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			Animal	24. Radiotransmitter Quotes
37 Jun -00	20		bats	Twenty-six people attended a bat skills training workshop.. in the Eglinton Valley. We..caught both species of bats..All participants were trained in trapping bats (harp trapping and mist netting), handling bats (including measuring and weighing, banding (long-tailed bats only), attaching transmitters and taking wing biopsies)
40 Mar-00	11	Southland	cats	*Tuhua (Mayor Island):* 2 applications of Talon 20 P were aerial broadcast..A sample of cats were radio-tagged prior to the drop. Some indication of home range was determined from those cats, but the severe topography of Tuhua made telemetry difficult. Of greater benefit was the ability to recover dead cats post drop
52 Mar -04	27	Auckland Island	cats	Some of this bait will be used to lure up to 15 pigs into traps so that a radio transmitter (tx's) can be attached to the ear. This will provide an opportunity to carry out some telemetry work in an attempt to gain better information regarding their pattern of movements around the island. Follow up telemetry work can be carried out during the summer period if the opportunity to get people down to the island arises. The second part of the field work will involve trapping 15 cats and attaching tx collars. Monitoring of these cats during the following months will provide useful information about cat distribution and density. Our game plan for the eradication has not yet been finalised, but will probably be to poison the pigs, and hopefully most of the cats with the one bait.
50 Sep -03	2	Chatham Islands	Chatham petrel	Chatham petrel: A big telemetry effort, to fit in with good moon conditions and the expected return of larger numbers of known fledglings, is planned for 2005/06
42 Oct -01	12	Nelson/ Marlborough	Hutton's shearwater	A concerted effort is going to be made to determine the flight paths of the shearwater to the colony. Transmitters will be put on birds and their routes tracked each evening.
37 Jun -00	1	Nelson/ Marlborough	kaka	kaka: 4 of 7 radio-tagged females were killed on the nest by predators, probably stoats.
37 Jun -00	2	Nelson/ Marlborough	kaka	kaka: Excluding last season's fledglings which are still at risk of predation and those that we can't find, 17 (61%) of the 28 fledglings radio-tagged at Rotoiti in the previous two breeding seasons are still alive at present. Although about a third of the young fledged have been lost to predators, more than enough have survived to compensate for adult mortality which is low (1 of 5 radio-tagged females at Rotoiti has died in 3 years, apparently of natural causes).
38 Sep -00	1		kaka	This stoat control research is a joint project between Science & Research and Te Anau Area Office staff. The effectiveness of this stoat control is evaluated by monitoring breeding and survival of colour-banded mohua and radio-tagged female kaka..2 females were killed probably by a stoat..We have recorded no mortality of 17 fledglings that have been radio tagged over the past 2 years (35% mortality has been recorded for Rotoiti fledglings).
43 Dec-01	7	Tongariro/ Taupo	kaka	Annual monitoring of nine radio tagged, adult female kaka has just begun on southern Mt Ruapehu.
47 Dec -02	4	Waikato	kaka	monitoring radio tagged kaka in the Waipapa Restoration Area to assess the effectiveness of pest control..Female kakas are followed to nests which are monitored. A sample of chicks have transmitters fitted to find out how many survived and where they disperse to...A dramatic increase in fledgling mortality has been noted coinciding with a change to the pest control regime. Seventeen female chicks were monitored since the breeding season and excluding missing birds, eleven of fourteen fledglings have died. Nine of these were probably (some certainly) killed by stoats. And just to show that the predators are not targeting birds wearing radio transmitters, one observation included finding the remains of two untagged kaka within the same den as a

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				dead tagged bird. So the results of a productive nesting season for kaka in the Waipapa has very much been let down by poor fledgling survival. The pest control regime was an aerial 1080 pollard operation in October. While this did offer protection during the time birds were nesting, as pest numbers increased, the level of protection decreased toward the end of the season when fledgling kaka become vulnerable.
51 Dec -03	3	Waikato	kaka	kaka: One nest has been found so far from a radio-tagged female
54 Sep -04	10	Nelson/ Marlborough	kaka	kaka: Nests are located by monitoring transmittered adult females. Due to transmission failure of some units in the field and the need to maintain a sample of birds for future monitoring, work was undertaken during the season to recapture and refit new transmitters on all adult female birds. Eight of nine birds with working transmitters were re-captured, old transmitters were removed and new transmitters attached. This follows on from the 1999-2000 work where four of four adult females were re-captured and re-transmittered. Techniques differed from initial capture and required considerably more effort. It is possible to remove transmitters from kaka at the end of the project, provided working transmitters are maintained on all sample birds
38 Sep -00	14		kaka, kereru	determining the costs.. and benefits..of an aerial 1080 possum poisoning operation to kereru and kaka in Whirinaki Forest Park. This requires the radio-tagging and monitoring of kaka and kereru in a treatment area (Otupaka Ecological Area) and in a non-treatment area (Oriuwaka Ecological Area).. To date, 63 kereru have been captured and survived at least a fortnight after being radio-tagged. Of these, 28 (44.4%) have died, giving a mean life expectancy of just 0.9 years! Although the cause of death or species of predator involved is not always obvious, the following are the assumed causes: 1 died on a nest, 2 collided with vehicles, 5 killed by cats, 6 killed by mustelids, 5 killed by falcon/ harrier, 2 killed by poachers, and 8 killed by unknown predators..One of the birds had been caught by a cat while feeding a couple of metres above the ground. Fifty-three kaka have been captured and survived at least a fortnight after being radio-tagged. Of these, 3 (5.7%) have died, giving a mean life expectancy of 20.5 years. All 3 kaka that died were females killed by unknown predators..None of 17 kaka (10 male, 7 female) in the treatment area, and 20 (9 male, 11 female) in the non-treatment area died during the fortnight following the poison drop. Similarly, none of 15 kereru in the treatment area died after the poison drop, but 1 of 11 (9.1%) died in the nontreatment area.
53 Jun -04	18	Southland	kereru	Over the summer several kereru have dispersed to distant parts of Southland. Recently, in an attempt to locate missing radio-tagged kereru, the Kereru-Tui team chartered a light plane. The following was found: A male kereru was located about the Pourakino Valley on the eastern approaches of the Longwoods Range; 36 km from its capture site in Invercargill city. This bird has subsequently returned to the city. A female caught in the city has been located in the Longwoods forest not far from Otautau. This bird has since disappeared into the ether. A female has been tracked to near Paua Beach at Paterson's Inlet on Stewart Island; 65 km from her capture site in Invercargill. A male kereru captured near the city which gave us a signal from the Port William area on the northern coast of Stewart Island over the Xmas break, has since returned to its capture site back on the outskirts of Invercargill (a 57 km one-way flight) and then flown on to parts unknown. At this point we still have five kereru unaccounted for. Thus, at this early stage of the radio-tracking phase of the project, it looks like we are dealing with a Southland population, not a localised Invercargill one.
36 Apr-00	11	East Coast/ Hawke's Bay	kiwi	kiwi: Five transmitted males currently form the source population
36 Apr-00	11	Tongariro/ Taupo	kiwi	Kiwi: Of the 13 Operation Nest Egg releases put back into Tongariro Forest, only 5 to date still carry functioning transmitters. One chick dropped its transmitter and 4 have had gear failure meaning we have lost track of them. One bird has been killed by a pig,

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				another by a ferret, and 1 died from a ruptured liver after what we can only describe as misadventure because the bird was in perfect health otherwise – there were no visible sign of predation.
37 Jun -00	16	West Coast	kiwi	[kiwi]..Two other juveniles lost their transmitters during the year because of harness failure.
38 Sep -00	6	East Coast/ Hawke's Bay	kiwi	kiwi: The number of transmitted birds has been increased from 5 to 8.
38 Sep -00	6	East Coast/ Hawke's Bay	kiwi	in Tongariro Forest 21 Operation Nest Egg birds have now been released since 1997. Despite at least three deaths (ferret, pig & misadventure) and five transmitter failures, the remaining 13 birds are doing well
40 Mar -01	8	West Coast	kiwi	Haast tokoeka: When the chick was seen leaving the nest, staff prepared themselves to catch it the following night and attach a transmitter.
41 Jun -01	1	Northland	kiwi	*Kiwi:* Of the surviving kiwi chicks, 78% are over 1000 gm and are 8 months old. Four chicks were lost to predators early in the season, and we have had one tx failure.
41 Jun -01	3	Waikato	kiwi	*Kiwi:* we lost contact with one soon after release from the enclosure..We have only monitored one chick loss to predation this season. We have been monitoring three young kiwi since 1997, part of an original group of six (three of which we have lost contact with). In the past year all three appear to have paired and are living in the project area. The annual transmitter change for some of the adult kiwi began a month earlier to coincide with their capture for blood sampling by the Kiwi Recovery Group for DNA work. Project Kiwi staff took Maryann Burbidge to the kiwi, and she sucked their blood and took feather samples. Local iwi (Ngati Hei) were involved in the sampling. The birds sampled were in mediocre shape, looking worse for wear because they were in the middle of a heavy moult. This is normally the only time of the year we come into contact with or handle the adults.
41 Jun -01	11	West Coast	kiwi	*Operation Nest Egg (ONE):* On 2 April, one was found camped up with a wild, unbanded bird, which was summarily banded but did not have a transmitter attached and has never been seen again...*Motuara Island sanctuary:* Of the 21 chicks released, three are dead, one transmitter has dropped, and three are missing.
43 Dec-01	7	Tongariro/ Taupo	kiwi	Kiwi: Up to eight nests are now being monitored, with three radio tagged chicks already on the ground.
43 Dec-01	8	East Coast/ Hawke's Bay	kiwi	kiwi: In September, after weeks of searching on foot and a good fly over in a fixed wing, we suspect that the transmitter on Raina (the oldest female in Boundary Stream) has failed. Seven of the ten kiwi, which were released in the Reserve are currently being monitored.
43 Dec-01	9	East Coast/ Hawke's Bay	kiwi	kiwi: project (near Motu) is making steady progress after two seasons of mustelid control. An adult male who went missing earlier in the year after a transmitter failed was found again. This bird was sitting on two eggs at the time. These were transported to Rainbow Springs but were found to be infertile. The second clutch from this bird has also been removed for artificial incubation to Rainbow Springs.
44 Apr-02	9	Tongariro/ Taupo	kiwi	kiwi: So far five of the 11 chicks have been predated, and all in the centre of the treatment area. Surviving kiwi chicks are being left in the wild in the hope that stoat density will not recover quickly enough to make their fate certain. Unfortunately only one of the 11 monitored chicks hatched early enough in the season to get the full benefit of the aerial knock-down. Its September hatch date has allowed it to reach well over 1000 grams now, so it is relatively safe from re-invading stoats. It is hoped that other unmonitored chicks from this same early (first clutch) cohort have also benefited as only 12 of an estimated 40 breeding pairs currently carry radio transmitters in the Sanctuary. However, all other monitored chicks hatched after November are still at risk.

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45 Jun -02	13	West Coast	kiwi	rowi: We have had relatively low hatching success with just 24 chicks observed to hatch. 20 of these chicks had transmitters fitted and were monitored for survival (four vanished prior to fitting transmitters). Six of the chicks are still alive and doing well in the wild.. We are nearing the end of the massive job of changing in excess of 120 kiwi transmitters and readying ourselves for the next breeding season.
46 Sep -02	7	West Coast	kiwi	Haast tokoeka: Six chicks hatched successfully and all had radio transmitters fitted. Within two weeks of hatching two chicks were predated by stoats and another was predated at 45 days old. With 50% of the chicks surviving , we were hopeful that predator control was making a difference to chick survival. However since then we have lost track of two further chicks, one due to transmitter failure at 70 days old and the other dropped its transmitter at 231 days old. Although the oldest of these chicks had passed the 'safe weight' of 1000 grams their fate is unknown. The remaining chick, 'Kahu', is living in the sub-alpine scrub and is getting very difficult to catch. When caught in early July, Kahu weighed 810 grams.
46 Sep -02	8	West Coast	kiwi	tokoeka: 26 adult pairs are being monitored..The TL Creek pair both dropped their transmitters in 1998. This year the TL Creek male was recaptured and is paired with a new female. We do not know the fate of TL Creek female.
48 Apr -03	11	West Coast	kiwi	tokoeka: Seven (41%) nests produced chicks, which were caught and fitted with radio transmitters. Three of the chicks were subsequently killed by stoats, one drowned, one is missing (suspected transmitter failure) and two are still being monitored: Huia, 600 grams at 100 days old, and Mischief, 570 grams at 89 days old. To date this season's chick survival is 29%, compared with 33% in 2001/02... We currently have transmitters on 48 Haast tokoeka: 44 adults (19 female and 25 male), 2 sub-adults (1 female and 1 male) and 2 juveniles (sex unknown). This equates to 24% percent of the estimated population (200 birds) within the sanctuary.
48 Apr -03	12	West Coast	kiwi	rowi: All 14 of the monitored chicks were dead by early January, with stoat predation being the major cause.
48 Apr -03	15	Southland	kiwi	kiwi: nine adult male kiwi with transmitters were monitored. Seven of these nine birds made nesting attempts, and four chicks were reared. One of these chicks survived, while the other three were predated by stoats. During the 2002/03 breeding season, nine of the 11 adult male kiwi that were monitored made nesting attempts. A total of 10 chicks hatched, two of these drowned before they left the natal burrow, one had a failed transmitter, five were predated by stoats, and two survived. For the coming season the team aim to catch another 10 adult kiwi to increase the sample size
49 Jun -03	9	Tongariro/ Taupo	kiwi	The kiwi chicks are released into Tongariro Forest when they are around 1200 grams in weight. To date, eight have returned to the forest, one of these was predated by a stoat. The others are doing well and gaining weight. Last season we monitored 14 kiwi chicks. This work was to measure chick survival in the wild after a very effective 21,000 ha aerial 1080 operation. Eight chicks successfully hatched in the wild: four were predated by stoats, one dropped its transmitter at 1370 g and three are still being monitored. Six eggs were taken to Rainbow due to nest abandonment and were hatched successfully. The new chicks were then released back into their parental territory in Tongariro forest. Three were predated by stoats, one died of hypothermia and two are still alive. We currently have 39 birds with transmitters: 13 adult male, 14 adult female, five sub adults, and seven juveniles.
49 Jun -03	10	East Coast/ Hawke's Bay	kiwi	In 2002, 21 kiwi were heard calling, 13 or which were radio tagged. In 2003, 31 kiwi were heard calling, of which 12 were radio tagged..Of the juveniles monitored, two were tracked eight kilometres from Puketukutuku and both have subsequently walked back. One kiwi was found due to its mortality signal, the transmitter was found on the ground. Another kiwi was located 10 kilometres away from its start point, and we subsequently lost this bird. Two other mortality signals have been picked up, one 16 kilometres away from Puketukutuku. The rest (five) have disappeared.

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49 Jun -03	21	Southland	kiwi	Kiwi: In May, Te Anau Area staff took two Bank of New Zealand managers to view the transmitter change on this chick. We hope to provide more opportunities like this to our sponsors next season. Recently, five new adult male kiwi were caught in the Clinton Valley as well as the beginning of the North Branch and the Neale Burn. This increases the monitored kiwi in the Clinton Valley study to a total of 19 adults
49 Jun -03	22	Southland	kiwi	Ten male kiwi were fitted with transmitters (five alpine, five forest habitat) during May, with the aim of monitoring nesting activity and chick production.
50 Sep -03	4	Waikato	kiwi	18 kiwi chicks monitored, one died of natural causes, two transmitters/harnesses failed, and 14 chicks are known to still be alive
51 Dec -03	2	Waikato	kiwi	So far in the 2003/04 season, the Moehau Kiwi Sanctuary monitoring team have placed transmitters on 15 kiwi chicks.
51 Dec -03	6	Bay of Plenty	kiwi	Kiwi: This year, 12 adult male kiwi and their mates were monitored for breeding. Eleven of the males are wild-caught birds fitted with transmitters; one was an Operation Nest Egg (ONE) bird released in 1995 that has mated with an ONE female released in 1996. Ten of the 12 pair monitored had nests, and laid a collective total of 41 eggs.
53 Jun -04	4	Waikato	kiwi	Unfortunately some of the kiwi chicks' transmitters failed this season. Of the 25 kiwi chicks that did not suffer from transmitter problems, 15 are still alive..Ten chicks have died this season; five from suspected mustelid (stoat or weasel) predation, two as a result of being entangled in mangemange fern, and three for unknown reasons.
53 Jun -04	7	Tongariro/ Taupo	kiwi	Kiwi: While we are currently monitoring 11 breeding males, our target is to have up to 30.
54 Sep -04	7	Wanganui	kiwi	Kiwi: To date nine males have been fitted with transmitters
55 Dec -04	5	Waikato	kiwi	Kiwi: Sanctuary, 12 chicks have hatched since 1 October..One chick was found dead..and one has dropped a transmitter.
55 Dec -04	7	Bay of Plenty	kiwi	Two of the four kiwi on Mokoia Island have dropped their transmitters, and will be re-caught in early 2005 to attach transmitters. The two that have been monitored are looking healthy and seem to be holding territories.
55 Dec -04	15	West Coast	kiwi	tokoeka: There are seven chicks with transmitters on them being checked once a week..At night, staff are using cameras set up at burrow entrances to watch for chicks to emerge from several nests; transmitters are to be attached to these chicks.
53 Jun -04	18	Southland	kiwi, takahe	Fieldwork to catch kiwi in the two Murchison Mountain monitoring sites finished recently; unfortunately not all the required birds were caught..A second attempt to complete this transmitter fitting work will be carried out in May. takahe chicks: As many of the chicks as possible will be banded before winter. Transmitters on several of the adult takahe being monitored in the area will also be changed.
45 Jun-02	3	Northland	pateke	pateke: Transmittered females (n=29) will be followed through the breeding season and nesting attempts, hatching rates, and duckling survival at fledging time monitored. Survival rates of all transmittered birds (n=38) will be an outcome measure of intensive predator control.
45 Jun-02	5	Auckland	pateke	Transmitters are currently being fitted to brown teal on Great Barrier Island with great support from Northland Conservancy, so that information on nests and mortality can be investigated.
46 Sep -02	2	Auckland	pateke	pateke: ..research on a proportion of adults wearing transmitters will investigate factors affecting duckling recruitment into the breeding population.
47 Dec -02	1	Auckland	pateke	Pateke have been intensively monitored for breeding success and survival information..Transmitters were attached to thirty adult pateke in March and May this year. By July a few transmitters had fallen off via their weak link, a couple of birds went missing, and a few birds died leaving eighteen females to be followed through the breeding season and three males followed for survival

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				information. Twelve of these birds were known to nest and nine of them successfully hatched chicks (75%). Two nests were lost to abandonment and one to predation, possibly pig..However duckling survival has been very low at 14% with only five ducklings out of thirty-five known hatchlings surviving to fledging age. The cause of this low survival rate is probably a combination of pukeko and harrier predation and lack of food resources. Food availability is low due to very dry feeding areas after weeks of low rainfall and strong winds. Transmitters have been put on nine juveniles and hopefully this sample will increase over the next couple of weeks, this will entail a lot of night wandering in the farm paddocks with a couple of hand nets. Recently five of these nine juveniles died. The cause of death is still being investigated, from the remains we know harriers had a meal but we are unsure whether it was scavenged or from a planned attack. Adult pateke survival has been relatively good with the loss of five of the initial thirty transmitted birds between March to the end of November.
47 Dec -02	19	Northland	pateke	Pateke: An adult population of 27 to 37 birds with transmitters attached have been closely monitored from May to October, and all nesting attempts and hatching rates recorded. Harness failures and transmitters malfunctioning prematurely have caused the sample size to fluctuate and many headaches for staff. With just one unfledged brood left on the ground produced from radio tagged adult females, there have been a total of 41 fully feathered juvenile pateke at the banding age of 8 weeks. Set monitoring targets have been met with 20 of those juveniles having transmitters attached.
50 Sep -03	2	Northland	pateke	Pateke/brown teal: less than half of the sample radio-tagged females (n=29) have nested. A couple of females have lost young broods, others are raising just one or two through to fledging . Survival of all radio-tagged birds (n=39) are an outcome measure of intensive predator control..A trial of Canadian-brand Holohil transmitters has been initiated in response to the poor performance of Sirtrack transmitters. An unacceptable number have failed well before their programmed "life", resulting in a frustrating reduction of information from monitoring. Now, if birds go missing from the area, it is equally likely that their transmitter has failed as it is they have dispersed. Indicator dog work is the only way to recover these birds
50 Sep -03	4	Waikato	pateke	pateke: we have lost signal from two of the 38 transmitters, although the birds are still around. Four birds have been lost to predation: one likely to a dog, and the others to a cat(s).
52 Mar -04	2	Northland	pateke	pateke: the capture of 37 fledglings to band, with 20 of those having radio-transmitters attached as well. Four radio-tagged juveniles have already dies, with carcasses showing mammalian sign and kahu scavenging. A radio-tagged sample adult population (maximum 44 birds) has been monitored over the year for adult survival, mortality and breeding data. The premature failure of batteries inside the transmitter units has caused the sample size to fluctuate over the months and to never reach the set target. “Missing” birds are often identified by band combinations or dog survey in later months, carrying dead transmitters. Canadian brand ‘Holohil’ transmitters will soon be exclusively used in this recovery programme to achieve confidence in annual outcome monitoring
52 Mar -04	5	Waikato	pateke	We now have 14 dead pateke from the original 38 released..Only one of these [nesting] attempts produced a fledged duckling, the rest were killed or "disappeared" before they were old enough for us to attach transmitters.
54 Sep -04	4	Waikato	pateke	Pateke: In the first month post-release, four birds lost their transmitters through the weak link in the new harnesses failing..Three birds have been killed so far this season; two to vehicle strikes, and one to apparent starvation (wing fat analysis showed no wing fat)
55 Dec -04	3	Northland	pateke	Northland pateke: The radio-tagged adult female sample suffered losses to dogs, mustelids and unknown causes in May, August and September; reducing the sample from 26 to 21 birds. There have been 28 breeding attempts from 27 pairs; of which 15 have

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				a radio-tagged female. It is still a little too early to evaluate overall brood survival from these breeding attempts; many of them are still making it through the 10 week phase until fledging, at which time they will be banded and 20 of them targeted for attaching transmitters. As a snapshot, five nests produced 32 chicks, with six of those surviving to fledging.
42 Oct -01	17	Southland	rats	Campbell Island rat eradication: Radio transmitters were put on four rats , which all died within 5 days of having accessed bait.
55 Dec -04	10	Tongariro/ Taupo	saddleback	saddleback: Ten birds had tail-mounted transmitters attached and were monitored weekly. Two weeks after release, four transmittered saddleback were found dead following a week of extremely cold southerlies which brought snow to the higher parts of Boundary Stream. Necropsies of two birds found they died of aspergillosis, a common fungal disease that can become fatal when the bird is under stress. One bird had a broken neck, but mammalian predation was ruled out. The fourth bird was too decomposed to necropsy, but no obvious signs of predation were found. A survey six weeks after release estimated 21 birds present, giving a 57% minimum survival rate. There are five known pairs that are courtship feeding, but none are known to have attempted to nest.
43 Dec-01	7	Tongariro/ Taupo	short-tailed bats	Area staff have been working with Brian Lloyd learning the finer points of monitoring short-tailed bats on the southern flanks of Mt Ruapehu. The technique involves catching and radio tracking bats to find communal roosts, then video monitoring them under infra red light to assess numbers as they leave at night to forage.
37 Jun -00	14	Wellington	taiko	taiko: Transmitters were attached to all chicks before fledging..so that chicks could be monitored and relocated if they did not make the 4-6 km journey to sea.. One chick however failed to fledge twice. The second time it was found its weight (390 g) was below the previous lowest known fledging weight (400 g) and well below expected fledging weight (470-480 g). This chick was taken to the coast that evening and placed on a hill side, from which it confidently departed
44 Apr-02	24	Chatham Islands	taiko	The breeding season is also progressing well for taiko, with seven chicks confirmed to date. Three new non-breeding burrows were found this year: two by telemetry
45 Jun-02	19	Chatham Islands	taiko	taiko: All chicks were banded and had transmitters attached to allow their departure to be monitored (and assisted if necessary).
52 Mar -04	14	Wellington	taiko	the eighth taiko telemetry operation, to search for new taiko burrows
38 Sep -00	16		takahe	Between 30 and 45 takahe were monitored using radio transmitters in the Murchison Mountains over the 1999/2000 year. This work is aimed at assessing survival and productivity differences between captive reared and wild reared takahe and determining causes of mortality. We have recently changed our transmitter design following an energetics study that showed significant cost for the birds in wearing transmitters. Egg and chick production from 9 pairs in the McKenzie block of the Murchison Mountains, was intensively monitored for the third year running. We have been using temperature data logger eggs, time lapse video, and small chick transmitters.
39 Dec-00	18		takahe	When the Takahe Recovery Group was approached with a proposal to conduct an energetics study to compare habitat quality between the Murchison Mountains and island sites the group was very hesitant. It felt that the research was of a low priority and that the results were unlikely to influence management decisions. Also, the study would be very invasive because takahe are not always easily caught. In fact we considered the number of repeated captures needed would not be possible to achieve in the Murchison Mountains. A compromise arrangement was negotiated. The energetics researchers were approved access to takahe at the Burwood Bush Rearing Unit and Mana Island in exchange for completing a trial investigating the energy cost to a takahe of wearing a transmitter. We have been monitoring a sample of radio-tagged takahe in the Murchison Mountains since 1991 to

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				compare the success of captive reared birds and wild-reared birds. That sample has numbered more than 30 birds over recent years and we were keen to see if the transmitters may be compromising the birds' survival in any way. Jason Godfrey.. measure[d] the free-living energy expenditure of the 8 birds at Burwood. ..The scale of increase in expenditure due to tags might be sufficient to compromise survival and/or reproductive success..the principal cost of tag-bearing derived from increased thermoregulatory costs consequent on feather disruption by the tag and/or harness and heat loss transfer via tag itself..Increased energy demands due to tag-bearing can be expected to peak in montane winter conditions..Heat loss via the long external antenna was considered as [a] potential factor...We are happy with the backpack harness design so only looked to make changes in transmitter package...The results of Jason's research have identified an issue that will have relevance for other transmitter studies in New Zealand.
42 Oct -01	12	Nelson/ Marlborough	takahe	After a brief hiccup with the takahe transmitters all the female takahe on Maud Island have working back packs. This will enable us to monitor more closely the nesting and especially the very early chick stage, when the greatest loss occurs.
47 Dec -02	15	West Coast	tawaki	Tawaki: The annual banding return study (both RH metal flipper bands and transponders) at Monro Beach (MB) and Jackson Head (JH), tawaki colonies was again repeated in July this year. One hundred and five birds were captured..Transponders were implanted into all unbanded birds caught at JH. These have been used since 1999 and provide a comparison of tawaki survivorship with the commonly used metal flipper bands
50 Sep -03	14	West Coast	tawaki	tawaki: Flipper bands were initially used in the study (1994-2001) at both the Jackson Head and Monro Beach colonies. Indications for this work were that adult survivorship figures were far lower than expected (70% in 1998), suggesting that bands are either detrimental to survival, or that they are falling off. To test these theories, subcutaneous transponders were implanted into a control population of birds at Jackson Head (1998-present) to see if survivorship figures differed. Recent survivorship calculations (2003) using a sex-based model suggest that adult and chick survivorship is approximately 98% and 44% respectively. These figures are typical of survival in seabirds such as penguins and petrels. It appears that on average, birds with transponders have a higher survivorship, suggesting that perhaps both theories are true
39 Dec-00	1		teal	4 teal: Twelve birds (8 female and 4 male) were released in March 1999. These were monitored using backpack transmitters, and all have survived, although we have lost track of a couple that decided to go walk-about around the island's rugged southwestern coast.
37 Jun -00	16	West Coast	weka	As part of ongoing monitoring of the effects of 1080 on non-target species 15 adult weka were captured in the Copland Valley and had mortality transmitters fitted in December 1999. Pre 1080 weka monitoring has been carried out every month to date. Four dead birds have been found in recent months. The first 2 birds found near the Welcome Flat hut were too decomposed to establish their cause of death. Two more birds found last week showed the cause of death was predation. Both had puncture wounds on the back of their skulls. Stoats are presumed to be the likely predator.
39 Dec-00	7	East Coast/ Hawke's Bay	weka	The NI weka project is about to commence a third year of radio telemetry and video monitoring of adult breeding pairs and juveniles at Motu..Since September 1997 we have captured and radio transmitted 36 fledgling weka within the two study areas. Each bird carries a transmitter for 13 months and is tracked at weekly intervals. Post fledging survival of weka in the broader Motu area so far appears to be high. In the Whitikau non-treatment area a mean survival rate of 71% has been recorded for juvenile weka in their first year. The recorded predation events were attributed to stoats (4) and feral cats (3). One predation contained evidence of interference from both cats and stoats. To date, we have not recorded any predation by ferrets. This

				season we have introduced feeder stations to selected breeding pairs and installed an infra red beam switch to our time lapse camera equipment which should allow for more efficient monitoring. We hope we can bring the adults and their chicks to us instead of us chasing them. The Whinray Scenic Reserve predator treatment block also contains kiwi. Mustelid control should also benefit the kiwi in the block, and we will be monitoring this through a radio telemetry study of chicks and sub-adult kiwi. At this stage we have one adult male kiwi incubating in an area populated by NI weka. We have a time lapse camera filming the burrow entrance and hope to record any interaction between the two species.
44 Apr-02	9	East Coast/ Hawke's Bay	weka	Transmitters were attached to six female weka from each study block, which enabled nesting activity to be monitored with minimal disturbance to the birds. To date all of the female weka have made at least one nesting attempt. Eleven of these 12 nests have produced between one and three chicks. The twelfth pair has made two known attempts at nesting, but the first was abandoned due to a disturbance event and second was abandoned during heavy rain. Presence and absence of individual chicks from each nest has been monitored using a combination of several methods. Video surveillance was used at feeding stations, chick sign - including chick prints and down – was searched for, and calls between parent birds and chicks were listened for. Depending on the area it was also sometimes possible to scope the birds from a distance. Occasionally these methods provided data on the number of chicks present in each nest, but more usually they only reliably provided presence and absence. Very rarely, they provided information on cause of death. In an attempt to further ascertain causes of chick mortality several chick transmitters were purchased. These will be attached to chicks after the next round of breeding. When the chicks are a few months old, they are usually large enough to carry adult-style transmitters. Six chicks from each study block are currently being caught and will have these transmitters attached to them. The transmitters have a battery life of 14 months and chick survival will be monitored throughout this time. Last season, five juveniles from the Whitikau and six from the Motu area had transmitters attached to them. Only one of the Whitikau juveniles is still alive. Of the four dead birds, three were predated by stoats and the other was either predated or scavenged by a cat. From the Motu area, three juveniles are still alive. Of the other two birds, one had wandered two kilometres beyond the trapped area and was predated by a stoat. The signal from the other bird has never been picked up and I suspect that the transmitter was faulty.
52 Mar -04		East Coast/ Hawke's Bay	weka	Juvenile weka (aged between 1–3 months old) are trapped in the Whitikau Valley (no stoat trapping) and in the Motu Valley (stoat trapping) each season. Transmitters are attached and the weka monitored until they reach 12 months of age. Each weka is monitored weekly to determine status and causes of death. Almost all of last season's juveniles have now reached 12 months of age. Results to date show that 40% (n=10) and 8% (n=12) of monitored juveniles were killed by stoats in the Whitikau and Motu valleys respectively.
52 Mar -04	23	Otago	weka	Weka: The other loss was a fledged female who recently had a transmitter attached. She got tangled in vegetation by her harness and perished. There was nothing obviously wrong with the harness settings, so it is likely that it was just very bad luck that she got caught.
41 Jun -01	3	Waikato	weta	Late last year Middle Island tusked weta were transferred from captivity ..to.. Red Mercury and Double Islands. Ian Stringer and team have used harmonic radar transponders and radio transmitters to follow them around on Red Mercury Island
37 Jun -00	10	Wanganui	whio	Whio: Intensive monitoring of the released birds has been regularly undertaken. Some of the captive-reared birds have been lost through starvation..Other birds have succumbed to predation from stoats or ferrets.. All the captive birds lost weight initially, which resulted in transmitter harnesses becoming loose. Without harnesses monitoring of the birds required significantly more

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				effort. All the casualties occurred within the first 4 weeks of release
40 Mar-01	3	Wanganui	whio	*Blue duck [Whio]:* 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
44 Apr-02	10	Wanganui	whio	Whio (blue duck): All the birds are fitted with radio transmitters and are regularly monitored on foot and from a fixed wing plane
49 Jun -03	12	Wanganui	whio	Whio: Three females were also fitted with radio transmitters.
49 Jun -03	18	West Coast	whio	Whio: The only results of searching the rivers again in April were the same two pairs, so their radio transmitters were replaced..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..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
50 Sep -03	12	Nelson/ Marlborough	whio	Blue duck: Conservation efforts have kicked off with transmitters placed on three females of pairs located on the edge of Kahurangi National Park.
51 Dec -03	11	Wanganui	whio	Whio: 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.
52 Mar -04	26	Southland	whio	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
54 Sep -04	9	Nelson/ Marlborough	whio	The study of whio juvenile dispersal is ongoing, and to date has shown juveniles dispersing up to 6 km from their natal territory.
50 Sep -03	16	Southland	yellow eyed penguins	The Yellow-eyed Penguin Trust has underwritten a year of cat control and research looking into the impacts of cats on yellow-eyed penguins. This will involve monitoring nests in treatment and non-treatment areas, controlling cats at selected breeding locations, and attaching radio transmitters to 10 cats.
39 Dec-00	17			remote monitoring gadgetry for threatened species.. This work is still carried on in our laboratory by myself and with our new electronics engineer, Stuart Cockburn..Stuart is currently busy upgrading our predator video systems so that we can manufacture the various configurations more easily. I have been improving the standard Automatic Bat Monitors (ABM) for similar reasons. *New designs:* Predator video: a time-lapse video system.. About $4000. • Nest viewer: a small waterproof "bullet camera" with infra red LEDs. For use with either the predator unit, cavity inspection unit or for long cable installations such as at kaka or shorebird nests. ..About $1000 for a monitor and $300 per camera.