



TASMANIAN COMMUNITY FOREST AGREEMENT RESEARCH INTO ALTERNATIVES TO 1080

NEWSLETTER 11

August 2007

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Overview

This month's newsletter is coming out a little late as the many demands of the Program have prevented me from putting pen to paper any earlier.

The good news is this means there's a lot going on, even if I do feel a little like a duck paddling madly away beneath the surface, with perhaps little progress being seen from above.

The final two grants have now been all but signed, and an overview of each is contained in this edition of the newsletter. Several of the existing grants also have upcoming milestones or meetings which readers may be interested in following up.

The Project Officers are well into a trial looking at how trapping intensity might affect the viability of trapping and some preliminary thoughts on the trial so far are included in this newsletter.

Finally, an excellent workshop took place in early July with many members of the Technical Panel and researchers from around Australia and even one

from New Zealand making the trip to Hobart to discuss the role repellents can play as an Alternative to 1080.

Grants Program Update

July marked the first opportunity for the Technical Panel to meet and review the progress of each of the grants.

The start up period of any project can throw up unexpected delays and issues, so it was extremely pleasing to see that all ten of the grants now signed were progressing well.

Based on the positive review of grant progress by the Technical Panel, the Implementation Committee accepted all project status reports for July and payments have subsequently been made. Some key events and deliverables coming up over the next few months include:

- Dr Charlie Eason of Connovation met with the National RSPCA and the Australian Pesticides and Veterinary Medicines Authority (APVMA) in early August to discuss the registration and acceptability of Feratox® in Tasmania. Charlie's team will also be in Tasmania in the first week of October to meet and discuss the use of the product with key stakeholder groups;
- Prof. Tony Norton's team will be holding a workshop in Launceston on September 17 to discuss with stakeholders their research program and objectives for developing decision support tools to quantify and monitor the impact of native animals on pasture. For more information contact Dr Richard Rawnsley by phone: 03 64304504 or

e-mail:
Richard.Rawnsley@utas.edu.au

- Rural Development Services will be circulating their survey design into landholder attitudes to the use of 1080 to the Technical Panel for review before it is mailed out;
- Tasmanian Plantation Services will be providing their review of night scope technology to the Technical Panel for review and sign off (see more below) by October; and
- The CRC for Forestry will be completing their research into possum aversion to resistant plantation stock and will be running an industry seminar and finalising their findings by October.

More Grants Finalised

The final two grant deeds have now been agreed and are in the process of being signed.

A brief overview of each program is listed below. More detailed information is contained in the deed and this can be made available to interested parties by contacting the Project Manager.

An investigation and demonstration of the effectiveness of shooting techniques as an alternative to 1080

Tasmanian Plantation Management Services, \$58,000.

This project will undertake field research to assess and compare the effectiveness of two different shooting approaches as control tools for mitigating native animal browsing impacts in both plantations and farmland.

The use of stationary shooting using the best available night vision scope and diversionary feed dumps will be compared against traditional shooting techniques using spotlighting and a vehicle.

The proposal will cover four field trials on a selection of sites with shooting taking place two nights per week for six months plus placement of feed dumps on two properties twice per week.

The proposal intends to provide landowners with data that they can use in evaluating the potential of the use of alternative shooting techniques and will include two field days where landholders can view the technology and discuss the findings of the grant recipients.

Humane Herbivore Control (Part 2): Cyanide products for wallabies and possums

Connovation Pty Ltd, \$150,000.

Cyanide formulations (Feratox® and Cyanara®) are potential alternatives to 1080 for browsing mammal management in Tasmania, offering advantages of relative humaneness and low environmental persistence.

New cyanide products have been used for effective possum control in New Zealand over the last eight years. Improvements in targeted delivery have increased specificity and reduced operator risk. This project will capitalise on this expertise to develop cyanide presentations that target Bennetts wallabies (*Macropus rufogriseus*) and possums (*Trichosurus vulpecula*).

Preliminary pen and field tests of their efficacy against the two species will be conducted in 2007-08. This will identify optimal cyanide formulations and delivery method(s) for wider field-testing in Tasmania in 2008-2009.

Final funding for this project is contingent on positive findings on the social acceptability and registration ability for these products from Part 1 of the deed (see Newsletter Edition 9, June 2007 for more information).

Project Officer Update

July has kept the Project Officers busy in the North East working on the trapping intensity trials which aim to evaluate the operational and capture effectiveness trade-offs between carrying out high (130 trap), medium (60 trap) and low (30 trap) trapping intensities along a 1km trap line.

Browsing exclosures (five per 50 hectare site as per the browsing damage assessment guidelines for the assessment of 1080 usage) were built and put on site in the first week of July.

Free feeding of the sites commenced at the same time that the exclosures were deployed, and a post free-feed spotlight and scat count was undertaken a week later.

Traps were deployed in week three, with further free feeding done at the same time. The first trapping session ran for three days from the 24 - 27 July. The traps were then rested for four days and trapping recommenced on 30 July for a further two days. A third day of trapping was cancelled due to very high rainfall in the area making trapping activities unsafe.

Trapping recommenced on 13 August for a further three nights and a fourth week of trapping is currently under-way.

As noted above, this trial has been affected by the very high rainfall that has been experienced across the State. The Project Officers have reported that they believe that the number of animals browsing the pasture areas has been greatly reduced by the weather and resultant new growth within the more sheltered areas due to the rains.

Catch data for these trapping sessions (by species and property) are shown in Figures 1-3.

The high intensity (130 trap) site captured the most animals, but has had fairly low capture rates (average 20%–25%) for each two to three day trapping session. It has however been the most

successful site in terms of absolute numbers of pademelons captured. These are the key target species for trapping due to their difficulty to shoot compared to possums and Bennetts wallabies.

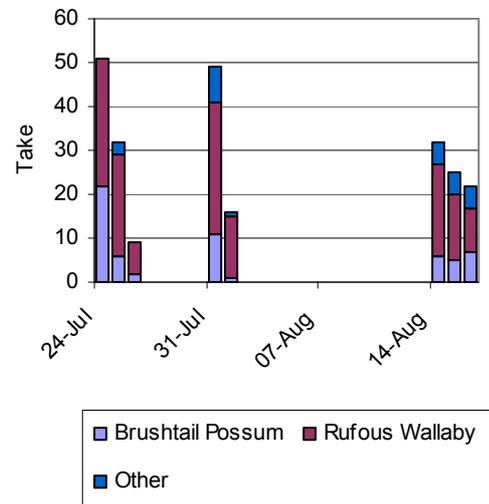


Figure 1 Take figures (exclusive of pouch young) for site with 130 traps

At the other end of the spectrum, the low intensity (30 trap) site is consistently reporting high capture rates (54%-60%) but 80% of trapped animals have been brushtail possums, and it is only during the more recent trapping nights that pademelons are being be caught.

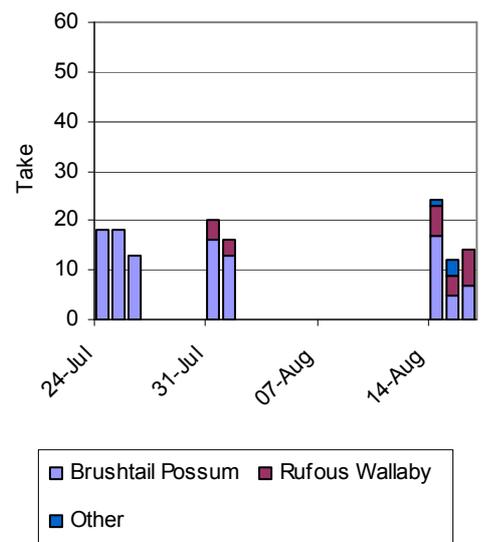


Figure 2 Take figures (exclusive of pouch young) for site with 30 traps

The medium intensity (60 trap) site has captured a significant number of both brushtail possums and Rufous wallabies, and whilst catching less animals overall than the higher intensity trapping trial, the trapping efficiency (number of animals per trap) has been higher.

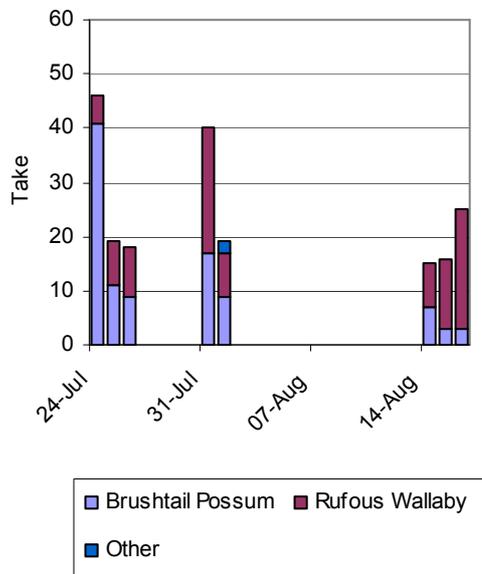


Figure 3 Take figures (exclusive of pouch young) for site with 60 traps

The Project Officers have reported a number of traps being set off by the wind or potentially by Bennetts wallabies (this observation based on the scats found around the traps and bait having been taken from inside the trap).

The overall capture patterns being observed seem to be consistent with past research¹ that has found that Bennetts wallaby were the first species to move to pasture, followed by brushtail possums and then pademelons.

Assuming animals approach traps as they enter the area, then this may partly explain why more brushtail possums are initially caught than pademelons, and also why traps are being set off by Bennetts wallabies before other species

enter them. However without actually monitoring animal response to traps this is only conjecture.

One possible research focus being discussed from this trial is that in a future trial it may be more effective to first shoot the area for brushtail possums and Bennetts wallabies in order to reduce the subsequent trapping effort.

The ‘other’ species shown as being caught in these graphs have included wombats, blackjays, potoroos, rabbits and four Bennetts wallabies. All non-target species (other than rabbits and Bennetts wallabies) have been immediately released and none have been injured.

Wallabies and brushtail possums captured so far in this trial have been provided to the captive devil program. This program forms part of the strategy of protecting this species from the devil-facial tumour disease.

Repellents Workshop

On 9 July, the Alternatives to 1080 Program sponsored a workshop to discuss the role of repellents in native animal browsing management.

Dr Mick Statham opened with a presentation on the history of repellent trials, outlining the diverse range of repellents that have been trialed over the years to reduce browsing. These included bitter, malodorous and spicy substances, animal scents, extracts from plants which are typically avoided by browsing animals and other generally distasteful substances such as urine, cow dung, sand, ash, tar, sulphur, blood, soot, soap and animal fat with train oil, blood, tobacco and animal flesh.

Trials generally had mixed results, with Dr Statham referring to a trial he himself carried out in the 1980’s where the treated seedlings were planted in a pen area, they went off for a cup of tea before returning to finish the set up the

¹ Johnson, K.A. (1978) Methods for the Census of Wallaby and Possum in Tasmania, pp59-62.

experiment only to find all of the seedlings fully browsed.

Dr Statham did report on a trial of lion urine and Tasmanian devil urine which were effective for up to a month from a single spray for captive Bennetts wallabies and pademelons.

Dr Julianne O'Reilly Wapstra gave an overview of repellent research being undertaken by the CRC for Forestry on several repellents including SenTree (WR1), Plant Plus (Plant Guard), Hot Shot and Neem.

Their research showed some effectiveness of the repellents trialed, but the results were mixed.

Andrew Walsh outlined a number of operational trials that Forestry Tasmania have conducted over the last few years using mainly SenTree and Plant Plus. Again, Andrew commented on the 'mixed' results that they have found with the repellents sometimes working and sometimes failing.

Andrew also noted that he has been unable to find anywhere in the world where a commercial enterprise is using repellents as a primary browsing tool.

Dr Charlie Eason of Connovation finished off the morning session with an overview of research trials that have taken place in New Zealand into repellents products such as Tree-pel and Hot Shot (a Connovation product).

Dr Eason noted that their own thinking in this area was moving towards better delivery methods and multi-component repellents to try and provide more effective and reliable control.

After lunch, Katie Hobbs of the Forest Industry Association of Tasmania gave a brief overview of what the industry is looking for in repellents, emphasising points like reliability and operational and cost-effectiveness.

The final two presentations were from Dr Michael Parsons of Curtin University who has been researching the use of dingo-urine as a repellent for kangaroos

for mine site rehabilitation in Western Australia and Dr Peter Murray of the University of Queensland who has been working on the use of tiger faeces as a repellent for goats, and has now expanded his research interests into refining odour based repellents.

Both of these research groups have found at least short-term promising results for the effectiveness of odour based repellents.

Where to next with Repellents?

A two-pronged research thrust is recommended to move this area forward.

The first is to use captive trials of likely odour based, and multi-component repellents against target species to confirm basic repellency; followed by field trials of any repellents that show likely repellency from the pen-trials.

The second thrust is to fund some research into investigating the sensory behaviour of the target species.

As noted by most of the workshop participants, repellent effectiveness seems to be mixed. It has been argued that this is partly because this type of research is often approached from an anthropomorphic perspective, where we trial substances we don't like, rather than trying to understand the animals basic perceptual capabilities and how they affect their browsing behaviour.

The purpose of sensory behaviour research is to encourage some basic research in order to help understand how repellents and attractants (eg. for baiting) can be made more effective.

Upcoming Activities

Date	Event
17 Sep	Workshop on quantifying the impact of herbivory of wildlife on pastures in Tasmania.
30 Sep	Quarterly Deed Status Reports Due
1-5 Oct	Connovation's Humane Herbivore Control Stakeholder discussions.