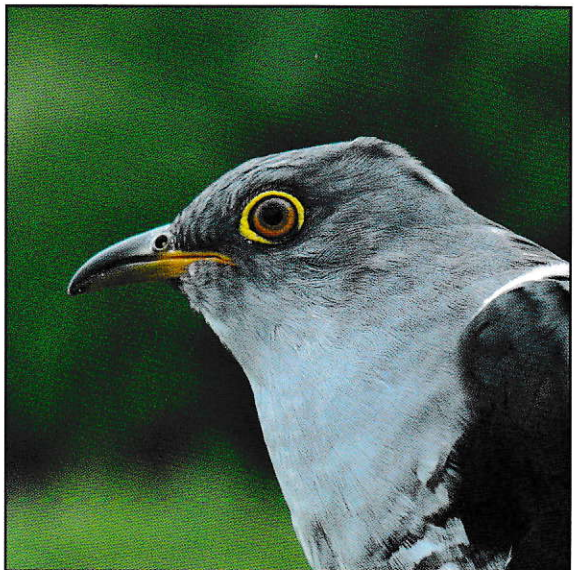
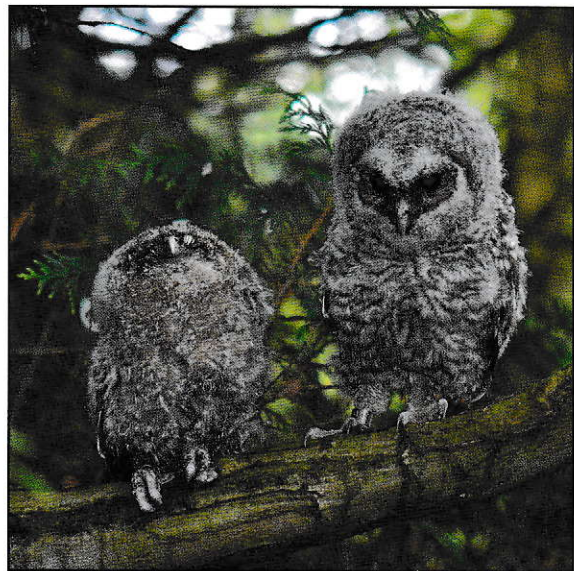
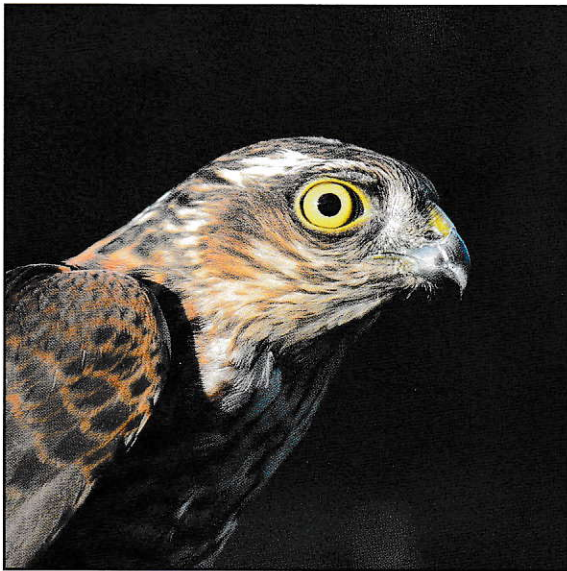


*Chew Valley  
Ringing  
Station*



*18th Report 2013-2015*



**Herriott's Bridge, Bath Road, West Harptree, Bristol. BS40 6HN**

**18<sup>th</sup> Report: 2013, 2014 and 2015**

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**CHEW VALLEY RINGING STATION**  
**Herriott's Bridge, Bath Road, West Harptree, Bristol. BS40 6HN**

**18th Report:**  
**2013 - 2015**

**Editorial**

I would like to thank the following for their help and encouragement in producing our 18th. report.  
Alan Feest, Bob Medland and Robin Prytherch for the many helpful suggestions whilst the report was in progress.  
The members of our data group, especially Alan Ashman for help in collating the ringing recoveries and totals.  
Alan Ashman, Mark Dadds , Ed Drewitt and Patrick Hancock for their various contributions in the form of articles and images.  
Chris Craig and Mike Hamzizj for compiling the Annual Accounts.

**CVRS Officers 2013, 2014 and 2015**

Chairman	Mike Bailey
Treasurer	Mike Hamzizj (2013 and 2014) Chris Craig (2015)
Minutes Secretary	Kate Atwell
Ringing Secretary	Alan Ashman

CVRS website [www.chewvalleyringingstation.co.uk](http://www.chewvalleyringingstation.co.uk)  
Constructed and maintained by Paul House

**Previous Reports**

Copies of some of our reports, including 16th and 17th, are still available. The rest are out of print but archive copies of all earlier reports are available for reference at the ringing station.

**Acknowledgements**

We are extremely grateful to Bristol Water for their continued support towards the ringing station, including generously contributing towards the printing of this report. Our thanks in particular to Patric Bulmer, Neil Burstow, Sophie Edwards and Steven Smith with whom we have the most contact.

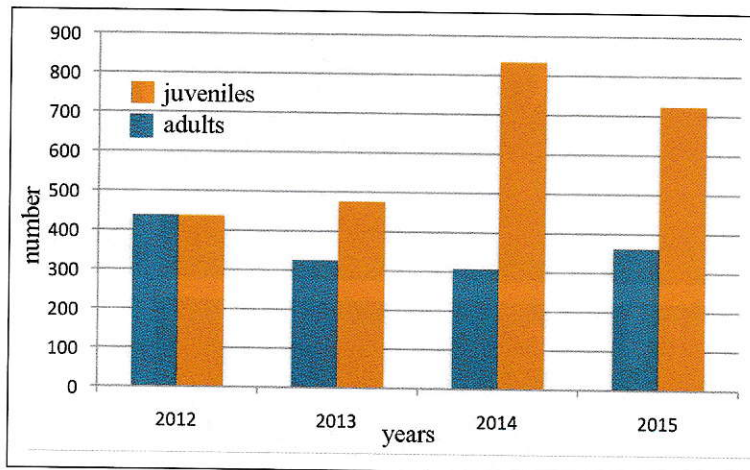
Maps produced using QGIS (<http://qgis/en/dite/>)

Mike Bailey.

## Chairman's Report: Activities 2013 to 2015

by  
Mike Bailey

The number of birds ringed by Chew Valley Ringing Station in the three years covered by this report were 3767 in 2013, 4820 in 2014 and 4681 in 2015. The overall picture is summarised in Figure 1. This combines the population data from our two Constant Effort Sites. The blue column represents the 'adults' of the year. These are the birds that survived through the winter to become that year's breeding population. The orange column is the number of juveniles produced.



*Figure 1. The Constant Effort Site totals for adults and juveniles passerines present at both CVRS sites 2012-2015*

2012 was a very poor breeding season with one of the lowest adult to juvenile ratios (1:1) since 1983 (the year CES monitoring began). The impact of this can be seen in the circa 25% reduction in breeding birds for 2013. This year too was affected by cold, wet and windy weather which resulted in a second poor breeding season. The knock-on effect of these two poor years and a wet winter meant that the 2014 breeding began with low adult numbers. However, by March, the situation improved and generally benign weather continued into late summer. The productivity rose to a high ratio of 1 adult : 2.7 juveniles. In 2015 a sunny winter, that remained dry until April, gave a favourable start to the breeding season for our residents although some sub-Saharan migrants fared less well. However, as usual, the weather was the main driver that affected breeding success and apart from June, the months of May, July and August were unsettled with some heavy rain. The ratio of 1 adult : 2 juveniles was only slightly above the average over the previous ten years.

A feature of our activities in recent years has been an increased concentration on ringing nestlings. With members gaining the specific permit endorsement that this involves, the pullus ringing is now accounting for around 25% of our annual total (Table 1).

	2013	2014	2015		2013	2014	2015
Water Rail	30	4	1	Reed Warbler	133	467	451
Stock Dove	1	-	6	Garden Warbler	-	-	1
Woodpigeon	-	1	2	Blackcap	-	17	9
Cuckoo	-	-	1	Chiffchaff	4	11	1
Barn Owl	-	5	7	Coal Tit	9	17	-
Tawny Owl	-	3	2	Blue Tit	220	344	352
Swallow	12	107	34	Great Tit	174	224	262
Pied Wagtail	-	2	-	Treecreeper	-	6	6
Wren	6	-	-	Jackdaw	4	3	2
Dunnock	8	4	7	Chaffinch	1	-	6
Robin	5	13	35	Bullfinch	-	-	2
Blackbird	4	19	10	Reed Bunting	7	-	8
Song Thrush	20	5	9	<b>Total:</b>	<b>638</b>	<b>1252</b>	<b>1214</b>

*Table 1 number of nestlings (age code 1) ringed at CVRS*

Two new species were added to the CVRS list with an Egyptain Goose in 2014 and Yellow-browed Warblers in 2013 and 2014. During this three year period our highest annual totals were recorded for Teal, Tufted Duck, Water Rail, Stock Dove, Tawny Owl, Goldcrest and Siskin.



*CVRS Ringing Courses: top left 2013, top right 2014, below left 2015.  
Below right: volunteers from Bristol Nature Network*

The weekend that falls around the end of July or the beginning of August has become our 'traditional' slot for hosting a BTO sponsored ringing course. Although these involve a great deal of preparatory work the feedback that we get from participants makes it all worthwhile.

On the internet front we are, as ever, very grateful to Paul House who continues to maintain and update our website at: [www.chewvalleyringingstation.co.uk](http://www.chewvalleyringingstation.co.uk). Robin Prytherch provides a brief summary each month noting any highlights and more immediate news is tweeted via our Twitter account @CVRSNews.

The two Constant Effort Sites, one on each side of the lake and known as CES A and CES C, were operated successfully in 2013-2015. All 12 visits for both sites were completed in each of these years.

We have been pleased to provide ringing demonstrations to quite a few groups such as the Royal Airforce Ornithological Society (RAFOS), the Bath and the Bristol Natural History Societies, the Bath RSPB and the Bath U3A. Apart from CVRS members taking part in four or five working mornings (usually a Sunday) in the winter months, a visit by the Bristol Nature Network was followed by some of their members very kindly volunteering to help with clearing the willows near the Heligoland trap. The British Trust for Conservation Volunteers (BTCV) also organised a workday for two groups from the Royal Bank of Scotland. This was billed as a 'team bonding' experience which went down very well with everyone thoroughly enjoying the day.

The ringing activities over the last three years have been quite varied and much has been achieved. We have successfully completed our CES population monitoring commitments, run three ringing courses, sent the data promptly to the BTO, and seen several ringers progress with permit upgrades. This has been possible due to the dedication of a small band of regular members and I would like to thank everyone involved for their hard work and enthusiasm.

And finally I would like to express our thanks to one of our long-standing members. It is perhaps not uncommon for ringers who decide to retire from the scheme to pass on their ringing quipment. However, I feel that special mention and thanks should be made to Roger Coombes who donated a large amount of equipment to CVRS - an extremely generous and much appreciated gesture that has been of great benefit to our finances.

**C.V.R.S. Ringed Species Totals for 1963 to 2015 with sub-totals  
1963 to 2012, and 2013, 2014 and 2015**  
Collated by Alan Ashman and Rosie Hall.

	Species	1963-2012	2013	2014	2015	1963-2015
1	Great Crested Grebe	21	0	0	0	21
2	Little Grebe	27	0	0	0	27
3	Cormorant	1	0	0	0	1
4	Grey Heron	1	0	0	0	1
5	Mute Swan	172	0	3	1	176
6	Greylag Goose	5	0	0	0	5
7	Canada Goose	5019	63	78	105	5265
8	Egyptian Goose	0	0	1	0	1
9	Barnacle Goose	1	0	0	0	1
10	Shelduck	2	0	0	0	2
11	Wigeon	60	0	0	0	60
12	Gadwall	6	0	0	0	6
13	Teal	83	1	2	29	115
14	Mallard	407	14	28	19	468
15	Pintail	2	0	0	0	2
16	Garganey	2	0	0	0	2
17	Shoveler	2	0	0	0	2
18	Pochard	3	0	0	0	3
19	Tufted Duck	14	1	20	1	36
20	Goldeneye	2	0	0	0	2
21	N.A.Ruddy Duck	1	0	0	0	1
22	Sparrowhawk	89	1	2	2	94
23	Kestrel	21	0	0	0	21
24	Hobby	3	0	0	0	3
25	Buzzard	9	0	0	0	9
26	Water Rail	90	33	27	11	161
27	Spotted Crake	5	0	1	0	6
28	Moorhen	627	48	44	27	746
29	Coot	213	2	14	4	233
30	Little Ringed Plover	10	0	0	0	10
31	Ringed Plover	110	0	0	0	110
32	Lapwing	18	0	0	0	18
33	Knot	1	0	0	0	1
34	Little Stint	8	0	0	0	8
35	Temmink's Stint	1	0	0	0	1

	Species	1963-2012	2013	2014	2015	1963-2015
36	Curlew Sandpiper	6	0	0	0	6
37	Dunlin	274	0	0	0	274
38	Ruff	11	0	0	0	11
39	Jack Snipe	4	0	0	0	4
40	Snipe	212	0	1	0	213
41	Black-tailed Godwit	1	0	0	0	1
42	Curlew	6	0	0	0	6
43	Whimbrel	5	0	0	0	5
44	Spotted Redshank	4	0	0	0	4
45	Redshank	15	0	0	0	15
46	Greenshank	17	0	0	0	17
47	Green Sandpiper	25	1	1	0	27
48	Wood Sandpiper	11	0	0	0	11
49	Common Sandpiper	253	0	0	2	255
50	Black Headed Gull	77	0	0	1	78
51	Lesser Black-backed Gull	11	0	0	0	11
52	Herring Gull	1	0	0	0	1
53	Great Black-backed Gull	1	0	0	0	1
54	Black Tern	1	0	0	0	1
55	Little Auk	1	0	0	0	1
56	Stock Dove	8	1	0	6	15
57	Wood Pigeon	73	0	2	3	78
58	Cuckoo	25	0	0	2	27
59	Barn Owl	62	0	5	8	75
60	Little Owl	1	0	0	0	1
61	Tawny Owl	32	0	4	2	38
62	Long Eared Owl	1	0	0	0	1
63	Short Eared Owl	1	0	0	0	1
64	Swift	1793	0	0	0	1793
65	Kingfisher	638	11	7	6	662
66	Wryneck	3	0	0	0	3
67	Green Woodpecker	17	0	0	0	17
68	Great Spotted Woodpecker	164	4	4	4	176
69	Lessr Spotted Woodpecker	9	0	0	0	9
70	Skylark	11	0	0	0	11
71	Sand Martin	4823	13	11	14	4861
72	Swallow	16454	881	218	120	17673
73	House Martin	3646	0	4	0	3650

	Species	1963-2012	2013	2014	2015	1963-2015
74	Tree Pipit	17	0	0	0	17
75	Meadow Pipit	100	4	4	13	121
76	Water Pipit	3	0	0	0	3
77	Rock Pipit	6	0	0	0	6
78	Yellow Wagtail	515	0	0	0	515
79	Grey Wagtail	25	2	0	1	28
80	Pied Wagtail	1464	5	4	5	1478
81	Wren	4582	64	114	149	4909
82	Dunnock	2833	47	86	71	3037
83	Robin	2864	71	97	132	3164
84	Nightingale	5	1	0	0	6
85	Bluethroat	1	0	0	0	1
86	Redstart	61	0	2	1	64
87	Whinchat	40	0	0	0	40
88	Stonechat	22	0	0	0	22
89	Wheatear	4	0	0	0	4
90	Blackbird	2237	39	66	42	2384
91	Fieldfare	65	5	2	3	75
92	Mistle Thrush	17	0	0	0	17
93	Song Thrush	957	33	27	36	1053
94	Redwing	379	0	8	16	403
95	Cetti's Warbler	522	11	32	52	617
96	Savi's Warbler	1	0	0	0	1
97	Grasshopper Warbler	57	0	0	1	58
98	Aquatic Warbler	10	0	0	0	10
99	Marsh Warbler	1	0	0	0	1
100	Sedge Warbler	17425	188	249	190	18052
101	Reed Warbler	33976	691	1372	1338	37377
102	Lesser Whitethroat	2048	12	9	21	2090
103	Whitethroat	1732	12	20	14	1778
104	Garden Warbler	2607	31	54	28	2720
105	Blackcap	7889	176	368	288	8721
106	Yellow-browed Warbler	0	1	1	0	2
107	Wood Warbler	5	0	0	0	5
108	Chiffchaff	12373	187	484	326	13370
109	Willow Warbler	5976	35	36	29	6076
110	Goldcrest	1293	8	42	111	1454
111	Firecrest	11	0	1	1	13



	Species	1963-2012	2013	2014	2015	1963-2015
112	Spotted Flycatcher	165	0	0	0	165
113	Pied Flycatcher	4	0	0	0	4
114	Bearded Tit	57	0	1	3	61
115	Long-tailed Tit	3217	69	68	132	3486
116	Marsh Tit	124	0	0	0	124
117	Willow Tit	4	0	0	0	4
118	Coal Tit	606	12	22	10	650
119	Blue Tit	15874	368	502	585	17329
120	Great Tit	7512	222	301	341	8376
121	Nuthatch	22	1	0	4	27
122	Treecreeper	760	10	27	24	821
123	Red-backed Shrike	1	0	0	0	1
124	Jay	46	2	0	3	51
125	Magpie	54	3	0	1	58
126	Jackdaw	332	5	3	2	342
127	Rook	118	0	0	0	118
128	Carrion Crow	78	2	0	1	81
129	Raven	4	0	0	0	4
130	Starling	2272	35	0	0	2307
131	House Sparrow	145	17	6	1	169
132	Tree Sparrow	250	0	0	0	250
133	Chaffinch	3656	49	42	100	3847
134	Brambling	32	0	0	0	32
135	Greenfinch	4761	95	183	112	5151
136	Goldfinch	925	49	14	22	1010
137	Siskin	103	29	1	0	133
138	Linnet	169	0	0	0	169
139	Redpoll	171	3	0	7	181
140	Bullfinch	1171	10	22	21	1224
141	Yellowhammer	2	0	0	0	2
142	Reed Bunting	3729	89	82	77	3977
143	Little Bunting	1	0	0	0	1
		<b>184221</b>	<b>3767</b>	<b>4829</b>	<b>4681</b>	<b>197498</b>

Figures highlighted in yellow are the highest annual total for CVRS since 1963.

## Ringling Recoveries and Controls 2013 - 2015

Included here are the recoveries of CVRS birds (found elsewhere) and the controls by CVRS (bird that have been ringed elsewhere but subsequently found at Chew). These have been received from the British Trust for Ornithology since our 17<sup>th</sup> Report. Most of the reports of our ringed birds that have been found nearby in the Chew Valley Lake area have been omitted.

Each record consists of the following

**First line:** Ring number:

Age using the Euring Code as given below;

1 = Pullus (Chick or nestling)

1J = Fledged but flying so weakly that it is obviously incapable of having flown far from the nest. Only applies to passerines.

2 = Fully grown, year of hatching quite unknown.

3 = Definitely hatched during calendar year.

3J = Passerines only – as in 3 above but still partly or completely in juvenile body plumage.

4 = Hatched before current calendar year – exact year unknown.

5 = Definitely hatched in previous calendar year.

6 = Hatched before last calendar year but exact year unknown

Ringling date:

Ringling Place:

Days = Duration in days between ringling date and finding date.

Distance. (in kilometres)

Direction. This is based on a 360 degree compass direction. Due North for example is 360° and due South – 180° etc.

**Second line**

Sex: M = Male, F = Female.

Recovery date,

Place recovered,

Finding code.

R = a Recovery of a bird ringed at Chew and found elsewhere.

C = a Control, i.e. a bird found at Chew that has been ringed elsewhere.

RR = Ring number read in field by a ringer.

VV = Ring number read in the field by a non-ringer.

X = Found dead

XF = Found freshly dead.

+ = Shot or killed by man

+F = Recently shot or killed by man

**Third Line**

Comments. Giving a brief description of the finding circumstances.

**C.V.R.S. Ringing Recoveries and Controls  
2013 - 2015**

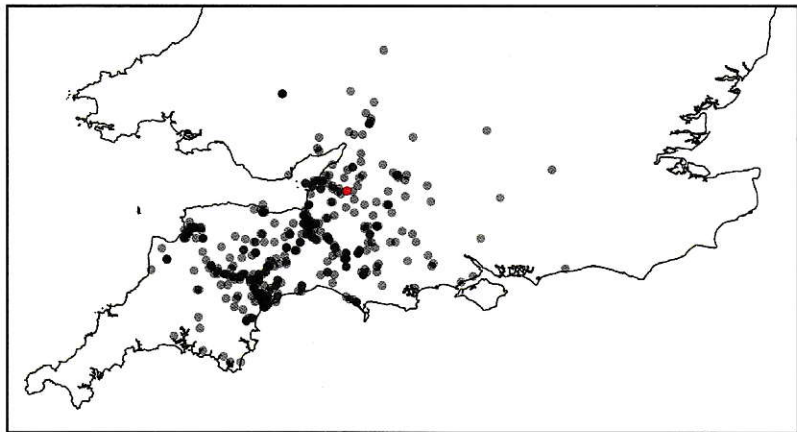
Collated by Alan Ashman (Ringing Secretary)  
Maps produced by Patrick Hancock

Species Ring No	Age Sex	Date ringed Date rec'd	Place ringed Place recovered Comments	Type Code	Days	dist. km	Dir. deg.
<b>Greylag Goose</b>							
5270424	3	30/06/2013 26/03/2014	Ashmead, Nr. Dursley, Glos. CVL Controlled CVL	C RR	269	48	206
<b>Canada Goose</b>							
5243610	4	28/06/2005 31/10/2013	CVL Slimbridge, WWT Glos. Recovery - sight reading by Ringer	R RR	3047	50	20
5243610	4	28/06/2005 07/02/2014	CVL Eastville, Bristol. Recovery - sight reading	R VV	3146	18	16
5251823	4	27/06/2006 29/01/2014	CVL Silverton Mills, Devon. Found Shot	R +	2773	81	225
5251877	4	27/06/2006 22/09/2015	CVL Chew Valley Lake Shot	R +	3374	2	0
5251945	4	26/06/2007 30/06/2013	CVL Llangorse Lake, Powys, Wales. Recovery by Llangorse R G	R	2196	80	327
5250818	2	10/12/2008 22/07/2014	Slimbridge, Glos. CVL Sighting record	C RR	2050	50	200

The annual Canada Goose roundup during their flightless period in June / July began in 1976 and has been carried out in most years since then with only 2002 and 2012 being the exceptions. 5,265 have been ringed resulting in a high percentage of retraps and recoveries.

The map, Fig. 1. shows a very clear distribution with the majority of birds moving south-west into Devon and Somerset to over-winter and breed. There has been some speculation that this direction of movement reflected their evolution in Canada.

However, the Llangorse Ringing Group in central Wales have found the exact opposite where most of their moulting flock are recovered to the north-east of Llangorse Lake in Hereford & Worcester. (Jerry Lewis pers comm.) It seems that this annual moult migration owes more to the availability of a suitable large lake rather than an innate sense of direction to find a moulting ground. As with the Llangorse Ringing Group a high proportion of the CVRS recoveries are of birds that are shot as part of crop protection.

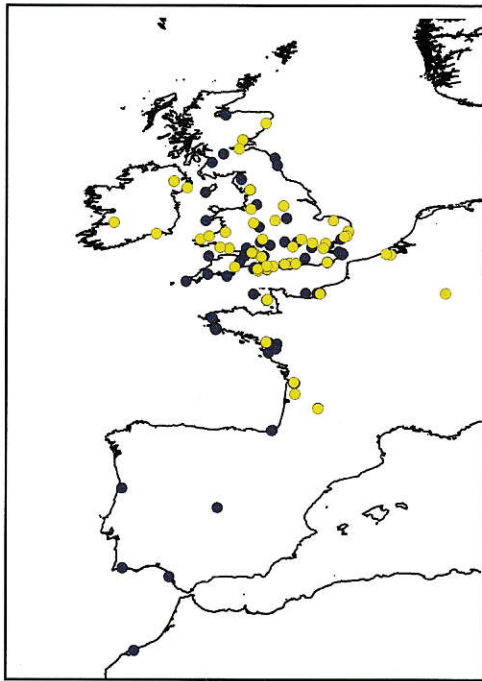


*Fig. 1. Distribution map of South-West England and South Wales showing sites of CVRS Canada Goose recoveries. Each light grey dot represents a single recovered bird. Dots are superimposed upon each other, therefore multiple recoveries show as progressively darker dots. (Red dot = Chew Valley Lake)*

Canada Goose continued Ring No	Age Sex	Date ringed Date rec'd	Place ringed Place recovered Comments	Type Code	Days	dist. km	Dir. deg.
5254411	4 M	30/06/2009 25/08/2014	CVL Dawlish Warren NNR Devon. Sighting record	R VV	882	98	216
5254395	4	30/06/2009 01/09/2014	CVL Pawlett. Som. Shot	R +	1889	32	238
5262044	4	29/06/2010 30/06/2013	CVL Llangorse Lake, Powys, Wales. Recovery by Llangorse R G	R	1097	80	327
5259143	4	29/06/2010 01/11/2014	CVL Weston-s-Mare, Som. Shot	R +	1586	24	280
5259118	4	29/06/2010 11/01/2016	CVL Bruton, Som. Bird found dead.	R X	2022	28	153
5262150	4	28/06/2011 30/06/2013	CVL Llangorse Lake, Powys, Wales. Recovery by Llangorse R G	R	733	80	327
5262151	4	28/06/2011 30/06/2013	CVL Llangorse Lake, Powys, Wales. Recovery by Llangorse R G	R	733	80	327
5262191	4	28/06/2011 29/09/2013	CVL Heaton Hall Marsh, Lancs. Shot	R +	824	301	358
5262162	4	28/06/2011 12/10/2013	CVL Shapwick, Som. Shot	R +	837	24	217
5262108	4	28/06/2011 09/09/2014	CVL Hill of Eaton, Herefordshire. Found Dead	R X	1169	69	3
5262106	4	28/06/2013 12/08/2013	CVL Iron Acton, S.Glos. Found dead	R X	776	28	72
5239928	4	09/07/2013 02/09/2013	CVL Bideford, Devon. Shot	R +	55	116	254
5239942	4	09/07/2013 15/01/2014	CVL Keynsham, Bristol. Found dead	R X	190	15	40
5239163	4 M	29/06/2004 01/01/2012	CVL Wrighton, N. Som. Ring only-found by metal detector	R	2742	10	292
5264932	4	24/06/2014 01/09/2014	CVL Bridgwater, Som. Shot	R +	69	32	231
5264919	4	24/06/2014 01/11/2014	CVL Weston-s-Mare, Som. Shot	R +	130	24	280

Ring No	Age	Date ringed	Place ringed	Type	Days	dist.	Dir.
Canada	Sex	Date rec'd	Place recovered	Code		km	deg.
Goose			Comments				
5267941	4	24/06/2014	CVL	R	182	34	241
	F	23/12/2014	Combwich, Som. Shot	+			
5267903	4	24/06/2014	CVL	R	444	95	230
		11/09/2015	Uton, Devon. Dead bird found	X			
5267901	4	24/06/2014	CVL	R	557	107	238
		02/01/2016	North Tawton, Devon. Shot	+			
5267994	4	30/06/2015	CVL	R	74	17	314
		12/09/2015	Tickenham Moor, N. Som. Shot	+			
5267993	4	30/06/2015	CVL	R	74	23	28
		12/09/2015	Serridge House, S. Glos. Found in poor condition, released alive	V			
5267986	4	30/06/2015	CVL	R	119	58	256
		27/10/2015	Dunster Beach, Som. Found dead on tide-line.	X			
5275135	4	30/06/2015	CVL	R	131	41	4
		08/11/2015	Woolaston, Glos. Shot	+			
5267975	4	30/06/2015	CVL	R	176	33	236
		23/12/2015	Chilton Trinity, Som. Shot	+			
<b>Tufted Duck</b>							
FT00408	6	24/01/2014	CVL	R	17	185	60
		10/02/2014	Blunham, Beds. Recovery by WWT.				
<b>Black-tailed Godwit</b>							
RY-RR	4	10/07/2002	Saudarkrokur, Iceland.	C	4030	1900	142
colour ring		26/07/2013	CVL	RR			
Colour rings read by Mike Rowan (CVRS).							
<b>Black-headed Gull</b>							
ST180535	6	14/07/1996	Turku, Finland.	C	6947	1840	245
		22/07/2015	CVL	RR			
Sight record							
ST258656	3	05/07/2006	Keski-Pohjanmaan, Vaasa, Finland.	C	3084	2062	245
		14/12/2014	CVL	RR			
Sight read P.Burston							
EW56120	8	06/01/2009	Poole Park, Dorset.	C	2345	84	330
		07/09/2015	CVL	R			
Sight record P.Burston							
S7602	6	20/04/2009	Riga, Latvia.	C			
		14/12/2014	CVL	RR	2065	1834	250
	6	20/04/2009	CVL	RR	2326	1848	251
Sight read P.Burston							
TU3V	3	11/08/2014	Wielkopolskie, Poland.	C	67	1367	271
colour ring		05/06/2015	CVL Sight read A.Ashman.	RR			

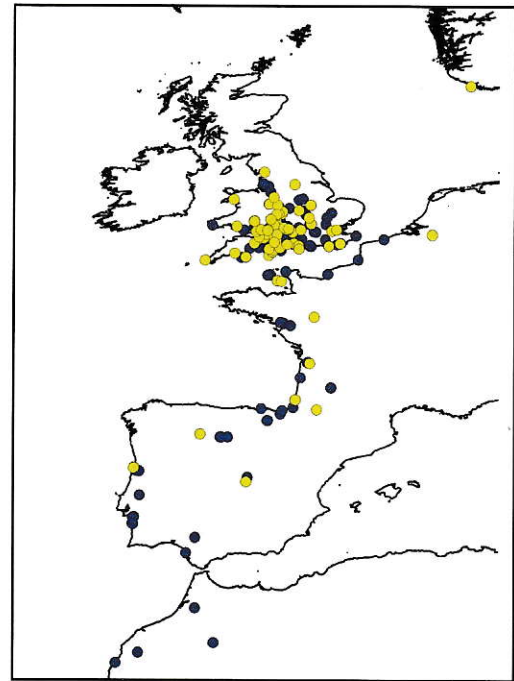
<b>Black-headed Gull</b>	<b>Age</b>	<b>Date ringed</b>	<b>Place ringed</b>	<b>Type</b>	<b>Days</b>	<b>dist.</b>	<b>Dir.</b>
<b>Ring No</b>	<b>Sex</b>	<b>Date rec'd</b>	<b>Place recovered</b>	<b>Code</b>		<b>km</b>	<b>deg.</b>
			<b>Comments</b>				
EY12131	1	30/06/2013 15/12/2014	Rye Meads, Herts. CVL Ring read P.Burston	C RR	533	187	WSW
<b>Common Gull</b>							
5163642	1	09/07/2004 04/12/2004	Frosta, Nord-Trondelag, Norway. CVL (Data recently received) Sight Record, Ed Drewitt	C RR	148	1575	211
<b>Lesser Black-backed Gull</b>							
Jersey D9208	5	15/05/2015 04/08/2015	Choet Landfill, Guernsey. C.I. CVL Sight record . A.Ashman.	C RR	81	202	358
<b>Great Black-backed Gull</b>							
MA30864	1	16/06/2013 12/08/2014	Denny Island, Bristol Channel. CVL Colour ring read	C RR	422	26	153
MA26406	1	08/06/2014 08/08/2014	Denny Island, Bristol Channel. CVL Metal ring read	C RR	61	26	153
<b>Cetti's Warbler</b>							
Z040947	3j	07/06/2015 01/11/2015	Marsworth Reservoir, Herts. CVL Controlled CVL.	C	147	147	249
D202733	3J F	06/07/2013 30/03/2014	Kintbury, W. Berks. CVL Controlled CVL.	C	267	84	264
Y410081	2	27/09/2014 28/07/2015	New Passage, Redwick, S. Glos. CVL Controlled CVL	C	304	28	178
<b>Swallow</b>							
D436059	1	06/06/2013 18/06/2015	Greenway Farm, Hinton Blewett, Somerset. (Bob Medland) CVL Controlled CVL.	C	772	4	299
D136357	3	26/07/2013 02/09/2013	CVL Dursley, Glos. Found dead	R X	38	48	26
D136396	3	26/07/2013 10/05/2014	CVL Plainsfield, Over Stowey, Som. Taken by Cat	R XF	288	43	239
D136631	3	02/08/2013 09/06/2014	CVL North Curry, Taunton, Som. Found Dead	R X	311	42	217
D136539	3	02/08/2013 21/12/2014	CVL Wiscombe Park, Colyton, Devon. Long dead in building	R X	506	75	210
D676264	4 M	10/09/2013 09/06/2014	CVL Pontcanna Riding Stables, Cardiff, Wales. Recovery by Bull & Morgan	R	272	46	297



Above Sedge Warbler at CVL 2013

Map: Blue dots = recoveries of birds away from CVL  
Yellow dots = controls of birds from elsewhere.

Species	Age	Date ringed	Place ringed	Type	Days	dist.	Dir.
Ring No	Sex	Date rec'd	Place recovered	Code		km	deg.
Comments							
<b>Sedge Warbler</b>							
L057791	4	08/08/2010 18/08/2014	CVL Frossay, Loire Atlantique, France. Paris	R	1471	457	174
Y000048	3	11/07/2011 10/04/2015	Icklesham, E. Sussex CVL	C	1369	235	282
Y776207	3	30/07/2012 26/04/2013	Hollesley, Suffolk. CVL	C	270	293	254
6902477	3	10/08/2012 21/04/2013	Donges, Loire Atlantique, France. CVL	C	254	447	355
6907185	3	23/08/2012 05/05/2013	Donges, Loire Atlantique, France. CVL	C	255	447	355
6890419	3	01/09/2012 08/08/2014	Chenac-St-Seurin-d'Uzet, France. CVL	C	706	659	349
D676070	4	10/08/2013 19/08/2014	CVL Chenac-St-Seurin-d'Uzet, France.	R	374	457	174
D965358	3	26/07/2014 04/08/2014	CVL Lot-et-Garonne, France.	R	9	802	165
D965438	3	27/07/2014 04/08/2014	CVL Wick. Nr. Christchurch, Hants. Christchurch Harbour R.G	R	8	91	138
Z723503	3	01/07/2015 21/07/2015	Teifi Marsh, Ceredigion, Wales. CVL	C	20	162	121
Controlled CVL.							



Above Reed Warbler at CVL 2015

Map: Blue dots = recoveries of birds away from CVL

Yellow dots = controls of birds from elsewhere.

Species Ring No	Age Sex	Date Ringed Date Rec'd	Place ringed Place recovered Comments	Type Code	Days	dist. km	Dir. deg.
Reed Warbler X610709	3J	25/07/2009 18/06/2014	CVL Steeple Langford Lakes, Wilts. Recovery by West Wilts R.G.	R	1789	53	116
L056765	3J	27/06/2010 26/04/2013	CVL Wharf Lane, Portishead. Recovery Paul House	R	1034	21	337
L056823	3	02/07/2010 21/07/2014	CVL New Passage, Redwick, S.Glos. Recovery by Ed Drewitt	R	1480	28	358
T512193	4	08/05/2011 21/04/2013	Lawrence Weston Moor, Bristol. CVL Controlled CVL	C	714	21	174
L059703	1	31/05/2011 11/08/2012	CVL Salburua, Vitoria-Gasteiz, Spain. San Sebastian	R	72	941	181
L059704	1	31/05/2011 16/08/2011	CVL Charente Maritime, France. Paris	R	77	663	169
L059073	1	31/05/2011 12/08/2011	CVL Salburua, Vitoria-Gasteiz, Spain. San Sebastian	R	73	941	181
L059748	1	05/06/2011 10/03/2014	CVL Meare, Som. Found headless	R X	1009	21	2215
L059848	1	17/06/2011 10/08/2013	CVL Icklesham, Sussex. Recovery by Rye Bay R.G.	R	785	235	102
L059864	1	19/06/2011 07/06/2015	CVL Ashton Keynes, Wilts. Recovery by Cotswold Water Park R.G.	R	1449	61	55



Species Ring No	Age Sex	Date ringed Date rec'd	Place ringed Place recovered Comments	Type Code	Days	dist. km	Dir. deg.
Reed Warbler L590229	3	02/08/2011 25/06/2013	Titchfield Haven, Hants. CVL	C	693	112	300
Y894476	3	22/08/2012 07/07/2013	Squires Down, Dorset. CVL Controlled CVL	C	319	44	335
Y697766	4	28/04/2013 20/07/2014	CVL Combwich, Som. Taken by cat?	R X	448	35	242
Y697811	4	05/05/2013 07/08/2015	CVL Llangorse Lake, Powys Recovery by Llangorse R.G.	R	824	80	327
D136440	3J	27/07/2013 29/07/2014	CVL West Bexington, Dorset. Recovery by Neil Croton.	R	367	73	183
D702789	4	01/06/2014 05/06/2014	Blashford Lakes, Hants. CVL Controlled CVL	C	4	78	311
D093632	3	04/06/2014 09/09/2014	Squires Down, Dorset. CVL Controlled CVL	C	5	44	335
D561616	4	09/06/2014 03/08/2014 20/07/2015	Hasely Manor, I.O.W. CVL and CVL Controlled CVL	C	55  406	122 122	303 303
D964173	1	18/06/2014 05/08/2014	CVL Squires Down, Dorset. Recovery by T.Squires	R	48	44	155
D964227	1	24/06/2014 09/08/2014	CVL West Down Plantation, Wilts. Recovery by N. Wilts. R.G.	R	46	49	102
D964290	1	04/07/2014 23/08/2014	CVL Titchfield Haven, Hants. Recovery by B.Duffin	R	50	112	120
D965179	3	20/07/2014 08/08/2014	CVL Squires Down, Dorset. Recovery by T.Squires	R	19	44	155
D965463	3	02/08/2014 20/08/2014	CVL Pyrenees Atlantique, France. Paris	R	18	879	175
D965591	3J	07/08/2014 01/09/2014	CVL Messanges, Landes, France. Paris	R	25	841	174
D970602	3	07/08/2014 27/06/2015	Litlington, E.Sussex. CVL Controlled CVL	C	324	204	287
D965797	3J	08/08/2014 30/08/2014	CVL Charente Maritime, France. Paris	R	22	659	169
7475386	5	18/08/2014 22/07/2015	Messanges, Landes, France. Controlled CVL	C	338	841	354

Species Ring No	Age Sex	Date Ringed Date Rec'd	Place ringed Place recovered Comments	Type Code	Days	dist. km	Dir. deg.
<b>Reed Warbler</b>							
D966985	4 M	17/05/2015 11/08/2015	CVL Shorncombe Reed Beds, Glos. Recovery by Cotswold R.G.	R	86	62	51
Z234207	1	28/06/2015 15/08/2015	CVL Squires Down, Dorset. Recovery by T.Squires	R	48	12	44
Z234855	3	28/06/2015 09/08/2015	CVL Squires Down, Dorset. Recovery by T.Squires	R	12	44	155
Z234430	3	11/07/2015 18/08/2015	CVL Icklesham, E.Sussex. Rye Bay R.G.	R	38	235	102
Z234984	3	16/08/2015 22/08/2015	CVL West Down Plantation, Wilts. N. Wilts. R.G.	R	6	49	102
D965058	3j	06/07/2014 15/08/2014	CVL Lot-et-Garonne, France. Paris	R	40	802	165
<b>Blackcap</b>							
Y696724	6 F	09/06/2012 28/04/2013	CVL Nailsea, North Som. Taken by Cat	R X	323	16	317
Y696289	3 M	16/09/2012 03/10/2014	CVL Mexilhoeira Grande, Faro, Portugal. Lisbon	R	767	1644	197
D135093	3j	07/07/2013 31/08/2013	CVL kings Lynn, Norfolk. Taken by cat	R X	55	264	53
D964590	3j	28/06/2014 19/09/2014	CVL Icklesham, E. Sussex. Recovery by Rye Bay R.G.	R	83	235	102
D966262	3	31/08/2014 19/09/2014	CVL Icklesham, E. Sussex. Recovery by Rye Bay R.G.	R	19	235	102
D966275	3	06/09/2014 03/10/2014	CVL Icklesham, E. Sussex. Recovery by Rye Bay R.G.	R	27	235	102
D966419	3 M	13/09/2014 12/05/2015	CVL Orleston Forest, Kent. Recovery by N.Tardivel	R	241	243	97
Z677281	3j	09/08/2015 19/09/2015	CVL Sewage Works, Swindon. Recovery by N.Wilts. R.G.	R	41	62	64
D093462	3	29/08/2014 06/09/2014	Squires Down, Dorset. CVL Controlled CVL	C	8	44	335

Species Ring No	Age Sex	Date ringed Date rec'd	Place ringed Place recovered Comments	Type Code	Days	dist. km	Dir. deg.
<b>Chiffchaff</b>							
DVK969	3J	18/06/2014 29/11/2014	Nr. Wilton, Redcar & Cleveland. CVL Controlled CVL	C	164	376	197
HJH206	3J	27/07/2014 20/09/2014	CVL West Bexington, Dorset. Recovery by Neil Croton	R	55	73	183
EYX485	3	13/08/2014 21/03/2025	Arrow Valley Culvert, Worcs. CVL Controlled CVL	C	220	120	205
EKH949	2	07/09/2014 13/09/2014	Bransbury Common Duckpond, Hants. CVL Controlled CVL	C	6	87	282
HRL131	3 M	28/10/2015 01/11/2015	Neatham Farms, Wyck, Hants. CVL Controlled CVL	C	4	122	280
<b>Starling</b>							
LB22370	3 F	22/12/2011 28/05/2014	CVL Muuga Tallinn Estonia. Found Freshly dead	R X	888	1955	63
<b>Great Tit</b>							
D965020	3J	29/06/2014 20/11/2014	CVL Timsbury Bath N E Som Recovery by Cyril Matthews	R	144	11	91
TX34266	3J	28/07/2013 18/08/2013	CVL East Harptree Taken by cat	R X	21	2	181
TX34067	3J F	08/08/2014 13/09/2014	CVL Chew Stoke, Som. Found dead	R X	36	4	0
TX34093	3J M	07/09/2014 17/04/2015	CVL Shoreditch Fm. Chew Stoke. Bristol. Taken by Sparrowhawk	R X	222	4	343
TV82056	3	27/09/2014 04/12/2014	CVL Tynning, Timsbury, Bath. Recovery by Mike Bailey	R	68	10	91
TR34873	3J F	11/08/2011 01/06/2013	CVL Bishop Sutton, Bristol. Hit Window	R XF	294	3	52
<b>Reed Bunting</b>							
L493619	4 F	06/05/2013 13/07/2014	Westhay Heath, Som. CVL Controlled CVL	C R	433	23	43
D313924	3 M	27/11/2013 08/03/2014	Tidmoor Fleet, Dorset. CVL Controlled CVL	C R	101	81	255
X108415	4 M	06/12/2013 05/01/2014	Abbotsbury Swannery, Dorset. CVL Controlled CVL	C R	30	75	359

## The Helgoland Trap at Chew Valley Lake. 2007 to 2015



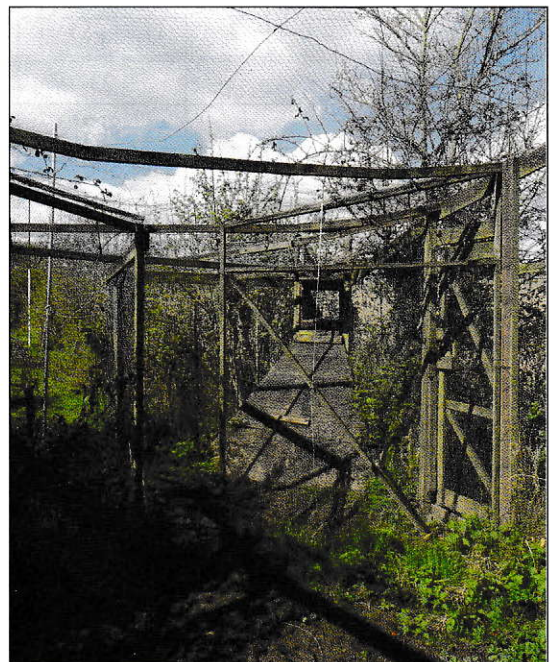
*Fig. 1 The Helgoland trap at Chew Valley Ringing Station, Summer 2013.*

The Helgoland Trap (Fig 1.) was operational by July 2006 and has continued to work well since then. In terms of ringed and retrap events (excluding pulli) it has provided circa 10% of the birds handled at CVRS over the nine years 2007 - 2015. The table on the next page provides a list of the species caught and the totals given are for all handlings i.e both birds ringed and retrapped. Two new species were added to the Helgoland list since the last report; Meadow Pipit and Jay, bringing the species total to 41.

As far as we know this is one of the few, possibly the only, operational inland Helgoland trap in the country; all others being at the coastal observatories. It is very useful on days that are unsuitable for using mist nets (too wet and windy) and provides the opportunity for the participants on our ringing courses to experience one in action. Feeding, mainly with sunflower seeds, is provided throughout the autumn and winter months by a small team of members who live locally. In some years ducks can be attracted when the lake level is high by baiting with corn.

A large structure such as the Helgoland trap needs a certain amount of maintenance for it to be kept in a fully functioning condition. For example, regular cutting of the vegetation inside the trap has to be carried out each year in early summer to stop it growing through the roof.

Fortunately, in the three years covered by this report, the winters were relatively mild with no falls of snow damaging the roof (as mentioned in our 16th and 17th Reports). However, holes do appear and need patching up from time to time. We have also made some minor adjustment to the catching box and changed the original design by making the tapered end catching area smaller (Fig. 2).



*Fig. 2 View from inside the Helgoland trap towards the catching box, April 2015.*

### Helgoland Trap capture totals at Chew Valley Lake 2007 to 2012

Species / Totals	2007-2012	2013	2014	2015	2007-2015
Mallard	25	1	0	1	27
Sparrowhawk	7	2	1	1	11
Water Rail	19	3	2	1	25
Moorhen	43	21	1	0	65
Wryneck	1	0	0	0	1
Great Spotted Woodpecker	8	0	1	0	9
Meadow Pipit	0	0	0	1	1
Wren	53	4	5	9	71
Duncock	107	7	28	5	147
Robin	104	6	18	15	143
Blackbird	55	3	4	2	64
Song Thrush	11	0	3	4	18
Redwing	11	0	0	3	14
Cetti's Warbler	12	0	1	1	14
Sedge Warbler	3	1	0	0	4
Reed Warbler	21	7	9	3	40
Lesser Whitethroat	1	1	1	0	3
Whitethroat	6	2	9	0	17
Garden Warbler	7	0	1	1	9
Blackcap	59	7	17	2	85
Chiffchaff	96	10	23	4	133
Willow Warbler	7	0	0	0	7
Goldcrest	23	0	4	3	30
Long-tailed Tit	98	0	15	12	125
Marsh Tit	1	0	0	0	1
Coal Tit	23	2	2	3	30
Blue Tit	882	124	168	197	1371
Great Tit	500	50	71	79	700
Treecreeper	1	0	0	1	2
Jay	0	0	0	1	1
Magpie	1	2	0	0	3
Carrion Crow	2	0	0	0	2
Starling	56	0	0	0	56
Chaffinch	498	51	23	82	654
Greenfinch	728	79	208	8	1023
Goldfinch	3	0	0	0	3
LesserRedpoll	4	0	0	1	5
Linnet	1	0	0	0	1
Siskin	1	0	0	0	1
Bullfinch	8	0	3	7	18
Reed Bunting	21	5	9	9	44
<b>Total:</b>	<b>3497</b>	<b>388</b>	<b>627</b>	<b>456</b>	<b>4968</b>

## Catching effort at CVRS 2013, 2014 and 2015

The tables 1, 2 and 3 give the monthly totals for three measures of catching effort at CVRS for the years covered by this report (2013-2015). These have been extracted from the daily logs sheets that are kept at the ringing station and represent the catching effort using mist nets. The days when ringers have been present for other activities such as hut maintenance or other catching methods e.g. using walk in traps, have been excluded from these totals. Roost netting effort is also excluded from this summary.

The figures for 'Operational Days' and 'Ringer Days' are available from 1966 and 'Net Foot Hours' from 1974. These were first published by Roy Smith in our 6<sup>th</sup> Report covering 1976-1978 pp 20-25. Rather than just using the raw annual totals he established a comparative system of indices (with base years being given a value of 100).

The annual index for operational days (ODI) takes the 1966 value of 103 as its base year.

The annual index for ringer days (RDI) takes the 1966 value of 370 as its base year.

The annual index for net foot hours (NFHI) takes the 1975 total of 201 as its base year. (Note, the net foot hours are based on the standard full height net so that, for example, two sixty foot nets operated for 5 hours =  $2 \times 60 \times 5 = 600$  NFH).

Tables for these three measures of catching effort can be found in previous CVRS reports that are kept at the ringing station.



*Mist net (site F3) at Chew Valley Ringing Station*

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Index
<b>2013</b>	7	11	8	10	9	12	13	11	11	6	7	9	<b>114</b>	<b>111</b>
<b>2014</b>	7	9	12	10	9	11	12	11	10	8	5	7	<b>111</b>	<b>108</b>
<b>2015</b>	9	9	9	21	13	7	14	11	12	11	4	3	<b>123</b>	<b>119</b>

Table 1. Operational days per month at CVRS 2013-2015

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Index
<b>2013</b>	39	58	42	49	39	67	73	86	44	31	57	48	<b>633</b>	<b>171</b>
<b>2014</b>	35	37	38	33	59	58	44	102	57	50	56	42	<b>611</b>	<b>165</b>
<b>2015</b>	47	46	50	70	75	42	100	64	49	64	28	12	<b>647</b>	<b>175</b>

Table 2. Ringer days per month at CVRS 2013-2015

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Index
<b>2013</b>	7	20	10	29	37	44	48	46	13	10	8	13	<b>285</b>	<b>142</b>
<b>2014</b>	1	6	10	12	39	40	27	57	44	16	20	13	<b>286</b>	<b>142</b>
<b>2015</b>	14	17	21	38	44	31	65	45	19	19	9	3	<b>323</b>	<b>161</b>

Table 3. Net Foot Hours per month at CVRS 2013-2015 x 1,000

**The movement and survival of colour-ringed Herring Gulls *Larus argentatus* and Lesser Black-backed Gulls *Larus fuscus* following rehabilitation at the Secret World Wildlife Rescue Centre, East Huntspill, Somerset.**

By  
Mike Bailey

The project began following discussions about the possibility of ringing rehabilitated birds at Secret World as a means of monitoring their survival after release. The reporting rate for the metal rings used in general ringing by the British Trust for Ornithology (BTO) is quite low so we set up a colour-ringing project. Large gulls were thought to be the best candidates for the study as the number released (around 80 per year) would give a significantly large sample. Through our contact with Peter Rock and his work with a very large, long-term study with urban gulls, we were aware that the sighting/reporting rate for colour-ringed gulls is high. The recovery rates for these two species for metal rings alone are only between 3 and 6% per year (P. Rock *pers comm*).



Fig 1. (Left) S:143 photographed at Chipiona Harbour, Portugal by Rafa Garcia on 5th January 2013.



Fig 2. (Right) One of the large pens where the gulls were cared for until ready for release.

Licences to ring rehabilitated birds and use colour-rings within the UK were obtained from the BTO. For anyone interested in ringing rehabilitated birds the BTO make an up-front surcharge based on the estimated number that will be processed at 50 pence per bird. This is recalculated for each year of the study. The codes were allocated by Peter Rock, the 'Large Gull' colour-ringing coordinator, with the BTO metal ring on the right leg and the colour-ringing below the tarsus on left leg. Colour rings were red with white characters using code S:001 to S:999 (except the 'colon' to be 3 dots). These were made by a firm based in Poland called Interrex which were of excellent quality. In order that observers can report sightings the scheme also needs to be registered on the cr-birding WebPages. In fairness, anyone joining a colour-ringing scheme needs to make the commitment to help find colour-ringed birds. An example is shown here (Figure 1) of a juvenile Lesser Black-backed Gull (S:143) sighted in Portugal. It is also expected that the ringer replies promptly with interesting information about the scheme to the people who have taken the time and trouble to send in any sighting - otherwise all of the colour ringing schemes get a bad name.



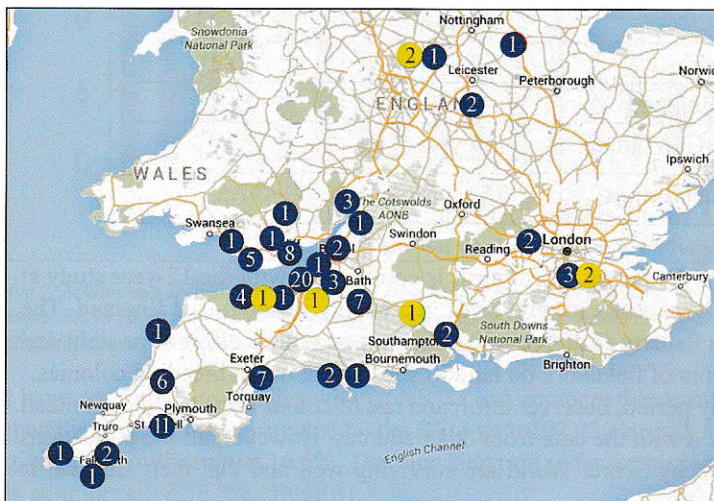
Fig 3. Identification of juvenile Herring and Lesser Black-backed Gulls based on the colour and patterning of the inner primaries. In Herring Gull (on the left) these are light grey and mottled and in Lesser Black-backed Gull (right) they are a plain darker, mid-grey.

Sightings have come in fairly steadily (at approximately one per week). The picture (Fig. 2) was sent with an Email explaining the project and to thank people that had reported one of the gulls. This also included any 'history' from earlier sightings.

The separation between juvenile Herring and Lesser Black-backed Gulls was known to be rather difficult and Ed Drewitt kindly prepared a PowerPoint presentation to show the main characteristics that can be used to tell them apart. The clearest difference between the two species can be seen in the colour and any patterning of the inner primaries (Fig. 3). In Herring Gull these are light grey and mottled and in Lesser Black-backed Gull they are a plain darker-grey. However, these descriptions represent the ends of a spectrum and some birds were noted with intermediate characters having darkish grey inner primaries but with some mottling. Three birds, based on photographic evidence from recorders, were shown to have been misidentified. In all cases these were recorded as Herring Gulls that later proved to be Lesser Black-backed Gulls. In practice it is the darkness of the grey, rather than the mottling, that proved to be the most important feature.

### Results - Movement

The following maps show where the gulls have been sighted: (Fig. 4) the southern counties of England and Wales; (Fig. 5) France, Morocco, Portugal and Spain. For Herring Gulls the positions and the number of sightings are indicated with a blue circle and for Lesser Black-backed Gulls a yellow circle. For clarity, nearby sites and totals have been amalgamated.



**Fig 4, (Above) Map showing the locations where Herring Gulls (blue) and Lesser Black-backed Gulls (yellow) have been sighted in the southern counties of England and Wales.**

**Fig 5. (Right) Map showing the locations where the Secret World Herring Gulls (blue) and Lesser Black-backed Gulls (yellow) have been sighted in France, Spain, Portugal and Morocco.**



Over 2,000 Herring and Lesser Black-backed Gulls are ringed every year in the UK and the results from the recoveries have been published by the BTO (Wernham, 2002). In summary, Herring Gulls do disperse and mainly remain within the UK although small numbers of juveniles from southern England are likely to go to the French and Spanish coasts. Immature and some adult Lesser Black-backed Gulls migrate in the autumn to winter in south-west Europe and north-west Africa. This was clearly demonstrated when a GPS tagging project by the BTO, intended primarily to study adult Lesser Black-backed Gulls interaction with wind farms, also tracked the winter movements of the 25 birds involved. Although some adults remained in the UK, others migrated using a variety of routes through France, Spain and Portugal to Morocco (Ross-Smith 2013). Thus the recovery pattern of the Secret World rehabilitated birds mirrors the dispersal pattern displayed by those that are reared naturally.

Richard Thompson, in a twelve year study at the Mallydams Wood wildlife rehabilitation centre, found that young rehabilitated Herring Gulls would disperse further afield than their naturally-reared counterparts. The mean overall distance travelled by rehabilitated birds was 74.3 km compared with 54.8 for non-rehabilitated birds from the South-West and 59.0 for non-rehabilitated birds from the South-East (Thompson 2013). This presumably reflects the 'orphan' and 'homeless' status of rehabilitated juveniles upon release.



**Results - Survival - The Secret World Herring Gulls**

The typical lifespan for Herring Gulls is 12 years with a maximum recorded age of 30 years 11 months 15 days (BirdFacts, BTO website). Clearly this project has not been running for sufficient time to allow us to make any comparison with these figures. We can, however, look at the reporting rates for Secret World birds ringed between 2011 and 2013 and discuss these in the context of data from some other sources. The graph (Fig. 6) plots the number of Herring Gulls that are known to have survived for a specific number of months since release. Table 1 shows the reporting rate so far for birds seen at least once.

Secret World	Colour ringed	reported	%
Herring Gull	184	56	30.4

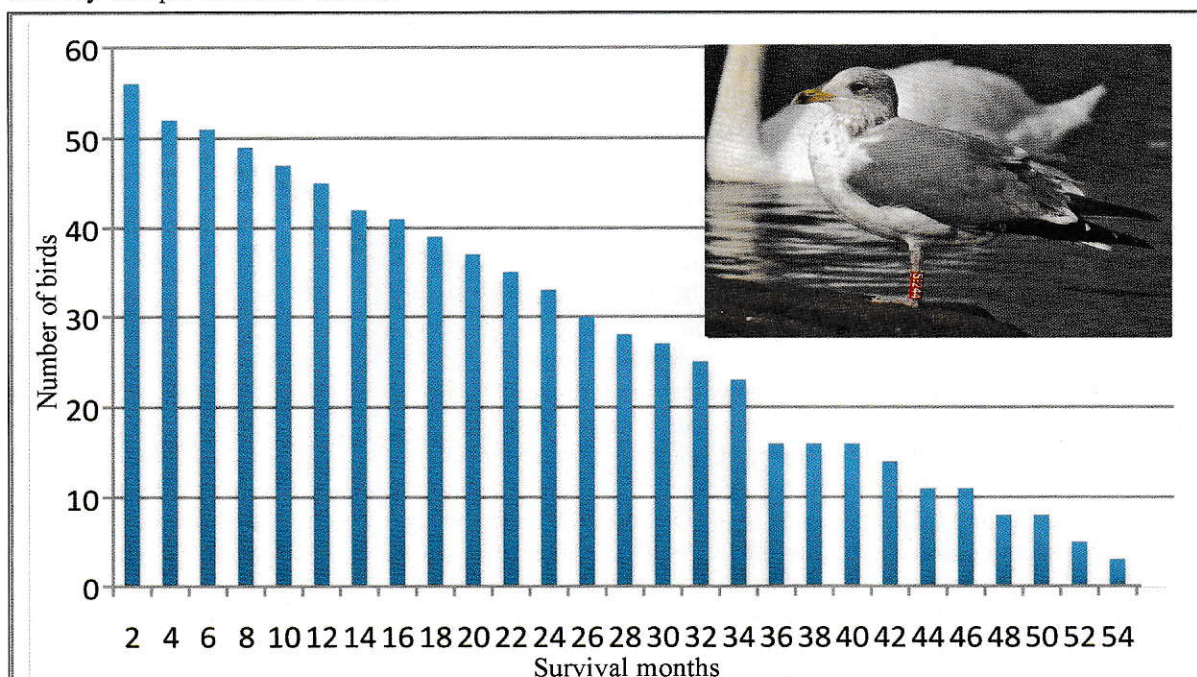
*Table 1. The reporting rate so far for Herring Gulls seen at least once.*

Thompson (2013) published the recovery rates for colour-ringed, rehabilitated Herring Gulls at the Mallydams Wood wildlife centre, also for non-rehabilitated (wild) birds from a colony in south-east England and the Severn Estuary. The number of BTO ringed, non-rehabilitated Herring Gulls by 2012 was 343,206 with total recoveries of 25,912 (Dadam et al 2013) giving a recovery rate of 7.5%. However this lower figure is far more to do with the difference in the reporting rate where only a BTO metal ring has been used. The extent to which the BTO recoveries also includes colour ringed birds is not known.

Type	Study centre	study period	% recovery
rehabilitated	Secret World	3 years	30.4
rehabilitated	Mallydams Wood	12 years	30.7
wild	Colony in S.E England	4 years	22.9
wild	Severn Estuary Gull Group	30 years	73.7
wild	BTO (mainly metal rings)	75 + years	7.5

*Table 2. Comparison of recovery rates for Herring Gulls.*

From the table above the recovery rate so far for the Secret World birds is comparable with the 12-year study at the Mallydams Wood wildlife centre and the 4 year study of wild birds in a colony in south-east England. The very high recovery rate of 73.7% by the Severn Estuary Gull Group is due to an enormous effort to re-sight and identify individually ringed birds with many hours of fieldwork on landfill sites and at urban breeding colonies. Thus the variables such as the length of the study period, observer effort and use of colour rings versus just metal rings make it difficult to gain a direct comparison with the data from other sources. However, all the indications are that the rehabilitated Herring Gulls released by Secret World are surviving well and that their survival is certainly on a par with other studies.



*Fig 6. Minimum survival. The number of months that the 56 Secret World Herring Gulls are known to have survived. Inset: S:244 (BTO ring GF24899) photographed at Par Sands, Fowey, Cornwall on 25th January 2016 by John Sanders. Original ringing and release at Apex Park, Burnham-on-Sea, Somerset on 17th July 2013.*

**Results - Survival - The Secret World Lesser Black-backed Gulls**

The typical lifespan for Lesser Black-backed Gulls is 15 years with a maximum recorded age of 34 years 10 months 11 days (BirdFacts, BTO website). The graph (Fig. 7) plots the number of Lesser Black-backed Gulls that are known to have survived for a specific number of months since release.

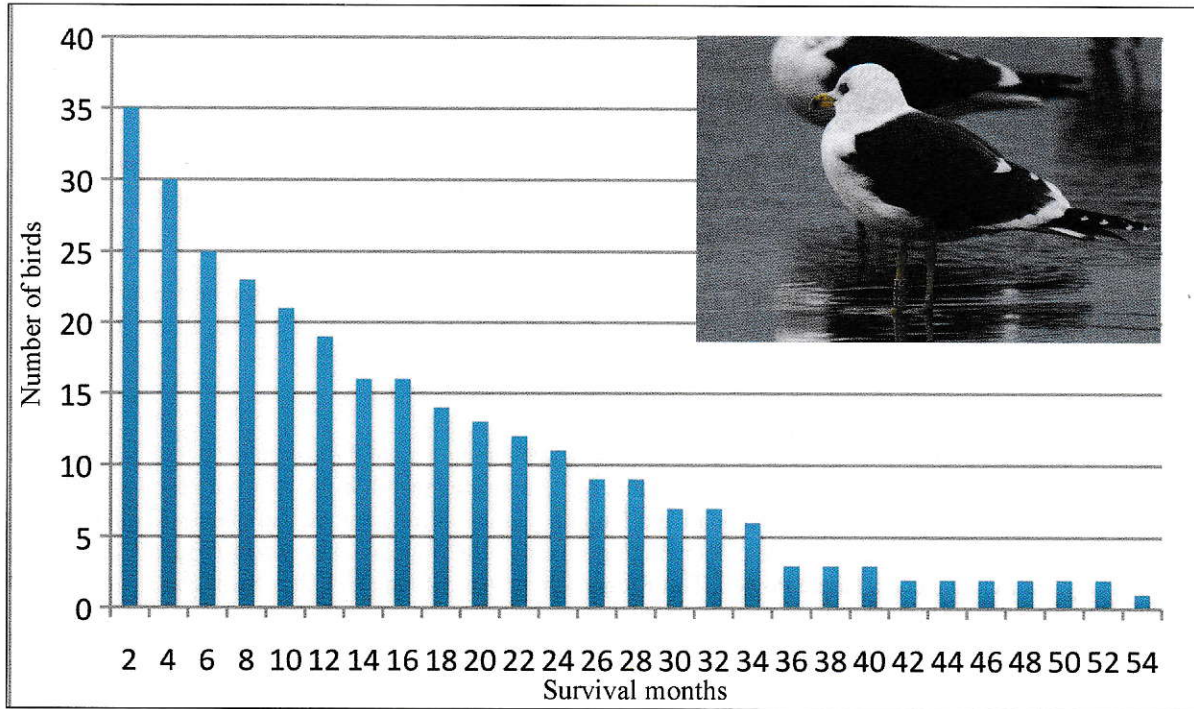


Fig 7. Minimum survival. The number of months that the Secret World Lesser Black-backed Gulls are known to have survived. Inset: S:195 (BTO ring GR43152) photographed at Matoshinos Beach, Portugal on 25th March 2016 by Jose Marques. Original ringing and release at Highbridge, Somerset on 27th August 2012.

I have not found any studies with which we can compare the recovery rates for Lesser Black-backed Gulls other than the ringing totals provided by the BTO with 207,232 ringed and total recoveries of 34,197 (Dadam Op. cit.) giving a recovery rate of 16.5%. The reporting rate so far for birds released by Secret World and seen at least once is an impressive 58.3% (Table 3).

Secret World	Colour ringed	reported	%
Lesser B-b Gull	60	35	58.3

Table 3. The reporting rate for Lesser Black-backed Gulls seen at least once

**The difference in reporting rates for the two species:**

Table 4 gives the recovery rates for both the colour-ringed Herring and Lesser Black-backed Gulls from Secret World. The difference is significant ( $\chi^2 = 5.61, P < 0.05$ ). This can also be seen in Table 5 which compares the percentage reporting rate for Secret World birds with the national BTO scheme. The question that arises is: 'Why should the reporting rate for Herring Gulls be approximately half that of Lesser Black-backed Gulls in both data sets?'

	Herring Gull	Lesser B-b Gull
Secret World colour ringed	184	60
Number of recoveries	56	35

Table 4. The reporting rate for Herring Gulls and Lesser Black-backed Gulls from Secret World.

	Herring Gull	Lesser B-b Gull
Secret World birds reported %	30.4%	58.3%
Reported nationally to BTO %	7.5%	16.5%

Table 5. The percentage reporting rate for Herring Gulls and Lesser Black-backed Gulls.

From the reporting and the considerable amount of correspondence that has been involved in monitoring the Secret World birds it is apparent that there are some very dedicated gull watchers in Portugal and Spain so, in this study, the explanation probably rests with observer bias. Presumably this also feeds into the difference for the BTO scheme.

#### Summary

184 Herring Gulls and 60 Lesser Black-backed Gulls were colour-ringed and released after rehabilitation by the Secret World Wildlife Centre between 2011 and 2013. The recovery rate by December 2015 for Herring Gulls was 30.4% and for Lesser Black-backed Gulls was 58.3%.

The dispersal pattern of the released birds conformed with the known migration patterns of the two species, with Herring Gulls tending to remain in Southern England and Lesser Black-backed Gulls moving to south-west Europe in the winter months. In other words, they behave normally!

Gulls are feisty birds and respond well to care. The post-release survival rates indicate that the protocols for care at Secret World give results that are comparable to the survival rates found in other studies investigating rehabilitated and 'wild' birds.

#### Acknowledgements

Thanks go to all of the people, mainly birdwatchers but also general members of the public, who took the time and trouble to report their sightings such as S:198 below (Fig. 8). The staff at Secret World who care for the gulls on a daily basis including Sara Cowen, Martin Kendall and Pauline Kidner with whom we had the most contact. Peter Rock for advice and help in organising the colour ringing scheme. The ringers: Chris Craig, Ed Drewitt, George Gay, Paul Gay, Patrick Hancock, Adele Powell, Tim Ridgers-Steer, Andy Slade and Nick Stephens.

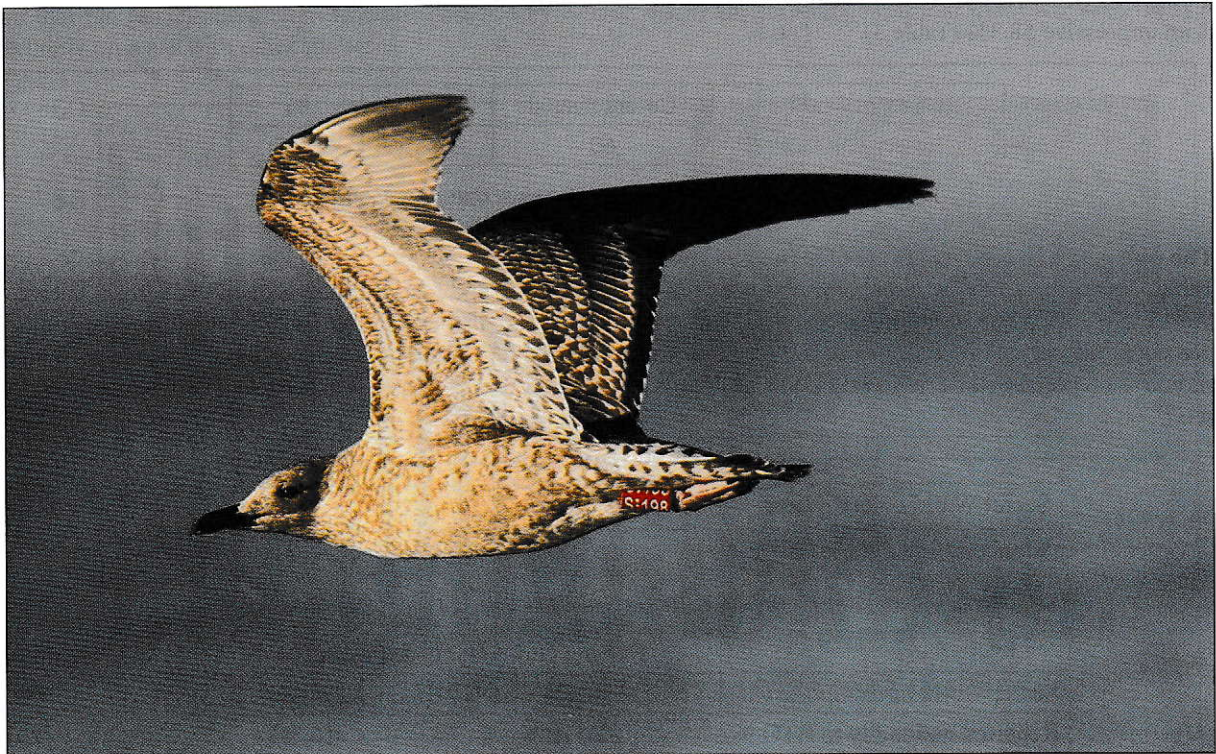
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**Fig 8.** Juvenile Lesser Black-backed Gull S:198 released at Apex Park, Burnham-on-Sea on 27 August 2012. It was seen on many dates during the winters of 2012, 2013 and 2014 at Quarteira Beach, Faro, Portugal. Photograph courtesy Michael Davies

# Materials used in the construction of Blue Tit *Cyanistes caeruleus* nests, with a particular focus on bryophytes.

By

Patrick Hancock



Fig 1. Blue Tit nest with moss base lined with fine dry grass, hair and feathers in readiness for egg-laying.

This report investigates the materials used by Blue Tits *Cyanistes caeruleus* to construct nests within nest boxes, with the aim of identifying the species of bryophyte (in this case moss) used. *Brachythecium* spp. (probably *B. rutabulum*), *Kindbergia praelonga* and *Hypnum cupressiforme* were the predominant mosses used. The percentage of each species as a total of nest weight is possibly dependant upon the availability of each moss species within the immediate vicinity of the nest box.

The Blue Tit is a common breeding bird at Chew Valley Ringing Station (CVRS) and within Britain. They are cavity nest builders and readily take to using small hole-fronted nest boxes (Ferguson-Lees et al 2011). Blue Tit nests are built using a base of moss mixed with other plant material, with a cup lined with finer materials such as hair, wool, feathers and fine grass (Fig.1 and 2) (Ferguson-Lees et al 2011). Typically, a single clutch is laid. The average first laying date for southern Britain is 26 April (Robinson 2015). The period from start of nest building to the laying of the first egg is variable, but is usually from 5 to 12 days (Cramp et al 1993).

A programme of providing nest boxes that are suitable for Blue Tits within the CVRS recording area has been in operation for more than 30 years. Boxes are sited within five habitat types; a small woodland dominated by Oak *Quercus robur* with some Sycamore *Acer pseudoplatanus*, a small woodland dominated by Scots Pine *Pinus sylvestris*, damp woodland dominated by Alder *Alnus glutinosa* with Willow *salix* spp. at the margins, standard trees (Oak, Ash *Fraxinus excelsior*) at the margins of a semi-improved pasture, and a garden with Willow sp., Hazel *Corylus avellana* and mature apple *Malus* sp. In 2015, 113 boxes suitable for both Blue Tit and Great Tit *Parus major* were monitored for breeding success. Blue Tits built nests and laid eggs in 30 boxes. 19 boxes fledged young. The first monitoring visit of nest boxes was on 11 April when nests were in various stages of construction, but eggs had yet to be laid

## Method

At the end of July 2015, post breeding, the contents of three nest boxes were removed for examination. The criteria used for the selection of nest boxes whose contents were to be examined are; (i) boxes from which a Blue Tit brood had successfully fledged, (ii) the location of the nest box. A judgement was made for criteria (ii) that although the three selected nest boxes were located within 250m of each other (Fig. 3), the specific nature of each location may influence the composition of materials used to build the nest. Nests were dismantled with bryophytes separated into individual fronds and identified using a 10x hand lens. Large grass leaves were also isolated but not identified to species. Mammal hair was not isolated as this came in various sizes and lengths and posed too many problems to remove from the general detritus left once the bryophytes and grass were removed. Feathers were also not isolated from the nest material. The majority of the detritus consisted of powdered material,



Fig. 2. Blue Tit carrying moss for nest construction



Fig. 3. Aerial image of the south-east corner of Chew Valley Lake showing the position of the three nests examined.

presumably substrate associated with the moss and was incorporated into the nest at the time of building, faecal material and other 'waste' associated with the development of the young. It was not apparent that plant material from the nest construction had decayed and contributed to the detritus. All materials were weighed dry to the nearest 0.01g using an electronic balance.

Table 1 gives a description of each of the sampled nest boxes.

### Results

The composition for each of the sampled nests is given in Table 2. All moss species used by Blue Tits in the construction of their nests are general epiphytes of lowland woodland and are common within the recording area. *Homalothecium sericeum* is more widely found on base-rich rocks, but it also grows on base-rich bark, e.g. Ash and Elder.

The following gives a brief account of the ecology of the bryophyte species recorded. It is based on accounts given by Atherton *et al* (2010).

***Kindbergia praelonga*** Grows on the ground and on logs where it ascends the trunks of trees.

***Brachythecium* spp. *B. rutabulum*** occurs in a wide range of habitats, living and dead wood, soil, stones and rocks. Other species occur in similar habitats, or are more specialised to growing on soil, e.g. *B. albicans* or in the case of *B. rivulare*, wet habitats.

***Hypnum cupressiforme*** Grows on acidic to slightly base-rich bark and rock

***Homalothecium sericeum*** Grows on hard surfaces, rocks, walls and tree bark, favouring base-rich substrates.

***Amblystegium serpens*** Favours moist or sheltered places, living and dead wood, soil, and bases of walls.

***Plagiothecium* spp** The common lowland species grow on soil, rocks, logs and tree bases.

***Cryphaea heteromalla*** Grows on the mossy bark of trees and shrubs.

***Metzgeria furcata*** Grows on bark, especially Ash, Sycamore and willow spp.

### Discussion

This small sample shows that the species of bryophyte principally used by Blue Tit in the construction of their nests are *Kindbergia praelonga*, *Hypnum cupressiforme* and *Brachythecium* spp. (with the majority probably being *B. rutabulum*). All three species are common epiphytes, with *K. praelonga* and *B. rutabulum* generally being more abundant at the ground layer and *H. cupressiforme* growing higher up tree trunks and on branches. Although the nest boxes sampled are of a similar size, the weight of material used in the construction of nests varied by 17.60g. The nest in Miscellaneous box 17 being the lightest. This nest, sited outside of woodland, consisted of approximately 20% by weight of bryophytes, compared to approximately 43% for the two nests sited within woodland, suggesting perhaps that the availability of material within the immediate vicinity of the nest site is a contributing factor in the composition of Blue Tit nests.

A survey of bryophytes at the three nest box sites would provide useful information in assessing the choice of materials used by Blue Tits in the construction of their nests.

Nest box name	Description of nest box location	Tree species	Height	Dimensions cms
Oak wood, box 1	Margin of oak wood bordering horse paddock and cattle pasture	Ash	1.5m	11.5 x 12 x 14
Oak wood, box 46	Margin of oak wood bordering farmyard and cattle pasture	Sycamore	1.6m	10 x 14 x 13.5
Miscellaneous, box 17	Standard tree bordering cattle pasture and freshwater lake	Oak	1.6m	11 x 9.5 x 11.5

Table 1 Nest box descriptions, tree species on which sited, height and dimensionson

Oak wood Box 1	dry weight (g)	%
<i>Kindbergia prealonga</i>	12.70	31.20
<i>Hypnum cupressiforme</i>	2.30	5.65
<i>Brachythecium spp.</i> *	2.00	4.91
<i>Homalothecium sericeum</i>	0.55	1.35
<i>Plagiothecium spp.</i>	very small amount	
<i>Cryphaea heteromalla</i>	2 small fronds	
<i>Metzgeria furcata</i> **	small number of fronds	
Hair, feathers & detritus	23.15	56.88
<b>Total weight</b>	<b>40.70</b>	
Oak wood Box 46	dry weight (g)	%
<i>Brachythecium spp.</i> *	7.25	23.31
<i>Kindbergia prealonga</i>	5.45	17.52
<i>Hypnum cupressiforme</i>	0.40	1.29
<i>Homalothecium sericeum</i>	0.25	0.80
<i>Amblystegium serpens</i>	0.15	0.48
unidentified moss	0.10	0.32
Hair, feathers & detritus	17.50	56.27
<b>Total weight</b>	<b>31.10</b>	
Miscellaneous Box 17	dry weight (g)	%
<i>Hypnum cupressiforme</i>	3.75	16.23
<i>Kindbergia prealonga</i>	0.55	2.38
<i>Brachythecium spp.</i> *	0.35	1.52
Grass (unidentified)	0.80	3.46
Hair, feathers & detritus	17.65	76.41
<b>Total weight</b>	<b>23.10</b>	
* not identified to species, but probably <i>B. rutabulum</i>		
** a liverwort		

Table 2 The composition of the nest material found in three nest boxes occupied by Blue Tits at Chew Valley Lake

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## Barn Owl prey items at Chew Valley Lake

by  
Ed Drewitt

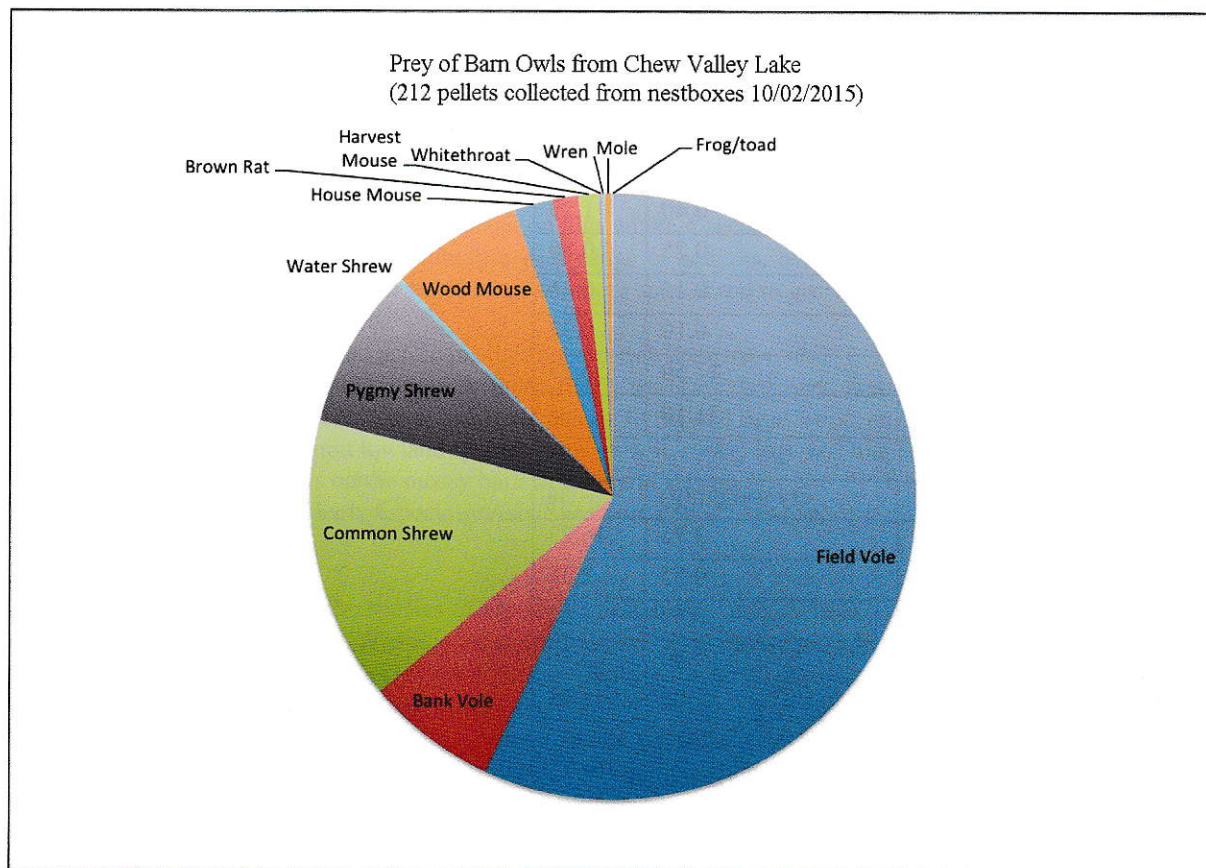
Species	Chew Valley Lake
Field Vole	364
Bank Vole	45
Common Shrew	97
Pygmy Shrew	53
Water Shrew	2
Wood Mouse	45
House Mouse	13
Brown Rat	9
Harvest Mouse	7
Whitethroat	1
Wren	1
Mole	2
Frog/toad	1
Total Number items	640
No of pellets	212

In March 2015 and April 2016 students studying biology and zoology dissected 212 barn owl pellets collected from three Barn Owl boxes at Chew Valley Lake on 10th February 2015. These were from the areas near the southern and western sides of the lake known as Herriott's Bridge, Heron's Green and The Parklands. This was part of the students' 'Diversity of Life' course at the School of Biological Sciences at the University of Bristol.

Barn Owls commonly eat Bank Voles, Field Voles, Common Shrews and other small rodents and insectivores. Their prey is a good indicator of what species of small mammal are living in the hunting range of the Barn Owl. In this exercise not only did the Barn Owl pellet dissections reveal the expected prey items but also species which are under-recorded. These included the Water Shrew and the Harvest Mouse. The Mole is also an interesting prey item too - one was an adult and the other a young animal.

Barn Owls are indicators of how well local populations of small mammals are faring. In this case, the study of the pellets on this scale has helped reveal that Harvest Mice, in particular, are living and perhaps thriving around the Chew Valley Lake area.

**Table 1.** Species and number of prey items found in Barn Owl pellets collected from Chew Valley Lake.



**Fig 1.** Pie Chart of Barn Owl prey items from Chew Valley Lake.

## Nest Recording 2012-2015

by  
Mark Dadds

The following account is of the highlights and interesting observations for the nests found and monitored in the nature reserve area at the southern end of Chew Valley Lake.

### Water Rail

Four Water Rail nests were found in 2012 and further details about the nest sites and observations were given in the Avon Bird Report (2012). One nest was found in May 2013 with 6 eggs (Figs. 1) The nest, which was partially concealed by a layer of dry vegetation (Fig. 2) was later predated.



*Fig. 1. Water Rail nest found on 5 May 2013.*



*Fig. 2. Location of Water Rail nest found on 5 May 2013*



*Fig. 3. Recently hatched Water Rail pulli 20 June 2014*



*Fig. 4. Potential Water Rail floating nest platform*

In 2014 a nest was found on 25 May when it contained 4 eggs. This subsequently rose to 8 eggs at which point a camera trap was set up to monitor the nest. Seven of the eight eggs hatched during the night of 18/19 June. The seven pulli remained in and around the nest for a couple of days (Fig. 3) before abandoning it for good. They were last seen on 21 June at a muddy puddle in the mouth of the CVRS Heligoland trap about 12m from the nest site.

Due to the difficulty in finding Water Rail nests two experimental types of 'nestbox' have been tried. The first attempt (Fig. 4) was a reed covered slab of polystyrene with two 'goalpost' like structures on top at different heights that were used to support a sloping roof of cut reed stems. A floating platform was considered desirable following the 2012 nesting season during which water levels rose by about a metre and probably submerged all the early season nests.

The second was reed wigwams (Fig. 5), the inspiration for which was the reed nesting boxes made at Leighton Moss for Bearded Tit which occasionally had Water Rail nesting underneath. There were two variants, portable ones which incorporated a tripod and hoop framework (Fig. 5), and simpler fixed ones, made by tying together the tops of a large clump of in-situ dead reeds.

To date none of these nestboxes have been used by Water Rails at CVL, but the floating design has been used by Mallard, and a Reed Warbler has built a nest in one of the fixed wigwams.





*Fig. 5. Experimental 'wigwam' nest boxes for Water Rail at CVL*

**Stock Dove**

In May 2013 a clutch of two eggs was found in a chimney nestbox designed for Tawny Owl. Both subsequently hatched but one had died by the time the second pullus was large enough to ring. This was the first Stock Dove to be ringed by CVRS since 1996, but it also died before fledging. In March 2014 a Stock Dove flew out of an old dilapidated nestbox with a collapsed roof that was no longer being monitored. The nest box contained two eggs but by the time of the next inspection 11 days later the box was empty.

Two eggs were found in April 2015 in a nestbox that had been made to the dimensions specified for Goldeneye. These successfully hatched (Fig. 6) and fledged, after which two more broods of two were successfully raised in the same nestbox (Fig. 7). All six pulli were ringed. When the nestbox was checked in September to confirm that the 3rd brood had fledged, two more eggs were found in the box, but they were heavily soiled and scattered. This 4th clutch must have been laid before the 3rd brood fledged, but was subsequently abandoned.

Dates have been estimated for laying, hatching and fledging (Table 1) from the data gathered when the nestbox was inspected.

Brood	First egg date	Fist pullus hatching date	Fledging date
1	31-March	18-April	13-May
2	03-June	20-June	15-July
3	17-July	03-August	28-August

*Table 1. Stock Dove, first egg, hatching and fledging dates in 2015*



*Fig. 6. (Left) A pullus from the first 2015 Stock Dove brood in the 'Goldeneye' nestbox, about 10 days old.*

*Fig. 7. (Above) The second 2015 Stock Dove brood in the 'Goldeneye' nestbox, about 25 days old.*

## Cuckoo

Prior to 2015 the last confirmed breeding of Cuckoo at CVL was in 2005 when four parasitized Reed Warbler nests were found, and these were the first since 1999 (David Warden, Avon Bird Report 2005).

On 28 May 2015 a Reed Warbler's nest was found under construction and on 9 June, the then completed nest, contained three Reed Warbler eggs and one Cuckoo egg (Fig. 8). On 23 June only the nest foundation was still attached to the reeds, the nest cup was upside down on the ground below, and a moribund Cuckoo pullus a few days old was lying on the ground next to it. A pair of anxiously calling Reed Warblers was close by. The nest was repaired and the pullus placed back inside (Fig 9), but when checked a few days later, although the nest repair was still good, there was no sign of the pullus in the nest or on the ground beneath.



*Fig. 8 (Left). Cuckoo egg in Reed Warbler nest 9 June. Fig 9 (Right) Moribund Cuckoo pullus returned to repaired nest 23 June 2015*

On 29 June 2015 a Reed Warbler's nest was found that contained a Cuckoo pullus, a Reed Warbler pullus and a Reed Warbler egg. The two pulli must have hatched earlier that day. The following day the nest only contained the Cuckoo pullus (Fig. 10). The image (Fig. 11) is at 8 days old and it was ringed on 11 July, but when checked on the 16 July the large pullus was found on the ground beneath the nest and it was placed back on the nest (Fig. 12). Three days later a young cuckoo was heard calling and seen being fed by Reed Warblers in the top of willow scrub a few metres from the nest which, on checking, was found to be empty.



*Cuckoo pullus that hatched in a Reed Warbler nest on 29 June 2015*

*Fig. 10 (Left) at two days old.*

*Fig. 11 (Middle) at 8 days old.*

*Fig. 12 (Right) at 17 days old*

## Blue Tit

There are currently 130 nestboxes within the reserve area of which about 100 are of the small hole type that are suitable for Blue Tits. Although they have existed for many years, data for the BTO Nest Recording Scheme has only been gathered since 2012.

The graph (Fig.13) shows that the 2013 season started approximately two weeks later than the other three years. This was caused by the very cold early spring period that year.

The two years with the worst fledging rates (2012 and 2015) both have high numbers of nests and total eggs laid (Table 3). In part this is due to a higher number of replacement broods inflating the nest count and explains why the duration of egg laying is so much longer. Where these two bad fledging years differ is in the productivity shown by CVRS ringing data, suggesting that post fledging mortality must have been much higher in 2012. That year had an exceptionally wet summer, although it also experienced a warm dry March and first half of April

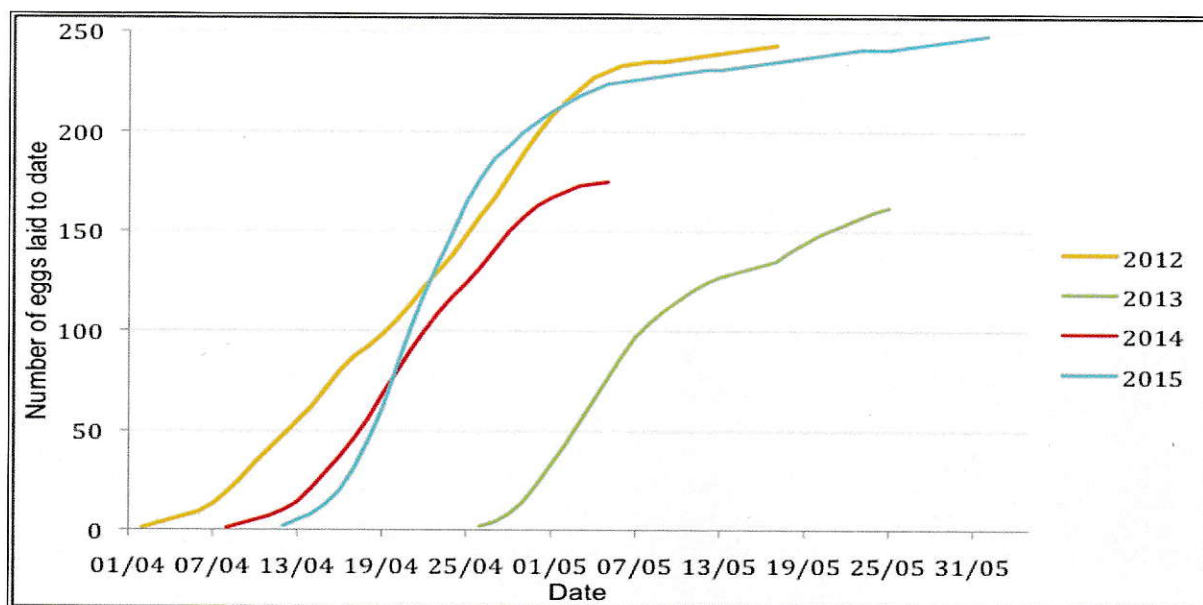


Fig. 13. Graph showing the timing of egg laying for Blue Tit in the breeding seasons 2012-2015

which accounts for the earlier start to egg laying.

The outstanding year for fledging success is 2014 (Table 4), for which the spring was generally warm and the summer settled with fairly high temperatures.

Year	Number of nests	Duration of egg laying	Av. number of eggs	Av. number of pulli	Av number fledged
2012	32	45	7.7	4.9	4.0
2013	23	29	7.9	5.3	4.1
2014	21	27	8.3	6.7	5.4
2015	30	50	8.4	5.3	4.0

Table 3. Blue Tit nest statistics for the breeding seasons 2012 to 2015.

Year	Adults	Juveniles	Productivity Index
2012	131	247	1.9
2013	59	312	5.3
2014	43	417	9.7
2015	47	381	8.1

Table 4. Blue Tit productivity for the breeding seasons 2012 to 2015 calculated from the CVRS ringing data. Counts are of the number of captures between August and December for each year / age category. Productivity . Productivity is the number of juvenile capture events for each adult capture event .

### Cetti's Warbler

On 15 April 2015 an empty nest, like a very robust Reed Warbler's nest, was found in a large bramble bush on the edge of the reeds. Suspecting that it might be a Cetti's Warbler nest, a Schedule 1 licence was applied for and obtained. The nest was next visited on 21 April when the suspicions were confirmed by the presence of two Cetti's Warbler eggs. The number of eggs subsequently rose to four (Fig. 14), all of which hatched, but the young were predated before fledging.

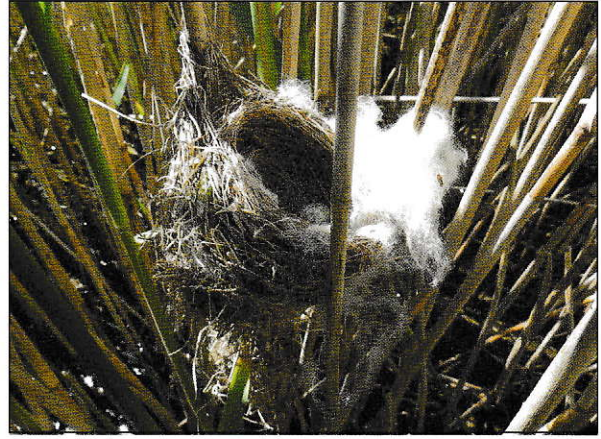
A second Cetti's Warbler nest containing four eggs was found on 2 May. This nest was mainly attached to reeds, and on 10 May was found to have slipped down on one side so was at an angle of 90° and now only contained 2 eggs. The nest was empty on 17 May.



Fig. 14. Cetti's Warbler nest in bramble 2015

### Reed Warbler

In May 2014 there was a particularly heavy willow seed crop resulting in some areas of reed being covered in willow down. Reed Warblers building at this time readily incorporated this into their nests resulting in some structurally unsound constructions.



*Fig. 15. (Left) Early phase of nest construction involving almost entirely willow down. Fig. 16. (Right) Failure of attachment to reeds where willow down has been used.*

Reed Warbler nests usually disintegrate over the winter, but this nest (Fig. 17) was well anchored low down in the reeds. It was found in July 2012 and had survived from the year before and now housed a toad!

Failure of Reed Warbler nests to remain attached to the reed stems can result in them tipping over, often with dire consequences for the contents. However, this nest (Fig. 18) slid down the reeds to water level without spilling its contents of three pulli.



*Fig. 17 (Left) Previous year's Reed Warbler nest plus Toad. Fig. 18. (Right) Reed Warbler nest that had slid down the reed stems.*



*Fig. 19 (Left) Two Reed warbler nests with one built on top of the other. Fig. 20 (Middle) An early Reed Warbler nest built inside a Water Rail 'wigwam'. Fig. 21 A recently fledged Reed Warbler adopting a 'disguise' with a 'bittern-like' posture.*

Fig. 19 shows two nests, one built on top of the other. The lower nest was first found on 17 May 2015 when it contained four eggs. Three young had fledged by 11 June. By 19 June the upper nest had appeared and contained four eggs although these eggs, or young, were subsequently predated.

For the earliest nesting Reed Warblers there is no fresh reed growth within which to conceal their nests, only the previous year's dead reed stems that provide little cover. Consequently nests tend to be built lower down than later in the season, or occasionally where other plant species in the reeds are already in leaf. In 2015 one of the earliest nests found was in one of the Water Rail 'wigwams' (Fig. 20). The first of four eggs was laid on about 30 April, and all four young fledged.

Occasionally recently fledged but flight incapable Reed Warblers are found, usually high up in the reeds (Fig 21). On close approach they sometimes freeze and point their bills straight up in a 'bittern-like' posture.

### Treecreeper

Prior to the 2013 breeding season 8 nestboxes specifically for Treecreepers were put up. Two were of the established wedge design (Fig. 22) except that they had no backs. The other 6 were of an experimental design built from a couple of triangles made from bark-covered sawmill off-cuts. The shape of the box resembles a half cone (Fig 23). None of the boxes were used by Treecreepers in 2013 although Coal Tit did nest in one of the wedges. However there has been some usage in 2014 and 2015 (Table 5). Generally, nesting by Treecreepers in nestboxes is very infrequent, so an occupancy rate of 30% for these two years is fairly high.



Fig. 22 Wedge design Treecreeper nest box.

Fig. 23 Experimental 'half cone' design Treecreeper nest box.

Fig. 24 Dave Francis design Treecreeper box.

In 2014 the BTO published details of a new type of Treecreeper nestbox designed by Dave Francis. The BTO invited interested parties to trial the new design. Eight were made and put up on the same trees as the eight that were already in place at CVRS. None of these were used in 2015, and of the 112 from around the country reported to the BTO only one was used. It remains to be seen if, as happened with the first eight CVRS boxes, they need to be in place for at least a year before they are used.

Year	box type	eggs	1st egg date	pulli	outcome
2014	half cone	6	29/04/2014	6	ringed and fledged
2014	half cone	5	31/03/2014	3	died shortly after hatching
2015	wedge	7	14/05/2015	6	predated by Gt. Sp. Woodpecker
2015	half cone	7	06/04/2015	6	ringed and fledged (Figs. 25 & 26)
2015	wedge	6	06/04/2015	6	fledged

Table 5. Nest statistics and outcomes for Treecreeper nest boxes occupied in 2014 and 2015



Fig. 25 (Left) A clutch of 7 Tree Creeper eggs in a 'half cone' design box on 24 April 2015.



Fig. 26 (Right) An 8 day old Tree Creeper pullus 7 May 2015.

### Reed Bunting

Nesting Reed Buntings seem to have a high failure rate. Of 18 nests found from 2012 to 2015, two thirds failed to fledge any young. Paradoxically the CVRS data shows that the better hidden the nest the more likely it is to fail. In table 6 the 'exposed' nests (Fig. 27) produced a higher number of fledglings in relation to those that were either 'well' or 'part-hidden'. This may suggest that they are more susceptible to terrestrial predators than aerial predators. The young have a reputation for leaving the nest well before they can fly, and most years one or two fledglings are caught by hand away from nests (Fig. 28).

nest exposure	number of nests	number of fledglings	av. number fledged per nest
well hidden	6	3	0.5
part hidden	10	9	0.9
exposed	2	7	3.5

Table 6. Reed Bunting nest outcomes in relation to the level of exposure.



Fig. 27 (Left) An example of an exposed Reed Bunting nest (in this case all four young fledged).



Fig. 28 (Right) A recently fledged Reed Bunting caught by hand.

### Predation

The eggs/young from many nests disappear before they are due to hatch/ fledge as a result of predation, but the predator species is usually unknown. To try and identify any species that were involved a camera trap was used to monitor some nests that were already at the egg stage. This exercise was successful on two occasions when Mallard and Moorhen were predated and both times the predators were Carrion Crows. (Fig. 29),

Fig. 29 (Right) A Carrion Crow predated eggs from a Mallard's nest built on a floating platform constructed for Water Rails.



## Breeding Season Surveys of Water Rails at CVL 2013, 2014 and 2015

by  
Mark Dadds

All reed beds around the Chew Valley Lake were surveyed in 2014 using a methodology based on that described by Gilbert et al (1998). A route that came within 100m of all suitable habitat was followed and a recording of Water Rail calls and song was played at approximately 100m intervals. The locations of any responses made by Water Rails were marked on a map before moving on quickly to the next stop. The recording consisted of 1 minute of Water Rail sharming (i.e. the most familiar call likened to the squealing of pigs), 1 minute of silence, and then 1 minute of a mixture of male song, female song and sharming. A pair of birds was indicated by a response of 2 birds sharming antiphonally. This is where each bird synchronises the peaks in its calls with the troughs in the other's, so sounds different to 2 rival birds trying to shout each other down. All other responses were noted as single birds except for: (i) 3 single birds calling in close proximity to each other were considered to be a pair and one single, (ii) male song and female song in close proximity to each other were noted as a pair, and (iii) on one occasion 2 silent birds came running in to view together while the recording was playing and were noted as a pair.

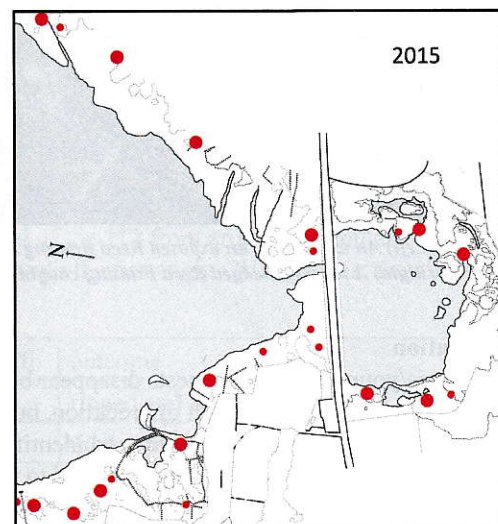
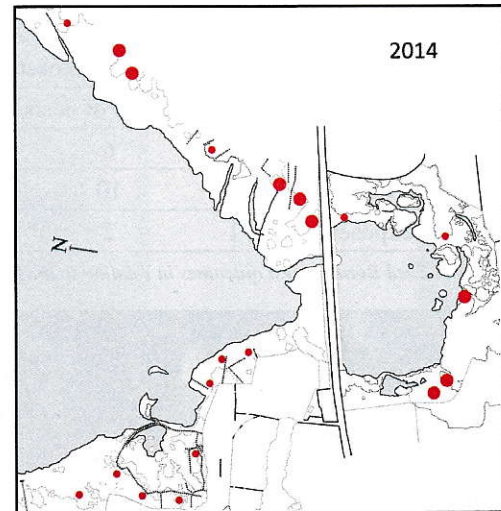
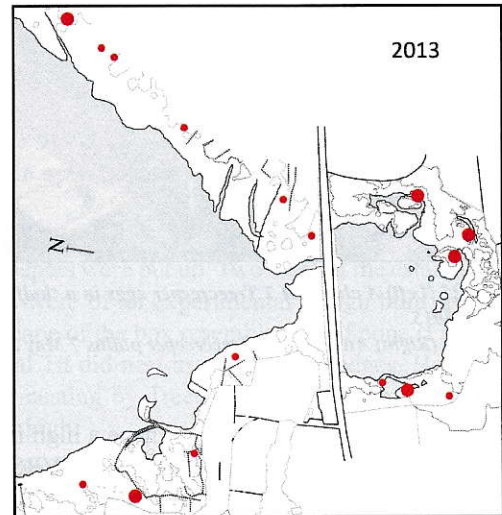
The surveying needed to be carried out between the last week of March and the middle of April. Before this time significant numbers of wintering birds may have been present and later than this the incubating birds are even less likely to respond so definite pairs are more difficult to detect. Surveys took place on 8 days within this period. Surveying also had to take place from just after sunrise to ideally no later than mid-morning as responses tend to drop off after this. Wet and/or windy days had to be avoided.

A pilot study of just the nature reserve area was carried out in 2013, and a partial survey of the lake (including the nature reserve) was carried out in 2015. Comparing the survey results for the nature reserve area over the 3 years (Figs. 1, 2 and 3) suggests a year on year increase in Water Rail numbers (Table 1.) but this could be due to year on year improvements in the playback equipment used which enabled louder volumes to be used. There appear to be a few favoured sites that are used every year.

	Single	Pair
2013	10	6
2014	12	8
2015	10	13

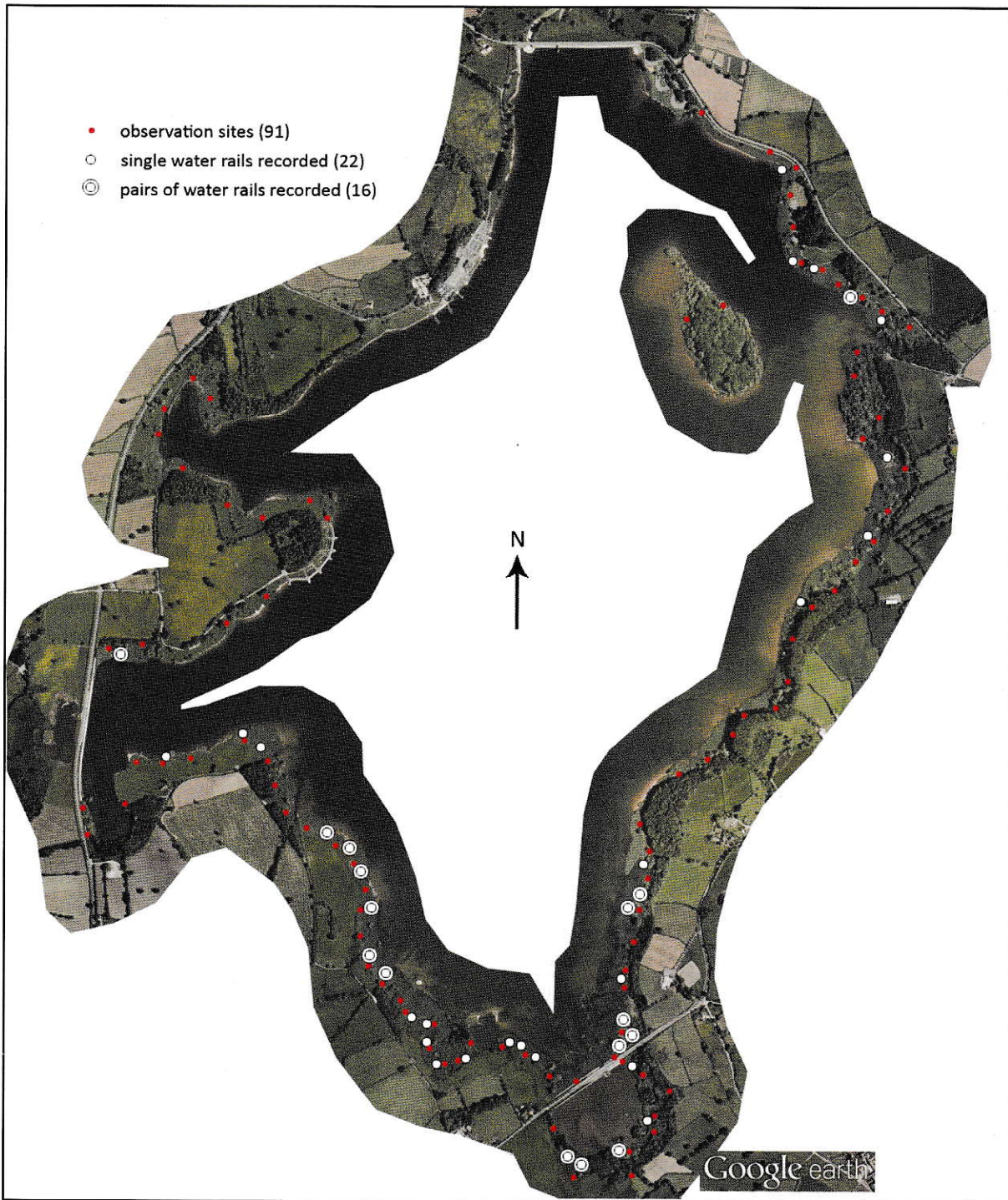
*Table 1. The number of single and pairs of Water Rail detected during the surveys within the nature reserve at the south end of the lake in 2013-2015.*

The map for the whole of lake survey in 2014 (Fig. 4) shows the bulk of the population residing at the southern end of the reservoir. The dearth of birds along most of the east shore seems unusual as it is almost completely bordered by reed beds. However, they do average a little less wide than the west shore beds where pairs are concentrated. Water Rails typically build their nests just above water level. The more pronounced wave action on the east shore as a result of exposure to the prevailing south-westerly/westerly wind direction, not helped by the narrower reed beds, could



*Figs. 1, 2 and 3. Locations of Water Rails detected during the surveys within the nature reserve at the south end of the lake in 2013-2015.*

*Large red dots denote pairs, small red dots single birds.*



*Fig. 4. Results from the whole of lake survey in 2014.*

increase the risk of nests being swamped so might be a factor in the observed distribution. This may also explain the small cluster in the north-east corner in the lee of Denny Island.

Human disturbance would not appear to be a factor. The location of some nests and the trapping and sighting of pulli in the parts of the nature reserve area where ringing activities take place show that there is plenty of breeding activity in what must be the most disturbed area of reeds at the lake. It also demonstrates that at least some of the singles found on the survey are due to only 1 of a breeding pair responding to the playback.

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(A previous report with observations of breeding Water Rails at Chew Valley Lake in 2012 by Mark Dadds can be found in the Avon Bird Report 2012 pp 157-161 ISSN - 0956-5744 Ed.)



## Site fidelity of breeding Sedge Warbler *Acrocephalus schoenobaenus* at CVRS

by

Patrick Hancock

Using ringing data from Chew Valley Ringing Station (CVRS), this report investigates the evidence for site fidelity of breeding Sedge Warbler *Acrocephalus schoenobaenus* within the CVRS recording area for the period of 1986 to 2015 inclusive.

The Sedge Warbler is a common breeding bird across Europe. It winters in Africa, south of the Sahara (Cramp *et al* 1992) and breeds in lowland marshes, margins of lakes, rivers and ditches; less often in drier habitats. Typically nests are sited in low, dense vegetation (Ferguson-Lees 2011). It has been shown that Sedge Warblers show a certain degree of site fidelity in successive breeding seasons (Vadasz *et al* 2008), but an individual males territory can shift in successive breeding seasons to improve the quality of his territory (Zajac *et al* 2011).

At Chew Valley Lake the Sedge Warbler is a spring and autumn passage migrant and breeding species. Singing males have been recorded each year for the period 1986 - 2015 (Avon Bird Report). It is a species that breeds within the CVRS recording area.

### Methods

All birds were caught using mist nets either as part of general ringing sessions or as part of the British Trust for Ornithology's Constant Effort Sites scheme. Birds were sexed according to the presence of a cloacal protuberance for males, or a brood patch for females. Age is determined according to the presence or otherwise of juvenile feathers (Svensson 2009). Individuals may not have been sexed on initial ringing as the bird may not have developed sexual characteristics, e.g. birds ringed as juveniles. However, reliable sexual characteristics may have been observable through the bird's recapture history, and therefore in these instances a sex has been attributed. Occasionally there was a conflict in the assigned sex. In cases where an obvious error had been made and the correct sex could be attributed due to the birds recapture history, then errors were corrected, otherwise the sex of the bird was deleted and the bird was recorded as not sexed.

### Results:

For the period 1986 to 2015, 228 individual Sedge Warbler were recaptured at CVRS in a year subsequent to that of ringing. Of these, 139 were determined as male, 63 as female and 26 were not sexed. Excluding those that had been attributed conflicting sexes, those not sexed during their capture and recapture histories were therefore not showing breeding characteristics (i.e. a brood patch or cloacal protuberance) and are regarded as being on passage either to or from breeding grounds away from the CVRS recording area. Those that were sexed are assumed to have breeding territories that incorporate at least part of the CVRS recording area, i.e. are showing natal site fidelity and / or breeding site fidelity. The male:female ratio of these birds is 2.2:1. This data is summarised in Table 1. Comparing the number of all males and females using the chi-square test with Yates' correction,  $X^2 = 27.85$ ,  $P < 0.001$ . (Fowler & Cohen) There is a statistically highly significant difference between the male:female ratio than that which would be expected purely through chance.

	all males	all females
Number	139	63
Percentage	68.8%	31.2%

Table 1 Sedge Warbler male:female ratio of individuals showing breeding site fidelity 1986-2015.

Of the 202 individuals where a sex was attributed and which showed breeding site fidelity (i.e. recaptured during the breeding season one year or more after ringing), 104 were ringed at CVRS as juveniles, see Table 2. Of these, 83 were male, 21 female, a male:female ratio of just under 4:1. There is a highly significant difference between the juvenile male:female ratio.  $X^2 = 35.78$ ,  $P < 0.001$ .

	juvenile males	juvenile females
Number	83	21
Percentage	79.8%	20.2%

Table 2 Sedge Warbler male:female ratio of juveniles showing breeding site fidelity 1986-2015.

There were 98 Sedge Warbler ringed as adults at CVRS that showed breeding site fidelity. Of these, 56 were male, 42 were female (see Table 3), a male:female ratio of 1.33:1. There is no statistically significant difference between the adult male:female ratio  $X^2 = 1.72$ ,  $P > 0.05$

	adult males	adult females
Number	56	42
Percentage	57.1	42.9

Table 3 Sedge Warbler male:female ratio of adults showing breeding site fidelity 1986-2015.

Figure 1 shows the annual number of male and female Sedge Warbler that were ringed at CVRS and were recaptured in a year subsequent to that of ringing, i.e. birds showing natal or breeding site fidelity. The totals are greater than those in Tables 1 to 3 due to some individuals returning in further years. An example of this is Sedge Warbler F531645. Ringed as a 3J (a bird with juvenile plumage) in 1997, it was recaptured in each successive year on at least two occasions in different months up to 2003. It was recaptured once, and for the last time, in May 2004. It was sexed as a male.

The mean number of individuals recaptured per year has declined, from 14.78 for the period 1986-2003 to 1.58 for the period 2004-15. For the same periods, the male to female ratio is approximately 5:2 and 9:7 respectively.

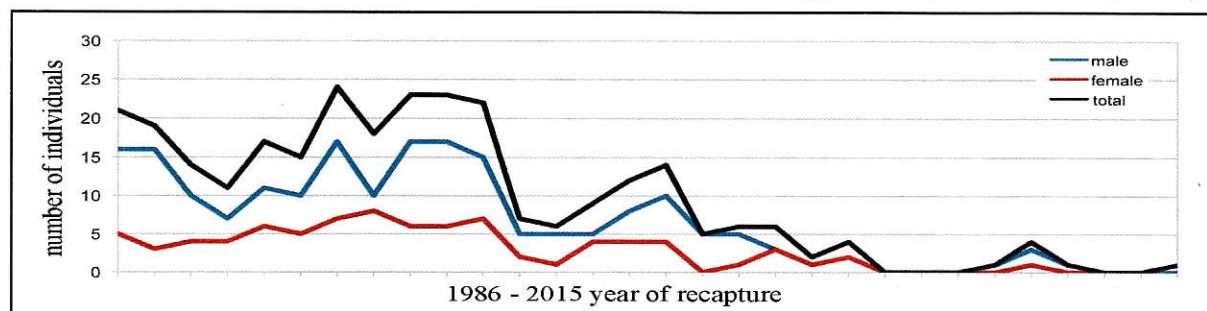


Figure 1. Annual totals of adult Sedge Warbler showing breeding site fidelity 1986-2015

## Conclusions

Ringing data confirms that Sedge Warblers show breeding site fidelity within the CVRS recording area and that individuals return to the same area to breed in successive years. Taking all age classes together the breeding site fidelity ratio of male:female is 2.2:1.

The data also shows that some Sedge Warblers return to the same area to breed in which they were hatched, i.e. their natal area. The statistically, highly significant difference in the male:female ratio of almost 4:1 for birds ringed as juveniles shows that males have a greater natal site fidelity than females. The implication being that females occupy breeding territories away from their natal area. It has been suggested that this behaviour has evolved to reduce the amount of in-breeding within a population (Eikenaar *et al* 2008). Dispersal from breeding sites of female migratory songbirds may also be dependent upon breeding success in the previous year, with less successful breeding females dispersing further than those that are successful (Cline *et al* 2013). However, once a breeding territory has been established there is no statistical significant difference in the sex ratio of birds returning to a breeding area in subsequent years.

As an additional observation from the ringing totals, there has been a marked decline in the number of returning Sedge Warblers within the CVRS recording area since 2004. The ratio of males:females recorded in the breeding season has become close to parity for the years 2004 to 2015, where previously there was a 5:2 ratio in favour of males. It should be noted that although the number of Sedge Warbler breeding within the CVRS recording area has declined, no such decline has been noted within the former county of Avon (Avon Bird Report).

It has been suggested for various species, that recapture rate has a positive correlation with the quality of a breeding area (McNicholl 1975, Greenwood 1980, Bollinger & Gavin 1989). If this is the case for Sedge Warbler, then perhaps one factor affecting the decline in breeding numbers at CVRS has been a decline in the quality of the territory favoured by male Sedge Warbler.

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# The changing fortunes of the Greenfinch *Carduelis chloris* at Chew Valley Ringing Station

By  
Patrick Hancock

This short report looks at the annual and monthly variation in numbers of Greenfinch *Carduelis chloris* ringed for the period 2006 to 2015 at Chew Valley Ringing Station (CVRS) and is set against the background of the emergence of *Trichomonas gallinae*, an infectious and fatal protozoal disease of the species. Annual and monthly figures of ringed Greenfinch are presented. The number of individuals that were recaptured subsequent to at least one breeding season after ringing is given.

The Greenfinch is a common breeding bird within the recording area of Avon. The Avon Bird Report (2012) states it is a resident, a passage migrant and winter visitor. Most British Greenfinch are known to spend their entire lives close to their birth places but some make extensive seasonal movements (Boddy & Sellers 1983, Main 1996). For Greenfinch recaptured or found away from the CVRS recording area, data shows that the mean distance moved from CVRS is circa 36km, the median distance is 6km, therefore agreeing with these findings. Greenfinch can have a protracted breeding season with up to three broods and young can still be fledging through August and into September (Ferguson-Lees *et al* 2011). Typical lifespan is two years, though a bird of over 12 years of age has been recorded (BTO BirdFacts).

*Trichomonosis* emerged as a fatal disease of finches in Britain in 2005 and rapidly became epidemic within some Greenfinch populations in 2006. By 2007, in the geographic region of highest disease incidence, breeding populations of Greenfinch had decreased by 35%. In contrast, declines were less pronounced or absent in regions where the disease was found in intermediate or low incidence (Robinson *et al* 2010). Figure 1 is a simplification of the map published by Robinson *et al*, and shows the distribution of finch *Trichomonosis* in 2006.

## Methods

All Greenfinch were caught using either mist nets or a Heligoland trap. During the autumn, winter and early spring, sunflower seeds were provided as a means of attracting birds to both forms of trapping. There was no standardised trapping method, but the number of 'ringer days' per annum can be used as an approximation of trapping effort (Figure 2). Here, one 'ringer day' is counted when a ringer is present and recorded on the day log at CVRS. 'Ringer days' for the period peaked in 2011 with 709. This year had the lowest number of Greenfinch ringed for the period.

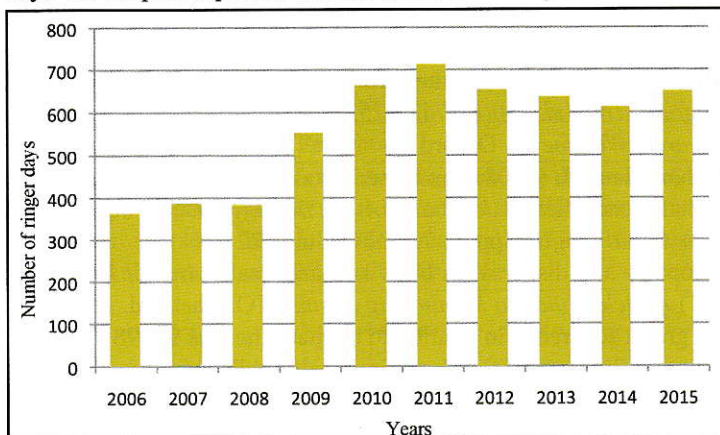


Figure 2 Ringer days per year at CVRS 2006 to 2015

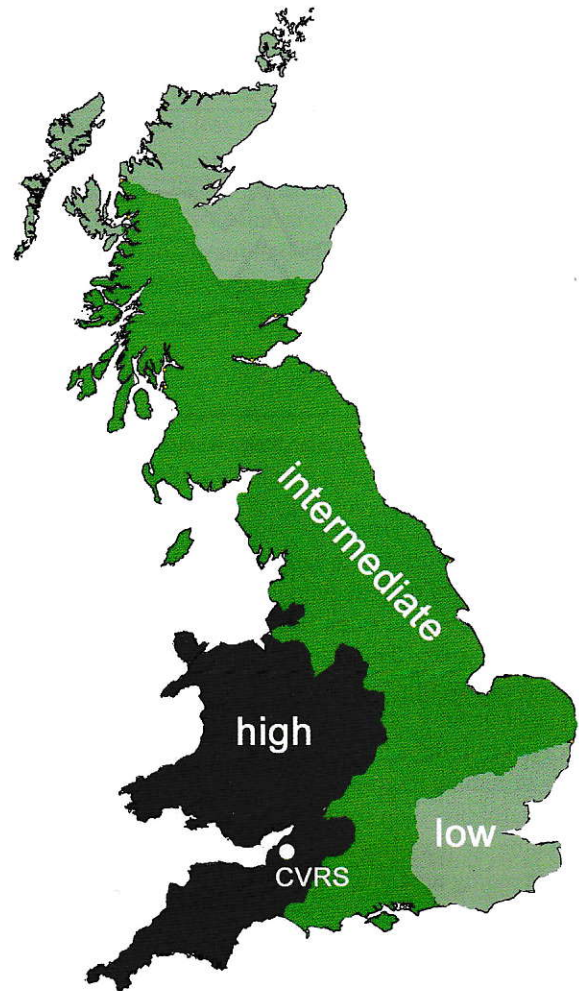


Figure 1 Distribution of trichomonosis incidents in 2006

The lowest annual total of 'ringer days' was 362 in 2006. The years 2006 to 2008 had the three lowest annual number of 'ringer days' for the period. It was these years that had the first, second and fourth highest number of Greenfinch ringed for the period. It is therefore assumed that the number of Greenfinch ringed is representative of the local population size and not of the ringing effort. The ageing and sexing of Greenfinch is as per Svensson (2009). Greenfinch that are in their second calendar year are capable of breeding.

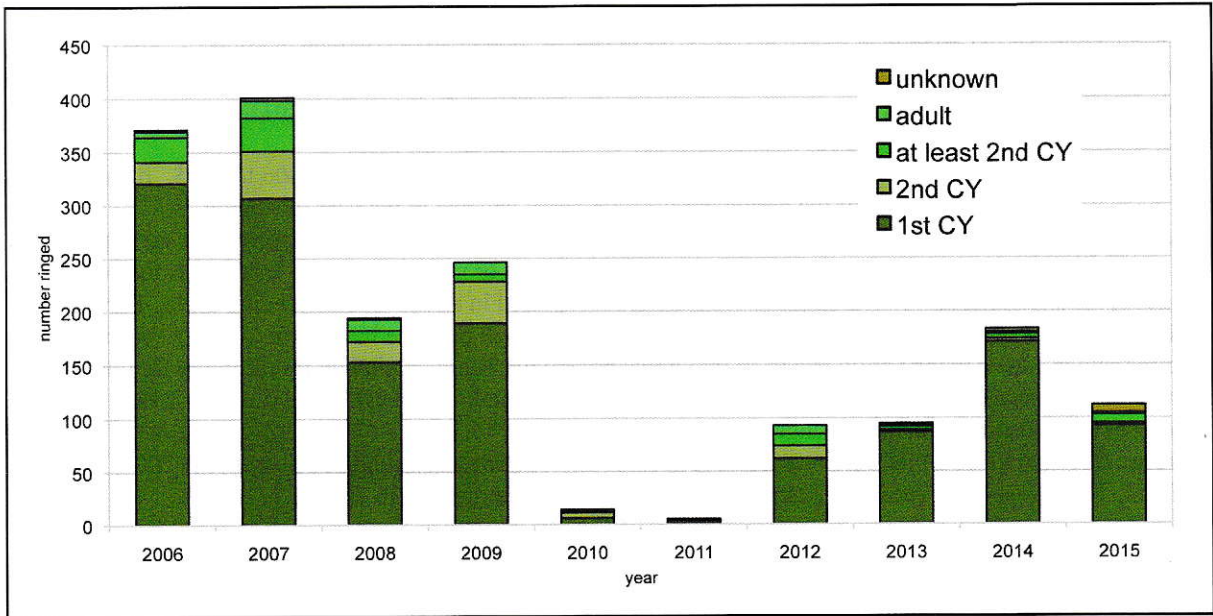


Figure 3. Number of greenfinch ringed by year and age class at ringing 2006 - 2015

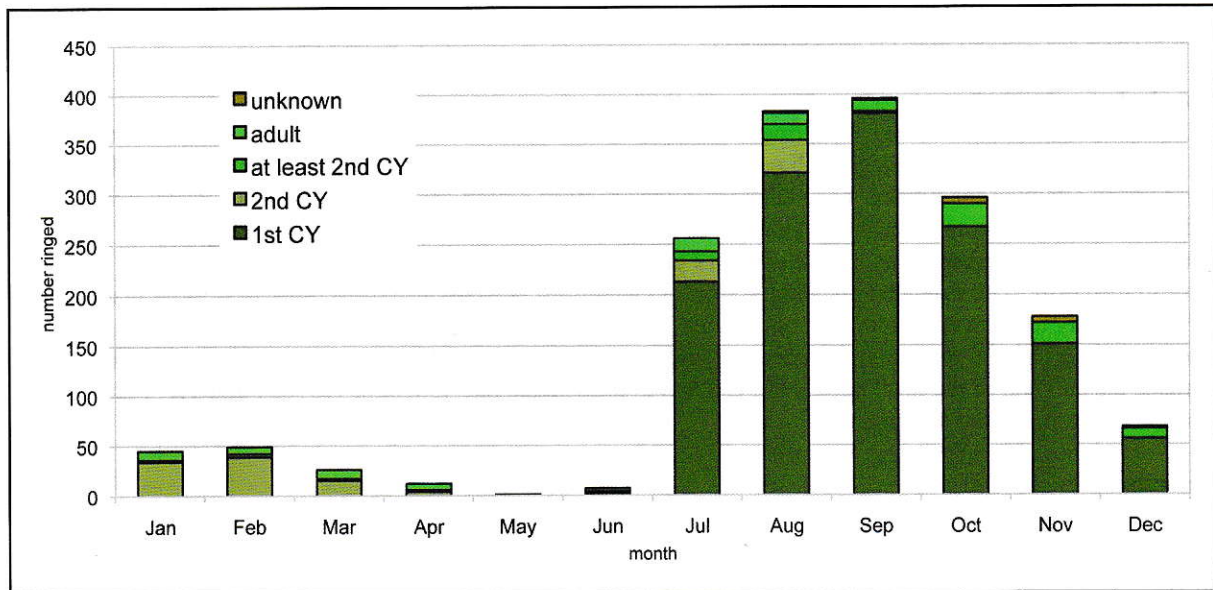


Figure 4 Accumulated monthly totals of Greenfinch ringed at CVRS 2006 - 2015

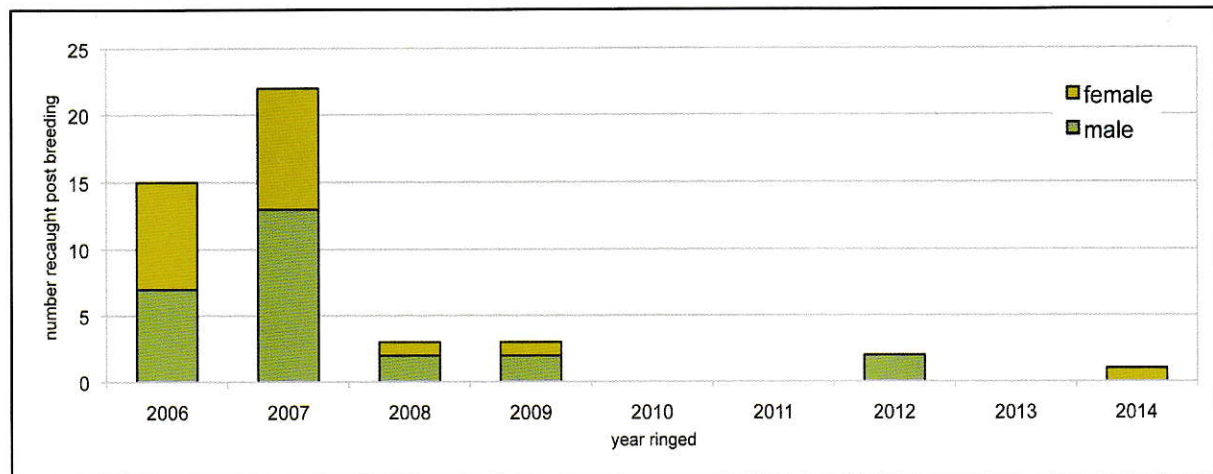


Figure 5 Number of Greenfinch ringed in year shown, that were recaptured post breeding in a subsequent year

## Discussion

The annual number of Greenfinch ringed at CVRS for the years 2006 to 2015 is shown in Figure 3. For the period, the highest annual ringing total was 401 in 2007, the lowest was five in 2011. There was a 94.3% drop in the number of Greenfinch ringed in 2010 compared to 2009, and a further 64.3% drop in 2011 compared to 2010. In 2012, the number ringed was 93, a substantial increase on the previous year total.

Figure 4 shows the number of individuals ringed per month at CVRS for the period 2006 to 2015. It can be seen that the majority of birds ringed for the period are juvenile birds, hatched in the year of ringing.

Figure 5 shows the annual number of male and female ringed Greenfinch that were recaptured in a subsequent year and after a breeding season, i.e. the bird had bred or had made one or more attempts to breed. For the years 2006 and 2007, 9.16% and 15.24% of Greenfinch ringed were recaptured in a subsequent breeding cycle. For the years 2008 to 2014, this percentage ranged from 0% to 2.52%. There will be some bias towards higher recapture rates for birds ringed earlier in the period due to an individual potentially being 'available' for recapture for the duration of the period compared to those ringed towards the end of the period. However, there is a clear reduction in the number of recaptures of Greenfinch ringed in 2008 onwards.

There are three individuals that were recaptured five years after ringing, each ringed as juveniles in 2007 (TJ37528, TJ37654, TK79489). The recapture histories of these birds are summarised in Table 1.

Ring No.	sex	2007	2008	2009	2010	2011	2012
TK79489	Female	11 August	23 August	16 August			11 March
TJ37528	Female	27 August					16 September
TJ37654	Male	10 November					3 August

Table 1 ringing and recapture history of three Greenfinch

## Conclusion

In 2007, a total of 401 greenfinch were ringed at CVRS. In 2011, 5 were ringed. CVRS data shows that the effects of *Trichomonosis* within the Greenfinch population local to CVRS began to be apparent from 2008 and 2009. In these years, although the number of Greenfinch ringed showed a drop compared to previous years, it was in the reduction in the recapture percentages that was a herald of the subsequent dramatic population decline.

Annual ringing totals showed an increase in 2012 on the previous two years, but have barely reached half of those prior to the crash. The extended breeding season of Greenfinch compared to some other passerines may account for their ability to recover in numbers, but it must be noted that the recapture rate has yet to recover to pre-crash rates, implying that the continued presence of *Trichomonosis* is a limiting factor on Greenfinch populations.

Perhaps the survival of the local population is down to individuals like TJ37528, TJ37654 and TK79489 that, for whatever reason, did not succumb.

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<b>CVRS Income &amp; Expenditure Accounts 2013-2015</b>				
<b>Income</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	
Subs Ringers	£735.00	£765.00	£735.00	
Subs Associates	£12.00	£12.00	£18.00	
Hut Tax	£944.60	£903.65	£923.80	
Ring Refund	£141.26	£119.88	£345.08	
Ringing Course	£414.00	£637.50	£679.90	
Donations	£166.00	£296.50	£341.15	
Sale of Nets	£250.00	£0.00	£0.00	
Sale Ringing Equipment	£123.10	£331.40	£0.00	
Sale of Keys	£0.00	£0.00	£30.00	
Report Sales	£1.00	£4.00	£0.00	
<b>Total Income</b>	<b>£2,786.96</b>	<b>£3,069.93</b>	<b>£3,072.93</b>	
<b>Expenditure</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	
Rent	£56.00	£56.00	£56.00	
Insurance	£425.25	£475.00	£509.06	
Electricity/Gas	£241.66	£207.02	£183.02	
Bird Seed	£192.00	£197.65	£253.60	
Course Expenses	£147.58	£204.60	£278.00	
Ring Purchases	£313.25	£1,435.00	£899.50	
Net Purchases	£293.50	£0.00	£0.00	
Ringing Equipment	£136.00	£151.50	£131.20	
Hut Maintenance/Misc	£305.78	£129.84	£120.67	
Secretary/Treas Expenses	£5.80	£11.79	£0.00	
Catering	£26.55	£6.00	£21.00	
Stationery	£21.28	£0.00	£0.00	
Keys	£0.00	£20.00	£0.00	
Report Costs	£276.42	£0.00	£0.00	
Boat	£75.00	£0.00	£46.36	
Computer Equipment	£73.00	£0.00	£44.81	
Traps	£0.00	£128.10	£0.00	
<b>Total Expenditure</b>	<b>£2,589.07</b>	<b>£3,022.50</b>	<b>£2,543.22</b>	
Surplus (Deficit)	£197.89	£47.43	£529.71	
Brought forward	£1,602.37	£1,800.26	£1,847.69	
Carried forward	£1,800.26	£1,847.69	£2,377.40	