

# RHODO

## Achieving effective Rhododendron control

### PROJECT TEAM

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### BACKGROUND

Foremost among alien invasive species in Ireland in terms of the area covered and density is rhododendron. Successful control of rhododendron is required to maintain these habitats in favourable conservation status. The scale of rhododendron infestation is such that it needs to be tackled at the landscape scale.

This project aims to develop cost-effective methods which use little or no herbicide, for use in conservation areas and to bring costs down. These issues will be tackled in a practical manner that will lead to (a) protection of environmental quality and (b) help in the development of alternative methods and skills in controlling a non-native invasive species like rhododendron.

### OBJECTIVES

- Increase knowledge of rhododendron invasion.
- Ascertain the effectiveness of reducing rhododendron natural regeneration post clearance.
- Survey and collect indigenous pathogens affecting rhododendron in Ireland.
- Isolate pathogens and test under laboratory conditions with a view to use as bioherbicides.
- Run workshops during and at the end of the project on rhododendron control.
- Produce national rhododendron control recommendations.

### PROGRESS

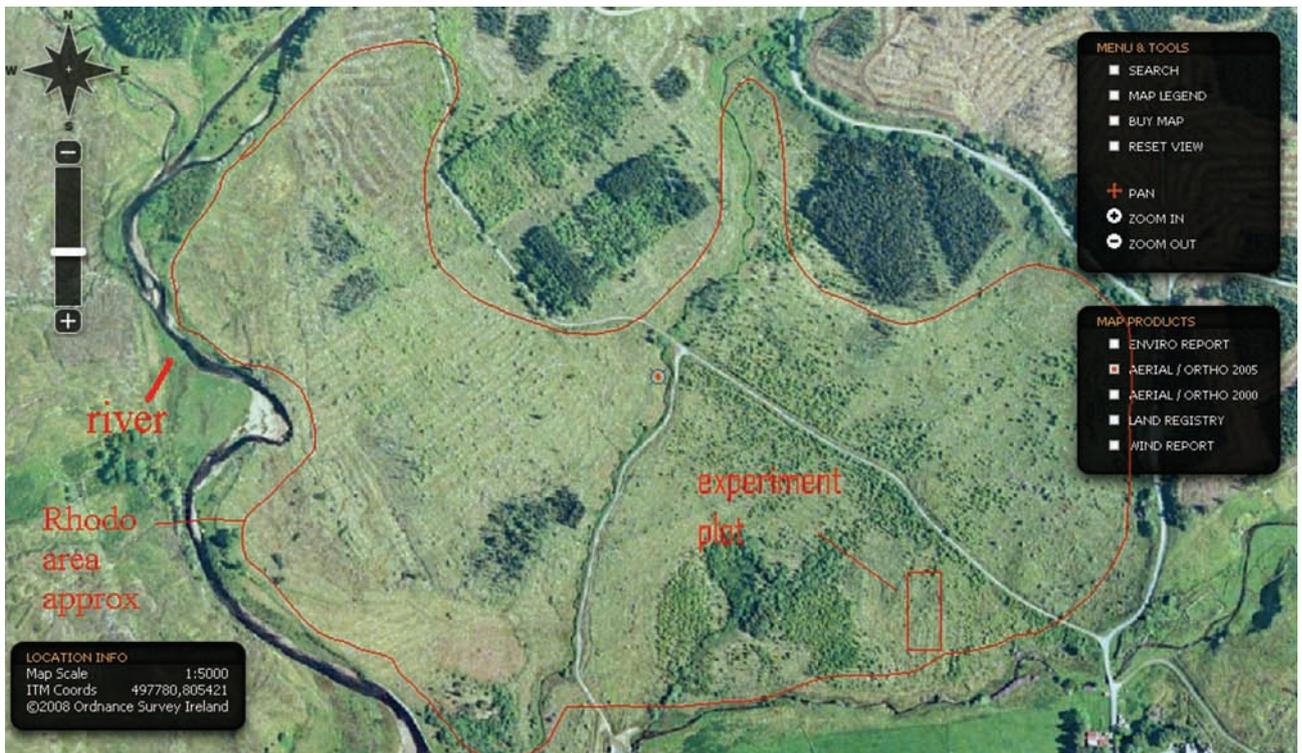
Key research questions have been identified and experimental protocols are being devised to answer them. Following extensive literature searches four areas were selected for detailed investigation:

- Development of an aging key for rhododendron;
- Invasion dynamics of rhododendron;
- Calorific value of rhododendron;
- Seed longevity and viability.

The RHODO team will collaborate with CABI (Centre for Agricultural Bioscience International) UK to isolate fungi that may have possibilities for use as a mycoherbicide. The investigation of innovative fungal isolates on rhododendron for the development of bioherbicides will be carried out in two phases. First, survey and collection of pathogens affecting rhododendron and subsequent isolation. Second, inoculation of young rhododendron plants with fungal isolates under laboratory conditions to ascertain their potential as bioherbicides



*Chondrostereum purpureum* strain on a plum tree in Moorstown, Co Tipperary.



Rhododendron re-invasion study site at Newport, Co Mayo.

### ACTIVITIES PLANNED

- Collaboration with CABI on the identification of fungi that may have possibilities for use as a mycoherbicide will commence. A member of CABI UK will visit WIT to work with the team.
- Detailed protocols for all experiments will be finalised and, once complete, experimental work will begin with seed viability tests.
- Outreach will commence with presentations at national and international meetings.

### OUTPUTS

Irwin, S., Kelly, D. L., Kelly, T., McCarthy, N., Mitchell, F., Coote, L., Oxbrough, A., Wilson, M., Martin, R., French, V., Fox, H., Sweeney, O., Moore, K. and O'Halloran, J. 2008. *Planning and management tools for biodiversity in a range of Irish forests*. (Poster presentation). ENVIRON 2008, DkIT.