RAINBOW LORIKEET

1. Description of the problem

(a) Location of the case-study

Several sites near Auckland, New Zealand.

(b) History (origin, pathway and dates, including time-period between initial entry/first detection of alien species and development of impacts) of introduction(s)

Deliberate releases and escapees are surviving in the wild. Feral populations are currently estimated to be 150 – 200 individuals, though without an effective response this is expected to increase quickly because breeding is known to occur.

(c) Description of the alien species concerned: biology of the alien species (the scientific name of species should be indicated if possible) and ecology of the invasion(s) (type of and potential or actual impacts on biological diversity and ecosystem(s) invaded or threatened, and stakeholders involved)

The colourful blue-headed parrot, *Trichoglossus haematodus*, was originally brought to New Zealand from Australia as a captive cage bird.

Feral rainbow lorikeets are considered a serious pest in Western Australia because they displace native species from their nesting habitat and compete for food, as well as consuming cultivated crops.

Rainbow lorikeets, a honeyeater, have now established in the wild in New Zealand and pose a serious risk to indigenous fauna and horticultural crops because the species' biology overlaps with that of a number of indigenous species.

The rainbow lorikeet competes for the food eaten by tuis, bellbirds and wood pigeons, and for nest sites (tree cavities) used by kakariki, kaka and hihi.

Concerns are held for native bird populations on significant conservation refuges such as Tiri Tiri Matangi Island and Wenderholm Regional Park.

(d) Vector(s) of invasion(s) (e.g. of deliberate importation, contamination of imported goods, ballast water, hull-fouling and spread from adjacent area. It should be specified, if known, whether entry was deliberate and legal, deliberate and illegal, accidental, or natural.)

Deliberate and illegal releases of rainbow lorikeet began around Auckland city in about 1992. A breeder sought to establish a wild population because he thought it would add 'colour' to New Zealand's bush.

(e) Assessment and monitoring activities conducted and methods applied, including difficulties encountered (e.g. uncertainties due to missing taxonomic knowledge)

An initial assessment of the distribution and abundance of rainbow lorikeet was achieved through public sightings and local knowledge. A systematic survey of the identified areas and adjacent habitat was then carried out.

2. Options considered to address the problem

(a) Description of the decision-making process (stakeholders involved, consultation processes used, etc.)

Up to 1984 there was no regulation on the export of rainbow lorikeets to New Zealand. Since then it has been illegal to import the bird, but they are still bred and sold.

It has recently been declared an "unwanted organism" under the Biosecurity Act 1993. The primary objective is to achieve and maintain zero density of rainbow lorikeet in the wild.

In declaring the parrot an 'unwanted organism,' the Department of Conservation (DOC) had to allow for the requirements of the cage bird trade and manage the risk of its reintroduction from captivity.

A number of briefings have been held with affected agencies, including the Auckland Regional Council and the Ministry of Agriculture and Forestry. DOC is consulting with the Regional Council to have the rainbow lorikeet included in its Regional Pest Management Strategy.

(b) Type of measures (research and monitoring; training of specialists; prevention, early detection, eradication, control/containment measures, habitat and/or natural community restoration; legal provisions; public education and awareness)

Besides the actions described in 2(c), DOC considered the option of managing the pest species under sections of the Wildlife Act 1953. However, this would not have allowed other agencies to easily be included in the response as some powers under the Act (such as entry on to private property) are confined to DOC officers only.

A public awareness campaign was initiated early on to combat negative press circulated by keen rainbow lorikeet fans. Public support is essential for the success of the programme, and is now high. DOC depends on public information to identify wild populations and the project team receives regular reports from members of the public. Support is also needed to gain access to private property without having to resort to the powers of the Biosecurity Act.

To date, control has included live capture techniques. Other methods such as shooting have not been initiated to avoid compromising the high public support for the programme.

(c) Options selected, time-frame and reasons for selecting the options

As described in 2(a), some management changes were effected through the Biosecurity Act 1993.

The operational options include combining live capture and direct control. Live capture techniques include trapping and mist netting. Direct control methods, although not yet used, could include shooting and the use of the avian pesticide (Alpha chlorolase) Lures include honey water, fruit and caged call birds to lure the lorikeets. Live birds removed from the wild are given to commercial breeders for sale as pets.

The choice of technique is determined by local conditions. For example, mist netting (live capture) will be used where birds are in a localised area, are trap shy and where a clear flight path can be identified. Alpha Chlorolase will be used where the population is small and does not respond to live trapping methods, or where traps or nets cannot be secured from disturbance or tampering.

New sightings are followed up and entered in a database. A standard form is filled in for each specific location visited. Site visits vary from one day to repeated visits for larger areas. Survey continues to run parallel to the catching programme as key recovery sites are identified.

Staff have been trained in calls and identification. A core group of 10 people have been trained and rostered in teams of two. Volunteer ornithologists have also offered assistance.

(d) Institutions responsible for decisions and actions

DOC, Auckland Regional Council, Ministry of Agriculture and Forestry.

3. Implementation of measures, including assessment of effectiveness

(a) Ways and means set in place for implementation

An operational plan for the recovery of rainbow lorikeet from the wild has been developed and implemented. This involved DOC, the Auckland Regional Council and the Ministry of Agriculture and Forestry working cooperatively.

(b) Achievements (specify whether the action was fully successful, partially successful, or unsuccessful), including any adverse effects of the actions taken on the conservation and sustainable use of biodiversity

Eradication of wild populations is considered feasible, and expected to take at least three years.

A trial operation in February 1999 received high media coverage and the public response was overwhelmingly in favour (94%) in support of removal of birds from the wild.

DOC gathered information on the effectiveness of various recovery techniques, such as drop door cage traps. It could also size the potential resource requirements of a large-scale operation and identify what other agency support was required.

(c) Costs of action

Annual costs are hard to accurately assess. An estimated three-year plan (1999/2002) based on current information on the size of the problem is NZ$245,155.

Sale of live captured helps offset the cost of recovery.

4. Lessons learned from the operation and other conclusions

(a) Further measures needed, including transboundary, regional and multilateral co-operation

A project co-ordinator has been appointed. His role includes:

- Maintaining a database of sighting and recovery records, needs for revisiting sites, etc;
- Co-ordinating a public awareness programme;
- Liaising with local bodies and commercial breeders;
- Maintaining consistent response standards; and
- Setting clear priorities for field recovery teams.

(b) Replicability for other regions, ecosystems or groups of organisms

The techniques used are replicable, especially where it is possible to achieve inter-agency co-operation. This has been a positive feature of the rainbow lorikeet response.

(c) Information compilation and dissemination needed

Two major considerations in planning and implementing the eradication have been:

- The need for public support and cooperation (coloured by the general perception of the bird as a harmless, pretty family pet); and
- The need to regulate the sale and movement of the birds, and educate people about the risk wild animals pose.