# SAFRING STATISTICS FOR THE 1985-1986 AND 1986-1987 RINGING YEARS

T. B. Oatley

## INTRODUCTION

The last report on ringing activity in southern Africa was published in *Safring News* 15, 1986, which was distributed 18 months ago. In this report the opportunity is taken to catch up and publish the results achieved over two years. Totals are always provisional because some recoveries are only reported years after the event or, in the case of foreign-ringed birds, it may be some years before the primary data is supplied in response to a recovery report. Over the last several years some of the western European ringing schemes have taken the plunge and decided to computerise their operations. This sometimes results in such schemes not dealing with any recoveries whilst they are in the throes of the change-over and such periods may extend over years rather than months. Currently SAFRING has 30 outstanding foreign recoveries awaiting primary data and this is an average total for pending recoveries in any year.

1985 and 1986 were respectively the 15th and 16th years of operation of the South African Bird Ringing Unit (SAFRING). As all South Africans will know, they have been years of steadily increasing costs in all walks of life. It is gratifying, however, to report that for the Ringing Scheme they have also been years of increasing ringing effort (see below). Effort has also been put into the writing-up of results by some ringers, and the years under review have seen some worthwhile publications, especially that by L. G. and G. D. Underhill on Hartlaub's Gull (*Ostrich* 57: 216-223).

## RINGING EFFORT

For the two ringing years under review, the numbers of birds ringed totalled 32 191 and 35 975 respectively. This continues the general trend for increase in ringing effort, which is shown diagrammatically in Figure 1 (overleaf). The ten-year total of birds ringed is 258 406.

The regional contributions to the totals for 1985/1986 and 1986/1987 are compared in Table 1 (page 17). Regions are listed in order of their combined total for the two years, given in the final column. It is worth noting that the small band of six ringers in the Orange Free State achieved the highest regional total in the 1985/1986 ringing year.

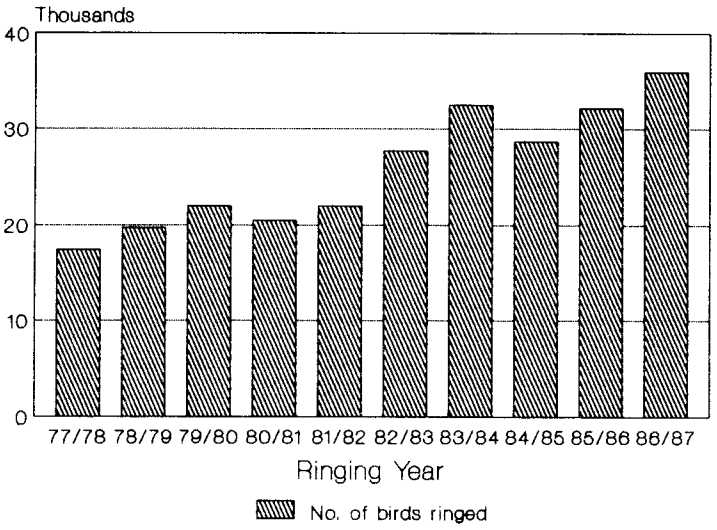


FIGURE 1

TREND IN RINGING EFFORT OVER TEN YEARS FROM 1977/78 TO 1986/87

The numbers of active ringers given for each region do not include trainees but do include pairs or groups who operate under a single ringing number, such as husband-and-wife teams. Ringers who have not submitted schedules to SAFRING (although they have ringed birds in the period under review) are not included. Based on the overall totals for the two years, the average number of birds ringed per ringer from each region is as follows:

| | |
|---|---|
| Orange Free State | 1 027 |
| Malawi | 632 |
| Natal | 488 |
| Cape | 346 |
| Zimbabwe | 300 |
| Transvaal | 296 |
| South West Africa/Namibia | 106 |

Individual ringers or groups that have reached four-figure totals of birds ringed in either year are given in Table 2 (page 18).

TABLE 1

COMPARISON OF REGIONAL RINGING EFFORT IN THE 1985-1986 AND 1986-1987 RINGING YEARS

| | JULY 1985 - JUNE 1986 | | | | JULY 1986 - JUNE 1987 | | | | GRAND TOTAL 1985-1987 |
|---|---|---|---|---|---|---|---|---|---|
| | No. of active ringers | No. of species ringed | No. of birds ringed | % of annual total | No. of active ringers | No. of species ringed | No. of birds ringed | % of annual total | |
| CAPE | 26 | 134 | 6 982 | 21,7 | 25 | 157 | 10 671 | 29,7 | 17 653 |
| TRANSVAAL | 23 | 229 | 5 610 | 17,4 | 23 | 252 | 8 008 | 22,3 | 13 618 |
| ORANGE FREE STATE | 7 | 118 | 8 420 | 26,2 | 6 | 101 | 4 931 | 13,7 | 13 351 |
| NATAL | 8 | 197 | 5 101 | 15,8 | 12 | 192 | 4 661 | 12,9 | 9 762 |
| MALAWI | 3 | 128 | 1 757 | 5,5 | 3 | 141 | 2 036 | 5,7 | 3 793 |
| ZIMBABWE | 6 | 139 | 1 350 | 4,2 | 6 | 161 | 2 246 | 6,2 | 3 596 |
| SUB-ANTARCTIC | - | 6 | 721 | 2,2 | - | 12 | 2 685 | 7,5 | 3 406 |
| SOUTH WEST AFRICA/NAMIBIA | 8 | 146 | 1 283 | 4,0 | 11 | 101 | 737 | 2,0 | 2 020 |
| BOTSWANA | 1 | 58 | 967 | 3,0 | - | - | - | - | 967 |
| TOTALS | 82 | 453 | 32 191 | 100,0 | 86 | 474 | 35 975 | 100,0 | 68 166 |

TABLE 2

RINGERS AND RINGING GROUPS THAT HAVE RINGED MORE THAN 1 000 BIRDS IN ONE YEAR

| RINGER/GROUP LEADER(S) | REGIONS | TOTAL SPECIES | | TOTAL BIRDS | |
|---|---|---|---|---|---|
| | | 1985/86 | 1986/87 | 1985/86 | 1986/87 |
| BENGUELA ECOLOGY PROJECT | CAPE | 2 | - | 1 285 | - |
| JOHN BUNNING | TRANSVAAL | 88 | 105 | 2 072 | 2 516 |
| DIGBY CYRUS | NATAL | 115 | 83 | 2 935 | 1 089 |
| ROY EARLÉ | O.F.S | 62 | 47 | 5 367 | 2 919 |
| MIKE FRASER | CAPE | - | 61 | - | 2 207 |
| DALE HANMER | MALAWI | 96 | 119 | 1 163 | 1 717 |
| DAVE JOHNSON | NATAL | 122 | 132 | 1 976 | 2 173 |
| GEOFF LOCKWOOD | TRANSVAAL | - | 108 | - | 1 028 |
| MARION ISLAND RESEARCH TEAM | SUB-ANTARCTIC | | 9 | - | 2 250 |
| LONNIE & MATHILDA ROOS | O.F.S. | 51 | 53 | 2 259 | 1 289 |
| GRAHAM ROSS & BIRD ISLAND TEAM | CAPE | - | 1 | - | 3 000 |
| SEA FISHERIES RESEARCH INSTITUTE | CAPE | - | 2 | - | 1 359 |
| TONY TREE | ZIMBABWE | - | 64 | - | 1 006 |
| LES UNDERHILL | CAPE | - | 75 | - | 1 346 |

The top 20 species ringed for the combined years provides an interesting mix of passerine and non-passerine species (Table 3 opposite). It is a good reflection of the work done by different special-interest groups or individuals. Some species are not the subject of special projects, however, but are ringed in large numbers because they are widespread and get caught in most people's nets. The Masked Weaver, Cape Weaver, Cape White-eye and Blackeyed Bulbul are examples of such species.

TABLE 3

TWENTY MOST-RINGED BIRDS FOR THE PERIOD
JULY 1985 TO JUNE 1987

| SPECIES | NESTLINGS | ADULTS | TOTAL |
|---|---|---|---|
| South African Cliff Swallow | 435 | 6 338 | 6 773 |
| Cape Gannet | 4 209 | 388 | 4 597 |
| Jackass Penguin | 1 854 | 1 715 | 3 569 |
| Masked Weaver | 57 | 3 102 | 3 159 |
| Red Bishop | 10 | 2 187 | 2 197 |
| Cape White-eye | 7 | 1 970 | 1 977 |
| Cape Sparrow | 29 | 1 888 | 1 917 |
| Laughing Dove | 13 | 1 902 | 1 915 |
| Redbilled Quelea | 0 | 1 871 | 1 871 |
| Curlew Sandpiper | 0 | 1 678 | 1 678 |
| European Swallow | 0 | 1 256 | 1 256 |
| African Sand Martin | 0 | 1 090 | 1 090 |
| Wandering Albatross | 688 | 293 | 981 |
| Blackeyed Bulbul | 2 | 903 | 905 |
| Cape Reed Warbler | 0 | 897 | 897 |
| Cape Sugarbird | 0 | 808 | 808 |
| Subantarctic Skua | 591 | 129 | 720 |
| Common Waxbill | 0 | 715 | 715 |
| Cape Weaver | 0 | 701 | 701 |
| African Marsh Warbler | 0 | 676 | 676 |

## RECOVERIES AND RECAPTURES

Table 4 (opposite) provides the figures for recoveries and recaptures for the three-year period July 1984 to June 1987 to show the trend in recovery rates. It is evident that in spite of the increase in ringing effort we are currently experiencing an overall downward trend in the number of recoveries. There is no obvious explanation for this. One may expect some lag between increase in ringing effort and increase in recoveries but, as shown in Figure 1, ringing effort has been increasing overall for several years now. Several factors may infuence this lag, including the recovery rates of the species ringed, the age of birds when ringed and the factors causing mortality.

In the 1985 ringing year 13,4 % of the birds ringed were nestlings; in the 1986 year this percentage rose to 19,5 %, largely because of increased colonial seabird ringing. Seabirds, especially inshore species such as gannets, cormorants, gulls and terns, have a higher recovery rate than most terrestrial species because many of them are found washed up on beaches. Of the total of 879 birds recovered in the two years from July 1985 to June 1987, 353 (40,1 %) had been ringed as chicks; 289 of these were seabirds and the other 64 were large birds such as herons, storks and vultures. The remaining 526 recoveries had all been ringed as free-flying birds, most of them in adult plumage.

Another way of looking at this is to divide ringing effort and recoveries into separate totals for non-passerines and passerines as in Table 5 (opposite). What this shows, in a nutshell, is that one third of the ringing effort is generating two thirds of the recoveries. Of course it must be borne in mind that many of the recoveries are of birds ringed in earlier years; in fact, the mean elapsed time from ringing to recovery of all rings reported in the 1986-1987 ringing year was 28 months with a median of 12 months, and a range of 0 to 246 months (the latter a Gannet ringed at Lambert's Bay in 1966).

Causes of mortality over the two year period are as follows:

| | |
|---|---|
| Found dead; cause of death unknown | 51,5 % |
| Accidental (including netting fatalities) | 13,2 % |
| Found sick or injured | 11,3 % |
| Predators (including domestic cats 2,8 %) | 7,5 % |
| Hunted and killed by man | 7,2 % |
| Collisions (including road deaths 3,5 %) | 5,9 % |
| Miscellaneous causes (drowned, electrocuted etc.) | 3,4 % |

Given that recovery rates are in the region of about 1% for many of our birds, one can say that, on average, one needs to ring at least 100 birds of any species in order to obtain one recovery.

TABLE 4

RECOVERY AND RECAPTURE STATISTCS FOR THREE-YEAR PERIOD JULY 1984 TO JUNE 1987

| | 1986-87 | 1985-86 | 1984-85 |
|---|---|---|---|
| Number of recoveries | 404 | 475 | 428 |
| Number of recaptures | 2 445 | 2 655 | 2 337 |
| Total records reported | 2 849 | 3 130 | 2 765 |
| Total species | 181 | 187 | 178 |
| Foreign-ringed birds | 32 | 42 | 49 |
| Meaningful recoveries | 295 | 305 | 353 |

TABLE 5

ALLOCATION OF RINGING EFFORT AND RECOVERIES TO NON-PASSERINES AND PASSERINES

| | NON-PASSERINES | PASSERINES |
|---|---|---|
| RINGED 1985/1986 | 10 955 | 21 236 |
| RINGED 1986/1987 | 13 341 | 22 634 |
| RECOVERED 1985/1986 | 313 | 163 |
| RECOVERED 1986/1987 | 286 | 117 |

For the two ringing years under review only 57 and 66 species respectively reached three-figure totals. More telling though, is that 204 species in 1985/86 and 217 species in 1986/87 (45 % and 46 % of the respective year's species totals) had less than 10 individuals ringed. It is unlikely that any of these species will yield recoveries because, given their individual life expectations, the number of ringed birds at risk in any year will seldom reach a three-figure total. However, if netting is repeated regularly at ringing sites, one can expect recaptures which, if properly recorded, will yield useful data on rarely-caught species.

T. B. Oatley, South African Bird Ringing Unit, University of Cape Town, RONDEBOSCH, 7700.