

2019 Report

Compiled Dec 2019

Elizabeth Antliff-Clark & Damon Bridge, RSPB.



Haribo, Twinkle and 'Westy' on Westmoor – Oct 2019

Contents page

0. Executive S	Summary
----------------	---------

1. Release population figures

- 1.1 Release population summary
- 1.2 Flock size over time
- 1.3 Survival by year group
- 1.4 Sex ratio of surviving birds

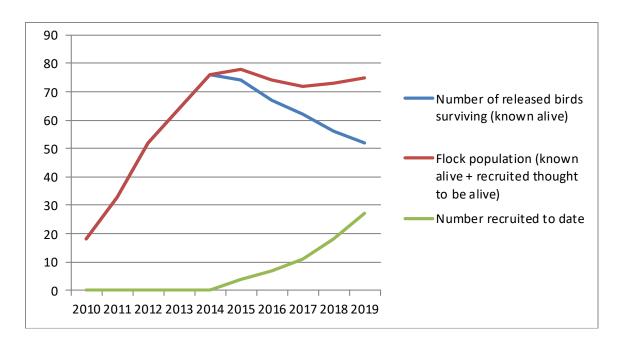
2. Progress against Great Crane Project targets

- 3. 'Resightings' results monthly status of each released bird
- 4. 2019 breeding season details
 - 4.1 Breeding season summary
 - 4.2 List of successful pairs and ages
 - 4.3 How old are the most successful breeders?
 - 4.4 Which birds are the most successful breeders?
 - 4.5 Breeding details (removed in public version to avoid revealing nesting locations)
- 5. Birds lost and missing this year
- 6. Chicks ringed this year
- 7. 2nd generation birds
- 8. Individual bird summaries
- 9. Appendix photos

0. Executive Summary

Original release population survival figures:	
No. of the 93 reintroduced birds known surviving at year end, Dec. 2019	52
% of reintroduced birds known surviving at year end, Dec 2019	56%
No. of birds known to have died during 2019	1
No. of birds gone missing <1yr during 2019	4
Reintroduced population 2019 breeding season summary:	
No. of breeding pairs in 2019 year	17
No. of breeding pairs that hatched chicks in 2019 year	11
No. of fledged young in 2019 year	9
Breeding productivity in 2019 year (fledged chicks per conf/prob breeding	0.53
pair)	
Total reintroduced (flock) population size:	
Number fledged young recruited to date	27
Number 2 nd generation birds thought to be surviving	23
Total flock population (min) at year end, Dec. 2019 (no. released birds	75
known to survive + no. 2 nd generation surviving)	
% of original release population in the whole flock	69%

Graph 1 . Reintroduced crane population 2010 - 2019



1. Release population figures

1.1 Release population summary

Previous year's figures	
Number of 'Known alive*' release birds at end previous report year (31st Dec 2018)	56
Number of 'Maximum possible*' release birds at end previous report year (31st Dec 2018)	59
This year's figures	
Number of 'Known alive' release birds at end of current report year (31st Dec 2019). This	52
includes birds missing <4mths but doesnot include those missing (>4mths and <1yr)	
Number of 'Maximum possible' release birds (this includes birds missing <1yr) at end of	56
current report year (31st Dec 2019)	
Cause of change in figures	
Number of release birds known to have died during report year (Squidgy)	1
Release birds moving into 'unknown >1yr' status during period Jan 1st 2019 - Dec 31st 2019	2
(Century, Lofty)	
Total release birds moving into 'unknown <1yr' status during period Jan 1 st 2019 - Dec 31 st 2019 (<i>Beatrice, Skye, Gibble, Chip,</i>)	4

Summary:

Three birds recorded as missing <1yr in 2018 Century (female) and Lofty (male) have now moved into the >1yr category.

4 are in the the missing < 1yr category: Beatrice, Skye, Gibble and Chip. However, Beatrice is most likely alive in the Fens of Cambridgeshire and just not being recorded as present for the last few months. Skye who was in the missing < 1yr category in 2018 was then re-sighted in January but not again since — so this bird has been recorded as missing <1yr again. It is possible that this was in error and she is in fact more permanently missing.

In addition - Both Sedge and Monty have not been recorded at Slimbridge now for 3 months – and their whereabouts are unknown – hopefully these will make a reappearance.

There is also concern for Ziggy who only had a positive ring-reading outside of the re-sightings in August. If this was an error – then Ziggy may also be missing.

*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.

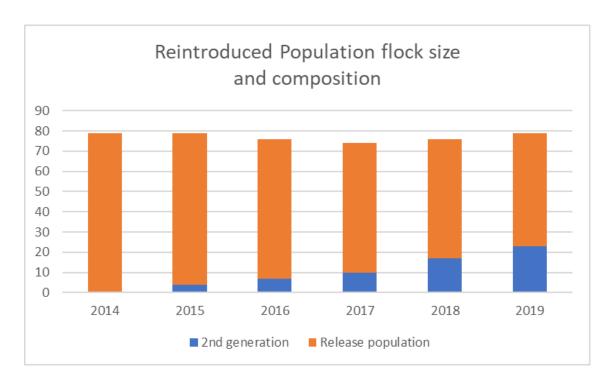
1.2 Flock size over time.

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
No. Known Alive	76	74	67	62	56	52
No. Possible Max	79	75	69	64	59	56
Recruited each year	0	4	3	4	7	9
Recruited thought alive	0	4	7	10	17	23
Flock size min.	76	78	74	72	73	75
Flock size max.	79	79	76	74	76	79
% of original release population	100%	95%	91%	86%	77%	69%
in the whole flock (min)						
2 nd generation as % of flock	0%	5%	9%	14%	23%	31%

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



1.3 Survival by year group

The percentage of birds surviving to date across all five release cohorts is between 56% and 60%. The oldest birds (in their ninth year) are still at 50% survival. The annual survival rates for each cohort and for each year group are tabulated overleaf.

There was an average annual survival rate this year of 95% based on the maximum possible alive. Both the 2012 and 2013 cohorts had a 100% survival rate this year.

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	1 Beatrice*	1 Gibble	1 Skye	1 Chip	4
Unknown status - missing > year	6 Vince Clarence Mennis Gilbert Minnie Cosmo	5 Mildred Trinny Charlie Pepper Lofty	2 Midnight Alexander	4 Frieden Mistymoor Stowford Billy	2 Dillon Century	19
Missing – combined	6	6	3	5	3	23
Possibly Alive (Maximum) end 2019	9	9	14	11	13	56
Known Alive	9	8	13	10	12	52
Possiblly Alive (Maximum) end 2018	10	10	14	11	14	59
2019 yr Annual Survival %	90%	90%	100%	100%	93%	95%
% Surviving to date known alive - max possible	45-50%	47-53%	68-74%	50-55%	71-76%	56-60%

1.4 Sex ratio of surviving birds

At the end of 2019, the sex ratio of the Known Alive birds is 22 male to 30 female therefore only 22 possible pairs among released birds although the gender of most of the second generation birds is unknown and there are increasing numbers 2nd generation birds reaching breeding age.

Sex ratio of known alive birds:
42% male (22): 58% female (30)

Graph 3. Sex ratio of release population

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

Table 3. Project targets and progress

TARGETS	
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. Regihtings ,onitoring 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 can not 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 table overleaf for details

Table 4. Resighting details Jan 2019 to end Dec 2019

	e 4. Resign	ling acta	113 3 4			C.7.G.										
No	Name	Combo	m/f	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	STATUS
1	Clarence	BlWhRe	М													M2
2	Gemma	ReWhRe	F	ND	ND	ND					ND	ND	ND	AE	AL	KA
3	Minnie	ReGrRe	М													M2
5	Gilbert	YeWhRe	М													M2
6	Michaela	GrBlRe	F	ND	ND	ND					AL	ND	ND	ND	AL	KA
7	Bart	ReBIRe	М													DE
9	Monty	BkGrRe	М	AE	AE	AE					ND	AE	ND	ND	ND	KA
10	Mennis	BlGrRe	М													M2
11	Chris	BkBlRe	F													DE
13	Twinkle	BkYeRe	F	AL	ND	AL					AL	ND	ND	AL	ND	KA
15	Wendy	WhBlRe	F	AE	AE	AE					AE	AE	AE	AE	AE	KA
17	Vince	WhGrRe	F													M2
18	Squidgy	GrYeRe	F	AE	DE											DE
19	Cosmo	GrBkRe	М													M2
21	Ruby	WhBkRe	F	AE	AE	AE					AE	AE	AE	AE	AE	KA
22	Tamsin	ReBkRe	F	AL	ND	AL					AL	ND	AL	AL	AL	KA
23	Regina	ReYeRe	F	AL	AL	ND					AL	AL	AL	AL	AL	KA
25	Sedge	WhYeRe	F	AE	AE	AE					AE	AE	ND	ND	ND	KA
26	Lofty	ReBlWh	М	ND	ND	ND					ND	ND	ND	ND	ND	M1
27	Wally	ReYeWh	М													DE
28	Christmas	BkBlWh	F	ND	ND	ND					AL	ND	AL	ND	ND	KA
29	Timmy	ReBkWh	М	AL	ND	AL					AL	AL	AL	AL	AL	KA
30	Legend	WhReWh	М	AL	ND	ND					AL	ND	AL	ND	AL	KA
31	Albert	WhBlWh	М	AE	AE	AE					AE	AE	AE	AE	AE	KA
32	Charlie	WhYeWh	М													M2
33	Pepper	WhGrWh	М													M2
35	Beatrice	BIReWh	F	AE	ND	ND					ND	ND	ND	ND	ND	??
37	Swampy	BlYeWh	F													DE
38	Trinny	YeReWh	F													M2
39	Elle	YeBlWh	F	AL	ND	ND					AL	ND	AL	ND	AL	KA
40	Mildred	BkGrWh	F													M2
41	Gerald	YeBkWh	М	AL	AL	AL					AL	AL	AL	AL	AL	KA
44	Flash	GeBkWh	F	AL	AL	AL					AL	AL	AL	AL	AL	KA
45	Pippa	GrReWh	F	AL	AL	AL					ND	ND	ND	ND	AL	KA
47	Phelps	ReYeBl	М	ND	AE	ND					AE	ND	AE	AE	AE	KA

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

No	Name	Combo	m/f	Jan	Feb	Mar	Apr	Мау	Jun	Jul	Aug	Sep	Oct	Nov	Dec	STATUS
91	Oakie	BkWhYe	М	AE	AE	AE					AE	AE	ND	AE	AE	KA
93	Mistymoor	BkGrYe	М													M2
94	Chip	ReWhBk	F	ND	ND	AL					ND	ND	ND	ND	ND	??
95	Pecky	ReBlBk	М	AL	AL	ND					AL	AL	ND	AL	AL	KA
96	Soar	ReYeBk	М	AL	ND	ND					AL	AL	AL	AL	AL	KA
97	Ted	BkYeBk	М	AL	AL	ND					AL	ND	AL	ND	AL	KA
98	Patience	WhReBk	F	ND	AL	ND					AL	AL	AL	AL	AL	KA
100	Century	WhYeBk	F	ND	ND	ND					ND	ND	ND	ND	ND	M1
102	Dillon	BIReBk	М													M2
103	Rosa	BlWhBk	F	AE	AE	ND					AL	AL	AL	ND	AL	KA
104	Sherbert	BlYeBk	F	AE	AE	ND					AE	AE	AE	AE	AE	KA
105	Kia	WhBlBk	F	AE	AE	AE					AL	ND	ND	ND	AE	KA
106	Ye-re-bk	YeReBk	М													DE
107	Diamond	YeWhBk	F	AL	ND	ND					AL	ND	ND	ND	AL	KA
108	Gary	YeBlBk	М	AL	ND	ND					ND	ND	ND	AE	AL	KA
109	Cleg	BkGrBk	М	AL	AL	AL					AL	AL	ND	ND	AL	KA
110	Pepé	GrReBk	М	AE	AE	ND					AL	ND	AE	ND	ND	KA
113	Ziggy	BkReBk	F	ND	ND	ND					ND	ND	ND	ND	ND	KA*
114	Humbug	BkWhBk	F													DE
201	A&S Chick	Unringed 2015	U	ND	ND	ND					ND	ND	ND	ND	ND	AA
202	A&S	Unringed		ND	ND	ND					ND	ND	ND	ND	ND	AA
203	Chick M&W	2015 Unringed	U	ND	ND	ND					ND	ND	ND	ND	ND	AA
203	Chick M&G	2015 Unringed	U	ND	IND	IND					IND	ND	IND	IND	IND	
204	Chick	2015	U	ND	ND	ND					ND	ND	ND	ND	ND	AA
205	M&G chick	Unringed 2016	U	ND	ND	ND					ND	ND	ND	ND	ND	AA
206	L&G Chick	Unringed 2016	U	ND	ND	ND					ND	ND	ND	ND	ND	AA
207	A&S Chick	ReWhGr 2016	F	AL	ND	AL					AL	AL	AL	AL	AL	KA
208	L&E Chick	Unringed 2017	U	AL	AL	ND					ND	ND	ND	ND	ND	AA
209	T&M	ReBkGr	J													DE
209	Chick T&M	2017 Unringed	М													DL
210	Chick	2017	U	ND	ND	ND					ND	ND	ND	ND	ND	AA
211	M&D Chick	ReYeGr 2017	F	AL	ND	ND					AL	AL	AL	AL	AL	KA
212	G&F chick	Unringed 2018	U	AL	AL	AL					ND	ND	ND	ND	ND	AA
213	J&V chick	WhReGr 2018	F	AL	ND	AL					ND	AL	AL	ND	AL	KA

No	Name	Combo	m/f	Jan	Feb	Mar	Apr	Мау	Jun	Jul	Aug	Sep	Oct	Nov	Dec	STATUS
214	L&Echick	Unringed 2018	U	AL	ND	ND					ND	ND	ND	ND	ND	АА
215	B&R chick	Unringed 2018	U	ND	AE	AE					ND	ND	ND	ND	ND	АА
216	B&R chick	Unringed 2018	U	AE	DE											DE
217	O&S chick	Unringed 2018	U	AE	AE	AE					ND	ND	ND	ND	ND	АА
218	W&P chick	Unringed 2018	U	ND	AL	ND					ND	ND	ND	ND	ND	AA
219	T&M chick	WhYeGr 2019	М	-	-	-					AL	AL	AL	AL	AL	KA
220	H&T chick	Unringed 2019	U	-	-	-					ND	ND	ND	AL	ND	КА
221	L&E chick	Unringed 2019	U	-	-	-					AL	ND	AL	ND	ND	KA
222	P&P chick	Unringed 2019	U	-	-	-					AL	ND	AL	AL	AL	KA
223	P&P chick	Unringed 2019	U	-	-	-					AL	ND	AL	AL	AL	KA
224	J&V chick	GrBkGr 2019	М	-	-	-					DE					DE
225	G&F chick	GrReGr 2019	F	-	-	-					AL	AL	AL	AL	AL	KA
226	P&R chick	GrWhGr 2019	F	-	-	-					DE					DE
227	M&D chick	Unringed 2019	U	- 1	-	-					AL	ND	ND	ND	AL	KA

KA* Ziggy identified in flock in August...

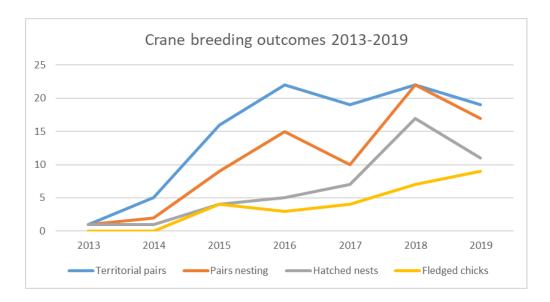
4. 2019 breeding season details

4.1 Breeding season summary

26 pairs of breeding age birds were observed in 2019 - two more than last year. Of these 26 pairs, 19 were observed to be holding territories, and 7 pairs without a clear territory. 17 pairs made confirmed or probable breeding attempts. This is a little lower than last year's peak of 22 pairs. 11 of the 17 (65%) of the nesting pairs went on to successfully hatch this year – a slightly lower percentage than last year's record of (77%). However, a much lower relay rate this year (22 nesting attempts in total compared to 33 last year) was due to much better survival at egg stage. Between 17 and 20 chicks were hatched in total this year with 9 of these finally making it to fledging stage. The cause of the losses during chick rearing are unknown.

The 17 confirmed and probable nesting attempts this year were made on the Somerset Levels and Moors (11 prs); WWT Slimbridge Reserve Gloucestershire (3 prs); Oxfordshire (1 pr); South Wales (1pr); Cambridgeshire (1 female).

As last year, the 9 fledged chicks this year were all from the Somerset Levels and Moors. Two of these fledged chicks subsequently died in August shortly after fledging – cause unknown.



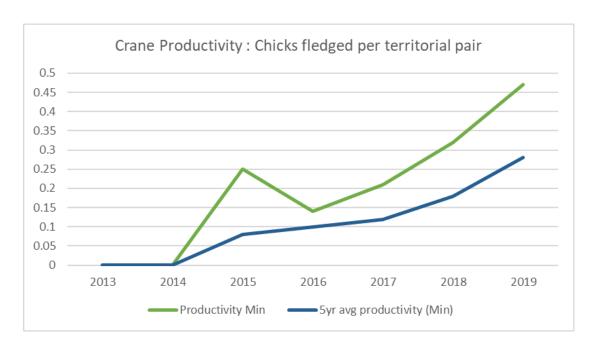
Graph 4. No. pairs, breeding attempts and outcomes 2013-2019

A productivity figure of 0.47 chicks per territorial pair (Productivty Rate 2 in table below) was recorded. This figure is encouraging as it is the highest to date and shows an increasing trend and is nearer to that seen in the native, non-reintroduced population. This population had a productivity figure of 0.72 chicks per breeding pair in 2018 (with 18 chicks produced from 25 breeding pairs). 2019 figs not yet available.

Table 5. Summary of breeding success and productivity 2013-2019

	2013	2014	2015	2016	2017	2018	2019
No. of pairs at breeding age (3yrs+)	1	5	16	23	24	24	26
Territorial pairs	1	5	16	22	19	22	19
No. pairs making confirmed nesting	1	2	7	15	10	21	15
attempts							
No. pairs making probable nesting attempts	0	0	2	0	0	1	2
% of breeding age pairs that made nesting	100%	40%	44%	65%	42%	92%	65%
attempts (confirmed plus probable)							
% of territorial pairs that made nesting	100%	40%	44%	68%	53%	100%	89%
attempts (confirmed plus probable)							
Confirmed/probable nesting attempts -	2	4	11	25	14	33	22
including re-lays							
No. known pairs reaching hatch stage	1	1	4	5	7	17	11
% of confirmed and probable nesting	100%	50%	44%	33%	70%	77%	50%
attempt reaching hatch stage							
Hatched chicks	1	2	6 -7	7	11	20	17-20
Fledged chicks	0	0	4	3	4	7	9
PRODUCTIVITY RATE 1.	0	0	0.44	0.20	0.40	0.31	0.53
No. of fledged chicks per confirmed/probable							
pair							
PRODUCTIVITY RATE 2.	0	0	0.25	0.14	0.21	0.31	0.47
No. of fledged chicks per total territorial pairs							
PRODUCTIVITY RATE 3.	0	0	0.25	0.13	0.17	0.29	0.35
No. of fledged chicks per total pairs at breeding							
age							

Graph 5. Productivity 2013- 2019



4.2 List of successful pairs and age at breeding

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

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) & Gibble (2012 - 4yr female)	1 fledged

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

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

2025	
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.

4.3 How old are the most successful breeders?

Table 6. Age and number of birds successfully breeding.

Age	Male	Female	Total
3у	2	1	3
4y	3	3	6
5y	4	1	5
6у	5	3	8
7y	3	4	7
8y	3	3	6
9у	0	3	3

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	2
Lofty*	2011	1	Wendy	2010	1
Timmy	2011	3	Michaela	2010	3
Legend	2011	3	Swampy*	2011	3
Alexander*	2012	3	Elle	2011	3
Midnight*	2012	2	Gibble	2012	1
Manfred	2013	2	Diamond	2014	2
Gerald	2011	2	Flash	2011	2
Jasper	2012	2	Viridor	2013	2
Wiz	2012	1	Pippa	2011	1
Bart*	2010	2	Ruby	2010	2
Oakie	2013	1	Sherbert	2014	1
Haribo	2012	1	Twinkle	2010	1
Pickles	2012	2	Patience	2014	2
Pecky	2014	1	Regina	2010	1

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

Timmy & Michaela and Legend & Elle are now the most productive with these two pairs having fledged 3 chicks each. Both these pairs nest on RSPB West Sedgemoor. However, post 2019 breeding season it appears that Timmy and Michaela have separated, with Timmy left chick rearing and Michaela apparently paired up with Cleg.

5. Birds lost and missing this year

Known deaths

Green/Yellow/Red Squidgy

Squidgy was found dead at WWT Slimbridge on 5th March. Cause unknown – post mortem not feasible.

Bart and Ruby's chick, produced in 2018, is also known to have died this being reported dead in Feb 2019.

Missing

White/Yellow/Black Century

Century was not seen all year and has now moved into the missing >1yr category.

Red/Blue/White Lofty

Lofty was not seen all year and has now moved into the missing >1yr category.

Yellow/Red/Yellow Skye

Skye was reported as missing in the 2018 annual report – but was reported present in Jan2019 on the resightings monitoring. However, she has not been seen since and is again now considered missing. It is possible that she was reported in error in January and could have been missing even longer.

Red/Black/Blue Gibble

Gibble was last identified during re-sighting in February 2019 and subsequently observed in April in South Wales with an unringed bird making a breeding attempt which failed. She has not been observed since.

Red/White/Black Chip

Chip has not been identified since March 2019

Blue/Red/White Beatrice

Beatrice has not been reported as present in the Fens for the last few months of the year. It is likely that the lack of reporting does not indicate that she is no longer present and it is expected that she will be resignted early in 2020.

6. Chicks ringed in 2019

Ringing Summary

6 juveniles were ringed and radio tagged this year. Four of the ringed birds subsequently died, 2 pre-fledge and 2 post-fledge.

Surviving ringed juveniles are Timmy & Michaela's juvenile WH/YE/GR and Gerald & Flash's juvenile GR/RE/GR.

Ringing details

Of the 18 young cranes hatched on West Sedgemoor this year six were successfully caught at late rearing stage, colour ringed and fitted with radio tags. Two ringed juveniles (Timmy & Michaela and one of Jasper and Viridor's were found dead in the area close to where they hatched before they would have reached fledging stage. The cause of the deaths is unknown. Two others were found at a time subsequent to them fledging- one on Aller Moor (Jasper and Viridor's second chick) and Regina and Pecky's chick was found dead within Hambridge Pool area.

Jasper & Viridor's two juveniles were ringed Gr/Ye/Gr and Gr/Bk/Gr on 11th July. They were fitted with leg mounted radio tags and a metal BTO ring above the foot. Both of these chicks were lost – one pre-fledging and one post-fledging. Cause uknown.

Timmy & Michaela's juveniles were ringed Wh/Ye/Gr and Wh/Bk/Gr on 31st July and fitted with leg mounted radio tag and a metal BTO ring above the foot and feather samples taken for blood testing. The chick ringed Wh/Bk/Gr died pre-fledge but and the surviving juvenile Wh/Ye/Gr, a male, nicknamed Timitutu.

Gerald & Flash's juvenile was ringed Gr/Re/Gr and fitted with radio tag and a metal BTO ring above the foot on 14th July. Feather samples were also taken for gender testing. This juvenile survived to fledging and is a female nicknamed Fergie.

Regina & Pecky's juvenile was ringed Gr/Wh/Gr on 26th July and fitted with radio tag and a metal BTO ring above the foot. It was found dead on 28th August, post-fledge, close to the area where it had hatched, and was the known night time roost for the family.

7. 2nd generation birds

18 birds have fledged to date – shown in the table below.

Of the birds produced 2015-2017 - One bird is considered to have been lost (Eugene from 2017). 1 second generation bird from 2015 (Slimbchick) at Slimbridge is thought to be missing (unconfirmed).

At least 4 unringed adult-looking birds were seen fairly regularly in Somerset with two unringed birds turning up at WWT Slimbridge in the Autumn too – which could well be 2nd generation birds.

Eight older 2nd generation birds are therefore thought still be alive, along with 6 of the fledged chicks from this year, as one of Bart and Ruby's chicks produced in 2018 is thought to be missing.

This leaves a total of around 15 2nd generation birds probably alive.

Table of 2nd generation birds

								Colour	
Identi	ity					Male	Female	ring combinat	
numb	er	Status	Nickname	Hatch date	Fledge date	Parent	Parent	ion	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	Alive	(Slimchick)	13/05/2015	08/08/2015	Minnie	Wendy	n/a	
	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	Alive		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	Alive		01/06/2017	10/08/2017	Timmy	Michaela	n/a	
	211	Alive	Mandi	10/06/2017	19/08/2017	Manfred	Diamond	ReYeGr	
	212	Alive		16/05/2018	20/07/2018	Gerald	Flash	n/a	
	213	Alive		23/05/2018	01/08/2018	Legend	Elle	n/a	
	214	Alive	Javi	25/05/2018	01/08/2018	Jasper	Viridor	WhReGr	
	215	Alive		25/05/2018	03/08/2018	Wiz	Pippa	n/a	
	216	Alive		22/05/2018	12/08/2018	Bart	Ruby	n/a	
	217	Alive		22/05/2018	12/08/2018	Bart	Ruby	n/a	Died Feb 2019
	218	Alive		01/07/2018	29/08/2018	Oakie	Sherbert	n/a	
	219	Allive	Timitutu	10/04/2019	24/07/2019	Timmy	Michaela	WhYeGr	
n/a		Dead		10/04/2019	n/a	Timmy	Michaela	WhBkGr	Dead June 2019
	220	Alive	Westy	19/04/2019	10/07 2019	Haribo	Twinkle	n/a	
	221	Alive		30/04/2019	09/07/2019	Legend	Elle	n/a	
	222	Alive		16/05/2019	06/08/2019	Pickles	Patience	n/a	
	223	Alive		16/05/2019	06/08/2019	Pickles	Patience	n/a	
n/a		Dead		26/05/2019	na	Jasper	Viridor	GrYeGr	Dead July 2019
	224	Dead	Veejay	26/05/2019	mid August 2019	Jasper	Viridor	GrBkGr	Dead August 2019
	225	Alive	Fergie	Late May	10/08/2019	Gerald	Flash	GrReGr	
	226	Dead	Peggy	30/05/2019	mid August 2019	Pecky	Regina	GrWhGr	Dead Aug 22nd 2019
	227	Alive		Early June	Late Aug 2019	Manfred	Diamond	n/a	

8. Individual bird summary table for all 93 released birds

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

2019:	Name	M F	Tag	Tag outcome	Ring combo	Annual summary 2019	Annual breeding outcome C = confirmed P = paired up N = non-breeding	Breeding outcome to date	Date of death	Other removal from programme
2010 re	elease year									
1	Clarence	М	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	Seen in Wiltshire with BopBop and later with Gary. Identified with Gary in early December 2019 in Wiltshire – appears to be paired with Gary.	N: Non breeding	2015:1 fledged chick 2016:1 fledged chick 2017:No evidence of nesting 2018:No evidence of nesting 2019: No evidence of breeding		
3	Minnie	М	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	М	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 was back on her territory with Timmy on West Sedgemoor, Somerset from early in the 2019 New Year. Incubation on the started on 17th March and two chicks were hatched c12th April. By the middle of May the two chicks were still with their parents and were successfully ringed on 31st May. Unfortunately one of the ringed juveniles died in early June but the other went on to fledge successfully is alive and	C: One successful breeding attempt with two chicks hatched. Both were ringed and radio tagged but one died shortly after.	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 stage. 2017: 1st attempt		

						well. Feather DNA tests show that it is a male – nicknamed TimiTutu. The family were back with the flock in August, but in September Michaela was being seen in the company of Cleg – a 2014 male while Timmy remained with the juvenile.		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 chiocks both ringed and radio tagged but only one fledged.		
7	Bart	М	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	М	RT	Radio tag ceased to function summer 2011.	bk-gr-re	Remained at WWT Slimbridge through the winter and spring of 2019. In April Monty seemed once again to have changed partners and was observed with Evie. In mid-May he was still being seen with Evie but there was no sign of a breeding attempt.	C: No 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.		
10	Mennis	М	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 2014
11	Chris	F	GPS, RT, ECO	Radio tag working poorly March 2012. Capture July 2012 at Slimbridge. Refitted 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	Observed with Haribo in January 2019 in their Westmoor territory, Somerset, and again on 22nd February. Incubation on their first nest started 16th March, two chicks were hatched around 16th April and were with their parents until 8th May when concerns were raised that the chicks were lost. However on 11th May one chick seen with them. This remaining juvenile fledged around 10th July and is now seen with its parents in the flock.	C: One successful breeding attempt, fledging one chick.	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		
15	Wendy	F	RT	Radio tag ceased to function summer 2011.	wh-bl-re	Remained at WWT Slimbridge over the winter. Wendy and Albert's first incubation started in late March but failed on 27th March – cause unknown. On 17th May it was reported they were possibly nesting again and on 18th June they were seen with two chicks but by 17th July the chicks were lost, presumed predated.	C: Two nesting attempts. First attempt failed at egg stage, second failed at chick 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.		

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
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	М	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	Remained at WWT Slimbridge through the Winter and Spring of 2019. Having lost her mate Bart last year she was seen for a while with an unringed bird but there was no breeding attempt.	C: No known breeding attempt	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		
22	Tamsin	F	RT	Radio tag ceased to function summer 2011.	re-bk-re	Observed on Whitmoor, Somerset in January and February with Chocolo and flock. In April Tamsin was observed west of Cardiff without Chocolo and having sustained a serious injury to her right leg the	C: No known breeding attempt	2015: Unknown – but failed to fledge. 2016: Unknown but failed to fledge. 2017 Unknown but		

						foot of which is missing. Mandi (M&D 2017 juvenile) was with her. No further sightings were received until 28th August when she was observed on Aller moor in Somerset with the flock. She has received some bullying form other birds but otherwise getting on pretty well despite the loss of her foot.		failed to fledge. 2018: 1 chick lost before fledge. 2019: No known breeding attempt	
23	Regina	F	RT	Radio tag ceased to function summer 2011.	re-ye-re	Observed regularly in the Hambridge area on West Sedgemoor with Pecky during March and April and they are thought to have started incubation on 2nd May. One chick hatched around 30th May. This juvenile was successfully caught, ringed and radio tagged on 26th July and fledged in mid August. However, it was found dead in its nest area from an unknown cause on 22nd August.	C: One breeding attempt, hatched one chick which was ringed and tagged and went on to fledge, but subsequently died.	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 died after fledge	
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	Remained at WWT Slimbridge through the winter and spring. She was chased away from her one time mate Monty by another female, Evie, and remained unpaired all year	C: No known breeding attempt	2016: 1 chick from 2 nd clutch, failed to fledge. 2017: No breeding attempt. 2018: 1 breeding attempt – failed at chick stage. 2019: Np Inown breeding attempt	
2011 re	elease year								
28	Christmas Shoes	F	RT	Radio tag ceased to function summer 2013.	bk-bl-wh	Observed nesting in late April in the Kingsmoor area of the Somerset Levels and Moors, but by mid-May was seen with Shadow feeding together without chicks. In August they were observed with the flock on Aller moor. In September Christmas Shoes was recorded at WWT Slimbridge, Gloucestershire.	C: One known breeding attempt - failed at egg stage	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.	

26	Lofty	М	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 Gibble 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 30th June. 2018: 2 chicks hatched from first attempt but not seen after 25th May 2019: No breeding attempt.	Possibly Oct 2018	
27	Wally	М	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	
32	Charlie	М	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	М	RT	GPS data logger failed Sept 2012. Radio tag ceased to function summer 2013. Back pack fallen off - Sept 2013.	wh-bl-wh	Remained at WWT Slimbridge, paired with Wendy. The first incubation started in late March but failed after two weeks. The second incubation started on 17th May and two chicks were hatched on 17th June but by the 16th July both were lost – presumed predated. Albert and his mate Wendy were observed at Slimbridge throughout the summer up to September.	C: Two breeding attempts the second produced two chicks that died pre-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.		

33	Pepper	М	RT	Radio tag ceased to function summer 2013.	wh-gr-wh	Went missing – January 2014. No further sightings.	-	-	Missing Jan 2014
29	Timmy	М	RT	Radio tag ceased to function summer 2013.	re-bk-wh	Paired with Michaela and frequently seen on territory on West Sedgemoor on the Somerset Levels and Moors throughout the winter. Incubation started 17th March and two chicks were hatched on or about 12th April. On 31st May both juveniles were successfully ringed and radio tagged. In early June one of the juveniles was found dead (cause unknown) but the other (nicknamed TimiTutu) fledged on 24th July and DNA tests showed it to be a male. Timmy, Michaela and juvenile were with the main flock in August but Timmy was being seen on his own with the youngster in September, and Michaela apparently paired with Cleg.	C: One successful breeding attempt, 2 chicks hatrched but only one fledged.	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	
30	Legend	М	RT	Radio tag last working in March 2016 , now failed.	wh-re-wh	Paired with Elle and seen frequently in their territory on West Sedgemoor, Somerset throughout the winter. Incubation started on 29th March and hatch took place on 30th April but it was not possible to see whether one or two chicks were present. Both parents were observed with one juvenile subsequently. The single juvenile fledged on 9th July and the family rejoined the flock in August.		2015: 2 clutches, both failed at egg stage. 2016: 3 clutches all failed at egg stage. 2017: 1 clutch of two eggs successful. One chick lost and one fledged. 2018: 2 clutches. 1st failed. 2nd clutch - 1 chick fledged. 2019: 1 clutch – 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	Paired with Legend and seen frequently in their territory on West Sedgemor, Somerset, throughout the winter. Incubation started on 29th March and hatch took place on 30th April but it was not possible to see whether one or two chicks were present. Both parents were observed with one juvenile subsequently. The single juvenile fledged	C: One successful breeding attempt fledging one chick	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.	

						on 9th July and the family rejoined the flock in August.		2018: 2 clutches. 1st failed egg stage. 2nd hatched 2 - 1 chick fledged. 2019: 1 clutch – 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	Beatrice was reported present in the Cambridgeshire Fens in the Spring where she bred with a Fenland male, sitting from 19th April. Two chicks hatched on 19th May but both were lost to presumed predation. No further observations since then.	C: One breeding attempt - two chicks which died	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.	
41	Gerald	М	GPS, RT	GPS data logger failed Sept 2012. Radio tag ceased to work winter 2012/13. Back pack noted as malpositioned towards end of 2017 and still in December 2018. #September 2019 back pack still positioned under its belly.	ye-bk-wh	Gerald and Flash were observed in January and February with their 2018 juvenile in the flock. Back in their territory on West Sedgemoor, Somerset, incubation on their first nest began on 28th April. Still incubating in mid May but off duty bird not seen very often. This pair were very well hidden and difficult to observe so the date of hatch is uncertain. They were eventually seen with one chick. The chick was ringed and radio tagged on 14th July and fledged before 10th August. It was confirmed by DNA testing to be a female, nicknamed Fergie, and returned to the flock with its parents in August.	C: One successful breeding attempt fledging one chick.	2015: Suspected nesting attempt – no chicks fledged. 2016: 2 clutches, both failed at egg stage. 2017: 1 attempt which failed and no evidence of eggs found. 2018: 1 attempt - 1 chick successfully fledged. 2019: 1 clutch – 1 chcik fledged	
44	Flash	F	RT	Radio tag ceased to function summer 2013.	gr-bk-wh	Gerald and Flash were observed in January and February with their 2018 juvenile in the flock. Back in their territory on West Sedgemoor, Somerset, incubation on their first nest began on 28th April. Still incubating in mid May but off duty bird not seen very often. This pair were very well hidden and difficult to observe so the date of	C: One successful breeding attempt fledging one chick.	2015: Suspected nesting attempt – no chicks fledged. 2016: 2 clutches, both failed at egg stage. 2017: 1 attempt failed egg stage. 2018: I attempt – 1	

						hatch is uncertain. They were eventually seen with one chick. The chick was ringed and radio tagged on 14th July and fledged before 10th August. It was confirmed by DNA testing to be a female, nicknamed Fergie, and returned to the flock with its parents in August.		chick successfully reared to fledge 2019: One successful breeding attempt fledging one chick.		
43	Gizmo	М	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	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.	ye-re-wh	Went missing April 2013. No further sightings.	-	-	-	Missing April 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	Observed on Whitmoor with Wiz and their 2018 juvenile on 16th February. By the 10th April seen in territory on Wetmoor with Wiz. Observed incubating on 17th April. Hatch took place on the 18th or 19th May. Observations through the summer indicated that chick was likely still present, but observed feeding with no sign of chicks in August so assumed failed at late stages of chick rearing.	C: One nesting attempt – failed at chick stage.	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.		

	I	1	1	T		T	I	T	I
2012 re	e <mark>lease year</mark>							<u>I</u>	<u> </u>
47	Phelps	М	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 remained with Elizabeth at WWT Slimbridge throughout the winter of 2018/19 and were last observed there in February 2019. They then disappeared and it was hoped they were prospecting for a nest site. However, they reappeared in August without young so it cannot be confirmed whether they did attempt to breed and failed or gave this year a miss.	C: No known breeding attempt	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.	
48	Easter Beans	F	RT	Radio tag ceased to function Oct 2013.	re-gr-bl	Observed on her own quite regularly on West Sedgemoor, Somerset, close to Timmy & Michaela's territory in May. She was not observed again until August when she was with the flock on Aller moor.	C: No known breeding attempt	2015: no breeding attempt 2016: no breeding attempt 2017: no breeding attempt 2018: 2 clutches failed at egg stage. 2019: No known breeding attempt	
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	Observed in Somerset on 10th February on Whitmoor with an unringed adult and the flock. On 10th February she was observed with an unringed bird at Goldcliff Lagoons, South Wales then elsewhere on the Gwent Levels s on 14th. Reported incubating at usual nest location possibly 4th April but failed after a week – cause unknown. No known further breeding attempt.	C: Made one nesting attempt, failed at egg sta	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	

50	Elizabeth Royal	F	PTT	Satellite tag ceased to function 27/07/2014.	wh-re-bl	Elizabeth remained with Phelps at WWT Slimbridge throughout the winter and were last observed there in February 2019. They then disappeared and it was hoped they were prospecting for a nest site. However, they reappeared in August without young so it cannot be confirmed whether they did attempt to breed and failed or gave this year a miss.	C: No known breeding attempt	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	
52	Chocolo	М	RT	Radio tag known failed by October 2015.	bk-gr-bl	Observed on Whitmoor with Tamsin in the flock on 26th January and again on 16th February 2019. He was observed with Tamsin in March west of Cardiff, but soon after appeared back at Slimbridge with Kia. On 17th May he was still with Kia but there was no sign of a breeding attempt. It was discovered later that Tamsin had sustained an injury which led to her losing one of her feet.	C: No known breeding attempt	2015: Unknown – but failed tofledge 2016: Unknown but failed to fledge 2017: n/a 2018: 1 breeding attempt – failed at chick stage. 2019: No known breeding attempt	
53	Alexander	М	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. 2017: I nest – abandoned at egg stage.	Missing since late 2017
54	Midnight	М	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 remained at Slimbridge and in April was observed frequently chasing off Monty's original mate Sedge. By 17th May she was still seen with Monty but there was no sign of a breeding attempt this year.	C: No known breeding attempt	2015: no breeding attempt 2016: no breeding attempt 2017: no breeding attempt 2017: no breeding attempt. 2018: no breeding	

58	Haribo	М	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	Observed with Twinkle in January and March in their territory on Westmoor, on the Somerset Levels and Moors. Incubation started on 16th March and they hatched 2 chicks on 16th April. On 8th May concerns were raised that both chicks were lost but on 11th May one chick was seen with its parents. The juvenile fledged circa 10th July and was seen with its parents in the flock on Aller moor in late August.	C: 1 breeding attempt raising 2 chicks – one fledged	attempt. 2019: No known breeding attempt 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.		
60	Wycliffe	М	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 was observed on Whitmoor, in the Somerset Levels and Moors, with Maple on 26th January with the flock. Both were seen again in March in Somerset. On 4th April the pair was observed nesting at RSPB Otmoor, Oxfordshire where they bred last year. Hatch was due by 24th April but there was no report of chicks. Later it was reported that the pair sat for 60 days on addled eggs. They were observed back in Somerset in late August.	C: 1 breeding attempt – failed at egg stage	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.		
61	Willow	М	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	М	RT	Radio tag ceased to function by Oct 2013.	bk-ye-bl	Observed on Whitmoor, Somerset Levels and Moors with Pippa and their 2018 juvenile on 16th February. By the 10th April seen in territory on Wetmoor, Somerset. Observed incubating on 17th April. Hatch took place on the 18th or 19th May. Observations through the summer indicated that the chick was likely still present, but the pair were observed feeding with no sign of chicks in August so assumed failure was at the late stages of chick rearing.	C: 1 breeding attempt. Chick lost before fledge	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.	
63	Shadow	М	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	Observed together on Kingsmoor in April and then just one of them feeding so possible incubation started 26th April. However, in mid-May they were seen feeding together without chicks. In August they were observed with the flock on Aller moor, Somerset.	C: 1 breeding attempt – assumed failed at egg stage.	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	
64	Maple-Glory	F	RT	Radio tag ceased to function by Oct 2013.	Gr-wh-bl	Maple was observed on Whitmoor, in the Somerset Levels and Moors, with Wycliffe on 26th January with the flock. Both were seen again in March in Somerset. On 4th April the pair was observed nesting at RSPB Otmoor, Oxfordshire where they bred last year. Hatch was due by 24th April but there was no report of chicks. Later it was reported that the pair sat for 60 days on addled eggs. They were observed back in Somerset in late August.	C: 1 breeding attempt, 2 addled eggs	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 cluch of 2 eggs, both addled	

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	On the 25th July Margaret was observed with Soar (2014 male) in the Hambridge area on West Sedgemoor, Somerset, acting as a pair but nothing came of it. She was seen occasionally during the summer but there was no indication of a breeding attempt. Both Margaret and Soar were observed in the flock in late August.	C paired but no known breeding attempt	2015: no breeding attempt. 2016: no breeding attempt. 2017: no breeding attempt. 2018: no breeding attempt. 2019: no breeding attempt.		
67	Jasper	М	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 was observed on Whitmoor, Somerset, with Viridor and their 2018 juvenile (Javi) and the main wintering flock on 26th January. The pair were then on their West Sedgemoor territory in February/March and Incubation on first nest started on 22nd March, but failed on 3rd April – cause unknown. Incubation of their second nest started on 28th April and the pair were still sitting on 17th May. Two chicks were hatched on 26th May and both chicks were ringed and radio tagged on 11th July. One of the chicks went missing on 27th July and was found dead on the 30th. The remaining chick, nicknamed VeeJay fledged in August but was found dead at the end of August – presumed predated. Jasper and Viridor were both observed with the flock at this time.	C: 2 breeding attempts – the first failed at egg stage, second fledged 1 chick	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. 1st failed at egg stage . 2nd 1 chick fledged		
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	М	RT	Radio tag ceased to function by Oct 2013.	bk-wh-bl	Observed with Patience and an unringed bird on Whitmoor, Somerset on 16th February. The pair were then observed during April in the territory they occupied in 2018 on West Sedgemoor. Incubation started on 15th April. On 17th May, parent	C: One successful breeding attempt, fledging two chicks	2015: no breeding attempt. 2016: no breeding attempt. 2017: no breeding attempt.		

2013 rd	elease year					behaviour suggested they had hatched but no chicks were observed until 21st May. They stayed in the area close to the nest until the juveniles fledged in early August. An attempt was made to catch the juveniles for ringing - but the family proved elusive. They were observed with their parents in the main flock in late August.		2018: 1 breeding attempt – failed at chick stage. 2019: 1 attempt fledging 2 chicks		
70	Cherry	F	ECO	Ecotone tag stopped working Dec 2013.	re-wh-ye	26th January Cherry was observed on Whitmoor, Somerset, with Cleg and the main flock and again on 16th February. Observed on Walton moor and at RSBP Greylake with Cleg during March. In April they were observed regularly on Walton moor displaying and apparently feeding in the Somerton Door area. Observed mating on Walton moor 13th April and roosting at RSPB Greylake on 22nd (using Ecotone record for Cleg). Incubation of their first nest started 1st May. Nest failed 22-23 May. A visit to the nest found 2 eggs predated – presumably by an avian predator as the nest was within the fox-proof fence. Cherry was observed with the flock on Aller moor at the end of August.	C: One breeding attempt which failed at egg stage.	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.		
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	Observed with Bombus in the Kingsmoor area, Somerset in April. Waterwing was seen regularly with Bombus in the area up until June but no signs of a nesting attempt.	P: paired – but no known nesting attempts this year.	2016: no breeding attempt. 2017: Unsuccessful attempt this year. 2018: no breeding attempt. 2019: no known nesting attempts this year.		

74	Acorn	F	RT	Radio tag working Dec 2016 but failed during 2017.	wh-re-ye	Observed with another crane on Kingsmoor/Whitcombe Bottom, Somerset, on 18th February. Seen with unringed bird feeding together on Kingsmoor 17th May. No sign of nesting. Acorn was identified in flight on 15th September.	P: Paired but no sign of breeding	2016: no breeding attempt. 2017: no breeding attempt. 2018: possible breeding attempt. 2019: no breeding attempt		
76	wh-gr-ye	М	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	М	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 was observed at RSPB Otmoor, Oxfordshire with Maple & Wycliffe in late May. She was also observed at Otmoor and then Duxford (Oxon WT) in late July. Not seen with another bird and no sign of a nesting attempt. In late August she was seen at Slimbridge with the flock of other released cranes there.	N: Unpaired and no breeding attempt.	2016: no breeding attempt. 2017: no breeding attempt. 2018: no breeding attempt. 2019: no breeding attempt.		
80	Viridor	F	RT	Radio tag failed in September 2016.	bl-re-ye	. Viridor was observed on Whitmoor with Jasper and their 2018 juvenile (Javi) with the flock on 26th January. They were on their West Sedgemoor territory in February/March and Incubation on 1st nest started on 22nd March but failed on 3rd April – cause unknown. Incubation on second nest started 28th April. Two chicks were hatched on 26th May and both chicks were ringed and radio tagged on 11th July. One of the chicks went missing on 27th July and was found dead on the 30th – cause unknown. The remaining chick (nicknamed Veejay) fledged in August but was then found dead at the end of August. Jasper and Viridor were both observed with the flock at this time.	C: Two breeding attempts – first failed at eggs stage, the second fledged 1 chick subsequently found dead.	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.		

81	Вор-Вор	F	GPS,RT	GPS ceased to function 20 th May 2014. Radio tag failed during 2017. Backpack still being worn, but malpositioned reported in Spring 2018.	bl-bk-ye	Observed on Whitmoor, Somerset, with Gemma 26th January and again on 16 February. Observed in Wiltshire with Gemma in early April 2019 as was the case last year. Observed prospecting with an unringed bird which could be Gemma & Midnight's juvenile 'Moonraker' at Cotswold Water Park. BopBop was seen again in Wiltshire on her own possibly moulting in early August but then reported with an unringed bird on 22nd August. BopBop was identified on Aller moor on 15th Septembe, and in early December on Otmoor, Oxfordshire.	N: no breeding attempt.	2016: no breeding attempt. 2017: no breeding attempt. 2018: no breeding attempt 2019: no breeding attempt		
82	Skye	F	ECO	Ecotone tag stopped working Dec 2013.	уе-ге-уе	:Recorded as being identified in Jan 2019 but there is some doubt about this – other than this record not been seen for over a year. No sign during breeding season, and not re-sighted to date.	N: no breeding attempt.	2016: no breeding attempt. 2017: no breeding attempt. 2018: no breeding attempt. 2019: no breeding attempt. attempt		Missing since Feb 2018
83	Stowford	М	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	М	GPS,RT	GPS and Radio tag working when euthanased March 2014.	ye-bl-ye	Collision injury lead to euthanasia at RSPCA March 2014. Injuries suggested collision with probable powerline or other obstacle.	-	-	08/03 2014	
85	Stanley	М	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	М	RT	Radio tag ceased to function Nov 2014.	ye-bk-ye	Observed on Kingsmoor, Somerset during March 2019 with Waterwing. Seen with Waterwing feeding together on Kingsmoor 17th May. No sign of nesting attempts this	N: Paired up but no breeding attempt this year.	2016: no breeding attempt. 2017: no breeding attempt. 2018: no breeding		

						year.		attempt. 2019: no breeding attempt		
87	Manfred	М	ECO	Ecotone ceased to function August 2015.	gr-re-ye	Observed with Diamond in Broadway area of West Sedgemoor, Somerset. with a possible start of incubation on 22nd March. The nest failed 6th April – cause unknown. Incubation of the second nest began on 22nd April with hatching between 22nd and 26th May. Unsure whether there were two chicks but one survived and was seen in flight, during an attempt to catch for ringing – on 27th July. The family was observed with the flock in late August.	C: Two breeding attempts – first failed at egg stage, second fledged 1 chick	2016: no breeding attempt 2017: 2 attempts 1 abandoned, the other produced one fledged chick 2018: I breeding attempt failed at chick stage. 2019: 2 breeding attempts – 1st failed at egg stage, 2nd fledged 1 chick		
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	No evidence of pairing but observed with the flock on Aller moor in late August.	N: Unpaired - no breeding attempt	2016: no breeding attempt 2017: no breeding attempt 2018: no breeding attempt 2019: no breeding attempt 2019: no breeding attempt		
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	Observed in March and April with Sherbert and their 2018 juvenile at WWT Slimbridge. On 11th April they were observed nest building with one egg laid the same day. The nest failed 23rd April - cause unknown. Started incubation on 2nd nest on 10th May but failed almost immediately. Again cause unknown. Observed at Slimbridge in late August.	C: Two nesting attempts, both failed at egg stage.	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.	
93	Misty Moor	М	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
2014 re	elease year								
94	Chip	F	RT	Radio tag ceased to work over Summer 2015.	re-wh-bk	No pairing or nesting attempts reported. Chip was last observed in March	N: Unpaired - no breeding attempt	2017: No breeding attempt 2018: no breeding attempt. 2019: no breeding attempt.	
95	Pecky	М	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	Observed regularly with Regina in last year's territory in the Hambridge area on West Sedgemoor, Somerset, during March and April. Possible start of incubation around the 2nd May. Possible changeover observed 31st May but it turned out to be hatch taking place. The juvenile was ringed and radio tagged on 26th July and fledged in mid August. Unfortunately it was found dead a few days later within its roosting area.	C: One successful nesting attempt but chick lost pre-fledge	2017: No breeding attempt. 2018: 1 breeding attempt – failed at chick stage. 2019: 1 successful attempt but chick lost pre-fledge	
96	Soar	М	RT	Radio tag working Feb 2017 but failed during the summer.	re-ye-bk	On 26th January Soar was observed on Whitmoor, Somerset, with the main wintering flock. On 25th July he was observed with Margaret in Hambridge area of West Sedgemoor and acting as a pair. No further evidence of breeding attempts. Soar was observed with Margaret on Aller moor in late August and appear still to be still paired.	P: paired but no breeding attempt.	2017: No breeding attempt. 2018: no breeding attempt. 2019: No breeding attempt attempt	
97	Ted	М	RT	Radio tag failed November 2015.	bk-ye-bk	On 26th January Ted was observed on Whitmoor, Somerset with the main wintering flock. He was then observed with Wurzelina on Whitmoor 16th February. Observed with	P: Paired but no breeding attempt.	2017: No breeding attempt. 2018: no breeding attempt.	

						Wurzelina on West Sedgemoor but without a clear territory on 11th April - no evidence of a breeding attempt. Both birds were observed on Aller moor in late August.		2019: no breeding attempt	
98	Patience	F	GPS,RT	Backpack ceased to work during the summer 2016. Radio tag working May 2017 but failed during the autumn 2017. Not assessed if still wearing backpack by Dec 2018.	wh-re-bk	Observed with Pickles and an unringed bird on Whitmoor, Somerset on 16th February. The pair were then observed during April in the territory they occupied in 2018 on West Sedgemoor. Incubation started on 15th April. On 17th May, parent behaviour suggested they had hatched but no chicks were observed until 21st May. They stayed in the area close to the nest until the juveniles fledged in early August. An attempt was made to catch the juveniles for ringing - but the family proved elusive. They were observed with their parents in the main flock in late August.	C: One successful breeding attempt resulting in 2 fledged chicks	2017: No breeding attempt 2018: 2 breeding attempts, 1st failed at egg stage, 2nd hatched but chicks lost early. 2019: 1 successful attempt - 2 fledged chicks	
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	М	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 remained in Somerset over winter 2018/19 and was observed on several occasions on West Sedgemoor with an unringed bird, with whom she may be paired, mainly feeding. There was no evidence of a nesting attempt. She was observed with the flock on Aller moor in late August.	P: paired but no breeding attempt.	2017: No breeding attempt 2018: no breeding attempt 2019: no breeding attempt	

104	Sherbert	F	GPS, RT	Radio tag failed – end Nov/December 2015 . Backpack ceased to work during the summer 2016. Backpack strap visible between upper legs December 2017. Backpack status currently unknown.	bl-ye-bk	Observed in March and April with Oakie and their 2018 juvenile at WWT Slimbridge. On 11th April they were observed nest building with one egg laid the same day. The nest failed 23rd April - cause unknown. Started incubation on 2nd nest on 10th May but failed almost immediately. Again cause unknown. Observed at WWT Slimbridge in late August.	C: Two breeding attempts which both failed at egg stage	2017: No breeding attempt 2018: 1 breeding attempt – 1 chick fledged. 2019: 2 attempts both 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	Kia remained at Slimbridge over winter and in March was observed with Chocolo – Tamsin's mate. In May they were still acting as a pair but there was no breeding attempt. They were observed still together in late August.	P: paired but no breeding.attempt	2017: No breeding attempt 2018: No breeding attempt 2019: No breeding attempt		
106	Yellow Red Black	М	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 2014.	-	-	05/11 2014	
107	Diamond	F	RT	Radio tag working until October 2016 – failed Nov 2016	ye-wh-bk	Observed with Manfred in Broadway area of West Sedgemoor, Somerset. with a possible start of incubation on 22nd March. The nest failed 6th April – cause unknown. Incubation of the second nest began on 22nd April with hatching between 22nd and 26th May. Unsure whether there were two chicks but only one survived and was seen in flight, during an attempt to catch for ringing – on 27th July. The family was observed with the flock in late August.	C: Two breeding attempts – the first failed at egg stage, second fledged 1 chick	2017: 2 attempts 1 abandoned, the other produced one fledged chick 2018: 1 breeding attempt – 2 chicks both lost. 2019: 2 attempts. 1st failed at egg stage. 2nd fledged 1 chick		
108	Gary	M	RT	Radio tag working until September 2016 when it fell off and was recovered from West Sedgemoor.	ye-bl-bk	Gary was last observed in Somerset in January bur disappeared during the Spring/Summer. On 19th September he was photographed in Wiltshire with Gemma. A ringed bird had been seen with her earlier in the summer but not identified so this could have been Gary. Gary and Gemma were identified together in Wiltshire in earlky December and they appear now to be a	N: Unpaired and non- breeding.	2017: No breeding attempt 2018: no breeding attempt 2019: no breeding attempt 4019: no breeding attempt		

						pair,				
109	Cleg	М	ECO	Ecotone tag working Dec 2016 2015 Ecotone tag working throughout 2017 and 2018	bk-gr-bk	26th January Cleg was observed on Whitmoor, Somerset, with Cherry and the main flock and again on 16th February. Observed on Walton moor and at RSBP Greylake with Cherry during March. In April they were observed regularly on Walton moor displaying and apparently feeding in the Somerton Door area. Observed mating on Walton moor 13th April and roosting at RSPB Greylake on 22nd (using Ecotone record for Cleg). Incubation of their first nest started 1st May. Nest failed 22-23 May. A visit to the nest found 2 eggs predated presumably by avian predator as the nest was within the fox-proof fence. Cleg was observed with the flock on Aller moor at the end of August but then with Michaela who he currently appears paired with.	C: 1 clutch failed at egg stage.	2017: One clutch of 2 eggs failed to hatch. 2018: 1 clutch – failed at egg stage. 2019: One attempt - failed		
110	Pepé	М	RT	Radio tag failed Dec 2015.	gr-re-bk	Remained in Somerset but no pairing or breeding attempts made. Observed on Aller moor with the flock and also at WWT Slimbridge in late August 2019.	N: Unpaired and non- breeding.	2017: No breeding attempt 2018: no breeding attempt 2019: no breeding attempt attempt		
113	Ziggy	F	RT	Radio tag fell off in late November 2015. Still working and retrieved from Hambridge block, West Sedgemoor.	bk-re-bk	No sig of Ziggy all year, but recorded as part of the flock in Sept 2019. No known pairing or breeding attempts made.	N: Unpaired and non- breeding.	2017: No breeding attempt 2018: no breeding attempt 2019: no breeding attempt 4019: no breeding attempt		
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



Patience (White Red Black) with her two juveniles [photo John Crispin]



Gemma (Red White Red) with Gary (Yellow Blue Black) - a new pairing for 2020! [photo John Crispin]



Timmy (Red Black White) with Timitutu (White Yellow Green) – his chick for this year. [photo John Crispin]



Gerald (Yellow Black White) and Flash (Green Black White) with their chick for this year, Fergie - on the left - (Green Red Green) [photo John Crispin]



In the pink!