



**MERSEYSIDE
RINGING
GROUP**



**Annual Report
2010**

MERSEYSIDE RINGING GROUP

Registered Charity No 700044

www.merseysiderg.org.uk

Report Editor: Peter Coffey



Cover photo: Two Marsh Harrier chicks ringed at a site in north Cheshire in July 2011 after a successful first year of breeding in 2010. These chicks are at a more advanced stage of development than those photographed last year (see Nest Records 2010 article on page 20). You can see from the relative size of the chicks (and the legs and feet in particular!) that the larger bird is a female and the smaller a male. (*Photo: David Norman*)

Acknowledgements

Merseyside Ringing Group receives vital co-operation from many landowners, farmers and gamekeepers in Merseyside, Cheshire and north Wales. They permit group members to work on their property and without their generous help, much of the work of the group would be impossible. The Group also receives considerable support from local authority countryside and ranger teams, local Wildlife Trusts and private individuals. Thank you all for your support.

Maps showing the distribution of controls and recoveries have been produced using DMAP ©.

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RECORDS SECRETARY'S REPORT

Bob Harris

Every year the group manages to produce some new record or other within its on-going history and this year is no exception. Over the last ten years or so the group has consistently been ringing approximately 95 different species each year. This year we smashed that with 106 species ringed and also added two new species to the group list in the process: Marsh Harrier in north Cheshire and Icterine Warbler in north Wirral. Admittedly there was a move to try to breach the 100 mark when it became a real possibility and this generated further ringing records. For instance the group totals for Tufted Duck, Hobby and Pallas's Warbler were all doubled, even it was only a single bird in each case.



Icterine Warbler caught by Dave Cross on 2nd September 2010 (Photos: P Coffey)

All of this activity produced the next obvious record – our best year for ringing totals ever. The final total for 2010 was 23,200 new birds ringed (compared to our previous highest year, 2009, when we ringed 22,207). Pullus-ringing totals were slightly higher than in 2009 but were still far below the 2004 totals when we ringed in excess of five thousand pulli. In the case of some species the decline is understandable – no Common Tern due to the loss of breeding at the colony, and Grey Herons because the trees in use are now considerably bigger than they were before. For others it is probably a reflection of national trends of falling breeding coupled with changes in group activity. For instance Lapwing pulli ringing is less than 25% of previous totals, Redstart numbers are down and Chats absent. More numerous species are not immune either as we ringed approximately half the number of Blue and Great Tit pulli as we did in 2004. On the other hand we are ringing more of certain species – Buzzard, Barn Owl, Blackbird, Tree Sparrow and Reed Bunting.

All of this increasing ringing witnessed welcome returns of some species to the group's annual list: Little Grebe (not since 2005), Merlin (since 2006), Hobby (since 2002), Black-tailed Godwit (since 1991), Greenshank (since 1995) and Bearded Tit (since 2006). Additionally some birds passed notable ringing totals: Dunlin (22,500), Redshank (4000), Little Tern (1000), Barn Owl (2000), Great Spotted Woodpecker (1000), Mistle Thrush (900), Chiffchaff (8000), Long-tailed Tit (10,000), Great Tit (40,000), Jackdaw (300) and House Sparrow (3000).

There was no change to the species in the Top Ten list for this year, but some changes in their order. More Reed Warblers and Blackcaps were ringed, and fewer Greenfinches, whose populations in some parts of our area have been badly hit by *trichomoniasis*. Both Blue Tit and Great Tit increased their percentages of the number of birds ringed, while all of the others remained at about the same ringing level as previous years (3-5%). The Top Ten species accounted for 60.9% of all birds ringed for the year.

This year 102 selected controls and recoveries are documented covering 29 species. First among these is MRG's first Little Egret where we too bear witness to the increasing distribution of this species! Of the gulls, the ringing undertaken at both Rixton and Risley in the early 1990's continues to bring returns – one from Poland and another from Latvia. The Finnish Black-headed gull first recorded in New Brighton in 2006 continues to frequent this part of the Wirral. Oxmoor Wood again contributes some interesting recoveries – this year including two Sand Martins from, and a Reed Warbler to, France. Woolston also added some French recoveries with birds to and from the country, and there was a constant swapping of species with Icklesham from Woolston.

Scandinavia featured in this year's recoveries with a Blackbird to Sweden and a Siskin to Norway, MRG's first. Another Siskin was the first Spanish-ringed control for the group (and only the fifth Spanish recovery for the Ringing Scheme). Finally, it is interesting to note the flock of at least eight Long-tailed tits caught and ringed in Ashton-in-Makerfield and, 37 days and 38km later, controlled at Meols.

There were 31 active members ringing within the group, ringing at over 248 sites. Of these, 163 sites generated pullus records, 31 sites recorded more than 100 new free-flying birds with seven sites recording over 1000 new birds ringed. Twelve members contributed Nest Records, all submitted electronically, and two Pied Flycatcher RAS projects (Prion and Glyn Arthur) and one Willow Tit RAS (Woolston) were run with data submitted.

The group sent direct contributions to the following bird reports: North-East Wales, CAWOS and L&CFS. No direct records were sent for Welsh Birds, as has been done in previous years, as the data they require are now fully accessible from the on-line BTO Ringing Report. All appropriate records were submitted to the BTO Bird Atlas 2007-2011.



Mandarin Duck chicks were ringed on 27th June 2010 in Sherdley Park, St Helens and the Tufted Duck was ringed on 24th January 2010 in Taylor Park, St Helens (Photos: K Foster)

GRAND TOTALS 2010

<u>Species</u>	<u>Adult</u>	<u>Pullus</u>	<u>Total</u>
106	19887	3313	23200

GRAND TOTALS SINCE 1954

<u>Species</u>	<u>Total</u>
197	770361

NEW SPECIES IN 2010

Marsh Harrier
Icterine Warbler

TOP TEN SPECIES RINGED IN 2010

Species	Number ringed	% of yearly total
Blue Tit	3534	15.2
Great Tit	2363	10.2
Chaffinch	1381	5.9
Reed Warbler	1318	5.7
Blackcap	1162	5.0
Greenfinch	1069	4.6
Goldfinch	924	4.0
Chiffchaff	909	3.9
Long-tailed Tit	774	3.3
Blackbird	707	3.0
Totals	14141	60.9

Ringing Totals 2010

Nomenclature based on BTO ringing reports

Species	Adult	Pullus	Total	Total since 1954
Mute Swan	1		1	760
Whooper Swan				1
Greylag Goose				1
Canada Goose	1		1	160
Shelduck				75
Mandarin Duck		9	9	10
Gadwall				7
Teal				1626
Mallard	5		5	1164
Pintail				40
Garganey				6
Shoveler				8
Tufted Duck	1		1	2
Red-legged Partridge				1
Grey Partridge				12
Common Pheasant				1
Fulmar				2
Manx Shearwater				1
Storm Petrel				21
Cormorant				228
Shag				109
Grey Heron				1689
Little Grebe	1		1	17
Great Crested Grebe				3
Marsh Harrier		3	3	3
Hen Harrier				1
Goshawk				3
Sparrowhawk	18	7	25	1495
Buzzard	2	12	14	181
Rough-legged Buzzard				1
Kestrel	5	46	51	1228
Merlin	1		1	12
Hobby	1		1	2
Peregrine				67
Water Rail	1		1	151
Spotted Crake				4
Corncrake				1
Moorhen	10		10	927
Coot	4		4	61
Oystercatcher	12	2	14	2684
Avocet				6
Little Ringed Plover	2		2	173
Ringed Plover	6	3	9	1287
Golden Plover				186
Grey Plover				30
Lapwing	3	23	26	2847
Knot				5292

Species	Adult	Pullus	Total	Total since 1954
Sanderling				3967
Little Stint				111
Pectoral Sandpiper				4
Curlew Sandpiper				44
Purple Sandpiper				1
Dunlin	49		49	22507
Buff-breasted Sandpiper				1
Ruff				77
Jack Snipe	1		1	106
Snipe	6		6	631
Woodcock	1		1	11
Black-tailed Godwit	1		1	19
Bar-tailed Godwit				190
Whimbrel				6
Curlew	6		6	349
Common Sandpiper	2		2	125
Green Sandpiper				9
Spotted Redshank				1
Greenshank	1		1	12
Wood Sandpiper				7
Redshank	86		86	4001
Turnstone				1125
Kittiwake				276
Black-headed Gull	7		7	6177
Little Gull				1
Great Black-backed Gull				287
Common Gull	2		2	79
Lesser Black-backed Gull				1619
Herring Gull				5911
Yellow-legged Gull				2
Iceland Gull				1
Little Tern		50	50	1000
Black Tern				3
Sandwich Tern				37
Common Tern				17472
Roseate Tern				1376
Arctic Tern				1583
Guillemot				242
Razorbill				57
Puffin				42
Stock Dove	10	7	17	286
Woodpigeon	40	124	164	2542
Collared Dove	23		23	921
Turtle Dove				13
Cuckoo				37
Barn Owl	42	198	240	2237
Little Owl		10	10	188
Tawny Owl	1	7	8	359
Long-eared Owl				53
Short-eared Owl				8
Nightjar				5

Species	Adult	Pullus	Total	Total since 1954
Swift	2	4	6	7705
Kingfisher	19		19	226
Hoopoe				1
Green Woodpecker	1		1	44
Great Spotted Woodpecker	64		64	1047
Lesser Spotted Woodpecker	1		1	20
Woodlark				1
Skylark		1	1	828
Shore /Horned Lark				1
Sand Martin	107		107	18692
Swallow	414	289	703	74927
House Martin	2	4	6	2674
Yellow Wagtail				1877
Grey Wagtail	2	7	9	935
Pied/White Wagtail	4		4	2524
Tree Pipit	3		3	116
Meadow Pipit	21	4	25	2193
Rock Pipit				116
Water Pipit				1
Waxwing	2		2	46
Dipper		20	20	4505
Wren	395	24	419	11282
Dunnock	453	12	465	12334
Robin	605	31	636	13769
Nightingale				2
Bluethroat				3
Black Redstart				1
Redstart	2	20	22	1174
Whinchat				1695
Stonechat				293
Wheatear				1694
Ring Ouzel				53
Blackbird	636	71	707	28818
Fieldfare	12		12	1520
Song Thrush	124	6	130	6584
Redwing	64		64	5689
Mistle Thrush	6	1	7	901
Cetti's Warbler	3		3	26
Grasshopper Warbler	19	1	20	488
Aquatic Warbler				3
Sedge Warbler	389	4	393	12923
Blyth's Reed Warbler				1
Marsh Warbler				5
Reed Warbler	1301	17	1318	15880
Icterine Warbler	1		1	1
Blackcap	1162		1162	11758
Garden Warbler	80		80	1255
Barred Warbler				1
Lesser Whitethroat	14		14	687
Whitethroat	418	22	440	60401
Arctic Warbler				1

Species	Adult	Pullus	Total	Total since 1954
Pallas's Leaf Warbler	1		1	2
Yellow-browed Warbler				6
Bonelli's Warbler				1
Wood Warbler	1		1	463
Chiffchaff	883	26	909	8818
Willow Warbler	460	6	466	17212
Goldcrest	326		326	6661
Firecrest	3		3	72
Spotted Flycatcher	1	17	18	543
Red-breasted Flycatcher				2
Pied Flycatcher	73	603	676	21675
Bearded Tit	1		1	42
Long-tailed Tit	768	6	774	10289
Blue Tit	2869	665	3534	77410
Great Tit	1703	660	2363	40702
Coal Tit	268	56	324	5955
Willow Tit	70	5	75	1274
Marsh Tit	1		1	170
Nuthatch	78	20	98	1843
Treecreeper	45	5	50	972
Woodchat Shrike				1
Magpie	28	4	32	1044
Jay	43		43	812
Jackdaw	15	17	32	300
Rook				611
Carrion Crow	2		2	380
Raven		3	3	31
Starling	289		289	17036
House Sparrow	212	19	231	3129
Tree Sparrow	81	92	173	9367
Chaffinch	1368	13	1381	25659
Brambling	185		185	7488
Serin				1
Greenfinch	1065	4	1069	46853
Goldfinch	919	5	924	9093
Siskin	271		271	6524
Linnet	112	17	129	11812
Twite				86
Lesser Redpoll	239		239	983
Common Redpoll	1		1	3399
Common Crossbill				36
Bullfinch	399		399	4949
Hawfinch				1
Snow Bunting				37
Yellowhammer	11		11	1247
Little Bunting				1
Reed Bunting	418	31	449	18640
Corn Bunting				304
Totals	19887	3313	23200	770361*

*due to a typing error from last year, combined with an audit, there is a new running 'Totals since1954'.

SELECTED CONTROLS AND RECOVERIES 2010

Peter Coffey

A selection of 102 records from 29 species is shown below. Thirteen MRG-ringed birds were recorded from eight foreign locations and five foreign-ringed birds (three French, one Spanish, and one Finnish) were recorded or controlled here. Six records are for earlier years (one for 2008, five for 2009) and relate to delays in receiving information from the French and Spanish ringing schemes.

The symbols and conventions used are given below:

Sex: M = Male F = Female

Age when ringed (Euring Code):

- 1 Pullus (nesting or chick)
- 2 Fully grown – year of hatching unknown
- 3 Definitely hatched during the calendar year of ringing
- 3J Definitely hatched during the calendar year of ringing and still completely or partially in juvenile body plumage
- 4 Hatched before current calendar year – exact year unknown
- 5 Definitely hatched during the previous calendar year
- 6 Hatched before last calendar year – exact year unknown
- 7 Definitely hatched two years before year of ringing
- 8 Hatched more than two calendar years before year of ringing
- 9 Definitely hatched three years before year of ringing

Condition at recovery:

- X found dead
- XF found freshly dead or dying
- XL found dead – not recent
- + shot or intentionally killed by man
- +F shot or intentionally killed by man – fresh
- SR sick or injured – released with ring
- V alive and probably healthy, caught and released but not by a ringer
- VV alive and probably healthy, ring or colour marks read in the field but not by ringer
- R caught and released by ringer
- B caught and released by ringer – nesting
- RR alive and probably healthy, ring or colour marks read in the field by ringer
- // condition on finding totally unknown
- © bird caught at breeding colony
- ® bird caught at roost

Abbreviations used for foreign ringing schemes:

ESI Spain, Madrid (Icona); FPR France, Paris; SFH Finland, Helsinki

Mute Swan

W21791	3	11.12.2007	near New Brighton, Merseyside	
(C/R SZS)	RR	11.11.2010	Sefton Park, Liverpool, Merseyside	11km 134°

ZY0306	5	04.12.2008	near New Brighton, Wirral, Merseyside	
	R	11.10.2010	Sefton Park, Liverpool, Merseyside	10km 139°
ZY1400	5	09.10.2009	Waterloo, Crosby, Liverpool, Merseyside	
	R	11.10.2010	Sefton Park, Liverpool, Merseyside	13km 154°

Little Egret

GC11772	1	13.06.2009	Penrhyn Castle, Bangor, Gwynedd	
	VV	03.01.2010	Norton Priory, Runcorn, Cheshire	96km 90°
	VV	20.08.2010	Leighton Moss, Nr Silverdale, Lancashire	134km 45°

MRG's first control of a Little Egret, showing interesting movement around the Irish Sea coast.

Kestrel

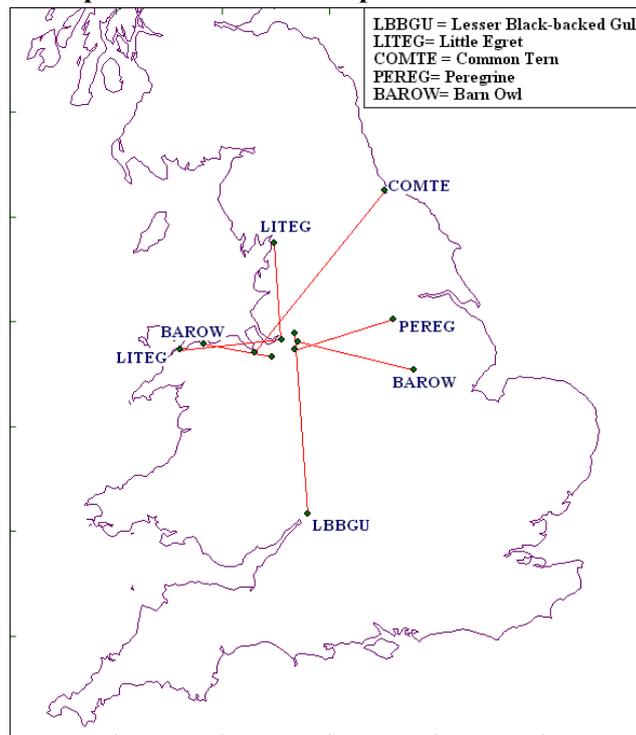
ET63086	1(3/3)	03.06.2007	Meols, Wirral, Merseyside	
	XF	15.04.2010	A55, Abergele, Clwyd	30km 249°
ET30459	1 (4/4)	09.06.2006	near Alvanley Hall, Cheshire	
	R(=F)	03.07.2010	Ternhill Quarry, Stoke Heath, Shropshire	46km 160°

Peregrine

GF57945	1 (3/3)	22.05.2000	near Northwich, Cheshire	(3670 days)
	X	09.06.2010	Bessacarr, Doncaster, South Yorkshire	97km 73°

This is the second Peregrine ringed in Cheshire as a chick that subsequently moved a considerable distance, in both cases towards the east; the first, ringed in 1999, flew to Leicestershire.

Map 1: Selected UK non-passerine movements



Redshank

DB97888	1 (2/2)	22.05.2006	Carnforth Marsh, Lancashire	
	R	15.08.2010	Frodsham Marsh, Cheshire	93km 178°
DD89528	6	13.02.2010	Bangor Harbour, Gwynedd	
	R	15.03.2010	Moreton, Wirral, Merseyside	69km 73°

Black-headed Gull

ES29912	4	09.11.1996	Moss Side Farm, Risley, Warrington,	
	RR	05.10.2010	Marine Lake, Southport, Merseyside	41km 307°
ES09148	6	13.03.1993	Rixton, Warrington, Cheshire	(6470 days)
	XF	29.11.2010	near Crewe, Cheshire	36km 177°
SFH	6	16.04.2005	Espoo 60°14'N 24°32'E Uusimaa, FINLAND	
ST223406	RR	18.02.2006	New Brighton, Wirral (also 2007, 2008 and 2009)	
	RR	23.01.2010	New Brighton, Wirral	1828km 258°
ES29912	4	09.11.1996	Moss Side Farm, Risley, Warrington	
	VV	20.05.2010	Dojlidy Fish Ponds 53°06'N 23°12'E Bialystok, POLAND	1710km 92°
ES95614	5	12.04.1997	Moss Side Farm, Risley, Warrington	
	VV	30.04.2010	Rumbula 56°53'N 24°15'E Riga, LATVIA	
	VV	01.05.2010	Rumbula Riga, LATVIA	1741km 78°

Lesser Black-backed Gull

GH92300	11	06.11.1993	Rixton, Warrington, Cheshire	(6223 days)
	R	20.11.2010	nr Hempsted, Gloucester, Gloucestershire	173km 176°

(Re-ringed FH33341; colour-rings added)

Common Tern

SR65517	1	29.06.2008	Shotton Steel Works, Flintshire	
	R	10.09.2010	Parque National Marismas del Odiel, 37°16'N 6°55'W, Huleva, SPAIN	1798km 190°
SV62196	1	17.07.2001	Shotton Steel Works, Flintshire	
	R	21.07.2010	Seal Sands, Teesmouth, Stockton-on-Tees	198km 38°

A further 49 Common Terns ringed as pulli at Shotton were re-sighted at Seaforth, Merseyside, 28 km 5° in 2010.
The oldest were two birds ringed in 1995.

Barn Owl

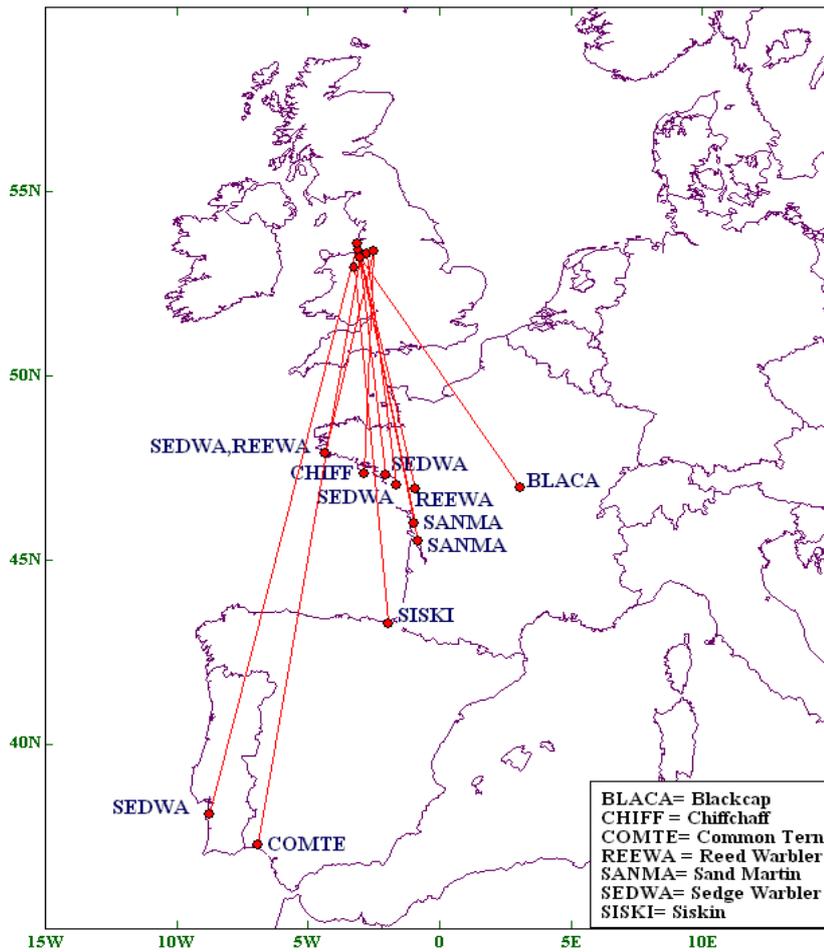
GN48424	1 (4/4)	19.06.2005	Bostock Green, Cheshire	
	B(=F)	28.06.2010	Spoonley, Market Drayton, Shropshire	34km 182°
GC51619	1(2/2)	09.08.2008	Thornton Hough, Wirral, Merseyside	
	X	10.06.2010	Wrexham, Clwyd	32km 174°
GC51861	1F(4/4)	29.06.2009	Crewe Engines, Coppenhall, Cheshire	
	X	23.02.2010	Sedsall, Rocester, Derbyshire	47km 119°
	(Ring only found in fox dropping)			
GC51884	1M(3/3)	08.07.2009	near Hockenhull Hall, Cheshire	
	XF	06.04.2010	Mochdre, Colwyn Bay, Clwyd	66km 280°
FH16296	1 (5/5)	30.06.2009	Site Confidential, near Capenhurst, Cheshire	
	R(=F)	17.10.2010	Vale Farm, nr Earnslow Grange, Cheshire	26km 99°
GC78633	1F(2/2)	07.08.2010	Winterbottom Farm, Cheshire	
	S (road)	08.11.2010	Newark-on-Trent, Nottinghamshire	106km 100°

Thirty-six other records were received relating to movements of <25km; eighteen involved recoveries and eighteen were controls/retraps.

Sand Martin

FRP 6016641	3	12.09.2008	La Cabane de Moins, Breuil-Magne, 45°59'N 0°57'W Charente-Maritime, FRANCE	
	R(=F)	25.07.2009	Oxmoor Wood, near Runcorn, Cheshire	828km 352°
FRP 6230728	3	08.08.2009	Roseliere, Chenac-Saint-Seurin-d'Uzet, 45°31'N 0°49'W Charente-Maritime, FRANCE	
	R(=M)	26.06.2010	Oxmoor Wood, near Runcorn, Cheshire	881km 352°

Map 2: Recoveries/controls from southern Europe



Swallow

L190649	1 (4/4)	06.06.2010	nr Alder Forest, Worsley, Greater Manchester	
	R	14.08.2010®	Woolston Eyes, Warrington, Cheshire	15km 219°
V653995	1 (5/5)	12.06.2010	New Hall Farm, near Hoylake, Merseyside	
	R	30.08.2010	near Gressingham, Lancashire	88km 22°
X931799	1 (4/5)	01.08.2010	Acton Bridge, Cheshire	
	R	22.08.2010®	Worsley, Greater Manchester	30km 29°

Meadow Pipit

X572487	3	14.09.2009	Oxmoor Wood, near Runcorn, Cheshire	
	R	30.09.2010	Llanwrthwl, nr Rhyader, Powys	137km 206°

Blackbird

CW48304	5M	23.03.2006	Eastham, Wirral, Merseyside	
	V	28.11.2010	Groene Glop 53°28'N 6°13'E Friesland, NETHERLANDS	609km 89°
CT64893	4F	29.12.2008	Mossley, near Whixall, Shropshire	
	X	04.08.2010	Rydnas, Jamjo 56°11'N 15°55'E Blekinge, SWEDEN	1257km 74°

Cetti's Warbler

X928054	3F	31.10.2009	Woolston Eyes, Warrington, Cheshire	
	R	06.07.2010	Drove Orchard, Thornham, Norfolk	213km 104°

The majority of Cetti's Warblers ringed by MRG have been juveniles caught in autumn during their post-natal dispersal. This female was controlled back in one of their strongholds in the breeding season.

Sedge Warbler

T651922	4	25.04.2010	Shotton Steel Works, Flintshire	
	XF	29.06.2010	Aultbea, Highland	538km 343°
X698804	3	13.08.2009	near Hempsted, Gloucester, Gloucestershire	
	R	01.08.2010	Frodsham Marsh, Cheshire	153km 349°
X574477	3J	23.07.2010	Meols, Wirral, Merseyside	
	R	06.08.2010	Frampton-on-Severn, Gloucestershire	190km 164°
L114604	3	19.08.2010	Woolston Eyes, Warrington, Cheshire	
	R	25.08.2010	Icklesham, East Sussex	352km 142°
L114115	3	24.07.2010	Woolston Eyes, Warrington, Cheshire	
	R	17.08.2010	Marazion Marsh, Cornwall	415km 210°

Most Sedge Warblers move S or SE on migration so finding this bird in Cornwall is unusual. It was caught there by a Woolston ringer (Margaret Rawlins) on holiday.

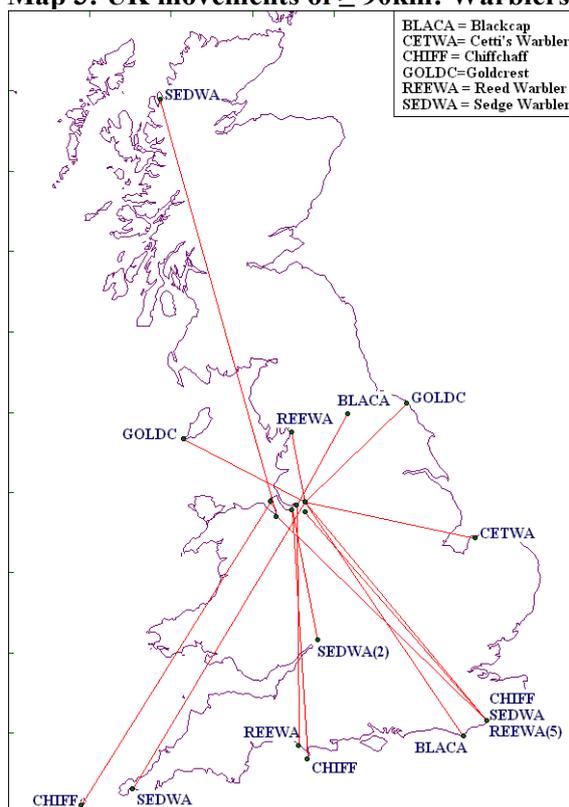
FRP 6055016	3	17.08.2008	Trunvel, Treogat, 47°53'N 4°21'W Finistère, FRANCE	
	R(=F)	16.05.2009	Woolston Eyes, Warrington, Cheshire	
	R(=F)	13.06.2009	Woolston Eyes, Warrington, Cheshire	625km 12°
FRP 5346832	2	01.08.2007	Tour aux Moutons, Donges, 47°19'N 2°04'W Loire-Atlantique, FRANCE	
	R(=M)	09.06.2010	Leasowe, Wirral, Merseyside	682km 354°
L406456	3	10.08.2010	Frodsham Marsh, Cheshire	(9 days)
	R	19.08.2010	Mars-Ouest, Saint-Philbert-de-Grand-Lieu, 47°02'N 1°38'W Loire-Atlantique, FRANCE	701km 174°
X064073	3	23.08.2008	Oxmoor Wood, near Runcorn, Cheshire	
	R	26.08.2010	Lagoa de Santo Andre, 38°05'N 8°47'W Setubal, PORTUGAL	1760km 196°

Note that this bird was ringed on 23rd August as a juvenile; two years later as an adult it was already back in Portugal by 26th August. It was caught there by a ringing team including Pete Fearon.

Reed Warbler

R128266	3J	23.08.2002	Rostherne Mere, Knutsford, Cheshire	(2814 days)
	R	07.05.2010	Woolston Eyes, Warrington, Cheshire	11km 291°

Map 3: UK movements of ≥ 90 km: Warblers



X092124	3 R	30.08.2008 08.05.2010	Leighton Moss, near Silverdale, Lancashire Woolston Eyes, Warrington, Cheshire	90km 169°
V849891	3J R(=M)	25.07.2009 03.06.2010	Woolston Eyes, Warrington, Cheshire Betley Mere, Betley, Staffordshire	42km 167°
X912282	3 R(=M)	10.09.2009 18.06.2010	Belvide, near Brewood, Staffordshire Woolston Eyes, Warrington, Cheshire	81km 345°
X831069	3 R(=M)	13.09.2009 05.06.2010	West Everleigh Down, Wiltshire Woolston Eyes, Warrington, Cheshire	238km 348°
L405333	3J R	18.09.2010 28.09.2010	Oxmoor Wood, near Runcorn, Cheshire Abbotsbury Swannery, Dorset	301km 179°
V384262	3J R	20.06.2009 28.07.2010	Woolston Eyes, Warrington, Cheshire Icklesham, East Sussex	352km 142°
X145698	3 R	31.07.2009 05.05.2010	Icklesham, East Sussex Anderton Nature Park, Northwich, Ches	342km 321°
L114505	3J R	15.08.2010 02.09.2010	Woolston Eyes, Warrington, Cheshire Icklesham, East Sussex	352km 142°
L115138	3J R	24.07.2010 18.08.2010	Woolston Eyes, Warrington, Cheshire Icklesham, East Sussex	352km 142°
T651948	4 R	23.05.2010 25.07.2010	Shotton Steel Works, Flintshire Icklesham, East Sussex	362km 136°

X931636	3J	24.07.2010	Oxmoor Wood, near Runcorn, Cheshire	
	R	25.08.2010	Stepro, Rochefort 45°56'N 0°56'W Charente-Maritime, FRANCE	834km 172°

X570822	3	12.09.2009	Woolston Eyes, Warrington, Cheshire	
	R	01.10.2009	Trunvel, Treogat 47°53'N 4°21'W Finistere, FRANCE	625km 192°

Twelve other movements of <40km were also recorded in 2010.

Blackcap

V025631	3J	15.08.2010	Catterick Garrison, North Yorkshire	
	R (=F)	31.08.2010	Oxmoor Wood, near Runcorn, Cheshire	129km 209°

X570910	3F	26.09.2009	Woolston Eyes, Warrington, Cheshire	
	B	03.08.2010	Heysham Harbour, Heysham, Lancashire	77km 341°

X305569	3J	24.07.2009	Meols, Wirral, Merseyside	
	R(=F)	12.09.2010	Woolston Eyes, Warrington, Cheshire	42km 91°

L407183	3JF	14.08.2010	Woolston Eyes, Warrington, Cheshire	
	R (=M)	18.09.2010	Icklesham, East Sussex	352km 142°

X555165	3F	13.09.2009	Beachy Head, East Sussex	
	B	19.06.2010	Woolston Eyes, Warrington, Cheshire	
	R	17.07.2010	Woolston Eyes, Warrington, Cheshire	351km 328°

FRP 5689219	3F	14.09.2008	Les Chamons, Marzy, 46°58'N 3°05'E Nièvre, FRANCE	
	R	28.06.2009	Shotton Steel Works, Flintshire	821km 328°

Chiffchaff

DCV930	4	12.09.2010	Anderton Nature Park, Northwich, Cheshire	
	R (=3)	14.10.2010	Icklesham, East Sussex	342km 141°

CHT290	3J	03.09.2010	Frodsham Marsh, Cheshire	
	R(=M)	12.10.2010	Portland Bill, Dorset	310km 176°

BVP695	3	18.10.2009	Porth Hellick, St Mary's, Scilly Isles	
	R	22.03.2010	Meols, Wirral, Merseyside	442km 30°

9M4661	3	22.08.2008	Woolston Eyes, Warrington, Cheshire	
	R	17.10.2008	Ile de Hoedic, 47°20'N 2°53'W Morbihan, FRANCE	673km 183°

Four other movements of <30km were recorded in 2010.

Goldcrest

BEL431	3M	27.09.2010	Calf of Man, Isle of Man	(5 days)
	R	02.10.2010	Woolston Eyes, Warrington, Cheshire	168km 117°

CHD275	3M	10.10.2010	near Black Nab, Whitby, North Yorkshire	
	R	06.11.2010	Woolston Eyes, Warrington, Cheshire	176km 227°

DCV398	3F	22.10.2010	Meols, Wirral, Merseyside	
	R	25.11.2010	Lilford Park, nr Leigh, Greater Manchester	45km 74°

Pied Flycatcher

T830700	1(6/6) B(=F)	02.06.2006 19.05.2010	Llwynmawr, Clwyd Habberley, Shropshire	37km 149°
V651823	1(8/8) B(=M)	07.06.2008 05.06.2010	Pandy, near Glyn Ceiriog, Clwyd Hurst, Clun, Shropshire	56km 168°
X065173	1 (6/6) R(=F)	03.06.2009 05.05.2010	Nant, Gwynedd Portland Bill, Dorset	319km 161°

Four other movements of <30km were recorded in 2010.

Long-tailed Tit

ATY565	2 R	04.09.2010 11.10.2010	Bryn, Ashton-in-Makerfield, Gtr Manchester Meols, Wirral, Merseyside	38km 247°
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This is just one of eight birds caught in a flock that had been ringed together, part of a larger flock of at least 12 birds. The ringing and finding details for all the birds are the same.

DCY175	3J R	16.07.2010 25.11.2010	Woolston Eyes, Warrington, Cheshire Ince Blundell, Merseyside	37km 295°
BTN987	3J R	09.06.2009 14.02.2010	Meols, Wirral, Merseyside Arley Hall, Arley Green, Cheshire	44km 100°

It is unusual to have this number of long-distance movements in one year for such a relatively sedentary species.

Blue Tit

R415642	3 XF	21.09.2003 09.01.2010	Marston, Cheshire Marston, Cheshire	(2303 days) 0km 360°
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Great Tit

X794069	5F R	30.03.2010 08.04.2010	Gibraltar Point, Skegness, Lincolnshire Birchwood, Warrington, Cheshire	(9 days) 192km 282°
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Carrion Crow

FP19148	1(2/2) +F	24.05.2008 28.04.2010	Speke Hall, Liverpool, Merseyside near Stoak, Chester, Cheshire	10km 174°
FR76830	4F +F	17.05.2003 17.10.2010	Hilbre Island, Wirral, Merseyside Meols, Wirral, Merseyside	(2710 days) 6km 72°

Greenfinch

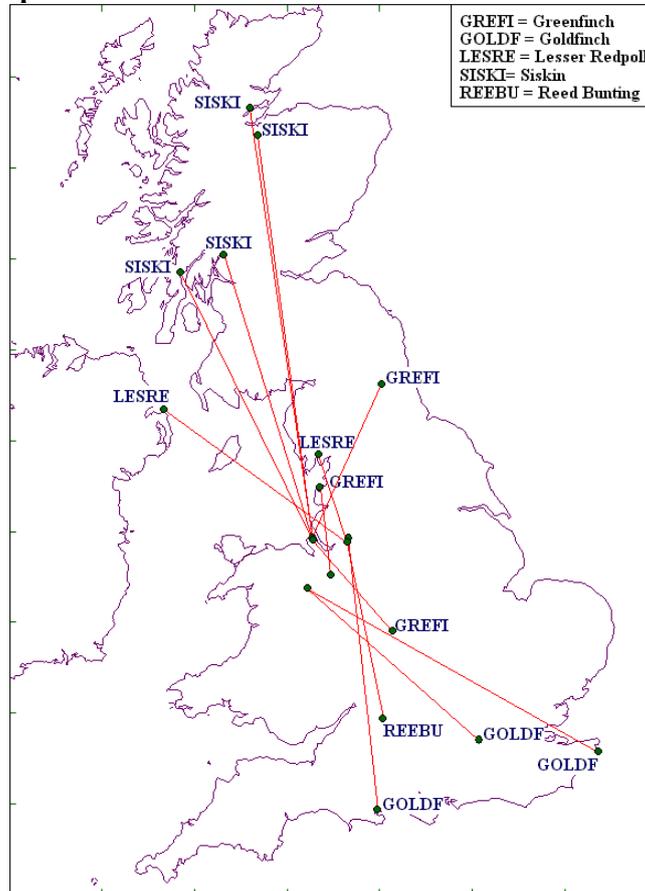
VV06011	3M XF	07.10.2009 03.08.2010	Leasowe, Wirral, Merseyside Riding Mill, Northumberland	184km 24°
TJ93939	3F R	25.10.2010 19.12.2010	Knott End-on-Sea, Lancashire Meadow Bank Farm, Broxton, Cheshire	96km 173°
TJ08123	3F R	11.11.2009 05.03.2010	Llwynmawr, Clwyd Upton Magna, Shrewsbury, Shropshire	43km 125°
TL07376	3F R	21.10.2009 13.10.2010	Birchwood, Warrington, Cheshire Ramsley Reservoir, Derbyshire	65km 107°
TP83072	4M XF	09.10.2010 21.12.2010	Woolston Eyes, Warrington, Cheshire New Mills, High Peak, Derbyshire	36km 93°

TJ07723	5F	02.06.2009	Bidston, Wirral, Merseyside	
	XF	08.10.2010	Handsworth, Birmingham, West Midlands	126km 143°

Goldfinch

X572185	3JF	27.08.2009	Oxmoor Wood, near Runcorn, Cheshire	
	R	11.02.2010	Great Warford, Cheshire	27km 103°
X436287	3M	28.10.2008	Queen Mary Reservoir, Surrey	
	R	03.04.2010	Llwynmawr, Wrexham	248km 313°
X574509	5	28.02.2010	Birchwood, Warrington, Cheshire	
	R(=F)	20.11.2010	Sandy Close Pond, Upton, Dorset	302km 174°
X192909	5M	08.02.2009	Sandwich Bay Estate, Kent	
	R	01.04.2010	Llwynmawr, Wrexham	361km 301°

Map 4: UK movements of ≥ 90km: Finches and Buntings



Siskin

X067440	5M	04.03.2009	Sutton Weaver, Runcorn, Cheshire	
	R	16.05.2010	Overbygda, Trysil, 61°20'N 12°15'E Hedmark, NORWAY	1261km 46°

This is the fourth MRG-ringed Siskin to be caught abroad but the first in Norway.

T006812	6M	19.02.2009	Bidston, Wirral, Merseyside	
	R	03.04.2010	Inverarnie, Highland	448km 352°
T006897	5M	01.04.2009	Bidston, Wirral, Merseyside	
	R	26.06.2010	Drummond, Inverness, Highland	456km 351°

T006825	6F R	06.03.2009 29.03.2010	Bidston, Wirral, Merseyside Tarbet, Cnoc, Loch Lomond, Strathclyde	328km 342°
T006963	5F XF	11.04.2009 22.08.2010	Bidston, Wirral, Merseyside Ardrishaig, Argyll and Bute	329km 333°
R803786	6M R	07.03.2009 31.12.2010	Higher Bebington, Wirral, Merseyside Garth, Llangollen, Denbighshire	43km 188°
ESA Z48527	5M R	15.04.2009 29.04.2009	Lezo, 43°17'N 1°56'W Guipúzcoa, SPAIN (14 days) Llwynmawr, Wrexham SJ2136	1075km 356°

This is the first Spanish-ringed Siskin controlled by MRG and only the fifth BTO record.

Lesser Redpoll

L291465	3M R(=M)	12.10.2010 13.11.2010	Copeland Bird Observatory, Down, Northern Ireland Woolston Eyes, Warrington, Cheshire	244km 127°
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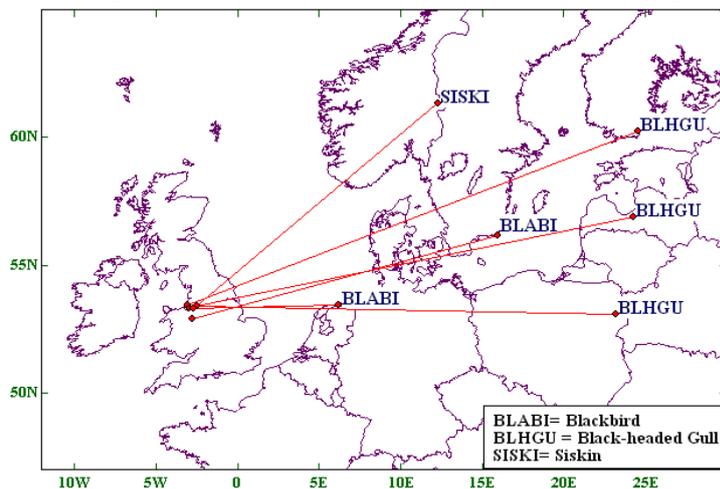
This is becoming a regular event – birds from Copeland have been controlled for each of the last three years.

R736715	3 R(=M)	07.10.2010 13.11.2010	Roudsea Wood, Haverthwaite, Cumbria Woolston Eyes, Warrington, Cheshire	100km 161°
X629179	4M B	06.07.2009 19.06.2010	Belmont, Bolton, Blackburn with Darwen Woolston Eyes, Warrington, Cheshire	28km 185°

Reed Bunting

V216479	3F R	29.10.2006 12.04.2010	Woolston Eyes, Warrington, Cheshire Newport, Shropshire	70km 171°
X357357	3F R	31.12.2008 19.12.2010	near Venusbank, Cound, Shropshire Meadow Bank Farm, Broxton, Cheshire	47km 352°
V849515	5M R	06.03.2009 02.05.2010	Woolston Eyes, Warrington, Cheshire Hall Road Station, nr Crosby, Merseyside	36km 288°
X874074	4M R	02.12.2009 17.04.2010	Betley Mere, Betley, Staffordshire nr Higher Walton, Warrington, Cheshire	42km 339°
L408742	4M R	23.10.2010 03.11.2010	Woolston Eyes, Warrington, Cheshire Cleveland Farm, Wiltshire	98km 168°

Map 5: Recoveries/controls from northern Europe



NEST RECORDS 2010

David Norman

Nest records are vital for analyses of population dynamics, integrated in studies with ringing data on productivity and survival. The MRG total of 705 submitted records this year was the fifth largest in the national scheme, making by some way the largest contribution from a ringing group. Our records came from twelve members and covered 58 species, with all but one of the records submitted electronically, the exception, as in 2009, being Black Swan because IPMR does not have a code for this species! A pleasing 43% of our total of nest records was from species considered to be Birds of Conservation Concern, 46 on the **Red List** and 305 on the *Amber List*. The top five species were the same as in 2009, in a slightly different order: Great Tit, Barn Owl, Blue Tit, Swallow, Pied Flycatcher.

Marsh Harriers bred for the first time in Cheshire. There are about 360 breeding pairs in the UK, mostly on the east coast and the only records for the west coast being in Lancashire and Isles of Scilly. David Norman, with assistance from Pete Burton and Richard Castell, used a mixture of traditional fieldwork and mobile phone technology to locate the nest.



Ten days old Marsh Harrier chicks, ringed under a Schedule 1 Licence in early July 2010, went on to fledge successfully. (Photo: D Norman)

The Group also contributed a collection of used Blackbird nests to a researcher at the University of St Andrews for a study into how individual birds construct their nests.

Nest records submitted in 2010

Great Crested Grebe	1	Dipper	6
Grey Heron	12	Wren	3
Mute Swan	2	<i>Duncock</i>	2
Black Swan	1	Robin	6
Canada Goose	4	<i>Redstart</i>	3
Mallard	2	Blackbird	26
Goosander	1	Song Thrush	3
<i>Marsh Harrier</i>	1	<i>Mistle Thrush</i>	1
Sparrowhawk	1	Reed Warbler	1
Goshawk	8	Chiffchaff	3
Buzzard	8	<i>Willow Warbler</i>	1
<i>Kestrel</i>	15	Spotted Flycatcher	4
Peregrine	3	<i>Pied Flycatcher</i>	81
Moorhen	1	Long-tailed Tit	4
Coot	2	Coal Tit	5
<i>Oystercatcher</i>	3	Blue Tit	96
Lapwing	8	Great Tit	102
<i>Redshank</i>	1	Nuthatch	3
Stock Dove	18	Treecreeper	2
Woodpigeon	3	Jackdaw	11
Collared Dove	3	Raven	2
Tawny Owl	5	Starling	1
<i>Barn Owl</i>	99	House Sparrow	9
Little Owl	3	Tree Sparrow	21
Great Spotted Woodpecker	1	Chaffinch	1
<i>Swallow</i>	88	Goldfinch	2
<i>House Martin</i>	3	Bullfinch	1
<i>Meadow Pipit</i>	1	<i>Reed Bunting</i>	4
<i>Grey Wagtail</i>	2		
Pied Wagtail	1	TOTAL	705

SOME FURTHER NOTES ON THE BREEDING ECOLOGY OF WOODPIGEONS AT SEFTON PARK (1994-2010)

Paul Slater

Summary

2010 was the seventeenth year of monitoring the breeding population of Woodpigeons *Columba palumbus*, at Sefton Park, Liverpool. A total of 1430 nests have been located and monitored at a mean of 84.1 nests monitored per year. For the whole study period, hatching success was 76.1%, fledging success 84.2% and overall breeding success 64.0%. There have been annual variations but no overall trend. This contrasts with other studies of rural populations which have shown long-term declines in hatching success causing a decline in overall breeding success.

Sefton Park provides an abundant supply of good nesting sites, with Lime *Tilia spp* and Holly *Ilex aquifolium* the preferred sites. Woodpigeons nesting in the park also show greater tolerance of humans, reducing the time they spend away from their nests when flushed, thereby reducing the risk of predation. Grey Squirrels *Sciurus carolinensis* have colonised the area since the study began but do not appear to have had any effect on Woodpigeon breeding success. However, there may be an effect on numbers through competition for winter food, such as acorns and beechmast.

Recent patterns of shooting Woodpigeon have changed with a shift from winter months to June-September. Other studies suggest this may lead to a decline in Woodpigeon populations due to a reduction in breeding success. Suburban populations feed in agricultural areas during the breeding season and are at risk of being shot although rural populations may face a higher risk.

In developing population models for Woodpigeon, account should be taken of the large numbers in suburban areas, and their higher breeding success. There is also a probability that the breeding populations in suburban areas act as a reservoir for the wider population.

Introduction

The study started in 1994, and from 1996 to date the whole of Sefton Park (about 100 hectares) has been covered during nest-searching. The park resembles pasture woodland, although mechanical grass cutting takes the place of grazing by livestock. In some areas of the park, the grass cutting regime has been relaxed in recent years, with some areas, predominantly below certain tree clumps, being cut only every two to five years and in some cases there has not been any mowing for about ten years. This has allowed natural regeneration to take place, with trees of a variety of species becoming self-seeded in these areas. This has benefited the butterfly population, with the variety of species increasing, along with their numbers and distribution across the park. Twenty different species of butterfly have been recorded in the park.

There are still some extensive areas of mown grassland in the park. During 2008 and 2009, there were major works in the park as part of a restoration project. However this mainly concentrated on the waterways and had minimal impact upon the study. Some tree-work was carried out, mainly outside the breeding season. Additionally, as part of the project, several hundred new trees of a variety of species were planted. These should provide potential nest sites in future years.

Minor changes in the methodology of the study

Information on the methodology of this study is given in Slater, 2001. The intention has been to locate every nesting attempt by Woodpigeon and to determine the outcome. If a nest fails, the

stage in the breeding attempt (egg(s) or chick(s)) at which this happens can usually be determined. Where it is possible to directly access a nest, any young reaching a suitable age (usually 12-14 days old) are ringed.

The methodology has changed slightly during the course of the study to make best use of the time available and, due to a desire to cover the more public areas of the park, as early in the morning as possible. This lessens disturbance, unwanted attention and saves time in explaining to curious bystanders what is occurring. However the whole park has been consistently covered, with all areas being searched approximately each fortnight during the breeding season. Nests are revisited for contents checking and for the ringing of young of suitable size.

In recent years full-scale searching has only started from mid-June onwards (although the park has been regularly visited in the months prior) and it is probable that some early nests will have been missed. However these would have represented only a small proportion of the total. Searching continues during the autumn until all young have fledged and no new nests have been located.

It is possible that nests were built and eggs laid and then predated between visits. This would bias the figures in favour of success. However, this is a potential problem that would affect all studies, and so the approach is considered to be reasonable and comparisons should be consistent. Murton (1958) reported that he sometimes found indications of nests being built, laid in and predated in between visits but did not include these cases in his results.

In most years, nests were also found that showed signs of having held large young (deposits of droppings and feather scale) but which had missed detection whilst they were occupied. None of these sites were used in any of the results. As with the findings of Inglis *et al.* (1994), these nests usually comprised less than 5% of the total of nests located that year.

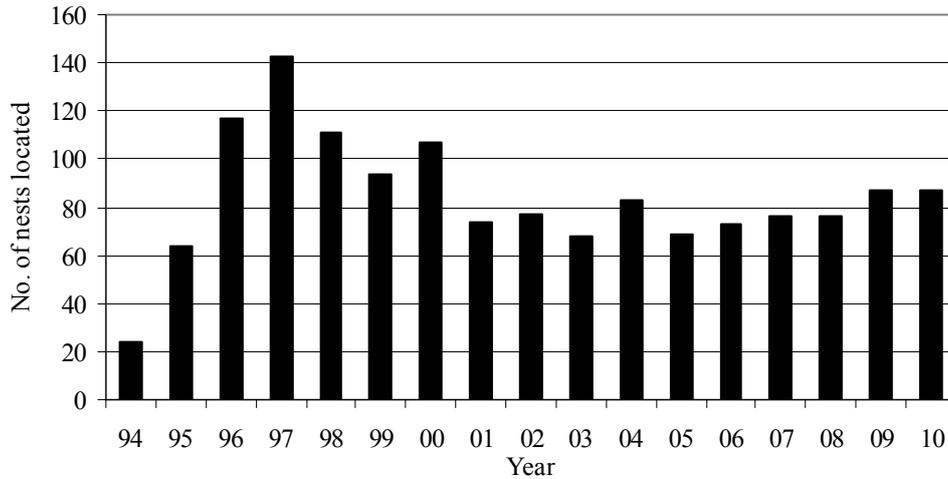
At Sefton Park tolerance of human presence by the birds and the fact that nests could be closely observed from the ground through binoculars make repeat checks of nests possible without disturbing the birds. Some nests had their contents noted on up to ten different visits. These checks provided evidence that some large young disappeared before they could have fledged and searches of the area occasionally found the predated remains of large young near the nest site. In several cases the bird ring was found and predated young could be traced to a specific nest. These cases were recorded as failure at the nestling stage. By comparison in the studies of Murton (1958) and Inglis *et al.* (1994) nests containing large young, found to be empty on subsequent visits, were classed as having been successful. Therefore part of the differences in breeding success rates between these studies and the Sefton Park study could be due to more accurate observer recording of chicks at the late stages of fledging in the latter study.

The fact that successful nests are more likely to be located than unsuccessful nests (due to their longer presence through time) will bias results towards success. A formula (the Mayfield method) has been devised for taking into account at what stage a nest is located to reduce this bias. Whilst it is valid to apply the formula for absolute accuracy, for comparative studies with similar methodology it is not believed necessary.

Nesting and breeding success

The numbers of nests located and monitored each year are shown in Figure 1 below. A total of 1430 nests have been studied at a mean of 84.1 nests monitored per year. It is noticeable that despite regular constant effort the number of nests located and monitored has dropped from 2001 suggesting that the Woodpigeon population level has fallen over the course of the study. The number of nests located and monitored has stabilised in recent years and breeding success rates remained consistent.

Fig 1: The number of nests located and monitored each year at Sefton Park (1994-2010).



As in previous years, during 2010 most eggs were laid in July (51.0%) and August (30.0%) with a corresponding peak in the number of nestlings ringed between August and September. In 2010, hatching success was 80.9%, fledging success 85.0%, giving an overall breeding success of 68.8%. These figures are higher than for the mean of the whole study period (hatching success 76.1%, fledging success 84.2% and overall breeding success 64.0%; see Table 1). The higher overall breeding success during 2010 was due to a higher hatching success.

Table 1: Breeding success of Woodpigeons at Sefton Park (1994-2010)

Year	% of eggs laid that hatch	% of eggs hatching that fledge	% of eggs laid which give rise to fledged young
1994	83.7 (n=43)	75.0 (n=36)	62.8 (n=27)
1995	76.3 (n=118)	81.1 (n=90)	61.9 (n=73)
1996	72.2 (n=212)	80.0 (n=153)	57.9 (n=122)
1997	66.8 (n=259)	76.3 (n=173)	51.0 (n=132)
1998	80.6 (n=191)	89.6 (n=154)	72.3 (n=138)
1999	82.4 (n=159)	84.0 (n=131)	69.2 (n=110)
2000	81.0 (n=189)	85.6 (n=153)	69.3 (n=131)
2001	67.2 (n=128)	94.2 (n=86)	63.3 (n=81)
2002	71.6 (n=141)	85.1 (n=101)	61.0 (n=86)
2003	81.7 (n=120)	84.7 (n=98)	69.2 (n=83)
2004	76.1 (n=155)	88.1 (n=118)	67.1 (n=104)
2005	82.7 (n=121)	91.0 (n=100)	75.2 (n=91)
2006	74.1 (n=139)	83.5 (n=103)	61.9 (n=86)
2007	73.9 (n=138)	81.4 (n=102)	60.1 (n=83)
2008	77.6 (n=143)	81.1 (n=111)	62.9 (n=90)
2009	76.4 (n=157)	84.2 (n=120)	64.3 (n=101)
2010	80.9 (n=157)	85.0 (n=127)	68.8 (n=108)
Mean	76.1 (n=2570)	84.2 (n=1956)	64.0 (n=1646)
	n = number of eggs laid	n = number hatching	n = number fledging

At Sefton Park variations in success rates over the course of the study have been noted: hatching success variation 16.9%, fledging success variation 19.2%, and overall breeding success variation 24.2%. However there does not appear to be any overall trend, with these rates not fluctuating greatly around the mean. This contrasts with the findings of Inglis *et al.* (1994) looking at the breeding success of a rural population in eastern England. They found that despite a fairly constant fledging success around a mean of 86.0%, hatching success declined during the years of their study from about 70% to about 40%, over a 22 year period. This caused a decline in overall breeding success.

A recent report by the Central Science Laboratory (CSL) (2005) has detailed a continuation of this study, with some additional studies undertaken within arable farmland at a variety of sites across England. The findings of this study also show a continuous decline in hatching success. This report, along with the earlier findings of Inglis *et al.* (1994), suggests that an increase in the potential predators of Woodpigeon eggs, such as Corvids and Grey Squirrels *Sciurus carolinensis*, is responsible for the declining hatching success of Woodpigeons due to egg predation. Both studies also suggest that the predation may have increased due to one or both parents being killed by shooting. This factor would leave nests, with conspicuous contents, unguarded and thereby increase their likelihood of being predated.

What is noticeable at Sefton Park is that the birds have higher hatching success (mean of 76.1%) than in those rural populations studied by Murton (1958) (42%) and Inglis *et al.* (1994) (mean of 53.5%). However, whilst fledging success is higher (mean of 84.2%) than that found by Murton (73%), it is slightly lower than that found by Inglis *et al.* (86%). The higher hatching success means that the suburban birds have a higher overall breeding success.

A study of Woodpigeons breeding in an area of rural Merseyside between 1996 and 1998 (Slater, 2001) found that hatching (62.8%) and fledging (66.3%) success were also much lower than for the suburban population studied at Sefton Park in the same time period. In this rural study area shooting takes place and it is a possibility that this factor is responsible, or partially responsible, for the differences. Although it is believed that adult Woodpigeons from the suburban breeding population also feed on the same feeding grounds (Slater, 2001), it is possible that the birds in the rural areas are at a greater risk of being shot because of time potentially exposed to shooters or behavioural differences.

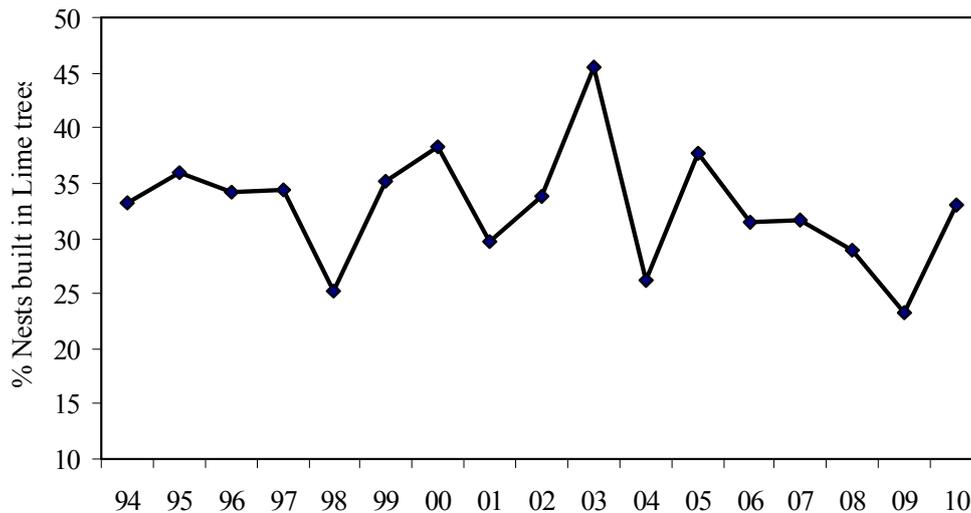
The possible reasons for higher breeding success at Sefton Park and other suburban sites are explored in the remainder of this report.

Availability of suitable nesting sites

There is no shortage of potential nest trees at Sefton Park; trees are present right across the park not only in woodland clumps but as lines and avenues, individual trees, and small clusters of scattered trees. In some rural areas, high populations can be concentrated in small areas of woodland, reaching locally high nesting densities. This is thought to lower breeding success through attracting predators. Additionally, conflict between territorial birds means that at high density birds leave nests to display and fight with their neighbours more often, exposing nest contents for longer thereby increasing their likelihood of being predated. Murton and Isaacson (1964) found in a breeding population studied in eastern England that proportionally more eggs failed to hatch with an increase in breeding density. Therefore increased spacing between nests at Sefton Park may be a contributory factor to higher breeding success.

Vegetation structure is another aspect to consider. It is notable that birds show a definite preference for certain tree species. In Sefton Park the Lime *Tilia spp.* has been the favoured tree for nesting in all years but one (when it was a very close second), ranging from 23.3% to 45.6% with a mean of 32.8% of Woodpigeon nests. (See figure 2)

Figure 2: % of Woodpigeon nests built in Lime trees at Sefton Park (1994-2010)



During 2010, when 33.0% of nests located were built in Lime trees, twenty one different species of tree were used (See Table 2.). However two species of tree, Lime and Holly *Ilex aquifolium* (26.1% of nests), accounted for 59.1% of all the nests that were located and monitored during 2010.

Table 2: Species of tree used by Woodpigeons nesting at Sefton Park in 2010

Species of tree used	Number*	% of total
Lime (<i>Tilia spp.</i>)	29	33.0
Holly (<i>Ilex aquifolium</i>)	23	26.1
Horse Chestnut (<i>Aesculus hippocastanum</i>)	5	5.7
Beech (<i>Fagus sylvatica</i>)	3	3.4
Copper Beech (<i>Fagus sylvatica purpurea</i>)	3	3.4
Hawthorn (<i>Crataegus monogyna</i>)	2	2.3
Cockspur Thorn (<i>Crataegus crus-galli</i>)	2	2.3
Pin Oak (<i>Quercus palustris</i>)	2	2.3
Hornbeam (<i>Carpinus betulus</i>)	2	2.3
Crab Apple (<i>Malus sylvestris</i>)	2	2.3
Whitebeam (<i>Sorbus aria</i>)	2	2.3
Norway Maple (<i>Acer platanoides</i>)	2	2.3
Willow-leaved Pear (<i>Pyrus salicifolia</i>)	2	2.3
Unidentified ornamental tree	2	2.3
Italian Alder (<i>Alnus cordata</i>)	1	1.1
Laburnum (<i>Laburnum anagyroides</i>)	1	1.1
Caucasian Wing-nut (<i>Pterocarya fraxinifolia</i>)	1	1.1
London Plane (<i>Platanus x hispanica</i>)	1	1.1
Alder (<i>Alnus glutinosa</i>)	1	1.1
Ash (<i>Fraxinus excelsior</i>)	1	1.1
Damson (<i>Prunus sp.</i>)	1	1.1

*One nest was built at the junction of branches of two trees (Beech and London Plane). Each species was recorded as a nest tree, giving a total of 88 trees for 87 nests.

In suburban areas, the types of tree available may give better concealment and protection than that available in rural areas. Sefton Park has a very diverse range of tree species (including a number of exotics) of a mixture of ages. Fifty one identified species of tree have been recorded as being used for nesting by Woodpigeons at Sefton Park over the study period. In addition several unidentified ornamental trees have been noted as being used.

Vulnerability to predation

Woodpigeons show greater tolerance of humans in suburban areas. There is evidence that shy and wary birds will give up during the nest-building stage at sites with potentially large numbers of people daily in the vicinity of nests. Partially-built nest structures were often found and birds were sometimes observed nest-building at some sites, only to give up part-way through. Added to this, the propensity of birds to go in for pseudo-incubation, sitting upon empty nests for lengthy periods of time, before eggs are actually laid, probably ensures that only those birds tolerant of close human presence are likely to go through with a breeding attempt. There were a number of occasions when birds were flushed from empty nests. Sometimes eggs were subsequently laid in these, but there were also occasions when these nests were abandoned before egg-laying commenced.

In all cases when eggs had been laid in a nest at Sefton Park, a sitting bird would flush only when an attempt was made to start climbing the tree and some birds would not leave until the observer was level with the nest. At several nests climbed to, it was possible to see what a nest contained without flushing the sitting bird. Likewise when checking nests in suburban areas birds returned quite readily, often within twenty minutes and sometimes trying to fly back in as the observer climbed back down.

This contrasts with the situation at more rural sites where the birds are very wary and will often flush from a nest when an observer walks below. Murton (1958) found that Woodpigeons flushed from nests in rural areas might wait anything between half an hour and eight hours before returning. Murton also found that more visits to Woodpigeon nests increases the likelihood of predation. Based upon personal observations of their behaviour, visiting Woodpigeon nests in rural areas is likely to have a more adverse effect than nest-visits in suburban areas because of their greater wariness. In suburban areas, there is probably a selection process in operation, favouring birds that are tolerant of the presence of humans.



Not the prettiest of birds, a juvenile Woodpigeon. Photo taken by Arthur Grosset and reproduced with his kind permission. (www.arthurgrosset.com)

There are no shortages of the potential predators of Woodpigeon eggs in Sefton Park. Magpies *Pica pica*, Jays *Garrulus glandarius* and Carrion Crows *Corvus corone* are all numerous, and breeding, in the park. Jackdaws *Corvus monedula* have colonised, and increased in numbers in recent years. Grey Squirrels have also colonised and increased greatly in numbers. All of these potential predators benefit from supplementary feeding from human visitors to the park. What effect this has is not known: does it distract them from foraging for nests, or does it raise the population of these species above the carrying capacity of the environment? Would breeding success for Woodpigeon be higher in their absence?

Birds in suburban areas also tend to nest higher (Slater, 1997 and 2001), which reduces human disturbance and probably makes nests less accessible to mammalian predators. It may also be easier for predators to forage in rural areas; in suburban areas disturbance by humans in the vicinity of Woodpigeon nest sites may make it more difficult for predators to effectively forage, keeping them away from an area.

The impact of colonisation by Grey Squirrels *Sciurus carolinensis*

When this study started, there were no Grey Squirrels present in the park (Slater, 2001). During the study, they colonised and have rapidly increased in numbers over the last ten years, and now breed widely in the park. Tentative results (see Table 1) suggest that the colonisation and increase in numbers of Grey Squirrels has had no effect on Woodpigeon breeding success.

However, there is certainly competition for winter food in the form of tree seeds. There are many large Beech *Fagus sylvatica* and Oak *Quercus* (predominantly Turkey) trees in the park which regularly produce large numbers of seeds. The crops of Turkey Oaks *Quercus cerris* are far more regular than those of English Oak *Quercus robur* or Beech. Until fairly recently, in most winters large numbers of Turkey Oak acorns would be present in the park until spring. These attracted large flocks of Woodpigeons, for example counts of 495 Woodpigeons on 31 December 2002 and 437 Woodpigeons on 13 December 2004. These flocks exceeded the breeding population and output of young for those years, indicating an influx of birds into the park from elsewhere.

Now Grey Squirrels are eating beechmast and acorns before they are fully-formed or ripe which continues throughout the summer, with the squirrels also removing large numbers of ripe acorns and other tree seeds in the autumn and early winter. This results in the acorn crop being depleted by mid-winter. The numbers of Woodpigeons that flock into the park during the winter have declined over the same time period (personal observations). There is also a possibility that a reduction in the over-winter food supply, due to competition, has resulted in a decline in the Woodpigeon population here. This might explain the drop in the number of nests monitored.

There have been several other effects of the presence of Grey Squirrels upon the study. Some nests built on old Squirrel dreys are more difficult to locate and observe. It is also now more difficult to access some of the nests. The squirrels have a habit of stripping bark from side branches of trees, especially Lime trees, causing many of the side limbs to die. Nests in a number of canopies of thick-trunked Limes that were previously very easy to access using numerous live side-branches, capable of bearing a climber's weight, are now very difficult, and potentially dangerous, to try to access.

Predation of nestlings by Sparrowhawk (*Accipiter nisus*)

Many of the previous studies of Woodpigeons were carried out when bird of prey numbers were at a low level. Murton (1958) suspected birds of prey, notably Sparrowhawks *Accipiter nisus*, as being the most important predators of nestling Woodpigeons. Inglis *et al.* (1994) make no mention of Sparrowhawks preying on nestlings in their study area. They comment that nestling predation remained at a low and relatively unimportant level throughout the study period.

Sparrowhawks have increased greatly across Britain, in the intervening years, although their status in the study area of Inglis *et al.* is unknown.

At Sefton Park, Sparrowhawks are known to predate some nestling Woodpigeons, sometimes taking quite large young. It is notable that in the rural Merseyside population looked at between 1996 and 1998 (Slater, 1997 and 2001) Sparrowhawks had been noted predated Woodpigeon nestlings in previous years. The fledging success was much lower than at Sefton Park.

Sparrowhawks regularly nest in, or near, Sefton Park. Most predation of Woodpigeon nestlings also tends to take place in the post-fledging period of Sparrowhawks. Ringing recoveries over the same time period (Merseyside Ringing Group recovery sheets and annual reports, 1989-2009) show that recently independent Sparrowhawks move into the area from nearby territories, and also from outside the area.

The impact of shooting

Shooting could affect egg hatching success, and differences between sites. As mentioned earlier, it is possible that birds in rural areas are at more risk of being shot. It is believed that adult Woodpigeons nesting in suburban Liverpool are flying out to feed on arable farmland around the edges of Liverpool during the breeding season (Slater, 2001, and further personal observations). The evidence for this comes from the observation of flight-lines, observation of feeding birds and the crop analysis of dead nestlings, dependent juveniles and adults found in some suburban areas. The crops of a number of dead birds recovered in the study area have been found to be stuffed full of Oilseed Rape, Barley and/or Wheat.

In recent years, there has been a shift in shooting from the winter months to the period around June to September when crops are ripening, when crops are ready to harvest and also when crops have recently been harvested, and there may be rich pickings of spilt grain amongst stubble fields (Harradine and Reynolds, 1997, BASC, 2001, CSL, 2005). At this time the birds are present in larger numbers and are easier to decoy, their behaviour is different and they provide shooting opportunities for a longer period of time. Initial analysis of recoveries from the birds ringed as part of this study show that most birds have been shot over farmland areas, mainly around Merseyside, from this time of year (Merseyside Ringing Group, recovery sheets and annual reports 1994-2009; findings in preparation).

The CSL report (2005) suggests that a significant shift in shooting effort towards the summer months could bring about a decline in the Woodpigeon population through lower productivity and recruitment. Removal of an adult from a breeding pair at the egg stage will almost certainly result in the failure of the nesting attempt, as the remaining adult will have to spend periods of time away from the nest feeding. This leaves conspicuous eggs unguarded in the nest.

There is some disagreement as to whether the removal of one adult from a pair will cause the failure of a nest holding young. Some shooters believe that one adult is capable of rearing young by itself. Indeed, some birds start a new nest whilst they are already attending a nest with young. However removal of an adult will probably increase the likelihood of failure because as well as a reduction in food provision, the young will be left by themselves for greater periods of time whilst the remaining adult forages. CSL (2005) suggests that removal of one adult from a pair will cause the failure of a nest holding young. Given the amount of shooting that takes place during the period of breeding, and the large bags recorded (personal communication with shooters), it is surprising that failure rates are not higher. This is an aspect of the species population dynamics that should be continuously monitored.

Winter food supply

Murton (1965) believed that over-winter food supply was the main regulator of Woodpigeon numbers. However, Inglis *et al.* (1990 and 1994) have highlighted that due to the amount of Oilseed Rape *Brassica napus* now grown, and the amount of birds that have switched to feeding upon this, over-winter starvation is unlikely to be the main limiting factor on numbers. Both studies looked at the food supply in arable farmland areas. In suburban areas there are other food sources such as tree seeds, although their availability fluctuates between years. During the study period, competition with Grey Squirrels for this food source has increased.

Current status of the Sefton Park Woodpigeon population

Whilst the studies of Inglis *et al.* (1994) and CSL (2005) have shown a decline in the breeding success of Woodpigeons in recent times, this is not the case for the suburban population studied at Sefton Park. In developing population models for the Woodpigeon, account should be taken of the large numbers present in suburban and urban areas, along with their breeding output. There is a probability that the breeding population in these areas is acting as a reservoir for the wider population. There have been a number of ringing recoveries from suburban areas out to rural areas. Although much smaller numbers have been ringed in rural Merseyside, none of these birds have subsequently been found to move into suburban or urban areas.

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SWIFTS IN THEIR BREEDING COLONY, COTEBROOK CHURCH, 1995-2011

David Norman

Summary

In 15 annual visits (1995, 1996 and 1999-2011) 62 adult Swifts *Apus apus* have been caught at a breeding colony in Cotebrook church, with many of them recaptured in subsequent years for a total of 140 handlings. All but four were adjudged to be females based on the cloacal shape or remnants of a wrinkled brood patch, although studies elsewhere have indicated that they cannot be sexed. Some adults spend the night on the wing but those that stay in the nests emerge over an extended period from about dawn to as late as four hours after dawn, and perhaps even later. More than twice as many nested on the north side than the south side of the church, and they left their nests on average half-an-hour earlier in the mornings.

1995 was clearly an odd year, with more birds caught than in any other visit, most of which emerged earlier than normal and were never retrapped, perhaps visitors from elsewhere not actually breeding at Cotebrook. Excluding the 1995 birds, mark-recapture analysis of the Swifts indicated an annual survival of 78%, consistent with their known longevity. The oldest bird in this study was 10 years from ringing to last recapture and had been caught in six of the eleven years 1999 to 2009.

A retained (unmoulted) outermost primary was recorded in 23 of the 140 bird-handlings. Its incidence appeared to be non-random, with none in some years and more than expected in others; this result is not quite statistically significant ($p \sim 0.07$) but would suggest a common external factor. The infestation of flatflies *Crataerina pallida* varied by more than an order of magnitude from year to year.

Perhaps the best result of all, easy to take for granted but remarkable nevertheless, is the Swifts' nest-site fidelity. These birds spend three-quarters of their year away from the church, much of it flying over Africa and south of the equator, yet they come back every year to the same site, not just to Cheshire or to Cotebrook church but more than 90% of those recaptured were apparently using exactly the same nest-site.

Introduction

The Swift *Apus apus* is well-known as an enigmatic bird, present with us in Britain for the shortest period of any summer visitor (Bromhall 1980). They winter in Africa, well south of the equator, and spend all of their life on the wing, coming to land only while breeding. They have been well studied at a small number of sites, notably the classic 'Swifts in a Tower' study at Oxford (Lack 1973), started in 1947 and continuing to this day (Lack & Overall 2002), and at Coldstream in the Scottish Borders (Douglas-Home 1977). They feed exclusively on flying insects and spiders; they have one nesting attempt per year, whose extent varies considerably according to the weather. Incubation periods can vary from 19 to 27 days, and chicks have the remarkable ability to reduce their metabolic rate and go torpid in poor weather, leading to a range of fledging periods from 5 to 8 weeks.

Their breeding biology was summarised by Lack & Lack (1951): "Swifts differ from small passerine birds and resemble *Procellarii* (petrels) in having a smaller clutch-size, longer incubation and nestling periods, a peak nestling weight well above, instead of similar to, that of the adult, a widely variable nestling period, a marked ability to withstand starvation and a capacity to retard feather development when undernourished. All these points can be related to

the fact that Swifts and petrels have safe nesting sites but an uncertain food supply, whereas small passerines are raised when food is dependable but predation is high.”

During the survey of Swifts in Cheshire and Wirral, 1995, organised by Brian Martin, he and his son Philip found an interesting colony of about 14 nests in the church at Cotebrook (SJ5765), near Tarporley, Cheshire. The birds were entering the roof-space at both sides of the church, at a height of only about 3 metres above ground level. Most Swifts are ringed opportunistically as adults mist-netted whilst flying low to feed in poor weather, and are of unknown origin, but I immediately realised that the Cotebrook site presented an unusual opportunity to catch adult Swifts at a breeding colony, and hence to study their return rate and other features of their breeding.

Methods

Adult Swifts are widely reported not to tolerate being handled at their nest until chicks are well-grown, so I have restricted this study to one visit per year, in July: most visits were in the period 13th to 23rd July. Ringing visits were made in 1995 and 1996, then every year from 1999 to 2011 inclusive. One 18-metre mist-net is erected along each side of the church (Fig.1), starting about 4 a.m. (before first-light), with nets taken down at times between 8 and 9.15 a.m.. Birds are caught on the inside of the net as they leave their nests, and are extracted immediately.

After the first, exploratory, year (1995), the time of emergence (to the nearest 5 minutes) and position in the net (north or south side of the church, and position relative to the church windows) was noted for each bird captured. Each bird was ringed, aged, sexed, with wing length and weight measured. The state of moult of the outermost (10th) primary was also recorded, and from 2004 onwards the number of flatflies *Crataerina pallida* on each bird was counted.

I have attempted to assess the numbers in the church from looking at apparently occupied nest entrances and recent droppings below the entrance holes, and the population appears to be stable at 12-14 nests.



Views of the two nets in position at the south (left image) and north (right image) of Cotebrook church.

Results

In the 15 visits, 62 Swifts were ringed. The numbers caught per year varied from 3 to 16 birds, with a mean of 9.3. Twenty-five birds were caught in one year only (including two in 2011, which have not yet had the chance to be recaptured in a later year); 11 were handled in two years; 16 in three years; 6 in four years; 3 in five years and one in six different years; making a total of 140 captures. In addition, four birds were caught attempting to return to their nest, on the outside of the net, but all were birds that had already been caught that same morning and these birds are excluded from all further analyses.

Age and sex

All birds caught were 'adults'. No bird was seen with any immature plumage features and all were aged as Euring code 6, hatched at least two years before date of catching. Swifts do not breed until at least two years of age, and often older. All birds caught appeared to be actively breeding and almost all were sexed as female on the cloacal shape or remnants of a wrinkled brood patch. Only two birds were sexed as male and two were left unsexed. There was no evidence of any non-breeders.

Differences between the two sides of the church

There appeared to be similar numbers of nest-holes on both sides but there was a clear preference for nesting on the north side of the church, providing 97 of the captures (69%) involving 42 different birds while the south side accounted for 43 captures (31%) of 23 different birds. Twenty-eight of the 42 birds caught on the north side were retrapped in a subsequent year and 14 were caught once only. On the south side nine of the 23 birds caught were retrapped in a subsequent year and 14 were caught once only. This seems like a clear difference in recapture rate between the two sides of the church, but closer inspection of the data shows that 10 of the 14 birds from the south side that were never retrapped were caught in 1995, the first year of this study. These also included the only two birds that were definitely sexed as males. Excluding 1995, 40 birds were caught on the north side, 28 of which were retrapped in a subsequent year and 12 were caught once only; 12 birds were caught on the south side, 8 of which were retrapped in a subsequent year and 4 were caught once only. There is no statistical difference between these proportions of retraps.

Time of emergence from nest

Some birds spend the night outside the colony, flying high, then descending and screaming on the wing above the church. The time of the first screaming birds varied enormously from year to year, from 04.10 (55 minutes before dawn), with most from 05.00 to 05.40 and a median time of 05.20, to the latest at 06.20 (80 minutes after dawn). Dawn varied only from 04.59 to 05.09 in the period of most visits, so no correction has been made to times of events.

One of the initial surprises of this study was how late many birds leave their nests. Fig.1 shows the times of capture in half-hour intervals of all birds caught from 1996 onwards (in 1995 the time was not recorded precisely), with, for instance, 05:30 referring to the 30 minutes from 05:01 to 05:30. This shows that most adults do not leave their nest until two or three hours after dawn, and some remain there, presumably brooding chicks, for four hours or more, after the time that nets were taken down. On average birds emerge later from nests on the south side of the church (median time = 07:25) than the north side (median time = 06:55): this difference is almost statistically significant ($z = 1.95$; $p = 0.05$, Mann-Whitney U -test).

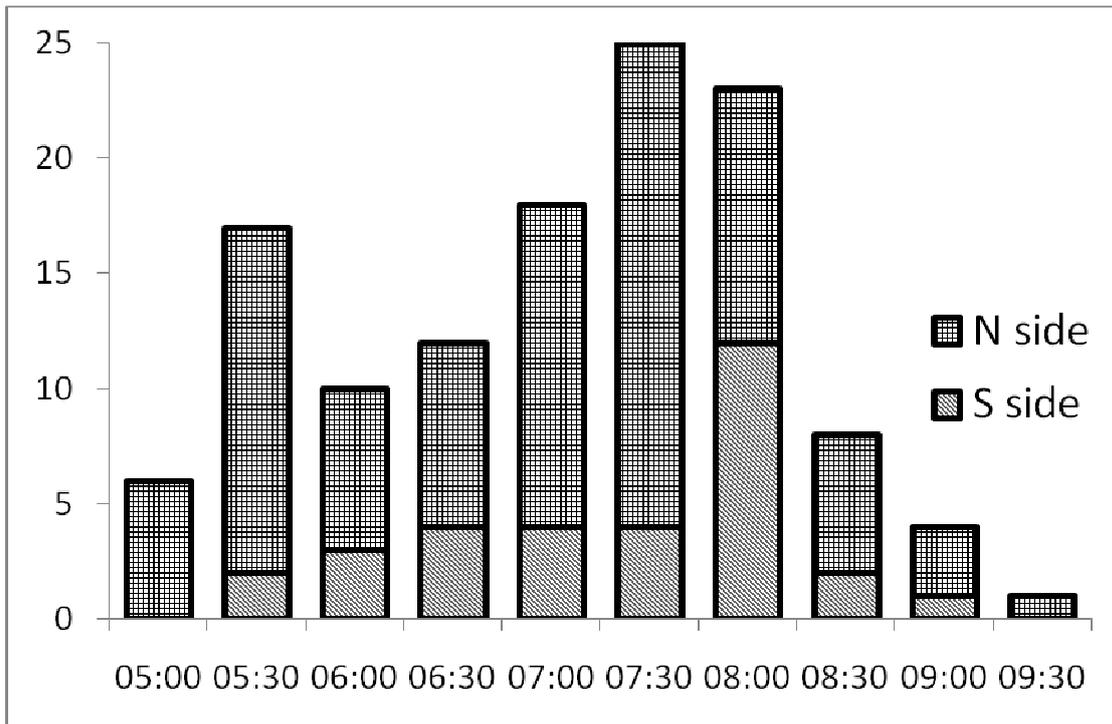


Fig.1. The times of capture of birds leaving their nests, with the two sides of the church shown separately. The vertical axis is the total number caught in each half-hour period on all visits from 1996 onwards (in 1995 the time was not recorded precisely). 05:30, for instance, refers to the 30 minutes from 05:01 to 05:30.

Survival/ mortality and longevity

The oldest bird in this study, ten years from ringing to last handling, was ringed in 1999 and retrapped five times, in 2000, 2001, 2005, 2008 and 2009. Another was retrapped four times up to eight years after ringing (2000, 2001, 2004, 2005 and 2008), two more up to seven years after ringing and another two six years after ringing. These figures illustrate the longevity of the species but also show that even birds that are presumably present every year may not be caught.

I analysed the recapture data to calculate the mean survival probability for the adult Swifts, using a standard statistical programme; the technical details of these calculations are in the appendix. For this analysis I used only the birds that had been sexed as females and discounted the four that were males or unknown; none of these was retrapped. Not enough birds had been caught to test for differences between the two sides of the church. Excluding the odd year of 1995 and using the data from 1996 onwards, accounting for the two-year gap with no visit in 1997 or 1998, the best model gave a figure for the survival probability (ϕ) of 0.780 (with 95% confidence intervals of 0.710 to 0.838) and a recapture probability (p) that varied from year to year with a mean of 0.56. In layman's terms, and rounding these figures to a survival probability of 0.8 and recapture probability of 0.5, each bird has, on average, an 80% chance of surviving to return to the colony the next year (and a 20% chance of dying); and I have an 'evens' chance (50% probability) of catching any bird present in any year.

Nest-site fidelity

Birds emerge from their nest-entrance and drop down to gain momentum for flight. The point in the net where they are caught is usually directly out from the nest and can be taken as a good guide to its location.

Of the 37 birds that were caught in more than one year, 34 of them (92%) were caught in the same location (for a total of 105 occurrences). The other three birds shifted between the two sides of the church; one from the north side in 1996 to the south in 2000 and 2003, another from the south side in 2003 to the north side in 2005 and 2008, and the third from the north side in 2000 and 2002 to the south side in 2005 and back to the north side in 2007.

Infestation by flatflies

Most ringers know that Swifts are prone to infestation by a parasitic lousefly *Crataerina pallida*, which is probably the largest external parasite of any British terrestrial bird. This fly spends its entire life in and around the Swifts' nest. The adults produce larvae in the late summer which immediately pupate and lie dormant all winter. They then hatch out when the first swift eggs are laid and feed on the nestlings and adults, sucking about 25mg of blood every 5 days, as much as 5% of the Swift's blood.

The incidence of these 'flatflies' varies greatly from year to year and for the more recent eight years of this study (2004-2011) I have searched for, recorded and destroyed all that I could find on each bird handled; I had always removed them in previous years, but without recording numbers. It is not always easy to find all of them so these figures are minima. In most years the birds are quite 'clean', with the majority of birds having no flatflies and a mean of less than 0.5 per bird in 2005, 2006, 2008, 2009 and 2011. In 2010, six out of ten birds had one or more with a mean of 0.9 per bird; in 2007, four of the five birds caught had flatflies with a mean of 1.6 per bird; and in 2004 the infestation was severe, with ten of the eleven birds having the parasites, and a total of at least 35 flatflies found, averaging 3.2 per bird.

Retention of unmoulted outermost primary

Swifts have ten long primary feathers, with the longest being p9 (counted from the inside) and p10 slightly shorter than p9. They have a protracted moult in Africa, taking at least six months to moult all the primaries (and all their other feathers as well), and some birds do not moult the outermost p10 (see Fig.2). This is not related to age – it is not a juvenile feather that is retained – and the incidence appears to be random from year to year.

An old p10 was recorded for 23 of the 140 bird-years (16%), as shown in the table.

	95	96	99	00	01	02	03	04	05	06	07	08	09	10	11	Total
Old	2	3	4	0	1	0	3	0	3	1	0	2	3	1	0	23
New	14	2	8	11	2	8	7	11	10	7	5	8	7	9	8	117
Total	16	5	12	11	3	8	10	11	13	8	5	10	10	10	8	140

The incidence varied between years and its occurrence appeared not to be random, with more than expected in some years including 1996, 1999, 2003 and 2009, and fewer than expected in 2000, 2002, 2004 and 2011. Statistical tests show $\chi^2=22.25$, d.f.=14, $p=0.0735$, which is close to, but not statistically significant.

Three birds were recorded in two years with a retained p10, all of which were also trapped with a renewed p10 in other years. One had an old p10 in 1999 and 2005, and a new p10 in 2000, 2001, 2008 and 2009. Another had an old p10 in 2005, a new p10 in 2007 and an old p10 in 2008. The third bird was recorded with a retained p10 in 2008 and 2009, and a renewed p10 in 2010 and 2011. This last bird, in two successive years, would be very unusual and should have had an extremely worn p10, but regrettably such an excessive state of wear was not noted at the time, and the bird was not photographed, so the record might be suspect.



Fig.2. Images of three birds with an 'old' (previous generation) outermost 10th primary, compared with a normal, fully-moulted bird at top left. The unmoulted feather is more pointed, bleached and abraded.

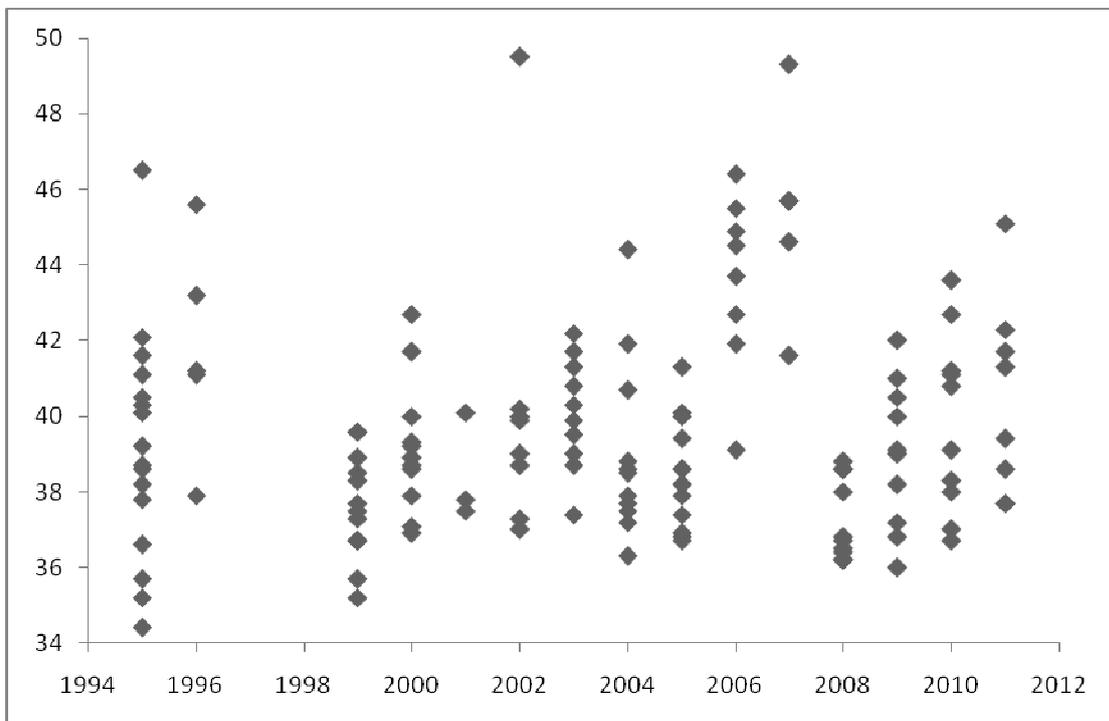


Fig. 3. The weights (g) of each bird in each year. A few data points are masked by coincident values, such as the two birds in 2007 that both weighed 45.7g.

Weights

The Swifts exhibited a range of weights, with a mean of 39.6g and most values lying within 3g either side (Fig.3). But in two years, 2006 and 2007, weights were significantly higher than in other years. The mean weight of birds nesting in the south side of the church (39.20g) was lower than that for the north side (39.84g), but this difference was not statistically significant ($z = 1.11$, n.s.).

Discussion

Both sexes incubate and Swifts are thought to be difficult or impossible to sex (George Candelin, *pers. comm.*). Perhaps my assessment of almost every bird as female – based on scrutiny of the abdomen for wrinkles, presumed to be the result of egg-laying, and on the more domed shape of cloaca – is wrong. Confirmation, or otherwise, by molecular methods such as DNA analysis of feathers, would be welcome.

I have assessed the population at 12-14 pairs, and Brian and Philip Martin's figure in early-June 1995 for screaming adults was 32 birds, reported as 'perhaps as many as fifteen pairs' (Martin 1997). My ringing, with a calculated recapture probability of around 0.56 and a mean catch of 9.3 birds per year, almost all thought to be females, suggests that the Swift population at the site is around 16-17 females. Perhaps we believe these statistics, and the population is higher than thought from observations; for instance, some of the entrance holes could lead to more than one nest, and some birds were already incubating and not part of the screaming party when counted in early-June 1995. But the possible uncertainty over sexing the birds means that this deduction should be treated with caution.

The first catch at the colony, on 23 July 1995, was clearly odd. More birds (16) were caught than on any subsequent visit, including the only two birds definitely sexed as males during this entire study; the distribution between the two sides of the church was different from any other year (with more birds on the south side of the church), and the birds on the south side of the church had an unusually low retrap rate, only one of the 11 being caught in a subsequent year. Nine of the 11 birds at the south side of the church were caught between 05.00 and 06.00 – in that year the precise time of capture was not noted – and again this is an unusual distribution of times compared to those for all other years shown in Fig.1. I suspect that these birds were transients, possibly non-breeders or perhaps post-breeding birds on migration from elsewhere that had chosen to roost overnight in old nest-holes. The distorting effect of those birds in 1995 is also seen in the computed values for survival/ recapture, where lower values of ϕ and p are found if the 1995 data are included.

An adult annual survival rate of 0.780 agrees closely with published data from elsewhere. A figure of 0.808 is given on the BTO Birdfacts webpage, citing an unpublished BTO report (<http://blx1.bto.org/birdfacts/results/bob7950.htm>). Over the period 1954 to 1993, the average annual adult survival in the Coldstream colony was estimated at 0.762 (95% confidence interval of 0.722 to 0.797 (Thomson *et al.* 1996). Differences between colonies have been determined in southern France, with birds in a 'good' colony having annual survival of 0.763 (95% confidence interval 0.678 to 0.830) and in a 'poor' colony of 0.621, which may partly reflect permanent emigration (Lebreton *et al.* 1992). Earlier, less robust, calculations produced a figure of 0.76 ± 0.03 (Dobson 1990) and 0.81 in Sweden and 0.83 in Switzerland, based on very small samples. A particularly interesting analysis is from the 60 birds caught in 1958 in the Oxford study, in which adult survival was quite low for the first two years after ringing, 60% in the first year and 63% in the second, thereafter rising sharply to 76.7% in the third year after ringing, 83.3% in the fourth and 86.4% in the fifth (Perrins 1971). Suggestions for the low apparent survival rate in the first two years after ringing were a genuinely higher mortality in the inexperienced, younger ones (first- or second-time breeders), or a lower tendency for non-breeders than breeders to return to the nesting site which they occupied the previous year, or a greater

tendency for them to desert the nest site due to disturbance for ringing, or to a combination of these factors. Unfortunately there are not enough birds caught at Cotebrook to push the statistics further by including different survival probabilities for different years.

An annual adult survival of 0.78 is high for a terrestrial bird – much higher than that for any of the 28 common British farmland passerines (Siriwardena *et al.* 1998) – but is consistent with the species' longevity. The British record-holder lived 17 years 11 months 5 days from ringing to final report. However, this longevity figure seems low: with a 0.78 annual probability of adult survival, a Swift has a 1.1% chance of surviving 18 years ($0.78^{18}=0.011$). More than 150,000 Swifts had been ringed in Britain and Ireland prior to 1990, at least 100,000 of them as adults, and 1,100 of them should have been still alive after 18 years; surely at least one of them would have been retrapped, or found dead. As no older bird has been found, it therefore seems likely that the real annual survival is lower, and perhaps the early-year effect suggested by Perrins (1971) is true.

The nest-site fidelity is worthy of emphasis. These birds spend three-quarters of their year away from the church, much of it flying over Africa and south of the equator, yet they come back every year to the same site, not just to Cheshire or to Cotebrook church but more than 90% of those recaptured were apparently using exactly the same nest-site.

When I started this study I was really surprised by the late times of Swifts' morning emergence from their nests. I had assumed, as expected for most species with chicks to feed, that they would leave as soon as there was sufficient light for them to forage. However, sixty years ago Koskimies (1950) – in a paper that I have not been able to obtain – had reported that temperature controlled the time of departure of Swifts from their nest in the morning, and recent observations with nest-cameras depicted on websites have found similar variations. Perhaps some birds also wait until their mate has returned, having spent the night on the wing outside the nest. In that case my netting would have distorted their behaviour as birds were not able to get back to their nests until after I had taken the nets away. However, in most years I have recorded when birds tried to return to the nests, from outside the colony, and that was seldom before 07:30 – after the peak of emergence – and in some years not before 09:00.

The differences between the two sides of the church are intriguing: most birds nest on the north side, and those on the south side emerged later from their nests, and tended to weigh less. The distribution of weights could easily have come about by chance but the difference in nest-emergence times is on the verge of statistical significance. The south side is presumably warmer and the later emergence from there is difficult to understand. The 'good' and 'poor' colonies studied in the south of France were also on different sides of the same building and a higher proportion of adults died, or permanently emigrated, in the 'poor' colony (Lebreton *et al.* 1992). The features described were that the 'good' colony was in a private sheltered area, while the 'poor' colony overlooked a public street exposed to swirling winds. With more data from future years it might be possible to test differences in apparent survival at Cotebrook, although it is confusing that two birds at Cotebrook switched from the north to the south side between years, although one moved back again.

At Cotebrook the counts of the parasitic lousefly *Crataerina pallida* varied considerably from year to year, by more than an order of magnitude, but work elsewhere has shown that the extent of flatfly infestation does not affect the Swifts: in a study of the Oxford population the parasite load had no effect on the number, body mass or date of fledging of chicks, or on the overwinter survival of adults (Lee and Clayton 1995). This result was strengthened by experiments in which the parasites were removed from some nests and transferred to others, making some nests 'clean' while others had an unusually high load (Tompkins *et al.* 1996). The suggested explanation is that the flatflies depend for their success on the survival of the Swifts because that is their only way of being transmitted to other hosts; a fly that was too virulent would

reduce its own chances of passing on future generations. Thus, horrible though they appear to be to us, the flatflies, and their variation in incidence from year to year, do not affect the Swifts.

The observations of a retained outermost primary could be dismissed as no more than a ringer's curiosity but the hint of a population-level effect – some years with a high incidence and others with none – is intriguing. If the suggested correlation with particular years does hold good, that implies that there is some external factor underlying it. With Swifts moulting whilst flying over vast areas of Africa, their moult is not possible to study directly (until geolocators can measure metabolic rate and other body processes). Perhaps the African weather varies from year to year, affecting the numbers of insects – Swifts sometimes concentrate at mass emergences of termites, for instance – or the duration of moult is extended so that some birds do not have time to complete it normally. But it only seems to be the outermost p10 that is ever retained, not other feathers, which implies an endogenous mechanism. Whatever the cause, it is not obvious how any large-scale effect could operate and affect a high proportion of the population in one year and few or none in another. But this is in the realm of speculation and more data are required from subsequent years to establish fully whether there is a non-random occurrence. It is very simple to check the state of moult and useful data could be collected by ringers elsewhere, catching Swifts away from their breeding sites.

There seems to be a view amongst some ringers that an old p10 is characteristic of a second-year, Euring age 5, bird. My understanding of the BTO non-passerine guide (Baker 1993) is that 5s have very narrow and abraded primaries, and that the occasional 7 (third calendar year) might be identified by a p10 unmoulted since hatching (thus two years old) and little more than a ragged shaft (Cramp 1985). But those with a retained p10 like those in Fig.2 are clearly of any age. The BTO Moulting Guide (Ginn & Melville 1983) suggests that an individual bird might leave its p10 unmoulted every fifth year on average, and BWP cites incidences of 22%, 30% 25% and 33% in a variety of studies (Cramp 1985). My figure of 23 in 140 handlings corresponds to one-in-six, and those with an old p10 in more than one year were six years and three years apart (plus the one in successive years).

Without knowing the state of the breeding cycle it is difficult to make any sense of the weight data. No obvious accumulations of fat were seen.

I have made no attempt to correlate any of these data with the summer weather, although it is clear from the species' biology, especially the chicks' adaptations to periods of cold or wet conditions, that it must be a strong influence on the breeding cycle. Anecdotally, the lowest catch at Cotebrook (only 3 birds) was in 2001, when the weather changed overnight and few birds emerged in the windy morning; and in 2006, following a long hot spell, the highest weights were recorded. In a study in Bohemia, rain in May, and – counter-intuitively – warm temperatures in June both depressed breeding success (Rajchard *et al.* 2006). On the other hand, analysis of data collected at the Coldstream colony between 1954 and 1993 showed that the breeding success of Swifts was positively related to temperatures in June, especially in recent years. Adult survival until the next breeding season, by contrast, was found to have been more vulnerable to low temperatures at the end of the breeding season: increasing July temperature significantly improved the chances of adults surviving to the following year (Thomson *et al.* 1996). As a long-lived species, weather affecting adult survival is more important than weather affecting annual breeding success. Although the number of birds in their analysis is not mentioned, the Coldstream colony had 15 nest-boxes and only just over half of the adults were caught in any year. These figures suggest that the Cotebrook data could be amenable to more detailed analysis, including weather variables, and that is perhaps a task for the future.

This interesting study has provided some useful information, but also raised many questions and exposed its limitations. Perhaps the key one is our lack of knowledge of the timing of the breeding cycle from year to year, and the state of breeding for each captured bird. Observations into the nests with an endoscope might help, but I am loath to experiment with anything that

might cause more disturbance. Nevertheless, I hope to continue to collect data, and once a year have the opportunity to interact with these fascinating birds.

Acknowledgements

This study would not be possible without the permission of Rev. G. L. Cookson, Vicar of Cotebrook, and his churchwardens, and their tolerance of these special birds that make their home in their church for three months every year.

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Appendix: calculation of survival and recapture probabilities

The basis of the method is mark-recapture: marked (ringed) birds are retrapped in subsequent years and the recapture rate depends on the bird's survival and return to the same site, and on the probability of being caught. It is impossible to distinguish between death and permanent emigration, so site fidelity from year to year is a key assumption. This seems to hold good for breeding Swifts. The analysis routines are able to separate survival probability from recapture probability by a simple point: birds that are missed in one year but caught in a subsequent year must obviously have been alive, and the proportion of them that are trapped indicates the recapture probability.

I used the program MARK (version 6.1), written and made freely available by Gary C. White of the Department of Fish, Wildlife and Conservation Biology at Colorado State University, USA. Both survival probability (ϕ) and recapture probability (p) are likely to vary from year to year but quite large numbers of birds are needed to determine the time-dependence. Using MARK I tested for the four combinations of time-varying or constant ϕ and p and the best model for these Swift data (chosen on statistical grounds by the lowest AIC) was for constant ϕ , with p varying from year to year. On biological grounds, variations in ϕ from year to year (especially connected to summer weather) would be expected, but these data are not strong enough for that to show up.

It is very important to check that the key assumptions of the model are valid. These are:

1. *Every marked animal present in the population at time (i) has the same probability of recapture (p_i)*
2. *Every marked animal in the population immediately after time (i) has the same probability of surviving to time ($i+1$).*
3. *Marks are not lost or missed.*
4. *All samples are instantaneous, relative to the interval between occasion (i) and ($i+1$), and each release is made immediately after the sample.*

Assumptions 3 and 4 are obviously true for this study: rings are not lost or overlooked, and Swifts are caught on just one occasion a year and released immediately after processing. Assumptions 1 and 2 are more tricky. Assumption 1 could be violated by, for instance, the presence of transient, non-breeders or, in other studies, differences between age or sex classes. Assumption 2 could be violated if, for instance, the process of ringing or the presence of a ring affected the bird's survival. Both of these assumptions can be tested mathematically using a program RELEASE, with two sets of tests that are unhelpfully called TEST2 and TEST3. Professional scientists are very interested to know that the data pass these tests. Lack of fit to the basic mark-recapture model would invalidate all of the figures for survival/ mortality. For these Swift data from 1996 onwards (excluding 1995), the cumulative result of two sets of TEST3 is $\chi^2=10.74$, d.f.=19, $p=0.932$ and the cumulative result of TEST2 is $\chi^2=5.17$, d.f.=10, $p=0.880$, giving a total 'goodness of fit' result (TEST2 + TEST3) of $\chi^2=15.91$, d.f.=29, $p=0.977$, which is a very satisfactory level of agreement. These figures are then used to adjust the fitting routines in MARK to come up with the final values of survival probability (ϕ) and recapture probability (p).

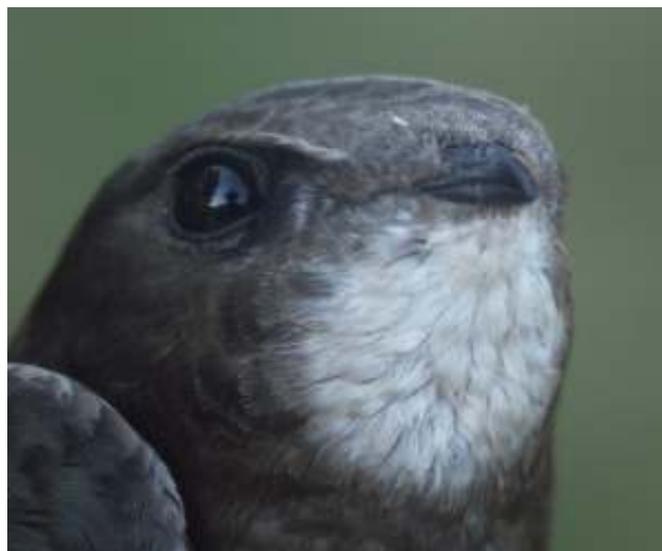


Photo: David Norman

RINGING AT PANDY, NEAR GLYN CEIRIOG, 2010

My 10th Year

By Nicola Edmonds

It is now over 10 years since that soggy weekend when I made my first visit to the valley, with Andy 'the bird man' Madden. It was early April and there wasn't much to see (although Dippers were a novelty) and the visit was almost entirely made up of the yearly ritual of unbunging nest boxes. It was cold and it was wet, and not very glamorous, and I wondered what I was letting myself in for. Two weeks passed until the next visit, and luckily the weather was glorious. I ringed my first ever birds – a brood of those Dippers – apparently a marvellous first species for a new ringer, and then another, and then a brood of Mistle Thrush to top it all off!

From that day I was hooked, and continued to make regular visits with Andy each summer for the next four years – fitting it around school work, exams and university. I became well known in the valley, and Andy taught me almost everything he knew about finding nests and ringing the chicks. I gained my first restricted C permit with Andy's help, and in the 4th year I was allowed to ring some of 'his' birds on my rings – once again Dipper being the first species. In my 5th year I found myself in the deep end taking over the site completely, armed with everything that Andy had shown me from the previous four years, and with my fingers crossed the landowners would accept me as they had accepted him. Thankfully they did, and I am still visiting the valley six years on.

There have been many changes to the site over the years, with more boxes being added, landowners coming and going, new species being sighted and others declining or disappearing altogether. Since Andy began visiting Pandy in 1993, 7261 birds from 48 species have been ringed, and in my 10 years I have handled 32 of those species. Since taking over the site in 2005 I have recorded over 500 nests of more than 25 species, and have ringed 2366 birds, of which 122 were fully grown and the rest were pulli.

My 10th year saw a number of milestones: the 7000th bird, 5800th pullus, 1500th Pied Flycatcher and Great Tit, 800th pullus Blue Tit, 450th Swallow and 200th Spotted Flycatcher. The 20th pullus Stock Dove was also ringed this year. Ringing totals for 2010 were my best yet, at 530 birds (16 fully grown and 514 pulli) of 15 species, but still not able to compete with Andy's best – 689 birds in 2004 (though I am cheered that 147 of those birds were mist-netted in October – with my help I must add!).

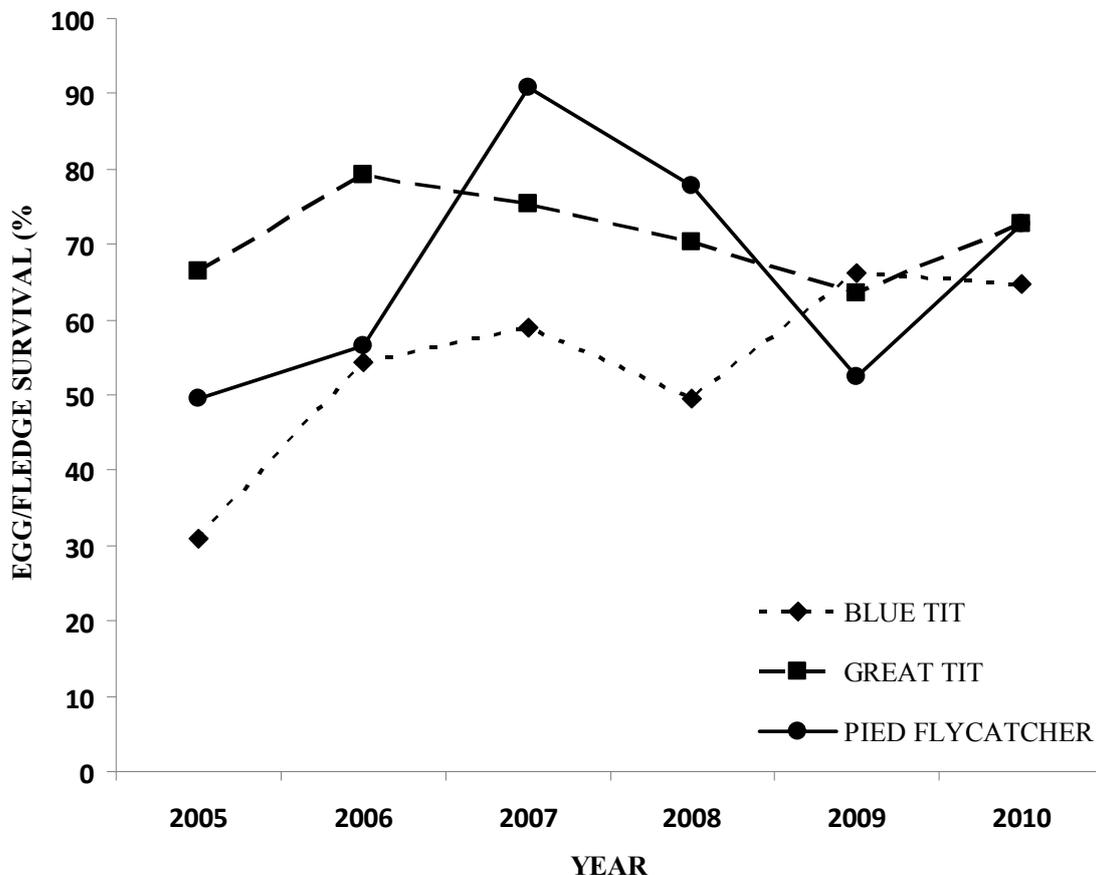
Pied Flycatchers have been one of the main study species of this site since ringing began here back in 1993. The number of pairs has fluctuated from year to year, the best ever being 22 in 1999 followed by 21 in 2009. This year returned to the annual average, 19 pairs. Despite this, numbers were good: 132 eggs were laid of which 121 hatched and 96 pulli fledged giving an overall egg/fledge success rate of 73% (see figure 1). I managed to trap a total of 26 of the breeding adults, and 14 of those were re-traps. Some of these were quite interesting, including two from the neighbouring site in the village of Pontfadog, plus two ringed at Pandy in 2007, but also one female who was ringed as a pullus back in 2003 by Andy. This bird may well have been showing her age, as she only managed to lay four eggs, and only three of those hatched and fledged.

Perhaps the most intriguing observations made of Pied Flycatchers are the behaviours of the males. Whilst I am likely to trap almost every single female bird – often whilst she is sat on eggs – I am lucky to get 50% of the males some years (for example this year I caught 17 females but only nine males). There may be many factors at play, but it does seem that in 'good

years' it is very difficult to trap males, as they seem less attentive to the young, and, as with this year, I may not see the male at all on any visit to a particular box. Indeed 2010 must have been a reasonable year, as not only did I have one female successfully rear a brood of nine almost entirely by herself (I never saw or heard the male), but in another case I caught a male at two separate boxes – one up on the slopes in mixed woodland and the other over half a kilometre away in fields down by the river. The two nests were active at the same time, though the one in the woods was a week ahead of the one by the river. My fruitless efforts to trap many of the males this year may have also been due to polygyny (where a male has multiple females), although unless the second nest is in a box I am unlikely to know for sure. This was the first year on record that a male has been caught at two nest boxes in Pandy.

As with most years, Great Tits continued to out-perform the smaller Blue Tits, with the most pairs I personally have recorded (31) compared to a distinctly average number for Blue Tits (15). Although clutch sizes for Blue Tits are typically larger than Great Tits (this year 8.7 per nest compared to 7.1 per nest) the latter normally enjoys a greater survival rate, which I have often attributed to their earlier starting dates that seem to coincide better with resource availability. Great Tits laid 219 eggs this year of which 176 hatched and 159 young fledged (egg/fledge survival 73%) and Blue Tits laid 130 eggs, of which 98 hatched and 84 young fledged (65%). The trends for the survival of the Blue and Great Tits, along with Pied Flycatchers, are shown in figure 1. As with the Pied Flycatchers, one of the highlights of the year was a re-trap male Great Tit, ringed as a juvenile by Andy in October 2003, and he managed to raise six young. Incidentally, I neglected to bung the boxes the previous winter, which probably explains the abundance of Great Tit nests compared to last year (20 nests).

Figure 1. Egg/fledge survival rates of the three main nest box using species from 2005.



The other regularly recorded species for the valley include the Jackdaw colony and the Dippers. I had one of the best years for Jackdaws, with eight reachable nests and 17 chicks ringed (in

2008 I had only five pairs but ringed 19 chicks). Andy began ringing Jackdaws at Pandy back in 1998, gradually increasing in number over the years. The nests require considerable effort to access, requiring long ladders and a brave disposition. I am lucky to have had help with this task the past few years, and no doubt Andy felt the same during those times I joined him! By comparison the Dippers seem easy to reach, usually only needing wellies and maybe a short ladder. The usual three sites were occupied this year, although I was too late for the earliest. I ringed seven chicks that all fledged however the egg/fledge survival was only around 65%.

One other speciality for the valley has been the Spotted Flycatcher, which Andy first recorded in 1996 as three breeding pairs. Their numbers increased to seven pairs in 1998, and Andy managed to ring a total of 17 young; nine nests in 2002 with 25 young ringed, and finally in 2004 six pairs produced eight broods and the most ever young ringed – 29 – and a further three pairs where the nest could not be located. Some years have been less productive, and unfortunately since taking over the site I have not managed to equal Andy's nine pairs. This year I did manage a respectable 17 pulli ringed from four nests, and the egg/fledge survival was 94%. One of these nests was a new site, and many of the former regular nest sites appear to have been abandoned. The worry is that there will be a steady decline in the species, and the sight of numerous unused nest sites does not bode well.

On a brighter note, 2010 was another fantastic year for nesting Swallows, and I smashed through last year's high by recording 20 nests and ringing 70 young (14 nests and 53 young in 2009). Swallows normally enjoy a reasonable success rate, although in the poorer weather of 2009 this dropped to 73.9%. In contrast 2010 proved to be one of the best years I have seen, with 83 of 85 eggs hatching, and all of those young fledging (97.6% success).

Other open-nest species doing well included Blackbirds, where I recorded five nests and ringed 13 young, and Robins with three nests with 16 young ringed. I also managed two Grey Wagtail nests with three and four young respectively, something that was missing from 2009's totals; as was Dunnock (one nest with three young), which was the first since 2005 when I found a couple of nests and ringed 12 young. I only found one Chaffinch nest this year (five young) but no Goldfinch after last year's two nests, or Bullfinch – which sadly I haven't seen, and little heard, since 2007. I did find two Song Thrush nests, though one was predated before ringing the young. The other was buried so deeply in hawthorn and nettles I doubt that anything but the smallest hunter would have reached it – indeed I was unable to check the outcome until later in the year when the vegetation had died back, but got well stung and scratched in my efforts to ring the young of a species that is declining in the valley. Once again I did not find any of the warbler's nests – although in reality I had little time to spare to search these out.

I welcomed the return of the Stock Doves for the third year running – another brood of two – but there was no other activity from the larger hole-nesters including the Tawny Owls. From the smaller hole-nesting species I failed to find any Redstarts or ring any Pied Wagtails, and the rest of my totals were made up of bits and bobs. However, one particularly heavy downpour was enlivened by my catching three sodden, newly-fledged Coal Tits – a nest I would never have accessed otherwise – though what an awful day for them to fledge!

Acknowledgments

I thank all the landowners who have continued to grant me access to their land, and to those who welcomed me back that first year I came alone. I also thank Andy 'the bird man' Madden for leaving me this legacy, and for those four years of his patience in teaching me everything he knew.

APPENDIX

The table below shows species currently cited as Birds of Conservation Concern: Red List (**bold**) and Amber List (*italics*).

Species	2010			2010 Grand total		
	Fledged	Pullus	Total	Fledged	Pullus	Total
<i>Kestrel</i>			0	0	1	1
<i>Curlew</i>			0	0	2	2
<i>Stock Dove</i>		2	2	2	20	22
Tawny Owl			0	0	26	26
Swift			0	1	7	8
G S Woodpecker			0	10	0	10
Skylark			0	0	5	5
<i>Swallow</i>		70	70	3	455	458
<i>House Martin</i>			0	2	0	2
<i>Meadow Pipit</i>			0	0	13	13
<i>Grey Wagtail</i>		7	7	11	141	152
Pied Wagtail			0	2	49	51
Dipper		7	7	12	147	159
Wren			0	27	56	83
<i>Dunnock</i>		3	3	27	58	85
Robin		16	16	37	144	181
<i>Redstart</i>			0	1	103	104
Whinchat			0	0	63	63
Blackbird		14	14	23	150	173
Song Thrush		4	4	9	88	97
<i>Mistle Thrush</i>			0	3	10	13
Lesser Whitethroat			0	1	0	1
Whitethroat			0	1	0	1
Garden Warbler			0	10	67	77
Blackcap			0	5	12	17
<i>Wood Warbler</i>			0	0	10	10
Chiffchaff			0	6	6	12
<i>Willow Warbler</i>			0	41	111	152
<i>Goldcrest</i>			0	28	0	28
Spotted Flycatcher		17	17	0	204	204
Pied Flycatcher	12	105	117	219	1289	1508
Long-tailed Tit			0	25	0	25
Marsh Tit			0	3	0	3
Coal Tit		3	3	43	13	56

Species	2010			2010 Grand total		
	Fledged	Pullus	Total	Fledged	Pullus	Total
Blue Tit	3	86	89	466	846	1312
Great Tit	1	158	159	218	1325	1543
Nuthatch			0	25	38	63
Treecreeper			0	3	0	3
Magpie			0	1	0	1
Jackdaw		17	17	0	132	132
House Sparrow			0	1	2	3
Chaffinch		5	5	135	135	270
Greenfinch			0	32	8	40
Goldfinch			0	2	26	28
Siskin			0	4	0	4
Linnet			0	0	7	7
Bullfinch			0	7	28	35
Yellowhammer			0	2	16	18
			0	0	0	0
TOTALS	16	514	530	1448	5813	7261



**The brood of nine Pied Flycatchers reared successfully by their mother alone.
Photo: Nicola Edmonds.**

SITE FIDELITY AND LOCAL MOVEMENTS OF BIRDS WITHIN THE WOOLSTON EYES RESERVE

David Norman and Michael Miles

In the British ringing scheme, movements of ringed birds more than 5km (for most species) are dealt with nationally, and these are included every year in the ringing report. But records of movements shorter than 5km are left to be treated locally, if at all. The steady and long-term programme of ringing at Woolston affords a great opportunity to examine the site-faithfulness, or otherwise, of some species.

We have analysed the records for all the birds ringed or retrapped at Woolston in the eight years 2003-2010 inclusive on no.1 and no.3 beds, including in the latter category those in the centre and at the southeast corner of no.3 bed. The main ringing areas at no.1 and no.3 beds are 2.3km apart. The word 'retrap' is the standard ringers' vocabulary for all birds caught again after the initial ringing although all of these birds were caught in mist-nets.

The Table, on the next page, shows the results for all those species of which at least 100 individuals have been ringed in this period.

Recaptures on the same bed

The results show that, on average, almost one-fifth of the individuals are caught again on the same bed. This proportion varies enormously between species, from over half for Willow Tit and Great Spotted Woodpecker, and more than 40% for Bullfinch, Long-tailed Tit, Blue Tit and Great Tit, to an average of 14% for the warblers and less than 1% for the roosting hirundines (Sand Martin and Swallow). In general the resident species, and especially those attracted to the feeding stations, have higher retrap rates than the migrants.

However, many individuals within the 'resident' species can move considerable distances, as shown for instance with Greenfinch and Reed Bunting in the annual ringing reports. In some others there may be a high proportion of continental immigrants; local populations of Goldcrest, Chaffinch and Blackbird, for instance, are considerably augmented in winter by visitors mainly from Scandinavia.

Our analysis, so far, has not considered the age of bird or whether it was retrapped within the same or a subsequent season.

Movements between no.1 and no.3 beds

The overwhelming picture is of site-faithfulness. Averaged over all these species, birds are some 28 times more likely to be retrapped on the bed where they were ringed than to have moved between these two beds. There are substantial differences between species, however. It may not be surprising that no Wren or Dunnock, with their reputation as the most sedentary of species, has moved the 2.3 km between these sites. But no Blackbirds have made the same swap, either local birds or continental immigrants, and only one Song Thrush, a juvenile ringed on no.1 bed on 18 September 2009, caught on no.3 bed just over two weeks later (4 October 2009). All four of the Robins that switched beds were ringed as juveniles in spotty plumage then caught on the other bed in August – October of their first year, and this is probably the extent of normal post-juvenile dispersal.

Perhaps it is significant that the two species with the highest retrap rates, Willow Tit and Great Spotted Woodpecker, also show the highest rate of movement between the beds at one-in-forty

of those ringed. The sample size is small, however; only three and six birds respectively moved beds, compared to 63 and 146 that were retrapped on the same bed where they were ringed.

	Total Ringed 2003-2010	Total Retrapped Same bed	% Retrapped Same bed	Total Retrapped Different bed	% Retrapped Different bed
Great Spotted Woodpecker	124	63	50.8	3	2.4
Sand Martin	398	3	0.8	0	0
Swallow	2882	10	0.3	4	0.1
Wren	1608	382	23.8	0	0
Dunnock	837	277	33.1	0	0
Robin	1348	401	29.7	4	0.3
Blackbird	749	156	20.8	0	0
Song Thrush	364	53	14.6	1	0.3
Sedge Warbler	982	104	10.6	1	0.1
Reed Warbler	4346	775	17.8	42	1.0
Whitethroat	1154	136	11.8	1	0.1
Garden Warbler	281	17	6.0	1	0.4
Blackcap	3632	342	9.4	13	0.4
Chiffchaff	3078	500	16.2	18	0.6
Willow Warbler	1735	298	17.2	5	0.3
Goldcrest	714	108	15.1	0	0
Long-tailed Tit	1221	546	44.7	3	0.2
Willow Tit	249	146	58.6	6	2.4
Blue Tit	2031	824	40.6	4	0.2
Great Tit	2075	984	47.4	9	0.4
Jay	115	25	21.7	0	0
Chaffinch	1898	316	16.6	5	0.3
Brambling	133	5	3.8	2	1.5
Greenfinch	5939	742	12.5	130	2.2
Goldfinch	197	14	7.1	0	0
Linnet	335	7	2.1	0	0
Lesser Redpoll	662	23	3.5	2	0.3
Bullfinch	968	416	43.0	14	1.4
Reed Bunting	1623	392	24.2	25	1.5
Total (of these species)	41678	8065	19.4	290	0.7

The Greenfinch provides the most numerous examples of inter-bed movement, and this species is less than six times more likely to be recaptured on the same site (742 birds) than having switched to the other bed (130). Some of the inter-bed movements are quick, and there are two records of Greenfinches being caught on the two beds only three or four hours apart. Greenfinch TK14068 was ringed on 21 October 2006 at 08.30 on no.1 bed and retrapped at 12.00 the same day on no.3, whilst Greenfinch TJ08434 made the opposite journey, being ringed on 27 December 2008 at 11.00 on no.3 bed and retrapped at 14.00 the same day on no.1.

Two of the roaming Long-tailed Tits were probably paired, or at least part of the same flock, having been ringed together on no.1 bed on 7 October 2005 and later caught together on no.3 bed on 21 January 2007; one of them had also been caught on no.2 bed on 29 April 2006.

It seems especially odd that birds that travel several thousand kilometres to reach Woolston, such as the warblers, do not then move around more when they reach the reserve. But only Reed Warbler has as many as 1% of the birds handled on both beds, and there is only one example each in the last eight years of Sedge Warbler, Whitethroat and Garden Warbler.

A similar effect is seen with Lesser Redpoll, which is mostly found as a passage bird, sometimes in large flocks, with 662 birds being ringed in these eight years. Only 16 of those were ringed at Woolston in the May-August period yet it is two of those, probably local birds, that have moved between beds, and none of those from the passage flocks. This was the pair of adults, apparently just having finished breeding, caught and ringed together in the southeast corner of no.3 bed on 1 August 2005 and retrapped together on no.1 five days later.

How do birds cross the Thelwall Viaduct?

For those birds that do move between no.1 and no.3 beds, we wonder do they cross over or under the M6?

Another ringing site in Warrington run by fellow MRG member Phil Guest in Gorse Covert is just 4 km due north of no.1 bed and 5 km from no.3 bed at about 15 degrees east of north. A bird leaving No.1 bed flies over open countryside to Gorse Covert whereas a bird leaving No.3 bed travels first over part of The Eyes, then over the edge of Woolston village and finally over Risley Moss and the M6 motorway. In the period from 2003 to 2010 there were 19 Greenfinches ringed at Woolston and subsequently retrapped at Gorse Covert. Sixteen of these were ringed on no.1 bed and just three on no.3 bed. After adjusting for the different number of Greenfinches ringed on the two beds (17% more birds were ringed on no.1 bed than on no.3 bed) it appears that a Greenfinch ringed on no.1 bed is four and a half times more likely to travel to Gorse Covert than one ringed on No.3 bed. Movements in the opposite direction show an even larger variation. Of the 15 Greenfinches ringed at Gorse Covert and later retrapped at Woolston, 14 of them were caught on no.1 bed and just a single bird on no.3 bed.

This variation is very unlikely to have happened by chance; statistically the probability is much less than one-in-fifty-thousand. It follows that there is an external factor influencing the behaviour of these birds. Some possibilities might include:

Distance: it seems unlikely that the difference between a flight of 4km and one of 5km would account for this disparity.

Direction: there is no obvious reason why a difference of 15 degrees in direction would influence the bird's travel behaviour.

Topography: the most likely explanation for this difference is topography including the 'barrier' of the M6 motorway. Birds leaving Gorse Covert appear to be flying south in parallel with the M6 with a similar influence on birds heading north from no.1 bed. There is no clear 'exit route' from no.3 bed that does not involve flying over a residential area and it seems unlikely that Greenfinches would be averse to doing so given that they are a common bird of built up areas and gardens. Although we now enter the realms of speculation, it may follow that it is the M6 motorway itself that acts as a barrier to birds moving between no.3 bed and Gorse Covert.

Finally we return to the question posed above and ask "If Greenfinches are averse to crossing the M6, how is it that 130 inter-bed movements have been recorded in the study period?" The answer might be that Greenfinches can move quite easily between beds whilst staying in or close to the trees and shrubs available and pass under the Thelwall Viaduct. There is a project opportunity for someone to study the interaction between Woolston's birds and the landmark structure that divides the reserve.

Glyn Arthur 2010

Bob Harris

It is at this time of year that, when considering collating the annual totals, one reflects back on things that have gone before. Thirty-two Pied Flycatcher nests were counted in 2008, which rated as joint seventh highest total for the site since 1987. From that happy start to 2008 things crashed in the latter part of May when 14 sets of eggs or chicks were lost to predation. It appears that 2009, and now 2010, are struggling to get back to anywhere near these levels. Combined with issues of climatic change affecting migration dates and breeding in relation to peak food availability, it seems likely that nest counts above 30 will be some years into the future.

Locally the first Pied Flycatchers were recorded at Prion on 14th April where three nests had been started. Others were recorded at Bala (18th April) and Aber (22nd). At Glyn Arthur three pairs were present during my first visit on the 24th, although on territory none of these pairs indicated any signs of starting to nest-build in any boxes. Others birds were not so slow however, with eight boxes with eggs (either Blue or Great Tit), and a further 23 being under construction.

Elsewhere all the usual migrant birds were on site, with Chiffchaff and Willow Warbler in and singing, Blackcap and Garden Warbler also, and the first Cuckoo of the year heard calling. No Redstarts were seen or heard. Wood anemones were well in flower, Primroses were just starting and a rare Bluebell was visible. Small White, Small Tortoiseshell, and Orange-tip butterflies were on the wing.

The following week 21 boxes contained eggs, all occupied by tits of one species or another. Another 22 boxes had signs of fresh building activity. Pied Flycatchers were conspicuous by their silence rather than by any calls or singing but 17 boxes showed signs of nest-building over the full range from N1 (just starting) to N4/NL (lined and ready for eggs). Three Redstarts were seen – two male and one female – and it was hoped that at least one of the unlined nests would be down to them.

A Pheasant was found incubating eggs – by almost tripping over her she was sitting that tight – and she was so tight that no egg count could be made (see image below).



Also on site, Raven and Buzzard were constantly overhead and calling loudly, Nuthatch were vocal throughout the whole of the valley, Chiffchaff and Willow Warbler were singing and a pair of Mistle Thrush were feeding young somewhere as they were witnessed carrying bills of grubs off into the trees. The usual pair of Pied Wagtails around the pond was missing and Swallows were only just beginning to explore the barn. Great Spotted Woodpeckers were drumming – with possibly three pairs on site – and Jays were heard scolding in the trees. A Cuckoo only called once towards the end of the day.

The next visit was made after a week of deteriorating weather – falling temperatures and rain which, usually, has the effect of slowing down the rate of nesting. At the end of this round figures stood at: three Coal Tit, all incubating eggs; eight Blue Tit with eggs, and two more building; and six Great Tit with eggs and another two building. There were an additional eight tit nests with eggs and one still being built. Interestingly two Blue Tit clutches increased their egg count to nine in just seven/eight days – which should not have been possible unless ‘helped’ by another laying female. All other apparent early building had come to nothing.

With Pied Flycatcher nests, one previously noted nest had been hijacked by a tit spp, and another was in fact a Redstart nest – with the female witnessed adding more feathers. Eleven of the other boxes with Pied Flycatcher nests held eggs (4x1e, 1x2e, 3e, 4e, 5e, 7e and 2x6e) with a ‘new’ female being lifted off one clutch of six eggs for ringing and photography before being replaced. A Nuthatch was building a nest in box 77, a Blackbird’s nest was found with two eggs by the stream, and a Song Thrush with two eggs by the pond.

Following a reasonably warmish week the weekend of my next visit was warm and sunny. The first pulli were ringed, unusually Coal Tit, with eight from a brood of eleven ringed. Five other broods of newly hatched chicks were all too small to ring (1x Coal Tit, and 2x each Blue and Great Tit). For Pied Flycatcher there were now twelve nests holding eggs with another four nests built but still empty. Six females were lifted off eggs and photographs taken – one was another new bird, while the other five were birds ringed in previous years.

Elsewhere Redstart had laid four eggs in the nest-box and another Redstart nest in a natural site, one of the old Alder trees, was found but was not in a location permitting further inspection. For other species there was good and bad news. The good news was that a Wren’s nest was found with eight warm eggs, while the Blackbird and Song Thrush nests had both been predated.

The next visit was extremely hot and sunny and, to start the day, cameras were set recording the feeding activities of broods of Coal Tit and Blue Tit – to add to the data still being collected on Pied Flycatcher feeding. With regard to the ringing of young, nearly all of this occurred on the warm south-facing slope. The north-facing slope is always about one week behind so, while ringing on the south-facing boxes, north-facing boxes still had eggs or very small young. Fifty-nine tit pulli were ringed (Blue, Great and Coal Tit) and one new female Pied Flycatcher was lifted, ringed and photographed.

The following week 54 Blue Tit pulli were ringed and two new, unringed, brooding females lifted. With Great Tit, 39 pulli were ringed and two adult females lifted – one being a bird originally ringed as a pullus in May 2007. Pied Flycatchers were more of a mixed bag – with nests containing anything from eggs to small sized young. Thirty-six chicks were ringed and two females were lifted. In addition two feeding males were trapped and one box was video-filmed for nearly five hours.

Ringing continued the next week, with the last young of Blue Tit and Great Tit, and new young of Redstart and Pied Flycatcher. In some Flycatcher boxes young, expected to be present for ringing, had already gone – with no evidence of foul play. Clearly they were being fed well during the warm and sunny weather and had developed rapidly. Filming also continued on another four broods of youngsters. Interestingly a box of eight chicks the previous week had

dropped to five this week and I assumed, wrongly, that they had been ‘lost’ in some fashion. However, filming revealed the truth for I had started to film part way through the brood departing – another four had left and were witnessed by filming. Analysis of the film taken indicated that the adults were still feeding some of the chicks in the box even though they were leaving – obviously they are not starved out.

Checking the nest of Wrens as the last action of the day indicated a brood of young not far from fledging (see photo).



After a final week of mopping up the final figures for the year were:

	1 st egg date	Nests	Pulli ringed	FG ringed	Retraps/controls	Total
Redstart	12 May	1	7	0	0	7
Pied Flycatcher	2 May	15	70	6	10	86
Coal Tit	16 April	3	28	0	0	28
Blue Tit	20 April	13	95	3	0	98
Great Tit	16 April	12	90	1	1	92
Totals		44	290	10	11	311

For Pied Flycatcher, there were 15 breeding pairs on site. Six of the 30 adults were caught and ringed as new birds with no history and ten others were retraps or controls with history. The Pied Flycatcher retraps/controls are shown below:

Females: T652441 ringed as an adult female in 2006 and not caught since
T834607 ringed as a pullus in 2006 and recaptured 2007 & 2008 but not 2009
T834634 ringed as a pullus in 2006 and not caught since
T537933 ringed as an adult female in 2007 and caught every year since
V570527 and V570591 first ringed as adult females in 2009
V570710 and V570711 ringed as pulli in 2009

Male: T834336 ringed as a pullus at Loggerheads in June 2006
V570576 ringed as an adult in 2009

My continued thanks to the Williams family at Glyn Arthur for permitting me to undertake this study on their land.

WOOLSTON EYES RINGING REPORT 2010

Michael Miles*

**Michael Miles on behalf of the ringing team (John Blundell, Tony Davis, Kieran Foster, Alan Hitchmough, Zoe Houghton, Stephen Menzie, Hugh Pulsford, Margaret Rawlins, Dave Riley, Lisa Warvill)*

Ringing operations in 2010 were carried out in just two areas of the Reserve: the east end of No. 1 bed and the centre of No.3 bed. The grand total of 6,607 birds of 58 species newly-ringed across the Reserve was a 23% increase on the 5,359 birds of 59 species ringed in 2009 and is the second highest total in 31 years of ringing at Woolston Eyes. Although there was a modest increase in ringing effort when compared with 2009 the primary reason for this excellent result is that a number of species enjoyed a very good breeding season at Woolston and, by inference, at sites further north which are the breeding grounds for birds that pass through Woolston in the autumn. Whilst the primary reasons for good breeding success must be the related ones of favourable weather and plentiful food supply, it seems clear that the very large improvement in breeding success on No.3 bed for Whitethroat, for example, must represent an immediate payback on the investment in coppicing made by WECG in 2009.

Nine species were ringed in record numbers: Stock Dove, Woodpigeon, Mistle Thrush, Garden Warbler, Blackcap, Willow Tit (for the second year running) Great Tit, Treecreeper and Bullfinch (again for the second year running). The Stock Doves and Woodpigeons discovered the food below the No 3 bed feeders which is where seven of the eight Stock Doves and 13 out of the 14 Woodpigeons were caught. The four Mistle Thrushes were all caught on No3 bed. The capture of a recently fledged juvenile plus adult male and female on 22nd May implies successful breeding by the pair that is resident on the bed. The 54 Garden Warblers improves on 50 in 2003 and the 695 Blackcaps is a big advance on the previous best of 545, also in 2003. Most of these birds will be migrants moving through Woolston and the catches imply a generally good breeding season. The 368 Great Tits caught demonstrate how a small resident bird that may be susceptible to prolonged harsh winter weather can “bounce back” rapidly if the breeding season brings favourable conditions.

The history of Treecreeper catches at Woolston is another instructive empirical demonstration of woodland succession. David Norman started ringing at Woolston in 1980 but the first example of this essentially woodland species was not caught until 1988, the same year that two other woodland species Jay and Coal Tit were first caught. The first year in which catches of Treecreeper reached double figures was 2002 when 10 were trapped and in 2010 the total reached 20 for the first time. In the 2009 report I wrote “Finally what may be the best news of all is that two birds of conservation concern, Willow Tit and Bullfinch, were caught in record numbers.” For this report I could cut and paste the same sentence. The 51 Willow Tits compares with last years 39 and the 229 new Bullfinches caught confirm that last year’s 199 was not a 'blip'. These two species are thriving at Woolston and the supplementary winter feeding provided by WECG has played a critical part in supporting these birds through two periods of harsh winter weather.

Other notable catches included Woolston’s second Hobby and sixth Lesser Spotted Woodpecker. The three Tawny Owl chicks ringed on No3 bed were the first since 2003. Grasshopper Warblers continue to increase from the low point of 2007, when just a single bird was ringed, with 13 new birds trapped. After just 17 birds were ringed in 2009 Goldcrests were more evident with 70 new birds trapped. Although an improvement, this total is still well below the 5 year average up until 2008, which is 117. On the negative side no Water Rails were ringed which reflects very low trapping effort caused in part by unsuitable weather at key times of the

year. No new species were added to the Reserve's ringing list in 2010 so the number of species ringed remains at 103.

Comparing 2010 with the previous year, 1,248 more new birds were ringed. A small roost of Swallows formed on No3 bed and persistent effort resulted in 201 more hirundines being ringed in 2010 than in the previous year. The remaining increase of 1,047 includes 433 more warblers, notably 204 additional Blackcaps and a remarkable 118 additional Whitethroats. There was also an increase of 545 in the number of finches and buntings caught with 227 more Greenfinches and 185 more Chaffinches.

Individual species' milestones included the 11,000th Swallow, the 10,000th Greenfinch, the 8,000th Reed Warbler, the 8,000th Blue Tit, the 7,000th Blackcap, the 5,000th Wren, the 5,000th Chiffchaff, the 3,000th Long-tailed Tit, the 1,000th Song Thrush, the 1,000th Linnet, the 200th Great Spotted Woodpecker, the 200th Jay and the 50th Snipe.

No.1 bed

Ringing took place on most weekends along the south side and around the east end of No. 1 bed. The 2,788 birds ringed in 2010 represent an 11% increase on the 2009 total. Contractors continue to work on the bed but in 2010 this did not impinge in a material way on the areas of the bed where ringing is carried out.

Two Sparrowhawks ringed during the year were both first year males. The smaller males are more likely to 'stick' in a mist net than the larger females. For the second year running Moorhen appears in the ringing totals for the bed with two adult males caught on consecutive weekends in November. As in 2009 the feeding station produced a single Stock Dove on 25th June and a single Woodpigeon on the following day. The four Kingfishers ringed were an adult female and three birds of the year. Just a single Green Woodpecker was caught during the year, a first calendar year female trapped on 5th September. This species has now been caught on the bed in eight of the last nine years. After a poor year in 2009 the nine Great Spotted Woodpeckers ringed represented a return to the levels seen in 2007 and 2008. As has been noted before, many of these birds visit the feeding station from the south side of the Manchester Ship Canal where breeding habitat is more suitable. The more advanced woodland succession on No3 bed supports its own population of this species.

Again no significant hirundine roosts formed on the bed. Just five Sand Martins were ringed and a sixth was retrapped on 9th July 2010 having been originally ringed on the bed on 10th July 2009 and controlled at Oxmoor Local Nature Reserve on 24th July 2009, part of a catch of 287 Sand Martins over two nights. A total of 39 Swallows were ringed between 2nd July and 13th August. A single House Martin was ringed on 19th June. For the second year running success was achieved in sampling the southerly migration of Tree Pipits with three birds trapped together in the same net on 28th August. After a bumper year in 2009 with 33 captures, just seven Meadow Pipits were ringed, all in September. After the poor year in 2009 Wrens and Robins were caught in average numbers but Dunnocks appeared to have a poor breeding season. The 15 birds ringed on No1 bed was the lowest total on record and less than half the total ringed in 2009.

After two poor years Blackbird catches recovered slightly and the 40 new birds ringed included a brood of 4 pulli ringed on 16th June. However this figure is still below the five year average up to 2007 and taken together with the low number of just 11 new Song Thrushes ringed suggests that the dry weather in early summer and the resulting hard ground had an adverse impact on breeding success of species feeding their chicks with invertebrates. A first calendar year female Fieldfare trapped on 27th November was the first to be ringed at Woolston since 2008. A single first calendar year Redwing was ringed on 20th November.

Warblers had a mixed year on the bed. Grasshopper Warblers have returned strongly with eight new birds ringed and the 234 Reed Warblers ringed was the second highest since 1995. Sedge Warblers, with 44 birds ringed, and Whitethroats with 78, had a very poor year but were caught in record numbers on No.3 Bed. A possible contributory factor is that these species may be particularly sensitive to woodland succession. The declining catches on this bed may reflect this whilst the intensive coppicing effort on No.3 bed has reversed the trend, albeit temporarily, without a continuous coppicing regime. Five Whitethroats were caught having returned from previous years but no Sedge Warblers. The single new Lesser Whitethroat trapped represented the worst year on record for this species. However, this is the rarest of the 'common' warblers at Woolston and is never caught in large numbers. Blackcaps and Garden Warblers were caught in good numbers with 180 of the former ringed and 20 of the latter. Blackcaps are a species more associated with woodland.

Bucking the 'woodland' trend, the 213 Willow Warblers caught was the highest number since 2005. In addition 21 Willow Warblers were caught returning from previous years. Chiffchaffs were also caught in very good numbers, the 312 new birds being the second highest annual total caught on the bed. After just 13 Goldcrests ringed in 2009 something of a recovery took place with 43 new birds ringed. Most Woolston Goldcrests are caught during the autumn passage of continental birds moving into the UK for the winter. The peak of this passage was on 16th October when seven birds were caught. In 2009 the peak day had been 17th October when four of the 13 Goldcrests ringed in that year were trapped.

Long-tailed Tits had a very good year and the 110 new birds ringed was just one short of the record year in 2008. Ten birds were retrapped from previous years. Other resident Tits continued the recovery noted in 2009. Eighteen new Willow Tits were ringed and a further ten retrapped from previous years. The steady influx of Coal Tits continues with six new birds ringed, all birds of the year. In addition, a bird was retrapped on 13th March and was presumed to be wintering in the area. The 174 Blue Tits ringed was the highest number since 2002 and the 153 Great Tits the highest since 2005. This includes a brood of 10 young Great Tits ringed in a nest in a box put up for owls. This is very spacious accommodation for a family of Great Tits but required a lot of nest material so is not an efficient choice on the part of the adults. Another woodland species turning up more frequently in the ringers' nets is Treecreeper and the seven birds ringed was a record for this species. Corvids were represented by four Jays and two Magpies. A further two Jays were trapped that had been ringed in 2005 and not encountered since.

Finches had a fairly good year. Chaffinches, with 120 new birds, had the third highest total for the bed and a further 35 were retrapped from previous years including two from 2002. The 377 new Greenfinches ringed was also the third highest total for the bed and 17 new Goldfinches was an average number albeit a reduction on the exceptional 29 in 2009. No Bramblings were caught and although November heralded the start of an exceptional "Brambling winter" with 20 caught on No.3 bed it can be considered unlucky that a few did not appear at the No.1 bed feeders. Only 41 Siskins have been ringed in 31 years of ringing at Woolston so the three birds of the year caught in November was a good achievement. This also marked the start of an above average invasion of Siskins into the region. After just 11 new birds in 2009 the ringing of 30 new Linnets marked a recovery to more average catches. In addition four broods totalling 17 pulli were ringed.

Lesser Redpolls are irruptive and the 88 new birds ringed in 2010 was a record total. For the third year running a bird ringed at Copeland Bird Observatory in Northern Ireland was controlled. An adult male Common Redpoll was trapped and ringed on 19th November. Bullfinches had yet another record year with 82 birds ringed and a further 23 retrapped from previous years. After a blank year in 2009 five new Yellowhammers were ringed all in the period 16th April to 14th May. Reed Buntings had an average year with 147 new birds ringed and 61 birds retrapped from previous years

Centre of No.3 bed

In the centre of No. 3 bed the 3,784 new birds ringed in 2010 was an increase of 40% over 2009 and is the largest one year total ringed in this location beating the previous record of 3,368 ringed in 2007. A notable feature of 2010 was the freezing weather both at the beginning and end of the year. One result of this was to severely restrict opportunities for trapping with the result that no ducks or Water Rails were ringed during the year. Just four Moorhens were ringed, the lowest total since the blank year of 2005, and only a single Coot.

Star capture of the year was a second year Hobby caught in a net set for hirundines on the evening of 27th August: just the second Hobby caught at Woolston and also the second caught by Merseyside Ringing Group in 56 years of ringing. We had a near miss in 2007 when a Hobby chasing Hirundines flew straight through a net leaving a large hole. Two Sparrowhawks were trapped just three days apart in September.

The opportunity to set nets for waders on the edge of the water is restricted to a short period between the end of the freeze and the arrival of Black-necked Grebes. For this reason the three Common Snipe and two Jack Snipe caught were all netted in March. One of the Jack Snipe was a retrapped bird which was ringed in November 2009. It is probable that this bird moved off the bed during the freeze but returned to favoured habitat when the thaw arrived.

One of the notable events of 2010 was the sudden arrival of Stock Doves at the feeders. Seldom recorded, the capture of seven different individuals at the feeders was a complete surprise. All were adults and were caught between 23rd February and 12th June. This influx also contained good numbers of Woodpigeons and, after a blank in 2009, a record total of 13 birds were ringed. Given the large number of Woodpigeons that are shot there is a chance that a recovery will give a clue to how far Woolston's Woodpigeons move around.

Successful breeding by Tawny Owls was confirmed with the ringing of three well grown young birds, the first chicks to be ringed on the bed. A single Kingfisher was caught in a net set for low flying Swifts on 23rd July. A record 14 Great Spotted Woodpeckers were ringed, most caught at the feeding station. The first juvenile was ringed on 19th June, a month earlier than in 2009. A juvenile male Lesser Spotted Woodpecker was caught on the north meadow on 21st October, just the sixth to be ringed at Woolston. This bird was probably undertaking post-fledging dispersal from a site on the south side of the Manchester Ship Canal.

A better year for hirundines with a persistent roost of about 300 Swallows forming near the Frank Linley Hide. The catch of 24 Sand Martins was below average but 296 Swallows was the best total since 2004. Catching took place between 16th July and 11th September with very few birds retrapped indicating that the population of what might appear to be an established roost is very fluid. After a blank year in 2009 four Meadow Pipits were ringed, all juveniles and all on 18th September. Unlike No.1 bed the autumn Meadow Pipit passage over No.3 bed is weak and short-lived. All the ten birds ringed in recent years have been caught between 17th and 20th September which represents the same Saturday morning in each year.

Wrens, Dunnocks and Robins were all caught in good numbers with 113 new Wrens being the highest total in the last seven years. National data, based on Constant Effort Scheme returns from ringers throughout the UK and Ireland indicates that for Wrens, adult abundance was down 20% on the five-year average but productivity was up 14% based on the number of juveniles caught. This is an example of how small residents using the 'large family' breeding strategy can bounce back from a severe winter. Dunnocks did not respond so successfully. The 82 new birds ringed was above average but down on the record of 111 in 2009. Nationally, adult abundance was down 12% and productivity down 4%. Robins suffered a 27% decline in adult abundance but achieved a 22% increase in productivity. The 88 new Robins ringed compares to a five-year average of 82.

Blackbird catches were above average with 52 new birds ringed. The first juvenile bird was ringed on 8th May from a brood raised in an old tractor shed. The first fledged young bird was ringed on 26th June. The capture of four Mistle Thrushes was one of the notable events of the year. Three of these, two adults and a newly-fledged juvenile, were caught together on 22nd May thus confirming breeding on the bed. The family group were regularly seen around the seeded area on the north meadow. It was a record year for Song Thrushes with 39 new birds ringed. Of this total 23 were caught between September and the year end and some of these could be continental migrants. The autumn influx of Redwings was not particularly strong and only four were trapped between 30th October and 27th November.

Migrant warblers enjoyed an exceptional breeding season both at Woolston and at those sites further north whose breeding birds and their offspring are trapped at Woolston on migration. A total of 1,564 warblers were ringed of ten species compared with 1,079 birds, also of ten species, in 2009 and only 590 birds of nine species in 2008. A record total of five Grasshopper Warblers were ringed including a recently fledged juvenile on 3rd July implying that breeding took place on the bed. A single female Cetti's Warbler was trapped on 20th November in what is becoming the 'traditional' area of the phragmites bed south of the Tower Hide. Last year I commented on the improved numbers of Sedge Warblers on the bed and suggested that this was a response to management work by WECG. In 2010 Sedge Warblers were caught in record numbers with 111 new birds ringed. Twenty of these were adults and 81 juveniles. The last bird was ringed on 25th September which is the latest date for the bed since 1985 when three were caught on the 30th. Reed Warblers also set a record with 514 new birds ringed. Seven ringed birds were trapped that had been ringed elsewhere. For the first time for a number of years no foreign ringed warbler was caught on the bed. Thirty five returning Reed Warblers were retrapped. The oldest was a female ringed in breeding condition on 24th May 2003.

Lesser Whitethroats are not common on the bed and three were ringed compared to four in 2009. Whitethroats were the surprise package amongst the warblers and the 139 new birds ringed was a record by a good margin and exceeded the previous three years combined. This species must be reacting to the management work carried out on the bed. Seven Whitethroats were retrapped in 2010, the oldest having been ringed as a juvenile on 18th July 2003. Garden Warblers had a record year in 2009 with 19 new birds ringed so the 34 birds ringed in 2010 were again exceptional. Blackcap also set a record in 2009 with a total of 316 birds ringed but 2010 produced 515 new birds ringed. The first bird, a female, was ringed on 3rd April, the earliest date ever and the first juvenile on 5th June, the same Saturday as the previous year. Thirteen Blackcaps were retrapped from previous years, the oldest from 2007. Another record was set for Chiffchaff with 180 new birds ringed just beating the 178 ringed in 2009. Willow Warbler is another species that might be expected to react to scrub management and the 62 new birds ringed were up from 32 in 2009, 37 in 2008 and 35 in 2007. After just 4 Goldcrests ringed in 2009, 27 was a big improvement. Most were caught in the two winter periods and might be continental migrants but it was a surprise to catch a Goldcrest in full juvenile plumage on 15th August and another on 9th September. These locally-bred birds are far more common on No.1 bed. A disappointment was that the autumn did not bring a Firecrest.

After exceptional breeding success in 2009 Long-tailed Tits had a more typical year with 69 new birds ringed comprising just 4 new adults and 65 juveniles. Forty-one Long-tailed Tits were retrapped, the oldest being a female first ringed on 4th June 2002 which has been handled on 23 occasions since then. The BTO longevity record for this species is eight years, eight months and five days and if this bird is retrapped in 2011 it will break the record.

The other resident Tits had a record year across the board. Thirty-three new Willow Tits were ringed after sixteen in 2009. Thirty-two of these were juveniles implying around six successful broods. A measure of Woolston's importance for this species is that if Woolston were a county in its own right it would have the second highest total of ringed Willow Tits in the country. For this reason it was decided to colour ring Willow Tits across the reserve so that their movements

can be studied more easily. Coal Tits are scarce on the bed but three juveniles were ringed between 25th September and 20th November, another example of post-fledging dispersion in action. Another record was set by Blue Tits with 209 new birds ringed; twenty-one of these were pulli ringed in the boxes. The first pulli were ringed on 11th May and the first young fledged on 5th June. Twenty-five Blue Tits were retrapped from previous years with the oldest having been ringed on 5th July 2003. At the risk of becoming repetitive, the total of 215 Great Tits ringed was also a record and again reflected good productivity in the nest boxes where 106 chicks were ringed with very low mortality. Twenty-seven Great Tits were retrapped from previous years with the oldest having been ringed on 20th July 2003.

Thirteen new Treecreepers were ringed – the previous best total for this species was seven in 2004. Sixteen new Jays ringed constituted an above average year as did the seven Magpies. House Sparrow made it onto the ringing schedules on 10th July when three birds were caught together in a net on the edge of the phragmites. They had been flying south and each had a large caterpillar in its beak presumably destined for young in a nest on the south side of the Manchester Ship Canal.

Chaffinches had a record year with 259 new birds ringed. The seven year average is 138. The first juvenile was caught on 5th June. Seventeen birds were retrapped from previous years, the oldest from 2006. Brambling is an 'irruptive' species and after just six in 2009 notice of a strong irruption was given on 13th November when the first bird of an exceptional 'Brambling winter' was caught. Twenty-one of the 22 Bramblings ringed in 2010 were caught between 13th November and year end. A total of 286 new Greenfinches were ringed. Although an improvement on 2009, catches declined towards year end and, although we do not see many 'sick' Greenfinches at Woolston, it seems clear that the trend of captures is beginning to reflect the national decline in this species after the *trichomonas* parasite has entered their population. Goldfinch remains a rare bird on the bed, seen mostly in flight and not tending to settle. A record eleven new birds were ringed and unusually the first was a juvenile trapped on 24th July. Another irruptive species, Lesser Redpoll, again arrived in good numbers and 47 new birds were ringed. The seven year average is 27 but year-on-year variations can be large. Bullfinches set another record with 147 new birds ringed. A total of 42 different birds were retrapped, the oldest having been ringed in 2006. Reed Buntings had a very good year with 87 new birds ringed, the record being 90 in 2007. The first juvenile was ringed on 5th June, the same Saturday as in 2009. A total of ten recently fledged birds were ringed.

Records of birds ringed in the nest are of particular value because, being of “known age” and origin, any data captured concerning their future lives is more accurate than would otherwise be the case. The ringing team is grateful to fellow Merseyside Ringing Group member Mike Smith who brought his nest-finding skills to Woolston on a number of occasions during the spring and early summer finding 59 nests of 15 different species. As a result a number of chicks were ringed in the nest including on Nos 2 and 4 beds where ringing does not otherwise take place.

SPECIES	No.1	No.2	No.3 centre	No.4	RESERVE TOTALS 2010	GRAND TOTAL 1980-2010
Sparrowhawk	2		2		4	91
Hobby			1		1	2
Moorhen	2		4		6	220
Coot			1		1	22
Lapwing				2	2	59
Jack Snipe			1		1	9
Common Snipe			3		3	50
Stock Dove	1		7		8	15
Woodpigeon	1		13		14	72
Tawny Owl			3		3	12

SPECIES	No.1	No.2	No.3 centre	No.4	RESERVE TOTALS 2010	GRAND TOTAL 1980-2010
Kingfisher	4		1		5	82
Green Woodpecker	1				1	13
G Spotted Woodpecker	9		14		23	211
L Spotted Woodpecker			1		1	6
Sand Martin	5		24		29	1083
Swallow	39		296		335	11102
House Martin	1				1	81
Tree Pipit	3				3	20
Meadow Pipit	7		4		11	547
Wren	70		113		183	5029
Duncock	15		82		97	3254
Robin	76		88		164	3531
Blackbird	40		52		92	2228
Fieldfare	1				1	40
Song Thrush	11		39		50	1004
Redwing	1		4		5	244
Mistle Thrush			4		4	9
Cetti's Warbler			1		1	9
Grasshopper Warbler	8		5		13	172
Sedge Warbler	44		111		155	4601
Reed Warbler	234		514		748	8136
Lesser Whitethroat	1		3		4	242
Whitethroat	78	11	139	17	245	4324
Garden Warbler	20		34		54	688
Blackcap	180		515		695	7270
Chiffchaff	312		180		492	5141
Willow Warbler	213		62		275	6903
Goldcrest	43		27		70	1334
Long-tailed Tit	110		69		179	3169
Willow Tit	18		33		51	578
Coal Tit	6		3		9	78
Blue Tit	174		209		383	8282
Great Tit	153		215		368	4853
Treecreeper	7		13		20	138
Jay	4		16		20	243
Magpie	2		7		9	117
House Sparrow			3		3	24
Chaffinch	120	5	259		384	3597
Brambling			22		22	165
Greenfinch	377		286		663	10605
Goldfinch	17		11		28	624
Siskin	3				3	41
Linnet	47		9		56	1082
Common Redpoll	1				1	4
Lesser Redpoll	88		47		135	1531
Bullfinch	82		147		229	1800
Yellowhammer	5				5	76
Reed Bunting	147		87		234	6271
Others (45 species)						1602
GRAND TOTAL	2788	16	3784	19	6607	112736

SHOTTON 2010

John Birch, Rob Cockbain and Graham Thomason

Events at Shotton in 2010 continued to both disappoint and surprise. Once again the Common Tern colony failed, despite several false dawns which raised hopes of a more successful year. On the plus side, more work continued on improving the site and the ringing year proved better than usual both in terms of ringing visits and birds ringed. During the year a number of ringing demonstrations were given to young pupils from local schools. The visits were organised by Steve Hughes of Tata and were deemed to be a great success.

The Tern Colony

Following the failure of the colony in 2009, we realised that our knowledge of the behaviour of the terns, from when they arrive back at the colony up to the actual laying of eggs, was woefully inadequate. In the past, apart from recording the arrival times and numbers present on any visit, the terns were generally left to their own devices up to the time when the nest count was made at the end of May or the beginning of June. Because of this we decided to observe and record the activity in more detail. These observations revealed behaviour which was both unexpected and inexplicable and probably produced more questions than answers when trying to ascertain why the birds failed to breed.

Terns were first recorded on 25th April when four birds were present. Only small numbers were recorded until 9th May when 300 birds were present at 07.30. The birds were behaving in what would appear to be a 'normal' fashion: landing on the islands and the posts and flying in typical courtship flight. It was noted that only a few birds were carrying fish. At 09.30, for no apparent reason, the birds circled high above the islands and began to drift off towards the estuary. By 09.45 all the terns had left the area. On 12th May (100) birds and 16th (300 birds) we saw similar behaviour with birds apparently taking up territory. This continued until 22nd May with up to 500 birds present on 20th and 21st. A large number of scrapes were noted on the islands but only one egg found. Visits on 22nd and 23rd May found a maximum of 17 birds. Odd birds were then recorded with a maximum of 12 on 18th July. The last record was of six birds on 8th August.

Despite many theories being offered as to the reasons behind this second failure of the colony, it was clear that more information was needed. To this end it was decided to seek the help and opinion of any person with an interest in the subject. Mainly through the hard work and contacts of David Norman and Peter Coffey a meeting was held on 26th August. Present were Steve Hughes of Tata; Paul Day of CCW; Euan Dunn of the RSPB; Alan Winstone of the Environment Agency Wales; and David Norman, Peter Coffey and John Birch of MRG. Subjects covered were wide-ranging and attempted to include all factors which could possibly affect the colony. The input of Euan Dunn, who has wide experience of seabird biology, was of particular value. Whilst no definite conclusions were reached, it was clear that a lot more work needed to be done. Subsequent to this meeting it was decided that the Group, together with others, would set up a programme whereby we would attempt to monitor the feeding habits of the Shotton Common Terns. This is an ongoing exercise and will be reported on as it develops.

Birds at Shotton

It was a slow start at Shotton, in part due to the atrocious weather, but also because three of the regulars were enjoying birding in South Africa. The first recorded visit was made on 24th January, but apart from the usual numbers of waterfowl was fairly quiet. A decent count of 52 Gadwall and a fairly unusual Jay were the only birds of note on 31st January.

The weather in February continued cold and changeable and three visits to the reserve were made. Records of note included: Water Rail, Snipe, Woodcock and a singing Cetti's Warbler on 7th February. Brambling and Redpoll were less common visitors to the Reserve and five Brambling were ringed during the month. Wildfowl numbers started to increase as the pools became less ice-bound, with maximum counts of 25 Gadwall, eight Shoveler, two Pochard, 39 Tufted Duck and five Goldeneye.

A Kingfisher on 7th March provided a welcome change from the more usual Shotton birds. A male Long-tailed Duck was seen briefly on 21st March and two Chiffchaffs were recorded on the same day. The introduction of nyger seed to the bird feeders seemed to be paying off with 30+ Goldfinches seen, of which 22 were ringed on 21st March and a further eight on 28th. Also on 28th, a lone hirundine (probably a House Martin) was recorded, as were Chiffchaff – two ringed – and a female Cetti's Warbler was also ringed. Ringing totals for the month were quite encouraging with a total of 107, including 24 Chaffinches and 46 Goldfinches.

Eight recorded visits were made to the Reserve in April. Sightings of note included: a Swallow on 2nd April; six Chiffchaffs, three Willow Warblers, and three Ravens present on the 5th; a Sedge Warbler and Blackcap were the first for the year on 11th; a female Wheatear and a female Pied Flycatcher were recorded on 21st. Migrant species were the highlight of 25th, with eight species of warbler recorded including Grasshopper and Garden Warblers. The Grasshopper Warbler caught on 25th was the first of this species to be ringed for a number of years.

To some extent, May was dominated by the uncertainty of the fate of the Common Tern colony as detailed earlier. On 2nd May there was evidence that the migrants had arrived in force. Swift, Swallow, House and Sand Martin were present along with a Wheatear and seven species of warbler. These included a Lesser Whitethroat, a less frequent visitor in recent years. Also noteworthy, although not on the Reserve, was a Red Kite near the Range Pools. A further six visits were made to the Reserve during the month but apart from the discovery of an Oystercatcher nest, as usual, on the islands and a Grasshopper Warbler heard reeling on 23rd, it was quiet.

It was a fairly normal June on the Reserve apart, of course, from the almost complete absence of the Common Terns. A Green Sandpiper on 20th and reasonable numbers of Tufted Duck, possibly breeding, were recorded.

The month of July saw more activity with one Wood Sandpiper, one Green Sandpiper, one Kingfisher on 11th, and two broods of Gadwall and four broods of Tufted Duck recorded on the 18th. Also noted on that day were one Common Sandpiper and six Green Sandpipers. The weekend of 24th/25th saw 53 species recorded, including two Peregrine Falcons, one Whimbrel, one Garden Warbler and a Treecreeper.

The Reserve was visited on six dates in August. Although a good month for species, the only more unusual birds were a calling Cetti's Warbler and a male Redstart on 22nd. An overnight weekend stay on 28th/29th began quite well on the Saturday, but was a complete washout on the Sunday. And September proved to be similar to August, but Snipe (3), Green Sandpiper, Coal Tit and Siskin – four on 19th – provided a little variety.

A very wet 3rd October found four Teal, eight Snipe, two Swallows, three Goldcrests, two Jays, two Ravens, two Siskin and eight Redpoll on the Reserve. On 17th, 12 Redwing and 150 Jackdaws flew over the Reserve; two Blackcap, two Siskin and eight Redpoll were also recorded. A female Goldeneye, three Shoveler and a single Pochard joined the more usual duck on the 24th. A count of 11 Snipe on the same day represented the highest count of this species for some time. Water Rail were in evidence with four calling on 31st. Thirteen Greylag Geese flew over and the Pochard numbers increased to eight. A Rock/Water Pipit, a Cetti's Warbler (caught), 2000 Starling leaving their roost in the reeds, one Brambling and 20 Redpoll were also records for the same day.

A colder than usual November saw the bird feeders popular with eight species of finch/bunting regularly in attendance. A male Bearded Tit caught on 14th was a pleasant surprise, and the first record for many years. Four Great Spotted Woodpeckers on the same day, and 15 Redwing and 80 Fieldfare heading south were indicative of the poor weather. On 21st November a Water Rail was caught in a trap intended for a Grey Squirrel, and a count of 20 Stock Doves on the same day was quite unusual. Apart from the Cetti's Warbler on the 21st being retrapped, and a flock of 20 Redpoll present on 28th, the month ended fairly quietly. Only two recorded visits to the Reserve were made in a very cold December. Six Shoveler, nine Pochard, 20 Gadwall and eight Goldeneye were on the pools, and overflying Skylark, Meadow Pipit and Grey Wagtail on 12th brought the year to an end.

Ringling Activities

The year 2010 proved to be quite a good year in terms of ringling.

Ringling Totals 2010	
Species	Total
Water Rail	1
Great Spotted Woodpecker	6
House Martin	1
Wren	21
Dunnoek	9
Robin	14
Redstart	1
Blackbird	11
Song Thrush	2
Cetti's Warbler	2
Grasshopper Warbler	1
Sedge Warbler	25
Reed Warbler	120
Whitethroat	12
Garden Warbler	1
Blackcap	23
Chiffchaff	53
Willow Warbler	11
Goldcrest	3
Bearded Tit	1
Long-tailed Tit	27
Coal Tit	6
Blue Tit	146
Great Tit	51
Treecreeper	1
Chaffinch	83
Brambling	6
Greenfinch	46
Goldfinch	98
Siskin	2
Lesser Redpoll	10
Bullfinch	11
Reed Bunting	25
Total Species 33	830

Although the number of species ringed (33) was the same as 2009, the total ringed showed a healthy increase. This was mainly due to the increased number of visits, which in turn resulted from some of the more ancient members of the Group getting their second wind. Particularly interesting were the Redstart, two Cetti's Warblers and a Bearded Tit. To the best of my knowledge, the last species has not been recorded at Shotton for over 30 years. Of the more common species, the total of 53 Chiffchaffs for the year was unexpected. The totals of Goldfinch (98), Siskin (2) and Lesser Redpoll (10) were quite pleasing in that these birds were attracted to nyger seed. In the past whenever this has been used in the feeders, it has been uneaten and usually rotted. Continuing with the recent run of foreign controls, a Reed Warbler bearing a Portuguese ring was caught on 24th July. We are still awaiting ringing details.

Birds Recorded 2010

Little Grebe	Green Sandpiper	Grasshopper Warbler
Cormorant	Wood Sandpiper	Sedge Warbler
Little Egret	Common Sandpiper	Reed Warbler
Grey Heron	Black-headed Gull	Lesser Whitethroat
Mute Swan	Lesser Black-backed Gull	Whitethroat
Greylag Goose	Herring Gull	Garden Warbler
Canada Goose	Great Black-backed Gull	Blackcap
Shelduck	Common Tern	Chiffchaff
Gadwall	Stock Dove	Willow Warbler
Teal	Woodpigeon	Goldcrest
Mallard	Swift	Pied Flycatcher
Shoveler	Kingfisher	Bearded Tit
Pochard	Great Spotted Woodpecker	Long-tailed Tit
Tufted Duck	Skylark	Coal Tit
Long-tailed Duck	Sandmartin	Blue Tit
Goldeneye	Swallow	Great Tit
Ruddy Duck	House Martin	Treecreeper
Sparrowhawk	Meadow Pipit	Jay
Buzzard	Rock/Water Pipit	Magpie
Kestrel	Grey Wagtail	Jackdaw
Peregrine	Pied Wagtail	Crow
Pheasant	Wren	Raven
Water Rail	Dunnock	Starling
Moorhen	Robin	Chaffinch
Coot	Redstart	Brambling
Oystercatcher	Wheatear	Greenfinch
Lapwing	Blackbird	Goldfinch
Snipe	Fieldfare	Siskin
Whimbrel	Song Thrush	Linnet
Curlew	Redwing	Lesser Redpoll
Redshank	Mistle Thrush	Bullfinch
	Cetti's Warbler	Reed Bunting
Total Species 94		

There were 51 recorded visits to the Reserve during the year and in spite of the absence of the Common Terns, 2010 was an interesting year both in terms of birds ringed and bird sightings. Our thanks go to Tata Steel for our continuing permission to manage the Reserve. In particular, to Steve Hughes and his colleagues for the help afforded to us over the year. Special thanks are due to the members of the Dee and Mersey Wildfowlers who once again did the lion's share of the work in preparing the tern islands.

RINGING AT FRODSHAM MARSH 2010

Peter Coffey*

Peter Coffey on behalf of ringers at Frodsham (David Norman, Kieran Foster, Zoe Houghton, Ray Eades, Kenny McNiffe, Bob Harris and Stephen Menzie)

Introduction

Merseyside Ringing Group has a long association with Frodsham Marsh dating back to the early 1960s. Birds have been ringed almost continually since that time and 2010 proved to be a year when both the quality and number of birds caught (788) was good. This report briefly describes the habitat and then provides a summary of ringing activity during the year followed by observations of other birds seen but not ringed.

Habitats

Frodsham Marsh lies in an exposed location adjacent to the Manchester Ship Canal and the Mersey estuary beyond. The banks of the canal/estuary are corridors of movement for some species of birds and area is a valuable feeding site for birds on migration.

A variety of habitats encourages a wide range of species. The farmland is predominantly unimproved pasture for sheep and cattle. There is very little shrub growth but seed-generating plants still thrive, providing good sources of food for finches and buntings in the autumn and winter. The low ground cover provides suitable nesting territory for several species such as Lapwing, Meadow Pipit and Skylark.

Ponds occur in a line running parallel to, and approximately 100 metres south, of the canal. The ponds vary in character, some containing areas of deep water with extensive reed growth around their perimeter, whilst others are shallower and may be bordered with sedges. The ponds provide breeding sites for warblers and roosting sites for many other birds including wagtails, hirundines and Starling. One shallow pool, with very limited colonisation of its perimeter and areas of exposed mud, is favoured by waders at high-tide roosts.

The west of the area comprises a large bunded area, Bed No 4, used to deposit dredgings from the canal in 1980/90s. It has slowly been colonised by vegetation, a process that has accelerated in recent years after the wet summers of 2007-08, and now provides an extensive habitat of reedbed, sedges and scrub growth, predominantly willows. It provides ideal habitat for warblers. The bed is largely dry so the chain of pools between bund and canal provides a useful supply of fresh water. The largest of these pools is Pensioners Pool which has reedbeds on two sides.

Summary of Bird Ringing in 2010

Wader Pool

Three visits to the 'wader' pool for overnight mist-netting sessions during the new moon high tide series produced a total catch of 81 birds. On the first visit, in March, only four birds were caught, three Lapwing and one Snipe. Two sessions in mid-August were much more rewarding, during which 76 waders were caught. Dunlin were most numerous, 46 birds of the *schinzii* race putting on fat to fuel their journey to Africa. The 17 Redshank included a non-Group bird previously ringed elsewhere in UK (details are still awaited) and most of the Redshank were moulting adults of the Icelandic-breeding race. The scarcer birds were two Little Ringed Plover, six Ringed Plover, one Snipe and two Common Sandpiper. Even rarer still were a Black-tailed Godwit (an Icelandic adult male in moult), only the 19th ringed by MRG, the last being in 1991; and a Greenshank (juvenile), only the 12th for the Group, the last being in 1995. For both these

species, the previous birds had also been caught at Frodsham. Finally, a Little Grebe was also mist-netted to become the 17th ringed by MRG. Avocets bred successfully on No 6 Bed and at least two flew round the nets on the first of the mid-August sessions but none were caught.

Farmland areas

Limited time was spent searching for nests this year. A total of 14 pulli were ringed, nine Lapwing, four Meadow Pipit and a single Skylark.

Bed No 4 / Pensioners Pool

Mist-net glades were prepared in mid-July, the first ringing session was held on 23rd July and the last of 13 was on 27th September. It was a productive season with a total of 676 new birds ringed: 12 birds ringed in earlier years were retrapped and two birds were controlled; a Sedge Warbler ringed in Gloucestershire as a juvenile in 2009; and a Reed Warbler caught seventeen days after being ringed at Woolston, Warrington on 24th July 2010. More than 100 birds were caught on three occasions. However the highlight was a Sedge Warbler ringed at Frodsham in August and caught nine days later in France (see Selected Controls and Recoveries 2010).

Summary of birds caught at Frodsham Marsh in 2010

Species	New Birds		Controls/ Retraps	Totals
	Full-grown	Pullus		
Little Grebe	1			1
Little Ringed Plover	2			2
Ringed Plover	6			6
Lapwing	3	9		12
Dunlin	46			46
Snipe	2			2
Black-tailed Godwit	1			1
Common Sandpiper	2			2
Greenshank	1			1
Redshank	16		1	17
Skylark		1		1
Meadow Pipit		4		4
Wren	19			19
Robin	10			10
Grasshopper Warbler	1			1
Sedge Warbler	125		1	126
Reed Warbler	249		4	253
Lesser Whitethroat	1			1
Whitethroat	62			62
Garden Warbler	6			6
Blackcap	27			27
Chiffchaff	70			70
Willow Warbler	41			41
Long-tailed Tit	2		6	8
Blue Tit	18		1	19
Great Tit	4		2	6
Treecreeper	1			1
Jay	1			1
Chaffinch	2			2
Goldfinch	23			23
Linnet	1			1
Reed Bunting	13			13
Totals (32 species)	756	14	15	785

The catch was very high quality – 87% were warblers! They covered nine species including 253 Reed and 126 Sedge Warblers, 70 Chiffchaff, 62 Whitethroat, 41 Willow Warblers, 27 Blackcap, 6 Garden Warblers and one each of Grasshopper Warbler and Lesser Whitethroat. Finches and buntings accounted for another 39 birds (6%) of four species, including 23 Goldfinches, 13 Reed Buntings, two Chaffinch and a single Linnet. A Treecreeper was the first bird caught this season, an unusual visitor to this type of habitat; it was a juvenile, probably moving through as part of its post-natal dispersal. At the end of the season a Jay made another unusual catch for the site; parties of Jays had been observed moving over the estuary and one flew into a mist-net.

Observations

Many other species were recorded but not ringed at Frodsham Marsh during the year. These records are not comprehensive and relate only to sightings made during ringing visits. Mute Swans were occasionally recorded along the canal but large flocks of Canada Geese were present throughout most of the year. Mallard, Tufted Duck and Teal were seen on various pools and ditches and Shelduck were seen on the canal, including an adult with three small chicks in July. Little Grebe were calling at several locations and probably bred, and a juvenile Great Crested Grebe was recorded on the canal in July. Two pairs of Grey Heron bred on No 6 Bed and other Grey Heron and Little Egret were recorded regularly in small numbers.

Raptors appeared regularly, with Sparrowhawk, Kestrel and Buzzard common, with a maximum of 9 Buzzard noted in September. We were treated to a fine spectacle as a male Sparrowhawk flew at speed across the bund on No 4 Bed into an Elderberry bush where Starlings were feeding. Other raptors included Peregrine and Marsh Harrier (adults and juvenile birds).

Moorhen and Coot were relatively numerous and bred successfully. Two wader species, in addition to those ringed, were recorded – Oystercatcher and Green Sandpiper. The latter was regularly seen in July/August in small pools with a maximum of four at any one time. Up to four pairs of Oystercatcher bred in wooden posts along the canal. Although only one Black-tailed Godwit was ringed, a small group of seven birds were seen dropping into one of the pools late in September. Gulls included Black-headed Gull, Common Gull, Lesser Black-backed Gull and Herring Gull.

Woodpigeon were common and Stock Doves were recorded in low numbers. Skylarks were present at several locations, including small numbers on passage in September. Sand Martins and Swallows were frequently observed along the canal and over pools but no roosts were found this year. Late September brought a strong migration of Swallows moving due south without stopping in the area. Pied Wagtails were recorded throughout the season and it was good to see Yellow Wagtails moving through on migration in late July/early August although numbers were low and roost sites were not confirmed. Several Wheatears and a juvenile Stonechat were observed moving along the canal bank in August.

Jay was the only corvid ringed but Magpies were seen regularly whilst Carrion Crows and Ravens were occasionally seen or heard. Large numbers of Starling (400+) roosted in trees in the dry scrub on Bed No 4 close to a ringing glade but none were caught. Finally the small number of Goldfinches and Linnets ringed underestimates the population of these finches flying round the area in flocks between 20-300 in size. Frodsham Marsh remains a key location for these birds.

Acknowledgements

Merseyside Ringing Group acknowledges the cooperation and support from Peel Holdings Ltd, the Frodsham and District Wildfowling Club and Mr C Faulkner, Frodsham Marsh Farm, for allowing access and permitting bird ringing at Frodsham Marsh.

GROUP MEMBERS IN 2010

The Group continues to attract new members and promote the development of existing members. In 2010, three members joined the Group: Zoe Houghton, Leah Williams and Mike Whiteside. One of the current trainees, Stephen Menzie, progressed to a “C” permit and Stuart Piner became a Country Member.

Merseyside Ringing Group maintained links with national organisations, including Bob Harris on BTO Council, David Norman on the Rare Breeding Birds Panel and Chris Batty on the British Birds Rarities Committee. Group members also contributed to local conservation organisations including Mersey Estuary Conservation Group, Woolston Eyes Conservation Group, Cheshire Wildlife Trust and Dee Estuary Conservation Group.

MRG Officers: Chairman – D Norman; Treasurer – P Coffey; Records Secretary – R Harris; Membership Secretary – K Foster ; Group Archivist – A Ormond; Health and Safety Advisor – A Hitchmough.

List of members

<i>Patron</i>		<i>Full Members</i>	
F Bairlein	Wilhelmshaven	P Triggs	Llanbedr DC
		C J Williams	Hoylelake
<i>Full members</i>		B W Wright	Broxton
S Binney	Higher Bebington		
J E Birch	Shotton	<i>Trainees</i>	
J Blundell	Bolton	R Brumby	Chester
T K Bradshaw	Hoylelake	J Clarke	Warrington
R P Cockbain	Hale	Z Houghton	Sandbach
P Coffey	Little Sutton	T Lowe	Liverpool
D P Cross	West Kirby	H Rowland	Bebington
A Davis	Atherton	L Warvill	Liverpool
A Duncalf	Northwich	M Whiteside	Burwardsley
R Eades	Parkgate	L Williams	Liverpool
N Edmonds	Irby		
J Elliott	Heswall	<i>Country Members</i>	
D Faulkner	Pantymwyn	C Batty	Poulton-le-Fylde
K Foster	St Helens	C Benson	Co. Mayo, Eire
A Garner	Sandiway	D Bowman	Lymm
P Guest	Warrington	T Bradshaw	Meols
R Harris	Whixall	T Cleeves	Huddersfield
A Hitchmough	Halewood	P Fearon	Crosby
R Leigh	Higher Marston	A Jones	St Albans
A M McCreary	Littleton	H Jones	Mellor, Lancs
K McNiffe	Eastham	C Lynch	Anglesey
S Menzie	Liverpool	P Morgan	Cardiff
M R Miles	Alderley Edge	B Murray	New Romney, Kent
D Norman	Sutton Weaver	D Okill	Shetland
A Ormond	Bidston	S Piner	Preston
H Pulsford	Great Warford	J Stein	Norway
M Rawlins	Oldham	R Taylor	Huddersfield
R D Riley	Great Sankey	P Thompson	Wilmslow
A Robinson	Llwynmawr	T Westhead	Chorley
E Samuels	Bromborough	H Williams	Devon
P Slater	Speke		
M G Smith	Upton	<i>Honorary Member</i>	
G E Thomason	Widnes	I G Main	Cheltenham