

THE NORTHERN BROWN ARGUS IN THE OCHIL HILLS, CLACKMANNANSHIRE

John Gallacher

Introduction

The major threats to Northern Brown Argus butterfly (*Plebius artaxerxes*) are the extremes of overgrazing or neglect of its grassland habitat; combined with fragmentation of habitat leading to small colony size and increased chance of local extinction.

In 2004, following the publication of the Clackmannanshire Local Biodiversity Action Plan (LBAP) 2003-2008, Clackmannanshire Biodiversity Partnership funded a survey of the Ochil Hill's population of this nationally scarce species.

The Clackmannanshire LBAP contains an Action Plan for the Northern Brown Argus. This largely reflects the UK Action Plan and has the following objectives:

1. Maintain the range of the butterfly in Clackmannanshire.
2. Locate all colonies by 2005.
3. Protect key sites.
4. Encourage beneficial management on all other sites.

The primary aim of this survey was to locate and map all areas of the larval foodplant common rock-rose (*Helianthemum nummularium*) within the Ochil Hills and to look for extant Northern Brown Argus colonies. Other objectives were to observe current habitat condition, to suggest any necessary management works to maintain and enhance populations and to use the butterfly to help raise the wider profile of biodiversity issues within Clackmannanshire through the Alva Glen Heritage Trust.

The Northern Brown Argus in the UK

The Northern Brown Argus is a nationally scarce UK BAP priority species and defined as being of conservation concern. It occurs in well drained, unimproved grasslands where common rock-rose grows in a lightly grazed or ungrazed sward. Most sites are sheltered (often with scrub) and have thin, base-rich soils with patches of bare ground, for example coastal valleys, steep slopes, sand dunes, and quarries. In Scotland it may also occur on predominantly neutral and even acidic soils where common rockrose is able to grow if there is some calcareous influence through weathering or flushing.

While the species has shown serious decline in England and Wales, the Scottish population is thought to be widespread though little is known about colony size or population trends. The area of known occupancy is thought to

be less than 2,000 hectares in the UK (Ravenscroft and Warren, 1996). Viable populations are known to persist on small patch sizes of suitable habitat of no more than 0.2 to 0.25 ha. However such sizes are vulnerable to local extinction especially as it is thought that adults rarely stray from areas of suitable habitat. Indeed, research indicates that 96 % of recorded movements were below 100 metres. These observations suggest that many small sites are highly isolated, prone to local extinction and unlikely to be re-colonised.

The Northern Brown Argus in the Ochil Hills.

The appropriate Northern Brown Argus habitat, base-rich to neutral grassland, is a rare and localised habitat within Clackmannanshire (LBAP) being largely confined to the steep south facing scarp slopes above Menstrie and Alva. Such unimproved grassland habitats are included within the Glens and Unimproved Grassland-Heathland Mosaic Action Plans of the LBAP.

The grassland habitat above Menstrie-Alva is typical of other Northern Brown Argus sites within the UK being base-rich, free draining and vegetated by the NVC CG10 *Festuca ovina-Agrostis capillaris-Thymus polytrichus* grassland (Roberston and Gallacher, 1991). Most of the larval foodplant occurs on the mid to upper slopes of the scarp that also includes adult nectar sources such as thyme (*Thymus polytrichus*) and bird's-foot trefoil (*Lotus corniculatus*).

Alva Glen (NS884 983) is a well known historic site for Northern Brown Argus and all the recent records in Clackmannanshire relate to this site. However, the Craigleith and Myretoun Hills SSSI, notified on the 30 March 1990, includes the Northern Brown Argus as part of the qualifying interest and states that "*it is the only known breeding colony in Central Region*". The SSSI however lies due west of Alva Glen and no recent records relate to the SSSI.

All the recent (1998) records for Northern Brown Argus in Clackmannanshire, provided by Butterfly Conservation, are confined to Alva Glen. This may be a true reflection of actual species distribution though it is more likely to reflect the ease of access compared to the steep unpathed slopes either side of the Glen.

In 1992/3 the Glen was fenced to exclude sheep under a Forestry Commission Woodland Grant Scheme project. The aim of this project was to assist the regeneration of semi-natural woodland and scrub which had been held in check by many years of sheep grazing. The Unimproved Grassland-Heathland Mosaic Action Plan notes that such projects, while beneficial for woodland restoration, may have a detrimental effect on neutral/calcareous grassland habitats and their associated species. Shading of common rockrose is likely to adversely impact on the extant Northern Brown Argus colonies within Alva Glen.

Survey methods

The survey methodology, as agreed with Butterfly Conservation (Kirkland pers comm.), included the following elements:

- Areas of common rockrose to be mapped during 2004 using a Geographical Positioning System (GPS).
- Plant species associated with common rockrose to be recorded.
- Height of common rockrose to be measured.
- Presence/absence of Northern Brown Argus butterflies to be recorded using a Geographical Positioning System (GPS).
- Presence/absence of Northern Brown Argus eggs on common rockrose to be recorded using a Geographical Positioning System (GPS).
- General comments on the habitat condition and other associated butterfly species to be recorded.

The field survey schedule was as follows:

Table 1: Field Survey Schedule 2004

Date	Location
4 July 2004	Alva Glen
6 July 2004	Slopes below Wee Torrie, west of Alva Glen
9 July 2004	Slopes below Craig Leith towards Balquharn Glen
30 July 2004	The Kipps south east of Dumyat summit
5 August	Balquharn Glen

The 2004 survey was confined to the known locations of Northern Brown Argus within Alva Glen and areas to the west of the Glen that were known to hold good populations of common rockrose. The survey of both these areas provided a good contrast between the ungrazed Glen and the sheep grazed open hill.

The Kipps area (due east of Dumyat summit) was added to the survey on account of historical records for common rock-rose (Blake, 1976).

Results

The results are summarised in Table 2.

The largest continuous areas of common rockrose occurs below Wee Torrie and Craighleith within the Craighleith and Myretoun Hills SSSI. Lower down the slope, including the Glen, the plant occurs as small isolated clumps on the steeper, free-draining slopes.

The thin, base-influenced soils which favour common rockrose also favour other mesotrophic grassland species such as thyme (*Thymus praecox*), marjoram (*Origanum vulgare*), purging flax (*Linum catharticum*) and pepper saxifrage (*Pimpinella saxifraga*). A feature of the common rockrose stands in the Glen is the strong association with scrub species such as gorse (*Ulex europaeus*), blackthorn (*Prunus spinosa*), dog rose (*Rosa canina*), broom (*Cytisus scoparius*) and hazel (*Corylus avellana*).

The sward height of common rockrose within the Glen can be as much as 20 cm and on the open slopes is typically 5 to 10 cm. However, there is evidence that the open slopes are becoming less intensively grazed since the grassland survey of Robertson and Gallacher (1991) as indicated by the presence of false oat-grass (*Arrhenatherum elatius*) – a species largely intolerant of heavy grazing pressures.

Northern Brown Argus was generally found in small groups of 3 to 4 adults. They were more likely to be found within the Glen rather than the more exposed open hill to the west even though the extent of common rockrose was greater in the latter areas. The shelter provided by the Glen and the scrub/woodland may be important in this regard. However, new records for Northern Brown Argus were confirmed to the west of Alva Glen within the Craigleith and Myretoun Hills SSSI. No evidence of Northern Brown Argus was found in Balquharn Glen. Further to the west, no common rockrose was found on The Kipps despite past records for this species in this locality.

Associated species of butterfly included small blue (*Polyommatus icarus*), small heath (*Coenonympha pamphilus*) and ringlet (*Aphantopus hyperantus*) the latter being particularly abundant in the ungrazed acid grasslands of the upper glen.

Discussion

Over-grazing and neglect of grassland habitats are two key factors that may affect the suitability of sites for Northern Brown Argus. Over-grazing leads to short turf and loss of habitat structure. Neglect, or under-grazing, leads to scrub encroachment onto species-rich grassland with the loss of larval foodplants and nectar sources. Both of these events are potentially at play in the known locations of Northern Brown Argus in the Ochil Hills: under-grazing in the Glen on account of stock exclusion with higher grazing levels on the adjacent sheep grazed open hill.

This survey has provided locational data for Northern Brown Argus both within the ungrazed Alva Glen and the grazed open hill to the west indicating that the species is currently coping with a range of grazing intensities. However, a tentative conclusion is that the colonies above the Glen are smaller despite the extensive areas of the larval foodplant below Wee Torrie and Craigleith. Obviously other factors contribute to the “ideal” Northern Brown Argus habitat and of particular importance is habitat structure. Here the Glen scores more highly than the open hill with the former providing better vegetative and topographic shelter.

The lack of vegetative shelter on the open hill is, in part, related to the continued stock grazing and burning management (burning being used to control gorse) to which this site has been historically subject. Indications since the 1990 grassland survey of Craigleith and Myretoun Hill SSSI are that grazing intensity (by sheep and rabbits) has reduced since then as indicated by the presence of false oat-grass (*Arrhenatherum elatius*). Further, the size of common

rockrose plants for egg laying is at its optimum in this area being in the medium range of 6-10 cm.

While the Glen is likely to be the type locality for Northern Brown Argus in Clackmannanshire, this report raises the concern that the Forestry Commission funded grazing enclosure around the site is encouraging the encroachment of scrub onto the areas of common rockrose. Gorse, blackthorn (*Prunus spinosa*), dog rose (*Rosa canina*) broom and hazel have all been noted as species spreading onto the remaining small areas of Common Rockrose (see Table 2). Left unchecked, this situation is likely to threaten the viability of Northern Brown Argus at this location.



Northern Brown Argus.

Table 2: The Ochil Hills Northern Brown Argus Project 2004 (text in bold indicated adults or eggs recorded)

NGR	Species associated with <i>Helianthemum</i>	Height of <i>Helianthemum</i>	NBA present/absent	Eggs present/absent	Comments
NS 88481 98155	<i>Origanum vulgare</i> , <i>Ulex europaeus</i> , <i>Teucrium scorodonia</i> , <i>Rosa canina</i> , <i>Lotus corniculatus</i> , <i>Deschampsia flexuosa</i> , <i>Ononis repens</i> , <i>Lapsana communis</i> , <i>Geranium robertianum</i> , <i>Asplenium trichomanes</i> , <i>Thymus polytrichus</i> , <i>Pimpinella saxifraga</i> .	20cm	A	A	All sites in Alva Glen are largely ungrazed following erection of a stock fence some 15 years ago to encourage natural regeneration. This has resulted in the spread of scrub (e.g. <i>Prunus spinosa</i> , <i>Rosa canina</i>) which is encroaching onto the <i>Helianthemum</i> sites. Other species noted from the Glen includes Small Heath (occasional), Common Blue (rare), Chimney Sweeper (rare) and Ringlet (abundant).
NS 88452 98125	<i>Deschampsia flexuosa</i> , <i>Thymus polytrichus</i> , <i>Pleurozium schreberi</i> , self-seeded <i>Fraxinus excelsior</i> .		A	A	
NS 88439 98230	<i>Teucrium scorodonia</i> , <i>D. flexuosa</i> , <i>A. elatius</i> , <i>Sedum anglicum</i> , <i>T. polytrichus</i> , <i>Pschreberi</i> , young rowan.	18-20cm	A	P	Several eggs noted.
NS 88450 98152	<i>Dactylis glomerata</i> , <i>T. scorodonia</i> , <i>T. praecox</i> , <i>Alchemilla</i> egg, <i>P. schreberi</i> .	12.5cm	A	P	4 NBA noted. <i>Cytisus scoprius</i> , <i>Corylus avellana</i> and <i>Prunus spinosa</i> in invading area of base-rich grassland.
NS 88449 98157					This area is essentially and outlier to the above also with <i>P. spinosa</i> spreading into <i>Helianthemum</i> area. This area is considered to be the highest clump of <i>Helianthemum</i> in the glen.
NS 88428 98127	<i>A. elatius</i> , <i>Galium saxatile</i> , <i>T. polytrichus</i>		A	A	
NS 88425 98111	As above.				Also small outlier at NS88424 98094.
NS 88448 98079	<i>A. elatius</i> , <i>D. glomerata</i> , <i>T. scorodonia</i> , <i>S. anglicum</i> , <i>D. flexuosa</i> , <i>T. polytrichus</i> , <i>P. schreberi</i> , <i>G. saxatile</i> , <i>G. verum</i>	15-20cm	P	P	<i>Ulex europaeus</i> invading sward. Four NBA noted. Also outlier at NS88461 98076.
NS 88515 98122	<i>T. scorodonia</i> , <i>D. flexuosa</i> , <i>Pschreberi</i> , <i>S. anglicum</i> , <i>P. saxifraga</i> , <i>Solidago virgaurea</i> , <i>G. saxatile</i> , <i>G. verum</i> , <i>Lotus corniculatus</i> , <i>Ononis repens</i> , <i>S. anglicum</i>	15-20cm	P	A	This patch extends to NS88507 98151. 6 NBA noted. <i>R. canina</i> and <i>C. avellana</i> encroaching site.
NS 87973 97750	<i>S. anglicum</i> , <i>G. verum</i> , <i>O. repens</i> , <i>T. polytrichus</i>	5-7.5cm	P	P	4 NBA noted. <i>Helianthemum</i> area surrounded by <i>Pteridium aquilinum</i> and <i>U. europaeus</i> kept open by rabbit grazing.
NS 87950 97740		5-7.5cm	A	P	This site is outlier of above.
NS 87953 97803	<i>Anthoxanthum odoratum</i> , <i>T. polytrichus</i> , <i>Festuca ovina</i> , <i>T. scorodonia</i> , <i>D. flexuosa</i> , <i>Pteridium aquilinum</i>	5-7.5cm	A	P	2 NBA eggs noted. Other species include Ringlet (abundant) and Small Heath (occasional).

Table 2 cont.

N587948 97820	<i>Helianthemum</i> spread through grassland/bracken with <i>A. odoratum</i> , <i>T. polytrichus</i> , <i>G. saxatile</i> , <i>D. flexuosa</i> .		A	A	This is a large diffuse area of exposed <i>Helianthemum</i> on the steep slopes below Wee Torrie.
NS 87835 97845	As above.	5-7.5cm	A	A	Small outlier to above.
NS 87815 97870	<i>Linum catharticum</i> , <i>Saxifraga pinnipinella</i> .	5-7.5cm	P	A	2 NBA noted. Sheltered area alongside Carnaughton Burn.
NS 87769 97832			A	A	Small diffuse colony of <i>Helianthemum</i> .
NS 87707 97844			P	A	1 NBA noted within small diffuse colony of <i>Helianthemum</i>
NS 87629 97825 to NS 87559 97813			A	A	Large extent of diffuse <i>Helianthemum</i> .
N587541 97861			P	P	1 NBA noted plus 1 egg.
N587444 97861		10-12.5cm	P	A	2 NBA noted.
N587570 97810	Undergrazed <i>Arrhenatherum elatius</i> grassland.		P	A	1 NBA noted.
N587007 97607	<i>Potentilla sterilis</i> , <i>G. verum</i> , <i>D. flexuosa</i> , <i>A. elatius</i> , <i>Agrostis</i> spp., <i>Festuca ovina</i> , <i>T. polytrichus</i> , <i>S. anglicum</i> , <i>Veronica chamaedrys</i> , <i>A. odoratum</i> .	10cm	A	A	All crags below Craigeith hold <i>Helianthemum</i> .
N587131 97854	<i>T. polytrichus</i> , <i>G. saxatile</i> , <i>A. odoratum</i> , <i>Aira praecox</i> , <i>S. anglicum</i> , <i>A. tenuis</i> , <i>P. aquilinum</i> .	10cm	A	A	6 spot burnt moth.
N587139 97887	As above.				
N587169 97936	<i>A. odoratum</i> grassland.		A	A	Diffuse population of <i>Helianthemum</i> with <i>A. odoratum</i> grassland. Small Heath.
NS 86987 97953			A	A	Small are of <i>Helianthemum</i> .
N586752 97864	<i>D flexuosa</i> , <i>A. odoratum</i> .		?	A	Small green caterpillar noted feeding on <i>Helianthemum</i> . NBA?
N586717 97910			A	A	Area of <i>Helianthemum</i> sheltered within stands of <i>U. europaeus</i> . Worth second visit.
NS842 974	The Kipps - south east of Dumyat summit.		A	A	Old record for <i>Helianthemum</i> noted by Blake in Forth Naturalist and Historian Vol. 1 1976. No <i>Helianthemum</i> recorded - too acid?
N586717 97910	Balquharn Glen		A	A	Second visit. No NBA noted in visit of 5 August 2004. Too late?

Further work

Further survey work is required to help estimate colony size and identify any further colonies outside the main area of Alva Glen. Some of this work should be concentrated within Balquharn Glen where the foodplant is present and topographic and vegetative shelter is similar to that found in Alva Glen.

Some educational and practical management works, including scrub control has been undertaken by the Alva Glen Heritage Trust and has involved work within the Glen to remove scrub that has encroached onto the areas of common rock-rose.

References

Craigeleith and Myretoun Hills SSSI map and citation.

E. A. Blake (1976). Ecological aspects of some of the more local flowering plants of the western Ochils. *Forth Naturalist and Historian*, Vol 1.

Clackmannanshire Local Biodiversity Action Plan 2003-2008.

N. Ravenscroft and M. S. Warren (1996) UK BAP for Northern Brown Argus

J. Robertson and J. Gallacher (1991) A grassland survey of Central Region, Nature Conservancy Council Internal Report.

WEATHER 2006 PARKHEAD CLIMATOLOGICAL STATION

Malcolm G. Shaw

That was the record year that was. The BBC weather-men emphasised before half time that it could break records, it did not disappoint. They had no hesitation in declaring it the warmest year for Scotland since their record began, and they have 60 year normals compared with our Parkhead records only stretching back 30 years.

There is a problem though. When the BBC says average temperature, they are averaging temperature recordings made on a continuous (hourly) basis at multiple sites, but the Parkhead normals are in the form of average maxima and average minima. In addition, in 2006 the Parkhead station which can now make hourly temperature measurements, did this for only 10 months, and no reliable rain data were collected. For the missing months (February and December), and all the rain data we are indebted to Mr. Niel Bielby, of Dunblane for substitute measurements.

The nearest one can get to an average temperature from these records, is to average the minima and maxima assuming they vary in a linear manner. I've tried it, and as you might guess, the relationship is not linear.

January and February taken together were relatively mild and dry. Day time maxima were average, but cloudy nights were almost a whole degree warmer and had a smaller number than average of air-frosts. January is usually our wettest month, and February our 6th, but only 56 % fell last year. That's interesting against what would overall be a +25 % wetter than average year. Our subjective recollections however can be different – the days with some rain ie “>0.2 mm rain” were very close to average at one day in 2.

March was significantly colder and wetter (169 % ave. rain) than average. Predictions of the “warmest year yet” looked bold. Never the less, a remarkable number of daffodils were in bloom for St David's day – a trick we once believed only the Welsh could pull off.

The beginning of the month was actually cold and dry and very sunny, in a northerly veering easterly airflow. Temperatures elsewhere were more extreme: -16°C in Altnaharra on the 2nd, -10°C at Stranraer on the 4th and -7.2°C in Dunblane also on the 2nd, making it the coldest night of the year locally.

On the 11th, Atlantic fronts moved in against this cold air and most areas had a good covering of snow before it turned to rain. Glasgow measured 22 cm and locally 27 cm was recorded.

A foot note to March might be to suggest we have a micro-climate, for Scotland as a whole did not have an especially wet March (106 % ave. rain)

April continued with low temperatures by day and near average rain fall. But look again at the number of days with some rain blowing in the air (>0.2 mm days). More than half were cloudy and wet.

In **May** the day/night temperatures at least came close to normal but the dreach weather continued with 60% more rain, and 50% more wet days than average. With all the cloud it is not unsurprising that air frost in both April and May were less than 50% normal.

The summer. Locally, June and September were not the warmest months of the year, that title goes to July and August as one would expect, but they stand out as being nearly 2 degrees warmer than their averages and that has an obvious bearing on our memory of a long warmer summer. September did unfortunately – except for plants – herald the beginning of our rainy season.

July and August were in most ways unexceptional at Parkhead as the data shows. Interestingly, July was the month that the BBC picked as the month that was 3 degrees warmer than average, but see the earlier remarks a data recording.

Out of our area some really high temperatures were recorded. For example Aberdeen recorded 30°C on 17th July, Wisley, Surrey 36.5°C (a new UK record) on 19th July, Aboyne 28°C on 14th Aug, the Moray coast 24°C in mid-September, but would you believe that Altnahara recorded an air frost on the 26th June, and Tulloch bridge on the 14th July!

In October and November the mild but very wet trend continued. The nightly minima remained consistently high, and we recorded our first and only November frost since the 10th April on 3rd November. Even after that temperatures rose again with the rain to end the month with nightly lows of only of 5-10 deg.

December continued a run of 4 really very wet months, (rain fall 190 % average). Those last 4 months produced 55 % vs 40 % normal of the rain in what was already a year with 125 % average rainfall.

Unfortunately this did little for the December day time temperatures which fell well below average for the first time since March. Another footnote of caution though is indicated because apparently we had, Scotland wide, a mild December (a full 1 degree C warmer than average).

So how should we remember 2006 in the Stirling area? Well, perhaps no individual day or month broke any record at Parkhead, but we had a winter/spring of grey days with few nightly frosts, benefiting early flowerings and perhaps survival of more pests, a summer which started earlier and went on longer with more warm evenings. Finally we had an autumn which was exceptionally mild, even if only our heating bills really benefited.

Table 1 Temperature readings Parkhead Climatological Station
February to December 2005

	mean - maxima		mean - minima		Number of Air Frosts	
January	6.7	(6.5)*	1.4	(0.5)	9	(13)
February	6.8	(6.9)	1.6	(0.8)	3**	(11)
March	7.0	(9.1)	1.3	(1.9)	9	(7)
April	11.6	(11.8)	3.1	(3.4)	2	(4)
May	15.3	(15.3)	6.0	(5.8)	0	(1)
June	19.4	(17.7)	10.0	(8.4)	0	(<1)
July	19.7**	(19.8)	10.9**	(10.6)	0	(0)
August	19.6	(19.4)	10.8	(10.2)	0	(0)
September	18.7	(16.3)	9.5	(8.3)	0	(<1)
October	14.6	(12.9)	8.0	(5.4)	0	(2)
November	9.9	(9.2)	4.5	(2.6)	1	(8)
December	5.7**	(7.2)	1.2**	(1.1)	10	(11)
Year January-December 2006	13.6	(13.2)	6.2	(5.3)	34	(44)

Table 2 Rainfall and Wind Feb.-Dec. 2005 Parkhead Climatological Station

	Total rain (mm)	Greatest fall (mm)	Number of days >0.2 mm	Number of days >1.0 mm	Number of days >5 mm	mean Wind strength (m/s)	Gust max. at time, date (m/s)
January	58.4 (110.7)	11.9 (40.0)	16 (19)	9 (16)	4 (8)	0.4 .	12.5N 11.00, 11/01
February	45.3 (73.2)	10.0 (31.8)	15 (16)	8 (12)	3 (5)	0.4 .	8.0SW 13.00, 07/02
March	138 (81.4)	26.0 (44.0)	19 (17)	16 (14)	8 (5)	0.8 .	10.7 E 21.00, 24/03
April	39.6 (47.5)	6.0 (35.3)	17 (13)	11 (10)	2 (3)	0.7 .	12.1 W SW 13.00, 22/04
May	92.3 (56.9)	10.9 (28.3)	20 (14)	17 (11)	7 (4)	0.9 .	12.1 WSW 13.00, 22/05
June	61.4 (57.1)	20.3 (35.8)	10 (13)	9 (10)	4 (4)	0.9 .	10.7 WSW 09.00, 21/06
July	44.0** (62.9)	12.3 (65.5)	11 (13)	6 (10)	4 (5)	0.4 .	9.4 WSW 17.00, 12/07
August	56.8 (68.1)	14.9 (30.0)	15 (14)	9 (11)	4 (5)	0.6 .	8.9 WSW 21.00, 18/08
September	145.8 (87.7)	36.5** (44.2)	22 (15)	19 (12)	8 (6)	0.5 .	8.9 WSW 11.00, 18/09
October	126.5 (97.9)	21.7 (66.2)	22 (17)	17 (14)	10 (6)	0.3 .	13 WSW** 10.00, 31/10
November	198** (98.9)	21.1 (68.3)	22 (17)	19 (14)	16 (7)	0.5 .	12.5 SW 19.00, 23/11
December	193 (101.0)	26.8 (43.8)	19 (18)	19 (15)	10 (7)		n/a
Year Jan.-Dec. 2006	1199 (943.3)	36.5** (68.3)	186 (186)	159 (149)	80 (65)	0.6 .	13.0 WSW**

* Climatological normals 30yrs 1971-2000 are shown in ()s

**high/low of the year



On 14 December 2006 direct links between Stirling and both Bridge of Allan and Causewayhead were blocked by floodwater. The photographs are of the railway bridge on the Causewayhead road and of Cornton road by the playing fields and allotments (below). Courtesy of Allan Water News.

NEW RECORD FOR THE COMMA BUTTERFLY IN CENTRAL SCOTLAND

Heather Young and Sue and Roy Sexton

The recent northwards expansion of the comma's range was confirmed by two independent sightings of a single specimen near the "Gathering Stone" on Sheriffmuir on the 21st and 24th August 2006 (NN 814022). This memorial, which marks the site of the famous battle between the Jacobite supporters and government troops loyal to George I (Inglis, 2005), appears to be the front line of a new invasion from the south. Photographs sent by the authors to Richard Sutcliffe (SW Scotland Recorder for Butterfly Conservation) revealed imperfections in the wings which confirmed both sightings were of the same individual.

The comma (*Polygonia c-album*) is a member of the *Nymphalidae* family and the sub-group known as vanessids. These include the more common peacock (*Inachis io*), small tortoiseshell (*Aglais urticae*), red admiral (*Vanessa atalanta*) and painted lady (*Vanessa cardui*). It is approximately the same size as these but is easily identified by the scalloped outlines of its dark spotted, orange-brown wings (Figure 1). A characteristic white comma shaped mark on the underside of its hind wing gives the butterfly its name. The comma's rapid flight and twisting glides can cause it to be mistaken for a fritillary (Lewington, 2003).

A northerly expansion of the comma into Central Scotland was widely anticipated. The 1972-82 distribution maps in the *Millennium Atlas of Butterflies in Britain and Ireland* showed that at that time it was restricted to the south of a line from the Mersey to the Wash. By 1995-9 it had moved north into 700 new 10 km squares reaching the Scottish border (Asher et al., 2001).

Historically the range of this butterfly has also undergone enormous change. During the early nineteenth century it covered much of England and Wales with scattered records in Scotland. For example in 1868 it had been described as scarce in Berwickshire with other earlier records in Fife and Edinburgh. However a century later George Thompson (1976), in his article on "*Scotland's Disappearing Butterflies*", concluded that the comma had been extinct north of the border for a long time.

Following a population crash in the early 20th century the comma became restricted to the Welsh border and a few sites in SE England. It has been suggested that this early race of the butterfly relied on the hop (*Humulus lupulus*) as its food plant and the decline coincided with the reduction in its cultivation. The nettle (*Urtica dioica*) is regarded as the main food plant now, though in Northern England most larval records are on wych elm (*Ulmus glabra*). Climate change and the associated milder winters have also been implicated in the northerly spread. The solitary comma larvae are more vulnerable to cold than gregarious caterpillars like the small tortoiseshell which

can raise their communal temperature in “tents” or silk webs spun round the top of nettle plants (Asher et al., 2001).

In recent years sporadic sightings north of the border in Dumfries and Galloway, Ayrshire and Lanarkshire have become more consistent, suggesting colonisation rather than migration (Spooner, 2002; Futter et al., 2006). The comma over-winters as an adult on tree trunks, branches and in leaf litter, becoming active again in March and April. The caterpillar is very distinctive, similar to other vanessids, but with a white stripe along its back making it resemble a bird-dropping. Until 2006 there was only a single record of a Scottish comma in early spring (Futter et al., 2006) but in 2007 an adult was reported locally on March 7th in Mugdock Country Park near Strathblane. Butterfly Conservation Scotland has also recorded a comma caterpillar on elm in the borders.

The local comma was recorded in the heath surrounding the “Gathering Stone” a quarter of a mile north of the MacRae monument on the Sheriffmuir road. This is an excellent site for butterflies. In May the green hairstreak can be seen on blueberry (*Vaccinium myrtillus*) its food plant and basking on rowan, willow and birch trees. The orange tip which is now common throughout the area is found with the green veined white along the path on lady’s smock (*Cardamine pratensis*). In early summer the small copper, small heath and small white have also been recorded as well as good numbers of the small pearl bordered fritillary in marshy open ground in the surrounding woods. The ringlet and meadow brown were both present in the same area in late July. In autumn the verge along the path by the eastern wall is frequented by hundreds of vanessids which included the comma. A count along the path on 20th August 2006 recorded 157 peacocks, 37 red admirals, 14 painted ladies, 34 small tortoiseshells, eight green veined whites, one common blue and three hummingbird hawk moths. They are probably attracted by large stands of devil’s bit scabious (*Succisa pratensis*) and knapweed (*Centaurea nigra*) which provide sources of nectar, together with the shelter provided by the surrounding dry stone walls and trees. Recent clear-felling of the conifer plantation to the north of the heath means the site will be more exposed and it remains to be seen whether this will have a detrimental effect on the rich variety of life to be found there.

References:

- Asher, J., Warren, M., Fox, R., Harding, P., Jeffcoate, G. and Jeffcoate, S. (2001) *The Millennium Atlas of Butterflies in Britain and Ireland*. Oxford: Oxford University Press.
- Futter, K., Sutcliffe, R., Welham, D., Welham, A., Rostron, A.J., MacKay, J., Gregory, N., McLeary, J., Tait, T.N., Black, J., and Kirkland, P. (2006) *Butterflies of South West Scotland*. Glendaruel: Argyll Publishing.
- Inglis, B. (2005). *The Battle of Sheriffmuir – Based on Eye-Witness Accounts*. Stirling Council Libraries.
- Lewington, R. (2003). *Pocket Guide to the Butterflies of Great Britain and Ireland*. Hook, Hampshire: British Wildlife Publishing.

Spooner, D. (2002) The Present Status of Scotland's Rarest Butterflies. *Forth Naturalist and Historian* 25, 41- 52.

Thompson, G. (1976) Our Disappearing Butterflies. *Forth Naturalist and Historian* 2, 89-103.



Figure 1 The comma butterfly showing its scalloped wings.

FORTH AREA BIRD REPORT 2006

A.E. Thiel and C.J. Pendlebury

The present report is the 32nd bird report for the Forth Valley (or Upper Forth) bird recording area. The report was written by Chris Pendlebury (waterfowl, excluding waders, raptors and gamebirds) and Andre Thiel (waders, passerines and escapees) with Cliff Henty contributing the half-monthly summaries to the wader accounts. Cliff remains the Bird Recorder and all data should be sent to him in the first instance.

The main part of the report consists of detailed species accounts presented in a systematic list arranged in the traditional Voous order. This is preceded by a summary of the main bird news from the past year, additional sections on the Breeding Bird Survey (BBS) and the Wetland Bird Survey (WeBS), the latter two written by Cliff Henty, and a Ringing Report, compiled by Andre Thiel.

ROUND-UP OF THE YEAR

Skinflats and Kinneil hosted a number of scarce species in January. A pair of Scaup were at Skinflats from 6th to 25th January, a female Common Scoter at Kinneil on 9th and 15th January and an Iceland Gull there on 14th. A male Scaup at Lake of Menteith on 16th January and a pair of Long-tailed Ducks there on 21st January were in a rather unusual location. As in 2005 the very mild winter encouraged a number of scarce waders to stay on. One to two Greenshanks and one to two immature Ruff were seen repeatedly at Skinflats in January and thereafter until at least March. Green Sandpipers were reported from Larbert House Loch on 14th and Kinneil on 27th January. Comparatively small numbers (1-3) of Jack Snipe were recorded from Skinflats and Kinneil in January. The fifth record of Mediterranean Gull in our recording area came from Kinneil on 14th January; this may have been the same bird as seen there in November 2005. Among the more usual winter visitors were a Snow Bunting at Stob Binnein on 3rd, 27 Waxwings at Cambus on 15th and a total of 11 in Stirling on 27th January. With a maximum count of 90 birds on 22nd January, the Raven roost in Doune hosted fewer birds than in 2005.

February was rather quiet, the highlight being a winter roost count of 50 Red Kite at Braes of Doune on 7th with a flock of 12 Turnstone at the mouth of the R. Carron on 12th another good record. Water Rails at Cambus Pools on 12th and Callendar Park Loch, Falkirk on 25th and redhead Smew at Gart GPs on 15th and Vale of Coustry on 25th brightened up the lengthening winter days, as did 25 Snow Buntings at Allt a Chaol Ghlinne, Tyndrum on 6th March.

The first signs of spring passage at Skinflats were a Greenshank and White Wagtail on 31st March. These were followed in April by 5 Avocets on 20th, a Little Ringed Plover on 24th, the first of a small influx of Garganeys on 27th, 3 White Wagtails on 28th as well as 9 Whimbrel at The Rhind, Alloa on 30th. The upstream shift of Black-tailed Godwits in spring when numbers decline in the

Kinneil/Skinflats area was again evident with a maximum of 31 recorded at Cambus Village Pools on 26th. Excellent finds elsewhere were a 1st winter Mediterranean Gull at Kinneil on 4th, Long-eared Owls at Cambus on 10th and Skinflats on 22nd and a Marsh Harrier at Darnrigg Moss, Slamannan on 29th.

May highlights included a summer-plumaged Spotted Redshank at Skinflats on 2nd-3rd, a Dark-bellied Brent Goose there on 4th-8th, Garganeys in Callander on 10th, at Gartmorn on 17th and at Cambus Village Pools on 21st-22nd, a Long-eared Owl at Wester Moss on 11th, 8 Whimbrel at Fallin on 13th, a Ring Ouzel at Sron Eadar a' Chinn, Callander on 19th and an Arctic Tern at Skinflats on 21st. The best bird of the month without any doubt, however, was a Black-crowned Night Heron in Bridge of Allan on 21st, only the second record for the area.

The highlight of June was a Hoopoe at Thornhill Muir Farm on 7th. This is only the third record for the recording area, the last one having occurred in 1984. As in 2005, Little Gulls were recorded at Skinflats. This time one to two 1st summer birds were there between 29th June and 1st July, followed by an adult on 13th July. Six days later the site hosted an adult Mediterranean Gull, the 7th for the recording area. Autumn migration started with a Greenshank at Kinneil on 26th.

August was rather quiet, the only birds of interest being a single passage Greenshank at Kinneil on 12th and two at Cambus on 20th. Things didn't really pick up until the start of September. A Ruff at Skinflats between 1st-15th was followed by an excellent count of 14 on 17th. This was accompanied by 4 Curlew Sandpipers on 5th, increasing to 14 on 7th, a Sanderling on 6th-7th, a Little Stint on 21st and 2 on 23rd. Kinneil supported an excellent 10 Greenshanks on 15th. Elsewhere a radio-tagged juvenile Marsh Harrier that fledged in the Tay estuary area arrived at Tullibody Inch on 7th Sep and stayed in the same general area until at least 21st. A Scaup was at Devonmouth, Cambus on 9th with a drake at Lake of Menteith on 19th. A Razorbill at Loch Katrine on 15th would have come as a bit of a surprise. A Green Sandpiper on the River Carron on 19th was less unusual. Less expected were two Great Grey Shrikes at Skinflats on 23rd. An adult Ring-billed Gull at Kinneil was intermittently seen from 26th September to 23rd December. This is the second record for the recording area and may be the same bird that was present there in 2005.

October started with a good count of 30 Guillemots at the Kincardine Bridge on 1st with a Razorbill at Skinflats on 6th and two at S. Alloa on 22nd. Two Little Gulls at Carriden on 2nd were a good find, while two Arctic Skua passing Skinflats on 8th was the only record of rather a poor show this year. The run of Nuthatches continued this year with a bird in Aberfoyle on 13th. Another Great Grey Shrike was seen at N Third Reservoir on 21st, 28th and 29th, while a well watched immature Spoonbill frequented the Kinneil/Skinflats area and was also seen at Kincardine Bridge and Cambus Village Pools between 17th October and 20th December.



Immature Spoonbill at
Kinneil/Skinflats

Photo by Keith Hoey



Barrow's Goldeneye. Some of the diagnostic features are shown nicely in this photo: slightly larger size than the drake Goldeneye behind it; more elongated less triangular head with a peak to the front, white crescent reaching above the eye; black spur on the flank; more extensive black upperparts encircling white 'windows'.

Photo by Nick Franklin

November started with two Little Auks at Kinneil on 5th and yet more Mediterranean Gulls in the form of a second winter bird at Skinflats on 4th, an adult and a second winter bird there on 12th and an adult at Kinneil on 17th. Two days later two Iceland Gulls graced Airth shore. Arguably the best bird of the year was a drake Barrow's Goldeneye commuting between the Teith in Callander and Loch Venachar between 19th November and the end of the year. This is only the third British record of the species, if accepted (while there is no question about the bird's identification, as with all wildfowl the likelihood of it being of wild origin will need to be determined by the BBRC). This bird comes hot on the heels of one on the Ythan estuary (Aberdeenshire) in 2005. It is thought that either the Callander bird or a second bird that appeared in Ireland at the same time may have been the same as the Aberdeenshire bird. If any confirmation was needed that winter had arrived, it came in the form of a Waxwing in Callander on 25th and 26th.

Not surprisingly December was dominated by wildfowl. The 17th of the month was a good day to be out and about: a drake Green-winged Teal was seen at Grangemouth, a Mediterranean Gull was seen at Kinneil as was a 1st winter Iceland Gull with a 2nd winter bird there on 26th-27th. The year ended as it started with overwintering waders including a Green Sandpiper on the River Carron on 17th, a Ruff at Skinflats on 30th and up to 3 Greenshanks in the Skinflats/Kinneil area between 1st and 30th.

RECORD SUBMISSION

Annual Bird Reports depend largely on contributions from the local birdwatching community. Due to the increasing (and welcome) datasets generated by birdwatchers as well as the now commonplace electronic dissemination of data from sources such as the bird news services and the BTO's Birdtrack online survey, it has been possible to produce a more detailed account of the avifauna over the past few years. As a corollary the bird report grew from year to year to the point where the editors of the Forth Naturalist and Historian felt that the bird report was over-represented. As a result it has been necessary to significantly cut down the report. This has been done in a number of ways.

Species sections have been reduced to the most relevant data. As in the past but increasingly so now, this means that some data that may be of relevance in one year may not be so in another year. This should not discourage contributors from submitting data that they feel are of relevance to their local area, as it will only become obvious whether a particular record should be included or not once the entire dataset is available. Several observers send in a list largely or entirely for their home locality. Much of this information is not appropriate for inclusion in these annual reports but it is valuable to have on record (e.g. for conservation action). These are kept in a special file. At the moment there are fifteen such lists referring to the whole district from Falkirk to Killin. Several contributors send in data, often of common species, from repeated transect visits to the same locality, e.g. Roughcastle, Falkirk; Hollow Burn, Fallin; Airthrey; King's Park, Stirling; Cobleland, Aberfoyle. This has become more common since the advent of the BTO's Birdtrack on-line project. Such data reflect birds per walked route rather than flock sizes. These data are especially useful, if collected repeatedly and using the same effort between years, as it allows valid comparison between seasons and years to be made.

The reader will notice another obvious way in which the bird report has changed. While all contributors whose data are included in the report are listed in the contributors section, in a deviation from the past the initials of only those who were lucky enough to witness scarce or rare species or unusual events are shown against the specific records or summarised after a series of these. While this may not seem to represent a great saving of space, its cumulative effect does add up, especially where lists of initials spill over into a separate line.

To facilitate the preparation of the report, contributors are strongly encouraged to submit their data as soon as possible after the end of the year. Electronic files are much the preferred format, as it greatly speeds up cross-checking and summarising of data. A standard spreadsheet is available from Cliff Henty. Special thanks are due to those contributors who are now submitting their data in this format.

Following on from the last couple of years, an increasing number of records are submitted with 6-figure grid references. While it is not appropriate to list these in the report itself, it enormously speeds up cross-checks and is a valuable

resource for conservation action. Also more contributors add the name of the nearest village which, too, is very much appreciated.

The sparse information available about common breeding species is improved by data from the Breeding Birds Survey (BBS). For less common species data can sometimes be summarised in terms of the numbers of pairs or apparently occupied territories for particular locations. The organisers for both the estuary and the inland waters parts of the national wildfowl counts (WeBS) have also made available the results from these for this report. Where appropriate, these are included in the species accounts.

For many species the records sent in are very unrepresentative of their general distribution. This applies particularly to very common species or to those that are secretive or breed in inaccessible locations. The status of species is detailed in a Check List, published in the Forth Naturalist and Historian, Vol 15. Additional information along with guidelines for the submission of records can be obtained from N. Bielby, 56 Ochiltree, Dunblane, FK15 0DF (tel.: 01786 823830, e-mail: n.bielby@sky.com). In addition there is a coded summary of general distribution after the species name. This often apparently contradicts the detailed records that are published for the year. The codes are thus:

B - Breeding status: widespread (present in more than five 10 km squares)
 b " " : local, scarce (present in fewer than five 10 km squares)
 W - Winter status: widespread or often in groups of more than ten
 w - " " : local, scarce (local and usually fewer than ten in a group)
 P : Passage (used when species is usually absent in winter; P or p used for widespread or local as in winter status)
 S or s : Summer visitor (used for species present in summer but which do not normally breed; S or s used for widespread or local as in winter status).

Thus BW would be appropriate for Robin, B for Swallow, p for Ruff and SW for Cormorant. No status letter is used if a species occurs less than every other year.

An asterisk (*) in front of the species name means that all records received have been quoted. The SOC has pressed for a more systematic vetting of records of species that are unusual locally. Our area has an informal panel of five members: C. Henty (Recorder), A. Smith, D. Orr-Ewing, A. Blair and D. Thorogood. They have produced a list of species that are scarce locally and where the records need to be supported by either a full description or sufficient evidence to remove any reasonable doubt. The list is available from Cliff Henty. Any species which is a vagrant to the area and some of those which are asterisked in this report will fall in this category. The judging of Scottish or national rarities continues as before and descriptions need to be submitted to the relevant committees. The first 20 occurrences of a species in our recording area are noted. Observers should be aware that aberrant individuals of common species of birds appear quite regularly and these sometimes resemble

rarities. There is also the problem of escaped birds and of hybridisation, a particular problem in captive wildfowl which may escape and appear in natural situations.

The British Ornithologists' Union (BOU) has appealed for introduced/escaped species to be recorded locally. As the published information on these species is not necessarily complete, self-sustaining populations of such species may exist which are not known about or adequately recorded. The BOU therefore encourages observers to record and monitor all naturalised species (particularly but not exclusively breeding records and interactions with native species) and escaped species seen in the wild to assist it to make future recommendations for category C status, if a self-sustaining naturalised population is established.

The following abbreviations have been used in the report: Ad(s). - adult(s), AoT - apparently occupied territory, b/lkm - birds per linear kilometre, Br. - bridge, BoA - Bridge of Allan, c/n - clutch of n eggs, conf. - confluence, BBS - Breeding Bird Survey, CP - Country Park, E - east, Est. - estuary, Fm. - farm, F - Female, G. - Glen, GP - gravel pit, Imm. - immature, incl. - including, Juv - juvenile, L. - Loch, N - north, NR - Nature Reserve, nr. - near, M - Male, Max. - maximum, ON - on nest; pr. - pair; Res - Reservoir, R. - river, Rd. - road, S - south, SP - summer plumage, W - west, WeBS - Wetland Bird Survey, Y - young, > - flying/flew.

The area covered by the report comprises the council areas of Falkirk and Clackmannan together with Stirling, excluding Loch Lomondside and other parts of the Clyde drainage basin. Please note that we do not include the Endrick water, i.e. Fintry and Balfron.

CONTRIBUTORS

This report has been compiled from records submitted by the contributors listed below. Where initials are given, the contributors are listed in the species entries.

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C. Henty (CJH), J. Holland, Liz Humphries (EMH), L. Ingram (LI), Andy Jensen (AJ), D. Jones (DJ), D. Kerr, E. Keenan, I. Keenan, J. Kaye, R. Knight, M. Kobs, A. Lauder, D. Lang, P. Lee, G. and E. Leisk (GEL), P. Lubbers (PAL), I. Madden, C. Mallett (CJM), D. Matthews, R. McBeath, M. McCartney, M. McDonnell, M. McGinty (MMcG), B. McGowan, K. Macgregor, A. McIver (AMC), R. McKenzie, M. Maclean (MML), P. McSorley (PMS), A. Masterman, P. May (PM), J. Mercer, S. Milligan, C. Moore, B. Murphy (BM), F. Murray (FAM), M. Mylne, J. Nimmo, L. Nisbett, M. O'Brien, C. Oldham, D. Orr-Ewing (DOE), B. Osborn, G. Owens (GO), J. and E. Payne, C.J. Pendlebury (CJP), D. Pickett, K. Pilkington, S. Rae (SR), D. Redwood, C. Renwick (CR), S. Renwick (SRE), G. Richards (GR), R. Ridley (RR), E. Rimmer, M. Roberts, G. Robertson, D. Robertson, A.C. Rogers (ACR), N. Rossiter (NR), David Rugg (DR), A. Samson, the late P. Sandeman (PWS), M. Scott, S. and R. Sexton, R. Shand (RS), J. Shanks, A. Simpkins (AS), G. Skipper, K. Smith (KS), A. Smith, E. Smy, C. Spray, H. Simpson, M. Stephen, P. Sutton, Stirling District Ranger Service, Rob Swift (RSW), D. Taylor, A. Thiel (AET), M. Thoroe (MT), D. Thorogood (DT), J. Towill (JT), M. Trubridge, N. Trout, A.E. Watterson, A.E. Whittington, A. Wallace (AW), C. Waddell, M. Ward (MWD), C. Wernham, M. White, N.D. White, K. Wilkinson, J. Willett (JW), M. Williamson, P. Wills, K. Wilson, R. Wilson (RW), L. Winskill, A. Woods, M. Wotherspoon (MWO).

Thanks are also due to Keith Hoey and Nick Franklin for the kind permission to use their photos of the Spoonbill and Barrow's Goldeneye, respectively, and to D. Orr-Ewing for RSPB data on Red Kites and Ospreys.

BREEDING BIRD SURVEY (BBS)

The Breeding Bird Survey is a UK survey organised by the BTO (British Trust for Ornithology) to provide yearly population trends for a range of common and widespread bird species in the UK. The local organiser is Neil Bielby who makes a detailed report for contributors which is also the basis for this brief summary. Each survey plot is a 1-km square of the National Grid visited twice during a breeding season with the observer walking the same two 1 km transects on both visits. The squares were originally selected at random and the aim is to survey the same squares each year.

Thirty eight out of the 45 squares allocated to our area were surveyed in 2006, six more than the previous best. The area covered by the BTO's 'Central Region' corresponds roughly to that of the Upper Forth Bird Reporting Area within the old Central Region, plus an area of Perth and Kinross stretching as far as Glen Devon to the east and Glen Artney to the north.

For general analysis the squares can be allocated to four broad habitat groups: Mountain and Moorland, Conifer Woodland (plus moorland edge), Farmland and Urban/Suburban. Inevitably the squares not covered have tended to be the more remote ones and in addition the initial randomisation did not give perfect weight to habitat importance. Thus, compared with land use statistics from the old Central Region, Mountain and Moorland is under-represented by 18 % whilst Farmland is over-represented by 19 %. In addition,

these relative proportions have varied over the years as has the number of BBS squares. This can give rise to large changes as a result of changes in habitat representation rather than bird numbers. This should be borne in mind when interpreting the data. Data from 1994-1996 are excluded from the long-term mean due to the small sample size of squares surveyed. The mean therefore refers to the period 1997 to 2006 (inclusive). Absolute numbers for several species are small, which should be borne in mind when interpreting the data.

One hundred and two species were recorded in 2006, a new high and five more than in 2005. Dunlin and Ring Ouzel were recorded for the first time, making a total of 119 species that have been recorded during the 12 years the survey has taken place. BBS data are mentioned in the individual species sections of this report. On a national scale BBS a most reliable method for detecting changes in the abundance of species, except for seabirds, scarce and rare species, etc. Birds which are scarce though widely distributed locally, e.g. woodpeckers, Spotted Flycatcher or Bullfinch, are only recorded in small numbers on BBS transects and annual variations therefore need to be interpreted with great care. Amongst the passerines the most frequent were Starling, Chaffinch and Meadow Pipit. Stonechat, Whitethroat, Goldfinch, Tree Sparrow, Yellowhammer and Reed Bunting were all in good numbers whilst Whinchat recovered strongly from a low level last year.

WETLAND BIRD SURVEY (WeBS)

WeBS is a monthly waterfowl census organised under the auspices of the BTO. The core months are September to March inclusive. For this survey 'waterfowl' includes divers, grebes, cormorants, herons, swans, geese (excluding Pink-footed and Greylag for which WWT (Wildfowl and Wetlands Trust) organises separate counts), ducks, sawbills, rails and coots. Wader, gull and Kingfisher numbers are also collected; locally, we also record raptors, Dipper, and Grey Wagtail.

For the 2006 Bird Report the more important individual records are mentioned in the individual species sections but a detailed summary of the whole survey is not possible since the WeBS system is centred on the autumn, winter and early spring period, not a calendar year, and also the FNH deadlines have become more stringent so that a complete breakdown of the coverage and results for 2006 is not available. Suffice it to say that about one hundred lochs and reservoirs are covered regularly together with the Forth estuary and large sections of the Union and the Forth and Clyde Canals, and of the rivers Teith, Forth, Allan Water, Devon, and Carron. It is anticipated that a fuller account of WeBS 2006/2007 will be published in the report for next year. Details of individual species can be found in the systematic list below.

RINGING REPORT

This is the third full ringing report. The following section lists all ringed birds seen in the recording area during the year. Contributors are encouraged to report colour-ringed wildfowl to the relevant organisers and/or the BTO and

not to assume that somebody else has already done so, as all movements are of interest to the ringers and add to our understanding of bird ecology and migration patterns. Thanks are due to Allan and Lyndesay Brown, Christie Hemple and Bob Swann for making available data on movements of birds seen in the recording area.

A total of 29 recoveries (excluding multiple sightings of the same bird) were made in 2006. Most are, not surprisingly, of Mute Swans (15) and Greylag Geese (7). Others related to Pink-footed Geese (4), Shelduck (2) and an interesting record of a Marsh Harrier.

Allan and Lyndesay Brown, who are ringing Mute Swans in Fife and the Lothians, are particularly keen to learn if any of the birds ringed by them (green or white Darvic rings) breed outside their study area.

Recoveries are listed in Voous order, as for the systematic list, under the headings shown below. Where an asterisk appears behind a ring number, further details of sightings are given in the 2004 and 2005 ringing reports.

Ring number	Date ringed	Location ringed	Date seen	Location in recording area (codes as in main list)	Recorder
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followed by the location(s) where the bird was seen in between

•PINK-FOOTED GOOSE

Grey neck PKV	20 Nov 2005	Loch of Lintrathen (Angus)	22 Dec 2006	Carse of Lecropt (S)	NB
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No sightings in between.

Grey neck PVI	20 Nov 2005	Loch of Lintrathen (Angus)	22 Dec 2006	Carse of Lecropt (S)	NB
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No sightings in between.

Grey neck TAL	22 Oct 2006	Loch of Lintrathen (Angus)	4 Nov 2006	Tulligarth (C)	AET
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No sightings in between.

Grey neck TSZ	22 Oct 2006	Loch of Lintrathen (Angus)	4 Nov 2006	Tulligarth (C)	AET
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Carsebreck (Perth and Kinross) 27 Oct 2006.

•GREYLAG GOOSE

Grey neck BZV*	28 Jul 1997	Masvatn, S-Ping ICELAND	20 Jan 2006 25 Feb 2006 11 Mar 2006	West Gogar East Gogar East Gogar (S)	AET
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Having spent most winter visits between 1998 and 2003 in Fife, this bird was first recorded in Clackmannanshire in Feb 2004. It has since been recorded repeatedly in Clackmannanshire with the occasional foray back into Fife. It was present in various localities in Clackmannanshire in Jan and Feb 2005 and in the Gogar area, nr. Menstrie, between Jan and Mar 2006. After its return migration, it was seen at Tarrel, nr. L. Eye, Easter Ross on 31 Oct 2006.

Grey neck DPS*	13 Oct 1998	Loch Eye (Easter Ross)	11 Mar 2006	East Gogar (S)	AET
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Between 1998 and 2001, this bird was seen in various localities in northern Scotland and Tayside. In Nov 2004 it appeared in Orkney before stopping over at Cambus in Jan 2005. It returned to the same area in 2006.

Grey neck HCA*	24 Feb 2000	Loch Eye (Easter Ross)	20 Jan 2006 25 Feb 2006 7 Mar 2006 24 Mar 2006	West Gogar East Gogar East Gogar East Gogar (S)	AET
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Following sightings nr. Montrose (Angus) and in Iceland in 2001, this bird was seen at Drymen, Stirlingshire, in Jan 2003. It has since been a regular visitor to Clackmannanshire, notably Sheardale nr. Dollar (Mar 2003, Feb 2004) and the area between Alva and Tillicoultry (Oct 2004 to Jan 2005), before relocating to the Cambus-Gogar area in Jan and Mar 2005. It returned to the Gogar area between Jan and Mar 2006.

Grey neck HDA	24 Oct 2000	Loch Eye (Easter Ross)	25 Feb 2006 4 Mar 2006 11 Mar 2006	East Gogar East Gogar East Gogar (S)	AET
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This bird spent the early part of winter 2000/01 in the area around L. Eye in Easter Ross. From mid-Dec 2000 to Apr 2001 it was in the area around Elgin in nearby Moray. It returned to this area in Jan 2002 before relocating to Skene, west of Aberdeen, in Mar and Apr 2002. After another sighting in the Elgin area (Moray) in Nov 2002, it was seen at Annfield Farm, Giffordtown, Rossie Bog and East Kilwhiss (all Fife) in Nov 2003 and between Jan and Apr 2004. On 23 Feb 2005 it reappeared at Newton nr. Elgin and made its way to Gogar (ca. 160 km) two days later where it presumably stayed into Mar.

Red neck BBU	30 Oct 2004	Loch Eye (Easter Ross)	1 Jan 2006	E of Coalsnaughton (C)	AET
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The day after being rung, this bird was at Clachnamuach, nr. L. Eye. It appeared in Jan 2005 near L. Leven (ca. 160 km). It was seen at Cluny Marsh, nr. Newtonmore (Badenoch) in early Dec 2005 before relocating to Clackmannanshire by the new year.

Red neck BKL	13 Nov 2004	Loch Eye (Easter Ross)	25 Feb 2006 4 Mar 2006 11 Mar 2006	East Gogar (S)	AET
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In Nov 2005 at Kinbeachie, then Udale Bay (both Cromarty Firth) Dec 2005. After its stay in Clackmannanshire in Feb and Mar 2006, the bird was seen at Akurbrekka, Hrutafjörður, **Iceland** on 28 Oct 2006.

Red neck BNN	14 Nov 2004	Loch Eye (Easter Ross)	16 Mar 2006	West Gogar (S)	AET
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At Carsebreck, Braco (Tayside) on 26 Jan 2006, then Gogar in Mar before being seen at Melrakkasletta, Nordur-Thingeyjar, **Iceland** on 23 Apr 2006. By 20 Nov 2006 the bird was at Pulrossie, Dornoch Firth.

• SHELDUCK

Blue over white plastic on right leg.	29 Jul 2005	Eden estuary (Fife)	28 May 2006	Skinflats (F)	AET
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Black 1 on left leg

Blue over red plastic on right leg.	29 Jul 2005	Eden estuary (Fife)	28 May 2006	Skinflats (F)	AET
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Black 1 on left leg

•MUTE SWAN

- Metal Z89438** 17 Aug 1997 Union Canal, Winchburgh (West Lothian) 18 Jul 2006 Cambus Village Pools (C)
5 Jul 1998 Alexandra Park, Glasgow. 25 Sep and 11 Oct L. Gelly (Fife). 8 Nov-28 Dec 1998 Craigluscar NR, nr. Dunfermline (Fife). 24 Oct, 7 Nov and 5 Dec Torry Bay. Bred with Z92188 at Cambus Village Pools and had 3 cygnets.
- Metal Z92188** 16 Apr 1998 Hogganfield Loch (Clyde) 18 Jul 2006 Cambus Village Pools (C)
Alexandra Park, Glasgow 15 Nov 1998. Bred with Z89438 at Cambus Village Pools and had 3 cygnets.
- Green BUA** 16 Aug 1997 Bara Loch, nr. Gifford (East Lothian) 17 Jan 2006 The Boll, Alva (C) NB
14 Feb 2006
7 Mar 2006
Moved around Edinburgh ponds until 1999, then seen at Torry Bay 18 Jan 2001 and Linlithgow Loch 15 Sep 2002. At Skinflats 26 Jan 2003, then The Boll 16 Jan-7 Mar 2005.
- Green HLY** 3 Aug 2003 Blackford Pond, Edinburgh 17 Jan 2005 The Boll, Alva (C) NB
14 Feb 2005
Remained at Blackford Pond until Mar 2004, then moulted at Musselburgh. Present at Crammond 4 Sep, Torry Bay Nov, Alva Dec and back to Cramond Dec 2004. After a stay at Boll Farm 14 Feb-16 Mar 2005, returned to Cramond on 16 Mar 2005.
- Green HPI** 30 Aug 2003 North Esk Res., Carlops (Borders) 16 Jan 2006 The Boll, Alva (C) ALB
7 Mar 2006 AET
Abandoned by parents and taken into care. Ringed and released at Linlithgow Loch 20 Dec 2003, where it remained until 1 Aug 2004. Gartmorn Dam 22 Aug 2004, Torry Bay (Fife) 23 Nov 2004, The Boll 27 and 29 Dec 2004. St. Margaret's Loch, Edinburgh 5 May 2005, Musselburgh 13 and 17 Jun 2005. Rutherford, E. Maxton (Borders) 14 Oct 2005.
- Green IFT** 21 Aug 2004 Stenton Pond, Glenrothes (Fife) 14 Feb 2006 The Boll, Alva (C) NB
7 Mar 2006
Last seen at Stenton Pond on 7 Feb 2005.
- Green IPT** 21 Aug 2004 Stenton Pond, Glenrothes (Fife) 17 Jan 2006 The Boll, Alva (C) NB
Original ring IFN replaced by IPT at Stenton Pond on 1 Jan 2005. Last reported from there 7 Feb 2005. At The Boll 15-16 Mar 2005.
- Green IPZ** 23 Jan 2005 Clatto Res. Dundee (Dundee) 16 Jan 2006 The Boll, Alva (C)
14 Feb 2006
7 Mar 2006
Broughty Ferry 1 Apr 2005. Airthrey Loch, BoA 9 Nov, 2 and 12 Dec 2005.
- Green ITU** 14 Sep 2003 New Mill, Lanark (South Lanarkshire) 7 Mar 2006 The Boll, Alva (C) NB
Taken into care with leg injury at Bonnybridge 13 May 2004. Released at Linlithgow Loch 13 Jun 2004 when colour ring added. Stayed there until present sighting.

Green IXN 14 Aug 2005 Union Canal, Broxburn 1 Dec 2006 Black Loch, Limerigg NB
(West Lothian) (F)

No sightings in between.

Orange 3ASL 13 Oct 2001 Balloch, Loch Lomond 1 Apr 2006 Airthrey
(Clyde) 5 Feb 2006 (S)

Gartmorn October 2002. Airthrey Jan, Feb and Mar 2003 and Mar 2004

Orange 3CDF 20 Aug 2004 Maggicroft Fishery, 19 Feb 2006 Lake of Menteith NB
Cumbernauld (Falkirk) (S)

Gartmorn Dam 16 Oct, 28 Nov and 25 Dec 2004.

Orange 3CKU 12 Feb 2005 R. Leven 19 Feb 2006 Lake of Menteith NB
(Dunbartonshire) (S)

Airthrey Loch, BoA 12 Dec 2005.

Orange 3CLF 18 Sep 2004 Forth-Clyde Canal, 15 Mar 2006 Vale of Coustry NB
Auchenstarry (S)

Broadwood Loch, Cumbernauld 20 Aug 2005.

White 284 24 Aug 2002 Yetholm Loch 14 Feb 2006 The Boll, Alva NB
(Borders) (C)

Also at The Boll 17 Feb 2005.

•MARSH HARRIER

FP06677 summer 2006 Tay estuary area 7 Sep R. Forth, Alloa
(radio-tagged 10 and 12 Sep Tullibody Inch
juvenile female) (C)

Remained around nesting area until 27 Aug. Magus Muir (Fife) 28 Aug. Carsebreck Loch (Perthshire) 30 Aug and 6 Sep. Peppermill Dam 8 Sep. Roosted on Tullibody Inch on 12 Sep and stayed in same general area until at least 21 Sep. Auldmuir Res., nr. Dalry (Ayrshire) 23 Sep. N of Kingarth, Isle of Bute (Argyll) 24 Sep. Logan Mains, Mull of Galloway 26 Sep. Copeland Island, Northern Island 29 Sep. South of Belfast 2 Oct. Roosted at Crymlyn Burrows, east of Swansea overnight on 3/4 Oct, a journey of 333 km. N of Slapton Ley, South Devon coast 5 Oct. NW of Parehame, Devon and at Weymouth, Devon 7 Oct. Believed to have been near Poole Harbour 8 and 9 Oct where confirmed sighting 10 Oct. No further signals after that date and believed to have been illegally killed (<http://www.roydennis.org/Marsh%20Harrier%202021251.htm>).

SYSTEMATIC LIST

Codes - S, F and C indicate records from Stirling, Falkirk and Clackmannanshire "Districts".

*RED-THROATED DIVER *Gavia stellata* (b, w)

F Five Kinneil 19 Mar. 1 Skinflats 17 Sep. 1 S Alloa 22 Oct. 1 Kinneil 5 Nov.
1 Dunmore 29 Dec.

S One L. Drunkie 30 Apr. 1 L. Katrine 9 May. 1 pr. Trossachs 13 Jul had no Y.
1 Kildean, Stirling 21 Oct.

*BLACK-THROATED DIVER *Gavia arctica* (b, w)

S Trossachs: pr. reared 2 fledglings at undisclosed site (DJC).

LITTLE GREBE *Tachybaptus ruficollis* (B, w)

C Site max.: 6 R. Devon, Alva-Menstrie 25 Jan; 4 Gartmorn Dam 2 Nov; 2 Cambus
Pools 2 Apr.

S Breeding: 2 Prs. L. Ard Forest 2 May; 1 Pr. Strathyre 8 May; 1 Pr. with 3 Y

Sheardale Park 15 Jun. Site max.: 18 L. Dochart 4 Mar; 15 Carron Valley Res 17 Sep; 5 L. Walton, Carron Valley 7 Jan; 5 Polmaise Lagoons 21 Sep; 2 Callander 26 Nov.

GREAT CRESTED GREBE *Podiceps cristatus* (b,W)

WeBS max.: 55 Forth Est. in Jan.

F Site max.: 45 Kinneil 15 Jan.

C Site max.: 7 Gartmorn Dam 23 Mar.

S Sixteen Lake of Menteith 9 Mar; 1 Pr. there 22 May; 21 on 1 Oct. 1 Pr. and 1 juv. Gartmore GP 20 Jul. 1 Pr. Gart GP, Cambusmore but nest flooded 1 Aug. 2 Vale of Coustry 25 Mar. 6 Carron Valley Res 17 Sep. 2 L. Venachar 28 Dec. 1 L. Earn 16 Oct. 1 Callander 31 Dec.

*RED-NECKED GREBE *Podiceps grisegena*

F One Kinneil 16 Sep and 19 Oct (JRC). These are the 12th and 13th records, respectively, for the recording area.

*SLAVONIAN GREBE *Podiceps auritus*

S One Carron Valley Res 19 Nov (DAC). This is the 20th record for the area since modern recording began in 1974.

*GANNET *Morus bassanus* (p)

F One juv. > Skinflats 30 Sep (AE); 7 juv. there 6 Oct (GO); 3 juvs. > W 12 Nov (BD). 1 juv. Kinneil 29 Oct (RHD).

S One juv. Polmaise 26 Dec (RHD).

CORMORANT *Phalacrocorax carbo* (S, W)

Forth Est. (WeBS): 85 in Jan, 64 in Feb and Mar, 141 in Sep, 47 in Oct, 70 in Nov, 54 in Dec.

F Ninety-nine S Alloa roost 25 Nov. 66 Higgins Neuk 11 Jan. 37 Skinflats 14 Jan. 27 Kinneil 19 Mar.

C Fifty-six Alloa Inches 23 Dec.

S Ten L. Walton, Carron Valley 19 Nov; 8 Carron Valley Res 17 Sep.

*BLACK-CROWNED NIGHT HERON *Nycticorax nycticorax*

S BoA 21 May (GO). Record accepted by the SBRC. This is the 2nd record for the area. The first record was a bird shot on the Black Devon, Alloa on 23rd May 1879. Since then there have been a couple of records, all of which are thought to have originated from a free-flying colony at Edinburgh Zoo.

GREY HERON *Ardea cinerea* (B,W)

Forth Est. (WeBS): 75 in Jan, 15 in Feb and Mar, 82 in Sep, 61 in Oct, 49 in Nov, 41 in Dec. BBS¹: recorded at 0.13 b/1km, similar to annual mean (1997-2006).

F Breeding: 20 nests estimated with at least 50 discarded eggshells Dunmore Wood heronry 16 Apr (AB). Site max.: 37 Skinflats 8 Oct; 11 Higgins Neuk 11 Jan; 10 S Alloa 14 Jan.

C Site max.: 26 Kennetpans 14 Jan; 9 Cambus 20 Aug.

S Site max.: 24 Lake of Menteith 21 Jan; 14 North Third Res 18 Feb; 8 L. Lubnaig 26 Feb; 6 Carron Valley Res 7 Oct.

*SPOONBILL *Platalea leucorodia*

F One Imm. Kinneil 17 Oct to 15 Dec; also at Skinflats 5 to 9 Nov and 19 Dec; also at Kincardine Bridge 17 and 19 Dec (RHD, GO, MVB *et al.*).

C Above also at Cambus Village Pools 20 Dec (RR).

This is the 4th record for the area since modern recording began in 1974.

¹ Data from 1994-1996 are excluded from the long-term mean due to the small sample size of squares surveyed. The mean therefore refers to the period 1997 to 2006 (inclusive). Absolute numbers for several species are small, which should be borne in mind when interpreting the data.

MUTE SWAN *Cygnus olor* (B,W)

- F Six Skinflats 2 Apr. 5 Carronshore 4 Jun.
 C Breeding: 1 ON Cambus Village Pool late Apr and May, 3 Y in Jul; 1 Pr. Cambus Pools 23 May.
 Site max.: 57 Gartmorn Dam 18 Oct; 27 The Boll, Alva 14 Feb.
 S Breeding: 3 Prs. Airthrey Loch Jun hatched 3, 4 and 7 chicks and fledged 2 cygnets. Site max.: 26 R. Forth, Stirling 21 Jan; 25 Lake of Menteith 21 Jan.

WHOOPEE SWAN *Cygnus cygnus* (W)

- F Winter/spring: 25 Bonnybridge 1 Mar. Autumn/winter: 6 Skinflats 8 Oct, 14 there 2 Nov; 15 Kinneil 21 Oct; 20 Torwood 17 Nov; 18 Larbert 30 Nov.
 C Autumn/winter: 4 Cambus 2 Nov; 5 (3 juvs.) Tullibody Inch 18 Nov; 3 over The Rhind, Alloa 17 Dec.
 S Winter/spring: 10 (2 juvs.) Carron Valley Res 7 Jan to 18 Mar; 8 (2 juvs.) L. Lubnaig 5 Jan; 12 Killin, L. Tay 6 Jan; 25 (7 juvs.) Thornhill Carse 17 Jan; 4 L. Arklet 7 Feb; 1 Pr. Craigforth 1 Apr to 7 May.
 Autumn/winter: 16 (2 juvs.) over Lecropt Carse 25 Oct; 3 over Stirling 4 Nov; 26 Thornhill Carse 22 Nov.

*BEAN GOOSE *Anser fabalis* (W)

- F Slamannan plateau: 268 on 6 Jan; 290 at roost 4 Feb (max. count, 25 more than 2005); last record of 4 on 1 Mar; 7 on 10 Oct were the first autumn birds with 150 there 13 Oct. 255 there on 29 Oct had 31 juvs. (12 %) (BGAG).

PINK-FOOTED GOOSE *Anser brachyrhynchus* (W)

- Last spring record: 1 Flanders Moss 22 May. First autumn return: 34 at Skinflats 25 Sep (DOE, GO).
 Forth Est. (WeBS): 641 in Jan, 1320 in Feb, 4440 in Mar, 427 in Oct.
 F Winter/spring: 1230 Skinflats 12 Feb; 4400 there 16 Mar; 150 on 2 Apr.
 Autumn/winter: 650 at Skinflats 16 Oct.
 C Winter/spring: 2640 Kennetpans 12 Feb, 1850 there 26 Mar; 899 Gogar Mains 5 Apr. Autumn/winter: 300 Tullibody Inch 30 Sep; 920 Haugh of Blackgrange 19 Nov; 2000 Tulligarth 4 Nov.
 S Winter/spring: 1565 Thornhill Carse 15 Feb; 1000 Lecropt Carse 20 Feb; 608 West Gogar 17 Mar; 1040 Little Kerse 10 Apr. Late birds: 16 Dunblane 4 May; 2 Lake of Menteith 11 May; 1 Flanders Moss 22 May. Autumn/winter: 2000 > W Flanders Moss 22 Oct; 1380 Thornhill Carse 25 Oct; 3020 Lecropt Carse 17 Dec.

*WHITE-FRONTED GOOSE *Anser albifrons* (w)

- F Two birds of the Greenland race at Skinflats 16 and 18 Oct (GO).

GREYLAG GOOSE *Anser anser* (b, W)

- Forth Est. (WeBS): 13 in Jan, 100 in Mar, 93 in Sep 62 in Oct.
 F Summer (probably feral): 58 Skinflats 18 Sep. Autumn/winter: 340 S Alloa 8 Oct.
 C Winter/spring: 136 R. Devon, Alva 29 Jan; 315 Belhearty, Coalsnaughton 1 Jan; 2000 Cambus Pools 20 Mar. Summer (probably feral): 6 Tullibody Inch 26 Jul; 15 Cambus Pools 27 Aug. Autumn/winter: 521 Cambus-Alloa Inch 30 Sep; 178 Gartmorn Dam 18 Nov.
 S Winter/spring: 200 Killin, L. Tay 23 Jan; 1270 E. Gogar 17 Feb; 200 Thornhill Carse 18 Feb; 420 Kinbuck 11 Mar. Autumn/winter: 425 Thornhill Carse 17 Dec.

CANADA GOOSE *Branta canadensis* (b W)

- F Site max.: 13 Skinflats 5 Jun; 71 Dunmore 8 Oct; 55 S Alloa 8 Oct; 196 St Helen's Loch, Bonnybridge 1 Dec.
 C Site max.: 15 Cambus 12 Aug; 21 Blackdevonmouth Marshes 21 Nov.
 S One brood G Finglas Res 2 May. Lake of Menteith: 38 Ads. with 2 broods 11 May; 84 Ads. there 30 May but no Y; 2 goslings 5 July. Site max.: 50 Killin, L. Tay

9 Jan; 80 L. Ard 9 Jan and 23 Dec; 200 Thornhill Carse 13 Oct; 44 L. Voil 4 Dec; 117 Lake of Menteith 20 Dec; 170 L. Venachar 28 Dec.

*BARNACLE GOOSE *Branta leucopsis* (w)

F Five S Alloa 8 Oct. 1 Skinflats 16 May; 37 there 25 Sep; 6 on 16 Oct (GO, MVB, AB).
C R. Forth: 2 Cambus-Tullibody Inch 30 Sep; 4 Haugh of Blackgrange 19 Nov (AET, RHD).

S Three Kinbuck 2 Apr. 1 Thornhill Carse 23 Oct. 1 Lecropt Carse 22 and 23 Dec (MVB, PAL, NB).

*BRENT GOOSE *Branta bernicla* (w)

1 dark-bellied bird Skinflats 4 to 8 May (RS, GO, AB).

SHELDUCK *Tadorna tadorna* (b, W)

Forth Est. (WeBS): 702 in Jan, 813 in Feb, 231 in Mar, 2293 in Sep; 1918 in Oct, 977 in Nov, 1243 in Dec.

F Moulting flock: 3140 at Kinneil and 183 at Skinflats on 26 Jul; peaking at 3445 at Kinneil and 360 at Skinflats on 11 Aug; with 1216 birds at Skinflats 17 Sep. Other site max.: 107 S Alloa 12 Feb.

C Breeding: 1 Pr. and 8 Y Tullibody Inch 26 Jul. Site max.: 122 Cambus to Alloa Inch 12 Feb; 5 R. Devon, Alva 29 Apr.

WIGEON *Anas penelope* (b, W)

Forth Est. (WeBS): 1794 in Jan, 940 in Feb, 314 in Mar, 100 in Sep; 143 in Oct, 1014 in Nov, 724 in Dec.

F Winter/spring site max.: 120 Blackness 6 Jan; 570 Kincardine Br.-Dunmore and 156 Skinflats 14 Jan. Summer: up to 7 Skinflats throughout. Autumn/winter site max.: 254 Skinflats 19 Nov; 50 Dunmore 29 Dec.

C Winter/spring site max.: 560 Cambus-Alloa 12 Feb. Summer: 3 M Tullibody Inch 4 Jun. Autumn/winter site max.: 560 Cambus-Alloa 18 Nov; 580 Alloa Inch 19 Nov; 35 R. Devon Alva 19 Nov.

S Winter/spring site max.: 210 Thornhill Carse 17 Jan; 194 Gart GP 24 Jan; 100 Killin, L. Tay Jan and Feb; 96 L. Dochart 4 Mar. Winter/spring site max.: 187 Thornhill Carse 24 Nov; 88 L. Dochart 9 Dec; 137 Killin 16 Dec.

GADWALL *Anas strepera* (s, w)

F One Pr. Skinflats 31 Mar and 25 Apr-8 May (GO, RS, AB).

C Cambus Pools: 2 Prs. 2 to 19 Apr; 1 Pr. to 23 May (AET, CJH). Cambus Village Pools: 3 Pr. 25 Apr; 1 Pr. to 11 May (MVB, NB, DAC). 1 Gartmorn Dam 14 May (PMA). 2 Craigmie Pond, Alloa 26 Sep (RLG). 1 Pr. Polmaise Lagoons 19 Oct (DAC).

TEAL *Anas crecca* (b, W)

Forth Est. (WeBS): 1366 in Jan, 1354 in Feb, 869 in Mar, 582 in Sep; 188 in Oct, 898 in Nov, 1962 in Dec.

F Winter/spring site max.: 492 Kinneil 17 Mar; 301 Skinflats 12 Feb. Summer: 13 Skinflats 1 May. Autumn/winter site max.: 100 Carronshore 18 Nov; 615 Kinneil 1 Dec.

C Winter/spring site max.: 263 Cambus-Alloa Inches 14 Jan. Summer: 1 Pr. Cambus Village Pool 28 Apr; 2 M there 4 Jun; 1 Pr. Devonmouth Pool 3 May. Autumn/winter site max.: 602 Cambus-Alloa Inches 17 Dec.

S Winter/spring site max.: 83 L. Dochart 4 Mar; 36 L. Laggan, Kippen 18 Feb. Summer: 1 Pr. L. Ard 2 May. Autumn/winter site max.: 37 L. Laggan, Kippen 19 Nov; 41 L. Dochart 9 Dec; 26 Carron Valley Res. 19 Dec.

*GREEN-WINGED TEAL *Anas carolinensis*

F M Grangemouth 17 Dec (JRC). This is the 3rd record for the area since modern recording began in 1974.

MALLARD *Anas platyrhynchos* (B,W)

Forth Est. (WeBS): 317 in Jan, 318 in Feb, 69 in Mar, 199 in Sep; 175 in Oct, 234 in Nov, 404 in Dec. BBS: recorded at 0.98 b/1km, slightly higher than the annual mean.

C R. Devon, Cambus: F with 6 Y 23 May. Cambus Village Pool: F with 14 Y 21 May; F with 2 Y 18 Jul; F with 6 Y 26 Jul. Cambus Pools: F with 8 Y 23 May. F with 1 Y Tullibody Inch 26 Jul.

S Site max.:100 Airthrey Loch 2 Feb; 94 Doune Pools 19 Feb.

PINTAIL *Anas acuta* (W)

Forth Est. (WeBS): 112 in Jan, 54 in Feb, 64 in Mar, 11 in Sep; 5 in Oct, 64 in Nov, 94 in Dec.

F Majority of above at Skinflats with 98 on 14 Jan, 50 on 12 Feb, 64 on 16 Mar, 56 on 6 Nov; 1 Pr. there 28 and 30 Apr. 86 at Kinneil 30 Dec.

*GARGANEY *Anas querquedula*

F M Skinflats 27 Apr to 8 May (GO, AB, RS).

C M Cambus Village Pools 21 and 22 May (AET).

S One Callander, Callander 10 May (RAB). 1 M Gartmore GP 17 May (CJH).

These are the 12th to 15th records, respectively, for the area since modern recording began in 1974.

*SHOVELER *Anas clypeata* (p)

F Skinflats: M 15 Mar; 3 (2 M, 1 F) on 2 Apr; 2 on 26 Jul; up to 3 on 29 Aug-8 Sep; 1 M on 4 Oct; up to 7 on 4-8 Nov; 1 M 19 Nov (GO, AB, MVB, ACC, RS). 2 M Little Denny Res 1 Mar (NB). 2 F Kinneil 22 and 26 Oct; 5 there 5 Nov; 2 on 15 Nov (GO, RS).

C One Cambus Village Pools 3 Jul; 2 there 30 Sep (NB, AET).

S One Carron Valley Res 19 Dec (DAC).

POCHARD *Aythya ferina* (W)

F M Skinflats 25 Jan. 5 Kinneil 17 Oct.

C Sixteen Gartmorn Dam 4 Jan.

S Thirty-eight Lake of Menteith 2 Jan. 8 L. Ard 11 Jan. 15 Carron Valley Res and 12 L. Walton, Carron Valley 18 Feb. 27 L. Walton 19 Nov. 2 Airthrey Loch 21 Dec.

*FERRUGINOUS DUCK *Aythya nyroca*

S 2005: 1 M Gart GP, Cambusmore 24 and 25 Sep (GEL). First record for area; accepted by BBRC.

TUFTED DUCK *Aythya fuligula* (B, W)

F Six (3 M, 3 F) Callendar Park Loch 14 Jan. 1 Pr. Union Canal, Falkirk 15 May. 13 (7 M, 6 F) Kinneil 23 and 24 Dec.

C Seven on R. Devon, Menstrie 6 Mar. 104 Gartmorn Dam 18 Mar; 58 there on 18 Oct.

S Summer/breeding: 2 Pr. Swanswater Fishery, Stirling 6 Jun; 1 F with 8 Y Cocksburn Res. 24 Aug; 3 Gartmore GP 20 Jul. Site max.: 28 Lake of Menteith 2 Jan; 50 Airthrey Loch 14 Mar; 28 L. Walton, Carron Valley 18 Feb; 16 L. Lubnairg 26 Feb; 6 Vale of Coustry 25 Mar; 23 Carron Valley Res 7 Oct.

*SCAUP *Aythya marina* (s, w)

F One Pr. Skinflats 6-25 Jan; 1 M there 11 Aug (AB, MVB). 1 Kinneil 10 Feb; F there 19 Mar; 2 M 26 Jul; 6 on 30 Dec (DAC, RHD, MVB). 1 M Airth Shore 5 Mar (RHD). 13 Forth Est. in Dec (WeBS).

C One Devonmouth, Cambus 9 Sep (CJH).

S M Lake of Menteith 16 Jan and 19 Feb (RW, NB). 1 F Hutchinson Loch 11 Nov (CJP). 1 M Airthrey Loch 21 Nov to year-end (BD, CJP).

*LESSER SCAUP *Aythya affinis*

2005: M Blairdrummond 23 Mar to 4 Apr (NB *et al*). Second record for area; accepted by BBRC.

EIDER *Somateria mollissima* (w, s)

F Seventeen Blackness 13 Feb. Grangemouth: 9 on 12 Feb; 15 on 16 Mar; 1 on 19 Nov. Kinneil: 2 on 28 Jan; 6 on 19 Mar; 25 on 24 Oct.

LONG-TAILED DUCK *Clangula hyemalis* (w)

F F/Imm. Skinflats Pools 11 Aug to year-end (GO *et al.*). 1 Forth/Clyde canal, Bonnybridge 17 Dec (AA).

S Pr. Lake of Menteith 21 Jan; 1 M there 19 Feb; 1 Pr. on 29 Oct (NB). 2 E Frew-Gargunnoch, R. Forth 30 Oct (ACR).

*COMMON SCOTER *Melanitta nigra*

F One F Kinneil on 9 and 15 Jan, 10 Feb and 19 Mar (AB, DAC, RHD). This is the 9th record since modern recording began in 1974.

*BARROW'S GOLDENEYE *Bucephala islandica*

S One M commuting between the R. Teith and Eas Gobhain, Callander and L. Venachar 19 Nov to year-end (NB *et al.*). This much photographed bird was usually in the company of Goldeneye and was regularly seen displaying to females. This will be the first record for the Upper Forth area and third Scottish (and British) record, if accepted by the BBRC.

GOLDENEYE *Bucephala clangula* (W)

Forth Est. (WeBS): 91 in Jan, 36 in Feb, 12 in Mar, 30 in Nov, 38 in Dec.

F Site max.: 40 Kinneil 2 Nov; 13 Skinflats 5 Dec.

C Site max.: 48 Cambus - Alloa Inches 14 Feb.

S Site max.: 31 Carron Valley Res 7 Jan; 25 L. Walton, Carron Valley 18 Feb; 137 Lake of Menteith 19 Feb; 118 Cambus weir 17 Mar; 37 Manorneuk, R. Forth 16 Dec.

*SMEW *Mergus albellus* (w)

S Redhead Br. Of Frew-E Frew, R. Forth 30 Jan and 21 Feb; Redhead there 22 Nov and 19 Dec (PAL). Redhead Gart GP 15 Mar, 30 Apr; Redhead there and 9 Dec (NB). Redhead Vale of Coustry 25 Mar (CJM, SRE).

RED-BREASTED MERGANSER *Mergus serrator* (B, W)

Forth Est. (WeBS): 142 in Jan, 82 in Feb, 41 in Mar, 23 in Sep, 36 in Oct, 97 in Nov, 57 in Dec.

F Site max.: 20 Skinflats 14 Jan; 19 there on 19 Nov. 19 Higgins Neuk, R. Forth 24 Jan. 25 Kinneil 19 Mar. 7 S Alloa 12 Nov. 8 Dunmore 29 Dec.

C Forty-seven Kennetpans 14 Jan. 1 Cambus Pools 24 Jan. 2 Alloa Inch 12 Feb. 7 Tullibody - Alloa Inch 18 Nov.

S One M on Allan Water, BoA 17 Sep. 2 Endrick R. 25 Jan. 1 M Lecropt 25 Mar. 1 M Vale of Coustry 25 Mar. 1 M L Arklet 5 May. 1 L. Tay 16 May. 1 L. Katrine 15 Sep. 1 Airthrey Loch 17 Sep.

GOOSANDER *Mergus merganser* (B, W)

Forth Est. (WeBS): 7 in Jan, 5 in Feb, 8 in Sep, 4 in Oct, 37 in Nov, 25 in Dec.

F Site max.: 1 Carronshore 4 Jun; 3 Forth/Clyde Canal, Camelon 18 Mar; 5 Skinflats 24 Oct; 5 Kinneil 26 Oct.

C Site max.: 5 Cambus Pools 24 Jan; 20 R. Devon, Cambus 20 Sep; 22 Tullibody Inch 17 Dec.

S Breeding: F with 9 Y on R. Teith, Callander 20 Jun; 9 juvs. L. Arklet 11 Jul. Site max.: 21 R. Forth, Stirling 12 Feb; 11 Allan Water, Dunblane 12 Sep; 22 Airthrey Loch 16 Nov; 7 Carron Valley Res 19 Nov; 9 L. Laggan 19 Dec; 8 L. Venachar 28 Dec.

RUDDY DUCK *Oxyura jamaicensis* (p)

C One Gartmorn 25 Feb (PMA).

S Four (3 M) Lake of Menteith 15 Jan; 2 there 9 Mar (RW, NB).

RED KITE *Milvus milvus* (b, W)

Eleven birds recorded on BBS (previous annual range: 0-4 birds).

- S Breeding: 24 territories occupied; 17 Prs. laid eggs, 11 successfully fledging 26 Y (DOE). Other sightings: max. 50 at winter roost at Braes of Doune 7 Feb (DOE, DJC, DA); 20 Argaty, Braes of Doune feeding station 19 Feb (KS); 1 Sgiath an Dobhrain, Arivurichardich 7 Jul (JRC).
- *MARSH HARRIER *Circus aeruginosus* (p)
- F One Darnrigg Moss, Slamannan 29 Apr (TF).
- C Juv. Peppermill Dam 8 Sep; roosted on Tullibody Inch 12 Sep and stayed in general area until at least 21 Sep (see Ringing Report for further details).
- *HEN HARRIER *Circus cyaneus* (b, w)
- F Ringtail Denny Muir 26 Dec (MWD).
- C Ringtail Blackdevon wetlands 26 Nov (CJH).
- S M Thornhill Carse 17 Jan (ACR). 1 M Kinbuck 18 Feb; 1 M there 9 and 17 Dec (BD, CJP). 1 M Cringate Muir 10 Sep (CJH). Ringtail Argaty, Braes of Doune 1 Oct; M there 10 Dec (DOE). 2 ringtails Flanders Moss; coming into roost at dusk 22 Oct (ACR).
- SPARROWHAWK *Accipiter nisus* (B, W)
- Only 1 bird recorded on BBS (annual range: 1-6).
- F Records from: Higgins Neuk; Falkirk; Polmont; Bo'ness; Kinneil; Skinflats (all year, no signs of breeding); Larbert; Denny.
- C Records from: R. Devon, Dollar-Menstrie (several); Tullibody; Alva Glen; Cambus.
- S Records from: Manorneuk, R. Forth; Blairlogie; Airthrey; BoA; Braes of Doune; Dunblane; Sheriffmuir; Callander; Blairdrummond; Thornhill Carse; Vale of Coustry; Crianlarich.
- BUZZARD *Buteo buteo* (B,W)
- BBS: recorded at 0.35 b/1km, slightly below the annual mean.
- F Breeding: 20 Prs. located; breeding success unknown (AMc).
- S Breeding: 131 known territories checked in the Doune and Aberfoyle areas; 115 were occupied by Ad. Prs.; 61 Prs. fledged 101 Y, 34 Prs. failed, 20 Prs. unknown (DOE, DA). Other records: 6 Argaty, Braes of Doune 19 Feb; 5 Polmaise Lagoons 23 Mar; 7 Vale of Coustry 25 Mar; 5 Carron Valley 23 Sep; 5 Airthrey Loch 3 Oct.
- GOLDEN EAGLE *Aquila chrysaetos* (b, w)
- S One Pr. Coire Charmaig, G Lochay 10 Feb (PWS). 1 Portnellan, Ben More 9 Apr (GR). 1 Imm. Lochearnhead 1 May (FAM). 1 Imm. Argaty 29 Sep and 1 Oct; presumed same bird over Allan valley from BoA 4 Nov (DOE, CJM, CJH).
- OSPREY *Pandion haliaetus* (B)
- F One Roughcastle, Falkirk 17 Jun (LI).
- S Breeding: 15 Prs. laid eggs, 13 successfully fledging 29 Y (DOE, DA, RAB). 2 Lake of Menteith 10 Apr and 29 May; 1 L. Tay between 11 Apr and 2 Jul. 1 Doune 14 Apr; 1 Blairdrummond 14 and 16 Apr. 1 Carron Valley Res between 30 Apr and 17 Sep. 1 L. Rusky 30 Apr. 1 Crianlarich 6 May. 2 Aberfoyle 16 Jun. 1 Callander 4 Sep. 1 > S Slamannan 4 Sep.
- KESTREL *Falco tinnunculus* (B,W)
- Eight birds recorded on BBS (previous annual range: 3-13 birds).
- F Breeding noted at Skinflats. Other records from: S Alloa; Kinneil; Stenhousemuir; Falkirk; Polmont; Bonnybridge; Denny; Slamannan.
- C Records from: Cambus; Tullibody; Alva; Alva Glen; Fishcross; Gartmorn Dam.
- S Breeding noted at: Stirling Castle (3 Y); Fallin; Strathyre. Other records: Lecropt; Stirling (King's Park, Polmaise Woods, Swanswater Fishery, and Roadhead Farm); Cambusbarron; Doune; Lanrick; Thornhill Carse; Carron Valley Res; Killin; Crianlarich.

*MERLIN *Falco columbarius* (b,w)

Breeding: 6 AoT; 3 occupied by Prs.; 1 fledged 3 Y, 1 failed at egg stage, 1 unknown; 3 occupied by singles (CSRSG).

F One Higgins Neuk 11 Jan (AET)

S One Cromlix 22 Jan (CJP). 2 Sheriffmuir 5 Jul (ACC); 1 M L. Arklet 2 Oct (DJC).

PEREGRINE *Falco peregrinus* (B, W)

F One S Alloa 1 Jan. 1 Carronshore 5 Jan. 1 Higgins Neuk 24 Jan. 1 Torwood 21 Jan. 1 Kinneil 7 Sep. 1 S Alloa 17 Sep and 16 Oct. 1 Skinflats 6 Oct; 2 there 12 Nov.

C One Alloa 13 Apr. 1 Cambus Pools 20 Aug.

S Single birds at: Argaty, Braes of Doune 6 Jan, 22 and 24 Feb; Vale of Coustry 25 Mar; Fallin 17 Apr; Doune 20 Aug; Carron Valley Res 23 Sep.

RED GROUSE *Lagopus lagopus* (B, W)

BBS: only 1 recorded, very low compared to annual mean.

S One Taobh na Coille, Strath Gartney 4 Jun (AG). 1 Cringate Muir 10 Sep (CJH).

*BLACK GROUSE *Tetrao tetrix* (B, W)

S CSBGCG counts: 11-12 Comer-Corriegrennan-L. Ard; 2 Kinlochard-Achray Forest; 4-5 Glenny-Menteith Hills-Callander; 12-13 G. Finglas-Brig O'Turk; 15 Ardchullarie-Keltie-Braes of Doune; 1 Balquhiddier and G Buckie; 13-15 Campsies; 61-69 Carron Valley and Gargunnoch-Touch. Two Braes of Doune 19 Feb; 4 nearby 1 May (KS, DOE). 1 L. Arklet 5 May (DAC). 2 M Bracklinn, Callander 30 Apr (DOE); 2 Sron Eadar a' Chinn, Callander 19 May (JRC). 11 (10 M) at Carron Valley lek 19 Nov (DAC). 4 Carron Valley Res 19 Dec (DAC).

GREY PARTRIDGE *Perdix perdix* (B, W)

Five birds recorded on BBS (previous annual range: 0-8 birds).

F Skinflats: 1 Pr. Feb-May; max. 12 on 10 Sep (GO, DAC, RS, MMcG). 6 Higgins Neuk 1 Jan. 7 Powfoulis 26 Nov (AB).

C R. Devon, Alva: 1 Pr. Mar-May; max. count was coveys of 11 and 4 on 3 Oct (DAC). 2 Gartmorn 3 Jun (ACR).

S One Pr. Bolfornought, Stirling 19 May (RHD). 2 Chartershall, Stirling 14 May; 1 there 25 Jun (GF). 2 Swanswater Fishery, Stirling 6 Jun (ACC). 8 Mains of Throsk, Stirling 17 Sep (RHD). 9 Pleanmill 20 Oct (RHD). No records received for the Carse of Stirling.

*QUAIL *Coturnix coturnix*

S One calling Craigton Fm., Ashfield 14 Jun (BD).

PHEASANT *Phasianus colchicus* (B, W)

BBS: recorded at 0.8 b/1km, slightly above the annual mean. Very large numbers released on shooting estates, otherwise widespread but in small numbers.

WATER RAIL *Rallus aquaticus* (b, w)

F One Kinneil 2 Jan (RS). 1 Callendar Park Loch, Falkirk 25 Feb (JF).

C One Cambus Pools 12 Feb and 30 Apr (RLG, PMA).

MOORHEN *Gallinula chloropus* (B,W)

F Site max.: 18 Callendar Park, Falkirk 14 Jan; 11 Millhall Res, Polmont 12 Feb; 12 Carronshore 5 May; 19 Lock 16-R Carron, Forth/Clyde Canal 19 Dec.

C Site max.: 7 Gartmorn Dam 11 Sep.

S Breeding: 2 Prs. bred Airthrey with 4 Y 8 Jun; 1 Ad. and 2 Y Polmaise Lagoons 26 Jul. Site max.: 20 Airthrey Loch 3 Nov.

COOT *Fulica atra* (B, W)

C Site max.: 80 Gartmorn 4 Jan.

S Breeding: 1 Pr. Gartmore GP 17 May; 4 broods (4, 2, 2, and 1 Y) Airthrey 8 Jun. Site max.: 95 Lake of Menteith 21 Jan; 40 Aithrey 22 Dec.

OYSTERCATCHER *Haematopus ostralegus* (B,W)

Numbers on BBS were slightly above the 2005 figure but at 0.80 b/lkm still 11 % below the mean (annual range: 0.41-1.64 b/lkm). Almost all the records came from farmland habitat (1.42 b/lkm). WeBS estuary peaks were 163 Jan and 231 Dec.

F 72 Kinneil 19 Mar with 114 there 18 Sep; 61 Skinflats 16 Mar were the peak counts early in the year. 26 returned Skinflats 20 Jun with 71 on 26 Jul, 80 on 2 Aug and 60 on 8 Oct. 4 Haircraigs 1 Jun.

C Return inland: 1 Silverhills Pond, Kersiepow 14 Jan. 1 R. Devon, Tillicoultry 19 Feb. Several similar counts in the Cambus area in Mar and May with a peak of 35 on 21 May. 2 ads. and 2 chicks Castlebridge Business Park, Forestmill 5 Jun.

S Return inland: 15 Vale of Coustry and 4 Gart GPs 24 Jan. 1 Doune 7 Feb; 2 Auchlyne, Killin 4 Mar; 2 L. Dochart 11 Mar. Spring peaks were 82 Drip 17 Feb; 63 Ashfield 11 Mar; 80 Kepdarroch, Thornhill Carse 10 Mar; 27 L. Dochart 21 Mar; 52 W side L. Tay 23 Mar and 50 Craigforth, Stirling 1 Apr. Pr. on nest Gartmore GP 17 May. Pr. hatched 1 egg in garden of Barbush, Dunblane 3 Jul.

*AVOCET *Recurvirostra avosetta*

F 5 Skinflats 20 Apr (GO). This is the fourth year in a row that Avocets stopped over at this site. 5th record for the area since modern recording began in 1974.

*LITTLE RINGED PLOVER *Charadrius dubius*

F Ad. Skinflats 24 Apr (GO, AB). This is the 10th record for the area since modern recording began in 1974.

RINGED PLOVER *Charadrius hiaticula* (b,W)

WeBS estuary peaks were a very low 6 in Jan and 58 in Oct.

F Much smaller numbers than in 2005. 8 Kinneil 19 Mar. 1 Skinflats 24 Apr with 2 there 30 Jun and 1-3 birds 6-11 Sep. The peak counts in autumn were 18 R. Carronmouth, Grangemouth 17 Sep and 14 Kinneil 18 Sep.

S 9 Gartmore/Gart GPs 22 Feb.

GOLDEN PLOVER *Pluvialis apricaria* (B,W)

WeBS estuary peaks were much lower than in the last 2 years with 54 Feb and 834 Oct.

F Another poor year. 12-15 roosting on former peat works, Darnrigg Moss 3 Jan was the only record from the winter/spring period. 5 Skinflats 28 Jul were the first back on the estuary with 20 there 22 Aug. Numbers remained low there with 135 on 17 Sep before climbing to a peak of 710 on 8 Oct, thereafter dropping to 360 on 19 Nov, 240 on 1 Dec and 100 on 9 Dec. Numbers were similarly low at Kincardine Br. with 50 there 1 Oct and Kinneil with 260 on 1 Dec.

S 34 Blairdrummond Carse 26 Apr. 1 Taobh na Coille, Strath Gartney 4 Jun. 1 Flanders Moss 12 Nov.

GREY PLOVER *Pluvialis squatarola* (W)

Another poor year.

F 22 Kincardine Br. 12 Feb. 8 Skinflats 25 Feb.

LAPWING *Vanellus vanellus* (B,W)

At 1.12 b/lkm numbers on BBS were 58 % higher than in 2005 and 33 % above the mean (annual range: 0.23-1.72 b/lkm). Most of the records came from farmland habitat (1.91 b/lkm) and unlike in 2005 some were recorded on mountain and moorland (0.35 b/lkm). WeBS estuary peaks were 866 in Jan and 2925 Sep.

F 430 Skinflats 12 Feb was the largest flock from early in the year with none reported from Kinneil. 68 included a downy chick Skinflats 20 Jun. Numbers gradually rose to peaks of 869 on 17 Sep, 966 on 8 Oct and 1020 on 1 Dec. The largest flock of the autumn/winter period at Kinneil was 1053 on 18 Sep, after

which numbers dropped to 678 on 17 Oct and 540 on 1 Dec. 100 on 1 Oct was the only flock reported from Kincardine Bridge.

- C The largest flock from early in the year was 250 Alloa 1 Mar. 3 ads. and 1 chick Cambus Pools 21 May. Ad. and 3 chicks Balhearty Fm., Sheardale 11 May. 20 Grassmainston, Gartmorn 28 May included 2 prs. with 4 chicks each. 18 R. Devon, Alva/Menstrie 26 Jun included 2Y. 63 Tullibody Inch 4 Jun rose to 358 on 26 Jul and 800⁺ on 21 Sep. 100 Blackgrange, Cambus 17 Sep. 200 Alloa 25 Sep.
- S 150 Airthrey 1 Mar. F on nest Gartmore GP 17 May. 12 returned Auchlyne, Killin 3 Mar; 50 Kilbryde, Braes of Doune 7 Mar and 10 Glen Dochart 11 Mar. 130 Flanders Moss 12 Nov.

KNOT *Calidris canutus* (W)

WeBS estuary peaks were 2854 in Feb and 910 in Dec.

- F Smaller numbers than last year. The peaks of the winter/spring period were 2750 Kincardine Bridge 12 Feb and 1260 Kinneil 16 Mar. 31 there on 26 Jul rose to a peak of 560 on 1 Dec. Elsewhere 1 Skinflats 26 Apr with 1-2 birds in Jun, 21 on 17 Sep and 90 on 19 Nov.

SANDERLING *Calidris alba

- F 1 Skinflats 6 and 7 Sep (GO).

LITTLE STINT *Calidris minuta

- F 1 Skinflats 21 Sep with 2 there 23 Sep (GO) and 1 on 7 Oct (RS).

CURLEW SANDPIPER *Calidris ferruginea* (p)

As in 2005, there was a constant trickle of birds migrating through the Skinflats/Kinneil area on autumn passage. 4 on WeBS estuary Sep.

- F 4 Skinflats 5 Sep with 7 there 6 Sep, 14 on 7 Sep, 8 on 8 Sep and 1 on 15 Sep. 3 birds on 17 and 22 Sep and 8 Oct. Singles Kinneil 15 and 18 Sep (GO, RS, AET, MVB, AJ, CJP).

Autumn passage, area summary (minimum number/half month)			
Sep		Oct	
15	4	3	0

DUNLIN *Calidris alpina* (b?,W)

WeBS estuary peaks were 5506 Feb and 5058 Dec.

- F 3270 Skinflats 14 Jan with 2610 there 12 Feb and 2760 on 16 Mar. The only count at Kinneil during the winter/spring period was a very low 180 on 29 Jan. 56 Skinflats 21 May; 380 on 17 Sep, 1790 on 19 Nov and peaked at 2720 on 17 Dec. Very low numbers were at Kinneil, with 100 on 5 Nov and 340 on 1 Dec.
- S 1 Taobh na Coille, Strath Gartney 13 May. 1 W side L. Tay 16 May with 20 there 2 Jun.

RUFF *Philomachus pugnax* (p)

- F One to two immature birds overwintered at Skinflats where they were seen 14 Jan, 28 Feb, 9, 16 and 31 Mar (GO, MVB, AB). Autumn passage did not start until Sep when a single was present at Skinflats between 1st and 15th. It then increased to a good showing of 14 on 17th when a single was also at Kincardine Bridge, then dropped to 8 on 22nd, 6 on 23rd, 5 on 22nd, 6 on 23rd and 25th with 1 on 5th and 6th Oct, 2 on 7th Oct. Overwintering birds were seen on 12th Nov and 30th Dec (GO, AB, RS, AET, DOE, AJ).

Autumn passage, area summary (minimum number/half month)			
Aug	Sep	Oct	Nov
0	0	1	14
		2	1
			1
			0

*JACK SNIPE *Lymnocyptes minimus* (w)

- F 3 Kinneil 2 Jan with 1 there 9 Jan. 3 Skinflats 11 Feb with 7 there 25 Feb (RS, GO).
In the autumn/winter period 1 Skinflats 6 Oct, 2 there 12 Nov and 1 on
saltmarsh there 1 Dec. 2 Braeface Pond, Banknock 1 Nov. 1 St. Helen's Loch,
Bonnybridge 1 Dec (GO, CJP, RS, MVB, NB).
- S 1 L. Rusky 21 Jan. 2 Nethererton Marsh, BoA 18 Feb. 1 R. Forth, Teith confl.-Allan
Water confl. 18 Feb with 3 there 15 Oct and 19 Dec. 2 Curling Pond, Cromlix
(NB, DT, MA).

SNIPE *Gallinago gallinago* (B,W)

- Estuary WeBS: 1 in Jan, 16 in Sep and 1 in Nov.
Only 10 birds were recorded on BBS transects (annual range: 3-17 birds).
- F 40 Braeface Pond, Banknock 1 Nov.
- C 1 W Gogar, Menstrie 16 Mar. 10⁺ Castlebridge Business Park, Forestmill 2 Nov
with 5 there 1 Dec.
- S 30 Nethererton Marsh, BoA 15 Jan. Single W side L. Tay 11 Apr, 6 May and 1 Jun.
1 drumming Drumloist, Braes of Doune 12 May. 1 chipping Arie Dam,
Callander 3 Jun. 5 L. Venachar 28 Dec.

WOODCOCK *Scolopax rusticola* (B,W)

- Grossly under-recorded during the breeding season.
- F 1 Dunmore Wood 7 Jan (MVB).
- S 2 Ardeonaig, L. Tay 10 Jan. 1 L. Ard Forest 2 Feb. 2 R. Forth, Br. of Frew-East
Frew 21 Feb. Singles R. Forth, A91-Fallin 11 Mar; Polmaise Wood, Stirling 18 Mar
and 26 Dec; Cromlix 19 Mar. Singles W side L. Tay 19 Apr, 8 May and 1 Jun; Lake
of Menteith and R. Forth, Br. of Frew-E. Frew 22 Nov and L. Laggan, Kippen 19
Dec (PWS, DJC, PAL, DJ, CR, NB, RHD, JPH, PAL, DAC).

BLACK-TAILED GODWIT *Limosa limosa* (W)

- WeBS estuary peaks in each winter were 334 Jan and 345 Sep.
- F Present throughout the year in the Grangemouth area. Monthly peaks at
Kinneil: 156 Jan (9th), 109 Mar (17th), 6 Apr (6th), 26 May (4th), 219 Jul (26th),
248 Aug (11th), 328 Sep (18th), 160 Oct (17th), 56 Nov (18th), 20 Dec (9th). Much
smaller numbers at Skinflats. Monthly peaks there: 37 Jan (27th), 120 Feb (28th),
100 Mar (15th), 366 Apr (26th), 42 May (1st), 5 Jun (8th and 29th), 188 Jul (23rd),
4 Aug (22nd), 23 Sep (15th), 18 Oct (6th), 49 Nov (19th) and 92 Dec (1st).
Elsewhere 1 S Alloa 1 Jan, 5 there 2 Feb, 1 on 16 Oct and 2 on 12 Nov. Single
Higgins Neuk 11 Jan and R. Forth, Bandeath 26 Jul.
- C Small numbers continue to be found upstream of Kincardine Bridge, especially
in spring. 25 Kennetpans 14 Jan. 31 Cambus Village Pools 26 Apr with 6 there 3
May, 5 on 22 May, 17 on 25 May, 7 on 4 Jun and 2 on 28 Jul. 12 Cambus Pools 11
May with 5 there 22 May. 53 Tullibody Inch 17 Dec.

BAR-TAILED GODWIT *Limosa lapponica* (W)

- WeBS estuary peaks in each winter were higher than in 2005: 205 Feb and 144 Dec.
- F Numbers were again erratic at Kinneil, generally low with some isolated and
much larger peaks: 75 on 29 Jan, 40 on 19 Mar, 200⁺ on 24 Oct, 40 on 5 Nov and
178 on 1 Dec. As usual very few at Skinflats: singles on 30 Jun and 26 Jul, 10 on
17 Sep and 1 on 19 Nov.
- C 31 Kennetpans 14 Jan.

WHIMBREL *Numenius phaeopus* (p)

- F Spring: 9 The Rhind, Alloa 30 Apr. 3 Fallin 7 May with 8 there 13 May; 1 >S over
Little Drive, Bo'ness 28 May (AET, RHD, RS). Autumn: singles >W Skinflats 30
Jun, 3 >W 13 Jul, single 20 Jul with 3 there 19 Aug, 2 on 7 Sep and 1 on 11 Sep
(AB, GO, CJH, AET). Single Kinneil 23 Jul with 2 there 16 Aug and singles 15 Sep
and 24 Oct (RS, RDZ, ACR). 1 Higgins Neuk 8 Oct (MVB).

Autumn passage, area summary (minimum number/half month)									
Jun		Jul		Aug		Sep		Oct	
0	1	3	2	0	5	3	0	1	1

CURLEW *Numenius arquata* (B,W)

At 0.96 b/lkm BBS numbers were at their highest level since recording began locally (annual range: 0.42-0.98 b/lkm). This was 85 % higher than in 2005 and 25 % higher than the long-term mean but numbers tend to fluctuate annually with no clear pattern. They occurred primarily on mountain and moorland habitat (1.28 b/lkm), followed by farmland (0.91 b/lkm) and conifer/moorland edge (0.71 b/lkm).

WeBS estuary peaks were 828 Jan and 963 Sep.

F 362 Skinflats 4 Jan with 424 there 12 Feb and 334 on 16 Mar. 20 returned 25 Jun building up to 382 on 8 Oct, 100 on 4 Nov and 487 on 17 Dec. Low numbers at Kinneil during the winter/spring period with 40 on 29 Jan and 30 on 19 Mar. 486 had returned by 26 Jul with 541 on 11 Aug, 471 on 18 Sep, 300 on 5 Nov and 10 by 9 Dec. Elsewhere 220 Blackness 6 Jan. 50 Kincardine Br. 1 Oct.

C 111 The Rhind 14 Jan. Flocks of 203 Cambus area 7 Mar with 217 there 11 Mar, 121 on 23 Oct, 100 there 25 Nov and 150 on 16 Dec. 197 Kennetpans with 194 there 16 Mar and 134 on 17 Sep.

S Spring return in Mar: 3 Auchlyne, Killin and 14 Thornhill Carse 10th; 22 Drip Carse 22nd; 29 W side L. Tay 23rd and 30 Lecropt 25th. Snow led to influxes of 200 at Manor Powis, Menstrie and 250 West Gogar, Menstrie 16 Mar with 100 still Manor Powis 13 Apr. 300 Bolfornought, Forthbank 23 Mar. 112 Hollow Burn, Fallin 5 Apr. During breeding season reported from Drumloist, Braes of Doune and Braeleny. 260 Cambus Pools 17 Dec.

*SPOTTED REDSHANK *Tringa erythropus* (p)

F Summer-plumaged bird Skinflats 2 and 3 May (RS, GO).

REDSHANK *Tringa totanus* (B,W)

Recorded in very low numbers (4) on BBS (annual range: 0-4 birds). WeBS estuary peaks were 2493 Jan and 2693 Dec.

F 1118 Kinneil 17 Mar with 475 on 26 Jul, 923 on 11 Aug, 800 on lagoon 7 Sep and 1713 on 18 Sep. 1068 Skinflats 14 Jan with 907 there 12 Feb, 771 on 16 Mar, 750 on 17 Sep, 798 on 8 Oct, 1253 on 19 Nov and 692 on 17 Dec. Elsewhere 30 Kincardine Br. 1 Oct.

C 107 R. Forth, Cambus to Alloa with 69 there 12 Feb, 50⁺ on 18 Nov and 80 on 17 Dec. 17 Cambus Pools 28 Apr with 1 singing at nearby Blackgrange 30 Apr.

S 1 W side L. Tay 26 Mar was the first back. 7 Allan Water, Cambushinnie-Ashfield 20 Mar. 2 Wood Lane, Blairdrummond Carse 26 Apr with 2 there 22 May. 1 Lecropt 15 May. 1 Bolfornought, Forthbank 20 May.

*GREENSHANK *Tringa nebularia* (p)

WeBS estuary counts: 2 in Jan, 1 in Feb, 4 in Sep, 2 in Nov and 2 in Dec.

F Skinflats: 1-2 birds during period 6 to 26 Jan, 11, 12 and 25 Feb and 9 Mar. A single on 31 Mar and 2 birds on 18 Apr may have been passage rather than wintering birds (AB, GO, MVB, DAC, CJP, RS). Autumn return started with 1-2 birds 25, 29 and 30 Jun, 19, 21 and 28 Jul. 2 birds on 3, 11 and 13 Aug were followed by 3 on 22 Aug (ACC, GO, AB, AET, GO). Up to 3 birds were seen during period 4 to 23 Sep (MVB, GO, MMcG, AET, RS). Up to 3 birds overwintered in the Skinflats/Kinneil area: 1-2 were seen 12, 15, 19 and 26 Nov with 1-3 birds during period 1 to 30 Dec (CJP, MVB, GO, AB, ACC, DAC). Kinneil: autumn passage started with singles on 26 Jul and 12 Aug with an excellent 10 on 15 Sep (RS) and 2 on 18 Sep (MVB, DAC, CJP, RS). Elsewhere 1 Dunmore 17 Sep (RHD)

- C 1 R. Devon, Cambus 20 Aug and 3 Sep. 1 R. Forth, Cambus 20 Aug (different bird) (AET).
- S 1 L. Dochart 21 Apr. 1 W side L. Tay 27 Apr (JPH).

Autumn passage, area summary (minimum number/half month)							
Jun		Jul		Aug		Sep	
0	2	0	3	3	8	13	2

GREEN SANDPIPER *Tringa ochropus* (p)

This species now occurs as a wintering bird and a passage migrant.

- F Overwintering birds were at Larbert House Loch 14 Jan and Kinneil 27 Jan (MA, GO). In autumn singles were seen at Kinneil on 22 Aug, 5, 6, 7, 15 and 18 Sep and at R. Carron, M876-Larbert 19 Sep (AB, GO, RS, AET, AB). Overwintering birds during the autumn/winter period were at Kinneil 17 Oct, in a flooded pool along the Carronshore to Skinflats path 18 Nov and on R. Carron 17 Dec (MA, RHD, AB).
- S 1 Allan Water, Kinbuck 19 Mar (AW).

COMMON SANDPIPER *Tringa hypoleucos* (B)

Recorded in low numbers (8) on local BBS squares, at exactly the annual mean value range: 7-11 birds).

- F Spring passage: singles R. Carron, Carronshore 23 Apr and Skinflats 1 May. Autumn passage: 1-2 birds Skinflats 30 Jun, 6 and 19-26 Jul with 4 birds there 23 Jul and 1 on 19 Aug. At Kinneil: 2 birds on 23 Jul with 1 there 26 Jul. A very late bird there 5 Nov. Elsewhere 4 birds R. Carron, Carronshore 9 Jul (AB).
- C Spring passage: 2 R. Devon, Cambus 21 May. Autumn passage: 9 Tullibody Inch 26 Jul and 1 Gartmorn 3 Aug.
- S Spring arrival in April: 1 L. Dochart 21st was the first back, followed by 1 W side L. Tay 23rd, 2 Allan Water, Dunblane 24th, 1 Bows, Braes of Doune 29th and 2 Tigh Mor, Trossachs 30th. During the breeding season reported from: Crianlarich, Gartmore GP, Keltie Water and Braeleny, R. Dochart and L. Katrine. 8 Gart GPs 9 Jul. Singles R. Forth on Teith-Allan confl. stretch 17 Sep and on Br. Frew-E. Frew stretch 19 Sep.

Autumn passage, area summary (minimum number/half month)					
Jul		Aug		Sep	
0	1	3	15	1	1

*TURNSTONE *Arenaria interpres* (W)

WeBS estuary counts: 12 in Feb, 15 in Mar.

- F 4 Carronmouth, Grangemouth 14 Jan with 12 there 12 Feb. 10 Bo'ness 17 Mar. Singles Kinneil 17 Mar and 1 Dec (MVB).

*ARCTIC SKUA *Stercorarius parasiticus* (p)

- F Only 1 record: 2 >W Skinflats 6 Oct (GO).

*LITTLE GULL *Larus minutus*

- F Two (1st summer) Skinflats 29 Jun; 1 there 30 Jun to 1 Jul; moulting ad. 13 Jul (GO, AET, RS). 2 Carriden 2 Oct.

*MEDITERRANEAN GULL *Larus melanocephalus*

The recent increase in the number of sightings parallels similar trends in neighbouring areas (e.g. Lothians). The sightings below represent the 5th to 11th records; some may refer to the same birds.

- F One Kinneil 14 Jan; a 1st winter bird there 4 Apr; ad. 17 Nov and 17 Dec. Ad. Skinflats 19 Jul; a 2nd winter bird there 4 Nov; 2 (ad. and 2nd winter) 12 Nov (JRC, CJP, SRG, AET).

BLACK-HEADED GULL *Larus ridibundus* (B,W)

Forth Est. (WeBS): 1313 in Jan, 595 in Feb, 250 in Mar, 1192 in Sep, 401 in Oct, 539 in Nov, 968 in Dec. BBS: recorded at 0.92 b/1km, below the annual mean.

- F Three thousand one hundred estimated flying to roost over Kincardine Br. 1 Dec. 790 Skinflats 4 Nov.
- C Seven hundred Gartmorn Dam 26 Jan. 554 Cambus Pools 11 Mar. 600 Alloa Inches 18 Dec. 2500 Menstrie 4 Dec.
- S Breeding: 6 ON Gart GP, Cambusmore 20 May; 1 ON Gartmore GP 17 May. Other records: 200 Airthrey Loch 20 Feb; 1500 Kings Knott, Stirling 11 Dec. 1082 Carse of Cambus, Doune 17 Dec.

*RING-BILLED GULL *Larus delawarensis*

- F Ad. Kinneil intermittently 26 Sep to 23 Dec (RS, GO) may have been the returning bird from 2005. This is the 2nd record for the area since modern recording began in 1974 and has been accepted by SBRC.

COMMON GULL *Larus canus* (B,W)

Forth Est. (WeBS): 181 in Jan, 54 in Feb, 79 in Mar, 142 in Oct, 211 in Dec. BBS: recorded at 0.82 b/1km, below the annual mean.

- C One hundred and fifty Cambus Pools 24 Jan.
- S Breeding: 6 ON Gart GP, Cambusmore 20 May; 1 ON Gartmore GP 17 May. Other records: 688 L. Watson, Doune 19 Mar; 457 Thornhill Carse 24 Nov; 100 Airthrey Loch 1 Dec; 2500 Drip Carse 15 Dec.

LESSER BLACK-BACKED GULL *Larus fuscus* (b,S)

- F Colony on industrial rooftops alongside the Carron at Grangemouth: at least 40 chicks visible 29 Jun. 200 Skinflats 22 Jul and 19 Aug.
- C Seven Ad. Blackdevon Wetlands 21 Nov.
- S Eighty-three Blairdrummond Carse 22 May.

HERRING GULL *Larus argentatus* (b,W)

Forth Est. (WeBS): 89 in Jan, 419 in Feb, 20 in Mar, 215 in Sep, 400 in Oct, 31 in Nov, 382 in Dec.

- F Colony on roofs alongside Carron, Grangemouth: at least 16 chicks on 29 Jun.

*ICELAND GULL *Larus glaucooides*

- F One Kinneil 14 Jan; a 1st winter bird there 17 Dec (JRC) and a 2nd winter bird there 26 and 27 Dec (GO). Two Airth shore 19 Nov (Forth estuary WeBS). These are the 18th to 21st records, respectively, for the area since modern recording began in 1974.

GREAT BLACK-BACKED GULL *Larus marinus* (S,W)

- F Largest flocks reported: 10 Avonmouth 3 Jan; 10 Skinflats 4 Nov.

*KITTIWAKE *Rissa tridactyla* (P,W)

- F One hundred and twenty Skinflats 23 Sep, flew off west (GO, RS).

SANDWICH TERN *Sterna sandvicensis* (P)

Forth Est. (WeBS): 281 in Sep, 4 in Oct.

- F Monthly site max. Skinflats: 20 on 25 Jun; 1 on 13 Jul; 27 on 11 Aug; 4 on 10 Sep. Kinneil: 8 on 26 Jul; 12 there 31 Aug; 56 on 17 Sep; 1 there 20 Oct. 139 Kincardine Br. 17 Sep; 20 there 1 Oct. 18 Carriden 18 Sep. 1 E past Bo'ness Harbour 15 Oct.
- C Two at Tullibody Inch 4 Jun was a very early date (AET). 11 (2 J.) Cambus 20 Aug. 15 Kennetpans 17 Sep. 3 Dunmore 8 Oct.
- S One over Fallin 10 Jun was another early date; 11 there 4 Aug; 45 on 17 Aug (RHD).

COMMON TERN *Sterna hirundo* (B)

- F Skinflats: 2 on 4 May; 15 on 7 May; 26 on 23 May; 10 on 25 Jun; 17 on 26 Jul; 3 on 19 and 22 Aug; 6 on 11 Aug. 4 Carron, Grangemouth and 3 Kincardine Br. 17 Sep.

- C Four on Forth, Cambus 20 Aug.
 S Five Fallin 16 Aug; 4 there 17 Aug.
- *ARCTIC TERN *Sterna paradisaea*
 F One Skinflats 21 May (RS) is the 13th record since modern recording began in 1974.
- GUILLEMOT *Uria aalge* (W)
 Forth Est. (WeBS): 24 in Sep, 1 in Oct, 8 in Dec.
 F One Kincardine Br. 17 Sep; 30 there 1 Oct (MVB; ACC). 12 > W Skinflats 23 Sep; 3 there 6 Oct; 4 on 17 Dec (GO, RS). 2 S Alloa 16 Oct; 3 there 22 Oct (RHD). 1 Kinneil 24 Oct (RHD).
 C Ten Cambus 23 Sep (RDZ). 1 Dunmore 8 Oct (MVB).
 S One Arnprior, R. Forth 25 Sep (BM). 1 R. Forth, Stirling 30 Sep (PM).
- *RAZORBILL *Alca torda* (w)
 F One Skinflats 6 Oct. 2 S Alloa 22 Oct (GO, RHD). 3 Forth Est. 12 Dec (WeBS).
 S One L. Katrine 15 Sep (DR).
- *LITTLE AUK *Alle alle*
 F Two Kinneil 5 Nov (JRC). This is the 7th record for the area since modern recording began in 1974.
- FERAL PIGEON *Columba livia* (B,W)
 Numbers dropped slightly from 1.61 b/lkm on local BBS transects in 2005 to 1.43 in 2006 but were still 13 % above the long-term mean (annual range: 0.58-2.19 b/lkm). Unsurprisingly, they occur at the highest rate in the urban/suburban habitat category, with 4.08 b/lkm compared to 2.28 on farmland.
 C 100 Blackgrange, Cambus 16 Dec.
 F 300 Skinflats 9 Dec.
- STOCK DOVE *Columba oenas* (B,W)
 Recorded in fairly low numbers on BBS transects, with 8 birds in 2006 (annual range: 1-14 birds). All birds were registered on farmland.
 F 14 Kinneil 14 Mar and 13 there 18 Sep. 1-5 birds Skinflats Mar to Sep. 3 Banded, Fallin 2 Jul and 4 there 18 Jul.
 C 2 Alloa Inches area 30 Apr with 11 there 23 Dec. 1-2 birds Woodland Park, Alva 23 Aug and 15 Oct and singles Cambus Village Pools 22 May and 4 Jun.
 S 8 Gargunnoch 23 Feb. 11 Argaty, Braes of Doune 12 Apr. 6 Wood Lane, Blairdummond Carse 23 Apr. Also reported from Drumvaich, Braes of Doune 10 Mar; Cambuskenneth 12 Apr; Hollow Burn, Fallin 29 Apr; Keir, Dunblane 1 Jul and Lake of Menteith 9 Jul.
- WOODPIGEON *Columba palumbus* (B,W)
 Recorded on BBS transects at 3.45 b/lkm which is 4 % above the mean. It was recorded from all four habitat types, being most numerous on farmland at 5.32 b/lkm and conifer woodland/moorland edge at 4.00 b/lkm.
 C 100 R. Devon, Alva 8 Jan. Ca. 600 25-Acre Wood, Fishcross 17 Jan. 100 Blackgrange, Cambus 17 Sep.
 S Ca. 1,000 Vale of Country in rape stubble 22 Feb. 340 Argaty, Braes of Doune 16 Sep. 100 L. Rusky 26 Nov.
- COLLARED DOVE *Streptopelia decaocto* (B,W)
 Greatly under-reported. No significant records were received this year. Numbers on BBS continued to increase from the all-time low in 2004 to 0.48 b/lkm, which is their highest value recorded so far, 78 % above the mean (annual range: 0.17-0.48 b/lkm). Recorded in the greatest numbers in urban/suburban areas at 2.37 b/lkm with 0.66 b/lkm on farmland.
- CUCKOO *Cuculus canorus* (B)
 Occurs in low numbers on BBS transects. The total of 18 birds in 2006 was the

highest to date (annual range: 6-18 birds). Recorded mostly in the conifer and moorland habitats.

Spring arrival: Tyndrum Community Woodland 21st Apr was 8 days earlier than in 2005 (Flanders Moss). This was followed by birds at Kirkton Farm, Crianlarich 27th; Mid Lundie, Argaty 28th; Bows, Braes of Doune 29th and Brig o' Turk and Blackwater Marshes, L. Venachar, both on 30th.

- C Singles Cambus Pools 11 May and R. Devon, Alva 4 Jun.
- F 2 Darnrig Moss 9 May with 1 there 1 Jun. Single California 11 Jun.
- S Single west end of L. Tay 6 May and other dates in May and Jun. 6 Crianlarich area 6 May with 1 there 4 Jun. 2 Gartrenich, Aberfoyle 9 May with 3 there 7 Jun and 2 nearby at Cobleland 16 Jun. Single L. Katrine 9 May. 3 Cromlix Moor 10 May. Singles Sheriffmir 12 May, Menteith Hills 14 May, Blairdrummond 22 May. 1 Callander 17 May, 2 Sron Eadar a' Chinn, Callander 19 May and 1 nearby at Tom Dubh 24 May. 2 prs. Flanders Moss 22 May. Singles Glen Lochay 31 May; Argaty, Braes of Doune 1 Jun and Allt na Ceardaich, Killin 3 Jun.

BARN OWL *Tyto alba* (b,w)

Following the comparatively large number of sightings over the last two years, there were only eight sightings this year, mainly from the core area (i.e. SE Stirlingshire/Clackmannanshire boundary and Falkirk).

- F Two Champany, Bo'ness 12 Feb (RS). Single Grangemouth Ind. Est. 8 and 9 Nov (GO).
- S Three prs. during the breeding season Doune Lodge, Braes of Doune; single Hill of Row, Dunblane 27 Oct (DOE). Casualties were found on the A81 at Douchlage, Buchlyvie 3 Jun (JT); on the M9 near Stirling (DJC) and on the A811 at Cambusbaron 9 Dec (JT).

TAWNY OWL *Strix aluco* (B,W)

- F Single calling most nights in Jan Strathavon Fm., Slamannan.
- C One to two birds calling Tait Place, Tillicoultry on several dates in Jan to Apr and Jul to Sep. Singles calling Cambus distillery 3 Sep and Gartmornhillwood, Gartmorn Dam 22 Sep with 2 birds there 18 Nov. 1 dead on A80, Falkirk boundary 4 May. 2 Bo'ness 13 Jul.
- S Single flew across A84 Drumvaich, Braes of Doune 20 Jan. Pr. calling to each other Strathyre 6 Feb. Singles west end of L. Tay 8 May and 1 Jun; Crianlarich 4 Jun; Airthrey L., BoA 20 Jul and Ochiltree, Dunblane 9 and 15 Aug. Pr. calling to each other Newton Crescent, Dunblane 1 Oct. Singles Flanders Moss car park 22 Oct and Castle Craig, Stirling 22 Nov. Road casualties A91 at Springkerse 31 Jan and A9 N of Dunblane 18 May.

*LONG-EARED OWL *Asio otus* (b,w)

- F Single Skinflats 22 Apr (GO).
- C Single flushed by 2 Buzzards Cambus 10 Apr (DAC).
- S Single Wester Moss 11 May believed to have bred (RHD). Fledged young found dead Doune Lodge, Braes of Doune (DOE).

SHORT-EARED OWL *Asio flammeus* (b,W)

For this rather local breeder, a more systematic survey of known breeding areas and potential breeding sites would be of value. Two birds were recorded on BBS transects.

- F Single Kinneil 15 Jan with 2 there 5 Nov and singles 12 Nov and 24 Dec (AB, JRC, CJP, GO). Single high W Skinflats 8 Oct (MVB). Single mobbing Hen Harrier Denny Muir 26 Dec (MWD).
- C Single between R. Devon and Melloch Wood 21 Mar (DE). Only 3rd record in Clackmannanshire since 1996.

*NIGHTJAR *Caprimulgus europaeus* (b)

- S The breeding site at L. Ard Forest remains occupied. 1 bird was churring and wing-clapping 15 Jul (JW).

SWIFT *Apus apus* (B)

With 0.45 b/lkm numbers recorded on BBS transects were 10 % down on 2005 and 8 % down on the mean (annual range: 0.15-0.98 b/lkm). Birds were recorded at greatest density (2.24 b/lkm) in urban/suburban areas.

Spring arrival: 1 Alloa 1 May was 3 days later than in 2005 (Alloa). This was followed by one Carron, 3 Slamannan and Doune and 11 Dunblane all on 3 May, singles R. Devon at Menstrie/Alva, Strathyre and 4 Blairdrummond all on 4 May; 6 BoA 5 May; 2 Larbert and 4 Falkirk on 6 May and 4 Skinflats 7 May.

Autumn departure: 6 Dunblane 5 Aug; 1 Stirling 10 Aug; 1 Falkirk 17 Aug and 1 Kincardine Br. 28 Aug, which was 9 days later than in 2005 (Killin).

- C 20 hawking Cambus Pools 7 Jul; 29 Dollar 16 Jul; 50 Tillicoultry 22 Jul.

- S Between 5 and 37 BoA 16 May to 26 Jul with screaming (17 birds) only noted 17 Jul. 25 Aberfoyle 16 Jun.

KINGFISHER *Alcedo atthis* (b,w)

There were four records from the breeding season but no confirmation of breeding.

- F Single Higgins Neuk 1 Jan. 5 R. Carron, Larbert-Carron 15 Jan. Singles R. Carron at Camelon cemetery 31 May and at Carron Works 15 Oct; Kinneil 15 Nov and 23 Dec; R. Carron at Carronshore 27 Dec.

- C Two R. Devon, Devonside to Harviestoun, Tillicoultry 17 Jan and 2 Devonside 27 Feb. Single R. Devon nr. Menstrie/Alva 19 Apr.

- S Singles Endrick Water 4 Feb; Kirkton, Criannlarich 4 Jul; Airthrey L., BoA 20 Jul; Cambusmore 7 Sep. 3 R. Forth, Teith to Allan confluence 17 Sep. 4 R. Teith, Wester Row to Forth confluence 22 Oct. Singles R. Teith, Carse of Lecropt 25 Oct and Callander 31 Dec.

GREEN WOODPECKER *Picus viridis* (B,W)

More records away from SE needed to establish true status. Three birds were recorded on BBS transects.

- F Singles Strathavon Fm., Slamannan 2 and 9 May; Plean CP 4 May; Carron House, Carronshore 4 Jun; Bo'ness 5 Aug and Torwood 19 Nov.

- C Heard calling Tillicoultry on several dates Feb-Apr, Jul and Oct. Singles Dollar Glen 18 Mar and 30 Apr; Birkhill, Gartmorn 2 Apr; Alva Glen 17 May and Woodland Park, Alva 31 May. Ad. and 3 juvs. R. Devon, Alva 2 Jul.

- S Singles west end L. Tay 19 Mar; Polmaise Woods, Stirling 31 Mar; Argaty and Kilbryde, Braes of Doune 29 Apr; Bracklinn, Callander 30 Apr; Strathyre 23 May; Tom Dubh, Callander 24 May; Cobleland, Aberfoyle 16 Jun; Menteith Hills 18 Jun; Keir, Dunblane 29 Jul; Airthrey L. 4 Aug and Stank Glen, Ben Ledi 4 Sep.

GREAT SPOTTED WOODPECKER *Dendrocopus major* (B,W)

Recorded in small numbers (6) on BBS, which is slightly above the long term average (annual range: 0-7).

- F Two Dunmore Wood 29 Jan with one there 9 Apr. Pair Plean CP 20 Mar with one there 21 Sep. Singles Haircraigs 9 Apr; Jaw, Slamannan 9 May; Garvald, Carron Glen 13 May; Denny 27 Jun; Torwood 29 Jun; Lock 15, Forth and Clyde Canal 18 Sep; Skinflats 24 Nov.

- C Singles Tait Place, Tillicoultry 5 Jan, 30 May (F) and 14 Oct with 3 (1F) at nearby Harvieston Home Fm. 22 Jul. Singles Kennetpans 14 Jan; Dollar Glen 5 Feb; NE Tullibody 9 Feb with one there boring holes in telegraph pole 4 Apr. Single Dollar Glen 18 Mar. Single Gartmorn Dam 23 Mar with 3 involved in a territory dispute there 10 Apr and 1 nearby 25 Apr. 3 (2 juvs.) Woodland Park, Alva 31 May. Singles Aberdona 10 Jul; Castlebridge Business Park, Forestmill 19 Jul; R.

Devon, Menstrie/Alva 13 Aug, 25 Aug and 3 Nov. Singles Cambus Pools 29 Aug and 2 at nearby Blackgrange 17 Sep.

- S Singles Argaty, Braes of Doune 6 Jan; drumming Lake of Menteith 1 Feb; west end of L. Tay 19 Mar; Crianlarich 6 May; nested Mid Torrie, Callander 20 May; Tyndrum community woodland 30 May. Two Airthrey 16 Jun; juv. Ochiltree, Dunblane 7 Jul. Single Glen Finglas 24 Dec.

*HOOPOE *Upupa epops*

- S Thornhill Muir Fm. 7 Jun (photographed by MT). This is the third record for the recording area, the first having occurred in Menstrie in 1896, the second in Gargunnock in 1984.

SKYLARK *Alauda arvensis* (B,W)

Recorded on BBS at 1.94 b/lkm, 10 % above the long-term mean (annual range: 1.25-2.71 b/lkm). Most frequent on mountains and moorland (3.16), then farmland (1.64).

The first singing bird was at Kersiepow, Alva 14 Feb

- F 40 Skinflats 16 Mar with 75 there 8 Oct.

- C 20 East Birkhill, Forestmill 30 Nov.

SAND MARTIN *Riparia riparia* (B)

Numbers continue to vary widely on local BBS transects. After very low numbers in 2003 and 2004, numbers increased fivefold in 2005, then almost doubled again in 2006. The rate of 0.53 b/lkm is 71 % above the long-term mean (annual range: 0.02-1.32 b/lkm). Recorded predominantly on farmland with lower numbers in mountain and moorland.

Arrival seems to have been much later than in previous years. The first birds were noted 20 Mar at Gartmorn 29th (3 days later than in 2005 (Stirling and Killin)) with no further report until 3 Doune 9 Apr, when birds are usually widespread. Departure also seems to have been later: 60 Skinflats 5 Sep were followed by 1 L. Venachar 13 Sep (20 days later than the main departure in 2005 (Fishcross)).

- C Ca. 92 AOT Devonvale, R. Devon 23 May.

- S 150 Glen Finglas 15 Apr; 100 Blair Drummond 16 Apr; ca. 50 Cambusmore/Gart GP 30 Apr. Ca. 20 AOT R. Dochart 1 Aug. 256 nest holes Cambusmore/Gart GP 6 Sep.

SWALLOW *Hirundo rustica* (B)

Following the 2005 high, numbers increased further in 2006 to 3.05 b/lkm, 31 % above the long-term mean (annual range 1.65-2.87 b/lkm). Recorded in all habitats with the greatest frequency in farmland at 5.46 b/lkm.

Spring arrival: 1 Carronshore 31st Mar was 3 days earlier than in 2005 (Carron). This was followed by singles Alva 1st Apr, Airthrey 7th, BoA 10th, Alloa 13th. Widespread from mid-month.

Autumn departure: 4 Alloa and 4 The Forest 21st Sep; 19 R. Forth Cambus-Alloa 22nd; 30 King's Park, Stirling 22nd with 3 there 29th. 6 R. Devon, Alva 24th. 86 Doune Ponds 1st Oct; 9 Dunmore 8th and 2 Carronshore 16th were 17 days earlier than in 2005 (Skinflats).

- F 6 prs. nested Strathavon Fm., Slamannan but many fledglings predated by Magpies. 80 Skinflats 5 Sep.

- C 100 Gartmorn Dam 11 Sep.

- S 60 L. Venachar 13 Sep; 50 Ballochruin Pond, Killearn 15 Sep.

HOUSE MARTIN *Delichon urbica* (B)

Numbers were slightly higher than in 2005 but at 0.61 b/lkm were the 3rd lowest so far, being 30 % below the long-term mean (annual range: 0.25-1.7 b/lkm). Unlike 2005 was most commonly recorded in the urban/suburban habitats (1.32 b/lkm).

Arrival in Apr: single Blairdrummond 14th was 7 days later than in 2005 (also there). This was followed by single King's Park, Stirling 16th and 6 R. Carron, Carronshore 23rd.

Departure in Sep: single Gartmorn Dam 11th; 5 L. Venachar 13th; single Killlearn 15th; 35 Dunblane 16th; 4 Cambus 17th and 13 Dunblane 1st Oct, which was 9 days earlier than in 2005 (also there).

- F 32 Roughcastle, Falkirk 17 Jun.
- C 1⁺ AOT Coalsnaughton centre.
- S 7 around nest boxes Univ. of Stirling 4 May; 32 Cobleland, Aberfoyle 16 Jun. 2 prospecting Coneyhill, BoA, mid-Jun.

TREE PIPIT *Anthus trivialis* (B)

No birds were recorded on BBS for the 3rd year in a row.

Arrival in April: 2 School Wood, Clackmannan 17th were 5 days later than in 2005 (Dunblane). This was followed by singles Tyndrum community woodlands 28th and Tigh Mor, L. Achray 29th; 2 Carron Res. and 3 Drumloist, Braes of Doune 30th.

- C 2 singing Gartmorn Dam 28 May.
- S 2 Lundie, Braes of Doune 4 May; single Crianlarich, 3 Flanders Moss and 6 Duke's Pass, Aberfoyle all 3 May; 2 Inversnaid 30 May. Singles Glen Lochay 3 May and west end L. Tay 4 Jun. 3 Cobleland, Aberfoyle, 18 Jun.

MEADOW PIPIT *Anthus pratensis* (B,W)

At 4.14 b/lkm was virtually identical to the 2005 figure (4.16) and only 1 % below the long-term mean (annual range: 2.71-6.21 b/lkm). Continues to be scarce mid-winter.

- F 20 Skinflats 19 Feb and 19 Dec. 30 Dunmore Wood 9 Apr.
- S Ca. 50 Cambusmore/Gart GP 6 Sep. 7 in 2.5km Cringate Muir 10 Sep.

*ROCK PIPIT *Anthus petrosus* (w)

At traditional sites along Falkirk shore.

- F 8 S Alloa 1 Jan (RHD). 1 Blackness 6 Jan (CJH).

GREY WAGTAIL *Motacilla cinerea* (B, w)

Recorded in low numbers (10) on BBS; the rate this year of 0.07 b/lkm is 17 % below the long-term mean. 74 % were recorded on farmland with the remainder occurring on mountain and moorland.

- F Regular visitor to Strathavon Fm., Slamannan during winter. Ad. and 3 juvs. R. Carron, Carronshore 9 Jul.
- C M R. Devon, Menstrie 6 Mar. Prs. Cambus 10 Apr and 13 Jul. Pr. Dollar Glen 30 Apr. 3 Woodland Park, Alva 31 May. Single Harviestoun Home Fm., Tillicoultry 22 Jul. Pr. R. Devon, Menstrie 15 Sep. Single Gartmorn 23 Sep. Male Cambus 28 Dec.
- S 3 prs. Allan Water, Dunblane 24 Apr with 3 birds there 2 May, 6 (4 juvs.) 15 Jun and 4 birds 12 Sep. Pr. L. Katrine 9 May with 3 birds there 15 Sep. 4 Cobleland, Aberfoyle 16 Jun. Single Polmaise lagoons 21 Sep. M Carse of Lecropt 23 Dec.

PIED WAGTAIL *Motacilla alba* (B, w)

Numbers on BBS dropped a little this year to 0.31 b/lkm, which is 24% below the mean (annual range: 0.21-0.77 b/lkm). Recorded in all habitats, with the highest density occurring on farmland at 0.41 b/lkm.

Remains scarce in winter: three Jan records (4 in 2004 and 2005) but all from one location: Tait Place, Tillicoultry 1st, 5th and 8th. Six Feb records (2 in 2004 and 1 in 2005): singles Tullibody 1st; Kersiepow, Alva 14th; Tillicoultry 18th; Killin 18th with 5 there 20th, 23rd and 25th; Coalsnaughton 19th and 4 birds Skinflats 19th. Six Nov records from 3 locations (4 in 2004 and 6 in 2005): Castlebridge Business Park, The Forest 1st and 3 birds there 4th; single The Rhind, Alloa 18th with 3

- birds there 25th and 2 Carse of Cambus, Doune 28th. Seven Dec records (10 in 2004, 6 in 2005): 3 Castlebridge Business Park, The Forest 1st with a single there 14th. 6 Skinflats and 1 The Meadows, Callander 9th; singles Kersiepow, Alva and Cambus Village Pools 11th; single Rossburn Lane, Blairdrummond Moss 20th.
- F Single White Wagtail (*M.a. alba*) Skinflats 31 Mar, with 2 there 24 and 25 Apr, 3 on 28 Apr and 1 on 3 May.
- C Two White Wagtail (*M.a. alba*) Cambus Village Pools 26 Apr.
- S 12 King's Park, Stirling 12 Aug with 90 there 29 Sep and 100 on 3 Oct.
Addition to 2005 report:
- F 51 (presumed roost) Falkirk 8 Jan.
- *WAXWING *Bombycilla garrulus* (w)
- C 27 Cambus Pools 15 Jan (PMA).
- S 10 Torbrex, Stirling and a single at the reliable site of Stirling Royal Infirmary 27 Jan (AET, AB). Single Callander library 25 and 26 Nov (RAB, DOE, JT, MMcG).
- DIPPER *Cinclus cinclus* (B,W)
As usual, recorded in low numbers on BBS with 3 birds (annual range: 1-11).
- F 2 Carron Works, R. Carron 17 Sep with 1 there 8 Oct and 3 on 17 Dec. Single Carron Glen 25 Apr.
- C Two Cambus Pools 15 Jan. One singing R. Devon, W. Sheardale 21 Jan. Single R. Devon, Tulligarth 31 Jan. 16 R. Devon, Dollar-Tillicoultry 27 Feb. 2 R. Devon, Alva 18 Mar. 1 Gartmorn Dam 23 Mar. One carrying nest material Dollar Glen 16 Apr. One Woodland Park, Alva 31 May.
- S Two (1 singing) Allan Water, BoA 12 Jan. 4 Endrick Water 4 Feb. 4 Allan Water, Dunblane 20 Feb. 2 L. Dochart 11 Mar with 1 there 1 Aug; 1 west end L. Tay 19 Mar. Single Tyndrum community woodland 21 Apr; pair Sheriffmuir 24 Apr and 2 Broomridge, Bannock Burn 27 Apr. Singles Crianlarich 6 May; Aberfoyle 11 May; Sron Eadar a' Chinn, Callander 19 May; Cambusmore 7 Sep. 2 L. Earn 16 Oct and Callander 31 Dec.
- WREN *Troglodytes troglodytes* (B,W)
Widespread and common. Under-recorded.
Occurs on BBS with 2.29 b/lkm, which is an 18 % drop since the high last year and is 6 % above the long-term mean (the annual range is rather narrow at 1.53-2.78 b/lkm). Density is at its highest in coniferous woodland (4.57) but this species is recorded at high densities in all habitats, apart from mountain and moorland.
- F 18 on transect at Roughcastle, Falkirk 17 Jun.
- S 11 on transect at Hollow Burn, Fallin 29 Apr. 13 on transect at Cobleland, Aberfoyle 16 Jun.
- DUNNOCK *Accentor modularis* (B,W)
Widespread and common. Under-recorded.
Dropped by 24 % from its highest ever figure in 2005 to 0.58 b/lkm in 2006 (annual range: 0.34-0.76), which is 16 % above the mean. Numbers in the urban/suburban category (2.11) were 3 times higher than in farmland and 7 times higher than in conifer woodland and moorland edge habitat.
- S 7 ringed Strathyre garden 27 Jan. 10 on transect at King's Park 21 Mar with 13 there 20 Apr. 1 on fatball Coneyhill, BoA 12-21 Jul.
- ROBIN *Erithacus rubecula* (B,W)
Under-recorded. The BBS rate of 1.41 b/lkm is virtually the same as in 2005 and 1 % above the long-term mean (annual range: 0.92-1.43). Found in all habitats but at greatest density in coniferous woodland (4.57 b/lkm) and urban/suburban (2.50 b/lkm) with only 1.52 b/lkm in farmland.
- C 12 Gartmorn Dam 4 Jan. 15 Blackgrange, Cambus 16 Dec.

- S 10 Airthrey 10 Feb. 17 King's Park, Stirling 8 Mar. 14 Hollow Burn, Fallin 15 Apr. 16 Cobleland, Aberfoyle 16 Jun; 10 Allan Water, Dunblane 12 Sep.
- REDSTART *Phoenicurus phoenicurus* (B)
 Occurs in very low numbers on BBS transects with only 3 birds this year. Recorded for the first time in 2003 (annual range: 2-5).
 Arrival in Apr: 1 west end L. Tay 23rd was 4 days later than in 2005 (Aberfoyle). This was followed by 3 (1M, 2F) Tigh Mor, L. Achray 29th and 2M Brig o' Turk 30th. (JPH, FAM, MVB)
- F F Skinflats 18 Oct (GO).
- S M Brig o' Turk/Glen Finglas 21 May. 4 (2M) Bracklinn, Callander 22 May. Singles L. Tay 29 May and 1 Jun; Glen Lochay 31 May; Allt na Ceardaich 3 Jun and M Lanrick 25 Jun. F Lake of Menteith 9 Jul. M Doune Lodge, Braes of Doune 27 Aug (RHD, DOE, JPH).
- WHINCHAT *Saxicola rubetra* (B)
 Occurred at its highest number on BBS transects with 26 birds (annual range: 2-26 birds). With 0.19 b/lkm was 90 % above the long-term mean.
 Spring arrival has been remarkably consistent over the last four years. A single Doune 29th was 1-2 days earlier than between 2003-2005. This was followed by M Dumyat; M L. Arklet and pair Skinflats all on 5th May; 3 Sheriffmuir 12th; Sron Eadar a' Chinn, Callander 19th; M L. Arklet and F Inversnaid 21st.
 Autumn departure: 3 Skinflats 13 Aug and M Glinns Road, Kippen 1 Sep was 7 days earlier than the bulk of 2005.
- F F Skinflats 8 Jun and in company of 2 imms. there 9 Jun.
- S Singles Glen Lochay 31 May; Braeleny, Callander (singing) and Allt na Ceardaich, both 3 Jun.
- STONECHAT *Saxicola torquata* (b,w)
 After last year's high, the 20 birds recorded on BBS transects were the highest to date, having risen steadily from 0.01 b/lkm in 1997 to 0.15 b/lkm this year. As would be expected, they were mainly found in mountain and moorland habitat with very small numbers on farmland.
- F 1-3 birds Skinflats Jan and Apr to Dec with ad. and 2 juvs. there 6 Jul and 4 well grown juvs. 29 Aug. 1-2 prs. Kinneil Sep, Oct and Dec. 1-2 birds S Alloa Jan, Oct and Nov. M Union Canal, Tamfourhill 18 Feb. Single California 11 Jun. 8 Slamannan-Fannyside 13 Oct. M St Helen's Loch, Bonnybridge 1 Nov.
- C M E of Coalsnaughton 10 May with a pr. there 27 Jun. 2 prs. Blackdevon wetlands 26 Nov.
- S 1-3 birds Auchlyne, Killin Feb-Mar. Pr. Carron Valley Res. 18 Feb with a M there 19 Dec. 1-2 birds Sheriffmuir area Apr-Jun and Aug-Sep with 6 there 15 Sep. Up to 2 prs. Polmaise lagoons Aug-Dec. 2 Gartrenich, Aberfoyle 9 May with 1 there 7 Jun. 2 prs. and 3 juvs. Flanders Moss 22 May with a single there 23 Oct. 2 Tom Dubh, Callander 24 May with 1 there 26 Jun. During breeding season also reported from Brig o' Turk/Glen Finglas (F with nest material), L. Arklet and Braeleny, Callander. In winter (Sep-Dec) also reported from Cringate Muir; L. Walton; Severie, Braes of Doune; Townhead, N Third and Lower Greenyards, Forthbank.
- WHEATEAR *Oenanthe oenanthe* (B)
 The 16 birds recorded represent 0.12 b/lkm, 20 % down on 2005 and 14 % below the long-term mean (annual range: 0.07-0.25 b/lkm). The vast majority occurred in mountain and moorland habitat.
 Spring arrival in Apr: prs. Strathavon Fm., Slamannan and Muirpark 3rd were 13 days later than in 2005 (Arnprior). This was followed by M Bows 9th and

single at South Alloa 16th.

Autumn departure: 2 Skinflats 6 Sep and F West Jawcraigs Slamannan 13 Oct was 39 days later than in 2005 (Kinneil).

- F Migrants: M South Bellsdyke, Skinflats Village 1 May. Pr. Skinflats 5 May and M there 8 Jul.
- C Migrants: Single Balhearty Fm., Coalsnaughton 20 Apr and F The Rhind, Alloa 30 Apr. 3 Gartmorn 12 May.
- S 2 Kirkton Fm. (hill ground) 19 Apr; 2 Wood Lane, Blairdrummond Carse 26 Apr. Pr. Kinbuck Bridge 4 May nested in rabbit burrows. Prs. Flanders Moss 6 May. Singles Sheriffmuir 12 May and Arie Dam, Callander 3 Jun.

*RING OUZEL *Turdus torquatus* (b)

- S One Sron Eadar a' Chinn, Callander 19 May (JRC). 2F, 1M Trossachs 14 Jun (DJC).

BLACKBIRD *Turdus merula* (B,W)

Recorded on BBS at 2.36 b/lkm, the same as the long-term mean. Annual numbers have been in a very narrow range of 1.82-2.72 b/lkm. As usual, the urban/suburban habitat was most favoured by this species with 5.66 b/lkm but again this is the lowest rate since BBS began. This is followed by a density of 3.59 b/lkm on farmland.

- C 12 M W of Tillicoultry 26 Dec.
- S 1 singing Coneyhill, BoA 25 Feb. 40 Airthrey 14 Mar with 20 there 31 May, 2 Jun, 15 Nov and 25 on 22 Dec. 25 King's Park, Stirling 28 Apr with 26 there 31 May, 29 on 5 Jun, 21 on 1 Nov and 2 on 15 Dec. A pair in Fallin had a 1st brood 8 Apr, 2nd brood 14 May, 3rd brood 22 Jun and a possible 4th brood 30th Jul.

FIELDFARE *Turdus pilaris* (W)

Spring departure: no April sightings were received, the last 2 birds being seen at Skinflats 31 Mar and a very late bird Polmaise 14 May, which was 15 days later than in 2005 (Flanders Moss).

Autumn arrival in October: 60 Flanders Moss and Glenhead, Denny 22nd were 2 days later than in 2005 (Denny). This was followed by 10 L. Rusky 23rd, 50 Doune 28th, 25 SW Blackdevon wetlands 14 SW Dunblane 29th, and 100⁺ Thornhill Carse 30th.

- F 120 SW Little Denny Res. 7 Jan. 50 Glenhead, Denny 8 Jan. 240 Skinflats 1 Dec.
- C 50 R. Devon, Alva 19 Nov. 80 R. Devon Menstrie/Alva 8 and 17 Dec with 200 there 21 Dec.
- S No counts were received from the Carse of Lecropt, which traditionally holds large flocks. 150 Thornhill Carse 17 Jan with 120 there 15 Feb, 118 on 10 Mar, 130 on 24 Nov and 65 on 28 Dec. 60 Argaty, Braes of Doune 28 Feb. Ca. 300 head of L. Lubnaig and 87 Auchlyne, Glen Dochart 4 Nov. 76 King's Park, Stirling 7 Nov with 60 there 15 Dec. 100 Airthrey 14 Nov. Ca. 180 L. Coulter 1 Dec.

SONG THRUSH *Turdus philomelos* (B,W)

Under-recorded. Recorded at 0.65 b/lkm, a drop of 17 % on the previous year (annual range: 0.46-0.82 b/lkm) but slightly (2 %) above the 9-year mean. It was found most often in the urban/suburban category (1.45 b/lkm).

As usual few winter records. Jan: singles R. Devon, Menstrie/Alva 6th, 8th and 25th. Single Ochiltree, Dunblane 3rd to 11th Feb and 26th Nov. Feb: singles Tullibody and Auchlyne, Glen Dochart 9th; Kinneil 10th; Coneyhill, BoA 13th (singing).

- F 8 Roughcastle, Falkirk 17 Jun.
- C 5 Woodland Park, Alva 31 May. 8 Blackgrange, Cambus 14 Oct.
- S 6 Airthrey and 7 Gartmorn Dam 23 Mar. 10 King's Park, Stirling 31 May. 8 Cobleland, Aberfoyle 16 Jun.

REDWING *Turdus iliacus* (W)

Spring departure: 12 Argaty, Braes of Doune 5 Apr was 8 days earlier than in 2005 (Tyndrum).

Autumn arrival in Oct: unspecified numbers Springkerse, Stirling and Tullibody (heard) 12th were 4 days later than in 2005 (Braes of Doune). This was followed by 30 Doune 13th. Good flocks in several localities from 20th.

F 100 Skinflats 4 Nov and 9 Dec.

C 100 R. Devon, Alva 29 Jan with 70 there 12 Feb, 250 on 20 Oct and 350 on 28 Nov.

S No counts were received from the Carse of Lecropt, which traditionally holds large flocks. 230 Kilbryde, Braes of Doune 7 Mar. 100 Flanders Moss and 400 L. Rusky 23 Oct. 175 in 6 flocks SW Dunblane 28 Oct. 200 passing Airthrey throughout 30 Oct with 100 here 7 Nov. 100 Aberfoyle Forest Park 15 Oct. 120 Airthrey 22 Dec.

MISTLE THRUSH *Turdus viscivorus* (B,W)

Greatly under-recorded. Recorded at 0.22 b/lkm on BBS, 12 % less than last year but still 16 % above the mean (annual range: 0.07-0.30 b/lkm). Most prominent in the mountain, moorland and conifer habitats (0.64 b/lkm).

F Singing Plean CP 21 Jan. 20 Skinflats 4 Nov.

S Singing Coneyhill, BoA 22 Jan. 70 (2 flocks) Carron Valley Res. 7 Oct. 15 Airthrey 3 Nov.

*GRASSHOPPER WARBLER *Locustella naevia* (b)

Eight birds recorded on BBS was the highest to date (annual range: 1-4 birds). Spring arrival in Apr: W side L. Tay 27th was 4 days later than in 2005 (Skinflats). This was followed by singles at R. Devon, Menstrie/Alva and Skinflats 28th and Hollow Burn, Fallin 29th, 2 Skinflats 29th, singles at Blackgrange, Polmaise, Carron Res., Cromlix and Blackwater Marshes, L. Venachar all on 30th.

F Single Darnrig Moss 5 May and 13 Jun.

C Singing Blackgrange, Cambus 29 Jul.

S Singles Yellowcraig Wood, Airthrey 5 May; Flanders Moss 6 May; 3 W side L. Tay 8 May and 1 Jun; 2 Gartrenich, Aberfoyle 9 May. Singles Hollow Burn, Fallin 14 May; Tyndrum community woodlands 30 May. Also present during breeding season at Lundie, Braes of Doune (no date given).

SEDGE WARBLER *Acrocephalus schoenobaenus* (B)

A total of 7 birds were recorded on BBS locally this year (annual range: 4-17).

Spring arrival: 1 Wood Lane, Blairdrummond Carse 26 Apr was 4 days earlier than in 2005 (Alva/Menstrie). This was followed by singles Skinflats 27 Apr, R. Devon, Alva/Menstrie 28 Apr, Cambus Pools and Blackwater Marshes, L. Venachar 30 Apr. 1 singing Skinflats 5 May; single Darnrig Moss, Slamannan; 3 Flanders Moss 6 May.

Autumn departure in Aug: 2 Blackgrange, Cambus 12th and 1 R. Devon, Alva 13th was 24 days earlier than in 2005 (Tullibody Inch).

F Single Skinflats 20 Jun gathering food with 4 there 22 Jul. Single Shieldhill, Falkirk 26 Jun and 1 Jul.

C 11 R. Devon, Alva/Menstrie in 400 m patch 12 May with birds present there 20 May, 4 Jun, 26 Jun (feeding Y) and 2 Jul. Single Cambus Pools 23 May with 3 there 11 May and 4 at nearby Blackgrange 29 Jul. 2 Gartmorn 3 Aug.

S During breeding season reported from Hollow Burn, Fallin; Polmaise lagoons (6 ads., 2 juvs.); Drummoist and Argaty, Braes of Doune; Aberfoyle and W side L. Tay (May, Jun and Jul).

WHITETHROAT *Sylvia communis* (B)

The BBS rate of 0.27 b/lkm was 4 % higher than in 2005 and 23 % higher than

the long-term mean (annual range: 0.09-0.32 b/lkm).

Spring arrival: 1 Skinflats 26 Apr was 4 days earlier than in 2005 (Cowie and Alva/Menstrrie). This was followed by 1 singing Cambus and single R. Devon, Alva/Menstrrie 28 Apr; single Hill of Row, Dunblane; 2 Skinflats and 3 (incl. F building nest) Hollow Burn, Fallin all on 29 Apr; singles Alloa 3 May and Darnrig Moss, Slamannan 5 May.

Autumn departure: 2 Blackgrange, Cambus 12 Aug; 5 R. Devon, Alva 13 Aug. A family there 23 Aug was 16 days earlier than in 2005 (Dunblane).

- F 4 Carron Glen 13 May. 6 Roughcastle, Falkirk 17 Jun. 8 Skinflats 25 Jun with ad. gathering insects there 29 Jun, 5 on 22 Jul.
- C 7 R. Devon, Alva/Menstrrie in 400 m patch 12 May with 3 there 20 May, 4 on 4 Jun, 1 feeding Y 26 Jun. Singing Cambus 11 and 23 May with imm. at nearby Blackgrange 29 Jul. 5 Gartmorn 26 Jun and 3 on 3 Aug.
- S 3 Aberfoyle 11 May; 6 Cobleland, Aberfoyle 16 Jun.

GARDEN WARBLER *Sylvia borin* (B)

Recorded in very low numbers on BBS transects. This year's total was 4 birds (annual range: 0 -6).

Spring arrival in May: singles R. Devon, Menstrrie/Alva and Argaty, Braes of Doune 4th were 2 days later than in 2005 (Fallin). This was followed by 1 Gartmorn 7th, 2 Doune 9th, singles Fallin Bing 11th and L. Katrine 13th.

Autumn departure: 1 Blackgrange, Cambus 12 Aug was 17 days earlier than in 2004 (Blairdrummond).

- C 3 Woodland Park, Alva 31 May. One Gartmorn 3 Aug.

BLACKCAP *Sylvia atricapilla* (B)

The above average rate since 2002 continued with 0.19 b/lkm on BBS transects, 6 % higher than last year and 27 % higher than the long-term mean (annual range: 0.07-0.19 b/lkm). In a reversal from last year, the highest rate occurred in the urban/suburban habitat with 0.79 b/lkm, followed by 0.29 b/lkm in the mountain, moorland and conifer edge habitats, a reflection of the high variance in squares surveyed in each category between years.

Winter records: M in Stirling garden 2 Jan with F there in Feb. Single Alva 1 and 9 Feb. In second part of year: M Airthrey 6 Nov, 2M there 7 Nov, M 15 Nov and 7 Dec. 2 in BoA garden from 15 Nov. M Skinflats 2 Dec.

Spring arrival in April: 6 M Blairdrummond 6th were 4 days earlier than in 2005. This was followed by 2 Hollow Burn, Fallin 15th; King's Park, Stirling 16th. Reported from several localities in SW of recording area from 24th.

Autumn departure: 2 Alva 17th Aug; singing bird Skinflats 13th Sep was 15 days later than in 2004 (Blairdrummond) but 4 days earlier than in 2003 (Lecropt).

- F 4⁺ singing Plean CP 4 May. 5 Hollow Burn, Fallin 14 May.
- C 7 Gartmorn 14 May.
- S 5 Airthrey 28 Jul.

WOOD WARBLER *Phylloscopus sibilatrix* (B)

Under-recorded. Unlike in previous years, no birds were recorded on BBS.

Spring arrival: singles Tigh Mor, Trossachs and W end of L. Tay 29 Apr were a day earlier than in 2005 (Crianlarch). This was followed by 3 singing Little Drum Wood, Brig o'Turk 30 Apr; 2 singing L. Katrine and 1 Darn Walk, Dunblane 3 May; 3 Glen Finglas 6 May where 1 also 21 May.

- S Recorded on several dates in May until 1 Jun at west end of L. Tay. 3 singing David Marshall Lodge, Aberfoyle 17 May; 2 Glen Lochay 27 May with 1 there 31 May. 1 Inversnaid 30 May; 1 Allt na Ceardaich, Killin 3 Jun.

CHIFFCHAFF *Phylloscopus collybita* (B)

Overall numbers on BBS were small with a total of 11 birds only (19 in 2005).

Spring arrival: much later than last year. One Skinflats 31 Mar was 7 days later than in 2005 (Blairlogie and Falkirk). This was followed not until 11 Apr by a single at Bantaskine, Falkirk, then singles Blairdrummond 14 Apr; Bellsdyke Rd., Larbert 15 Apr and Dunmore Wood 16 Apr.

Autumn departure: juv. Carron Valley Res. 17 Sep; Newton Crescent, Dunblane 23 Sep and a late bird singing King's Park, Stirling 4 Oct was 8 days later than in 2004 (Blackness).

- F One singing Falkirk Tunnel 21 Apr with 2 there 24 Apr. 2 singing Plean CP 4 May. Singles singing Carron Glen 13 May and R. Carron, Camelon 31 May. Singles Carron House, Carronshore 4 Jun; Torwood 29 Jun and singing Grangemouth Golf Course 17 Jul.

WILLOW WARBLER *Phylloscopus trochilus* (B)

After the steady decline since 1997, there was a 20 % increase in numbers this year with 1.47 b/lkm. This is still 18 % below the long-term mean and 48 % below the 1997 figure (range: 1.23-2.84). As before, the highest rate occurred in the conifer and moorland habitat with 3.29 b/lkm, almost twice that in farmland.

Spring arrival in Apr: 1 Yellowcraig Wood, Airthrey 14th was 11 days later than in 2005 (Fallin and Flanders Moss). This was followed by birds at Hollow Burn, Fallin 15 Apr with 7 there 29 Apr; Blairdrummond and Dollar Glen 16th with birds reported from many locations thereafter.

Autumn departure in September: 1 Gartmorn 11th was followed by singles Blackgrange, Cambus and Skinflats 17th, which was 19 days earlier than in 2005.

- C 6 Cambus Pools 30 Apr with 4 there 7 Aug and 18 ringed at nearby Blackgrange 12 Aug. 9 Gartmorn 15 May and 26 Jun with 14 there 3 Aug. Family R. Devon, Alva/Menstrie 3 and 25 Aug. 8 Alva Glen, 12 Aug. 8 R. Devon, Alva 13 Aug.
- S 6 singing Airthrey 20 Apr with 3 (1 juv.) there 8 Aug. 8 Wood Lane, Blairdrummond Carse 24 Apr. 6 King's Park, Stirling 25 Apr with 7 there 23 May and 6 on 10 Aug. 16 Polmaise Woods, Stirling 6 May. 14 Criarlarich 6 May; 6 Cambusbarron 6 May; 6 Swanswater Fishery, Stirling 6 Jun.

GOLDCREST *Regulus regulus* (B,W)

Under-recorded. No notable records were received.

After the high of 2005, numbers (0.65 b/lkm) dropped by 39 % to just above the mean (+5 %) (annual range: 0.18-1.07). The highest density (4.64 b/lkm) occurred, not surprisingly, in the conifer and moorland category.

SPOTTED FLYCATCHER *Muscicapa striata* (B)

Recorded in very low numbers on BBS with the 5 birds this year, like last year, equalling the mean (annual range: 2- 12). Remains scarce with reports from 20 locations received.

Spring arrival in May: single L. Katrine 9th was 5 days earlier than in 2005 (G. Dochart). This was followed by singles Dollar Glen 21st, Burnbank Wood, Blairdrummond; 2 Westerton Fm., Dollar and 4 Linnbank Fm., Dollar 22nd, single Gartmorn 25th (also there 27 Jun); Tullich, G. Lochay 27th and Tyndrum community woodlands 30th.

Autumn departure: singles Skinflats 22 Aug and 1 Sep were probably passage birds.

- F Single Jawparks Fm., Slamannan 9 May.
- S Present in June Allt na Ceardaich 3rd; west end L. Tay 4th; Allan Water, Dunblane 15th; R. Teith, Callander 20th. Pr. Lake of Menteith 9 Jul; single Doune Lodge 22 Jul; 2 ads. with 4 juvs. King's Park, Stirling 10 Aug and single Sheriffmuir 20 Aug.

*PIED FLYCATCHER *Ficedula hypoleuca* (b)

- S M Little Drum Wood, Brig o' Turk 30 Apr. Single Glen Lochay 9, 27 (in song) and 31 May. 1 singing David Marshall Lodge, Aberfoyle 17 May. M Bracklinn, Callander 10 Jun.

LONG-TAILED TIT *Aegithalos caudatus* (B,W)

Numbers on BBS fluctuate markedly (annual range: 0.03-0.38b/lkm) due to the small number of birds involved (11 this year).

- F 11 Callander Estate, Falkirk 12 Feb.
S 2 at 580 m asl. Taobh na Coille, Strath Gartney 13 May. 12 Keirhead, Thornhill 23 Oct.

COAL TIT *Periparus ater* (B,W)

Widespread but under-recorded. After the very high 2005 BBS rate, the 0.53 b/lkm represents a drop of 42 % (annual range: 1.2-2.51 b/lkm), 18 % below the mean. With 3.79 b/lkm is 15 times more frequent in coniferous woodland than farmland (0.25 b/lkm).

- F 25 Roughcastle, Falkirk 17 Jun.
S 16 Strathyre during garden ringing session 27 Jan. 53 Cobleland, Aberfoyle 16 Jun.

BLUE TIT *Cyanistes caeruleus* (B,W)

Under-recorded. After last year's high, the BBS rate of 2.21 b/lkm was 12 % lower but still 23 % above the long-term mean (range: 1.20-2.51). Is most frequent on farmland (3.65 b/lkm), then urban/suburban areas (3.26 b/lkm).

- F 77 Roughcastle, Falkirk 17 Jun.
C 18 R. Devon, Alva 5 and 8 Jan. 16 Gartmorn 25 Feb.
S 20 Strathyre during garden ringing session 27 Jan. 20 King's Park, Stirling 17 Feb. 20 (several families) Airthrey 16 Jun. 33 Cobleland, Aberfoyle 16 Jun. 57 Fintry 19 Jun.

GREAT TIT *Parus major* (B,W)

Under-recorded. This year's figure of 1.20 b/lkm is up 5 % on 2005 and 52 % above the long-term mean (range: 0.23-1.72). Is most frequent in urban/suburban areas (1.97 b/lkm), then farmland (1.81 b/lkm).

- C 14 Woodland Park, Alva 5 Jan. 10 Gartmorn 24 Jan. 10 R. Devon, Alva 29 Jan and 17 Dec.
S One in juv. plumage on feeder 2 and 3 Feb Springwood Ave., Stirling. One singing Coneyhill, BoA 26 Feb, 13 and 14 Oct. 22 King's Park, Stirling 27 Feb.

NUTHATCH *Sitta europaea*

- S Single Aberfoyle 13 Oct (AS) is the 5th record for our area following the first record in 1999.

TREECREEPER *Certhia familiaris* (B,W)

Under-recorded. Recorded in very low numbers on BBS. This year's total of 9 birds was the highest so far (annual range: 2-9).

- C 3 old road Alva-Menstrie 8 Apr. 3 E of Gartmorn 25 May.
S 4 Cobleland, Aberfoyle 17 Jun. 4 Airthrey 16 Aug.

*GREAT GREY SHRIKE *Lanius excubitor*

- F 2 Skinflats 23 Sep (RS) was the 19th record for the recording area.
S 1 Townhead Fm., North Third Res. 21, 28 and 29 Oct (DB) was the 20th record for the recording area.

JAY *Garrulus glandarius* (B,W)

Recorded in very low numbers on BBS generally with 8 this year locally (annual range: 1-11 birds).

- F Singles Dunmore Wood 21 Jan. 2 Bonnyfield, Haircraigs 2 Feb. 2 Denny 29 Apr. 4 Roughcastle, Falkirk 17 Jun. 3 Torwood 19 Nov. Single Callendar Estate,

- Falkirk 16 and 30 Dec.
- C Single Gartmorn 24 Jan and 22 Sep. 2 calling The Forest, Gartlove 25 Jan and one there 1 Dec. Singles Cambus 21 Mar; E of Clackmannan 29 Mar; Alloa 7 Apr; 2 School Wood, Clackmannan 17 Apr. Singles Dollar Glen 30 Apr; Coalsnaughton 23 Oct
- S In autumn/winter: 4 Glen Lochay 10 Jan; singles Auchtubh and Stronachvar, Balquhidder 11 Jan with 1 Balquhidder Station 9 Dec. 1 Plean CP 21 Jan with 2 there 3 Nov. Singles Lake of Menteith 21 Jan, 19 Feb and 1 Oct. 3 Innishewan, Glen Dochart 9 Feb with 1 L. Dochart 9 Dec. 2 Auchlyne, Killin 10 Mar; 1 W side L. Tay 19 Mar. 2 Carron Valley Res. 23 Sep, 7 Oct and 19 Nov. 6 L. Rusky 23 Oct with 1 there 26 Nov and 20 Dec. 1 Doune Ponds 25 Oct; 1 S of Doune 24 Nov. 1 Callander holiday park 22 Nov. In breeding season: 1 Cambusbeg, Callander 30 Apr; 4 Cromlix Moor 10 May with 2 there 13 Jul; 1 Cambusmore carrying food 20 May with family of 3 there 1 Aug; 1 Glen Lochay 31 May; 2 Cobleland, Aberfoyle 17 Jun; 1 Tom Dubh, Callander 26 Jun; 1 Cushenquarter, Plean 24 Jun
- MAGPIE *Pica pica* (B,W)
 Recorded in a fairly narrow range on BBS, the 2006 rate of 0.58 b/lkm is 21 % higher than last year and 14 % above the mean (annual range: 0.31-0.63 b/lkm). Most numerous in urban/suburban habitat with 3.03 b/lkm compared to 0.72 in farmland.
 No records received from the Airthrey roost. Continues to be very scarce NW of Dunblane. Abundant around Stirling but is not as frequent in the west; large groups now widespread in Falkirk
- F 17 near Falkirk Wheel 18 Feb. 10 Haircraigs 20 Mar and 3 Sep.
- C 10 R. Devon, Alva 8 Jan.
- S 12 Newton Crescent, Dunblane 7 Apr. Pr. nested Mid Torrie Fm., Callander 20 May. 2 Tom Dubh, Callander 24 May and 26 Jun. Pr. and 3 juvs. Severie, Braes of Doune is the first time breeding has been recorded there. 1 L. Rusky 23 Oct. 10 Airthrey 23 Nov (presumably not roost count).
- JACKDAW *Corvus monedula* (B,W)
 Under-recorded. After last year's high, there was a 14 % drop, still 12 % above the mean (annual range: 2.11-3.27 b/lkm). Recorded at 4.88 b/lkm on farmland and 4.08 b/lkm in urban/suburban squares, the latter less than half that of 2005.
- C Ca. 35 prs. collecting nest material Tillicoultry quarry 10 Apr.
- S Roost flights S over Coneyhill, BoA late Jan to late Mar, with maxima of 250 birds on 25 Jan and 80 on 16 Feb, down to 35 on 22 Mar. At the end of the year there were maxima there of 125 on 23 Oct, 240 on 1 Nov and 150 on 16 Nov. 200 Airthrey 2 Feb. 120 around King's Park, Stirling 7 Dec. 200 Thornhill Carse 28 Dec.
- ROOK *Corvus frugilegus* (B,W)
 The 2nd most frequent species on BBS. The BBS figure of 2.80 b/lkm represents a 47 % drop on last year and a 35 % drop on the long-term mean (annual range: 2.08-6.74 b/lkm). Numbers vary quite widely from year to year depending upon how many large post-breeding feeding assemblages are encountered
 Systematic counts of known rookeries (e.g. BoA, Gartmorn, Forth and Clyde Canal, Lake of Menteith, etc.) needed.
- S 400 Thornhill Carse 17 Jan. 300 Airthrey 2 Feb. Major roost flights over Coneyhill, BoA observed 10 Feb to 23 Mar. 5 rookeries noted in late Apr in Dunblane: 29 nests Strathmore Ave., 100 nests Holmehill, 16 nests Victoria Hall, 75 nests Kippendavie, 53 nests Duthieston House (MVB). 252 King's Park, Stirling 7 Dec. Ca. 1,500 Longbank, Doune 16 Dec. Major roost flights of Rooks and Jackdaws observed over Coneyhill, BoA in Jun and Nov to Dec, with maxima of 520 on 5 Jun and 2,000 on 10 Nov.

CARRION CROW *Corvus corone* (B,W)

After last year's high, BBS numbers dropped 12 % to 5.48 b/lkm, still 43 % above the long-term mean (annual range: 2.18-6.22 b/lkm). Most frequent on mountain/moorland habitat (7.88 b/lkm), then farmland (5.21 b/lkm).

- F 33 Bo'ness 17 Mar. 30 Skinflats 22 Jul with 42 there 11 Aug.
 C 50 R. Devon, Alva 8 Jan. 30 Cambus Pools 15 Jan with 40 at nearby Blackgrange 17 Sep. 67 Colnsaur Hill 31 May with 60 there 4 Jul. 40 Woodland Park, Alva 26 Sep.
 S 30 Airthrey 23 Feb. 1 Coneyhill, BoA 26 and 28 Feb had white wings. 267 on carse at King's Park Stirling 21 Dec.

*HOODED CROW *Corvus cornix* (b, w)

A single bird was recorded on BBS transects this year. More records are needed to determine true status in NW of recording area.

- F Singles at Harvies Maling, Denny 1 Mar; R. Carron, Grangemouth 12 Jul; Skinflats 2 Nov are unusual locations (NB, AE, GO).
 S In core range: pr. L. Doine, Balquhidder 11 Jan and 4 Mar. 10 and 15 hybrids Glen Dochart 11 Jan. Hybrids Achmore, Killin and Crianlarich (paired with a Carrion Crow) both 11 Jan. 1 L. Voil, Balquhidder 9 Feb was paired with a Carrion Crow; 1 Tulloch, L. Voil 4 Mar was paired with a hybrid; 1 Rhuveag, L. Voil 4 Dec. 23 and 25 hybrids Glen Dochart 9 Feb with pr. at L. Iuhhair 4 Mar, 1 L. Dochart 4 Mar (paired with a Carrion Crow) and 1 and 3 hybrids Dochart Haughs 16 Dec. Singles Crianlarich 6 May and W side L. Tay 1 Jun. Outside usual range: 2 Wester Borland, Thornhill 12 Nov.

*RAVEN *Corvus corax* (B,W)

A total of 29 birds were recorded on BBS, more than twice the previous highest number (annual range: 1-14). Unlike last year when all records came from the coniferous habitat category, was most frequent in mountain and moorland (0.47 b/lkm), than conifer/moorland (0.36 b/lkm) with small numbers in farmland. A Doune Lodge roost count of 90 on 22 Jan was smaller than in 2005. There were again a number of reports from south/southwest of the core Callander-Doune-Dunblane area.

- F 1 Strathavon Fm., Slamannan 27 Jan and pr. there most days in Dec.
 C 2 over Castlebridge Business Park, The Forest 28 Aug.
 S From core area: pr. L. Doine, Balquhidder 11 Jan. Nests with 4 Y Argaty, Braes of Doune 14 Apr and 3 Y Drumloist, Braes of Doune 30 Apr. 5 Crianlarich 6 May. 3 Cromlix Moor 10 May. 1 Sron Eadar a' Chinn, Callander 19 May. 2 Newton Crescent, Dunbane 1 Jun. 7 Arie Dam, Callander 3 Jun. 2 Taobh na Coille, Strath Gartney 4 Jun. 1 Tom Dubh, Callander 26 Jun. 7 Sgiath an Dobhrain 7 Jul. 2 Cromlix Moor 13 Jul. 3 Ochiltree, Dunblane 20 Aug and 1 there 19 Oct. 2 Doune Ponds 6 Sep. 3 Cambusmore 7 Sep. 1 L. Katrine 15 Sep. 2 Kinlochard 16 Oct. 1 L. Rusky 29 Oct. 3 Severie, Braes of Doune 19 Nov. 2 L. Dochart 9 Dec. 1 L. Venachar 28 Dec. Outside of the core area: 1 Gogar Loan, Menstrie 10 Apr. 2 Cambusbarron and 2 Polmaise Woods, Stirling 6 May. 1 Mine Wood, BoA 6 Jul. 2 Airthrey 15 Sep and 1 there 21 Dec. 3 Flanders Moss 22 Oct with 1 there 23 Oct and 12 Nov. 5 Cambus 19 Nov. 1 Carron Valley Res. 17 Dec.

STARLING *Sturnus vulgaris* (B,W)

Greatly under-reported. The most abundant species on BBS. This year's rate of 5.61 b/lkm was 10 % lower than in 2005 and 5 % below the mean (annual range: 4.06-10.71 b/lkm). Numbers vary greatly from year to year depending upon how many large post breeding feeding assemblages are encountered. They were 2.6 times more frequent in urban/suburban settings (21.97 b/lkm) than on farmland (8.30 b/lkm).

- F 300 Kincardine Br. roost 5 Jan with 100 there 1 Oct and 130 on 1 Dec. 200 Haircraigs 5 Jun. 500 Glenhead, Denny 18 Dec.
- C 100 Blackgrange, Cambus 4 Oct.
- S 100 Airthrey 8 Jun. 300 N Third Res. 24 Oct. 2,500 in pre-roost flight over mouth of Bannock Burn 25 Nov. 250 King's Park, Stirling 7 Dec. 400 in roost exit flight to W at Craig Forth, Stirling 9 Dec.
- HOUSE SPARROW *Passer domesticus* (B,W)
Under-recorded. With 2.10 b/lkm on BBS squares, this species was recorded at its highest ever level. This represents an increase of 17 % on last year and is 31 % above the long-term mean (range: 1.22-2.08). The urban/suburban abundance (6.58 b/lkm) was exactly twice that recorded on farmland (3.29 b/lkm).
- S 40 Argaty, Braes of Doune 6 Jan with 50 there 5 Oct. 30 Kinlochard 16 Oct.
- TREE SPARROW *Passer montanus* (B,W)
Occurs in very low numbers on BBS transects with 16 birds this year being the highest to date by far (annual range: 0-7). All the birds were found on farmland (0.22 b/lkm).
Fewer records this year than in 2004-05 but the species still seems to be more widespread than in preceding years.
- F Small numbers most months in Skinflats area with maxima of 40 on 23 Jul, 22 on 26 Jul, 38 on 14 Sep and 25 there at Brackenlees Fm. 26 Nov. 25 Fallin 13 Oct. 2-10 birds Kendushill Fm., Maddiston Feb to Oct.
- C 2⁺ Linn Mill 17 Jan. 15 Fishcross 15 Jan with 9 at nearby Maggie's Wood Flood 12 Feb. 1 Cambus Pools 24 Jan. 1 R. Devon, Alva 18 Mar and 17 Dec. 2 Longriggs, Coalsnaughton 10 May. 2 Gartmorn 10 and 12 May and 27 Jun. 25 Westhaugh, Alva in game crop 11 Dec. 6 S Alloa 16 Oct with 3 there 22 Oct and 1 on 9 Nov.
- S 18 Hilton Fm., Cowie 1 Feb. 15 Arneive Fm., Thornhill Carse 10 Mar with 7 at Nether Carse 24 Nov. 1 Lecropt 25 Mar. 4 Hollow Burn, Fallin 15 Apr with 10⁺ there 14 May. 4 Wood Lane, Blairdrummond Carse 26 Apr. 3 Carbrook Mains, Plean 29 Apr with 2 there 24 Jun. Singles Cambusbarron 19 May and Upper Taylorton 20 May. 25 Fallin 13 Oct.
- CHAFFINCH *Fringilla coelebs* (B,W)
Numbers on BBS squares increased to 5.25 b/lkm, the highest figure to date (range: 3.46-5.15). This is 15 % higher than last year and 23 % above the long-term mean. Numbers were highest in conifer woodland and its moorland edge at 13.10 b/lkm, almost twice that recorded on farmland (6.93 b/lkm).
- S 500 Lerrocks, Braes of Doune 5 and 24 Jan with 250 there 5 Oct and 350 on 15 Dec. 500 Westerton, Braes of Doune 5 Jan. 760 Glenhead, Braes of Doune 8 Feb with 600 there 2 Apr. 410 Doune 10 Jan. 190 Waterside, Kinbuck 11 Mar with 400 at nearby W Cambushinnie 15 Nov and 800 there 25 Nov (MVB). 8 Taobh na Coille, Strath Gartney at 580m asl. 13 May. Ca. 400 Milton of Cambus 25 Oct. One singing Coneyhill, BoA 13 Feb.
- *BRAMBLING *Fringilla montifringilla* (W)
- F 1 Kinneil 17 Oct. 2 Strathavon Fm., Slamannan 27 Dec (GO, TF).
- C M Newrowhead, Clackmannan 17 Apr (RHD).
- S Singles (M and F) Ochiltree, Dunblane on several dates in Jan, Mar and Apr with 19 there 12 Mar (NB). 1 Keir roundabout, Dunblane 20 Jan. 1 High Street, Dunblane 5-25 Feb with 2 there 26 Feb-25 Mar (CJP). 2 Lerrocks, Braes of Doune 22 Jan with 4 at nearby Glenhead 8 Feb and 10 on 2 Apr. 5 Waterside, Kinbuck 11 Mar (MVB). F Springwood Ave., Stirling 15 Mar (CJM). 3 Ashentree Fm., Thornhill Carse 3 Apr (RHD). 2 L. Rusky 23 Oct. 1 Deanston Fm., Doune 12 Nov (JT).

GREENFINCH *Carduelis chloris* (B,W)

Under-recorded. No large flocks reported this year. After last year's high, numbers (0.67 b/lkm) dropped by 37 % to 8 % below the mean (range: 0.42-1.07 b/lkm). This species favours urban/suburban habitats occurring at 1.71 b/lkm (much lower than in 2005), followed by farmland (1.05 b/lkm).

F 17 Polmont, Falkirk 17 Sep.

C 50 Gartmorn 11 Sep.

S 40 Springwood Ave., Stirling 6 Jan. 28 King's Park, Stirling 10 Feb.

GOLDFINCH *Carduelis carduelis* (B,W)

At 0.51 b/lkm this species was recorded at its highest level on BBS squares so far. This is 38 % higher than in 2005 and 65 % above the mean (range 0.12-0.40 b/lkm). Found in greatest abundance on farmland (0.81 b/lkm), then in urban/suburban (0.66) and conifer/moorland (0.43 b/lkm). Again no significant flocks reported from the Doune-Dunblane area.

F 35 Back Falkirk 6 Apr. 30 Skinflats 18 Apr. Roost of 50-60 birds Strathavon Fm., Slamannan Nov to Dec.

C 30 R. Devon, Alva 13 Aug.

S 25 Sheriffmuir Inn 15 Sep.

SISKIN *Carduelis spinus* (B,W)

Recorded in low numbers (27) on BBS. At 0.20 b/lkm was 29 % lower than in 2005 and 43 % lower than the long-term mean (annual range: 0.10-0.75 b/lkm). Recorded predominantly in conifer/moorland edge habitats (0.93 b/lkm), where more than four times as frequent as on farmland (0.18 b/lkm).

F 28 Polmont, Falkirk 28 Jan. 5 singing Dunmore Wood 16 Apr.

S 70 Newton Crescent, Dunblane 17 Sep with 33 there 21 Oct. Ca. 20 R. Balvag Bridge, Balquhiddier 4 Dec; ca. 30 Strathyre 4 Dec. 40 Carron Valley Res. 19 Dec. 20 Airthrey 22 Dec. 175 Callander 31 Dec.

LINNET *Carduelis cannabina* (B,W)

With 114 birds recorded, more than three times as frequent as the previous highest rate (annual range: 5-35 birds). This represents a 17-fold increase compared to last year and is 259 % above the long-term mean. Recorded predominantly on farmland (1.55 b/lkm), then mountain/moorland (0.05 b/lkm). Medium-sized flocks were again present in the Doune and Dunblane areas. No reports from the Carse of Lecropt.

F 30 Skinflats 6 Jan with 120 there 8 Oct, 60 on 1 Dec and 110 on 9 Dec. 20 Kinneil 5 Nov.

C 170 R. Devon, Alva 6 Jan with 250 there 28 Nov, 100 on 8 Dec and 120 on 21 Dec. 57 Longcarse, Tullibody Inch 14 Jan. Ca. 150 in set-aside Westhaugh, Alva 7 Apr. Ca. 200 W Fishcross in wild bird cover 4 Nov.

S 270 Glenhead, Braes of Doune 2 Apr. 220 Stonehill, Dunblane 15 Sep. 280 W Cambushinnie, Kinbuck 27 Oct with 200 there 15 Nov.

TWITE *Carduelis flavirostris* (b,W)

21 birds recorded on BBS this year compared to none last year, yielding a rate of 0.15 b/lkm.

F 50⁺ Kinneil 2 Jan with 20 there 12 Nov. 20 Skinflats 25 Feb with 40 there 12 Nov, 60 there on saltmarsh 1 Dec and 40 on 9 Dec. 74 Higgins Neuk 17 Dec.

S 180 Glenhead, Braes of Doune 8 Feb with 1 there on 2 Apr and 4 at Mid Lundie on 16 Jul. 80 Ashentree Fm., Thornhill Carse 3 Apr. 3 Garrison Fm., Inversnaid 23 Apr with 6 there 21 May. 2 Wood Lane, Blairdrummond Carse 26 Apr. 5 Braes of Balquhiddier 4 May. 2 Sron Eadar a' Chinn, Callander 19 May and 7 Jul. 1 W side L. Tay 21 May. 3 Braeleny, Callander 3 Jun.

LESSER REDPOLL *Carduelis cabaret* (b,W)

Recorded in low numbers on BBS with 4 birds this year compared to 12 last year (annual range: 2-27).

- C 16 W of Tillicoultry 26 Dec. During breeding season: 5 Birkhill, Gartmorn 8 and 10 Apr.
 S 25 Carron Valley Res. 7 Jan. 24 Ochiltree, Dunblane 14 Nov with 85 there 26 Nov. Ca. 30 Callander 19 Nov. During breeding season recorded from: Cromlix (6), Tyndrum community woodland, W side L. Tay, Glen Lochay and Glen Finglas where one collected nest material 21 May.

*COMMON CROSSBILL *Loxia curvirostra* (b,W)

Occurs in very low numbers on BBS transects with 8 birds recorded this year compared to 4 last year (annual range 0-11). Found only in coniferous/moorland edge habitat with 0.57 b/lkm.

- C 4M, 1F Birkhill, Gartmorn 2 Apr, 1 M there 8 Apr (RHD) with pr. and juv E Gartmorn 10 May (DAC). 17 School Wood, Clackmannan and 1 Hillfoot Hill, Dollar both 17 Apr (RHD).
 S 8 Carron Valley Res. 8 Jan and 19 Nov (DAC, GO). Single Sheriffmuir 26 Feb (CJP) with 6 there 9 Dec (EMH). 5 Lake of Menteith 9 Jul (DOE). 18 L. Rusky 30 Oct (RS) with 3 there 23 Oct (JT). 3 Hutchinson L. 11 Nov (CJP). 6 Lanrick 19 Nov (DOE). 10 Lerrocks, Braes of Doune 15 Dec (MVB). 2 Cromlix 17 Dec (CJP).

BULLFINCH *Pyrrhula pyrrhula* (B,W)

Occurs in low numbers on BBS with 7 birds this year compared to 6 last year (annual range: 1-13). This year it was only recorded on farmland and not in coniferous woodlands as in 2005.

- C During breeding season reported from: Birkhill, Gartmorn; Cambus Pools and Alva Glen.
 S 6 Marl Loch, Braes of Doune 29 Jan. 8 Keir, Dunblane 23 Jan. 6 King's Park, Stirling 1 Dec. 10 Airthrey 21 Dec. During breeding season reported from: Fallin; Coneyhill, BoA; Aberfoyle and G. Lochay.

*SNOW BUNTING *Plectrophenax nivalis* (W)

- S 1 Stob Binnein 3 Jan (MML). 25 Allt a Chaol Ghlinne, Tyndrum 6 Mar (JPH).

YELLOWHAMMER *Emberiza citrinella* (B,W)

The BBS rate of 0.63 b/lkm represents the highest figure since recording began locally. Numbers were up by 2 % compared to last year and were 62 % higher than the mean (range: 0.08-0.61 b/lkm) with all the birds being recorded on farmland (1.20 b/lkm).

- C During breeding season reported in Gartmorn area Apr, May and Jun. 10 Blackgrange, Cambus 16 Dec.
 S 50 South Mid Frew feeding station, Thornhill Carse 10 Jan. During breeding season reported from: Hollow Burn, Fallin; S Alloa; Lower Greenyards, Forthbank where 15 on 26 Dec; Flanders Moss; Glen Lochay; Blairdrummond; Longbank, Doune. 25 Glenhead, Braes of Doune 16 Sep. 15 Polmaise 26 Dec.

REED BUNTING *Emberiza schoeniclus* (B,W)

With 61 birds, numbers on BBS were almost twice as high as the previous highest number (annual range 11-35 birds). This represents a 450 % increase on 2005 and is 114 % above the mean. It was recorded at its highest levels on mountain and moorland squares (0.60 b/lkm), then farmland (0.48 b/lm).

- F 8 Kinneil 19 Mar. During breeding season reported from Shildhill, Falkirk and Skinflats where 59 at Orchardhead 1 Dec and 31 on 26 Dec.
 C 12 R. Devon, Alva 6 Jan. During breeding season reported from: Cambus Pools; R. Devon, Alva and Gartmorn. 8⁺ roosting Castlebridge Business Park, The

- Forest 1 Dec. 20 Blackgrange, Cambus 16 Dec.
S 18 L. Arklet 2 Feb. During breeding season reported from: Carron Valley Res.
and Arie Dam, Callander. 15 Lower Greenyards, Forthbank 26 Dec.

ESCAPED SPECIES

SWAN (CHINESE) GOOSE *Anser cygnoides*

This is the first time this species has been reported from our recording area.

- S Airthrey throughout the year (CJP, AET). This bird has been present since at least 2003.

BAR-HEADED GOOSE *Anser indicus*

This is the first time this species has been reported from our recording area.

- S Wester Borland, Thornhill with Pink-footed Geese 25 Oct (JT).

EGYPTIAN GOOSE *Alopochen aegyptiacus*

The long-staying bird that was first discovered on the Forth on 22 Jan 2003 was present until Sep.

- F R. Forth, Bandedeath 2 Jul (AET), then Skinflats on 4, 8, 13, 15 and 18 Sep (MVB, RS, AET, GO, DOE, AB).

- C Cambus 11 May (DAC).

WOOD DUCK *Aix sponsa*

The long-staying male from 2004 was still present in Jan.

- S Castle Business Pk., Stirling on 5, 14 and 27 Jan (AET, RS).

