

Application of biogeography to protection of Chatham Island endemic vascular plants

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Astelia chatbamica

Introduction

The Chatham Islands are home to 42 endemic vascular plant taxa, such as *Sporadanthus traversii*, *Astelia chatbamica* and *Hebe barkeri*. The Department of Conservation, since 1997, has collated information about the distribution and ecology of all endemic plant taxa onto the Chatham Plant Database. This information is now being used to improve the protected natural area network for the Chathams, so that those unique components of the flora are protected throughout their range. It is also providing a basis for understanding the ecology of the Chatham Islands.

Information about the past and present distribution of endemic plants is being used:

- To identify sites where endemic plants occurred in the past so they may be re-instated to those sites as part of species recovery work (restoration).
- To develop research projects that seek to provide ecological explanations for observed distribution patterns (ecological biogeography).
- To identify taxa that are poorly represented in the protected natural area network so that legal protection priorities may include sites supporting endemic taxa (gap analysis).
- To provide baseline information for comparative analysis of future changes in the distribution of each taxon (monitoring).



Hebe barkeri

Sporadanthus traversii

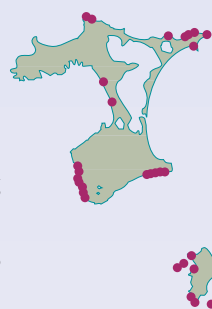
Case studies

Myosotidium hortensia Chatham Island forget-me-not

This plant forms clumps over 1 m in diameter, comprising leaf stalks bearing huge glossy leaves branching from a stout, cylindrical rootstock. It produces pale blue (sometimes white) flowers.

It is found on coastal cliffs, rock outcrops and on beaches just above the strand zone.

The past distribution of the plant has identified sites to which the species could be restored. Its current distribution provides a focus for habitat protection and legal protection.



Myosotidium hortensia

Leptinella featherstonii Chatham Island button daisy

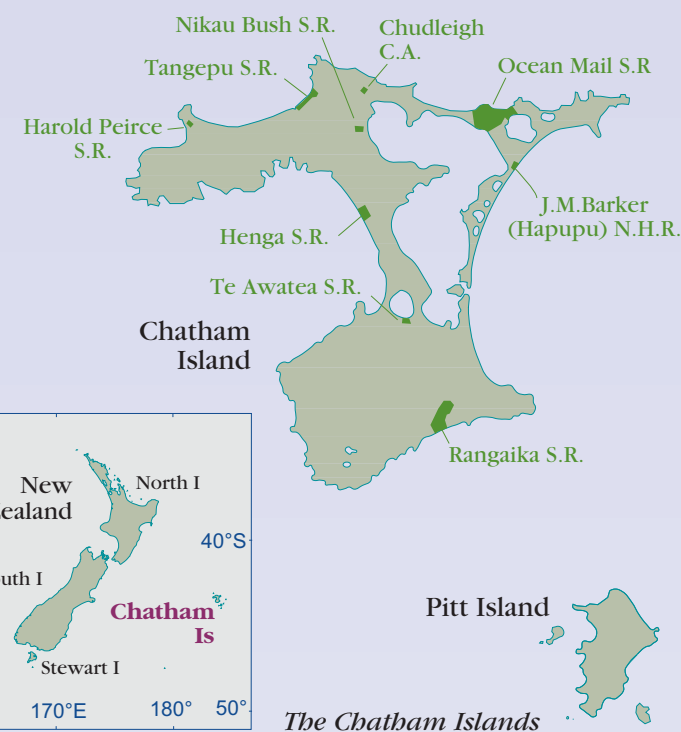
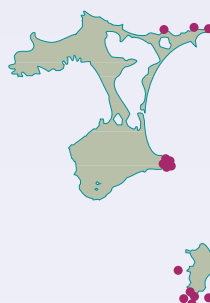
This is a woody shrub that forms low, rounded bushes. It has notched, spoon-shaped, blue-grey leaves.

It is found on peaty ground near the coast.

The species is nationally threatened and information about its distribution is being used to focus efforts for restoration, monitoring and legal protection.



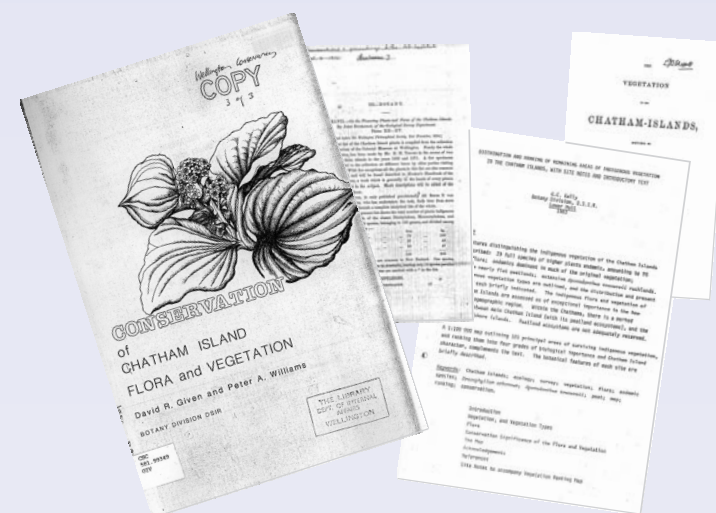
Leptinella featherstonii



Sources of information

Information about the endemic plants of the Chathams has been obtained from:

- Plant checklists compiled for areas in the Chathams. (Sawyer, J.W.D. 2000. *Plant checklists and vegetation survey data for areas in the Chathams*. Department of Conservation, New Zealand.)
- Herbarium records from all national herbaria.
- Species record sheets compiled by botanists working on the Chathams.
- Landowners on whose property the plants occur.



Conclusions

Biogeography has been applied in many ways to the protection and restoration of the 42 vascular plant taxa that comprise the endemic flora of the Chatham Islands, including gap analysis, ecological biogeography, monitoring and restoration.

The Department of Conservation will continue to manage the Chatham Plant Database and include new information about the endemic plants when it comes to hand.

For more information about the ecology and biogeography of Chatham Island endemic plants see: Crisp, P., Miskelly, C. and Sawyer, J.W.D. 2000. *Endemic Plants of the Chatham Islands*. Department of Conservation, New Zealand.