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The implementation of weed control on Phillip Island

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Summary

Crown land managers, environmental facilitators and educators regard the combination of multiple components to be most effective in combating Phillip Island's environmental and agricultural weeds. Working together to plan integrated control programs that often rely on more than one method of control. Also equally important has been monitoring control programs, establishing a comprehensive system of mapping weeds across public and private remnants and keeping up to date with new and emerging species.

Reaching the permanent and part-time population through a range of education and incentive programs, and supporting an enthusiastic group of environmental volunteers has ensured that more and more people are joining the war against weeds. Future efforts have been boosted by a recently secured Island-wide Envirofund grant. A cultural shift in the way we view and manage the land is taking place. The momentum is building, and although we have a long way to go, we believe we are on the way towards making a real impact.

Introduction

Phillip Island is a place of diverse natural features. This is exemplified in its unique coast line, with exposed sandy beaches, sheer cliff lines in the south coast to lower energy beaches and muddy bays backed by mangrove and salt marsh communities to the north. The island is also renowned for its wildlife, with species such as little penguins, Australian fur seals and koalas responsible for drawing tourists to the area.

Despite its natural treasures, Phillip Island has been highly modified due mainly to its agricultural history, ever increasing tourism and a high proportion of non-resident landholders places increasing pressure on the remaining remnants.

Therefore, those involved in weed control, facilitation and environmental education on Phillip Island are faced with on going challenges. This paper provides a snap shot of some of the strategies in place across the island.

There are two main public land management agencies on Phillip Island. Phillip Island Nature Park manages approximately 80 kilometres of foreshore reserve and a few larger reserves, including the Penguin Parade, Oswin Roberts Reserve,

Cape Woolamai and Churchill Island. The Bass Coast Shire Council manage the remainder of the foreshore reserve (approximately 20 km) and some small inland bushland reserves. The other major stakeholder involved in land management is Phillip Island Landcare, who represents over 200 families on the island.

Over the past five years, the Phillip Island Landcare Group, Phillip Island Nature Park and Bass Coast Shire Council's have worked together on a multi-pronged approach to weed management. This involves a wide range of activities such as integrated field management, coordination across land management boundaries, mapping/monitoring, education, incentives, and community involvement.

As we look around Phillip Island it is easy to notice that many of our reserves are suffering from weed invasion. Exotic and non-indigenous native plants, such as blackberry, mirror bush, gorse, bridal creeper, asparagus fern, watsonia and cape ivy to name a few, have the ability to out-compete indigenous plants, resulting in a reduction of biodiversity, thereby impacting the natural characteristics for which the Phillip Island is famous. It has only been in the last ten years that some crown land managers have prioritized weed control. As a result we have inherited some highly degraded weedy native remnants. However a number of enthusiastic people are now working together in the battle to control weeds.

Weed management issues

A number of physical, demographic and legislative factors limit environmental weed control on Phillip Island and place extra challenges to those involved in community education and crown land weed control. These limitations include:

Vegetation loss/fragmentation Phillip Island has less than 7% remnant vegetation remaining; much of it was removed during the early part of the century for agriculture and to provide fuel for chicory kilns. As a result, indigenous remnants are confined to the narrow reserved coastal strip, inland reserves, roadsides and small patches scattered across farm land. The resultant fragmented landscape with predominant edges, makes many reserves susceptible to weed invasion.

Catchment demography Phillip Island is characterized by a high proportion of non-permanent landholders and holiday-makers. Many of these have a limited

understanding of the local natural environment and due to their part-time presence on the Island, have limited time to devote to property maintenance such as weed control. Many of our weed outbreaks originate from source plants that have spread from such urban properties. Some of these have spread from the garden to reserves due to seeds being transported by the wind, water or animals such as fruit eating birds. Other weeds are transported by the illegal dumping of garden waste.

There is also a high turn over of landholders, as people are buying and selling holiday properties. From a Landcare perspective, this means that you constantly having to meet new and changing expectations and there is a continual program of re educating new landholders on the weed management issues.

Being a holiday destination means you also attract lots of retirees living in both the urban and rural sector, resulting in both aging farmers and volunteers, which in turn can alter the control techniques that can be used.

Wildlife constraints Some of Phillip Island's unique wildlife can also restrict the control of environmental weeds. Much of the southern coastal reserve is home to the burrowing little penguin and short-tailed shearwater, thereby restricting the use of herbicide and ability to which weed controllers can enter some areas.

Funding for priority weeds Another major issue in weed control is that we are constantly faced with new and emerging weeds as landholders move into the area and apply the same gardening practices to holiday homes as they do in suburban Melbourne. Another problem with the high proportion of non-permanent population is that many landholders leave their gardens unattended for long periods of time. This high proportion of garden escapees means that many of our priority weeds are not found on the noxious weed list, and are not matched to funding applications and quite often do not have registered chemical methods of control. Therefore a great deal of time is spent identifying the weeds and then trying to determine the best method of control.

Partnerships

Those involved in environmental weed control, education and facilitation have been able to have a greater impact by forming partnerships. In 1997, the Bass Coast Environmental Alliance was formed to ensure that strong partnerships exist between all agencies working on weed management and education. The Alliance is made up of the Bass Coast Shire Council, Phillip Island Landcare, Phillip Island Nature Park, Westernport Water and Coast Action/Coastcare.

The partnerships formed through the Alliance, in turn create direct links to the

community, ensuring that all stakeholders involved in weed management are incorporated into all aspects of the project including the developmental stage, resulting in the wide adoption of the projects and awareness of all facets involved. This has resulted in a long term record of project outcomes being achieved.

A weed sub-committee has been formed, with representatives from alliance agencies as well as community representatives. This sub committee meet on a bi-monthly basis to provide direction to Project Officers, discuss weed control priorities, timing and management techniques. It is through this group directly that weed control timing and technique is aligned ensuring consistent weed management across all land tenures.

These direct links between partners and community enables the alignment of priority issues and directions and has seen the joint development of the Bass Coast Shire Council Land Management Biodiversity Incentive Scheme (LMBIS), improving community ownership and adoption of such initiatives.

An example of such a partnership can be seen from the annual weed forum, where all stakeholders in weed management across the area come together prior to the peak weed season to review last years achievements, share localized knowledge and information on control techniques and start up new initiatives. From this forum we are able to align our yearly list of priority issues and directions and improve community ownership and adoption of weed control programs.

Strategic planning

Strategic planning has been identified an important aspect of weed management. A Landcare initiative saw the Weeds sub committee develop a localized weed strategy fitting directly into community expectations, with achievable outcomes identified by the community. The 10 in 10 strategy has been running for three years now and identifies 10 weeds that can be controlled on Phillip Island in 10 years. This strategy has been widely adopted across the island by landholders, volunteer groups, Bass Coast Shire Council, Phillip Island Nature Park, Westernport Water and is referred to by VicRoads when they are determining there yearly program.

Part of the focus for the environmental alliance has been the strong push to develop joint projects to ensure that a consistent approach to weed control is carried out. This year we have developed a project encompassing over nine community groups on the island, Bass Coast Shire Council, Phillip Island Landcare, Coastcare/Coast Action and Phillip Island Nature Park focusing on weed control.

Weed control initiatives

The provision of incentives for weed control has turned some of the more recalcitrant landholders in to models for long-term weed control.

One of the newer initiatives for weed awareness is the 'Weeds Out, Indigenous Plants In' campaign, where urban residents are given free indigenous plants for the removal of nominated weeds. This program is being run through local nurseries to highlight the issue at the point of sale and has been working exceptionally well.

Another newer initiative is the Rural Rebate Scheme, whereby landholders are given a reduced rate notice if they are deemed to be good land managers. This scheme has worked exceptionally well as the community were involved from the beginning as mentioned earlier and the local Landcare group reviews the priority weeds for control each year.

There are also many subsidies available to landholders trying to control weeds in remnant vegetation and revegetation. There is also a scheme with the Bass Coast Shire Council where landholders are able to gain free herbicide for use along roadsides.

These projects require the sensitive herbicide application, to ensure there is no damage occurring to revegetation sites and remnant vegetation, so there has been a strong push to educate landholders on the correct chemicals to ensure no detrimental effects occur. This has involved training sessions, field days and information evenings.

Integrated Control

Spraying

When we are actually carrying out on ground weed control works, we are often trying to establish a coordinated approach to weeds across all land tenures, through communication between adjacent land managers and landholders

We also use a broad range of control techniques depending on the weed being targeted and the area in which it occurs. One of the most widely used techniques is chemical spraying and usually occurs in a farm situation, along the foreshore and in land reserves. Some of the weeds generally controlled using spraying include blackberry, bridal creeper, cape ivy, gorse and so on.

Manual removal

Another widely used control technique is manual removal. Generally this techniques is more widely used on farm land with little or no indigenous vegetation around and where there are a large amount of woody weeds that can be removed at a relatively low cost, this also often achieves two outcomes as we are removing potential vermin harbour.

Manual removal is also widely used in areas where volunteers are working and is often associated with control of woody weeds and creepers that are not as susceptible to or are too tall for spraying such as mirror bush, Cape wattle and pittosporum.

Creepers such as English ivy and dolichos are often treated with manual control if they are growing up trees. This technique is also widely used by those groups that prefer to avoid large scale chemical spraying.

Fire

We have also begun using fire as a management tool for weeds such as gorse that are often located in difficult terrain making chemical or manual control almost impossible due to access. This has led to a strong partnership being developed with the CFA, where they use these sites as part of their overall training program.

The burning of gorse with follow up chemical application has proved to be one of the most successful tools in eradicating it and will continue to be used across the island.

Biological control

The last regular technique that we use to control weeds on Phillip Island is that of biocontrol. To date we have two agents for gorse and two for bridal creeper.

Gorse biocontrol agents have been a real winner on Phillip Island and are again used in areas where chemicals are not the first option, either due to terrain or surrounding vegetation. This past year we ran a program with the local primary schools where Bridal Creeper agents were reared in the class room and then released on to reserves and farmland.

Monitoring and mapping

Monitoring is considered an essential component of any weed control program, and an important recent innovation to weed management on Phillip Island has been the development of standardized weed mapping system. This not only allows land managers to effectively monitor past projects, but is also a vital tool in planning future programs.

In the past, public land managers kept rudimentary weed maps for their own areas. However, the partnerships forged through Phillip Island Landcare's Weeds Sub-committee and a successful Government grant application resulted in the collection of field data on most public and private remnants and the storage of mapped data on a central database. Land management agencies are now incorporating these maps onto their own GIS systems. Ongoing data collection and updating of the maps will now be incorporated into future weed management programs.

Working with the community

Phillip Island is fortunate to benefit from a range of enthusiastic environmental volunteers who greatly contribute to on ground control activities, planning and education. These include six Coast Action/Coastcare groups, a thriving Landcare membership and several 'Friends of' and other volunteer conservation groups.

Public land managers have recognized the value of these groups and devote much of their time and resources to supporting volunteer activities.

Case Study – Newhaven Coast Action/Coastcare Group

The formation of the Newhaven Coast Action Group dates back to 1996 when a couple of concerned residents saw a local newspaper advertisement seeking people to become involved in the protection of foreshore areas. This led to interpretative foreshore walks with the regional Coast Action/Coastcare Facilitator, followed by the successful application for funds to improve foreshore access and tackle environmental weed problems.

Today, the Newhaven Coast Action Group have transformed many areas that were completely dominated by environmental weeds into self-sustaining indigenous plant communities. In most situations these areas were so overrun by environmental weeds that the only option was to completely knock down the vegetative cover with non selective herbicide, apply weed mat and reintroduce locally sourced indigenous plants (refer to image below).

The provision of locally sourced indigenous plants was assisted by the local community nursery and seed bank. The Barb Martin Bushbank was formed four years ago by a group of local farmers and community representatives who wanted to establish a seed bank. Since then, it has grown to a large-scale nursery that

produces over 50 000 plants annually to volunteer groups, Landcare, public land managers and the general public.

The Bushbank is coordinated by a part-time employee, but all other labour is contributed by volunteers, such as Coast Action groups, Landcare members, elderly citizens' home and students. As a result the Newhaven Coast Action Group have been actively involved in most stages of their rehabilitation programs. These being planning, fund application, seed/cuttings collection and propagation, weed control, revegetation and follow-up maintenance.

Awareness and education

The facilitation of a network of volunteer groups has proven invaluable in tackling weeds on Phillip Island. However, there is still a wide cross-section of the permanent and part-time population who need to be kept aware of environmental issues. In order to adequately reach these people, the aforementioned Bass Coast Environmental Alliance use a variety of methods such as the production of brochures, press releases, field days and public information evenings.

The major weed education event is the jointly coordinated Weedbuster Week. Coinciding with National Weedbuster Week, the Bass Coast Weedbuster Week activities include public street displays during which Environmental Officers and Park Rangers provide information of local weed related matters including species identification and control techniques. A public information evening allows land managers to highlight current control activities and guest speakers present new ideas on how we can prevent and control weed infestations around the home and in public land. It is also during Weedbuster Week that the previously mentioned 'Weeds Out, Indigenous Plants In' offer commences.

