Progress Report 0-2003

Development of effective broad-scale aerial baiting strategies for the control of feral cats

Animal Science

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Context

The effective control of feral cats is one of the most important native fauna conservation issues in Australia. Development of an effective broad-scale baiting technique, and the incorporation of a suitable toxin for feral cats, is cited as a high priority in the National Threat Abatement Plan for Predation of Feral Cats, as it is most likely to yield a practical, cost-effective method to control feral cat numbers in strategic areas and promote the recovery of threatened fauna.

Aims

- Design and develop a bait medium that is readily consumed by feral cats.
- Examine bait uptake in relation to the time of year, to enable baiting programs to be conducted when bait uptake is at its peak and therefore maximise efficiency.
- Examine baiting intensity in relation to baiting efficiency to optimise control.
- Examine baiting frequency required to provide long-term and sustained effective control.
- Assess the potential impact of baiting programs on non-target species and populations and devise methods to reduce the potential risk where possible.
- Provide a technique for the reliable estimation of cat abundance.

Progress

- Research into bait composition is continuing with the objective of further improving bait uptake. Chemical synthesis of several compounds that elicit a chewing response by cats has been achieved. One of these compounds is being manufactured at a scale that will enable incorporation into baits and reliable assessment of any improvement to bait uptake. In addition, the surface coating of baits with mould inhibitors is continuing.
- Feral cat baiting programs on the Fortescue Marsh (Pilbara) were conducted in 2012, 2013 and 2014. All campaigns resulted in statistically significant declines in cat occupancy rates in the baiting area. A further baiting program is being conducted this winter. Research into the effectiveness of baiting strategies is continuing to be assessed under the temperate climatic conditions of the south-west at sites including Cape Arid and Fitzgerald River National Parks. The baiting programs conducted to date at Cape Arid National Park have contributed to an apparent stabilisation in the critically endangered western ground parrot population and significant population increases in number of other species, including the southern brown bandicoot. Similar results have been achieved at Fitzgerald River National Park where anecdotal increases in a number of native bird and mammal species have been observed.
- Stage 1 of the management plan for the control of cats on the tropical Christmas Island has been completed with all domestic cats having been desexed, microchipped and registered. Stage 2 of the plan is continuing and involves the removal of all stray/feral cats from the residential area and surrounds. Stage 3 of the plan - island-wide eradication of feral cats commenced in 2015 following the funding being secured to see the project to its conclusion.
- An assessment of bait consumption by the northern quoll is to be undertaken later this year. The bait medium will contain an encapsulated 1080 toxin. If the encapsulated toxin is demonstrated to be reliably rejected by quolls it will pave the way for feral cat campaigns to be conducted in northern Australia.
- Work has been completed on the lure for the active camera traps. A combination of olfactory and visual attractants are used and have been shown to be successful in attracting cats to the camera traps across temperate, semi-arid and tropical environments. Also, a new audio lure is currently being tested as a further trap attractant.

Management implications

- Development of effective baiting methods across climatic regions will ultimately provide efficient feral cat control at strategic locations across the state and lead to conservation benefits.
- Successful eradication of cats from a number of islands off the Western Australian mainland has occurred over the past ten years (i.e. Hermite, Faure and Rottnest islands), allowing the persistence of the native fauna of the islands and enabling effective reintroductions of mammals where necessary. Eradication of cats on Dirk Hartog Island and Christmas Island will significantly add to conservation of biodiversity.

Future directions

- Continue refinement of bait medium to improve bait consumption by feral cats.
- Analyse baiting effectiveness at the various research sites and refine the method of operation where necessary to optimise baiting efficacy.
- Further investigation of bait consumption by non-target species and devise methods to minimise risk (eg. toxin encapsulation).
- Provide a standard operating procedure for camera trap lures for feral cats.