THE FOURTH ANNUAL REPORT OF THE

SEVERN
WILDFOWL
TRUST

1950–1951

EDITED BY PETER SCOTT

Published for the Severn Wildfowl Trust by
COUNTRY LIFE LIMITED
2–10 Tavistock Street, Covent Garden, London, W.C.2
THE SEVERN WILDFOWL TRUST

SLIMBRIDGE . GLOUCESTERSHIRE

Tel. : CAMBRIDGE (GLOS) 268
Station : COALEY JUNCTION

President  Field-Marshal the Rt. Hon. the Viscount Alanbrooke, K.G., G.C.B., O.M., D.S.O.

Vice-Presidents  The Rt. Hon. the Lord Dulverton of Batsford, O.B.E., M.A., J.P.
Sir Percy Lister
E. M. Nicholson, Esq., C.B.

Trustees  The Rt. Hon. the Lord Kennet of the Dene, G.B.E., D.S.O., D.S.C.
His Grace the Duke of Beaufort, K.G., P.C., G.C.V.O.

Hon. Treasurers  Sir Archibald Jamieson, K.B.E.
John Bevan, Esq., C.B., M.C.

Hon. Director  Peter Scott, Esq., M.B.E., D.S.C.

Council  Guy Benson, Esq.
Capt. R. G. W. Berkeley
C. T. Dalgety, Esq.
H. H. Davis, Esq.
James Fisher, Esq.
James Robertson Justice, Esq.
K. Miller Jones, Esq.
Sir Norman Kinnear, K.C.B.
H. F. B. Fox, Esq., O.B.E.
(Ministry of Education Assessor)

Hon. Secretary  Michael Bratby, Esq.

Secretaries  Miss P. Talbot-Ponsonby
E. A. Scholes, Esq.

Assistant Secretary  Miss M. E. Lea

Organising Secretary  Miss E. R. Gregorson

Curator  S. T. Johnstone, Esq.

Agent  Col. M. Berkeley
CONTENTS

WILD GEESE
Total Numbers (Graph I) 6
Pink-footed Goose 7
Bean Goose 7
Counts (Table I) 8
European White-fronted Goose 10
Greenland White-fronted Goose 10
Lesser White-fronted Goose 10
Barnacle Goose 11
Aggressive Behaviour in the White-fronted Goose 11
Disturbance by Aircraft 11
Marking of Wild Geese 12
Pink-footed Geese—Recovery (Table II) 13
Notes on Colour Marking of Geese 14
Rejected Methods—Use of Dyes—Preparation of Solutions—Application—Visibility of Colours—Effects of Dyeing on Birds

WILD DUCKS
The Decoy 17
The Lead—The Catch—Progress of Total Catch (Graph II)—Catch and Ringing Figures (Table III)—Methods of Capture in Decoy (Table IV)
Status of Ducks 21
Common Shelduck—Pintail—Teal—Mallard—Gadwall—Wigeon—Garganey—Shoveler—Pochard—Tufted Duck

RINGING AND RECOVERIES 22
Bird Ringing (Tables V and VI) 23
Recoveries (Table VII) 23
Details of Recoveries (Table VIII) 24

BIRDS (OTHER THAN ANATIDAE) RECORDED AT THE NEW GROUNDS 27

WATERFOWL COLLECTION 31
New Species 31
Important Additions 32
List of Birds in the Collection 33
The Breeding Season 37
WATERFOWL COLLECTION—contd.

Hatching and Rearing (Table IX) 38
Pathology 44
Treatment 44
Causes of Death (Table X) 45
The Scientific Value of a Group Collection of Live Animals 47
Preening Studies 50
Sweden 1950 51

GENERAL ACTIVITIES AND ADMINISTRATION 53

Visitors 53
Beatrice 53
Finance 54
Bulletins 54
Director's Lecture 54
Wants 54

FOURTH ANNUAL GENERAL MEETING 55

Minutes 55
Income and Expenditure Account 56
Balance Sheet 57
Annual Dinner 58
Obituary 59
Membership 60

LIST OF MEMBERS 61

PHOTOGRAPHS 84

THE SWANS, GEESE AND DUCKS OF THE BRITISH ISLES 111
Plate V Shelducks 111
Plate VI Dabbling Ducks 113
Plate VII Dabbling Ducks 115
Plate VIII Dabbling Ducks 117
REPORT

The Fourth Annual Report of the Trust’s work covers the period from 1st May, 1950, to 30th April, 1951 (the Trust’s ornithological year). In the scientific field there have been two important developments. First, wild geese have been caught in the rocket-propelled nets in sufficient numbers for statistical work on goose populations to be undertaken. A total of 691 geese were marked and released, and the experiments yielded interesting data on the technique of colour marking with dyes.

The second important development was the impetus given to the Trust’s scientific effort by the visit of Dr. Konrad Lorenz to observe and film the birds in the collection in pursuance of his comparative study of innate behaviour patterns.

Further research has also been carried out on preening, bathing, shaking, stretching and other everyday activities of the Anatidae, and on aggressive behaviour in geese.

A greatly increased catch in the duck decoy was a feature of the autumn season. On 13th September, 1950, a record catch of 145 ducks was run into the West Pipe.

Many new species and races have been added to the Trust’s enclosures, and apart from the scientific uses of this unique collection of live waterfowl, it has given pleasure to some 20,000 visitors, many of them from schools and other educational establishments.

The Trust was represented at the 10th International Ornithological Congress at Uppsala, Sweden. Here and elsewhere in international scientific circles was evidence that the Trust is becoming generally recognized as one of the leading organizations occupied with the world’s swans, geese and ducks.

The Key to the Wildfowl of the World, first published in the Second Annual Report, and subsequently reprinted in separate form, has been unexpectedly successful, and Members will be glad to know that a new edition is now available, with extensive corrections which bring it into line with the most recent work on the systematics of the Anatidae.

The total membership at the time of the Annual General Meeting on 28th March, 1951 (reported on p. 55), was 3,830. At the previous Annual General Meeting the total was 3,118 and, in the Council’s view, an increase of more than 700 members in the year is extremely satisfactory.

Details of membership are given at the end of this report, on p. 60.
WILD GEENSE

The first geese arrived on the estuary punctually on 23rd September—a pair, followed by 20 more on the 26th—and the last 15 left the marsh rather later than usual, on 21st March.

Between these dates there were always Whitefronts (A. a. albifrons) to be seen on the New Grounds, and from the last week in December until the last week in February, the numbers were between 2,500 and the peak of 3,700. Only six species and subspecies of geese were recorded this season. Grey Lag (A. a. anser) and Brents (B. bernicla) did not put in an appearance. On the other hand no fewer than six Lesser Whitefronts (A. erythropus) were observed, bringing the British records of this species to 17, of which all but three have been recorded on the New Grounds since 1945. The sixth of this year’s birds, which had a wounded leg, spent some weeks in the enclosures and became perfectly tame.

The maximum number of Pinkfeet (A. brachyrhynchus) was 63, compared with 62 in 1949 and 58 in 1948.

PINK-FOOTED GOOSE (Anser brachyrhynchus)

Main flock similar in size to that of autumn, 1949, but a number remained until nearly the end of December, an unusually late date (see Table I for details of numbers). After the departure of the flock single birds and small groups appeared, or reappeared, at intervals throughout the winter.

BEAN GOOSE (Anser fabelis subsp.)

One adult with orange on bill limited to a narrow transverse strip seen 17th December (P. S.), 28th December (H. B., P. S.), and 30th December (H. B., P. S.). One with predominantly yellow bill seen 20th December (H. B.).
### TABLE I

#### NUMBERS OF GEESE

<table>
<thead>
<tr>
<th>Date</th>
<th>Pink-footed</th>
<th>Bean</th>
<th>White-fronted</th>
<th>Lesser White-fronted</th>
<th>Barnacle</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sept. 23rd</td>
<td>2</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>2</td>
</tr>
<tr>
<td>&quot; 24th</td>
<td>2</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>2</td>
</tr>
<tr>
<td>&quot; 26th</td>
<td>22</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>22</td>
</tr>
<tr>
<td>&quot; 27th</td>
<td>26</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>26</td>
</tr>
<tr>
<td>Oct. 5th</td>
<td>14</td>
<td>—</td>
<td>2</td>
<td>—</td>
<td>—</td>
<td>16</td>
</tr>
<tr>
<td>&quot; 17th</td>
<td>14</td>
<td>—</td>
<td>3</td>
<td>—</td>
<td>—</td>
<td>17</td>
</tr>
<tr>
<td>&quot; 18th</td>
<td>14</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>14</td>
</tr>
<tr>
<td>21st</td>
<td>37</td>
<td>—</td>
<td>3</td>
<td>—</td>
<td>—</td>
<td>40</td>
</tr>
<tr>
<td>22nd</td>
<td>37</td>
<td>—</td>
<td>22</td>
<td>—</td>
<td>—</td>
<td>59</td>
</tr>
<tr>
<td>23rd</td>
<td>38</td>
<td>—</td>
<td>65</td>
<td>—</td>
<td>—</td>
<td>103</td>
</tr>
<tr>
<td>24th</td>
<td>49</td>
<td>—</td>
<td>140</td>
<td>—</td>
<td>—</td>
<td>189</td>
</tr>
<tr>
<td>25th</td>
<td>53</td>
<td>—</td>
<td>224</td>
<td>—</td>
<td>—</td>
<td>277</td>
</tr>
<tr>
<td>26th</td>
<td>54</td>
<td>—</td>
<td>291</td>
<td>—</td>
<td>—</td>
<td>345</td>
</tr>
<tr>
<td>30th</td>
<td>45</td>
<td>—</td>
<td>c490</td>
<td>—</td>
<td>—</td>
<td>c535</td>
</tr>
<tr>
<td>31st</td>
<td>44</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>No count</td>
</tr>
<tr>
<td>Nov. 1st</td>
<td>54</td>
<td>—</td>
<td>493</td>
<td>—</td>
<td>—</td>
<td>547</td>
</tr>
<tr>
<td>&quot; 2nd</td>
<td>54</td>
<td>—</td>
<td>467</td>
<td>—</td>
<td>—</td>
<td>521</td>
</tr>
<tr>
<td>&quot; 3rd</td>
<td>56</td>
<td>—</td>
<td>480</td>
<td>—</td>
<td>—</td>
<td>536</td>
</tr>
<tr>
<td>&quot; 4th</td>
<td>51</td>
<td>—</td>
<td>537</td>
<td>—</td>
<td>—</td>
<td>588</td>
</tr>
<tr>
<td>&quot; 5th</td>
<td>56</td>
<td>—</td>
<td>429</td>
<td>—</td>
<td>—</td>
<td>485</td>
</tr>
<tr>
<td>&quot; 6th</td>
<td>56</td>
<td>—</td>
<td>422</td>
<td>—</td>
<td>—</td>
<td>478</td>
</tr>
<tr>
<td>&quot; 7th</td>
<td>52</td>
<td>—</td>
<td>463</td>
<td>—</td>
<td>—</td>
<td>515</td>
</tr>
<tr>
<td>&quot; 8th</td>
<td>52</td>
<td>—</td>
<td>487</td>
<td>—</td>
<td>—</td>
<td>539</td>
</tr>
<tr>
<td>&quot; 9th</td>
<td>56</td>
<td>—</td>
<td>475</td>
<td>—</td>
<td>—</td>
<td>531</td>
</tr>
<tr>
<td>&quot; 10th</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>c510</td>
</tr>
<tr>
<td>&quot; 11th</td>
<td>52</td>
<td>—</td>
<td>470</td>
<td>—</td>
<td>—</td>
<td>522</td>
</tr>
<tr>
<td>&quot; 12th</td>
<td>56</td>
<td>—</td>
<td>468</td>
<td>—</td>
<td>—</td>
<td>524</td>
</tr>
<tr>
<td>&quot; 13th</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>523</td>
</tr>
<tr>
<td>&quot; 14th</td>
<td>56</td>
<td>—</td>
<td>475</td>
<td>—</td>
<td>—</td>
<td>531</td>
</tr>
<tr>
<td>&quot; 15th</td>
<td>57</td>
<td>—</td>
<td>480</td>
<td>—</td>
<td>—</td>
<td>537</td>
</tr>
<tr>
<td>&quot; 16th</td>
<td>57</td>
<td>—</td>
<td>487</td>
<td>—</td>
<td>—</td>
<td>544</td>
</tr>
<tr>
<td>&quot; 17th</td>
<td>56</td>
<td>—</td>
<td>478</td>
<td>—</td>
<td>—</td>
<td>534</td>
</tr>
<tr>
<td>&quot; 18th</td>
<td>50</td>
<td>—</td>
<td>464</td>
<td>—</td>
<td>—</td>
<td>514</td>
</tr>
<tr>
<td>&quot; 19th</td>
<td>56</td>
<td>—</td>
<td>453</td>
<td>—</td>
<td>—</td>
<td>509</td>
</tr>
<tr>
<td>&quot; 20th</td>
<td>58</td>
<td>—</td>
<td>473</td>
<td>—</td>
<td>—</td>
<td>531</td>
</tr>
<tr>
<td>&quot; 21st</td>
<td>42</td>
<td>—</td>
<td>471</td>
<td>—</td>
<td>—</td>
<td>513</td>
</tr>
<tr>
<td>&quot; 22nd</td>
<td>58</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>No count</td>
</tr>
<tr>
<td>&quot; 23rd</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>510</td>
</tr>
<tr>
<td>&quot; 26th</td>
<td>54</td>
<td>—</td>
<td>486</td>
<td>—</td>
<td>—</td>
<td>540</td>
</tr>
<tr>
<td>&quot; 27th</td>
<td>51</td>
<td>—</td>
<td>481</td>
<td>—</td>
<td>—</td>
<td>532</td>
</tr>
<tr>
<td>&quot; 28th</td>
<td>58</td>
<td>—</td>
<td>c755</td>
<td>—</td>
<td>—</td>
<td>c815</td>
</tr>
<tr>
<td>&quot; 29th</td>
<td>57</td>
<td>—</td>
<td>1025</td>
<td>—</td>
<td>—</td>
<td>1080</td>
</tr>
<tr>
<td>&quot; 30th</td>
<td>61</td>
<td>—</td>
<td>1100</td>
<td>—</td>
<td>—</td>
<td>1160</td>
</tr>
<tr>
<td>Dec. 1st</td>
<td>63</td>
<td>—</td>
<td>e1040</td>
<td>—</td>
<td>—</td>
<td>e1100</td>
</tr>
<tr>
<td>&quot; 2nd</td>
<td>58</td>
<td>—</td>
<td>1057</td>
<td>—</td>
<td>—</td>
<td>1115</td>
</tr>
<tr>
<td>&quot; 3rd</td>
<td>57</td>
<td>—</td>
<td>c1020</td>
<td>—</td>
<td>—</td>
<td>c1050</td>
</tr>
<tr>
<td>&quot; 4th</td>
<td>57</td>
<td>—</td>
<td>1065</td>
<td>—</td>
<td>—</td>
<td>1120</td>
</tr>
<tr>
<td>&quot; 5th</td>
<td>57</td>
<td>—</td>
<td>1100</td>
<td>—</td>
<td>—</td>
<td>1160</td>
</tr>
<tr>
<td>&quot; 6th</td>
<td>57</td>
<td>—</td>
<td>1053</td>
<td>—</td>
<td>—</td>
<td>1110</td>
</tr>
<tr>
<td>&quot; 7th</td>
<td>53</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>1120</td>
</tr>
<tr>
<td>&quot; 8th</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>1010</td>
</tr>
<tr>
<td>&quot; 9th</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>1240</td>
</tr>
<tr>
<td>&quot; 11th</td>
<td>57</td>
<td>—</td>
<td>1180</td>
<td>—</td>
<td>—</td>
<td>1240</td>
</tr>
<tr>
<td>Date</td>
<td>Pink-footed</td>
<td>Bean</td>
<td>White-fronted</td>
<td>Lesser White-fronted</td>
<td>Barnacle</td>
<td>Total</td>
</tr>
<tr>
<td>----------</td>
<td>-------------</td>
<td>------</td>
<td>---------------</td>
<td>----------------------</td>
<td>----------</td>
<td>-------</td>
</tr>
<tr>
<td>1950</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dec. 12th</td>
<td>61</td>
<td>—</td>
<td>1260</td>
<td></td>
<td>—</td>
<td>1320</td>
</tr>
<tr>
<td>&quot; 13th</td>
<td>53</td>
<td>—</td>
<td>1370</td>
<td></td>
<td>—</td>
<td>1420</td>
</tr>
<tr>
<td>&quot; 14th</td>
<td>52</td>
<td>—</td>
<td>c1450</td>
<td></td>
<td>—</td>
<td>c1500</td>
</tr>
<tr>
<td>&quot; 16th</td>
<td>15</td>
<td>—</td>
<td>—</td>
<td></td>
<td>—</td>
<td>No count</td>
</tr>
<tr>
<td>&quot; 17th</td>
<td>20</td>
<td>1</td>
<td>1400</td>
<td></td>
<td>—</td>
<td>1420</td>
</tr>
<tr>
<td>&quot; 18th</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td></td>
<td>—</td>
<td>c1500</td>
</tr>
<tr>
<td>&quot; 19th</td>
<td>c26</td>
<td>—</td>
<td>1660</td>
<td></td>
<td>—</td>
<td>1690</td>
</tr>
<tr>
<td>&quot; 20th</td>
<td>28</td>
<td>1</td>
<td>2800</td>
<td>1</td>
<td>—</td>
<td>2830</td>
</tr>
<tr>
<td>&quot; 21st</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td></td>
<td>—</td>
<td>2990</td>
</tr>
<tr>
<td>&quot; 23rd</td>
<td>34</td>
<td>—</td>
<td>c2365</td>
<td>1</td>
<td>—</td>
<td>c2400</td>
</tr>
<tr>
<td>&quot; 26th</td>
<td>24</td>
<td>—</td>
<td>c2180</td>
<td></td>
<td>—</td>
<td>c2200</td>
</tr>
<tr>
<td>&quot; 27th</td>
<td>25</td>
<td>—</td>
<td>—</td>
<td></td>
<td>—</td>
<td>No count</td>
</tr>
<tr>
<td>&quot; 28th</td>
<td>1</td>
<td>1</td>
<td>c2800</td>
<td>1</td>
<td>—</td>
<td>c2800</td>
</tr>
<tr>
<td>&quot; 29th</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td></td>
<td>—</td>
<td>c3100</td>
</tr>
<tr>
<td>&quot; 30th</td>
<td>1</td>
<td>1</td>
<td>c3000</td>
<td>—</td>
<td>1</td>
<td>c3000</td>
</tr>
<tr>
<td>&quot; 31st</td>
<td>—</td>
<td>—</td>
<td>c3000</td>
<td>—</td>
<td>1</td>
<td>c3000</td>
</tr>
<tr>
<td>1951</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jan. 4th</td>
<td>—</td>
<td>—</td>
<td>c2800</td>
<td></td>
<td>1</td>
<td>c2800</td>
</tr>
<tr>
<td>&quot; 7th</td>
<td>—</td>
<td>—</td>
<td>c2430</td>
<td></td>
<td>—</td>
<td>c2430</td>
</tr>
<tr>
<td>&quot; 8th</td>
<td>—</td>
<td>—</td>
<td>c2800</td>
<td></td>
<td>1</td>
<td>c2800</td>
</tr>
<tr>
<td>&quot; 9th</td>
<td>—</td>
<td>—</td>
<td>2620</td>
<td></td>
<td>1</td>
<td>2620</td>
</tr>
<tr>
<td>&quot; 12th</td>
<td>—</td>
<td>—</td>
<td>2560</td>
<td>2</td>
<td>—</td>
<td>2570</td>
</tr>
<tr>
<td>&quot; 26th</td>
<td>6</td>
<td>—</td>
<td>c3700</td>
<td></td>
<td>—</td>
<td>c3700</td>
</tr>
<tr>
<td>&quot; 27th</td>
<td>4</td>
<td>—</td>
<td>c2500</td>
<td>1</td>
<td>—</td>
<td>c2500</td>
</tr>
<tr>
<td>Feb. 1st</td>
<td>—</td>
<td>—</td>
<td>2260</td>
<td></td>
<td>—</td>
<td>2260</td>
</tr>
<tr>
<td>&quot; 2nd</td>
<td>—</td>
<td>—</td>
<td>c2350</td>
<td></td>
<td>—</td>
<td>c2350</td>
</tr>
<tr>
<td>&quot; 6th</td>
<td>—</td>
<td>—</td>
<td>c2600</td>
<td></td>
<td>—</td>
<td>c2600</td>
</tr>
<tr>
<td>&quot; 12th</td>
<td>—</td>
<td>—</td>
<td>c2600</td>
<td></td>
<td>—</td>
<td>c2600</td>
</tr>
<tr>
<td>&quot; 14th</td>
<td>—</td>
<td>—</td>
<td>c3300</td>
<td></td>
<td>—</td>
<td>c3300</td>
</tr>
<tr>
<td>&quot; 17th</td>
<td>—</td>
<td>—</td>
<td>c2000</td>
<td>2</td>
<td>—</td>
<td>c2000</td>
</tr>
<tr>
<td>&quot; 18th</td>
<td>—</td>
<td>—</td>
<td>1950</td>
<td></td>
<td>—</td>
<td>1950</td>
</tr>
<tr>
<td>&quot; 19th</td>
<td>1</td>
<td>—</td>
<td>3140</td>
<td>1</td>
<td>—</td>
<td>3140</td>
</tr>
<tr>
<td>&quot; 20th</td>
<td>6</td>
<td>—</td>
<td>c3000</td>
<td>1</td>
<td>—</td>
<td>c3000</td>
</tr>
<tr>
<td>&quot; 22nd</td>
<td>—</td>
<td>—</td>
<td>3360</td>
<td>1</td>
<td>—</td>
<td>3360</td>
</tr>
<tr>
<td>&quot; 23rd</td>
<td>6</td>
<td>—</td>
<td>2630</td>
<td>1</td>
<td>—</td>
<td>2640</td>
</tr>
<tr>
<td>&quot; 24th</td>
<td>1</td>
<td>—</td>
<td>2290</td>
<td>1</td>
<td>—</td>
<td>2290</td>
</tr>
<tr>
<td>&quot; 27th</td>
<td>—</td>
<td>—</td>
<td>1100</td>
<td></td>
<td>—</td>
<td>1100</td>
</tr>
<tr>
<td>&quot; 28th</td>
<td>—</td>
<td>—</td>
<td>c1200</td>
<td></td>
<td>—</td>
<td>c1200</td>
</tr>
<tr>
<td>Mar. 1st</td>
<td>—</td>
<td>—</td>
<td>712</td>
<td></td>
<td>—</td>
<td>712</td>
</tr>
<tr>
<td>&quot; 8th</td>
<td>—</td>
<td>—</td>
<td>490</td>
<td></td>
<td>—</td>
<td>490</td>
</tr>
<tr>
<td>&quot; 9th</td>
<td>—</td>
<td>—</td>
<td>552</td>
<td></td>
<td>—</td>
<td>552</td>
</tr>
<tr>
<td>&quot; 10th</td>
<td>—</td>
<td>—</td>
<td>c450</td>
<td></td>
<td>—</td>
<td>c450</td>
</tr>
<tr>
<td>&quot; 11th</td>
<td>—</td>
<td>—</td>
<td>833</td>
<td></td>
<td>—</td>
<td>833</td>
</tr>
<tr>
<td>&quot; 12th</td>
<td>6</td>
<td>—</td>
<td>924</td>
<td></td>
<td>—</td>
<td>930</td>
</tr>
<tr>
<td>&quot; 13th</td>
<td>—</td>
<td>—</td>
<td>733</td>
<td></td>
<td>—</td>
<td>733</td>
</tr>
<tr>
<td>&quot; 14th</td>
<td>—</td>
<td>—</td>
<td>550</td>
<td></td>
<td>—</td>
<td>550</td>
</tr>
<tr>
<td>&quot; 15th</td>
<td>—</td>
<td>—</td>
<td>241</td>
<td></td>
<td>—</td>
<td>241</td>
</tr>
<tr>
<td>&quot; 16th</td>
<td>—</td>
<td>—</td>
<td>32</td>
<td></td>
<td>—</td>
<td>32</td>
</tr>
<tr>
<td>&quot; 18th</td>
<td>—</td>
<td>—</td>
<td>17</td>
<td>1</td>
<td>—</td>
<td>18</td>
</tr>
<tr>
<td>&quot; 19th</td>
<td>—</td>
<td>—</td>
<td>14</td>
<td>1</td>
<td>—</td>
<td>15</td>
</tr>
<tr>
<td>&quot; 21st</td>
<td>—</td>
<td>—</td>
<td>14</td>
<td>1</td>
<td>—</td>
<td>15</td>
</tr>
</tbody>
</table>

No counts were made on days omitted from the table. The symbol 'c' indicates that the figure given was obtained by estimation, or that some doubt was felt of the accuracy of the count. The numbers are in most cases the mean values of several counts.
EUROPEAN WHITE-FRONTED GOOSE (*Anser a. albifrons*)

See Table I for details of numbers. As will be seen from the graph on p. 6, these changes in numbers conformed more closely to the pattern of earlier seasons than in the ‘abnormal’ season of 1949-50. Sight records of geese ringed in previous seasons were obtained as follows:

3rd December: one ringed on right leg with red ring (i.e., caught 27th February, 1950). No details of family status or individual markings.

8th December: one red-ringed. No details.

16th December: a pair, both red-ringed, without young.

20th December: one red-ringed, paired, but without young.

29th December: one red-ringed, with a family (size not noted).

26th January: one red-ringed. Paired, no young.

5th February: two red-ringed. One paired, no young; the second accompanied by two juveniles, but apparently without a mate.

6th February: three red-ringed. An adult in a family of four; and a pair without young.

18th February: two red-ringed, one with white metal ring, right leg. Red-ringed pair as before. White-ringed bird presumably one of fifteen ringed at New Grounds, 18th February, 1948.

20th February: red-ringed pair again.

At least eight different red-ringed individuals were seen. Had it been possible to make satisfactory notes on the appearance of ringed birds on every occasion, this total would probably have been increased. The red-ringed birds were all caught together on 27th February, 1950, when 69 Whitefronts were ringed and released.

The gander known as ‘White-eyebrows’, seen in the previous seasons, was not found this year.

GREENLAND WHITE-FRONTED GOOSE (*Anser a. flavirostris*)

A family of two adults and four young first seen 27th November remained until 11th January at least. On 1st February a party of five, comprising one adult and four young, and thought to be this same family, was ‘rediscovered’. They were then seen frequently until 23rd February.

A family of three, seen on 20th December only, included a ringed adult. This bird must almost certainly have been caught in Greenland, as the ring was not of the British pattern and no geese of this form are known to have been ringed elsewhere.

Odd records of birds of this race include two adults on 1st December (in addition to the family of six), one adult, 12th January, and three, apparently all adults, 13th March.

LESSER WHITE-FRONTED GOOSE (*Anser erythropus*)

Six individuals, four adults and two first-winter birds, were observed during the season:


A second adult, B, 28th December (P. S.), 17th February (P. S.).

Single adults, identity not established, 16th January (B. Ashworth), 4th February (P. T. P.), 22nd February (H. B.).

A juvenile, very lame in right leg, 26th January (H. B.), 17th February (P. S.).
A second juvenile 26th January (A. Richardson), 1st February (H. B.), 19th February (H. B.).


Fourth adult (♀), D, with badly damaged right leg, first seen in Thirty-Acre, 18th March, subsequently attached itself to the grey geese in the Big Pen, where it remained until late May, becoming very tame. No improvement in the condition of its leg occurred during its stay, so that its departure was unexpected.

**BARNACLE GOOSE** (*Branta leucopsis*)

A single adult present from 30th December to 11th January.

**AGGRESSIVE BEHAVIOUR IN THE WHITE-FRONTED GOOSE**

Observation on aggressive behaviour in the wintering flocks of wild geese, begun in the previous winter, was continued by the Resident Biologist, Mr. Hugh Boyd, from November, 1950, to March, 1951. In the preliminary account of this work given in the Third Annual Report it was described as a study of dominance relationship; but this form of description has been discarded in favour of the more comprehensive ‘aggressive behaviour’ to indicate that the data being collected are not restricted to those relevant to the hypothesis of dominance.

During the later part of the season attention was concentrated on the incidence of aggressive behaviour in groups rather than on the performance of family units, and it is proposed to develop this line of attack during the coming winter. It will, however, be necessary to continue the collection of information on family behaviour as the data so far obtained are insufficient to establish many results, though the picture to which they give rise is unexpectedly free from anomalies.

Studies of geese in the collection with the object of supplementing the observations on the wild birds have provided quite a lot of information on the ethological aspects of aggressive behaviour, but from the sociological viewpoint, which is being emphasized, it is only too apparent that conditions of captivity affect these activities and give a misleading idea of the natural social organization.

It is likely that at least two more seasons’ study will be necessary before the pattern of these complex relations, which is now emerging, can be substantiated.

**DISTURBANCE BY AIRCRAFT**

Although pilots were officially asked by their respective Ministries not to fly over the New Grounds, little enough attention was paid to the request, and on days of good flying weather serious observation of the geese was virtually impossible. Once more the geese became for a while largely nocturnal. During the full moon periods of October and November many visitors who had come great distances to see the geese were disappointed, because of the lack of cooperation of both civil and R.A.F. pilots. If it were generally recognized that a minor alteration of course on the part of an aircraft can make, for 50 or more people, the whole difference between the success or failure of an ornithological expedition, perhaps of hundreds of miles at considerable expense, surely more pilots would take the trouble to avoid the area.
On at least three occasions during the season parties who had made the journey by coach from the other side of England saw nothing of the wild geese because of disturbance by a single aircraft.

It seems possible that nothing short of a prohibited area will ever really reduce the low altitude air traffic which causes such serious disturbance to the White-fronted Geese.

MARKING OF WILD GEESE

It will be recalled that the first catch of wild geese with special nets propelled by rockets was made on the New Grounds on 18th February, 1948, when 30 Whitefronts and 1 Pinkfoot were caught. For various reasons the development of the technique was very slow and subject to many delays. It was not until 27th February, 1950, that the next catch was made. On that day 71 Whitefronts were caught on the Dumbles, and during March 29 Greylags and 7 Pinkfeet were caught, ringed and released in S.W. Scotland. The first experiments were made in colour marking with dyes, and met with only very limited success.

During the summer the netting and marking techniques were greatly improved, although the methods available for the winter of 1950–51 were still far from perfect. Between 8th and 28th October, 1950, 400 Pinkfeet were caught in Southern Scotland in 14 catches (highest 75, lowest 6, average 28). An expedition to the Wash in December yielded only two catches, but one produced the record figure of 159. In January, in Scotland, three small catches were made (14 Greylags, 13 Pinkfeet, and 14 Pinkfeet). At the New Grounds only two catches were made—4 and 25 Whitefronts, in February; and in March a last expedition to Scotland resulted in three catches—the first of 4 Greylags and 1 Pinkfoot, the next of 79 Pinkfeet and 1 Greenland Whitefront, and the last of 2 Pinkfeet. Thus, throughout the season 691 geese were marked in 24 catches. All these birds were marked with British Trust for Ornithology rings (dyed blue, on the left leg), and most of them were also dyed on the tail and tail-coverts with bright colours, visible in favourable conditions at distances as great as a mile. 643 of the geese ringed were Pinkfeet; the remainder comprised 29 European Whitefronts, 1 Greenland Whitefront, and 18 Greylags. No recoveries of any of these Whitefronts or Greylags have yet been reported.

Pink-footed Geese

Fifty-eight of the 643 Pinkfeet have so far been recovered, i.e., 9 per cent. of those ringed were killed in the same season as they were caught. The following table of records gives some indication of the local movements of the geese during the winter. Recoveries are mainly birds which have been shot. Numbers in parentheses are sight records of dyed birds; but those noted in the immediate neighbourhood of the ringing area are not included unless the observation was at least a month after the original capture.
TABLE II—RECOVERY OF PINK-FOOTED GEESE

(a) Of 378 ringed in south Scotland in October, 1950, 72 have been reported.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>S.E. Scotland</td>
<td>2</td>
<td>1</td>
<td>1(4)</td>
<td>3</td>
<td>2(1)</td>
<td>3</td>
<td>11(9)</td>
<td></td>
</tr>
<tr>
<td>Solway</td>
<td>(8)</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td>12(5)</td>
<td></td>
</tr>
<tr>
<td>N. Scotland</td>
<td>1</td>
<td>2(5)</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>5(1)</td>
<td></td>
</tr>
<tr>
<td>E. Central Scotland</td>
<td>1</td>
<td>2(5)</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>5(1)</td>
<td></td>
</tr>
<tr>
<td>N.W. Midlands</td>
<td>1</td>
<td>1</td>
<td>1(1)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>5(1)</td>
<td></td>
</tr>
<tr>
<td>Humber</td>
<td>(3)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>5(1)</td>
<td></td>
</tr>
<tr>
<td>Wash</td>
<td>1(1)</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>5(1)</td>
<td></td>
</tr>
</tbody>
</table>

(b) Of 160 ringed in the Wash area, December, 1950, 20 have been reported.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Wash</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>1 recap. (1)</td>
<td>10(1)</td>
</tr>
<tr>
<td>N.W. Midlands</td>
<td>1</td>
<td>3(4)</td>
<td>2</td>
<td>1</td>
<td>4(5)</td>
</tr>
</tbody>
</table>

The bird recaptured on the Solway was released again.

(c) Of 27 ringed in the Solway area, January, 1951, one was recovered in the same area in January. Two blue-dyed geese were reported seen in flight near Neumunster, Schleswig-Holstein, on 27th January. These were probably Pinkfeet, in which case they were ringed on the Solway on 21st or 23rd January; but it is possible that they were Greylags, ringed in the same area on 16th January, or that the green dye used in December was mistaken for blue.

(d) Of 78 ringed in the Solway area, March, 1951, one was recovered in the same area in March and another in East Central Scotland at the end of that month.

Full details of individual recoveries are shown on pp. 24–25.

The Council wishes to express its gratitude to those who have given their assistance in various ways to this project, and especially to thank those who granted facilities to the netting team to operate on their land.

Experiments have been carried out with improved equipment and it is hoped that much better results will be achieved during the winter of 1951–52. It should be emphasized that early information about sight records of dyed birds is of great value and should be communicated to the Director at the New Grounds with as little delay as possible.
NOTES ON COLOUR MARKING OF GEESE

By Hugh Boyd, Resident Biologist

The first attempts at colour marking geese in February and March, 1950, were based on the findings of Wadkins (J. Wildlife Manag. 12 (1948) : 388-391), who concluded that basic dyes in alcoholic solution provided a practical, inexpensive and quick method of marking pheasants for field study. Accordingly we used solutions of Rhodamine B and Crystal Violet on geese captured at the New Grounds and in the Solway area. The results were disappointing: the intensity of colouring was less than expected and very uneven, and fading was very rapid.

This failure led to experiments with other methods, including paints, inks, etc., applied to series of feathers, to tame ducks and to passerines captured for ringing. None of these alternatives appeared preferable to the dye solutions for the purpose of marking geese, but since some promised to be of use on small birds they are commented on briefly here.

Rejected Methods

1. Quick-drying cellulose paints (supplied by Jenson and Nicholson Ltd., and I.C.I. Paints Division, Slough) provide a series of bright colours, are durable and fairly easily applied to small areas, but they seem objectionable in their effects on the treated birds. It is difficult to prevent bad matting of the feathers at the time of application, and continued observation of passerines marked by this means disclosed that after several weeks some individuals developed ‘bald’ patches, due to the loss of both the painted feathers and some of those adjacent to them. The cause of this loss was not established. No evidence of increased mortality of painted as compared with unpainted birds was obtained.

2. Artists’ oil colours suspended in carbon tetrachloride appeared to produce quite good results on test-feathers and when applied to passerines. Bright colouring, quick drying and durability are the merits of this method. The length of time required to mark large areas and the relatively extravagant use of pigment led to its rejection.

3. Waterproof inks (supplied by Winsor and Newton Ltd., and J. Holden & Co. Ltd.) gave a very limited range of suitable colours (most shades fading badly), lacked intensity, and were slow drying. They would also be expensive to use in quantity.

4. ‘Cado Flo-master’ waterproof inks (Cushman and Denison Mfg. Co., New York) gave excellent results in respect of brilliance and durability, but the solvent used appeared to affect the feathers so that the cohesion of the webs was lost.

Use of Dyes

Continued experiments with alcohol-water dye solutions showed them to possess advantages of speed and inexpensiveness, making them the most suitable method yet devised for marking large numbers of large birds with areas of white feathers. The unsatisfactory initial attempts were found to be due to an inadequate method of application and an unfortunate choice of dyestuffs, and better results were obtained by changes in technique and material. The dyes so far tested are Rhodamine B 500, Auramine ON 150, Brilliant Green YN 5,
Victoria Blue BN 150, Methyl Violet 2 BN 200, and Methasol Nigrosine ENS (all supplied by I.C.I. Dyestuffs Division, Huddersfield); Crystal Violet and Malachite Green. The original batch of Rhodamine B was found greatly inferior to the type 500 and was discarded. Methyl Violet and Methasol Nigrosine (black) have not yet been used on geese in the field; but feather tests suggest that Methyl Violet is to be preferred to Crystal Violet because of much greater resistance to water fading. Nigrosine is unlikely to prove very useful. The following table summarises the conclusions reached on the success of the dyes in the field.

<table>
<thead>
<tr>
<th>Dye</th>
<th>Colour</th>
<th>Initial intensity</th>
<th>Resistance to fading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rhodamine B</td>
<td>Crimson to pink</td>
<td>Very good</td>
<td>Good</td>
</tr>
<tr>
<td>Auramine</td>
<td>Yellow</td>
<td>Good</td>
<td>Good</td>
</tr>
<tr>
<td>Rhodamine B and Auramine</td>
<td>Orange</td>
<td>Very good</td>
<td>Good</td>
</tr>
<tr>
<td>Brilliant Green</td>
<td>Green</td>
<td>Very good</td>
<td>Fair</td>
</tr>
<tr>
<td>Victoria Blue</td>
<td>Dark blue</td>
<td>Good</td>
<td>Poor</td>
</tr>
<tr>
<td>Crystal Violet</td>
<td>Violet</td>
<td>Good</td>
<td>Poor</td>
</tr>
<tr>
<td>Malachite Green</td>
<td>Green</td>
<td>Fair</td>
<td>Poor</td>
</tr>
</tbody>
</table>

Auramine produces an intense yellow coloration, but is only described as 'good' because it is rather difficult to detect this colour except in certain conditions of lighting. The bright crimson of Rhodamine fades fairly quickly to a shade not certainly distinguishable from that of the orange mixture in unfavourable conditions. The unsatisfactory lasting qualities of Crystal Violet and Malachite Green appear to be due principally to water fading; Brilliant Green is more affected by sun fading; and Victoria Blue is badly affected by both sun and water.

Preparation of Solutions

All the dyes except Nigrosine are used in a 33 per cent. solution of ethyl alcohol in water (industrial methylated spirit 64 O.P. is a satisfactory alcohol source). Optimum concentrations of each dye have yet to be determined but are of the order of 1–2 oz. dye per gallon of solvent. Attempts to prepare more concentrated solutions may result in the formation of insoluble precipitates, especially in the case of Auramine. The dyestuffs are added to the solvent in the cold. Solutions containing higher proportions of alcohol seem to give no greater initial coloration and tend to wash out more readily. The use of acetic acid in the solvent effects no improvement. Some experiments with wetting agents have been made but the results obtained have been unpromising.

Application

In the first field tests the dye was applied by means of a hand spray of the type used for insecticides. This failed to effect a sufficient penetration of the feathers, nor could enough solution be applied. To ensure a thorough soaking of the white parts of the plumage the technique now employed is to immerse the tail coverts of the goose in a bucketful of solution, care being taken to keep the wings dry. After dyeing the birds are placed in portable cages for about fifteen minutes. This allows the dye to penetrate and dry to a considerable extent, improving both the initial intensity and durability of the colouring.
Visibility of Colours

The most unsatisfactory feature of the dyeing method is the great variation in appearance of individuals marked on any one occasion. The causes of this variation are not yet understood, though wetting of the birds while in the nets and fouling play some part. Well-dyed birds have been detected in flight at ranges in excess of a mile and on the ground at half a mile within a few days of being marked. On the other hand some individuals have only been detected with difficulty at less than a hundred yards after a scarcely longer interval. Rhodamine-dyed geese have been recognized in the field at least fourteen weeks after marking and those marked with brilliant green after 13 weeks. Geese in the collection are still recognizably pink over six months after dyeing, though yellow- and green-dyed birds become no longer distinguishable after about four months.

Many of the people who have shot or found ringed birds and reported them have commented on the presence of dyes on the feathers, but a number have failed to note any colour even on birds shot within a few weeks of marking, while a majority of the positive reports have described the colouring as faint. Samples of feathers sent have shown great variation in colour intensity.

Effects of Dyeing on Birds

The behaviour of dyed geese has been carefully observed. Immediately on settling after release a great deal of preening of the affected areas takes place, but probably no more than would occur in any bird whose plumage had been drastically disarranged by contact with the nets, handling and wetting. A little dye may be ingested as a result, but is most unlikely to produce any serious effects (the solutions are distasteful but not highly toxic). A high rate of preening may be maintained for one or two days but the return to normal preening is speedy. Our attention has been drawn to the frequency and extent of damage to the tail feathers in dyed geese that have been recovered: it is uncertain whether there is any greater damage in dyed as compared with undyed birds that have been captured and more information is required on this point (which is complicated by the ‘normal’ severely-abraded state of the tail-feathers in first-winter birds until their renewal in the late winter).

Particular attention has been paid to the social effects of dyeing geese. It appears that for a day or so after capture marked geese tend to remain somewhat isolated. Subsequently many, though probably not all, of the captured birds become reunited with their families. No discrimination between them and their unmarked companions by other members of the flock is apparent. Precise data on conflict-frequency are only available for White-fronted Geese: the rates for dyed individuals fall within the range of variation found for the classes to which the birds belong. Non-quantitative observations on Pinkfeet and Greylags have not provided any evidence of coloured birds being attacked by their neighbours with abnormal vigour or frequency.
WILD DUCKS

THE DECOY

During late August and early September large flocks of Mallards fed regularly, by day as well as by night, in wheat fields to the east of the decoy, one of which had been abandoned uncut because of the wet weather. It was not uncommon to see up to 1,500 ducks milling round over these fields. It was not surprising, therefore, that many of them came to the decoy and on several mornings there were up to 400 birds on the pool, although they seldom remained for more than a few hours, no doubt because of the unavoidable noise and activity round the headquarters which are in this respect regrettably close. Owing to the rains it was possible to obtain spoiled wheat in considerable quantity and the pipes were extensively fed, with excellent results, during September. As in the previous year, however, the ‘lead’ fell off during October and November, and apart from a spring of 20–30 Teal which frequented the pool during January and February, the numbers of ducks were continuously disappointing after so promising a start.

The Catch

The season’s total catch of 1,203 was nearly double that of the previous one (609). Since the decoy was first built in 1843 this total has only been exceeded 3 times (1853–54, 1,410 ; 1861–62, 1,295 ; 1899–1900, 1,273).

The most productive period of the season was during September, 1950; the Director’s journal reads as follows:

‘Work continued in the decoy until the end of July, and thereafter the “lead” was slow in building up. By 13th August there were about 50 birds and by 18th over 80, but this seems to have been a flash in the pan, for at the end of the month there were only 14 mallards although there were 31 teal. These fell off, too, and during the first few days of September only about 30 ducks were to be seen on the pool.

‘On 4th September I began feeding the West and South pipes. (Hitherto they had been fed lightly in the mornings only.) For the first night I put one bucket on the running side of each pipe (W. and S.). The “lead” began to increase almost at once. Two days later, on 6th September, there were 73, and on 7th and 8th over 100. On the night of 9th September, C. and I put 1 cwt. of mouldy wheat in the South and West with some in the House and North pipes as well. Next morning there were 286 ducks on the pool, suggesting that perhaps they had smelled the grain—it was hot when put in. Unfortunately, there was an unexplained flush while we were in the North hut and after it only 133 ducks remained. That night another sack went in and next morning, 11th September, we caught 42 in the West and there were 240 ducks still on the pool after the catch. At about 5.30 p.m. we took 62 in the South pipe (not a single recapture) and afterwards about 80 ducks were left on the pool. Thus we had caught 104 in the day—a record. . . . That night we put 5 buckets of fermented wheat in, and next day there were 240 again. Late in the afternoon we took another 42 in the South and did not feed that night at all. On the morning of 13th there were 440 ducks and before breakfast we left 90 ducks in the West as the birds were not properly settled. At about 11.0 a.m. there seemed to be 50 in the West when we spied from the gazebo. We decided to catch them and
P. and I went round. P. showed. The pipe seemed full, and it took some minutes to get them into the tunnel net. Unfortunately we rose the pool in so doing, but it was obviously a record catch. It took about 1½ hours to ring them, having herded about a third of them back into the tunnel net taken off the South pipe. The total catch was 145 ducks, and they had pretty well filled the one tunnel net in the first instance. Two wigeon, one teal and the rest mallards (only 11 recaptures). After the catch there were only 70 birds on the pool. For the next two mornings, after night feeding, there were over 200 birds on, but on each day some disturbance put them off in mid-morning. On 16th September (no feed the night before) we caught 50 in the West after breakfast. It did not upset them much, but a tractor backfire rose the pool while we were still ringing. (Only two recaptures, one from last year.) In the afternoon I took 14 more, including five Pintails, and brought the day total to 64. That night and on the morning of 17th September there was a gale and only about 50 ducks on the pool. . . . We caught 32, and on the following day 30, then the pool was rested until 22nd. For two days there had been about 300 on all day and on 22nd there were 410, but they were unaccountably disturbed, leaving under 170. We took 25 in the evening, and next morning, 23rd September, there were about 220. We made simultaneous catches by a new technique in South and West and caught 24 and 55 respectively, but for our 79 we raised the pool. . . . Next morning we did the same again. I went to the South and waited near the show place until I heard the birds flush in the West, then I showed and ran my pipe. My catch was only 14, but the others got 61'. Thus in two weeks 596 ducks had been caught—only 13 short of the total for the whole of the previous season.

Duck catching at this rate must compare very favourably with the best decoys in this country and even with those in Holland, and not many catches of 145 at one run can have been made in recent years in any decoys. If only the standard could have been maintained through the season! But it was not to be. The thousand was reached as early as 28th October, but the next five months yielded only 203.

The numbers of each species are shown in Table III. For the first season since the decoy was repaired in 1946, no Garganey was taken.
## TABLE III—Catch and Ringing Figures

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mallard</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ringed</td>
<td>3</td>
<td>64</td>
<td>102</td>
<td>410</td>
<td>802</td>
<td>1381</td>
</tr>
<tr>
<td>Recaptures</td>
<td>—</td>
<td>6</td>
<td>19</td>
<td>71</td>
<td>222</td>
<td>318</td>
</tr>
<tr>
<td>Total catch</td>
<td>3</td>
<td>70</td>
<td>121</td>
<td>481</td>
<td>1024</td>
<td>1699</td>
</tr>
<tr>
<td>Recoveries</td>
<td>1</td>
<td>8</td>
<td>12</td>
<td>32</td>
<td>43</td>
<td>96</td>
</tr>
<tr>
<td><strong>Teal</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ringed</td>
<td>2</td>
<td>24</td>
<td>24</td>
<td>56</td>
<td>98</td>
<td>204</td>
</tr>
<tr>
<td>Recaptures</td>
<td>—</td>
<td>—</td>
<td>7</td>
<td>2</td>
<td>12</td>
<td>21</td>
</tr>
<tr>
<td>Total catch</td>
<td>2</td>
<td>25</td>
<td>31</td>
<td>58</td>
<td>110</td>
<td>225</td>
</tr>
<tr>
<td>Recoveries</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>8</td>
<td>4</td>
<td>17</td>
</tr>
<tr>
<td><strong>Wigeon</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ringed</td>
<td>—</td>
<td>19</td>
<td>52</td>
<td>19</td>
<td>4</td>
<td>94</td>
</tr>
<tr>
<td>Recaptures</td>
<td>—</td>
<td>—</td>
<td>20</td>
<td>2</td>
<td>2</td>
<td>24</td>
</tr>
<tr>
<td>Total catch</td>
<td>—</td>
<td>21</td>
<td>72</td>
<td>21</td>
<td>6</td>
<td>120</td>
</tr>
<tr>
<td>Recoveries</td>
<td>—</td>
<td>5</td>
<td>8</td>
<td>3</td>
<td>—</td>
<td>16</td>
</tr>
<tr>
<td><strong>Pintail</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ringed</td>
<td>—</td>
<td>2</td>
<td>13</td>
<td>17</td>
<td>36</td>
<td>68</td>
</tr>
<tr>
<td>Recaptures</td>
<td>—</td>
<td>1</td>
<td>4</td>
<td>5</td>
<td>7</td>
<td>17</td>
</tr>
<tr>
<td>Total catch</td>
<td>—</td>
<td>3</td>
<td>17</td>
<td>22</td>
<td>43</td>
<td>85</td>
</tr>
<tr>
<td>Recoveries</td>
<td>—</td>
<td>—</td>
<td>1</td>
<td>—</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td><strong>Shoveler</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ringed</td>
<td>—</td>
<td>9</td>
<td>26</td>
<td>23</td>
<td>18</td>
<td>76</td>
</tr>
<tr>
<td>Recaptures</td>
<td>—</td>
<td>—</td>
<td>2</td>
<td>—</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Total catch</td>
<td>—</td>
<td>9</td>
<td>26</td>
<td>26</td>
<td>20</td>
<td>81</td>
</tr>
<tr>
<td>Recoveries</td>
<td>—</td>
<td>6</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td>15</td>
</tr>
<tr>
<td><strong>Garganey</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ringed</td>
<td>—</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>—</td>
<td>5</td>
</tr>
<tr>
<td>Recaptures</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Total catch</td>
<td>1</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>—</td>
<td>9</td>
</tr>
<tr>
<td>Recoveries</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ringed</td>
<td>6</td>
<td>120</td>
<td>218</td>
<td>526</td>
<td>958</td>
<td>1828</td>
</tr>
<tr>
<td>Recaptures</td>
<td>—</td>
<td>7</td>
<td>50</td>
<td>83</td>
<td>245</td>
<td>385</td>
</tr>
<tr>
<td>Total catch</td>
<td>6</td>
<td>133</td>
<td>269</td>
<td>609</td>
<td>1203</td>
<td>2220</td>
</tr>
<tr>
<td>Recoveries</td>
<td>1</td>
<td>23</td>
<td>27</td>
<td>46</td>
<td>49</td>
<td>146</td>
</tr>
</tbody>
</table>

*The recovery figures will increase with the passage of time. Those shown for 1950–51 represent recoveries in the same season as that in which they were ringed.*

## TABLE IV—Methods of Capture in Decoy

<table>
<thead>
<tr>
<th></th>
<th>Without Dog</th>
<th>With Dog</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Seasons</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No. of Ducks</td>
<td>No. of Catches</td>
<td>Avg. No. of Ducks per catch</td>
</tr>
<tr>
<td>1946–47</td>
<td>280</td>
<td>148</td>
<td>1.9</td>
</tr>
<tr>
<td>1947–48</td>
<td>432</td>
<td>101</td>
<td>4.3</td>
</tr>
<tr>
<td>1948–49</td>
<td>1119</td>
<td>101</td>
<td>11.2</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td>1831</td>
<td>350</td>
<td>5.3</td>
</tr>
</tbody>
</table>
STATUS OF DUCKS

COMMON SHELDUCK (*Tadorna tadorna*)

No information on size of local breeding population. The population was at a peak in June, with a maximum of 254 on 27th. In the second half of July the adult numbers declined abruptly from 200 on 16th to 45 on 19th, rose again to 218 by 21st, on 23rd fell to 44, and to 6 on 27th, rose temporarily to 41 on 31st, but fell below 20 in early August. These figures accord with current theories that Shelducks perform a moult migration at this period, many of them going to the Heligoland Bight. Few juveniles were seen, 61 on 27th August being the most, and these nearly all left the area in mid-September, so that the population (of both adults and young) totalled less than 20 from late September to the beginning of January. There was a gradual increase in January and February to about 80 birds, at which level the population remained until the third week of April when a rapid increase took place (from 68 on 22nd to 210 on 24th).

PINTAIL (*Anas acuta*)

Numbers seen on the river during the winter smaller than in the previous season: highest counts 127 on 30th December, 90, 6th February. Full-winged birds in the pens and the decoy exceeded 50 on several occasions, but included some hand-reared birds.

TEAL (*Anas crecca*)

Numbers on river in autumn and early winter comparatively small, increasing to 550 by 10th December and remaining high until the beginning of April, with c.1100, 16th February, and 960, 11th March, the highest counts. Most numerous in the decoy in late January and February (maximum 65 on 22nd January).

MALLARD (*Anas platyrhynchos*)

As in previous years, abundant on river and in decoy in autumn but comparatively few present after mid-December. Highest counts on river 1250, 29th August, c.1350, 10th September: in decoy, c.430, 13th, and c.380, 22nd September. After mid-December not more than 150 on river and 60 in decoy.
GADWALL (*Anas strepera*)

Some undoubtedly wild birds in pens during winter, but presence of a number of full-winged hand-reared birds prevented adequate recording of numbers. Six, 31st December, most probably wild.

WIGEON (*Anas penelope*)

Up to 1250 (31st December) on estuary November to January: few at other times. Very few seen in decoy this season, 12, 1st February, the most.

GARGANEY (*Anas querquedula*)

A male in decoy 26th and 27th May, 1950; a female in pens 2nd to 11th September; a pair in decoy 12th April, 1951.

SHOVELER (*Anas clypeata*)

Seen on estuary from mid-August to early April, 20, 13th August and 13th October, the most. Despite the presence of some hand-reared birds, not so numerous in decoy as in previous season, 25 on 18th October the maximum and numbers subsequently very small except for 19-21 in first week of December.

POCHARD (*Aythya ferina*)

Seven (six males) on river 10th January. One male in decoy, 19th February.

TUFTED DUCK (*Aythya fuligula*)

One on river 16th February. One in decoy 26th September, 23rd and 24th October, (♂) (subsequently in pens) mid-November until following summer (caught and ringed 26th December); another ♂ 5th February.

RINGING AND RECOVERIES

As in previous years the Trust has carried out its ringing activities for the Wildfowl Inquiry Committee and both ducks and geese have been available to the Committee's Duck Adoption Scheme. The standard British Trust for Ornithology rings were used, carrying the address of the British Museum of Natural History, London.

The most important recoveries have been the 4 Whitefronts reported from Russia. Three of these were from known breeding grounds of the species—the Island of Kolguev and the Kanin Peninsula, both to the east of the White Sea. The fourth, however, was much more unexpected. Ringed, with the others, at the New Grounds at the end of February, it was recovered near Kursk in Southern Russia on 4th April. If this should indicate a regular route between wintering and breeding grounds it would be very strange and new. On the other hand it is perhaps more likely that it is a stray bird far from the normal migration line of the New Grounds flocks.

The long-distance record for any bird ringed at the New Grounds is now held by a Wigeon which was recovered near Novosibirsk in September, 1949, having been ringed at Slimbridge in the same month two years before. Novosibirsk is in 77°40'E, some 1,000 miles east of the Ural Mountains.

Another Wigeon was found at the mouth of the River Petchora. Two Mallards, usually regarded as less extensive travellers, were recovered in W. Finland.

Full details of the numbers ringed and the recoveries are shown in the four tables which follow.
TABLE V

**BIRDS RINGED AT NEW GROUNDS DURING YEAR**

<table>
<thead>
<tr>
<th>Rocket-nets</th>
<th>Duck Decoy</th>
<th>Traps, or other methods of capture</th>
</tr>
</thead>
<tbody>
<tr>
<td>29 White-fronted Geese</td>
<td>802 Mallard 98 Teal 4 Wigeon 36 Pintail 18 Shoveler</td>
<td>5 Pintail 1 Shoveler 1 Tufted Duck</td>
</tr>
</tbody>
</table>

TABLE VI

**BIRDS RINGED AWAY FROM NEW GROUNDS DURING YEAR**

<table>
<thead>
<tr>
<th>Rocket-nets</th>
</tr>
</thead>
<tbody>
<tr>
<td>643 Pink-footed Geese</td>
</tr>
<tr>
<td>1 Greenland White-fronted Goose</td>
</tr>
<tr>
<td>18 Greylag Goose</td>
</tr>
</tbody>
</table>

TABLE VII

**PROPORTION OF RECOVERIES OF BIRDS RINGED SINCE 1946**

(Omitting Trust-reared birds and birds escaped from the collection)

<table>
<thead>
<tr>
<th>Species</th>
<th>Total number ringed</th>
<th>Number Recovered</th>
<th>Per cent. recovered</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>In same season</td>
<td>Subsequently</td>
</tr>
<tr>
<td>Pink-footed Goose</td>
<td>650</td>
<td>59</td>
<td>—</td>
</tr>
<tr>
<td>White-fronted Goose</td>
<td>116</td>
<td>—</td>
<td>7</td>
</tr>
<tr>
<td>Greylag Goose</td>
<td>47</td>
<td>—</td>
<td>3</td>
</tr>
<tr>
<td>Mallard</td>
<td>1382</td>
<td>73</td>
<td>23</td>
</tr>
<tr>
<td>Teal</td>
<td>205</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>Wigeon</td>
<td>94</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td>Pintail</td>
<td>82</td>
<td>2</td>
<td>—</td>
</tr>
<tr>
<td>Shoveler</td>
<td>77</td>
<td>9</td>
<td>6</td>
</tr>
</tbody>
</table>

* This percentage excludes birds (included in Column 1) which have only carried rings for one season and could not therefore yet have been recovered subsequent to the season in which they were ringed.
TABLE VIII—DETAILS OF RECOVERIES
(In the order in which the birds were originally ringed)

<table>
<thead>
<tr>
<th>Ring no.</th>
<th>Species</th>
<th>Where ringed</th>
<th>Date ringed</th>
<th>Recovered</th>
</tr>
</thead>
<tbody>
<tr>
<td>127338</td>
<td>Greylag</td>
<td>Kirkcudbright</td>
<td>26.3.50</td>
<td>Co. Wexford, 20.12.50</td>
</tr>
<tr>
<td>127350</td>
<td>Greylag</td>
<td>Kirkcudbright</td>
<td>28.3.50</td>
<td>Shot Lancs., 18.12.50</td>
</tr>
<tr>
<td>127357</td>
<td>Greylag</td>
<td>Kirkcudbright</td>
<td>28.3.50</td>
<td>Caught in rabbit-trap, Co. Louth, 13.12.50</td>
</tr>
<tr>
<td>128052</td>
<td>Whitefront</td>
<td>New Grounds</td>
<td>18.2.48</td>
<td>Eidersteht, nr. Tönning, Schleswig-Holstein</td>
</tr>
<tr>
<td>129399</td>
<td>Whitefront</td>
<td>New Grounds</td>
<td>27.2.50</td>
<td>(54°19'N., 8°59'E.), 11.12.50</td>
</tr>
<tr>
<td>129397</td>
<td>Whitefront</td>
<td>New Grounds</td>
<td>27.2.50</td>
<td>Sudja District, Kursk (51°10'N., 35°25'E.),</td>
</tr>
<tr>
<td>129412</td>
<td>Whitefront</td>
<td>New Grounds</td>
<td>27.2.50</td>
<td>4.4.50</td>
</tr>
<tr>
<td>129418</td>
<td>Whitefront</td>
<td>New Grounds</td>
<td>27.2.50</td>
<td>W. shore of Kanin Peninsula (67°54'N.,</td>
</tr>
<tr>
<td>129420</td>
<td>Whitefront</td>
<td>New Grounds</td>
<td>27.2.50</td>
<td>44°10'E.), 21.5.50</td>
</tr>
<tr>
<td>128092</td>
<td>Whitefront</td>
<td>New Grounds</td>
<td>27.2.50</td>
<td>Skeleton found Somerset, --.1.51</td>
</tr>
<tr>
<td>129505</td>
<td>Pinkfoot</td>
<td>S.E. Scotland</td>
<td>8.10.50</td>
<td>Shot Lancs., 1.1.50</td>
</tr>
<tr>
<td>129517</td>
<td>Pinkfoot</td>
<td>S.E. Scotland</td>
<td>9.10.50</td>
<td>Shot Lincs., 22.10.50</td>
</tr>
<tr>
<td>129518</td>
<td>Pinkfoot</td>
<td>S.E. Scotland</td>
<td>9.10.50</td>
<td>Shot Lincs., 8.11.50</td>
</tr>
<tr>
<td>129532</td>
<td>Pinkfoot</td>
<td>S.E. Scotland</td>
<td>9.10.50</td>
<td>Shot Lincs., 13.12.50</td>
</tr>
<tr>
<td>129521</td>
<td>Pinkfoot</td>
<td>S.E. Scotland</td>
<td>9.10.50</td>
<td>Lancs., 12.1.51</td>
</tr>
<tr>
<td>129527</td>
<td>Pinkfoot</td>
<td>S.E. Scotland</td>
<td>9.10.50</td>
<td>Shot Yorks., 26.1.51</td>
</tr>
<tr>
<td>129522</td>
<td>Pinkfoot</td>
<td>S.E. Scotland</td>
<td>9.10.50</td>
<td>Shot Lincs., 10.2.51</td>
</tr>
<tr>
<td>129545</td>
<td>Pinkfoot</td>
<td>S.E. Scotland</td>
<td>12.10.50</td>
<td>Shot Fife, 28.10.50</td>
</tr>
<tr>
<td>129597</td>
<td>Pinkfoot</td>
<td>S.E. Scotland</td>
<td>12.10.50</td>
<td>Found dead Kinross, 26.3.51</td>
</tr>
<tr>
<td>129658</td>
<td>Pinkfoot</td>
<td>S.E. Scotland</td>
<td>15.10.50</td>
<td>Shot Lanark, 19.11.50</td>
</tr>
<tr>
<td>129652</td>
<td>Pinkfoot</td>
<td>S.E. Scotland</td>
<td>15.10.50</td>
<td>Shot Camb., 27.1.51</td>
</tr>
<tr>
<td>129640</td>
<td>Pinkfoot</td>
<td>S.E. Scotland</td>
<td>15.10.50</td>
<td>Shot Aberddeen, --.1.51</td>
</tr>
<tr>
<td>129602</td>
<td>Pinkfoot</td>
<td>S.E. Scotland</td>
<td>15.10.50</td>
<td>Shot Dumfries, 11.2.51</td>
</tr>
<tr>
<td>129676</td>
<td>Pinkfoot</td>
<td>S.E. Scotland</td>
<td>15.10.50</td>
<td>Found dead (shot) Cumberland, 13.5.51</td>
</tr>
<tr>
<td>129681</td>
<td>Pinkfoot</td>
<td>S.E. Scotland</td>
<td>18.10.50</td>
<td>Found dead Cumberland, --.11.50</td>
</tr>
<tr>
<td>129700</td>
<td>Pinkfoot</td>
<td>S.E. Scotland</td>
<td>18.10.50</td>
<td>Shot Cumberland, 4.2.51</td>
</tr>
<tr>
<td>129716</td>
<td>Pinkfoot</td>
<td>S.E. Scotland</td>
<td>20.10.50</td>
<td>Shot Dumfries, 15.12.50</td>
</tr>
<tr>
<td>129718</td>
<td>Pinkfoot</td>
<td>S.E. Scotland</td>
<td>20.10.50</td>
<td>Shot Dumfries, early 2.51</td>
</tr>
<tr>
<td>129579</td>
<td>Pinkfoot</td>
<td>S.E. Scotland</td>
<td>21.10.50</td>
<td>Shot Angus, 19.12.50</td>
</tr>
<tr>
<td>130206</td>
<td>Pinkfoot</td>
<td>S.E. Scotland</td>
<td>21.10.50</td>
<td>Shot Dumfries, 23.12.50</td>
</tr>
<tr>
<td>130272</td>
<td>Pinkfoot</td>
<td>S.E. Scotland</td>
<td>23.10.50</td>
<td>Shot Midlothian, 26.10.50</td>
</tr>
<tr>
<td>130247</td>
<td>Pinkfoot</td>
<td>S.E. Scotland</td>
<td>23.10.50</td>
<td>Shot Midlothian, 26.10.50</td>
</tr>
<tr>
<td>130258</td>
<td>Pinkfoot</td>
<td>S.E. Scotland</td>
<td>23.10.50</td>
<td>Shot Kinross, 7.11.50</td>
</tr>
<tr>
<td>130243</td>
<td>Pinkfoot</td>
<td>S.E. Scotland</td>
<td>23.10.50</td>
<td>Shot Kinross, 11.11.50</td>
</tr>
<tr>
<td>130262</td>
<td>Pinkfoot</td>
<td>S.E. Scotland</td>
<td>23.10.50</td>
<td>Shot Perth, 16.12.50</td>
</tr>
<tr>
<td>130246</td>
<td>Pinkfoot</td>
<td>S.E. Scotland</td>
<td>23.10.50</td>
<td>Shot Lincs., 23.12.50</td>
</tr>
<tr>
<td>130238</td>
<td>Pinkfoot</td>
<td>S.E. Scotland</td>
<td>23.10.50</td>
<td>Shot Norfolk, 30.12.50</td>
</tr>
<tr>
<td>130252</td>
<td>Pinkfoot</td>
<td>S.E. Scotland</td>
<td>23.10.50</td>
<td>Shot Yorks., 11.1.51</td>
</tr>
<tr>
<td>130264</td>
<td>Pinkfoot</td>
<td>S.E. Scotland</td>
<td>23.10.50</td>
<td>Shot Sutherland, 30.1.51</td>
</tr>
<tr>
<td>130218</td>
<td>Pinkfoot</td>
<td>S.E. Scotland</td>
<td>23.10.50</td>
<td>Found dead Lancs., 19.2.51</td>
</tr>
<tr>
<td>130216</td>
<td>Pinkfoot</td>
<td>S.E. Scotland</td>
<td>23.10.50</td>
<td>Shot Angus, 5.3.51</td>
</tr>
<tr>
<td>130251</td>
<td>Pinkfoot</td>
<td>S.E. Scotland</td>
<td>23.10.50</td>
<td>Found dead Angus, 9.3.51</td>
</tr>
<tr>
<td>130282</td>
<td>Pinkfoot</td>
<td>S.E. Scotland</td>
<td>23.10.50</td>
<td>Shot Perth, 13.4.51</td>
</tr>
<tr>
<td>130291</td>
<td>Pinkfoot</td>
<td>S.E. Scotland</td>
<td>24.10.50</td>
<td>Shot East Lothian, 16.12.50</td>
</tr>
<tr>
<td>130297</td>
<td>Pinkfoot</td>
<td>S.E. Scotland</td>
<td>24.10.50</td>
<td>Found dead, Banff, before 3.4.51</td>
</tr>
<tr>
<td>130318</td>
<td>Pinkfoot</td>
<td>Dumfries</td>
<td>27.10.50</td>
<td>Shot Lincs., 25.11.50</td>
</tr>
<tr>
<td>130325</td>
<td>Pinkfoot</td>
<td>Dumfries</td>
<td>27.10.50</td>
<td>Found dead (shot), Dumfries, 14.12.50</td>
</tr>
</tbody>
</table>
### Ringed Birds

<table>
<thead>
<tr>
<th>Ring no.</th>
<th>Species</th>
<th>Where ringed</th>
<th>Date ringed</th>
<th>Recovered</th>
</tr>
</thead>
<tbody>
<tr>
<td>130311</td>
<td>Pinkfoot</td>
<td>Dumfries</td>
<td>27.10.50</td>
<td>Shot Dumfries, 21.1.51</td>
</tr>
<tr>
<td>130312</td>
<td>Pinkfoot</td>
<td>Dumfries</td>
<td>27.10.50</td>
<td>Shot Aberdeen, 31.1.51</td>
</tr>
<tr>
<td>130346</td>
<td>Pinkfoot</td>
<td>Dumfries</td>
<td>28.10.50</td>
<td>Shot Dumfries, 16.11.50</td>
</tr>
<tr>
<td>130340</td>
<td>Pinkfoot</td>
<td>Dumfries</td>
<td>28.10.50</td>
<td>Shot Dumfries, 30.11.50</td>
</tr>
<tr>
<td>130348</td>
<td>Pinkfoot</td>
<td>Dumfries</td>
<td>28.10.50</td>
<td>Shot Cumberland, 22.1.51</td>
</tr>
<tr>
<td>130341</td>
<td>Pinkfoot</td>
<td>Dumfries</td>
<td>28.10.50</td>
<td>Found shot Stirling, 26.4.51</td>
</tr>
<tr>
<td>129951</td>
<td>Pinkfoot</td>
<td>Lines</td>
<td>2.12.50</td>
<td>Found dead Lines, 11.12.50</td>
</tr>
<tr>
<td>130389</td>
<td>Pinkfoot</td>
<td>Lines</td>
<td>2.12.50</td>
<td>Found dead Norfolk, 14.12.50</td>
</tr>
<tr>
<td>130371</td>
<td>Pinkfoot</td>
<td>Lines</td>
<td>2.12.50</td>
<td>Shot Lines, 26.12.50</td>
</tr>
<tr>
<td>129916</td>
<td>Pinkfoot</td>
<td>Lines</td>
<td>2.12.50</td>
<td>Lines, 30.12.50</td>
</tr>
<tr>
<td>129886</td>
<td>Pinkfoot</td>
<td>Lines</td>
<td>2.12.50</td>
<td>Lanes, 30.12.50</td>
</tr>
<tr>
<td>129908</td>
<td>Pinkfoot</td>
<td>Lines</td>
<td>2.12.50</td>
<td>Lines, 10.1.51</td>
</tr>
<tr>
<td>129962</td>
<td>Pinkfoot</td>
<td>Lines</td>
<td>2.12.50</td>
<td>Lines, 14.1.51</td>
</tr>
<tr>
<td>129898</td>
<td>Pinkfoot</td>
<td>Lines</td>
<td>2.12.50</td>
<td>Kirkcudbright, 17.1.51</td>
</tr>
<tr>
<td>129906</td>
<td>Pinkfoot</td>
<td>Lines</td>
<td>2.12.50</td>
<td>Kirkcudbright, 17.1.51</td>
</tr>
<tr>
<td>129980</td>
<td>Pinkfoot</td>
<td>Lines</td>
<td>2.12.50</td>
<td>Kirkcudbright, 17.1.51</td>
</tr>
<tr>
<td>129942</td>
<td>Pinkfoot</td>
<td>Lines</td>
<td>2.12.50</td>
<td>Shot Lines, 28.1.51</td>
</tr>
<tr>
<td>129946</td>
<td>Pinkfoot</td>
<td>Lines</td>
<td>2.12.50</td>
<td>Shot Lines, 3.2.51</td>
</tr>
<tr>
<td>129975</td>
<td>Pinkfoot</td>
<td>Lines</td>
<td>2.12.50</td>
<td>Found dead Lines, 15.2.51</td>
</tr>
<tr>
<td>129924</td>
<td>Pinkfoot</td>
<td>Lines</td>
<td>2.12.50</td>
<td>Found dead Lines, 24.2.51</td>
</tr>
<tr>
<td>129885</td>
<td>Pinkfoot</td>
<td>Lines</td>
<td>2.12.50</td>
<td>Found dead (shot) Aberdeen, 28.4.51</td>
</tr>
<tr>
<td>130358</td>
<td>Pinkfoot</td>
<td>Caught Lines, released New Grounds</td>
<td>5.12.50</td>
<td>Shot, Glos., 13.12.50</td>
</tr>
<tr>
<td>130025</td>
<td>Pinkfoot</td>
<td>Dumfries</td>
<td>21.1.51</td>
<td>Shot Cumberland, 27.1.51</td>
</tr>
<tr>
<td>130441</td>
<td>Pinkfoot</td>
<td>Dumfries</td>
<td>10.3.51</td>
<td>Caught Kirkcudbright, 14.3.51</td>
</tr>
<tr>
<td>130366</td>
<td>Pinkfoot</td>
<td>Dumfries</td>
<td>10.3.51</td>
<td>Found dead Perth, before 2.4.51</td>
</tr>
</tbody>
</table>

### Ducks

All ringed at the New Grounds. List does not include recaptures.

<table>
<thead>
<tr>
<th>Ring no.</th>
<th>Species</th>
<th>Date Ringed</th>
<th>Recovered</th>
</tr>
</thead>
<tbody>
<tr>
<td>926463</td>
<td>Mallard</td>
<td>9.9.48</td>
<td>Shot Malmö, S. Sweden (55°36'N., 13°0'E.), 12.8.50</td>
</tr>
<tr>
<td>926499</td>
<td>Mallard</td>
<td>19.12.48</td>
<td>Klaypeda (formerly Memel), Lithuania (55°42'N., 21°10'E.), 11.9.49</td>
</tr>
<tr>
<td>926539</td>
<td>Mallard</td>
<td>11.2.49</td>
<td>Vähäkyrö, W. Finland (63°3'N., 22°10'E.), 25.4.51</td>
</tr>
<tr>
<td>403759</td>
<td>Mallard</td>
<td>25.8.49</td>
<td>Shot near Shifnal, Salop, 27.1.51</td>
</tr>
<tr>
<td>403754</td>
<td>Mallard</td>
<td>25.8.49</td>
<td>Taken Bakhuisen Decoy, near Stavoren, Friesland, Holland, end 1.51</td>
</tr>
<tr>
<td>403805</td>
<td>Mallard</td>
<td>13.9.49</td>
<td>Shot Stubbe Sø, Denmark (56°15'N., 10°40'E.), 5.8.50</td>
</tr>
<tr>
<td>403812</td>
<td>Mallard</td>
<td>13.9.49</td>
<td>Shot Frampton, Glos., 23.9.50</td>
</tr>
<tr>
<td>927601</td>
<td>Mallard</td>
<td>24.9.49</td>
<td>Found dead Lydney, Glos., 8.4.51</td>
</tr>
<tr>
<td>927607</td>
<td>Mallard</td>
<td>24.9.49</td>
<td>Aberich, near Pwllheli, Caerns, 25.10.50</td>
</tr>
<tr>
<td>927625</td>
<td>Mallard</td>
<td>24.9.49</td>
<td>Found in game-dealer's shop, Friesland, Holland, 25.10.50</td>
</tr>
<tr>
<td>927627</td>
<td>Mallard</td>
<td>24.9.49</td>
<td>Shot Ross-on-Wye, Hereford, 26.2.50</td>
</tr>
<tr>
<td>927648</td>
<td>Mallard</td>
<td>24.9.49</td>
<td>Remains found Droitwich, Worcs., 10.7.50</td>
</tr>
<tr>
<td>927672</td>
<td>Mallard</td>
<td>24.9.49</td>
<td>Shot Kalfö Fjarden, Bohuslan, W. Sweden, 5.9.50</td>
</tr>
<tr>
<td>927691</td>
<td>Mallard</td>
<td>25.9.49</td>
<td>Found dead Saul, Glos., 20.3.51</td>
</tr>
<tr>
<td>927781</td>
<td>Mallard</td>
<td>26.9.49</td>
<td>Killed by fox Todendorf, Schleswig-Holstein (53°40'N., 10°15'E.), 4.5.50</td>
</tr>
<tr>
<td>927599</td>
<td>Mallard</td>
<td>10.2.50</td>
<td>Persnas, Kalmar, Sweden (57°3'N., 16°56'E.), 10.8.50</td>
</tr>
<tr>
<td>928124</td>
<td>Mallard</td>
<td>15.8.50</td>
<td>Hockwold, Thetford, Norfolk, 11.1.51</td>
</tr>
<tr>
<td>928136</td>
<td>Mallard</td>
<td>21.8.50</td>
<td>Shot Frampton, Glos., 23.9.50</td>
</tr>
<tr>
<td>928163</td>
<td>Mallard</td>
<td>25.8.50</td>
<td>Shot Frampton, Glos., 23.9.50</td>
</tr>
<tr>
<td>928192</td>
<td>Mallard</td>
<td>30.8.50</td>
<td>Found dead Longtown, Hereford, 4.5.51</td>
</tr>
<tr>
<td>928219</td>
<td>Mallard</td>
<td>11.9.50</td>
<td>Hasfield, R. Severn, Glos., 7.1.51</td>
</tr>
<tr>
<td>928232</td>
<td>Mallard</td>
<td>11.9.50</td>
<td>Withington, Glos., 7.10.50</td>
</tr>
<tr>
<td>Ring no.</td>
<td>Species</td>
<td>Date Ringed</td>
<td>Recovered</td>
</tr>
<tr>
<td>---------</td>
<td>---------</td>
<td>-------------</td>
<td>-----------</td>
</tr>
<tr>
<td>928239</td>
<td>Mallard</td>
<td>11. 9.50</td>
<td>Oakley Park decoy, Ludlow, Salop, 22.11.50</td>
</tr>
<tr>
<td>928261</td>
<td>Mallard</td>
<td>11. 9.50</td>
<td>Shot Frampton, Glos., 23.9.50</td>
</tr>
<tr>
<td>928295</td>
<td>Mallard</td>
<td>11. 9.50</td>
<td>Shot Bibury, Glos., 1.11.50</td>
</tr>
<tr>
<td>928324</td>
<td>Mallard</td>
<td>12. 9.50</td>
<td>Shot Langley, near Slough, Bucks., 31.1.51</td>
</tr>
<tr>
<td>928348</td>
<td>Mallard</td>
<td>13. 9.50</td>
<td>Found dead West Hunthill, Som., 25.1.51</td>
</tr>
<tr>
<td>928356</td>
<td>Mallard</td>
<td>13. 9.50</td>
<td>Hartpury, Glos., 4.1.51</td>
</tr>
<tr>
<td>928359</td>
<td>Mallard</td>
<td>13. 9.50</td>
<td>Shot Belz, Morbihan, France (47°41’N., 3°13’W.), early 1.51</td>
</tr>
<tr>
<td>928365</td>
<td>Mallard</td>
<td>13. 9.50</td>
<td>Elmore Court, Glos., 30.9.50</td>
</tr>
<tr>
<td>928372</td>
<td>Mallard</td>
<td>13. 9.50</td>
<td>Shot R. Coln, Foss Bridge, Glos., 30.9.50</td>
</tr>
<tr>
<td>928414</td>
<td>Mallard</td>
<td>13. 9.50</td>
<td>Shot near Berkeley, Glos., 30.10.50</td>
</tr>
<tr>
<td>928445</td>
<td>Mallard</td>
<td>13. 9.50</td>
<td>Shot R. Wye, Ross, Hereford, -1.51</td>
</tr>
<tr>
<td>928458</td>
<td>Mallard</td>
<td>13. 9.50</td>
<td>Shot South Molton, Devon, 1.11.51</td>
</tr>
<tr>
<td>928152</td>
<td>Mallard</td>
<td>13. 9.50</td>
<td>Found dead Aylburton, near Lydney, Glos., 12.4.51</td>
</tr>
<tr>
<td>928385</td>
<td>Mallard</td>
<td>13. 9.50</td>
<td>Hauho, W. Finland (61°15’N., 24°30’E.), 26.4.51</td>
</tr>
<tr>
<td>928493</td>
<td>Mallard</td>
<td>13. 9.50</td>
<td>Elmore Court, Glos., 31.12.50</td>
</tr>
<tr>
<td>928523</td>
<td>Mallard</td>
<td>17. 9.50</td>
<td>Shot Frampton, Glos., 23.9.50</td>
</tr>
<tr>
<td>928531</td>
<td>Mallard</td>
<td>17. 9.50</td>
<td>Ross-on-Wye, Hereford, 4.1.51</td>
</tr>
<tr>
<td>928548</td>
<td>Mallard</td>
<td>18. 9.50</td>
<td>Shot Hartpury, Glos., 4.1.51</td>
</tr>
<tr>
<td>928549</td>
<td>Mallard</td>
<td>18. 9.50</td>
<td>Shot near Cheltenham, Glos., 30.10.50</td>
</tr>
<tr>
<td>928555</td>
<td>Mallard</td>
<td>18. 9.50</td>
<td>Shot near Chester, Mon., 17.10.50</td>
</tr>
<tr>
<td>928568</td>
<td>Mallard</td>
<td>18. 9.50</td>
<td>Caught by dog, Kenn, Clevendon, Som., 20.2.51</td>
</tr>
<tr>
<td>928574</td>
<td>Mallard</td>
<td>22. 9.50</td>
<td>Near Shrewsbury, Salop, 24.11.50</td>
</tr>
<tr>
<td>928587</td>
<td>Mallard</td>
<td>23. 9.50</td>
<td>Shot near Troyes, Aube, France (48°18’N., 4°40’E.), -3.51</td>
</tr>
<tr>
<td>928603</td>
<td>Mallard</td>
<td>23. 9.50</td>
<td>Found dead Lydney, Glos., 10.2.51</td>
</tr>
<tr>
<td>928614</td>
<td>Mallard</td>
<td>23. 9.50</td>
<td>Shot Frampton, Glos., same day</td>
</tr>
<tr>
<td>928617</td>
<td>Mallard</td>
<td>23. 9.50</td>
<td>Shot Frampton, Glos., same day</td>
</tr>
<tr>
<td>928629</td>
<td>Mallard</td>
<td>23. 9.50</td>
<td>Shot Frampton, Glos., same day</td>
</tr>
<tr>
<td>928668</td>
<td>Mallard</td>
<td>23. 9.50</td>
<td>Aqualate Mere, Newport, Salop, 28.10.50</td>
</tr>
<tr>
<td>928669</td>
<td>Mallard</td>
<td>24. 9.50</td>
<td>Shot Frinkney, Lincs., 1.11.50</td>
</tr>
<tr>
<td>928690</td>
<td>Mallard</td>
<td>24. 9.50</td>
<td>Strensham, Wores, 23.12.50</td>
</tr>
<tr>
<td>928694</td>
<td>Mallard</td>
<td>24. 9.50</td>
<td>Stow-on-the-Wold, Glos., 16.11.50</td>
</tr>
<tr>
<td>129469</td>
<td>Mallard</td>
<td>27. 9.50</td>
<td>Shot Lydney, Glos., 23.11.50</td>
</tr>
<tr>
<td>928730</td>
<td>Mallard</td>
<td>4.10.50</td>
<td>Shot Stanton, Salop, 27.1.51</td>
</tr>
<tr>
<td>928763</td>
<td>Mallard</td>
<td>12.10.50</td>
<td>Ross-on-Wye, Hereford, 3.12.50</td>
</tr>
<tr>
<td>928849</td>
<td>Mallard</td>
<td>26.10.50</td>
<td>Deeping St. James, Lincs., 28.11.50</td>
</tr>
<tr>
<td>928860</td>
<td>Mallard</td>
<td>27.10.50</td>
<td>Found long dead, Lydney, Glos., 25.4.51</td>
</tr>
<tr>
<td>906528</td>
<td>Teal</td>
<td>13. 9.49</td>
<td>Warkworth, 10.12.50</td>
</tr>
<tr>
<td>906724</td>
<td>Teal</td>
<td>1. 3.50</td>
<td>Onnerup, near Malmö, Sweden (55°36’N., 13°00’E.), 11.11.50</td>
</tr>
<tr>
<td>906734</td>
<td>Teal</td>
<td>30. 3.50</td>
<td>Shot Ahaus, Westphalia (52°5’N., 7°00’E.), 7.10.50</td>
</tr>
<tr>
<td>909513</td>
<td>Teal</td>
<td>20. 8.50</td>
<td>Shot Cirencester, Glos., 30.8.50</td>
</tr>
<tr>
<td>909547</td>
<td>Teal</td>
<td>31. 8.50</td>
<td>Nalliers, Vendée, France (46°40’N., 1°20’W.), 15.12.50</td>
</tr>
<tr>
<td>909607</td>
<td>Teal</td>
<td>11.10.50</td>
<td>Foxford, Co. Mayo, 25.11.50</td>
</tr>
<tr>
<td>909616</td>
<td>Teal</td>
<td>22.10.50</td>
<td>Shot Stockbridge, Hants., 12.1.51</td>
</tr>
<tr>
<td>904206</td>
<td>Wigeon</td>
<td>26. 9.47</td>
<td>Novosibirsk Govt. (54°10’N., 77°40’E.), 12.9.49</td>
</tr>
<tr>
<td>906352</td>
<td>Wigeon</td>
<td>8.11.48</td>
<td>Naryon Mar, mouth of R. Petchora (68°N., 53°E.), -6.50</td>
</tr>
<tr>
<td>906481</td>
<td>Wigeon</td>
<td>23. 9.48</td>
<td>Talais, Medoc, Gironde, France (45°59’N., 0°42’W.), 29.12.50</td>
</tr>
<tr>
<td>928314</td>
<td>Pintail</td>
<td>12. 9.50</td>
<td>Shot Medoc, Gironde, France (45°59’N., 0°42’W.), -12.50</td>
</tr>
<tr>
<td>904167</td>
<td>Shoveler</td>
<td>16.11.47</td>
<td>Shot Chateau Renault, Indre-et-Loire (47°36’N., 0°54’E.), 20.9.48</td>
</tr>
<tr>
<td>906437</td>
<td>Shoveler</td>
<td>5.12.48</td>
<td>Shot St. David’s Park, Pembs., 22.1.51</td>
</tr>
<tr>
<td>906093</td>
<td>Shoveler</td>
<td>24. 9.49</td>
<td>Shot Frampton, Glos., 23.9.50</td>
</tr>
<tr>
<td>909511</td>
<td>Shoveler</td>
<td>12. 8.50</td>
<td>Shot Groede, Zeeland, Holland (51°30’N., 3°50’E.), 15.8.50</td>
</tr>
</tbody>
</table>
BIRDS (Other than Anatidae)
RECORDED AT THE NEW GROUNDS

The following list is confined to observations made between 1st May, 1950, and 30th April, 1951, and includes notes on the common species only where of especial interest.

Principal contributors may be identified by their initials, as follows: H. B.—H. Boyd; S. T. J.—S. T. Johnstone; D. F. McK.—D. F. McKinney; P. S.—P. Scott; J. Y.—J. Yealland.

RAVEN (Corvus corax).—Two on Dumbles 20th December (H. B.).
HOODED CROW (Corvus cornix).—One on Dumbles 4th and 11th, two 12th, one 19th November; one 27th and 30th December; one 8th April (H. B., D. F. McK.).

JAY (Garrulus glandarius).—Two flying south over pens 9th May (P. S.).
SISKIN (Carduelis spinus).—One near the Patch 21st December (P. S.).
BULLFINCH (Pyrrhula pyrrhula).—Not less than thirty in area 28th December (A. Shaw); otherwise only a few scattered records of single birds.

TREE-SPARROW (Passer montanus).—One pair certainly nested in Decoy Wood and at least three others believed to have done so in Decoy and Rushy Pen. A flock of about forty near headquarters in February.


WHITE WAGTAIL (Motacilla alba).—Two on Dumbles with Yellow Wagtails 23rd April (D. F. McK.).


SEDGE-WARBLER (Acrocephalus schoenobaenus).—Two singing in Decoy Wood and seven singing in reed-bed Bottom New Piece 22nd May (H. B., D. F. McK.), but number of breeding pairs not known.
LESSER WHITETHROAT (Sylvia curruca).—One near Headquarters Cottage 8th August (H. B., D. F. McK.), one Top New Piece 31st August, and four in same place 1st September (H. B.).

FIELDFARE (Turdus pilaris) and REDWING (T. musicus).—Seen on passage on many days in winter, largest numbers 4th November (Fieldfares predominating) and 2nd and 4th January (Redwings more plentiful).

WHINCHAT (Saxicola rubetra).—One near Goose House 10th May (D. F. McK.), two same place 23rd July (H. B.), and three (adult females and two juveniles) 1st September (H. B.). One in Rushy Pen 29th April (J. Y.).

STONECHAT (Saxicola torquata).—One near Patch 25th September (H. B.), the only record for the area.

RED-SPOTTED BLUE THROAT (Luscinia svecica svecica).—A male seen in hawthorns near main pillbox 15th April (M. Everitt). Described as 'a robin with a blue breast with a red spot in the middle'. Seen at close range, though without binoculars. Could not be found subsequently.

MERLIN (Falco columbarius).—One on Dumbles 10th May (H. B., D. F. McK.); a male 12th April (D. F. McK.).

BUZZARD (Buteo buteo).—One over pens 4th June (H. B.).

NIGHT-HERON (Nycticorax nycticorax).—An adult 4th September (F. R. H. Brian, E. J. B. Langhorne, H. B., P. S.), seen flying past Rushy Pen by all four observers. In flight appeared as a small heron with a short neck and rather short wings, underparts white, black of crown merging with black on mantle, wings and tail grey. The first two observers twice saw the bird at rest alongside the rhine east of the pens, once at c.30 yds. for some minutes, and were impressed by the whiteness of the underparts and the markedly yellow legs. This appears to be only the second record for the county.

GEESE AND DUCKS.—Details on pages 7 and 21.

MANX SHEARWATER (Puffinus puffinus).—One flying over river 12th September after south-westerly gale (H. B.). It was being harried by Black-headed Gulls, which repeatedly forced it down to the water and made it dive. Another, found at Uley, Glos., on 11th, was released on the river on 12th but was taken by a Peregrine within 10 minutes.

GREATCRESTED GREBE (Podiceps cristatus).—One off Purton breakwater 29th October (J. Field).

LITTLE GREBE (Podiceps ruficollis).—Single birds seen in Decoy on seventeen days between 8th September and 12th November, two on 15th September.

STOCK-DOVE (Columba oenas).—A pair nested successfully in the Decoy Wood. Two nestlings ringed.

TURTLE-DOVE (Streptopelia turtur).—Three pairs nested in Decoy Wood. Three juveniles and 2 nestlings ringed. A flock of 20 seen on Dumbles 10th May.

BAR-TAILED GODWIT (Limosa lapponica).—One 13th (J. P. Paige, S. T. J.), three 28th August, one 2nd September (H. B.), one 29th December to 3rd January (J. D. Powne).

BLACK-TAILED GODWIT (Limosa limosa).—In August: four on 13th (H. B.), nineteen 18th (J. H. P. Allan, C. N. Mallinson), three 26th (L. W. Hayward, Mrs. M. J. Morgan), twenty-three 27th, eight 28th, three 29th and
31st (H. B.). Five on 1st, two 2nd, one 7th September (H. B.). One 8th, five 12th April (D. F. McK.).

**Curlew (Numenius arquata).**—Largest flocks counted 312 31st August, c. 400 26th January (H. B.).

**Whimbrel (Numenius phaeopus).**—One or two seen on many days in May, July, August and September. Twenty-two, including sixteen juveniles, 10th August (H. B.).

**Jack Snipe (Lymnocryptetes minimus).**—One 19th November (P. S.).


**Knot (Calidris canutus).**—One 26th August (L. W. Hayward, Mrs. M. J. Morgan).

**Dunlin (Calidris alpina).**—Most numerous in May, when c.800 present 10th and 23rd; winter numbers small.

**Little Stint (Calidris minuta).**—Two 13th (J. P. Paige, S. T. J.), one 28th August (H. B.).

**Sanderling (Calidris alba).**—A flock of 40 22nd May (H. B., D. F. McK.), and more 23rd but good count impracticable; one 26th August (L. W. Hayward, Mrs. M. J. Morgan), two or three 3rd September (R. Kidwell); three 28th March (Miss M. S. van Oostveen).

**Ruff (Philomachus pugnax).**—One 28th August (Salim Ali, H. B., P. S.), 7th September (R. Kidwell) and 29th September (H. B.).

**Common Sandpiper (Actitis hypoleucos).**—Ten 14th July, the most seen. One caught in decoy 26th April.

**Green Sandpiper (Tringa ochropus).**—One on Dumbles 14th and 27th June (H. B., D. F. McK.), one flying over Rushy Pen 15th August (J. P. Paige, S. T. J.), three Dumbles 24th April (B. King).

**Redshank (Tringa totanus).**—Present throughout year, but eight 27th June the most recorded.

**Greenshank (Tringa nebularia).**—Two Dumbles 13th May (D. F. McK.), single birds 18th May (L. W. Hayward), 14th July (H. B.), 13th August (J. P. Paige, S. T. J.), 1st September (H. B.), two over Rushy Pen 5th September (R. Kidwell), single birds on river 6th to 9th September (R. Kidwell).

**Golden Plover (Pluvialis apricaria).**—Seen frequently during winter but two 23rd May (D. F. McK.), the only indication of late spring passage.

**Grey Plover (Squatarola squatarola).**—Recorded only in October; nineteen 12th, eight 13th, seven 14th (D. F. McK.).

**Oyster-Catcher (Hæmatopus ostralegus).**—Two on river 13th August (J. P. Paige, S. T. J.).

**Black Tern (Chlidonias niger).**—Sixteen over river 13th May (D. F. McK.). One 7th August (L. W. Hayward, Mrs. M. J. Morgan).

**Common or Arctic Tern (Sterna hirundo or macrura).**—About thirty 13th May (D. F. McK.). One, apparently macrura, 21st September (L. W. Hayward, Mrs. M. J. Morgan), two 23rd, one 27th, 29th September (H. B.), one 11th, 12th, 13th, two or more 14th October (D. F. McK.).
**Little Tern** (*Sterna albitrons*).—One 5th October and a juvenile tern thought to be of this species 14th October (D. F. McK.).

**Black-headed Gull** (*Larus ridibundus*).—A gull seen with several Black-headed on the Dumbles 11th November must presumably be ascribed to this species though quite abnormally coloured. In size, shape and mode of flight the bird resembled its companions, but the whole of its plumage was a brilliant white except for black tips to the primaries (appearing more extensive below than above). The bill was bright coral-red with a black tip and the legs also bright red, not crimson.

**Common Gull** (*Larus canus*).—An estimate of about 20,000 roosting on mud 26th February (D. F. McK.).

**Lesser Black-backed Gull** (*Larus fuscus*).—One frequented Patch throughout winter; a few other records of single birds in winter.

**Little Crake** (*Porzana parva*).—An adult male frequented the decoy from 22nd to 29th April, when it was found dead with an injured head. It was very tame and was watched on many occasions by at least ten observers. The general colouring resembled that of a Water-Rail, though the back was a paler brown with quite large white spots on the mantle feathers (visible only at very close range). The under tail-coverts were white flecked with black. The bird was very much smaller than *Rallus aquaticus*. Its overall length was the same as that of a Hedge Sparrow, *Prunella modularis*, which at one time was feeding beside it. The bill was yellowish-green with red at the gape (same on the lower mandible, though more on the upper); the red was not often apparent in the field. The legs and feet were green.

This appears to be the first record of this species for the county. The specimen is now in the British Museum (Natural History).

**Coot** (*Fulica atra*).—A juvenile, not yet full-grown, in Rushy Pen 6th and 7th August. Winter population in pens at maximum of eleven in late January and early February.
WATERFOWL COLLECTION

The collection has continued to improve during the year and now consists of 130 species and subspecies and some 920 birds altogether. One of the most attractive features is the increase in the numbers of full-winged birds. During the year it was possible to see the following species in flight:

- Southern Red-billed Whistling Duck (D. a. discolor).
- White-faced Whistling Duck (D. viduata).
- Coscoroba Swan (C. coscoroba).
- Barnacle Goose (B. leucopsis).
- Dark-bellied Brent Goose (B. b. bernicla).
- Grey Lag Goose (A. a. anser).
- Yellow-billed Bean Goose (A. f. fabalis).
- Pink-footed Goose (A. brachyrhynchus).
- White-fronted Goose (A. a. albeifrons).
- Bar-headed Goose (A. indicus).
- Emperor Goose (A. canagicus).
- Blue Goose (A. c. cerulescens).
- Lesser Snow Goose (A. c. hyperboreus).
- Greater Snow Goose (A. c. atlanticus).
- Ross's Goose (A. rossi).
- Bahama Pintail (A. bahamensis).
- Mallard (A. p. platyrhynchos).
- Pintail (A. a. acuta).
- Gadwall (A. s. strepera).
- Wigeon (A. penelope).
- Shoveler (A. clypeata).
- Mandarin Duck (A. galericulata).
- Carolina Duck (A. sponsa).

As usual a large number of wild birds spent the winter in the pens. Most numerous were Pintails. Details of these will be found on pp. 21–22.

ADDITIONS TO THE COLLECTION

New Species

Eight new species and one new sub-species have been added to the collection during the past year:

- Wandering Whistling Duck (Dendrocygna arcuata).—A pair received as an exchange from Rotterdam Zoo.
- Indian Spot-bill (Anas p. pecilorhyncha).—A pair received in exchange from Rotterdam Zoo.
- Smeew (Mergus albellus).—A pair from Hamburg Zoo; the female unfortunately died on the night of arrival.
- White-eye, or Ferruginous Duck (Aythya n. nyroca).—A pair from Rotterdam Zoo.
- Indian Pygmy Goose, or Cotton Teal (Nettapus c. coromandelianus).—Three males and one female from Herr F. Duyzend, of Zeist, Holland.
Severn Wildfowl Trust

South African Black Duck (Anas s. sparsa).—A male and three females from Mr. M. Wocke, of Belleville, Cape Province.

African White-backed Duck (Thalassornis l. leuconota).—A pair presented by Mr. M. Wocke.

Hartlaub's Duck (Cairina h. hartlaubi).—Two pairs collected by Mr. K. Smith in the Southern Province of Sierra Leone. This is a species of particular interest, being, it is believed, new to British aviculture.

Pacific White-fronted Goose (Anser albifrons frontalis).—A pair as a gift from Dr. Dillon Ripley.

Species Not New to the Collection

In addition to the new species, the following forms, already represented in the collection, have been acquired:

Maned Goose (Chenonetta jubata).—Five pairs.

Chestnut-breasted Teal (Anas castanea).—One pair.

Australian Grey Teal (Anas gibberifrons matthewsi).—One pair.

This valuable collection was presented to the Trust by Major W. Winter Irving, of Victoria, Australia.

Spur-winged Goose (Plectropterus gambensis niger).—Two pairs received in exchange from Major H. R. Hendy, in Swaziland, S. Africa.

Spur-winged Goose (Plectropterus g. gambensis).—A pair given by Mr. R. H. Simcock, in Nigeria.

Grey Lag Goose (Anser a. anser).—Three presented by Mr. A. Stewart Dean.

Mandarin Duck (Aix galericulata).—Seven young ones as a gift from Mr. C. D. W. Savage.

Blue-winged Teal (Anas discors).—Three pairs from Mr. Calvin Wilson, of Saltlake City, Utah.

Blue-winged Goose (Cyanochen cyanoptera).—Two males and one female.

Abyssinian Yellow-billed Duck (Anas undulata ruppelli).—Three drakes.

Southern Pochard (Netta erythropthalma).—Two males and one female.

The above three species presented by Major A. Irwin, at Addis Ababa.

White-faced Whistling Duck (Dendrocygna viduata).—Two males and one female.

South American Comb Duck (Sarkidiornis melanotus carunculatus).—A pair.

Brazilian Teal (Amazonetta braziliensis).—A male and two females.

The above three species presented by Mr. C. R. Murray, of Rio de Janeiro.

Barrow's Golden-eye (Bucephala islandica).—A male and four females presented by Prof. I. McT. Cowan, of Vancouver.

Cape Shoveler (Anas smithi).—One male and two females.

Red-billed Pintail (Anas erythrorhyncha).—Four females.

South African Yellow-billed Duck (Anas undulata).—Four females.

The above three species presented by Mr. M. Wocke, of Cape Province.

Hawaiian Goose (Branta sandvicensis).—A male on loan from Mr. H. Shipman, of Hawaii.

Common Scoter (Melanitta n. nigra).—A male presented by Miss Tucker, and a female by Mr. E. G. Holt.
# List of Birds (with Numbers of Specimens) in the Collection at 30th April, 1951

<table>
<thead>
<tr>
<th>Bird Name</th>
<th>Specimens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magpie Goose (<em>Anseranas semipalmata</em>)</td>
<td>2</td>
</tr>
<tr>
<td>Black-billed Whistling Duck (<em>Dendrocygna arborea</em>)</td>
<td>1</td>
</tr>
<tr>
<td>Southern Red-billed Whistling Duck (<em>D. autumnalis discolor</em>)</td>
<td>8</td>
</tr>
<tr>
<td>Fulvous Whistling Duck (<em>D. bicolor</em>)</td>
<td>2</td>
</tr>
<tr>
<td>Wandering Whistling Duck (<em>D. arcuata</em>)</td>
<td>2</td>
</tr>
<tr>
<td>Javan Whistling Duck (<em>D. javanica</em>)</td>
<td>2</td>
</tr>
<tr>
<td>Eyton's Whistling Duck (<em>D. eytoni</em>)</td>
<td>2</td>
</tr>
<tr>
<td>White-faced Whistling Duck (<em>D. viduata</em>)</td>
<td>8</td>
</tr>
<tr>
<td>Coscoroba Swan (<em>Coscoroba coscoroba</em>)</td>
<td>4</td>
</tr>
<tr>
<td>Whooper Swan (<em>Cygnus c. cygnus</em>)</td>
<td>3</td>
</tr>
<tr>
<td>Whistling Swan (<em>C. c. columbianus</em>)</td>
<td>4</td>
</tr>
<tr>
<td>Bewick's Swan (<em>C. columbianus bewickii</em>)</td>
<td>2</td>
</tr>
<tr>
<td>Eastern Bewick's Swan (<em>C. c. jankowskii</em>)</td>
<td>2</td>
</tr>
<tr>
<td>Black-necked Swan (<em>C. melanocoryphas</em>)</td>
<td>2</td>
</tr>
<tr>
<td>Mute Swan (<em>C. olor</em>)</td>
<td>4</td>
</tr>
<tr>
<td>Black Swan (<em>C. atratus</em>)</td>
<td>2</td>
</tr>
<tr>
<td>Canada Goose (<em>Branta canadensis canadensis</em>)</td>
<td>2</td>
</tr>
<tr>
<td>Central Canada Goose (<em>B. c. interior</em>)</td>
<td>2</td>
</tr>
<tr>
<td>Lesser Canada Goose (<em>B. c. parvipes</em>)</td>
<td>1</td>
</tr>
<tr>
<td>Western Canada Goose (<em>B. c. occidentalis</em>)</td>
<td>6</td>
</tr>
<tr>
<td>Tundra Canada Goose (<em>B. c. leucopareia</em>)</td>
<td>8</td>
</tr>
<tr>
<td>Cackling Goose (<em>B. c. minima</em>)</td>
<td>10</td>
</tr>
<tr>
<td>Hawaiian Goose (<em>B. sandvicensis</em>)</td>
<td>3</td>
</tr>
<tr>
<td>Barnacle Goose (<em>B. leucopsis</em>)</td>
<td>17</td>
</tr>
<tr>
<td>Dark-bellied Brent Goose (<em>B. b. bernicla</em>)</td>
<td>9</td>
</tr>
<tr>
<td>Light-bellied Brent Goose (<em>B. b. hrota</em>)</td>
<td>3</td>
</tr>
<tr>
<td>Black Brant (<em>B. b. nigricans</em>)</td>
<td>3</td>
</tr>
<tr>
<td>Red-breasted Goose (<em>B. ruficollis</em>)</td>
<td>19</td>
</tr>
<tr>
<td>Swan Goose (<em>Anser cygnoides</em>)</td>
<td>2</td>
</tr>
<tr>
<td>Grey Lag Goose (<em>Anser a. anser</em>)</td>
<td>9</td>
</tr>
<tr>
<td>Eastern Greylag Goose (<em>A. a. rubrirostris</em>)</td>
<td>5</td>
</tr>
<tr>
<td>Common Name</td>
<td>Scientific Name</td>
</tr>
<tr>
<td>-------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Yellow-billed Bean Goose</td>
<td>Anser fabalis f. fabalis</td>
</tr>
<tr>
<td>Bean Goose</td>
<td>Anser fabalis</td>
</tr>
<tr>
<td>Pink-footed Goose</td>
<td>Anser brachyrhynchus</td>
</tr>
<tr>
<td>White-fronted Goose</td>
<td>Anser albifrons</td>
</tr>
<tr>
<td>Greenland White-fronted Goose</td>
<td>Anser a. flavirostris</td>
</tr>
<tr>
<td>Pacific White-fronted Goose</td>
<td>Anser a. frontalis</td>
</tr>
<tr>
<td>Perry River White-fronted Goose</td>
<td>Anser a. albifrons ssp</td>
</tr>
<tr>
<td>Lesser White-fronted Goose</td>
<td>Anser erythropus</td>
</tr>
<tr>
<td>Bar-headed Goose</td>
<td>Anser indicus</td>
</tr>
<tr>
<td>Emperor Goose</td>
<td>Anser canagicus</td>
</tr>
<tr>
<td>Blue Goose</td>
<td>Anser c. caerulescens</td>
</tr>
<tr>
<td>Lesser Snow Goose</td>
<td>Anser c. hyperboreus</td>
</tr>
<tr>
<td>Greater Snow Goose</td>
<td>Anser c. atlanticus</td>
</tr>
<tr>
<td>Ross's Goose</td>
<td>Anser rossi</td>
</tr>
<tr>
<td>Ruddy Shelduck</td>
<td>Tadorna ferruginea</td>
</tr>
<tr>
<td>South African Shelduck</td>
<td>Tadorna cana</td>
</tr>
<tr>
<td>Australian Shelduck</td>
<td>Tadorna tadornoides</td>
</tr>
<tr>
<td>New Zealand Shelduck</td>
<td>Tadorna variagata</td>
</tr>
<tr>
<td>Red-backed Radjah Shelduck</td>
<td>Tadorna radjah</td>
</tr>
<tr>
<td>Common Shelduck</td>
<td>Tadorna tadorna</td>
</tr>
<tr>
<td>Egyptian Goose</td>
<td>Alopochen aegyptiacus</td>
</tr>
<tr>
<td>Orinoco Goose</td>
<td>Neochen jubatus</td>
</tr>
<tr>
<td>Abyssinian Blue-winged Goose</td>
<td>Cyanochen cyanoptera</td>
</tr>
<tr>
<td>Ashy-headed Goose</td>
<td>Chloephaga poliocephala</td>
</tr>
<tr>
<td>Ruddy-headed Goose</td>
<td>Chloephaga rubicola</td>
</tr>
<tr>
<td>Greater Magellan Goose</td>
<td>Chloephaga leucoptera</td>
</tr>
<tr>
<td>Lesser Magellan Goose</td>
<td>Chloephaga p. picta</td>
</tr>
<tr>
<td>Cereopsis Goose</td>
<td>Cereopsis novae-hollandiae</td>
</tr>
<tr>
<td>Andean Crested Duck</td>
<td>Lophonetta specularioides alticola</td>
</tr>
<tr>
<td>Marbled Teal</td>
<td>Anas angustirostris</td>
</tr>
<tr>
<td>Cape Teal</td>
<td>Anas capensis</td>
</tr>
<tr>
<td>Versicolor Teal</td>
<td>Anas v. versicolor</td>
</tr>
<tr>
<td>Punta Teal</td>
<td>Anas v. puna</td>
</tr>
<tr>
<td>Red-billed Pintail</td>
<td>Anas erythropyna</td>
</tr>
<tr>
<td>Bahama Pintail</td>
<td>Anas bahamensis</td>
</tr>
<tr>
<td>Chilean Pintail</td>
<td>Anas georgica spinicauda</td>
</tr>
<tr>
<td>Pintail</td>
<td>Anas a. acuta</td>
</tr>
<tr>
<td>Chilean Teal</td>
<td>Anas f. flavirostris</td>
</tr>
<tr>
<td>Common Teal</td>
<td>Anas c. crecca</td>
</tr>
<tr>
<td>Green-winged Teal</td>
<td>Anas c. carolinensis</td>
</tr>
<tr>
<td>Baikal Teal</td>
<td>Anas formosa</td>
</tr>
<tr>
<td>Australian Grey Teal</td>
<td>Anas gibberifrons mathewsi</td>
</tr>
<tr>
<td>Chestnut-breasted Teal</td>
<td>Anas castanea</td>
</tr>
<tr>
<td>New Zealand Brown Duck</td>
<td>Anas aucklandica chlorotis</td>
</tr>
<tr>
<td>Mallard</td>
<td>Anas platyrhynchos</td>
</tr>
<tr>
<td>Hawaiian Duck</td>
<td>Anas p. wyvilliana</td>
</tr>
<tr>
<td>North American Black Duck</td>
<td>Anas f. rubripes</td>
</tr>
<tr>
<td>Florida Duck</td>
<td>Anas f. fulvignula</td>
</tr>
<tr>
<td>Mottled Duck</td>
<td>Anas f. maculosa</td>
</tr>
<tr>
<td>Indian Spot-bill</td>
<td>Anas p. pecilorhyncha</td>
</tr>
<tr>
<td>Australian Grey Duck</td>
<td>Anas superciliosa rogersi</td>
</tr>
</tbody>
</table>
**Annual Report 1950-51**

<table>
<thead>
<tr>
<th>Species Name</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>South African Yellow-bill (A. u. undulata)</td>
<td>10</td>
</tr>
<tr>
<td>Abyssinian Yellow-bill (A. u. rupelli)</td>
<td>5</td>
</tr>
<tr>
<td>Cameroonian Yellow-bill (A. undulata ssp.)</td>
<td>1</td>
</tr>
<tr>
<td>Philippine Duck (A. luzonica)</td>
<td>2</td>
</tr>
<tr>
<td>South African Black Duck (A. s. sparsa)</td>
<td>3</td>
</tr>
<tr>
<td>Gadwall (A. s. strepera)</td>
<td>25</td>
</tr>
<tr>
<td>Falcated Teal (A. falcata)</td>
<td>2</td>
</tr>
<tr>
<td>Wigeon (A. penelope)</td>
<td>20</td>
</tr>
<tr>
<td>American Wigeon (A. americana)</td>
<td>7</td>
</tr>
<tr>
<td>Chiloe Wigeon (A. sibilatrix)</td>
<td>6</td>
</tr>
<tr>
<td>Blue-winged Teal (A. discors)</td>
<td>5</td>
</tr>
<tr>
<td>Cinnamon Teal (A. c. cyanoptera)</td>
<td>10</td>
</tr>
<tr>
<td>Garganey (A. querquedula)</td>
<td>12</td>
</tr>
<tr>
<td>South American Shoveler (A. platalea)</td>
<td>2</td>
</tr>
<tr>
<td>Cape Shoveler (A. smithi)</td>
<td>3</td>
</tr>
<tr>
<td>Shoveler (A. clypeata)</td>
<td>17</td>
</tr>
<tr>
<td>Red-crested Pochard (Netta rufina)</td>
<td>6</td>
</tr>
<tr>
<td>Rosy-bill (N. pepeosaca)</td>
<td>6</td>
</tr>
<tr>
<td>Southern Pochard (N. erythropthalma)</td>
<td>13</td>
</tr>
<tr>
<td>Canvasback (Aythya vallisneria)</td>
<td>5</td>
</tr>
<tr>
<td>Common Pochard (A. ferina)</td>
<td>10</td>
</tr>
<tr>
<td>Red-head (A. americana)</td>
<td>8</td>
</tr>
<tr>
<td>White-eye, or Ferruginous Duck (A. nyroca)</td>
<td>2</td>
</tr>
<tr>
<td>Ring-necked Scaup (A. collaris)</td>
<td>2</td>
</tr>
<tr>
<td>Tufted Duck (A. fuligula)</td>
<td>8</td>
</tr>
<tr>
<td>Common Scaup (A. m. marila)</td>
<td>6</td>
</tr>
<tr>
<td>Lesser Scaup (A. affinis)</td>
<td>5</td>
</tr>
<tr>
<td>Brazilian Teal (Amazonetta braziliensis)</td>
<td>2</td>
</tr>
<tr>
<td>Maned Goose (Chenonetta jubata)</td>
<td>13</td>
</tr>
<tr>
<td>Mandarin Duck (Aix galericulata)</td>
<td>15</td>
</tr>
<tr>
<td>Carolina Duck (A. sponsa)</td>
<td>26</td>
</tr>
<tr>
<td>Indian Pygmy Goose, or Cotton Teal (Netta palustris)</td>
<td>4</td>
</tr>
<tr>
<td>Indian Comb Duck (Sarkidiornis m. melanotus)</td>
<td>2</td>
</tr>
<tr>
<td>South American Comb Duck (S. m. carunculatus)</td>
<td>3</td>
</tr>
<tr>
<td>Hartlaub's Duck (Cairina hartlaubi)</td>
<td>4</td>
</tr>
<tr>
<td>Muscovy Duck (C. moschata)</td>
<td>3</td>
</tr>
<tr>
<td>Spur-winged Goose (Plectropterus g. gambensis)</td>
<td>4</td>
</tr>
<tr>
<td>Black Spur-winged Goose (P. g. niger)</td>
<td>3</td>
</tr>
<tr>
<td>Common Eider (Somateria mollissima)</td>
<td>7</td>
</tr>
<tr>
<td>Common Scoter (Melanitta nigra)</td>
<td>1</td>
</tr>
<tr>
<td>Barrow's Goldeneye (Bucephala islandica)</td>
<td>9</td>
</tr>
<tr>
<td>American Goldeneye (B. clangula americana)</td>
<td>1</td>
</tr>
<tr>
<td>Common Goldeneye (B. c. clangula)</td>
<td>1</td>
</tr>
<tr>
<td>Smew (Mergus albellus)</td>
<td>1</td>
</tr>
<tr>
<td>Goosander (M. merganser)</td>
<td>1</td>
</tr>
<tr>
<td>Red-breasted Merganser (M. serrator)</td>
<td>6</td>
</tr>
<tr>
<td>North American Ruddy Duck (Oxyura jamaicensis)</td>
<td>7</td>
</tr>
<tr>
<td>African White-backed Duck (Thalassornis l. leuconota)</td>
<td>2</td>
</tr>
</tbody>
</table>

**Total** | **890**
### HYBRIDS

<table>
<thead>
<tr>
<th>Hybrid</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andean Goose × Upland Goose</td>
<td>2</td>
</tr>
<tr>
<td>Grey Lag Goose × Barnacle Goose</td>
<td>2</td>
</tr>
<tr>
<td>Ross's Goose × Red-breasted Goose</td>
<td>1</td>
</tr>
<tr>
<td>Red-breasted Goose × Lesser White-fronted Goose</td>
<td>3</td>
</tr>
<tr>
<td>Lesser Snow Goose × Blue Snow Goose</td>
<td>3</td>
</tr>
<tr>
<td>Grey Lag Goose × Canada Goose</td>
<td>1</td>
</tr>
<tr>
<td>White-fronted Goose × Bean Goose</td>
<td>2</td>
</tr>
<tr>
<td>Tundra Canada Goose × Lesser Snow Goose</td>
<td>1</td>
</tr>
<tr>
<td>Andean Goose × Egyptian Goose</td>
<td>1</td>
</tr>
<tr>
<td>Rosy-bill × Yellow-bill</td>
<td>1</td>
</tr>
<tr>
<td>Chilean Teal × Carolina Duck</td>
<td>3</td>
</tr>
<tr>
<td>Red-crested Pochard × Chilean Pintail</td>
<td>2</td>
</tr>
<tr>
<td>Cape Teal × Tufted Duck</td>
<td>1</td>
</tr>
<tr>
<td>Chilean Pintail × Bahama Pintail</td>
<td>2</td>
</tr>
<tr>
<td>Falcated Teal × American Wigeon</td>
<td>1</td>
</tr>
<tr>
<td>Chilean Teal × Chestnut-breasted Teal</td>
<td>3</td>
</tr>
<tr>
<td>Blue-winged Teal × Cinnamon Teal</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>32</strong></td>
</tr>
</tbody>
</table>

Total number of birds at the New Grounds 922
THE BREEDING SEASON, 1950

By J. Yealland, Curator

From the tables which follow it will be seen that, in general, a greater degree of success was achieved with the rearing of goslings than with ducklings.

The summer was persistently wet and often cold so that the growth of grass and clover was maintained at a higher rate than would have been the case in a hot dry summer when grass grows little and becomes tough and unappetizing.

It may have been that this abundance and palatability of plant food more than compensated for the inclement weather by maintaining health and building up the goslings' resistance to chills. However that may be, there is no doubt that cold and wet are death to all but the strongest of ducklings, and it was evident from post-mortem examination that many of the deaths were traceable to chill.

There were some cases of paratyphoid and a number of ducklings were infested with tape-worms of the genus *Hymenolepis*, while others died at an early age through having failed to assimilate all the yolk of the egg. The cause of this has not been ascertained, but it occurred mostly in those which were late in hatching.

A disappointment was the failure to rear more than one Marbled Teal. These were extremely sensitive to cold, a condition which has been observed elsewhere.

The Southern Red-billed Whistling ducklings hatched very late in the year and, though they thrived until the end of September, all but four then developed rickets.

This year the parents, a full-winged pair, went to the other extreme and nested early in March. Up to the 30th of April, 31 eggs were laid, though only five of them have proved fertile.

It would be almost impossible to reach more than general conclusions from the analysis, for some of the parent birds are elderly, others may be inbred or closely related, while it is possible that some, having been bred in captivity, are of slightly inferior physical quality and therefore tend to be unlikely to produce really healthy young.

This possibility was particularly noticeable in the Ross's Geese, the two young whose father was a wild-caught bird from the Perry River being far superior to those of entirely hand-reared parentage.

The food used for goslings was fine soaked biscuit-meal in addition, of course, to grass and clover growing in the pens. Food for ducklings included the biscuit-meal, dried milk, raw egg, meat-meal (believed to be made from dried liver or whale meat), dried and fresh ants' 'eggs', cod-liver oil, various small water-life (including small shrimps which are found in the Severn and which form the main food of the local wild Shelducklings), and duckweed. The Sea-ducklings were reared on minced sheep's heart, ants' 'eggs', a small amount of biscuit-meal, water insects and cod-liver oil.

1During the 1951 season the female laid 75 eggs from which only 5 young were reared.
<table>
<thead>
<tr>
<th>Species</th>
<th>Breeding pairs</th>
<th>Date of first egg</th>
<th>No. of eggs</th>
<th>Taken by vermin</th>
<th>Infertile</th>
<th>Broken by hen</th>
<th>Added</th>
<th>Dead in shell</th>
<th>Hatched</th>
<th>% Hatched of eggs laid</th>
<th>% in 1949</th>
<th>Crushed by hen</th>
<th>Killed by predators</th>
<th>Reared in 1949</th>
<th>% Reared of eggs hatched</th>
<th>% in 1949</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Southern Red-billed Whistling Duck</td>
<td>1</td>
<td>22.7</td>
<td>14</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>1</td>
<td>13</td>
<td>93%</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>31%</td>
<td>—</td>
<td>Plus 5 rachitic specimens destroyed</td>
</tr>
<tr>
<td>Coscoroba Swan</td>
<td>1</td>
<td>13.3</td>
<td>1</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Tundra Canada Goose</td>
<td>2</td>
<td>10.4</td>
<td>23</td>
<td>—</td>
<td>—</td>
<td>1</td>
<td>—</td>
<td>1</td>
<td>9</td>
<td>39%</td>
<td>17%</td>
<td>1</td>
<td>2</td>
<td>6</td>
<td>4</td>
<td>66%</td>
<td>100%</td>
</tr>
<tr>
<td>Western Canada</td>
<td>2</td>
<td>20.4</td>
<td>23</td>
<td>—</td>
<td>13</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>3</td>
<td>—</td>
<td>100%</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Barnacle</td>
<td>1</td>
<td>23.6</td>
<td>4</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>1</td>
<td>3</td>
<td>75%</td>
<td>50%</td>
<td>—</td>
<td>—</td>
<td>2</td>
<td>—</td>
<td>67%</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Red-breasted</td>
<td>1</td>
<td>15.6</td>
<td>5</td>
<td>—</td>
<td>4</td>
<td>—</td>
<td>1</td>
<td>20%</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>1</td>
<td>100%</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Greylag</td>
<td>1</td>
<td>18.4</td>
<td>7</td>
<td>—</td>
<td>6</td>
<td>—</td>
<td>1</td>
<td>14%</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>1</td>
<td>100%</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Lesser White-fronted</td>
<td>1+1f</td>
<td>1.5</td>
<td>11</td>
<td>—</td>
<td>7</td>
<td>2</td>
<td>2</td>
<td>18%</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>2</td>
<td>100%</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Emperor</td>
<td>2</td>
<td>30.4</td>
<td>16</td>
<td>1</td>
<td>9</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>19%</td>
<td>33%</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>33%</td>
<td>100%</td>
<td>—</td>
</tr>
<tr>
<td>Bar-headed</td>
<td>2</td>
<td>15.4</td>
<td>13</td>
<td>2</td>
<td>2</td>
<td>—</td>
<td>2</td>
<td>7</td>
<td>54%</td>
<td>89%</td>
<td>—</td>
<td>7</td>
<td>6</td>
<td>100%</td>
<td>75%</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Greater Snow</td>
<td>3+1f</td>
<td>3.5</td>
<td>69</td>
<td>4</td>
<td>33</td>
<td>—</td>
<td>2</td>
<td>1</td>
<td>28</td>
<td>40%</td>
<td>50%</td>
<td>2</td>
<td>15</td>
<td>3</td>
<td>54%</td>
<td>30%</td>
<td>Several died from what appeared to be epilepsy</td>
</tr>
<tr>
<td>Lesser Snow</td>
<td>1</td>
<td>18.5</td>
<td>5</td>
<td>1</td>
<td>2</td>
<td>—</td>
<td>2</td>
<td>40%</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>1</td>
<td>1</td>
<td>50%</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Species</td>
<td>1+1f</td>
<td>29.4</td>
<td>9</td>
<td>6</td>
<td>—</td>
<td>—</td>
<td>4</td>
<td>44%</td>
<td>71%</td>
<td>—</td>
<td>1</td>
<td>3</td>
<td>6</td>
<td>75%</td>
<td>60%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------------</td>
<td>------</td>
<td>------</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ross's Snow</td>
<td>3</td>
<td>4.5</td>
<td>16</td>
<td>3</td>
<td>—</td>
<td>—</td>
<td>4</td>
<td>9</td>
<td>56%</td>
<td>23%</td>
<td>—</td>
<td>4</td>
<td>2</td>
<td>44%</td>
<td>50%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ruddy Shelduck</td>
<td>1</td>
<td>28.4</td>
<td>6</td>
<td>6</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>2</td>
<td>1</td>
<td>100%</td>
<td>100%</td>
<td>—</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N.Z. Shelduck</td>
<td>1</td>
<td>11.4</td>
<td>8</td>
<td>6</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>2</td>
<td>25%</td>
<td>14%</td>
<td>—</td>
<td>2</td>
<td>1</td>
<td>100%</td>
<td>100%</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>Egyptian</td>
<td>2</td>
<td>14.3</td>
<td>31</td>
<td>16</td>
<td>1</td>
<td>1</td>
<td>13</td>
<td>43%</td>
<td>77%</td>
<td>—</td>
<td>13</td>
<td>9</td>
<td>100%</td>
<td>90%</td>
<td>—</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upland</td>
<td>1</td>
<td>2.4</td>
<td>11</td>
<td>11</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ruddy-headed</td>
<td>1</td>
<td>26.4</td>
<td>16</td>
<td>16</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cereopsis</td>
<td>1</td>
<td>13.2</td>
<td>5</td>
<td>1</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>4</td>
<td>80%</td>
<td>50%</td>
<td>—</td>
<td>4</td>
<td>100%</td>
<td>0%</td>
<td>—</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marbled Teal</td>
<td>1</td>
<td>?</td>
<td>9</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>9</td>
<td>100%</td>
<td>—</td>
<td>—</td>
<td>1</td>
<td>11%</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Puna Teal</td>
<td>1+1f</td>
<td>10.4</td>
<td>15</td>
<td>1*</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>33%</td>
<td>43%</td>
<td>—</td>
<td>1</td>
<td>20%</td>
<td>0%</td>
<td>*Taken by visitor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Red-billed Pintail</td>
<td>1</td>
<td>?</td>
<td>4</td>
<td>4</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bahama Pintail</td>
<td>1</td>
<td>5.5</td>
<td>45</td>
<td>9</td>
<td>1</td>
<td>1</td>
<td>34</td>
<td>76%</td>
<td>88%</td>
<td>—</td>
<td>23</td>
<td>9</td>
<td>69%</td>
<td>64%</td>
<td>—</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chilean Pintail</td>
<td>1</td>
<td>27.3</td>
<td>14</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td>5</td>
<td>25%</td>
<td>—</td>
<td>—</td>
<td>2</td>
<td>5</td>
<td>50%</td>
<td>—</td>
<td>—</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pintail</td>
<td>3</td>
<td>30.3</td>
<td>28</td>
<td>9</td>
<td>2</td>
<td>7</td>
<td>3</td>
<td>7</td>
<td>25%</td>
<td>43%</td>
<td>—</td>
<td>4</td>
<td>3</td>
<td>56%</td>
<td>33%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black Duck</td>
<td>2</td>
<td>26.3</td>
<td>24</td>
<td>4</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>20</td>
<td>83%</td>
<td>69%</td>
<td>—</td>
<td>3</td>
<td>11</td>
<td>15%</td>
<td>44%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mottled</td>
<td>1</td>
<td>24.4</td>
<td>6</td>
<td>—</td>
<td>2</td>
<td>4</td>
<td>66%</td>
<td>58%</td>
<td>—</td>
<td>—</td>
<td>4</td>
<td>5</td>
<td>100%</td>
<td>71%</td>
<td>—</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Florida</td>
<td>1</td>
<td>19.3</td>
<td>9</td>
<td>9</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>2</td>
<td>0%</td>
<td>0%</td>
<td>—</td>
<td>—</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

[continued]

Annual Report 1950-51
<table>
<thead>
<tr>
<th>Species</th>
<th>Breeding pairs</th>
<th>Date of first egg</th>
<th>No. of eggs</th>
<th>Taken by vermin</th>
<th>Infertile</th>
<th>Broken by hen</th>
<th>Added</th>
<th>Dead in shell</th>
<th>Hatched</th>
<th>% Hatched of eggs laid</th>
<th>% in 1949</th>
<th>Crushed by hen</th>
<th>Killed by predators</th>
<th>Reared in 1949</th>
<th>Retained in 1949</th>
<th>% Retained of eggs hatched</th>
<th>% in 1949</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spot-billed</td>
<td>1</td>
<td>19.3</td>
<td>12</td>
<td>5</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>7</td>
<td>58%</td>
<td>42%</td>
<td>-</td>
<td>-</td>
<td>3</td>
<td>-</td>
<td>5</td>
<td>23%</td>
<td>5 killed by Hen</td>
</tr>
<tr>
<td>Australian Grey Duck</td>
<td>2</td>
<td>19.3</td>
<td>28</td>
<td>12</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>16</td>
<td>55%</td>
<td>62%</td>
<td>-</td>
<td>-</td>
<td>11</td>
<td>4</td>
<td>73%</td>
<td>40%</td>
<td>1 m. 10 f. Two left with parents disappeared</td>
</tr>
<tr>
<td>African Yellow-billed</td>
<td>2 + 1f</td>
<td>21.3</td>
<td>30</td>
<td>12</td>
<td>3</td>
<td>5</td>
<td>7</td>
<td>3</td>
<td>10%</td>
<td>41%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>3</td>
<td>25%</td>
<td></td>
</tr>
<tr>
<td>Gadwall</td>
<td>3 + 1f</td>
<td>6.5</td>
<td>28</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>21</td>
<td>75%</td>
<td>83%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>20</td>
<td>8</td>
<td>94%</td>
<td>19%</td>
<td>60%</td>
<td>1 reared by the mother</td>
</tr>
<tr>
<td>Wigeon</td>
<td>3</td>
<td>24.4</td>
<td>30</td>
<td>2</td>
<td>11</td>
<td>4</td>
<td>3</td>
<td>10</td>
<td>33%</td>
<td>43%</td>
<td>-</td>
<td>-</td>
<td>10</td>
<td>6</td>
<td>100%</td>
<td>60%</td>
<td></td>
<td>All weaklings</td>
</tr>
<tr>
<td>American Wigeon</td>
<td>3</td>
<td>18.5</td>
<td>21</td>
<td>10</td>
<td>-</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>20%</td>
<td>26%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>8</td>
<td>-</td>
<td>89%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chiloë Wigeon</td>
<td>3 + 1f</td>
<td>22.4</td>
<td>24</td>
<td>18</td>
<td>4</td>
<td>2</td>
<td>8%</td>
<td>53%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>12</td>
<td>-</td>
<td>67%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cinnamon Teal</td>
<td>5</td>
<td>8.4</td>
<td>50</td>
<td>4</td>
<td>3</td>
<td>5</td>
<td>38</td>
<td>76%</td>
<td>63%</td>
<td>1</td>
<td>1</td>
<td>19</td>
<td>2</td>
<td>50%</td>
<td>8%</td>
<td></td>
<td></td>
<td>1 hatched by parent and disappeared</td>
</tr>
<tr>
<td>Garganey</td>
<td>1</td>
<td>?</td>
<td>?</td>
<td>?</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>6</td>
<td>29%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>50%</td>
<td></td>
<td>Hatched by the mother and only 2 caught</td>
</tr>
<tr>
<td>Shoveler</td>
<td>3</td>
<td>18.5</td>
<td>40</td>
<td>9</td>
<td>1</td>
<td>9</td>
<td>21</td>
<td>52%</td>
<td>95%</td>
<td>1</td>
<td>-</td>
<td>10</td>
<td>12</td>
<td>49%</td>
<td>63%</td>
<td></td>
<td></td>
<td>1 died through swallowing a whole beech-nut</td>
</tr>
<tr>
<td>Red-crested Pochard</td>
<td>3 + 1f</td>
<td>26.3</td>
<td>32</td>
<td>6</td>
<td>2</td>
<td>-</td>
<td>24</td>
<td>75%</td>
<td>56%</td>
<td>-</td>
<td>2</td>
<td>2</td>
<td>14</td>
<td>8%</td>
<td>41%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Species</td>
<td>Sex</td>
<td>Eggs</td>
<td>Hatched</td>
<td>Dipped</td>
<td>Died</td>
<td>Total</td>
<td>Hatched (%)</td>
<td>Dipped (%)</td>
<td>Died (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------</td>
<td>-----</td>
<td>------</td>
<td>---------</td>
<td>--------</td>
<td>------</td>
<td>-------</td>
<td>-------------</td>
<td>------------</td>
<td>----------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rosy bill</td>
<td></td>
<td>3</td>
<td>13.5</td>
<td>38</td>
<td>—</td>
<td>6</td>
<td>26</td>
<td>69%</td>
<td>48%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pochard</td>
<td></td>
<td>2</td>
<td>18.4</td>
<td>9</td>
<td>—</td>
<td>2</td>
<td>7</td>
<td>77%</td>
<td>56%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Red head</td>
<td></td>
<td>1</td>
<td>7.6</td>
<td>3</td>
<td>—</td>
<td>3</td>
<td>—</td>
<td>—</td>
<td>87%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scaup</td>
<td></td>
<td>2</td>
<td>29.5</td>
<td>14</td>
<td>—</td>
<td>2</td>
<td>4</td>
<td>63%</td>
<td>0%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maned Goose</td>
<td></td>
<td>1</td>
<td>24.8</td>
<td>10</td>
<td>—</td>
<td>10</td>
<td>—</td>
<td>—</td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mandarin</td>
<td></td>
<td>3</td>
<td>27.4</td>
<td>18</td>
<td>11</td>
<td>—</td>
<td>2</td>
<td>28%</td>
<td>—</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carolina</td>
<td></td>
<td>15?</td>
<td>22.3</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experimentally incubated at 99°F.</td>
<td></td>
<td>47</td>
<td>16</td>
<td>10</td>
<td>16</td>
<td>5</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>Hatched on 39th-41st day</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incubated for 15 days at 99°F. and 18 days at 102°F.</td>
<td></td>
<td>40</td>
<td>14</td>
<td>7</td>
<td>18</td>
<td>8</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>Hatched on 33rd-34th day</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incubated by the mother</td>
<td></td>
<td>29</td>
<td>6*</td>
<td>9</td>
<td>—</td>
<td>14</td>
<td>—</td>
<td>—</td>
<td>9</td>
<td>*Taken by visitor. Rest hatched on 29th-30th day</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incubated by bantam</td>
<td></td>
<td>190</td>
<td>56</td>
<td>1</td>
<td>25</td>
<td>30</td>
<td>78</td>
<td>—</td>
<td>—</td>
<td>Hatched on 29th-30th day</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Carolinas</td>
<td></td>
<td>306</td>
<td>6</td>
<td>95</td>
<td>1</td>
<td>42</td>
<td>47</td>
<td>115</td>
<td>—</td>
<td>38%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Red-breasted Merganser</td>
<td>1 f</td>
<td>2.6</td>
<td>7</td>
<td>—</td>
<td>7</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ruddy Duck</td>
<td></td>
<td>11</td>
<td>26.5</td>
<td>11</td>
<td>—</td>
<td>1</td>
<td>10</td>
<td>91%</td>
<td>—</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Species</td>
<td>Breeding pairs</td>
<td>Date of first egg</td>
<td>No. of eggs</td>
<td>Taken by vermin</td>
<td>Infertile</td>
<td>Broken by hen</td>
<td>Addled</td>
<td>Dead in shell</td>
<td>Hatched</td>
<td>% Hatched of eggs laid</td>
<td>% in 1949</td>
<td>Crushed by hen</td>
<td>Killed by predators</td>
<td>Retired</td>
<td>Retared in 1949</td>
<td>% Retared of eggs hatched</td>
<td>% in 1949</td>
<td>Remarks</td>
</tr>
<tr>
<td>---------------------</td>
<td>----------------</td>
<td>-------------------</td>
<td>-------------</td>
<td>-----------------</td>
<td>-----------</td>
<td>---------------</td>
<td>--------</td>
<td>---------------</td>
<td>---------</td>
<td>------------------------</td>
<td>----------</td>
<td>----------------</td>
<td>---------------------</td>
<td>---------</td>
<td>----------------</td>
<td>------------------------</td>
<td>----------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>Greylag</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>1*</td>
<td>3</td>
<td>60%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>100%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>*Deformed bill</td>
</tr>
<tr>
<td>Shelduck</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Gadwall</td>
<td>9</td>
<td>6</td>
<td>1</td>
<td>2</td>
<td>22%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Wigeon</td>
<td>16</td>
<td>16</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Tufted</td>
<td>41</td>
<td>25</td>
<td>6</td>
<td>1</td>
<td>9</td>
<td>22%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Pochard</td>
<td>35</td>
<td>18</td>
<td>2</td>
<td>12</td>
<td>2</td>
<td>3%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Plus 10 broken in transit</td>
</tr>
<tr>
<td>Goldeneye</td>
<td>2</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Eider</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Red-breasted Merganser</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Plus 5 arrived broken</td>
</tr>
</tbody>
</table>
### EGGS FROM ICELAND

| Species                | Males | Females | Total | Males | Females | Total | Males | Females | Total | Males | Females | Total | Males | Females | Total | Males | Females | Total | Males | Females | Total | Males | Females | Total | Males | Females | Total | Males | Females | Total | Males | Females | Total |
|------------------------|-------|---------|-------|-------|---------|-------|-------|---------|-------|-------|---------|-------|-------|---------|-------|-------|---------|-------|-------|---------|-------|-------|---------|-------|-------|---------|-------|-------|---------|-------|-------|---------|-------|-------|---------|-------|-------|---------|-------|
| Scaup                  | 12    | 3       |       | 1     | 7       | 8     |       |         |       | 3     | 43%     |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |
| Barrow's Goldeneye    | 14    | 5       |       | 2     | 3       | 4     |       |         |       | 2     | 50%     |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |
| Scoter                | 11    | 3       |       | 1     | 2       | 2     | 18%   |         |       | 2     | 50%     |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |
| Long-tailed           | 12    | 6       |       | 1     | 2       | 2     | 17%   |         |       | 2     | 50%     |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |
| Merganser             | 1     |         |       | 1     |         |       |       |         |       | 1     | 100%    |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |
| **BROUGHT AS YOUNG**  |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |
| Greylag               | 3     |         |       |       |         |       |       |         |       | 1     | 33%     |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |
| Shelduck              | 20    |         |       |       |         |       |       |         |       | 13    | 65%     | 9      | 69%    |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |
| **HYBRIDS**           |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |
| Swan x Domestic       | 14    | 7       |       | 7     | 50%     |       | 7     | 100%    |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |
| Chinese 1-1f          |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |
| Bean x White-fronted  | 4     | 2       |       | 2     | 50%     |       | 2     | 100%    |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |
| Blue x Lesser Snow    | 12    | 2       |       | 2     | 50%     |       | 3     | 50%     |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |
| Tundra x Lesser Snow  | 7     |         |       | 4     | 3       | 3     | 43%   |         |       | 1     | 33%     |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |
| **GRAND TOTAL**       | 1371  | 39      | 524   | 24    | 119     | 112   | 551   | 59%     | 14    | 24     | 282     | 274   | 52%   | 42%    |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |       |         |       |
PATHOLOGY

The Trust’s thanks are due to Mr. D. W. Menzies and Mr. J. A. J. Venn of the Ministry of Agriculture Veterinary Investigation Centre, Langford, for post-mortem examinations and bacteriological investigations. With their help it has been possible to make a much more scientific approach to the problems of disease in the collection than had previously been possible. Much progress has already been made in finding cures for the ailments which have hitherto caused casualties. As more and more data are amassed it is confidently expected that deaths from many of the diseases will be greatly reduced.

The Trust is also most grateful to Mr. C. S. Adams for his services in veterinary surgery.

A tabular summary of the results of the post-mortem examinations performed is set out below. This does not purport to be a complete record of the deaths in the collection during the year: a small number of adults are omitted because of insufficient information, and the ducklings reported on represent only a sample of the total losses (practical difficulties in the handling of material in summer prevent more complete coverage).

It will be seen that, though the largest number of casualties is listed under ‘Infectious and Parasitic Diseases’, in no case did any disease attain epidemic proportions. The great variety of causes of death is perhaps the most striking feature of the summary.

In the table the class ‘Young’ comprises birds less than four months old. Contributory causes of death are not included; no individual appears more than once in the summary. Birds dying within two days of arrival in the collection are not included.

TREATMENT

Gizzard Worm (*Amidostomum anseris*)

Both Phenothiazine and carbon tetrachloride have been successfully used in the treatment of this parasite. The latter, in doses of 1 cc., acts more rapidly, but is more dangerous if the birds’ general condition is much lowered. Few deaths occurred when infestation was correctly diagnosed in time.

Aspergillosis

So far as is known there is no cure for birds sufficiently affected by this mould disease for accurate diagnosis. Prophylaxis recommended by Biester and Schwarte (*Diseases of Poultry*, pp. 407–8) is confined to the avoidance of mouldy food and litter, but other observations indicate that the spores of *Aspergillus fumigatus*, the most pathogenic species, are airborne. Thus they are less likely to be inhaled if grain is wet when fed to the birds.

There is some reason to believe, as indicated by Yealland (*Mycosis in Birds, Avicultural Magazine*, Vol. 55, pp. 20–22), that potassium iodide is a prophylactic, and this is now being given to the Sea-ducks in the food.

Further scientific work on this disease is proposed.
## TABLE X

**CAUSES OF DEATHS IN THE COLLECTION**

(May 1950—April 1951)

<table>
<thead>
<tr>
<th>Cause of Death</th>
<th>Species</th>
<th>Young</th>
<th>Adult</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Infectious and Parasitic Diseases</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paratyphoid (<em>Salmonella</em>)</td>
<td>Red-billed Whistling Duck</td>
<td>1+</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Puna Teal</td>
<td>1</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bahama Pintail</td>
<td>1+</td>
<td>—</td>
<td>3+</td>
</tr>
<tr>
<td>Renal coccidiosis</td>
<td>Ross’s Goose</td>
<td>—</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Intestinal coccidiosis</td>
<td>Rosybill</td>
<td>1</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Eider</td>
<td>—</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Aspergillosis</td>
<td>Upland Goose</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Andean Crested Duck</td>
<td>—</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Red-crested Pochard</td>
<td>—</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Maned Goose</td>
<td>—</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Eider</td>
<td>—</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Gizzard Worm (<em>Amidostomum sp.</em>)</td>
<td>Chinese Goose</td>
<td>—</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Grey Lag Goose</td>
<td>—</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Greater Snow Goose</td>
<td>—</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Upland Goose</td>
<td>—</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Cestode infestation (<em>Hymenolepis spp.</em>)</td>
<td>Bahama Pintail</td>
<td>1</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shoveler</td>
<td>—</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pochard</td>
<td>—</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Carolina Duck</td>
<td>—</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shelduck</td>
<td>—</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bahama Pintail</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Diseases of Circulatory System</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inflammation of heart</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lesion in spleen</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heart failure</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diseases of Respiratory System</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute congestion of lungs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pneumonia</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infection of syrinx</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diseases of Digestive System</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impaction of intestine</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impaction of gizzard</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cirrhosis of liver</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fatty degeneration of liver</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acute enteritis</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diseases of Urino-genital System</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nephritis</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nutritional Diseases</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

[continued]
Severn Wildfowl Trust

**TABLE X—continued**

<table>
<thead>
<tr>
<th>Cause of Death</th>
<th>Species</th>
<th>Young</th>
<th>Adult</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Violent and Accidental Deaths</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Predators</td>
<td>Swan Goose</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Greater Snow Goose</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Shelduck</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Abyssinian Blue-winged Goose</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Puna Teal</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Mottled Duck</td>
<td>2</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Blue-winged Teal</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>Drowning</td>
<td>White-faced Whistling Duck</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Swan Goose</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Scoter</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Fighting</td>
<td>Mottled Duck</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Destroyed (because of senility, injury, etc.)</td>
<td>Australian Shelduck</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>New Zealand Shelduck</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Red-billed Pintail</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Bahama Pintail</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Australian Grey Teal</td>
<td></td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Gadwall</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Spur-winged Goose</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8</td>
</tr>
</tbody>
</table>

**TABLE XI**

**SUMMARY**

<table>
<thead>
<tr>
<th>Mortality Factors</th>
<th>Age of Birds</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Young</td>
<td>Adult</td>
</tr>
<tr>
<td>Infectious and Parasitic Diseases</td>
<td>7</td>
<td>18</td>
</tr>
<tr>
<td>Diseases of Circulatory System</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Diseases of Respiratory System</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Diseases of Digestive System</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Diseases of Urino-genital System</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Nutritional Diseases</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Violent and Accidental Death</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Destroyed</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>21</td>
<td>47</td>
</tr>
</tbody>
</table>
THE SCIENTIFIC VALUE OF A GROUP
COLLECTION OF LIVE ANIMALS

Konrad Z. Lorenz

Dr. Lorenz began a stay of six weeks at Slimbridge, the first, it is hoped, of a
series of regular visits, during April, 1951. The results of his particular studies
will be reported fully in next year's report. Meanwhile he gives his impressions
of the value of the Trust's collection in the following article.—Ed.

All biological science has begun its career with collecting, and it is worthy of
psychological consideration that nearly all really successful biologists have,
in their own lives, gone through a period in which they repeated, individually,
the history of their science. There are very few of them, indeed, who have not
been given to collecting, as a hobby, at an early stage of their scientific develop­
ment. It is not only legitimate, but absolutely necessary, that the study of
animals or plants should begin with simply and modestly collecting knowledge
of 'all there is' before proceeding to the more ambitious task of causal analysis.
If some modern physiologists show a certain tendency to look down on museum
collections, systematics and comparative anatomy, they forget that these
particular branches of biological science have given to all others their common
fundamental—the theory of evolution.

For certain reasons, which need not concern us here, the study of animal
behaviour did not, until a very recent date, introduce the evolutionary view­
point into its consideration—very much to its own detriment. The fact that
all the innate traits of animal behaviour can—and therefore must—be studied
from the common viewpoint of phyletic descent, remained necessarily hidden
from scientists who never studied the behaviour of a whole group of species,
but confined themselves to just one kind of animal, chosen exclusively for the
single reason that it was the easiest to obtain, to keep and to breed. The basic
discovery which has since given rise to a new branch of behaviour study—
Comparative Ethology—is, in itself, very simple: certain innate behaviour
patterns are not only common to all the individuals of a species, but very
often to much more comprehensive groups of animals as well. In other words,
these innate behaviour patterns have, among the several species, genera, families,
and still larger groups of animals, exactly the same type of distribution and,
with decreasing relationship, the same grading of similarity into dissimilarity,
as we find in the comparison of bodily characters.

From this the important inference is, obviously, that these behaviour patterns
are just as old as any structural properties whose systematic distribution is
about the same. To people who regard animal behaviour as something extremely
variable and unrestrictedly modifiable these facts seem very surprising and
even unbelievable. Yet, so far from being 'slippery stuff' to use in systematic
comparison, innate behaviour patterns are, in most cases, extremely con­
servative characters, indeed, much more so than the specific form of bones and
other hard structures. What is hardest and least perishable in the museum,
need not necessarily be so in evolution.

Let us look at just one example: since the very beginnings of ornithological
systematics, the structure and proportions of the skull and bill have been con­
sidered as characters of paramount importance and reliability. A group of
Anatidae, the so-called ‘Geese’, were lumped together on the strength of just one character: in all of them the lamellæ of the bill have been converted into sharp, horny teeth in adaptation to grass-eating, while their skull has assumed, for the same reason, a typical high profile, calculated to heighten the chewing pressure of the mandibles. With the true geese, like the Greylag, Bean, White-front, Pinkfoot, Snow, Bar-headed, Canada, Brent, Barnacle, etc., were included the Andean, Upland, Kelp, etc. (genus *Chloëphaga*), the Abyssinian Blue-winged Goose (*Cyanochen*), the Australian Cape Barren Goose (*Cereopsis*), the Spur-winged Goose (*Plectropterus*), the Maned Goose (*Chenonetta*), and even the tiny Pygmy Geese of the genus *Nettapus*. All were considered as one family. Subsequent close investigation, in which the consideration of innate behaviour patterns played an important part, revealed the indubitable fact that these birds, so far from being closely related to each other, really belong to at least three different groups, the true Geese, the Sheldrakes and the Perching Ducks. The Genus *Chloëphaga*, the Abyssinian Blue-winged, and the Cape Barren Goose, have, all of them, evolved from the Sheldrake family, but, in all probability, independently from each other and in very different parts of the world. The Spur-winged Goose belongs to one group of the Perching Ducks and is allied to the Muscovy Duck, while the Maned Goose and the Pygmy Geese belong to another, and are closely related to the Mandarin and Carolina Ducks. All instinctive behaviour patterns of these birds, particularly those of courtship display, are quite typical of the respective groups to which they belong. None of these innate movements are common to all so-called ‘Geese’. The fact that the latter do not, by any means, represent a phyletically coherent family is further emphasized by a great number of other morphological characters.

It is, on principle, impossible to attribute a fixed and constant systematic value to any single character, because one and the same structure may, in different groups, undergo evolutionary change at quite different speeds. What is an exceedingly conservative, slow-changing property in one family or order, may be very plastic in another. In the Anatidae, for example, the colour markings of the downy young are evidently most resistant to evolutionary change, while the form of head and bill is extremely plastic; in the order of Rails (*Rallidae*) the very opposite is true. The ‘relative conservativity’ of every single property must, therefore, be gauged in every single instance by a thorough comparison with as many other characters as possible. If, in a group of animals represented by a considerable number of forms, we amass as many comparable characters as possible, our conclusions become more reliable in geometrical proportion to the number of characters considered. The historical correctness of our conclusions increases not only with the number of agreeing ‘documents’ which point in one direction, but the significance of each document is increased with the number of others with which we are able to compare it, in order to ascertain its particular age and value.

This is precisely why the phylogeneticist is forever on the lookout for new, comparable characters; and also why he prefers to work on groups which are rich in species. A group consisting exclusively of one or two isolated species with nothing but ‘missing links’ to join it together, and on to other groups, is obviously not a favourable object for evolutionary studies. On the other hand, in a group with many species, every taxonomic character can be studied in many different forms and stages of differentiation. Charles Otis Whitman and Oskar Heinroth, the pioneers of Comparative Ethology, both chose for investi-
igation a group which fulfilled these requirements: the former worked on the pigeons, the latter on the ducks and geese. It is an interesting historical fact that both these scientists were primarily phyletists rather than behaviour students and that it was their assiduous search for comparable characters that induced them to bring innate behaviour patterns into consideration. Thus, Comparative Ethology originated in the service of the study of evolution.

Thus we may infer that the studies of evolution in general and of comparative ethology in particular are dependent on a suitable object of study which possesses certain essential qualities. The discovery of a law of nature has always been dependent upon the selection or discovery of a favourable object of study. If we review these essential qualities we find ourselves simultaneously expounding the scientific value of collecting and keeping live animals belonging to one systematic group. For the purpose of the studies in question it is necessary to keep live animals in perfect condition, in order to investigate their innate behaviour patterns. It would be absolutely impossible to acquire an extensive comparative knowledge of these patterns by field observation alone, even if one genus were not, as it so often is, distributed all over the globe. The group chosen for an object of a study ought, therefore, to be technically easy to keep and to breed; only if the animals display the whole inventory of their instinctive activities are we furnished with a solid basis for our comparison of behaviour. The group must also be rich in innate behaviour patterns and, last but not least, it must contain an abundance of sub-orders, families, genera and species, and there must be enough gradations and transitions which link up the undergroups.

There can be hardly any doubt that, among all the groups of animals which are available in captivity at present, the order of Anatidae is the one which fulfills all these requirements in the most ideal manner. Though C. O. Whitman worked on the order of pigeons and though valuable work has been done on Cichlid fishes, the Anatidae still rank first as an object of evolutionary and ethological study. A number of prominent phylogenetists such as Heinroth, Mayr, Delacour, von Boetticher and others have given special attention to this order. The writer of these lines, as a comparative ethologist, has found the unique collection of Anatidae at the New Grounds a wonderful subject for his investigations. The word 'unique' is not used here in the complimentary but in the literal sense. There is not, in all the world, another collection of Anatidae as complete, and what is more, there is no other collection of any group of live animals which could, for the type of evolutionary investigation sketched in this article, be exploited to such advantage as that of the Severn Wildfowl Trust.

Systematics and taxonomy are regarded by many people as tedious subjects. Some biologists even think that phylogenetic investigations performed by the method of systematic comparison are something rather antiquated, something that was all right in the days of Darwin and Wallace, but rather out of date at the present time. So far from having shot its bolt, however, phylogenetics is only beginning to get, from other branches of biological science, the consideration which it merits. The current modern physiology of the central nervous system, to cite only one instance, would do well to give more thought to phylogenetic considerations. The 'simple' reflex-arc, still regarded by many physiologists as the basic element of all central nervous structures and functions, is, in reality, a phylogenetically extremely 'young' acquisition which does not occur at a lower stage of evolution than birds and mammals. But apart from their everlasting scientific value, phylogenetic studies done by the good old method of
comparison of homologous characters are a superlatively alluring occupation. The attempt to disentangle the course which evolution has taken ages ago, by the simple means of comparing the similarities and dissimilarities of living animals, and thus delving into times a thousandfold more remote than the earliest dawn of human history, is among the most fascinating enterprises that the human mind can undertake. To me, at least, it always causes a truly reverential thrill, whenever comparative study leads to some real insight into the blood-relationship of different species and allows us, to a certain extent, to reconstruct their latest common ancestor!

PREENING STUDIES

By D. F. McKinney

As briefly reported in the 3rd Annual Report a study has been made, since November, 1949, of the behaviour of the Anatidae, with particular emphasis on such everyday activities as preening, bathing, shaking, stretching, etc. Although the investigation is still incomplete, a record of its nature and scope may be of interest. The method has involved direct observation and description of the birds’ movements, with the assistance of still and ciné photography. The results, largely of a detailed descriptive nature, are not yet sufficiently complete for generalization.

The Mallard has been selected for close study and the behaviour of this species provides a model with which to compare that of its relatives. Preening, bathing, shaking, stretching and other similar activities have been studied in the adult Mallard. Their development has been observed in ducklings. Their relations to one another and to various stages of the life history have been examined.

In order to cover one important part of the life history, observations have been made on the incubation behaviour of the Mallard. The most interesting period has proved to be at the time of hatching. As soon as the ducklings begin to move about in the nest, the duck performs very frequent oiling preens. The function of this behaviour would seem to be the distribution of oil over the ducklings before they leave the nest. It is hoped to extend these observations with a view to investigating the stimuli which elicit this interesting behaviour.

Although of considerable intrinsic interest, these ‘everyday’ behaviour patterns are not, however, particularly suitable as taxonomic characters for the determination of relationships within the Anatidae. They are on the whole very deeply ingrained, and from an evolutionary point of view much ‘older’ than the display-movements which have been studied by Lorenz. It is possible, however, that such movements might prove to be very useful when examined in a number of the larger groups of birds. This has been done by Heinroth, notably with the scratching movements of birds. It is hoped that the descriptive material which is being collected may provide a basis for such comparisons.

Much recent research on animal behaviour has drawn attention to the ‘displacement activity’, and the existence of ‘displacement-preening’ is well-known in the Anatidae. This group, moreover, is especially interesting in showing many states of the incorporation of such activities in the display. In some species, such as the Mandarin, the ‘false-preening’ movements are highly ritualized and form important elements in the display, while in other species it is often difficult to be sure whether one is watching ‘false-preening’ or not.
In the present study, the incorporation of other every-day movements in display is being investigated. For example, wing-shaking movements are highly developed in the aggressive behaviour of Canada geese. In the Common Sheldrake, the ‘throw-up’ movement used by the adult male in the breeding season is derived from the ordinary shaking movement.

The head-shaking movements are particularly interesting in *Anatidae*. These are of several different types and their normal function is the removal of water, dirt or loose feathers from the head or beak. In many species, however, these movements are used during display, while they are also used in various forms in the well-known ‘pre-flight’ movements.

---

**SWEDEN 1950**

The Trust was represented at the Xth International Ornithological Congress held in June, 1950, at Uppsala, Sweden, by the Director and the Assistant Secretary, Miss P. Talbot-Ponsonby. Two films were shown by the Director, one of the Trust’s work and the other of his expedition to the Perry River region of Arctic Canada (recorded in the Third Annual Report).

After the Congress the Trust’s delegates took part in excursions to Jämtland and Abisko in Lapland, and later, accompanied by a member, Dr. J. D. Mills and Dr. Finnur Gudmundsson, the Icelandic delegate, made a trip to the Lapland breeding and moulting grounds of the Lesser White-fronted Goose, *A. erythropus*. The principal object was to catch and bring back alive three male Lesser White-fronts for three hand-reared breeding females in the collection at the New Grounds. The success of this mission is described in the following note contributed by the Director.

Among the mountains of Torne Lappmark, near the border between Sweden and Norway, is the summer home of the most beautiful of the grey geese—known locally as the Mountain Goose, and to us by the much less romantic name of Lesser White-fronted Goose.

On 1st July we reached the highland lakes just above the line of birch woods and saw our first Mountain Geese—a party of fourteen, swimming below us on the smooth water of a small tarn. During the following week, with a Lapp hut as our base we walked over the surrounding moors and hills. Evidently the geese were not breeding extensively in this area; we saw only one brood of 5 goslings with their parents, although many broods had been seen at the same spot by our Swedish guide, Knut Larsen, during the previous summer. About 200 adult geese, however, were living on these lakes and it seemed that as soon
as they became flightless we should have a good chance of catching the three ganders we needed. But in the days that followed we found that catching them was no easy matter even though they had moulted their flight feathers. The first bird which we managed to run down turned out to be a female. She was therefore ringed and released.

The daily technique was to cross the big lake by boat and then walk round the most likely tarns, stalking up to each in the hope of spotting the geese before they spotted us, usually quite a forlorn hope. When they did spot us they immediately began to run up the nearest and steepest available mountain.

Once, in pursuit of a flightless goose, I ran up a col and came over the crest upon the splendid sight of a pair of Rough-legged Buzzards diving in turn at a White-tailed Eagle. The eagle was sitting on a rock ducking its head at each attack by the mobbing buzzards. There were Long-tailed Ducks, Velvet and Black Scoters, Goldeneyes, Phalaropes, Long-tailed Skuas, Merlins, Lapland Buntings, Redpolls, Wood Sandpipers, and Red-throated Divers in the area, and we caught a Lemming.

Towards the end of our week, when Mills and Gudmundsson had already left, we came one evening round a point on the lake, in Knut’s boat with his outboard motor on the stern. There on the water were about thirty geese and it was soon clear that many of them were flightless. They made for a huge cake of ice which lay at the foot of a precipitous cliff. After running across the ice some tried to hide in the narrow strip of open water along the shore, while others began to climb the cliff. Further up it became sheer; for once the geese were cut off. We landed in their rear, and for the next half-hour, rock climbing was added as a new ingredient to the pursuit of geese. One was caught trying to climb a near-vertical wall of rock and fluttered down stern first into my arms, another was caught by Knut, and a third made off back into the lake where, with oars, and later with the outboard motor, we pursued him. It was half an hour before he could be persuaded to go ashore again. The first time he did so I over-ran him and he got back into the lake again. After another half-hour he sneaked ashore for the second time and set off uphill. I followed him at lung-bursting speed up to a col. When I got there he had disappeared. I cast around and just as I was giving up the unequal struggle I flushed him from the dwarf birch. He went off down hill at full speed, I after him, taking giant strides on the steep hill side. I ran all out for 200 yards and overtook him only ten yards from the lake. We were both exhausted and I sank to the ground with the little gander in my arms.

One of the three we had caught, being a female, was ringed and released. We had only two ganders and we needed three. On the following day, which was our last, we surprised about twenty moulting geese at the head of a bay in the main lake. We had already walked nearly twenty miles and were returning empty-handed in the boat. By the time we had landed in pursuit, the geese had a good start, but the three of us divided, each to chase a separate bird. Yet another breath-taking all-out run was needed before we rejoined each other, each carrying a Mountain Goose. Two were males and one a female. But we only kept one—to make up the three we needed. The other two were ringed and released again.

And so we returned with wild-caught ganders to pair with the three hand-reared females at the New Grounds.

(Note.—Young have been reared from one of these pairs during the summer of 1951.)
GENERAL ACTIVITIES & ADMINISTRATION

VISITORS

No less than 257 organized parties—83 of them from schools—have visited the New Grounds during the year. Normally, only one party is booked a day, in order to avoid overcrowding, and to enable the parties to be shown round by the Wardens. Even then the pressure on the Wardens from individual visitors and small groups has been so great that the whole question of arrangements for visitors has had to be reviewed. Three duplicated sheets have been prepared. The first is a brief guide to the enclosures and the collection, mainly for those visiting the New Grounds for the first time. The second is for Members who are being taken to the observation huts in order to watch the wild geese. It is essential that Members visiting the Trust during the winter months should make certain of obtaining and reading this sheet before proceeding with the Warden to the observation huts. The third constitutes a kind of permit, and is issued at the discretion of the Curator to those Members who have already been to see the geese not less than six times. This sheet enables them to proceed unaccompanied, on condition that they have inquired first from the Curator where the geese are feeding and whether there are any special arrangements for the day. It gives details of all the places where particular care must be taken not to disturb the geese. During the last season certain Members have made little or no attempt to follow the directions of the Wardens and Honorary Wardens; as a result the Council feels bound to give the warning that it may, under the terms of Rule 5(3), refuse to accept the subscription renewal of any Member who attempts to use the observation huts without such a permit.

The new pens, which were completed early in 1950, have proved a great success, although the need of a hard path leading through them became more than ever apparent during the wet winter. Public lavatories have been erected at a cost of £400.

'BÉATRICE'

The Trust’s Narrow Boat, Beatrice, took part in the Market Harborough Festival and Rally of Boats in August, 1950. The boat was taken to Market Harborough by Lord Geoffrey Percy with a crew provided by the Inland Waterways Association. Owing to the close contact between the Severn Wildfowl Trust and the Inland Waterways Association (the Director of the Trust is a Vice-President of the I.W.A.), it was not considered suitable for Beatrice to compete for the various prizes and cups, but it was evident that she compared favourably with the other converted Narrow Boats present at the Festival and was much admired. She returned to Slimbridge in the care of Mr. Robert
Severn Wildfowl Trust

Aickman, Chairman of the Inland Waterways Association, after a total absence of three weeks.

The catering and cooking is now in the able charge of Miss Margaret Timbrell, under the supervision of Mrs. S. T. Johnstone. During the period 31st March, 1950, till 30th April, 1951, 272 visitors have stayed on board. The Council would like to see more visitors using Beatrice, especially during the summer months. Members can help by recommending to their friends this comfortable hostel accommodation which is available to visitors whether they are Members or not.

FINANCE

The Accounts and Balance Sheet for the year ended 31st December, 1950, are on pp. 56-57. It will be noted that expenditure exceeded income by £15 13s. 8d. The Council, however, is happy to announce that a magnificent grant of £5,000 was received from the Pilgrim Trust. The Council placed £4,000 of this grant in a Reserve Account for at least one year and proposed that Capital Development during that period be curtailed in order that the Trust might consolidate its financial position.

A further gift of £500 was made by the Trustees of the W. Graham Robertson Charity Fund (although it does not appear in the Accounts for 1950). The Council wishes to place on record its gratitude for these splendid contributions to the Trust's financial welfare.

The Second Annual Report and ‘Key to the Wildfowl of the World’ made a profit of £501, and the sale of 13,000 Christmas Cards, £380.

The Gift Membership Tokens have been a considerable success, but the Council would like Members to use them even more in order to bring our membership to 5,000.

BULLETINS

Periodical Bulletins have been issued since September, 1950, covering the ornithological work, and in the Council’s opinion these form an admirable channel by which Members can be kept in touch with the most recent activities undertaken by the Trust. They are all the more valuable in view of the long but unavoidable time-lag before the Annual Report appears.

DIRECTOR’S LECTURES

The Hon. Director, Mr. Peter Scott, gave 31 lectures in the course of the year. The sum raised from these, including the sale of literature, was £1,256 10s. 5d. It should be pointed out that all fees are paid to the Trust. The films shown included the Perry River Expedition (later stolen during a car theft and not recovered), the Lapland trip, the general film of the Trust’s work and the rocket-netting film. Notice of the Director’s forthcoming lectures is now given in the Bulletins.

Once more the Council wishes to pay tribute to the untiring efforts of the staff. The present prosperity of the Trust is very largely attributable to the enthusiastic spirit in which they have continued to work.

WANTS

Garden seats; carpentry tools; hampers of any size; garden tools, and 10,000 cuttings of Lonicera nitida.
FOURTH ANNUAL GENERAL MEETING

MINUTES

The Fourth Annual General Meeting of the Severn Wildfowl Trust was held at the Royal Society of Arts, 6, John Adam Street, Adelphi, London, W.C.2, on Wednesday, 28th March, 1951. The President, Field-Marshal Lord Alanbrooke, was in the chair. The Minutes of the Third Annual General Meeting, having been circulated to Members in the printed Report, were taken as read and signed by the President.

The Minutes of the Extraordinary General Meeting, held at Market Harborough in the Narrow Boat, Beatrice, on 16th August, 1950, were read by the Hon. Secretary and signed by the President.

The adoption of the Report of the Council together with the Balance Sheet and Accounts for 1950 (which had been circulated to Members in printed form), was proposed by the President, seconded by the Director, and carried unanimously.

The re-election of the following retiring Council Members was proposed by Mr. Keith Miller Jones and seconded by the Hon. Secretary, Mr. Michael Bratby: Guy Benson, Esq.; R. A. H. Coombes, Esq.; C. T. Dalgety, Esq.; H. H. Davis, Esq.; James Fisher, Esq. The motion was carried.

The re-election of the officers en bloc (as shown on page 2) was proposed by Major R. C. R. M. Clarke, seconded by Mr. G. T. Wilkins, and carried unanimously.

The re-election of Messrs. S. J. Dudbridge & Sons of 8, Lansdown, Stroud, was proposed by the Treasurer, Sir Archibald Jamieson, seconded by the Hon. Secretary, Mr. Michael Bratby, and carried unanimously.

A glowing tribute to the work of the Trust was paid from the body of the hall by Mr. H. K. Hallam, who suggested that Members should be asked to pay for their Annual Reports in view of the high cost of these publications. The Director replied that the Council would consider this matter, but drew attention to the fact that a profit had been made on the sale to non-members of the first two Reports. More general support appeared to be given, however, to a plea that the Reports should continue to be free to Members, even if it should necessitate the increase of the subscription.

Mr. J. S. Gordon-Clark asked whether it would be possible to have a separate enclosure at the New Grounds for the British Waterfowl. The Director replied that this had been considered before, and explained the very great difficulties of keeping all the British species in one pen at present. British geese, for example, are kept in all the pens and even then there is scarcely enough grass for them all. To confine them to one pen would therefore be quite impossible. Another point was that many ornithologists particularly liked to be able simultaneously to compare related birds from, say, Britain and America, side by side in the same pen. He said that as soon as the Trust had acquired more ground, which it hoped to be able to do shortly, a special collection of British species only would be formed in one pen.

After the meeting, the Director showed his colour films of the Decoy and Wild Geese at the New Grounds, and of the Trust's Rocket-netting Expeditions. Proceedings then terminated.
# THE SEVERN WILDFOWL TRUST

## INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31st DECEMBER, 1950

<table>
<thead>
<tr>
<th>EXPENDITURE</th>
<th>£</th>
<th>s.</th>
<th>d.</th>
</tr>
</thead>
<tbody>
<tr>
<td>To Rent, Rates and Insurance</td>
<td>271</td>
<td>13</td>
<td>9</td>
</tr>
<tr>
<td>&quot; Wages and National Insurance</td>
<td>3,333</td>
<td>7</td>
<td>11</td>
</tr>
<tr>
<td>&quot; Food for Waterfowl</td>
<td>1,348</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>&quot; Purchases and Transport of Wildfowl and Eggs</td>
<td>530</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>&quot; Purchases of Hens for Sitting</td>
<td>172</td>
<td>13</td>
<td>1</td>
</tr>
<tr>
<td>&quot; Carriage on Birds sold</td>
<td>122</td>
<td>16</td>
<td>6</td>
</tr>
<tr>
<td>&quot; Materials (Wood for Observation Huts, Wire Netting, Coops, etc.)</td>
<td>1,097</td>
<td>16</td>
<td>11</td>
</tr>
<tr>
<td>&quot; Minor Replacements and Repairs</td>
<td>26</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>&quot; Miscellaneous</td>
<td>253</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>&quot; Staff Travelling Expenses</td>
<td>378</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>&quot; Telephone</td>
<td>59</td>
<td>12</td>
<td>2</td>
</tr>
<tr>
<td>&quot; Printing and Stationery—General</td>
<td>495</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>&quot; Printing of Christmas Cards</td>
<td>260</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>&quot; Bank Charges</td>
<td>53</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>&quot; Office Expenses, Postages, etc., Narrow Boat, Beatrice, Running Expenses</td>
<td>233</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>&quot; Narrow Boat, Beatrice, Running Expenses</td>
<td>756</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>&quot; Land Rover Expenses</td>
<td>193</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>&quot; Legal Charges re Headquarters' Cottage</td>
<td>47</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>&quot; Legal Charges re Lease and Licence</td>
<td>62</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>&quot; New Engine and Repairs to Narrow Boat</td>
<td>155</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>&quot; Mower and Roller</td>
<td>162</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>&quot; Public Conveniences</td>
<td>400</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>&quot; Surfacing Road</td>
<td>500</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>&quot; New Enclosures</td>
<td>183</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>&quot; Hut and Garage</td>
<td>207</td>
<td>17</td>
<td>0</td>
</tr>
<tr>
<td>&quot; Water Supply</td>
<td>110</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>&quot; Repairs to Headquarters' Cottage</td>
<td>255</td>
<td>18</td>
<td>9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>INCOME</th>
<th>£</th>
<th>s.</th>
<th>d.</th>
<th>£</th>
<th>s.</th>
<th>d.</th>
</tr>
</thead>
<tbody>
<tr>
<td>By Subscriptions</td>
<td>3,997</td>
<td>11</td>
<td>3</td>
<td>8,676</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>&quot; Donations</td>
<td>288</td>
<td>13</td>
<td>6</td>
<td>1,656</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>&quot; Sale of First Annual Report</td>
<td>41</td>
<td>0</td>
<td>9</td>
<td>1,113</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>&quot; Sale of Booklets</td>
<td>180</td>
<td>17</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot; Sale of Surplus Waterfowl</td>
<td>737</td>
<td>16</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot; Fees and Collections at Lectures</td>
<td>1,431</td>
<td>11</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot; Sale of Christmas Cards</td>
<td>640</td>
<td>1</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot; Narrow Boat takings</td>
<td>399</td>
<td>11</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot; Gate takings</td>
<td>825</td>
<td>16</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot; Sale of Books and Calendars</td>
<td>133</td>
<td>2</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot; Special Donations for Development</td>
<td>506</td>
<td>1</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot; Carnegie Trust (final payment)</td>
<td>1,150</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot; Sale of Second Annual Report</td>
<td>1,113</td>
<td>0</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot; Sale of 'Key to Wildfowl of the World'</td>
<td>249</td>
<td>17</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Balance, being Excess of Expenditure over Income</td>
<td></td>
<td></td>
<td></td>
<td>11,695</td>
<td>1</td>
<td>6</td>
</tr>
</tbody>
</table>

**Total Income:** £11,710 15 2

**Total Expenditure:** £11,710 15 2
### THE SEVERN WILDFOWL TRUST

**BALANCE SHEET—31st DECEMBER, 1950**

<table>
<thead>
<tr>
<th>LIABILITIES</th>
<th>£</th>
<th>s.</th>
<th>d.</th>
<th>£</th>
<th>s.</th>
<th>d.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sundry Creditors and Subscriptions paid in advance</td>
<td>617</td>
<td>5</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loan Accounts:—</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Peter Scott</td>
<td>500</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. J. H. Bevan</td>
<td>500</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reserve Account:—</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grant from Pilgrim Trust</td>
<td>1,000</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excess of Assets over Liabilities:—</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Balance, 31st December, 1949</td>
<td>6,244</td>
<td>12</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Add Increase in Valuation of Assets:—</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Valuation, 31st December, 1950</td>
<td>8,842</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Valuation, 31st December, 1949</td>
<td>7,769</td>
<td>19</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excess of Expenditure over Income for the year</td>
<td>7,316</td>
<td>13</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less Excess of Expenditure over Income for the year</td>
<td>15</td>
<td>13</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Balance, 31st December, 1949</td>
<td>7,300</td>
<td>19</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**ASSETS**

<table>
<thead>
<tr>
<th>£</th>
<th>s.</th>
<th>d.</th>
<th>£</th>
<th>s.</th>
<th>d.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waterfowl, at valuation</td>
<td>5,913</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Narrow Boat, at valuation</td>
<td>1,000</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land Rover, at valuation</td>
<td>440</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coops, Hen Houses, Scythes, Trailers, etc., at valuation</td>
<td>1,489</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sundry Debtors</td>
<td>162</td>
<td>16</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash at Bank:—</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Westminster Bank Ltd., No. 1 Account</td>
<td>3,437</td>
<td>14</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ditto, No. 3 Account</td>
<td>1,369</td>
<td>16</td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lloyds Bank Ltd.</td>
<td>99</td>
<td>10</td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash in hand</td>
<td>6</td>
<td>5</td>
<td>8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

We have examined the above Balance Sheet of The Severn Wildfowl Trust, dated 31st December, 1950, together with the accompanying Income and Expenditure Account, with the Books and Vouchers of the Trust, and certify them to be in accordance therewith.

Stroud, Glos.

26th February, 1951.

(Signed) S. J. DUDBRIDGE & SONS,

Auditors.
ANNUAL DINNER

After the Annual General Meeting a Dinner was held for Members and their guests at the Charing Cross Hotel. The following were present:


The Toast List was as follows:

H.M. The King.
The Severn Wildfowl Trust.
Proposed by Humphrey Ellis, Esq.
Reply by the Hon. Ewen Montagu, O.B.E., K.C.
The Guests.
Proposed by Lt.-General Sir Adrian Carton de Wiart, V.C., K.B.E., C.B., C.M.G., D.S.O.
Reply by Kenneth Horne, Esq.
OBITUARY

The Trust, in common with all British ornithology, suffered grievous loss in the death of B. W. Tucker, who had been a member of the Council since its very earliest days. Although illness had prevented his attendance at recent meetings his advice was of the greatest benefit to the Trust, and the support of so eminent an ornithologist gave great encouragement in the early and formative years.

The Council has also noted with deep regret the deaths (notified since the last issue of the Annual Report) of the following members:

- Miss N. E. Batty
- Brigadier F. W. Bewsher C.B.E., D.S.O., M.C.
- A. W. W. Brown
- H. A. Calnan
- G. Clinton Baker
- Brigadier E. F. Davies, D.S.O., M.C.
- His Grace the Duke of Devonshire, K.G.
- Miss T. Fisher-Smith
- Mrs. A. Graham
- D. G. Hancock
- Major W. Harker

- E. W. Hendy
- Miss K. M. Hughes
- W. J. Jones
- G. G. Lydiard
- J. M. Macmillan
- R. Mason
- P. F. Mountcastle
- Brigadier-General W. L. Osborn, C.B., C.M.G., D.S.O.
- George Bernard Shaw
- Mrs. Edgar Smith
- R. E. Stuart
- Mrs. A. M. Vaughan-Hughes
- J. C. Wigham
MEMBERSHIP

Members

Associates
Annual subscription 5s. Free access to pens and to observation huts. No copy of Report, but receive periodical Bulletins.

Corporate Membership
Annual subscription (minimum 1 guinea) ls. each up to 50 members of Corporate body, 9d. each up to 100, 6d. each above 100. For those under 16, 9d., 6d. and 4d. respectively. Free access to pens and to observation huts, but only in parties of not less than 10. Not before 2 p.m. on Sundays. One copy of Annual Report and periodical Bulletins for each Corporate body. (This membership is open only to Schools, Universities, Youth Clubs, and Teachers' Training Colleges.)

Parish Members
Annual subscription 2s. 6d. Free access to pens only, but not on Sunday mornings. May bring a guest. Receive periodical Bulletins. (This membership is only open to those residing in the Parish of Slimbridge.)

General Public
Admitted to the pens only, at 2s. (children under 16, 6d.), but not before 2 p.m. on Sundays. The enclosures are open from 9 a.m. till sundown every day of the week with the exception of Sunday mornings, which are reserved for Members only.

Gift Membership Tokens
These can be purchased and given as Christmas or birthday presents. They make the recipient a Member of the Trust for a year with full facilities and a free copy of the Annual Report.

Accommodation
Hostel accommodation is available at reasonable rates for visitors, whether Members or not, on board the converted canal boat, Beatrice, which lies a few hundred yards from the Headquarters.
MEMBERS OF
THE SEVERN WILDFOWL TRUST

21st April, 1951

We apologise for any errors which may appear in this list and shall be grateful
if members will inform us so that our records can be corrected.

HONORARY LIFE
MEMBER
Her Royal Highness The
Princess Elizabeth, Duchess
of Edinburgh

LIFE MEMBERS
Field-Marshal Viscount Alan­brooke, K.G., G.C.B., O.M.,
D.S.O.
H.E. Ahmed Abboud Pasha
Duke of Bedford
G. Benson
Lt.-Col. R. L. Benson, D.S.O.,
M.C., M.V.O.
J. H. Bevan, C.B., M.C.
Michael Bratby
Miss V. M. Bury
Miss D. A. Cadbury
H. G. Calkin
Major R. C. R. M. Clarke
Lord Dulverton of Batsford,
O.B.E.
Lord Egerton of Tatton
G. Gibb
P. L. Gordon
Mrs. M. Greenslade
G. P. Harben
Sir Archibald Jamieson, K.B.E.
James Robertson Justice
J. A. Lister
Sir Percy Lister
J. W. Livermore
S. L. Lloyd
Mrs. J. M. Macmillan
I. D. Malcolmson
Miss T. A. Miller
Henry S. Morgan
P. Murray
C. D. Norton
Kerrison Preston
D. Roberts
Peter Scott, M.B.E., D.S.C.
Sir William Seeds, K.C.M.G.
Mrs. W. J. Short
R. Simpson
Sir Keith Smith
W. Proctor Smith

Group Capt. R. Smyth-
Picott
Mrs. Carl Tucker
Sir George Usher
H. Whitbread
Capt. W. D. Wills

MEMBERS
H.R.H. The Princess Royal
Mrs. A. H. Ackroyd
Miss C. M. Acland
E. P. Acton
Miss A. E. Adam
A. M. Adam
Mrs. E. C. Adam
Professor N. K. Adam
Mrs. N. K. Adam
P. G. Adam
A. W. Adams
Miss E. Adams
J. L. Adams, Jr.
W. C. Adams
Dr. E. I. M. Addenbrooke
Sir Michael Adeane, K.C.V.O.
S. Adlard
Mrs. S. Adlard
N. M. Agnew
R. F. Aickman
Mrs. R. F. Aickman
C. J. Ainscough
Col. E. A. Airy
Miss D. Allbright
Lord Aldenham
Mrs. M. Alder
Miss D. M. Alderson
Mrs. J. R. Alderson
R. F. N. Aldrich-Blake
Mrs. A. W. S. Aldridge
J. F. Alexander
Mrs. V. Alexander
W. B. Alexander
Capt. W. Allan
Professor A. A. Allen
D. W. Allen
Miss G. R. Allen
Mrs. H. J. Allen
Lt.-Gen. Sir Charles Allfrey

Lady Allfrey
Major D. S. Allhusen
Lt.-Col. R. C. Allhusen
Miss J. Allison
Mrs. A. T. Allott
C. R. Allott
L. D. Alpess
K. P. Allpress
Miss T. Almack
W. E. Almond
J. K. Ambler
Mrs. L. G. Ambler
R. N. H. Ambler
J. G. Ambrose, O.B.E., M.C.
Sir Alan Anderson, G.B.E.
D. Anderson
G. F. Anderson
Dr. R. G. Anderson
W. A. Anderson
J. W. Anderton
F. E. Andrews
Mrs. H. A. Andrews
H. K. Andrews
J. Andrews
P. Andrews
R. W. Angus
Miss C. Anson
G. W. Anson
Miss E. S. Anstice
R. J. W. Appleton
R. Appleyard
Miss M. Archer
T. Archer
Mrs. M. N. Argles
Mrs. N. B. Arkell
Miss W. Armer
Miss E. Armitage
Dr. G. Armour
Miss W. Armstrong
H. J. Armstrong
A. B. Arney
Miss C. Arnold
T. S. Arnold
G. Arthur
G. E. Arthurs
W. A. Ashby
Miss J. Ashmore
Mrs. A. H. Ashwin
P. Ashworth
Severn Wildfowl Trust

62

T. C. Askew
Mrs. J. B. Aspden
W. E. Astin
A. J. Aston
S. N. Aston
Hon. Michael Astor
A. Atkinson
Fit. Lt. D. W. Atkinson, M.B.E.
Miss H. M. Atkinson
G. L. Atkinson-Willes
Mrs. N. Atteridge
Miss E. Attwell
Miss L. Auerback
Miss J. Aumonier
Capt. E. A. Aylmer, R.N.
Mrs. E. A. Aylmer
R. J. Ayshford-Sandford
Mrs. R. J. Ayshford-Sandford
R. M. Bache
Mrs. A. G. Bailey
A. J. M. Bailey
Lt.-Col. F. G. G. Bailey
F. G. Bailey
Miss W. E. Bailey
J. S. Bain
Mrs. M. E. Bainbridge
Canon H. W. Baines
Mrs N. E. Baines
J. F. Baines
H. M. B. Baird-Ferguson
P. A. Bak
Mrs. A. Baker
Miss B. M. Baker
G. F. Baker
Mrs. H. Baker
Miss K. E. Baker
L. Baker
Miss M. Baker
C. V. Balch
Mrs. L. M. Balch
J. M. Balcon
Sir Michael Balcon
Miss F. E. Baldwin
H. J. Baldwin
Miss S. Baldwin
A. N. Balfour
Mrs. G. Balfour
H. G. Balfour
L. Balfour
Miss E. Balfour-Browne
Mrs. M. Balme
F. Bancroft
Miss M. Banks
Michael Banks
C. Barbarin
Miss E. G. Barber
C. G. Barclay
Lt.-Col. F. P. Barclay
Mrs. T. M. Barclay
Miss Baringh-Dene
D. G. W. Barham
E. B. Baring
Hon. Robin Baring
Dr. A. S. Barling
C. D. Barlow
Mrs. C. D. Barlow
D. D. Barlow
F. R. Barlow
Cmdr. T. E. Barlow, R.N.
Miss W. M. Barnard
R. D. J. Barnes
Mrs. E. Barnes
Miss R. M. Barnes
W. Barnes
Col. G. A. Barnett
Miss C. Barney
Air Chief Marshal Sir Arthur Barratt, K.C.B., C.M.G., M.C.
G. A. Barratt
Capt. G. A. Barratt, R.N.
J. Barratt
J. H. Barrett
P. J. Barrett
F. J. F. Barrington
J. S. Barrington
Lt.-Col. R. C. Barrow
R. L. Barrow
Miss D. V. Barry
A. Barwell
B. R. Basset
R. L. Basset
J. Bastow
A. A. M. Batchelor
Mrs. A. A. M. Batchelor
Mrs. E. Bate
Hon. Mrs. B. L. Bathurst
Hon. Mrs. W. Bathurst
R. J. Batterbury
Mrs. E. M. Battle
T. J. Batty
W. R. Batty
Wing-Comdr. A. R. G. Bax
Miss G. O. Bax
H. L. Baxendale
Major W. L. Baxendale
G. V. Baxter
Miss S. E. Bayley
D. R. Baylis
Miss D. H. Beach
R. H. Beach
G. G. Beadle
Mrs. G. Beadle
D. O. Beale
Miss K. M. Beard
Lt. J. H. Beattie, R.N.
A. R. Beauchamp
Mrs. E. F. Beauchamp
Duke of Beaufort, K.G., P.C., G.C.V.O.
Duchess of Beaufort
Mrs. Beaufort-Clayton
Hon. Mrs. Beaumont-Nesbitt
Miss W. A. Beaureire
Miss E. D. Beauley
Mrs. J. S. Becke
Miss E. L. Beckett
Dr. F. G. A. Beckett
H. Bedford
W. Bee
Miss D. H. de Beer
C. U. L. Behrend
A. Behrendt
Mrs. F. H. Bell
Miss M. Bell
Miss D. W. Bellhouse
G. W. F. Bellward
R. Belsey, M.S., F.R.C.S.
C. H. Benmore
A. E. Bennett
Brigadier C. V. Bennett
H. W. Bennett
Lt. J. H. C. Bennett
P. W. Bennett
R. A. Bennett
Air Commodore C. E. Benson, C.B.E., D.S.O.
Miss G. Benson
G. B. Benson
J. H. Benson
Lt. N. R. Benson, R.N.
Lady Violet Benson
A. Bentham
Capt. R. G. W. Berkeley
F. W. W. Bernard
Dr. J. Berry
M. F. Berry
Mrs. K. Berry
W. G. Berry
A. A. Best
F. A. K. Betty
Major L. B. B. Beuttler, M.B.E.
Mrs. P. R. Beuttler
D. M. E. Bevan
L. E. D. Bevan
Rear-Admiral Sir Richard Bevan, C.B., D.S.O., M.V.O.
C. T. Beverley
Dr. J. A. B. Bickford
Dr. M. Bickmore
Mrs. C. Biddell
Miss C. Biddle
W. J. Biddle
A. Biddulph
Miss C. M. Biggs
T. H. A. Biggs
F. B. Bigland
D. L. Binder
Miss V. J. Binks
Miss E. Binyon
Lady Birchall
Mrs. S. P. Birchall
R. C. Bird
S. S. Birdsall
Annual Report 1950-51

J. Birkett
T. C. A. Birley
Miss W. Birt
Miss H. N. Biscoe
Mrs. E. W. Bishop
Mrs. E. Bisset
Mrs. G. T. Black
M. G. Black
Miss P. Blackburn
Dr. C. P. Blacker
A. F. S. Blackett
Col. C. J. Blaikie
C. B. Blake
G. G. Blake
G. B. Blaker
Miss N. Bland
Mrs. L. Blandy
Rev. F. L. Blathwayt
Miss S. Blathwayt
Mrs. B. Bleckly
Miss E. M. Blinman
Miss N. Blizard
Lt.-Col. N. R. Blockley
Rev. G. V. Blois
Hon. Mrs. G. V. Blois
Miss E. E. Bloodworth
J. Blott
C. R. Blount
G. Blows
Mrs. B. S. Blundell
J. K. Blundell
L. Blundell
Capt. H. S. Blunt
D. F. Blyth
R. P. Blyth
M. R. Boardman
G. S. Bocquet
Dr. F. Bodman
A. E. V. Boggust
Mrs. H. E. Boggust
C. H. Bois
Mrs. H. E. Bolden
Miss E. Bolton
E. R. P. Bond
Mrs. M. E. H. Bonar
Capt. R. J. Bond
Mrs. E. Bonner
Miss A. Bonus
S. S. Boorman
B. D. McD. Booth
C. G. Booth
Dr. R. W. Booth
Major A. R. Bosanquet, M.C.
H. Bostock
Mrs. B. Boston
W. H. Boston
Rev. Canon P. E. Boswell
A. G. Bottomley
Capt. S. Boucher, C.B.E., R.N.
Dr. D. Boultbee
C. H. Boutflower

Mrs. D. E. Bovet
Miss C. E. Bowen
Miss M. Bowen
J. Bowby
Lady Bowby
Miss E. M. Bowles
A. W. Boyd
Mrs. A. W. Boyd
H. J. Boyd
L. L. Boyd
R. Boyd
Dr. T. Boyd
W. Boydell
Mrs. C. L. Boyle
D. Boyle
W. J. A. Boyle
Viscount Boyne
C. Braby
A. G. Brackenbury
Miss J. Bradbury
Lt.-Col. J. M. A. Braddell
T. Brading
Miss H. W. Bradley
Miss W. E. Bradley
R. G. Bradshaw
W. R. B. Brash
H. J. Bratby
S. H. Bratby, M.B.E.
Mrs. M. Bratby
Mrs. B. Bray
R. P. Bray
Dr. M. K. Braybrooke
Air Vice-Marshal J. Breakey,
C.B., D.F.C.
Dr. C. E. Brierley
Mrs. E. Briggs
Dr. E. M. Briggs
Miss E. M. Briggs
G. van den Brink
Dr. D. H. Brinton
Miss E. M. Briscoe
Major F. E. Briscoe, D.S.O.
W. S. Brittan
W. F. Britton
C. A. Brobyn
F. Brock
Miss M. M. Brock
Major J. M. Brockbank
Mrs. C. G. Brocklebank
P. F. Le Brocq
F. K. Bromley
R. Bromley
P. E. Bromley-Martin
Capt. Rt. Hon. Sir Basil
Brooke, Bart., P.C., C.B.E.,
M.C.
Lt.-Cmdr. H. J. A. Brooke,
D.S.C., R.N.
O. Brooke
R. H. Brooke
J. B. Brooker
Miss F. C. Brookes
J. H. Brooks
Miss H. Brotherton
Major Hon. H. R. Broughton
Miss A. Brown
Miss A. Brown
Miss B. E. Brown
Miss B. W. Brown
Mrs. C. Brown
C. H. A. Brown
Miss D. Brown
D. H. W. Brown
E. R. Brown
E. T. Brown
G. Brown
G. E. Brown
J. J. G. Brown
Col. J. R. Brown
Miss J. R. Brown
P. E. Brown
P. P. Brown
S. Brown
W. A. Brown
Mrs. W. S. A. Brown
Dr. E. M. Browne
J. B. Browne
Miss N. Browne
Major W. B. E. Browne
Mrs. C. S. Browning
Lt.-General Sir Frederick
Browning, K.B.E., C.B.,
D.S.O.
Lady Browning
Lt.-Col. H. G. Brownlow
Mrs. K. M. Brownlow
Miss M. Bruce
Miss M. E. Bruce
Miss R. H. Bruce
Miss M. Brummell
Mrs. G. Bryant
Miss H. M. Bryant
Dr. N. Bryce
Dr. R. G. Bryce
Mrs. R. G. Bryce
W. J. Brymer
Lady Buchanan
D. H. Buchanan
A. Buckoke
M. Budgen
W. R. Buhon
Miss M. Buhon
R. P. Buhon
F. W. Buglass
A. Bull, O.B.E.
Severn Wildfowl Trust

Mrs. H. E. Carnes
R. A. Carr
Mrs. H. G. C. Carr-Ellison
A. J. Carrington
J. F. Carson, O.B.E.
A. S. Carter
Mrs. B. V. Carter
Mrs. F. G. Carter
G. F. Carter
Mrs. E. Carter-Lewis
Lt.-General Sir Adrian Carton
de Wiart, V.C., K.B.E.,
C.B., C.M.G., D.S.O.
C. N. Carver
Col. W. H. Carver
Miss D. Casdagli
K. E. H. Cassels
H. D. Cassini
H. V. Casson
R. H. Casson
Mrs. E. Castle
J. V. Catlin
H. J. Cator
W. Chadderton
J. Chadwick
Mrs. T. Chadwick
Mrs. G. M. Chadwyck-Healey
F. H. Chaffer
Miss N. Channoner
Miss E. M. Chalmers
A. W. Chambers
R. W. Champion
Mrs. E. W. Champion
K. Chaperlin
A. F. Chapman
C. N. Chapman
G. Chapman
H. B. Chappell
P. H. Chard
Miss E. Charles
Miss V. R. Charlewood
C. N. Charrington
Mrs. E. S. Charrington
G. A. Charrington
G. B. Charter
Hon. Guy Charteris
Lt.-Col. Hon. Martin Charter
R. F. Chatfield
Miss E. F. Chawner
Dr. C. Chessex
Viscount Chetwynd, F.S.A.
Miss W. E. Chew
Mrs. R. Childs
Mrs. B. F. C. Childs-Clarke
A. H. Chilver
G. W. Chisholm
H. F. Chittenden
Miss E. B. Chowins
J. Christmas
J. C. Christopherson
Miss E. M. Clapham

Miss G. M. Clark
H. J. S. Clark
M. Clark
R. C. Clark
Miss D. Clark-Lewis
Lady Clarke
C. A. Clarke
G. C. Clarke
Miss A. E. Clay
A. T. Clay
F. Clay
J. W. Clayton
Mrs. M. W. Clayton
Col. D. W. Cleaver
Miss G. G. Clement
W. Cliff-Hodges
A. W. Clifford
Sir Geoffrey Clifford, K.B.E.,
C.M.G.
Mrs. H. H. E. C. Clifford
A. C. Clinton
W. L. Clinton-Baker
Mrs. A. Clive
J. R. Clive
Miss V. Close
H. Clutton-Brock
C. H. Coad
Mrs. C. Coaker
Mrs. C. Coaker
P. W. R. Coate
E. N. Cobb
M. D. Cobham
A. S. Cochrane
Miss G. Cochrane
J. N. Cochrane
Col. J. C. Cockburn
Major W. G. la Trobe Coc-
craft
Edwin Cohen
Mrs. E. S. W. Cohen
Miss J. C. Cohen
W. M. Colby
G. B. Cole
Miss M. Y. Cole
Mrs. R. M. Cole
E. Coles
Mrs. J. D. D. Coles
Dr. J. H. Coles
Miss L. Collett
Lt.-Cmdr. O. Collett
Miss A. Collins
K. G. Collins
Miss U. M. Collins
P. C. Colbys, M.R.C.S.
Mrs. M. L. Colthurst
S. H. Combe
J. W. Comins
Mrs. E. M. Connemelie
P. J. Conder
Miss B. A. Coney
K. M. Conl
Mrs. M. Connelly
<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Miss I. M. Cook</td>
</tr>
<tr>
<td>Miss M. K. Cook</td>
</tr>
<tr>
<td>Mrs. E. W. F. Cooke</td>
</tr>
<tr>
<td>R. G. Cooke</td>
</tr>
<tr>
<td>Mrs. N. Cooke-Hurle</td>
</tr>
<tr>
<td>C. E. T. Cooper</td>
</tr>
<tr>
<td>Mrs. D. M. Cooper</td>
</tr>
<tr>
<td>Dr. E. T. D. Cooper</td>
</tr>
<tr>
<td>Miss J. L. Cooper</td>
</tr>
<tr>
<td>Miss L. Cooper</td>
</tr>
<tr>
<td>Major R. J. Cooper</td>
</tr>
<tr>
<td>Miss M. Cope</td>
</tr>
<tr>
<td>Miss E. G. Cordiner</td>
</tr>
<tr>
<td>Miss I. W. Corfe</td>
</tr>
<tr>
<td>Mrs. F. E. Corley</td>
</tr>
<tr>
<td>Mrs. H. V. Corley</td>
</tr>
<tr>
<td>Hon. Fienes Cornwallis</td>
</tr>
<tr>
<td>Sir Kinalian Cornwallis,</td>
</tr>
<tr>
<td>G.C.M.G., C.B.E., D.S.O.</td>
</tr>
<tr>
<td>Mrs. W. L. Corrigall</td>
</tr>
<tr>
<td>Very Rev. H. Costley-White</td>
</tr>
<tr>
<td>Dr. H. B. Cott</td>
</tr>
<tr>
<td>Miss L. Cotton</td>
</tr>
<tr>
<td>Mrs. B. Cotts</td>
</tr>
<tr>
<td>Miss A. E. Courts</td>
</tr>
<tr>
<td>A. C. Cowan</td>
</tr>
<tr>
<td>W. S. Cowin</td>
</tr>
<tr>
<td>Miss G. R. Cowing</td>
</tr>
<tr>
<td>F. T. Cox</td>
</tr>
<tr>
<td>Dr. G. L. Cox, C.B.E.</td>
</tr>
<tr>
<td>H. F. Cox</td>
</tr>
<tr>
<td>T. F. Cox</td>
</tr>
<tr>
<td>Lt.-Col. G. G. Cox-Cox</td>
</tr>
<tr>
<td>Miss J. Crabbe</td>
</tr>
<tr>
<td>R. E. Crabtree</td>
</tr>
<tr>
<td>Lt.-Cmdr. J. Crockett</td>
</tr>
<tr>
<td>D.S.C.</td>
</tr>
<tr>
<td>Sir Walter Craddock</td>
</tr>
<tr>
<td>Mrs. A. Crapps</td>
</tr>
<tr>
<td>E. N. G. Crane</td>
</tr>
<tr>
<td>J. M. Craster</td>
</tr>
<tr>
<td>J. E. Crawford-Wood</td>
</tr>
<tr>
<td>Dr. A. R. Crawford</td>
</tr>
<tr>
<td>F. J. S. Crawford</td>
</tr>
<tr>
<td>Mrs. J. B. Crawford</td>
</tr>
<tr>
<td>Dr. M. P. Crawford</td>
</tr>
<tr>
<td>C. Crawhall</td>
</tr>
<tr>
<td>N. Crawhall</td>
</tr>
<tr>
<td>J. C. Crawshaw</td>
</tr>
<tr>
<td>N. C. B. Creek</td>
</tr>
<tr>
<td>Miss E. B. Cresslin</td>
</tr>
<tr>
<td>J. E. Crewe</td>
</tr>
<tr>
<td>P. Crewe</td>
</tr>
<tr>
<td>B. J. Crichton</td>
</tr>
<tr>
<td>M. H. Crichton</td>
</tr>
<tr>
<td>Lady Cripps</td>
</tr>
<tr>
<td>Capt. J. H. Cripps</td>
</tr>
<tr>
<td>Hon. Lady Cripps, G.B.E.</td>
</tr>
<tr>
<td>Mrs. O. Crittall</td>
</tr>
<tr>
<td>Miss Crone</td>
</tr>
<tr>
<td>A. Crook</td>
</tr>
<tr>
<td>Miss N. G. Crooks</td>
</tr>
<tr>
<td>J. W. Cropper</td>
</tr>
<tr>
<td>Miss M. D. Crosby</td>
</tr>
<tr>
<td>K. Crosland</td>
</tr>
<tr>
<td>Miss D. Crowe</td>
</tr>
<tr>
<td>Miss M. Cruddas</td>
</tr>
<tr>
<td>Miss R. Cruddas</td>
</tr>
<tr>
<td>Major M. Cruickshank</td>
</tr>
<tr>
<td>B. H. Cudmore</td>
</tr>
<tr>
<td>Miss D. M. Cuer</td>
</tr>
<tr>
<td>Miss D. E. G. Culmer</td>
</tr>
<tr>
<td>W. D. Cummings</td>
</tr>
<tr>
<td>J. S. Cummins</td>
</tr>
<tr>
<td>D. Cunliffe-Lister</td>
</tr>
<tr>
<td>G. R. Cunningham-van-Someron</td>
</tr>
<tr>
<td>J. Cunningham</td>
</tr>
<tr>
<td>Capt. C. N. E. Currey, C.B.E., R.N.</td>
</tr>
<tr>
<td>Mrs. M. M. Currey</td>
</tr>
<tr>
<td>Miss Currie</td>
</tr>
<tr>
<td>R. M. Currie</td>
</tr>
<tr>
<td>Mrs. F. Currie</td>
</tr>
<tr>
<td>N. G. Curie</td>
</tr>
<tr>
<td>Miss M. M. Curtis</td>
</tr>
<tr>
<td>Miss P. M. Curtis</td>
</tr>
<tr>
<td>Capt. R. C. Curtis</td>
</tr>
<tr>
<td>C. M. Curtis-Hayward</td>
</tr>
<tr>
<td>G. E. Curwen</td>
</tr>
<tr>
<td>Dr. S. L. Dahne</td>
</tr>
<tr>
<td>Mrs. M. K. L. Dahne</td>
</tr>
<tr>
<td>Miss A. K. L. Dahne</td>
</tr>
<tr>
<td>L. F. Dale</td>
</tr>
<tr>
<td>M. B. Dale</td>
</tr>
<tr>
<td>C. T. Dalgety</td>
</tr>
<tr>
<td>Miss M. M. Dalghis</td>
</tr>
<tr>
<td>P. Dalghis</td>
</tr>
<tr>
<td>Earl of Dalhousie</td>
</tr>
<tr>
<td>Capt. R. Dalryme</td>
</tr>
<tr>
<td>Miss C. A. L. Dalryme</td>
</tr>
<tr>
<td>Vice-Admiral Sir Frederick Dalryme-Hamilton, K.C.B.</td>
</tr>
<tr>
<td>D. Dundridge</td>
</tr>
<tr>
<td>Dr. F. R. Daniel</td>
</tr>
<tr>
<td>H. M. Daniel</td>
</tr>
<tr>
<td>H. E. Danks</td>
</tr>
<tr>
<td>Mrs. H. E. Danks</td>
</tr>
<tr>
<td>V. E. Danks</td>
</tr>
<tr>
<td>Mrs. M. M. Dann</td>
</tr>
<tr>
<td>C. R. Dalyn</td>
</tr>
<tr>
<td>Dr. F. L. Dalyn</td>
</tr>
<tr>
<td>A. M. G. Darby</td>
</tr>
<tr>
<td>Col. C. G. Darby</td>
</tr>
<tr>
<td>Col. Sir Lionel Darell, Bart., D.S.O.</td>
</tr>
<tr>
<td>Major J. L. Darell</td>
</tr>
<tr>
<td>Dr. A. Darlington</td>
</tr>
<tr>
<td>H. Darnborough</td>
</tr>
<tr>
<td>A. F. Darvill</td>
</tr>
<tr>
<td>D. B. Dash</td>
</tr>
<tr>
<td>Mrs. D. M. Daubeney</td>
</tr>
<tr>
<td>Lt.-Col. G. B. Daubeney</td>
</tr>
<tr>
<td>D. Davenport</td>
</tr>
<tr>
<td>E. C. Davey</td>
</tr>
<tr>
<td>Major H. E. David</td>
</tr>
<tr>
<td>Major-General A. E. Davidson, C.B., D.S.O.</td>
</tr>
<tr>
<td>Miss R. S. Davidson</td>
</tr>
<tr>
<td>Mrs. S. S. Davidson</td>
</tr>
<tr>
<td>Brigadier E. F. Davies, D.S.O., M.C.</td>
</tr>
<tr>
<td>E. G. Davies</td>
</tr>
<tr>
<td>Miss E. M. Davies</td>
</tr>
<tr>
<td>H. Davies</td>
</tr>
<tr>
<td>Mrs. H. C. Davies</td>
</tr>
<tr>
<td>H. O. Davies</td>
</tr>
<tr>
<td>Miss M. E. Davies</td>
</tr>
<tr>
<td>H. H. Davis</td>
</tr>
<tr>
<td>Mrs. H. H. Davis</td>
</tr>
<tr>
<td>J. C. Davis</td>
</tr>
<tr>
<td>J. K. N. Davis</td>
</tr>
<tr>
<td>Mrs. J. K. N. Davis</td>
</tr>
<tr>
<td>R. B. Davis</td>
</tr>
<tr>
<td>T. F. S. Davis</td>
</tr>
<tr>
<td>D. P. Davison</td>
</tr>
<tr>
<td>Mrs. N. C. Davison</td>
</tr>
<tr>
<td>E. B. Day</td>
</tr>
<tr>
<td>P. L. Day</td>
</tr>
<tr>
<td>A. W. S. Dean</td>
</tr>
<tr>
<td>Mrs. M. H. Dearmer</td>
</tr>
<tr>
<td>J. O. Death</td>
</tr>
<tr>
<td>P. Dehn</td>
</tr>
<tr>
<td>Jean Delacour</td>
</tr>
<tr>
<td>A. Delme-Radcliffe</td>
</tr>
<tr>
<td>Lt.-Col. A. C. S. Delmege</td>
</tr>
<tr>
<td>R. P. Demuth</td>
</tr>
<tr>
<td>N. L. Denning</td>
</tr>
<tr>
<td>Sir Francis Dent, C.V.O.</td>
</tr>
<tr>
<td>J. V. Dent</td>
</tr>
<tr>
<td>Mrs. R. Dent</td>
</tr>
<tr>
<td>Mrs. P. M. Denty</td>
</tr>
<tr>
<td>F. M. Derrick</td>
</tr>
<tr>
<td>J. P. Derscheid</td>
</tr>
<tr>
<td>Lt.-Col. Sir Thomas Devitt, Bart.</td>
</tr>
<tr>
<td>Miss A. M. Dewar</td>
</tr>
<tr>
<td>Col. F. W. Dewhurst</td>
</tr>
<tr>
<td>Miss A. C. Dicker</td>
</tr>
<tr>
<td>Dr. A. D. Dickson</td>
</tr>
<tr>
<td>Dr. J. W. Dickson</td>
</tr>
<tr>
<td>Miss S. Diggle</td>
</tr>
<tr>
<td>Lady Dilke</td>
</tr>
<tr>
<td>Miss L. R. Diike</td>
</tr>
<tr>
<td>Miss D. G. Dilloway</td>
</tr>
<tr>
<td>H. Dirk</td>
</tr>
<tr>
<td>D. Divine</td>
</tr>
<tr>
<td>Mrs. E. Divine</td>
</tr>
<tr>
<td>A. G. Dixon</td>
</tr>
<tr>
<td>J. H. B. Dixon</td>
</tr>
<tr>
<td>Miss S. M. Dixon</td>
</tr>
<tr>
<td>Miss V. Dobson</td>
</tr>
<tr>
<td>H. A. Dod</td>
</tr>
<tr>
<td>R. Dodd</td>
</tr>
</tbody>
</table>
Severn Wildfowl Trust

P. J. Dodds
Miss M. Dodson
Rev. C. S. Donald
Miss K. M. Donne
T. L. S. Dooley
Major P. S. Doolan
R. J. Douglas
Mrs. T. Douglas-Cooper
P. B. Douglas-Cooper
C. Dowdeswell
E. H. Down
Miss P. K. Downes
Mrs. E. B. Downie
A. M. Drake
G. A. Drew
Mrs. J. R. Drinkwater
P. M. Driver
Major C. Druce
T. R. Drury
Rev. G. F. Drysdale
Mrs. N. Duckham
C. Duckworth
F. D. Duckworth
M. Dudbridge
Miss P. Dugdale
Lt.-Col. W. D. H. Duke
A. B. Duncan
S. Duncan
W. Duncan
Brigadier W. E. Duncan, C.V.O., D.S.O., M.C.
Viscount Duncannon
Capt. R. Duncan
Mrs. N. Duncombe
C. Duncum
Lord Dunleath, C.B.E., D.S.O.
C. Dunlop
E. D. Dunn
J. D. Dunn
Brigadier K. F. W. Dunn, C.B.E.
Mrs. J. Dunn
H. Dunnilliff
A. C. Dunsmore
Lady Durand
G. R. Duval
J. M. O. Dyer
Mrs. K. Dyson
Miss G. M. Eacott
Lt.-Col. R. E. P. Eames
F. J. Eardley
G. Eardley-Wilmot
Mrs. M. Eardley-Wilmot
Mrs. E. East
J. R. East
Lt.-General Sir Ralph Eastwood, K.C.B., D.S.O., M.C.
J. W. Ebden
Miss A. Eccles
D. L. Eccles
D. Eccleston
Hon. Terence Eden
Miss I. D. Edmiston
G. C. Edwards
Miss H. M. Edwards
M. Edwards
T. A. Edwards
Mrs. V. Edwards
V. S. Edwards
Capt. A. T. Eeles
A. H. Eggeling
H. G. Eley
G. Elgar
Miss M. C. Elliott
G. G. Elliott
Miss D. M. Ellis
N. F. Ellison
Miss P. F. Elmes
K. V. Elphinstone
Mrs. H. Engelmann
P. R. England
E. A. R. Ennion
H. J. Entenhoven
Hon. Mrs. Erskine
Sir John Erskine, C.B.E.
R. L. Eskell
Lt.-Col. C. L. Etridge, D.S.O.
Dr. A. A. Evans
A. R. Evans
Mrs. B. W. Evans
D. Evans
Mrs. D. S. Evans
D. T. Evans
Miss G. M. Evans
Mrs. M. S. Evans
Mrs. R. E. Evans
Mrs. A. K. Everest
W. M. Everett
Miss J. C. Eyre
A. Ezra, O.B.E.
C. R. Fail
Dr. W. A. Fairbairn
J. Fairfax-Ross
Lt.-Col. Sir Terence Falkiner, Bart.
Major Hon. Mountjoy Fane, T.D.
Major-General E. D. Fanshawe
Dr. N. B. Farman
Lady Farquhar
M. F. H. Farquhar
J. H. J. Farquhar
Mrs. J. P. Farquharson
J. Farrand
Miss W. M. Farrant
G. B. Farrar
Mrs. J. C. Farrell
Mrs. E. M. Farrer
R. L. Faulkner
W. L. Faulks
Miss A. C. Favell
Miss E. W. Favell
L. R. Fawcus, C.S.I., C.I.E.
Miss D. J. Fayers
Dr. B. W. D. Fayle
D. G. F. Fayle
Mrs. I. B. S. Fayle
R. Fear
H. Felce
R. Ferguson
E. D. Fergusson
Miss J. M. Ferrier
E. A. Fiddian
A. W. Field
J. Field
Mrs. J. M. Field
S. Field
Mrs. F. B. Fielding
F. J. Fielding
Miss G. H. Findlay
H. Finley
Brigadier C. L. Firbank
E. Fisher
Miss E. H. Fisher
G. Fisher
James Fisher
Rev. J. H. W. Fisher
R. C. Fisher
S. E. Fisher
Miss S. L. Fisher
Miss U. M. Fisher
R. S. R. Fitter
P. Fleming
R. E. Fleming
Miss M. Fleming
G. W. Fletcher
Lt.-Col. Sir Lionel Fletcher, C.B.E.
Lady Fletcher
C. M. Floyd, O.B.E.
Mrs. W. S. Foljambe
Miss R. P. Folkard
Miss R. Follett
R. B. H. Foot
C. L. G. McK. Forbes
B. C. Forder
D. H. Fordham
Col. Lord Forester
A. J. Forrester
Mrs. Forster
Miss E. Forster
Miss E. Forster
Hon. Denzil Fortescue, M.C., T.D.
G. Foster
H. F. B. Foster
K. J. Foster
Miss M. Foster
R. J. Foster
Lt.-Col. R. T. Foster, D.S.O.
Miss D. Fowler
H. F. B. Fox
Dr. W. S. Fox
Mrs. H. Francis-Fisher
<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Name</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>S. Frank</td>
<td></td>
<td>H. J. Goodhart</td>
<td></td>
</tr>
<tr>
<td>C. H. Frankland</td>
<td></td>
<td>Mrs. M. S. Goodhart</td>
<td></td>
</tr>
<tr>
<td>T. S. Frankland</td>
<td></td>
<td>Miss E. M. Goodwin</td>
<td></td>
</tr>
<tr>
<td>Major J. H. Franklin</td>
<td></td>
<td>M. Goodwin</td>
<td></td>
</tr>
<tr>
<td>H. A. Franklyn</td>
<td></td>
<td>Miss N. Goom</td>
<td></td>
</tr>
<tr>
<td>Major A. C. Fraser</td>
<td></td>
<td>Major A. F. Gordon</td>
<td></td>
</tr>
<tr>
<td>Major A. J. Fraser</td>
<td></td>
<td>R. E. J. Gordon</td>
<td></td>
</tr>
<tr>
<td>Dr. D. Fraser</td>
<td></td>
<td>Seton Gordon, C.B.E.</td>
<td></td>
</tr>
<tr>
<td>I. H. C. Fraser</td>
<td></td>
<td>J. S. Gordon-Clark</td>
<td></td>
</tr>
<tr>
<td>J. Fraser</td>
<td></td>
<td>Mrs. J. Gordon-Clark</td>
<td></td>
</tr>
<tr>
<td>J. N. Fraser</td>
<td></td>
<td>Col. Sir Eric Gore-Browne,</td>
<td></td>
</tr>
<tr>
<td>M. H. A. Fraser</td>
<td></td>
<td>D.S.O., O.B.E.</td>
<td></td>
</tr>
<tr>
<td>Mrs. M. H. A. Fraser</td>
<td></td>
<td>Miss H. M. Gornall</td>
<td></td>
</tr>
<tr>
<td>Professor R. Fraser</td>
<td></td>
<td>Maj.-Gen. A. A. Goschen,</td>
<td></td>
</tr>
<tr>
<td>Mrs. V. A. L. Freeman</td>
<td></td>
<td>C.B., D.S.O.</td>
<td></td>
</tr>
<tr>
<td>C. R. E. Freezer</td>
<td></td>
<td>Miss C. C. B. Gosling</td>
<td></td>
</tr>
<tr>
<td>Mrs. D. M. French</td>
<td></td>
<td>R. W. Gossage</td>
<td></td>
</tr>
<tr>
<td>Lt.-Col. D. M. French</td>
<td></td>
<td>Major G. V. H. Gough</td>
<td></td>
</tr>
<tr>
<td>Lt.-Col. L. Frewen</td>
<td></td>
<td>Lt.-Col. C. Goulburn, D.S.O.</td>
<td></td>
</tr>
<tr>
<td>Mrs. M. Frewen</td>
<td></td>
<td>Miss D. Gould</td>
<td></td>
</tr>
<tr>
<td>Mrs. W. Frick</td>
<td></td>
<td>Mrs. J. Govett</td>
<td></td>
</tr>
<tr>
<td>H. H. F. Friend</td>
<td></td>
<td>C. Gowin</td>
<td></td>
</tr>
<tr>
<td>J. Frith</td>
<td></td>
<td>Miss C. Graham</td>
<td></td>
</tr>
<tr>
<td>Mrs. J. K. Fry</td>
<td></td>
<td>C. S. Graham</td>
<td></td>
</tr>
<tr>
<td>Mrs. D. Fryer</td>
<td></td>
<td>Sir Fergus Graham, Bart.,</td>
<td></td>
</tr>
<tr>
<td>Mrs. J. E. Fryer</td>
<td></td>
<td>T.D., D.L.</td>
<td></td>
</tr>
<tr>
<td>P. G. Fryer</td>
<td></td>
<td>I. M. Graham</td>
<td></td>
</tr>
<tr>
<td>R. F. Fryer</td>
<td></td>
<td>Brigadier Lord Malise Graham</td>
<td></td>
</tr>
<tr>
<td>G. M. Fuller</td>
<td></td>
<td>C.B., D.S.O., M.C.</td>
<td></td>
</tr>
<tr>
<td>J. R. Furse</td>
<td></td>
<td>Lady Malise Graham</td>
<td></td>
</tr>
<tr>
<td>W. G. Fussell</td>
<td></td>
<td>Miss P. K. Graham</td>
<td></td>
</tr>
<tr>
<td>Mrs. T. Fyfe</td>
<td></td>
<td>Mrs. M. Graham-Clarke</td>
<td></td>
</tr>
<tr>
<td>Miss R. M. Fynes-Clinton</td>
<td></td>
<td>G. A. Grain</td>
<td></td>
</tr>
<tr>
<td>A. G. Fyse</td>
<td></td>
<td>Canon H. P. Granlund</td>
<td></td>
</tr>
<tr>
<td>Mrs. D. Fyson</td>
<td></td>
<td>Sir Allan Grant</td>
<td></td>
</tr>
<tr>
<td>Capt. G. C. Gadd</td>
<td></td>
<td>F. Grant</td>
<td></td>
</tr>
<tr>
<td>Mrs. Gadesden</td>
<td></td>
<td>Mrs. A. M. Grant</td>
<td></td>
</tr>
<tr>
<td>Miss J. Gain</td>
<td></td>
<td>Major R. Grant</td>
<td></td>
</tr>
<tr>
<td>Miss M. L. A. Galbraith</td>
<td></td>
<td>R. M. W. Grant</td>
<td></td>
</tr>
<tr>
<td>L. C. Gale</td>
<td></td>
<td>T. Grant</td>
<td></td>
</tr>
<tr>
<td>E. Galland</td>
<td></td>
<td>V. A. Grantham</td>
<td></td>
</tr>
<tr>
<td>G. E. H. Gallia</td>
<td></td>
<td>Mrs. V. H. Grantham</td>
<td></td>
</tr>
<tr>
<td>Mrs. D. M. Galliford</td>
<td></td>
<td>Capt. P. Grant-Sturgis</td>
<td></td>
</tr>
<tr>
<td>F. T. Galloway</td>
<td></td>
<td>Dr. A. H. Gray</td>
<td></td>
</tr>
<tr>
<td>Miss M. G. Galloway</td>
<td></td>
<td>A. R. Gray</td>
<td></td>
</tr>
<tr>
<td>Lt.-Col. L. P. P. Gallowy</td>
<td></td>
<td>Miss M. J. Gray</td>
<td>Miss R. Gray</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lt.-Col. R. M. Gazebrook</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>E. Greasley</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>J. I. Greatrix</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lady Greaves</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>D. S. Green</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Miss M. C. Green</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>R. C. Green</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>S. Green</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mrs. W. Green</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>H. Greenaway</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sir Edward Greene, Bart.,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>M.C., T.D.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>G. C. Greene</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>N. D. G. Greene</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mrs. D. Greenland</td>
<td></td>
</tr>
</tbody>
</table>
Severn Wildfowl Trust

R. A. C. Greenland
R. Greenwood
E. M. Greenwell
F. Gregory
Canon L. W. Grensted
Miss A. M. Grey
Major S. J. Griffin
Miss D. Griffiths
G. P. Griggs
H. R. Griggs
I. R. Grimwood
Miss B. A. M. Grist
F. Grocott
A. Groppi
Lt.-Col. G. H. Grosvenor, D.S.O.
Lt.-Col. L. F. B. Groube
D. B. Grubb
Mrs. E. Grubb
K. R. Grundon
Lady Gueterbock
Sir Anselm Guise, Bart.
Miss I. Gundent
H. S. Gunn
M. Gunn
E. H. Gunter-Jones
Dr. N. J. S. Gurney
G. H. Gush
Mrs. J. E. Guthe
Miss M. Guthe
Miss E. R. Gwatkin
Sir Evan Gwynne-Evans, Bart.
Miss I. Gun dent
Miss B. A. Hall
J. T. Hall
K. R. L. Hall
Miss M. Hall
Mrs. M. G. Hall
R. A. Hall
W. B. Hall
H. K. Hallam
Mrs. L. E. Hallam
C. M. Hallott
R. C. Hallowes
Miss V. M. Halsey

H. Halvorsen
F. D. Ham
Sir Charles Hambro, K.B.E.
D. J. Hambro
R. G. Hamilton
C. R. A. Hammond
E. C. Hammond
Mrs. N. A. Hammond
Mrs. P. Hammond
Comdr. C. E. Hamond, D.S.O., D.S.C., R.N.(ret.)
Major R. Hamond
W. H. Hampton
Miss I. M. Hanbury-Sparrow
Mrs. E. Hancock
A. N. Handley
C. B. C. Handleby
Sir John Hanham, Bart.
Miss M. T. Hankin
B. Hamilton
Capt. H. L. Harclerode
Col. D. C. J. Harcourt-Woods
W. S. Hardcastle
G. L. Hardey
Miss J. M. D. Harding
J. L. M. Hardwick
Mrs. W. Hardwick
Mrs. M. E. Hardy
W. Hardy
B. W. T. Hare
Major C. E. Hare
Mrs. E. C. Hare
A. H. Harford
Lt.-Col. G. Harford
G. A. Harford
M. H. Harford
Miss M. Hargreaves
Mrs. G. M. B. Hargood-Ash
J. F. D. Hargreaves
B. H. Har ley
G. H. Har ley
J. L. Harman
D. V. Harradine
H. G. Harraway
A. J. M. Harris
Miss F. Harris
P. Harris
R. Harris
S. Harris
Mrs. D. Harrison
Capt. H. L. Harrison
J. C. Harrison
Dr. J. G. Harrison
Miss P. J. M. Harrison
Lt.-Col. R. N. Harrison, O.B.E.
W. R. D. Harrisson
Mrs. W. R. Harris-St. John
Dr. L. R. Hart
Miss K. A. Hartfree
P. H. G. Horton-Smith
Hartley, O.B.E.
Miss A. Harvey
Miss C. Harvey
J. M. Harvey
Miss J. W. Harvey
Dr. R. M. Harwin
M. Haseho
Mrs. M. L. Hatch
Miss Hathway
J. C. Hawkins
J. W. Hawkins
W. B. Hawkins
Miss M. C. Hay
Miss R. A. Hay
R. T. Hay
Mrs. V. E. Hay
T. A. Hayden
Miss M. Haydock
Capt. A. S. Hayward
L. W. Hayward
Miss L. E. Hazleton
Mrs. W. H. Heaving
R. E. Heft
E. E. Heft
Mrs. J. A. Heimann
D. Hellen
R. E. Hempl
Miss O. Henderson
A. Hendrichs
Major H. R. Hendy
J. D. Hendy
Miss E. Henney
Miss M. M. Henney
Miss K. H. Henrey
Major P. F. Henry
W. H. Henson
B. W. Henwood
Miss A. Hervey
Lt.-Col. J. L. Heselton, D.S.O., M.C.
C. E. Hett
Mrs. A. Hewer
H. P. Hewett
D. Hewitt
Major G. B. Heywood
H. G. Heywood
Sir Oliver Heywood, Bart.
Miss B. H. G. Heyworth, M.B.E.
A. E. Hickery
Miss E. A. G. Higgins
Air-Commodore T. C. R. Higgins, C.B., C.M.G.
W. E. Higham
Col. F. F. G. Highway
Miss A. Murray Hill
C. J. Hill
Mrs. C. L. Hill
C. N. A. Hill
D. M. Hill
Mrs. E. M. Hill
Col. E. R. Hill, D.S.O.
F. R. Hill
Annual Report 1950-51
Hon. Robert James  
T. O. James  
Mrs. J. Jameson  
J. V. McC. Jameson  
Major D. Jamieson, V.C.  
G. Jamieson  
J. A. J. Jamieson  
Miss J. H. Jamieson  
Miss P. Jamieson  
Mrs. N. Jamieson  
Miss K. M. Jane  
C. O. Janson  
C. W. Janson  
R. T. Janson  
Mrs. E. G. Jarratt  
Miss P. Jamieson  
Mrs. N. Jamieson  
Miss K. M. Jane  
C. O. Janson  
C. W. Janson  
R. T. Janson  
Mrs. E. G. Jarratt  
Miss Z. Jarret  
Mrs. E. M. Jefferson  
Mrs. A. Jeffrey  
Canon A. T. Jenkins  
O. T. Jenkins  
Major S. R. M. Jenkins  
Miss G. Jenkins  
Dr. S. M. Jenner  
A. M. C. Jenour  
R. C. Jephcott  
V. E. Jimenez  
Lt.-Col. A. A. Johnson, M.C.  
Mrs. I. Johnson  
L. A. G. Johnson  
Lt.-Col. R. H. Johnson  
Miss A. M. Johnston  
Capt. T. N. Johnston  
Miss C. J. B. Johnstone  
Dr. I. L. Johnstone  
Mrs. M. Johnstone  
Dr. W. Johnston  
Col. Lord Joicey, D.S.O.  
Lady Joicey  
Capt. Hon. Michael Joicey  
Dr. B. M. Joly  
A. H. B. Jones  
B. H. Jones  
Comdr. (S) B. S. Jones, O.B.E., R.N.  
R. E. Jones  
R. R. M. Jones  
Terry Jones  
W. J. Jones  
W. M. Jones  
H. B. Joseph  
R. G. Joslin  
A. H. Jouett  
Miss A. Joyce  
H. S. Joyce  
Miss R. Judge  
A. C. Jupter  
Miss A. Kay  
G. Kay  
G. T. Kay  
Miss D. Keane  
J. F. Keelie  
T. P. Keeley  
E. P. M. Keeling  
Lt.-Col. N. A. Keith  
J. K. C. Kemp  
Sir Norman Kendal  
N. O. Kendal  
Mrs. A. R. Kennedy  
J. D. Kennedy  
J. R. M. Kennedy  
Mrs. N. McL. Kennedy  
Mrs. V. B. Kenneth  
D. J. Kenney  
H. Kenrick  
J. B. Kenrick  
W. E. Kenrick  
Miss S. Kent  
Mrs. Rait Kerr  
Miss W. A. Kerr  
L. W. Kersley  
W. H. B. Key  
Miss A. Keyser  
Miss S. Keyser  
Miss J. Kift  
R. G. Kilburne, O.B.E.  
Miss E. M. Killick  
W. Killicking  
H. E. Kimber  
Bernard King  
Mrs. B. King  
Capt. C. M. King  
G. L. King  
H. D. King  
Major Sir James King, Bart.  
Dr. L. R. King  
P. G. King  
Mrs. P. M. King  
Miss R. M. King  
W. L. King, M.C.  
T. J. A. Kingan  
C. R. King-Farlow  
A. W. G. Kingsbury  
Mrs. V. O. Kingscote  
Colonel C. H. Kingsford-Lethbridge, O.B.E.  
R. B. King-Smith  
Mrs. D. D. Kirkbride  
Miss M. Kirke  
Major-General J. M. Kirkman, C.B., C.B.E.  
H. R. Kirkwood  
E. N. Kitcat  
Mrs. E. N. Kitcat  
Mrs. D. Knappett  
Esmond Knight  
G. A. Knight  
Major-General J. M. Kirkman, M.C.  
J. E. M. Knight  
Major M. Knight, O.B.E.  
Mrs. E. M. Knobel  
Mrs. E. G. M. Knowles  
Miss Erica Koch  
Dr. Ludwig Koch  
G. S. E. Lacon  
Miss S. M. Ladbrook  
J. C. Laiday  
H. W. Lake  
A. Lamb  
Capt. J. W. Lamb, R.N.  
Mrs. L. B. Lamb  
Mrs. D. de G. Lambert  
G. C. Lambourne  
R. S. Laming  
J. C. Lancaster  
B. Landale  
Miss J. Landale  
R. Landray  
Col. C. M. Lane  
J. D. Lane  
Miss M. A. Lane  
Miss N. E. Lane  
Miss N. E. Landray  
Lady Langman  
Marquis of Lansdowne  
H. Lapworth  
Miss H. D. Larcombe  
Major-General G. W. Latbury  
H. G. Law  
A. E. Lawrence  
Rev. F. K. Lawrence  
Comdr. J. Lawrence, R.N.  
H. B. Lawson  
Mrs. J. Lawson  
D. Lea  
A. C. Leach  
Mrs. L. C. Leach  
T. C. Leader  
R. H. Leaf  
Miss D. A. Leake  
Mrs. K. R. M. Leat  
A. G. F. Leather  
A. R. Lee  
B. Lee  
Viscountess Lee of Fareham
Severn Wildfowl Trust

E. H. Marshall
H. F. Marshall
Mrs. H. F. Marshall
Mrs. J. R. Marshall
Mrs. K. H. Marston
Lady Martel
Mrs. F. S. Martin
Dr. J. J. Martin
R. F. Martin
W. T. Martin
Miss D. Martindale
Mrs. A. Martin-Hurst
E. Martland
Major A. G. Martyr
A. Mason
Miss A. W. Mason
Miss D. C. Mason
Miss E. I. Mason
M. H. Mason
Lt.-Col. G. Masters
Mrs. S. J. Mather
J. B. F. Mathews
T. H. G. Mathews
G. V. T. Matthews
J. B. L. Matthews
Capt. T. F. V. Matthews, M.C.
R. L. E. Maude
M. C. P. Maurice
Mrs. Mawson
Miss V. Maxse
H. H. Maxwell
M. Maxwell
P. H. Maxwell
B. F. May
G. Mayson
S. W. Mealing
Mrs. D. A. Meanley
Lieut. A. S. Mears, D.S.C., R.N.
W. S. Medlicott
Dr. B. R. Medlycott
J. A. Medwell
Lt.-Col. A. Mellor
Lt.-Col. M. E. Melville
Major I. G. Menzies
Mrs. I. Meredith
Lt.-Col. E. J. Merry
Lt.-Col. E. J. H. Merry
Mrs. J. T. Merry
Sir Thomas Merton, F.R.S.
Dr. J. J. A. Van Der Merve
A. E. Messer
Dr. G. A. Motcalf
Comdr. B. Metcalfe, R.N.R.
Mrs. N. M. Mews
Miss S. Mews
Major H. Meynell
Rev. M. Meynell
Capt. W. L. Meynell, R.N., (ret.)
Hon. Gwendolen Meynell-Thompson
Miss S. V. G. Milall
W. N. Milall
Mrs. F. L. Michell
R. J. Michelmore
J. H. Middlemiss
Lady Middleton
C. Midwood
D. G. Miles
R. W. Miles
A. H. Milford
J. Milhais
Mrs. E. R. Millard
J. Millard
Mrs. A. H. Miller
F. E. Miller
J. A. d'E. Miller
Lt.-Col. J. A. T. Miller, O.B.E.
Mrs. E. L. Miller
A. Milne
J. W. Milne, O.B.E.
C. E. Milner
C. D. Milward
Mrs. C. D. Milward
D. S. Milward
Miss P. Milward
A. Mitchell
C. Mitchell
D. J. Mitchell
F. G. Mitchell
F. J. L. Mitchell
Dr. G. Mitchell
J. P. Mitchell
J. W. Mitchell
R. W. B. Mitchell
W. M. Mitchell
Miss G. A. Mizen
Brigadier G. M. Moffatt, O.B.E.
L. G. Moir
Miss S. Mold
Mrs. B. M. Mollison
Hon. Lady Monckton, C.B.E.
Mrs. S. Moncrieff-Brown
Dr. J. F. Monk
A. Monk-Jones
Hon. Lady Montagu, O.B.E., K.C.
H. E. Montgomery
Miss O. M. Montgomery
Duchess of Montrose
A. Moody
Miss A. H. Moore
H. J. Moore
I. G. Moore
Mrs. M. R. Moore
D. W. J. Morgan
Miss F. Morgan
Miss H. M. A. Morgan
Miss L. E. Morgan
Mrs. M. J. Morgan
Miss M. L. Morgan
A. J. Morris
Mrs. A. K. F. Morris
Miss C. H. L. Morris
F. C. Morris
Mrs. J. Morris
M. Morris
Miss M. A. Morris
Miss M. T. Morris
Stewart H. Morris
R. O. Morris
Miss A. E. Morrison
Miss R. Morrison-Bell
Dr. B. Morson
Dr. C. Morson
F. D. B. Morton
Sir George Morton, O.B.E., M.C.
Mrs. K. B. Morton
S. Morton
P. J. Mosedale
Mrs. P. J. Mosedale
Lt.-Col. R. B. Moseley
F. Mosford
J. I. Mosley
Lady Moss
M. Mostyn-Owen
Mrs. E. E. Motion
G. W. H. Moule
R. Moulton
H. R. Mountain
G. R. Mountford
J. L. Muckle
P. H. Munhead
W. J. H. de W. Mullens
Mrs. E. G. Mullins
A. G. Munday
Major P. M. Mundy
F. A. C. Munns
Major G. F. A. Munns
R. D. G. Munns
Mrs. M. Munro
Miss M. Munro
Count Paul Munster
J. E. Murphy
Mrs. A. D. Murray
B. C. Murray
Major P. W. Murray-Threipland
Miss P. B. Muscott
Capt. F. J. W. Musselwhite
Annual Report 1950-51

R. H. Nailer
J. M. Naish
Brigadier V. J. L. Napier
Brigadier V. M. C. Napier
D. Nash
Dr. F. J. Nattrass
Miss A. S. Neale
Professor A. V. Neale
Mrs. I. Neale
M. H. Neale
W. G. Neat
Capt. A. E. P. Needham
Major Hon. Francis Needham, M.V.O.
J. R. Neighbour
O. W. Neighbour
Mrs. C. Neilson
L. C. Nelms
C. S. Nelthorpe
J. C. Neve
Dr. E. M. Newman
C. P. Newman
L. Hugh Newman
Viscount Newman
M. J. Newsom
Dr. G. T. Newton
J. Newton
Mrs. J. E. Newton
Mrs. M. G. Newton
R. C. Newton
Capt. R. G. Newton
W. E. M. Newton
E. N. J. Nias
Dr. L. Nicholls
W. H. T. Nicholls
W. R. Nicholls
W. T. Nicholls
D. Nicholson
E. M. Nicholson, C.B.
Sir John Nicholson, Bart., C.I.E.
M. J. Nicholson
J. H. Nicoll
I. Nisbet
J. P. M. Niven
Mrs. K. Noel
M. G. Noll
Duke of Norfolk, K.G., P.C., G.C.V.O.
Lady Norman
Earl of Normanton
C. A. Norris
C. E. Norris
Major N. F. H. C. Norris
Miss S. F. Norris
Miss M. M. Northcott
Duke of Northumberland
Helen, Duchess of Northumberland
H. C. Norton
Miss R. Nott
Mrs. M. E. Nurse

Mrs. M. Nuttall
J. M. Oakley
Dr. R. O’Callaghan
Dr. D. Odlum
Mrs. D. L. Offord
Mrs. D. K. R. Ogilvie
Sir Heneage Ogilvie, K.B.E.
Miss F. H. O’Keefe
G. Oldfield
Miss S. F. Oldfield
R. D. Oldham
Mrs. D. Olive
C. Oliver
P. L. Oliver
W. K. Oliver
Miss K. N. Ollier
S. B. Olsen
P. F. O’Neill
Miss M. van Oostveen
Brigadier-General W. L. Osborn, C.B., C.M.G., D.S.O.
Miss M. E. Osborne
K. H. Osbourne-Young
Mrs. Otter
Miss E. Otter
T. L. Outhwaite
Miss E. D. Overend, B.Sc.
B. A. Owen
H. Owen
T. J. Owen
Miss E. L. Pagan
E. Page
P. W. K. Page
J. P. Paige
Miss D. K. Palin
Hon. Mrs. A. R. Palmer
D. Palmer
Mrs. E. Palmer
Mrs. E. A. B. Palmer
I. R. Palmer
Lt.-Col. K. R. Palmer
Mrs. R. Palmer
Lt.-Col. R. H. Palmer
R. H. R. Palmer
W. E. Palmer
Hon. William Palmer
Major Albert Pam, O.B.E.
Mrs. E. M. Parbury
Mrs. D. M. C. Parish
C. J. Park
Miss P. Park
Mrs. C. Parker
Miss E. Parker
J. F. Parker, F.S.A.
Mrs. J. F. Parker
R. M. Parker
Sir William Parker, Bart., O.B.E.
R. G. Parkes
R. W. Parkyn
N. J. C. Parmenter

Hon. Christopher Parnell
W. B. Parr
E. R. Parrinder
J. Parry
W. S. Parry
A. J. Parsons
A. M. Parsons
P. W. Parsons
E. J. Partridge
Mrs. G. E. Partridge
W. R. Partridge
E. A. Paterson
Mrs. A. B. Paton
Miss K. A. Paton
Mrs. M. Paton
H. A. Patrick
C. R. Patterson
L. C. Patterson
Mrs. D. Pattinson
J. L. Pattinson
S. E. B. Pattinson
J. R. Pattinson
D. L. Pattullo
G. H. Paul
C. J. Payne
Col. W. P. Paynter
K. S. Peacock
M. Peacock
Miss M. G. Peak
Mrs. D. Peall
Wing-Comdr. R. S. Pearce
Miss B. R. Pearson
Hon. Clive Pearson
Mrs. D. E. Pearson
H. C. Pearson
Mrs. P. W. Pearson
F. J. S. Pearson-Gregory
G. R. Peck
J. A. Peck
Lady Delia Peel, C.V.O.
Miss I. M. Pelly
Mrs. C. Pemberton
M. Pemberton
F. P. Penfold
R. H. Penley
Sir Arthur Penn, K.C.V.O., M.C.
J. D. Penn
W. E. Penn
A. G. Penny
H. J. Penrose
Mrs. M. V. Penruddocke
Capt. D. S. Peplow
Miss E. A. Peplow
W. A. Peplow
Mrs. D. R. Percy
Lord Geoffrey Percy
Col. Lord William Percy, C.B.E., D.S.O.
F. R. Perkins
R. Perkins, M.P.
Severn Wildfowl Trust

D. H. Perrett  
Mrs. M. Perrett  
E. N. Perrett  
Professor B. Perry  
Mrs. R. T. Peterson  
Lt.-Col. W. G. Petherick  
J. Petrie  
Lt.-Col. D. V. Phelps  
G. J.Phillipson  
A. S. Phillips  
E. V. Phillips  
G. H. Phillips  
Miss J. M. Phillips  
Mrs. R. Phillips  
Miss V. A. Phillips  
W. W. A. Phillips  
Dr. J. S. Philpotts  
Mrs. L. N. G. Phipps  
Miss G. Pickford  
Comdr. (S) F. C. Pidcock, R.N.  
H. K. Pierson  
O. Pike  
P. E. Pike  
Dr. R. E. M. Pilcher  
A. D. Pilkington  
G. L. Pilkington  
G. M. Pilkington  
J. Pilkington  
R. C. L. Pilkington  
R. D. Pilkington  
T. D. Pilkington  
Mrs. P. Pinfold  
Lady Pinsent  
N. Prie  
J. A. M. Pitcairn  
F. A. H. Pitman  
Miss Frances Pitt  
M. H. Pitt  
Miss A. M. Plaistowe  
H. Platt  
J. Platt  
E. W. Player  
S. D. Player  
Rev. E. W. Plowright  
Miss C. F. Flunkett  
D. R. Pochin  
R. E. Pochin  
D. C. E. Pockney  
Lady Pole  
Miss R. Polehampton  
P. H. Pollen  
Miss L. B. Pollit  
A. Pollock  
Mrs. D. Pollock  
V. Ponsonby  
I. Pope  
Dr. S. Pope  
Miss C. Popham  
Hon. Mrs. C. W. Portal  
M. Portal  
J. Porter  
Sydney Porter  
M. V. Posner  
R. G. M. Poston  
C. W. Potter  
Major G. E. W. Potter, M.C.  
Miss J. Potter  
R. H. Pough  
Mrs. E. M. Powell  
Mrs. H. Powell  
J. B. Powell  
L. A. Powell  
Miss M. E. Powell  
W. M. J. Powell  
C. W. Mackworth Praed  
Dr. C. A. Pratt  
Miss B. Prescott  
A. W. Preston  
Mrs. D. Price  
E. G. Price  
Mrs. E. G. Price  
Mrs. K. L. H. Price  
M. P. Price  
R. Price  
W. B. Price  
A. K. Priday  
Wing-Comdr. R. G. Prier  
Mrs. J. B. Priestley  
A. W. R. Pring  
Miss A. Pritchard  
D. R. Pritchard  
Mrs. I. P. B. Probert  
Miss E. Proctor  
Dr. D. C. Prowse  
Mrs. D. E. Prowse  
Lt.-Col. W. M. Pryor  
G. E. Pugh  
Mrs. C. R. Pullen  
Mrs. M. Pulman  
C. E. Pybus  
H. D. Pyke  
Major A. R. Pym  
J. W. A. Pyman  
C. E. Queckett  
Paul Queeneau  
T. G. Quinn  
Mrs. P. C. Raban  
Mrs. E. P. Rackham  
C. P. I. Radcliffe  
Miss M. A. Radford  
P. Radley  
G. V. Ralli  
Lady Ralli  
Hon. Simon Ramsay, M.P.  
Dr. C. Ramsdale  
G. G. Ramsden  
W. Ramsden  
G. A. F. Rands  
G. E. Ranken  
Mrs. G. E. Rankin  
Dr. N. E. Rankin  
C. Ransom  
Mrs. P. Ransom  
R. F. Ransom  
P. W. Ratcliff  
Miss J. Rawlings  
Mrs. M. J. Rawlins  
Major-General S. B. Rawlins, C.B., C.B.E., D.S.O.  
G. W. Rayner  
J. S. Read  
T. E. Read  
J. M. Reakes-Williams  
R. G. T. Reckitt  
Miss J. Reed  
Miss M. Reed  
B. Reeves, F.R.C.S., E.D.  
Mrs. E. W. Reeves  
H. K. Reeves  
Miss A. Reid  
A. H. Reid, C.B.E.  
G. L. Reid  
Miss S. Reid  
Mrs. M. Reilly  
J. Reiss  
Miss L. Rendall  
W. Rendell  
Mrs. H. D. Rennoldson  
H. F. Rennoldson  
Miss P. Rendol  
Sir Stephen Renshaw, Bart.  
Sir Robert Renwick, Bart., K.B.E.  
Countess Reventlow  
M. R. Reynard  
Miss E. C. Reynolds  
F. L. Reynolds  
R. A. W. Reynolds  
E. D. Rhodes  
T. C. Ribchester  
Mrs. H. C. Ribchester  
C. Richards  
Miss M. Richards  
R. M. Richards  
A. Richardson  
J. F. Richardson  
W. Richardson  
A. J. Richmond  
R. S. Richmond  
Lady Ricketts  
R. F. Ridgers  
Mrs. H. G. Ridgers  
L. C. Rider  
A. H. Ridley  
Miss S. K. Rigg  
P. W. T. Riley  
W. P. Riley  
Miss M. Ring  
Dr. S. Dillon Ripley  
Major C. B. Ritchie  
Sir Lewis Ritchie, K.C.V.O., C.B.E.
G. S. H. Rittner
B. B. Riviere
Miss C. M. Rivington
J. Roberts
Miss B. M. Robbins
C. B. A. Roberts
Mrs. D. C. Roberts
Mrs. F. M. Roberts
J. F. Roberts
M. C. Roberts
P. J. Roberts
G. J. J. Robertson
Miss K. M. Robertson
Mrs. V. A. Robins
F. G. Robinson
Miss H. R. Robinson
J. E. Robinson
J. S. Robinson
Mrs. K. J. Robinson
Miss L. M. Robinson
Mrs. P. Robinson
N. B. Robinson
W. Robinson
H. Robinson-Smith
Miss A. Robson
J. C. Robson
Mrs. C. E. Rochford-Boyd
S. W. Rodell
H. C. I. Rogers
Miss M. H. Rogers
P. M. Rogers
T. P. Rogers
F. Rollett
Mrs. L. Romanes
Miss N. L. Rome
Dr. K. B. Rookie
G. D. Roper
Mrs. J. M. Rosser
H. C. I. Rotherwick
Mrs. P. B. Rowden
W. Rowles
Lt.-Col. Sir Charles Rowley, E.D.
J. F. Rowley
Maurice Rowling
Duke of Roxburghe
Mrs. A. B. Royce
Viscount Royston
R. S. Rudd
Lt.-Col. S. Rudd-Clarke, R.A.
M. K. Ruddock
Mrs. M. K. Ruddock
Capt. J. Rushbrooke, R.N., (ret.)
Dr. E. P. K. Rushton
Mrs. J. W. Rushton
Miss P. A. Rushton
A. T. Russell
F. R. Russell
J. A. S. Russell
Lieut. M. J. Ryall
D. R. Rye
L. M. Ryland
E. C. Rymer
J. H. Rymer
A. V. Sainsbury
Col. H. H. Salmon, C.B.E., M.C.
R. G. Salter
Miss A. M. Salvesen
Miss R. J. Samson
L. P. Samuels
J. F. Sandars
R. E. Sandell
Mrs. Sanderson
G. T. Sandy
Dr. P. R. B. Sankey
Miss C. L. Sansom
J. C. van Santen
Sir Malcolm Sargent
Miss E. Sartoris
B. M. J. Saunders
C. D. W. Savage
J. H. Savage
M. Savage
M. J. Savage
R. C. Savery
J. M. Savidge
A. F. Savory
H. Savory
W. J. Sayles
R. L. Schofield
E. A. Schofield
Mrs. H. Schroder
J. B. Schuster
Mrs. J. B. Schuster
C. Schwerdt
C. H. Schwind
C. D. Scotland
E. Scot-Skirving
Miss B. A. Scott
Capt. D. H. Scott
J. Scott
Capt. J. B. Scott
Miss J. V. Scott
Miss M. Scott
Miss Nicola Scott
P. F. Scott
W. Scott, F.R.C.V.S.
W. E. Scott
H. C. Scrimgeour
J. Scrimgeour
G. W. R. Scudamore
Mrs. G. Seabroke
A. R. A. Seacome
Miss D. M. Seager
Miss T. L. Seager
Edward Seago
A. F. Sealey
L. J. Sealy-Lewis
Miss E. M. Seaman
Brigadier E. G. L. Searight, C.B.E., M.C.
H. J. C. Searley
G. S. Seaward
D. P. K. Seddon
Miss C. I. V. Seedhouse
Mrs. F. K. Senter
R. B. Serjeant
W. J. Serjeant
Miss O. M. Sessions
David Seth-Smith
E. A. Shackleton
Keith Shackleton
W. S. Shackleton
L. Shaddick
G. P. Shakerley
Miss K. M. H. Sharman
A. Shaw
H. Shaw
J. R. Shaw
Miss M. I. Shaw
E. O. Shebbeare
Miss E. Shedden
Miss R. Sheffield
Miss C. Shepherd
A. Sherriff
B. J. Sherriff
R. G. Sherwood-Hale
R. M. Sherwood-Hale
Dr. W. Shipton
W. E. Shipton
Miss C. A. Shirley
Earl of Shrewsbury and Waterford
Mrs. E. N. Shulman
Dr. J. Shulman
T. M. Sibley
W. A. Sibley
R. B. Sibson
Miss I. T. Silcock
Miss P. B. Sillar
S. Sillar
R. Sillito
C. O. Silvers
R. H. Simcock
Miss G. Simister
Mrs. A. Simmons
Major M. H. Simonds
A. B. Simpson
Major The Master of Sinclair
Squadron Leader G. L. Sinclair
Earl of Shrewsbury and Waterford
Mrs. E. N. Shulman
Dr. J. Shulman
T. M. Sibley
W. A. Sibley
R. B. Sibson
Miss I. T. Silcock
Miss P. B. Sillar
S. Sillar
R. Sillito
C. O. Silvers
R. H. Simcock
Miss G. Simister
Mrs. A. Simmons
Major M. H. Simonds
A. B. Simpson
Major The Master of Sinclair
Squadron Leader G. L. Sinclair
Severn Wildfowl Trust

Wing-Comdr. H. M. Sinclair
Sir Robert Sinclair, K.C.B., K.B.E.
Dr. D. Sinton
R. J. M. Skarratt
R. A. Skinner
Miss M. G. Skipworth
Lieut. N. T. J. Skitt, R.N.
Mrs. C. M. Sladen
Capt. G. M. Sladen, D.S.O., D.S.C., R.N.
Mrs. G. M. Sladen
Dr. W. J. L. Sladen
E. A. Slatford
G. L. Sleath
Miss S. Slingsby
E. Slocock
D. E. Slocombe
W. A. Smallcombe
A. D. G. Smart
A. Smith
A. Smith
Lt.-Col. A. D. Smith
C. F. J. Smith
Major D. A. Smith
Mrs. D. A. Smith
Lieut. (S) D. S. Smith, R.N.
Miss F. M. W. Smith
G. H. P. Smith
Dr. H. E. Smith
H. M. L. Smith
Mrs. H. R. Smith
Mrs. I. Smith
Lieut. P. J. S. Smith, R.M.
R. T. Smith
S. O. Smith
Miss T. D. Smith
Dr. T. R. Smith
W. F. Smith
F. Smithies
E. H. Smouha
Major J. M. Smyth
A. Snell
T. B. Snell
Miss L. G. Snooker
A. A. Soames
W. P. A. Sole
Mrs. W. P. A. Sole
Lord Sommelyton, M.C.
Rt. Hon. Sir Donald Somervell, P.C., O.B.E.
L. C. Somervell
J. L. Somerville
A. F. Soper
F. G. R. Soper
Miss M. B. Sorby
N. Southern
Mrs. P. Southern
H. A. W. Southon
T. M. Sowerby
Col. R. Sparrow
Dr. J. B. Spearman
Major M. C. Speer
T. Spence, M.R.C.V.S.
Miss B. I. Spencer
Mrs. E. P. Spencer
H. N. E. Spencer
Dr. J. G. C. Spencer
M. Spencer
R. D. E. Spencer
F. E. Spicer
J. Spicer
F. E. Spiller
Mrs. K. N. Spinks
Miss M. Spinks
J. J. Spooner
E. O. Squire
J. D. Squire
Miss V. E. Stack
Hon. Lady Stainton
R. W. Stallybrass
Lady Stamer
R. G. F. Stanes
Lt.-Col. J. K. Stanford
Dr. R. Stanford
W. Stanford, D.F.C.
Mrs. A. W. Stanton
J. W. Stanton
Dr. W. Steadman
R. O. Steel
T. W. M. Steele
M. R. M. Steele-Mortimer
G. S. Steele-Peirks
J. I. Stephens
Mrs. J. M. Stephens
J. S. Stephens
Miss K. M. Stephens
P. T. Stephens
Miss M. C. Sterland
G. T. S. Stevens
N. Stevens
Miss N. B. Stevens
R. Stevens
R. N. H. M. Stevens
H. N. C. Stevenson, O.B.E.
Miss M. I. Stevenson
W. Stevenson
Miss J. C. Steward
C. H. Stewart-Hess
Miss M. Stewart
I. Stewart-Hargreaves
A. P. Stinchcombe
Lt.-Col. J. A. Stirling
J. D. W. Stobart
Dr. J. Stobo
Mrs. H. Stock
W. O. Stock
Major P. C. Stocker
Mrs. C. Stocks
J. Stone
Miss K. Stone
R. J. Stonor
Miss I. M. W. Stooke
A. Storey
Mrs. A. Storey
Capt. K. L. Storey
Miss E. D. Stott
I. J. Stovel
Lady Mary Strelchey
Mrs. M. Strain
Lady Stratton
Mrs. G. Stratton
Gp. Capt. J. A. C. Stratten
Miss S. M. Stratton
J. J. Strawbridge
Miss M. Stretton
J. N. Strickland
P. Strutt
F. Stuart
E. F. Studd
Mrs. G. Sturt
G. C. N. Stuart
P. E. Suckling
S. G. Sullings
A. Sullivan, K.C.
J. B. Sumner
Major L. R. C. Sumner, M.C.
E. B. Sunderland
H. K. Sutcliffe
Mrs. H. K. Sutcliffe
Lt.-Col. A. H. C. Sutherland
J. K. Sutherland
R. J. M. Sutherland
Mrs. R. J. M. Sutherland
C. R. Sutton
J. A. Swan
K. R. Swan
Miss S. R. M. Swann-Mason
Dr. G. A. Swanson
Dr. A. Swindale, C.B.E.
A. E. B. Swindale
J. Swinfin-Cottrell
Capt. J. Swinton
J. A. Swire
Miss M. A. Synes
Mrs. A. H. Tabor
Mrs. H. Talbot-Ponsonby
Miss P. Talbot-Ponsonby
F. N. Tanner
T. C. Tanner
Miss H. M. M. Tapp
Mrs. M. D. Tapp
N. Tate
Miss I. M. Tattershall
Miss A. B. Taylor
A. C. Taylor
A. R. Taylor
C. L. Taylor
Miss E. Taylor
E. A. Taylor
E. W. Taylor, C.B.E.
J. N. Taylor
R. C. Taylor
R. J. F. Taylor
Mrs. S. M. Taylor
Annual Report 1950-51

W. R. Taylor
W. W. Tegg
Miss H. Telford
Rt. Hon. Viscount Templewood, G.C.S.I., G.B.E., C.M.G.
Vice-Admiral Sir William Tennant, K.C.B., C.B.E., M.V.O., R.N.
Miss V. Tessier
Mrs. E. A. Tetley
Mrs. E. G. Tetley
G. E. R. Thatcher
R. G. Thin
C. H. Thomas
Dr. D. J. Thomas
Miss D. P. Thomas
F. Thomas
Sir William Beach Thomas, K.B.E.
Canon W. H. Thomas
A. G. G. Thompson
M. Thompson-Coon
Dr. A. Landsborough Thomson, C.B.
Sir Ivo Thomson, Bart.
E. Thornhill
Mrs. E. Thornhill
J. Thorpe
Dr. W. H. Thorpe
R. E. Threlfall
T. E. Tildesley
Cpt. P. B. Tillard
S. Timbrell
W. O. Times
Professor N. Tinsley
M. S. Tinne
Miss B. G. Tinsley
P. C. Tinsley
W. G. Tinsley
Dr. W. F. Tisdale
Miss H. C. Todd
Mrs. M. Tolley
Lady Tollemache, M.B.E.
J. E. H. Tollemache, M.C.
Miss E. P. Tomkinson
Miss M. G. Tomkinson
Miss B. Torrance
Hon. Carmelo Torreggiani
Miss M. C. Tothill
Lady Clementina Tottenham
H. W. Toulmin
Miss P. Townsend
Mrs. O. B. Tounbee
Mrs. L. A. Train
R. B. Treleaven
Capt. C. H. Tremayne
Miss O. Trewby
Sir Geoffrey Tritton, Bart., M.B.E.
A. J. E. Tritton
Miss L. Trotter
L. B. C. Trotter
Miss B. Truem
Hon. Anthony Tryon
V. J. Tubbs
C. Tucker
R. L. Tufnell
M. A. Tulloch
H. Tully
H. Tully
Miss C. M. Tunnard
A. L. Turnbull
Miss M. L. Turnbull
Miss A. R. Turner
H. B. Turner
Miss K. M. Turner
Mrs. M. L. N. Turner
R. G. Turner
S. T. C. Turner
F. Turnidge
C. J. Tweedy
Miss S. Twiston-Davies
Lady Twysden
C. W. Tyler
J. B. Tyer
J. R. Tyrie
H. D. Tyringham
Miss E. Tyrwhitt
Mrs. J. W. B. Tyser
R. D. Unwin
T. H. Unwin
Mrs. P. V. Upton
G. C. Urwick
Miss A. Usborne
Miss I. Vale
Miss E. Vale
G. P. Vale
A. B. B. Valentine
Miss C. M. D. Vanner
A. Varty
Miss K. Vaughan
Miss L. M. Vaughan
Mrs. D. P. Vaughan-Morgan
Mrs. G. C. Veal
Miss D. M. Verini
Major M. S. B. Vernon
J. E. Vesey
Rt. Hon. Lord Vestey
Miss C. N. Vevers
Dr. G. M. Vevers, F.R.C.S.
T. H. Vinnicombe
R. A. Vlasto
Mrs. C. Waddicor
C. T. Wade
Col. G. A. Wade
N. J. P. Wadley
A. R. Wagg
Major-General C. B. Wainwright, C.B.
Lt.-Col. J. W. Wainwright
M. C. Wainwright
Maj.-General Sir Hereward Wake, Bart., C.B., C.M.G., D.S.O.
Mrs. V. G. Wakefield
G. W. Wakeford
Earl Waldgrave
Lt.-Col. A. R. Walker
B. C. Walker
D. F. Walker
Miss D. M. Walker
E. H. Walker
Mrs. E. W. Walker
M. Walker
Lt.-Col. P. L. E. Walker
R. M. Walker
Miss M. A. Walkinshaw
A. J. A. Wall
Mrs. C. E. Wall
Vice-Admiral J. W. A. Waller, C.B.
Miss M. D. Waller
Miss M. N. Waller
Mrs. E. Wallham
J. M. A. Wallinger
Lady Phillipa Wallop
Major E. G. W. T. Walsh
Mrs. K. Walsh
Miss A. H. Walter
C. N. Walter
Col. A. B. Walters
Mrs. D. E. Walters
Miss G. A. Walton
G. O. Warburg
F. W. Ward
Miss K. M. Ward
S. Ward
Miss E. F. Warden
J. N. Warden
Miss C. A. L. Wareham
Rev. G. J. S. Warner
Miss D. Warren
E. J. Warren
G. Warren
Miss D. I. Warton
W. I. Washbrooke
Mrs. O. Waterfield
A. T. Waterhouse
Major R. T. C. Waters
E. S. Watkins
J. T. E. Watkins
J. B. Watson
J. N. Watson
J. W. Watson
Mrs. W. B. Watt
Miss M. A. Watters
J. Watts
P. L. Wayre
A. L. Webb
H. F. Webb
Miss K. J. Webb
C. V. Webber
R. H. Webster
Severn Wildfowl Trust

Miss M. F. Weedon
H. T. Weeks
Mrs. R. P. Weeks
D. A. Weir
Mrs. J. Weir
Miss M. Weir
A. E. Welch
Mrs. A. E. Welch
Mrs. E. H. Welch
O. J. C. Wellbelove
R. Wellesley
W. Welstead
W. K. Welton
Mrs. V. Welton
Earl of Wemyss
Col. J. R. West
W. J. West
P. R. Westall
Hon. Brigid Westenra
A. J. Weston
Rev. R. M. L. Westropp
Lady Wetherall
Miss D. H. Wethered
Miss D. Wharton
T. D. Whately, M.C.
G. Whatoff
C. E. Wheat
H. F. Wheway
Miss J. E. Whillis
G. Whittaker
Mrs. J. Whitaker
C. G. White
Miss C. M. S. White
Sir George White, Bart.
G. White
G. White
Rev. R. L. White
Mrs. L. E. Whitehead
Mrs. M. E. Whitehead
H. Whitelegg
A. R. Whitfield
Capt. G. N. R. Whitfield
G. N. R. Whitfield
Miss P. Whitfield
G. S. Whiting
E. Whitley-Jones
A. I. Whitlock
Ralph Whitlock
Sir Cecil Whitney, K.B.
Miss U. H. Whittaker
Miss E. Whitall
Dr. M. Wickham
H. J. Wiggins
J. A. Wigzell
E. O. Wild
G. E. Wild
Miss H. E. Wilding
Miss S. Wilesmith
P. E. Wilkes
Mrs. G. C. Wilkins
G. T. Wilkins
Mrs. A. F. L. Wilkinson
T. J. Willcocks
T. V. W. Willes
Miss H. R. Willett
D. A. Williams
Lt.-Col. D. G. Williams
E. Williams
Miss E. C. Williams
Dr. E. I. Williams
Mrs. G. E. Williams
Capt. H. W. Williams, R.N.
Mrs. M. Williams
M. J. Williams
Miss M. M. K. Williams
Major M. McC. Williams
Mrs. S. G. Williams
Miss V. S. Williams
W. Williams
J. R. Williams-Ellis
Mrs. M. S. Williamson
H. Williamson
Sir Walter Williamson, C.M.G.
Mrs. Willis
R. W. H. Willoughby
Major H. D. H. Wills
Hon. Robert Wills
T. Wills
G. A. Willsher
Rev. M. W. Wilson
A. E. Wilson
A. M. Wilson
Lt.-Col. B. Wilson
C. W. Wilson
Miss C. M. Wilson
Miss E. Wilson
Miss E. M. Wilson
Miss I. E. Wilson
J. Wilson
Miss J. Wilson
J. D. Wilson
J. J. Wilson
J. L. Wilson
Dr. K. L. Wilson
Miss P. R. Wilson
R. H. Wilson
Stuart Wilson
T. Wilson, C.B.E.
Dr. T. M. P. Wilson
Miss M. O. P. Wiltshire
J. O. Wimshurst
Dr. W. Winch
Major J. K. Wintedatt
M. P. Winser
W. R. Winstanley
John Winter
Mrs. Winter
R. P. Winter
Mrs. C. Winterbotham
Miss C. Winter-Irving
W. A. Winter-Irving
D. Wintle
Miss H. C. Wise
Lt.-Col. H. D. Wise
J. H. Wiskin
R. A. Witchell
M. D. J. Wocke
Miss A. Wood
A. D. Wood
C. J. Wood
Miss D. R. Wood
M. S. Wood
M. Woodcock
Professor J. H. Woodger
Mrs. J. H. Woodger
P. Woodland
Lt.-Col. E. D. S. Woodruffe
A. R. Woods
Dr. G. Wood-Storey
O. B. Woodward
K. Woolley
G. C. Wooltorton
Miss B. Workman
M. P. Workman
R. F. Wormald
M. Wray
A. Wright
C. W. Wright
Miss G. R. Wright
Dr. H. A. Wright
Mrs. H. L. Wright
H. M. V. Wright
Miss T. S. Wright
M. Wyatt
Mrs. C. J. Wykeham-Musgrave
Mrs. A. R. B. Wylam
Major H. J. Wyld
P. Wyld
A. H. Wyllie
T. A. Yardley
I. L. Yarrow
G. K. Yeates
A. J. Yeatman
J. W. Yeend
P. H. Yeld
Mrs. P. H. Yeld
F. G. Yeo
J. M. A. Yerburgh
O. G. de B. Yerburgh
E. N. Yorke
W. M. Yorke
B. A. Young
Mrs. E. G. H. Young
G. A. Young
H. J. S. Young
H. V. Young
J. D. Young
T. M. D. Young
ASSOCIATE MEMBERS

Miss E. M. Adams
Capt. L. C. Adye
D. Affleck
A. F. Airey
J. Alder
R. Alder
W. J. Alder
Mrs. D. M. Alexander
H. G. Alexander
J. H. P. Allan
Mrs. K. E. Allan
Miss E. M. Allen
Miss G. Allen
Mrs. R. Allhusen
D. A. Allport
Rev. L. G. Allum
G. W. K. Anderson
Mrs. A. R. Anderson
Miss C. R. K. Anderson
Miss G. R. Anderson
P. Anson
Miss A. E. Anstis
P. B. Anthony
Mrs. M. E. Antill
Miss A. Archdale
Mrs. E. M. Archdale
C. B. Ashby
Lt.-Col. R. Auld
Miss J. I. Bacon
Miss M. N. Badland
J. A. Bailey
R. H. Baillie
Mrs. R. H. Baillie
Major V. S. Baily
Miss D. Bainton
Miss A. M. Baker
C. C. Balch
Mrs. J. M. Ball
Miss F. Ballantine
N. Ballantine
J. M. Bannerman
Mrs. K. E. I. Barham
Miss I. Barlow
L. H. Barnard
Mrs. I. A. S. Barr
P. A. Barrett
Miss P. Barry
V. C. Batchelor
R. M. Bateman
Miss N. E. Batty
Miss E. S. Baxter
Miss G. D. Beale
R. M. Beattie
L. G. Bedford, D.F.C.
J. S. Beesley
Col. M. D. Bell
Mrs. Bell
Miss F. M. Bennett
Mrs. N. Bernays
A. Best
Miss V. Bick
B. S. Bird
Miss J. Bird
N. Birdsell
H. L. H. Birley
Miss A. J. Blackie
Miss I. Blakeston
Miss B. E. Bland
M. F. Bland
H. R. Board
D. G. Boddington
D. Boswell
Mrs. E. A. G. Bowkley
C. J. Brecknell
D. Bridgewater
Mrs. W. A. Brimacombe
C. A. Brobyn
P. M. Brobyn
T. F. Brockbank
F. S. Bromley
Mrs. L. E. Brooks
Miss J. Brown
A. Buchanan
Mrs. G. Budd
Miss R. Badgen
L. F. Burroughs
Miss W. Burt
Miss F. Burton
H. Burton
B. Butter
Miss C. Butler
G. C. Buxton
Mrs. G. C. Buxton
R. H. Buxton
Miss M. Caines
Miss D. M. Cake
Mrs. C. Caldicott
Major F. G. Caldwell, M.B.E., M.C.
Miss J. M. Caldwell
R. T. Caldwell
Miss M. O. Canham
R. H. Cannell
R. P. Cant
Miss K. M. Cary
M. E. Castle
D. A. Cave
Mrs. D. A. Cave
Miss M. Cavithorn
P. J. W. Chadwick
T. Chadwick
Mrs. M. C. Challinor
Miss M. K. Chamberlin
M. Chambers
A. F. S. Chance
G. E. Chandler
C. B. Chatwin
G. H. L. Chick
Miss E. Churches
Miss J. A. Clark
Mrs. E. C. Clark
Miss M. C. Clarke
Miss P. M. G. Clarke
R. J. Clarke
H. P. O. Cleave
Miss S. Clements
P. J. R. Clifton
F. E. Clissold
G. E. Clothier
Mrs. E. Cobby
Miss V. Cochran
Miss G. Cochran
H. Cochran
R. Cochran
Miss B. C. Cole
Miss A. S. Collett
G. W. Collett
V. H. Collier
Hon. Margaret Colville
D. Cook
R. A. H. Cooper
D. S. Cope
P. G. Cope
P. M. Cope
A. S. Corbett
Mrs. M. Cornelius
Miss C. H. Cox
Mrs. D. W. Coyne
H. A. Craw
Miss C. F. Critchley
Miss O. Crosbie
C. Cullimore
G. M. Cummings
B. Curtis
Mrs. M. C. Curwen
Mrs. A. F. Cutcliffe
A. S. Cutcliffe
Miss A. A. Cutter
A. M. G. Darby
Miss C. D. Darby
Lady Davidson
A. E. Davies
E. R. Davies
Miss K. Davids
Miss F. Davis
Mrs. H. Day
P. Dennington
C. Dent
Mrs. D. Dickinson
G. S. T. Diggory
G. Dillingham
Miss A. Dixon
Mrs. F. E. Down
Miss N. Downey
F. G. F. Drake
I. S. Drought
Miss D. M. Dunn
Capt. J. Dunster
A. J. M. Eavis
Miss M. M. Ede
Miss D. M. Ellis
J. R. McD. Elliot
Miss A. Evans
A. C. Evans
Mrs. C. M. Everidge
R. Fairclough
Miss P. Farmer
B. W. K. Fayle
Miss J. A. Fayle
Mrs. D. E. Felce
Miss S. E. Felce
Miss P. F. Field
M. C. Findlay
R. Fitzgerald
A. K. Floet
Miss A. B. Fleming
R. A. Flower
Mrs. F. L. Fogwill
J. Fogwill
Miss A. Forbes-Robertson
Hon. Mrs. C. Fortescue
Mrs. R. E. Francis
Mrs. C. D. Franklin
Major A. J. Fraser
Miss E. F. M. Fricker
Miss K. A. Gabb
Miss M. Galbraith
Miss M. Garner
J. V. Garrett
Miss M. Gay
I. Gemmell
F. S. George
Miss M. M. Gibbon
Mrs. F. Gibson
M. G. Gibson
Miss B. Gillett
Miss M. Gladding
W. Gleed
D. J. Gobbett
Miss C. E. Godman
Miss K. M. Goodworth
Miss W. L. Goodworth
J. Gore, C.V.O.
Miss A. Gough
Mrs. D. W. Gower
H. Gray
Miss N. M. Greening
Miss E. V. Griffiths
J. Gully
F. M. Gurteen
Miss J. E. Hague
R. W. Hale
G. R. Hall
H. Hall
Miss D. Halliday
Miss L. M. Ham
D. Hamblett
E. Hamblett
Miss L. Hamilton
Mrs. M. E. Hamilton
D. D. Handford
N. J. Hapden
Miss M. B. Hardy
Miss L. Harries
H. V. Harris
A. Harrison
C. E. Hart
Mrs. H. W. L. Hartley
Miss H. Harvey
Miss C. Hawes
Miss A. J. Hawkins
R. S. I. Hawkins
T. L. Hawkins
N. A. Haworth
R. W. Hayman
R. R. H. Hazell
Mrs. C. T. L. Heale
G. A. Hebditch
E. M. Heimann
B. T. Henderson
Miss M. Henderson
W. L. Henman
N. Henson
S. D. Herrington
Professor O. H. Hewitt
Miss P. M. Heysham
R. G. M. Heysham
J. Heyworth
Mrs. Hibbert
Col. A. Hibbert
D. O. Hibbert
R. H. Higgins
Mrs. F. W. R. Hill
P. Hill
Miss E. M. Hillman
Miss C. Hitch
R. Hobbs
L. G. Hodgkinson
Miss G. F. Holbech
H. D. Holbeach
Mrs. S. C. Holland
G. O. Holmes
Miss M. L. Holmes
R. M. Holmes
W. A. Holmes
G. E. Holroyd
P. D. P. Hope
G. P. Hopkins
P. Howlett
C. Hughes
Miss G. Hughes
P. N. Humphries
K. P. Humpidge
Miss A. L. Hunt
Capt. D. W. W. Hunt
E. B. Hunt
P. D. D. Hutchinson
E. Huyton
Miss M. A. Ironside
A. L. Irvine
Lt.-Col. E. H. P. Jackson
N. Jackson
J. P. Jacques
D. G. James
Miss C. Jarrett
W. G. Jarvis
D. Jenkins
L. Jenkins
J. H. C. Jenner
Miss P. Jervis
Miss D. Johnson
Mrs. L. Johnstone
Miss L. Johnstone
C. E. Jones
Mrs. E. Jones
L. A. Jones
E. G. Kaines-Thomas
Miss M. L. Kay
N. Keble-Williams
Miss M. W. Kendall
P. G. Kenning
Mrs. B. King
Miss E. King
C. C. Knight
C. W. Knight
Mrs. C. W. Knight
Miss I. C. Knight
M. D. P. Knight
G. Knowles
Mrs. E. M. Lamb
J. D. B. Lambert
Miss A. M. Langdale-Smith
Mrs. D. M. Langdale-Smith
Dr. H. G. Langdale-Smith
E. R. Langford
H. D. Lavin
Mrs. Lawson
Hon. Mrs. Leaf
Miss E. R. Lee
Mrs. M. E. Lee
R. W. M. Lee
B. Linney
Miss J. F. Lipscomb
A. B. Little
Miss D. M. Little
Miss R. M. Lloyd
R. W. Lloyd-Davies
Mrs. V. M. Logan
J. Low
Miss B. M. Lowe
Mrs. E. Lowe-Hopper
Mrs. C. M. Lucas
S. R. Luce
G. Lutyens-Humfrey
Mrs. Lutyens-Humfrey
Lt.-Col. Lutyens-Humfrey
Miss K. M. Luxford
Dr. J. F. Lyons
Mrs. M. U. Lyons
Miss J. M. McAlister
M. I. McAlley
D. McCullough
J. G. McDowell
A. M. Macfarlane
J. G. Macgeorge
A. C. MacIntosh
### Members 1950-51

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Name</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. McIntyre</td>
<td></td>
<td>D. D. Parker</td>
<td>Miss B. L. Searle</td>
</tr>
<tr>
<td>A. D. Mackay</td>
<td></td>
<td>J. G. Parker</td>
<td>B. J. Sim</td>
</tr>
<tr>
<td>Mrs. A. D. Mackay</td>
<td></td>
<td>Mrs. H. Parker-Jervis</td>
<td>G. G. Selman</td>
</tr>
<tr>
<td>W. R. MacKlin</td>
<td></td>
<td>Miss C. Parsons</td>
<td>J. B. Serjeant</td>
</tr>
<tr>
<td>L. McMeekin</td>
<td></td>
<td>R. F. Partridge</td>
<td>Mrs. H. Seth-Smith</td>
</tr>
<tr>
<td>Mrs. A. M. McMeekin</td>
<td></td>
<td>R. J. Paterson</td>
<td>Mrs. M. Shaw</td>
</tr>
<tr>
<td>J. McMeekin</td>
<td></td>
<td>Miss M. T. Payne</td>
<td>D. A. Shiac</td>
</tr>
<tr>
<td>A. C. Macrae</td>
<td></td>
<td>A. Pearce</td>
<td>H. B. Shield</td>
</tr>
<tr>
<td>F. I. Makepeace</td>
<td></td>
<td>Miss G. Pearce</td>
<td>Mrs. J. Shipp</td>
</tr>
<tr>
<td>Mrs. E. Mann</td>
<td></td>
<td>Miss H. Pearce</td>
<td>P. F. Skelton</td>
</tr>
<tr>
<td>Miss M. C. Mansell</td>
<td></td>
<td>M. J. Pengelly</td>
<td>Miss Sladden</td>
</tr>
<tr>
<td>D. J. Marling</td>
<td></td>
<td>Miss F. Penrose</td>
<td>R. O. M. C. Slade</td>
</tr>
<tr>
<td>Mrs. P. M. Marriott</td>
<td></td>
<td>Miss M. Penrose</td>
<td>J. Smillie</td>
</tr>
<tr>
<td>Miss A. D. Marsh</td>
<td></td>
<td>Mrs. M. Perkins</td>
<td>Mrs. Smith</td>
</tr>
<tr>
<td>Mrs. N. Marshall</td>
<td></td>
<td>Miss G. R. Perry</td>
<td>D. Smith</td>
</tr>
<tr>
<td>H. J. Massingham</td>
<td></td>
<td>Dr. H. C. Petch</td>
<td>Mrs. D. M. Smith</td>
</tr>
<tr>
<td>Dr. P. W. Mathew</td>
<td></td>
<td>J. M. Petit</td>
<td>E. Smith</td>
</tr>
<tr>
<td>M. W. V. Maude</td>
<td></td>
<td>H. A. Pettit</td>
<td>Miss I. H. M. Smith</td>
</tr>
<tr>
<td>Miss M. E. Mauder</td>
<td></td>
<td>K. F. Philliston</td>
<td>J. G. Smith</td>
</tr>
<tr>
<td>Dr. N. E. Mawby</td>
<td></td>
<td>Miss E. Pidgeon</td>
<td>L. Smith</td>
</tr>
<tr>
<td>Miss M. Maxwell-Jackson</td>
<td></td>
<td>H. E. Piggott</td>
<td>M. Smith</td>
</tr>
<tr>
<td>H. A. Maynell</td>
<td></td>
<td>J. B. Pitman</td>
<td>Miss R. Smith</td>
</tr>
<tr>
<td>Mrs. P. Mewburn</td>
<td></td>
<td>J. M. Pittman</td>
<td>R. A. L. Smith</td>
</tr>
<tr>
<td>F. L. Michell</td>
<td></td>
<td>A. L. Poole</td>
<td>Miss S. H. Smith</td>
</tr>
<tr>
<td>Miss M. E. Middleton</td>
<td></td>
<td>Miss B. H. Powell</td>
<td>E. M. Somers</td>
</tr>
<tr>
<td>Miss M. E. Miles</td>
<td></td>
<td>T. D. Powne</td>
<td>Miss E. R. Spalding</td>
</tr>
<tr>
<td>B. Miller</td>
<td></td>
<td>C. W. Preston</td>
<td>Mrs. A. D. L. Spearman</td>
</tr>
<tr>
<td>Lt.-Col. R. O. Miller</td>
<td></td>
<td>C. R. M. Prentice</td>
<td>Miss H. Spearman</td>
</tr>
<tr>
<td>A. G. Millett</td>
<td></td>
<td>Miss N. K. Price</td>
<td>Dr. A. H. Spicer</td>
</tr>
<tr>
<td>H. E. Millicen</td>
<td></td>
<td>Miss P. N. Price</td>
<td>S. M. G. Sprague</td>
</tr>
<tr>
<td>Mrs. G. M. Mills</td>
<td></td>
<td>H. M. Pritchard</td>
<td>Mrs. F. C. Spurgin</td>
</tr>
<tr>
<td>Miss L. M. Mills</td>
<td></td>
<td>A. J. Pullin</td>
<td>Mrs. E. C. Stacey</td>
</tr>
<tr>
<td>R. Money</td>
<td></td>
<td>Major G. H. R. Pye-Smith</td>
<td>D. G. Stamp</td>
</tr>
<tr>
<td>Mrs. M. E. Monk-Jones</td>
<td></td>
<td>Miss I. Radcliffe</td>
<td>Miss E. F. Stanford</td>
</tr>
<tr>
<td>J. Moor</td>
<td></td>
<td>J. M. Raddock</td>
<td>V. M. Station</td>
</tr>
<tr>
<td>G. W. Moore</td>
<td></td>
<td>M. F. Rawlence</td>
<td>Miss D. Steinhall</td>
</tr>
<tr>
<td>D. Moorehead</td>
<td></td>
<td>M. G. Rawston</td>
<td>J. Stephens</td>
</tr>
<tr>
<td>R. E. Moreau</td>
<td></td>
<td>Miss J. E. Rebbeck</td>
<td>M. J. Stephens</td>
</tr>
<tr>
<td>Miss D. Morgan</td>
<td></td>
<td>F. Reddan</td>
<td>Mrs. N. K. Stephens</td>
</tr>
<tr>
<td>Miss E. Morgan</td>
<td></td>
<td>P. T. G. Reed</td>
<td>D. R. M. Stewart</td>
</tr>
<tr>
<td>Mrs. M. Morris</td>
<td></td>
<td>J. R. C. Reynell</td>
<td>Miss J. Stewart</td>
</tr>
<tr>
<td>T. Mosedale</td>
<td></td>
<td>Lieut. (E) J. D. Richard, R.N.</td>
<td>Mrs. K. H. Straker</td>
</tr>
<tr>
<td>Miss M. P. Naish</td>
<td></td>
<td>B. A. Richards</td>
<td>H. Stretch</td>
</tr>
<tr>
<td>R. Nedderman</td>
<td></td>
<td>P. C. Richards</td>
<td>Hon. Mrs. Strutt</td>
</tr>
<tr>
<td>Miss A. Nicholls</td>
<td></td>
<td>B. Richardson</td>
<td>F. G. Stuart</td>
</tr>
<tr>
<td>Miss J. M. Nicholls</td>
<td></td>
<td>Mrs. A. Roach</td>
<td>Mrs. F. G. Stuart</td>
</tr>
<tr>
<td>Mrs. V. Nicholls</td>
<td></td>
<td>Mrs. E. H. Roach</td>
<td>Mrs. E. A. Sturrock</td>
</tr>
<tr>
<td>D. J. K. Nichols</td>
<td></td>
<td>Mrs. W. G. Roberts</td>
<td>Miss P. M. Sturrock</td>
</tr>
<tr>
<td>Mrs. E. B. Ninnies</td>
<td></td>
<td>J. S. C. Robinson</td>
<td>R. F. Sturrock</td>
</tr>
<tr>
<td>Miss H. G. Ninnies</td>
<td></td>
<td>C. Rochfort-Boyd</td>
<td>W. D. Sturrock</td>
</tr>
<tr>
<td>T. Nonweiler</td>
<td></td>
<td>M. Rogers</td>
<td>Capt. C. G. C. Sumner, O.B.E.,</td>
</tr>
<tr>
<td>Canon G. R. G. Norris</td>
<td></td>
<td>M. C. F. Rogers</td>
<td>R.N.</td>
</tr>
<tr>
<td>Miss M. Organ</td>
<td></td>
<td>P. J. F. Rogers</td>
<td>F. D. C. Sumner</td>
</tr>
<tr>
<td>M. Osborne</td>
<td></td>
<td>J. H. B. Roy</td>
<td>Mrs. G. Swayne</td>
</tr>
<tr>
<td>Miss S. M. B. Ottley</td>
<td></td>
<td>T. Rutherford</td>
<td>C. R. Talbot</td>
</tr>
<tr>
<td>Miss P. M. Overy</td>
<td></td>
<td>R. H. Ryall</td>
<td>C. V. Talboys</td>
</tr>
<tr>
<td>J. E. M. Owen</td>
<td></td>
<td>Miss H. Rycroft</td>
<td>R. J. Tarran</td>
</tr>
<tr>
<td>Mrs. M. C. Owen</td>
<td></td>
<td>S. E. Rycroft</td>
<td>C. F. Tebbutt</td>
</tr>
<tr>
<td>Miss J. M. Paddock</td>
<td></td>
<td>Mrs. E. Sadler</td>
<td>Miss A. G. B. Thomas</td>
</tr>
<tr>
<td>M. K. Paffard</td>
<td></td>
<td>B. Saidman</td>
<td>Miss K. M. Thomas</td>
</tr>
<tr>
<td>Miss O. M. Pain</td>
<td></td>
<td>Miss J. Scotland</td>
<td>Miss M. Thomas</td>
</tr>
<tr>
<td>Miss J. Pardo</td>
<td></td>
<td>Major W. Scott</td>
<td>Miss W. Thomas</td>
</tr>
</tbody>
</table>
Severn Wildfowl Trust

J. Wilkins
J. F. Wilkins
Miss B. Williams
E. S. Williams
I. M. G. Williams, M.B.E.
J. H. Williams
Miss P. W. Williams
Mrs. M. K. Willmore
Miss A. E. Wilson
Mrs. D. Wilson
Miss D. M. Wilson
Miss I. E. Wilson
Miss S. Wilson
Mrs. Wilson
Mrs. B. J. Winder
Miss A. J. Winton
R. C. Witting
Mrs. F. I. Witting
R. G. Woodcock
Mrs. Wolley
D. Wood
Mrs. A. D. Woodruffe
Mrs. C. R. Woodward
D. Yallop
Miss E. H. Yates
Miss E. M. Young
G. H. E. Young
G. R. Young

PARISH MEMBERS

Mrs. A. M. Baker
E. G. Barton
E. P. Barton
Miss V. Barton
Mrs. H. J. Crawley
J. T. Crawley
G. H. Hunter
Mrs. G. H. Hunter
L. R. Hyam
G. A. Lintern
Miss M. Mirfin
A. S. Noad
D. A. Noad
W. Noad
A. E. M. Pearce
N. G. Phillips
F. Seaman
Miss N. Seaman
Mrs. J. Shipp
Miss A. D. Smith
Mrs. G. Smith
W. Smith
L. R. Steel
J. W. E. Terrett
Miss R. Timbrell
C. Wall
C. T. C. Wall
R. Wall
J. F. Wherrett
J. L. Whittard
Mrs. J. L. Whittard

CONTRIBUTORS

Ackworth School
Bath & West & Southern Counties Society
Birmingham & West Midland Bird Club
Bristol City Museum
Bristol Clifton & West of England Zoological Society
Bristol Public Libraries
British Trust for Ornithology
Cardiff Naturalists' Society
Cardiff Ornithological Society
Cornwall Bird Watching & Preservation Society
Cotteswold Naturalists' Field Club
Daily Herald
Dudley Zoological Society Ltd.
Edmunds Epping Ltd.
Electrical Association for Women
Gloucester City Libraries
Gloucester City Museum
Grimsby Kinneir Ltd.
Hawk Mountain Sanctuary Association
Hill & Rockhampton Women's Institute
Holloway Bros. Ltd.
I.C.I. Game Services
Leeds Public Libraries
Morecambe Bay Wild Fowlers' Association
News Chronicle (Daily News Ltd.)
Royal Empire Society
Royal Society for the Protection of Birds
Royal Zoological Society of Scotland
Science Museum
Stoneham Museum & Research Centre
University of California Library
Woolhope Naturalists' Field Club
Yorkshire Naturalists' Trust Ltd.
Zoological Society of London

CORPORATE MEMBERS

Margaret Allen Preparatory School
Badminton School
Badminton School, Junior & Senior
City of Bath Secondary Technical School
City of Bath Training College
Beaudesert Park School
Beckenham County Grammar School for Girls
Berkeley Secondary School
Birkenhead School Natural History Society & Field Club
Bournville Infants' School
Bredenbury Court School
Bristol Grammar School Ornithology Club
Bristol Teachers' Nature Club
Charborough Road Secondary Modern School
Cheltenham College Natural History Society
Cheltenham College Junior School Natural History Society
Cheltenham Branch Workers' Educational Association
Chester Park Senior Girls' School
Clayesmore School Natural History Society
Clifton College Natural History Society
Clifton High School for Girls
Colston's Girls School
Culford School
Denmark Road Girls' High School
Doncaster Road Junior Mixed School
The Downs School Ornithologists' Club
Dursley Grammar School
Fishponds Diocesan Training College
Gloucester Central Secondary School for Boys
Gloucester Teachers' Nature Club
Gloucester Technical College
Hatherop Castle School Field Club
Hereford Cathedral School Field Society
Hereford Training College
King's High School for Girls, Warwick, Science Club
Leamington College for Girls, Natural History Society
Linden Secondary School for Boys
Lucton School Field Club
Lydney Grammar School Field Club
Malvern College Natural History Society
Marlborough College Natural History Society
Marling School Field Club
Newport High School for Boys
Newport & District Naturalists' Society
Oak Bank Open Air School
Oakley Training College for Women
The Alice Ottley School
Pate's Grammar School
Science Society
Redlands Training College
Rendcomb College
Shrewsbury School Ornithological Society
Slimbridge Branch Workers' Educational Association
Somerset Teachers' Nature Club
St. James's School, Malvern
Staple Hill Secondary Girls' School
Stubbington House School
Taunton School Natural History Society
Wallasey High School
Wells Cathedral School
Wells House School
Whitley House School
Worcester Royal Grammar School
Wyggeston Grammar School for Girls
PHOTOGRAPHS

The Trust is greatly indebted to the following for permission to reproduce the photographs they have taken:

A. M. Adam  News Chronicle
Baron  Sunday Mercury
L. Devenish  Miss P. Talbot-Ponsonby
P. Glasier  M. Thompson-Coon
Miss Erica Koch  N. Tinbergen
D. F. McKinney  G. T. Wilkins
Nesting Grey Lag
The Tack Piece in snow photographed from the hut in Rushy Pen.

The House Pipe of the Decoy broken down by snow.
A catch of about thirty Mallards in the West Pipe.

Ringing an immature drake Pintail.
The rocket nets are previously furled onto large reels (top, left) so that they can be laid out quickly in the field. Below a net is being set and checked over in an oats stubble in Scotland to which the Pinkfeet will return later in the day. When laid the net is completely hidden with rakings of straw—a laborious procedure (top, right).
Concealing the net in a grass field is much harder than in stubble. The lip of a ditch (above) provides a slope on which the net will be hidden from geese walking up from the right. Here the net is being laid for Grey Lags in Scotland. Below is the trailer-hide usually stationed at the edge of the field 200-300 yards from the net. The wheels are hidden by the camouflaged apron. From this hide the rocket nets are fired by electricity.

A catch of seventy-nine Pinkfeet and one Greenland Whitefront with four nets. Scotland, March 10, 1951.

After a catch of thirty-eight Pinkfeet with one net. Scotland, October 15, 1950.
Recapture of a Pinkfoot ringed a year earlier.

Dyeing the tail of an immature Pinkfoot.

After a catch of fourteen Pinkfeet with two nets. Scotland, January 23, 1951. Note black bags over heads of geese to prevent additional tangling in nets, also dye-can and bucket.
The Big Pen flooded. Greater Snow Geese—adult and immature.

The geese in the Big Pen by flashlight.
Greater Snow, Grey Lag, Blue Snow, Barhead, Bean, Emperor, Swan Goose, Whitefront; also Mallard.

"News Chronicle"
Tame full-winged geese—three Grey Lags and a Bean.

The Rushy Pen in hard weather.
Full-winged cob Whooper Swan threatening.

A pair of Coscoroba Swans from Argentina.

"Sunday Mercury"

P. Talbot-Ponsonby
Six White-faced Whistling Ducks from South America and Africa, and two Eyton's Whistling Ducks from Australia.

Ne-ne or Hawaiian Goose sitting on nest. The eggs were infertile, probably because the new gander arrived in full moult.
Southern Red-billed Whistling Duck from South America. A number of these birds are full-winged and may be seen flying round the New Grounds.
Southern Red-billed Whistling ducklings, the first of this race, it appears, to be successfully reared in Europe.
Studying the development of Mallard ducklings. Here they are being weighed and measured by Hugh Boyd, resident biologist, and their temperatures are being taken.
Chiloe Wigeon drake from South America.

Chilean Pintail drake from South America.
Above, Radjah Shelduck from northern and eastern tropical Australia. Surprisingly enough these birds appear to be perfectly hardy in Britain. Unfortunately only two females are included in the collection. The introduction of fresh blood from Australia into the very small breeding stock in this country is urgently needed.

Below, Female Ring-necked Duck from North America. This is sometimes held to be the New World representative of the Tufted Duck. Unfortunately, the Trust has only two females of this species, too, although mates for them are to be supplied shortly from the Delta Waterfowl Research Station, Manitoba, Canada.
Above, Tufted drake, a British bird. A wild drake of this species spent the winter in the Rushy Pen. He was caught and ringed but has remained, and is still present at the time of writing.

Below, Southern Pochard drake. This beautiful coppery-brown species comes from South Africa and also South America. It has lately been shown that the populations are distinguishable. This drake is from the Cape and belongs to the race *Netta erythrophthalma brunnea*, but specimens have recently arrived from Brazil belonging to the typical race *Netta erythrophthalma erythrophthalma*. 
Mandarin Ducks—native of China, have now become established as wild birds in several parts of Southern England and probably merit inclusion in the British List. It is proposed to rear full-winged Mandarin at the New Grounds.
Drake Carolina or Wood Duck, from North America—a New World relation of the Mandarin Duck, which was recently threatened with extermination, but which has been saved by vigorous conservation. Although the Wood Duck breeds more satisfactorily in captivity than the Mandarin it has never established itself in the wild state in Britain. Many are full winged at the New Grounds.
Barrow’s Goldeneyes—from Iceland, Greenland, Labrador and the Rocky Mountains. Above, two drakes are displaying, throwing up a small jet of water with their feet. Below, a female scratches her ear.
Red-breasted Mergansers, a British species which also occurs throughout Europe, Asia and North America. Below are four which were reared at the New Grounds in 1949 from eggs sent from Iceland, and above is one of the drakes in full plumage.
Drake Goosander—Europe. Above, the bird is in full plumage; below is the same bird in eclipse plumage. He was taken, as an adult, in the outflow of Walton Reservoir, near London, during the hard weather in March 1947, and has been at the New Grounds ever since. At present he is paired to a Red-breasted Merganser which lays eggs each year. These eggs have so far always been infertile. A mate of his own species is greatly needed.

D. F. McKinney
Above, a male Ruddy Duck displays in full chestnut breeding plumage. The head feathers are raised; the tail is kept closed (not spread as is shown erroneously in most illustrations). The brilliant blue bill is bounced on the breast, producing a fringe of bubbles at the waterline and the performance is accompanied by a soft belching sound. Below, two pairs of Ruddy Ducks are in grey winter plumage when only the male’s white cheeks remain to distinguish the sexes. The blue bills of the males turn black. Ruddy Ducks breed well at the New Grounds. In the background is a Falcated drake.
Goslings of the Swan Goose (above) and of the Lesser Whitefront (below). Note the prominent eyelid, already characteristic of the species even at this early age.
THE SWANS, GEESE AND DUCKS
of the British Isles

BY PETER SCOTT

Part Two

The Third Annual Report contained Part One—Swans and Geese. In this Report the Egyptian Goose, Shelducks and Dabbling Ducks are dealt with; it is hoped in subsequent Annual Reports to complete the series of British Anatidae.

In presenting the short life histories the author wishes to acknowledge the following sources of information: Handbook of British Birds; Witherby, Ticehurst and Tucker, 1939. Geese of Europe and Asia; S. Alpheraky, 1905. Check List of Birds of the World; J. L. Peters, 1931.

The four original oil paintings (30 in. × 20 in.) which have been reproduced in The Swans, Geese and Ducks of the British Isles were specially painted for the Trust by the Director. They have been presented and are for sale in aid of the Trust's funds. Applications should be made to the Assistant Secretary.
EGYPTIAN GOOSE  *Alopochen aegyptiacus* (Brisson)

[No subspecies.] Breeds throughout Africa, excepting the arid regions, and in southern Palestine. Non-migratory, numerous records of occurrences in Europe, including British Isles, doubtless due mainly to escapes from captivity, but some evidence for sporadic influxes of wild birds (as in Ruddy Shelduck). Kept commonly in captivity in England since 18th century. Long found in a feral state in several parts of the country, so that case for admission as ‘British bird’ comparable to that of Canada Goose.

Nests in trees, often in old nests of other species, but many other sites recorded. Nest built of twigs, lined with grass. 5–8 eggs, late March-May in England. Incubation 28–30 days. Breeds freely in captivity, but very quarrelsome with other species.

Food: principally grasses, but variety of other vegetables and animal foods taken.

Voice: harsh frequently repeated bark. Male in display has curious rasping puffing call.

Identification: plumage pattern highly distinctive. Prominent chocolate patches round eye and in centre of lower breast. White wing-coverts, black primaries and metallic green secondaries produce striking and characteristic appearance in flight.

RUDDY SHELDUCK  *Tadorna ferruginea* (Pall.)

[No subspecies.] Breeds from South-eastern Europe and central Asia east to Manchuria and China and south to Tibet, Iran and rarely to Algeria and Morocco.

Nests in holes in wide variety of situations. 8–12 eggs (16 recorded) late May. Incubation 27–29 days. Breeds freely in captivity.

Winters N. African coast, S. Arabia, India, Ceylon, east to Japan, S. China and Formosa. Has occurred casually in eastern U.S.A., in W. Greenland, Iceland, almost all European countries, and Japan. Recorded from many
parts of Great Britain and Ireland, usually singly, but very occasionally in small flocks, mainly late summer, but impossible in most instances to distinguish between wild birds and those escaped from captivity.

Food: mainly vegetable, of many kinds, but also small fish, amphibia, worms, snails and crustaceans. Typically seen grazing in steppe country in large flocks.

Voice: loud moaning call: 'kow' or 't-t-taaw'.

Identification: general orange-brown coloration with pale buff or white head (considerable individual and seasonal variations in intensity), black flight-feathers and tail, wings strikingly black and white in flight.

**COMMON SHELDUCK** *Tadorna tadorna* (L.)

[No subspecies.] Breeds on coasts of western Europe from northern Norway to Normandy, and locally about the shores of the Mediterranean, Black and Caspian Seas, in areas of mud-flats; also on saline lakes of central Asia to E. Siberia, Mongolia and Tibet. Nests chiefly in burrows, but also under haystacks and bramble bushes, in stone walls and occasionally hollow trees. 7-12 eggs (up to 20 record), late April to end of May in Britain. Incubation 28 (usually)–30 days. Breeds (but not very freely) in captivity.

Movements outside breeding-season not yet well understood. Occurs in winter over most of breeding range except extreme north, and also farther south, to Egypt, Palestine, N. India, Burma, S. China and Formosa. Adults of Western European breeding population undertake moult-migration in July, assembling in a very few areas (notably the Heligoland Bight, and the Bristol Channel), and returning very gradually through the winter to their breeding-haunts. Probably majority of, but not all, British birds go to Heligoland.

Food: principally molluscs and crustaceans, also insects, fish, annelids, and some vegetable matter (algæ, grasses and aquatic plants).

Voice: female, a loud laughing note in falling cadence. Male in display a high whistle.

Identification: black, white and chestnut plumage and red bill of adults unmistakable; juveniles are dark grey-brown above, lack chestnut band and bright bills.
PLATE VI. (DABBLING DUCKS)

PIXTAIL Anas acuta acuta (L.)

[American Pintail has been described as Anas acuta tzitzihoa Vieillot, but race is of doubtful validity.] Breeds in northern parts of Europe, Asia and North America, including British Isles, where increasing as breeding species. Nests, often socially, on islands in lakes or in cover on shores of lakes (not necessarily close to water). 7–9 eggs (6–12 recorded), early May to end of June in Scotland. Incubation 23–25 days. Breeds freely in captivity.

Winters south, northern Africa, Persian Gulf, India, Ceylon, Burma and southern China. More numerous in Britain in winter than in breeding season. Pintails ringed in Britain have been recovered in Iceland and N. Russia, also most other countries of N. and W. Europe. Occurs mainly on coast and estuaries; frequent on inland waters but usually only in small numbers.

Food: chiefly vegetable, especially plants of brackish water. Animal food includes insects, molluscs, earthworms and amphibians.

Voice: drake, a low double whistle: ‘prhew’; about a fifth lower than Teal. Female quacks rather like mallard but thinner.

Identification: long, slender neck, very distinctive; drake mainly grey with dark head and neck, white breast, tail long and pointed, predominantly bronze-green speculum; grey-blue bill. Female, mallard-like, but of slighter build, grey bill, and generally paler plumage with bold crescent-shaped markings on flanks.

EUROPEAN GREEN-WINGED TEAL Anas crecca crecca (L.)

Green-winged Teal A. c. carolinensis replaces A. c. crecca in North America, while a form found in the Aleutian Islands has been separated as A. c. nimia.

Breeds in Europe and Asia from Iceland to China. Widely distributed as breeding bird in Britain, sparsely in southern England, most numerous in Scotland. Nests on the ground in moors and marshes, often well away from water. 8–11 eggs (7–16 recorded), late April to early June. Incubation 21–22 days. Breeds infrequently in captivity.

Winters south to North Africa, Nile Valley, Somaliland, Persia, India and Ceylon, Assam, southern China and the Philippines. Fairly regular on Atlantic coast of North America. Recoveries of ringed birds show that British breeding Teal are largely resident and are reinforced by large-scale immigration of birds from Scandinavia and Baltic states, many on passage to Ireland and France.

Food: largely vegetable, mostly aquatic plants. Animal food includes wide variety of invertebrates.

Voice: male, high double whistle: ‘prhew’; about a fifth higher than Pintail. Female, like high pitched mallard, first quack loudest, tails off more quickly.

Identification: small size distinguishes from other British ducks except Garganey and Green-winged Teal; prominent horizontal white line above wings in male; speculum of both sexes green and black, with broad white or buffish-white anterior bar and very narrow posterior one in drake. Female indistinguishable from Green-winged Teal.
AMERICAN GREEN-WINGED TEAL *Anas crecca carolinensis* (Gm.)

[Subspecies see above.] Breeds in northern North America from Alaska to Hudson Bay, south to central California, northern Nebraska, southern Minnesota and rarely to Gulf of St. Lawrence. 10-12 eggs (6-18 recorded), second half of May and early June. Incubation 21-23 days. Breeds more freely than European Teal in captivity.

Winters from southern British Columbia, Arizona, New Mexico, Arkansas and Chesapeake Bay, South to British Honduras, the Gulf coast and the lesser Antilles. Casual in Greenland, Bermuda, Hawaii and Japan. About eight British records (none elsewhere in Europe) but may occur unrecognised comparatively frequently.

Food: about 90 per cent. vegetable, mainly seeds of sedges and pondweeds; also insects and molluscs (rotting salmon recorded).

Voice: indistinguishable from European Teal.

Identification: drake very similar to Teal, but with conspicuous vertical white mark on sides of breast and no horizontal white bar on the scapulars; white or buff 'spectacle marks' on sides of head much less intense; drake in eclipse and duck in all plumages not distinguishable from Teal in the field.

MALLARD *Anas platyrhynchos platyrhynchos* (L.)

[A. *p. conboschas* replaces typical form in Greenland. *A. p. subboschas* from Iceland is probably not a valid race. Three endemic and sedentary ducks from islands in the Pacific are possibly conspecific: *A. p. wyvilliana* (Hawaiian Islands), *A. p. laysanensis* (Laysan Island), *A. p. oustaleti* (Guam, Saipan and Tinian).] Breeds in Europe and Asia from Arctic Circle south to the Mediterranean, Persia, Tibet, central China, Korea and northern Japan; Iceland; the Azores; northern and central North America; west of Hudson Bay and the Mississippi. Commonest breeding duck in Britain. Nests in fairly thick cover on ground, also holes in trees. 10-12 eggs (7-16 recorded; and fewer in re-nesting), usually in March or early April. Incubation 26-28 days, but unusually variable and 22 recorded. Breeds very freely in captivity and long domesticated; frequency of abnormally-plumaged birds in the wild indicates considerable admixture of domestic stock in wild population.

Winters from southern half of breeding range to North Africa, Nile Valley, India, Burma, southern China, Japan, southern Mexico and Florida. British birds largely resident and sedentary; joined in winter by birds from Iceland, Scandinavia, Baltic countries and Holland, some on passage to N. France.

Food: mainly vegetable, of great variety, including grain from stubble fields in autumn. Animal food also varied, chiefly insects and molluscs.

Voice: female, loud and characteristic quack in falling diminuendo: 'kaakaak-kaak-kek-kek'. Male, low single quack, also, in display, a grunting whistle.

Identification: appearance of both sexes familiar, from domesticated birds, which are, however, larger; violet-purple speculum bordered by black and white bands on both sides is diagnostic in all plumages.
Food: almost entirely vegetable, principally grasses and Zostera, though many aquatic plants recorded. Was much affected by failure of Zostera during early 1930's. Grazes commonly in meadows in large packs by day, although it feeds mainly by night.

Voice: male, a loud double whistle: 'whee-uw'. Female, a stuttering rasping purr: 'ch-churr'.

Identification: medium size duck with short neck and small, short, blue-grey bill; adult drakes show white patch on wing-coverts, especially noticeable in flight, but juveniles lack this feature and resemble females; speculum black and green, white belly of both sexes apparent on the wing. For differences from American Wigeon, see under that species.

AMERICAN WIGEON Anas americana (Gm.)

[No subspecies.] Breeds in northern North America from Yukon and Mackenzie valleys east to Hudson Bay and south to eastern Oregon, northern Utah and South Dakota. 9-11 eggs (6-13 recorded), June. Incubation 22-25 days. Does not breed very freely in captivity.

Winters from British Columbia, the central Mississippi Valley and Maryland, south to Costa Rica, rarely to Panama, Colombia, West Indies, Greenland, Aleutian, Commander and Hawaiian Islands, Japan and Azores. About twelve British records, but some may be due to escapes. Probably occurs more frequently and is unidentified, especially as female so similar to European species.

Food: largely vegetable matter, principally pondweed, also grasses and other aquatic plants. Animal food mainly snails.

Voice: similar to European Wigeon but male cannot produce clear sweet whistle, only a stuttering attempt.

Identification: size and shape as Wigeon; drake is pale pinkish brown with grey speckled head and white crown, whereas European bird is grey with reddish-brown head and buff crown; glossy green on head only visible in good light; duck only distinguishable from Wigeon under very favourable conditions, by more spotted head and darker patch behind eye.

Identification: size as Garganey; head of drake dark slate-grey with white crescent in front of eye; most distinctive feature in all plumages, light-blue fore-wing (not blue-grey as in Garganey), nearly as conspicuous in duck as in drake, but often completely hidden when at rest.

**SHOVELER** *Anas clypeata* (L.)

[No subspecies.] Widespread as breeding species in Europe, Asia and North America, usually not north of Arctic Circle and not in eastern half of Canada. Now common and increasing in British Isles. Nests in meadows near water, favouring more open sites than most ducks. 8–12 eggs (7–14 recorded), April and May. Incubation 22–24 days. Breeds readily in captivity.

Winters from southern parts of breeding range south to North and East Africa, Persian Gulf, India, Ceylon, Burma, southern China, Japan, Hawaii, Lower California, Mexico, Honduras, Florida. British breeding birds are mainly summer residents. Breeding places of passage migrants and winter visitors not yet well established, apparently include Holland and N. Germany.

Food: no satisfactory studies of British birds, but American data indicate an unusually high proportion of animal food (34 per cent.), especially molluscs, but also crustaceans, insects, worms, tadpoles and frog spawn. Vegetable matter, buds, stems and seeds of many aquatic plants.

Voice: male, double clucking note: 'hnuk-hnuk'. Female, low quack, rarely heard. Wings make curious drumming rattle when bird rises, quite unlike any other duck.

Identification: large spoon-shaped bill diagnostic at all ages and seasons; breeding plumage of drake also distinctive; in flight pale-blue fore-wing noticeable, especially in drake, speculum green, bordered white in front and narrowly behind.