

Darwin Initiative for the Survival of Species

Half Year Report (due 31 October each year)

Project Ref. No.	15/004
Project Title	Conserving and using entomopathogenic fungi and nematodes within Chile
Country(ies)	UK, Chile
UK Organisation	CABI, Silwood Park, Ascot, Berks SL5 7TA
Collaborator(s)	Instituto de Investigaciones Agropecuarias (INIA) Avenida Vicente Méndez 515, Chillán, VIII Región, Chile
Report date	October, 2006
Report No. (HYR 1/2/3/4)	HYR 1
Project website	

1. Outline progress over the last 6 months (April – September) against the agreed baseline timetable for the project (if your project has started less than 6 months ago, please report on the period since start up).

The project began in June 2006, delayed, with Darwin approval, by one month. The project leader (Dr. Moore) travelled to Chile in August to agree the work plan with the collaborators (milestone 1).

Activities:

Establishment of survey along Chile. During Dr. Moore's visit to Chile, and after a meeting with Dr. Santibañez (University of Chile) and Dr. France, six transects along Chile were selected as sampling sites. These transects, stretching East to West from the Andes Mountains to the Pacific Coast cover the main climatic, vegetation and soil types present in the country. Areas within the transects that lack vegetation or do not have accessible roads will not be included in the surveys. The transects are:

Parallel 20° (Iquique to Colchane). Just north of the Tropic of Capricorn. Includes xerophytic vegetation from one of the most arid deserts in the world. Plant communities depend on available moisture, particularly from characteristic fogs and deep water sources.

Parallel 30° (Fray Jorge to Caren). Fray Jorge corresponds to a relict forest, remnants from tropical jungle when most of the Chilean desert was covered by tropical plants.

Parallel 33° (Valparaiso to Los Andes). A transect represented by typical Mediterranean vegetation. It also covers a considerable portion of the journey made by Charles Darwin from Valparaiso to Mendoza in 1835.

Parallel 37° (Concepción to Laguna de la Laja). A transition from dryland to wetlands.

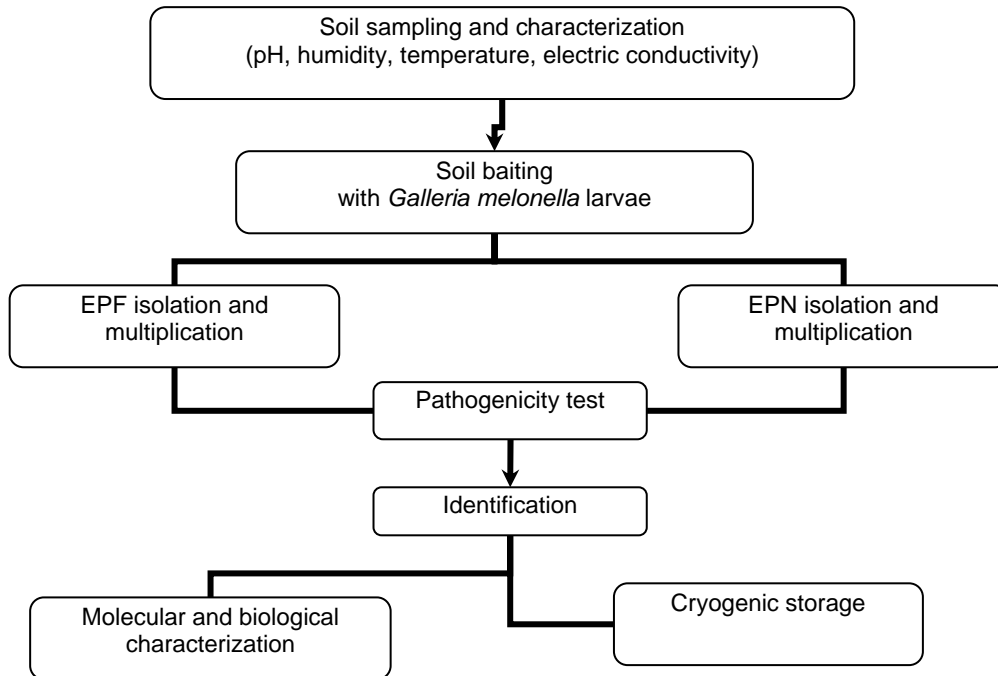
Parallel 46° (Archipelago Los Chonos to Balmaceda). This transect includes areas with the heaviest rainfall in Chile, covered with a dense cold jungle, as well as areas of cold pampas in which the coiron grass predominates.

Parallel 52° (Tierra del Fuego). Near-antarctic region dominated by flora and fauna adapted to cold temperature. A region also visited by Charles Darwin in 1834. (**Annex 1**)

- Acquisition of capital equipment for the first year work. Most of the equipment required for the whole project has been bought during this period.
- Following a selection process Ms Loreto Merino was recruited to work full-time on the Darwin project. Ms Merino is an Agronomist Engineer from University of Concepción, she has experience in projects related to insect pathology and biological control of insect pests in Chile.
- Establishment of culture technique for the wax moth (*Galleria melonella*). Isolating EPN and EPF from survey sites will be accomplished by baiting with larvae of the wax moth. This insect

can also be used for pathogenicity tests. The culturing will be initiated from wild wax moth eggs collected from infested honey bee hives. The eggs are surface sterilised and placed on a mixture of cereals, vitamins, wax and honey inside a metal box. Last instar larvae are used for baiting the soil samples collected during the surveys.

- Local surveys. Samples have already been collected along Parallel 37°. These samples, and the future ones, follow the schedule:



- Insect rearing. To test the pathogenicity of the collection, nine representative insects are being collected and maintained under controlled conditions. All of them are important agricultural insect pests in Chile. These species are: *Aegorhinus superciliosus*, *Asynonychus cervinus*, *Graphognathus leucoloma*, *Naupactus xantographus*, *Otiorhynchus rugosostriatus*, *Otiorhynchus sulcatus*, *Hylamorpha elegans*, *Phytoloema hermanni* and *Sericoides viridis*.
- Protocol for handling, identification and short-term preservation of EPN established.
- Publicity. During the visit of the project leader to Chile, an interview took place regarding the project and the Darwin Initiative. This interview is registered in the “Informativo Digital” of INIA, a web publication accessed through <http://www.inia.cl/quilamapu> (Informativo Digital).

2. Give details of any notable problems or unexpected developments that the project has encountered over the last 6 months. Explain what impact these could have on the project and whether the changes will affect the budget and timetable of project activities.

None

Have any of these issues been discussed with the Darwin Secretariat and if so, have changes been made to the original agreement?

None

Discussed with the DI Secretariat: no, in..... (month/yr)

Changes to the project schedule/workplan: no, in.....(month/yr)

3. Are there any other issues you wish to raise relating to the project or to Darwin's management, monitoring, or financial procedures?

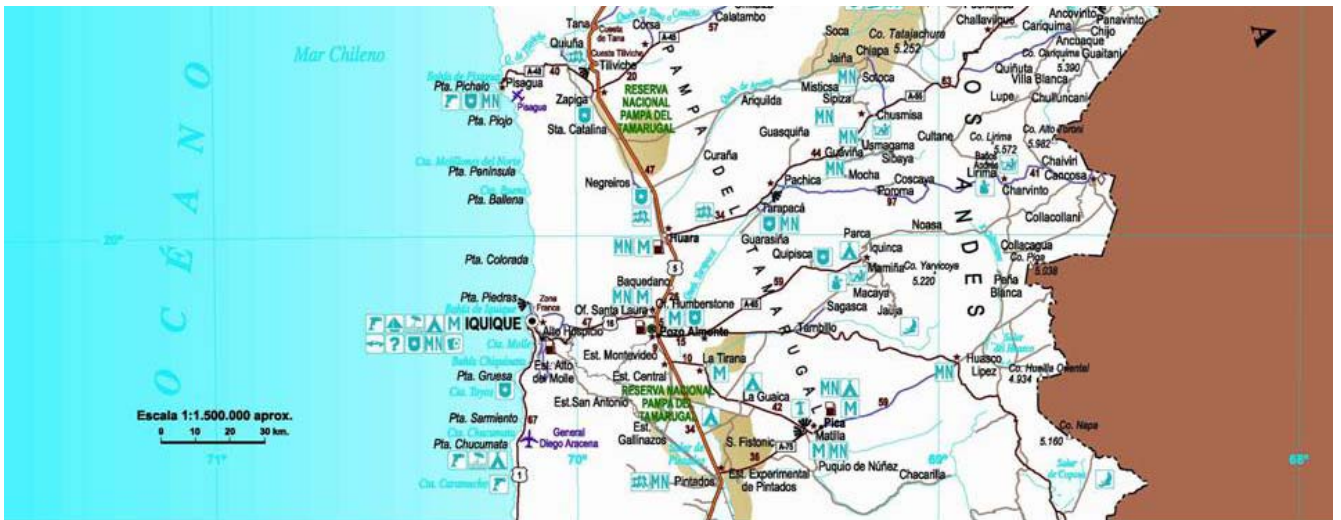
None

If you were asked to provide a response to this year's annual report review with your next half year report, please attach your response to this document.

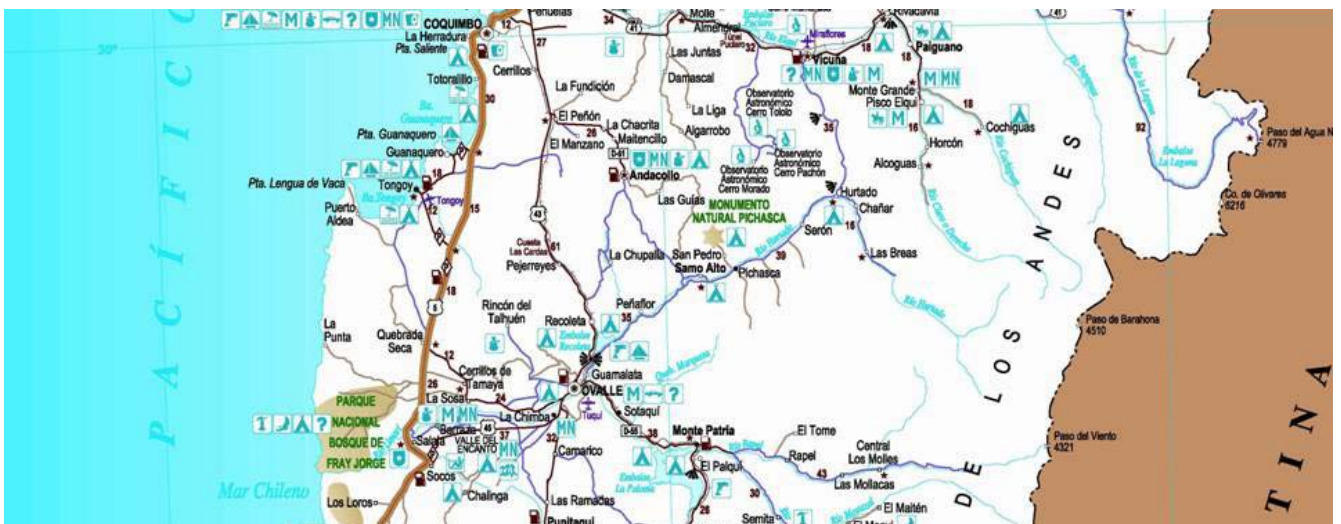
Please note: Any planned modifications to your project schedule/workplan or budget should not be discussed in this report but raised with the Darwin Secretariat directly.

Please send your **completed form by 31 October each year per email** to Stefanie Halfmann, Darwin Initiative M&E Programme, stefanie.halfmann@ed.ac.uk. The report should be between 1-2 pages maximum. **Please state your project reference number in the header of your email message.**

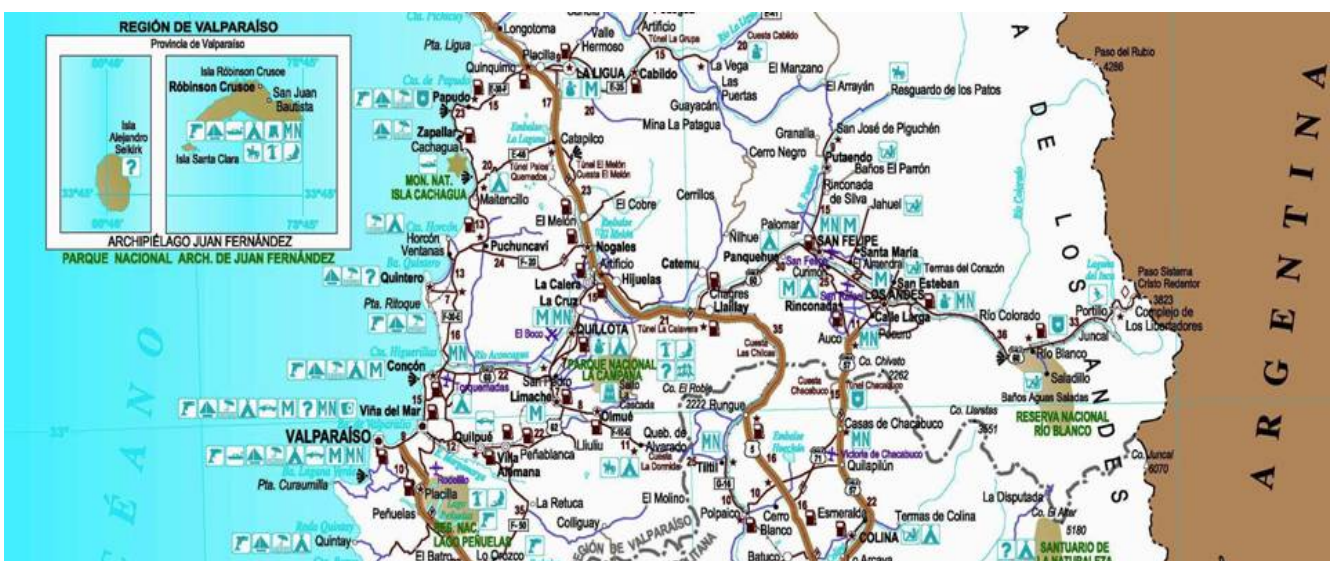
Annex 1. Samples collection zones



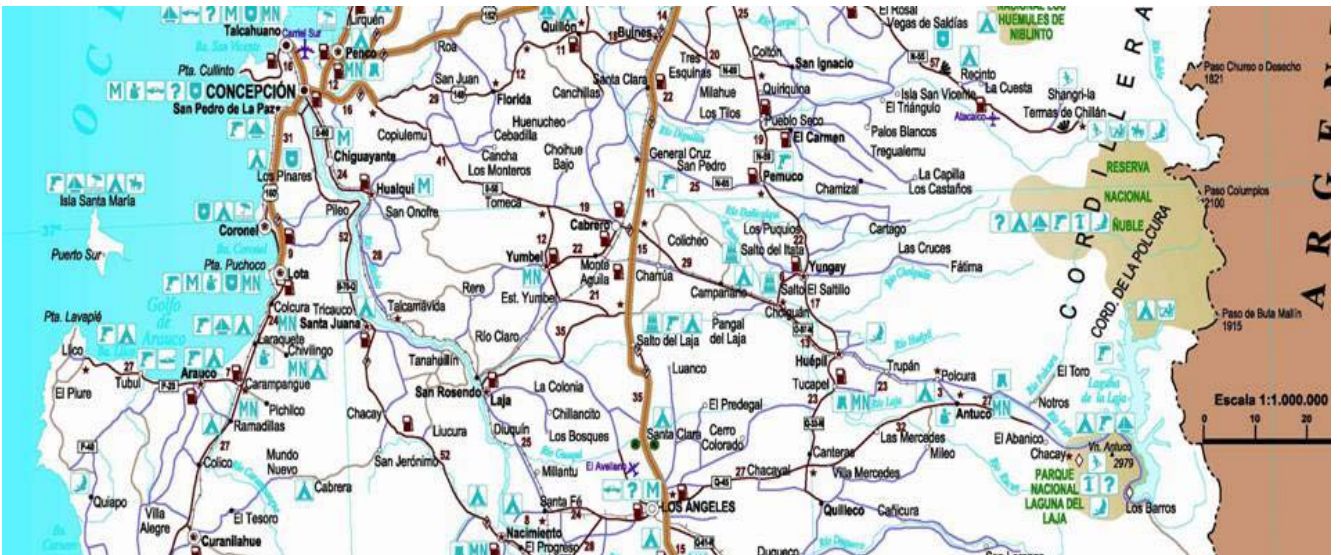
First zone. Iquique to Colchane.



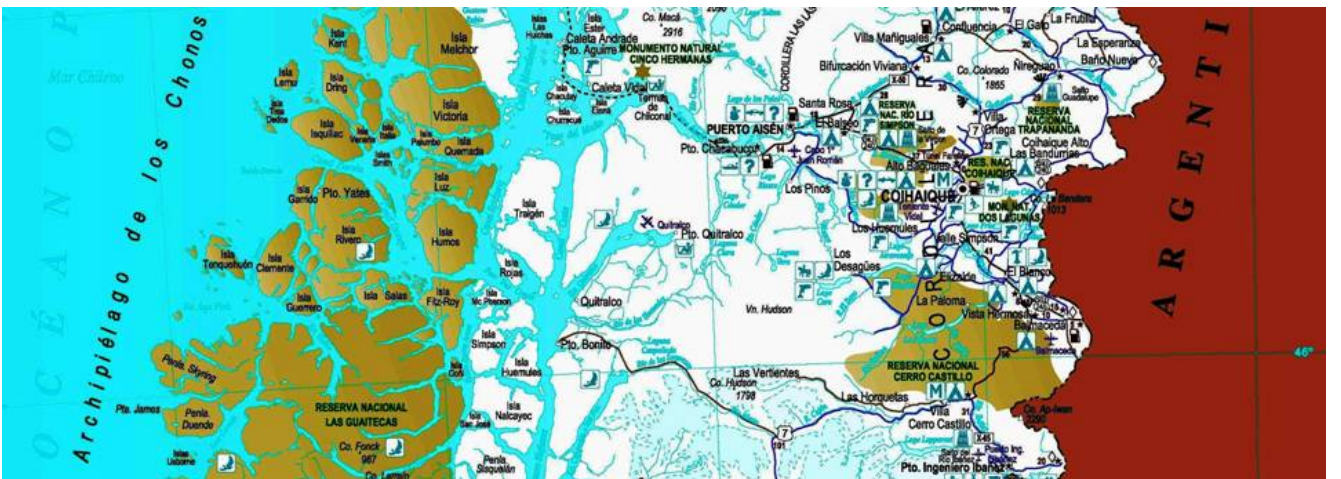
Second zone. National park Fray Jorge to Caren



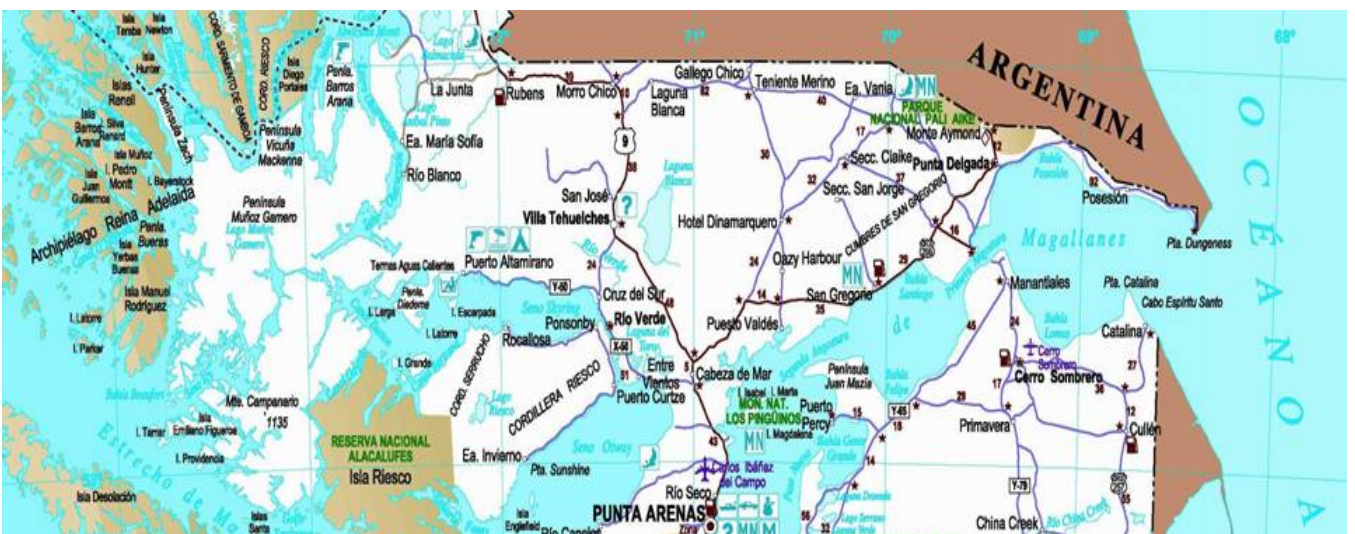
Third zone. Valparaíso to Los Andes.



Quarter zone. Concepción to National park Laguna del Laja.



Fifth zone. Archipelago Los Chonos to Balmaceda.



Sixth zone. Tierra del fuego