



2021 Report

Compiled Dec 2021

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Photo: Black Yellow Black ('Ted') and chick at RSPB Otmoor. Spring 2021

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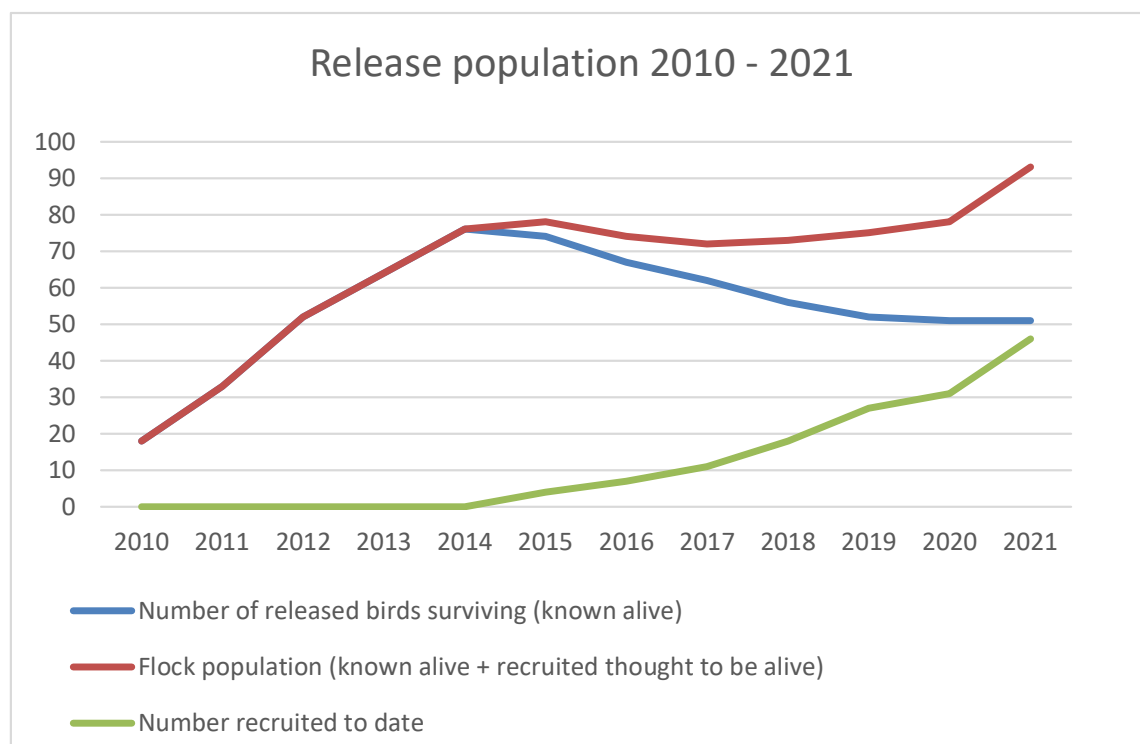
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0. Executive Summary

Original release population survival figures:	
No. of the 93 reintroduced birds known surviving at year end, Dec. 2021	51
% of reintroduced birds known surviving at year end, Dec 2021	55%
No. of birds known to have died during 2021	0
No. of birds gone missing <1yr during 2021	0
Reintroduced population 2020 breeding season summary:	
No. of breeding pairs in 2021	30
No. of breeding pairs that hatched chicks in 2021	19
No. of fledged young in 2021	15
Breeding productivity in 2021 (fledged chicks per conf/prob breeding pair)	0.63
Total reintroduced (flock) population size:	
Number fledged young recruited to date	47
Number 2 nd generation birds thought to be surviving	42
Total flock population (min) at year end, Dec. 2021 (no. released birds known to survive + no. 2 nd generation surviving)	51+42 = 93
% of original release population in the whole flock	54.8%

Graph 1 . Reintroduced crane population 2010 - 2021



1. Release population figures

1.1 Release population summary

Previous year's figures	
Number of 'Known alive*' release birds at end previous report year (31 st Dec 2020)	51
Number of 'Maximum possible*' release birds at end previous report year (31 st Dec 2020)	53
This year's figures	
Number of 'Known alive' release birds at end of current report year (31 st Dec 2021). This includes birds missing <4mths but does not include those missing (>4mths and <1yr)	51
Number of 'Maximum possible' release birds (this includes birds missing <1yr) at end of current report year (31 st Dec 2021)	51
Cause of change in figures	
Number of release birds known to have died during report year	0
Release birds moving into 'unknown >1yr' status during period Jan 1 st 2021 - Dec 31 st 2021 Wycliffe and Regina	2
Total release birds moving into 'unknown <1yr' status during period Jan 1 st 2020 - Dec 31 st 2020	0
Summary: No other birds were recorded missing or dead this year but Wycliffe (Ye/Wh/BI) a 2012 male who was missing since May 2020 and Regina (Re/Ye/Re) a 2010 female, also missing since May 2020, both went into the "unknown - missing for more than 1yr status this year".	

**The two figures 'Known Alive' and 'Maximum Possible' are based on the resightings method.*

'Known Alive' comprises birds that have been resighted at least in the last 4 months of the year.

'Maximum Possible' includes those not resighted in the last few months but that have been resighted at some point during the year. Once unknown status birds have not been seen for a whole 12 month period they are no longer included 'Maximum Possible' category and are counted as being unknown missing >1yr.

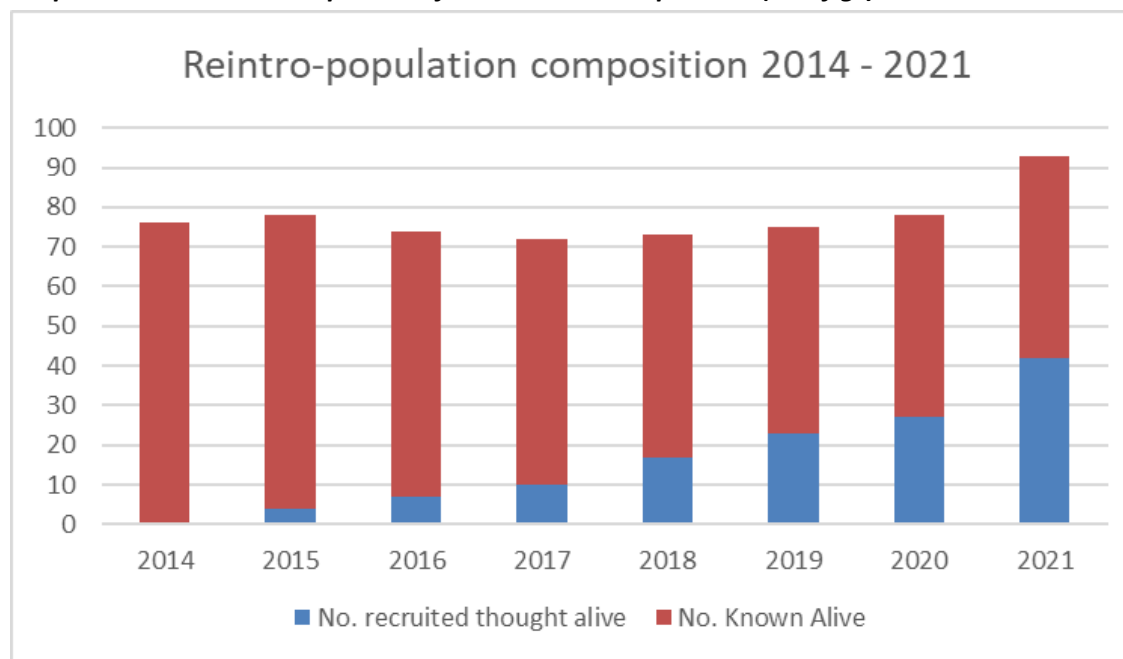
1.2 Flock size over time.

Although the number of released birds has been steadily falling since 2015, population modelling suggests that the overall population will start to increase around 2020 as the surviving birds fecundity improves with age and 2nd generation birds reach breeding age too and start to feed into the population model. The 'flock size' reported below includes all released birds – those frequenting WWT Slimbridge, Somerset Levels and also a single bird (Beatrice) that appears to have settled in the Cambridgeshire Fens with a fenland male.

Table 1. Release project flock-size post final release year (2014).

	2014	2015	2016	2017	2018	2019	2020	2021
No. Known Alive	76	74	67	62	56	52	51	51
No. Possible Max	79	75	69	64	59	56	53	51
Recruited each year	0	4	3	4	7	9	4	15
Recruited thought alive	0	4	7	10	17	23	27	42
Flock size min.	76	78	74	72	73	75	78	93
Flock size max.	79	79	76	74	76	79	80	93
% of original release population in the whole flock (min)	100%	95%	91%	86%	77%	69%	65%	55%
2 nd generation as % of flock	0%	5%	9%	14%	23%	31%	35%	45%

Graph 2. Reintroduced Population flock size and composition (min figs)



1.3 Survival by year group

More than half of the original release population survive with a minimum of 55% surviving to date across all five release cohorts. The oldest birds (in their eleventh year) are now at 40% with only 8 of the original 20 known alive. The youngest release cohort ie those birds in their seventh year have the highest cohort survival with 71% of the original release of 17 birds known to be alive. The annual survival rates for each cohort and for each year group are tabulated below.

Although no birds were known to have died this year, two birds moved into the unknown for more than a year category, and hence there was an average annual survival rate this year of 96% *

*(calculated using the maximum possible alive figures).

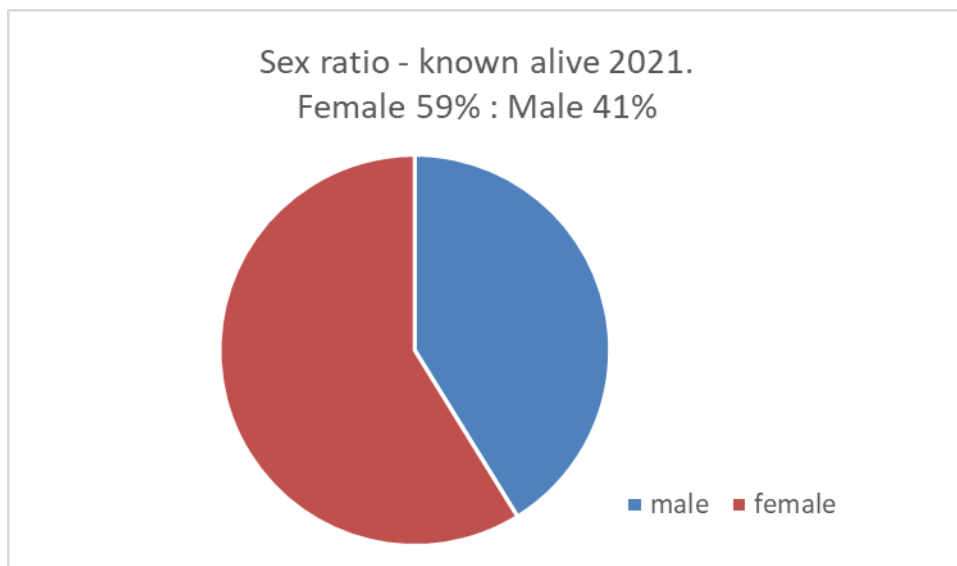
Table 2. Survival per release year cohort

Category	2010	2011	2012	2013	2014	TOTAL
Number released	20	17	19	20	17	93
Dead - known cause	4 Jack Chris Bart Squidgy	3 Gizmo Swampy Wally	2 D2 Willow	4 Sven Stanley Buttercup Cotton	0	13
Dead - unknown cause	1 Howard	0	1 Jess	1 Whgrye	2 Yerebk Humbug	5
Dead - combined	5	3	3	5	2	18
Unknown status - missing < year	0	0	0	0	0	0
Unknown status - missing > year	7 Vince Clarence Mennis Gilbert Minnie Cosmo Regina	5 Mildred Trinny Charlie Pepper Lofty	4 Midnight Alexander Gibble Wycliffe	5 Frieden Mistymoor Stowford Billy Skye	3 Dillon Century Ziggy	24
Missing – combined	7	5	4	5	3	24
Possibly Alive (Max) end 2021	8	9	12	10	12	51
Known Alive	8	9	12	10	12	51
Possibly Alive (Max) end 2020	9	9	13	10	12	53
2021 yr Annual Survival (max) %	89%	100%	92%	100%	100%	96%
% range of Survival known alive - max possible	40%	53%	63%	50%	71%	55%

1.4 Sex ratio of surviving birds

At the end of 2021 the sex ratio of the 51 Known Alive birds is 41% male to 59% female (21/30). However, the gender of most of the second generation birds is unknown and there are increasing numbers 2nd generation birds reaching breeding age. There were not obvious groups of unpaired birds around, and it is assumed that the sex ratio in the overall flock is probably close to 50:50. This year seven released females have unringed mates: Ruby, Tamsin, Sedge, Easter, Margaret, BopBop & Rosa. A pair of unringed, presumed 2nd generation birds also raised a chick, and 1 released male paired with 2nd generation female (Wurzelina).

Graph 3. Sex ratio of release population



2. Progress against targets (from GCP Project 2009-2014)

Table 3. Project targets and progress

TARGETS	
1. By 2015, to establish a resident and self-sustaining breeding population of cranes.	Population modelling by Geoff Hilton at WWT has shown that the population is on track to be self-sustaining long term. New better defined targets based on productivity are under production.
2. By 2025, to achieve a breeding population of at least 20 pairs, plus sufficient juveniles to maintain the population.	Population modelling by Geoff Hilton at WWT has shown that the population is on track to be self-sustaining long term. New better defined targets based on productivity are under production.
3. To achieve a survival rate to adulthood of 50% for the released cranes.	Target achieved.

3. 'Resightings' results – monthly status of each released bird

The ringed cranes were monitored monthly through radio tracking and observations by volunteers in Somerset over a five day period at the end/start of each calendar month, coordinated by the project coordinator volunteer. Resightings monitoring was not carried out in the months of April May June July and Aug. At WWT Slimbridge observations were carried out by site staff and volunteers over the same period and sent on to the coordinator in Somerset to compile.

Monthly column categories

AL = Known to be alive, within the study area (Somerset Levels and Moors)

AE = Known to be alive, outside the study area

DE = Known to be dead

ND = Not Detected

Key to Summary column 'Status'

KA = Known alive within or without study area – a positive ID within the last 4 months of the calendar year. (This includes positive ID outside of the resightings period, marked with *)

?? = Not detected for at least the last 4 months (Sep-Oct-Nov-Dec) but less than a year. Recorded as missing < year in the table above.

DE = Known to be dead

M1 = Missing for more than 12 months but less than 2yrs

M2 = Missing for more than 2yrs

AA = Assumed Alive (for unringed 2nd generation birds that cannot be categorically identified only)

AD = Assumed Dead (for unringed 2nd generation birds that cannot be categorically identified only)

Key to shading

Grey shading = birds missing for 1yr +, or known to be dead previous to this year

Orange shading = birds missing for <1yr

Salmon shading = birds known to have died this year

Refer to resightings table overleaf for details

Resightings Table

No	Name	Combo	m/f	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	STATUS
1	Clarence	BlWhRe	M													M2
2	Gemma	ReWhRe	F	AL	ND	AL						AE	AL	AL	AL	KA
3	Minnie	ReGrRe	M													M2
5	Gilbert	YeWhRe	M													M2
6	Michaela	GrBlRe	F	ND	AL	AL						AL	AL	AL	AL	KA
7	Bart	ReBlRe	M													DE
9	Monty	BkGrRe	M	ND	AE	AE						AE	AE	AE	ND	KA
10	Mennis	BlGrRe	M													M2
11	Chris	BkBlRe	F													DE
13	Twinkle	BkYeRe	F	AL	ND	AL						AE	ND	AL	AL	KA
15	Wendy	WhBlRe	F	ND	AE	AE						AE	AE	AE	AE	KA
17	Vince	WhGrRe	F													M2
18	Squidgy	GrYeRe	F	AE	DE											DE
19	Cosmo	GrBkRe	M													M2
21	Ruby	WhBkRe	F	ND	ND	AE						AE	AE	AE	AE	KA
22	Tamsin	ReBkRe	F	ND	AL	ND						AL	AL	AL	AL	KA
23	Regina	ReYeRe	F	ND	ND							ND	ND	ND	ND	M2
25	Sedge	WhYeRe	F	ND	AE	AE						AE	AE	AE	AE	KA
26	Lofty	ReBlWh	M													M2
27	Wally	ReYeWh	M													DE
28	Christmas	BkBlWh	F	ND	ND	AL						AL	ND	AL	AL	KA
29	Timmy	ReBkWh	M	AL	AL	ND						AL	AL	AL	AL	KA
30	Legend	WhReWh	M	ND	AL	AL						AL	AL	AL	AL	KA
31	Albert	WhBlWh	M	ND	AE	AE						AE	AE	AE	AE	KA
32	Charlie	WhYeWh	M													M2
33	Pepper	WhGrWh	M													M2
35	Beatrice	BlReWh	F	ND	ND	ND						ND	ND	ND	ND	KA
37	Swampy	BlYeWh	F													DE
38	Trinny	YeReWh	F													M2
39	Elle	YeBlWh	F	ND	AL	AL						AL	AL	AL	AL	KA
40	Mildred	BkGrWh	F													M2
41	Gerald	YeBkWh	M	ND	AL	AL						AL	AL	AL	AL	KA
44	Flash	GeBkWh	F	ND	AL	AL						AL	AL	AL	AL	KA
45	Pippa	GrReWh	F	AL	AL	AL						AL	AL	AL	AL	KA

No	Name	Combo	m/f	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	STATUS
47	Phelps	ReYeBl	M	ND	AE	AE						AE	ND	ND	AL	KA
48	Easter	ReGrBl	F	ND	AL	AL						AL	AL	AL	ND	KA
49	Gibble	ReBkBl	F	ND	ND							ND	ND	ND	ND	M2
50	Elizabeth	WhReBl	F	ND	AE	AE						AE	ND	ND	AL	KA
52	Chocolo	BkGeBl	M	AE	AE	AE						AE	ND	AE	AE	KA
53	Alexander	WhBkBl	M													M2
54	Midnight	BlReBl	M													M2
56	Evie	BlYeBl	F	ND	ND	AE						AE	ND	AE	ND	KA
58	Haribo	BlBkBl	M	AL	AL	AL						AL	ND	AL	AL	KA
60	Wycliffe	YeWhBl	M	ND	ND							ND	ND	ND	ND	M2
61	Willow	YeGrBl	M													DE
62	Wiz	BkYeBl	M	AL	AL	AL						AL	AL	AL	AL	KA
63	Shadow	GrReBl	M	ND	ND	AL						AL	ND	AL	AL	KA
64	Maple	GrWhBl	F	ND	ND	AL						ND	AL	AL	ND	KA
65	D2	GrYeBl	M													DE
66	Margaret	GrBkBl	F	ND	ND	ND						ND	AL	AL	ND	KA
67	Jasper	BkReBl	M	AL	AL	AL						AL	AL	AL	AL	KA
68	Jess	YeBkBl	F													DE
69	Pickles	BkWhBl	M	AL	AL	AL						AL	AL	AL	AL	KA
70	Cherry	ReWhYe	F	AL	ND	AL						AL	AL	AL	AL	KA
71	Cotton	ReBlYe	F													DE
72	Waterwing	ReGrYe	F	AL	AL	AL						AL	AL	AL	AL	KA
74	Acorn	WhReYe	F	ND	ND	ND						ND	ND	AL	AL	KA
76	Wh-gr-ye	WhGrYe	M													DE
77	Billy	WhBkYe	M													M2
79	Excalibird	BlWhYe	F	AL	ND	ND						AL	ND	AL	AL	KA
80	Viridor	BlReYe	F	ND	AL	AL						AL	AL	AL	AL	KA
81	Bop-Bop	BlBkYe	F	AL	AL	AL						AL	AL	AL	AL	KA
82	Skye	YeReYe	F													M2
83	Stowford	YeWhYe	M													M2
84	Sven	YeBlYe	M													DE
85	Stanley	YeGrYe	M													DE
86	Bombus	YeBkYe	M	AL	AL	AL						AL	AL	AL	AL	KA
87	Manfred	GrReYe	M	ND	ND	AL						AL	AL	AL	AL	KA
88	Buttercup	GrWhYe	F													DE
89	Cookie	GrBkYe	F	ND	ND	ND						AE	ND	AL	ND	KA

No	Name	Combo	m/f	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	STATUS
90	Frieden	BkReYe	F													M2
91	Oakie	BkWhYe	M	ND	AE	AE						AE	AE	AE	AE	KA
93	Mistymoore	BkGrYe	M													M2
94	Chip	ReWhBk	F	AL	ND	AL						AL	ND	ND	AL	KA
95	Pecky	ReBIBk	M	ND	AL	AL						AL	AL	AL	AL	KA
96	Soar	ReYeBk	M	AL	AL	AL						AL	AL	AL	AL	KA
97	Ted	BkYeBk	M	AL	AL	ND						AL	ND	AL	AL	KA
98	Patience	WhReBk	F	AL	AL	AL						AL	AL	AL	AL	KA
100	Century	WhYeBk	F													M2
102	Dillon	BlReBk	M													M2
103	Rosa	BlWhBk	F	AL	ND	AL						AL	AL	AL	AL	KA
104	Sherbert	BlYeBk	F	ND	AE	AE						AE	AE	AE	AE	KA
105	Kia	WhBIBk	F	AE	AE	AE						AE	ND	AE	AE	KA
106	Ye-re-bk	YeReBk	M													DE
107	Diamond	YeWhBk	F	ND	ND	AL						AL	ND	AL	AL	KA
108	Gary	YeBIBk	M	ND	ND	ND						AE	AL	AL	ND	KA
109	Cleg	BkGrBk	M	ND	AL	AL						AL	AL	AL	ND	KA
110	Pepé	GrReBk	M	ND	ND	ND						AE	ND	AL	ND	KA
113	Ziggy	BkReBk	F													M2
114	Humbug	BkWhBk	F													DE
201	A&S Chick	Unringed 2015	U	ND	ND	ND						ND	ND	ND	ND	AA
202	A&S Chick	Unringed 2015	U	ND	ND	ND						ND	ND	ND	ND	AA
203	M&W Chick	Unringed 2015	U	ND	ND	ND						ND	ND	ND	ND	AA
204	M&G Chick	Unringed 2015	U	ND	ND	ND						ND	ND	ND	ND	AA
205	M&G chick	Unringed 2016	U	ND	ND	ND						ND	ND	ND	ND	AA
206	L&G Chick	Unringed 2016	U	ND	ND	ND						ND	ND	ND	ND	AA
207	A&S Chick	ReWhGr 2016	F	AL	AL	AL						AL	AL	AL	AL	KA
208	L&E Chick	Unringed 2017	U	ND	ND	ND						ND	ND	ND	ND	AA
209	T&M Chick	ReBkGr 2017	M													DE
210	T&M Chick	Unringed 2017	U	ND	ND	ND						ND	ND	ND	ND	AA
211	M&D Chick	ReYeGr 2017	F	AL	AL	AL						AL	ND	AL	AL	KA
212	G&F chick	Unringed 2018	U	AL	AL	ND						ND	ND	ND	ND	AA

No	Name	Combo	m/f	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	STATUS
213	J&V chick	WhReGr 2018	F	AL	AL	ND						ND	AL	AL	AL	KA
214	L&Echick	Unringed 2018	U	ND	ND	ND						ND	ND	ND	ND	AA
215	B&R chick	Unringed 2018	U	ND	ND	ND						ND	ND	ND	ND	AA
216	B&R chick	Unringed 2018	U	AE	DE											DE
217	O&S chick	Unringed 2018	U	ND	ND	ND						ND	ND	ND	ND	AA
218	W&P chick	Unringed 2018	U	ND	ND	ND						ND	ND	ND	ND	AA
219	T&M chick	WhYeGr 2019	M	ND	ND	AL						AL	AL	AL	AL	KA
220	H&T chick	Unringed 2019	U	ND	ND	ND						ND	ND	AL	ND	AA
221	L&E chick	Unringed 2019	U	ND	ND	ND						ND	ND	ND	ND	AA
222	P&P chick	Unringed 2019	U	ND	ND	ND						ND	ND	ND	ND	AA
223	P&P chick	Unringed 2019	U	ND	ND	ND						ND	ND	ND	ND	AA
224	J&V chick	GrBkGr 2019	M													DE
225	G&F chick	GrReGr 2019	F	AL	AL	AL						ND	AL	AL	ND	KA
226	P&R chick	GrWhGr 2019	F													DE
227	M&D chick	Unringed 2019	U	ND	ND	ND						ND	ND	ND	ND	AA
228	P&P chick	Unringed 2020	U	ND	ND	ND						AL	AL	AL	ND	KA
229	P&P chick	Unringed 2020	U	ND	ND	ND						AL	AL	AL	ND	KA
230	M&C chick	Unringed 2020	U	ND	ND	ND						AL	AL	AL	ND	KA
231	B+ wild chick	Unringed 2020	U	ND	ND	ND						AE	ND	ND	ND	AA
232	W&P chick	Unringed 2021	U									AL	AL	AL	AL	KA
233	M&C chick	ReBlGr 2021	F									AL	AL	AL	AL	KA
234	Ch&S chick	YeReGr 2021	U									AL	AL	AL	AL	KA
235	P&W chick	YeWhGr 2021	M									AL	AL	AL	AL	KA
236	X&S chick	Unringed 2021	U									AL	AL	AL	AL	KA
237	X&S chick	Unringed 2021	U									AL	AL	AL	AL	KA
238	B&W chick	Unringed 2021	<u>U</u>									AL	AL	AL	AL	KA
239	B&W chick	Unringed 2021	U									AL	AL	AL	AL	KA

No	Name	Combo	m/f	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	STATUS
240	G&F chick	Unringed 2021	U									AL	AL	AL	AL	KA
241	T&E chick	Unringed 2021	U									AL	AL	AL	AL	KA
242	G&G chick	Unringed 2021	U									AL	AL	AL	AL	KA
243	C&P chick	Unringed 2021	U									ND	ND	ND	ND	AD
244	C&P chick	Unringed 2021	U									AL	AL	AL	AL	KA
245	L&E chick	Unringed 2021	U									AL	AL	AL	AL	KA
246	B+ wild chick	Unringed 2021	U									ND	ND	ND	ND	AA

4. 2021 breeding season details

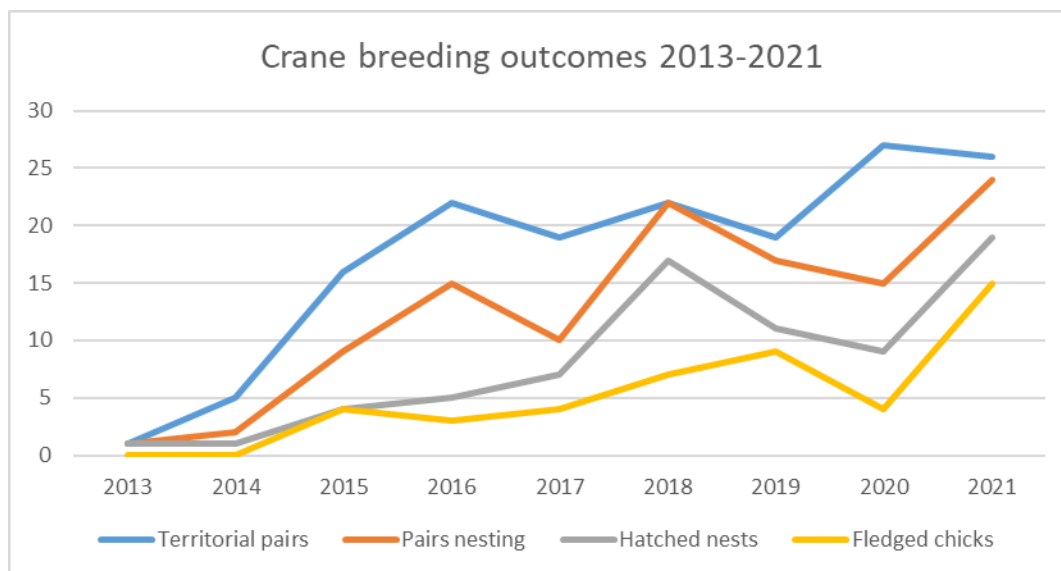
4.1 Breeding season summary

30 pairs of breeding age birds were observed in 2021 – a record so far for the project. In addition, an unringed pair with a fledged chick appeared post breeding, but their origin are unknown and they are not included in any of the analysis figures. Of these 30 pairs, 26 pairs were recorded as holding territories with 24 of these making confirmed breeding attempts. There were no probable attempts recorded this year. There were 2 possible pairs, holding territory but not known to have bred – and 4 definite non-breeding pairs. 19 pairs reached hatch stage, hatching between 28 and 32 chicks, 15 of which went on to successfully fledge.

Of the 24 confirmed nesting attempts this year, 15 were made on the Somerset Levels and Moors; 5 around WWT Slimbridge Reserve Gloucestershire, and then single attempts at RSPB Otmoor in Oxfordshire; on the RSPB Nene Washes in Cambridgeshire; on private farmland in Wiltshire and on private land in Dorset (assumed).

Of the 15 fledged chicks, 10 originated from the Somerset Levels and Moors; 1 from Cambridgeshire, 1 from Wiltshire, 1 from Oxfordshire, and 2 from Dorset.

Graph 4. No. pairs, breeding attempts and outcomes 2013-2021

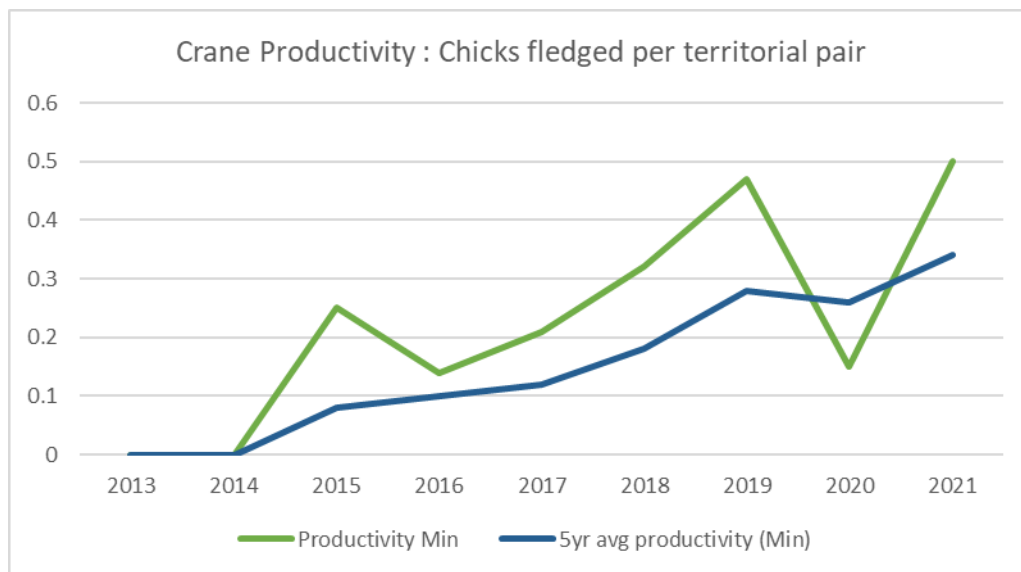


A productivity figure of 0.58 chicks per territorial pair (Productivity Rate 2 in table below) was recorded. This figure represents a significant step-change in success and is by far the best productivity rate recorded so far, on a par with that in the east of the country. The 5yr average figure now stands at 0.34 chicks per pair (rate 2 value) and shows an encouraging increasing trend in overall productivity.

Table 5. Summary of breeding success and productivity 2013-2020

	2013	2014	2015	2016	2017	2018	2019	2020	2021
No. of pairs at breeding age (3yrs+)	1	5	16	23	24	24	26	27	30
Territorial pairs	1	5	16	22	19	22	19	27	26
No. pairs making confirmed nesting attempts	1	2	7	15	10	21	15	13	24
No. pairs making probable nesting attempts	0	0	2	0	0	1	2	2	0
% of breeding age pairs that made nesting attempts (confirmed plus probable)	100%	40%	44%	65%	42%	92%	65%	56%	80%
% of territorial pairs that made nesting attempts (confirmed plus probable)	100%	40%	44%	68%	53%	100%	89%	56%	92%
Confirmed/probable nesting attempts - including re-lays	2	4	11	25	14	33	22	15	29
No. known pairs reaching hatch stage	1	1	4	5	7	17	11	9	19
% of confirmed and probable nesting attempt reaching hatch stage	100%	50%	44%	33%	70%	77%	50%	60%	79%
Hatched chicks	1	2	6-7	7	11	20	17-20	13-14	28-32
Fledged chicks	0	0	4	3	4	7	9	4	15
PRODUCTIVITY RATE 1. No. of fledged chicks per confirmed/probable pair	0	0	0.44	0.20	0.40	0.31	0.53	0.27	0.63
PRODUCTIVITY RATE 2. No. of fledged chicks per total territorial pairs	0	0	0.25	0.14	0.21	0.31	0.47	0.15	0.58
PRODUCTIVITY RATE 3. No. of fledged chicks per total pairs at breeding age	0	0	0.25	0.13	0.17	0.29	0.35	0.15	0.50
5yr average (Productivity rate 2)	0	0	0.08	0.10	0.12	0.18	0.28	0.26	0.34

Graph 5. Productivity 2013- 2020



4.2 List of successful pairs and age at breeding

2015

Alexander (2012 - 3yr male) & Swampy (2011 - 4yr female)	2 fledged
Midnight (2012 - 3yr male) & Gemma (2010 - 5yr female)	1 fledged
Minnie (2010 - 5yr male) & Wendy (2010 - 5yr female)	1 fledged

2016

Alexander (2012 - 4yr male) & Swampy (2011- 5yr female)	1 fledged (WURZELINA) ringed.
Midnight (2012 - 4yr male) & Gemma (2010 - 6yr female)	1 fledged
Lofty (2011 - 5yr male) & Gobble (2012 - 4yr female)	1 fledged

2017

Manfred (2013 -4yr male) & Diamond (2014 - 3yr female)	1 fledged (MANDI) ringed.
Timmy (2011 - 6yr male) & Michaela (2010 - 7yr female)	2 fledged (1, TIMI) ringed.
Legend (2011 -6yr male) & Elle (2011 - 6yr female)	1 fledged

2018

Legend (2011 -7yr male) & Elle (2011 - 7yr female)	1 fledged
Gerald (2011 - 7yr male) & Flash (2011- 7yr female) (siblings)	1 fledged
Jasper (2012 – 6yr male) & Viridor (2013 – 5yr female)	1 fledged (JAVI) ringed.
Wiz (2012 – 6yr male) & Pippa (2011 – 7yr female)	1 fledged
Bart (2010 – 8yr male) & Ruby (2010 – 8yr female)	2 fledged
Oakie (2013 – 5yr male) & Sherbert (2014 – 4yr female)	1 fledged

2019

Legend (2011 - 8yr male) & Elle (2011 - 8yr female)	1 fledged
Gerald (2011 - 8yr male) & Flash (2011- 8yr female) (siblings)	1 fledged (FERGIE) ringed.
Haribo (2012 - 7 yr male) & Twinkle (2010 - 9yr female)	1 fledged
Pickles (2012 - 7yr male) & Patience (2014 - 5yr female)	2 fledged
Manfred (2013 - 6yr male) & Diamond (2014 - 5yr female)	1 fledged
Pecky (2014 - 5yr male) & Regina (2010 - 9yr female)	1 fledged (PEGGY) ringed.
Timmy (2011 – 8yr male) & Michaela (2010 - 9yr female)	1 fledged (TUTU) ringed.
Jasper (2012 – 7yr male) & Viridor (2013 – 6yr female)	1 fledged (VEEJAY) ringed.

2020

Pickles (2012 - 8yr male) & Patience (2014 - 6yr female)	2 fledged
Cleg (2014 – 6yr male) & Michaela (2010 - 10yr female)	1 fledged
Wild male & Beatrice (2011 - 9yr female)	1 fledged

2021

Gary (2014 -7 year male & Gemma (2010 - 11 year female)	1 fledged
Cleg (2014 – 7 year male) & Michaela (2010 - 11 year female)	1 fledged (Meg) ringed F
Legend (2011 – 10 year male) & Elle (2011 – 10 year female)	1 fledged
Pecky (2014 – 7 year male) & Wurzelina* (2016 - 5 year female)	1 fledged
Soar (2014 – 7 year male) & Cherry (2013 -8 year female)	1 fledged (Sherry) ringed U
Gerald (2011-10 year male & Flash (2011-10 year female) siblings	1 fledged
Wiz (2012 - 9 year male) & Pippa (2011 - 10 year female)	1 fledged (Goose) ringed M
Ted (2014 – 7 year male) & Excalibird (2013 -8 year female)	1 fledged
Bombus (2013 -8 year male) & Waterwing (2013 -8 year female)	2 fledged
Shadow (2012 - 9 year male) & Christmas (2011 – 10 year female)	2 fledged

Pepe (2014 – 7 year male) & Cookie (2013 -8 year female)
Wild male & Beatrice (2011 -10 year female)

2 fledged
1 fledged

*= 2nd generation birds

Also – turning up at end of season – origin unknown:

unringed & unringed

1 fledged

4.3 How old are the most successful breeders?

Table 6. Age and number of birds successfully breeding.

Age	Male	Female	Total
3y	2	1	3
4y	3	3	6
5y	4	1	5
6y	6	5	11
7y	9	4	13
8y	5	7	12
9y	2	4	6
10y	2	6	8
11y	0	2	2

4.4 Which birds are the most successful breeders?

Table 7. The 'league table' of successful birds – nos. fledged per breeding bird to date.

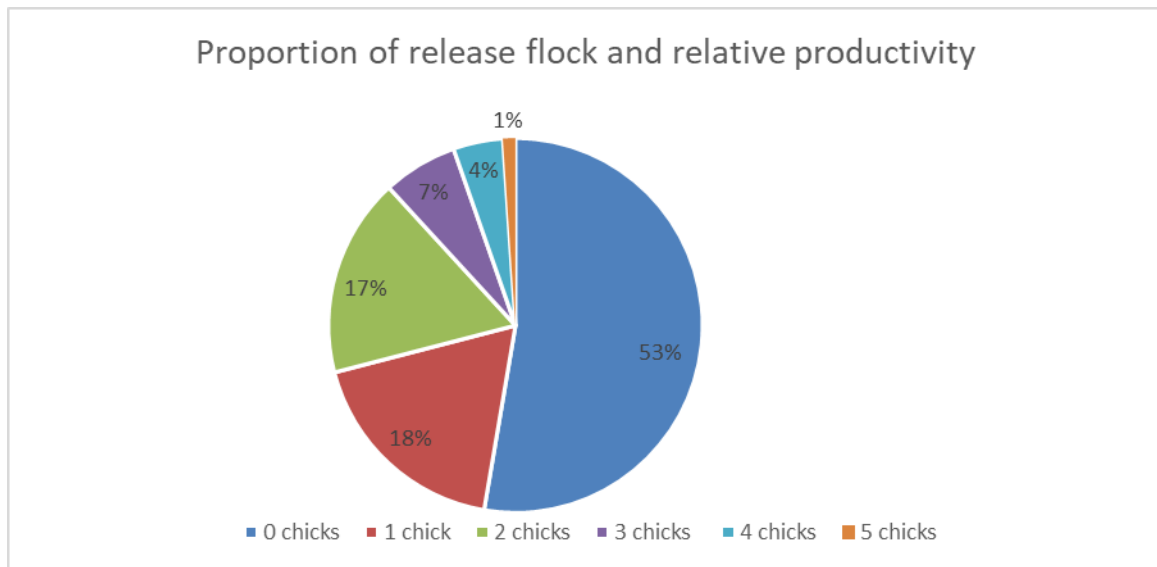
Males	Release yr	No. fledged	Females	Release yr	No.fledged
Minnie*	2010	1	Gemma	2010	3
Lofty*	2011	1	Wendy	2010	1
Timmy	2011	3	Michaela	2010	5
Legend	2011	4	Swampy*	2011	3
Alexander*	2012	3	Elle	2011	4
Midnight*	2012	2	Gibble*	2012	1
Manfred	2013	2	Diamond	2014	2
Gerald	2011	3	Flash	2011	3
Jasper	2012	2	Viridor	2013	2
Wiz	2012	2	Pippa	2011	2
Bart*	2010	2	Ruby	2010	2
Oakie	2013	1	Sherbert	2014	1
Haribo	2012	1	Twinkle	2010	1
Pickles	2012	4	Patience	2014	4
Pecky	2014	2	Regina*	2010	1
Cleg	2014	2	Beatrice	2011	2
Gary	2014	1	Wurzelina^	2016	1
Soar	2014	1	Cherry	2013	1
Ted	2014	1	Excalibird	2013	1
Bombus	2013	2	Waterwing	2013	2
Shadow	2012	2	Christmas	2011	2
Pepe	2014	1	Cookie	2013	1

*birds that are now dead, or missing < > 1yr.

^ 2nd Generation ringed

Michaela is the most productive bird to date with five fledged chicks, followed by Legend, Elle, Pickles and Patience with 4 each. In total 43 of the 93 released birds (46%) have had successful breeding seasons, producing offspring that have been recruited into the overall flock.

Graph 6. Proportion of release flock and relative productivity to 2020



4.5 Breeding details – CONFIDENTIAL*

***removed in Public Version.**

Table of confirmed, probable and possible breeding attempts – location, outcomes, and cause of losses

5. Birds lost and missing this year

Known deaths

None

6. Chicks ringed in 2021

4 chicks ringed, 1 subsequently died pre-fledging

26 th May	Successful ringing of first of two chicks raised by Michaela and Cleg Blue over Red over Green BTO number 5275170 Female
2 nd June	Successful ringing of second chick but found to be missing soon after ***
16 th July	Successful ringing of chick raised by Cherry & Soar Yellow over Red over Green BTO number 5275163 gender unknown
22 nd July	successful ringing of chick raised by Pippa & Wiz Yellow over White over Green BTO 5275164 Male

7. 2nd generation birds

47 birds have fledged to date – shown in the table below. 42 of which are thought to be alive

Table of fledged 2nd generation birds

Identity number	Status	Nickname	Hatch date	Fledge date	Male Parent	Female Parent	Colour ring combination	Comment
201	Unknown		10/05/2015	22/07/2015	Alexander	Swampy	n/a	
202	Unknown		10/05/2015	22/07/2015	Alexander	Swampy	n/a	
203	Missing	(Slimchick)	13/05/2015	08/08/2015	Minnie	Wendy	n/a	went missing
204	Unknown		May-15	Aug-15	Midnight	Gemma	n/a	
205	Unknown	(Moonraker)	May-16	Aug-16	Midnight	Gemma	n/a	
206	Unknown	(Garan)	21/05/2016	05/08/2016	Lofty	Gibble	n/a	
207	Alive	Wurzelina	28/06/2016	02/09/2016	Alexander	Swampy	ReWhGr	
208	Unknown		09/05/2017	18/07/2017	Legend	Elle	n/a	
209	Missing	Eugene	01/06/2017	10/08/2017	Timmy	Michaela	ReBkGr	Lost Sep 2017
210	Unknown		01/06/2017	10/08/2017	Timmy	Michaela	n/a	
211	Alive	Mandi	10/06/2017	19/08/2017	Manfred	Diamond	ReYeGr	
212	Unknown		16/05/2018	20/07/2018	Gerald	Flash	n/a	
213	Unknown		23/05/2018	01/08/2018	Legend	Elle	n/a	
214	Alive	Javi	25/05/2018	01/08/2018	Jasper	Viridor	WhReGr	
215	Unknown		25/05/2018	03/08/2018	Wiz	Pippa	n/a	
216	Unknown		22/05/2018	12/08/2018	Bart	Ruby	n/a	
217	Dead		22/05/2018	12/08/2018	Bart	Ruby	n/a	Died Feb 2019
218	Unknown		01/07/2018	29/08/2018	Oakie	Sherbert	n/a	
219	Alive	Timitutu	10/04/2019	24/07/2019	Timmy	Michaela	WhYeGr	
220	Unknown	Westy	19/04/2019	10/07 2019	Haribo	Twinkle	n/a	
221	Unknown		30/04/2019	09/07/2019	Legend	Elle	n/a	
222	Unknown		16/05/2019	06/08/2019	Pickles	Patience	n/a	
223	Unknown		16/05/2019	06/08/2019	Pickles	Patience	n/a	
224	Alive	Fergie	Late May	10/08/2019	Gerald	Flash	GrReGr	
225	Dead	Veejay	26/05/2019	mid August 2019	Jasper	Viridor	GrBkGr	Dead August 2019
226	Dead	Peggy	30/05/2019	mid August 2019	Pecky	Regina	GrWhGr	Dead Aug 22nd 2019
227	Unknown		Early June	Late Aug 2019	Manfred	Diamond	n/a	
228	Unknown		Unknown	mid July 2020	Pickles	Patience	n/a	
229	Unknown		Unknown	mid July 2020	Pickles	Patience	n/a	
230	Unknown		Unknown	mid July 2020	Cleg	Michaela	n/a	
231	Unknown		Unknown	early August 2020	Wild crane	Beatrice	n/a	
232	Alive		early April 2021	14/06/2021	Pecky	Wurzelina	na	
233	Alive	Meg	before 11th Apr	24/06/2021	Cleg	Michaela	BkWhGr	
234	Alive	Sherry	early June 2021	tnb	Soar	Cherry	YeReGr	
235	Alive	Goose	early June 2021	17/08/2021	Wiz	Pippa	YeWhGr	
236	Alive		late June 2021	before 24/08/2021	Shadow	Christmas	na	
237	Alive		late June 2021	before 24/08/2021	Shadow	Christmas	na	
238	Alive		26/05/2021	before 28/08/2021	Bombus	Waterwing	na	
239	Alive		26/05/2021	before 28/08/2021	Bombus	Waterwing	na	
240	Alive		before 26/06/20	26/08/2021	Gerald	Flash	na	
241	Alive		tnb	before 18/08/2021	Ted	Excalibird	na	
242	Alive		late April ?	before 24/08/2021	Gary	Gemma	na	
243	Alive		tnb	before 24/08/2021	Pepe	Cookie	na	
244	Alive		tnb	before 24/08/2021	Pepe	Cookie	na	
245	Alive		c 19/5/2021	before 25/08/2021	Legend	Elle	na	
246	Alive		tnb	before 26/08/2021	Wild crane	Beatrice	na	

8. Individual bird summary table for all 93 released birds

(Greyed out birds = birds known dead or missing for >1yr)

No	Name	Sex	Tracking	Tracking info	Ring combo	Annual Movements	Annual Breeding	Historic breeding to date	Death date	Death cause (if known)
2010 Cohort										
1	Clarence	M	GPS, RT	GPS data logger malfunction – ceased to work Sept 2010 Radio tag ceased summer 2011. Thought to be still wearing back pack when missing August 2013.	bl-wh-re	Went missing August 2013. No further sightings.	-	-	?	Missing Aug 2013
2	Gemma	F	RT	Radio tag ceased to function summer 2011.	re-wh-re	In April it was reported from Wiltshire that Gary was observed in Gemma's territory so they could be incubating. No further information until 9th June when it was reported that the pair had two well grown chicks. One chick was lost c 20th May. The family have been observed with the flock on West Sedgemoor, Somerset during the Autumn..	C: 1 attempt, 2 chicks 1 survived to fledge	2015:1 fledged chick 2016:1 fledged chick 2017:No evidence of nesting 2018:No evidence of nesting 2019: No evidence of breeding 2020: No evidence of breeding 2021: 1 fledged chick		
3	Minnie	M	GPS, RT	GPS data logger malfunction – ceased to work Sept 2010 Radio tag working poorly March 2012. Still wearing back pack in March 2014. Thought to be still wearing Back Pack when missing in November 2015	re-gr-re	Missing from Nov 2015. No further sightings.	-	2015:1 fledged chick 1 chick died pre-fledge	?	Missing Nov 2015
5	Gilbert	M	GPS, RT	GSP data logger malfunction – ceased to work Sept 2010 Radio tag ceased summer 2011. Back pack absent - Sep 2013.	ye-wh-re	Went missing from early January 2015 following severe leg injury (probable break). No further sightings.	-	2014:2 eggs - failed at egg stage	?	Missing Jan 2015
6	Michaela	F	RT	PTT removed Feb 2011 after problem with gait	gr-bl-re	Michaela and Cleg with last year's juvenile were on territory on West Sedgemoor, Somerset from January to March. Their nest and Incubation were confirmed on 17th March. On April 11th	C: One successful breeding attempt with 2 chicks hatched.	2014: 1 clutch - failed at egg stage 2015: 3 clutches: 2 clutches failed egg stage; 1 chick from last clutch failed to fledge. 2016: 2 clutches both failed at egg		

No	Name	Sex	Tracking	Tracking info	Ring combo	Annual Movements	Annual Breeding	Historic breeding to date	Death date	Death cause (if known)
						two chicks were confirmed hatched. Both chicks were successfully ringed but one of them did not survive. The other fledged on 24th June.	One chick survived to fledge.	stage. 2017: 1 st attempt abandoned. 2 nd successful fledging 2 chicks. 2018: 2 clutches. 1 st failed. 2 nd two chicks - one lost the other fledged. 2019: 1 clutch raising two chicks both ringed and radio tagged but only one fledged. 2020: 1 clutch raising 1/2 chicks of which one survived to fledge. 2021: 1 clutch raising two chicks both ringed but only one fledged.		
7	Bart	M	PTT	PTT ceased Dec 2012 and then intermittent in March 2013. Stopped fully by June 2013.	re-bl-re	2018: Paired with Ruby and seen at Slimbridge and photographed displaying to each other in late February. Nested on Southlake Duck Marsh (reported 25/04) Hatch took place on 26th May - 2 chicks. Both juveniles fledged by late August Bart found dead on 29 th October – cause of death avian TB.	C: 1 breeding attempts, 2 eggs successfully hatched and 2 chicks fledged.	2014: 1 clutch, failed at egg stage. 2015: 1 clutch, failed at egg stage. 2016: 2 clutches – both failed at egg stage. 2017: 2 clutches – both failed one at egg and the other at chick stage. 2018: 1 clutch producing two chicks. Both fledged.	29/10 2018	
8	Jack	F	RT	Radio tag functioning when died	ye-bk-re	Died November 2010 (flew into wires)	-	-	18/11 2010	
9	Monty	M	RT	Radio tag ceased to function summer 2011.	bk-gr-re	Monty and Evie were observed to make one breeding attempt at WWT Slimbridge where Evie laid one egg without first building a nest. The egg was predated by corvids and no further attempt was made.	C: 1 unsuccessful breeding attempt	2013: 1 chick died at 1-2 days. 2014: 2 chicks, both failed to fledge. 2015: 0 2016: 2 clutches: 1 (single egg) was abandoned, 2 egg clutch hatched 1 chick, died after 14 days. (other egg was infertile) 2017: n/a 2018: 1 clutch of 2 eggs. 1 chick hatched but failed to thrive. 2019: No breeding attempt. 2020: No known breeding attempt 2021: 1 clutch of 1 egg - predated		
10	Mennis	M	GPS, RT	Radio tag ceased summer 2011. Still wearing backpack March 2014.	bl-gr-re	Last seen in November 2014. No further sightings.	-	2014: Paired with Swampy- no known attempt MISSING NOV 2014		Missing (presumed dead) November

No	Name	Sex	Tracking	Tracking info	Ring combo	Annual Movements	Annual Breeding	Historic breeding to date	Death date	Death cause (if known)
										2014
11	Chris	F	GPS, RT, ECO	Radio tag working poorly March 2012. Capture July 2012 at Slimbridge. Re-fitted with GPS data logger and radio tag. GPS data logger failed Jan 2013. Radio tag failed by summer 2014. Radio tag removed on recapture in August 2014, along with back pack. ECOTONE GPS tag fitted at recapture in August 2015	bk-bl-re	Euthanased in Feb 2016 due to ill health.	-	2013: 1 chick died at 1-2 days. 2014: 2 chicks, both failed to fledge. 2015: no attempt 2016: EUTHANASED	16/02 2016	
13	Twinkle	F	PTT	PTT ceased to function 19 th October 2011 Causing gait problem/irritation to leg winter 2012/13 and Spring/Summer 2013. Intermittent gait problems in 2015. Gait problem still apparent in photos Sep 2018.	bk-ye-re	Twinkle and Haribo were observed on West Sedgemoor, Somerset in January but returned t territory on Westmoor, Somerset and started incubating sometime before 17th March when the nest was confirmed. On 9th April she and Haribo were seen feeding together with no sign of chicks. One broken eggshell was found on their nest. No further attempt was observed.	C: 1 unsuccessful breeding attempt	2016: 1 clutch, failed at egg stage. 2017: No attempt made. 2018: two attempts both failed at egg stage. 2019: one attempt, one chick fledged 2020: No known breeding attempt 2021: 1 clutch of 1 egg which failed at egg stage		
15	Wendy	F	RT	Radio tag ceased to function summer 2011.	wh-bl-re	At WWT Slimbridge Wendy and Albert were observed incubating 2 eggs on 7th April and hatched 2 chicks on 9th May. Both chicks were lost in early June. No further attempts were observed	C: 1attempt but failed at egg stage	2015: 1 fledged chick, 1 chick died pre-fledge. 2016: 1 clutch, failed at egg stage. 2017: 1 clutch, failed at egg stage. 2018 1 clutch – hatched 1 chick but did not survive. 2019: 2 clutches. The 2nd produced 2 chicks -later died 2020: 1 attempt failed owing to drought 2021: 1 clutch of 2 eggs which failed		
16	Howard	F	RT	Radio tag signal enabled rings to be found Jan 2011	ye-bl-re	Died November 2010. Remains found - cause unknown.	-	-	05/11 2010	
17	Vince	F	RT	Radio tag ceased to function summer 2011	wh-gr-re	Went missing May 2013 – no further sightings	-	-	?	Missing May 2013

No	Name	Sex	Tracking	Tracking info	Ring combo	Annual Movements	Annual Breeding	Historic breeding to date	Death date	Death cause (if known)
18	Squidgy	F	RT	Radio tag ceased to function summer 2011	gr-ye-re	Squidgy's remains were found on 5 th March 2019. Cause of death unknown.	N: No breeding attempt this year, unpaired.	None to date	5/3 2019	
19	Cosmo	M	RT	Radio tag ceased to function summer 2011	gr-bk-re	2018: Cosmo has not been observed this year. Went missing late 2017.	-	2015: Probable breeding attempt, failed at egg stage. 2016: 1 clutch, failed at egg stage. 2017: No breeding attempt. 2018 : n/a		Missing since late 2017
21	Ruby	F	PTT	PTT ceased Dec 2012 but intermittent in early Spring 2013. PTT removed when caught at moult, July 2013. Original radio tag ceased to function summer 2011. New radio tag fitted in July 2013, still working March 2014. Not checked during 2015 or 2016 so radio tag status unknown.	wh-bk-re	At WWT Slimbridge Ruby and her unringed mate were reported incubating on 28th April. They were often off the nest and no chicks were observed. The nest contained 1 broken eggshell. No further attempt was observed.	C: 1 attempt failed at egg stage	2014: 1 clutch, failed at egg stage. 2015: 1 clutch, failed at egg stage. 2016: 2 clutches, both failed at egg stage. 2017: 2 clutches – both failed one at egg and the other at chick stage. 2018 1 clutch - 2 fledged chicks. 2019: No known breeding attempt 2020: 1 attempt failed due to drought 2021: 1 clutch, 1 egg which failed		
22	Tamsin	F	RT	Radio tag ceased to function summer 2011.	re-bk-re	Tamsin was observed on West Sedgemoor, Somerset from January to March with an unringed mate but no breeding attempt was observed.	P: Paired with an unringed bird but no breeding attempt .	2015: Unknown – but failed to fledge. 2016: Unknown but failed to fledge. 2017 Unknown but failed to fledge. 2018: 1 chick lost before fledge. 2019: No known breeding attempt 2020: No known breeding attempt 2021: No known breeding attempt		
23	Regina	F	RT	Radio tag ceased to function summer 2011.	re-ye-re	Regina was observed on territory on West Sedgemoor with Pecky on 16th March. Hatched 1 chick - lost at 14 days – cause unknown. Regina has not been observed with the flock on West Sedgemoor during	C: One breeding attempt, hatched one chick which was	2016: 1 clutch, failed at egg stage. 2017: No breeding attempt. 2018 1 clutch, 1 chick, lost during rearing. 2019: One attempt, one chick which		Missing since March 2020

No	Name	Sex	Tracking	Tracking info	Ring combo	Annual Movements	Annual Breeding	Historic breeding to date	Death date	Death cause (if known)
						the Autumn.	lost – cause unknown	died after fledge 2020: One attempt, one chick which died		
25	Sedge	F	PTT	PTT stopped working in Dec 2012 , and was intermittent through Spring 2013, stopping working fully by mid June 2013.	wh-ye-re	At WWT Slimbridge on 4th May, Sedge and her unringed partner were reported showing signs of incubating in an area where another pair of cranes were nesting - after chasing them off. There was no evidence of eggs or chicks.	C: 1 failed attempt .	2016: 1 chick from 2 nd clutch, failed to fledge. 2017: No breeding attempt. 2018: 1 breeding attempt – failed at chick stage. 2019: No known breeding attempt 2020: No known breeding attempt 2021: 1 failed attempt		
2011 Cohort										
28	Christmas Shoes	F	RT	Radio tag ceased to function summer 2013.	bk-bl-wh	Christmas and Shadow were observed on territory in the Kingsmoor area, Somerset Levels and Moors, very occasionally but breeding activity was difficult to assess. Eventually seen with two chicks on 28th June. On 2nd July the chicks still with their parents and they fledged towards the end of August.	C: 1 successful attempt	2017: One chick hatched but not seen again after 11 th June. 2018: 1 clutch, failed at egg stage 2019: 1 attempt but no evidence of chicks 2020: No known breeding attempt 2021: 1 clutch of 2 eggs and 2 chicks fledged		
26	Lofty	M	GPS, RT	GPS data logger failed Sept 2012. Radio tag ceased to work winter 2012/13. Appeared to be wearing back pack in photos from Summer 2016. No sign of back pack in photos from April 2018.	re-bl-wh	Not seen since October 2018 and didn't appear in South Wales with with Gobble when she returned to their territory. His whereabouts are unknown and he is assumed dead.	C: No breeding attempt	2015: Unknown but failed to fledge. 2016: 2 chicks hatched, 1 chick fledged. 2017: 2 chicks hatched from first attempt but not seen after 30 th June. 2018: 2 chicks hatched from first attempt but not seen after 25 th May 2019: No breeding attempt.	Possibly Oct 2018	
27	Wally	M	GPS, RT	GPS data logger failed Sept 2012. Radio tag ceased to work winter 2012/13. Back pack harness noted as slipped out of position – photo Oct 2017. Backpack straps caused entanglement and death Aug 2018.	re-ye-wh	2018: Paired with Easter and took up territory on West Sedgemoor in April. Mating witnessed and incubation started 24th April but failed on 25th April. Observed mating on 26th April. Incubation of 2nd nest started on 11th May. Nest failed 16th May. The pair continued to occupy their territory but no further nesting attempts were made. Wally was found dead on the Reserve on 9th August, following entanglement.	C: 1 clutch – failed at egg stage	2018: 1 clutch – failed at egg stage	09/08 2018	

No	Name	Sex	Tracking	Tracking info	Ring combo	Annual Movements	Annual Breeding	Historic breeding to date	Death date	Death cause (if known)
32	Charlie	M	GPS, RT	GPS data logger failed Sept 2012. Radio tag ceased to work winter 2012/13. Still wearing back in Sep 2013 when went missing – Oct 2013.	wh-ye- wh	Went missing – October 2013. No further sightings.	-	-		Missing Oct 2013
31	Albert	M	RT	GPS data logger failed Sept 2012. Radio tag ceased to function summer 2013. Back pack fallen off - Sept 2013.	wh-bl-wh	At WWT Slimbridge Albert and Wendy were observed incubating 2 eggs on 7th April and hatched 2 chicks on 9th May. Both chicks were lost in early June. No further breeding attempts were observed	C: 1 attempt - 2 chicks lost before fledge	2016: 1 clutch, failed at egg stage. 2017: 1 clutch – failed at egg stage. 2018: 1 clutch. Failed at chick stage. 2019: Two breeding attempts - two chicks died pre-fledge. 2020: One attempt – failed 2021: 1 clutch of 2 eggs hatched but chicks lost before fledged		
33	Pepper	M	RT	Radio tag ceased to function summer 2013.	wh-gr-wh	Went missing – January 2014. No further sightings.	-	-		Missing Jan 2014
29	Timmy	M	RT	Radio tag ceased to function summer 2013.	re-bk-wh	Timmy was observed prospecting with Margaret on Southlake SSSI, Somerset Levels and Moors, but no evidence of incubating was observed by 13th April. Not seen again during the breeding season but observed on W Sedgemoor in September.	P: Paired but no known breeding attempt	2015: 2 clutches: 1 failed to hatch; 1 chick from 2 nd clutch failed to fledge. 2016: 2 clutches – both failed at egg stage. 2017: 2 attempts one failed at egg stage the other successful with two chicks hatched and fledged. 2018: 1 clutch – 2 chicks hatched but both died pre fledge. 2019: 1 clutch, 2 chicks hatched, only one fledged 2020: No known breeding attempt 2021: No known breeding attempt		
30	Legend	M	RT	Radio tag last working in March 2016 , now failed.	wh-re-wh	Legend and Elle observed on West Sedgemoor, Somerset during January and March and a nest was confirmed on 17th March. The location was difficult to	C: 2 breeding attempts – 1 chick fledged	2015: 2 clutches, both failed at egg stage. 2016: 3 clutches all failed at egg stage.		

No	Name	Sex	Tracking	Tracking info	Ring combo	Annual Movements	Annual Breeding	Historic breeding to date	Death date	Death cause (if known)
						monitor. Legend was observed feeding alone on 22nd March but the first nest had failed. A second nest confirmed c19th April. The pair were still sitting on 30th April. They appeared to have hatched by 25th May but at the start of June it was difficult to find them so the number of chicks was unknown. However, they were photographed in the air with 1 fledged juvenile and observed on territory in September.		2017: 1 clutch of two eggs successful. One chick lost and one fledged. 2018: 2 clutches. 1 st failed. 2 nd clutch - 1 chick fledged. 2019: 1 clutch – 1 chick fledged. 2020: No known breeding attempt 2021: 2 attempts. 1 chick fledged		
39	Elle	F	GPS, RT	GPS data logger failed Sept 2012. Radio tag still working (just) in December 2016. (Incredibly!) Back pack shifted and in odd position first noted in Feb/March 2015. Out of position through all of 2016, 2017 and in November 2018 Elle was reported without the back pack so assume successfully shed.	ye-bl-wh	Elle and Legend were observed on West Sedgemoor, Somerset during January and March and a nest was confirmed on 17th March. The location was difficult to monitor. Legend was observed feeding alone on 22nd March but the first nest had failed. A second nest confirmed c19th April. The pair were still sitting on 30th April. They appeared to have hatched by 25th May but at the start of June it was difficult to find them so the number of chicks was unknown. However, they were photographed in the air with 1 fledged juvenile and observed on territory in September.	C: 2 breeding attempts – 1 chick fledged	2015: 2 clutches, both failed at egg stage. 2016: 3 clutches all failed at egg stage. 2017: 1 clutch of two eggs hatched successfully. 1 chick lost, 1 fledged. 2018: 2 clutches. 1st failed egg stage. 2nd hatched 2 - 1 chick fledged. 2019: 1 clutch – 1 chick fledged 2020: No known breeding attempt 2021: 2 attempts. 1 chick fledged		
35	Beatrice	F	GPS, RT	GPS data logger failed Sept 2012. Radio tag ceased to function summer 2013. Backpack reported as malpositioned in Spring 2017. Malpositioned through winter of 2017/18. Backpack shed by May 2018.	bl-re-wh	2021 has been another good year for Beatrice. She nested again on the Nene Washes, Cambridgeshire, This year she hatched 2 chicks one of which survived to fledge.	C: One breeding attempt - two chicks-one survived to fledge	2016: 3 clutches, all failed at egg stage. 2017: no breeding attempt. 2018: 1 clutch failed at egg stage. 2019: 1 clutch of 2 chicks which died. 2020: 1 clutch of 2 chicks- one reached fledge 2021: 1 clutch of 2 chicks- one fledged		
41	Gerald	M	GPS, RT	GPS data logger failed Sept 2012. Radio tag ceased to work winter 2012/13. Back pack noted as	ye-bk-wh	Gerald was observed feeding on West Sedgemoor, Somerset up to 27th March. He and Flash were chased away from their chosen nesting site by another pair	C: 2 attempts – 1 chick fledged	2015: Suspected nesting attempt – no chicks fledged. 2016: 2 clutches, both failed at egg stage.		

No	Name	Sex	Tracking	Tracking info	Ring combo	Annual Movements	Annual Breeding	Historic breeding to date	Death date	Death cause (if known)
				malpositioned towards end of 2017 and still in December 2018. #September 2019 back pack still positioned under its belly.		that are incubating there. On 8th April their nest was confirmed and incubation started c 4th April. Observed sitting until 1st May but were not observed again until 26th June when they were seen with 1 chick so assumed to have started incubation c 26/7th May. The first nest must have failed before hatch. The 2nd attempt hatched c 26th June but after that it was difficult to observe them due to dense vegetation. On 19th July the pair were observed with 1 chick. An attempt to ring the young bird failed and it subsequently fledged on 28th August.		2017: 1 attempt which failed and no evidence of eggs found. 2018: 1 attempt - 1 chick successfully fledged. 2019: 1 clutch – 1 chick fledged 2020: 1 attempt – failed 2021: 2 attempts 1 chick fledged		
44	Flash	F	RT	Radio tag ceased to function summer 2013.	gr-bk-wh	Flash was observed feeding on West Sedgemoor, Somerset up to 27th March. She and Gerald were chased away from their chosen nesting site by another pair that are incubating there. On 8th April their nest was confirmed and incubation started c 4th April. Observed sitting until 1st May but were not observed again until 26th June when they were seen with 1 chick so assumed to have started incubation c 26/7th May. The first nest must have failed before hatch. The 2nd attempt hatched c 26th June but after that it was difficult to observe them due to dense vegetation. On 19th July the pair were observed with 1 chick. An attempt to ring the young bird failed and it subsequently fledged on 28th August.	C: 2 breeding attempts – 1 chick fledged	2015: Suspected nesting attempt – no chicks fledged. 2016: 2 clutches, both failed at egg stage. 2017: 1 attempt failed egg stage. 2018: 1 attempt – 1 chick successfully reared to fledge 2019: One successful breeding attempt fledging one chick. 2020: 1 attempt failed at egg stage 2021: 2 attempts 1 chick fledged		
43	Gizmo	M	RT	Taken by fox in Dec. Radio tag enabled body to be located.	gr-ye-wh	Taken by fox December 2011, following illness.	-	-	10/12 2011	
40	Mildred	F	RT	Out of study area - Radio tag unknown.	bk-gr-wh	Went missing September 2011 after sighting in Kent. No further sightings.	-	-	-	Missing Sept 2011
38	Trinny	F	GPS, RT		ye-re-wh		-	-	-	Missing April

No	Name	Sex	Tracking	Tracking info	Ring combo	Annual Movements	Annual Breeding	Historic breeding to date	Death date	Death cause (if known)
				GPS data logger failed Sept 2012. Radio tag ceased to work winter 2012/13. Thought to have still been wearing back pack when went missing April 2013.		Went missing April 2013. No further sightings.				2013
37	Swampy	F	RT	Radio tag fell off May 16 th 2012 and located on Aller Moor by signal.	bl-ye-wh	Swampy was found shot on 28 th September 2016.	-	2015: 2 chicks to fledging. 2016: 1 chick fledged and ringed.	28/09 2016	
45	Pippa	F	RT	Radio tag ceased to function summer 2013.	gr-re-wh	Pippa and Wiz were observed regularly on their territory on Wetmoor, Somerset Levels and Moors, from January to March. Observed nest building on 25th March but still feeding together 5th April. Pippa was identified as one of a pair nesting on Whitmoor and still sitting on 25th May. Appeared to have hatched by 8th June but evidence was confusing. Eventually both adults were observed with one chick which was ringed at the end of July and fledged by mid-August.	C: Possibly 2 attempts – 1 chick fledged	2015: Probable breeding attempt, failed to hatch eggs 2016: 1 clutch failed at egg stage. 2017: No breeding attempt made. 2018: 1 breeding attempt. 1 chick successfully reared to fledge. 2019: One nesting attempt – failed at chick stage. 2020: 1 attempt - failed 2021: Possibly 2 attempts - 1 chick ringed and fledged		
2012 Cohort										
47	Phelps	M	GPS, RT	Back-pack partly fell off and was removed by hand autumn 2012 Radio tag ceased to function Nov 2014.	re-ye-bl	Phelps and Elizabeth were observed at WWT Slimbridge and on West Sedgemoor from January to March. Reported nesting at Slimbridge by 28th April. Not seen until they hatched two chicks on 16th May. Chicks later lost - cause unknown.	C: 1 breeding attempt – 2 chicks both lost – unknown cause	2015: no breeding attempt 2016: 2 clutches, both failed at egg stage 2017: n/a 2018: 3 clutches – all failed at egg stage. 2019: No breeding attempt 2020: 1 clutch, 1 chick, lost – cause unknown 2021: 1 clutch, 2 chicks both lost before fledge		
48	Easter Beans	F	RT	Radio tag ceased to function Oct 2013.	re-gr-bl	Easter and her unringed mate observed on West Sedgemoor, Somerset in	C: 2 breeding attempts-failed	2015: no breeding attempt 2016: no breeding attempt		

No	Name	Sex	Tracking	Tracking info	Ring combo	Annual Movements	Annual Breeding	Historic breeding to date	Death date	Death cause (if known)
						January. A nest was confirmed 17th March. Still sitting 2nd April but on 6th April the unringed mate was acting agitatedly though he returned to nest. By 11th April both birds were off the nest but very territorial - chasing off another crane. They were back on territory 19th April. A second nest was confirmed 3rd May. Still sitting 24th May and appeared to have hatched 5th June but no chicks observed.	at hatch stage	2017: no breeding attempt 2018: 2 clutches failed at egg stage. 2019: No known breeding attempt 2020: 1 clutch – 1 chick, lost 2021: 2 clutches – failed at hatch		
49	Gibble	F	GPS, RT	GPS ceased to function 19 th December 2013. Radio tag stopped Nov 2014. Still wearing back pack when sighted in November 2015. Backpack – no further information during 2016/17/18 Status TBC	re-bk-bl	Gibble has not been observed since the Summer of 2019.	N: no known breeding attempt	2015: no breeding attempt 2016: 1 fledged chick 2017: 2 chicks hatched from first attempt but not seen after 30 th June 2018: 1 breeding attempt – 2 chicks hatched but lost before fledge. 2019: Made one nesting attempt, failed at egg stage 2020: No breeding attempt		
50	Elizabeth Royal	F	PTT	Satellite tag ceased to function 27/07/2014.	wh-re-bl	Elizabeth and Phelps were observed at WWT Slimbridge and on West Sedgemoor, Somerset from January to March. Reported nesting at Slimbridge by 28th April. Not seen until they hatched two chicks on 16th May. Chicks later lost - cause unknown. They have been observed at Slimbridge in September.	C: 1 breeding attempt – 2 chicks both lost – unknown cause	2015: no breeding attempt 2016: 2 clutches, both failed at egg stage 2017: Made a nest but abandoned. 2018: 3 clutches – all failed at egg stage. 2019: No known breeding attempt 2020: 1 clutch – 1 chick - lost 2021: 1 clutch, 2 chicks both lost before fledge		
52	Chocolo	M	RT	Radio tag known failed by October 2015.	bk-gr-bl	The pair observed together and apart on West Sedgemoor and at WWT Slimbridge in January, February and March. Kia experienced some difficulties shedding her GPS mounted backpack during early Spring but by the end of March it had been shed. No evidence of nesting was observed.	P: Paired but no evidence of breeding attempt	2015: Unknown – but failed to fledge 2016: Unknown but failed to fledge 2017: n/a 2018: 1 breeding attempt – failed at chick stage. 2019: No known breeding attempt 2020: 1 clutch – 1 chick – lost 2021: No known breeding attempt		
53	Alexander	M	PTT	PTT Satellite tag ceased to function 19/12/2013.	wh-bk-bl	2018: Alexander has not been observed this year.		2015: 2 chicks to fledging. 2016: 1 chick to fledging.		Missing since late 2017

No	Name	Sex	Tracking	Tracking info	Ring combo	Annual Movements	Annual Breeding	Historic breeding to date	Death date	Death cause (if known)
							-	2017: 1 nest –abandoned at egg stage.		
54	Midnight	M	PTT	Satellite tag ceased to function 15/04/2014.	bl-re-bl	Went missing May 2016. No further sightings.	-	2015: 1 fledged chick 2016: 1 fledged chick		Missing since May 2016
56	Evie	F	RT	Radio tag failed autumn 2015 .	bl-ye-bl	Evie and Monty were observed to make one breeding attempt at WWT Slimbridge where Evie laid one egg without first building a nest. The egg was predated by corvids and no further attempt was made.	C: 1 breeding attempt – 1 egg - predated	2015: no breeding attempt 2016: no breeding attempt 2017: no breeding attempt. 2018: no breeding attempt. 2019: No known breeding attempt 2020: No known breeding attempt 2021: 1 attempt – failed at egg stage		
58	Haribo	M	GPS,RT	GPS ceased to function Dec 2013. Radio tag ceased to work Mar 2014. Back-pack straps seen hanging low in late October 2015. November 2015 re-sightings recorded him without backpack so successfully shed.	bl-bk-bl	Haribo and Twinkle were observed on West Sedgemoor, Somerset in January but returned to their territory on Westmoor, Somerset Levels and Moors and started incubating sometime before 17th March when the nest was confirmed. On 9th April the pair were seen feeding together with no sign of chicks. One broken eggshell was found on their nest. No further attempt was observed.	C: 1 breeding attempt – failed at egg stage.	2015: no breeding attempt 2016: 1 clutch, failed at egg stage 2017: no breeding attempt 2018: 2 breeding attempts – failed at egg stage 2019: 1 breeding attempt, 2 chicks - fledged. 2020: 1 unconfirmed attempt – failed 2021: 1 attempt - failed		
60	Wycliffe	M	GPS, RT	GPS ceased to function Oct 2013. Radio tag failed over summer 2015. Back pack harness noted as slipped out of position – photo Oct 2017. Reported as still malpositioned in Spring 2018.	ye-wh-bl	Wycliffe and Maple were observed incubating on the 10th March at RSPB Otmoor, Oxfordshire, and hatched one chick which was predated after 5 weeks. No further breeding attempt was recorded. Since the summer Wycliffe has not been observed.	C: 1 breeding attempt – predated after 5 weeks	2015: 2 eggs failed to hatch. 2016: 2 eggs hatched but chicks predated. 2017: 1-2 eggs hatched then chick(s) lost presumed predated. 2018: 2 chicks hatched then assumed predated. 2019: 1 breeding attempt – failed at egg stage. 2020: 1 chick - predated		Missing since Summer 2020

No	Name	Sex	Tracking	Tracking info	Ring combo	Annual Movements	Annual Breeding	Historic breeding to date	Death date	Death cause (if known)
61	Willow	M	GPS, RT	GPS ceased to function Oct 2013. Radio tag ceased to function by Oct 2013. Still wearing back pack when sighted in November 2015. Recaptured at Slimbridge in June 2016 and ECOTONE tag fitted. Back pack removed.	ye-gr-bl	Deceased; Possible predation following moult at Slimbridge.	-	-	15/07 2016 (approx)	Dead
62	Wiz	M	RT	Radio tag ceased to function by Oct 2013.	bk-ye-bl	Wiz and Pippa were observed regularly on their territory on Wetmoor, Somerset levels and Moors from January to March. Observed nest building on 25th March but still feeding together 5th April. Pippa was identified as one of a pair nesting on Whitmoor and still sitting on 25th May. Appeared to have hatched by 8th June but evidence was confusing. Eventually both adults observed with one chick - ringed at the end of July and fledged by mid-August.	C: 1 (possibly 2) attempt – 1 chick fledged	2015: no breeding attempt 2016: no breeding attempt 2017: no breeding attempt 2018: 1 breeding attempt rearing 1 chick to fledge. 2019: 1 breeding attempt – 1 chick.Chick lost. 2020: 1 breeding attempt – failed 2021: 1 or 2 attempts. 1 chick ringed and fledged		
63	Shadow	M	GPS, RT	GPS stopped during Summer 2014. Radio tag ceased to function by Oct 2013. Back pack partly shed July to October 2015. Still wearing back pack when sighted in November 2015 with straps hanging low. Straps still hanging about his legs in February 2016 but not after that so successfully shed.	Gr-re-bl	Shadow and Christmas were observed in the Kingsmoor area, Somerset Levels and Moors very occasionally but breeding activity was difficult to assess. Eventually they were seen with two chicks on 28th June. On 2nd July the chicks were still with parents and they fledged towards the end of August.	C: 1 breeding attempt – 2 chicks fledged	2015: no breeding attempt. 2016: no breeding attempt. 2017: 2 clutches – one abandoned and the second hatched one chick. Chick lost. 2018: 1 clutch – failed at egg stage. 2019:1 attempt -failed at egg stage 2020: 1 possible attempt – failed 2021: 1 attempt – 2 chicks both fledged		

No	Name	Sex	Tracking	Tracking info	Ring combo	Annual Movements	Annual Breeding	Historic breeding to date	Death date	Death cause (if known)
64	Maple-Glory	F	RT	Radio tag ceased to function by Oct 2013.	Gr-wh-bl	Maple observed with an unringed bird at RSPB Otmoor, Oxfordshire on 25th March. No further reports during the season. She has been observed with the flock on West Sedgemoor, Somerset in September.	P: Paired but no known breeding attempt	2015: 2 eggs failed to hatch. 2016: 2 chicks hatched, both predated. 2017: 1-2 eggs hatched then chick(s) lost presumed predated. 2018: 1 clutch. 2 eggs hatched but failed at late chick stage. 2019: 1 clutch of 2 eggs, both added 2020: 1 clutch – 1 chick - predated 2021: No known breeding attempt		
65	D2	M	RT	Radio tag working when found dead on March 31 st 2013.	Gr-ye-bl	Died March 2013. Remains found following severe leg injury and then presumed predation by fox	-	-	31/03 2013	
66	Margaret	F	RT	Radio tag ceased to work over summer 2015. Not functioning by October.	Gr-bk-bl	Margaret was observed prospecting with Timmy on Southlake, SSSI, Somerset Levels and Moors but no evidence of incubating by 13th April. No sighting during the breeding season. Observed on W Sedgemoor in September.	P: paired but no evidence of breeding attempt	2015: no breeding attempt. 2016: no breeding attempt. 2017: no breeding attempt. 2018: no breeding attempt. 2019: no breeding attempt 2020: no breeding attempt 2021: no breeding attempt		
67	Jasper	M	GPS,RT	Radio tag ceased to function Oct 2013. GPS data logger ceased to function Dec 2013. Backpack – no further information during 2016.	bk-re-bl	Jasper and Viridor were on territory on West Sedgemoor, Somerset early in the year and observed incubating on 25th April. On 22nd May they were observed off the nest but without chicks. No further breeding attempt was observed.	C: 1 breeding attempt – failed at hatch stage.	2015: no breeding attempt. 2016: 1 clutch, failed at egg stage. 2017: no breeding attempt. 2018: 1 breeding attempt -1 chick successfully reared to fledge. 2019: 2 attempts. 1 st failed at egg stage. 2 nd 1 chick fledged 2020: 1 attempt – failed 2021: 1 attempt - failed		
68	Jess	F	RT	Radio tag working when found dead on 11 th Nov 2013.	ye-bk-bl	Found dead, September 2013.	-	-	01/09 2013	
69	Pickles	M	RT	Radio tag ceased to function by Oct 2013.	bk-wh-bl	Pickles and Patience were observed	C: 1 breeding	2015: no breeding attempt.		

No	Name	Sex	Tracking	Tracking info	Ring combo	Annual Movements	Annual Breeding	Historic breeding to date	Death date	Death cause (if known)
						regularly on West Sedgemoor, Somerset with their two 2020 juveniles from January to March. Observed without juveniles on 9th March and incubation was confirmed between 9th and 14th March. Observed with two chicks on 14th April. One chick lost c 23rd April and by 14th May the pair were seen with no chicks! No further breeding attempt was made.	attempt – 2 chicks lost before fledged	2016: no breeding attempt. 2017: no breeding attempt. 2018: 1 breeding attempt – failed at chick stage. 2019: 1 attempt fledging 2 chicks 2020: 1 attempt fledging 2 chicks 2021: 1 attempt, 2 chicks lost before fledged		
2013 cohort										
70	Cherry	F	ECO	Ecotone tag stopped working Dec 2013.	re-wh-ye	Cherry and Soar were on West Sedgemoor, Somerset and Whitmoor, Somerset Levels and Moors from January to March. Observed nest building at RSPB Greylake, Somerset c20th March. Confirmed incubation c 19th April and still sitting 7th May. Possible hatch date 25th May. Observed to have 1 chick during June and July. Chick successfully ringed on 16th July and fledged soon after. Family observed together with flock on West Sedgemoor in September.	C: One breeding attempt, 1 chick fledged	2016: no breeding attempt. 2017: 2 egg clutch, failed to hatch. 2018: 1 breeding attempt – failed at egg stage. 2019: 1 breeding attempt - failed at egg stage. 2020: No known breeding attempt 2021: 1 attempt, 1 chickringed and fledged		
71	Cotton	F	GPS, RT	GPS ceased to function Oct 2014. Radio tag not working when in Somerset in autumn, so assumed failed during the year. Shed backpack during summer 2018	re-bl-ye	2018: Remained at Slimbridge and is not known to have paired or made any breeding attempts. Died on 26th September 2018.	N: no breeding attempt this year.	2016: Possible nest only. 2017: no breeding attempt. 2018: no breeding attempt.	26/09 2018	
72	Waterwing	F	RT	Radio tag failed in March 2016.	re-gr-ye	Waterwing and Bombus were observed in January and February in the Kingsmoor area, Somerset Levels and Moors. Observed together in territory on 24th March. Waterwing observed feeding on her own on 24th April so possible incubation ongoing. Bombus observed flying back to nest 30th April. Nest observed with 2 eggs. 2 chicks hatched c 26th May and on 2nd July chicks observed with parents. 24th July both	C: One breeding attempt 2 chicks fledged	2016: no breeding attempt. 2017: Unsuccessful attempt this year. 2018: no breeding attempt. 2019: no known nesting attempts this year. 2020: 1 attempt failed 2021: 1 attempt, 2 chicks fledged		

No	Name	Sex	Tracking	Tracking info	Ring combo	Annual Movements	Annual Breeding	Historic breeding to date	Death date	Death cause (if known)
						chicks with parents and exercising their wings. Both fledged by 28th August. Observed on West Sedgemoor, Somerset with flock during September.				
74	Acorn	F	RT	Radio tag working Dec 2016 but failed during 2017.	wh-re-ye	Any breeding activity remains unknown. She was observed with the flock on West Sedgemoor, Somerset in late Autumn.	N: No known breeding attempt	2016: no breeding attempt. 2017: no breeding attempt. 2018: possible breeding attempt. 2019: no breeding attempt 2020: no breeding attempt 2021: no breeding attempt		
76	wh-gr-ye	M	GPS,RT	Radio tag working when died, Nov 2013. Tag used to locate remains.	wh-gr-ye	Died November 2013.	-	-	01/11 2013	01/11 2013
77	Billy	M	RT	Radio tag working Dec 2015. Not known if still working during 2016.	wh-bk-ye	Went missing in late 2016	-	-		Missing from late 2016
79	Excalibird	F	RT	Radio tag working intermittently March 2015 failed by end of summer 2015.	bl-wh-ye	Excalibird and Ted were observed to be at RSPB Otmoor, Oxfordshire in March. By 25th May they were reported to be rearing 1 chick - hatched 22nd May and fledged by 18th August. They remained at Otmoor until September when they were observed with the flock on West Sedgemoor.	C: One breeding attempt, 1 chick fledged	2016: no breeding attempt. 2017: no breeding attempt. 2018: no breeding attempt. 2019: no breeding attempt 2020: 1 attempt – 1 chick, predated 2021: 1 attempt – 1 chick fledged		
80	Viridor	F	RT	Radio tag failed in September 2016.	bl-re-ye	Viridor and Jasper were on territory on West Sedgemoor, Somerset early in the year and observed incubating on 25th April. On 22nd May they were observed off the nest but without chicks. No further breeding attempt was observed.	C: One breeding attempt – failed possibly at hatch stage	2016: no breeding attempt. 2017: no breeding attempt. 2018: 1 breeding attempt – 1 chick reared to fledge. 2019: 2 attempts – 1st failed at eggs stage, 2nd fledged 1 chick found dead. 2020: 1 attempt - failed 2021: 1 attempt - failed		
81	Bop-Bop	F	GPS,RT	GPS ceased to function 20 th May 2014. Radio tag failed during 2017. Backpack still being worn, but	bl-bk-ye	BopBop was observed on W Sedgemoor January and February. She was observed at RSPB Otmoor, Oxfordshire	N: No evidence of a breeding attempt	2016: no breeding attempt. 2017: no breeding attempt. 2018: no breeding attempt		

No	Name	Sex	Tracking	Tracking info	Ring combo	Annual Movements	Annual Breeding	Historic breeding to date	Death date	Death cause (if known)
				malpositioned reported in Spring 2018.		and then on Wetmoor, Somerset Levels and Moors during March. No further information during the season though she may have been in Wiltshire in April. She and her unringed mate were observed with flock on Whitmoor, Somerset Levels and Moors in September but there was no juvenile with them.		2019: no breeding attempt 2020: no breeding attempt 2021: no breeding attempt		
82	Skye	F	ECO	Ecotone tag stopped working Dec 2013.	ye-re-ye	Skye has not been observed since January 2019	N: n/a	2016: no breeding attempt. 2017: no breeding attempt. 2018: no breeding attempt. 2019: no breeding attempt		Missing since Jan 2019
83	Stowford	M	RT	Radio tag failed in April 2016	ye-wh-ye	Stowford has not been seen since December 2016.	-	2016: no breeding attempt.		Missing Jan 2017
84	Sven	M	GPS,RT	GPS and Radio tag working when euthanased March 2014.	ye-bl-ye	Collision injury led to euthanasia at RSPCA March 2014. Injuries suggested collision with probable powerline or other obstacle.	-	-	08/03 2014	
85	Stanley	M	RT	Radio tag working Dec 2015.	ye-gr-ye	Stanley was found dead having flown into a barbed wire fence in February 2016	-	None.	29/02 2016	
86	Bombus	M	RT	Radio tag ceased to function Nov 2014.	ye-bk-ye	Bombus and Waterwing were observed in January and February in the Kingsmoor area, Somerset Levels and Moors. Observed together in territory on 24th March. Waterwing observed feeding on her own 24th April so possible incubation ongoing. Bombus observed flying back to nest 30th April. Nest observed with 2 eggs. 2 chicks hatched c 26th May and on 2nd July chicks observed with parents. 24th July both chicks with parents and exercising their wings. They fledged on 28th August.	C: One breeding attempt – 2 chicks fledged	2016: no breeding attempt. 2017: no breeding attempt. 2018: no breeding attempt. 2019: no breeding attempt 2020: 1 attempt – failed 2021: 1 attempt, 2 chicks fledged		

No	Name	Sex	Tracking	Tracking info	Ring combo	Annual Movements	Annual Breeding	Historic breeding to date	Death date	Death cause (if known)
87	Manfred	M	ECO	Ecotone ceased to function August 2015.	gr-re-ye	Manfred and Diamond were observed feeding together on West Sedgemoor, Somerset up to 27th March and still feeding on 1st April. A nest was confirmed on 8th April with incubation starting c 4th April. On 6th May there was possible hatch activity but by May 7th they appeared to have failed. A second attempt was confirmed on 29th May but there was no evidence of chicks once incubation was over.	C: Two breeding attempts failed at hatch stage	2016: no breeding attempt 2017: 2 attempts 1 abandoned, the other produced one fledged chick 2018: 1 breeding attempt - failed at chick stage. 2019: 2 breeding attempts – 1st failed at egg stage, 2nd fledged 1 chick 2020: 1 attempt – failed 2021: 2 attempts - failed		
88	Buttercup	F	RT	Radio tag not assessed at time of death.	gr-wh-ye	Died of disease, July 2016.	-	-	July 2016	Dead
89	Cookie	F	RT	Radio tag ceased to function Jan 2015.	gr-bk-ye	There was no news of Cookie and Pepe during the breeding season until they returned to Slimbridge with 2 fledged juveniles in August. One of the juveniles did not survive. It is possible that they nested at a site in Dorset as they had been recorded in that county in 2020.	C: One breeding attempt, 2 chicks fledged (one lost since)	2016: no breeding attempt 2017: no breeding attempt 2018: no breeding attempt 2019: no breeding attempt 2020: no breeding attempt 2021: 2 chicks fledged but 1 lost		
90	Frieden	F	RT	Radio tag working, although possibly failing when birds went missing, Dec 2013.	bk-re-ye	Went missing December 2013. No further sightings	-	-		Missing Dec 2013
91	Oakie	M	RT	Radio tag ceased to function May 2014.	bk-wh-ye	Oakie remained at WWT Slimbridge with Sherbert and they were observed nest building in early April. This nest was flooded and a second attempt was disturbed by (possibly) Sedge and her unringed mate. Their 3rd attempt was also disrupted by Sedge and mate. They have been observed at Slimbridge in September.	C: Three breeding attempts. All failed due to disturbance	2016: Possible nest only. 2017: no breeding attempt. 2018: 1 breeding attempt – 1 chick reared to fledge. 2019: Two nesting attempts, both failed at egg stage 2020: 1 attempt, 2 chicks – both died 2021: 3 attempts - failed		
93	Misty Moor	M	RT	Radio tag ceased to work March 2014. Bird went missing May 2014.	bk-gr-ye	Went missing May 2014. No further sightings.	-	-		Missing May 2014

No	Name	Sex	Tracking	Tracking info	Ring combo	Annual Movements	Annual Breeding	Historic breeding to date	Death date	Death cause (if known)
2014 cohort										
94	Chip	F	RT	Radio tag ceased to work over Summer 2015.	re-wh-bk	Chip was not seen during the breeding season and there was no evidence of pairing or breeding but she has been observed with the flock on West Sedgemoor, Somerset during the Autumn.	N: Unpaired - no breeding attempt	2017: No breeding attempt 2018: no breeding attempt. 2019: no breeding attempt 2020: no breeding attempt 2021: no breeding attempt		
95	Pecky	M	GPS,RT	Radio tag working until March 2016. Backpack ceased to work during the summer 2016. Not assessed if still wearing by Dec 2016 Dec 2017 or Dec 2018.	re-bl-bk	Pecky was observed on West Sedgemoor, Somerset with the flock in February. No further sighting until mid-April when he was identified as Wurzelina's mate and with one chick. The pair - had nested on West Sedgemoor. The chick fledged on 14th June and the family was observed with the flock on West Sedgemoor in September.	C: one breeding attempt, 1m chick fledged	2017: No breeding attempt. 2018: 1 breeding attempt – failed at chick stage. 2019: 1 successful attempt but chick lost pre-fledge 2020: 1 attempt, 1 chick – lost. 2021: 1 attempt, 1 chick fledged		
96	Soar	M	RT	Radio tag working Feb 2017 but failed during the summer.	re-ye-bk	Soar was observed on West Sedgemoor, Somerset and Whitmoor, Somerset Levels and Moors from January to March with Cherry. Seen nestbuilding at RSPB Greylake c20th March and incubation confirmed c 19th April. Hatch due by 25th May but some doubt about the presence of chicks. Observed to have 1 chick during June and July. The chick was successfully ringed on 16th July and fledged soon after. .	C: One breeding attempt, 1 chick ringed and fledged	2017: no breeding attempt. 2018: no breeding attempt. 2019: no breeding attempt 2020: no breeding attempt 2021: 1 attempt, 1 chick fledged		
97	Ted	M	RT	Radio tag failed November 2015.	bk-ye-bk	Ted and Excalibird were observed at RSPB Otmoor, Oxfordshire in March. By 25th May they were reported to be rearing 1 chick - hatched 22nd May and fledged by 18th August.. They remained at Otmoor until September when they were observed with the flock on West Sedgemoor, Somerset.	C: One breeding attempt, , 1 chick fledged	2017: No breeding attempt. 2018: no breeding attempt. 2019: no breeding attempt 2020: 1 attempt, 1 chick – predated 2021: 1 attempt, chick fledged		
98	Patience	F	GPS,RT	Backpack ceased to work during the summer 2016.	wh-re-bk	Patience and Pickles observed regularly	C: One breeding	2017: No breeding attempt		

No	Name	Sex	Tracking	Tracking info	Ring combo	Annual Movements	Annual Breeding	Historic breeding to date	Death date	Death cause (if known)
				Radio tag working May 2017 but failed during the autumn 2017. Not assessed if still wearing backpack by Dec 2018.		on West Sedgemoor, Somerset with their two 2020 juveniles from January to March. Observed without juveniles on 9th March and incubation confirmed between 9th and 14th March. Observed with two chicks on 14th April. One chick lost c 23rd April and by 14th May the pair were observed with no chicks. No further breeding attempt and the pair observed on West Sedgemoor during September.	attempt, 2 chicks both lost before fledge	2018: 2 breeding attempts, 1 st failed at egg stage, 2 nd hatched but chicks lost early. 2019: 1 successful attempt - 2 fledged chicks 2020: 1 successful attempt - 2 fledged chicks 2021: 1 attempt, 2 chicks lost before fledge.		
100	Century	F	RT	Radio tag failed from March 2016.	wh-ye-bk	Missing, presumed dead. Not observed this year	N: Not se	2017: Not seen since May – so unknown 2018: no breeding attempt 2019: missing		Missing since March 2018
102	Dillon	M	GPS,RT	Radio tag ceased to work during summer 2015. Backpack ceased to work during the summer 2016 Not assessed if still wearing by Dec 2016. Missing all 2017.	bl-re-bk	Went missing Dec 2016.	-	-		Missing since Dec 2016
103	Rosa	F	RT	Radio tag working July 2017 but failed during the autumn.	bl-wh-bk	Rosa was observed on West Sedgemoor, Somerset from January to March with her unringed mate. Incubation on their West Sedgemoor nest was confirmed on March 18th. By 11th April both birds observed off the nest. A mating was witnessed and they were back on territory 19th April. By 14th May they were still on territory but no sign of re-lay. The pair observed regularly on territory in August and September.	C: One breeding attempt – failed at egg stage	2017: No breeding attempt 2018: no breeding attempt 2019: no breeding attempt 2020: no breeding attempt 2021: 1 attempt, failed		
104	Sherbert	F	GPS, RT	Radio tag failed – end Nov/December 2015 . Backpack ceased to work during the summer 2016. Backpack strap visible	bl-ye-bk	Sherbert remained at WWT Slimbridge with Oakie and they were observed nest building early April. This nest was flooded and a second attempt was disturbed by Sedge and her unringed mate. Their 3rd	C: Three breeding attempts – all failed due to disturbance	2017: No breeding attempt 2018: 1 breeding attempt – 1 chick fledged. 2019: 2 attempts both failed 2020: 1 attempt – failed		

No	Name	Sex	Tracking	Tracking info	Ring combo	Annual Movements	Annual Breeding	Historic breeding to date	Death date	Death cause (if known)
				between upper legs December 2017. Backpack status currently unknown.		attempt was also disrupted by Sedge and mate. They were observed at Slimbridge during September.		2021: 3 attempts – all failed		
105	Kia	F	GPS,RT	Backpack ceased to work during the summer 2016. Radio tag detached and recovered in July 2017 on Aller Moor. Not assessed if still wearing backpack by Dec 2018	wh-bl-bk	The pair observed together and apart on W Sedgemoor and at Slimbridge in January and February. Observed at Slimbridge in March. Kia experienced some difficulties shedding her GPS mounted backpack during early Spring but by the end of March it had been shed. No breeding attempt was observed.	P: paired but no known breeding attempt	2017: no breeding attempt 2018: no breeding attempt 2019: no breeding attempt 2020: 1 attempt, 1 chick – predated 2021: no breeding attempt		
106	Yellow Red Black	M	GPS, RT	Radio tag working when found dead in November 2015 Backpack still functioning when found dead in November 2015.	ye-re-bk	Found dead in November 2015.	-	-	05/11 2014	
107	Diamond	F	RT	Radio tag working until October 2016 – failed Nov 2016	ye-wh-bk	Diamond and Manfred were observed feeding together on West Sedgemoor, Somerset up to 27th March and still feeding on 1st April. A nest was confirmed on 8th April with incubation starting c 4th April. On 6th May there was possible hatch activity but by May 7th they appeared to have failed. A second attempt was confirmed on 29th May but there was no evidence of chicks once incubation was over. Observed on territory and with flock on West Sedgemoor in September.	C: Two breeding attempts – both failed close to hatch stage	2017: 2 attempts 1 abandoned, the other produced one fledged chick 2018: 1 breeding attempt – 2 chicks both lost. 2019: 2 attempts. 1 st failed at egg stage. 2 nd fledged 1 chick 2020: 1 attempt – failed 2021: 2 attempts - failed		
108	Gary	M	RT	Radio tag working until September 2016 when it fell off and was recovered from West Sedgemoor.	ye-bl-bk	On 9th April it was reported from Wiltshire that Gary was observed in Gemma's territory so could be incubating. 9th June it was reported that the pair had two well grown chicks. One chick was lost c 20th May. The family have been observed with the flock on West Sedgemoor during September.	C: One breeding attempt, 2 chicks – one lost before fledge	2017: no breeding attempt 2018: no breeding attempt 2019: no breeding attempt 2020: no breeding attempt 2021: 1 attempt, 2 chicks – one lost		

No	Name	Sex	Tracking	Tracking info	Ring combo	Annual Movements	Annual Breeding	Historic breeding to date	Death date	Death cause (if known)
109	Cleg	M	ECO	Ecotone tag working Dec 2016 2015 Ecotone tag working throughout 2017 and 2018	bk-gr-bk	Cleg and Michaela with last year's juvenile were on territory on West Sedgemoor, Somerset from January to March. Their nest and incubation were confirmed on 17th March. On April 11th two chicks were confirmed hatched. Both chicks were successfully ringed but one of them did not survive. The other fledged on 24th June. The family have been observed on West Sedgemoor on territory and with the flock in September.	C: One breeding attempt, 2 chicks, both ringed but only one fledged	2017: One clutch of 2 eggs failed to hatch. 2018: 1 clutch – failed at egg stage. 2019: One attempt – failed 2020: 1 attempt, 1 chick fledged 2021: 1 attempt, 1 chick fledged		
110	Pepé	M	RT	Radio tag failed Dec 2015.	gr-re-bk	There was no news of Pepe and Cookie during the breeding season until they returned to Slimbridge with 2 fledged juveniles in August. One of the juveniles did not survive. It is possible that they nested at a site in Dorset as they had been recorded in that county in 2020. They have been observed at Slimbridge in September.	C: One breeding attempt, 2 chicks fledged (one lost since)	2017: no breeding attempt 2018: no breeding attempt 2019: no breeding attempt 2020: no breeding attempt 2021: 1 attempt – 2 chicks 1 lost after fledge		
113	Ziggy	F	RT	Radio tag fell off in late November 2015. Still working and retrieved from Hambridge block, West Sedgemoor.	bk-re-bk	Ziggy has not been seen for over a year.	N: Unpaired and non-breeding.	2017: No breeding attempt 2018: no breeding attempt 2019: no breeding attempt 2020: no breeding attempt		Missing since September 2019
114	Humbug	F	RT	Radio tag working when found dead in November 2015.	bk-wh-bk	Found dead on West Sedgemoor Nov 2014.	-	-	03/11 2014	

Appendix – Photos.



July 2021: Bombus & Waterwing with their 2 chicks (Photo - Adam Hawkins/Nigel Eastmead)



Aug 2021: Waterwing and chick at fledge age early Autumn 2021 (Photo - Adam Hawkins/Nigel Eastmead)



July 2021: Cleg or Michaela with recently ringed chick Meg (Re-BI-Gr) (Photo - Shelly Saltman)



Aug 2021: Wiz and Pippa's chick, 'Goose' post ringing. (Photo - Damon Bridge)



March 2021: Maple and unringed partner at RSPB Otmoor (Photo - xxx)



June 2021: Shadow, Christmas shoes and their two chicks (Photo Adam Hawkins, Nigel Eastmead)



Nov 2021: 2nd generation bird Javi - White Red Green - hatched 2018. (Photo John Crispin)



Nov 2021: Group including a mix of unringed and ringed adults and juveniles on Aller Moor (John Crispin)