

ACCEPTED PAPERS AND MEDIA

- Ewen, J.G., Parker, K.A., Richardson, K., Armstrong, D.P. & Smuts-Kennedy, C. (2011) Translocation of hihi *Notiomystis cincta* to Maungatautari, a New Zealand mainland reserve protected by a predator-exclusion fence. Conservation Evidence 8: 58-65.
- Ewen, J.G., Armstrong, D.P., Empson, R., Jack, S., Makan, T., McInnes, K., Parker, K.A., Richardson, K. & Alley, M. (2011) Parasite management in translocations: lessons from an endangered New Zealand bird. Oryx (in press).
- New Zealand Geographic "Geonews" story based on Patricia's most recent manuscript submission (image capture on right but story also includes a fantastic photo).

A Stitch in Time

THE HIGHLY ENDANGERED hihi has an appetite for sex to rival rabbits, but promiscuity and infidelity may just save the species.

Even while paired up, the female hihi, or stitchbird, will be mating with another male, and her partner may be copulating with another female. Consequently, about 60 per cent of a male hihi's nestlings will not be his own progeny.

Zoological Society of London research fellow John Ewen has been studying the birds for 17 years and believes that there may be an advantage in this behaviour. With only a few thousand birds in existence, some hihi suffer from 'inbreeding depression'—a situation common in small populations that often results in weaker offspring. Patricia Brekke, who studied this issue for her PhD, says that with extensive polygamy, the resulting population becomes far more genetically diverse because many more individuals can successfully breed and pass on their genes, and the most compatible sperm and egg matches are able to take place.

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PRESENTATIONS, VISITS & NEWS *conference presentations, visits to and from group members etc*

- **Patricia has been awarded a two year AXA-funded post-doc to continue genetic research on hihi – CONGRATULATIONS!!**
- Leila & John spent a week in Van, Turkey analysing the latest hihi plasma samples for carotenoid and vitamin concentrations related to Leila's supplementary feeding experiments during the 2010/2011 season on Tiri.
- Ali submitted her PhD upgrade report to Imperial College and a research manuscript titled "Does supplemental feeding affect the viability of translocated populations? The example of the hihi."
- Kate submitted her PhD update report to Massey University

FEATURE STORY: **Hihi fate hanging on a wire?**

It is a nervous time for hihi and those that are focussed on their conservation as Maungatautari struggles to resolve recent conflicts of a human nature. Our fingers are crossed that this important restoration project overcomes these issues. Of key necessity is the continued integrity of the predator-exclusion fence which has been threatened and damaged in recent months. MEIT monitoring and our research (Kate's PhD research) is showing very promising signs for hihi establishment, making this site of major importance for hihi conservation. Our group is 100% supportive of this population and site.

SUMMARY of John, Kevin, Kate, Doug and Smuts' Conservation Evidence paper on release of hihi at Maungatautari

In March 2009, 79 hihi (stitchbird) *Notiomystis cincta* were translocated from Tiritiri Matangi and Little Barrier (Hauturu) Islands to Maungatautari, a 3,255 ha New Zealand mainland reserve with a predator (exotic mammals) exclusion fence. Genetic management, by mixing founders from both a reintroduced and highly productive site (Tiritiri Matangi) and the only naturally occurring extant population (Little Barrier), appears successful with at least one mixed pairing producing fledglings in the first breeding season after release. Monitoring this population is challenging due to the large scale and rugged terrain of the reserve. However, closed mark-recapture analysis based on a 15-day survey about 1 year after release indicated that between 15 and 41 (19 - 52%) of the translocated hihi had survived. Unringed hihi were also observed during this survey (25 observations, but it is unknown how many of these were the same individuals), indicating successful breeding in the first year. If they persist and thrive in the longer term, this translocation will provide an important hihi population at a large mainland site and will contribute to the ongoing ecological restoration of Maungatautari.



Male hihi with tail mounted transmitter. All hihi released in 2011 had a transmitter so that Kate could closely follow post-release movements.

FUNDING *our major funders and new funding news*

- **Patricia has been awarded a two year post-doc from the AXA-fund to continue working with hihi valued at 120 000 Euros.**

CURRENT AND PAST FUNDING – thank you!

+ British Research Council + Royal Society + Leverhulme Trust + Department of Conservation + AXA-fund + NERC + SoTM + ASAB + Massey University + Wesfarmers Industrial and Safety NZ Ltd.

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