



# SGS Albatross and Prion Islands Monitoring Programme

## 2010 Annual Report



*Visitors on the boardwalk at Prion Island, January 2010*

Prepared by Sally Poncet, South Georgia Surveys  
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## Acknowledgements

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**Cover photo** – Nest #17, 4.5 metres from the end of the lowest viewing platform on Prion Island, 11 January 2010.

## Summary

2010 was the 12<sup>th</sup> year of the annual seabird and habitat monitoring programme on Albatross and Prion Islands. The research is managed by South Georgia Surveys (SGS), a Falkland Islands-based research group. Collaboration with the South Georgia Government (GSGSSI) began in 2008 and is due for review at the end of 2010. Funding for the programme is currently provided by the Government of South Georgia and the South Sandwich Islands, with additional funds from the "Protect Our Poles" Fund (administered by the Calgary Zoological Society) and The Antarctic Research Trust.

The main aim of this research programme is to monitor distribution and abundance of wandering albatross and giant petrel populations and seabird breeding habitat on Albatross and Prion Islands. Research is carried out in accordance with terms stipulated in the 2008 letter of agreement between SGS and GSGSSI. Logistical support for the programme is provided by GSGSSI's FPV *Pharos SG* supplemented by occasional yacht support.

Fieldwork requires 12-15 days each year. The majority takes place in January when two personnel from SGS spend 7-10 days camping on Albatross Island including a half a day visit to Prion Island to carry out the following activities:

1. Recording coordinates of nests of all wandering albatross and giant petrels on Prion Island;
2. Recording coordinates of nests of all wandering albatross on Albatross Island, and of nests of giant petrels in two study colonies;
3. Documenting plant communities, numbers of fur seals and seal impact on vegetation within a radius of 5 and 25 metres from each nest;
4. A census of light-mantled sooty albatrosses on Albatross Island.

An additional two half days are required to count wandering albatross chicks on Prion Island in April/May and October/November. This fieldwork is carried out by BAS personnel from King Edward Point.

Survey data and images are held by South Georgia Surveys.

### 2010 fieldwork

Principal scientist and project officer (Sally Poncet, SGS) and co-researcher (Ken Passfield, SGS) travelled to South Georgia on board FPV *Pharos SG* in late December 2009, and set up a field camp on Albatross Island for the period 31 December-6 January. On 6 January, the team transferred to SV *Golden Fleece* for the remainder of the field work period (6-12 January). Fieldwork on Albatross Island took place 31 December - 6 January, with further day visits made between 6 and 12 January. Prion Island fieldwork was carried out on day visits on 7 and 12 January. For a full account, refer to the January 2010 Fieldwork Report.

The Prion Island hatchling chick count, usually carried out by BAS personnel from King Edward Point in April/May, was cancelled this year following discussions with SGS and GSGSSI, when it was agreed that the count was not essential for the purpose of documenting annual chick survival. Other factors which influenced this decision were the logistical difficulties that have arisen in getting BAS personnel to Prion at this time of year.

The second Prion Island visit to census surviving chicks before the start of fledging in mid-November had to be brought forward to late September, due to ship and BAS personnel availability. The count should ideally be done in early November. BAS zoological assistant Jon Ashburner, assisted by BAS personnel Richard Inman and Paula O'Sullivan from King Edward Point did the census on 26 September. They traveled to Prion Island from King Edward Point on FPV *Pharos SG*. A short report on the visit is presented below.

## 2010 Results

- Thirty three pairs of wandering albatross were recorded on Prion Island on 11 January 2010 (see Fig. 1).
- Twenty eight fledglings were present on nests on Prion Island on 26 September 2010, and five nests had failed since January.
- Nine wanderers on nests on Prion Island were in view of the boardwalk. Of these, five were less than 25m away, the closest (#17) being only 4.5m from the end of the lower viewing platform. Of the nine nests in view, one had failed by 26 September (nest #18, 30m from the boardwalk). There were no active display nests recorded within 25m of the boardwalk in January.
- 129 pairs of wandering albatross were recorded on Albatross Island in January, a substantial decline from 2009 (140 pairs) (see Fig 2).
- Photographs were taken of each incubating wanderer and fledgling on Prion Island.
- Photographs of vegetation damage on Albatross Island were taken from established photopoints.
- One Bird Island-banded male wandering albatross was recorded on egg on Albatross Island; one Bird Island-banded female was present with partner on Prion Island but did not breed this year. Both birds have been recorded breeding in previous seasons.
- Southern and northern giant petrel numbers on Prion totaled 33 pairs of southern and 37 of northern (Fig. 3). In the study colonies on Albatross Island there were 35 pairs of southern and 27 pairs of northern (Fig. 4).
- Four pairs of light-mantled sooty albatrosses were recorded on Albatross Island (Fig 5).
- No marine debris was recorded at any wandering albatross or giant petrel nests and no fur seal entanglements were seen.

All data are archived in Excel spreadsheets; nest positions and fur seal and vegetation-linked data can be plotted using mapping software; examples are shown in Figs. 1-5.

Year	No. nests with eggs in January		No. chicks in April/May	No. chicks in Sep/Oct
	Albatross Island	Prion Island	Prion Island	Prion Island
1999	174	40		32
2000	158	40		32
2001	175	42		
2002	133	35		
2003	144	30		
2004	151	41		
2005	144	33		
2006	153	35		
2007	131	28		
2008	151	33	29 (11 April)	29 (19 October)
2009	140	31	27 (7 May)	27 (13 October)
2010	129	33		28 (26 September)

Table 1. Population data for wandering albatross populations on Albatross and Prion Islands for the period 1999-2010.

PRION ISLAND WANDERING ALBATROSS DATA FORM (abridged): NESTS WITH EGGS, JANUARY 2010																
Stake number	Latitude	Longitude	Altitude	%cover_tussac_5mradius	%cover_Other_Veg_5mradius	%cover_bare_ground_5mradius	Type_of_veg	Tussac_height_5mradius	%tussac_dark_green_5mradius	%tussac_green_5mradius	%tussac_yellow_5mradius	Other_birds_5mradius	Num_seals_5mradius	Seal_age_25mradius	Stake number	Latitude
17	-54.02785	-37.25847	41.5	60	40	0	D, C, AM	2	30	50	20	X	0	1	6	2
46	-54.02760	-37.25880	41.8	90	10	0	M, AM	3	30	30	40	B, N	0	0	1	1
8	-54.02782	-37.25920	37.2	80	20	0	D, AM, C,	3	60	20	20	N	0	0	1	2
24	-54.02748	-37.25924	39.3	50	50	0	AM, M	2	0	50	50	X	0	0	0	1
16	-54.02741	-37.25952	37.2	50	50	0	AM, M	2	20	40	40	B, N	0	0	0	1
9	-54.02711	-37.25876	44.5	70	30	0	AM, M	2	10	40	50	B, W	0	0	0	0
7	-54.02726	-37.25863	46.3	60	40	0	D, AM, M	3	10	50	40	N, B	0	0	0	0
15	-54.02735	-37.25869	46.9	50	50	0	D, AM, M	2	10	40	50	B	0	0	0	0
1	-54.02741	-37.25882	43.3	60	40	0	D, AM, M	3	40	30	30	B, N, W	0	0	0	0
35	-54.02758	-37.25838	45.7	50	50	0	D, AM, M	3	40	30	30	B, N, W	0	0	0	0
18	-54.02756	-37.25784	40.8	60	40	0	AM, M, D	3	40	30	30	N	0	0	0	0
25	-54.02765	-37.25804	43.6	60	40	0	AM, M, D	3	50	20	30	B	0	0	0	0
22	-54.02787	-37.25755	50	100	0	0		3	90	0	10	B	0	1	1	2
12	-54.02791	-37.25792	48.8	90	5	5	D	3	80	10	10	B	0	1	3	2
54	-54.02831	-37.25742	46	90	10	0	D, C, AM	3	80	10	10	X	0	1	2	2
19	-54.02789	-37.25721	52.4	80	20	0	D, C, AM	3	90	0	10	B	0	0	0	0
5	-54.02800	-37.25704	45.7	100	0	0		3	30	30	40	B	0	2	0	2
10	-54.02734	-37.25745	46	60	40	0	D, M, AM	2	10	40	50	N	0	0	0	0
53	-54.02685	-37.25837	42.1	60	40	0	M, F	2	30	20	50	X	0	0	0	0
11	-54.02731	-37.25720	50	60	40	0	R, D, AM,	2	30	30	40	N, B	0	0	0	0
20	-54.02717	-37.25684	53.3	60	40	0	AM, M	2	0	50	50	X	0	0	0	0
60	-54.02721	-37.25674	49.7	70	30	0	AM, M	2	10	40	50	B	0	0	0	0
39	-54.02697	-37.25584	48.5	90	10	0	D, AM	2	20	40	40	G, N	0	0	0	0
59	-54.02655	-37.25618	48.8	60	40	0	D, M, F	2	10	40	50	B	0	0	0	0
13	-54.02607	-37.25618	44.2	70	30	0	M, AM, D	2	0	50	50	X	0	0	0	0
29	-54.02580	-37.25640	41.8	60	20	0	M, AM	1	20	40	40	B, N	0	0	0	0
21	-54.02562	-37.25544	40.8	80	20	0	M, AM	2	20	40	40	N	0	0	0	0
2	-54.02555	-37.25574	40.8	50	50	0	M, AM, R	2	0	50	50	X	0	0	0	0
23	-54.02502	-37.25651	46	60	40	0	R, M, AM,	2	10	50	40	B	0	0	0	0
3	-54.02497	-37.25674	40.8	70	30	0	AM, M, D,	2	30	40	30	B, N	0	0	0	0
n/a	-54.02817	-37.26022	25.9	90	10	0	AM, M	3	70	0	30	B	0	2	1	2
4	-54.02781	-37.25998	27.4	70	30	0	AM, M	2	10	40	50	X	0	0	0	0
n/a	-54.02924	-37.25945	32.6	100	0	0		3	90	0	10	X	1	1	4	2

Table 2. Prion Island wandering albatross census data, 7 January 2010

## **Discussion**

### **Wandering albatross**

Although the wandering albatross census data for Prion Island appear to indicate a stable population for this island, the combined population totals for Albatross and Prion Islands show a significant decline: 184 pairs in 2008, 171 in 2009 and 162 in 2010. This is similar to the decline recorded at Bird Island.

Chick survival on Prion Island this year was 85% (5 nests failed out of 33), which is close to the 87% average for the previous two seasons. This failure rate is similar to the long-term average at the Bird Island study colony (R. Phillips pers. comm.). Data from the 2008 and 2009 Prion censuses show that chick mortality was due to egg and chick losses sustained between the January census data and the April/May hatchling count, and that all chicks present in April/ May survived through to the end of winter (see Table 1); similarly high survival rates were recorded at the Bird Island study colony (R. Phillips pers. comm.).

It will be several years at least before the census data indicate any potential effect of the boardwalk on the distribution and abundance of wandering albatrosses and southern and northern giant petrels. Long-term monitoring may show that those pairs with long-established nest sites in close proximity to the boardwalk will continue to nest in the vicinity, while first-time breeders will avoid areas with high levels of fur seal and visitor activity, as has been recorded at Bird Island and New Zealand.

### **Southern and northern giant petrels**

On Prion Island, southern birds dropped from 62 pairs in 2008 to 33 pairs in 2010, and northern birds from 62 to 37 pairs. The decline for southern birds on Albatross Island is similar (89 pairs to 35); however, northern birds remain more or less stable about the same with 24 pairs in 2008, 30 in 2009 and 27 in 2010. Nest failure in 2010 is thought to have been due to heavy snowfalls earlier in the season with many recently abandoned nests seen on both Albatross and Prion Island. It is also possible that birds in the Albatross Island study colonies have simply moved to adjacent areas on that island. The declines on Prion Island are less easily explained since the counts are for the whole island. Continued monitoring is required to determine the long-term population trends for these two species.

### **Fur seal impacts**

The data for fur seal impacts on vegetation have not yet been analysed but from observation, there appeared to be fewer seals hauled out in the tussac than in previous years. This has resulted in increased growth of tussac around wanderer nests at the lower viewing platform on Prion Island, where some of the tussac bogs were masking nests which would have previously been within view from the boardwalk.

## **Future activities**

1. Wandering albatross census – January and November, on Albatross and Prion Islands
2. Giant petrel census – January, on Prion (all-island) and two Albatross Island study sites
3. Light-mantled sooty albatross census – January, on Albatross Island
4. White-chinned petrel transects on Prion Island - needs to be reviewed
5. Fur seal impacts on vegetation – January, on Albatross and Prion Islands
5. Analysis of the 12 year dataset
6. Data entry for the ACAP and BAS GIS databases

Prion Island Chick Census Report, 26 September 2010.

Jon Ashburner, Richard Inman, Paula O'Sullivan, BAS personnel from KEP traveled to Prion Island on FPV *Pharos* SG. They landed on 26 September at 1230, took 4 hours to complete fieldwork and departed the island at 1630. Conditions were fine and sunny with a few intermittent squalls and no delays were experienced in landing.

All 33 nests recorded in January were visited and a total of 28 chicks were counted, and photographs taken of all birds present. All birds seen appeared to be in good condition. Also checked was the site of a well-built nest occupied by a well-established pair on 11 January, in case the pair had laid a late egg and produced a chick. The nest was located but it was empty and there was no indication that it had contained an egg or chick.

Snow covered much of the island. Two thirds of nests had some snow around them, up to 15cm deep in some cases. The nest closest to the boardwalk (#17) had the deepest snow but it is not known if this was caused by drifting around the viewing platform (4.5 m from the nest) where snow was up to the level of the boards.

There were many fur seals on the island. None were recorded in the vicinity of the wanderer nests although there was sign of recent activity around nest #17 in the vicinity of the lower viewing platform.

The numbered plastic stakes that marked each nest were removed as requested (with the exception of #17 which was buried under snow). The stakes were wrapped in a plastic bag and placed next to the lower viewing platform for collection in January.

A note was made of the abundance of South Georgia pipits, and of the fact that the gentoos had started nest-building. The field data and notes were forwarded to Sally Poncet by Jon Ashburner on his return to King Edward Point.



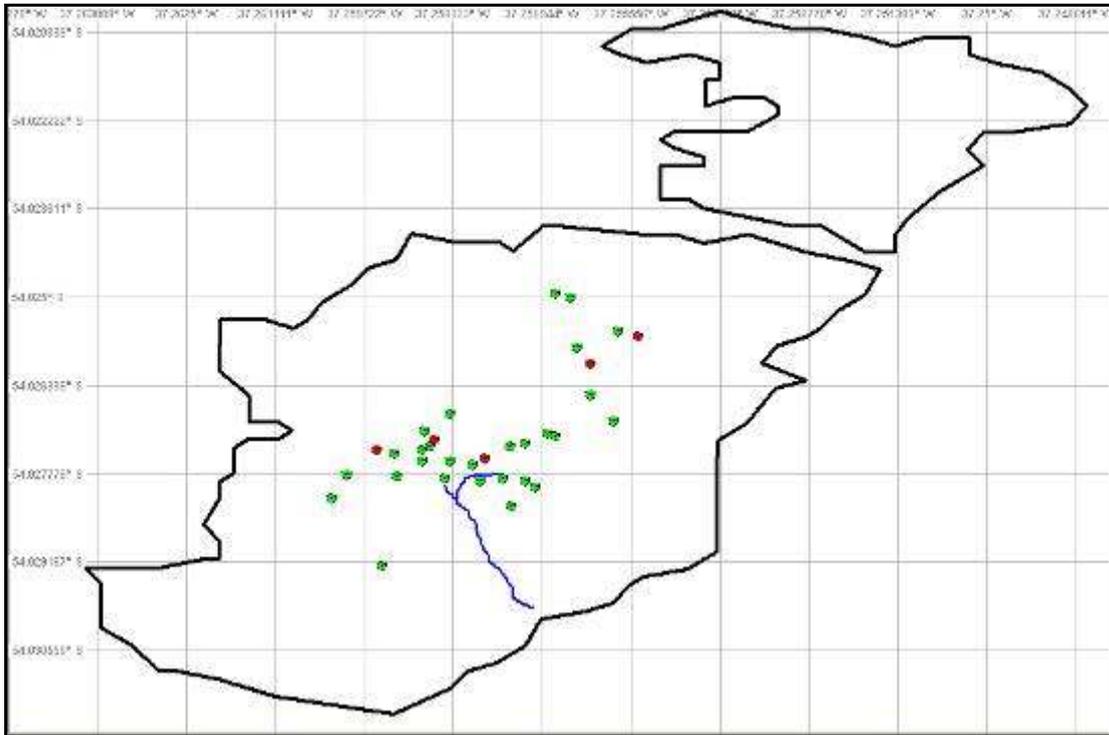


Fig. 1 Location of 33 wandering albatross nests on Prion Island, January 2010: red dots indicate the 5 nests that had failed by September 2010. The boardwalk is shown by the blue line.



Fig. 2. Location of 129 wandering albatross nests on Albatross Island, January 2010.

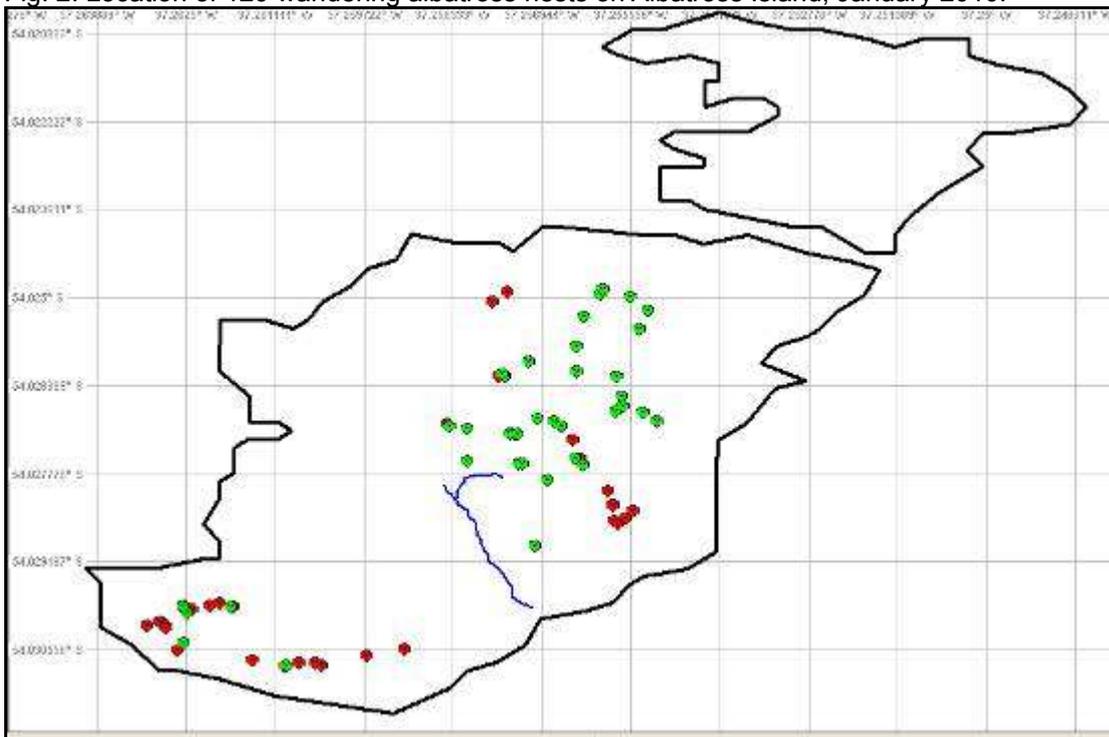


Figure 3. Distribution of southern (green dots) and northern (red dots) giant petrel nests on Prion Island, 12 January 2010. The blue line is the boardwalk.



Figure 4. Distribution of southern (grey dots) and northern (red dots) giant petrel nests in the two long-term study sites on Albatross Island, 6 January 2010.



Figure 5. Distribution of light-mantled sooty albatross nests on Albatross Island, 6 January 2010.