



Department of  
**Environment and Conservation**

*Our environment, our future*



## **GORGON OFFSET PROGRAM FAUNA TRANSLOCATION PROJECT**

# **Golden Bandicoot translocation: Barrow Island to Doole Island**

Report to DEC Exmouth District, Nature Conservation  
Service staff.



by  
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## Introduction

The 'Threatened species translocation and reintroduction program' is one of six conservation initiatives being funded by the Gorgon Joint Venture (GJV). These initiatives are some of the environmental conditions placed on GJV to gain approval for the development of a Liquefied Natural Gas (LNG) plant on Barrow Island (BWI) under the *Barrow Island Act 2003*. The aim of the translocation project is to create secure populations of threatened and priority fauna on mainland Western Australia and offshore Pilbara islands as an insurance policy against potential detrimental impacts which may result from the development of the LNG plant.

The translocation program commenced in early 2010, with animals from BWI relocated to three sites. One of the species identified for translocation was the golden bandicoot (*Isoodon auratus barrowensis*), and in January / February 2010, 160 individuals were successfully reintroduced to Hermite Island (the largest of the Montebello island group, north of BWI, 20°29'02.74", 115°31'56.11"E; Fig 1A), and another 160 to an enclosure at Lorna Glen (an ex-pastoral lease located ~150km northeast of Wiluna on the West Australian Mainland, 26°13'32.87"S, 121°33'26.11"E). In order to establish another insurance population of this threatened species, a third translocation (a conservation introduction) was undertaken to Doole Island in July 2011 (22°28'22.32"S, 114°09'43.19"E; Fig 1A).

The golden bandicoot is the smallest of the *Isoodon* genus, with animals attaining about 670g (Burbidge and McKenzie 1989). The subspecies *Isoodon auratus barrowensis* is federally listed as 'Vulnerable' under the *Environmental Protection and Biodiversity Conservation Act 1999* and is also listed as 'Fauna that is rare, or is likely to become extinct' under Western Australia's *Wildlife Conservation Act 1950*. Previously, this subspecies of golden bandicoot only occurred on two Pilbara islands, BWI and Middle Island, just south of BWI (Palmer *et al.* 2003). The populations on both of these islands are at a high density, however anthropogenic impacts and the introduction of non-indigenous species such as cats (*Felis catus*) or black rats (*Rattus rattus*) to either island could result in a dramatic decline or even elimination of these populations (Short and Smith 1994; McKenzie *et al.* 2008). These threats are possible with the increased use of BWI for the Gorgon Gas development despite a comprehensive quarantine management system being in place. As a result, and as part of the offset program, additional secure populations needed to be created through a translocation program.

The translocation proposal to move Golden Bandicoots from BWI to Doole Island outlines criteria for success in the short-term (release – 1 year), criteria for success in the medium long term (1-5 years) and criteria for failure/triggers for action. The results from our monitoring should inform us as to which of these criteria have been met. These criteria are as follows:

### Criteria for success of the translocation in the short term (release- 1 year)

1.1 Survival of 60% of the released founder population on Doole Island

1.2 Recruitment of new individuals

1.3 Establishment of stable body weights within six months of release

### Criteria for success in the medium-long term (1-5 years)

2.1 Ongoing persistence of the population on Doole island

- 2.2 A trap success rate of at least 20%
- 2.3 Continued recruitment of new individuals (conceived on Doole Island)
- 2.4 Population expansion to all suitable habitat on Doole Island

Criteria for failure/triggers for action

- 3.1 Greater than 40% mortality of released animals on Doole island in the first year
- 3.2 Sustained, significant body weight loss (taking into account seasonal variations)
- 3.3 Lack of evidence of breeding within the population
- 3.4 No bandicoot recruitment over a 12 month period

At this time, we are aiming to have fulfilled the short term criteria for success and are looking for indications that success in the medium-long term will also be achieved.

## **Methodology**

### *Translocation*

BWI is an A Class Nature Reserve located approximately 55km off the Pilbara coastline of northwest Western Australia (20°48'32.57"S, 114°09'43.19"E; Fig 1A). The translocation of golden bandicoots from BWI occurred in July 2011. Animals were trapped using medium sized aluminum Elliott traps (Elliott Scientific Company, Upwey, Victoria) and medium sized wire cage traps (Sheffield Wire Products, Welshpool, Western Australia) which were baited with a mix of peanut butter, sardines and oats. Three locations on the island were trapped; the construction village, an operations centre and an area in John Wayne Country. There was a total trapping effort of 312 trap nights. All animals were implanted with a passive integrated transponder (PIT), each encoded with an individual number to be used for identification. Animals were also weighed, had their head and long pes measured and tissue samples were taken for later genetic work. Sex and the reproductive status of females was recorded. Animals were held in black bags and were transported in these black bags within plastic pet packs. Animals were flown via light aircraft from BWI to the Bullara Station air strip, then transported via car to the nearby coast and transferred via boat to Doole Island.

Doole Island is a nature reserve located at the southern end of the Exmouth Gulf, 210km from BWI. Doole island was chosen for translocation due to its size (210 ha), as it has a similar climate and geology to BWI, it represents habitat present on BWI, it is vermin free and there were no other animals present on the island which filled the niche used by the golden bandicoot. Once animals arrived on Doole Island they were held in the shade until sunset when they had a health check and were released. Animals were released at two different locations, one at the northern end of the island (22°26'50.51"S, 114°10'11.57"E; Fig 1B) and the second in the middle of the island on the east side (22°28'22.70"S, 114°09'48.35"E; Fig 1B). All animals were released on Doole Island within 24 hours of being caught on BWI.



**Figure 1:** (A) Locality map showing Barrow island (the location of the original population), and the translocation locations for Golden bandicoots Hermite Island, Doole Island and Lorna Glen. (B) Doole Island, showing the location of the northern release point and trapping grid (N) and the southern release point and trapping grid (S).

### *Monitoring*

Since the translocation in July 2011, three monitoring trips have occurred to Doole Island (September 2011, November 2011 and May 2012). These were co-ordinated and undertaken by Nature Conservation Division, Exmouth and Science Division staff. Two grids, designated as 'northern' and 'southern' according to their location on the island were established in order to monitor the bandicoots (Northern 50K 208722.88 E, 7514865.65 S; Southern 50K 208109.27 E, 7512225.33 S; Fig 1B). The northern grid is easily accessible on foot from the camp site, while the southern grid requires either a 40 minute walk or a boat ride. Both grids consist of 50 trap points (five lines of ten, 25 m apart) each marked with a post and trap number. Animals were trapped using medium sized aluminum Elliott traps baited with a peanut butter and oats bait mix. The trapping effort in the September session was 300 trap nights (150 per grid), while in November and May the effort was 400 trap nights (200 per grid).

Traps were checked immediately after sunrise, in accordance with Standard Operating Procedure 9.1 'Elliott traps for live capture of terrestrial vertebrates'. Animals were weighed and all animals over 100g were PIT tagged. Measurement of head and long pes length were taken, sex was checked as was the pouch condition of females. During the May 2012 monitoring effort, tissue was taken from all Doole Island born animals caught and stored in 70% ethanol. Animals were released immediately after processing.

During the summer between 2011 and 2012 a lightning strike started a fire which burnt approximately one third of the island (Fig 2). During the May 2012 session a walk through of the burnt area was done in order to assess the damage and look for signs of activity from bandicoots, other fauna and flora recovery.



**Figure 2:** Aerial view of the fire scar on Doole island resulting from a fire started by lightning strike in the 2011/2012 summer.

## **Results**

### *Translocation*

A total of 92 adult bandicoots were translocated from BWI to Doole Island. Of these, 43 were female and 49 were male. At the northern site 65 animals were released (28 females, 37 males) and at the southern site 27 animals were released (15 females and 12 males). All animals which were translocated arrived and were released in a healthy condition.

### *Monitoring*

Since release, bandicoots have spread out over the majority of the island. Evidence of movement was noted in the first monitoring session when animals released in one grid in July had moved the 2.5km to the other grid by September. During the November monitoring session, the southern beaches of Doole Island were checked for tracks and presence of bandicoots was confirmed.

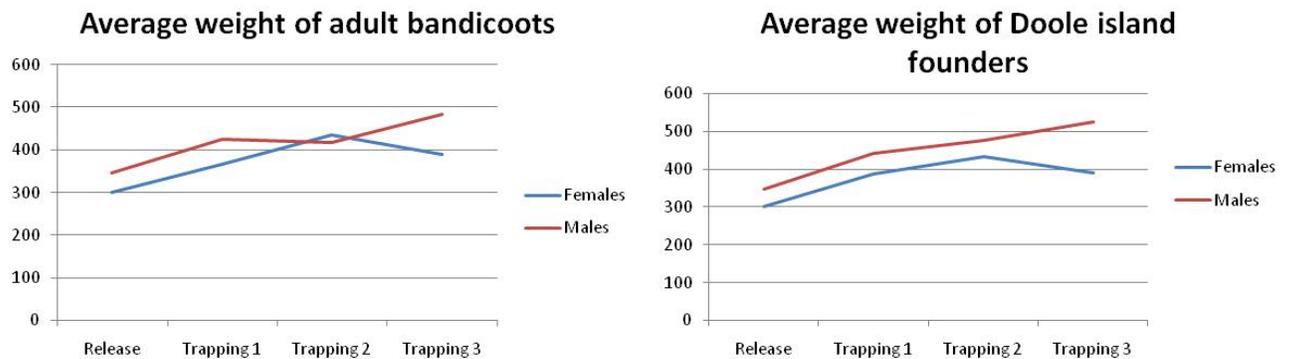
High numbers of reproductive females (either with pouch young or elongated teats and enlarged mammary glands) have been recorded. This was most evident in the September and November trapping sessions with 70.5% and 94% of females, respectively, being in a fecund state. This number did drop to 9.3% in May, however during this session there was evidence of recruitment with 30 new animals being tagged. In total 52 new bandicoots have been tagged since initial release with five more animals having been caught which were too small for PIT's. Based on PIT tagged animals the

population on Doole Island has increased, with 77 individuals caught in the most recent monitoring session (Table 1).

**Table 1:** Measure of Doole island population using known to be alive index. Only animals with PIT tags were included in calculations.

Date (Event)	2011/07 (Release)	2011/09 (Trap)	2011/11 (Trap)	2012/05 (Trap)
KTBA	92	61	59	77

Animals have been steadily increasing in weight since release with male founders increasing from an average of 347g to 524g and females increasing from 300g to 391g (Fig 3). This weight increase in the founding animals has also been reflected in the overall population (Fig 3). Handlers during animal processing have also noted that animals have continued to be in a healthy state.



**Figure 3:** (A) Average weight in grams of animals at release and all animals caught in follow up trapping sessions. (B) Average weight in grams of animals translocated individuals at and in follow up trapping sessions

The walk through the burnt area of the island in May 2012 showed that the area was still being used by bandicoots despite lack of cover and vegetation. Diggings and tracks from bandicoots were observed throughout the burnt area. Also observed were fresh diggings and tracks from *Varanus sp.*, presumed to be *Varanus gouldii* as there have been individuals sighted on the island. Overall the island appeared to be in very good shape. The vegetation (most notably *Triodia sp.*) had grown to be higher and thicker in the May trip as compared to the other sessions and plants had also started to come back throughout the burnt area.

## Summary

At this stage monitoring sessions are indicating that two of the three short term criteria for success having been fulfilled, all medium to long term criteria likely to be achieved and no criteria for failure have been observed.

Bandicoots have colonized all parts of the island indicating that the habitat is suitable for survival, supporting criteria 2.4 for success in the medium-long term. The initial movement between grids would be part of the establishment period, individuals moving

to find space and resources suitable for themselves. As this kind of movement was not observed in later sessions it is likely the population as a whole has settled and established, at least in the northern half of the island where the grids are situated.

Initial high levels of reproduction is another good indication of the suitability of the island. Golden bandicoots have the ability to breed year round, however this is resource dependent (Southgate *et al.* 1996). Only one female caught with pouch young on Doole Island could still have had pouch young from Barrow Island. All other females had to have given birth on Doole Island as the pouch young they were recorded carrying were either smaller than those they were carrying when translocated or they had more pouch young than they were translocated with. This reproduction would most likely be the result of suitable and high levels of resources. If this level of reproduction continues to be recorded in future monitoring then the medium-long term criteria for success 2.3 will be fulfilled.

The drop in reproduction recorded in May could be the result of the island reaching carrying capacity, but may be due to a resource drop from the fire or a pause in breeding following and intense reproduction effort from the females who may still have young at foot. It is hard to know the exact cause of this breeding drop off, but more information will be gained from further monitoring sessions. Given the increased growth of vegetation observed on the island over the summer outside the burnt area and the regrowth already occurring in the burnt area it is most likely that breeding will continue, as will successful recruitment.

The total number of tagged individuals caught in May 2012 is more evidence of successful establishment of this species on Doole Island. The recruitment of 52 new animals just on the two monitoring grids more than supports the short term criteria for success 1.2. The number of animals caught on the two grids has steadily increased during the monitoring sessions, with a particularly high increase between November and May (most likely due to recruitment, rather than adult animals moving in). The trapping success rate in May 2012 was 43%, meeting the medium to long term success criteria 2.2. The number of animals known to be alive is still lower than the number released on the island, but this is to be expected as we are only trapping a small area of the island and the evidence of bandicoot visitation which has been observed indicates that the released individuals have spread throughout most of the available space. For this same reason the first criteria for success in the short term has not been met (1.1), only 55% of founders have been caught since release on the island. However the converse criteria for failure (3.1) has not been fulfilled at all, as we have no evidence of any mortality of the animals released on the island.

Finally, the increase in weight and maintained good condition of individuals is also indicative of successful establishment on the island. If the habitat was not suitable, the resources were too low or the animals were under stress then we would expect to see weights drop and animals in poor condition – this has not been the case. The male bandicoots give a better indication of the overall weight gain by the animals as their weights are not confounded by pouch young. Male founders have gained on average more than 50% of their initial body weight, while the average weight for the overall male population has increased by almost 39%. Females have lost weight over the monitoring period despite an initial gain; but this is due to reduced breeding, females carrying pouch young dropped from 59% of the female population to zero. Despite this, the average weight of Doole Island female bandicoots is still above their initial release weights. Short

term criteria for success states that stable body weights should be established within six months of release, at this point female body weights appear to be stabilizing but male weight are still continuing to rise. This criteria may not be completely fulfilled, however, this criteria is based on the assumption that animals will initially lose weight post release. As both sexes have maintained and/or exceeded the initial average release weights, this criteria has been exceeded.

It appears that the fire had a minimal effect on the bandicoot population as abundance increased at both grids. It does not appear to have had an effect on the health of the animals but may have potentially caused a pause in breeding. Given that animals have been using the area that was burnt and the continued health of animals caught on the grids which were both within close proximity to the fire, it is unlikely that the overall population has been greatly affected by this event.

### **Future work**

The successful training of the Exmouth District staff in animal processing techniques and in particular the PIT tagging process means that Exmouth staff can now independently and confidently run the future monitoring sessions at Doole Island. It is hoped that annual monitoring will continue from 2013 onwards with support from Science Division staff as required.

After each monitoring trip, copies of data sheets and a report summarizing the activities for the monitoring period should be passed on to Science Division staff. Data from each trip will be inputted into the Gorgon database, with the active copy of the data base to be held with Science Division.

Other works which need to be addressed in the future include assessment of weeds on the island such as Buffel grass and Kapok as well as their spread, continued vigilance for the presence of Shark Bay mice and black rats, and the continuation of the bird list.

### **References**

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Short, J. and Smith, A. (1994). Mammal decline and recovery in Australia. *Journal of Mammalogy*, **75**: 288-297.

Southgate, R., Palmer, C., Adams, M., Masters, P., Triggs, B. and Woinarski, J. (1996). Population and habitat characteristics of the Golden Bandicoot (*Isoodon auratus*) on Marchinbar Island, Northern Territory. *Wildlife Research* **23**:647-664.

## **Appendix 1.**

### **Trapping gear**

Black handling bags

Bait:

-'Quick cooking' oats

-Peanut butter

Bait holding buckets

Trapping kits x 2 each containing:

-Scanner

-Spare battery for scanner

-PIT tags

-2 x pit tag applicators

-2 x tissue glue

-Mediswabs

-Calipers (plastic preferable to metal, dial preferable to digital)

-Spring scales 1kg, 600g and 300g (pesola)

-Ear punches

-Tissue vials (with 100% ethanol)

-Forceps

-Fine scissors

-Fixamul

-Betadine

Data sheets

Clip boards

PIT tag list for current individuals

## Appendix 2

### PIT tag list of current individuals

DOOLE GB Days Alive								
Sex	PIT	1st Location	Grid	MaxOfWt (g)	First Date	Last Date	Days Alive	Tissue
F	129806	Doole Is	North	130	11/05/2012	11/05/2012	0	1
F	131323	Doole Is	North	105	11/05/2012	11/05/2012	0	1
F	132536	Doole Is	North	295	9/05/2012	9/05/2012	0	1
F	133036	Doole Is	North	310	8/05/2012	10/05/2012	2	1
F	133133	Doole Is	North	165	8/05/2012	9/05/2012	1	1
F	133434	Doole Is	South	120	9/05/2012	11/05/2012	2	
F	155824	Doole Is	South	570	11/11/2011	11/05/2012	182	
F	169115	Doole Is	North	120	22/09/2011	22/09/2011	0	
F	208149	Doole Is	North	150	10/05/2012	10/05/2012	0	1
F	309977	BWI	North	450	13/07/2011	11/05/2012	303	1
F	310781	BWI	Doole	200	13/07/2011	13/07/2011	0	1
F	311394	BWI	Doole	340	12/07/2011	12/07/2011	0	1
F	312090	BWI	Doole	175	15/07/2011	15/07/2011	0	1
F	314754	BWI	Doole	205	13/07/2011	13/07/2011	0	1
F	315046	BWI	Doole	270	12/07/2011	12/07/2011	0	1
F	315693	BWI	Doole	335	12/07/2011	12/07/2011	0	1
F	316823	BWI	North	475	13/07/2011	11/05/2012	303	1
F	394782	BWI	Doole	270	13/07/2011	13/07/2011	0	1
F	411135	Doole Is	North	340	20/09/2011	10/05/2012	233	
F	415198	Doole Is	North	195	20/09/2011	21/09/2011	1	
F	484287	BWI	North	420	13/07/2011	11/05/2012	303	1
F	484594	BWI	Doole	245	13/07/2011	13/07/2011	0	1
F	488546	BWI	Doole	270	15/07/2011	15/07/2011	0	1
F	493004	BWI	North	565	13/07/2011	11/05/2012	303	1
F	493117	BWI	North	480	13/07/2011	11/05/2012	303	1
F	502061	BWI	Doole	365	12/07/2011	12/07/2011	0	1
F	509001	BWI	Doole	270	12/07/2011	12/07/2011	0	1
F	510583	BWI	Doole	370	13/07/2011	13/07/2011	0	1
F	514811	BWI	South	440	12/07/2011	9/05/2012	302	1
F	522369	BWI	Doole	100	13/07/2011	13/07/2011	0	1
F	522801	BWI	North	500	12/07/2011	11/05/2012	304	1
F	523133	BWI	Doole	195	15/07/2011	15/07/2011	0	1

**DOOLE GB Days Alive**

Sex	PIT	1st Location	Grid	MaxOfWt (g)	First Date	Last Date	Days Alive	Tissue
F	532656	BWI	North	565	12/07/2011	9/05/2012	302	1
F	534913	BWI	Doole	315	15/07/2011	15/07/2011	0	1
F	545353	BWI	North	395	12/07/2011	11/05/2012	304	1
F	546480	BWI	Doole	320	13/07/2011	13/07/2011	0	1
F	547465	BWI	Doole	310	15/07/2011	15/07/2011	0	1
F	580646	BWI	Doole	405	13/07/2011	13/07/2011	0	1
F	583728	BWI	North	350	13/07/2011	10/11/2011	120	1
F	584011	BWI	Doole	245	15/07/2011	15/07/2011	0	1
F	585066	BWI	North	515	13/07/2011	10/05/2012	302	1
F	586185	BWI	Doole	210	15/07/2011	15/07/2011	0	1
F	590251	BWI	North	365	12/07/2011	10/05/2012	303	1
F	591260	BWI	Doole	415	15/07/2011	15/07/2011	0	1
F	597226	BWI	South	560	15/07/2011	10/05/2012	300	1
F	602657	BWI	Doole	320	15/07/2011	15/07/2011	0	1
F	611895	BWI	North	330	13/07/2011	11/05/2012	303	1
F	612611	BWI	Doole	280	15/07/2011	15/07/2011	0	1
F	616875	BWI	North	410	12/07/2011	9/05/2012	302	
F	633270	BWI	Doole	230	15/07/2011	15/07/2011	0	1
F	645461	BWI	South	440	15/07/2011	11/05/2012	301	1
F	650749	BWI	South	430	15/07/2011	9/05/2012	299	1
F	654731	BWI	Doole	170	12/07/2011	12/07/2011	0	1
F	661678	BWI	South	630	15/07/2011	11/05/2012	301	1
F	715486	Doole Is	South	260	9/05/2012	10/05/2012	1	1
F	715595	Doole Is	South	510	8/05/2012	10/05/2012	2	1
F	715803	Doole Is	South	315	8/05/2012	10/05/2012	2	1
F	716291	Doole Is	South	310	8/05/2012	10/05/2012	2	1
F	752951	Doole Is	South	250	9/05/2012	11/05/2012	2	
F	753367	Doole Is	South	345	8/05/2012	8/05/2012	0	1
M	097073	Doole Is	South	270	10/05/2012	10/05/2012	0	1
M	130314	Doole Is	South	550	9/11/2011	9/05/2012	182	
M	130338	Doole Is	South	310	11/05/2012	11/05/2012	0	1
M	130436	Doole Is	South	560	9/11/2011	10/05/2012	183	
M	130567	Doole Is	South	190	11/05/2012	11/05/2012	0	1
M	130734	Doole Is	North	300	10/05/2012	10/05/2012	0	1
M	131280	Doole Is	North	405	9/05/2012	11/05/2012	2	1
M	131415	Doole Is	North	410	9/05/2012	10/05/2012	1	1
M	131476	Doole Is	South	255	11/05/2012	11/05/2012	0	1

**DOOLE GB Days Alive**

Sex	PIT	1st Location	Grid	MaxOfWt (g)	First Date	Last Date	Days Alive	Tissue
M	131509	Doole Is	South	370	9/05/2012	11/05/2012	2	
M	131538	Doole Is	South	505	8/11/2011	8/11/2011	0	
M	131843	Doole Is	North	210	11/11/2011	11/11/2011	0	
M	132213	Doole Is	North	310	10/05/2012	11/05/2012	1	
M	132272	Doole Is	North	420	9/11/2011	11/05/2012	184	
M	132416	Doole Is	South	490	10/05/2012	10/05/2012	0	1
M	154661	Doole Is	North	220	21/09/2011	22/09/2011	1	
M	155561	Doole Is	North	420	22/09/2011	9/05/2012	230	
M	157233	Doole Is	North	165	21/09/2011	21/09/2011	0	
M	182969	Doole Is	North	495	9/11/2011	11/05/2012	184	
M	183499	Doole Is	North	200	9/11/2011	10/11/2011	1	
M	183630	Doole Is	South	110	21/09/2011	21/09/2011	0	
M	185607	Doole Is	South	120	22/09/2011	22/09/2011	0	
M	189554	Doole Is	South	655	22/09/2011	11/05/2012	232	
M	207616	Doole Is	South	290	10/11/2011	11/11/2011	1	
M	207847	Doole Is	South	405	10/05/2012	10/05/2012	0	1
M	207876	Doole Is	South	730	10/11/2011	9/05/2012	181	
M	208218	Doole Is	South	260	10/05/2012	11/05/2012	1	
M	210028	Doole Is	North	165	9/05/2012	10/05/2012	1	1
M	211307	Doole Is	North	330	10/05/2012	10/05/2012	0	1
M	311270	BWI	North	605	13/07/2011	9/05/2012	301	1
M	315033	BWI	South	330	15/07/2011	9/11/2011	117	1
M	391977	BWI	North	550	12/07/2011	11/05/2012	304	1
M	413411	Doole Is	North	125	20/09/2011	22/09/2011	2	
M	416285	Doole Is	North	350	9/11/2011	9/11/2011	0	
M	437614	Doole Is	South	140	23/09/2011	23/09/2011	0	
M	483215	BWI	South	455	13/07/2011	10/05/2012	302	1
M	488672	BWI	North	370	15/07/2011	21/09/2011	68	1
M	489248	BWI	North	510	13/07/2011	11/05/2012	303	1
M	492533	BWI	North	545	13/07/2011	11/11/2011	121	1
M	494779	BWI	South	390	15/07/2011	23/09/2011	70	1
M	499736	BWI	Doole	325	13/07/2011	13/07/2011	0	1
M	501504	BWI	North	580	12/07/2011	9/05/2012	302	1
M	505397	BWI	North	440	12/07/2011	10/11/2011	121	1
M	507497	BWI	South	640	13/07/2011	11/11/2011	121	1
M	510905	BWI	North	610	13/07/2011	11/05/2012	303	1

**DOOLE GB Days Alive**

Sex	PIT	1st Location	Grid	MaxOfWt (g)	First Date	Last Date	Days Alive	Tissue
M	513855	BWI	South	645	15/07/2011	8/05/2012	298	1
M	518636	BWI	Doole	575	13/07/2011	13/07/2011	0	1
M	520780	BWI	Doole	285	13/07/2011	13/07/2011	0	1
M	521278	BWI	Doole	270	12/07/2011	12/07/2011	0	1
M	524897	BWI	Doole	385	12/07/2011	12/07/2011	0	1
M	532428	BWI	Doole	200	13/07/2011	13/07/2011	0	1
M	533187	BWI	South	600	13/07/2011	11/05/2012	303	1
M	536438	BWI	South	380	12/07/2011	11/05/2012	304	1
M	537168	BWI	South	400	13/07/2011	22/09/2011	71	1
M	537182	BWI	North	465	13/07/2011	11/11/2011	121	1
M	537605	BWI	South	500	12/07/2011	23/09/2011	73	1
M	540653	BWI	Doole	575	13/07/2011	13/07/2011	0	1
M	542307	BWI	North	490	13/07/2011	11/05/2012	303	1
M	543402	BWI	North	600	13/07/2011	9/11/2011	119	1
M	544724	BWI	Doole	325	13/07/2011	13/07/2011	0	1
M	583165	BWI	North	580	12/07/2011	10/05/2012	303	1
M	587242	BWI	North	490	12/07/2011	11/05/2012	304	1
M	588613	BWI	Doole	505	13/07/2011	13/07/2011	0	1
M	589383	BWI	North	410	12/07/2011	22/09/2011	72	1
M	592583	BWI	North	600	13/07/2011	10/05/2012	302	1
M	593423	BWI	South	490	15/07/2011	11/11/2011	119	1
M	593962	BWI	North	565	12/07/2011	10/05/2012	303	1
M	597276	BWI	Doole	270	12/07/2011	12/07/2011	0	1
M	597843	BWI	North	555	12/07/2011	10/05/2012	303	1
M	599651	BWI	Doole	450	15/07/2011	15/07/2011	0	1
M	602607	BWI	Doole	335	13/07/2011	13/07/2011	0	1
M	605033	BWI	Doole	355	15/07/2011	15/07/2011	0	1
M	626653	Doole Is	North	520	8/05/2012	8/05/2012	0	
M	636653	BWI	North	500	13/07/2011	10/05/2012	302	1
M	636723	BWI	South	430	12/07/2011	10/05/2012	303	1
M	637273	BWI	Doole	305	15/07/2011	15/07/2011	0	1
M	638745	BWI	South	440	12/07/2011	11/05/2012	304	1
M	645161	BWI	South	595	15/07/2011	11/05/2012	301	1
M	650987	BWI	Doole	560	15/07/2011	15/07/2011	0	1
M	651232	BWI	Doole	440	15/07/2011	15/07/2011	0	1
M	656559	BWI	Doole	425	15/07/2011	15/07/2011	0	1
M	660421	BWI	North	610	12/07/2011	11/05/2012	304	1

**DOOLE GB Days Alive**

<b>Sex</b>	<b>PIT</b>	<b>1st Location</b>	<b>Grid</b>	<b>MaxOfWt (g)</b>	<b>First Date</b>	<b>Last Date</b>	<b>Days Alive</b>	<b>Tissue</b>
M	715425	Doole Is	South	495	8/05/2012	11/05/2012	3	1
M	715903	Doole Is	South	370	9/05/2012	11/05/2012	2	
M	752914	Doole Is	South	270	8/05/2012	10/05/2012	2	1

