Rainforest CRC Cooperative Research Centre for Tropical Rainforest Ecology and Management

PROJECT 6.2.1
Ecology and management of Wet Tropics weeds
Project Leader: Ms Melissa Setter (DNRM)

Weed invasion is recognised as a threatening process to the environment of the Wet Tropics. Rare and threatened species or assemblages of species may be threatened through degeneration or destruction of the ecosystem processes that sustain them. A sound knowledge of the invasive processes of key weed species is essential to protect these ecosystems. It will also allow prediction of the invasive potential of other weed species, which may become threatening in the future (and thus allow legislative protection, early warning monitoring systems etc to diffuse their threat). There is an identified need to develop and/or improve methods of removing existing weed invasions without further detriment to the environment. This project aims to investigate the biology, ecology, and control methods of Wet Tropics Weeds, in order to develop strategies to prevent the destruction of habitat and reduction of biodiversity associated with weed invasions.

To this end, collaborative CRC research undertaken to date has increased our knowledge bank for a number of species, most notably pond apple. We now have detailed information about its seed longevity, seed bank dynamics, seed dispersal (cassowaries and feral pigs), and control methods, which has already been adopted by several land managers. Other significant outputs achieved through CRC collaboration to date include:
(1) Successful joint workshop "Weeds of rainforests and associated ecosystems" with CRC for Australian Weed Management held Nov 2002 - proceedings being published March 2003. Outcomes of this workshop include recommendations for future collaborative research between the two CRC's
(2) Report on the effectiveness of remote sensing as a tool for identifying pond apple infestations
(3) Publication of research in scientific journals and presentation of findings at relevant Conferences.

Continuation of pest research in the Wet Tropics will allow us to fill in knowledge gaps in the pond apple profile which will further assist in the control of this weed, and to perform similar work for other species. For example, experiments investigating seed longevity of several weed species (hymenachne, siam weed, Tobacco weed, sicklepod, hairy senna) have commenced. Unfortunately these species still have substantial amounts of viable seed after three years, so

require ongoing work to investigate their full longevity.

POSTGRADUATE STUDENTS

Daniel STOCK (GU) PhD

The dynamics of Lantana camara (L.) invasion of subtropical rainforest in southeast Queensland