The Gorse Report

Newsletter of the National Gorse Task Force

Issue 2, May 2007

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For further information or a copy of this newsletter visit -

www.weeds.org.au/WoNS/gorse

or contact -

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Coordinators Report

Welcome to the second issue of The Gorse Report!

Many of you will be aware that Sandy Leighton has moved on from the position of National Gorse Coordinator. Sandy is now based in Alice Springs as the WoNS National Athel Pine and Mimosa pigra Coordinator. The Task Force would like to thank Sandy for all her hard work. It has certainly paid off!

I'll take this opportunity to introduce myself as the new Coordinator. I am a Tasmanian and during varied roles in the environmental sector have come into close contact with gorse on many occasions.

The chance to be part of a national approach to gorse management is very exciting and I look forward to meeting many of you before too long. Give me a call to talk gorse!

National Gorse Task Force - Resolve to Focus on Regional Eradication of Gorse

During April the National Gorse Task Force met in Canberra. The major outcome of the meeting was that the Task Force and Coordinator will focus efforts during the next twelve months on Eradication of Outlying Gorse Infestations - Nation Wide.

There are many areas such as Western Australia and Northern NSW where gorse is present in low densities and where people believe a focused and continued effort through a partnership approach could permanently eradicate gorse.

If you would like more information or would like to be part of this approach contact the National Gorse Coordinator.

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Breaking News!

Kangaroo Island to Eradicate Gorse - 25 Year Agreement!

Kangaroo Island Natural Resource Management (NRM) Board in South Australia and Private Landowners have committed to the permanent eradication of gorse from the island.

The project is a partnership between the Kangaroo Island NRM Board, Private Landowners and the National Gorse Task Force (NGT).

This project is a first in Australia, where all partners involved have formally committed to eradicating Gorse and the seed bank which can stay viable in the soil for up to 25 years.

Many weed eradication projects fail as treatments are carried out sporadically and don't manage the longevity of seed in the soil.

All gorse infestations will be destroyed this spring and an annual monitoring and control program established to ensure this Weed of National Significance (WoNS) is permanently eradicated from the island.

The Chair of the National Gorse Task Force, Ian Sauer and the Presiding Member of the Kangaroo Island NRM Board, Janice Kelly met during an Australian Landcare Council meeting on Kangaroo Island, on the 29th May to jointly sign a twenty five year Memorandum of Understanding, to secure the outcome of gorse eradication on Kangaroo Island.

The control program will continue annually for a period of twenty-five years to ensure that any seedlings or re growth are destroyed.

With good planning, adequate resources and commitment, this green cancer that is invading the landscape can be permanently eradicated. " Chairman of the NGT Ian Sauer said.

As part of the project, landowners across the island will be contacted to ensure that there are no other gorse infestations present and an education and awareness campaign will be conducted.

Key to the success of the program will be to ensure that seed from the infestation sites remains at the sites and no further gorse seed is bought onto the island.

The National Gorse Task Force has secured this agreement as part of its focus on the Eradication of Outlying Gorse Infestations Nation Wide.

A Kangaroo Island Gorse Infestation Awaiting Eradication (Keith Hodder)

Bobbie Brazil (Chair - Australian Landcare Council), Ian Sauer (Chair - National Gorse Task Force) and Janice Kelly (Kangaroo Island NRM Board) at the signing of the MOU

Government of South Australia
Kangaroo Island Natural Resources Management Board

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The Beginning of the End for Australia's Northern-most Gorse Infestation

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In the NSW New England Tablelands a group of 7 landholders, the Border Rivers / Gwydir CMA and Southern New England Landcare are joining forces to commence a Gorse Eradication project along Boorolong Creek.

Boorolong Creek is in the upper catchment of the Gwydir River and this is the most northern Gorse Infestation in NSW and Australia.

The original planting of Gorse on the creek occurred 100 years ago in the old Homestead garden. The infestation has spread along the creek for 25 km and has a width of 30m at its widest point.

Gorse is thriving amongst blackberry and remnant vegetation. Thankfully, due to the granite soil and rocky terrain, the infestation is contained on the riparian zone with the exception of a few scattered bushes.

As a result of the terrain, the eradication of the infestation is going to be quite a complex exercise involving a 4 wheel drive tractor with twin quick spray units and a lot of hard work and dedication.

Gorse was declared a noxious weed on the Tablelands in 2000 by the New England Weeds Authority. The infestation is an established one requiring investment by both the CMA and Landowners for the project to be effective.

An incentives package is being negotiated between the Landowners and the Border Rivers / Gwydir CMA with assistance from the Southern New England Landcare. The project involves remnant native vegetation across the 7 properties to be fenced and protected, gorse to be sprayed and treatments follow up, some fencing off of the creek and some dam construction.

Group commitment is the key to the success of the project with fencing work to commence as soon as contracts are signed and initial spraying to occur in summer for maximum kill on both gorse and blackberry.

Eradication of this infestation will remove the threat of downstream infestation throughout the Gwydir River Catchment and will involve continued dedication for its control by landholders for years to come.

Typical Boorolong Creek Infestation

Gorse Spider Mite Colony

VIC

Draft Victorian Gorse Strategy

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Since 1999 Victoria has had a Gorse Strategy. This strategy mainly focused on management of core infestations. A new Strategy has been initiated by the Victorian Gorse Task Force (VGT) which has a statewide scope.

A strategy brief has been circulated to several consultants calling on them to submit proposals which will be assessed by the VTG over the coming weeks. Once a consultant has been engaged it is hoped that a Draft Strategy will be available for public comment by September 2007.

In 2005 an evaluation was undertaken on the 1999 Gorse Control Strategy, consisting of two components:

- A desktop analysis to review the principal goals set in 1999 and to determine whether the actions outlined in the strategy had been achieved
- A survey of partners and stakeholders to determine levels of satisfaction with current programs and to comment on any issues.

A Bob Cat Mulcher taking on gorse in VIC

Gorse sprayed out on a creek in the Wimmera CMA (S. Leighton)

The survey was conducted by an independent consultant. In mid 2006 a workshop was held with the VGT and a project brief was developed outlining the desired direction the VGT wished to take in the development of its new five year strategy.

To ensure that the VGT could continue to deliver and expand on past achievements the brief outlined the need for the new strategy to address the following points:

- Alignment to government policy particularly those associated with pest plant priorities and community assets
- Integration with other community and government priority projects
- Alignment with the National Gorse Strategy
- Identifying models/options on how the VGT can be structured to deliver statewide interests
- The development of strategic objectives, outcomes and actions outlining responsibility for delivery, partners and timeframes

Gorse Management in Tasmanian Conservation Covenants

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The Private Reserve System hidden away in Tasmania's historic agricultural properties and nestled amongst scenic bushy hills is a system of privately owned nature conservation reserves that protect some of Tassie's most threatened flora and fauna.

These reserves have been created through voluntary partnerships between private landowners and the State, largely through Conservation Covenants being placed on land titles or portions of titles, in perpetuity.

Tasmania's first Covenant was registered in 1999 and now there are over 350 across Tasmania, protecting around 45 000 ha of high priority native vegetation and fauna.

Environmental weeds pose one of the greatest threats to this private reserve system and gorse is the most widespread and prolific weed present. Gorse threatens under reserved vegetation communities, threatened species and increases fire severity. Gorse is also a major financial burden for landowners with private reserves who are often sheep graziers.

Each of these private reserves has a Conservation Management Plan that is negotiated and agreed to between the Landowner and the State.

Management Plans outline the natural values of the reserve, the activities that can or cannot take place in the reserve and specific management actions appropriate to maintaining the natural values.

All Management Plans require landowners to manage environmental weeds such as gorse. Typically, plans require an annual inspection for weed populations, as well as control measures.

All Private Reserves in Tasmania are now administered and managed through the Private Land Conservation Program (PLCP) in the Department of Primary Industries and Water.

During initial reserve assessments and regular reserve visits, weeds are mapped and previous management information is recorded. Data is stored in a management database and on a MapInfo GIS system.

Mapping is consistent with the National Mapping Standard, developed by the Australian Government and Bureau of Rural Sciences, (see the Gorse Best Practice Manual). Data collected can contribute to national weed mapping programs and enhance our broader understanding of the extent and distribution of gorse across the nation.

Gorse has been mapped in over half of the private reserves in Tasmania. Once all weed species are mapped, the Program can complete a Weed Management Strategy for the reserve system.

Tasmania
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Tasmanian Reserve Estate (cont)

The Program provides all landowners with a map of weed locations and weed management advice. PLCP staff give a helping hand with gorse control in the field, where this helps to develop the skills of landowners. It also helps the entire PLCP team to develop an understanding of management issues faced by landowners, and an appreciation of the effort required to control weeds.

Control techniques include a combination of burning, spraying, mechanical removal and cutting and pasting of gorse. The gorse spider mite has also been released in many reserves where infestations are too difficult to access or other means of control are cost prohibitive. The gorse seed weevil is also active within many reserves.

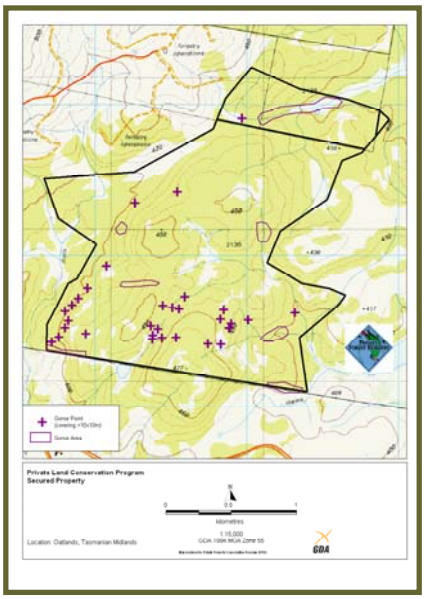
Prior to covenanting, many of the reserves had a history of light grazing by sheep under conditions that allowed for the maintenance of the natural values. Managed grazing is permitted for conservation management of many reserves. Grazing can also assist in gorse control as sheep tend to browse young gorse seedlings, often killing them.

Gorse also provides habitat in landscapes where there has been significant land clearance and understorey. Removing gorse often needs to be done gradually and requires replacement with local native shrubs to provide habitat.

There is no doubt that gorse is a significant threat to the integrity of private conservation reserves in Tasmania. The PLCP is committed to action that will manage the gorse threat strategically.

This action will compliment the fantastic efforts made by landowners to control gorse and in some cases eradicate it from their properties altogether.

Tasmania
Explore the possibilities



Sample Weed Map

Louise Mendel Mapping Gorse

Landowner in Action

WA

"The Burning Bush"

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Soon to be seen in the Albany area of Western Australia will be 'The Burning Bush' as known in biblical terms but more commonly known now as gorse.

Due to its chemical composition and high content of oil, this bush is known to self combust. In days of old – self combustion would have been a frightening concept with connotations of witch craft or divine intervention.

In England gorse was traditionally gathered into faggots and used as tinder to start fires. In 1864 it was cultivated in Surrey and other English counties especially for this purpose, being popular with bakers to whom it was sold as fuel for their ovens.

It has a high concentration of oil in its leaves and branches, and so catches fire easily and burns well, giving off a heat almost equal to that of charcoal. Because older plants can carry a lot of dead wood gorse can be a hazard in hot dry summers.

The ashes have high alkali content and can be mixed with animal fat to produce soap or clay to form a soap substitute. Branches were also spread onto the fields to improve the soil.

Gorse has been used for dying textiles, in home brewing to produce a 'moonshine' beverage but today sadly supply far outstrips demand.

John Moore and Phil Williamson from Department of Agriculture and Food have been working with local landholder George Franey to manage the spread of gorse on his property on the outskirts of Albany.

The management program is at the stage of 'burning' the 'Burning Bush. Spraying has been used to kill outliers, while the main infestation has been pushed into large piles which will be burnt when the weather is appropriate.

In Albany, some infestation sites are being developed as housing estates and will be covered with bitumen and concrete.

The partnership of the Department of Agriculture and Fisheries (WA), and the South Coast Natural Resource Management (SCNRM) and Landholders is continuing to research permanent methods of eradication.

The SCNRM Inc is the Regional Group for NRM on the South Coast of Western Australia. Funding is provided by the Australian and Western Australian Governments through the joint National Action Plan for Salinity and Water Quality programme and the Natural Heritage Trust.

Merv Penne pushes on with gorse eradication.

Assessing the Impact of a Native Parasitic Plant *Cassytha pubescens* on Gorse

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At the University of Adelaide we have commenced a research project looking at the impacts of the native parasitic plant *Cassytha pubescens* (Dodder Laurel) on gorse. This a Linkage Project (LP0667863) funded by the Australian Research Council and the Adelaide Mount Lofty Ranges Natural Resources Management Board.

Dodder is a native twining, leafless and rootless vine that obtains all its water and nutrients, and possibly most of its carbon, from its host via small connections into the host tissue called haustoria.

Gorse has been observed to die in the presence of the parasite and most infected gorse plants have low vitality and reduced flowering. Preliminary research work has found that gorse plants infected by Dodder have less efficient photosynthesis and may be under more water stress than uninfected gorse plants.

In the most severe infections, Dodder forms thick, horizontal mats, resulting in the death of the gorse shrubs. The Dodder then moves to the closest patch of living gorse and the process begins again.

Our initial findings suggest that Dodder has the potential to reduce gorse infestations, depending on environmental conditions and the density of the invaded gorse stand.

Our research will use controlled pot experiments, field observations and manipulative field experiments to examine the development of the parasite-host association and quantify the impact of Dodder on gorse growth, physiology, reproduction and survival.

Virtually nothing is known about how Dodder affects gorse or other hosts. We know from other studies that parasitic plants impact on their hosts by diverting host resources.

The severity of impact depends upon the ability of the parasitic plant to acquire its own resources, the efficiency of transfer of resources from the host to the parasite, the nutritional status of the host and prevailing environmental conditions.

An important aspect of our research will be to focus on how *Cassytha pubescens* obtains resources from its hosts under varying environmental conditions and the impact this has on the host.

A practical application of this research will be to assess the potential of *Cassytha pubescens* as a biological control for gorse. The potential risks of using *Cassytha pubescens* should also be understood.

Knowledge regarding the biology of the control agent, *Cassytha pubescens*, and the nature of its interaction with host species is required to develop its use as a control agent. It will be important to study these relationships in target weed species such as gorse and co-occurring native host species.

Cassytha pubescens covering a gorse infestation

Dodder Laurel (*Cassytha pubescens)* continued

Dodder will not be an appropriate control agent if its intentional distribution is likely to have significant off-target impacts on indigenous flora in remnant native vegetation, particularly where it is not already locally present.

Consideration will also have to be given to the possible consequences of moving particular genotypes of *Cassytha pubescens* to other regions.

We are interested in records of *Cassytha* species parasitism on gorse and other exotic weeds in Australia.

There are reports of *Cassytha melantha* parasitising gorse in Tasmania and we welcome any further observations on this.

Cassytha pubescens on a young gorse plant

Cassytha pubescens takes a hold in Tasmania

(Photos by Sandy Leighton)

National Gorse Task Force Members

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National Gorse TASKFORCE

The role of the National Gorse Taskforce is to facilitate, improve and encourage strategic National Action by coordinating the implementation of the National Gorse Strategic Plan.

The Task Force welcome contributions to the newsletter which will be circulated in Autumn and Spring

National Gorse Program Achievements

1995	Gorse biological control program began
2003	National Gorse Strategic Plan published
2004	National Gorse Coordinator appointed National Gorse Task Force formed
2005	National Gorse Eradication Areas identified Gorse National Priority Action Framework produced (a document that helps guide investment in gorse management and maximise public benefit)
2006	National Best Practice Manual Produced NSW gorse infestations mapped National Containment Lines developed for SA, WA, Tasmania and NSW National Gorse Map Produced
2007	Task Force Focus on Regional Eradication of Gorse Outliers Commences First 25 Year Agreement signed by Kangaroo Island NRM Board to Eradicate Gorse

Potential Investment Programs

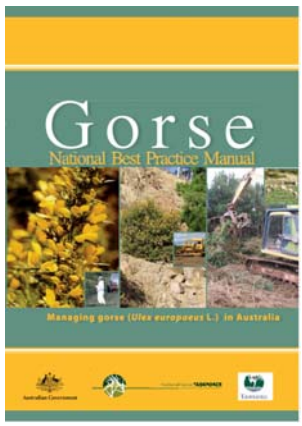
The following websites provide links to a range of funding opportunities:

- **GrantsLink website - www.grantslink.gov.au/**
- **Guide to Community Grants - www.aph.gov.au/library/intguide/sp/spgrants.htm**

For the best chance of success, start planning your project early and ensure that you clearly demonstrate how the project meets the criteria outlined by the funding program.

If you are planning, or already conducting, a project that involves gorse, the National Gorse Coordinator is keen to hear about it and provide you with assistance or information where needed.

Download your copy of the Gorse Best Practice Manual
at www.weeds.org.au/WoNS/gorse



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Advertise your next big gorse event here...

Upcoming Events:

The next face to face meeting of the National Gorse Task Force will be held in SA during the 2007 spring.

If you are planning a gorse-related event and would like to advertise it in this newsletter, please forward details of the event to the National Gorse Coordinator.

We're on the web!
www.weeds.org.au/WoNS/gorse