

IPPS

Sharing Plant Production Knowledge Globally

the Propagator



International Plant Propagators
Society (IPPS) Australia

International Plant Propagators' Society <http://aus.ipps.org/>
Australian Region - Newsletter Winter 2017 - No: 54

Perth Ticked All The Boxes

The Perth Australian Region conference really met or exceeded expectations ... plus.

It was;

Informative - covering issues of health, and business topics as well as the focus on horticulture. This conference tackled serious topics for growers including work being undertaken to stimulate demand into the future (such as the 2020 Vision) as well as reviewing gardening trends pertinent to the breeding of plants for future demand.

The inclusion of talks on the nursery industry in China and show gardens in Singapore also gave us some insight about what is happening in Asia. From this there was an invitation to explore export potential, as well as potential for IPPS future regions and possibilities of exchange of knowledge. Not to mention building valuable contacts throughout Asia as well as other parts of the world with IPPS membership.

Tours and talks during the conference provided a range of ideas for people to take back to their work and make some improvements or

reflect on why they do things the way they do.

Within Budget - both in terms of financial as well as attendees. There was a good feeling at this conference with a good mix of age and gender with nearly 50% under 45 years old

Enjoyable - Providing the space and opportunity to catch up with people we had not seen for a while as well as take some time out. There was a lot going on, the venue was great and discussion during breaks was

lively. This conference was packed with energy.

Value for Money - having a conference at reasonable cost in Perth CBD also gave members the chance to do some shopping and see the sights as well as taking home some fond memories and great ideas.

Well the bar has been raised and Tony Van De Staay has taken on the job of organising a different type of conference in Hobart next year. Looking forward to seeing you there.

Bruce Higgs



THIS EDITION

Perth Ticked All The Boxes
2017 Southern African Exchange
Perth Conference
Conference Dinner & Awards

Pre Conference Tour
Kings Park Botanic Gardens

Reports
♦ President's Comment

♦ Executive Officer's Comment
♦ Perth Conference Organiser
News
Newsletter Editors Comment
2017 - 2018 IPPS Event Calendar

President's Comment



In Perth this year, we were treated to a conference that was a real mix of left-field, big picture ideas; with some nitty gritty horticulture thrown in. I must admit, some of Helen Frosts ideas was not the first thing I would think of when at a propagation conference. But the fact that our own health is not always a priority is exactly why it was important to include it. After all, why are we in this game if not for "health, wealth and good times"? David Hancock and the Perth team did a great job of pulling it all together, and are to be congratulated on the achievement.

Aside from the conference content, the great thing about being at a meeting like this is meeting people with a shared interest. We were fortunate to have attendance from all over Australia, and it was great to see so many international delegates attending. We heard from Anton Van Der Schans from Singapores Gardens By The Bay on how they do things, and I found talking with the rest of the Gardens By The Bay team really interesting. There are some strong similarities to Northern Australia, and much of their experience that can be utilised in our north. Julianne Zhu and her colleagues from China gave us an insight into what is happening in their country, and the wealth of potential it holds for sharing

propagation knowledge. The "China - Australia propagation connection" is looking strong, thanks to some committed work on both sides. It's exciting to see this developing. Stay tuned for information on an upcoming area meeting tour to China.

Encouraging new, passionate people in the industry is vital to it's future. The 6-Pack program continues to be an important scheme in making this happen. This years Seasol 6-pack was an excellent group, who are to be commended for their contribution in ensuring the smooth running of the conference. It is one of the joys of going to a conference, meeting the younger delegates and seeing them network and exchange with more experienced propagators. Hopefully they got to see a wider perspective on the industry, and took encouragement that there is a strong future for propagators with passion. It's fantastic to have Seasol International on board as sponsors of the 6-pack initiative. It was great to meet Craig and Alan from Seasol at their first conference with us. I'm looking forward to future conferences with them on board.

With another conference under our belt it's time to look forward to Hobart next year. Tony Van Der Staay has some exciting ideas regarding a mid-week schedule, and an extended pre-conference tour. If you have struggled to find the time to attend our traditional weekend conferences, this one is for you. Keep watching the upcoming editions of "The Propagator" for updates.

The winter season is now upon us. The bare-root producers among us will likely barely have time to read this newsletter. Others might be settled in to a more quiet time of year. Whichever you find yourself in, may it be a productive and successful winter.

John Messina



Executive Officer's Report

Perth Conference – What another great conference. A big 'Thank-you' to all the organisers and a 'special thank-you' to David Hancock for all their efforts in ensuring this years conference was a success going by the feedback received majority of attendees found the conference informative and enjoyable.

Plans are well underway for next years IPPS conference in **HOBART, TASMANIA**. Make a note of these dates for next years conference in your diary now – **HOBART TASMANIA – Pre-Conference Tour 19th May – Conference 24th & 25th May – Post-Conference Tour 27th to 30th May 2018**



Membership Subscriptions 2017

Last year saw the introduction of the new International website where all Regions are now managed. All Members were sent a notification advising that their membership expired on the 01.01.2017. All Members are encouraged to renew their membership through the Australian IPPS Office. Payment via EFT or Credit Card are the preferred options. Please contact IPPS Secretariat Pam Berryman to organise payment.

A big thank-you to those members who have forwarded payments. A friendly reminder to everyone else, could you please tend to this matter at your earliest convenience. If you are having difficulty in paying your

IPPS Australian Region Board for 2017 - 2018

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subscription (for whatever reason), please feel free to contact me so that we can discuss alternative payment options.

BANK DETAILS:

Bendigo Bank BSB: 633-000
Account No: 140185737

If paying by EFT PLEASE PUT INVOICE NO. OR NAME IN THE PAYMENT BOX SO I CAN IDENTIFY WHO PAYMENT IS FROM. THANK YOU

Change of Address:

To ensure Office records are kept 'up to date' it is very important for Members to notify me of any changed contact details. In particular, if you have changed your telephone provider recently, *please* remember to forward your new email address onto me at piberry@iprimus.com.au or pam@ipps.org.au

Pam Berryman

2017 Southern African Exchange

I was lucky enough to be chosen for a 2 week visit to South Africa as part of the IPPS exchange program and it was an amazing two weeks! I flew into Johannesburg and spent 2 days at Pico Gro a nursery specialising in micro-greens and salad leaves. I then joined the IPPS Conference which was held over 4 days in Tzaneen, 5hrs north east of Jo'burg. This was a great opportunity to meet other IPPS members, hear the talks and receive guided tours of other nurseries which varied from large to small, to highly advanced vs. smaller less mechanised places.

At the end of the conference I moved to Hartbeespoort to stay with the Sittings who have a family run nursery and spent a week with them. They were fantastic and went out of their way to show me some of the

highlights (Pilanesburg NP game drive, Pretoria city and Botanic Gardens, Cheetah park, Cable car ride) and also managed to pack in over 10 different wholesale nursery visits plus visits to retail plant nurseries, pot plant wholesalers, landscape gardens and much more.

Coming from a relatively small native plant nursery with a full-time staff of 6, Flamingos nursery was one of the highlights of my trip. The produce Chrysanthemums for the European cut flower industry at a rate of 1 million cut stems a week, with 22 hectares of greenhouses and a staff of 400. As South Africa is in the same time zone as Europe but with the opposite season, they are forging ahead to complement Europe's cut flower needs to enable natural production of certain flowers year around. It was fascinating to see how they manage and run such a big business to meet production targets and the strict quality control that is required for international export. Although they have the advantage of cheap labour they are also investing heavily in mechanisation including autoseeders and automatic pot fillers which were great to see.

I learnt so much in my 2 week trip and would strongly encourage others to apply for next years exchange. For those who are concerned about safety, the hosts went out of their way to collect and drop you off at the airport and escorted you throughout the day so you never felt uncomfortable. They



Left IPPS Southern African region group photo, Right Sittings Nursery



SOUTH AFRICA 2018

YOUNG HORTICULTURISTS

APPLY NOW

For the opportunity of a lifetime, it is now time to apply for the **Southern African Exchange Program**.

This IPPS project aims to give young propagators at the start of their career the opportunity to gain experience of the industry elsewhere and to build a better understanding of each country.

In March 2018 the person chosen will spend approximately 3 weeks in South Africa hosted by local members, where they will work and visit other nurseries and places of interest in South Africa, including tourist venues, plus attend the IPPS Conference.

The exchange program is sponsored by Australia and Southern Africa IPPS. After the trip the chosen propagator will be expected to attend the Australian IPPS Hobart Conference in May 2018 to talk about their experience.

Now that you are thinking about this or you know someone who may be suitable, check the following to make sure of eligibility:-

- You must be over the age of 18 and in the early years of your career of growing plants.
- You must be able to travel to South Africa in early March 2018 and attend the Hobart Conference in May.
- Your employer must support this application and your time off work.
- You must be prepared to make notes and take photographs of your great experience and report back at the Australian IPPS Conference.

If all of the above suits you and you would like to be hosted in South Africa (at no cost to you, except spending money) and gain from the experience. Then send in the application form which is available on the IPPS website www.ipps.org.au by the end of December 2017.



Flamingos cut flower production

also made special effort to show you the highlights of South Africa from local foods (e.g. biltong), interacting with the workers and of course the spectacular wildlife. As well they catered to your personal propagating interests e.g. showing me nurseries producing local native grasses and Proteas so you get an appreciation of how other similar business operate to yours.

I cannot recommend the program enough and extend a huge thank you to IPPS for selecting me to go!

Bree Howard

The 2018 Southern African Region conference is in Port Elizabeth. The Eastern Cape is known as South Africa's 'wild' province, featuring expanses of untouched beach, bush and forest. Along with some top horticultural experiences this promises to be a great experience for our 2018 exchange.

<http://www.southafrica.net/za/en/articles/overview/eastern-cape>

Perth Conference

Thoughts from the Organizer

It is fair to say that I had not given much thought to what would be involved in organising IPPS Perth 2017. Whilst I did give some attention to early planning, the reality is that there are many aspects that

cannot be commenced too early, for various reasons.

The venue needs to be locked in a year in advance and this in itself is quite a task. I undertook 4 full venue assessments before settling on the Parmelia Hilton. I am sure that if I had gone with any of the others or not spent the extra time on the assessments, the outcome would have been poorer and quite likely in 2 cases, at a substantial loss.

The difficult issues are assessing likely attendee numbers and the effect on budgets. The other issue is the added costs that can arise post venue decision, and in particular unspecified extras at the venue and needing to commit to a minimum number of attendees while being locked in on costs under contract.

I think it essential to have a solid team of supporters providing contacts and suggestions relative to sponsors, speakers & tour venues. Gaining 13 financial and in kind sponsors for Perth required some 80 informal and formal approaches to companies and suppliers for support. That's a lot of work !!

Beyond that, in hindsight I also needed a couple of people to assist with the mechanics of assisting with communications, enquiries & general admin. Dealing with food menus (36 pages of selections) wine lists, sponsor displays, gifts and display material etc., all add up to a power of work in a compressed time frame. I also discovered that organising a preconference tour is a major task in itself, another set of logistical and budget exercises, taking place at the same time as everything else.

Gauging success when you are the organiser is not really possible, that is for the broader assessment of those attending and for their own reasons & preferences. However, I suppose getting your target numbers, attracting a strong overseas contingent, getting the best speakers we could, adequate

sponsorship and everything running on time and holding the budget together ticked the boxes for me. Sure I would now do some things differently but I am better for the experience and will be doing all I can to assist those similarly tasked in the future.

Some very special people in IPPS gave me great assistance, they know who they are, and I thank them collectively on behalf of the Society and will do so in person as this is the best way. Looking forward to future IPPS events and promoting the Society.

David Hancock

Conference

The Conference opened with a welcome from John Messina followed by an opening tribute to the late Steve Vallance our immediate past president by well known plant breeder, TV presenter, author and personal friend - Angus Stewart.

Tours

We then boarded the coaches for a very full day of tours.

Landsdale Plants (at Darch) are a retail nursery with a great range of plants. We walked to **Landsdale Farm & Wildflower Nursery** to inspect plants grown by enthusiastic amateur plant propagators. They were successfully using cloches over pots with cuttings of many rare plants. These were simply made

from cut down bottles that were sterilised with a bleach / acetic acid solution. A few also made it to **Ezi-Gro Orchids** to view their collection.

Then on to **Lynch Group** (at Carabooda near Yanchep) to see a sophisticated potted colour nursery with moving benches. The Chrysanthemum area was empty as they had just shipped stock out for Mother's day. Nevertheless we saw a great variety of plants including herbs, Cyclamens, and dwarf Phalaenopsis orchids (imported in-bud) each in different areas with different irrigation suited to the stock.

It was a real treat to then visit **Plantrite Nursery** (at Bullsrock) managed by David Lullfitz who was a 6 pack member only 7 years ago at the Fremantle conference. We were shown some very sophisticated transplant equipment (capable of 30,000 plants being potted per shift). This nursery is on 40 ha with both covered and open air grown plants on benches and on covered

drained ground. The great majority of plants here were propagated from seed but many were from cuttings. We saw possibly tens of millions of plants, mostly in tubes for revegetation. I think everyone was impressed by the quality and cleanliness of the stock as well as the huge variety at this relatively new facility.

Finishing off our packed lunch on the coach we arrived at another impressive business; **Ellenby Tree Farm** (also at Bullsrock). They grow their trees with a combination of techniques including growing in the ground and using specialised Rootmaker pots. They are the only tree farm/nursery in Australia to be accredited as a certified platinum Rootmaker grower. Established in the 1980's the business has grown to become the largest tree farm in Western Australia producing trees on three production properties with stock ranging in size from 500 mm tall to 10 metres tall (about 20 years old). They propagate many of their

Below left; Michael Gleeson at Lansdale Wildflower Nursery.

Right; Tour group at Lynch Group, and below right Plantrite Nursery tubes being admired



plants and now produce over 600 different species and cultivars. Everyone was impressed with the demonstration of their equipment for digging and removing trees from in-ground planting.

Then for something different at **Margaret River Chocolate Factory** for chocolate tasting and chocolate quokkas & **Sambarino** (West Swan) who offered chocolate liqueur and wine tasting as well as various condiments.

Natural Area Nursery C (Whiteman Park) is part of David Hancock's organisation offering a broad range of integrated operations from consulting, through growing and

Photos: Ellenby Trees,
Natural Area Holdings Nursery,
Workpower Wholesale Nursery



installation. This year's Southern African exchange Bree Howard (Nursery Manager) took the group on a tour of the site operations that produces mostly grasses and sedges from seed for revegetation projects. The nursery has twice been awarded 'Best Small Production Nursery' by the NGIA and has been a finalist in the WA Water Awards for the water retrieval and recycling systems in use. The use of palletised growing to reduce handling costs was featured.

Workpower Wholesale Nursery (at Noranda) were our gracious hosts for dinner as well as allowing the tour group to inspect their operations. The nursery produces around 200 species of commonly used trees, shrubs and ground covers. The West Australian native stock is most commonly supplied in 50mm pots,

however tree-tubes and larger pots are also grown. Workpower is one of the largest employers of people with disability in WA and provide an extensive range of support services for people with a disability, and their families and carers. Something different was their area for growing water plants.

Wow, what a busy day of interesting and varied tours of some impressive WA horticultural businesses.

Saturday

Saturday started with the health theme from our keynote speaker, **Helen Frost** "RedHot Plants – RedHot Bodies –



What's on the end of your fork?" Helen spoke about improving our health, mostly through improving what we eat and drink coupled with some exercise. It is not about dieting or weight loss but it is about losing fat through eating right, cleansing the body and exercising smart not hard to build lean muscles. Most of us do not drink enough water – Helen suggested 40 ml per kg body weight (3.2 l for an 80 kg person). I noticed that at morning tea the water / fruit juices and fresh fruit were favoured.

Gregory Priest, Josh Byrne & Associates "Growing the Urban Forest Movement – Challenges and Opportunities". Greg outlined five key aspects of the presentation. Urban Forest values and challenges; The Green Space Alliance; 2020 Vision; WHV Landcorp case study (converting a creek sump with drainage cells and landscaping for urban use) and encouragement for us all to get involved.

Prof. David Ellsworth from Hawkesbury Institute for the Environment UWS "The Which Plant Where (WPW) Project". The mission for this project sponsored with NGIA and HIA is to provide new species for enhancing urban greening. The project was conceived as a separate effort to assist Vision 2020 and aims to:

- Facilitate sustainable green cities in a changing environment. Parks and rural areas are cooler than cities.
- Drive sustainable market growth for the horticultural industry, with new places and new varieties. Bio-prospecting for hardy varieties of plants that can withstand difficult urban environs is part of this study.
- Develop usable tools and resources underlain by science, to be used by a wide range of stakeholders.

Thermal imaging of leaves of various plants in the sun during the heatwave in Western Sydney in February 2017 showed they reached temperatures above 50C, which is above their viable limit resulting in foliage dying.

Following selection of various plants and testing, an online tool for species selection and technical guidelines will be developed. This will have maps for distributions, filters for specific needs and value-added characteristics important for various reasons including aesthetics, and risk flags for plants that do not perform well in certain circumstances.

Karen Smith & Gabe Mostafa from Greener Publishing and Media Pty Ltd have been working on a project called "PlantSelect.com.au" that is aimed at bringing growers and landscape designer together so there is a beneficial outcome for everyone. It is envisaged that the site will be launched in July and provide a professional way to source plants. It aims to provide designers with a complete list of plants that are grown in Australia that they can select from, forward order and secure at the design stage for planting when required. It will also enable designers to be introduced to new plant releases. Growers will need to upload their complete plant growing list on the plantselect website. Plants will be categorised into plant

groups and their attributes and characteristics included.

Esther Gngang - Green Space Alliance WA, Matrix Enterprises (WA) Pty Ltd, Exec. Director of Landscape Industries Assoc. of WA Inc. - said that there are two different situations depending on whether the project is a residential development or a commercial one. Commercial projects often involve civil engineering firms tendering and as potential subcontractors landscapers are not able to communicate with growers in advance. Often they have less than one month to obtain the plants specified. Many times the plants are not available and the designer needs to select alternates. Sometimes the contract has been awarded to landscape architects from another area (e.g. France) and they are not familiar with the plants or site conditions. Landscape architects are time poor and mostly do not visit nurseries, and their plant knowledge may not be great, so you need to present them with a wow factor to have your plants specified.

Anton Van Der Schans, Principal Horticulturist, Gardens by the Bay, Singapore "Plants chosen in the past and what we are looking for in times ahead". The gardens have two large conservatory structures as well as the tropical climate gardens outside. The flower dome is mainly used to grow Mediterranean climate flowering plants (16C night, 25C daytime, less than 70 % Relative Humidity). The cloud forest dome growing tropical montane rainforest plants mainly has a similar temperature profile but the RH is kept to around 90%. Anton mainly spoke of the Australian species they have used and breeding programmes for Dahlia, and their tissue culture lab. for Orchids and rare species. The red "GB Singapura" series of Begonias were recently developed for Chinese New Year.



Julienne Zhu, Secretary General – Nursery Stock Branch, China Flower Association. "China Horticultural Industry – Situation & trends". The Nursery Stock Branch is one of 14 branches of the China Flower Association and appeared to be comparable to NGIA in Australia. They however classify nurseries differently. Julienne gave examples of some very successful plants found overseas and now grown widely in China such as Photinia Red Robin. Bougainvillea grows well in the southern regions and has the popular red and yellow colours. Roses are very popular in northern regions. By the end of 2015 China's horticultural planting area was about 1,305,500 hectares and was worth \$20.1 billion in sales, with US\$620 in exports to 105 countries and regions. Knowledge is still needed to support growth in the areas of; nursery design and planning, substrate & fertiliser technology, water treatment technology, good varietal promotion, landscape architecture and professional horticultural business management.

Darren Fissioli from Thorntons Accountants and Business Advisors "Business & Finance essentials for FY 2017". Most businesses are focussing on cash flow and efficiencies through cost analysis and their profitability. Cloud computing and implementation of associated

business procedures is a big thing now. Some small businesses are now outsourcing some of their administration roles directly from overseas e.g. the Philippines. The recent budget and tax implications were touched on as well as the need to review organisational structure.

Steve Richards, Commercial Manager, Infinite Energy. "The Commercial Solar Landscape & Pitfalls to avoid" The commercial solar market was reviewed; 20% of homes have solar whereas the commercial market is less than 5%. The national solar market is about 70MW and growth has been flat since about 2012. System sizes have increased over the years.

Some of the pitfalls are; product quality, installation, the inverters and then the monitoring and mounting system. Low quality components can have hot spots, junction box failure can also be common with poor quality. Their current panel recommendations include; SUNPOWER (highest efficiency panel on the market), WINAICO, and CanadianSolar. Sometimes systems are oversold and the financial benefits are unrealistic. A number of installation failures were then covered. Leasing and Power purchase agreements have become popular.

Nigel Swarts – Royal Tasmanian Botanical Gardens, University of Tasmania, "Ex situ production of Native Orchids – what is their market potential". Nigel quoted figures from UN Comtrade 2017 showing that orchids account for 8% of world floriculture trade (nearly one billion dollars). They are one of the world's top ten cut flowers and large scale production is possible by tissue culture of exquisite and rare hybrids. There are about 25,000 species worldwide, Australia has approximately 1600 native orchids (Western Australia has 450 -500 and Tasmania 214 species).

A number of the endemic species are now rare and are on threatened species lists due to clearing and development activity. Another problem is pillaging of wild sites for illegal trade over the internet. Most papers generated in orchid research are related to propagation and not conservation.

Different germination protocols were explained such as using sterile techniques where orchid seed are placed on OMA plates containing a range of different mycorrhizal fungi. Seedlings are kept in the greenhouse for two years after transferring to potting mix, and then can be in situ planted for hopefully flowering after three years.

Darryl Hardie, Grains BioMAP Manager, Dept. of Agriculture and Food WA spoke about "Update on the Tomato Potato Psyllid (TPP - *Bactericera cockerelli*)" and other biosecurity threats to various plant species.

As well as the TPP a number of other pests have been recently discovered in Western Australia. The life cycle of TPP and symptoms in potato, tomato, capsicum and tamarillo plants were discussed. The concept of "Citizen Science" has been developed through a *MyPestGuide Reporter* app for smartphones, which lets anyone report and map pests for experts to ID.

Bree Howard, our IPPS Exchange to South Africa 2017 gave an account of some of the many places she saw in March:

Pico Gro produce micro greens, mini greens, mini vegetables, and edible flowers. Turn arounds can be as short as ten days.

IPPS Tzaneen conference had talks on greenhouse ventilation, solar power, flower morphology, sustainable irrigation, herbicide resistance, seed germination, variable drive motors and exchange student presentations.

Colorweis Ornamental Nursery

Westfalia produce 250,00 double grafted avocado trees annually taking 7 months with about 55% success from seeds.

Amorentia grow dragonfruit, macadamia, and also camellias, gardenias and fuchsias. The forest there has some 2000 year old trees. *Malanseuns* is the biggest ornamental nursery in South Africa. They also operate Plantland retail nurseries over seven sites.

Multiplant specialise in vegetable seedlings and grafted tomatoes and cucumbers. They produce one million plugs per week for Flamingo's Nursery. Of interest was their recycling of all waste material from the nursery including producing worm castings for plugs.

Flamingo's Nursery produce one million Chrysanthemum seedlings a week, mostly exported to the UK, Middle East and some to Australia. Turnaround is about 17 weeks in 22 hectares of greenhouses. Pre-cut cuttings are imported from Holland.

Semperflors produce cut flower foliage, specialising in fountain grass and Baby's breath.

Sittigs Nursery (Bree's host family) produce ornamentals and hanging baskets and distribute seed.

Ziniko Mkiva briefly spoke about how he enjoyed his time in Australia and what he had learnt.

SUNDAY May 14th

IPPS Presents "Sharing Propagation, selection & breeding Knowledge"

Angus Stewart. Renowned propagator, author, researcher & broadcaster. "Selecting compact cultivars from wild plant populations". Angus discussed trends leading to the current need for compact plants for smaller gardens. With greenwalls, and rooftop gardens we need to breed plants for the future.

Production and distribution logistics are also driving the breeding of compact plants. Uniform compact habit equals easier management as seen in Phalaenopsis production at



Lynch group nursery during the conference tours. Tall plants occupy more space in freighting so also mean less profit.

Strategies for creating compact plants were explored:

Traditional plant breeding, Examples given were; Nuflora and the University of Sydney developments of *Scaevola aemula* varieties used as a street plant in France. Compact Native plant breeding at Kings Park with Digby Growns .

Deliberate hybridization is an obvious approach, and has taken *Anigozanthos* to a place in world horticulture. There are however unintended consequences, specific hybrids are great for production and impulse sales, but do not always perform well in the garden. Tall *Anigozanthos* cultivars are much more garden hardy, but are not grower or retailer friendly due to freight cost and handling problems.

Selection of chance seedlings like Callistemon “Great Balls of Fire” is another useful method.

Selection from wild populations in coastal areas is another option e.g. *Goodenia ovata* “Gold Cover”.

Angus spoke about his involvement with research at developing compact cultivars at Royal Botanic Gardens Sydney, Mt Annan; a case study in the flora of Catherine Hill Bay in NSW. A

major part of the study is how stable is the genetic basis for compactness in coastal populations? Can we reproduce compact growth habit from seedlings? *Melaleuca nodosa* prostrate form appears to be performing well so far.

Some of the WA work mentioned included the bell fruited mallee dwarf form in Fitzgerald River NP and *Adenanthos cuneatus* “Flat Out” bred by Steve Vallance

George Lulfitz. Master propagator, author and discoverer of new plants. “Selecting varieties to be market driven, his selections and compatibility planting.” Landscape architects and councils these days are asking for small plants and trees. Over the last 20 to 40 years we were promoting plants over two metres. The market has changed very quickly and now everyone wants small plants and trees.

Over the last 20 years most of the small varieties have come from the coast. For WA most of the development has occurred on the coast, so plants that will grow in a high pH (8-9) is important. You need to trial the plants now that you intend selling in ten years’ time. The demand now for 60-80 cm high lines is that they are low maintenance, drought tolerant and the specified height is reliable. For the ground covers shown George has found that they grow flatter in the shade. In WA they do not want eastern varieties

anymore that could hybridise with natural species in parks. He has also been working on columnar tree forms. George suggested the next big challenge is for dieback resistant varieties.

Nathan Layt – OzBreed “Commercial Plant breeding operations 101”

Basic Breeding Methods; Open pollination – the easiest method where large numbers of seedlings are needed. A good method for promiscuous plants. Assisted open pollination – using a brush to assist insect pollination. Good for hard to pollinate plants. Controlled pollination – where the male part of the flower is removed. Pollen is added by hand. Straight seedling selection – where seed is collected or bought, and variations in genetics are identified. Works for a limited number of plant types and large numbers are usually required. Bush breeding – selecting desired variation compared with other plants in the population. Mutation breeding – where seed or small plants are irradiated, treated with chemicals or subjected to severe stress. This may be good for changing the chromosome count; a tetraploid produced this way may be crossed with a diploid to make a generally sterile triploid. Variations in leaf colour etc. may also occur. DNA screening for selection – large numbers of seedlings are tested at a young age and a large number of variables screened. Opportunity breeding – a major source of new plants where nurseries grow a large number of plants from seed, and variations occur. Spontaneous mutations also often occur; such as variation in tissue culture.

Ozbreed believe that breeding is only as good as the testing for fit for purpose. From a short list of plants e.g. 20 types, potential candidates are placed in: diseased conditions, or inoculated with



the disease or pest to test for tolerance. Non-invasive exotics are tested to ensure they have low or no seed set in multiple climatic locations over a number of years. Environmental condition testing - candidates are planted in adverse conditions for years to test for wet feet, drought, cold, and humidity tolerance. Various soil types are also tested from sandy to clay. Other environmental aspects - include shade (various measurable levels) and full sun testing in summer and winter. Functional Testing - plants are tested for where they should grow e.g. *green walls and roofs* (plants that are usually wet feet and drought tolerant), *screening & hedging* (plants pruned a number of times per year to destruction), *erosion control abilities* etc.

Propagation can be another major hurdle in breeding. Sometimes an amazing plant is really hard to propagate. In Ground propagation - has been successful for Liriope, Lomandra and Dietes. Very slow to strike cuttings - getting mature plants back to propagation fit mother stock can be hard.

A number of new plants from Ozbreed were then discussed as well as aspects of the rebuild of their research farm.

Ben Croxford - Proprietor Nuts about Natives. "Meeting client requirements via botanical knowledge & specialist propagation techniques". The business commenced supplying specialty nurseries and cut flower growers



with difficult to source plants on a contract basis. They now specialise in the production of provenance correct tubestock mainly derived from wild collected material for specific revegetation projects. Some areas may have up to 700 different species that are required for rehabilitated mining sites or other areas. Botanical consulting and in particular floral surveys are a significant part of the business now. Plant production areas have been established for species where collecting seed from the wild is difficult, the cost is high or they could be affecting the remaining natural population. Some plants are also grown for cutting stock such as *Verticordia*, *Darwinia* and *Hibbertia*. Tissue culture also has a part in supplying sufficient numbers of plants when required.

David Hancock - Natural Area Nursery discussed (1) Sharing and not surrendering competitive advantage - can be done, and often is a two way street. And (2) Benefits and knowledge gained from IPPS involvement, my examples your examples.". Sometimes it is a collection of ideas from different times and sources that end up jelling into an idea for improvement, while at other times it may be a member giving a full answer to your issue. These are the things that more than make membership of IPPS a great benefit to your career and business.

Rapid Fire Propagation Sessions; these were short sessions from growers outlining what they have been working on, what's on their target list, what's worked and what's failed.

Ross Hooper from Zanthorrea Nursery spoke about "Zanthorrea Propagation". The nursery is primarily a retail operation but has a propagation facility on-site. Ross started with the example of a failure where they inadvertently sold all of the stock of *Scaevola Crinkle Cut*. They had one left in a

display pot but a higher growing sport had become dominant. They took cuttings from garden plants but they had variation in form. Since then they have collected and tried growing various *Scaevolae* selecting "Flat Tack" and "Thickstar" forms, which they would like to cross with *Scaevola platyphylla* with larger flowers. They also have selected a form of *Lechenaultia formosa* that they named Stirling Range that is completely covered with orange to red flowers.

Michael Gorman from the City of Stirling nursery spoke about the challenges in the "Propagation of *Spinifex hirsutus* and *Spinifex longifolius*". They grow up to 50,000 plants annually that are used for street trees, landscape plants and revegetation projects. *S. longifolius* is propagated preferentially from seed, where female seed heads are collected in November to December in close proximity to male plants. Seed heads were trimmed down and chaff separated from grass like seed. Seed was sown into trays with general purpose potting mix and covered to around 2 cm.

S. hirsutus is a plant used to rugged foredune conditions and is very easily propagated from cuttings. Seedlings are difficult to maintain in the nursery, so transplanted cuttings with at least two nodes are chosen.

Rod Carey comes from a community based not-for-profit nursery in WA with 3 full-time staff and 60 to 70 volunteers many of whom have a disability and come with helpers. They produce about 120,000 plants per year with up to 350 different species, 90 % of what they do is from seed. As well as providing provenance plants they see themselves as providing a valuable community service.

Bree Howard told us of the difficulty they have at Natural Area Nursery is obtaining suitable material for revegetation work, so they need to work closely with local councils.

They have found that *Spinifex hirsutus* can be readily produced from seed and the plants look to be robust but this will need to be proved when planted. *Tricoryne elatior* (Yellow Autumn Lily) is a plant often requested and the seed is difficult to get to germinate, the quality of seed from collectors is most important.

They have grown four forms of desert Spinifex species (*Triodia basedowii* / *pungens* / *wiseana* / *epactica*) from seed and need to see how they respond to planting on-site. They have had propagation failures this year with *Banksia attenuate* and *B. menziesii* due presumably to too high a phosphorous level in the potting mix and poor seed.

Digby Growns showed us some of the ornamental plants they have been breeding at Kings Park with selection criteria of low water and fertilizer requirement and providing habitat They have been focussing on six main genera working with commercial partners. They use three main ways of producing plants: selection from plants in the wild as well as from those grown in Kings Park, from a great diversity of *Scaevola* species they get a huge variety of seedling plants which are selected out. Cross-pollination is the method used most of the time. Biotechnology is the third method used.

David Parlby spoke about his previous reported work on moss control. - Kendocide being preferred over vinegar. Environmental control is probably the best by control of fertiliser and watering. Regen Shield has proven to be effective on Liverwort, but with moss if you only get it on top it grows back. A high volume penetrating spray at 25% rate was effective but it is still cheaper to use Kendocide. Spraying in enclosed areas may lead to too long a contact with plants, a knapsack sprayer of low application rate may account for

adverse effects on plants or lack of effectiveness.

Tony Van Der Stay – Outline of IPPS Tasmania 2018 conference. You need to perhaps understand Tony's sense of humour. I am still wondering about the animated blue bear wandering over parts of Tasmania. But then he did give us a day by day breakdown of a very different type of program that aims to keep the cost of the conference down while giving everyone the opportunity to have an enjoyable experience.

2017 Conference Sponsors

Many thanks to our sponsors for their support and informative trade displays.

- Seasol**
- Garden City Plastics**
- Hort Journal**
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- Fertil**
- Rootmaker**
- Norwood**
- Ellenby Trees**
- Tissue Culture Australia**
- Benara Nurseries**
- Transplant Systems**
- Seed Shed**

IPPS Conference Dinner and Awards

Unfortunately we did not have a recipient for either the Award of Honour or Rod Tallis award this year.

Peter Smith Perpetual Golf Trophy This year a few keen golfers contested for this prize while enjoying a great Perth golf course. David Miles from Richgro was presented by last years winner Tony Van der Staay with this prestigious sporting trophy. Who will meet the challenge next year in Hobart when Tony is on his home patch?

IPPS Steve Vallance Award This year we voted to rename the award, and James Burnett (last years



recipient) gave a heart felt speech about the significance of the award. Peter Waugh received the Pewter Tankard from John Messina in recognition of distinguished service to the society over many years.

Anita Boucher Award; Is awarded each year by the Editorial team for the best paper at the conference. This year Angus Stewart was selected and will receive his award shortly.

Youth Auction; Peter Waugh, supported by our Six pack members assisting displaying sales items and encouraged us to spend a bit more than we were prepared to support our youth. We raised about \$3600 this year.

Tony Van Der Staay was successful in securing the IPPS silver plated Felco secateurs at the auction. They should look good in the office at Westland Nurseries in Hobart.

Seasol 6 Pack Craig Brown from Seasol Pty Ltd presented the "Six Pack" of; Jenna Bell (Mansfields

Seasol Six Pack

Applications are open for the chance to be a 6 pack member in Perth. You could have the privilege to meet some of the industry leaders while being sponsored by Seasol.

All that needs to be done for either of these is **submit an application by Feb. 2018**. Contact details are on the IPPS website (see www.ipps.org.au).

Rod Tallis Award

It is that time of year again when our young propagators need to be nudged and encouraged to apply for this prestigious award

A worthy propagator at the start of their career can gain an award that they can be proud of and mark the start of a successful career in horticulture. All you need to do is report on some propagation work you have undertaken. Then go to the website and apply soon.

Propagation), Lisa Wightwick (Tissue Culture Australia), Ruby Hayes (Westland Nurseries), Shi Wei Sia (Natural Area Holdings), Vanessa Behrtel (Greenhills Propagation), Ziniko Mkiva (South Africa). Many thanks go to the new sponsor of the youth initiative. Members of the six pack are sponsored to the conference, and are selected from a number of applicants. Please encourage some young members of your staff to apply for next year in Hobart.



Conference Snaps It was good to see that the NGINA Tubestock Growers had sponsored James Scorer from Colourwise Nursery to this years conference.

Our visitors from China and Singapore were also recognised with gifts.

We all had some fun at the conference dinner, auction and dancing afterwards with music from Eden Fire band. Congratulations to David Hancock and those who helped organise the conference and especially for their attention to detail making this an enjoyable conference. Thank you everyone who brought along something for the auction.

There are over 100 photos and a video from the conference on the IPPS Australian Region Facebook page that help show how much fun the event was.



Perth Pre Conference Tour 9th-10th May

North from Perth to Green Head and Back Again

I wondered why we were going to the AQWA aquarium as our first stop, and certainly I liked seeing the tropical fish and coral ... and of course the morning tea with fresh scones with strawberry jam and cream. Travelling on we soon realised it was for us to gain an appreciation of the Coral Coast, both in terms of the lobster industry but more importantly the sand dune environment that vegetation grows in. As we drove north roadside vegetation changed from shrubland with plenty of *Banksia prionotes* to semi-desert heath with *Xanthorrea*.

I suppose David Hancock planned it this way, as he drove the bus with the Kiwis and the Aussies followed in one driven by Dermot Molloy (from RBG Melbourne). Fortunately each bus also had a local seed collector who could identify the plants that we were finding and where some interesting ones were (as well as knowing where we were).

After a brief stop at Nambung National Park to visit the Pinnacles desert we headed to Cervantes for lunch at the Country Club featuring a fisherman's basket with lobster. Then off to the Lobster Shack for a tour of the facility. The Western Rock Lobster Fishery accounts for sales of up to \$600 million annually (mostly from live shipments to China).

Then on to our accommodation and the opportunity to walk around Dynamite Bay at Green Head, before a barbecue dinner and chats into the night. At first glance the coastal heath looked similar to that on many parts of the East Coast, but without much bordering shrubland. Of course the endemic species were very different though (glad we met up with one of the seed collectors at times



Lesueur plants. Hi Vallee Farm & group. Muchea Tree Farm tubestock and afternoon tea

to assist identifying them) - *Acacia cyclops*, *Pittosporum ligustrifolium*, *Templetonia retusa*, *Santalum acuminatum*, *Spinifex longifolius* to name a few. The breakers over coral reefs out in the Indian Ocean were obvious, no wonder this is called the ship wreck coast.

annually (nearly a million) from seed as well as cuttings, as well as grafted plants (Avocado and Corymbia especially). Natalie showed us the propagation facility and tube area and some really nice looking tropical Grevilleas that they have mastered the propagation of. Fortunately some of the tour group were able to assist with an irrigation issue that was raised. Wow, what a spread of sweet delicacies we enjoyed for afternoon tea.



I think some of us made it up early the next day for a morning walk and breakfast before departing for Lesueur National Park. The elevation was high enough to see the coast from the roadside bordering the park. It was interesting looking at the different types of plants there. Then we headed off to Hi Vallee Farm where we were treated to morning tea with fresh damper and golden syrup by Don and Joy Williams, along with the chance for us to see a few Red cattle dogs. Then off to see an acclaimed to plant biodiversity hot-spot in the 1000 acres of the farm set aside for native plants. Really worthwhile seeing for plants people, and probably more spectacular in spring (book early). Following a tasty lunch prepared by the local CWA we set off south.

Then sadly the tour was over and it was back to our accommodation in Perth ready for golf, meetings and touring the next day.

Pre-Pre Conference Tour - Kings Park Botanical Gardens

David Hancock was able to organise a special tour of the facilities of Kings Park Botanical Gardens on the Thursday before the official opening. Dr Eric Bunn (senior research scientist) showed us through the laboratory area with tissue culture facilities, cryogenics, environmental chambers, cold stores for seed and equipment used to check seed viability. Amanda Shade (Nursery Curator) explained the role of the nursery facilities in the production of native plants for research, restoration and display in the botanic gardens. Luke Sweedman (Curator of Seed Technology Centre) explained the difficulties in collecting seed from remote sites in Western Australia and the use of rugged GPS equipment to log



Our final visit was to Muchea Tree Farm where we were met by Natalie Vallance and staff. We were impressed by the wide range of native plants and others that they produce. We first entered from the retail nursery into the wholesale area and stock plants area. They produce a large number of tubestock





and features case studies of local residents working together to revitalise and reinvent the under-utilised grey spaces around them.

Newsletter Editors Comment

The Perth conference is over, but the opportunity is there to travel to one of the upcoming conferences around the world.

Then of course we can put the dates for the Hobart conference in our diary, and perhaps the Pacific Rim conference in Honolulu.

As with any IPPS conference I am sure you will come away from the experience with memories of a great time and having learnt many new things, or even reflected on why you do things the way you have. If you have the opportunity to go to a local area meeting throughout the coming year, don't hesitate, it will be worthwhile.

With the Spring edition of the newsletter I look forward to hearing about the European International Conference from some of our delegates.

If you are not already a member join up to the region's **facebook site** - search for "**International Plant Propagators Society (IPPS) Australia**" and start contributing by "liking" it and posting. We now have about three hundred and eighty Facebook member likes. There are many photos there as well from past conference tours and activities.

collection details. We then enjoyed afternoon tea together.

Grady Brand (Senior Curator) then took the group of around 24 for a tour of the gardens pointing out recent changes to the site, the famous Boab tree that had been moved a few thousand kilometres from the north, and rare and endangered species in various parts of the Australian Native plant section. The tour led to some interesting and stimulating discussion. We thanked the staff of the gardens for their time and effort in showing us around.

News

The 2020 Vision team and HIA have created **Park It** - a 10 step video and guide to help communities turn their grey spaces green. This how-to-guide brings together two of The Plan projects, *How to Create a Community Action Plan* <http://horticultureaustralialimited.com/t/d-l-kritktd-utbpiuy-d/> and *How to Get Your Park Approved* <http://horticultureaustralialimited.com/t/d-l-kritktd-utbpiuy-h/>

IPPS Membership

Do you know of anyone who would be interested in joining IPPS? The best method of recruiting new members is by word of mouth by existing members. Who in your organisation or local area might be interested in joining?

Download the membership form from <http://www.ipps.org.au>

or tell them they can join online at <http://www.ipps.org/register>

Don't forget to mention some of the benefits of joining IPPS including:

- Great conferences and area meetings.
- Exchange opportunities.
- Free, unlimited access to all IPPS papers online - a great bank of plant knowledge.

Sam Hall and James Burnett have become new admins for the Facebook page to bring a younger face to it and attract new members to join the society.

Don't forget that this newsletter and many past copies are available on the IPPS website at www.ipps.org.au

Pass your extra printed copy of the newsletter around at work.

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2017 -2018 IPPS Calendar

2 July - 18 July 2017	International Tour & Conference - European Region - UK, Belgium, Netherlands
26 July 2017	Ontario Area Meeting
11 October - 14 October 2017	Eastern Region Annual Conference, Grand Rapids, Michigan
17 October - 20 October 2017	Western Region Annual Meeting, Wilsonville, Oregon
28 October - 1 November 2017	Southern Region 42nd Annual Conference, Dallas, TX
18 November - 19 November 2017	Japan Region Annual Conference, University of the Ryukyus, Okinawa prefecture, Ryukyus Island, Japan
March 2018	Southern African Region Conference, Port Elizabeth, Eastern Cape Province, South Africa
26 April - 29 April 2018	New Zealand Conference, "Mind Blowing" Palmerston North
24 May - 25 May 2018	Australian Region Conference, Hobart, Tasmania
28 July - 4 August 2018	Pacific Rim Conference, Western Region, Honolulu, Hawaii