



**RIAWA**

Revegetation Industry Association of WA

**Quality in Revegetation & Rehabilitation**

Standards • Education • Involvement • Improvement



newsletter June 2009



## REVEGETATION INDUSTRY ASSOCIATION OF WESTERN AUSTRALIA INC.

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### Management Committee

President	Geoff Cockerton
Vice President	David Venning
Treasurer	Dan Huxtable
Secretary	Luke Sweedman
Member	Fiona Johnson
Member	Shane Kearney
Member	David Merritt
Member	Linda Thomson

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Newsletter Editors	Luke Sweedman David Venning
Webmaster	Peter Grose

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Photos Courtesy of Luke Sweedman and David Venning

All articles and contributions of interest are welcomed and should be submitted in electronic format as a Word document or in Rich Text Format to the Administration Officer.

Front cover: *Anigozanthos onycis* - Fitzgerald National Park, courtesy Luke Sweedman

## MEMBER BENEFITS

- Representation of industry issues with government agencies and NGO's
- Professional recognition of adherence to highest industry standards and quality
- Networking with fellow industry professionals
- Opportunity for input into industry submissions, papers, guidelines and committees
- Information seminars
- Latest industry news for new techniques, methodologies and legislative changes
- Access to free advice through the committee and members
- Web site listing
- Free newsletter
- Use of Association logo on your own marketing material
- Positive contribution towards sustainable conservation outcomes by improvement to the standards of native plant revegetation



## EDITORIAL

The dramatic changes in the world economy have highlighted the business environment for everyone during this past year. Here in Western Australia we have been fortunate in perhaps being better cushioned from the more severe impacts felt in many developed nations. However we are not immune and certainly the mining sector has experienced a significant downturn and several major projects have come to an abrupt halt and others are reined in by tight budgetary controls. Whilst the impacts have been minimal in WA so far, it may be that some adjustment will occur over the next year or so.

The RIAWA committee are currently engaged in planning for a Revegetation Seminar later this year under the title 'Revegetation: Challenges and Solutions'. It will be a two day event on November 9th and 10th.

The committee have also been in continuous communication with Florabank in Canberra providing technical assistance to their drive for accreditation standards within the nationwide seed collection industry.

The provenance issue continues to dominate discussion within industry practitioners and, not least, the problem in coping with a diminishing resource. It is essential that a more thorough understanding is developed between consultants/management authorities and practitioners on the ground. Too often we see important projects compromised because access to local genetic resources is not allowed and therefore non-provenance material is utilised which, in the long run, has not only the potential to pollute the existing genetic pool but, is also highly likely to fail as it is not suited to the local conditions.

There continues to be a lack of understanding by management authorities of the opportunities to collect sufficient quantities of local seeds without any detrimental effects to the collection flora. Indeed the amount of research examining the effects of seed collection on the bush is almost non-existent but, seed collectors on the ground have years and years of experience in going back to the same areas because they know how to collect in a sustainable fashion. Indeed, it is quite likely that any negative impacts are far outweighed by the positive results of utilising the correct provenance material for revegetation. If we continue to lock up areas and not allow the use of

this precious resource then we must bear the consequences of long term genetic pollution.

Seed collection is a professional business and by far the majority of collectors perform their work in a proper and sustainable way. There needs to be a degree of trust placed in these collectors in order for them to carry out their important work in what is a vital part of our efforts to improve, maintain and manage our environment in a responsible and effective manner.

David Venning



## PRICING AND AVAILABILITY OF NATIVE SEED

This article has been updated from a previous issue.

### Pricing and availability of native seed

I would like to start this article by stating that the average, market price of native seed is too low in Western Australia. There are a number of different reasons which, I believe, have contributed over the years to this low price situation including:

- Absence of industry seed standards
- Inappropriate contract specifications
- Lack of auditing and enforcement of performance criteria
- Full collection costs not applied
- Loss of production without market adjustments

### Absence of industry seed standards

Without proper standards for processing and cleaning seed to an acceptable level of purity the seed counts of mixes and individual species have been largely ignored i. e. lowest price gets the order and the customer doesn't understand what they are getting for their money. Proper standards require an industry run by professional personnel who are all trained and qualified to meet the appropriate criteria for the work and products which they provide. Coupled with this minimum standards for purity should be adopted.

All seed should have minimum packaging standards with respect to the type of bag or container in which it is supplied together with minimum labelling information.

### Inappropriate contract specifications

Collectors and seed companies will sometimes quote low prices for items (species) which they know they cannot supply and rely on replacing them with lower cost substitutes. Where there is a requirement to supply provenance seed there is no effective auditing process to ensure the authenticity of batches.

### Lack of auditing and enforcement of performance criteria

Low quality seeding mixes are used by contractors on revegetation projects knowing that the results of direct seeding are not sufficiently monitored and audited, and that remedial works will not be enforced when performance criteria aren't matched.

### Full collection costs not applied

Collection of seed has been traditionally carried out on a full time and part time basis by expert and amateur collectors alike. Many part time collectors have been willing to accept very low prices in order to make some pocket money. Full time collectors with higher capital and working costs are thus at a severe price disadvantage in any competitive situation.

### Loss of production without market adjustments

Long term drought, lower water tables, clearing and degradation effects have contributed to gradual loss of seed production over the past few decades. The market price of seed has not been adjusted fully to compensate for this lack of seed. Collectors in general must share some of the blame for this as they have been prepared to accept lower returns on their time.

## AVAILABILITY OF NATIVE SEED

In the last decade the demand for provenance seed has increased dramatically and for many projects demand is greater than potential supply. The situation is not going to improve as the further loss of remnant vegetation stands through development, clearing and environmental degradation continues at an alarming rate. These degraded sites mean less productive plants with reduced seed set.

Access to potentially fruitful collection sites (e. g. roadsides) is frequently not allowed or made very difficult through over bureaucratic processes. Unless we are prepared to accept non provenance material for revegetation and the subsequent risks of genetic pollution then properly managed collections must be allowed in reserves, parks and other productive sites. It is vital that scientific reasoning is applied to all decision making processes or we risk losing sustainable diversity.

Effects of seed collection on the bush have not been adequately studied and researched resulting in collection regulations being implemented without a proven outcome. Again this has seen many potentially fruitful sites locked up without access to important provenance/genetic material.

Government financial commitment to the sustainability of our remnant bush must be increased to enable effective management practices to be implemented and appropriate research to be carried out.



## PLANTS IN PROFILE

### *The 'Wonder' Plant*

#### **KNOTTED CLUB RUSH - *Ficinia nodosa***

##### **Habit and description**

This perennial sedge is often referred to as the 'Wonder' plant by practitioners in the field where it has proven to be an excellent coloniser with very good drought resistant properties. The plant grows to 1 m in height and 0.8 m across.

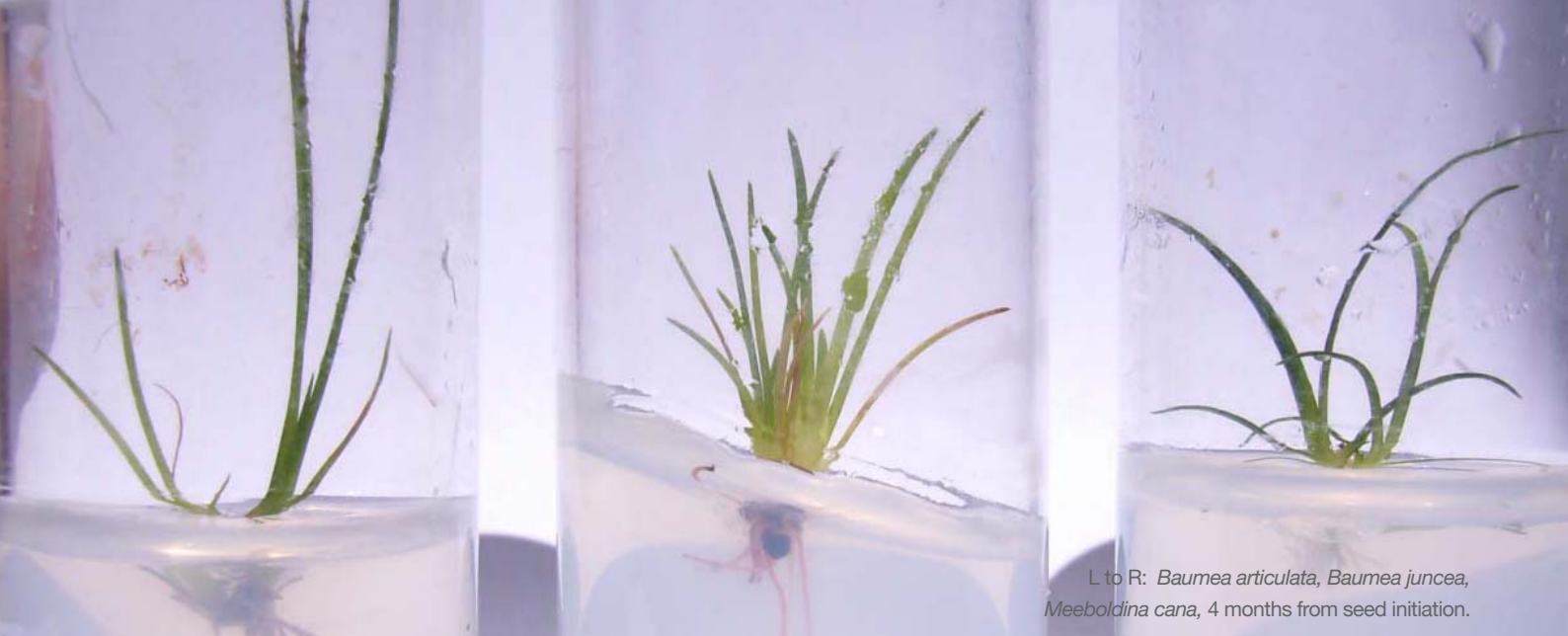
##### **Propagation**

It produces profuse quantities of seed in the black, bristly, round fruit which are easy to collect and will germinate readily in damp conditions. It is a popular component for direct seeding mixes. *Ficinia nodosa* seeds require light to germinate – if incubated in continuous darkness you will get zero germination. Better germination will occur if seeds are not buried to any great depth but rather surface sown. Smoke treatment substitutes for the light requirement and allows for germination in the dark.

##### **Revegetation uses**

It will grow in a wide range of conditions including bare sand, sandy clay, loam, granite and limestone. It has a wide distribution from the South Coast through to North of Geraldton and occurs on dunes, flats, seasonally wet areas and appears to have some salt tolerance. As it has the facility to spread rapidly it acts as a weed deterrent, assists in the control of erosion and facilitates native plant establishment generally





L to R: *Baumea articulata*, *Baumea juncea*, *Meeboldina cana*, 4 months from seed initiation.

## LULLFITZ NURSERY TARGETS ENDEMIC FLORA FOR REVEGETATION INDUSTRY

Revegetation and landscaping projects require a diverse range of endemic plants but until now the industry has not been able to access the range and volume of WA flora it requires. Lullfitz Nursery has undertaken an ambitious research and development activity focusing on replacing the current Eastern States varieties of plants in the horticultural industry with the correct endemic WA flora.

Lullfitz Nursery specializes in the selection, development and commercial production of West Australian plants for West Australian conditions.

George Lullfitz is working closely with industry and community members Statewide, from the Kimberleys to the South-West and South Coast to select endemic West Australian plants. Recent selections include *Dianella*, *Lomandra*, and *Dasypogon* spp. as well as wetland and dryland rushes and sedges.

Lullfitz Nursery employs a comprehensive range of modern propagation strategies using seeds and a vacuum seeder to manage volumes, conventional cuttings and micropropagation. This allows the application of the most efficient production methods available to generate the volume required by industry.

Lullfitz Nursery has pioneered the commercial application of micropropagation techniques to the WA flora. This has involved a 20-year commitment to R&D covering hundreds of species and selections, many of which are considered to be difficult-to-propagate plants.

The Wanneroo laboratory establishes plant cultures that are sent overseas for bulking up prior to importing rooted microcuttings back to the propagation nursery. This business model allows the staff to focus on new product development and lowers the overall cost of production. The resulting product is genetically true to type and uniform in quality. Where it's required, a number of genotypes are produced to provide an adequate genetic mix.

The current laboratory staff has over 50 years combined scientific and technical experience in the field of plant tissue culture (see photo). As well as refining conventional micropropagation techniques, in-house R&D includes improving culture medium, developing early embryo rescue techniques, somatic embryogenesis, and rooting and acclimatization protocols. This intellectual property is an extremely valuable asset to help with the complexity of a project of this size.



*Lepidosperma effusum*, 5 weeks from subculture, 17 weeks from shoot initiation.

George Lullfitz is committed to conservation and believes that by propagating and developing the widest range of WA species possible his business is able to contribute to the conservation of the local flora. George sees himself as a commercial greenie. One of George's special interests is encouraging the use of the WA flora all year round creating four seasons of colour in the garden, local parks and roadside landscaping. His aim is to grow the correct plants for specific landscaping conditions providing choice for landscapers to replace the Eastern States varieties currently available in the industry. Elite individual genotypes and seed lots from selected provenances are targeted and brought into the R&D program at Wanneroo.

Lullfitz Nursery takes pride in contributing to the use and conservation of the West Australian flora and is happy to help any business or community group with revegetation and landscape plant production requirements.

The objective of Lullfitz Nursery is the long term conservation of local endemic flora by encouraging its widespread use in the nursery, landscaping and revegetation industries.



## THE MILLENNIUM SEEDBANK PROJECT END OF PHASE TWO

The Millennium Seedbank (MSB) – Australian partners, also known as Australian Seed Conservation and research (AuSCaR), have been working together since 2005 to help conserve Australia's plant life. The network has largely been facilitated and funded as part of the Royal Botanic Gardens, Kew's Millennium Seedbank Project (MSBP). At a national level, AuSCaR has provided a network of capacity building, training and collaborative scientific research opportunities that its members can tap into. At an international level, AuSCaR partners can share knowledge and expertise with a global network of up to 123 organisations from the 54 countries that make up Kew's MSBP.

The network has been working towards the achievement of target 8 of the Global Strategy for Plant Conservation by 2010: 60 per cent of threatened plant species in accessible ex situ collections, preferably in the country of origin, and 10 per cent of them included in recovery and restoration programs.

In Western Australia 2009, will see the culmination of 10 years of coordination between the WA agencies of the Botanic Gardens and Parks Authority, the Department of Environment and Conservation (DEC) and Kew Gardens in the United Kingdom. As the first state in Australia to be part of the MSBP over 2000 species of seeds from WA will have been seed banked in WA and as well duplicated at the Millennium Seedbank in the U.K. This represents an enormous effort within the state of WA and significantly progresses targets for 60% of WA rare and threatened species to be stored as ex situ collections as per the convention on biological diversity.

The MSBP has seen all the states of Australia unified in collecting wild species for conservation and although this phase of the project is drawing to a close it is hoped that the next phase will continue in most states. Currently in Australia, over 7000 species have been collected. Globally the number is 10% of all wild species and this figure is hoped to treble over the next 10 years.

The project has helped evolve strategic methods for seed collection at Kings Park's Seed Technology Centre (STC) that has it as world leader in targeting, collecting and storage of seeds.

Staff from the S.T.C has also been trained at the MSB in Sussex, U.K. in MSB protocols and techniques so they can train staff from other



countries throughout the world. Staff from Kings Park spent 2 weeks delivering training programs in Portugal and in Kenya to staff involved in the MSBP during 2008.

The project is entering a new and exciting phase as many of the collections made throughout the world may begin to be used for restoration and as the next phase gathers momentum it is hoped that eventually all the wild species will not only be stored for conservation but may be used in major restoration rebuilding projects.

Luke Sweedman (Curator Western Australian Seed Technology Centre)  
Tom North (MSB coordinator for Australia)



FLOWERING SPECIES NORTHERN JARRAH FOREST SPRING 2008



## MEMBERSHIP

We are actively seeking your support and membership of this association to help it achieve its full potential. Various membership and sponsorship options are available with the details and a membership application form on the back of this brochure.

It is the support and co-operation of members that will determine how effective the association will be.

### MEMBERSHIP CATEGORIES

- **Individual**  
\$100 per annum
- **Corporate**  
\$500 per annum. Companies employing people within the industry. One person is designated as a voting member.
- **Non-profit organisation or government agency**  
\$100 per annum. One designated person has voting rights.
- **Associate member**  
\$50 per annum. No voting rights.
- **Student member**  
\$20 per annum. No voting rights.

### FOR FURTHER INFORMATION, PLEASE CONTACT

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Bassendean, WA 6942



## APPLICATION FOR MEMBERSHIP

Membership type: \_\_\_\_\_

Name: \_\_\_\_\_

Company: \_\_\_\_\_

Position / Occupation: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Mobile: \_\_\_\_\_

Email: \_\_\_\_\_

Educational qualifications: \_\_\_\_\_

\_\_\_\_\_

Relevant experience: \_\_\_\_\_

\_\_\_\_\_

Company profile: \_\_\_\_\_

### PAYMENT DETAILS

- **Amount owing:**
- **Payment method:**
  - Cheque
  - Direct deposit
  - Cash
- **RIAWA bank details:**  
**Bank:** Westpac  
**BSB:** 036 078  
**Account No:** 28 7608

- **Signature of applicant:** \_\_\_\_\_

Please return with payment to:  
Delia Baldock – Administration Officer  
PO Box 3393, Bassendean, WA 6942



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[www.riawa.com.au](http://www.riawa.com.au)

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