A Veterinarian's Perspective of the Saddleback (Tieke) Reintroduction to Boundary Stream Mainland Island (BSMI), New Zealand: Past, Present, and Future

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The saddleback (native Maori name=tieke) is a small (about 80g) passerine wattled bird, *Philesturnus carunculatus rufusater* in the family *Callaeidae*. Its conservation status is protected, threatened endemic.

The main conservation objectives of the project are:
1) to establish a self-sustaining population of North Island saddleback in BSMI;
2) to help restore biological diversity reflecting pre-European times; and
3) to confirm that the current management levels are sufficient for a population of a predator-vulnerable species to persist on the mainland.

The main health objectives of the project are:
1) to prevent any pathogenic organisms from entering BSMI that are not present already;
2) to reduce any disease associated with translocation; and
3) to obtain baseline data on the species. The role of the veterinarian is to coordinate the application of the DOC health screening guidelines with the capture team leaders to meet both the conservation and health objectives.

In August 2004, 41 birds were caught on an offshore island from which no baseline disease screening had been done. As a veterinarian was not present, and communications from the island could be difficult, a decision flow-chart had been made for each outcome of disease testing. Appropriate antiparasitic and antibacterial drugs, doses, and equipment were sourced and ready. Basic physicals were done by an experienced bird handler. Blood and faecal samples were collected from all birds to check for haemoparasites and endoparasites, as well as to assess blood parameters. Bacterial cultures for *Salmonella* and *Yersinia* were also done.

Coccidia were found in 9 birds and all treated. A salmonella-like bacteria was found in 7 birds so all 41 were transferred to Auckland Zoo for quarantine. However, further investigation revealed the Salmonella-like organism to be a common *Citrobacter* spp. The birds were not treated and transferred to the release site. Three birds had died from transport trauma, so 38 were released. Ten were fitted with radio transmitters. After 2 weeks there was an extrapolated 40% mortality when 4/10 birds found dead. This mortality rate was confirmed later by census. Two of the four died of aspergillosis. In addition, one male upon release was immediately recaptured and later diagnosed with aspergillosis. He was treated for 6 weeks and released. Five pairs were formed but none had successful nests. Four transmitted birds are still being sighted. There have been no signs of any other birds.

This first capture did not meet the conservation objective, while 2 of the 3 health objectives were met.

As the conservation objectives were not met, a second translocation of 40 birds is planned for May 2006. There will be many differences to help us attain both our conservation and health objectives. First, an easier access lake island will be used for the source population. A veterinarian will be on site and samples taken off daily as received. The transport boxes have been modified to reduce any injuries. The holding aviaries are being planned to reduce stress by having less birds per enclosure and multiple feeders. In the first capture, there was aspergillosis morbidity and mortality, so we will be prophylatically treating all birds with iatraconazole in the wombaroo. This has been successful prevention for other aspergillosis "prone" species. All quarantine will be done on the island. We will also be doing a gram stain on all faeces as we recognize we are only culturing for 2 bacteria that require special culture techniques and are thought to pose a possible threat to naïve populations. We hope to add PCR for avian malaria to increase our sensitivity for this pathogen. We also hope to be able to do a baseline disease survey in BSMI before the transfer. This will help us interpret any positive pathogen results. Upon release, all birds will be transmitted as currently we can only find birds with transmitters.

It should be mentioned that another transfer of 40 birds from this lake island will take place about 30 days later to a location 3 hours of BSMI. This is of significance as we will share all disease screening information with them. If nothing of significance is found, the second transfer will proceed directly to a release-site quarantine with no disease screening done. This collaboration will save time, save resources, and hopefully lessen the stress on the birds.