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Waders and wildfowl on the Ythan Estuary 2000/2001

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WADERS AND WILDFOWL ON THE YTHAN ESTUARY 2000/01

A REPORT TO SNH

I J Patterson and AW Thorpe

Aberdeen University Zoology Department
Culterty Field Station, Newburgh, Aberdeenshire

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SUMMARY

Counts of waders and wildfowl on the Ythan estuary were made from 13 July 2000 to 26 June 2001, continuing the monitoring which was started in 1989/90 and using the same method, a systematic survey from the estuary mouth to Logie Buchan bridge (Appendix 1). Fortnightly counts and the distribution of birds over the estuary are shown in detail for each species.

The highest monthly mean count of Eiders in spring decreased from 3,313 in 1999/00 to 3,038 in 2000/01, while the peak monthly mean total of other species increased, from 9,143 to 10,347.

The overall mean total of birds other than Eiders over the whole autumn and winter (August to February) increased from 5,393 in 1999/00 to 6,159 in 2000/01.

Five of the eight common wildfowl species but only four of the 10 common wader species increased their peak numbers from 1999/00 to 2000/01. Median winter counts also suggested that more species had decreased than had increased. The increase in bird numbers that followed the low coverage of *Enteromorpha* in 1996 seems to have reached a peak in 2000 and to have begun to decline.

A number of species less commonly seen on the Ythan were again recorded systematically in 2000/2001; their occurrence and numbers are tabulated.

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INTRODUCTION

The wader and wildfowl counts in this report are a direct continuation of the series started in 1989/90, with the same objective of monitoring the bird populations of the Ythan estuary by means of twice-monthly surveys of numbers and distribution. The counts were carried out from 13 July 2000 to 26 June 2001, using the same methods as in previous years (Patterson and Thorpe2000; Appendix 1). Precautions against foot and mouth disease prevented counts being made from mid February until April. Since the field surveys in 2000/01 were again carried out by a specialist ornithologist, it was possible to include counts of species which occur less commonly on the Ythan.

RESULTS

a) Individual species

As in previous reports, the data are presented in separate species accounts, arranged in taxonomic order. For each species, a table shows the number of birds found in each section of the estuary from the mouth upstream (ie, Mouth, Inches, Quay, Tarty, Sleek, Haddo, Snub, Machar, and Logie), as defined in Figure 1, and the total on the whole estuary on each count date. Information which is not obvious from the data tables is appended and peak numbers are compared with those in the previous year. Only the commoner species, which were included in previous reports, are dealt with in this section; the species recorded less commonly during the year are tabulated in section d).

CORMORANT Phalacrocorax carbo

Date	Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
13 7 2000	0	0	0	0	4	3	0	0	0	7
26 7 2000	0	0	0	0	13	10	1	0	0	24
8 8 2000	0	0	0	0	7	0	12	0	0	19
23 8 2000	0	0	0	0	8	0	10	0	0	18
5 9 2000	0	0	3	0	30	7	0	0	0	40
19 9 2000	5	0	0	0	8	0	0	0	0	13
13 10 2000	2	11	6	0	0	1	0	0	0	20
26 10 2000	9	3	1	1	1	7	0	1	0	23
14 11 2000	3	7	1	0	4	1	0	0	0	16
27 11 2000	1	8	1	0	0	3	0	3	0	16
15 12 2000	8	4	0	0	2	1	0	0	0	15
28 12 2000	4	5	4	0	2	2	1	0	0	18
11 1 2001	4	7	1	0	6	3	0	0	0	21
29 1 2001	2	1	0	0	8	0	0	0	0	11
12 2 2001	1	2	0	0	3	0	0	1	1	8
8 4 2001	0	1	6	0	0	0	0	0	0	7
25 4 2001	1	0	1	0	5	0	0	0	0	7
14 5 2001	0	2	0	0	8	0	0	0	0	10
26 5 2001	0	0	0	0	20	12	0	2	0	34
12 6 2001	1	1	0	0	3	1	1	0	0	7
26 6 2001	0	0	0	2	5	4	0	0	0	11

Peak; 40: not counted in 1999/2000

HERON Ardea cinerea

Date			Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
13	7	2000	0	4	0	16	3	0	1	1	0	25
26	7	2000	1	7	1	4	3	0	2	0	0	18
8	8	2000	0	2	1	0	6	0	7	0	0	16
23	8	2000	0	0	0	5	14	3	5	0	0	27
5	9	2000	7	1	7	7	16	8	1	2	3	52
19	9	2000	5	3	1	1	8	4	2	0	1	25
13	10	2000	3	7	2	1	4	0	0	1	1	19
26	10	2000	1	2	1	1	3	1	0	0	1	10
14	11	2000	1	2	0	1	1	0	0	1	0	6
27	11	2000	2	4	0	0	0	1	0	0	0	7
15	12	2000	1	1	1	1	0	0	1	1	0	6
28	12	2000	1	2	0	1	1	2	0	0	0	7
11	1	2001	1	4	1	1	1	2	0	2	0	12
29	1	2001	1	4	1	0	3	0	0	0	0	9
12	2	2001	0	2	0	0	5	0	0	0	0	7
8	4	2001	0	0	0	0	1	0	1	0	0	2
25	4	2001	0	0	0	1	0	0	0	0	0	1
14	5	2001	1	5	1	0	4	0	0	0	0	11
26	5	2001	1	10	0	0	6	1	0	1	0	19
12	6	2001	0	0	1	3	3	0	0	0	1	8
26	6	2001	1	4	2	1	9	1	0	1	0	19

Peak; 52: (1999/2000 peak; 59)

MUTE SWAN Cygnus olor

Date			Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
13	7	2000	0	0	0	0	10	2	15	0	0	27
26	7	2000	0	0	0	0	14	3	1	0	2	20
8	8	2000	0	0	0	0	8	0	7	0	6	21
23	8	2000	0	0	0	0	8	12	0	0	0	20
5	9	2000	0	0	0	0	5	1	15	0	1	22
19	9	2000	0	0	5	0	24	0	17	0	0	46
13	10	2000	0	4	0	0	3	39	0	0	0	46
26	10	2000	0	2	4	0	18	38	0	0	0	62
14	11	2000	0	2	0	4	32	38	2	0	0	78
27	11	2000	0	2	0	0	32	35	2	0	0	71
15	12	2000	0	2	4	0	24	20	0	0	0	50
28	12	2000	0	2	0	6	15	16	3	0	0	42
11	1	2001	0	4	0	0	21	1	0	0	0	26
29	1	2001	0	0	0	0	20	0	0	0	0	20
12	2	2001	0	0	0	1	5	0	0	0	0	6
8	4	2001	0	0	0	0	9	1	0	0	0	10
25	4	2001	0	2	2	2	5	0	0	0	0	11
14	5	2001	0	0	0	0	3	36	0	0	0	39
26	5	2001	0	0	2	0	2	30	0	0	1	35
12	6	2001	0	0	2	0	5	0	0	0	2	9
26	6	2001	0	0	0	0	0	12	13	0	0	25

Peak; 78: (1999/2000 peak; 45)

SHELDUCK Tadorna tadorna

Date			Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
13	7	2000	0	0	0	1	26	16	1	2	0	46
26	7	2000	0	0	0	1	26	23	0	0	0	50
8	8	2000	0	0	0	7	27	13	0	0	0	47
23	8	2000	0	0	0	1	4	4	0	0	0	9
5	9	2000	0	0	0	0	3	3	0	0	0	6
19	9	2000	0	0	0	0	1	6	0	0	0	7
13	10	2000	0	0	0	0	2	0	0	0	0	2
26	10	2000	0	0	0	0	1	1	0	0	0	2
27	11	2000	0	0	0	0	1	3	0	0	0	4
15	12	2000	0	1	2	0	0	14	0	0	0	17
28	12	2000	0	2	0	0	51	0	0	0	0	53
11	1	2001	0	2	0	0	47	7	0	0	0	56
29	1	2001	0	1	0	0	66	6	1	0	0	74
12	2	2001	0	7	3	0	76	40	0	0	0	126
8	4	2001	2	7	10	4	78	14	2	0	0	117
25	4	2001	2	9	2	2	20	25	0	0	0	60
14	5	2001	0	3	4	8	72	40	14	10	0	151
26	5	2001	0	2	0	16	51	50	3	26	0	148
12	6	2001	0	2	7	14	83	0	8	1	6	121
26	6	2001	0	1	5	6	92	48	0	2	1	155

Peak; 155: (1999/2000 peak; 164)

WIGEON Anas penelope

Date			Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
13	7	2000	0	1	0	0	0	15	0	0	0	16
8	8	2000	0	0	0	0	4	0	0	0	0	4
5	9	2000	0	0	0	0	7	71	0	0	0	78
19	9	2000	1	0	0	0	159	0	0	0	0	160
13	10	2000	147	257	18	0	3	0	40	0	0	465
26	10	2000	365	147	50	0	24	0	0	0	0	586
14	11	2000	83	147	130	0	91	0	0	0	0	451
27	11	2000	240	38	188	0	28	0	0	0	0	494
15	12	2000	30	48	171	0	2	0	0	0	0	251
28	12	2000	199	202	285	0	555	0	6	0	0	1247
11	1	2001	115	160	151	0	4	0	0	0	0	430
29	1	2001	53	123	90	0	137	0	0	0	0	403
12	2	2001	16	99	95	0	240	0	0	0	0	450
8	4	2001	0	9	0	0	0	0	0	5	0	14
25	4	2001	0	0	0	0	3	0	12	0	0	15
14	5	2001	0	1	0	0	9	0	0	0	0	10
26	5	2001	0	0	0	0	0	0	6	0	0	6
26	6	2001	0	0	0	0	0	0	9	0	0	9

Peak; 1,247: (1999/2000 peak; 877)

TEAL Anas crecca

Date			Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
13	7	2000	0	0	0	0	0	0	0	0	3	3
23	8	2000	0	0	0	0	3	0	0	0	5	8
5	9	2000	0	0	0	0	0	9	0	0	0	9
13	10	2000	0	9	0	0	0	0	0	0	2	11
28	12	2000	0	4	0	0	0	0	0	0	0	4
29	1	2001	0	0	0	0	0	0	0	0	13	13
12	2	2001	0	0	0	0	0	0	0	0	18	18
26	5	2001	0	0	0	0	0	0	0	1	0	1
12	6	2001	0	0	0	0	0	0	0	0	6	6
26	6	2001	0	0	0	0	0	0	0	0	4	4

Peak; 18: (1999/2000 peak; 99)

MALLARD Anas platyrhynchos

Date	Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
13 7 2000	0	1	0	0	0	3	0	1	27	32
26 7 2000	0	2	0	1	0	0	0	3	0	6
8 8 2000	0	0	0	0	7	2	0	1	0	10
23 8 2000	0	0	0	0	3	0	0	0	0	3
5 9 2000	0	0	0	0	2	0	0	0	6	8
19 9 2000	0	0	0	0	0	0	1	0	2	3
13 10 2000	0	2	0	0	2	0	0	0	0	4
15 12 2000	0	0	0	0	0	1	0	0	0	1
28 12 2000	36	15	19	0	16	1	0	0	0	87
11 1 2001	0	14	12	0	11	0	0	0	0	37
29 1 2001	0	7	12	0	0	0	0	0	0	19
12 2 2001	0	0	0	0	6	0	0	0	0	6
8 4 2001	0	0	0	0	4	1	0	0	0	5
25 4 2001	1	4	0	0	2	0	0	0	0	7
14 5 2001	0	0	0	0	0	4	0	2	0	6
26 5 2001	0	0	0	0	0	2	3	0	1	6
12 6 2001	0	2	0	0	0	1	6	0	4	13
26 6 2001	0	0	0	0	0	2	0	0	0	2

Peak; 87: (1999/2000 peak; 38)

EIDER Somateria mollissima

Date			Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
3	7	2000	1723	207	97	0	12	0	0	0	0	2039
19	7	2000	1497	60	177	0	3	0	0	0	0	1737
14	8	2000	578	0	5	0	14	0	0	0	0	597
29	8	2000	597	6	12	0	6	0	0	0	0	621
14	9	2000	1973	4	57	0	0	0	0	0	0	2034
28	9	2000	1325	619	591	0	0	0	0	0	0	2535
9	10	2000	907	4	575	0	56	0	0	0	0	1542
26	10	2000	68	802	351	0	24	0	0	0	0	1245
9	11	2000	46	62	1084	0	0	0	0	0	0	1192
22	11	2000	677	25	737	0	0	0	0	0	0	1439
7	12	2000	318	568	29	0	0	0	0	0	0	915
28	12	2000	11	79	1100	0	11	0	0	0	0	1201
9	1	2001	13	34	965	0	28	0	0	0	0	1040
30	1	2001	5	31	1192	0	10	0	0	0	0	1238
19	2	2001	5	289	719	0	63	0	0	0	0	1076
10	3	2001	228	5	761	0	47	0	0	0	0	1041
9	4	2001	656	81	349	0	46	0	0	0	0	1132
20	4	2001	910	708	230	0	27	0	0	0	0	1875
25	4	2001	854	613	35	1	24	0	0	0	0	1527
2	5	2001	852	1722	175	56	27	0	0	0	0	2832
9	5	2001	1325	1847	318	40	55	0	0	0	0	3585
14	5	2001	941	1657	312	40	49	0	0	0	0	2999
23	5	2001	1027	2360	21	67	0	0	0	0	0	3475
30	5	2001	806	1241	196	46	9	0	0	0	0	2298
7	6	2001	1447	604	138	20	32	0	2	0	0	2243
13	6	2001	1385	480	81	31	1	0	0	0	0	1978
27	6	2001	907	498	65	10	0	0	0	0	0	1480

Peak; 3,585: (1999/2000 peak; 3,756)

GOLDENEYE Bucephala clangula

Date			Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
8	8	2000	0	0	0	0	0	0	0	0	1	1
23	8	2000	0	0	0	0	0	0	0	0	1	1
19	9	2000	0	1	0	0	0	0	0	0	0	1
13	10	2000	0	0	1	0	1	0	0	0	0	2
26	10	2000	0	0	2	0	0	0	0	3	0	5
14	11	2000	0	1	10	0	0	0	0	0	0	11
27	11	2000	0	2	2	0	10	0	0	0	0	14
15	12	2000	1	3	7	0	2	3	0	0	2	18
28	12	2000	5	3	11	0	4	1	2	0	0	26
11	1	2001	2	6	3	0	6	2	0	0	0	19
29	1	2001	4	9	20	0	19	0	8	3	0	63
12	2	2001	1	6	4	0	3	2	0	0	2	18
8	4	2001	0	1	0	0	0	0	1	8	1	11
25	4	2001	0	0	1	0	0	0	16	0	0	17
14	5	2001	0	0	2	0	0	0	0	0	0	2

Peak; 63: (1999/2000 peak; 73)

RED-BREASTED MERGANSER Mergus serrator

Date	Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
23 8 2000	2	0	0	0	0	0	0	0	0	2
19 9 2000	17	4	0	0	0	0	0	0	0	21
13 10 2000	4	8	8	0	0	0	0	0	0	20
26 10 2000	19	11	5	0	0	0	0	0	0	35
14 11 2000	6	15	11	0	3	0	0	0	0	35
27 11 2000	6	18	7	0	3	0	0	0	0	34
15 12 2000	6	9	9	0	0	0	0	0	0	24
28 12 2000	9	10	8	0	0	0	0	0	0	27
11 1 2001	13	2	4	0	1	1	0	0	0	21
29 1 2001	9	11	3	0	1	0	1	0	0	25
12 2 2001	9	7	7	0	1	0	0	0	0	24
8 4 2001	0	12	1	0	0	0	0	0	0	13
25 4 2001	4	11	4	0	0	0	2	0	0	21

Peak; 35: (1999/2000 peak; 32)

OYSTERCATCHER Haematopus ostralegus

Date			Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
13	7	2000	76	153	6	0	35	4	6	0	0	280
26	7	2000	77	241	7	5	37	10	3	0	0	380
8	8	2000	79	201	51	2	22	6	0	0	0	361
23	8	2000	409	84	46	0	0	0	0	0	0	539
5	9	2000	283	284	10	0	0	0	0	0	0	577
19	9	2000	263	130	34	0	6	0	0	0	0	433
13	10	2000	158	113	18	0	15	1	0	0	0	305
26	10	2000	249	105	0	2	17	0	0	0	0	373
14	11	2000	223	101	33	1	23	0	0	0	0	381
27	11	2000	181	107	20	1	16	2	0	0	0	327
15	12	2000	160	128	33	0	0	0	0	0	0	321
28	12	2000	228	131	19	1	15	3	0	0	0	397
11	1	2001	161	73	33	0	26	2	0	0	0	295
29	1	2001	147	99	41	0	25	0	1	0	0	313
12	2	2001	132	92	42	2	28	6	5	0	0	307
8	4	2001	36	48	5	1	18	1	60	0	2	171
25	4	2001	19	38	4	6	18	2	2	0	0	89
14	5	2001	17	57	9	0	19	26	14	1	0	143
26	5	2001	2	10	3	1	10	25	11	67	0	129
12	6	2001	27	22	9	8	13	35	6	0	1	121
26	6	2001	31	75	9	0	30	19	2	1	1	168

Peak; 577: (1999/2000 peak; 457)

RINGED PLOVER Charadrius hiaticula

Date	Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
13 7 2000	3	1	0	0	0	0	0	0	0	4
26 7 2000	12	38	2	0	0	0	0	0	0	52
8 8 2000	0	52	4	0	0	0	0	0	0	56
23 8 2000	13	31	0	0	0	0	0	0	0	44
5 9 2000	5	11	0	0	0	0	0	0	0	16
19 9 2000	53	6	3	0	0	0	0	0	0	62
13 10 2000	0	12	0	0	0	0	0	0	0	12
26 10 2000	0	13	0	0	0	0	0	0	0	13
14 11 2000	0	8	0	0	0	0	0	0	0	8
27 11 2000	0	0	0	9	0	0	0	0	0	9
15 12 2000	0	4	0	0	0	0	0	0	0	4
12 2 2001	0	1	0	0	0	0	0	0	0	1
8 4 2001	2	1	1	0	0	0	0	0	0	4
25 4 2001	2	3	0	0	0	0	0	0	0	5
14 5 2001	0	1	0	0	2	0	0	0	0	3
26 5 2001	0	44	0	0	0	0	0	0	0	44
12 6 2001	2	0	0	0	0	0	0	0	0	2

Peak; 62: (1999/2000 peak; 99)

GOLDEN PLOVER Pluvialis apricaria

Date	Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
26 7 2000	0	4	0	0	0	0	0	0	0	4
23 8 2000	4	530	146	0	0	0	0	0	0	680
5 9 2000	0	44	1110	0	0	120	0	0	0	1274
19 9 2000	0	8	1510	0	0	1400	0	0	0	2918
13 10 2000	0	0	36	0	0	6000	0	0	0	6036
26 10 2000	0	0	860	0	900	500	0	0	0	2260
14 11 2000	0	0	20	0	40	1000	0	0	0	1060
27 11 2000	0	86	0	0	0	1900	0	0	0	1986
15 12 2000	0	20	0	0	0	80	0	0	0	100
11 1 2001	0	50	1	0	0	0	0	0	0	51
29 1 2001	0	102	0	0	0	0	0	0	0	102
12 2 2001	0	130	0	0	0	0	0	0	0	130

Peak; 6,036: (1999/2000 peak; 3,315)

LAPWING Vanellus vanellus

Date			Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
13	7	2000	2	8	82	7	116	162	214	48	2	641
26	7	2000	0	12	23	157	54	336	133	70	3	788
8	8	2000	0	6	111	0	502	223	155	35	1	1033
23	8	2000	0	295	290	10	940	770	1110	516	8	3939
5	9	2000	0	414	150	110	2530	260	960	0	5	4429
19	9	2000	0	313	610	17	2390	2020	780	0	0	6130
13	10	2000	1	397	1139	0	430	1400	389	0	0	3756
26	10	2000	0	0	150	0	0	80	330	0	0	560
14	11	2000	0	450	680	20	91	1870	330	0	0	3441
27	11	2000	0	479	20	0	159	470	270	0	0	1398
15	12	2000	0	501	110	0	190	650	0	0	0	1451
28	12	2000	0	34	24	2	9	82	40	0	0	191
11	1	2001	0	34	177	2	3	368	27	0	0	611
29	1	2001	0	5	4	1	9	47	7	1	0	74
12	2	2001	0	45	164	2	383	520	8	0	0	1122
8	4	2001	0	2	0	0	0	0	0	0	0	2
25	4	2001	0	0	0	2	0	3	0	0	0	5
14	5	2001	0	0	0	0	0	1	29	2	0	32
26	5	2001	0	0	0	0	0	0	9	4	1	14
12	6	2001	0	0	1	0	0	3	14	0	6	24
26	6	2001	0	0	0	0	5	79	17	0	0	101

Peak; 6,130: (1999/2000 peak; 4,515)

KNOT Calidris canutus

Date			Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
26	7	2000	0	20	0	0	0	0	0	5	0	25
8	8	2000	0	3	0	0	0	0	0	0	0	3
23	8	2000	90	0	0	0	1	0	0	0	0	91
5	9	2000	71	19	0	0	0	0	0	0	0	90
19	9	2000	209	0	1	0	0	1	0	0	0	211
13	10	2000	45	57	30	0	0	0	0	0	0	132
26	10	2000	10	150	0	0	2	43	0	0	0	205
14	11	2000	0	0	70	0	0	0	0	0	0	70
27	11	2000	0	159	0	2	2	0	0	0	0	163
15	12	2000	0	17	167	0	6	1	0	0	0	191
28	12	2000	0	175	0	0	0	0	0	0	0	175
11	1	2001	0	135	0	0	10	0	0	0	0	145
29	1	2001	180	0	0	0	0	0	0	0	0	180
12	2	2001	0	0	0	0	210	0	0	0	0	210
8	4	2001	0	2	0	0	66	0	0	0	0	68
25	4	2001	0	11	30	0	0	0	0	0	0	41
14	5	2001	0	0	0	0	0	0	3	0	0	3
26	5	2001	0	125	0	0	0	0	0	0	0	125
12	6	2001	52	0	0	0	0	0	0	0	0	52
26	6	2001	0	37	0	0	0	0	0	0	0	37

Peak; 211: (1999/2000 peak; 474)

DUNLIN Calidris alpina

Date			Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
13	7	2000	0	2	0	0	4	0	0	0	0	6
26	7	2000	2	2	6	0	0	0	0	0	0	10
8	8	2000	0	92	1	0	0	0	0	4	4	101
23	8	2000	0	8	0	0	0	0	0	0	0	8
5	9	2000	0	29	16	0	0	2	0	0	0	47
19	9	2000	20	46	10	0	0	15	0	1	0	92
13	10	2000	0	24	19	0	8	53	24	0	0	128
26	10	2000	0	16	0	0	0	114	304	0	0	434
14	11	2000	0	0	0	0	1	80	0	0	0	81
27	11	2000	0	0	0	0	0	63	0	0	0	63
15	12	2000	0	0	124	0	0	0	0	0	0	124
28	12	2000	0	2	0	0	0	435	0	0	0	437
11	1	2001	0	0	0	0	0	80	0	0	0	80
29	1	2001	0	0	0	0	0	55	3	0	0	58
12	2	2001	0	380	40	0	0	0	0	0	0	420
8	4	2001	0	0	4	0	0	0	0	0	0	4
25	4	2001	0	9	20	0	0	0	0	0	0	29
14	5	2001	0	1	6	0	0	0	0	0	0	7
26	5	2001	0	13	0	0	0	0	0	0	0	13
12	6	2001	0	2	0	0	0	0	0	0	0	2

Peak; 437: (1999/2000 peak; 806)

BAR-TAILED GODWIT Limosa lapponica

Date	Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
13 7 2000	0	0	1	0	3	0	0	0	0	4
26 7 2000	0	0	12	1	2	0	0	0	0	15
8 8 2000	0	6	2	0	0	0	0	0	0	8
23 8 2000	2	3	2	0	1	0	0	0	0	8
5 9 2000	0	9	0	0	3	0	0	0	0	12
19 9 2000	0	9	10	0	2	0	0	0	0	21
13 10 2000	1	24	11	0	2	0	0	0	0	38
26 10 2000	5	43	4	0	5	0	0	0	0	57
14 11 2000	0	10	11	1	1	0	0	0	0	23
27 11 2000	3	19	9	2	0	4	0	0	0	37
15 12 2000	6	14	4	0	2	6	1	0	0	33
28 12 2000	1	23	14	4	11	5	0	0	0	58
11 1 2001	0	12	18	0	6	1	0	0	0	37
29 1 2001	3	18	24	0	19	0	0	0	0	64
12 2 2001	1	33	11	0	12	0	0	0	0	57
8 4 2001	0	0	7	0	18	0	0	0	0	25
25 4 2001	1	1	0	0	0	0	1	0	0	3
14 5 2001	0	0	0	0	1	0	12	0	0	13
26 5 2001	0	0	0	0	0	0	29	0	0	29
12 6 2001	0	0	0	0	18	0	0	0	0	18
26 6 2001	0	10	0	0	1	0	0	0	0	11

Peak; 64: (1999/2000 peak; 80)

CURLEW Numenius arquata

Date			Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
13	7	2000	5	55	12	2	393	54	2	0	1	524
26	7	2000	2	0	4	4	1020	240	119	0	1	1390
8	8	2000	0	45	9	8	2	109	65	2	2	242
23	8	2000	3	115	15	7	689	190	30	3	0	1052
5	9	2000	6	135	11	2	891	60	13	2	0	1120
19	9	2000	2	146	11	3	1007	0	0	0	0	1169
13	10	2000	133	274	16	0	657	3	3	1	0	1087
26	10	2000	6	20	15	2	29	20	4	0	1	97
14	11	2000	78	77	2	170	715	0	0	1	0	1043
27	11	2000	45	134	5	2	62	4	0	1	3	256
15	12	2000	0	887	12	0	542	25	2	0	0	1468
28	12	2000	3	119	11	3	37	12	4	0	0	189
11	1	2001	2	165	4	5	613	47	4	1	0	841
29	1	2001	251	184	11	2	77	216	7	1	2	751
12	2	2001	201	140	11	25	258	6	18	0	0	659
8	4	2001	2	40	15	0	370	2	0	13	1	443
25	4	2001	0	5	0	2	20	6	0	0	0	33
14	5	2001	8	9	1	2	3	12	28	1	6	70
26	5	2001	0	0	0	6	35	63	7	0	0	111
12	6	2001	0	0	0	2	50	61	19	0	0	132
26	6	2001	4	0	7	2	31	48	10	1	1	104

Peak; 1,468: (1999/2000 peak; 1,777)

REDSHANK Tringa totanus

Date			Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
13	7	2000	0	48	72	3	238	290	73	56	6	786
26	7	2000	4	174	63	5	71	77	58	60	0	512
8	8	2000	0	208	138	1	39	283	74	15	2	760
23	8	2000	12	0	131	5	97	185	90	33	15	568
5	9	2000	25	280	103	2	201	56	49	7	12	735
19	9	2000	27	237	66	8	46	110	236	45	0	775
13	10	2000	7	121	51	9	240	199	59	2	0	688
26	10	2000	6	107	2	20	87	251	110	1	0	584
14	11	2000	0	47	3	53	121	252	40	0	0	516
27	11	2000	5	51	14	38	0	283	15	1	1	408
15	12	2000	3	329	50	0	155	206	12	0	0	755
28	12	2000	4	15	2	32	84	317	6	0	0	460
11	1	2001	4	84	6	34	57	281	57	10	0	533
29	1	2001	1	32	30	3	248	146	56	1	2	519
12	2	2001	5	72	0	55	364	194	35	0	0	725
8	4	2001	0	171	32	31	109	155	100	320	0	918
25	4	2001	1	29	16	23	195	145	70	0	0	479
14	5	2001	0	0	0	2	2	0	4	0	0	8
26	5	2001	0	0	0	1	0	2	10	0	0	13
12	6	2001	0	0	0	1	0	0	7	1	0	9
26	6	2001	0	0	0	12	0	0	7	0	0	19

Peak; 918: (1999/2000 peak; 1,502)

TURNSTONE Arenaria interpres

Date	Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
26 7 2000	2	0	0	0	0	0	0	0	0	2
8 8 2000	0	13	1	0	0	0	0	0	0	14
23 8 2000	0	3	0	0	0	0	0	0	0	3
5 9 2000	12	5	11	0	0	0	0	0	0	28
19 9 2000	10	1	1	0	0	0	0	0	0	12
13 10 2000	1	9	16	0	0	5	0	0	0	31
26 10 2000	15	12	2	0	4	5	0	0	0	38
14 11 2000	0	11	8	0	1	0	0	0	0	20
27 11 2000	0	19	0	0	10	7	0	0	0	36
15 12 2000	0	5	17	0	0	2	0	0	0	24
28 12 2000	2	14	1	0	0	2	2	0	0	21
11 1 2001	7	16	11	0	2	0	0	0	0	36
29 1 2001	4	19	1	0	0	0	0	0	0	24
12 2 2001	0	7	7	0	0	0	0	0	0	14
8 4 2001	0	1	15	0	0	0	0	0	0	16
25 4 2001	21	24	0	0	0	1	0	0	0	46
14 5 2001	0	2	0	0	0	0	0	0	0	2

Peak; 46: (1999/2000 peak; 57)

b) Total number of birds on the estuary

The total number of birds of all species was calculated for each count date and the mean taken for each month. Since Eiders were so numerous, they were considered separately. Foot and mouth disease prevented counts in March 2001.

Month	Eiders	Other species	Total
2000			
July	1888	2859	4747
August	609	4886	5495
September	2285	10347	12632
October	1394	9149	10543
November	1316	6326	7642
December	1058	4159	5217
2001			
January	1139	3003	4142
February	1076	4326	5402
March	1041	-	-
April	1511	1390	2901
May	3038	626	3664
June	1900	612	2512

The total number of birds of all species on the estuary was strikingly higher in September and October than in any other month, due mainly to large numbers of Golden Plovers and Lapwings. Numbers in winter (November to February) at 4,000 – 5,500, were similar to those in July and August. There was a decrease in the total number of birds present in April to June, in spite of the increase in numbers of Eiders.

c) Comparison between 1999/00 and 2000/01

(i) Total number of birds

There was little consistent difference between 1999/00 and 2000/01 in the monthly mean numbers of birds of all species (including Eiders); numbers were higher in 2000/01 in six of the 11 months for which data were available. However, the peak of 12,632 in September 2000 was much higher than the total in September 1999 (8,314) and also higher than the highest monthly mean in that year (10,303 in November).

The comparison between years for Eiders gave similar results, with higher monthly mean values in 2000/01 in six of the 12 months. However, in species other than Eiders, numbers were higher in 2000/01 in eight of the 11 months for which data were available. However, as was emphasised in previous reports, such peak monthly values may be affected by year-to-year differences in the timing and extent of migratory movements and so may not be meaningful in making comparisons between years.

A less variable measure, the mean monthly total of species other than Eiders over the whole autumn and winter (August to February), showed an increase from 5,393 in 1999/2000 to 6,159 in 2000/01.

(ii)Individual species

For each of the commonly-recorded species, the mean of the three highest counts in 2000/01 was compared with the same measure for the previous year (Patterson and Thorpe 1999).

Species	1999/00	2000/01	Change
Cormorant	-	33	
Heron	47	35	-
Mute Swan	42	70	+
Shelduck	149	151	+
Eider	3559	3353	-
Wigeon	649	776	+
Teal	66	14	-
Mallard	36	52	+
Goldeneye	44	36	-
Red-breasted Merganser	32	35	+
Oystercatcher	447	516	+
Ringed Plover	83	57	-
Golden Plover	3150	3738	+
Lapwing	3775	4833	+
Knot	412	209	-
Dunlin	724	430	-
Bar-tailed Godwit	72	60	-
Curlew	1202	1342	+
Redshank	1344	826	-
Turnstone	50	40	-

Of the eight wildfowl species, five showed increases and three showed decreases. Of the 10 wader species, four showed increases and six decreased. The data are of course subject to the difficulty that some species (eg Golden Plover and Lapwing) occurred in unusually large numbers in only a few counts out of the whole year, so that peak counts can be misleading.

An alternative measure, the median of the winter counts (1 September to 31 March) is not subject to this problem (Patterson and Cosgrove , 1998).

Species	Median 1999/00	2000/01	Change
Cormorant	-	16	
Heron	12	9	-
Mute Swan	8	45	+
Wigeon	305	450	+
Teal	4	0	-
Mallard	14	4	-
Goldeneye	21	14	-
Merganser	25	24	-
Wildfowl total	389	563	+
Oystercatcher	344	327	-
Ringed Plover	6	8	+
Golden Plover	1010	1060	+
Lapwing	1264	1398	+
Knot	247	175	-
Dunlin	341	92	-
Bar-tailed Godwit	48	37	-
Curlew	536	789	+
Redshank	789	584	-
Turnstone	24	24	
Wader total	4609	4494	-
Overall total	4998	5057	+

Of the six species of wildfowl which normally have their highest numbers in winter (ie excluding Eider and Shelduck), two showed an increase in their median counts, while four decreased. Of the 10 wader species, four showed increases and six decreased. The totals of the median values increased for wildfowl and decreased for waders, with a slight increase overall.

d) Species which occur less commonly on the Ythan, seen during the surveys

The various species recorded during the year are tabulated below. Comments are added where appropriate.

LITTLE GREBE Podiceps ruficollis

Date	Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
11 1 2001	0	1	0	0	0	0	0	0	0	1
29 1 2001	0	2	0	0	0	0	0	0	0	2

Rather fewer records than in recent years

SLAVONIAN GREBE Podiceps auritus

Date	Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
15 12 2000	0	0	1	0	0	0	0	0	0	1
28 12 2000	0	2	0	0	0	0	0	0	0	2

SPOONBILL Platalea leucorodia

Date	Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
13 7 2000	0	0	0	2	0	0	0	0	0	2
26 7 2000	0	0	0	1	1	0	0	0	0	2
8 8 2000	0	0	0	0	2	0	0	0	0	2
23 8 2000	0	0	0	0	2	0	0	0	0	2
5 9 2000	0	0	0	0	1	0	0	0	0	1
26 6 2001	0	0	0	0	0	2	0	0	0	2

An adult and an immature were present between 21 June and 23 August, with one remaining until 5 September.

WHOOPER SWAN Cygnus cygnus

Date	Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
8 4 2001	0	0	0	0	0	1	0	0	0	1
25 4 2001	0	0	0	0	1	0	0	0	0	1
14 5 2001	0	0	0	0	0	1	0	0	0	1

PINK-FOOTED GOOSE Anser brachyrhychus

Date	Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
13 7 2000	0	0	0	0	2	0	0	0	0	2
26 10 2000	0	0	0	0	0	0	3	0	0	3
15 12 2000	0	0	0	0	1	0	0	0	0	1
25 4 2001	0	0	0	0	53	0	0	0	0	53
14 5 2001	0	0	0	0	0	5	0	0	0	5

GREYLAG GOOSE Anser anser

Date	Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
13 7 2000	0	0	0	0	6	0	0	0	0	6
23 8 2000	0	0	0	0	9	0	0	0	0	9
13 10 2000	0	0	0	0	20	0	0	0	0	20
27 11 2000	0	46	0	0	0	0	0	0	0	46
15 12 2000	0	1	0	0	0	0	0	0	0	1
29 1 2001	0	0	0	0	1	0	0	0	0	1
8 4 2001	0	0	0	3	0	0	0	0	0	3
25 4 2001	0	0	0	0	2	0	0	0	0	2

CANADA GOOSE Branta canadensis

Date	Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
23 8 2000	0	0	0	0	14	0	0	0	0	14
13 10 2000	0	0	0	0	14	1	0	0	0	15
26 10 2000	0	0	0	0	0	0	1	0	0	1
14 11 2000	0	0	0	0	0	0	1	0	0	1
27 11 2000	0	4	0	0	0	0	0	0	0	4
14 5 2001	0	0	0	0	0	0	1	0	0	1

BARNACLE GOOSE Branta leucopsis

Date	Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
19 9 2000	0	0	0	0	0	2	0	0	0	2

BRENT GOOSE Branta bernicla

Date	Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
5 9 2000	6	0	0	0	0	0	0	0	0	6
26 10 2000	1	0	0	0	0	0	0	0	0	1
14 11 2000	1	0	0	0	0	0	0	0	0	1

TUFTED DUCK Aythya fuligula

Date	Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
14 11 2000	1	0	0	0	0	0	0	0	0	1
28 12 2000	0	1	0	0	0	0	2	0	0	3

SCAUP Aythya marila

Date	Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
13 10 2000	7	1	0	0	0	0	0	0	0	8
14 11 2000	6	0	0	0	0	0	0	0	0	6
27 11 2000	0	6	0	0	0	0	0	0	0	6
28 12 2000	0	0	9	0	0	0	0	0	0	9
11 1 2001	0	4	0	0	0	0	0	0	0	4
29 1 2001	2	4	0	0	0	0	0	0	0	6
12 2 2001	0	0	0	0	9	0	0	0	0	9
8 4 2001	0	8	0	0	0	0	0	0	0	8
25 4 2001	7	0	0	0	0	0	0	0	0	7

This species is maintaining a regular presence on the estuary, mainly in the lower reaches.

LONG-TAILED DUCK Clangula hyemalis

Date	Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
29 1 2001	0	1	0	0	0	0	0	0	0	1
25 4 2001	0	1	0	0	0	0	0	0	0	1

A poor year for this species.

OSPREY Pandion haliaetus

Date	Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
5 9 2000	0	0	0	0	1	0	0	0	0	1
14 5 2001	0	0	0	0	1	0	0	0	0	1
26 5 2001	0	0	0	0	1	0	0	0	0	1
26 6 2001	0	0	0	0	1	0	0	0	0	1

MOORHEN Gallinula chloropus

Date	Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
14 11 2000	0	0	0	0	0	0	0	0	1	1

GREY PLOVER Pluvialis squatarola

Date	Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
13 7 2000	0	0	0	0	2	0	0	0	0	2
26 7 2000	0	1	0	0	0	0	0	0	0	1
8 8 2000	0	2	0	0	0	0	0	0	0	2
23 8 2000	0	2	0	0	0	0	0	0	0	2
5 9 2000	0	1	0	0	0	0	0	0	0	1
19 9 2000	0	12	1	0	0	0	0	0	0	13
13 10 2000	1	20	1	2	0	1	0	0	0	25
26 10 2000	3	6	0	0	0	1	0	0	0	10
14 11 2000	0	8	0	0	0	0	0	0	0	8
15 12 2000	0	1	0	0	0	0	0	0	0	1
28 12 2000	0	3	0	0	0	0	0	0	0	3
11 1 2001	0	4	1	0	0	0	0	0	0	5
29 1 2001	0	5	0	0	2	0	0	0	0	7
12 2 2001	0	5	0	0	0	0	0	0	0	5
26 5 2001	0	0	0	0	0	0	1	0	0	1
12 6 2001	1	0	0	0	0	0	0	0	0	1

A return to more typical numbers, following the high counts in 1999/2000.

SANDERLING Calidris alba

Date	Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
26 10 2000	7	0	0	0	0	0	0	0	0	7
12 6 2001	0	0	0	0	0	31	0	0	0	31

LITTLE STINT Calidris minuta

Date	Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
19 9 2000	0	0	0	0	0	1	0	0	0	1

CURLEW SANDPIPER Calidris ferruginea

Date	Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
23 8 2000	0	0	0	0	0	0	0	4	0	4
19 9 2000	0	0	0	0	0	5	0	0	0	5

RUFF Philomachus pugnax

Date	Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
26 7 2000	0	0	0	0	0	1	0	0	0	1
23 8 2000	0	0	0	0	0	1	0	0	0	1
19 9 2000	0	0	0	0	2	2	1	0	0	5
13 10 2000	0	0	0	0	4	1	0	0	0	5

SNIPE Gallinago gallinago

Date	Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
19 9 2000	0	1	0	0	0	0	0	0	0	1
13 10 2000	0	0	0	0	0	0	0	20	0	20
26 10 2000	0	2	0	0	0	0	0	0	0	2
27 11 2000	0	1	0	0	0	0	0	0	0	1
29 1 2001	0	2	0	0	0	0	0	0	0	2

LONG-BILLED DOWITCHER Limnodromus griseus

Date	Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
8 8 2000	0	0	0	0	0	0	0	1	0	1

A bird remained around Machar between 4 and 6 August. This was only the fourth record for north-east Scotland.

BLACK-TAILED GODWIT Limosa limosa

Date	Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
13 7 2000	0	2	0	0	0	0	0	0	0	2
13 10 2000	0	12	0	0	0	0	0	0	0	12
26 10 2000	0	13	0	0	1	0	0	0	0	14
14 11 2000	0	4	0	0	0	0	0	0	0	4
27 11 2000	0	10	0	0	0	0	0	0	0	10
15 12 2000	0	4	0	0	0	0	0	0	0	4
11 1 2001	0	2	1	0	0	0	0	0	0	3
12 2 2001	0	4	0	0	0	0	0	0	0	4
8 4 2001	0	1	0	0	0	0	0	0	0	1
25 4 2001	0	2	0	0	0	0	0	0	0	2
14 5 2001	0	0	0	0	0	0	4	0	0	4

WHIMBREL Numenius phaeopus

Date	Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
26 5 2001	0	1	0	0	0	0	0	0	0	1

SPOTTED REDSHANK Tringa erythropus

Date	Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
19 9 2000	0	0	0	0	0	1	0	0	0	1

GREEN SANDPIPER Tringa ochropus

Date	Mo	In	Qu	Ta	Sl	Ha	Sn	Ma	Lo	Total
13 7 2000	0	0	0	0	0	1	0	0	0	1
26 7 2000	0	0	0	1	0	0	0	0	0	1
8 8 2000	0	0	0	0	6	1	2	1	0	10
23 8 2000	0	0	0	1	4	2	0	1	0	8
5 9 2000	0	0	0	2	3	0	0	0	2	7
19 9 2000	0	1	0	1	4	0	0	1	0	7
13 10 2000	0	1	1	2	2	0	0	0	0	6
26 10 2000	0	1	0	0	2	0	0	0	0	3
25 4 2001	0	2	0	0	0	0	0	0	0	2

DISCUSSION

As in previous years, the large month-to-month fluctuations in the numbers of some of the most abundant species on the estuary makes it difficult to compare overall bird numbers between 1999/00 and 2000/01, especially since many of the fluctuations may have been the result of large-scale movements, eg cold-weather effects or post-breeding dispersal, not related to conditions on the Ythan itself. Year-to-year comparisons must therefore be interpreted cautiously.

However, it seems reasonable to conclude that there had been some decrease in bird numbers between the two years, following the high coverage of algae in summer 2000, as was predicted in the last report. The increase in bird numbers which followed the lower coverage of *Enteromorpha* in 1996 (continuing to some extent in 1997; Raffaelli *et al.* 1999), appears to have reached a peak in 2000 and have started to decline.

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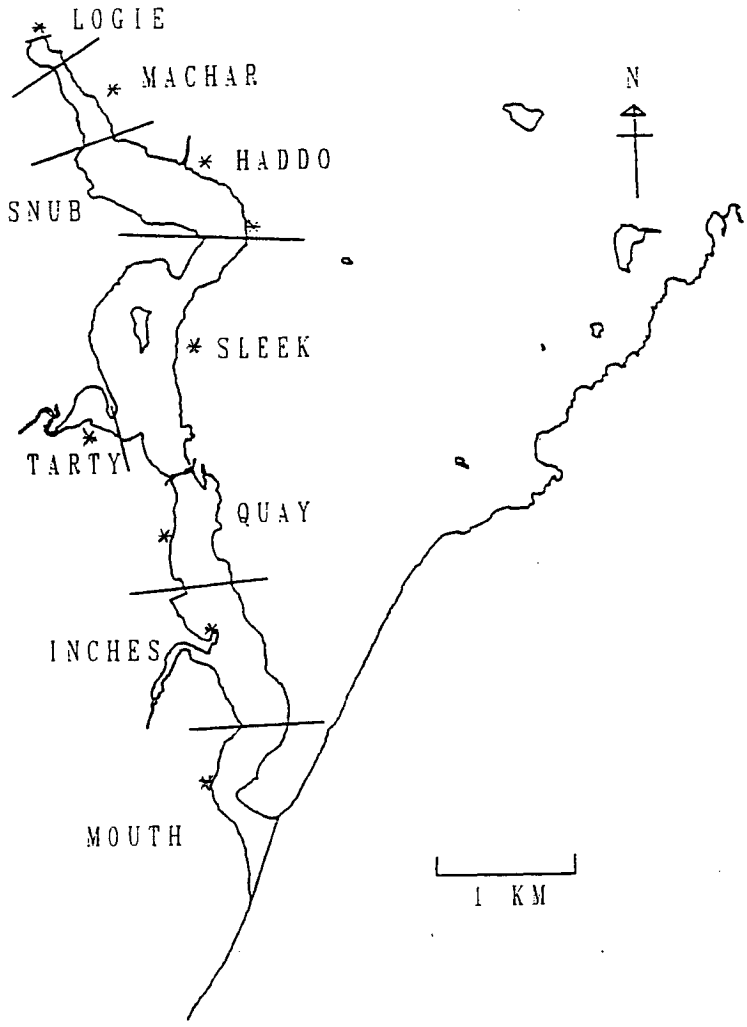

Figure 1. The Ythan estuary, showing the counting sections and count points (asterisks). The division between the Snub and Haddo areas is the centre of the low-tide river channel.

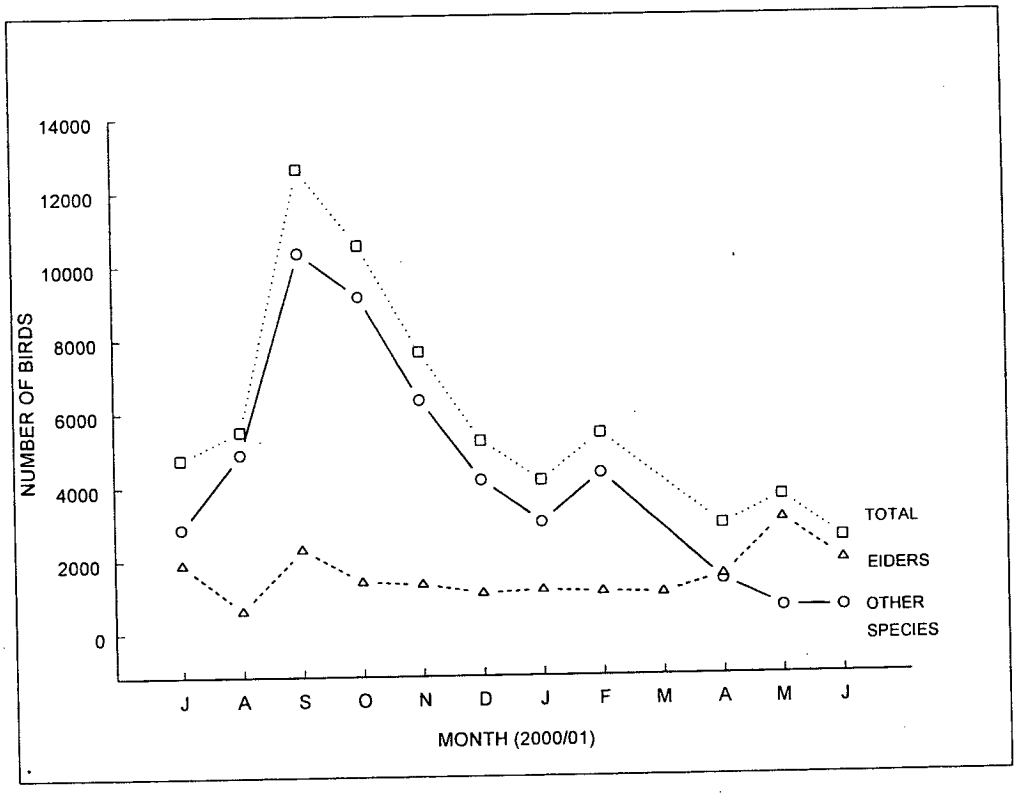

Figure 2. The mean number of Eiders (triangles), birds of other species (circles) and the total of birds of all species (squares) on the Ythan estuary in 2000/01.

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