## REPORT ON BIRD BANDING IN NEW ZEALAND: <br> 1990-1991

by
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## Roderick O Cossee

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#### Abstract

During the 1990/91 banding year 20,439 birds of 97 species were banded and 189 previously banded birds were re-banded, bringing the grand total of individual birds banded in New Zealand over the years since 1950 to $1,083,125$. Two species previously not banded, Chatham Island Blue Penguin and Royal Spoonbill, were banded during the year. A total of 5601 recoveries were added to the computer files. Bird banding supported a large variety of research projects and was regulated by 27 individual permits and 28 institutional/group permits.


## 1 INTRODUCTION

Bird banding (ringing) is recognised worldwide as an important research tool for both amateur and professional ornithologists. In New Zealand it has been recognised officially as such since 1950, when the Ornithological Society of New Zealand started the first organised scheme. The Department of Internal Affairs soon followed with its own scheme for game bird species. The New Zealand National Banding Scheme as it exists today was initiated in 1967, when the two then existing schemes (run by the Dominion Museum and the New Zealand Wildlife Service respectively) were joined together. Between 1967 and 1987 the scheme was run under the auspices of the Wildlife Service. In 1987 the New Zealand National Banding Scheme was taken over by the Department of Conservation and is now operated and maintained by the Science $\&$ Research Division.

The objective of the scheme is to accurately record information about habits and movements of birds. Apart from its value in understanding bird biology, such knowledge is essential for the effective conservation of native species and for management of game birds, as well as for the control of those species that are considered a nuisance.

This report summarises the bird banding activity in New Zealand during the 1990/91 banding season and gives details of some interesting recoveries. Appendix 1 lists some of the research projects which were serviced by the Banding Scheme.

## 2 METHODS

The totals given are for the period between 1 April 1990 and 31 March 1991. They may include some records for birds banded in previous years, however, as schedules not received in time for inclusion in the 1989190 report have been included. Similarly, totals relating to the present report year, which were received after the cut-off date for this report, were omitted.

Previously banded birds which were re-banded during the year are not included in the totals, nor in Table 1. Details on re-banded birds can be found in Tables 2 and 4. The naming and order of species in this report is based on the Annotated Checklist of the Birds of New Zealand (1970 and subsequent amendments and additions). The Omithological Society of New Zealand published an updated version of the Checklist of the Birds of New Zealand in 1990. The order of species in this new version differs markedly from the earlier published checklists. For the sake of continuity as well as to avoid reprogramming of existing computer programmes we have decided to adhere to the previous edition.

The species code numbers are those used under the Banding Scheme.

Numbers in open brackets are provisional totals and figures in square brackets indicate birds banded as an unknown species of a particular genus. These latter are included in Table 1 as they contribute to the total number of birds banded. They are not included in the total number of species banded.

## 3 RESULTS

During the 1990/91 banding season 20,439 birds of 97 species were banded and 189 previously banded birds were re-banded. Non-game species contributed 16,855 ( $82.5 \%$ ) and game species $3,584(17.5 \%)$ to the new birds banded. During this report season nongame banding increased by about $25 \%$, but there was a marked decline in the number of game birds banded; numbers fell by about $50 \%$. The possible reason for this decline is the fact that the Department of Conservation's game management roles have been transferred to the newly founded Fish \& Game councils, many of which do not yet have the staffing levels nor the finance to mount large banding operations.

The total number of birds banded in New Zealand increased to $1,083,125$ (previously $1,062,686$ ). Of these birds 160,538 ( $14.8 \%$ ) have been recovered at least once, while many of them have been recovered on multiple occasions. The total number of recoveries held on the computer files now stands at 254,700.

The total number of species banded during the existence of the Scheme increased by two to 229 , with Chatham Island Blue Penguin and Royal Spoonbill being banded for the first time.

The numbers banded for each species are given in Table 1. It should be noted that rebanded birds have been omitted from this table.

Table 2 summarises by age and sex the birds banded during the 1990191 season. Also included in this table are the 189 birds that were re-banded during the year. They can be found under the heading 'RB'. I included these birds to illustrate the overall banding effort.

Bird banding supported a great number of research projects. These are listed in Appendix 1. Numbers in brackets after the project titles are the actual permit numbers.

## 4 RECOVERIES

A total of 5,601 recoveries was coded and added to the database. Not all these recoveries were received during the report year. A number of these records go back to previous years and are mostly operator recoveries. There is a steadily growing backlog in data input. Especially in the non-game sector of these recoveries. This is mainly because of decreased staffing levels and an increased workload for present staff. All data entry is now done in the Banding Office, while previously this was done by outside agencies.

A large number of recoveries were reported by the general public. The handling of these recoveries has precedence over other recoveries. Where possible, they are dealt with on the day of receipt. All finders are informed of the relevant banding details and receive some additional information on the New Zealand National Banding Scheme. Maximum turnover time for public recoveries is ten days but even during the hunting season staff managed to process recoveries within a week of receipt.

The Banding Scheme plays a major role as an interface with the public. A quick and efficient response enhances the chance of members of the public sending in bands, as well as keeping up the standing of the Department. As mentioned in a previous report, the New Zealand National Banding Scheme has the fastest response time for public recoveries in the world as well as the highest recovery rate!

Of the 5,601 recoveries processed during the year 2,046 records (36.5\%) were for birds recovered dead and 3,555 (63.5\%) for birds recovered alive (either actively caught or sight recoveries of birds with individual colour combinations or readable bands). Of all these recoveries 1,885 birds ( $33.6 \%$ ) were recovered at least once before.

Of the 2,046 birds recovered dead 1,595 (78\%) were game and 451 (22\%) were nongame species. The 3,555 live recoveries consisted of 1,096 (30.8\%) game and 2,459
( $69.2 \%$ ) non-game birds. The 1,885 repeat recoveries were made up of 646 ( $43.3 \%$ ) game and 1,239 ( $65.7 \%$ ) non-game species.

Dead and live recoveries combined for each species group are 2,691 (48\%) and 2,910 (52\%) respectively.

Some notable recoveries are listed below.

C-45972, an adult KNOT banded at Miranda, Firth of Thames on 3-1190 was caught in Wasur National Park, West Irian in April 1992. Another KNOT banded at Miranda on the same date was recovered in the MiaoGang Yangtze River Estuary in China on 14-4-91. In both cases the birds were apparently taken for food.

A BLACK PETREL, H-27735, banded as a pullus on 29-4-90 on Little Barrier Island, was collected as a study specimen off Salinas, Ecuador on 4-5-91. The specimen is now at the Philadelphia Academy.

Two SOOTY SHEARWATERS were caught in driftnets in the North Pacific Ocean. 2-6872 was banded as an adult in the Snares Islands on 13-1-69 and died on 16-8-91. 2-12453 was caught on 24-5-91. It was banded as an adult on 14-3-74 on Big South Cape Island.

SOUTHERN GIANT PETREL V-11158, banded under the Brazilian scheme as a nestling on 16-2-90 at Stinker Point, Elephant Island, South Shetlands was found dead on Wellars Rock Beach, Otago Harbour on 5-8-90. A SOUTHERN GIANT PETREL banded on 22-2-89 as a nestling on Signy Island, South Orkneys by British Antarctic Survey was found dead on the beach near Lake Ellesmere on 24-4-90. Another BAS banded bird, this time a WANDERING ALBATROSS, was caught and released alive off East Cape on 22-6-90. The bird, which had been banded on 9-10-84 on Bird Island, South Georgia as a chick, had its foot caught in a tuna long-line.

A pilot scheme to re-introduce FLUTTERING SHEARWATERS (and hopefully other seabirds) to islands from which they have disappeared through predator pressure was started in 1991. About 100 hirds that were close to fledging were transferred from Long Island to artificial burrows on Maud Island. The birds were banded, monitored and fed where necessary until they were ready to fledge. Two of these birds have since been recovered in Australia. They wsre both handed on 25-1-91. One was found on Pettman's Beach, Victoria, oiled and with about fifteen similar birds and the same number of Blue Penguins on 16-2-91. The other on Altona Beach, near Melbourne on 28-2-91.

The use of leg flags for migratory (basically colour bands that do not wrap around but are glued together with a flat piece of about one centimeter sticking out) and a greater international co-operation are realising results. Contributing countries along the flyways have been allocated their own colour, New Zealand's being white. We can so far report the following interesting sightings.

A New Zealand banded BAR-TAILED GODWIT was seen on 28-4-92 near Arao City, Kyushu, Japan, together with two metal banded birds. The flock consisted of over 500 birds.

Australian flagged KNOTS have been reported from the Mangere sewage ponds, Ruakaka and Miranda, a RED-NECKED STINT from Lake Ellesmere, and a BAR-TAILED GODWIT from the Ashley Estuary.

Several CATTLE EGRETS, individually wing-tagged in Australia, were seen in New Zealand. All were marked as chicks. One bird was marked on 14-12-89 at Fishery Creek, Ballina, New South Wales. It was seen on 20-6-90 at Rangariri. The other two were marked at the Wetland Centre, Shortland, New South Wales on 22-12-89 and 12-1-91 respectively. The first was spotted on $11 \& 12-4-91$ at Rangiriri; the second on 19-4-91 at Tauroa Point, Ahipara.

## 5 REQUESTS FOR INFORMATION

The New Zealand National Banding Scheme has serviced a range of requests for information or analyses in 1990-91. These included data for the Handbook of Australian, New Zealand and Antarctic Birds, as well as for the Antarctic Database, which is operated by South Africa. Life expectancy analyses were carried out for several game species. This work was done for the Fish \& Game Councils, among other things to set bag limits for the following hunting season.

## 6 ACKNOWLEDGEMENTS

I am indebted to Mrs G D Tofield for her valued contribution to the administration of the New Zealand National Banding Scheme, to M J Wakelin for technical and field support, and to C J R Robertson for valuable advice during the year.

TABLE ONE
GENERAL BANDING TOTAL (REBRANDS EXCLUDED)

## SPECIES NUMBER AND NAME

001 NORTH ISLAND BROWN KIWI
002 SOUTH ISLAND BROWN KIWI 003 STEWART ISLAND BROWN KIWI
004 LITTLE SPOTTED KIWI
012 YELLOW-EYED PENGUIN
026 NORTHERN BLUE PENGUIN
014 COOK STRAIT BLUE PENGUIN
016 WHITE-FLIPPERED BLUE PENGUIN
015 SOUTHERN BLUE PENGUIN
027 CHATHAM ISLAND BLUE PENGUIN
017 ROCKHOPPER PENGUIN
019 FIORDLAND CRESTED PENGUIN
020 SNARES CRESTED PENGUIN
021 ERECT-CRESTED PENGUIN
041 WANDERING ALBATROSS
044 NORTHERN ROYAL ALBATROSS
043 SOUTHERN ROYAL ALBATROSS
045 BLACK-BROWED MOLLYMAWK
046 NEW ZEALAND BLACK-BROWED MOLLYMAWK
047 GREY-HEADED MOLLYMAWK
049 BULLER'S MOLLYMAWK
050 WHITE-CAPPED (SHY) MOLLYMAWK
052 SALVIN'S MOLLYMAWK
051 CHATHAM ISLAND MOLLYMAWK
054 LIGHT-MANTLED SOOTY ALBATROSS
109 NORTHERN GIANT PETREL
061 SOUTHERN GIANT PETREL
064 ANTARCTIC FULMAR
063 SNARES CAPE PIGEON
062 CAPE PIGEON
093 GREY-FACED PETREL
094 WHITE-HEADED PETREL
095 WHITE-NAPED PETREL
098 MOTTLED PETREL
110 SOFT-PLUMAGED PETREL
100 KERMADEC PETREL
111 CHATHAM ISLAND TAIKO
101 PYCROFT'S PETREL
102 GOULD'S PETREL
104 COOK'S PETREL
106 BLACK-WINGED PETREL
105 CHATHAM ISLAND PETREL
065 BLUE PETREL
066 BROAD-BILLED PRION
069 ANTARCTIC PRION
071 AUCKLAND ISLAND PRION
072 NARROW-BILLED PRION

TOTAL TOTAL PRE 1989

89/90

TOTAL FOR ALL YEARS

| 332 | 0 | 332 |
| ---: | ---: | ---: |
| 4 | 0 | 4 |
| 21 | 0 | 21 |
| 121 | $\mathbf{0 2}$ | $\mathbf{1 4 3}$ |
| 3753 | 189 | 3942 |
| 615 | 0 | 615 |
| 1974 | 43 | 2017 |
| 10855 | $\mathbf{6 8 4}$ | 11539 |
| 726 | 0 | 726 |
| 0 | 15 | 15 |
| 2404 | 0 | 2404 |
| 603 | 16 | 619 |
| 2179 | 0 | 2179 |
| 43 | 0 | 43 |
| 3002 | 1 | 3003 |
| 2474 | 8 | 2482 |
| 32671 | 0 | 32671 |
| 13 | 0 | 13 |
| 22325 | 193 | 22518 |

6382
2102
561
1296
$20 \quad 0 \quad 20$

TABLE ONE GENERAL BANDING TOTAL (REBRANDS EXCLUDED)

| SPECIES NUMBER AND NAME | TOTAL <br> PRE 1989 | $\begin{array}{r} \text { TOTAL } \\ 89 / 90 \end{array}$ | TOTAL FOR ALL YEARS |
| :---: | :---: | :---: | :---: |
| 073 FAIRY PRION | 40317 | 3275 | 43952 |
| 075 FULMAR PRION | 61 | 0 | 61 |
| 074 CHATHAM FULMAR PRION | 2 | 0 | 2 |
| 089 GREY PETREL | 8 | 0 | 8 |
| 090 BLACK PETREL | 736 | 110 | 846 |
| 091 WESTLAND BLACK PETREL | 3361 | 116 | 3477 |
| 092 WHITE-CHINNED PETREL | 31 | 0 | 31 |
| 077 FLESH-FOOTED SHEARWATER | 1719 | 30 | 1749 |
| 078 WEDGE-TAILED SHEARWATER | 461 | 0 | 461 |
| 079 BULLER'S SHEARWATER | 1049 | 0 | 1049 |
| 080 SOOTY SHEARWATER | 6672 | 56 | 6728 |
| 115 CHRISTMAS ISLAND SHEARWATER | 1 | 0 | 1 |
| 082 FLUTTERING SHEARWATER | 1677 | 0110 | 1787 |
| 083 HUTTON'S SHEARWATER | 1134 | 0 | 1134 |
| 084 NORFOLK ISLAND LITTLE SHEARWATER | 1 | 0 | 1 |
| 085 KERMADEC LITTLE SHEARWATER | 354 | 0 | 354 |
| 086 NORTH ISLAND LITTLE (ALLIED) SHEARWATER | 465 | 35 | 500 |
| 087 SUBANTARCTIC LITTLE SHEARWATER | 5 | 0 | 5 |
| ----- PRION SPECIES | [4] | 0 | [4] |
| 121 LEACH'S FORK-TAILED PETREL | 1 | 0 | 1 |
| 123 GREY-BACKED STORM PETREL | 775 | 0 | 775 |
| 124 WHITE-FACED STORM PETREL | 6477 | 98 | 6575 |
| 125 KERMADEC STORM PETREL | 1 | 0 | 1 |
| 126 BLACK-BELLIED STORM PETREL | 6 | 0 | 6 |
| 127 WHITE-BELLIED STORM PETREL | 25 | 0 | 25 |
| 131 NORTHERN DIVING PETREL | 6925 | 214 | 7139 |
| 133 SUBANTARCTIC DIVING PETREL | 19 | 0 | 19 |
| 132 SOUTHERN DIVING PETREL | 104 | 0 | 104 |
| 135 DIVING PETREL (SP.) | 1 | 0 | 1 |
| ----- PETREL SPECIES | [1] | 0 | [1] |
| 141 RED-TAILED TROPIC BIRD | 119 | 0 | 119 |
| 142 WHITE-TAILED TROPIC BIRD | 13 | 0 | 13 |
| 161 AUSTRALASIAN GANNET | 15313 | 1171 | 16484 |
| 162 BROWN BOOBY | 1 | 0 | 1 |
| 163 MASKED (BLUE-FACED) BOOBY | 445 | 0 | 445 |
| 171 BLACK SHAG | 511 | 11 | 522 |
| 172 PIED SHAG | 168 | 0 | 168 |
| 173 LITTLE BLACK SHAG | 954 | 0 | 954 |
| 174 LITTLE (WHITE-THROATED) SHAG | 116 | 0 | 116 |
| 176 STEWART ISLAND SHAG | 2 | 0 | 2 |
| 179 AUCKLAND ISLAND SHAG | 154 | 0 | 154 |
| 180 CAMPBELL ISLAND SHAG | 66 | 0 | 66 |
| 182 SPOTTED SHAG | 443 | 14 | 457 |
| 216 WHITE-FACED HERON | 14 | 0 | 14 |
| 213 WHITE HERON | 2 | 0 | 2 |
| 215 REEF HERON | 48 | 4 | 52 |
| 220 CATTLE EGRET | 1 | 0 | 1 |
| 218 BITTERN | 7 | 0 | 7 |
| 233 ROYAL SPOONBILL | 0 | 11 | 11 |

TABLE ONE
GENERAL BANDING TOTAL (REBRANDS EXCLUDED)

| SPECIES NUMBER AND NAME | TOTAL <br> PRE 1989 | $\begin{gathered} \text { TOTAL } \\ 89 / 90 \end{gathered}$ | TOTAL FOR ALL YEARS |
| :---: | :---: | :---: | :---: |
| 242 MUTE SWAN | 4 | 0 | 4 |
| 243 BLACK SWAN | (59980) | 0 | (59980) |
| 241 CANADA GOOSE | (53684) | 293 | (53977) |
| 245 PARADISE SHELDUCK | (68212) | 694 | (68906) |
| 252 MALLARD | (89150) | 804 | (89954) |
| 259 HYBRID MALLARD (CROSS) | (1761) | 0 | (1761) |
| 251 GREY DUCK | (34194) | 31 | (34225) |
| 247 GREY TEAL | (1490) | 0 | (1490) |
| 248 BROWN TEAL | (1634) | 112 | (1746) |
| 249 AUCKLAND ISLAND TEAL | 45 | 0 | 45 |
| 250 CAMPBELL ISLAND TEAL | 3 | 0 | 3 |
| 253 NEW ZEALAND SHOVELER | (4494) | 0 | (4494) |
| 254 BLUE DUCK | (172) | 30 | (202) |
| 256 NEW ZEALAND SCAUP | (107) | 0 | (107) |
| --. DUCK (GREY OR MALLARD) | [(13)] | 0 | [(13)] |
| 272 AUSTRALASIAN HARRIER | 4551 | 106 | 4657 |
| 281 NEW ZEALAND FALCON | 44 | 3 | 47 |
| 296 CHUKOR | 2177 | 5 | 2182 |
| 299 RED-LEGGED PARTRIDGE | 17169 | 993 | 18162 |
| 300 RED-LEGGED PARTRIDGE (HYBRID) | 42 | 0 | 42 |
| 298 GREY PARTRIDGE | (14215) | 0 | (14215) |
| 292 BROWN QUAIL | 18 | 0 | 18 |
| 295 CALIFORNIA QUAIL | (12204) | 0 | (12204) |
| 293 PHEASANT | (57261) | 729 | (57990) |
| 331 BANDED RAIL | 32 | 0 | 32 |
| 335 NORTH ISLAND WEKA | 3474 | 0 | 3474 |
| 336 WESTERN WEKA | 450 | 0 | 450 |
| 337 BUFF WEKA | 31 | 0 | 31 |
| 338 STEWART ISLAND WEKA | 781 | 0 | 781 |
| 340 MARSH CRAKE | 5 | 0 | 5 |
| 341 SPOTLESS CRAKE | 23 | 0 | 23 |
| 342 PUKEKO | 1845 | 35 | 1880 |
| 343 NOTORNIS | 202 | 2 | 204 |
| --- WEKA SPECIES | [1] | 0 | [1] |
| 401 SOUTH ISLAND PIED OYSTERCATCHER | 1369 | 133 | 1502 |
| 402 VARIABLE OYSTERCATCHER | 281 | 7 | 288 |
| 404 CHATHAM ISLAND OYSTERCATCHER | 91 | 2 | 93 |
| 403 (BLACK OYSTERCATCHER) | 101 | 0 | 101 |
| 411 SPUR-WINGED PLOVER | 629 | 1 | 630 |
| 413 LEAST GOLDEN PLOVER (PACIFIC GOLDEN PLOVER) | 3 | 1 | 4 |
| 418 NEW ZEALAND DOTTEREL | 324 | 66 | 390 |
| 415 BANDED DOTTEREL | 3904 | 9 | 3913 |
| 422 BLACK-FRONTED DOTTEREL | 72 | 0 | 72 |
| 419 NEW ZEALAND SHORE PLOVER | 415 | 18 | 433 |
| 420 WRYBILL | 2404 | 24 | 2428 |
| 445 EASTERN BAR-TAILED GODWIT | 235 | 234 | 469 |
| 451 TURNSTONE | 12 | 1 | 13 |
| 453 CHATHAM ISLAND SNIPE | 150 | 0 | 150 |

TABLE ONE
GENERAL BANDING TOTAL (REBRANDS EXCLUDED)

| SPECIES NUMBER AND NAME | TOTAL | TOTAL | TOTAL FOR |
| :--- | ---: | ---: | ---: |
|  | PRE | $\mathbf{1 9 8 9}$ | $\mathbf{8 9} / \mathbf{9 0}$ |
| ALL YEARS |  |  |  |

TABLE ONE
GENERAL BANDING TOTAL (REBRANDS EXCLUDED)

| SPECIES NUMBER AND NAME | TOTAL <br> PRE 1989 | $\begin{gathered} \text { TOTAL } \\ 89 / 90 \end{gathered}$ | TOTAL FOR ALL YEARS |
| :---: | :---: | :---: | :---: |
| 741 NEW ZEALAND PIPIT | 46 | 0 | 46 |
| 731 HEDGESPARROW | 2129 | 45 | 2174 |
| 701 NORTH ISLAND FERNBIRD | 34 | 0 | 34 |
| 702 SOUTH ISLAND FERNBIRD | 257 | 0 | 257 |
| 703 STEWART ISLAND FERNBIRD | 27 | 0 | 27 |
| 706 SNARES FERNBIRD | 152 | 0 | 152 |
| 711 BROWN CREEPER | 297 | 0 | 297 |
| 712 WHITEHEAD | 295 | 50 | 345 |
| 713 YELLOWHEAD | 98 | 26 | 124 |
| 714 GREY WARBLER | 1018 | 13 | 1031 |
| 715 CHATHAM ISLAND WARBLER | 74 | 0 | 74 |
| 681 NORTH ISLAND FANTAIL | 612 | 5 | 617 |
| 682 SOUTH ISLAND FANTAIL | 846 | 19 | 865 |
| 684 PIED TIT | 175 | 0 | 175 |
| 685 YELLOW-BREASTED TIT | 420 | 0 | 420 |
| 686 CHATHAM ISLAND TIT | 37 | 0 | 37 |
| 687 BLACK TIT | 161 | 0 | 161 |
| 689 NORTH ISLAND ROBIN | 49 | 0 | 49 |
| 690 SOUTH ISLAND ROBIN | 2186 | 172 | 2358 |
| 691 STEWART ISLAND ROBIN | 10 | 0 | 10 |
| 692 BLACK ROBIN | 236 | 50 | 286 |
| 721 SONG THRUSH | 2936 | 70 | 3006 |
| 722 BLACKBIRD | 6650 | 224 | 6874 |
| 761 SILVEREYE | 58317 | 1939 | 60256 |
| 751 STITCHBIRD | 271 | 14 | 285 |
| 753 BELLBIRD | 5861 | 114 | 5975 |
| 755 TUI | 930 | 7 | 937 |
| 756 CHATHAM ISLAND TUI | 1 | 0 | 1 |
| 775 YELLOWHAMMER | 842 | 28 | 870 |
| 776 CIRL BUNTING | 19 | 6 | 25 |
| 774 CHAFFINCH | 2523 | 178 | 2701 |
| 771 GREENFINCH | 6522 | 507 | 7029 |
| 772 GOLDFINCH | 2369 | 195 | 2564 |
| 773 REDPOLL | 7529 | 292 | 7821 |
| 781 HOUSE SPARROW | 27470 | 1484 | 28954 |
| 791 STARLING | 17699 | 133 | 17832 |
| 792 INDIAN MYNA | 1397 | 0 | 1397 |
| 821 NORTH ISLAND SADDLEBACK | 1607 | 72 | 1679 |
| 822 SOUTH ISLAND SADDLEBACK | 289 | 0 | 289 |
| 824 NORTH ISLAND KOKAKO | 42 | 19 | 61 |
| 811 BLACK-BACKED MAGPIE | 41 | 0 | 41 |
| 812 WHITE-BACKED MAGPIE | 257 | 2 | 259 |
| 813 HYBRID MAGPIE | 25 | 0 | 25 |
| ---- MAGPIE SPECIES | [4] | 0 | [4] |
| 802 ROOK | 1070 | 0 | 1070 |
| *** TOTAL *** | 1062686 | 20439 | 1083125 |

## TABLE TWO

BANDING TOTALS BY AGE AND SEX
For abbreviations of column headings see page 15

| SPECIES NUMBER AND NAME | PU | JM | JF | JU | AM | AF | AU | UM | UF | $\mathbf{U U}$ | RB | TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 004 LITTLE SPOTTED KIWI | 0 | 3 | 5 | 0 | 7 | 6 | 1 | 0 | 0 | 0 | 0 | 22 |
| 012 YELLOW-EYED PENGUIN | 83 | 1 | 0 | 16 | 18 | 15 | 56 | 0 | 0 | 0 | 2 | 191 |
| 014 COOK STRAIT BLUE PENGUIN | 15 | 0 | 0 | 0 | 11 | 2 | 2 | 0 | 0 | 0 | 2 | 45 |
| 016 WHITE-FLIPPERED BLUE PENGUIN | 570 | 0 | 0 | 0 | 33 | 55 | 55 | 0 | 0 | 0 | 0 | 684 |
| 027 CHATHAM ISLAND BLUE PENGUIN | 0 | 0 | 0 | 0 | 0 | 15 | 15 | 0 | 0 | 0 | 0 | 15 |
| 019 FIORDLAND CRESTED PENGUIN | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 1 | 17 |
| 041 WANDERING ALBATROSS | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| 044 NORTHERN ROYAL ALBATROSS | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 043 SOUTHERN ROYAL ALBATROSS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| 046 NEW ZEALAND BLACK-BROWED MOLLYMAWK | 193 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 193 |
| 047 GREY-HEADED MOLLYMAWK | 42 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42 |
| 061 SOUTHERN GIANT PETREL | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 093 GREY-FACED PETREL | 404 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 404 |
| 098 MOTTLED PETREL | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 36 |
| 101 PYCROFT'S PETREL | 0 | 0 | 0 | 0 | 1 | 9 | 167 | 0 | 0 | 0 | 0 | 177 |
| 104 COOK'S PETREL | 31 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 34 |
| 106 BLACK-WINGED PETREL | 0 | 0 | 0 | 0 | 1 | 4 | 25 | 0 | 0 | 0 | 0 | 30 |
| 073 FAIRY PRION | 0 | 0 | 0 | 0 | 0 | 4 | 3271 | 0 | 0 | 0 | 5 | 3280 |
| 090 BLACK PETREL | 110 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 110 |
| 091 WESTLAND BLACK PETREL | 97 | 0 | 0 | 0 | 14 | 5 | 0 | 0 | 0 | 0 | 1 | 117 |
| 077 FLESH-FOOTED SHEARWATER | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 0 | 0 | 0 | 0 | 30 |
| 080 SOOTY SHEARWATER | 4 | 0 | 0 | 0 | 0 | 1 | 51 | 0 | 0 | 0 | 0 | 56 |
| 082 FLUTTERING SHEARWATER | 101 | 0 | 0 | 3 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 110 |
| 086 NORTH ISLAND LITTLE (ALLIED) SHEARWATER | 0 | 0 | 0 | 0 | 0 | 0 | 35 | 0 | 0 | 0 | 0 | 35 |
| 124 WHITE-FACED STORM PETREL | 0 | 0 | 0 | 0 | 0 | 0 | 98 | 0 | 0 | 0 | 0 | 98 |

## TABLE TWO

BANDING TOTALS BY AGE AND SEX
For abbreviations of column headings see page 15

| SPECIES NUMBER AND NAME | PU | JM | JF | JU | AM | AF | AU | UM | UF | $\mathbf{U U}$ | RB | TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 131 NORTHERN DIVING PETREL | 7 | 0 | 0 | 0 | 0 | 0 | 207 | 0 | 0 | 0 | 0 | 214 |
| 161 AUSTRALASIAN GANNET | 64 | 0 | 0 | 1106 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1171 |
| 171 BLACK SHAG | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| 182 SPOTTED SHAG | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| 215 REEF HERON | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 233 ROYAL SPOONBILL | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| 241 CANADA GOOSE | 0 | 129 | 128 | 1 | 10 | 25 | 0 | 0 | 0 | 0 | 0 | 293 |
| 245 PARADISE SHELDUCK | 0 | 131 | 129 | 0 | 239 | 195 | 0 | 0 | 0 | 0 | 0 | 694 |
| 252 MALLARD | 0 | 361 | 265 | 0 | 54 | 124 | 0 | 0 | 0 | 0 | 0 | 804 |
| 251 GREY DUCK | 0 | 5 | 6 | 0 | 13 | 8 | 0 | 0 | 0 | 0 | 0 | 31 |
| 248 BROWN TEAL | 0 | 0 | 0 | 0 | 54 | 58 | 0 | 0 | 0 | 0 | 0 | 112 |
| 254 BLUE DUCK | 0 | 9 | 8 | 3 | 6 | 4 | 0 | 0 | 0 | 0 | 0 | 30 |
| 272 AUSTRALASIAN HARRIER | 0 | 23 | 9 | 2 | 36 | 27 | 6 | 0 | 3 | 0 | 0 | 106 |
| 281 NEW ZEALAND FALCON | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 296 CHUKOR | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 299 RED-LEGGED PARTRIDGE | 0 | 39 | 29 | 609 | 100 | 84 | 132 | 0 | 0 | 0 | 0 | 993 |
| 293 PHEASANT | 0 | 702 | 20 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 729 |
| 342 PUKEKO | 5 | 0 | 0 | 7 | 11 | 12 | 0 | 0 | 0 | 0 | 0 | 35 |
| 343 NOTORNIS | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 401 SOUTH ISLAND PIED | 27 | 0 | 0 | 7 | 5 | 10 | 84 | 0 | 0 | 0 | 2 | 135 |
| OYSTERCATCHER <br> 402 VARIABLE OYSTERCATCHER | 6 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 404 CHATHAM ISLAND | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| OYSTERCATCHER 411 SPUR-WINGED PLOVER | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 413 LEAST GOLDEN PLOVER <br> (PACIFIC GOLDEN PLOVER) | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 418 NEW ZEALAND DOTTEREL | 31 | 0 | 0 | 10 | 0 | 0 | 25 | 0 | 0 | 0 | 1 | 67 |
| 415 BANDED DOTTEREL | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 4 | 0 | 9 |
| 419 NEW ZEALAND SHORE PLOVER | 13 | 0 | 0 | 1 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 18 |
| 420 WRYBILL | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 0 | 0 | 0 | 22 | 46 |

## TABLE TWO

BANDING TOTALS BY AGE AND SEX
For abbreviations of column headings see page 15

| SPECIES NUMBER AND NAME | PU | JM | JF | JU | AM | AF | AU | UM | UF | UU | RB | TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 445 EASTERN BAR-TAILED | 0 | 0 | 0 | 30 | 0 | 0 | 65 | 0 | 0 | 149 | 1 | 235 |
| GODWIT |  |  |  |  |  |  |  |  |  |  |  |  |
| 451 TURNSTONE | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 458 KNOT | 0 | 0 | 0 | 20 | 0 | 0 | 247 | 0 | 0 | 231 | 0 | 498 |
| 481 PIED STILT | 112 | 0 | 0 | 0 | 23 | 26 | 82 | 0 | 0 | 0 | 0 | 243 |
| 521 SOUTHERN BLACK-BACKED | 771 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 775 |
| GULL |  |  |  |  |  |  |  |  |  |  |  |  |
| 523 RED-BILLED GULL | 618 | 0 | 0 | 0 | 55 | 78 | 6 | 0 | 0 | 0 | 123 | 880 |
| 524 BLACK-BILLED GULL | 801 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 818 |
| 527 CASPIAN TERN | 51 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 51 |
| 525 BLACK-FRONTED TERN | 33 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 34 |
| 531 FAIRY TERN | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 551 NEW ZEALAND PIGEON | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 7 | 0 | 11 |
| 561 KAKAPO | 0 | 0 | 0 | 0 | 2 | 5 | 0 | 0 | 0 | 0 | 4 | 11 |
| 563 SOUTH ISLAND KAKA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 2 | 25 |
| 566 EASTERN ROSELLA | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 568 RED-CROWNED PARAKEET | 6 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 9 |
| 573 YELLOW-CROWNED | 0 | 0 | 0 | 0 | 0 | 0 | 71 | 0 | 0 | 0 | 0 | 71 |
| PARAKEET |  |  |  |  |  |  |  |  |  |  |  |  |
| 583 SHINING CUCKOO | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 621 NEW ZEALAND KINGFISHER | 0 | 0 | 0 | 2 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 5 |
| 642 SOUTH ISLAND RIFLEMAN | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| 662 WELCOME SWALLOW | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 731 HEDGESPARROW | 3 | 0 | 0 | 4 | 0 | 0 | 36 | 0 | 0 | 2 | 0 | 45 |
| 712 WHITEHEAD | 5 | 9 | 6 | 5 | 17 | 8 | 0 | 0 | 0 | 0 | 0 | 50 |
| 713 YELLOWHEAD | 0 | 0 | 0 | 7 | 10 | 8 | 1 | 0 | 0 | 0 | 0 | 26 |
| 714 GREY WARBLER | 0 | 0 | 0 | 2 | 0 | 0 | 8 | 0 | 0 | 3 | 0 | 13 |
| 681 NORTH ISLAND FANTAIL | 0 | 0 | 0 | 2 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 5 |
| 682 SOUTH ISLAND FANTAIL | 0 | 0 | 0 | 8 | 0 | 0 | 9 | 0 | 0 | 2 | 0 | 19 |
| 690 SOUTH ISLAND ROBIN | 16 | 6 | 6 | 33 | 65 | 43 | 3 | 0 | 0 | 0 | 0 | 172 |
| 692 BLACK ROBIN | 50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 50 |
| 721 SONG THRUSH | 5 | 0 | 0 | 29 | 0 | 0 | 36 | 0 | 0 | 0 | 0 | 70 |

## TABLE TWO

BANDING TOTALS BY AGE AND SEX
For abbreviations of column headings see page 15

| SPECIES NUMBER AND NAME | PU | JM | JF | JU | AM | AF | AU | UM | UF | UU | RB | TOTAL |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 722 BLACKBIRD | 19 | 27 | 23 | 48 | 63 | 43 | 0 | 0 | 1 | 0 | 4 | 228 |
| 761 SILVEREYE | 0 | 0 | 0 | 91 | 0 | 0 | 1582 | 0 | 0 | 266 | 0 | 1939 |
| 751 STITCHBIRD | 0 | 0 | 0 | 0 | 8 | 6 | 0 | 0 | 0 | 0 | 0 | 14 |
| 753 BELLBIRD | 0 | 5 | 6 | 7 | 50 | 43 | 0 | 2 | 1 | 0 | 0 | 114 |
| 755 TUI | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 4 | 0 | 7 |
| 775 YELLOWHAMMER | 0 | 1 | 0 | 5 | 15 | 1 | 1 | 2 | 1 | 2 | 0 | 28 |
| 776 CIRL BUNTING | 0 | 0 | 1 | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 6 |
| 774 CHAFFINCH | 0 | 15 | 20 | 6 | 63 | 58 | 8 | 1 | 2 | 5 | 0 | 178 |
| 771 GREENFINCH | 1 | 23 | 40 | 15 | 194 | 134 | 24 | 34 | 37 | 4 | 0 | 507 |
| 772 GOLDFINCH | 18 | 2 | 6 | 25 | 16 | 27 | 82 | 0 | 0 | 19 | 0 | 195 |
| 773 REDPOLL | 14 | 4 | 7 | 35 | 88 | 58 | 78 | 0 | 1 | 7 | 0 | 292 |
| 781 HOUSE SPARROW | 24 | 140 | 97 | 58 | 668 | 486 | 8 | 0 | 1 | 2 | 0 | 1484 |
| 791 STARLING | 6 | 6 | 4 | 20 | 44 | 30 | 21 | 1 | 1 | 0 | 0 | 133 |
| 821 NORTH ISLAND SADDLEBACK | 0 | 6 | 5 | 5 | 18 | 9 | 15 | 0 | 6 | 8 | 0 | 72 |
| 824 NORTH ISLAND KOKAKO | 3 | 0 | 0 | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 19 |
| 812 WHITE-BACKED MAGPIE | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| *** Total *** | 444 | 1652 | 825 | 2221 | 2036 | 1711 | 6715 | 40 | 54 | 738 | 189 | 20628 |

Reference to abbreviations in the column beadings.

| PU | Pullus of unknown sex | AU | Adult of unknown sex |
| :--- | :--- | :--- | :--- |
| JM | Juvenile male | UM | Male of unknown age |
| JF | Juvenile female | UF | Female of unknown age |
| AM | Adult male | W | Unknown age and sex |
| AF | Adult female | RB | Birds re-banded |

## TABLE THREE

Summary of recoveries added to the computer file during the report year. NOTE: The figures in the repeat column are already incorporated in the total column.

| SPECIES NUMBER AND NAME | DEAD | ALIVE | TOTAL | REPEAT |
| :---: | :---: | :---: | :---: | :---: |
| 001 NORTH ISLAND BROWN KIWI | 13 | 21 | 34 | 22 |
| 002 SOUTH ISLAND BROWN KIWI | 0 | 1 | 1 | 0 |
| 012 YELLOW-EYED PENGUIN | 15 | 42 | 57 | 31 |
| 026 NORTHERN BLUE PENGUIN | 2 | 0 | 2 | 0 |
| 014 COOK STRAIT BLUE PENGUIN | 3 | 107 | 110 | 67 |
| 016 WHITE-FLIPPERED BLUE PENGUIN | 30 | 840 | 870 | 474 |
| 015 SOUTHERN BLUE PENGUIN | 1 | 0 | 1 | 0 |
| 019 FIORDLAND CRESTED PENGUIN | 1 | 55 | 56 | 14 |
| 020 SNARES CRESTED PENGUIN | 0 | 1 | 1 | 1 |
| 041 WANDERING ALBATROSS | 1 | 4 | 5 | 0 |
| 043 SOUTHERN ROYAL ALBATROSS | 0 | 2 | 2 | 0 |
| 045 BLACK-BROWED MOLLYMAWK | 1 | 1 | 2 | 0 |
| 046 NEW ZEALAND BLACK-BROWED MOLLYMAWK | 2 | 1 | 3 | 0 |
| 047 GREY-HEADED MOLLYMAWK | 1 | 1 | 2 | 0 |
| 061 SOUTHERN GIANT PETREL | 7 | 0 | 7 | 0 |
| 064 ANTARCTIC FULMAR | 0 | 1 | 1 | 0 |
| 062 CAPE PIGEON | 0 | 2 | 2 | 0 |
| 093 GREY-FACED PETREL | 5 | 8 | 13 | 1 |
| 095 WHITE-NAPED PETREL | 0 | 6 | 6 | 0 |
| 106 BLACK-WINGED PETREL | 0 | 3 | 3 | 1 |
| 105 CHATHAM ISLAND PETREL | 0 | 6 | 6 | 2 |
| 073 FAIRY PRION | 1 | 0 | 1 | 0 |
| 090 BLACK PETREL | 0 | 3 | 3 | 0 |
| 091 WESTLAND BLACK PETREL | 3 | 0 | 3 | 1 |
| 082 FLUTTERING SHEARWATER | 1 | 0 | 1 | 0 |
| 161 AUSTRALASIAN GANNET | 19 | 5 | 24 | 3 |
| 163 MASKED (BLUE-FACED) BOOBY | 0 | 47 | 47 | 11 |
| 171 BLACK SHAG | 1 | 0 | 1 | 0 |
| 182 SPOTTED SHAG | 4 | 1 | 5 | 0 |
| 243 BLACK SWAN | 128 | 6 | 134 | 6 |
| 241 CANADA GOOSE | 364 | 296 | 660 | 318 |
| 245 PARADISE SHELDUCK | 456 | 550 | 1006 | 206 |
| 252 MALLARD | 525 | 241 | 766 | 116 |
| 259 HYBRID MALLARD (CROSS) | 1 | 0 | 1 | 0 |
| 251 GREY DUCK | 2 | 0 | 2 | 0 |
| 248 BROWN TEAL | 2 | 0 | 2 | 0 |
| 253 NEW ZEALAND SHOVELER | 6 | 2 | 8 | 0 |
| 254 BLUE DUCK | 0 | 2 | 2 | 0 |
| 272 AUSTRALASIAN HARRIER | 4 | 0 | 4 | 0 |
| 299 RED-LEGGED PARTRIDGE | 14 | 1 | 15 | 0 |
| 293 PHEASANT | 99 | 0 | 99 | 0 |
| 337 BUFF WEKA | 2 | 0 | 2 | 0 |
| 401 SOUTH ISLAND PIED OYSTERCATCHER | 1 | 19 | 20 | 14 |
| 402 VARIABLE OYSTERCATCHER | 2 | 4 | 6 | 3 |

## TABLE THREE

Summary of recoveries added to the computer file during the report year. NOTE: The figures in the repeat column are already incorporated in the total column.

| SPECIES NUMBER AND NAME | DEAD | ALIVE | TOTAL | REPEAT |
| :---: | :---: | :---: | :---: | :---: |
| 404 CHATHAM ISLAND OYSTERCATCHER | 0 | 57 | 57 | 46 |
| 418 NEW ZEALAND DOTTEREL | 0 | 3 | 3 | 3 |
| 415 BANDED DOTTEREL | 1 | 1 | 2 | 1 |
| 419 NEW ZEALAND SHORE PLOVER | 0 | 65 | 65 | 50 |
| 453 CHATHAM ISLAND SNIPE | 0 | 1 | 1 | 0 |
| 458 KNOT | 1 | 0 | 1 | 0 |
| 481 PIED STILT | 1 | 30 | 31 | 10 |
| 511 SOUTHERN GREAT SKUA | 1 | 2 | 3 | 0 |
| 521 SOUTHERN BLACK-BACKED GULL | 82 | 32 | 114 | 1 |
| 523 RED-BILLED GULL | 31 | 448 | 479 | 94 |
| 524 BLACK-BILLED GULL | 125 | 11 | 136 | 0 |
| 527 CASPIAN TERN | 1 | 6 | 17 | 0 |
| 532 WHITE-FRONTED TERN | 4 | 0 | 4 | 0 |
| 561 KAKAPO | 0 | 8 | 8 | 3 |
| 563 SOUTH ISLAND KAKA | 2 | 2 | 4 | 2 |
| 564 KEA | 2 | 90 | 92 | 28 |
| 731 HEDGESPARROW | 1 | 5 | 6 | 1 |
| 690 SOUTH ISLAND ROBIN | 0 | 8 | 8 | 0 |
| 721 SONG THRUSH | 2 | 0 | 2 | 0 |
| 722 BLACKBIRD | 7 | 2 | 9 | 0 |
| 761 SILVEREYE | 15 | 459 | 474 | 353 |
| 751 STITCHBIRD | 0 | 2 | 2 | 0 |
| 753 BELLBIRD | 0 | 4 | 4 | 0 |
| 755 TUI | 1 | 2 | 3 | 0 |
| 774 CHAFFINCH | 1 | 4 | 5 | 0 |
| 771 GREENFINCH | 14 | 7 | 21 | 0 |
| 772 GOLDFINCH | 2 | 3 | 5 | 0 |
| 773 REDPOLL | 1 | 11 | 12 | 0 |
| 781 HOUSE SPARROW | 21 | 12 | 33 | 1 |
| 791 STARLING | 2 | 1 | 3 | 1 |
| 812 WHITE-BACKED MAGPIE | 1 | 0 | 1 | 0 |
| *** Total ${ }^{* * *}$ | 2046 | 3555 | 5601 | 1885 |

TABLE 4
SUMMARY PER PERMIT
(RE-BANDS INCLUDED)
BIRDS BANDED
** PERMIT 0002 MILLS DR J A
RED-BILLED GULL ..... 880
BLACK-BILLED GULL ..... 1
** Subtotal ** ..... 881
** PERMIT 0005 ROBERTSON C J R
NORTHERN ROYAL ALBATROSS ..... 8
** Subtotal ** ..... 8
** PERMIT 0032 DAVIS V T
AUSTRALASIAN GANNET ..... 1107
** Subtotal ** ..... 1107
** PERMIT 0036 BARTLE J A
WESTLAND BLACK PETREL ..... 117
** Subtotal ** ..... 117
** PERMIT 0041 BULL DR P C SILVEREYE ..... 133
** Subtotal ** ..... 133
** PERMIT 0042 CHALLIES C N WHITE-FLIPPERED BLUE PENGUIN ..... 610
SOUTHERN BLACK-BACKED GULL ..... 29
** Subtotal ** ..... 639
** PERMIT 0044 COWIE J A
SPUR-WINGED PLOVER ..... 1
BLACK-BILLED GULL ..... 817
BLACK-FRONTED TERN ..... 34
** Subtotal ** ..... 852
** PERMIT 0053 BARLOW MRS C E
CASPIAN TERN ..... 51
** Subtotal ** ..... 51
** PERMIT 0065 MERTON D V
BLACK ROBIN ..... 50
** Subtotal ** ..... 50

TABLE 4
SUMMARY PER PERMIT
(RE-BANDS INCLUDED)
BIRDS
BANDED
** PERMIT 0068 IMBER M J
MOTTLED PETREL ..... 36
PYCROFT'S PETREL ..... 11
COOK'S PETREL ..... 34
FAIRY PRION ..... 114
WHITE-FACED STORM PETREL ..... 98
NORTHERN DIVING PETREL ..... 168
** Subtotal ** ..... 479
** PERMIT 0076 BELL BRIAN D
FLUTTERING SHEARWATER ..... 101
SOUTHERN BLACK-BACKED GULL ..... 45
SHINING CUCKOO ..... 1
HEDGESPARROW ..... 1
BLACKBIRD ..... 38
SILVEREYE ..... 239
YELLOWHAMMER ..... 1
CHAFFINCH ..... 5
GREENFINCH ..... 121
HOUSE SPARROW ..... 503
STARLING ..... 62
WHITE-BACKED MAGPIE ..... 2
** Subtotal ** ..... 1119
** PERMIT 0093 SAGAR P M
SOUTH ISLAND PIED OYSTERCATCHER ..... 42
** Subtotal ** ..... 42
** PERMIT 0104 D S I R LAND RESOURCES
SOUTHERN BLACK-BACKED GULL ..... 260
NEW ZEALAND PIGEON ..... 11
SOUTH ISLAND KAKA ..... 25
SOUTH ISLAND ROBIN ..... 2
** Subtotal ** ..... 298
** PERMIT 0108 CAMPBELL ISLAND PARTY
YELLOW-EYED PENGUIN ..... 4
WANDERING ALBATROSS ..... 1
SOUTHERN ROYAL ALBATROSS ..... 2
NEW ZEALAND BLACK-BROWED MOLLYMAWK ..... 193
GREY-HEADED MOLLYMAWK ..... 42
** Subtotal **。 ..... 242

TABLE 4

## SUMMARY PER PERMIT

(RE-BANDS INCLUDED)

## BIRDS <br> BANDED

** PERMIT 0164 AUCKLAND ACCLIMATISATION SOC RED-LEGGED PARTRIDGE ..... 316
PHEASANT ..... 29
** Subtotal ** ..... 345
** PERMIT 0167 TARANAKI ACCLIMATISATION SOC
PARADISE SHELDUCK ..... 694
** Subtotal ** ..... 694
** PERMIT 0172 HAWKES BAY ACCLIM SOCIETY
CHUKOR ..... 5
RED-LEGGED PARTRIDGE ..... 270
PHEASANT ..... 700
** Subtotal ** ..... 975
** PERMIT 0175 MARLBOROUGH ACCLIM SOCIETY RED-LEGGED PARTRIDGE ..... 157
**Subtotal ** ..... 157
** PERMIT 0184 SOUTHLAND ACCLIM SOCIETY MALLARD ..... 798
** Subtotal ** ..... 798
** PERMIT 0215 TORR O C
NEW ZEALAND KINGFISHER ..... 3
HEDGESPARROW ..... 1
SONG THRUSH ..... 3
BLACKBIRD ..... 1
SILVEREYE ..... 32
YELLOWHAMMER ..... 1
CHAFFINCH ..... 5
GREENFINCH ..... 2
GOLDFINCH ..... 20
HOUSE SPARROW ..... 15
** Subtotal ** ..... 83
** PERMIT 0243 SIM D M
FLESH-FOOTED SHEARWATER ..... 21
AUSTRALASIAN HARRIER ..... 18
S ILVEREYE ..... 379
** Subtotal ** ..... 418

TABLE 4
SUMMARY PER PERMIT
(RE-BANDS INCLUDED)
BIRDS
BANDED
** PERMIT 0244 POWLESLAND DR R G BLACK SHAG ..... 11
KAKAPO ..... 11
** Subtotal ** ..... 22
** PERMIT 0246 PIERCE R J
FAIRY TERN ..... 1
** Subtotal ** ..... 1
** PERMIT 0256 WILKINSON G B
SOUTHERN BLACK-BACKED GULL ..... 4
** Subtotal ** ..... 4
** PERMIT 0259 MASSEY UNIVERSITY
HEDGESPARROW ..... 1
SONG THRUSH ..... 7
BLACKBIRD ..... 2
SILVEREYE ..... 208
TUI ..... 3
CHAFFINCH ..... 9
GREENFINCH ..... 29
GOLDFINCH ..... 12
HOUSE SPARROW ..... 4
STARLING ..... 17
**Subtotal ** ..... 292
** PERMIT 0278 MIRANDA NATURALISTS TRUST SOUTH ISLAND PIED OYSTERCATCHER ..... 93
LEAST GOLDEN PLOVER (PACIFIC GOLDEN PLOVER) ..... 1
NEW ZEAIAND DOTTEREL ..... 2
BANDED DOTTEREL ..... 9
WRYBILL ..... 46
EASTERN BAR-TAILED GODWIT ..... 235
TURNSTONE ..... 1
KNOT ..... 498
** Subtotal ** ..... 885
** PERMIT 0282 DUCKS UNLIMITED (N Z)
CANADA GOOSE ..... 93
BROWN TEAL ..... 112
** Subtotal ** ..... 205

TABLE 4
SUMMARY PER PERMIT
(RE-BANDS INCLUDED)

## BIRDS <br> BANDED

** PERMIT 0284 OTAGO UNIVERSITY
WHITE-FLIPPERED BLUE PENGUIN ..... 74
** Subtotal ** ..... 74
** PERMIT 0285 RAPTOR ASSOCIATION OF N Z
AUSTRALASIAN HARRIER ..... 74
NEW ZEALAND FALCON ..... 3
**Subtotal ** ..... 77
** PERMIT 0291 NORTHLAND/FAR NORTH REG OSNZ
SOUTHERN BLACK-BACKED GULL ..... 89
** Subtotal ** ..... 89
** PERMIT 0292 ROWE L K
HEDGESPARROW ..... 2
SILVEREYE ..... 71
HOUSE SPARROW ..... 119
** Subtotal ** ..... 192
** PERMIT 0294 CANTERBURY PASSERINE GROUP
NEW ZEALAND KINGFISHER ..... 1
SOUTH ISLAND RIFLEMAN ..... 2
WELCOME SWALLOW ..... 1
HEDGESPARROW ..... 21
GREY WARBLER ..... 3
SOUTH ISLAND FANTAIL ..... 4
SONG THRUSH ..... 15
BLACKBIRD ..... 57
SILVEREYE ..... 215
BELLBIRD ..... 12
YELLOWHAMMER ..... 3
CHAFFINCH ..... 10
GREENFINCH ..... 261
GOLDFINCH ..... 58
REDPOLL ..... 28
HOUSE SPARROW ..... 397
STARLING ..... 9
** Subtotal ** ..... 1097
** PERMIT 0295 CANTERBURY UNIVERSITY
FIORDLAND CRESTED PENGUIN ..... 17
SOUTH ISLAND ROBIN ..... 117
**Subtotal ** ..... 134

TABLE 4
SUMMARY PER PERMIT
(RE-BANDS INCLUDED)
BIRDS
BANDED
** PERMIT 0297 AUCKLAND UNIVERSITY
PUKEKO ..... 35
BELLBIRD ..... 91
TUI ..... 2
STARLING ..... 4
NORTH ISLAND SADDLEBACK ..... 72
** Subtotal ** ..... 204
** PERMIT 0301 DARBY J T
YELLOW-EYED PENGUIN ..... 187
** Subtotal ** ..... 187
** PERMIT 0304 TAYLOR G
BLACKBIRD ..... 1
** Subtotal ** ..... 1
** PERMIT 0307 COSSEE R O
COOK STRAIT BLUE PENGUIN ..... 45
CHATHAM ISLAND BLUE PENGUIN ..... 15
SOUTHERN GIANT PETREL ..... 1
BLACK-WINGED PETREL ..... 6
FAIRY PRION ..... 3166
SOOTY SHEARWATER ..... 30
SPOTTED SHAG ..... 14
REEF HERON ..... 4
VARIABLE OYSTERCATCHER ..... 7
SOUTHERN BLACK-BACKED GULL ..... 348
SILVEREYE ..... 279
GOLDFINCH ..... 1
HOUSE SPARROW ..... 23
** Subtotal ** ..... 3939
** PERMIT 0323 DOWDING J (N Z DOTTEREL GRP) NEW ZEALAND DOTTEREL ..... 65
** Subtotal ** ..... 65
** PERMIT 0324 PASSERINE GROUP OSNZ CENTRAL
EASTERN ROSELLA ..... 1
SHINING CUCKOO ..... 1
NEW ZEALAND KINGFISHER ..... 1
HEDGESPARROW ..... 19
GREY WARBLER ..... 9
NORTH ISLAND FANTAIL ..... 4
SOUTH ISLAND FANTAIL ..... 15

TABLE 4
SUMMARY PER PERMIT
(RE-BANDS INCLUDED)
BIRDS
BANDED
SONG THRUSH ..... 45
BLACKBIRD ..... 127
SILVEREYE ..... 383
BELLBIRD ..... 8
T-U.IYELLOWHAMMER ..... 1
CIRL BUNTING ..... 23
CHAFFINCH ..... 6
GREENFINCH ..... 148
GOLDFINCH ..... 85
REDPOLL ..... 104
HOUSE SPARROW ..... 264
STARLING ..... 408
** Subtotal * ..... 39
** PERMIT 0325 OSNZ AUCKLAND SEABIRD GROUP PYCROFT'S PETREL ..... 166
BLACK-WINGED PETREL ..... 24
FLESH-FOOTED SHEARWATER ..... 9
SOOTY SHEARWATER ..... 26
FLUTTERING SHEARWATER ..... 9
NORTH ISLAND LITTLE (ALLIED) SHEARWATER ..... 35
NORTHERN DIVING PETREL ..... 28
** Subtotal ** ..... 297
** PERMIT 0326 WAGHORN E J
AUSTRALASIAN GANNET ..... 64
** Subtotal ** ..... 64
** PERMIT 0331 GODBERT F D
HOUSE SPARROW ..... 9
** Subtotal ** ..... 9
** PERMIT 0332 STILT RESEARCH GROUP OSNZ PIED STILT ..... 243
** Subtotal ** ..... 243
** PERMIT 0333 BAKER D G
GREY WARBLER ..... 1
NORTH ISLAND FANTAIL ..... 1
BLACKBIRD ..... 2
TUI ..... 1
CHAFFINCH ..... 1
GREENFINCH ..... 9

TABLE 4
SUMMARY PER PERMIT
(RE-BANDS INCLUDED)
BIRDS
BANDED
HOUSE SPARROW ..... 6
STARLING ..... 2
** Subtotal ** ..... 23
** PERMIT 0334 GREENE T
RED-CROWNED PARAKEET ..... 9
** Subtotal ** ..... 9
** PERMIT 0335 ALLEN D G
WHITEHEAD ..... 50
** Subtotal ** ..... 50
** PERMIT 0337 ROYAL SPOONBILL PROJECT OSNZ ROYAL SPOONBILL ..... 11
** Subtotal ** ..... 11
** PERMIT 0338 WELLINGTON CONSERVANCY DOC STITCHBIRD ..... 14
** Subtotal ** ..... 14
** PERMIT 0339 TAYLOR T J
AUSTRALASIAN HARRIER ..... 7
** Subtotal ** ..... 7
** PERMIT 0344 J D ROBERTSHAW (MAF)
AUSTRALASIAN HARRIER ..... 7
** Subtotal ** ..... 7
** PERMIT 0345 EASTERN FISH \& GAME COUNCIL
CANADA GOOSE ..... 200
RED-LEGGED PARTRIDGE ..... 250
** Subtotal ** ..... 450
** PERMIT 1125 NORTHERN REGION DOC
BELLBIRD ..... 3
**Subtotal ** ..... 3
** PERMIT 3125 EASTERN REGION DOC
NORTH ISLAND KOKAKO ..... 19
**Subtotal ** ..... 19
** PERMIT 7125 CANTERBURY REGION DOC
MALLARD ..... 6
GREY DUCK ..... 31
BLUE DUCK ..... 7
CHATHAM ISLAND OYSTERCATCHER ..... 2

TABLE 4
SUMMARY PER PERMIT
(RE-BANDS INCLUDED)
BIRDS
BANDED
NEW ZEALAND SHORE PLOVER ..... 18
**Subtotal ** ..... 64
** PERMIT 9125 SCIENCE \& RESEARCH DOC LITTLE SPOTTED KIWI ..... 22
GREY-FACED PETREL ..... 404
BLACK PETREL ..... 110
BLUE DUCK ..... 23
NOTORNIS ..... 2
YELLOW-CROWNED PARAKEET ..... 71
YELLOWHEAD ..... 26
SOUTH ISLAND ROBIN ..... 53
** Subtotal ** ..... 711
*** Total *** ..... 20628

## APPENDIX 1: RESEARCH SUPPORTED BY BIRD BANDING

(Numbers in brackets indicate permit numbers)
Lifetime reproduction and the role of inheritance in the breeding of Red-billed Gulls at Kaikoura. (0002)

General ecological studies of gannets and albatrosses, population dynamics, life span and dispersal patterns. (0005)

Life expectancy, breeding success, dispersal and census of Australasian Gannet on White Island. (0032)

Breeding biology and movements of Westland Black Petrel. (0036)

Distribution, life expectancy and migration of native and introduced Passerines. (0041, 0076, 0215, 0243, 0292, 0294, 0307, 0324, 0331, 0333)

A long-term study of population dynamics, behaviour and dispersal of White-flippered Penguins. (0042)

Ecology, dispersal and habitat requirements of White-fronted and Black-fronted Terns (0044)
Distribution, movements and longevity of Caspian Terns. (0053)
Conservation of Black Robin populations in the Chatham Islands. (0065)
Population dynamics, longevity, age of first breeding, migration dispersal and movements of Procellariiformes. $(0068,0325)$

Translocation of Fluttering Shearwaters from Long Island to Maud Island, Marlborough Sounds. (0076)

Mate \& nest site retention, annual mortality and breeding success of the South Island Pied Oystercatcher. (0093)

Comparative ecology of the New Zealand Pigeon. (0104)
Ecology and movements of South Island Kaka. (0104)
Black-backed Gull movements from the Nelson Boulder Bank. (0104)

Translocation of South Island Robins from Breaksea Island, Fiordland. (0104)
Population dynamics of the seabirds of Campbell Island. (0108)

Establishment of populations of game farm bred Red-legged Partridge, Chukor and Pheasants in the wild. (0164, 0172, 0175, 0345)

Population dynamics of Paradise Shelduck. (0167)
Population dynamics of Mallard and Grey Duck. (0184, 7125)
Breeding biology of Black Shags at Lake Kohangatera. (0244)
Breeding biology of the Kakapo. (0244)
Population dynamics and distribution of Fairy Terns in Northland. (0246)

Breeding biology of the Black-backed Gull in Nelson. (0256)
Competition and parental investment in Starlings.(0259)

Variation in fat condition, body mass and wintering site fidelity in Passerines in patches of native vegetation in the Manawatu. (0259)

Migration patterns in waders. (0278)
Population dynamics in North Island Canada Geese. (0282, 0345)
Captive breeding of Brown teal and their re-establishment in the wild. (0282)
The breeding biology of the White-flippered penguin: a test for sexual selection theory. (0284)
Biology and distribution of New Zealand Raptors. (0285, 0339,0344)
Population dynamics of Black-backed Gull in Northland. (0291)
Response of South Island Robins to predators. (0295)
Ecology and dispersal of Fiordland Crested Penguins from Open Bay Island. (0295)
Communal breeding in Pukeko on Tiritiri Matzngi Island. (0297)
Population biology and vocalisation of North Island Saddleback on Tiritiri Matangi Island. (0297)
Feeding behaviour of nectar feeding birds. (0297)
Dynamics of the Yellow-eyed Penguin. (0301)
Breeding biology, predation, habitat requirements and movements of New Zealand Dotterel. (0323)

Breeding biology of the Australasian Gannet at Waimaru Point, Marlborough Sounds. (0326)

Movement patterns of the Pied Stilt. (0332)
Breeding biology of Red-crowned and Yellow-crowned Parakeets on Little Barrier Island. (0334)
Population growth and behavioural ecology of Whitehead following an inter island transfer. (0335)
Dispersal of Royal Spoonbills from Vernon Lagoons, Marlborough. (0337)
Relocation of Stitchbirds to Kapiti Island. (0338)
Evaluation of the relative roles of browsers and predators in North Island Kokako decline. (3125)

Long term monitoring of New Zealand Shore Plover and Chatham Island Oystercatcher in the Chatham Islands. (7125)

Natal dispersal of Blue Duck. $(7125,9125)$
Chick production estimates of Grey-faced Petrel on Whale Island. (9125)
Productivity and predation of Yellow-crowned Parakeet, Yellowhead and South Island Robin. (9125)

Population dynamics of Little Spotted Kiwi on Kapiti Island. (9125)
Translocation of Black Petrel chicks from Great to Little Barrier as a test for establishing new petrel colonies. (9125)

Release of captive reared Takahe into the wild. (9125)

