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**ANTARCTIC
PENINSULA
SITE
DESCRIPTIONS**

INCLUSIVITY

From the inception of the Inventory, there has been an effort to survey and census as many sites as possible, and the *Site Compendium* includes information for 82 sites where Inventory researchers have collected data and information from November 1994 through February 2003. One site not included in the *Site Compendium* is Lagotellerie Island (67°53'S, 67°24'W), an Antarctic Specially Protected Area visited in January 1996, presumably inadvertently, by an expedition tour ship on which Inventory researchers were working.

An excellent and much appreciated rapport with expedition ship captains and expedition leaders has enabled Inventory researchers to survey and census additional sites near to where visitors are making zodiac landings, and to census shag and penguin colonies ships pass en route from one location to the next. Also, the Oceanites' collaboration with *HMS Endurance* has enabled Inventory researchers to survey, census, and photodocument even more locations "off" the regular rotation of expedition tourism visits.

These non-"regular" sites include:

Eden Rocks (NE)
Jonassen Island (NE)
Point Obelisk, James Ross Island (NE)
Vapour Col, Deception Island (SH)
Foyen Harbor (NW)
Gouvernøren Harbor (NW)
Lecoite Island (NW)
Priest (Goetschy) Island, Peltier Channel (NW)

All locations, whether "regular" visitor sites or sites where visitors are infrequent or totally absent are included in the *Site Compendium* and noted in the subarea maps. It is hoped that all of these data and site-descriptions ultimately assist further investigation and a better understanding of the Antarctic Peninsula ecosystem.

FORMAT

Site descriptions are grouped according to Inventory subarea and each site description presents the following information:

- Official geographical name, four-letter abbreviation used on Inventory data sheets and throughout the *Compendium*, geographical coordinates, appropriate magnetic declination for surveying, charting, and GPS work), Inventory subarea, level of species diversity and sensitivity to potential environmental impacts (as per Inventory analyses described in Part IV of the *Compendium*); and whether there is restricted visitor space on the regular zodiac landing beach;
- Location, history, prominent onshore, offshore, geological, glaciological, or topographical features, historical artifacts, or official designation as an Antarctic Historic Sites and Monument;
- Landing characteristics (if the site has been visited regularly);
- Antarctic Site Inventory effort, including a chronological listing of visits by Antarctic Site Inventory researchers, 1994-2003, and a summary of Inventory assessment and monitoring activity to date;
- Fauna (penguins, flying birds, wallowing seals) and flora (mosses, lichens, grass, flowering plants) observed;
- Census data from the scientific literature, if available, particularly Woehler (1993) and Woehler & Croxall (1996);
- Antarctic Site Inventory censuses;
- Conservation aspects, including sensitivity to potential environmental disruptions and suggestions ("pointers") for avoiding potential disruptions;
- Visitation aspects, noting the numbers of zodiac landings and visitors participating in such landings, over 13 seasons, from the 1989 to 2002, and other, proximate visitor sites.

The primary sources for site names and coordinates are the *Geographical Names of the Antarctic* (1995) and the *Gazetteer of the Antarctic* (1989).

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SPECIES IDENTIFICATION

Fauna and flora are identified specifically whenever possible; otherwise, the genus is noted and the lack of a specific identification noted (e.g. “skua, spp.” or “Usnea, spp.”).

CENSUS NUMBERS

The site descriptions present penguin and seabird census data collected by the Inventory and previously published (Naveen, et al., 2000), as well as recently collected data and historic censuses reported in Woehler (1993) and Woehler & Croxall (1996). Inventory census data are presented as mean values of all counts achieved during a particular calendar month.

All nest and chick data are presented in the same format suggested in Woehler (1993) and Woehler & Croxall (1996).

Table 3: Format for census data

N1	Nests individually counted, accurate to better than $\pm 5\%$
N2	Nests counted in known area then extrapolated over total colony area, accurate to 5-10%
N3	Accurate estimate, accurate to 10-15%
N4	Rough estimate, accurate to 25-50%
C1	Chicks individually counted, accurate to better than $\pm 5\%$
C2	Chicks counted in known area then extrapolated over total area, accurate to 5-10%
C3	Accurate estimate, accurate to 10-15%
C4	Rough estimate, accurate to 25-50%
A1	Estimates based on counts of total birds or adults individually counted, accurate to better than $\pm 5\%$
A2	Estimates based on counts of total birds or adults individually counted, accurate to 5-10%
A3	Estimates based on counts of total birds or adults individually counted, accurate to 10-15%
A4	Estimates based on counts of total birds or adults individually counted, accurate to 25-50%
Extra large (EL)	>100,000 breeding pairs
Very large (VL)	20,000-99,999 breeding pairs
Large (L)	7,500-19,999 breeding pairs
Medium (M)	1,000-7,499 breeding pairs
Small (S)	100-999 breeding pairs
Very small (VS)	1-99 breeding pairs

Source: Woehler (1993) and Woehler & Croxall (1996)

Conditions and circumstances often prevent Inventory researchers from achieving intended censuses. Also, censuses are not attempted when a visit clearly does not occur within the peak of egg-laying (for nest censuses) or the peak of chick-crèching (for penguin chick censuses) or after seabird chicks have fledged (in the case of blue-eyed shags).

Inventory census data, as well as the data reported in Woehler (1993) and Woehler & Croxall (1996), need to be used carefully. Until correlations are completed, there is no way to confirm whether Inventory counts were obtained at the absolute peak of egg-laying or chick-counts at the absolute peak of chick-crèching, as required by CEMP Standard Methods (Scientific Committee for CCAMLR, 1997). As a result, Inventory nest counts may be useful for general discussions of population size, according to the accuracy of the counting method used; however, until correlations are completed, these data are not sufficiently rigorous for use in productivity determinations under the CEMP Standard Methods.

Based on Woehler (1993), Appendix 7 presents summary data on World and Antarctic Peninsula populations of the four penguin species regularly censused by the Inventory — Adélie, gentoo, chinstrap, and macaroni.

The site descriptions occasionally refer to “large” numbers of fur seals hauling-out on beaches of various landing sites. In this instance, the reference is >50 individual animals.

MAPS AND PHOTODOCUMENTATION

Many of the descriptions are supplemented by site-specific photo-documentation. There are orientation maps of sites the Inventory regularly censuses, and a few others where site sensitivities have been identified.

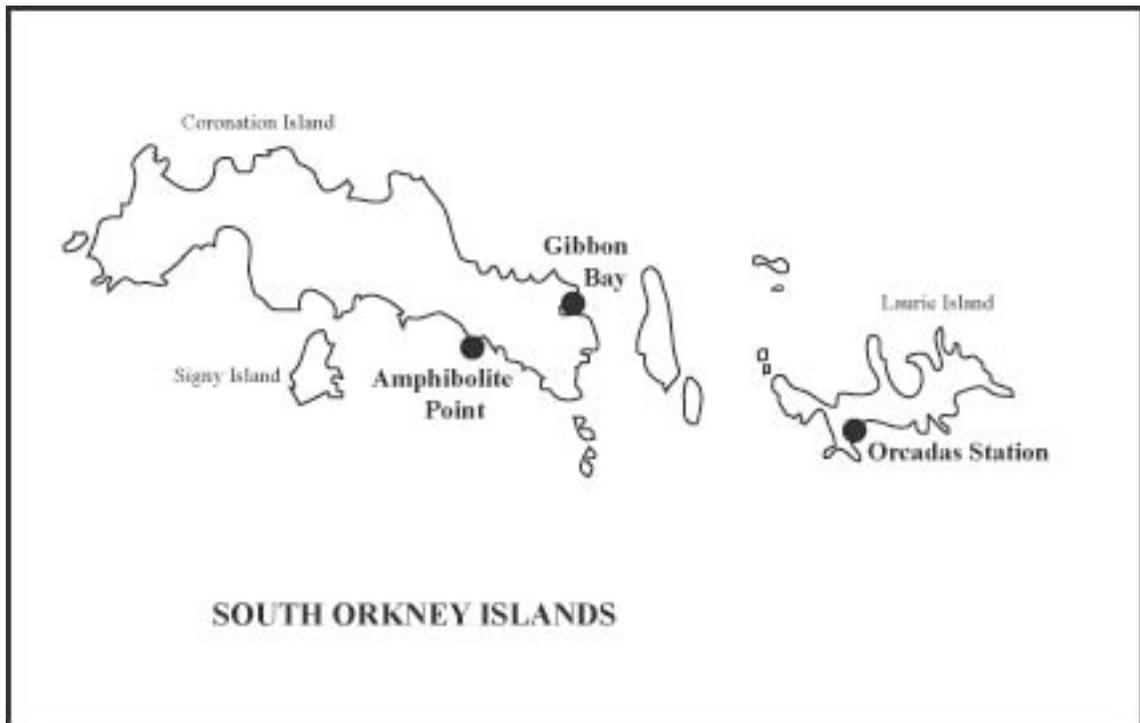
SOUTH ORKNEY ISLANDS (SO) Subarea

Subarea Map

Site Descriptions (3)

- Amphibolite Point (AMPH)
- Gibbon Bay (GIBB)
- Orcadas Station Vicinity (ORCA)

The South Orkneys are the least visited subarea in the Antarctic Peninsula. On departures proceeding south from gateways like Punta Arenas, Chile, or Ushuaia, Argentina, the South Orkneys are decidedly inconvenient, with ships more regularly choosing direct routes across the Drake Passage to the South Shetland Islands. The South Orkneys are a more realistic option on Antarctic Peninsula itineraries that add visits to South Georgia or the Falkland Islands.



Keys:

For acronyms of Antarctic Site Inventory researchers, see Appendix 1 p. 39.

For codes relating to penguin/seabird census/population data, see Table 3, p. 49.

Amphibolite Point (AMPH)

60°41'S, 45°21'W

Magnetic Declination: 2.4° E

Inventory subarea: SO

Inventory acronym: AMPH

Species Diversity: LOW

Site Sensitivity: LOW

Note: Restricted visitor space

Location — History — Features

Conspicuous, pyramidal point located 1.5 mile NW of Saunders Point on the S coast of Coronation island. Named by Falkland island Dependencies Survey after 1948-49 surveys. Named for considerable amount of the metamorphic rock, amphibolite, found on site.

Landing Characteristics

Small cove at base of penguin colony provides narrow, rocky, uphill access to the site.

Antarctic Site Inventory Effort

Visits by Antarctic Site Inventory researchers, 1994-2003:

1. February 22, 2002 RN Endeavour

Assessment and monitoring. Preliminary surveying and population estimates. Regular chinstrap penguin census colonies not identified. Preliminary ground level digital photography achieved. No aerial photodocumentation.

Fauna — Flora — Censuses

Penguins & flying birds. Chinstrap penguins and snowy sheathbills confirmed breeding at time of Inventory visit. One gentoo penguin, dead Adélie penguin chicks also noted. Large area cleared, where Adélie penguins likely breed and which, at time of Inventory visit, had concluded their breeding season and departed.

Recent census data reported in Woehler (1993): chinstrap penguin, 4,000 N4, 1984; and Adélie penguin, 4,000 N4, 1984.

Seals. Southern elephant seals and Antarctic fur seals hauled-out on shore.

Flora. Crustose lichens (spp.) commonly observed.

Conservation Aspects

Site sensitivities. Restricted visitor space among large colony of breeding chinstrap penguins. Fur seals on the rocky landing beach, and in coves along the shoreline.

Pointers for avoiding disruptions:

- Do not impede penguins' access to and from the water.
- Walk slowly and carefully around nesting, crèching, or molting penguins.
- Avoid and stay clear of Antarctic fur seals, which should be given a wide berth and should not be approached.

Visitation Aspects

Numbers of tourist zodiac landings and participating visitors, 1989-2003:

	Zodiac Landings	Participating Visitors
1989-2001:	0	0
2001-02:	1	109
2002-03:	0	0
14-Season Total	1	109

Proximate visitor sites. Laurie Island (Cape Dundas), Gosling Islands, Signy Island, Coronation Island (Gibbon Bay, Shingle Cove, Iceberg Bay).

Gibbon Bay (GIBB)

60°39'S, 45°11'W

Magnetic Declination: 2.3° E

Inventory subarea: SO

Inventory acronym: GIBB

Species Diversity: LOW

Site Sensitivity: LOW

Location — History — Features

A one-mile-long and wide bay along the E coast of Coronation Island. It was first observed in 1821 by Capt. George Powell and Capt. Nathaniel Palmer, recharted in 1933 on *Discovery II* and named for that ship's surgeon.

Landing Characteristics

Very few landings have been reported and no regular locations for zodiac landings are known. Preliminary Inventory data and information were collected via zodiac, which was the most efficient means for surveying this long, wide bay.

Antarctic Site Inventory Effort

Visits by Antarctic Site Inventory researchers, 1994-2003:

- | | | | |
|----|-------------------|----|-----------|
| 1. | February 19, 2003 | MB | Endeavour |
|----|-------------------|----|-----------|

Assessment and monitoring. Very preliminary surveying. No aerial photodocumentation.

Fauna — Flora — Censuses

Penguins & flying birds. Chinstrap penguins are confirmed breeders, and Snowy Sheathbill and Wilson's storm-petrel likely breeders. Kelp gull, southern giant petrel, skua spp., blue-eyed shag, and pintado petrel also observed.

Seals. Leopard seals observed offshore.

Flora. None noted

Conservation Aspects

Site sensitivities. None noted

Visitation Aspects

Numbers of tourist zodiac landings and participating visitors, 1989-2003:

	Zodiac Landings	Participating Visitors
1989-1995:	0	0
1995-96:	1	115
1996-97:	0	0
1997-98:	0	0
1998-99:	0	0
1999-2000:	0	0
2000-01:	0	0
2001-02:	0	0
2002-03:	1	108
14-Season Total	2	223

Proximate visitor sites. Laurie Island (Cape Dundas), Gosling Islands, Signy Island, Coronation Island (Gibbon Bay, Shingle Cove, Iceberg Bay).

Orcadas Station Vicinity (ORCA)

60°45'S, 44°43'W
Magnetic declination: 2.1°E
Inventory subarea: SO
Inventory acronym: ORCA
Species Diversity: LOW
Site Sensitivity: LOW

Location — History — Features

The South Orkneys are a group of two larger and several smaller mountainous, barren islands lying NE of the Antarctic Peninsula between 60°20'S and 60°50'S, and 44°20'W and 46°45'W. They were discovered in 1821 on a joint sealing expedition by British Captain George Powell and American Captain Nathaniel Palmer. Orcadas Station is the Argentine Research Station in the South Orkneys. The station is located on a gravel bar of cobbles and pebbles that connects the high peaks on the E end of Laurie Island. Uruguay Bay is to the N, Scotia Bay to the S. Scree slopes are developed along the base of the cliffs around Scotia Bay and at both ends of the gravel bar where the station is located. E of the station a large glacier comes down to the shore and calves into Scotia Bay. Another large glacier comes to the shore of Uruguay Bay W of the station.

Landing Characteristics

Visitors may reach Orcadas by zodiac, with advance permission required, as with all station visits, under the terms of the Antarctic Treaty. Visitors are prohibited from landing at Port Martin, where large Adélie and chinstrap penguin colonies are being studied. Punta Cormorán, located between the base and Port Martin has an Adélie penguin colony and visitors may land here with advance permission from base personnel.

Antarctic Site Inventory Effort

Visits by Antarctic Site Inventory researchers, 1994-2003:

1. December 13, 1995 LB Explorer

Assessment and monitoring. Preliminary surveying and censusing have been completed, but this site has not been regularly visited by Inventory researchers. Additional characterization needs include: designation of regular censuses colonies and photodocumentation. Argentine researchers stationed year-round at Orcadas are involved in censusing penguin and flying bird populations in the vicinity, especially at Port Martin (Puerto Martín), located at 60°46'S 44°42'W, where visitor landings are prohibited.

Fauna — Flora — Censuses

Penguins & flying birds. Pintado petrels observed nesting on cliffs W of the base; station personnel indicate that southern giant petrels, snow petrels, black-bellied and Wilson's storm-petrels, kelp gulls, Antarctic terns, and snowy sheathbills also breed in the vicinity. Station personnel are completing an outline map indicating sites of breeding colonies. Macaroni penguins also have been seen in the area, and a few gentoo penguin pairs have breed at Port Martin.

Census data from Port Martin reported in Woehler & Croxall (1996): gentoo penguin, a "large" colony; and Adélie penguin, 26,038 N1/2, 1994, approximately a 10% increase from a 1983 census; and chinstrap penguin, 13,394 N1/2, 1994, an approximate 13% increase from 1983 (biologists on site also have commented on an apparent 40% displacement rate of Adélie penguin by chinstrap penguins during the 1995-96 season at Port Martin study plots).

Seals. A single southern elephant seal was observed.

Flora. Ground-survey of the flora in the vicinity of the base has not been conducted.

Conservation Aspects

Site sensitivities. None noted.

Visitation Aspects

Numbers of tourist zodiac landings and participating visitors, 1989-2003:

	Zodiac Landings	Participating Visitors
1989-90:	0	0
1990-91:	1	36

	Zodiac Landings	Participating Visitors
1991-92:	2	148
1992-93:	1	127
1993-94:	2	152
1994-95:	3	198
1995-96:	3	203
1996-97:	4	491
1997-98:	0	0
1998-99:	4	462
1999-2000:	12	1,388
2000-01:	1	43
2001-02:	7	753
2002-03:	4	389
14-Season Total	44	4,390

Proximate visitor sites. Laurie Island (Cape Dundas), Gosling Islands, Signy Island, Coronation Island (Gibbon Bay, Shingle Cove, Iceberg Bay).