

# The Plant Press

Western Australian Regional Herbaria Newsletter

Volume 10 August 2001

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## We are Waiting for a New Grant

We applied for a new grant from Natural Heritage Trust to develop a new Regional Herbaria program that will cover lower plants as well as the vascular flora. The original NHT grant was for three years and since it terminated we have been running a scaled-down Regional Herbarium Project on special funding received from the Director of the Department of Conservation and Land Management.

The new grant application covers the continuation of the Regional Herbaria Project and extends it to cover lower plants. It is imperative that we commence a well-organised effort to capture information about the non-vascular groups, namely the mosses, liverworts, lichens, fungi and non-marine algae. These are neglected organisms; we have hardly started to document them as part of our biodiversity yet we know that many play a key role in maintaining ecosystem health.

We have been advised that our grant application has successfully been through the first hurdle; it has received State committee approval and has been recommended to Senator Hill's office. We wait with bated breath to see if it will be funded.

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Newsletter of the Community Regional Herbarium  
Volunteer Program

**Editor:** Margaret Lewington ph 9334 0587  
fax 9334 0515 email: <margl@calm.wa.gov.au>  
WA Herbarium, Locked Bag 104, Bentley Delivery  
Centre WA 6983

## 500,000th Voucher Celebration

There was a lot of excitement on the first date that we were able to arrange for the new Environment Minister, Dr Judy Edwards to officially declare the 500,000th voucher processed and incorporated into the State Research Collection.

This she did with style after first seeing over the Herbarium and meeting staff and volunteers. Also present were Dave and Sheila Quicke and Sandra Murray of the Kulin-Kondinin Regional Herbarium. It was Dave's collection of *Clematis delicata* ms that was the celebrated 500,000th voucher - a climbing plant having beautiful flowers with white sepals and mauve stamens and styles. Dave collected the plant east of Kulin close to a salt lake.

Congratulations to Dave but also to all the other collectors without whom it would have been impossible to reach that magic 500,000th voucher!

The oldest vouchers in the State Collection are those collected by Robert Brown in 1801 and from King George's Sound. It has taken 200 years to collect 500,000 vouchers. I wonder if it will take another 200 years before we celebrate the 1,000,000th voucher. Not if the Regional Herbaria collectors keep up their good work - with more than 15,000 high quality vouchers in 5 years!!!

Jan Gathe

## Serpentine-Jarrahdale Regional Herbarium

We are very sorry to lose the dedicated commitment of Geoff Brand, who has moved to Albany. Geoff submitted the Serpentine-Jarrahdale Herbarium's first box of vouchers to the WA Herbarium on 4th December 1997. Since then Geoff has attended a number of our workshops and celebrations. He and his helpers have worked closely with their Shire, which has been very supportive in providing materials and space for the collection.

This outer metropolitan shire is experiencing a lot of change and the role of the Regional Herbarium is a very important one. Under Geoff's leadership, plant surveys of road verges, railway lands and reserves were made and these surveys underpinned management of remnant vegetation by weeding, spraying and planting.

All of us in the Community Regional Herbarium Volunteer Program wish Geoff and his wife the very best in their move to Albany and hope that we shall keep in touch. We also look forward to working with Helen Doe and all members of the Serpentine-Jarrahdale Regional Herbarium.



## FloraBase Request for slides and/or prints

In the past we've been delighted that Regional Herbarium members have lent us slides and/or prints. Many of these you'll now see on FloraBase.

As you might expect we are still seeking your assistance. If you are interested in being a contributor to FloraBase we can provide wish lists of images we need related either to a specific area or to individual species.

**Weeds** You will have heard that the Herbarium is now involved with the Weed Information Network project. We have scanned images of approximately 200 species. This leaves about 600 weed species still to be illustrated. As with native plant species we can send you wish lists of those we need.

**Grasses** We are also collecting images of grasses. If you can help we'll be glad to send you a wish list.

As always your slides and/or prints are locked away while not in use and we return them to you as soon as they've been scanned.

Kath Napier

## Curtin Radio Talk

Did any of you hear me speak for about 10 minutes on Curtin Radio 927 on Saturday 26th May?

Matthew Lunn (Grounds Curator of Curtin) and Eoin Cameron were hosting a gardens program; this was a great opportunity to talk about Plant Collectors in WA - past and present. The 10 minutes flew by and I didn't say much of what I had prepared but I was able to talk a little about the Regional Herbarium Program and the many collectors participating in it.

If any of you in the various Regional Herbaria are interested in talking about why you belong to the Program, I could probably make arrangements with Curtin. Let me know.

Jan Gathe

# Hopetoun - Ravensthorpe Railway Heritage Walk Trail

It was a grand day.

On Sunday, 4th March about 150 people came to Kundip to join in the celebrations to open the first section of the Heritage Trail of the Hopetoun - Ravensthorpe Railway Line. Sixty-two of those had set out that morning to walk from Desmond along the 9 km stretch between Desmond and Kundip. The warm weather forced a few to opt for a lift from the halfway mark, but most completed the journey to Kundip through this history-packed landscape. A rest area at each end of this part of the trail offers parking, an information bay giving some details of the geology, the flora and fauna, and history, together with a map of the route etc., and table and benches.

A composting toilet is situated at Kundip. Various plaques along the route give further information on some of the historical sites and selected flora and fauna, with occasional directional signs consisting of half-length railway sleepers with a train routed into the surface.

After such a dry spell there were not too many flowers to be seen - just a few *Baeckea corynophylla*, *Beaufortia orbifolia*, an occasional acacia and several eucalypts, though even when not in flower the bush is so varied and interesting.

Sir Laurence Brodie-Hall, who had spent some time in the early 1940s mining at Kundip, performed the official opening. This was followed by a few words of commendation from Tom Hopkins, Regional Manager of the WA Tourism Commission for the Goldfields and Esperance Region.

The afternoon became a celebration of the centenary of Kundip, with many a tale being told by bygone residents, several of whom had been born there. Refreshments and souvenirs were available, including some fascinating

whistles made out of railway dog spikes collected from along the track.

Earlier this year some 70 intrepid walkers walked the Hopetoun - Dunns Swamp part of the Railway Heritage trail - a 14 km round trip. As we have yet to install the information bays and plaques, this section is not officially open, but is a pleasant and interesting walk. Each part of the Railway line has its own special appeal, with the flora of this section typifying the coastal sandplain and the extra moisture of both the coast and the permanent waterhole at Dunn's Swamp.

The Hopetoun - Ravensthorpe Railway Heritage Walk Trail is the brainchild of a steering committee under the auspices of RHAPS [Ravensthorpe Hopetoun Area Promotions] bringing together a group interested in the natural environment and local history - with the idea of showing off some of the hidden treasures of our district. Ann Williams, a major collector for the Ravensthorpe Regional Herbarium, has been the driving force behind the action. Funding was obtained from various sources, including the WA Tourism Commission, the Dept of Local Government, Trails West, the Ravensthorpe Shire Council, and RHAPS. Local donations of sleepers and railway iron and over 600 people hours of voluntary work has gone in to develop the Trail so far.

We are now starting work on the Ravensthorpe to Desmond section of the Railway track, while waiting for the arrival of the signs and plaques for Hopetoun - Dunns Swamp to arrive. It will be several years before the whole line will be open, and there are a few problem areas where the line has disappeared into farming land, but luckily this is only a very small proportion of the proposed trail. It's great bush, with a variety of soil types and consequently of flora, making the work of retracing the Railway line an exciting adventure.

Merle Bennett

## SWALE Project News

As SWALE (Surveying Western Australia's Land Edge) facilitator over the last two months I have been enjoying the hospitality of a whole bunch of interesting, friendly and extremely knowledgeable Regional Herbaria members and revelling in our wonderful coastal scenery, landforms and diverse coastal flora from Geraldton, Rockingham and Bunbury all the way to Esperance!

The four project teams have now chosen locations to set up several permanent transects in each of their regions and are preparing to start work collecting baseline floristic and habitat data in late winter/early spring. The permanent transects will subsequently be monitored to follow natural changes (e.g. climate and shifting landforms), life cycles of plants and the impact of human activities (e.g. fire, recreational land use and management practices).

The Rockingham Regional Herbarium group (including writer/artist Elizabeth Rippey and Deanne Pember) will be working in the Ramsar-listed Port Kennedy Scientific Park studying a coastal salt marsh at Becher Point and also a longer transect south of the Point stretching from the tall frontal dunes and grassland/low heath of the beach ridge plain through to freshwater sedgeland. The youth and mobility of landforms in this area and the wetlands are special features of this important conservation reserve.

The Esperance Wildflower Society will survey the flora of ancient coastal granite headlands in the glorious Cape Le Grand National Park and Holocene-aged sand dunes which host a flora very different to that of the Swan Coastal Plain's Quindalup Dunes. The bicentenary of The Investigator expedition of Matthew Flinders and botanist Robert Brown to Esperance is due to be commemorated at the end of this year. My guide to the area Coral Turley, along with Volker Mischker and Klaus Tiedeman, combined a rich historical commentary with appreciation of the flora.

Peppermint and Tuart woodlands at Dalyellup Beach and WA's most southern mangroves with associated halophytes will be the subjects of two transects in the Bunbury area. The dynamic Bunbury Naturalists Club (including Shirley Fisher, Gordon Paine, and Lynne Clark) will be conducting this project. This area is developing rapidly and the transects here will no doubt be important in monitoring human impacts.

The coast at Geraldton had a protected serene quality about it when I explored it recently in perfect weather and the company of Jenna Brooker and the immensely practical Julie Firth of the local Regional Herbarium group. However there are many challenges facing conservation of coastal vegetation here, not the least of which is the African Boxthorn, aptly named *Lycium ferocissimum*, which is rapidly growing into formidable prickly palisades! The group will place a permanent transect in the dwindling coastal vegetation at Drummond's Cove where the tall woody *Atriplex isatidea* inhabits the crests of unusual-shaped frontal dunes. South of the Greenough River mouth, a *Thryptomene* heath will be the setting for other studies.

Anyone interested in participating in any of these projects are most welcome to any of the field days which will be scheduled soon. For further details please contact either myself, Jan Gathe or the regional groups directly.

Cate Taus

## Rottnest Herbarium News

Recently the Rottnest Island Regional Herbarium folders were handed over to the Rottnest Island Authority for display in the Rottnest Museum. The specimens have been collected, pressed and documented during the past three years by the Rottnest Voluntary Guides with the assistance of Dr John Dodd and Mrs Elizabeth Rippey. The Herbarium will be a valuable resource for visitors to Rottnest.



# WEED INFORMATION NETWORK

## What is it

The Weed Information Network (WIN) is a new Natural Heritage Trust supported initiative for the Western Australian Herbarium that over the next two years will develop a comprehensive weed-watch program and online information system for the State.

The Weed Information Network aims to become the primary authoritative information resource concerning the State's weed species. WIN is designed to integrate closely with the Regional Herbaria Network to focus local communities across the State on the problem of destructive invasive species.

Information products created as outcomes from the WIN project will be disseminated primarily via the FloraBase web site.

## Why is it important

Weeds cause serious economic loss for agriculture and damage to the environment of natural areas. Good information is the first requirement for tackling the problems.

It is uncertain how many weed species occur in Western Australia because of poor information. Estimates range from 800 to over 1000 species. The WIN project is re-assessing the evidence.

Additionally, the actual identity of many weed species is uncertain due to a lack of expert identifications. WIN project botanists and cooperating international experts will review the identity of Western Australian weeds.

Specimens provide the physical evidence for the presence, distribution and identity of weeds. The WIN project will train and mobilise the many volunteers of the Regional Herbaria Network to collect good specimens with quality data from numerous locations across Western Australia.

## The user community

A wide range of conservation practitioners in government and the community require authoritative information on the identification, propagation and control of invasive species.

Community groups forming the Regional Herbaria Network will be increasing their efforts in documenting local and regional weed species and will require in return the latest available information on weeds.



*Volunteers from local community conservation groups locate, document and collect voucher specimens of weeds for their regional herbarium*

## Contact details

Dr Neville Marchant  
Western Australian Herbarium  
CALMScience Division  
Department of Conservation and Land  
Management

Locked Bag 104  
Bentley Delivery Centre WA 6983

Phone: +61 8 9334 0500  
Fax: +61 8 9334 0515  
Email: [nevillem@calm.wa.gov.au](mailto:nevillem@calm.wa.gov.au)

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**FloraBase**

<http://florabase.calm.wa.gov.au/>

# WEED INFORMATION NETWORK WIN Workshops

The workshop program of the Weed Information Network has been a very busy one. Since April workshops have been held at Gooseberry Hill, Bunbury, Geraldton, Narrogin, Merredin and Albany.

Invitations to participate in these workshops have been sent to personnel in Regional Herbaria, Department of Conservation, Department of Agriculture, Greening Australia WA, Coast Care, LCDCs, Shires and land holders. The response has been very encouraging with numbers close to 40 in Geraldton.

Dr Neville Marchant, Director of the WA Herbarium, opens the Workshop by discussing the WIN Project, its funding by NHT, the aims of the project, the many personnel involved, the role of the Regional Herbaria and the need for people to become involved in the program to add to our knowledge of weed species.

A manual titled 'How to Collect and Document Weeds', in draft form, has been distributed at these workshops. Various suggestions made by workshop participants have been incorporated into the manual which will be published very soon, in time for the collecting season.

Three more workshops are planned for this year:

**Esperance** 7 Aug. 2.30-4.30 Conference Room, CALM, 92 Dempster St

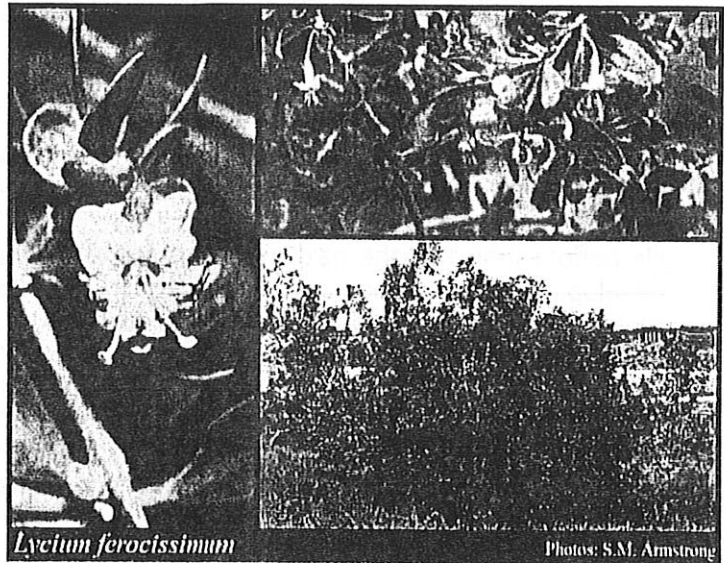
**Ravensthorpe** 10 Aug 9.30-12 noon Senior Citizens Centre, Morgan St

**Bunbury** 20 Aug. Being organised by Dept of Agriculture.

If you are interested in attending any of these workshops, ring **Jan Gathe** on **9334 0587** on Mon, Wed or Fri mornings and I can send you more details.

If any Regional Herbaria or Dept of Agriculture districts are interested in having WIN workshops next year, contact the above number also.

## Is this weed spreading near you?

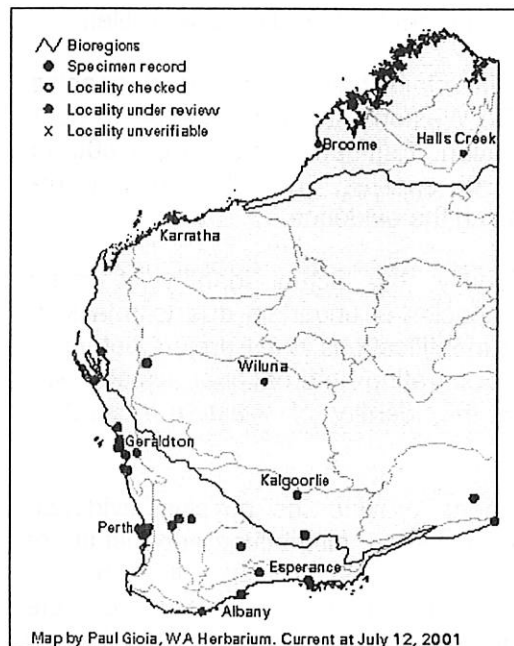


Family Solanaceae \* **Lycium ferocissimum**

Common name: **African Boxthorn**

An intricately branched, spiny shrub, 0.5-2.5(-4) m high. Flowers white, purple, blue, in April-May and August-December. Occurs on waste ground.

This plant is able to grow on unstable dunes and can tolerate salt spray so that it can form impenetrable thickets in exposed areas on the coast.



Western Australian Herbarium (1998). FloraBase - Information on the Western Australian flora. Department of Conservation and Land Management. <http://www.calm.wa.gov.au/science/florabase.html>

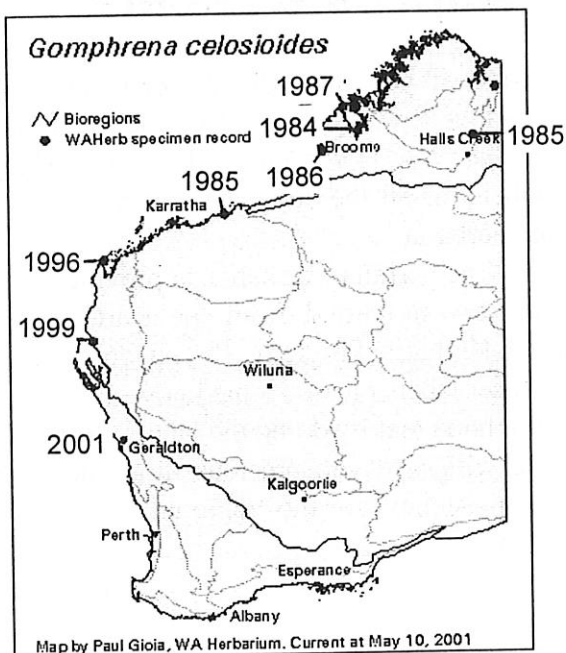
# Gomphrena celosioides, Presence: Past and Future

## Robert Davis

In December 1999 a plant specimen from Carnarvon was delivered to the WA Herbarium for identification. The collector thought it was clover and reported it had been found growing in a local lawn. He also noted it occurred in irrigated areas, and appeared to establish itself in a moist environment and once mature, could withstand dry periods. The specimen was identified as *Gomphrena celosioides*, Gomphrena weed, a plant from Brazil related to the Mulla Mullas. The earliest report I could find on this species was from Gardner and Bennetts (1956) in "Toxic Plants of Western Australia". At that time it had not been discovered in Western Australia, however, it had been recorded from Queensland. Newton (1952) reported that this species caused ataxia in horses (coastal staggers) and noted that in sufficient quantities it could cause death.

state, its movement southward into a more temperate climate may be more conducive to its proliferation. All the collections so far have come either from moist areas or a garden situation, and there have been very few reports of the plant growing in surrounding bushland. This would suggest that the distribution of *G. celosioides* has been influenced by human activity and transported through the movement of soil and garden material. Although the rate of the apparent southward movement of *G. celosioides* cannot be accurately calibrated due to the infrequency of collections, the trend is worth reporting as it is another potential threat to the biodiversity of the flora of the southwest. The most recent collection was earlier this year, from the caravan park at Northampton, illustrating a method of transport which could accelerate its speed of spread southwards.

This tale of *G. celosioides* is an example of the enormous amount of information that can be deduced from correctly vouchered specimens. It illustrates that we can ascertain plant requirements from site information, predict mode of distribution, and track the rate of dispersal. It also shows us that vigilance is a vital tool in the protection of Western Australia's floral biodiversity. Our state's collections are often undervalued; however, they are not just validated dried pressed specimens gathering dust in the vaults of the Western Australian Herbarium. Each collection is a snap-shot in time of a particular plant's history, habit and habitat.



The collection dates and distribution of *G. celosioides* as recorded in Florabase, show a correlation between the collection dates and its movements. *Gomphrena celosioides* appears to have steadily moved south since its first collection in Kununurra in 1978. Whilst this species may seem fairly innocuous in the north of our

Woody  
Weed  
says



"Don't spread weeds on your tyres"



# Investigator 200 Symposium

A symposium to celebrate the 200th anniversary of Matthew Flinders' survey of the south coast of WA has been organised by the Australian Systematic Botany Society, the Western Australian Herbarium, CALM and the Wildflower Society of Western Australia.

The symposium, which will include speakers from WA, the Eastern States and England, will run from 9th-11th December. Excursions before, during and after the symposium have also been organised.

If you want more information contact:  
Alex George  
'Four Gables'  
18 Barclay Road  
Kardinya  
Western Australia 6163.  
Phone: (08) 9337 1655 Fax: (08) 9337 9404  
Email: [ageorge@central.murdoch.edu.au](mailto:ageorge@central.murdoch.edu.au)  
More information is also available at:  
<http://florabase.calm.wa.gov.au/events/investigator200/>



A display highlighting the botanical importance of the Investigator voyage and featuring the most important publications about the Western Australian flora in the 200 years since will be mounted at the Alexander Library, Perth for December 2001 and January 2002.

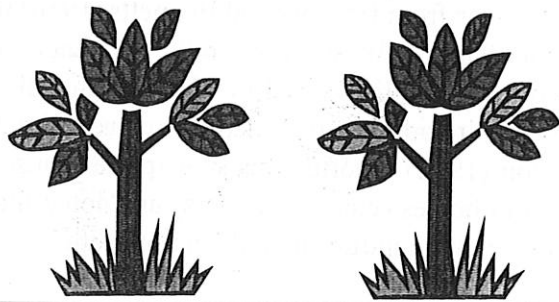
## Message from the Database

Correct latitude and longitude are very important on the database. If you use a GPS, please mark clearly on the collection sheet if the GPS is giving you decimal degrees, e.g. 28.3533 S, 114.6300 E rather than degrees, minutes and seconds e.g. 28° 21' 12" S, 114° 37' 48" E. Some GPS units are calibrated in degrees and decimal minutes; any of these are good as long as it is clearly marked which has been used.

(Continued from page 1)

If we obtain the new grant, the work to continue our effort in recording the State's vascular plants will continue hand-in-hand with the collection of lower plants. Training programs to teach collecting methods and some basic identification skills will deal with all plant groups so that we can build up collections of all flora and fungi in the Regional Herbaria and in Perth. The Herbarium has access to limited expertise in non-vascular plant taxonomy so we will need to seek help with identification elsewhere.

Neville Marchant



## Duplicate Labels

Some of you may already have received duplicate labels with your last barcode list. From now on the WA Herbarium will be providing these labels for all the duplicate vouchers in the regional herbaria.

As time permits we shall also provide them for vouchers submitted from the start of the Regional Herbaria Program. If you don't want these earlier labels please let me know.

We hope that by doing the labels electronically we will save you precious time and give more consistency to the regional herbarium collections.

Jan Gathe

## Correct mailing address

When sending items, please add to the address:

- one of our names or
- 'Regional Herbaria Program'
- 'Weed Information Network' or
- 'Plant Identification Unit'

so it will come straight to us.

**WA Herbarium, Locked Bag 104,  
Bentley Delivery Centre WA 6983**