantageous if the plant is rare or endangered.



As we left Plantbank we passed The Diversity Wall, an interactive wall which visitors are able to peruse at their leisure. A quick look at Plantbank's nursery, which was well guarded by a cliplock fence, and we adjourned for a well-anticipated and tasty lunch, followed by a visit to the adjacent nursery for some plant purchases.

It was a very interesting day and we left with a knowledge that the future of our native flora is in good hands and promising ourselves

another visit to Mount Annan to enjoy the beauty of the gardens, sooner rather than later.

Photos above - Fran Mullard

Report - An Inspiring Talk! Bush Tucker, by Trisha Arbib

Robyn Kremer

At the APS SH meeting in June, our Vice President, Trisha Arbib, presented a beautifully structured look at Bush Tucker Plants. In her introduction she acknowledged the assistance of Pat Hall from National Parks who had asked permission of the elders of the tribe who are the custodians of local Aboriginal law and customs.



Trisha ran a nursery for twenty eight years, but in retirement she has discovered native plants and has developed particular interest in indigenous plants that can be grown for food. This was formerly the domain of Aboriginal women who transmitted through songs, paintings and practice where to find and how to prepare a wide range of staple foods. Colonisation decimated these traditions.

On a visit to the National Botanic Garden, Trisha had been inspired to buy a well designed publication entitled: *Ngunnawal Plant Use, traditional Aboriginal plant use guide for the ACT region*.

In her handsome power-point presentation, Trisha illustrated a wide range of interesting plants and discussed their uses. Bulrushes or cumbungi *Typha orientalis* (see photo left) is the local variety; it grows in creeks and dams is called Gummiuk by the Ngunnawal people. It produces flowers that turn to white fluff

which Aborigines used in ceremonial decorations, whilst the baked rhizomes were a staple food. The long, scrappy leaves are used for basketmaking.

We also tasted Midyim berries that Jenny Simons had grown and found them delicious.

Aborigines enjoyed nectar from *Banksia spinulosa*, and probably enjoyed a crop of fruit from the Bunya Bunya Pine, *Araucaria bidwillii* every 3 years or so: a specimen of this tree thrives next to Mittagong Library.

The Silver Wattle provided seeds to grind for bread, sap for food, a poultice, glue and bark for rope as well as timber for hunting implements. Trisha recommended the shop, Source in Springett's Arcade, for bulk supplies of wattle seeds, Tasmanian mountain pepper, teas and other treats like lemon myrtle which is good on fish & in muffins. She suggested dry roasting their dried and ground wattle seed and infusing for a beverage and then incorporating the grounds in shortbread. Always check references before using your own picked wattle seed. We enjoyed her delicious samples while being encouraged to grow a male and



female Illawarra Plum, *Podocarpus elatus* (photo at right). This rainforest species is also available in dwarf form and produces fruit tasting like blueberries.

Some of our members were already familiar with Native Raspberry, *Rubus parvifolius* and its use for jam or paste. Many of us are looking forward to our finger limes, propagated by Jenny, bearing fruit and delighting our palates.

Trisha, with infectious enthusiasm, encouraged us to explore online. Eg Taste Australia Bush Food Shop. What a Pandora's box awaits the curious visitor!



Trisha's final slide was of an ad for Lemon Myrtle body lotion. The advertisers, with obviously no knowledge of Australian plants, had placed the bottle of lemon myrtle body lotion in a beautiful spray of Geraldton wax flowers! *Photo previous page: Finger Limes grown by Jenny Simons*

Notes from the Archivist - our history and floral emblem

Jenny Simons

I spent a recent wet afternoon reviewing our group's archives and find that we are now twenty one years old, having been formed in 1996. We have managed to archive a complete set of our newsletters from September 1996 to the present, so our history is very accessible.

After a public meeting to consider the formation of our group, the first APS meeting was held at the home of Gillian Davies, who then lived at Paddy's River. Helen Tranter was at that first meeting; she has the longest consecutive membership of our group and Gillian is still a member. At that meeting apologies were received from Martin and Jane Lemann, Elizabeth Smith and David Tranter. It was at the third meeting that our plant table 'Show and Tell' was introduced and has been a feature of every meeting since then.

Our logo, *Grevillea arenaria*, was introduced in May, 1999, after the NSW group asked its local groups to adopt a floral logo. In Newsletter 14 it was noted that the floral emblem had been chosen, 'with sincere thanks to the members who devoted so much time and energy in creating and submitting ALL of the many entries'. *G. arenaria* was chosen 'because it best suited the essential criteria of being geographically representative as well as lending itself to an attractive but simple design.' The idea was submitted by Yvonne Everingham and the drawing was then made by Jean Winton.

Of interest to long-standing members will be the fact that the editor of the newsletter was Peter Stuart, the president was Angus Wilson and the secretary was Margaret Wilson.

In the archives box I found a file of information leaflets. I shall bring this file to our next meeting. There are leaflets about garden planning, ferns for the garden, cuttings, propagating, reliable plants and Myrtle Rust. These leaflets are for giving away.

Plant description: *Grevillea arenaia*: It could be said to be an unspectacular flower, especially given that we live in the territory of the waratah, but quiet little *Grevillea arenaria* shows many desirable attributes. Elliot and Jones describe it as a variable species, growing in diverse forms from a little shrub to a sturdy, small tree. It has attractive silvery foliage and the modest, salmon pink flowers which hide amongst the foliage. *G. arenaria* is described as 'one of the best ... for attracting nectar-feeding birds'. Our members report plants jiggling with tiny, feeding visitors; there and flowers on the plant nearly every day of the year. *G. arenaria* grows in a variety of soils and does well in full sun or shaded sites. It is hardy to most frosts and withstands dry periods. It responds well to pruning.

(notes above by SC/ Reference, Elliott and Jones: Encyclopaedia of Australian Plants)

Travel Tales from Tassie...

Sarah Cains



On a July 2017 visit to the Royal Tasmanian Botanical Gardens (RTBG) I came across these stories which I think will be of interest to you. (All information courtesy of RTBG)

Although common on the mainland, the **Tasmanian genotype of *Hardenbergia violacea*** is distinct and endangered. It is found only on one site, the Pontos Hills, near Hobart. The RTBG has developed a 'seed orchard' for this plant and it presently holds over 10,000 seeds in storage. Additional to the seeds, the RTBG nursery holds seven plants from the extinct southern population. In co operation with The Penna Landcare Group, RTBG is reintroducing the plant to the wild on an unpopulated site on the Pontos Hills.

I found this surprising, given how freely our local version of this plant grows around our district; goes to show that they are all vulnerable and must be treated with the greatest respect. SC

The Mt Read Huon Pine: Tasmania is home to one of the most ancient organisms on the planet. In the Western Ranges is a clonal population of Huon Pine arising from a single male plant more than 10,500 years old. The grove this plant has formed is the highest altitude known occurrence of the Huon Pine,



Lagarostrobos franklinii. Being a 'boy' plant, it produces no seed, but over millennia, the plant has layered itself, producing roots where branches, heavily laden with snow, have touched the ground. The original single trunk has long since disappeared, but the plant lives on.

Huon Pine ancestry can be traced back using fossilised pollen records. Study reveals the species to be 70 to 100 million years old. During that time, Australia was a much wetter place and was inhabited by dinosaurs. These pines and other primitive conifers were dominant in many areas including Tasmania and what is now Victoria and South Australia.

In the photo at left is a specimen of the Mt Read Huon pine which is growing in the RTBG. It has been grown from a cutting taken from the original, ancient plant described above. The Mt Read pine is a slightly different form and colour from other Huon Pines.

In the Tasmanian Museum and Art Gallery, Hobart (July 2017)



Margaret Hope 1848-1934

Screen painted in 1894 presented to the gallery in 1985.

Margaret Anderson Hope was a highly-regarded painter of plants, particularly Tasmanian native flowers.

Plants depicted on the screen are:

- 1) *Richea dracophylla*
- 2) *Anopterus glandulosus*
- 3) *Telopea truncata* and *Olearia viscosa*
- 4) *Eucalyptus globulus* and *Diplarrena moroea*

 A botanical word and it's meaning



Trisha suggested that, in each NL, we present a botanical word; this to enlarge our botanic vocabulary and enrich our understanding of plants. The word she has suggested for July is inflorescence.

An inflorescence is the complete flowerhead of a plant, including flower stems, flower stalks, bracts and all flower parts. Inflorescences come in many different configurations e.g. an umbel is the umbrella shaped inflorescence seen on parsley plants and a spike is an unbranched inflorescence with many flowers arranged along a single axis with the flowers at the bottom opening first.

Recently I was surprised by these amazing inflorescences on a *Doryanthus palmeri* (sister of *Doryanthus excelsa*, The Gynea Lily) in Winifred West Park, Mittagong. Being winter, they have dried out, but when in full flower, these giant inflorescences would be massed with hundreds of scarlet flowers so full of nectar that it can clearly be seen splashing out of the flowers as native birds indulge themselves in a marvellous feast.

Over to you to select our next botanical word! Send in your word and explanation for our September edition.