Islands of Information: weeds in New Zealand

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Weeds are a major conservation problem on the New Zealand archipelago. The government's conservation agency, the Department of Conservation (DOC), has recently implemented a National Weeds database to capture and synthesise diverse biological information.

Until recently, information was dispersed in filing cabinets, reports, personal databases, manuals, books, the internet and in people's heads.

Information weed managers need to know is

- *What species are they?*
- *Where are they?*
- *How do we manage them?*

The National Weeds database allows information to be entered, edited and viewed by staff through the DOC intranet using web browsers in the many isolated DOC offices. Adopting innovative web technologies makes the application easy to use. Importantly, regional staff can instantly see their own data as part of the national set and can learn from other people's data.

The structure and relational aspects of the database are built around species, observations and control techniques yet the use of these data is not restricted to a species focus. Information can be retrieved to support DOC's innovative approach to weed management; i.e. weed-led and site-led programmes.

What species is it?

How do we manage it?

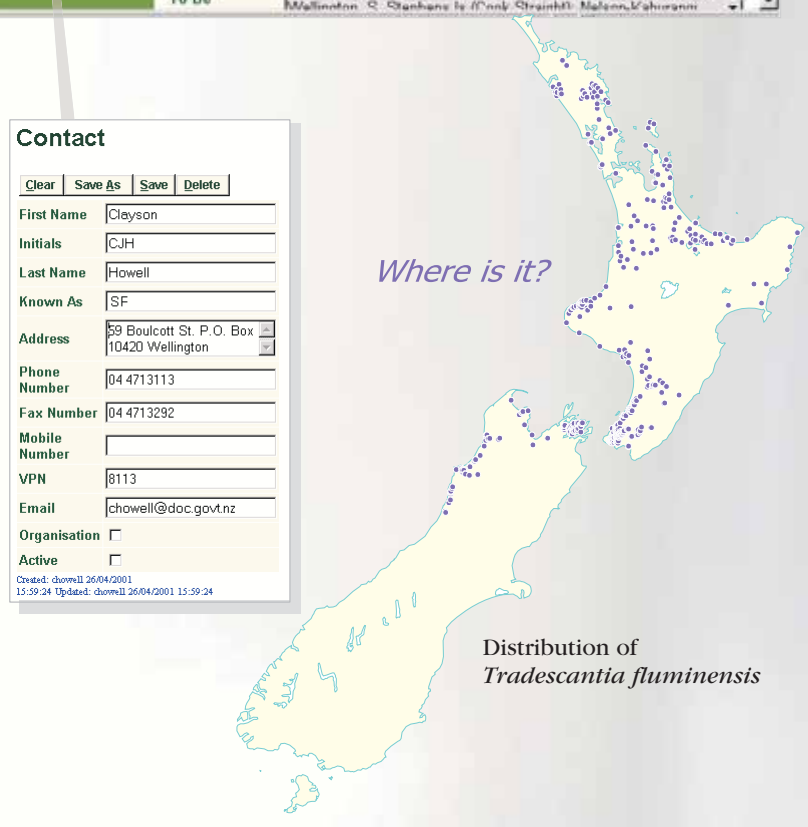
Control Techniques for Tradescantia fluminensis

New

Species	Ranking	Description
Tradescantia fluminensis	Acceptable	Spray Grazon (triclopyr 600g/l) at a rate of 3.3 - 13.3 ml/l (0.33 - 1.33%) with the addition of 1.5ml/l of a penetrant. Follow up quickly (2-3 months) before plant recovers
Tradescantia fluminensis	Acceptable	Weed wiper Grazon (Triclopyr 600g/l) 25% + penetrant.
Tradescantia fluminensis	Acceptable	Rake and roll up (usually small spots only, to minimise initial spray). Dispose of material by burning or burying deeply. When Tradescantia grows in shallow soils (eg Te Maua Bush) this method is recommended as spraying will damage the root systems of maj
Tradescantia fluminensis	With reservations (conditions)	Grazing by cattle can be effective in reducing bulk, but care needs to be taken not to spread the plants further.
Tradescantia fluminensis	With reservations (conditions)	Spray 15g (1.5%) of Escort, 200mls (20%) of glyphosate and 10mls (1%) of Pulse per 10 litres of water, to the plant. Apply this method if conditions are warm and dry to ensure good uptake of the solution by the plants.
Tradescantia fluminensis	With reservations (conditions)	Spray Glyphosate at a rate of 10 - 30 ml/l (1.3%) with the addition of 1.5 - 3.5 ml/l of a penetrant.

People repeatedly trialed the same suite of control techniques, or continued to use ineffective ones. For example:

Trials showed that *Tradescantia fluminensis* is best controlled by triclopyr. Despite a published report some staff used less effective methods. The database provides instant access to the best methods of control for many species.



References Search

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Title: %tradescantia
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Author	Date issued	Title	Source
Kelly D and Skipworth JP	1984	Tradescantia fluminensis in a Manawatu (New Zealand) Forest: 1. Growth and effects on regeneration	New Zealand Journal of Botany 22:393-397
Kelly D and Skipworth JP	1984	Tradescantia fluminensis in Manawatu (New Zealand) Forest II. Management by herbicides	New Zealand Journal of Botany 22:399-402
Maule, HG, Andrews M, Morton JD, Jones, AV and Daly GT	1995	Sun/shade acclimation and nitrogen nutrition of Tradescantia fluminensis, a problem weed in New Zealand native forest remnants	New Zealand Journal of Ecology 19:35-46
Ogle, C.C.; Lovelock, B.	1989	Methods for the control of Wandering Jew (Tradescantia fluminensis) at Rangitawa, Rangitikei District, and notes on other aspects of conserving this forest remnant.	Science and Research Internal Report No 56.
Trounce RB	1991	Controlling wandering jew (Tradescantia albiflora) in urban landscapes	Australian Weeds Research Newsletter No.

Where is it?

Distribution of *Tradescantia fluminensis*

Lessons for database builders

- Maintain data standards through tight controls on data entry. Appointing a data administrator is a good idea.
- Allow for improvements; there is always a better way to manage data.
- Train users of the database so they are comfortable with using it.
- Cost and time may amount to more than you think.
- Promote the database and its use.

Conclusions

- Through the process of data capture, gaps in knowledge can be identified and remedied.
- The database provides the means to secure and view data that might otherwise have been lost or be unavailable under dispersed systems.
- Maps of weed distributions provide the means to educate DOC staff and the public about weed problems.
- There were islands of information already; now there is a central information source instantly accessible from isolated parts of New Zealand.

Department of Conservation
Te Papa Atawhai

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Other titles available from Science Publications, Dept. of Conservation, Box 10420, Wellington.