

CURIOUSER AND CURIOUSER . . .

It's not only Cheshire cats in Wonderland that are curious animals; our hihi are providing many fascinating glimpses of a socially complex bird.

It is known from previous studies on the island sites where hihi breed that up to 40% of the eggs in a clutch may have been fertilised by one or more males other than the putative partner. But does a non-dominant male have a further role in this cuckold's nest? Andy Warneford, our hihi monitoring contractor, reports a male feeding a chick that seemed to have its siblings being fed a short distance away by a dominant male associated with an observed nest. Was this a non-dominant male easing his conscience? An alternative hypothesis though offered by another student of hihi is that the single chick had in fact originated from an unobserved nearby nest and its feeder was in fact its father. Feeding of chicks has many permutations and combinations with the female though usually doing most of the feeding assisted by the male. Once chicks are fledged the male may continue on his own, the female possibly staking out a new nest site and visiting occasionally to ensure feeding standards are being maintained!



Grounded [1]
[photo courtesy of L. Béchet]

Both may feed fledglings or sometimes the male may decide that he no longer needs to bring up this rowdy brood and flies off leaving his mate to continue on her own. The fledglings leave the nest gliding in hope

till they encounter a branch they can cling to. When all chicks have landed they are shepherded into a suitable shrubby area for a while by the parent[s] and fed until they develop their flying skills and can follow. This year four successful groups of fledged chicks have been seen already [although the single chick being fed raises the possibility of a 5th successful nest]. To

photograph our first set of chicks when it was realised they must have flown from their nest, new volunteer Laurence Béchet set off with her largest telephoto lens. While getting ready, she placed her equipment on the ground but her plaintive radio call to Andy that she was unable to photograph the chicks as they were climbing over the lens says a lot about their naiveté! Chicks from more than one nest have been observed at ground level and then later have been seen up shrubs and trees being fed.

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— The Ark in the Park —

A Forest and Bird, Waitakere Branch "Auckland Naturally" project partnered by the Auckland Regional Council

EXPANSION

The original concept of the ARK was to include the total catchment of the upper Waitakere stream and now having the consent of Watercare, we have started expanding our area of predator control. Trackless forest untouched since the Waitakere Dam was built in 1904 is being navigated to form bait lines on gridlines 100 metres apart. Bait stations are being placed, baits deployed, and stoat traps added as in the previous 1000 hectares. In another few years, we would hope to bring this new area, which is the catchment for the reservoir, to the same standard of predator control so that the ARK will be over 2000 hectares. Initially, two areas which will total about 150 hectares will be added. While one is of modest slope and has frequent open bush sections, sometimes for as much as 10 metres, the other area in the Kelly Stream catchment is an unrelenting tangle of very tall kie kie [*Freycinettia*]. For malicious variety, supplejack vines are randomly added to the tangle. Kelly Stream gives its initial to the block and lines K1 to K10 are now done.



K9 terrain, beaten by dogged navigators.
[photo courtesy of J. Sumich]

CURIUSER . . .

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Grounded [2]
[photo courtesy of A. Warneford]

This is a pretty good indicator that our predator control is still effective as days grounded is not recommended when cats, stoats, or rats are about.

Nine nests have so far been found this season with some being vacated after competition from starlings, but later re-established by one of the original birds with a new partner: mate fidelity doesn't even have to last a season with hihi!

Here though is perhaps the most bizarre observation. Several people have been very impressed with the sound intensity from a pumped up male hihi. Frequent hihi observer Grant Capill, describes how if a hihi within 1 metre sounds off with its call, it is like a boom box with percussion waves palpable across his chest. What to make then of an occasion when Grant and Hayden Reynolds were out monitoring hihi and saw a blackbird that came close to the hihi chicks that dominant male HM/GH had been feeding. HM/GH flew onto the branch confronting the blackbird and gave forth the loud, high intensity "face blast." Appearing as though stunned, the blackbird plummeted to the ground metres below, landing almost at Hayden's feet with a thud then flying off at speed! Will hihi be listed with pistol shrimps, elephants, whales, fart beetles, and the myriad other species known to use sound as a defensive mechanism?

MEET THE MANAGER

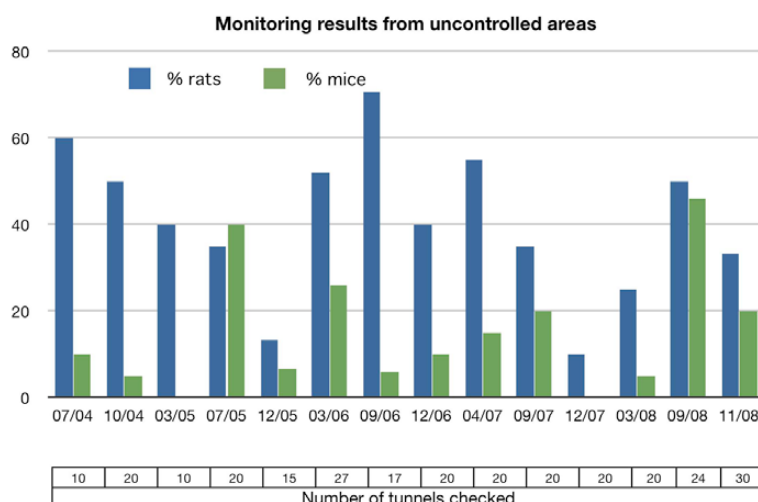
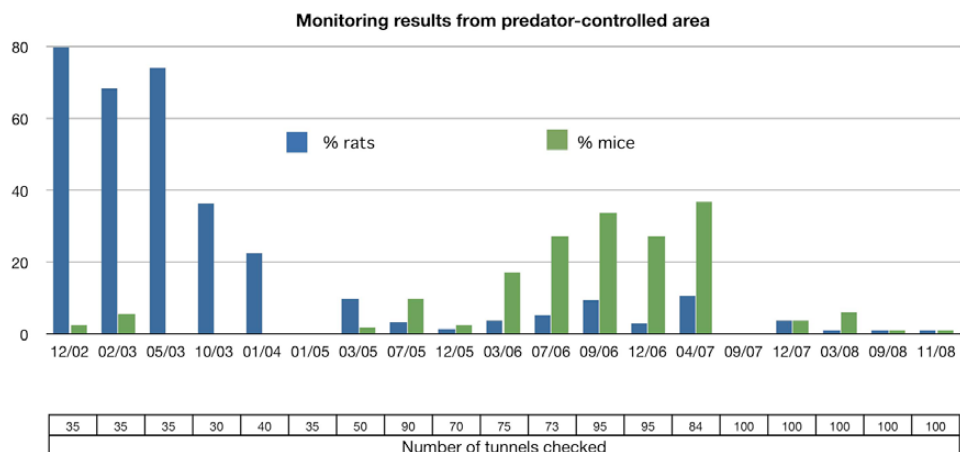
Maj De Poorter comes to the ARK from the Invasive Species Specialist Group of International Union for the Conservation of Nature's Species Survival Commission, based at the University of Auckland. For the last 10 years, she worked on advocacy, networking, awareness, and education on invasive species at an international level. Before that she worked as a research contract manager at the University for 2 years, after working for Greenpeace International for over

a decade, as part of the successful campaign to keep mining out of Antarctica. She is by training an ecologist, having done an undergraduate at the Free University of Brussels (Belgium), and a PhD on snowshoe hares in the Canadian Yukon Territory. She is particularly looking forward to being part of the ARK IN THE PARK project and its community-based approach. Meanwhile Sandra Jack, our previous manager, has moved to DOC (Auckland) and still is looking after her stoat traps at the ARK.

PARSIMONY IS SAGE THIS TIME

Over the 5 years we have used our rat bait, we have by modifying our techniques constantly achieved more with less. Initially loose bait was placed in the bait stations on a monthly cycle over the 5-month breeding season and in the moist Waitakere climate was mouldy within weeks. Within 2 years we were using half as much by pre-packaging bait into small plastic bags, which reduced spoilage and extended the life of the bait.

A further reduction occurred as we only replaced the bait once in the majority of our area with a further top-up on the perimeter sites. With fewer rats about as constantly shown by our monitoring, this year we experimented yet again. Instead of replacing all bait bags at 8–11 weeks in the second cycle we only replaced those bags where the majority of the bait had been taken and leaving those bait bags with minimal or zero take. Bait used per station is now only



about 15% of the amount used in the first year. But would it work? Frugality is all well and good, but would the small amount maintain our rodent control? As anxiety-provoking as any school exam, the December rodent monitoring resulted in much relief and satisfaction. Out of 100 monitoring tunnels throughout our total area, only one set of rat prints and one set of mouse prints were found contrasting greatly with the 30% of rat and 22% of mouse in our nearby comparison sites. If this can be repeated at the autumn monitoring in March then we'll be pleased indeed as will our ARC partners who supply the bait.

P.T.A.

No it's not the Parent Teachers Association, but a disease affecting kauri that's causing concern to those who cherish our northern

forests. *Phytophthora* taxon *Agathis*—P.T.A.—is a previously undescribed fungus that specifically attacks kauri [genus *Agathis*]. A cluster of dead and dying kauri in the Waitakere Ranges noted some 3 years ago by Forest & Bird president Dr Peter Maddison lead to the finding of sick or dead trees in other Waitakere sites including where the ARK is based. However many other sites north of Auckland as far as

Trounson Kauri Park also have affected trees that first show a bleeding of gum not far above ground level, a gummy encirclement of the trunk, and then foliage changes. Tree death can come quickly in small saplings or take many months in mature trees. The threat to this iconic species in the upper North Island is now being jointly tackled by MAF Biosecurity, the Department of Conservation and all the regional councils. Although much remains to be discovered about the disease it would seem that the spread of the fungal spores is relatively slow in sites with unmodified soils, but transmission is hastened where the soil is disturbed. One possible cause is thought to be via pigs. These are known to transmit *Phytophthora* strains in other parts of the world and it is thought that the spores can be carried

on snouts or feet. Pigs that are already a threat to biodiversity in many parts of New Zealand are now seen as even more of a problem in kauri forests. The

ARC has therefore hired additional teams of pig hunters and over 40 pigs have been dispatched in the first weeks of the programme.

Other potential vectors though are humans—park walkers, trail joggers, and conservation volunteers. While general park users have been asked to stick to the existing tracks to minimise the likelihood of spore carriage, our volunteers who in their activities of monitoring species or controlling

predators frequently go off-track are attending to their soles. Cleaning then spraying the soles of our boots with an antifungal preparation before entering the bush and on return has become a routine.

Stop Press—

Approval was given in early December by the Waitakere City Council to allow for the placing of a house on city-administered land on Falls Road immediately neighbouring the ARK. This house, which will be converted into a 14-bed bunkhouse, will be used by visiting volunteers, students both local and overseas, and visitors who might want to be on-site to hear a dawn chorus or walk some tracks at night to observe the [invertebrate!] nightlife. More details in the next issue . . .

*Enjoy a Merry Christmas
and a Happy New Year!*

Until next time . . .

John Sumich



Marital duties: The Colgans clean up
[photo courtesy of G. Capill]

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