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			27. Blue Duck (Whio) Management Quotes
49 Jun -03	1		In October 2002 the World Conservation Union upgraded the conservation status of whio from Vulnerable to Endangered, while the Department of Conservation ranks whio as Nationally Endangered. The Blue Duck Recovery Group predicts that if the present rate of decline in whio populations is not addressed, the species will be functionally extinct from much of its present range within the next 10 years. We therefore find ourselves in almost the 11th hour for yet another unique taonga.. Through the 1990.s several populations were monitored, with the vast majority showing systematic decline, while the best that any of them did was to hold their own. Anecdotal and survey evidence through the same period indicates that whio are missing from vast tracts of country in which they were once relatively common. On top of this, a closer look at remaining whio populations shows they are invariably in poor health, highly fragmented and mainly comprised of lonely adult males. So what is behind this decline? Research in Fiordland over the last three years identified stoats preying on nesting females, chicks and eggs, as the greatest threat to the species. Other projects are also now being established to test if this is the case throughout a range of habitats. At the same time, research is being undertaken to establish how to best protect whio on the nest so they can breed safely and their populations recover. Meanwhile, projects aimed at controlling predators to protect whio are already underway in several sites. These include the Clinton, Arthur, Cleddau and Murchison catchments in Fiordland; the Oparara and Flora catchments of Kahurangi; the Tewaiiti in Te Urewera; the Takapotahi in the Motu catchment; in the Egmont national park and on the Manganui a-Te-Ao...a workshop hosted by the Blue Duck Recovery Group last year determined that a minimum of 30 pairs need to be protected in each of eight broad geographical regions.. In terms of what should be done at each site to protect whio, we are in the all-to-familiar situation of not knowing the answer, but unfortunately not having the luxury of time to wait before starting work.
49 Jun -03	11	East Coast/ Hawke's Bay	Blue duck monitoring continued in the Opotiki Area at the two national monitoring sites: the Takaputahi in the Motu catchment, and the Te Waiiti River in the Te Urewera National Park. The Takaputahi population has been monitored for the past twelve years and without predator management up until last year. In comparison, the Te Waiiti population has been monitored for the past four years and has had predator management associated with the Te Urewera mainland island. The Takaputahi represents a population within a modified catchment system but with intact riparian area, and the Te Waiiti an un-modified North Island podocarp forested river system. These two river systems have had very contrasting results over the period of monitoring. Over the past twelve years the Takaputahi whio population has steadily declined. In 1993 a total of 36 whio were counted within 26 kilometres of river. The 2003 survey found only seven birds within the same survey area. Only one of 21 adults banded over a five year period remains, and there has been a 91% reduction of territorial pairs over the past ten years. The recruitment of juveniles has also been poor, with only two out of 26 fledglings returning to their natal river. The cause for this decline is suspected to be predation. The predator controlled Te Waiiti whio population is trending in the opposite direction. In 1999/00, 34 birds were found in 18 kilometres of river: 8 pairs and 18 juveniles. This season (2002/03) a total of 77 whio were encountered in the same sample area: 15 pairs, one single and 46 juveniles. In the past four years territory size has decreased from to 2.25 to 1.2 kilometres per pair. Fledgling success has increased by 155% since 1999. Juvenile recruitment into their natal river has been minimal due to lack of space through pairs maintaining their territories. Banded juveniles have been found up to 20 kilometres away from their natal river. The monitoring of these two populations indicates that predator control is required for continued blue duck population viability. Predator management in both areas has been funded with help from Environment BOP.
42 Oct -01	11	Nelson/ Marlborough	Flora stream is being done with the help of a bunch of keen locals who have banded together as an incorporated society, Friends of Flora, and will help out a host of bush birds and whio.
43 Dec-01	12	Nelson/	only one whio was seen in the whole East Branch

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		Marlborough	
43 Dec-01	13	Nelson/ Marlborough	Two community sponsored stoat control operations, one on Adele Island off Abel Tasman NP, the other at Flora Stream in Kahurangi NP start in late December. Designed to protect blue penguin and blue duck respectively, they are funded in part by Community Relations money.
45 Jun-02	12	Nelson/ Marlborough	A local community group calling themselves the Friends of Flora have completed their first season of stoat control along 8km of the Flora Stream with the intention of protecting all forest bird species with particular emphasis on blue duck.
50 Sep -03	12	Nelson/ Marlborough	Blue duck: Conservation efforts have kicked off with transmitters placed on three females of pairs located on the edge of Kahurangi National Park. The hope is to conduct an Operation-Nest-Egg-type experiment, where clutches will be borrowed from birds, raised in captivity and the chicks released back into protected habitat once they have fledged. The protected habitat in this instance is Flora Stream, and the protection involves in excess of 50 kilometres of stoat lines. In addition to the work in the Flora Stream, the habitat of the three pairs contributing the eggs will also be protected from stoats, with the hope that they will re-nest and successfully raise their second clutch.
52 Mar -04	17	Nelson/ Marlborough	In order to conserve whio, 568 double stoat traps have been placed to protect 4,500 ha of the Flora Stream catchment from stoats. This involved a massive job of trap tunnel construction and track cutting. Eleven fertile eggs were harvested in October from two whio nests on the fringes of Kahurangi National Park, and as a result we have 10 healthy ducklings to release into the protected area on 27th March. One of the pairs from which eggs were taken has successfully renested and is raising four young.
53 Jun -04	12	Nelson/ Marlborough	The release of whio into the Flora catchment was successful and birds are now feeding well and distributing widely. There are however doubts about whether they are thriving: two of the 10 birds have died, one at least having apparently starved. We are still confident that the eight survivors will fully adapt in time
54 Sep -04	9	Nelson/ Marlborough	Following the March release of 10 whio into the Flora catchment, six have died from apparent starvation. Due to their poor condition, the remaining four birds were taken back into captivity until spring. The starvation problem is possibly due to too little food being available and poorly developed feeding behaviour in the captive-raised birds. Interestingly, despite low invertebrate numbers recorded in a recent survey of the Flora, wild whio are currently surviving there. Changes to husbandry are also being looked at to help improve feeding behaviours developed during captivity. In the Wangapeka, the four wild hatched juveniles from last season are doing well. A juvenile female from this clutch has recently paired with an adult male who is a new arrival in the area. The study of whio juvenile dispersal is ongoing, and to date has shown juveniles dispersing up to 6 km from their natal territory. Whio nest monitoring for the 2004/05 season is due to start soon. Two pairs will be monitored, and their first clutches harvested for captive rearing. The aim is to secure another 10 whio juveniles for release early next year
39 Dec-00	15	Southland	*Whio:* The productivity and survival study has just kicked off in the Clinton and Arthur Catchments (Milford Track).. We are placing video cameras on nests (3 so far) and will continue this throughout the summer. Two of the three videoed nests have been visited by stoats and one also by a possum. A stoat destroyed one of the nests and the female survived, while the other female managed to defend her nest from a stoat and a possum although the stoat stole one egg. A third female was thought to have just begun incubating when she was killed, she was found pulled under a rock with stoat scats surrounding her. The sex imbalance, particularly in the Clinton Study site, is also concerning, containing 14 males (2 male/male pairs) and now, only 2 females. This is alarming evidence of the impacts of stoats on whio and probably more serious than most expected. The impact is possibly worse this year than normal because of the mild winter and double beech mast, but the sex imbalance suggests that this has been an ongoing problem. A stoat trap line along the same design as the Eglinton programme has recently been set up in the Clinton Catchment. We hope that this will provide protection, not only to kaka and mohua but also whio and kiwi next year.

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51 Dec -03	19	Southland	Whio are well into nesting: three nests in the Arthur, one in the Clinton and one in the Cleddau. Five eggs were removed from a nest in the Clinton last week and taken to Burwood as the nest was situated on top of fresh avalanche debris and likely to get wiped out. Three eggs are fertile and they will be hatched at Burwood and then transferred to the Wildlife Park to be released next year. Two nests have been preyed on by weka so far this season
52 Mar -04	26	Southland	Release of the captive-reared whio juveniles back into the Clinton Valley is planned for 23rd February. Wild ducklings from this season are being fitted with radio transmitters so as to monitor their dispersal and survivorship through the winter
55 Dec -04	17	Southland	The first of this season's whio ducklings have hatched in the Operation Ark site; 10 ducklings have hatched from two broods in the Clinton and Arthur Valleys. A further three nests are currently being monitored in the Arthur and Cleddau..At least two juveniles from last year are nesting
36 Apr-00	11	Tongariro/ Taupo	Whio: Annual monitoring has shown significant breeding has occurred on all monitored rivers within the Tongariro/Taupo Conservancy in the 1999/00 season, unlike the poorest breeding season on record last year where there were only 2 broods seen on one-off catchment-wide surveys of four major river systems. Some early moulting adults may not have been detected on the monitored Whakapapa reach this year, but 4 chicks from a brood of 6 were transferred from here to Mt Taranaki as part of the National Blue Duck Recovery Programme. On a recent walk of the lower reaches of the Mangaturuturu River field staff saw 2 pairs of blue ducks. This is the first time blue duck have been recorded in this river. Although the Mangaturuturu River is very close to other blue duck inhabited waterways its headwaters are filled with the ash laden lahar path known as the Mangaturuturu Glacier. As a result the river has had little or no aquatic life and has previously been deemed unsuitable blue duck habitat.
49 Jun -03	8	Tongariro/ Taupo	Whio: Regular monitoring of the Tongariro, Whakapapa, Okupata/Mangatepopo confluence, Makatote and Mangaui-a-te-ao rivers was undertaken in December and January of 2002/03. The preliminary results..indicates a relatively stable population when compared to previous years. A male/male pair was observed on the Whakapapa, and they have even tried to nest
49 Jun -03	8	Tongariro/ Taupo	Department of Conservation, Genesis Power Ltd and the Royal Forest & Bird Protection Society Inc. entered into a formal agreement to establish a Trust. Its purpose would be to provide ongoing operations to enhance, protect and promote blue duck populations..projects approved are a predator control pilot study on the Manganui-a-te-ao in the Central North Island, and secondly, to establish a new blue duck population on Mount Taranaki in the Egmont National Park
53 Jun -04	6	Tongariro/ Taupo	A complete survey of the Whanganui/Whakapapa and Mangatepopo rivers was undertaken in December 2003 by Enviroresearch and DOC, with the primary aim of measuring the impacts of increased water flow released by Genesis on the whio population. The sections of river running through Tongariro Forest were surveyed and thereafter birds banded. A total of 44 pairs, 11 single adult males, 15 single birds sex unknown and 19 chicks were counted. An estimate of the total number of individuals in Tongariro Forest Conservation Area is around 140. Only a third of those were banded. The number of pairs per kilometre was 0.74 on the Whanganui, 0.52 on the Whakapapa, and 0.71 on the Mangatepopo. These figures are similar to counts done in the past. Productivity was very low this year (19 chicks from 44 pairs), primarily due to flooding in October. The monitoring and banding will continue for two years after the water has been released. The water release is due to occur when hearings within the environment court have been resolved. The Department has secured internal and external (Central North Island Blue Duck Conservation Charitable Trust) funds to measure nesting success and female mortality with and without predator control on the Whakapapa and Whanganui over a 5-year period. Detailed planning is underway and work is set to begin in August.
55 Dec -04	8	Tongariro/ Taupo	Whio: We are in full swing, monitoring 32 pairs and 21 single birds on the Whakapapa, Whanganui and Mangatepopo rivers, situated within Tongariro Forest. Pairs have started nesting and are either incubating eggs or have young chicks on the river. The season has been 2–3 weeks later this year; 17 pairs have been found nesting to date, however we expect to find more this month. We are monitoring nine pairs and two

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			single birds on the Whakapapa; surveys last year counted 10 pairs. Six of the currently monitored pairs have nests. One of these nests has recently been deserted or the female has been lost on the nest, this is unconfirmed at present. Egg shell fragments have been sent away in an attempt to understand what happened to the egg. The female has not been seen for sometime and it appears the male has adopted a paradise shelduck chick. The other five nests have yet to be located. On the Mangatepopo we are monitoring nine pairs and five single birds; seven of these pairs are nesting. Four nests have been located to date. We are still searching for the other three. Of those four nests found, one nest has seven eggs, and three pairs have class one ducklings. The Whanganui has 14 pairs and 14 singles. Of the birds we have been able to visit, four pairs are nesting, however we have yet to find actual nest sites
40 Mar-01	3	Wanganui	*Blue duck in Egmont National Park:* The planned transfer of further wildhatched and captive-raised birds has been postponed owing to poor productivity of both wild and captive populations this season. Survivors from last year's release are still encountered, but the birds had transmitters removed because of weight loss problems so monitoring is much more labour intensive. We plan to refit modified transmitters on birds based on findings from the takahe energetics study
36 Apr-00	13	Wanganui	Twelve blue ducks have been released in Egmont National Park over three separate releases (1986, 1989, and 1991). Of these, 7 were captive-reared juveniles and 5 were wild adult birds from the Manganui-a-te-ao River. Over the past couple of years 3 male birds were known to have survived including a captive raised bird from the first release. He was last seen in November 1999 aged 13 years. In December 1999 and January 2000 4 wild-caught birds from the Whakapapa and 11 captive-raised birds from Palmerston North Aviaries, Staglands Wildlife Park, and Hamilton Zoo were released into the park. Considerable effort is being invested in monitoring the birds.
37 Jun -00	10	Wanganui	Intensive monitoring of the released birds has been regularly undertaken. Some of the captive-reared birds have been lost through starvation, not from a lack of food resource. We assume the birds starved because they did not know how to forage for aquatic invertebrates. Other birds have succumbed to predation from stoats or ferrets, and one of the wild caught birds was run over by a car (can you believe it!). All the captive birds lost weight initially, which resulted in transmitter harnesses becoming loose. Without harnesses monitoring of the birds required significantly more effort. All the casualties occurred within the first 4 weeks of release, and there have been no further losses since then. This implies that the remaining birds are true survivors, although the threats to adult birds from introduced and native predators remain. Despite the losses to date the results are encouraging. The knowledge gained from the experiment enables us to refine future releases to significantly increase survival chances, which will ultimately assist in re-establishing a population of blue ducks.
44 Apr-02	10	Wanganui	Whio (blue duck): it was decided, in consultation with..local iwi, that up to five juveniles could be removed to Mount Taranaki. The plan was to supplement these birds with five from the Whakapapa River and also with captive-reared ducks. In the end a poor breeding season prevented any birds from being taken from the Whakapapa. However three juveniles were caught on the Manganuioteao in early January and were released on Mount Taranaki. These birds have been joined by seven captive-bred juveniles released on 27th February. All the birds are fitted with radio transmitters and are regularly monitored on foot and from a fixed wing plane
46 Sep -02	4	Wanganui	Whio: Results of this years translocation efforts to Mt. Taranaki are promising with seven of the ten birds released between January and March this year known to be alive. Two birds were killed by stoats. Captive-bred birds have largely remained on the release river whilst wild-bred birds have wandered widely around the mountain. The blue duck recovery group recently reviewed the translocation work and has recommended that releases continue for a further five years but that mustelid control is put in place in key catchments
48 Apr -03	8	Wanganui	Two more blue duck were transferred to Egmont National Park as part of ongoing attempts to reestablish a population there. The birds were sourced as juveniles from the Manganui-a-te-ao. Both birds were females and join existing captive-bred and wild-caught birds in the park. A further 8-10 captive-bred ducks will be released at the end of March. Unfortunately, all but one of these captive-bred birds are male, when

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			the Egmont population is in need of females. The programme is being enhanced by funding from the Central North Island Blue Duck Conservation Charitable Trust. The Trust is funding a programme of stoat control in two key release catchments, and for the source population in the Manganui-a-te-ao. Stoat numbers in the national park appear to have been low since a 1080 drop in August 2002, but with time more mustelids are turning up on trap lines
49 Jun -03	12	Wanganui	Whio: As part of a predator control trial and increased monitoring on the Manganui-a-te-ao, a team from the Whanganui Area Office, Wanganui Conservancy and Ohakune Field Centre spent four days colour banding whio on the Manganui-a-te-ao. Twenty nine birds were caught, including two old adults originally banded by Murray Williams 11 years ago on the same river. Three females were also fitted with radio transmitters. Breeding success will be closely monitored over the coming breeding season. The translocation of whio to Egmont National Park continued in April with the release of this year's crop of captive-bred juveniles. Ten of the 11 birds released were males. This necessitated the release of some males outside the current area of mustelid control. Encouragingly, all birds seemed to cope with a move into the wild despite some wild Taranaki weather. Two males have been predated by stoats outside the mustelid control area. The release programme carries on for another four years
51 Dec -03	11	Wanganui	A one-year trial predator control and monitoring study has started.. a line of stoat traps has been installed along one bank of the Manganui-a-te-ao. A major effort has been made to colour and metal band birds and fit several females with radio transmitters. Unfortunately three out of four transmitters failed following fitting. The number of pairs present in the 9.5 km study stretch of river has varied from 16 to 18 since monitoring began. As of early November, five pairs had hatched 25 ducklings, 14 of which were still alive as class I ducklings. An angler reported a stoat attack on a duckling. Two females were killed by predators on the nest and another two nests were flooded out. Five to six females were still incubating.
52 Mar -04	12	Wanganui	Egmont National Park: Over the next 4 years there will be ongoing releases of blue duck in to the park. A Bank of New Zealand Operation Nest Egg programme is underway.
52 Mar -04	12	Wanganui	Blue duck have been intensively monitored through the 2003/04 season along a 9.5 km stretch of the Manganui-a-te-ao, a tributary of the Whanganui. Limited stoat control was put in place, with a single line of double set Fenn traps along one side of the river. A total of 19 nesting attempts occurred: 18 pairs making a single attempt and one pair nesting a second time following the loss of the first nest to flooding. Ten successful nesting attempts resulted in 43 chicks hatching and reaching the river. The latest hatching date was 12/12/03. Of these 43 chicks, only 13 survived to fledge (NB includes four birds currently one week away from fledging). A series of flood events during spring and early summer appear to be the primary cause of this high rate of chick mortality. Of the nine nests that failed, two had females predated whilst incubating, and seven were washed out by floods. A major effort was put in through January to band this year's juveniles, catch unbanded adults, and check bands on existing birds. Over 30 birds were caught, with 18 having bands fitted for the first time. Only one unbanded pair remains on the study stretch of river. Four juveniles remain to be banded
53 Jun -04	9	Wanganui	A translocation of captive-bred blue duck to Egmont National Park has been postponed as a result of heavy flooding in the park which stripped the rivers of invertebrate prey. The ducks will be kept at Peacock Springs in Christchurch and will be released in the spring once conditions in the rivers improve. Wanganui Conservancy has combined with Tongariro / Taupo Conservancy to produce a 'Conservation Strategy for the blue duck (whio) in the central North Island 2004–2009.' The goal of the strategy is 'to maintain, expand existing, and establish new self-sustaining blue duck populations on key central North Island river systems.' The plan has four key objectives : secure a minimum of 40 interrelating pairs in prescribed management sites ; monitor change in blue duck populations on three key central North Island rivers; develop translocation tools for population recovery work with iwi and local communities to further blue duck conservation

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54 Sep -04	7	Wanganui	Whio: The monitored population on the Manganui-a-te-ao has changed significantly since last season. In 2003, 22 pairs in a 10 km study stretch of river made 19 nesting attempts. This year the population of territorial adults has declined to 12 pairs and as yet no nesting attempts have been made. Reasons for this change are unclear. Sixteen captive-bred whio were released in Egmont National Park in August as part of an ongoing programme to test translocation techniques for the species and establish a new secure population in the site. The release was delayed from March to allow river invertebrate populations to recover following February's devastating floods. The birds were older and heavier than in previous releases and proved very mobile, some birds travelling over 10 km in the week after release
36 Apr-00	15	Wellington	Following the research conducted on the shore plover diet, NWC is planning trials on an insectivore mix, which Massey University has formulated and Unifeeds has produced (in close conjunction with Massey researchers). Takahe, blue duck, and teal pellets have already been formulated and are now commercially available. Initially this feed will replace the imported insectivore mix from Australia, which is very expensive, and requires the addition of cat biscuits. The aim is to perfect an insectivore mix resulting in a formulated/balanced diet, requiring only the addition of minced heart and water...This research will take the guess work out of the captive diet, which is the primary building block to producing viable eggs with good hatchability and healthy stock. It may not be widely known that NWC has the expertise to investigate diet issues. The value of a balanced diet will rectify 'the-cart-before the- horse' situation we are currently in with captive diets for our insectivorous species.
45 Jun -02	14	West Coast	Blue duck: One territorial dispute was also observed. This was a source of major stress for the birds, with lots of whistling and flying which continued for over 5 minutes.
49 Jun -03	18	West Coast	Whio: The only results of searching the rivers again in April were the same two pairs, so their radio transmitters were replaced. We are sure that there are more ducks on the river. Observations during trap line checks and from helicopters indicate that there may be as many as two more pairs and one single duck in an area of the Oparara River that is very difficult to check. It is hoped that these elusive ducks will be caught prior to the 2003/04 breeding season. Meanwhile, four other staff worked long hours to establish 25 kilometres of stoat traps along the Oparara, Nimrodel and Postal rivers. To date, 59 stoats have been caught. During June 2003, an additional 16 kilometres of trap lines are going in, giving more complete coverage of the area. In August 2002, staff from the Buller Area Office, along with Dave Barker and his dog Gus, searched the Oparara River and its tributaries for blue duck. Historically, the Oparara catchment is thought to have supported one of the largest populations in the Buller, but only two pairs were found during the survey. Radio transmitters were attached to both females in order to monitor their breeding success. The blue ducks were monitored during the 2002/03 breeding season. One pair raised four chicks, all of which fledged during mid-January. The other pair showed no signs of breeding