



CRISP Nursery News

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Community of
Ringwood
Indigenous
Species
Plant Nursery



Botanical Illustrations
by Ruth Jackson

Winter July 2015

CRISP Nursery

SALES AREA

Wednesday 9.30am - 12.30pm
Friday 9.30am - 12.30pm
Saturday 10.00am - 1pm
(March- Nov)



CRISP WEBSITE

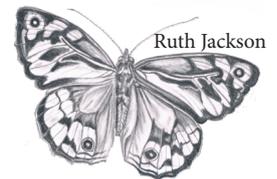
www.crispnursery.org.au

Management Team

Nursery Management	Annette O'Sullivan Stephanie Dean
Committee	
President	Merrilyn Smith
Vice President	Lloyd Smiley
Secretary	Steve O'Flynn
Treasurer	Vivienne Osborne
Members	Carmel Koesasi Vivien Holyoak Mark Smith Pam Yarra Magda Hornung
Newsletter Editor/design:	Linda Hibbs
Website manager/design:	Ken McInnes

Cover photo

by Linda Hibbs
Pterostylis nutans,
Nodding Greenhood
orchid growing near
Wombolano Park.
Colour version can
be viewed on the website.



Volunteers

Most of the work at CRISP is carried out by volunteers. These are people from within the community who give their time to help provide a large range of indigenous plants for the Maroondah Region. If you care about your local environment and would like to help out at the nursery, join the friendly team. No experience needed. Learn the difference between various native plants, learn to propagate and pot up the many seedlings.

Where are we?

CRISP is located in GREENWOOD AVE, Ringwood (just next to Jubilee Park).
If you can't find a volunteer amongst the plants, walk down further and find them in a small building on your left, just before Reverse Art.
Come and browse the sales section or give some of your time to help the others.

DISCLAIMER:

Crisp Nursery Inc does not hold itself responsible for statements made or opinions expressed in CRISP news. They may not necessarily reflect the opinions of the organisation, but are merely printed to share information with those who are interested in the conservation of our local flora and related environmental concerns.

A Note from the Editor



Dear members,

With cold clear nights, it has been rather a fresh start to each morning this winter. Hopefully you and your plants are able to keep warm.

What has been beautiful to observe in my garden is the display of Nodding Greenhoods. They don't mind the cold at all and are in several clumps, growing naturally in filtered sunlight and not far from the protection of some rather large orchard pine trees. There seems to be more this year. I am trying to make sure that neither human nor animal tracks don't traverse these areas as they are very sensitive little plants and will stop growing if they have been trodden on or disturbed in some way. You can find some of these orchids at the nursery. If you want to replant them in a pot or in the ground, you need to keep some of the soil from around the underground nodules intact and plant this with them. They prefer filtered light and flower in winter, so need to be weed free when ready to bloom.

I would like to thank; Stephanie for her support and help in getting the newsletter information together and also those who contributed including Diana Mattea, Kerrie Handasyde, Eric Hornung, Olwyn Smiley, Stephanie Dean, Andy Parsons and Pam Yarra. Pam originally wrote her article **Green Rehab** to coincide with Mental Health Week last year. My sincere apologies to Pam for not being able to print the article at the time due to limited space.

Start planning for some indigenous planting in the Spring and enjoy the greenery around you.
Stay warm,
Linda



National Tree Day - 26th July Reports by Planet Ark

Every year for the past three years, Planet Ark has commissioned independent surveys and produced reports in the lead up to National Tree Day. All reports focus on contact with nature and outdoor recreation. The full reports and summaries of the key findings can be found at:
<http://treeday.planetark.org/research/>

The most recent report *Valuing Trees: What is Nature Worth?* highlights the financial, health and well-being, social, and environmental benefits of nature at home, in the workplace, and at school.

Past reports that make interesting reading are titled;
2013 - *Missing Trees: The Inside Story of an Outdoor Nation*
2012 - *Planting Trees: Just What the Doctor Ordered*
2011 - *Climbing Trees: Getting Aussie Kids Back Outside*

Committee Corner



by Merrilyn Smith

On behalf of the Committee, I would like to thank all CRISP members and interested locals for their ongoing support. The nursery has grown over 40,000 plants in the past year for the local community and to support re-vegetation projects. This is an amazing effort for a small nursery that relies on the hard work of a few individuals.

The Committee would especially like to thank the nursery managers Annette O'Sullivan and Stephanie Dean, as well as the fantastic band of volunteers who produce high quality plants of local provenance. It is due to their continued efforts that we are able to support the projects undertaken by our local council, private contractors, schools, 'Friends' groups, community groups and home gardeners.

I hope all those who attended the Annual General Meeting in April enjoyed the 'Gardens for Wildlife' presentation by Irene Kelly, Vice President of the Knox Environment Society (KES). She was very enthusiastic about the benefits of this program and it would be great to see something similar in Maroondah. If you would like to find out more visit www.knox.vic.gov.au/g4w

A new committee which includes some old and new faces was also elected at the AGM:

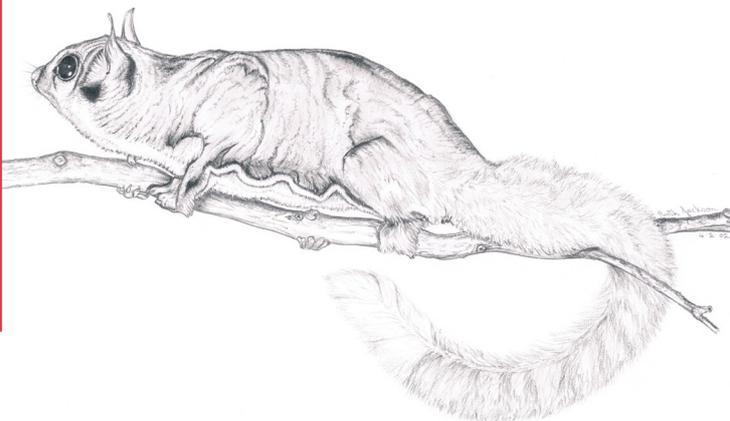
President	Merrilyn Smith
Vice President	Lloyd Smiley
Secretary	Steve O'Flynn
Treasurer	Vivien Osbourne
Members	Vivien Holyoak, Carmel Koesasi, Mark Smith, Pam Yarra, Magda Hornung

A special thanks to all these volunteers who work hard behind the scenes to support the CRISP team, and to outgoing member Andy Parsons for his contribution over the last few years.

If you have any issues or suggestions for improving the service the nursery provides, please don't hesitate to contact any of the staff or the committee members.

Merrilyn Smith
President

**Don't forget to return your
plant tubes
Bring back on Wednesday or Friday
or leave outside the CRISP potting
shed/office.**



Sugar Glider by Ruth Jackson



Nursery Report

By Annette and Stephanie



We have spent quite a bit of time out and about in the community over the past couple of months, handing out information about the nursery and talking to people about the importance of our local indigenous plants. During May we set up display stands in support of the Mullum Mullum Creek Walk, Uambi Open Day and at Maroondah Federation Estate. We have found the addition of Ruth Jackson's botanical illustrations to our display has gained a lot of attention. The quality of these illustrations gets people looking closer at the plants and appreciating the subtle beauty of our local species.

We have also been busy packing large orders and sending many thousands of plants out of the nursery and into Maroondah reserves. The majority of our plants go out to Council orders and our bushland plants are returned to our reserves. These plants will boost the remnant plant populations, replace weed species or just enhance our local areas. Council plantings are mostly undertaken during autumn and winter when the weather is cool and the ground is wet. This planting regime gives the plants the best opportunity to establish themselves before facing the stress of summer.

The hard work and dedication of our volunteers, who are involved in all aspects of producing these plants, is appreciated not only within the nursery, but by all the residents who are able to enjoy our leafy green environment.

During *Monday Mornings in the Reserves* we frequently receive positive comments about the work we are doing and the difference that we have made to a number

of local sites. There are a couple more revegetation plantings planned for the next few months so if you would like to have some practical, hands-on input in preserving the local environment, consider joining in.

We have also been supplying plants for 'Friends Group' plantings and you are hereby invited to join in with First Friends of Dandenong Creek on National Tree Day, July 26th from 1pm – 3.30pm as they undertake the planting of thousands of plants in Mansons Reserve Wantirna (end of Selkirk Ave). Other National Tree Day activities are listed on the Planet Ark website <http://treeday.planetark.org/>

If you are not able to attend any of our daytime activities but would still like to do some hands-on work, perhaps you might consider attending our *Seed cleaning evenings*. We meet in the tea-room at the nursery for two hours on a Wednesday evening once every two months and share conversation and supper while separating the collected seed from other plant material, ready to be stored or sown. Our next seed cleaning evening will be on **Wednesday 29th July at 7pm**.

A reminder that all memberships become due on the 1st July. To continue receiving the benefits of your CRISP membership you will need to renew (see membership information on page 19). If you would like to check your membership status please contact the nursery.

Hope to see you around the nursery soon
Annette & Stephanie

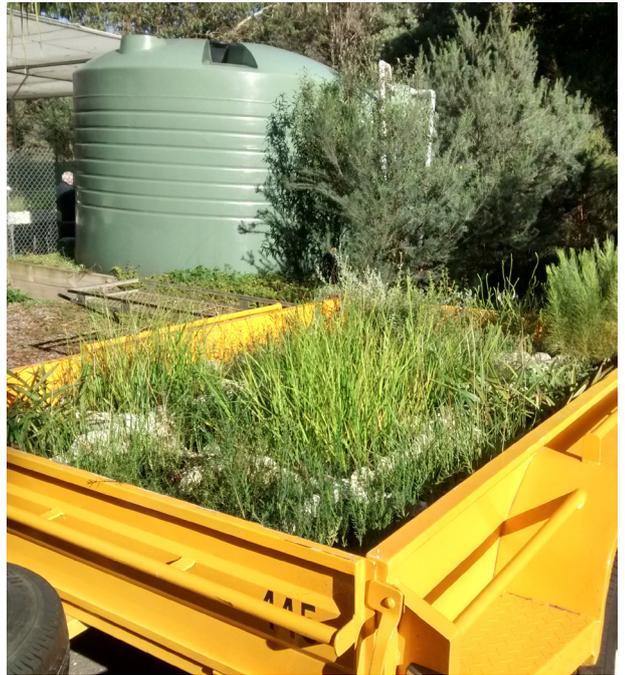
Display at Federation Estate



Display at Mullum Mullum Creek (see information on page 11)



Nursery activities



Above left to right:
Sales Day, White Heath
April Sales day, Trailer load
of CRISP plants ready
for delivery

Left: Ruth Jackson's
illustrations on display
at the April Sales Day

Above: Olwyn Smiley's stall at the
April Sales Day



Right: Cherry Tree Reserve
CRISP planting in 2014
The same area in 2015

Gardens for Wildlife

by Pam Yarra

At the 2015 Annual General Meeting, held in April, our guest speaker, Irene Kelly (Vice President of Knox Environment Society (KES)) spoke with enthusiasm and passion about the Gardens for Wildlife Program (GFW) in Knox.

This program operates as a partnership between Knox City Council and KES and was designed to encourage residents to set aside a special area in their gardens for indigenous and some non weedy native plants to encourage local wildlife and thus form 'stepping stones' of habitat for wildlife to move between bushland and residential areas.

Irene spoke of the benefits of wildlife corridors and how the increased wildlife movement between populations helps:

- maintain diversity
- increase population size
- decrease probability of extinction
- prevent inbreeding
- increase foraging area for a wide range of species.
- allow an escape or refuge from predators and other disturbances.

Within Knox, remnant vegetation areas with indigenous tree cover make up less than 5% of the Knox municipality and 41% of species in Knox are now considered critically endangered. This means that private land is becoming crucial in the protection and enhancement of local species, as it holds a significant proportion of remnant vegetation.

Irene also emphasised the important role of the community, and explained how initially this program was community driven. The partnership between the Council and KES still includes community members, all working for a better Knox environment.

Any garden of any size or style can be a 'Garden For Wildlife'. The group works with individuals and provides 'recipes' to bring wildlife to the garden. These include:

- a tall mature tree
- Dense prickly thicket
- Nectar plants
- Cat proof bird bath
- Frog friendly pond
- Warm sheltered corner
- Natural organic mulch layer
- Daisies for butterflies



She also stressed that it is important to leave the individual with the knowledge of the negative impact weeds have on the habitat for local native wildlife.

The GFW program began in 2005 driven by the community and there were 100 registrations in the first year. It has now grown to over 600 registrations and is 90% managed by Council. The response, from both residents and Council demonstrates the demand for such a program that celebrates natural vegetation on small urban blocks and the benefit this has on local wildlife.

The City of Maroondah is facing many of the same issues as the City of Knox; increased population growth, increased housing and the loss of remnant bush on private land, with many species now considered critically endangered. It would be good if in the future we collaborated with those such as Irene to help introduce this type of program to the Maroondah region.

Irene Kelly in her garden



Glyphosate's impact on the environment

by Diana Mattea

Glyphosate, perhaps most well known as Roundup, is a chemical many of us are well aware of that filters through our food chain via animals, soil, waterways and eventually ending up in our bodies for the liver to process and eliminate.

A recent informative talk by Dr Don Uber, together with local concerned citizen groups at the Fitzroy Town Hall, provided an update on glyphosate's environmental impact.

Dr Don Uber, Professor Emeritus of Plant Pathology at the University of Purdue Indiana USA, together with a panel of local representatives including Professor Marc Cohen (RMIT), Fran Murrell (MADGE), Andre` Leu (President of IFOAM), Anthony Amis (FOE – Friends of the Earth) and Cr Sam Gaylard from City of Yarra delivered an information session on the topic.

Glyphosate is an endocrine disruptor; neurotoxin. It is linked to cancer, kidney failure, endocrine disruption, digestive disorders, birth defects and the list goes on.

Dr Don Uber presented disturbing images of glyphosate's effects absorbed by unborn babies resulting in human birth defects.

The constructive information delivered by Dr Uber and panel members created much discussion afterwards and is a discussion that should occur more often.

Glyphosate in agriculture

Over the years reports have brought to our attention the environmental impact of glyphosate on our soils and food production. It is the main ingredient in Roundup, a common herbicide applied in agriculture and home gardens to eradicate weeds. The discussions continue in regards to its safety in these environments. Published scientific data, however, indicate Roundup and any kind of "icides" are toxic to all living life.

Glyphosate and Genetically Modified Organism (GMO)

Glyphosate is connected with genetically modified crops such as corn, wheat, soybean, alfalfa and canola. Community groups and the general public are concerned about the environmental safety and absorption into the food chain including animals (livestock).

What is the connection between GM crops and glyphosate?

The DNA of GM crops is modified to resist herbicide application in agriculture. When crops are sprayed with Roundup or similar products the GM crop is not affected. The constant application of agricultural chemicals can lead to crops developing resistance to those chemicals. Stronger chemicals and more frequent application become necessary.

The question then focuses on what other chemical concoctions are required for weed control at an agricultural level. The thought should scare us.

Glyphosate in our gardens?

Before applying chemicals to eradicate unwanted plants, we should ask, are they really a problem?

Alternatives

Before reaching out for Roundup or similar products consider IPM (Integrated Pest Management). This can involve simple selection of ground cover plants to 'smother' the unwanted plants or weeds. If we learn about the weed's characteristics and understand its purpose in our environment, then we can learn to work with the weeds instead of trying to eliminate them completely using chemicals. Healthy soil serves the entire eco system. Poisoning soil and plants serves no-one.

Weeds tell us a story of soil condition. They may be referred to as colonising plants when soils are disturbed by humans or by natural disaster. These are the first plants to grow, maintaining some form of soil health and binding to prevent erosion. Weeds are the front liners in most ecological disasters.

With careful consideration and good strategies, we can find a wholistic solution to weed management for home gardeners. Biodynamic, permaculture and organic practices respect the environment and appreciate all that the garden has to offer.

Have a look around your garden and take the time to learn plant biology and exploit their potential. A patch of dandelions, for example, provides vitamin K and makes this available to other plants; the leaves and root are edible; the flower provides nectar for our pollinators and fresh leaves feed our herbivore pets.

Urtica urens, commonly known as nettle is another weed. Nettles can be a good food source and indicate high phosphorous levels in the soil. Australian native plants require low phosphorous and if for some reason nettles have colonised in your garden you may want to engage services of a soil laboratory to determine the levels of this element in the soil. In home gardens the problem can be easily managed. I recently experienced a nettle outbreak in our garden beds through imported soil. I eradicated the problem by cutting the seed heads and pulling out seedlings as I noticed them. The seeds I disposed of responsibly by bagging and placing in the bin (not the garden waste) and the remaining I made compost tea for my garden. The problem was managed without application of glyphosate and everyone was happy.

Further to the talk I attended in Fitzroy, I was also interested to hear Dr Ken Walker, Senior Curator of Entomology and Arachnology, Museum Victoria discuss our native bees. Our bees and pollinators are affected by our behaviour and our application of 'icides' to plants. The majority of native bees collect pollen, producing honey for their survival, not

and alternative options

for human consumption. Five native bee species have been noted that produce honey.

There's a class of insecticides known as neonicotinoids designed to kill pests. Using these chemicals kill off bees and valuable pollinators. Neonicotinoids are banned in many countries. Unfortunately these 'icides' continue to be available in Australia for anyone to buy off the shelf.

As gardeners, if you detect pest and disease it's important to correctly identify the problem and manage it responsibly in order to protect all pollinators providing our food. We do have a choice.

References

Leu, André, The Myths of Safe Pesticides (President of International Federation of Organic Agricultural Movements – IFOAM)

Cohen, Marc, article <http://organicgardener.com.au/magazine/issues/marchapril-2015>

MADGE Australia Inc.
www.madge.org.au

Dr Ken Walker, Senior Curator of Entomology and Arachnology
<http://museumvictoria.com.au/bugs/exhibition/collection.aspx>

Tim Marshall (Australian)
www.tmorganics.com
Eco organic products, Australian company <http://ecoorganicgarden.com.au/>

□ Diana Mattea is a member of CRISP and is the founder of 'Gardens Aquilani'

Canopy Tree Forum

by Olwyn Smiley

The Canopy Tree Forum was held on the 26th of June at St Bernadette's Primary School in response to concerns about the loss of canopy trees in the Knox region. The speakers were Greg Moore (Melbourne University), Anna Foley (National Trust) and Ian Shears (Melbourne City Council). The following is a summary of Greg Moore's talk, **'The Value of Urban Trees.'**

On the theory that people only take note when dollars are involved, Greg enlisted a group of undergraduate economists to calculate the monetary value to the community of our trees.

Trees he says,

- reduce the heat island effect
- reduce roof temperatures by up to 8°C
- stabilise the soil on steep blocks
- reduce storm wind speeds; reduce respiratory conditions such as asthma and hay fever by increasing humidity
- reduce rates of vandalism, violence and graffiti
- protect us from UV radiation
- slow water flow in creeks and rivers
- store carbon

- increase the value of residential properties (good street trees can add up to \$30,000 to the value of a property. One good garden tree adds about 5%)
- reduce air conditioning costs (an estimated \$180 per household per year)
- by shading roads, extend the life of the bitumen by 2-3 times.

An Adelaide street tree was found to have a value of \$424 per year, for an annual expenditure of \$10. These trees, which are becoming fewer and fewer in Maroondah as developers 'develop', are actually very valuable. Food for thought...

Note: See the next issue for notes on the equally informative talks by Anna Foley and Ian Shears.

My transformation - a volunteer's story

by Andy Parsons

Sometimes I wonder how I ended up volunteering for an indigenous plant nursery, for upon reflection, it all seems rather paradoxical. My past association with plants could at best be described as selfish and at worst confrontational. In my earlier years especially.

I remember times of abundance when the supply of loquats from a neighbour's overhanging tree was simply irresistible. Back then it was a luxury item for hungry kids and I still remain attached to this fruit. I am not sure how important that past connection was but interestingly enough, our newly acquired Ringwood East home came with a loquat tree! It remains amazingly productive. I no longer sit on the fence to eat them but they still taste yummy.

During my childhood, we were all very aware that mum's plants were an important source of nourishment. So despite the vegie patch, annoyingly in the direct flight path of cricket balls, its connection to our stomachs meant it actually mattered. There was, however, an undeniable truth. Sport versus plants was a confrontational constant.

Then there were the 'jack- jumper' ant bites. They were an occupational hazard of building cubby houses in and amongst the undergrowth of the sandy foreshore soils of Port Phillip Bay. More confrontation. In those days we small humans had to win, so if it bit, it died and if it was in the way, it fell.

On a softer side, I do recall always hanging out for dad to mow the lawns in spring time. The 'scissors' high jump technique often had us landing on our skinny backsides, so a big pile of freshly cut soft green grass was a real bonus. Some could argue that this, and the progression from climbing trees to the construction of houses from fallen and occasionally broken off branches, were all on the pathway to connecting with nature.

However, the confrontational association with nature continued via legendary encounters with agapanthus. To this day, I still get the urge to attack them with a pick. For us, they were the plants that stole tennis balls and far too frequently interrupted the magical flow of our wonderfully constructed backyard cricket test matches.

Gradually I began to mature as the surviving plants and I aged together. It was partly bushwalking in mountains under the trees which gave me the taste of freedom and a refreshingly different relationship with nature. I was beginning to realise that plants had a more meaningful role to play on our planet and it was not all about me. I was gaining an understanding that these trees offered much more than simply a foothold to the next branch.

Later, as a husband and father, I enjoyed the ironical throw back to my childhood. I created my very own garden which included vegetables, and then watched as my kids tried to destroy all within. I now became almost hypocritically protective of plants.

I even found a strange tranquillity behind the handle of a Victa motor mower and discovered myself almost nurturing the green grass back and forth. Unlike my father, however, I was never

threatened by kids hanging out for clippings. Mine found their way into a compost bin. The clippings I mean!

Slowly but surely, like a chameleon I found myself changing to green.

I remember an artist's work next to the old Discovery Centre in Toolangi Forest. A net was hung beneath some eucalyptus and other understorey plants. The artist would never return but be content in the knowledge that the net would eventually rot and disintegrate in its own time and way. To me that was natural and right. Much more sensible than the clean neat bushes and edges along formed concrete structures to which I had been conditioned.

The transformation was definitely under way when I began to take more than a passing interest in native plants. Many pleasant walks through Wombolano Park certainly had an impact. It is nice to experience a little piece of the Australian bush so close to home and in fact, that may have been the catalyst for my decision to help put some of this bush back where it belongs.

A wise person may notice that further connections to nature are possible and there's no better place to keep doing this than at CRISP. That person may even suggest I need not be so dependant on occasions when I notice a lack of indigenous plants in local gardens around me. Better still they may even whisper words of wisdom.

'Cast your mind back and be calm. Look at where YOU have come from and see what is possible.'



Left: Andy Parsons (left) with Keith, putting some CRISP plants back into the Tarralla Creek area.

Green Rehab

by Pam Yarra

Much has been written and reported about the benefits of gardening and many people claim it has therapeutic benefits.

During Mental Health Week in October last year, gardening and connecting with nature was a feature of ABC Gardening Australia. The whole program was, in fact, dedicated to this. Some of the features included Korean refugees growing plants at Werribee (which also provided the opportunity for developing skills, that may lead to future employment) and war veterans (including those with post traumatic stress disorder) identifying the ways gardening had assisted in improving their health.

Recent research carried out in primary schools in New South Wales reported an increased ability of students, following periods of time playing outdoors and being in parks and bushland areas.

This brought me to reflect on my recent travels. I visited the beautiful Botanical Garden in Gothenburg, a small town on the West coast of Sweden. This public garden received three stars in the Michelin Green Guide and differs in many respects to most traditional botanical gardens in Europe. The total area is 175 hectares (about 432 acres), consisting mostly of a nature reserve and gardens as well as an arboretum.

The garden areas are divided into many sections linked by lawns with beautiful trees and shrubs. The kitchen garden,

a herb garden, a rock garden with a beautiful waterfall and a Japanese Glade (a place for rest and reflection) were just a few of the features I really enjoyed. A day was not long enough for me to spend in these beautiful surroundings.

This region offers a Green Rehab program, which is housed in the gardener's cottage, a short distance from the Botanical Garden. The cottage is surrounded by the rehabilitation garden and adjacent to a nature reserve.

Green Rehab provides rehabilitation in garden surroundings for employees in the local region with stress related conditions or mild depression.

The approach is based on insights gained from research on how gardens and nature can help people recover. The program combines these new ideas with established methods and the staff includes a biologist, a gardener, an occupational therapist, a psychotherapist and a physiotherapist.

The program offers a new beginning for employees on long term sick leave with the goal to return to work and achieving a better quality of life. The program is work oriented and carried out in collaboration with the participants, employers, Social Insurance Office and the physician approving the sick leave.





There are eight to ten participants in each group. Participants sow and harvest in the garden, take guided walks together in the surrounding forest or in the Botanical Garden. During winter, pruning trees and bushes and handicrafts are a focus. Body awareness, stress management and art, as well as taking part in support groups are some of the other activities.

The program began in 2006 and was initially only a three year project. The method used is successful, with about 75% of participants being able to return to work or study. Before the project, participants had been on sick leave for an average of one to two years.

As part of the rehabilitation there are also courses in stress management and gardening and nature, and these are combined with established methods through lectures and practical exercises.

Not all people are gardeners, but a walk in the park, picnic in the outdoors will confirm that green is good for your health.

Ecotherapy

<http://www.mind.org.uk/information-support/drugs-and-treatments/ecotherapy/#.VRzvaFy0J8Y>

<http://www.bgci.org/resources/article/0749/>



Science explained...

by Eric Hornung

There is an abundance of useful scientific studies in the environmental field that are often not used or understood by practitioners and the community. My aim here is to look at a published scientific paper and give an explanation that can help bridge the gap between the enviro-science and the non-scientific world.

'Nitrogen availability and weed invasion in a remnant native woodland in urban Melbourne' By S. Bidwell, P. Attiwill and M. Adams. Published in Austral Ecology, 2006.

Note: All credit goes to the Authors of the paper, if quoting this research, refer to original paper which can be found on 'google scholar'.

Background to the study

Weeds are a contributor to biodiversity loss in Australia. Many weeds are nutrient loving and increases in nutrient levels have been shown to increase the abundance of weed species. Bushland in urban areas is particularly susceptible to increases in soil nutrient levels, mainly due to deposition from car exhausts and nutrient enriched drainage water. This study aimed to determine the drivers of weed invasion in a major urban park, by testing the whether weed species abundance is related to nutrient availability.

continued next page....

Science explained...

What Occurred?

The study was undertaken in a Yellow Gum open woodland-grassland area in Studley Park, part of the Yarra Bend Park. The canopy and middle strata of vegetation in this area is relatively intact, with *Acacia sp.* (Wattles) and *Bursaria spinosa* (Sweet Bursaria) accompanying the *Eucalyptus sp.* Gums. Four sites with similar soil types were chosen for comparison. Two were heavily invaded by weeds, and two were relatively intact uninvaded sites. Native grasses and forbs such as *Stipa spp.* (Spear grass), *Danthonia spp.* (Wallaby grass), *Poa spp.* (Tussock grass), occupied the two uninvaded sites. Invaded sites were dominated by *Ehrharta longiflora* (Panic Veldt grass), *Oxalis pes-caprae* (Soursob) and *Dactylis glomerata* (Cock's Foot).

Soil samples were taken for 0-5cm and 5-10cm depth and were analysed for phosphorus (P) and nitrogen (N) levels. Vegetation cover of plants was recorded along with soil seed bank collections and enzyme assays.

Figure 1 describes what occurred more clearly.

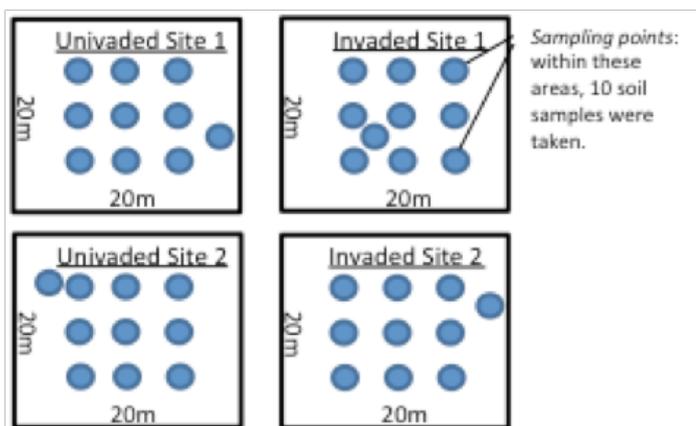


Figure 1. The sampling method used, within each site 100 soil samples were taken.

If we focus on the soil nutrients component of the study, what was found and how does this compare to other studies? (Note: statistical analysis has been excluded here to improve readability).

The results were generally supportive of the hypothesis that weed abundances are related to the availability of nutrients, specifically nitrogen. Organic carbon (C), total nitrogen (N), and available phosphorus (P) in the top 0-5cm of soil were significantly higher in invaded sites. Concentrations of organic carbon and total nitrogen were up to twice that of soils in uninvaded sites, and available phosphorus was four-fold greater.

Vegetation analysis confirmed that invaded sites were dominated by weed species compared to uninvaded sites. Interestingly, native grasses *Microloena stipoides* and *Stipa bigeniculata* were two fold greater at sites with the highest nitrogen concentrations, suggesting these natives grasses are able to compete with weed species in these conditions.

Seed bank analysis provided further evidence to suggest that nutrients were affecting weed abundances. Numbers of environmental weed seeds found in soils at uninvaded sites were similar to those at invaded sites, despite the difference in vegetation quality. This is important because it suggests that elevated nutrients may be a precursor to invasion, given that seeds are widely spread throughout the area (not just present in the invaded sites).

There is now conclusive evidence from numerous studies showing that weeds that have the capacity to deal with high nutrient levels will flourish in woodlands with high nitrogen levels. Once a weedy understory is established, nutrient recycling and retention occurs through the dense litter layer created, which also further excludes native species. The same authors previously showed links between weed proliferation and nitrogen increases in riparian vegetation in outer Melbourne. Here, it was concluded that increased soil nutrient levels appears to be a precondition for invasion at Studley Park.

Relevant conclusions for CRISP

- Increased soil nutrient levels usually lead to an increase in weedy species.
- Weed species are more likely to outcompete native species in nutrient enriched soils.
- To improve success of indigenous habitat and reduce time spent weeding in your backyard, either remove nutrient inputs (septic tanks, water runoff), or plant in your lowest quality soil. Go for the drier light soil, rather than the dark stuff.
- If you are trying to restore highly invaded sites, be aware that soil nutrient levels are likely to be enriched. If nutrient inputs (e.g. car exhaust, water runoff) will continue, efforts are better spent in lower nutrient sites.
- If choosing to work in highly invaded areas, consider 'scalping': removing 5-10cm of topsoil, before revegetating.
- Cars are not good for our urban bushland areas; up to 45kg of nitrogen deposition per hectare has been recorded in heavily polluted areas - mostly due to car exhaust.

□ Eric Hornung, a member of CRISP, has studied Environmental Science and has an interest in ecological research being used in by practitioners and the community.

The words for where we live

by Kerrie Handasyde

My dad grew up just down the road in a place that, looking back, seems so strange and so different from what is there now, that contemporary people lack the words to describe it. But in Wantirna South in the 1940s, he and his brothers knew all the words to describe the place in which they lived. They knew the names of the wildflowers – Early Nancy, Milkmaids, Chocolate Lilies, Flycatchers, 'Salt and Pepper', Everlastings... They knew the names of the orchids in the bush paddock – Greenhoods, Mentones, Cowslips, Spiders and 'Billygoats'. Then there were the birds – mudlarks and magpies, tomtits and firetails, finches, jays and friarbirds, silvereyes and scissors grinders, creek robins, redbreasts, snipes, quails, and plovers that called at night when it was going to rain. There was no Latin in these boys' lexicon, and certainly some confusion in the names they applied to the creatures they knew. But the important thing was that they had names for all the wonders in their world and because these wonders had names, the boys knew to look out for them in season. We give our attention to what we know.

Naming matters. Without the detail of individual words for plants and animals, it's all just scenery: background for some other enterprise. There was quite a kerfuffle a few years ago when the Junior edition of the Oxford English Dictionary dropped a range of words like catkin, mistletoe and lark. Words describing the natural world were replaced with those of the cyber world – chatroom, celebrity, bullet-point and blog. The editors believed they were reflecting common usage and, it's fair to say, junior dictionaries are not the place to preserve the antiquated and obscure. But are we so detached from the landscape in which we live that we no longer expect our children to see and name its parts? As Robert MacFarlane argues in his recent study of the vocabulary of the British countryside, when our vocabulary diminishes so does our vision and our consciousness of the lives of plants and animals.[1]



Photo by Kerrie Handasyde

Wumbea dioica, Early Nancy at Hochkins Ridge, Nth Croydon

My children learn about the environment at school. There are lessons on sustainability, endangered species and the virtues of recycling. The curriculum is concerned with systemic ecological problems and remedial actions, but it lacks firm ties to the place where the children live. When knowledge is theoretical, children can assume that ecology is all about somewhere else. When the issues are large and nature is problematised, the seeming immensity of it all can swamp children or lead them to retreat to a manufactured world. How much better it would be for each child to learn the detail of the place in which they live so that they can name it, understand it, recognise it and belong to it. Members of CRISP will know well the reciprocal relationships that develop between people and indigenous plants. A much cared for *Wahlenbergia*, swamp gum or banksia can, in turn, nurture us.

Through gardening and walks, I teach my children what I can. We supplement our combined knowledge with posters and guidebooks and the occasional argument over which bird it might be alighting in our backyard. The children know that there are scientific names and common names and Wurundjeri names. They also know that their Grandpa will likely recognise the plant or bird in question, his eyes attuned from a lifetime of quiet observation. Tuning in, listening and seeing are central.

Having the vocabulary of a place, we are enabled to see differently. Seasonal changes are so much more apparent. Our awareness shifts. We can be more deeply present in the place in which we dwell. And once we are there and, for a moment, more conscious of the natural world around us than of ourselves, we can let go of language. In silence we can watch and wonder.

[1] Robert MacFarlane, *Landmarks* (London: Hamish Hamilton, 2015).

□ Kerrie is a member of CRISP. She lives six and a half kilometres, as the crow flies, from her dad's childhood home on the corner of Burwood Highway and Stud Road, Wantirna South.

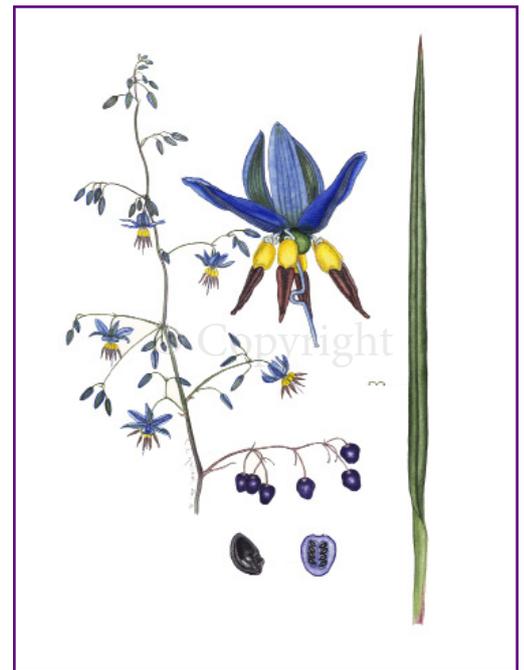
Cards and prints by Ruth Jackson

Ruth is a botanical illustrator who has lived most of her life in the Maroondah area. As she is legally blind and thus unable to drive a car, she has spent many hours walking around the municipality exploring lots of out of the way places and lesser known reserves. All that time in the bush has led to a great understanding of the bushland and how the natural elements interact and how important it is to retain and protect the little remnant areas that we have remaining. Maroondah has less than 2% left of the natural flora and Ruth is working hard to depict as many of the indigenous species that she can.

For more than twenty years Ruth has worked as an environmental activist and has used her paintings to help people become interested in the local plants. She has found that you can get through to people with 'pretty pictures' and, as you explain what the pictures are about, you can introduce them to the intricate beauty of the natural world around them. A number of her original artworks have been acquired by the State Botanical Collection and Maroondah City Council.

The first of our listed aims of the nursery is 'to introduce people to the beauty of our local native plants' and having Ruth's artwork on view in the nursery works towards that aim. For the past two years we have stocked and sold a selection of greeting cards with Ruth's illustrations and for the past six months we have had some beautiful A4 & A5 prints available.

Ruth is very generous with her illustrations and costs are kept to a minimum to allow many to enjoy the beauty of our local species. The works that we stock for purchase include a variety of cards and prints featuring butterflies, fungi, orchids, wildflowers, shrubs, trees and the very popular Blue Wren. Make sure to have a look at the prints next time you visit the nursery.



Daniella admixta
by Ruth Jackson



Pterostylis nutans by Ruth Jackson



Eucalyptus cephalocarpa by Ruth Jackson

What's on

Monday July 6 Maroondah Bushlinks meeting @7.45pm

57-69 Merrill cres. Warranwood 9876 3094 MarBushOz@hotmail.com

Roger Lord will discuss vegetation issues associated with increased population and denser housing.

Tuesday July 14 Bees and Bee keeping @7-8.30pm

Everything that you wanted to know about bees and keeping with 'Steve's Bees'. Steve McGrath is a member of the Victorian Apiarists. Yarran Dheran Information Centre (enter at the Ashburton Drive entrance, Mitcham, Melways Ref 49 B6). Free event, children welcome. Bookings essential via gay.gallagher@bigpond.com

Thursday July 16 Field Naturalists Club of Victoria Botany Group: Darwin's Abominable Mystery -

with speaker Patrick Honan. 1 Gardenia St Blackburn. T. 9877 9860 or admin@fncv.org.au

Sunday July 26 Friends of Dandenong Creek. National Tree Planting Day @ 1pm-3.30pm

Meet at Mansons Reserve, Wantirna (end of Selkirk Ave). Please bring tools and gloves. Sausage sizzle provided.

Sunday July 26 National Tree Planting Day (Schools National Tree day - 24th July)

To see what is happening in your area - go to <http://treeday.planetark.org/>

Wednesday July 29 CRISP seed cleaning evening @ at 7pm. In the tea-room at the nursery.

September 24 Field Trip Hochkins Ridge, 3km 2.5 hours. Difficult. Leaving 9.30 Enquiries 9840 9326

Manningham Council Talks

August 5 Fabulous Fungi and Fungi map - Dr. Sapphire McMullan Fisher (Fungi Map Coordinator)
7.30 pm, Chandelier/Bull and Bush Rm (upstairs), Grant Hotel, Yarra Street, Warrandyte.

September 2 Australian Native Fish - Tim Curni. Fresh Water Ecologist.
7.30 pm, Chandelier/Bull and Bush Rm (upstairs), Grant Hotel, Yarra Street, Warrandyte.

October 7 An Introduction to Native Bees - Jess Baumann (Melbourne University Researcher)
7.30 pm, Chandelier/Bull and Bush Rm (upstairs), Grant Hotel, Yarra Street, Warrandyte.

The 17th Mullum Mullum Festival will be held over the weekends of the **14 and 15th, and 21st and 22nd November 2015**. During the Festival you will have the opportunity to learn about the biodiversity of the Mullum Mullum Valley, as well as the cultural heritage of the area. As usual, the walks organised for this Festival cover a wide range of aspects of the valley; there is always something new to see:
<http://mullummullumfestival.org.au>



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LOCAL ENVIRONMENT/FRIENDS GROUPS

Group Name	Contact
Heathmont Bushcare Working bees held 1st Sunday of the month http://heathmontbushcare.wordpress.com	Roger: 9876 6762
Loughies Bushland Working bees held 1st Saturday of the month 9.30-12.30pm. Meet in Kubis Drv at the Main Entrance.	Carol: 9870 8126
First Friends of Dandenong Creek	Barry: 9801 1628
Mullum Mullum Creek Bushcare Group	Alan: 98761319 0417541483
FJC Rogers Reserve	Don Dower 9736 2309
Friends of Wombolano Working bees held 3rd Sunday of the month	Andy: 0414999491
Friends of Ringwood Lake Working bees held first Monday of the month Meet at the Sound Shell at 10.00am	Des: 9879 4176
Friends of Andersons Creek	Richard: 9876 5382
Friends of BJ Hubbard Reserve	Kaye: 9879 8445
Ringwood Field Naturalist Club	Peter: 9801 6946
Croydon Conservation Society	Keith: 9723 1806
Warranwood Reserve	Margaret: 9876 3094
Warrien Reserve www.warrien.org	Keith 9723 4410
Yanggai Barring , Warranwood	Pat Black 9723 0036



CRISP WEBSITE

www.crispnursery.org.au

Maroondah Environment Yahoo network

MaroondahEnvironmentNetwork@yahoogroups.com

Subscriptions

Due on July 1st each year

(For Members joining after March, your next subscription falls due the following year.)

What does your membership mean for you?

Apart from helping support your local Indigenous plant nursery (run by volunteers), all plants are available to you at reduced rates (eg. tube stock will cost \$1.25 instead of \$1.75 and 150mm pots cost \$3.50 instead of \$5.00.)

You are also helping to keep Maroondah's local flora and fauna alive.

Support CRISP and help your local environment.

Pay now (cheque, direct debit) or drop into the nursery. THANK YOU

Direct deposit to renew membership

Can't get to the nursery to pay cash?
Don't have a cheque book? We are making it easier for you to
renew by direct deposit.

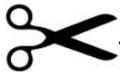
BSB 033 044

Account No: 149422

Ensure you put your name in the details section so we can
update your membership



Sending an email to the nursery when you make the
deposit will ensure that your membership information
is updated correctly.



APPLICATION FOR MEMBERSHIP



MEMBERSHIP (Please circle)	SINGLE	\$10 per annum
	FAMILY	\$15 per annum
	GROUP:	\$20 per annum

Name: _____

Address: _____

Contact: Tel: _____ Email: _____

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