Trees foil sweet-tooth rats..

TREAT News No. 12, December 1996, pages 3-4

from Nigel Tucker, Manager,
Lake Eacham Community Conservation Nursery

TREAT members understand better than most that conservation is something which needs to be practised across whole landscapes and not just in national Parks. Donaghy's Corridor is an example of how landowners, government and community working together can counter the negative effects of forest fragmentation and isolation, and begin the process of restoring connections between isolated forest areas.

Forest fragmentation is also a very serious issue on the coastal plain and for many years Nursery staff looked for ways to encourage coastal cane farming communities to begin the rehabilitation process. In 1993 at a gathering of cane farmers, Peter Lucy from Canegrowers Australia mentioned to me the problem of rats emerging from cleared streambanks to eat 4 to 9 million dollars worth of cane each year, a very expensive sweet tooth! This chance remark encouraged me to look further at the problem and my hunch was confirmed when I found a research paper compiled by the Qld University of Technology which pointed to the unnaturally high populations of rodents living in weed and grass choked streambanks, suggesting a rat control strategy could include revegetation of cleared streambanks, in this case known as harbourage areas.

The problem..

In harbourage areas, the native rodents Rattus sordidus (canefield rat) and Melomys burtoni (Burton's climbing rat) consume mainly seeds of grasses and weeds, cane representing only 20% of the rodent's diet, indeed females fed cane only are unable to reproduce. However, they cause serious damage to cane by eating partway through the stem thereby encouraging secondary bacterial infection to follow this primary damage. Traditional methods of controlling rodents involved laying poison baits, sometimes badly timed and often with secondary baiting problems, for example, owl populations are likely to fall in areas where bait-affected rats make easy prey. The other main control method has been regular application of herbicide to control grass and weed availability. This of course is self-perpetuating because as one crop of weeds is destroyed another steps in to take its place.

The theoretical solution??

Revegetation back to rainforest should provide effective long term control of rodents by removing their preferred diet and habitat. A well forested stream network improves the chances for sub-adults of many other species to disperse to available territory, establishing new populations or re-invigorating existing populations with a wider genetic base. Of course all the other benefits relating to soil and water should also apply, along with the reductions in baiting and spraying. I contacted the B.S.E.S. (Bureau of Sugar Experiment Stations, the grower-funded research body) and made contact with 'the rat man' Paul Storey, who expressed a willingness to give the idea a try and put his resources into the experiment.

The test..

In May 1994, two experimental sites were established, at Miriwinni and Euramo involving the revegetation of 200 metres of cleared streambank, and monitoring of rodent populations began in the restored areas and 200 metres of adjacent untreated (control) on the same stream. In 18 months a closed canopy was achieved at both replanting sites and weed control reduced to negligible levels. Rodents were completely eliminated from the Euramo site within six months and reduced by 80% at the Miriwinni site. These dramatic results have sparked widespread interest among industry and research bodies, growers and Landcare groups, hopefully offering benefits to all.

The negatives..

Shading of cane will doubtless occur but can be alleviated by choosing species with smaller crowns on the margins. Branches arcing out over paddocks interfere with harvester booms but can be greatly reduced by planting species with pole like habit on the margin and lower growing species closer to the stream. Cockatoos also eat cane and may benefit from increased tree cover, though I suspect this problem may be limited to particular habitat areas which traditionally support higher numbers of cockies. Finally, one farmer did suggest we were 'making bitumen roads for feral pigs' and short of suggesting it makes it easier to trap them, that one stumped me!

↑ Top of Page

More Newsletters

- TREAT Newsletter Archive Trees foil sweet-tooth rats.. (this page)
- **TREAT Newsletter Archive Rainforest Rehabilitation on Christmas Island**
- **TREAT Newsletter Archive The Sarsparilla Restaurant**
- **Previous TREAT Newsletters**