



TASWEEDS



WINTER 2010 NUMBER 47

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The benefits of joining the Tasmanian Weed Society include:

- an information-packed quarterly newsletter – *Tasweeds*
- a forum to discuss weeds with people who actually understand
- regional field days and workshops on topics of interest
- an opportunity to meet and make valuable contacts.

Membership is timed to coincide with the AGM and is therefore valid for a year from 1 March. Members who join in the three-month period prior to March are deemed to have joined on 1 March.

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Cost of Membership

- Student \$10.00
- Ordinary \$25.00
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Please forward form and remittance to:

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About *Tasweeds*

Tasweeds is a quarterly publication of the Tasmanian Weed Society Inc.

Editor: Jonah Gouldthorpe

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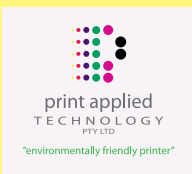
Members of the weed community are encouraged to submit articles to *Tasweeds*.

Deadlines for upcoming editions:

- Spring 2010 – 1 October
- Summer 2011 – 10 January.

Cover images (Jonah Gouldthorpe):

- *Ecballium elaterium* (Squirting Cucumber)



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Central Coast Council Weed Control 2009 to 2010

In early 2009 the Central Coast Council with financial support from Cradle Coast NRM commenced a roadside weed mapping program. There were 25 priority weeds chosen and the mapping began throughout our rural road reserves. At the end of the program, which cost around \$15,000, 23 rural roads had been mapped and over 3,900km had been traveled. The data collected was simple but relevant providing information on species, size of infestation, density and location. At least one way point was recorded for each infestation. With this data we were able to determine which weeds were present and which infestations/species were a priority for control.

From this data six priority weeds were identified: Pampas Grass, Gorse, Ragwort, Elishas Tears, Boneseed and Bridal Creeper. The data collected for these priority weeds was then uploaded to a GPS and the exact locations of each infestation plotted on maps to ensure control works could be undertaken as accurately and efficiently as possible.



Roadside Holly infestations are a target of Central Coast Council's weed control. Photo: Haylee Alderson



Sample map from Central Coast Council's roadside weed mapping program.

Control works for these priority weeds is now undertaken twice yearly and any new infestations found while undertaking control works are recorded. As these sites become completely controlled they will be removed from the data base.

We have recently completed the weed mapping of 7.5km of foreshore coastal reserve, this data will be analysed and priority weeds/infestations will be identified and control works implemented.

The Council will be continuing to build on existing weed mapping data to ensure data is kept relevant and accurate. Further roadside and reserve weed mapping will be ongoing to ensure adequate control of priority/environmental weeds, throughout the Central Coast.

The Central Coast Council has also been undertaking annual Boneseed control works for the past three years throughout the foreshore coastal reserve from Blythe River through to Forth River.

Through the roadside weed mapping data collected the ever growing presence of Holly (*Ilex aquifolium*) has been identified. The Council is currently spending \$8,000 towards controlling Holly through out the Central Coast municipal area.

Haylee Alderson
 Natural Resource Management Officer
 Central Coast Council
 Ulverstone

Landcare group for Circular Head

Local enthusiasm combined with assistance from Cradle Coast Natural Resource Management (NRM) has resulted in the formation of the Circular Head Landcare Group Inc (CHLCG). Initially a public meeting was held in February to assess the degree of community support for a Landcare group, and once it was established that sufficient interest existed in Circular Head then the rest of the seeding grant was used for group set up costs such as insurance and incorporation. The new group is very grateful for the wonderful support they have received from the Tasmanian Landcare Association and Cradle Coast NRM, through funding from the Australian Government's Caring for our Country.

As often happens when "the timing is right" the group has almost skipped the crawling stage and progressed to running in a very short space of time. They currently have five projects on the go which cover a diverse range of environmental issues. CHLCG are one of the successful applicants to the recent Tasmanian Landcare Association/ Wildcare Inc Round 1 funding "From the Bush to the Beach". Their project is to continue control of National Priority infestations of Seeding Willow (*Salix cinerea*) situated in Circular Head. Control work will be carried out by contractors at the end of the 2010. This project is



Weed control in threatened Swamp Paperbark forest is an important aim for the group. Photo: Anthea Fergusson

supported by Tasmanian Landcare Association, through funding from the Australian Government's Caring for our Country.

The Landcare group has successfully negotiated with the Circular Head Council to eradicate environmental and declared weeds from remnant native vegetation on East Esplanade at Smithton. The native vegetation consists of clumps of Swamp Paperbark (*Melaleuca ericifolia*) which is a listed threatened vegetation community in Tasmania. The group held a Weed Identification Day at the beginning of June where Matt Rose, Coastal Weeds Officer from



Matt Rose from Cradle Coast NRM discusses weed control methods with the group. Photo: Sue Jennings

Cradle Coast NRM also informed members of best practice weed control methods. Dudley Billing Landcare has since carried out the initial cut and paint work on the weed infested clumps, and now the volunteer members will take over the maintenance and revegetation of the remnant vegetation.

The issue of climate change and sea-level rise is a topic close to the heart of many people who live in coastal areas, and the Circular Head municipality had a large coast-line and many low lying areas. Dr. Richard Mount from the University of Tasmania will be visiting Circular Head on the 12th & 13th August to speak to secondary school children and the general public about a project he has been involved with which evaluates changes in sea-level from aerial photographs of the Robbins Passage – Boullanger Bay area in the far north-west. The seminar is also made possible through support from Cradle Coast NRM, through funding from the Australian Government's Caring for our Country.

The group will also assist the University of Tasmania by gathering data every two months on existing sea levels at Stanley.

The President of the group is Ms. Sue Jennings, the Vice President is Mr. Ian Wells, the Secretary is Ms. Jenny Brazier and the Treasurer is Mrs. Anthea Fergusson. Contact for any further information is Sue on 0429 337 204.

Anthea Fergusson

Glyphosate resistance spreading into roadside weeds

We tend to think of herbicide resistance as being a problem confined to cropping systems. But a recent case of glyphosate resistance has been documented from kilometres of roadside infestations of Annual Ryegrass in South Australia.

The Australian Glyphosate Sustainability Working Group said that roadsides will be the next “frontier” for glyphosate resistant weeds

Testing by University of Adelaide staff confirmed herbicide resistance from a swathe of Annual Ryegrass that had a 20 year history of being treated with glyphosate alone for weed control. The Working Group says that more cases of glyphosate resistance such as this one are likely if management practices don't change.

Glyphosate is a widely used and critical part of the toolbox for many Australian land managers, both in primary production and infrastructure management. However, over-reliance on glyphosate for weed control leads to weed populations being dominated by resistant individuals, against which the herbicide is no longer effective.

Seeds from these resistant individuals then spread to other areas, creating infestations which are difficult to manage using traditional glyphosate-based weed control.

In Australia, glyphosate resistant grasses are Annual Ryegrass, Awnless Barnyard Grass, and Liverseed Grass. Overseas another four grasses and eight broadleaf weed species have developed glyphosate resistance.

“Although the South Australian infestation was first noticed in 2008 it had clearly been there for some time for it to have spread so far” said Associate Professor Chris Preston, Chair of the Australian Glyphosate Sustainability Group. “Roadsides are routinely treated with glyphosate herbicide alone with few other effective weed control techniques being used, which should be ringing alarm bells with roadside managers”.

Associate Professor Preston says authorities, councils and communities must start looking at a range of roadside weed management techniques to prevent the development and spread of glyphosate resistant weeds along roadsides and movement into other sectors of the community.

“Preventing the seed set of those weeds surviving the herbicide application is critical to the management of herbicide resistance,” stated Professor Preston. “This applies as much to roadside weed management as it does in farming.”

Anyone suspecting glyphosate resistant weeds should contact their state expert with details available from the Australian glyphosate Working Group web site - <http://www.glyphosateresistance.org.au/suspect%20glyphosate.htm>

For more information about the Australian Glyphosate Sustainability Working Group go to: www.glyphosateresistance.org.au

Giant capeweed competition – entries trickling in

Weed buffs have begun their quest for riches and glory in the giant capeweed competition (see Tasweeds #45 Summer 2010 edition for details). The best entry so far comes from James Webb of Hobart, who sent in this shot of an 18 x 64 cm plant, collected in Hobart.

If you think that you can do better, and want to be in the running for cash prizes, email jonah_the_g@hotmail.com with the following:

- o A photo of the plant, roots visible, with a ruler for scale
- o The plant's height and width in cm
- o The location where you found/grew the plant
- o Your name and contact number.



Jonah Gouldthorpe

WEED PROFILE

Matthew Baker

WEED TAXONOMIST
TASMANIAN HERBARIUM

The fruits are spindle shaped berries up to 3.5cm long. Photo: Matthew Baker.

Bluebell Creeper

Billardiera heterophylla (Lindl.) L.Cayzer & Crisp
(Pittosporaceae)

Synonym (used to be called): *Sollya heterophylla* Lindl.

What is it?

Bluebell Creeper is a member of the Pittosporaceae family, which comprises seven genera and 250 species worldwide. Tasmania is home to several other members of the family including six *Pittosporum* taxa (one native species, four naturalised species and a taxon thought to be a hybrid between the native *P. bicolor* and the naturalised *P. undulatum*); the native *Bursaria spinosa*; two native species of *Rhytidosporum*; and six native species of *Billardiera*.

Billardiera is an endemic Australian genus of 24 species, which occur widely across south eastern and south western Australia. *Billardiera heterophylla* is native to south western Western Australia. However, its popularity as a garden plant coupled with its propensity to escape from plantings has seen it become widely naturalised in New South Wales, Victoria, South Australia and Tasmania. It was first recorded in Tasmania in 1965, from a roadside at South Arm, and has since been recorded from many locations across the state.

What is its weed potential?

In Tasmania, Bluebell Creeper is a common environmental weed in a variety of usually dry habitats in coastal and near coastal locations. Preferred habitats include disturbed sites such as waste places, roadsides and recently burnt woodland but more worryingly, infestations have been recorded growing amongst native *Eucalyptus* and *Allocasurina* woodlands and *Melaleuca* shrubbery. Spread of Bluebell Creeper occurs via bird dispersed seed and through the dumping of garden refuse.

Bluebell Creeper is likely to become more widespread and dominant in Tasmania's coastal vegetation.

What does it look like?

Bluebell Creeper is a vigorous twining, prostrate to rounded shrub that commonly grows on and through native shrubbery. The stems are flexuous and spineless. The juvenile leaves (seldom seen) are trilobed. The adult leaves are linear (up to 5 cm long and 1.8 cm wide) and are softly hairy when young but become glabrous once mature. The nodding inflorescence consists of clusters of up to five flowers, each flower with five, blue to mauve petals (8–12 mm long). The fruits are spindle shaped berries (up to 3.5 cm long), green to blackish in colour and contain numerous small seeds. Flowering occurs during summer.

Bluebell Creeper can be distinguished from the native species by its blue flowers. The native species have white, cream, yellow-green or reddish coloured flowers.



The inflorescence consists of clusters of up to five blue to mauve flowers. Photo: Matthew Baker.

If you think you have found Bluebell Creeper, please contact Matthew on 6226 1029 or matthew.baker@tmag.tas.gov.au.

Erica lusitanica – a most persistent weed

Control of Spanish Heath in Coningham Nature Recreation Area and observations on the effect of environmental factors on this control

Erica lusitanica (Spanish Heath) is an erect woody shrub. A native of south west Europe, it was introduced into Tasmania for use in horticulture and the floral trade and naturalised in southern Tasmania many years ago, thriving in the acid soils. It produces copious seeds which are spread by water, attachment to animal fur and human clothing, and mechanically by slashers and earth moving equipment.

Coningham Nature Recreation Area (CNRA) is a 490ha reserve 25km south of Hobart. From the early days of settlement until the 1970s it was a Crown Land block intermittently used for sheep grazing and timber cutting. It became a Regional Park in 1975 and a Nature Recreation Area in 1999. The reserve supports threatened vegetation communities and a number of threatened plant and animal species.¹

Weed management

Erica lusitanica has been present in the reserve for many years, probably introduced from nearby gardens and by heavy equipment used in roading and dam construction. A weed management strategy produced in 2002 identified *E. lusitanica* as the principal weed threat to the values of CNRA.²

The Friends of Coningham Nature Recreation Area (FCNRA) began primary weed control in 2002. Techniques used are hand pulling, cut and paint using glyphosate and spraying dense infestations using Garlon 600 Herbicide, a selective herbicide which has little effect on the predominately grassy/sedgy understorey. Monitoring is an important component of weed control and each year areas previously weeded or sprayed are checked. Up until 2009 little significant regrowth was recorded at any treated site.

Fire, drought and rain

Fires are a regular feature of the CNRA ecology. Major wildfires occurred in 1987³ and 2008. Both fires denuded the landscape leaving large areas of bare ground. Observations post the 1987 fire commenced in the 1990s when *E. lusitanica* was noted growing vigorously along tracks and old roads. By 2008 a significant area of the reserve had been colonised although the growth was patchy.

After the 2008 fire regrowth from incompletely burnt root stock was noted and very occasionally flowering plants were discovered. All surviving plants were destroyed. While plants in areas exposed to the full brunt of the wildfire appeared more likely to be completely destroyed than those exposed to back burning, it was noted that plants able to take advantage of shelter or small depressions survived. This was particularly noticeable along tracks and roads and probably explains the growth noted in these areas after the 1987 fire.

After the January 2008 fire it was expected that a massive and immediate germination of *E. lusitanica* seedlings from the soil seed bank would occur. However, the remainder of 2008 and early 2009 were drought years and seed germination was delayed.

In contrast to the drought of 2008, rainfall in 2009 was 862mm, about 30% above average.⁴ This abundant rainfall stimulated germination in the soil seed bank and resulted in a flush of seedlings across the reserve in both burnt and unburnt areas. The heaviest areas of seedling regrowth were in back burned areas not previously weeded.

Monitoring 2010 – unburnt areas

In treated areas cut and paint patches appear to have more seedling regrowth than the sprayed areas - several patches show masses of tiny seedlings, invariably where there had been very heavy weed growth. Most of the sprayed areas show very little regrowth. "Random" plants are growing in small numbers throughout the reserve in untreated areas. Some of these must have been missed during previous surveys but some have obviously germinated after the rains.



Abundant rainfall stimulated germination of seedlings in both burnt and unburnt areas Photo: Jean Taylor

Burnt areas

These have given some surprises. For instance, an area which was hand pulled in 2002 and monitored yearly since had yielded only a small number of plants over this time, however in 2010 many tiny seedlings were discovered here, located in a patch with little canopy but reasonable understorey regrowth. Areas sprayed in 2004 and 2007 show similar results in similar locales.

(Continued next page)

The recovery of *E. lusitanica* in the burnt areas untreated prior to the 2008 fire appears to be affected by both topography and fire intensity. In the areas where the fire was fiercest, most mature *E. lusitanica* appears to have been completely destroyed unless the plants were able to obtain some shelter behind large trees or rocks or in depressions. In areas where heavy infestations of *E. lusitanica* were exposed to less intense fire, seedling germination was noted in late 2009. This has now become rampant growth.

Conclusions

Erica lusitanica naturalised in the area south of Hobart many years ago. Anecdotally, during the 1930s depression the only source of income for families living in Poverty Gully in nearby Margate were these winter blooming flowers gathered for the floral trade.⁵ This weed is therefore well established and will take some time and effort to control.

Primary weed treatment using herbicides was achieving excellent results and it was expected that with secondary treatment long term maintenance would only require low level follow up. Unfortunately, environmental factors – fire, drought and rain – have affected this weed control.

The 2008 fire in CNRA destroyed large areas of very dense weeds but stimulated germination from the soil

seed bank. The large volumes of weed regrowth throughout the reserve following the fire and subsequent drought breaking rains are remarkable. Similar post rain weed flushes have been noted at other bush regeneration sites.⁶ It is obvious that this possibility must be taken into account when weed control is being planned.

Post fire funding for control of *E. lusitanica* was obtained from the Federal Government Caring for our Country grant program in late 2008. Fortunately, the life of this grant was two years as a lesser period would have missed the flush of growth following the drought-breaking rain. *E. lusitanica* is a very persistent weed because of very effective survival strategies – ability to cope with fires, copious seed production and a long life in the soil seed bank. It is apparent that if control of this and similar well-endowed weeds is the aim, attention must be paid to both environmental conditions which can disrupt planned weeding and to adequate follow-up weeding and these must be addressed in the provision of grant funding.

Unfortunately, grant monies must often be spent within a specified, often short time with no consideration of the environmental conditions affecting the site. Also of concern, money is usually granted for primary weeding and the importance of secondary control is not recognised.

Primary weeding will never achieve control/containment and the importance of long-term follow-up weeding needs to be factored into funding opportunities.

Jean Taylor
Friends of Coningham Nature
Recreation Area

References

- 1 Coningham Nature Recreation Area Management Statement 2009 DPIPW
- 2 Friends of Coningham, Oyster Cove and Lower Snug (FOCOCLS) 2002 Weed Management Strategy
- 3 An Archaeological Survey of Coningham State Recreation Area Ian Thomas and Debbie Maynard June 1988
- 4 Bureau of Meteorology Website – station at Snug, the nearest town
- 5 Personal communication 2004 Bev Benseman
- 6 A comment on frequency of follow up treatments required at bush regeneration sites Dr Tein McDonald AABR NSW Newsletter 105 May 2010



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