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# LINK ONLINE

Short webinars for environmental policy-makers and practitioners

## More Birds in the Bush – Findings from a 5-year Endeavour research programme

The following questions were asked during our live webinar with Susan Walker but due to time restrictions, we were unable to answer these in the session.

**I am wondering how reduction in stoat numbers increases rat numbers and increases extinction probability on certain species?**

Evidence to date varies. We will have results from two big chunks of country (Kahurangi and Fiordland) in the end of programme webinar.

**Do you have a volunteer programme? Do you need volunteers to support this good work?**

Not in our research programme. However many of our partner organisations have volunteer networks.

**How is 'carrying capacity' of forests i.e. presence/absence of key plants being factored into reintroduction of bird species?**

Not my area of expertise, sorry, but that's a question that experts such as Doug Armstrong and Zoe Stone and others may be able to answer in the webinar. Their session is on the second day (<https://www.landcareresearch.co.nz/events/more-birds-in-the-bush-end-of-programme-event/>).

**Being relatively new to this programme, what if any consideration was given to understanding native bird biodiversity in other land use types - i.e. despite popular belief - plantation forests can have high numbers of insectivore species, and these areas are subject to ongoing predator control - what if any consideration was given to these as potential Reservoirs of insectivore species?**

We didn't have the scope or resource to cover plantation forests in this programme, but I agree with your point. A hunch I have is that insectivores such as robins hang in because exotic forests are (in the south island at least) often less suitable habitats for ship rats than native forests.

**Is there any work on the internal fragmentation of forest species make up i.e.. selective dying off of species in response to herbivore impact (possum, deer, pigs knocking over trees etc)?**

No, we didn't have the ability to look at that in this programme. In the research community I hear two schools of thought - one is that we already know that ungulates are stripping and changing native forests and should just get on with controlling them and the barrier is really political. Another is that more research is needed. It was not a topic we tackled in this programme.

**How does 1080 affect the native bird population and their food sources?**

Outcomes of aerial management for bird populations is going to be discussed in a couple of talks in the webinar (Day 2) and effects on predators on Day 1. We don't look at effects of 1080 on bird food sources directly but Jo Carpenter's talk will discuss the effects of removing ship rats and possums on food for birds (<https://www.landcareresearch.co.nz/events/more-birds-in-the-bush-end-of-programme-event/>).

**Did the research also look at native bird populations (new and/or relocated) occurring in exotic forests?**

No - we didn't have the scope or resource to cover plantation forests in this programme.

**Any consideration on the impact of herbivores removing food sources for birds?**

Jo Carpenter's work talk will discuss the effects of removing ship rats and possums (omnivores) on food for birds. We didn't look at deer, pigs, cattle, goats etc, though! I hear two schools of thought in the research community - one is that we already know that ungulates are stripping our forests and should just get on with controlling them, and the barrier is really political. Another is that more research is needed. It was not a topic we tackled in this programme.

**Our native forests are dying, what is your take on that?**

Sorry, I am not aware of this.

**Is any research being done to look at effects of invasive weed species on bird populations?**

Not that I know of, sorry!

**The management of threats also impacts non-native birds. Do non-native birds populations impact native population outcomes in ecosystems that are more disconnected/isolated?**

The little work that has been done on this in production landscapes (e.g. on magpies - paper by John Innes and others) has suggested not, and generally it is thought that the effects of competition from exotic birds are minor compared to those of predators. Work based on data from sanctuaries (Rachel Binny's work for example) indicates that exotic birds (and recent arrivals like silvereye) decrease as endemic species bird recover with good pest control. I don't think we know enough, however.

**What are the priority unanswered research questions?**

I think that would depend who you ask! Personally I think sustained control of ship rats on the mainland, and the management of unintended consequences of controlling only a few pests are still huge unsolved issues/questions. And there are some intriguing questions about larger carnivores (feral cats and stoats) and their distributions, interactions, and damage to native species across different forests (from cold irruptive to warm and often quite fragmented) and options to manage them. We have scratched the surface in this programme but it would be great to be able to do more work on this.

**Is there any consideration of the impacts of native predators i.e. weka on native species when mammalian predators are managed?**

We didn't look at that directly in our programme. Jo Carpenter's paper on weka in NZJE is the most recent summary of the issue that I know of

[https://www.researchgate.net/publication/345984789\\_Good\\_predators\\_the\\_roles\\_of\\_weka\\_Gallirallus\\_australis\\_in\\_New\\_Zealand's\\_past\\_and\\_present\\_ecosystems](https://www.researchgate.net/publication/345984789_Good_predators_the_roles_of_weka_Gallirallus_australis_in_New_Zealand's_past_and_present_ecosystems)).

**Did the predator impact studies only cover rats and stoats, or were other animal pests and impacts of controlling them investigated as well?**

We didn't look at other animal pests unfortunately - apart from our work with Tuawhenua which looked at the effects of removing ship rats and possums on food for birds.