

The challenge of maintaining a robust on-going weed spotters network in Queensland

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Summary Several factors come into play once a community-based early weed detection network is established. A dedicated team of organisations and individuals becomes committed to the program. There is a broad diversity of skills and expectations. Who these people are and how their enthusiasm is maintained to achieve realistic goals is discussed. The weed spotters submitted 783 specimens to the Queensland Herbarium over an 18 month period, and two new weeds were detected in that time. Membership increases over time. Sudden increases in new membership and what triggers these are discussed, along with what to focus on to maintain and grow the network. The movement to web-based delivery of the network and the gains and losses to be expected are considered.

Keywords Community engagement, early detection, herbarium.

INTRODUCTION

A successful pilot program for a community-based early weed detection network was established in Queensland, funded nationally by the Cooperative Research Centre for Australian Weed Management (Weeds CRC). When this funding ceased in June 2008, there was a challenge to maintain the network's functionality.

When the pilot program ceased, it was realised that several factors come into play once a community-based early weed detection network is established. Firstly, there is a community expectation that the network will continue to exist. To address this, resources need to be sourced to maintain the network operations. Secondly, after an initial burst of enthusiasm, there is a period of waning enthusiasm for the activities of the network by volunteers. Therefore communication with the members is vital to maintain interest in the network.

It was found that a dedicated team of organisations and individuals become committed to the weed detection program once it is established.

These people come from three broad types of backgrounds.

1. Land carers. They include land care groups, conservation volunteers, catchment care groups and individual land holders, both rural and urban.

2. People who want to do something for the environment in a social network. This group consists of active retirees, students and jobseekers wanting to make a useful contribution in the community.
3. People whose core business is weeds. This group includes weed officers from Local Government Authorities, Natural Resource Management groups, National Parks, State Biosecurity and the Australian Quarantine Inspection Service.

Maintaining enthusiasm amongst and achieving realistic goals for such a diverse group is a continual challenge.

METHODS

The goal of the Weed Spotters Queensland Network is the early detection of new weeds in Queensland. Having a single, simple goal has proved beneficial to designing an appropriate program for the network.

The Weed Spotters Queensland Network offers:

- Initial training in how to press plants and send them for identification,
- Provision of phone or email advice and information about particular weed problems that spotters are involved with locally,
- Regional training sessions to improve knowledge and to link individuals with other like-minded people in their area,
- Information on new weeds suspected in their area via new weed alerts and
- Free plant identification service.

The network operates as part education and training, part listening and enquiring, and part encouragement and support.

RESULTS AND DISCUSSION

Weeds detected The Queensland Herbarium has developed Herbarium weed notification protocols to ensure rapid notification of potential invasive plant species to the agency responsible for invasive species management (Holland 2007). Invasive species management in Queensland is presently the role of Biosecurity Queensland.

Data are presented on the plants submitted to the Queensland Herbarium over an 18 month time

period by members of the Weed Spotters Queensland Network, from 1 July 2008 to 31 December 2009 (Figure 1).

Most plant collectors submit a mixture of native and exotic plant material for identification. Weed Spotters submitted more than twice as many weeds as native species. A total of 783 specimens were submitted in the last 18 months. Of these 526 were weeds and 257 were natives. A total of 52.8% of the weeds submitted were retained for incorporation into the Queensland Herbarium collection and 26% of the native specimens submitted were retained. The contribution of scientific information made by these additional collectors to the Herbarium is significant. A number of weeds collected by the weed spotters triggered alert notifications (Table 1).

Two weed species new to Queensland have been detected in the last 18 months. *Nassella tenuissima*, Mexican feather grass, was detected by a Biosecurity Queensland officer and *Mayaca fluviatilis*, bog moss, was detected by a Queensland Parks and Wildlife officer. Both people were off-duty when they ‘wondered’ about a plant, collected it and sent it for identification.

The single population of *Mayaca fluviatilis* was the first naturalisation of this species recorded for Australia. The outbreak has been successfully treated and the site is being monitored. *Nassella tenuissima* was unknowingly distributed by the nursery industry as a landscaping plant. Not all plants have been able to

be traced and eradicated. An early halt was put on sales and distribution, so the scale of any potential infestation by this exotic species has been greatly reduced by the prompt action of Biosecurity Queensland.

It is economically beneficial to the state of Queensland to maintain an active, community-based, weed detection network to assist government officers in the early detection and control of new weeds.

Maintaining the network Membership registration records have been examined to determine factors that drive new member recruitment. There were three main peaks in recruitment in the period July 2008 to January

Table 1. Number of weed species collected by weed spotters in each alert notification category during the period July 2008–December 2009.

Category	No. specimens
Declared class 1	17
Declared class 2	27
Declared class 3	14
Northern Australian Quarantine Service target list	3
Weeds of National Significance	8
National Environmental Alert list	10
Priority Sleeper Weeds	6

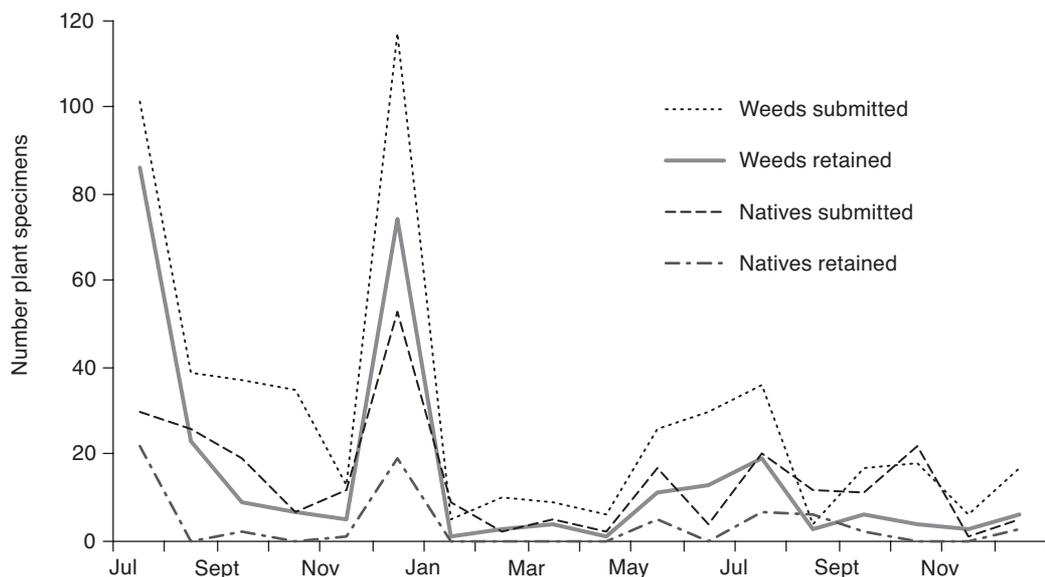


Figure 1. Number of plant specimens submitted by Weed Spotters Queensland Network during the period July 2008–December 2009.

2010 (Figure 2). The first was the result of a mail out of application forms to people previously registered as weed spotters under the Weeds CRC. The return of these forms peaked in September 2008.

The second major recruitment event occurred in April–May 2009. There was a series of practical training workshops delivered to the Desert Channels Region at that time. Attendance was high and meeting others with similar interest in early weed detection and eradication inspired enthusiasm amongst this group.

The third increase in membership occurred when the position of regional coordinator for the Wet Tropics bioregion of Queensland finished. This position was hosted by Conservation Volunteers Australia, but ceased to exist when external funding for the position ended. The regional membership dealt with by this regional coordinator was transferred from Conservation Volunteers Australia to the state-wide network directly.

Other membership bursts come after some type of activity. Each newsletter, training session, public presentation, email alert or enquiry to members triggers extra members signing up.

These events are usually initiated by the weed spotter coordinator rather than the members themselves.

CONCLUSIONS

What to focus on to maintain and grow the network The highest priority is to establish regional coordinators as a local point of contact for the network members. The role of the regional coordinator is a key to the project outcomes. The coordinators are nodes that link scientists to the community and the community to scientists (Morton 2007). Priority areas of the state are those most likely to be impacted by new weeds. These include the Wet Tropics, port areas, areas of high vehicle movement, e.g. mining sites, infrastructure developments, roads and regions importing grains or stock feed that may contain contaminants.

Increased education of existing weed spotters is a high priority area that will continue to receive a lot of effort. ‘Train the trainer’ workshops have been successfully trialled and it is intended that they will be the focus of most training that is conducted. The training given is tailored to group requirements. Characteristics of weeds and where to look for new weeds are included in the training. Rather than increasing numbers, the focus will be on improving the skills and knowledge of those already participating as members of the network.

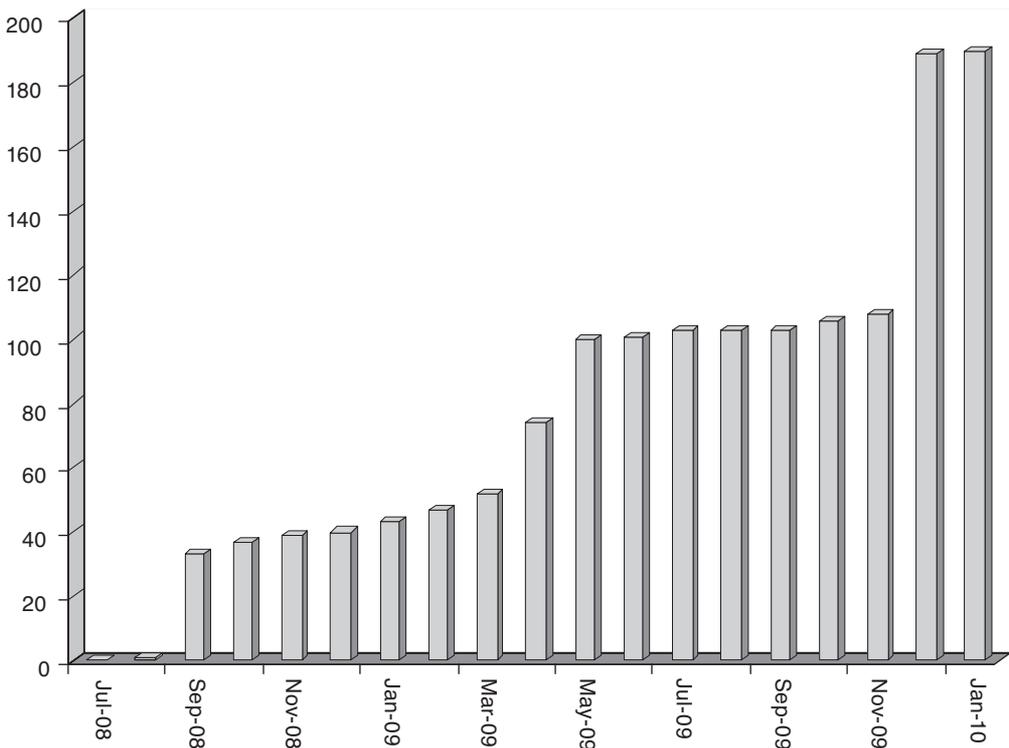


Figure 2. Membership growth during the period July 2008–January 2010.

Developing the network skills base It is intended to improve weed spotters skills and knowledge by (i) regular newsletters and email contact, (ii) development of illustrated keys to weed species to improve weed identification skills in the broader population and (iii) introduction of a program of field days to exchange and update knowledge. Field days have the additional advantage of connecting like-minded people who develop friendships and exchange information at a local level.

Move to web-based delivery of information Gains and losses are expected when the move to web-based delivery of information is implemented.

There are several advantages. It will be easier to maintain up-to-date information in a rapidly changing field. It will also be easier for those with internet access to view and obtain information and link to further information. Members will also be able to access rapid search facilities for previous newsletter articles and keys.

There are also some negative aspects that will need to be addressed. There will still be a need to email individuals when something new happens or to update regularly, i.e. monthly, so that people stay connected. People are not going to be checking the website daily. To avoid alienation of members without computer and internet access, mail out of information will still occur. To a certain extent there will be loss

of personal communication, which makes a network appeal to many people. It may prove a disadvantage to isolated rural landowners who may be less likely to have reliable internet access – this group is likely to have new weeds in stock feed, crop seeds or spread from trucks accessing their properties.

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