

Update on Reintroduction of Kaki (Black Stilt) to the Mackenzie Basin, South Island, New Zealand

The latest release of kaki to the wild took place on 16 September 1999. In total, 3 adults and 17 sub-adults (aged ~9 months) raised in captivity were released near the Cass River, Mackenzie Basin. The survival rate from this release has been very high. One sub-adult was found dead one day after the release, but the remaining 19 birds (95 %) are all alive two months after the release. Two changes to the release protocol have increased post-release survival from a mean survival rate to adult age of 29% obtained from 1993 to 1997, to the 80+% survival rates presently achieved. These are (1) all birds receive supplementary food for one month after release, and (2) all birds have iodine added to their captive diet pre-release. Supplementary food used is their normal captive food placed in plates at the release site. Mealworms are initially added to the plates to encourage the birds to feed at the plates. Iodine has been added to the birds diet because necropsies on dead bodies recovered from a previous release in 1998 showed that most released birds had goitre (thyroid dysplasia). Goitre may not be the proximate cause of death of released birds, it causes a reduction in the metabolic rate which may make birds more susceptible to predation or cold weather conditions. At least one further release will be undertaken at this site, then a new site elsewhere in the Mackenzie basin will be chosen.

From Richard Maloney

Update on introductions of North Island weka to islands, New Zealand

In 1996, 34 captive reared North Island weka were introduced to the small resort island of Pakatoa, in the Hauraki Gulf. Since then the population has fluctuated from 51 to 19 birds as drought has taken its toll in the limited habitat of about 30 hectares. In 1997, 32 weka were released on nearby Whanganui Island. This island of 286 hectares is mainly in pasture with some native forest, pines and small wetlands. Initially many captive-bred and possibly naive weka were taken by hawks and stoats. Now the stoats have been trapped, trap lines buffer the island from the adjacent mainland and the surviving weka are known to have reared at least two clutches this season. For this summer, Dr Tony Beauchamp has put forward a plan to capture juvenile birds from Pakatoa and transfer them to Whanganui Island, thus providing a source of wild-bred birds for the new population and relieving the pressure on Pakatoa Island.

From Ann Graeme

Recent robin reintroductions to mainland sites, North Island, New Zealand

As noted in the last newsletter, New Zealand robins were reintroduced to 3 mainland sites this year, to Wenderholm Regional Park (just north of Auckland), Paengaroa Mainland Island (near Taihape) and Kakepuku Mountain (near Hamilton). At Wenderholm, 12 of

the 21 birds released survived to the breeding season and formed 6 pairs. These appear to be breeding at “island rates”, with 5 of the 6 pairs already having produced young and on to their second clutches. At Paengaroa, about 20 of the translocated birds survived to the breeding season. Almost all the nests have been taken by predators, and several adult birds have disappeared since the start of the breeding season. However, 3 nests have recently been successful and there are now 7 fledged young. Based on the data so far, the Wenderholm population looks extremely promising whereas that at Paengaroa is dodgy at best (we will be doing PVA when we get more data). The difference between the sites is presumably due to different levels of predator abundance. Wenderholm is a peninsula, and the predator control programme there has reduced numbers to very low levels. Paengaroa also has a predator control programme, but the density of bait stations is fairly low (74 for 100 ha) and the reserve is surrounded by a rural landscape.

From Doug Armstrong and Tim Lovegrove

Potential for reintroduction of saddlebacks to the mainland

Saddlebacks have been extinct on the mainland for at least several decades, but have done extremely well when reintroduced to predator-free islands. Recently, Rob Davidson (Massey MSc student) developed a detailed population model based on data we collected for the first 5 years after reintroduction to Mokoia Island, and used this to explore the potential for reintroducing saddlebacks to the mainland. This is an important issue at the moment, as intensive predator control programmes on the mainland are potentially creating opportunities to reintroduce species such as saddlebacks and stitchbirds that are currently restricted to islands. The main factor driving the Mokoia population dynamics appeared to be density dependence in reproduction and juvenile survival – that is, saddlebacks initially had extremely high reproduction and juvenile survival rates, but these reduced as the population expanded. This makes for a very stable long-term population, but also means that the population would be extremely resilient to harvesting. While the population is only about 250, the model predicts we could take about 60 birds per year with no threat to its viability. Similar figures probably apply to other island populations, meaning they could potentially be harvested quite aggressively in attempts to establish mainland populations. The big question is what level, and what manner, of predator control is needed to allow mainland populations to persist. Rob’s modelling showed that saddlebacks could have a substantial increase in mortality rates or decrease in reproduction rates, and still be viable. However, it’s currently unclear what level of control corresponds to the minimum level of predation that can be tolerated. Another important finding was the saddlebacks are very sensitive to brodifacoum bait – we estimate that about half the population was killed by a poison drop to eradicate mice in 1996. Rob's modelling suggests it is unlikely that a mainland population could be made viable through poison drops due to this bykill, so another important question is the level of bykill that may occur with the bait stations normally used in mainland sites.

From Doug Armstrong

Proposed translocation of blue ducks to Taranaki National Park, New Zealand

Twelve blue ducks (*Hymenolaimus malacorhynchos*) have been released in Egmont National Park over three separate releases (1986, 1989 and 1991). Of these, seven were captive-reared juveniles and five were wild adult birds from the Manganui-a-te-ao River. So far the establishment of blue duck in Egmont National Park has been of limited success with only 3 known birds remaining, all of which are male. These are distributed widely, one on the Waiaua River (originating from the 1991 release), one on the Waiwhakaiho River (the single male released in 1989) and one on the Manganui River in the area of his release in 1986. Breeding has been recorded in the past. However with an observed lack of females within the present known population, there is no chance of continued natural recruitment. In addition, all birds in the current population are old (one is over 11 years), and with an average life span of 7-8 years, this population is aged. In their favour, however, is the fact that blue duck are capable of breeding throughout their life span.

In December 1997 the Blue Duck Recovery Group (BDRG) met to review blue duck work and set recommendations for the future. From this meeting it was recommended that releases of blue ducks should continue in Egmont National Park to supplement the aging population and to continue the trial of methods for the establishment of new blue duck populations. The current plan is to capture eight near-fledged wild juvenile blue ducks from the Manganui-a-te-ao River and/or the Whakapapa River and release them in Egmont National Park in the 1999/2000 and 2000/2001 seasons. Ideally the translocated birds will consist of 2 entire broods. The birds will be hand released on one river, where they will be monitored daily for the first week, weekly for the first two months and monthly thereafter. Birds will be fitted with mortality transmitters to aid with monitoring and test the effectiveness of this type of transmitter for future releases

From Tim Holmes

Reintroductions in the Geelong Area, Victoria, Australia

There was a trial reintroduction of *Antechinus minimus* (**swamp antechinus**) to Anglesea heathland in 1991, 1992, and 1993. The species appeared to have been exterminated from the area by the Ash Wednesday fires of 1983, as none turned up in subsequent annual trapping. 10 animals were translocated from Port Campbell (200 km to west) each year, and released in artificial burrows. Reintroduced animals were radio collared and tracked, and behaviour such as reproduction, range of movement, and diet investigated. There do not appear to be any animals presently at release site, but some have been found 2 km away. DNA tests are currently being used to determine parentage.

Mandy Lock (PhD student) is currently in the process of releasing captive bred *Pseudomys novaehollandiae* (**New Holland Mouse**), an endangered species in Victoria, into the Anglesea heathlands. Mandy has bred 20-30 of the animals at Deakin

University, and some at Melbourne zoo. She was previously trapping animals in the heathlands. Up to 40-50 were found two years ago, but this is now down to 2-5 being trapped over large area. John Seebeck, Barb Wilson and Peter Myroniuk are also involved with NHM recovery.

From John Aberton

Introduction of Dibblers to Escape Island, Western Australia

Escape Island. Conservation introduction.

In 1998, 26 captive-bred dibblers (*Parantechinus apicalis*) from Perth Zoo were translocated to Escape Island (10.5 ha, near Jurien, Western Australia). This was a conservation introduction, aimed to provide security for the species and for two small island populations nearby that were small and remained vulnerable to introduced house mice. Individuals were monitored over the year by radio-tracking and trapping. Breeding was successful in 1999, and young were found dispersing across the island later in the year. The second stage of the translocation proceeded in October 1999. The aim was to increase the genetic vigour of the island population by the supplementation of 41 additional captive-bred dibblers. Monitoring will continue to ascertain whether the second group and the first generation progeny will breed in 2000. General information on dibblers is available on the web at: <http://ecofriends.nccnsw.org.au/member/tsn/context/profiles/350.html>

From Dorian Moro

Reintroduction of Numbats to Scotia Sanctuary, New South Wales

Earth Sanctuaries Limited continues to have success with re-introduction of Australian wildlife back in the wild. Our most important recent success is the Numbat (*Myrmecobius fasciatus*). The 1993 transfer of 15 Numbats from CALM (Now just Dept of Conservation?!) in WA to ESL's Yookamurra Sanctuary in SA has worked very well. A population of 130 Numbats were recorded at Yookamurra for our Annual Report as of June 30, 1999. Dr Tony Friend (principal research scientist for CALM, in charge of the Numbat program) was instrumental in assessments and recommendations for the transfer of 40 individuals from Yookamurra Sanctuary to Scotia Sanctuary (far western NSW on the SA/NSW border). This comprehensive program to move them into NSW has begun with the re-introduction of 12 Numbats on Nov 24th (8 more to go on Dec 13th, 1999). This termite-eater has officially returned to NSW after a ~99 year absence (Dickman et al, 1993). There was a crowd of more than 100 people, including a representative from every mainland State National Parks Department. The Numbats are being tracked daily from radio collar signals or direct sighting.

From Mark Edwards, Earth Sanctuaries Ltd.

Update on Bridled Nailtail Wallabies reintroduced to Scotia Sanctuary

6 bridled nailtail wallabies were reintroduced to Scotia Sanctuary in August 1998, the animals being provided by The Queensland Department of Environment and Heritage. The population has now increased to 25 as of December 2 1999. To increase genetic diversity, we swapped 2 males with Dubbo Zoo on November 24 1999.

From Mark Edwards, Earth Sanctuaries Ltd.