

Ewen lab hihi research update

January 2011



ACCEPTED PAPERS AND MEDIA *publications in scientific journals, popular science and media coverage*

- Thorogood, R., Ewen, J.G. & Kilner, B. M. (2011). Sense and sensitivity: responsiveness to offspring signals varies with the parents' potential to breed again. *Proceedings of the Royal Society London B*. doi:10.1098/rspb.2010.2594
- Patricia et al.'s Molecular Ecology paper was covered by NERC's (Natural Environment Research Council) magazine – Planet Earth online.



In Celebration of Hihi Week
March 9th to 13th with a concert on March 12th

The Tiritiri Matangi Island Hihi (Stitchbird) Research Group in conjunction with the Supporters of Tiritiri Matangi and the Department of Conservation would like to invite you to an exhibition of work celebrating one of New Zealand's least known endemic and endangered birds, the hihi or stitchbird.

A group of New Zealand Artists and Artisans have spent time on Tiritiri Matangi with our Researchers and have created some unique works to celebrate this beautiful bird. We hope the work produced will raise public awareness about this species.



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

- Ali won the runner up prize at the IoZ's student conference for her talk titled "Supplemental feeding of translocated populations: how important is it?" (a study based on monitoring data from Kapiti Island) **congratulations!!**
- Patricia attended the International Population Genetics meeting and presented a talk titled "Promiscuity as a strategy for avoiding inbreeding by island bound species"
- John visited the University of York and gave a seminar on the hihi project titled "Carotenoids, colour and conservation in the hihi"
- Kate has submitted ethics and research permit applications for her project and applied for funding through the Wilsons Ornithological Society
- John and Nathalie have applied, as part of an EU consortium, for an EU Training Network Grant
- Prof. Geoff Hill (Auburn University, USA) has won a travel grant and will visit Leila, Tiri and the hihi in March this year
- Doug has spent time down at Te Papa (museum) looking at hihi specimens to assist in his art project.
- Mary-Ann (SoTM) & Patricia with help from John, Leila & Kate are preparing for the "In celebration of hihi week" to be held on Tiri

FEATURE STORY: CONGRATULATIONS TO ROSE ON HER PROCEEDINGS PAPER!!

- **Abstract from Rose, John and Becky's recently accepted and published paper in Proceedings of the Royal Society London B**

How sensitive should parents be to the demands of their young? Offspring are under selection to seek more investment than is optimal for parents to supply, which makes parents vulnerable to losing future fitness by responding to manipulative displays. Yet, parents cannot afford to ignore begging and risk allocating resources inefficiently. Here, we show that parents may solve this problem by adjusting their sensitivity to begging behaviour in relation to their own likelihood of breeding again, a factor largely neglected in previous analyses of parent-offspring interactions. In two carotenoid-supplementation experiments on a New Zealand passerine, the hihi *Notiomystis cincta*, we supplemented adults to enhance their propensity to breed again, and supplemented entire broods to increase their mouth colour, thus enhancing their solicitation display. We found that adults that attempted two breeding attempts a season were largely insensitive to the experimentally carotenoid-rich gapes of their brood, whereas those that bred just once responded by increasing their rate of provisioning at the nest. Our results show that parents can strategically vary their sensitivity to begging in relation to their future reproductive potential. By restricting opportunities for offspring to influence provisioning decisions, parents greatly limit the potential for offspring to win parent – offspring conflict.



FUNDING *our major funders and new funding news*

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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Recent graduates

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