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Front cover: *Richea x curtisiae* in northwest England Photo Jeff Irons

Back cover: Bumble bees on *Grevillea johnsonii* in the Netherlands
Photo Liesbeth Uijtewaal

Australian Plants articles

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Introduction

Merle Thompson, Editor

What part does our sense of country play in our love of our native flora? Do our plants contribute to our commitment to Australia? What does our flora mean to people in other lands?

In this issue we are exploring three ideas – the celebration of Wattle Day and the associated links between our flora and patriotism, the depiction of the flora of the Sydney area by one of the first European residents and the experiences of people who grow Australian plants in other countries.

Maria Hitchcock was actively involved in the campaign to gazette Wattle Day. On 1 September 2010 Maria gave a lecture in Canberra at a function to mark the centenary of the celebration of Wattle Day. An edited version of this presentation is the first article in this journal.

The first known drawings of Australian flora by a European artist are those of William Dampier from the northern coast of Western Australia, in 1699. One of the best known and largest collection of paintings was that done by Sydney Parkinson, artist to Sir Joseph Banks, on the voyage of the *Endeavour* in 1770.

Since then there has been a strong tradition of botanical art and of depictions of Australian flora by both Australians and by visitors. A number of naval and military personnel and of convicts on the First Fleet painted the plants and animals of their new homeland. The best artist among them was George Raper. Linda Groom, Curator of Pictures, National Library of Australia has written for us about Raper and permitted reproduction of some of his work.

Australians can enjoy learning of the interest in and experience growing Australian plants of people in other countries. Because Australia is such a vast country with diverse climatic conditions, there are areas which may have some resemblance to conditions in other countries. Readers who wish to grow species from other parts of Australia may benefit from the experiences of those whose conditions may resemble their own. The article by Astrid Fyhr in March 2009 issue on raising Australian natives in Sweden has already assisted a grower in the United States, particularly with regards to propagation techniques.

We invited overseas subscribers and members of the Society to write about their own experiences and present some responses from the Netherlands, Japan, the United Kingdom and the United States of America.



The significance of Wattle Day – past, present and future

Maria Hitchcock

Maria was actively involved in the campaign to officially gazette Wattle Day. This is an edited version of a talk given at the Centenary Wattle Day Dinner in Canberra on 1 September 2010.



It is now 100 years since the first major celebration of Wattle Day in Australia on September 1, but only 18 years since official gazettal of National Wattle Day which occurred in 1992. Through the course of our history, wattle has been used by successive generations as a symbol of independence, freedom, nationhood, patriotism, future wealth and prosperity and it was wonderfully named as 'Australia's Heart of Gold'. Like the flag, the Commonwealth Arms and the national anthem, the wattle stands in history as a symbol of Australia. Strangely though, the genus as a whole was seen as an emblem rather than a particular species. The Golden Wattle *Acacia pycnantha* was finally selected, in response to a need for a single species that could be depicted pictorially in insignia, such as the Commonwealth Arms. The public continued to use any wattle that was handy for Wattle Day festivities and for sending abroad and still does to this day. Literature and songs also seemed to focus on the genus rather than on a particular flower.

Past significance

The story of our Wattle emblem and Wattle Day can be traced back to 1838 in Hobart Town when the citizens of the colony wanted to commemorate the anniversary of Tasman's discovery of Van Diemen's Land on 1 December 1642. A regatta was suggested and the *Colonial Times* of Tuesday 20 November 1838 encouraged the adoption of a National emblem, to consist of a sprig of silver wattle blossom, tied with the British colour – navy blue. This suggestion that wattle should become a National emblem preceded the move towards Federation by about 50 years and demonstrates fledgling sentiments of belonging to a new homeland. The festivities were held in 'Wattle Park' and a public holiday was declared.

For some reason Wattle Day has always brought out the poets in our nation and its story is littered with poetic sentiments which cover a whole range of emotions but most notably a feeling of overt patriotism which was important in the early part of the 20th Century. The question arises

as to why the colonists chose Black Wattle as an emblem. Acacias often dominate the understorey of Eucalypt woodland. When they flower, the bush lights up with sunlight and can be quite breathtaking during peak flowering, lighting up what would have been a very drab olive coloured bushland to the English colonists. Flowering usually coincides with the start of spring in many parts of Australia and the beginning of the growing season, particularly in the southern states. It is this juxtaposition of Acacias with springtime that later led to the selection of September 1 as Wattle Day – Australia's own Spring Festival.

At the turn of the century, the main issue was Federation. In 1889, Mr Will J. Sowden, a journalist with the *Adelaide Register*, who was Vice-President of the Adelaide branch of the male only Australian Natives Association (ANA), proposed the formation of a ladies' society to be called the 'Wattle Blossom League'. Robert Hughes in his book, *The Fatal Shore*, reported that the ladies were requested to wear a spray of wattle blossom, either real or artificial as a distinctive badge at all suitable public assemblies. Their role was to encourage patriotism towards the new nation. Sowden encouraged the planting of wattle trees rather than the European species and asked the Wattle Blossom League 'To promote a national patriotic sentiment among the women of Australia'.

At this time Canada had adopted the maple leaf as an emblem and this prompted action in Australia. William Sowden called for the wattle blossom, to become our emblem. Archibald James Campbell responded by spearheading the formation of a 'Wattle Club' in Melbourne. In 1908 he advocated the honouring of a Wattle Day. His call was taken up by J. H. Maiden, Government Botanist and Director of the Sydney Botanic Gardens, in 1909. Maiden's aim was to form a Wattle Day League and to coordinate the States into accepting and celebrating the first Wattle Day:

'With a view of stimulating Australian National sentiment, and connecting it with love of our beautiful flora, we suggest the desirableness of setting apart throughout the Commonwealth a day on which the Australian national flower – the Wattle Blossom – might be worn, and its display encouraged. Wattles might also be sown and planted on this day. It is suggested that a date in September would be universally suitable...'

Wattle was selected because it is 'found in every State of the Commonwealth, from Port Darwin to Tasmania, from Sydney to Fremantle, it has that universality without which no emblem, however beautiful, could accept general acceptance'. Once again it was the genus as a whole rather than a single species which was promoted.



On 1 September 1910, the first Wattle Day was celebrated in Sydney, Adelaide and Melbourne. Wattle Day activities included the planting of wattle trees in school grounds. Blooms were on display in shop windows and on sale in the flower stalls. Everyone was asked to wear a sprig of wattle and get into the spirit of this patriotic occasion. That first Wattle Day, sprays of *Acacia pycnantha* were sent to the Governor, Members of Parliament, newspaper editors and other notables. The concept was quite widely accepted in the general community and many people wore sprigs of wattle for the first time. In 1911, Adelaide was described as a city 'decked with gold'. Sydney celebrated Wattle Day in a similar manner. Sprigs of wattle were sold for charity, a practice which continued for many years. A move was then made to apply for gazettal of Wattle Day by the Commonwealth.

In January 1913, the *Commonwealth Government Gazette*, No. 3 showed a coloured copy of the Commonwealth Arms carrying the wattle blossom accessory which had been recommended by the Prime Minister, Mr Andrew Fisher. Proclamation of the emblem was in train but then World War 1 broke out and Wattle Day was used as a means of serious fundraising for the war effort by the Red Cross and Patriotic Fund. Wattle was sent to soldiers on the front and in hospitals to remind them of home and wattle became an emblem of deep patriotism never before experienced among Australians.

So much wattle was needed that demand soon outstripped supplies. In 1916, the date for Wattle Day in New South Wales was temporarily changed to 1 August, because of the early blooming of wattle around Sydney. It had become the fashion to plant specimens of the winter flowering Cootamundra Wattle (*Acacia baileyana*) in Sydney gardens.

With the end of World War 1 Wattle Day was mainly celebrated in schools with special ceremonies that included crowning a wattle queen. Fundraising was also an important aspect of Wattle Day celebrations, with hospitals and other charities being the beneficiaries. The tradition was carried on in different ways in the various States, but appears to have



Acacia pycnantha
Photo: Wolf Achim-Roland

been strongest in New South Wales, where it became an important day in the school calendar, largely because of the School Magazine. Wattle Day doesn't seem to have had much significance during World War II, although badges may have been sold. Observance of the day gradually died out with little interest in reviving the tradition until the 1980s.

Present significance

During the 1980s, environmental problems began to attract a great deal of media and government attention. Everyone became aware of the greenhouse effect, damage to the ozone layer, soil degradation, salinity of our farmlands and river systems and problems associated with woodchipping of our old growth native forests.

Millions of native trees were planted and programs were financed to replace much of the beneficial tree cover that had been lost during the 20th century in rural areas. Schools were encouraged to put in nature areas and to cooperate with the general community in tree planting projects. Government initiatives were set up to encourage tree planting across Australia in a wide range of habitats and climatic zones and this trend is set to continue well into this century. Australia became a nation of 'greenies' at various levels of commitment, an attitude which is affecting every aspect of life.

Observance of Wattle Day has been mixed in the past 18 years. I have participated in school plantings and school celebrations in a shopping centre. Our own group of the Australian Plants Society hands out sprigs of wattle attached to a card and the Wattle Day Association sends baskets of wattle to the Governor General. None of this is co-ordinated or promoted on a national level. The Victorian branch of the Australian Plants Society has tried an association with the Red Cross to use the day as a fundraiser but the idea never caught on.

There is one positive note. When the National Floral Emblem was gazetted in 1988, the Australia Day Committee began using it on brochures and posters and some government departments adopted it as well. However, that was as far as government involvement went. This year the ACT Fire Brigade sold Wattle Day badges encouraged by the Wattle Day Association and it is hoped that we might be able to develop this relationship on a national level.

The city of Melbourne has an annual Spring planting day and there are a number of Wattle Walks in various Botanic Gardens. The Monaro Folk Society holds an annual Wattle Day Colonial Ball and each year the Hiroshima Chapter of the Japan-Australia Society sends 1,000 yellow ribbons to the Australian National Botanic Gardens for Wattle Day to commemorate the fact that Australian Acacias were the first plants to flower in Hiroshima following the events of August 1945.

There is still a suspicion amongst older Australians that the date is wrong – that it should be August 1, because that's the way they remember it from their schooldays. I've found myself in the awful position of trying to



convince people who don't want to be convinced that historically Wattle Day is linked to the first day of Spring. It is very difficult to choose a date that would please everyone. With the range of species of Acacias available it should not be too hard to find a variety that flowers around the beginning of September.

The revival of wearing a sprig of wattle seems to have taken a new turn in recent years. When some Australian canyoners died in Switzerland in 1999, the Governor General, Sir William Deane, gave wattle to the families to throw into the canyon as a symbol of Australia. We all recall John Howard wearing a sprig of wattle at the Bali bombing memorial service.

Future significance

I believe that the wearing of a sprig of wattle will continue to be used on official occasions when people want to honour being Australians in a strongly emotive way. They will continue to select any wattle which is available rather than specifically selecting *Acacia pycnantha*. The wearing of the wattle needs a role model such as the Governor General or Prime Minister to set the trend.

Wattle Day itself needs to be revived on a fairly grand scale. There are a number of obstacles with fund raising marketing. Tree planting days such as National Tree Day are starting to crowd the calendar but there's no reason we can't promote the planting of native species on Wattle Day. It has been suggested that the Queen's birthday holiday be transferred to National Wattle Day. Maybe we need to involve the arts. I would love to see a National Wattle Day Landscape Prize run by the National Gallery or a Portrait Prize of an eminent Australian or a Book Award. Any of these ideas could grow with the years and would reflect Will Sowden's philosophy of celebrating the emblem through patriotic poetry and song.

We could request that the Government hand out Honours on National Wattle Day rather than on the Queen's Birthday. Canberra holds a citizenship ceremony on that day and this could be done more widely. Perhaps the time for a real revival of Wattle Day has not yet come and it will evolve in an unforeseen way. It would be good to set people thinking about it however and start some meaningful discussions. I believe we are now ready for that discussion and I hope that together we might be able to develop a pathway towards a real and widespread observance of Wattle Day.

The full text of the address can be found on www.wattleday.asn.au

George Raper's First Fleet paintings

Linda Groom

Curator of Pictures, National Library of Australia

Raper's artworks; reproduced with permission of the National Library of Australia

In late 2005 the National Library of Australia purchased 56 rare and exquisite First Fleet watercolours by the young George Raper, a midshipman on the Sirius, flag ship of the First Fleet. Drawn with loving care, they show the birds and flowers of the Port Jackson region and reflect the awe and wonder of the sailors of the First Fleet as they encountered Australian birds and plants for the first time. The flower paintings include a waratah, fringed lily, swamp lily, Boronia, Crowea and Dendrobium.

From the flowering state of the plants that Raper depicted, as well as the presence of migratory birds such as the channel-billed cuckoo, it is clear that he made the paintings during spring. This distinguishes his work from the well-known Banks Florilegium, drawn on Captain Cook's voyage; Cook's visit to Botany Bay was in autumn. It is a matter of good luck that we have such a wonderful visual record of spring flowers as they appeared to the people of the First Fleet. Unlike the voyage of Captain Cook, the First Fleet had no scientists or professional artists. Men like Raper, trained in making maps and coastal profiles, painted the plant species that they saw, when the more serious issues of convicts and supplies and politics allowed. Raper is now regarded as the finest of the First Fleet artists.

Raper's paintings are an important scientific record. Many of his flower paintings are, to my knowledge, the first European depiction of the species – for example the purple donkey orchid *Diuris punctata*, apple berry *Billardiera scandens* and the handsome flat pea *Platylobium formosum*. Among the birds, his inclusion of the Swift Parrot (pictured right) and Glossy Black Cockatoo provides evidence of their common presence in Port Jackson in 1788.

George Raper had the clarity of an eighteen-year old's eyes and the careful observation that came with his naval training. These characteristics allowed him





to produce paintings which were far more detailed than those of other First Fleet artists such as Captain Hunter. Hunter, in fact, copied many of Raper's works, and the difference in detail is telling. Until the National Library acquired Raper's paintings, a pink flower in Hunter's sketchbook, also held by the National Library, had been a small mystery. Botanists had commented on Hunter's version: 'the subject of this painting cannot be identified. It appears to be a composite of two plants – the flowers belonging to one and the leaves to another'¹. The additional detail in the Raper version allowed Dr Annette Wilson, former Australian Botanical Liaison Officer at Kew Gardens, to identify it as *Pelargonium*, probably *Pelargonium australe*.

The detail in Raper's paintings also contributes to their aesthetic appeal. His Fringe Lily (pictured opposite) owes some of its beauty to his use of a single-hair brush for each of the delicate fimbriae.

Raper returned to England with the rest of his ship's company in 1792. He continued his naval career, with rapid promotion to Lieutenant. He was given his first command in 1796 and sailed to the West Indies. There, just after his 27th birthday, he died, possibly from a fever.

Four years before Raper's untimely death, the 56 paintings acquired by the National Library were in the hands of the third Baron Ducie, who had a personal interest in natural history. They were passed down from generation to generation, with the knowledge of their origin forgotten. They were rediscovered in 2004, at Tortworth Manor, Gloucestershire, in the Cotswolds, during a routine valuation of the estate of Basil Moreton, sixth Earl of Ducie, by the firm Dreweatt Neate. After several months of negotiations, the Library purchased them in 2005.

Digital copies of all 56 Raper paintings can be seen online (<http://catalogue.nla.gov.au/Record/3563487> and follow the links). They are also reproduced, along with Raper's First Fleet maps and landscapes owned by the National Library, in the book *First Fleet Artist*, which can be ordered online through the Library's Bookshop: http://shop.nla.gov.au/product_info.php?products_id=2339

Editor: A list of Raper's work in 'First Fleet Artist' can be summarised as: 74 held at the Natural History Museum, London, 33 in an album at the State Library of New South Wales, and an album of 68 watercolours at the National Library of New Zealand, of which one is signed by Raper. Works by Raper and other artists of the First Fleet held by the State Library of NSW can be viewed at www.sl.nsw.gov.au – Discover Collections; History of our Nation; From Terra Australis to Australia; Tales from the First Fleet.

¹ John Hunter. The Hunter sketchbook [facsimile edition], edited by John Calaby. Canberra: National Library of Australia, 1989. Page 94.



George Raper's paintings of:

Left: *Telopea speciosissima*, the Waratah

Below left: *Thysanotus tuberosus*, fringe lily

Below right: *Platylobium formosum*, the handsome flat pea



Growing Australian plants in The Netherlands

Liesbeth Uijtewaal

Liesbeth studied Botany in the early eighties and did part of her study in Melbourne. She started growing Australian plants in 1994 as a hobby and became a member of ASGAP in 1997. She came back to Australia for the Perth Conference in 2005. After that she has made some more trips to Australia, the last one to the Geelong Conference in 2009.

During my stay in Melbourne in the early eighties I fell in love with the Australian flora. Those unusual flowers, with stamens and styles frequently the most conspicuous part of the flower, made them very special to me. The plants themselves, often with their leathery leaves and rugged, ancient, character completed their enchanting nature.

I have been growing Mediterranean plants in pots since 1993 and became a member of the Oranjerievereniging, the Dutch Society for Growing Mediterranean Plants. Members of this Society keep their frost sensitive plants outside in summer and move their pots to a frost free greenhouse by the middle of October when the risk of night frost in the Netherlands is increasing. By the middle of May, when this risk is over, the plants are taken out into the open again.

Some members are lucky enough to have their own greenhouse to overwinter their plants; others – like me, initially – rely upon garden centres or other commercial facilities, mainly in disused greenhouses for vegetables. A couple of regions of our society rent greenhouses for their members' plants.

I bought my first bottlebrush in 1994, *Callistemon* 'Rose Opal', a very floriferous *C. viminalis* cultivar. It has lived in a pot for 15 years.

In 1995 I found the book 'Australian Plants Identified' by Gwen Elliot and spent many happy hours reading through it and drooling over photos of all those magical plants.



Whenever I found Australian plants in a nursery or in somebody's collection I tried to obtain cuttings or to buy the plant but it was very hard to find any. One day I got overly excited when I found some *Melaleuca thymifolia* plants in a specialist nursery and, of course,

First Australian garden 2006
All photos by the author



Left: *Banksia baxteri* Sept. 2007

Below: *Banksia praemorsa* 'High Noon' flowering in a pot August 2008



one came home with me. Other plants occasionally available from nurseries are *Prostanthera cuneata*, for use as a bedding plant, several callistemon more often than not named *Callistemon laevis*, a name that is never used in Australian literature, *Acacia dealbata*, *A. paradoxa* – usually named *A. armata* – and *Eucalyptus gunnii*. Occasionally grevilleas appear on the market like *G. semperflorens*, *G. juniperina*, *G. 'Ivanhoe'* and *G. 'Clearview David'*. *Grevillea lanigera* 'Mt Tamboritha' and *G. johnsonii* are getting more and more common. As far as I know, the grevilleas are mainly grown by Israeli nurseries, other Australian plants mainly come from Italy.

Some Dutch and Belgian specialist nurseries grow their own unusual plants, including Australian ones. This is where I got a *Hakea sericea*. It flowered for the first time when it was overwintering at a friend's place who was wondering why on earth I kept a pine tree in a pot. Well: it turned out it wasn't!

Early in 1997 I became aware of the SGAP (as it was called at the time) since it was mentioned in Gwen Elliot's book and in July I became a member. From then on my collection and knowledge expanded considerably.

By the end of 1998 I felt confident enough to start growing banksias, which I absolutely loved when I lived in Melbourne, from seed. I pre-germinated them in a box lined with moist kitchen towelling, a sturdy type that resists the frequent lifting of the paper to check for germination. Germinated seeds were planted into small pots with seed raising mix soon after the root tip became visible.



My husband, Bert, and I started looking for another place where we could have our own greenhouse and a larger garden for Bert. We found the perfect spot in 1999, in a disused dairy farm. The two cowsheds could be converted into greenhouses, one for containers and one for a bush garden. The 8,000 square metres of paddocks and old sheds developed into an extensive paved area for plants to be outdoors in summer, an ornamental garden and a small orchard on one side of the house and, on the other side, a small dam and an arboretum with a variety of plants from all over the world. Recently a little Aussie hut completed the garden.

The older cowshed is attached to the house, and measures 9 x 15 metres. We replaced its roof with glass in 2000 and for the first time I could keep my pots at home in winter.

Because of all the available space I could grow more and more plants. I started off with callistemon, melaleuca, acacia, eucalyptus and the odd grevillea but, after a while, I managed to obtain seed of many other species and had surprising success in growing them.

After a while I mastered the art of growing the more difficult banksias and by the end of 2008 I had 60 species of which 40 flowered or budded up and seven set seed. In 2003 I started growing dryandras as well and even some of them grew well and flowered. In all I had around 900 different Australian plant species by the end of 2008, mainly callistemon, calothamnus, darwinia, eucalyptus, leptospermum, verticordia, correa, prostanthera, westringia, acacia, anigozanthos, lechenaultia, banksia, dryandra, grevillea and hakea.

One of the prerequisites for this is, of course, the potting mix. In Holland there is a wide range of available potting mixes but all of them contain fertilizer high in phosphorous. Besides, drainage, mineral content and



Aerial view of property in early 2008 showing the two glass houses, formal garden and the paved area for pots. The arboretum is not in view.



Paved area for pots August 2008

pH of these mixes are not optimal for most Australian plants so I was very pleased to find a potting mix company that was willing to make a special mixture for me in 2001; it is peat based with volcanic grit, mineral sand and trace elements added. Right before potting on I add low P Osmocote for Australian natives at 3g/per litre. This is not available on the Dutch market but I managed to obtain it directly from the Dutch manufacturers. Initially I had it brought over by friends visiting Australia, only to find that it was produced only 50 km from where I live..... those first supplies of Osmocote made quite a nice detour!

Since I started using the specially made potting mix and Osmocote my success with more difficult plants increased considerably. I found that just about any plant can be successfully grown in a pot, provided it gets the proper care. Where necessary, drainage can be improved by adding more volcanic grit to the potting mix.

Of course plants in pots require more attention than plants grown in the garden. For instance, they need repotting at regular intervals: I may pot on young plants twice a year, depending on their vigour. In general, the next pot is twice or three times the size of the old one, by volume. Older plants in, say, 20 litre (12 inch) pots generally get potted on once every 2 or 3 years. If they are lucky they receive an extra dressing of Osmocote in the year they're not potted on. I tend to use smaller pots rather than larger ones to avoid water logging during rainy periods.

Watering, done with a hose, may take me several hours per day during warm periods in summer. In the middle of winter watering can be reduced to once a week or even less since the temperature in the greenhouse is kept just above zero and even though the temperature may go up to 10°C on sunny days, the plants do not use a lot of water



during that period. I always use plastic pots; they are cheaper and it is easier to judge by the weight of plant plus pot whether or not water is needed. This requires some experience.

When we bought this place I had visions of me looking over my own bit of Australian bush in a greenhouse. For this, the larger cowshed, which measures 12 x 24 metres, got a glass roof in May 2004 and in December 2005 the concrete floor was removed. Eighty cubic metres of good quality topsoil was added and mixed in – by hand – with the subsoil.

In April 2006 the first plant was planted with many more to come. Paths were constructed and I was looking forward to my own private bushwalks amongst lushly flowering plants. However, being able to grow Australian plants in pots did not necessarily mean that growing them in the ground would be easy.....!

One of the challenges was, to get to grips with correct watering regimes and to find suitable plants for the sometimes harsh conditions inside, such as the high humidity and relatively low light conditions in winter. In summer it can get very hot on sunny days. Success has been varied but slowly more and more plants seem to feel at home and flower. Recently I have laid out soaker hoses and let them run for some hours at regular intervals on bore water; it works wonders!

Plants that are doing well are Acacia, Correa, Eucalyptus (e.g. *E. torquata*, *E. woodwardii*, *E. 'torwood'*, *E. leucoxylon 'rosea'*, *E. caesia ssp. magna*, *E. kruseana*), Callistemon, Melaleuca (e.g. *M. elliptica*, *M. incana*, *M. huegelii*, *M. pulchella*, *M. nesophila*), Calothamnus, Prostanthera and Westringia. I am trying some Eremophila in a drier area.



After my visit to the ASGAP conference in Perth in 2005, my first time back in Australia since the early eighties, I realised how different the Western Australian vegetation is compared to the vegetation in the eastern states. I felt it would be inappropriate to mix these plants so the middle section of the 'bush' is planted with WA plants and plants from the eastern states are growing on the sides.

E. caesia ssp. magna



The Bush Garden

Clockwise from top left: removing floor November 2005; bringing in soil December 2005; digging paths: 29/12/2005; first tree *Grevillea robusta* April 2006; May 2006; July 2006; the garden in May 2010



For some years I have been growing a selection of Australian plants in the garden quite successfully. These were several *Ozothamnus*, *Olearia*, *Grevillea* (*G. australis*, *G. alpivaga*, *G. victoriae*, *G. juniperina*), *Hakea microcarpa*, *Banksia canei*, *Callistemon* (*C. pallidus*, *C. pityoides*, *C. subulatus*), *Leptospermum* (*L. lanigerum*, *L. micromyrtus*, *L. rupestre*), *Baeckea ericoides*, *Prostanthera cuneata* and *Acacia* (*A. dealbata* ssp. *subalpina*, *A. pravissima*).

The last couple of winters, though, were very severe with temperatures occasionally dropping down to -20°C at night with day temperatures around -8°C for weeks which was too much for most plants. Only *Olearia megaphylla*, *Hakea microcarpa*, *Callistemon pityoides* and *Leptospermum micromyrtus* survived without much damage. Most *Callistemon* plants re-shot from the base in summer.

Unfortunately, during a very cold period in January 2009, the plants that were supposed to be safe in the 'old' greenhouse were not safe at all: the thermostat controlling the heating failed during a very cold period when outdoor temperatures reached -20°C and I lost over 700 plants. I was devastated at the time, but subsequently pleasantly surprised to see that some plants survived these extreme conditions including *Banksia brownii* (compact form), *B. integrifolia*, *B. ornata*, *B. spinulosa*, some *Callistemons*, *Darwinia grandiflora*, *D. taxifolia* var. *macrolaena*, (pictured below) *Xanthorrhoea australis* and several *Grevilleas*. It must have been at least minus 10°C at night and well below zero during the day for some three days. Unfortunately the heater gave up again in December 2009 – even though we thought we'd fixed it – and I lost some plants again. The results of these two winters are very sad since many ten year old plants and even older ones are on the compost heap now but I have learned a lot from growing them, it was great fun and I have many young plants on the shelves again. One important thing I learned



is that plants can cope with lower temperatures if the potting mix is dry.

Few problems with pests are encountered. Hungry wasps may chew on *Banksia* flowers if there is no other food source available for them (this happened in 2008) and

Darwinia taxifolia var. *macrolaena*



Left: *Callistemon* 'Injune' with butterfly



Below left: *Calytrix tetragona*

Below: *Grevillea iaspicula*



occasionally I find scale on a plant but this is not a major problem. More annoying are little moths, or rather their grubs, that seem to like Australian plants even more than I do. They especially like the sheltered environment of the new bush garden but with the help of insect eating birds who fly in and out of the greenhouse (and even nested inside in 2009 and 2010!) and grub-squash expeditions I am getting them under control. For the bird lovers amongst you: the birds are great tit (*Parus major*) and blue tit (*Parus caeruleus*), lovely little colourful creatures.

Insects like (bumble) bees, wasps and (hover) flies pollinate many of the plants. There are no honeyeaters in Holland.

A major problem outdoors is the wind, blowing many plants over, which is very annoying. In one area I build little walls around the pots with hexagonal paving slabs but even this does not always prevent the plants from falling all over the place. Wooden tubs help to stabilise pots too.

I open my garden to visitors in the summer months and there is a lot of interest in these extraordinary plants, especially for visitors who have been in Australia or have relatives there. Most people love the unusual foliage and flowers and are interested to hear how well adapted they are to their natural environment. They are even more amazed when they learn that many species already existed millions of years ago.

Let's hope and make sure that future generations can still enjoy the beauty of Australia's flora!



Bush garden entrance, September 2009



The dam with the little Aussie hut, September 2009

The Netherlands: Amsterdam Botanical Garden

Jim Ward is President, Blue Mountains Group, Australian Plants Society NSW

Jim visited this garden in 2010 and shares his impressions of the Australian plants growing there.

This garden is one of the oldest in the world. It was commenced in 1638 as a herb garden with medical plants. The reason for establishing the garden was because of an outbreak of the plague in the years 1634–1637.

By 1682 it had a collection of plants brought from all over the world by the traders of the Dutch East India Company. These plants were completely unknown in Europe at the time. Some of these plant species are the ancestors of plants which have been spread throughout much of the world.



Australian plants in the glasshouse

Photos by the author



An interesting aspect of the gardens was the effort made to show the relationships between various families of plants and the evolution of plants.

The gardens also contain a small collection of Australian plants from a number of genera. These are in one of the hothouses (pictured on page 365) and include such plants as *Viola hederacea*, *Dicksonia antarctica* and *Eucalyptus globulus*. There is a Wollemi pine growing in the open with an explanation of its significance.



Wollemia nobilis, Wollemi Pine

Growing native plants in Japan

Koji Miyazaki

Koji Miyazaki lives in Yokohama. From 1997 to 2002 he was resident in Australia, initially in Hobart for two years during which he undertook a TAFE course in Horticulture. He then moved to Sydney and worked in a nursery. After returning to Japan he missed his association with Australian native plants and decided to have an Australian garden.

I am growing some Australian native plants in a 'kennel-sized' small garden in Yokohama, just next to Tokyo, which is in the middle of Japan.

Growing native plants is still just an experiment for me. I built my own house last year and started planting natives both in a trench-like slender bed in front and a triangular small garden in the back.

In my garden I have *Actinotus helianthi*, *Brachyscome multifida*, *Callistemon* 'Little John', *Dianella caerulea* 'Variegata', *Grevillea* 'Moon Light', *G.* 'Pink Midget', *G. obtusifolia* 'Gin Gin Gem', *Hardenbergia violacea*, *Leucophyta brownii*, *Telopea speciosissima*, *Viola banksii* and *Westringia fruticosa*.

Half of the plants haven't experienced the cold winter yet, but they seem to be surviving so far. The cold winter (Dec–Feb, minimum temperature 2 degrees) and the humid rain season (Jun–Jul, rainfall 300mm) are the major concerns when I grow the Australian native plants in Japan.

The climate here is temperate but is becoming slightly warmer in recent years because of global warming. We are having the hottest summer in the last hundred years this year. The maximum temperature has been around 35 degrees every day for more than a month!

Despite the extreme hot weather, my native plants are still growing steadily. This means that Australian native plants have high potential for heat and drought tolerance. However, *Viola banksii* is nearly knocked down by the heat. The leaves have turned a yellowish colour and have withered as well.

When growing the native plants in Japan, we have a couple of problems to consider. One of the problems is the soil (or potting mix). It is impossible to obtain the specialised native garden soil or native potting mix in Japan. We have to mix up original soil by ourselves, or ask for the 'secret recipe' from professional growers. They are actually very reluctant to disclose their own recipe. Luckily, one of my best friends is a professional native plants grower and he kindly gives me most of the recipes for native soil.



The other biggest problem is a fertiliser. There is no particular fertiliser (low phosphorus) for Australian natives in Japan. This is quite a serious problem when we grow natives. I deeply miss 'Osmocote'!!

'Seasol' is an alternative fertiliser so far. Strictly speaking, 'Seasol' is not a fertiliser; it is a soil conditioner as everyone knows. Well, 'Necessity knows no law'.... My smelly liquid conditioner is a little bit expensive, but is working well in my gardens.

I believe that Australian native plants will become more popular in Japan. As a propagandist of Australian native plants, I would like to improve the growing technique and the knowledge of them. This is the main reason why I joined the Society.



Left: 'The Ditch' – Koji's slender trench garden (3800 mm X100mm with *Viola banksii* and *Grevillea* 'Pink Midget' plus 300 mm planting space with *Dianella caerulea* 'variegata' and *Leucophyta brownii*) at the front of his home



Right: Koji on a visit to Australia, October 2010, pictured at the Glenbrook Native Plant Reserve, Blue Mountains, NSW with *Boronia fraseri* in the background. Photo Merle Thompson

Editor: Unfortunately some of the plants in Koji's back garden dried out while he was on this visit to Australia. It has three areas:

'Backyard ditch' 4800 mm X 200 mm (*Dianella caerulea*, *Viola banksii* and *Westringia fruticosa*);



Left: *Grevillea* 'Moonlight' blooms beautifully in May

Below: *Callistemon* 'Little John' is not very popular yet in Japan, but it is perfect in size for a small garden.

Photos by the author



'Small ditch' 1200 mm X 200 mm with *Callistemon* 'Little John', *Brachycome multifida* and *Bracteantha bracteata*; and

Garden bed, a triangular garden 170mm X 1700 mm. This is where he planted the larger plants such as *Telopea speciosissima* and *Grevillea* 'Moonlight' as well as flannel flowers, *Actinotus helianthi*.

United Kingdom

My northwest England garden

Jeff Irons

Jeff Irons' interest in Australian plants began in 1966 when, during a garden visit, he saw a plant that he had seen growing by a roadside in Tasmania. Joining the SGAP made him aware that there were others in Britain with a similar interest and he was one of the 16 enthusiasts who met and formed what became Britain's Australasian Plant Society. There are few references to Australian plants in British gardening books, so in 1997 he and the late Thomas Ross published 'Australian Plants, A guide to their cultivation in Europe.' Unusually for a gardening book the authors had grown every one of the 500 odd plants described in the book. Illness now prevents him gardening, but he retains his interest in it.

My garden is in northwest England, about five miles from the Irish Sea and about a mile inland from an estuary. Rainfall is 24-28 inches (600-700mm) p.a. distributed fairly evenly. During three months of the year evaporation exceeds precipitation. Extremes are rare but occasionally we get a reminder that Britain's hinterland is Siberia. Desiccating cold dry winds coupled with frozen soil result in plants being unable to replace water lost from their leaves and death results. The absence of long periods of snow cover, coupled with alternating temperatures, produces conditions favourable to plants from upland Tasmania and similar areas on mainland Australia. Most British gardens have a preponderance of forbs and are well manicured. Mine is mostly woody plants, planted informally in a formal layout. A few plants have been brought back from Australian nurseries but most are seed raised. The overall effect is a blending of shades and textures of green, punctuated by spots of colour, from plants in bloom. I like to think that it blends Australian plants into a European garden, valuing some of them for the new textures they introduce.



Baloskion tetraphyllum
All photos by the author

In Britain gardeners speak of the May–June gap, meaning that there is a paucity of flower then. In my garden the Australian element ensures that it is the peak period for flowers.

The year begins with *Acacia nano-dealbata* which opens in January and continues till March. Getting their colour from stamens, the flowers withstand frost better than (say) camellias, which get their colour from petals. It is followed by *A. dealbata* ssp. *subalpina*, *A. leprosa* var *uninervia* Nail Creek variant and *A. melanoxylon*. In late February *Lissanthe strigosa* opens its small white flowers, seemingly impervious to winter's weather.



Acacia nano-dealbata

Soon after, *Asterolasia trymalioides* (from Dealbata Nursery) opens the first of its small yellow flowers. My specimen of this superb long flowering plant has now been given to an alpine nursery for propagation and sale to British alpine enthusiasts. *Acrothamnus hookeri* has gone to the same nursery.

My shady border, which is always moist, houses some of my finest plants. The season begins with *Telopea oreades*, followed in May by *Acradenia frankliniae*. Although native to wet forests, this will grow in drier conditions and after about 40 years my specimen is about 7ft high. *Eucryphia lucida* died when the garden was flooded and has been replaced by *E. lucida* 'Ballerina', which inherits the long flowering season of this species – from late June to early December in my area. *Eucryphia milliganii* 'Pink Whispers' blooms only for a few weeks. In August 2009 *Melaleuca megalongensis* produced a solitary flower in a leaf axil. Lyn Craven explained to me how this was a reversion to an ancestral state, before the familiar condensed spike became the norm. I hope that subsequent summers will produce a good display of conventional flowers. Two provenances of *Leptospermum riparium* have each grown to about 25ft, twice their wild height, and flower profusely in June. The unaccountably uncommon *Anopterus glandulosus* also



flowers in June. I just cannot understand why this superb shrub is so rare in British gardens. I used to have the pink form, but it died after being lifted by frost. Seeds sown in 2009 and 2010 have not germinated yet.

Richeas are some of my favourite plants and I grow *R. acerosa*, *R. continentis*, *R. gunnii*, *R. pandanifolia* ssp. *ramulosa*, *R. scoparia* and *R. x curtisiae* (pictured opposite and on front cover). The only species sold by nurseries is the not very cold tolerant *R. dracophylla*, which is sold by a nursery specializing in 'architectural' plants.

Like most gardeners I get losses and it was only after many years that I realised plants were fading away because alkaline clay some 2ft down was causing the acidity of my soil to decline. Eventually it reached a level that some Australian *Ericaceae* could not tolerate. Other species in other genera showed their intolerance by changing flower colour from pink to white. Liberal dressings of agricultural sulphur rectified things.

Most leptospermums grow to become too large for the average British garden and the only small ones I have are *L. blakelyi* and an arching form of *L. lanigerum* from Tasmania's Mount Wellington. Other species put on 3 to 6ft of new growth each year. Bottlebrushes behave similarly and because of space considerations all except *Melaleuca subulata* and *M. pityoides* have been removed. *Melaleuca squarrosa*, collected on one of my trips to Tasmania, fills the garden with its honey scent in June, following on *Hymenanthera dentata* from Colac. The equally strongly scented *Hakea microcarpa* blooms at the same time. Aromatic leaves are the forte of *Baeckia gunniana*. When stroked its leaves leave a long-lasting smell on the hand.



Leptospermum riparium



Top left: *Ozothamnus ledifolius*

Top right: *Epacris gunnii* June 2010

Above left: *Prostanthera cuneata*, 'Karwarra'

Above right: *Lambertia formosa*

Right: *Richea x curtisiae* October 2010





Very few Australian plants have the Royal Horticultural Society's Award of Garden Merit. One of them is *Ozothamnus ledifolius*. I know people who grow it simply for the aromatic smell of its leaves under the strong summer sun. I value it for the way its green and yellow young growth glows when seen against the low winter sun. It is followed by *O. ericifolius*, one of those plants that becomes much taller than when in its native habitat. This species has paler buds than *O. ledifolius* and, though similar, its smell is different. *O. stirlingii* from Mount Baldhead has larger leaves and very different flowers. The Tasmanian *O. x purpurascens* is already twice its wild height and is still growing. *Olearia phlogopappa* will take anything that the British weather can throw at it and is a favourite of garden landscapers.

At a lower level *Diplarrena latifolia* was my first Australian plant and has been with me since 1966. It is much better than *D. moraea* whose flowers are too small for their height.

Pelargonium australe and *P. littorale*, both from Tasmania, were killed by Britain's worst winter for 30 years but regenerated from self-sown seedlings. All top growth of *Pelargonium rodneyanum* was killed, but not its fleshy roots, so it too regrew but did not bloom in 2010.

Lomandra longifolia from Tasmania and the Blue Mountains were both unaffected. My first plants of *Xerochrysum subundulatum* lasted for 15 years, but subsequent sowings have all behaved as biennials. *Dianella revoluta* and *D. longifolia* both have inconspicuous flowers in summer but prominent blue berries in autumn. In that they are joined by *Billardiera longiflora* whose berries last until Christmas.

Most *Prostanthera cuneata* in Britain have white flowers but mine, given to me by Marilyn Gray, has blue flowers. *P. lasianthos*, from Essie Huxley's seed, is also a blue flowered form. Before it I had tried two commercial clones and two wild origin seeds, but not one could withstand even a mild winter outdoors. Essie's was unscathed by the vicious 2010 winter. *Prostanthera* 'Badja Peak' appeared to be a plant that shrugged off winter and had spread from my garden to several nurseries. After 18 years, the 2010 winter proved to be too much for it. The double form of *Epacris gunnii* was unaffected by the severe weather and flowered magnificently as usual.

Yellow flowers come from *Brachyglottis brunonis* (formerly *Senecio brunonis*) and *Calocephalus citreus*.

The year ends as it began with correas and grevilleas. The only correas able to stand up to severe weather are *C. alba*, *C. backhouseana* and *C. decumbens*. Sadly the Yorke Peninsula form of *C. pulchella*, which

came to me as a left-behind from the Australian stand at the 1984 Liverpool International Garden Festival, was killed by the 2010 winter, along with *C. 'Marian's Marvel'*.

Seeds sent to me as *Grevillea lanigera* turned out to have a lot of something else in them. I call this plant, which blooms from August to April, *G. lanigera x rosmarinifolia*. In recent years Britons have been able to buy a 'red flowering Christmas tree'. Called *Grevillea* 'Red Salento' PBR it is described as a cold loving tub plant from the Mediterranean. Australians would recognise it as the Upper Murray form of *G. lanigera*. Here it blooms from October to April.

Asterotrichion discolor blooms reliably in November. I cannot say that its fragrance is among the most pleasant around.

My small unheated glasshouse contains plants that cannot withstand our winter wet. Certainly not the most conspicuous, but probably the most noteworthy, is *Gymnostachys anceps* from Mount Tomah (Blue Mountains, NSW). Outside it is defoliated by -4°C and killed by -6°C. Kept dry, it is winter hardy.

Many people fill their house with holiday souvenirs. Mine are in the garden. Every time I look out of a window there is something to remind me of a holiday somewhere in Australia. Plants are better than things!



Lagarostrobos franklinii Huon pine



United Kingdom

Eucalyptus gunnii – the pioneer Australian tree in Britain

John Purse

John Purse is a plant scientist who has worked in eucalyptus forestry for 25 years. He now runs his own business, which includes breeding E. gunnii hybrids for the hardy ornamental nursery stock and the cut foliage markets. He has visited Australia many times and is fascinated by its flora.

In the decades following the European settlement of Australia, seed of numerous eucalyptus species was brought to Britain. Many young plants were grown in greenhouses and some flowered under these conditions – for example, *Eucalyptus macrocarpa* flowered at Kew for the first time in 1847¹ and was noted as ‘very handsome’. However, they died at a taste of a British winter outdoors. With hindsight, this is hardly surprising: the species and the climates from which they came were poorly described, and the seed of the vast majority would have been collected from areas having little or no frosts, close to the first European settlements. This changed with the recognition of *Eucalyptus gunnii*, and a tree of this species was the first Australian tree to be grown successfully outdoors in Britain. The result today is that *E. gunnii* is quite common as a specimen tree in parks and gardens throughout Britain and Ireland. The trees are frequently long-lived and grow to a considerable size – far too large for the small suburban gardens where they are often found!

The first Australian tree grown outdoors in Britain

Eucalyptus gunnii had been informally recognised in the 1830s as a distinct species in Tasmania, particularly on account of the stem sap that could be harvested from its trunks in spring. This led to the common name ‘Cider Tree’ and latterly ‘Cider Gum’. The remarkable Tasmanian botanist, Ronald Gunn, brought the species to the attention of Joseph Dalton Hooker during the latter’s visit to Hobart in October 1840 on the outward voyage from Britain of the Antarctic expedition of HMS *Erebus* and HMS *Terror*. (Hooker was assistant to the surgeon on HMS *Erebus* and was the youngest member of the 128-man crew of the expedition). Hooker himself visited one of the stands of the Cider tree near Lake Echo and in 1844 formally described the species, naming it *Eucalyptus gunnii* in recognition of Ronald Gunn². In a published extract of a letter accompanying Hooker’s description, Gunn noted the exceptional tolerance of the species to the unusually severe winter conditions around

Arthur’s Lake in 1842³. Therefore Hooker would have been aware that this species had the potential to cope with the British climate. Hooker brought seed of *E. gunnii* back to England, via Antarctica.

It is not clear whether Hooker himself collected the seed from the stand at Lake Echo, or whether it was a sample given to him by Gunn. The expedition arrived back in England in September 1843 and the seed would doubtless have arrived at Kew soon after. Hooker’s father, Sir William Jackson Hooker, was director of Kew at this time, and he maintained a long-standing correspondence with Ronald Gunn. One tree was planted outdoors at Kew shortly afterwards, presumably in 1845 or 1846. Despite having shoot damage in several severe winters, this tree survived temperatures below -18°C in 1860-61, and being transplanted some years later⁴. It lived until around 1908⁵. Thus it was the first Australian tree to be cultivated in the open air in England. Reportedly, it never flowered or achieved large dimensions, both of which are unusual features by the standards of subsequent plantings, and this may indicate that by chance it was an inbred individual having poor vigour. However, a precedent had been established, and it was not long before there was another try.

The Whittinghame Gum

Further seed was brought to Britain by Lord Robert Cecil (later Lord Salisbury, a British Prime Minister) as a result of his visit to Tasmania during his voyage around the world in 1851-53⁶. He passed this to his nephew, Arthur Balfour, the 1st Earl of Balfour (and later also a British Prime Minister), of Whittinghame Castle, East Lothian, near Edinburgh in Scotland. One tree was planted in the grounds of Whittinghame Castle in 1854 and proved to be very robust and long-lived – it was still there in 1957⁷, when its height was 29m and its girth was 184cm, and it was finally blown down in 1963. This tree did not appear to be typical of the species, most notably because of its slightly urn-shaped flower buds and fruits. This led to some rather polarised discussion on its true identity^{6,8-12} and it was given the attribution of *Eucalyptus whittinghamei* and later, *Eucalyptus whittinghamensis*.

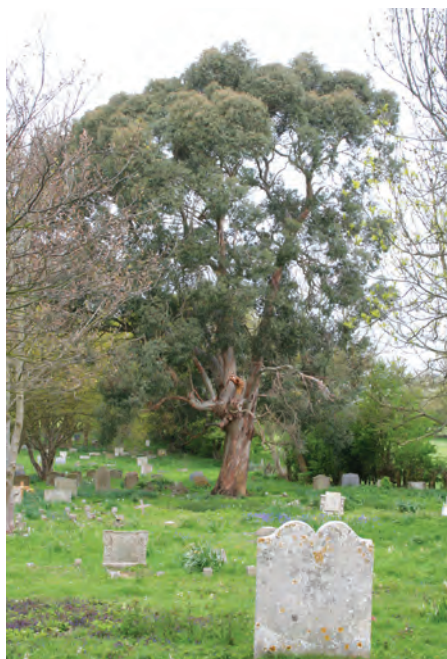
This tree was particularly hardy and it flowered and seeded freely. The gardener at Whittinghame, John Garrett, raised ‘hundreds’ of seedlings from it and distributed these throughout Britain, starting in 1887⁶. These also proved notably hardy; a population of young trees planted at Kinloch Hourn in western Inverness-shire, Scotland in 1890 and 1891 was barely damaged by an extended period at -18°C in the winter of 1894-95⁶. These seedlings differed in morphology from the parent and clearly resembled *E. gunnii*. They also were notably glaucous when young. As a result, the



attribution given changed to *E. gunnii* var. *Whittinghamensis* and this attribution has been used until recently. It seems probable that the original tree was from one of the glaucous provenances of *E. gunnii* that occurs at higher elevations in Tasmania and would probably today be categorised as *E. gunnii* subsp. *divaricata*¹³ (this subspecies can have slightly urn-shaped fruit). Four seedlings from the progeny of the original tree were planted at Whittinghame between 1891 and 1912¹². At least one of these still exists, so the opportunity to re-examine the point remains.

Another Victorian introduction

A further introduction of seed was made by John Bateman of Brightlingsea, Essex, in the 1880s. Mr Bateman's parents, James and Maria, were noted gardeners and established a famous garden and collection of exotic plants at Biddulph Grange, Staffordshire from 1840¹⁴. Their son evidently inherited his parents' interests and applied them in various ways on his estate at Brightlingsea. The origin of his *E. gunnii* seed is unclear. Bateman left two differing comments on their source, the extreme south of Tasmania¹⁵ and Negrete, Argentina¹⁶. Subsequent descriptions by others have ascribed the source to New Zealand¹⁴. An initial population of 60 seedlings was planted out in the autumn of 1887 and these flowered for the first time in 1892. Both seed and seedlings from this population were freely and widely distributed, both around Brightlingsea and throughout southern Britain. By 1902, some 900 trees had been planted around Brightlingsea and more than 200 of these survived in 1963. Large trees still exist there today, though their age is unclear. Many of the large eucalyptus crowns in local shelterbelts prove on close inspection to be re-invigorated branches or to be from epicormic shoots, on trunks of trees that blew down decades ago but are still very much alive. A large specimen still in the churchyard of All Saints church is particularly



The large *Eucalyptus gunnii* in the churchyard of All Saints, Brightlingsea, Essex, England in May 2010.

All photos by the author

intriguing, as it may be from one of the earliest plantings. In 1899 Mr Bateman referred to a tree from local seed planted in the churchyard and commented 'The best I have...has got his roots into a grave, whose tenant died of small-pox, and it enjoys the situation hugely...'¹⁵. A photograph of a large *E. gunnii* in the churchyard was published in 1912⁵. The tree in the churchyard today has disrupted several undated graves that are clearly not at all recent.

The plantings around Brightlingsea have provided more evidence of the ability of *E. gunnii* to cope with severe winters in Britain. Mr Bateman himself noted that some of the trees were damaged by the severe winter of 1894-95. These trees lost a year's growth, but recovered fully¹⁵. A similar response was seen following the prolonged severe winter of 1962-63 (which froze the sea locally and killed established *Cupressus macrocarpa* trees outright): the trees looked dead until late May 1963, when new growth appeared throughout the crowns¹⁷.

The experiences of trying to grow eucalypts in Britain and Ireland were reviewed in 1912 by Elwes and Henry in the sixth volume of their magisterial survey of trees. Their conclusions were somewhat pessimistic, though with hindsight one can see that taxonomic confusion made firm conclusions and recommendations difficult. After 1912, there is a long period with very few records of *E. gunnii* or any other eucalypts in Britain. One *E. gunnii* tree was planted in the grounds of Cobham Hall, Kent, by Australian soldiers as a commemoration of their stay there during World War 1⁷. The house was used as a hospital and convalescent home for Australian troops at this time, probably because of other Australian connections dating back to the 1880s – not least as the original home of The Ashes! The tree has since been identified as *Eucalyptus archeri* (Alpine Cider Gum, a species first described in 1929), which is plausible, though distinguishing



The eucalyptus planted by Australian soldiers to commemorate their stay at Cobham Hall, Kent, England during the First World War. It is thought to be *Eucalyptus archeri*.

the two species outside their native habitats is not easy. There is no record of the seed origin. One wonders if it was posted from Tasmania to a convalescing individual. The tree is still there, growing well, though it has evidently suffered storm damage to its trunk and limbs in the past.

Renewal of interest in the mid-20th century

After the Second World War, there were efforts to see what could be learned from the surviving eucalyptus plantings of the Victorian and Edwardian eras, in the now-neglected estates¹⁸. The findings led to further seed imports and small-scale forestry plantings, usually with seed provenances that were selected as more likely to perform acceptably in Britain¹⁹. Interest in planting eucalypts as ornamental amenity trees was renewed around this time also, notably through the efforts of Dr Richard Barnard of Bovey Tracey, Devon, who conducted his own trials from the mid-1950s and established a specialist nursery²⁰, and the plantsman and nursery owner Sir Harold Hillier. *E. gunnii* again proved to be one of the more reliably successful species in both forestry trials and amenity plantings, particularly away from the milder coasts. As late as 1974, *E. gunnii* was noted as 'infrequent' in gardens in Britain²¹, but it has since become quite common with young plants being offered for sale in most garden centres in the country.

The Forestry Commission undertook a comprehensive series of trials with eucalypts in the early 1980s with strong emphasis on evaluating different provenances and seed sources of *E. gunnii*.

Early survival in the trials was rather poor, due to a combination of poor establishment conditions and a series of exceptionally cold winters between 1980 and 1987²² when the trials were abandoned, but the surviving

Part of a trial plantation of *E. gunnii* (Alma provenance) in the snow in January 2010 at Newnham, Kent, age 8 years. The trees show the poor form typical of the species when grown as a plantation forestry crop. The much larger trees visible behind are *Eucalyptus nitens* of the same age.



trees were allowed to grow. Re-assessments of these trials since 2001 have shown that *E. gunnii* has given very respectable yields on relatively short rotations²³, but that tree form under plantation conditions is generally very poor. These trial results have led to renewed interest in growing other hardy eucalyptus species having better form and yield for fuelwood production.

Starting in the 1970s, *E. gunnii* has been grown at various locations as stooled plants to provide cut foliage for florists. This industry has developed significantly, notably in Ireland, but also in the UK²⁴. More recently, the species has fallen from favour for this sector, due to more vigorous species with more distinctive juvenile foliage such as *Eucalyptus glaucescens* and *Eucalyptus parvula* now being preferred.

Until 2000 most *E. gunnii* seed used in Britain was imported from Australia. Despite opportunities to collect seed from trees in the UK, as the Victorians had done, only small amounts appears to have been collected, for example by Richard Barnard. With the closure of the Tasmanian natural populations of *E. gunnii* to commercial seed collection in the 1990s, virtually all the seed used in Britain today comes from stands managed for seed production in New Zealand.

Note on sources: Many of the events from the 19th century cited in this article are reported in different publications to have occurred in different years. I have used my judgement in selecting and reporting the most probable years of occurrence. Many early publications also contain much interesting detail, including engravings, photographs and anecdotes. However, the taxonomic classifications used then differ considerably from those current today. I have tried either to distinguish or to avoid using data from species that are no longer regarded as *E. gunnii*.

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A Snippet from Tucson Arizona USA

Al Guhl, a member of APS NSW who lives in Arizona

I feel that I am not of the class to write about how to succeed in growing Australian plants.

At one time I did have something like 11 different eremophilas and one Queensland Bottle Tree (*Brachychiton rupestre*) but the tree caused so much shade (!) that most of the Emu Bushes died.

The bottle tree did quite well and was the object of a number of plant folks' visits BUT, after its best blooming season ever, it rapidly declined and passed on due to Texas (Cotton) Root Rot – *Phymatotrichopsis omnivora* – and what originally cost me \$4.50 to purchase in a one gallon pot, cost me over \$600 to have removed by a tree company! YIKES!

There are two Emu Bushes remaining in the ground (I'm surprised the root rot hasn't killed them yet!) and three species of *Brachychiton* which are potted. These NEVER cause a stir amongst my plant-loving friends so I think they are nothing to write home about, except I like them.

United States of America Australian natives thriving in Northeast Florida

Sue Logan

Sue's interest in growing Australian plants began over ten years ago when a friend gave her a packet of Sturt's Desert Pea seeds. She grew them as a summer annual in pots on the deck in Connecticut and was hooked by the exotic flowers. After moving to Florida, Sue took a pot of red and green kangaroo paw to a garden club meeting for a plant exchange. The guest speaker was the Curator of Horticulture at the Jacksonville Zoo. Their discussion led to an invitation to volunteer at the Zoo to help develop the Australian gardens. That was seven years ago and her interest in these plants has grown by leaps and bounds.

Seven years ago Australian natives were few and far between in Jacksonville, Florida. Certainly no organized Australian gardens existed. It was pretty much an empty palette and, as seen from the eyes of an Aussie ex-pat, the opportunity was huge. I could surely take my Australian roots and, half way around the world, establish an up close experience with the incredible flora of my native country.

When my husband and I left Australia in 1966 for North America it was supposed to be for a two year working adventure. Forty-four years later we are still here and are now retired in Jacksonville, where we found a climate that reminded us of our days growing up on the east coast of Australia.

Shortly after relocating from Connecticut to Florida in 2001, I was offered the opportunity to work as a horticulture volunteer at the Jacksonville Zoo. I had been into gardening for as long as I could remember, having grown up on a small commercial flower farm in the Sydney suburb of Castle Hill.

While living in Connecticut I had grown Sturt's desert pea and kangaroo paw in pots on my deck and that was pretty much the extent of my knowledge of Australian natives. I knew that I loved the banksias and grevilleas I saw whenever I visited Sydney, so with the backing of my local garden club and the Zoo's director of horticulture, I set out to establish an Australian native plants garden here in Florida.

My sister, a truly great gardener, presented me with *Australian Native Plants* by Wrigley and Fagg, which has been an incredible resource in helping determine what plants would have a chance to thrive in our Florida climate. While doing research, I found the Australian Plants Society and promptly became a member.





Some of our original kangaroo paw blooming in summer 2010

All photos supplied by Jacksonville Zoo

It all started with my big pot of kangaroo paw, grown from seed in my home garden. This plant was promptly sliced up with a machete and formed the basis for our modest native garden which began as a sandy mound behind the Australian exhibit. When the exhibit was finally renovated a couple of years ago, all the natives I had raised on the mound were potted up to be transplanted into newly prepared beds. Some took the move quite well, some didn't, and once again our kangaroo paws took pride of place in our new garden which was finally out in public view.

It has been seven years since we sliced up that lone kangaroo paw and, as I write this article, this summer's blooms are fading. *Anigozanthos flavidus* has been an outstanding performer in the garden with little impact from black ink disease. Kangaroo paws also seem to have made a mark in American landscaping, particularly in states such as California and, here in the east, our local nurseries now carry dwarf varieties that are actually being raised in Vietnam.

Last summer my *Grevillea* 'Robyn Gordon' put on a magnificent display, tripling in size and blooming profusely. Sadly it did not survive the abnormally harsh winter temperatures that produced twelve consecutive nights of freezes. Despite these freezes, this was the only loss we had in the Australian gardens.

The exhibit's *Araucaria bidwillii* is about 5 metres tall and lost its top to the freezes, however, it seems to have recovered. Numerous *Eucalyptus*

tereticornis planted around the zoo about six years ago are now about 8 metres tall. Several years ago tropical storm gale force winds whipped some of these trees around to the point where they were threatening nearby power lines so they were quickly dispatched by utility company workers with chain saws. The survivors are doing very well.

We are currently adding numerous other natives to our gardens. I am very excited that I was able to get two *Grevillea* 'Peaches and Cream' from fellow Aussie, Jo O'Connell's Australian Plants Nursery in Ventura, California. The following are just some of the new plants we have recently acquired from Jo's nursery: *Grevillea* 'Honey Gem', *Grevillea* 'Moonlight', *Grevillea paniculata*, *Grevillea alpina*, *Grevillea victoriae*, *Banksia robur*, *Darwinia taxifolia*, *Lomandra* 'Katie Belles' and *Acacia rigens*.

The Jacksonville Zoo is now officially the Jacksonville Zoo and Gardens with horticulture tours available to the public. The new Australian gardens are gradually emerging and plants such as bottlebrush (a very popular plant in Florida) and dianella are being used extensively as landscaping plants, both in the exhibit and throughout the Zoo. Tasmanian violets provide great ground cover in the Australian gardens and are being introduced into other Zoo gardens.

Banksia integrifolia, grown from seed, are over two metres tall and are being further propagated with cuttings. These plants have been in the new gardens for almost three years and we have been rewarded with our first bloom. Last year we added several other banksias, including two large *B. ericifolia*, one which produced a flower spike several weeks ago, so there is great excitement in the horticulture department.

Other plants grown from seed include *Callistemon pallidus*, *C. pinifolius*, *C. rigidus* and silver senna which bloomed for me last year.



Entrance to the Australian Exhibit with bottlebrush and dianella, Spring 2010



Looking to the future, I am excited that my husband and I are headed to Australia in September. We plan on exploring Western Australia and Perth during the wildflower season where I can indulge in my other passion – photography – and at the same time look for possible other specimens to add to the Zoo's collection of beautiful Australian natives. Our trip culminates with a stay in Manly (Sydney) and you will surely find me, camera in hand, photographing the banksias out at the tip of North Head of Sydney Harbour.

Please visit the Jacksonville Zoo and Gardens on line at: www.Jacksonvillezoo.org.

Editor: Sue wrote this in August and she has since had a wonderful trip through parts of Queensland, NSW and ACT and a 8,550 km tour of WA.



Right: Sue tending the new plants



Left: New gardens on both sides of the entry path from inside the exhibit

Australian plants in Texas

David Klein, a subscriber to *Australian Plants* from Texas

I have had experience with Australian plants. I live in Texas, just north of Houston, in a little town called Spring. This area is TOUGH on plants.

It's important to explain our climate here. We are in 'Zone 8b', but I need to elaborate. Our normal winters consist of ten nights of 30–32 degrees F° (-1–0°C) minimum, perhaps twenty nights of frost, 32–40 degrees F° (0–10°C). Every five years or so we have a few nights in the low 20s, only very rarely below 20 (-11°C). Winter is mild and damp, but when a 'Norther' comes in, it's dry, cold and windy. Humidity can drop into the single digits and the temperature can drop from high 70s to high 20s in twelve hours. It rarely snows.

In late Spring, we may have five inches of rain in one night and plants' roots may be waterbound for a week.

Summers are hot, 95–100 degrees (35–38°C) and mostly humid. In August, however, a dry wind comes from the southwest, from Mexico, and it's tough on plants just trying to survive the hot summers.

Autumn is pleasant, except for the occasional tropical storm in September or October, that generally drops 6"–18" of rain, but may drop up to 36" in a couple of days. Oh yes, the hurricane winds of up to 100 mph (higher at the coast) wreak havoc with tall trees.

We receive about 40" of rain per year, May and September are the rainiest months, July and August the driest.

I have been a plant collector for many, many years. I live on 130 acres and have 8,000 sq ft of greenhouses, in which I grow 1,200 rare or unusual plants, including tillandsias, bromeliads, palms, cacti and succulents, tropicals and assorted trees and flowers.

I have tried to start an 'Australian Collection' and have just not had much luck. I have a few types of Eucalyptus, Acacia and bottlebrush, but not much else. None of the local nurseries carry any Australian plants, other than an occasional bottlebrush or Eucalypt, and there are just a very, very few nurseries in the U.S. that carry much of a selection, and their product varies in size, quality, quantity and availability. Furthermore, I cannot always get good information about the hardiness of the plant against heat, cold, drought, humidity, temperature changes and 'wet feet'. However, they are trying and I give them great credit for that.

Some of the plants I have purchased froze, some cannot handle the humidity, the 'wet feet', or the dryness.



Within the last five years, the Texas Highway Dept has been planting Eucalyptus trees on the shoulders beside some new freeways. They grow fast and are drought resistant. Slowly, Australian plants are entering the mainstream of landscaping in Texas.

In order to promote Australian plants, I recommend:

1. Establishment of some sort of club or organization, based in the US, that would promote Australian plants.
2. Some organization in Australian to promote plants, seeds and information relating to growing your wonderful plants in the US.



Growing Eucalyptus in cold winter/hot summer regions

Larry Little

Stone Mountain, Georgia

Larry has been a gardener for about 50 of his 60 years. He wrote: 'Naturally, I started with annuals and veggies as a kid but became interested in cold hardy palms and lush foliage plants about 20 years ago. Australian plants are so appealing because they provide unusual texture and contrast in my garden.'

Perhaps the most widely recognized genus of Australian plants, some eucalyptus species are adaptable enough to grow in areas with very different weather patterns than exist in their native Australia. While summer heat and humidity are not uncommon in parts of Australia, winter minimum temperatures of -8°C to -10°C are certainly not common there. Moreover, wet conditions followed by freezing cold can be fatal to many plant species that would survive a dry cold. For the past ten years I have experimented with several eucalyptus species and have found two species that grow nicely in my northern Georgia area of the eastern USA.

The photos show these trees in their fourth year. They were originally small transplants less than half a metre high.

The first species is *Eucalyptus dalrympleana*, which, to my eye, has a more typical eucalyptus appearance and is quite ornamental. The peeling bark and glaucous leaves make this tree stand out among the many green-leaf deciduous trees native to North America. Drought and cold tolerant, this species is number one on my success list.

The second successful species is *Eucalyptus parvula*. I still see it listed in some books as *Eucalyptus parvifolia*. In overall appearance, I do not

think it as attractive as *E. dalrympleana*. Still, it is perhaps even more cold and drought tolerant. The small, fine-textured leaves make this tree an excellent backdrop for flowering shrubs.

I understand this species has a very limited natural distribution in the Kybean area of New South Wales. It makes one wonder if the species is a relic of some past geological time when Australia was a colder continent.



Both these species are very easily grown with no insect or disease issues. The wide genetic variability within the eucalyptus genus (a diversity much studied by the timber industry) suggests that other species might succeed in 'unfriendly climates.' I will continue to explore the wide world of eucalyptus. It is a fun hobby.

Left: *Eucalyptus dalrympleana*

Below: *Eucalyptus parvula*

Both in their 4th year from a small seedling

Photos by the author





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The next issue of *Australian Plants*, Vol 26 No. 206, March 2011, will
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