Brief Communication

THE SUB-ANTARCTIC AS A SOURCE OF HUMAN ENRICHMENT — THE CASE OF SOUTH GEORGIA

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(with three text-figures and four plates)

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South Georgia and how its history and heritage may be considered a unique source of human enrichment today is considered in the light of the sealing and whaling eras and more recent times when science and tourism dominate. Attitudes to the whaling heritage have gradually changed in this latter period. The spectacular natural heritage is emphasised, and a recent project on habitat restoration at the island is mentioned.

Key Words: South Georgia, industrial heritage, natural heritage, whaling, habitat restoration.

INTRODUCTION

Among the sub-Antarctic islands, South Georgia stands out as the second largest (after Îles Kerguelen), and the one with historically the most extensive human activity. The industrialised whaling area that lasted from 1904 to 1964, in particular, is unique. The industry was a source of income and "enrichment" in a very literal sense, but was also — in retrospect — a very controversial industry. So, the history of the industry has been problematic, and only gradually has it become more common to consider it as a valuable heritage and a source of human enrichment.

The aim of this paper is to review the development of the whaling industry, but particularly to focus on the post-whaling era and how attitudes to the physical and other remains of the industry on the island have gradually changed. After years of decline and neglect, the remains of the whaling stations have been surveyed, some environmental clean-up has taken place, a museum has been created and selected buildings restored. In 2005 the South Georgia Heritage Trust (SGHT) was established.

South Georgia's history is, of course, more than whaling. Exploration and science have always been an integral part of the history that today has become heritage. Ernest Shackleton's association with the island is arguably the most well-known part of this heritage (Burton & Venables 2001). Then there is the nature, wildlife and the *natural* heritage. South Georgia is an important habitat for birds, penguins and seals — in fact it is the largest breeding ground for some species (Poncet & Crosbie 2005, Burton & Croxall 2012). This natural heritage is obviously a decisive source of human enrichment for today's visitors. However, invasive species are threatening some of this wildlife, and a challenging project on habitat restoration has been initiated by the SGHT. This will be covered briefly here, with a focus on how the unique "mix" of natural and cultural heritage that is so evident at South Georgia could be conceived of as a source of human enrichment.

THE WHALING ERA

The main sub-Antarctic industry of the nineteenth century was sealing, dominated by American and British sealers who discovered new islands and grounds where stocks of fur seals (*Arctocephalus* sp.) and Elephant Seals (*Mirounga leonina* (Linnaeus, 1758)) were exploited. South Georgia probably was visited by sealers in 1786 and the activity there peaked during the first two decades of the nineteenth century. The sealers then moved to the South Shetland Islands and elsewhere (Headland 2009).

Whaling around several sub-Antarctic islands was also taking place throughout the nineteenth century — mainly by New England whale ships associated with what may be called "the American Century of Whaling". However, these whalers were mostly harvesting whaling grounds further north, along the Australian coast and further north in the Pacific, Indian and Atlantic oceans (Dolin 2007).

The twentieth-century "Modern whaling" in Antarctic waters started in Grytviken, South Georgia, in 1904 (pl. 1). It very soon led to the establishment of more shore whaling stations at South Georgia (six before World War I) and elsewhere in the sub-Antarctic (Tønnessen & Johnsen 1982, Headland 1984, Hart 2001).

Around 1920 — the heyday of shore station whaling in the Antarctic region — there were stations operating at four islands (fig. 1): South Georgia (six): Grytviken, Husvik, Stromness, Leith Harbour, Prince Olav Harbour, Ocean (in addition Godthul — a floating factory anchorage and base); Deception Island (South Shetlands) (one); South Orkney Islands (one); and Kerguelen (one).

At the same time, floating factory ships were whaling in the South Shetlands in large numbers. So, before 1925, South Georgia and the South Shetlands were the main whaling areas. Very little went on elsewhere. The establishments at Kerguelen and the South Orkney Islands were short-lived and never fully developed industrially and technologically.

PLATE 1
The Grytviken whaling station at South Georgia around 1920. Source: Com. Chr. Christensen's Whaling Museum.

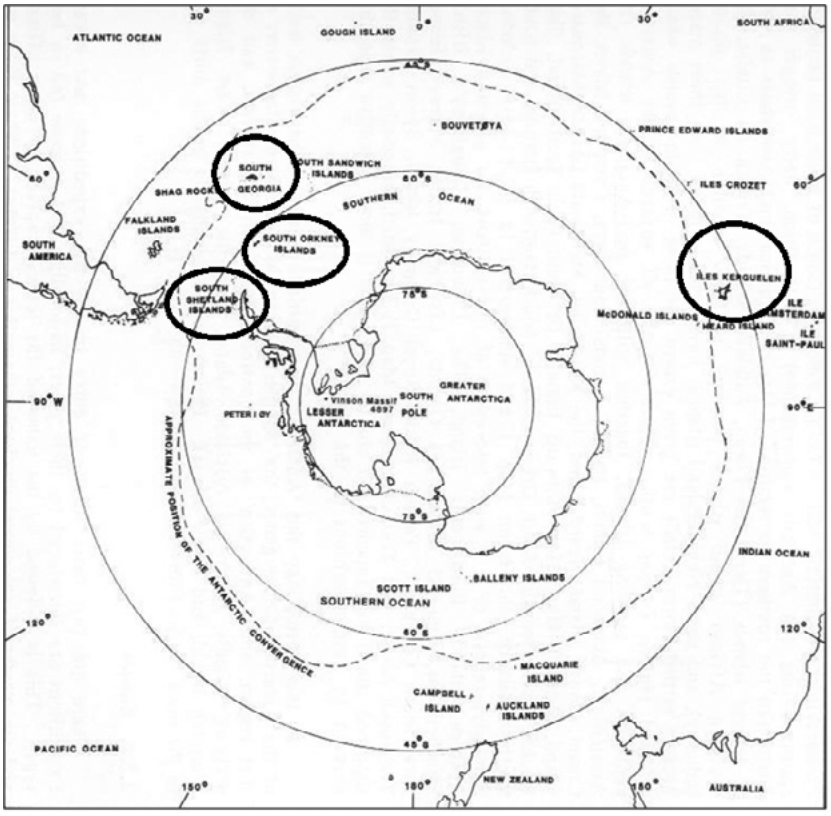

FIG. 1 —Location of former whaling shore stations in the Antarctic region.

An important new phase in the development of the whaling industry was started by C.A. Larsen — the pioneer in Grytviken — when he took a factory ship and catcher boats into the Ross Sea in 1923, operating independently of shore bases. From then on Antarctic whaling took a new direction, technologically as well as geographically.

In 1925 the so-called stern hauling up slip was invented and adopted on a Norwegian floating factory ship. Its use soon became widespread. Whaling expanded in the late 1920s, and operated independently of islands, territorial waters, licences and leases. This so-called "pelagic whaling" hunted for whales throughout the Southern Ocean around the Antarctic continent, and followed the ice as it retreated during the Austral summer (Tønnessen & Johnsen 1982).

The sub-Antarctic shore stations gradually lost their importance and several plants were permanently shut down during the economic crises (which also hit whaling) in the early 1930s. Only at South Georgia was some activity resumed, and three stations continued operations into the early 1960s: the Scottish Salvesen at Leith; the Argentine Comp. Argentina de Pesca at Grytviken; and the Nowegian Tønsberg Hvalfangeri at Husvik.

The Salvesen Company also used South Georgia (Leith and Stromness) as a repair base for their pelagic expeditions, thus the island to some extent was also important for this aspect of the industry. However, the pelagic expeditions typically maintained and laid up their fleets between seasons at locations further north (Cape Town, Montevideo, Hobart, Stewart Island (Kaipipi Shipyard) and Norway).

In terms of economic or commercial importance, whaling was by far the most important industry ever to have taken place in the Antarctic region. Sealing before and fisheries afterwards, cannot compare. Whaling in this period in a very literal sense was a decisive source of human enrichment.

POST-WHALING DECLINE AND SURVEYS

What has happened to the whaling sites since the industry closed down? And to what extend can this phase in the history also be a source of human enrichment? This is potentially a challenging concept given the derelict state of most of the sites today (pl. 2). Prince Olav Harbour, for example, was already abandoned in 1931, so its post-whaling history (80 years) is now much longer than its actual whaling history which lasted only about 14 years. However, even the stations that were closed down in the 1960s are in a severe state of decline — after being abandoned for about 50 years.

The post-whaling history of these sites has evolved through stages. For some years the stations were maintained. When a possible resumption of whaling was abandoned, caretakers left, and the stations went into a period of neglect and decline. The harsh climate of South Georgia was in itself responsible for the decline, but throughout the 1970s frequent visiting fishing vessels in particular contributed to the process, and stations were also severely looted. During this period, there was a time when the economic potential of recovering scrap metal from the stations was considered, but this has come to nothing. Instead some clean up of the stations was motivated by environmental concerns. This included removal of oil, asbestos and debris. Over the past 20 years or so, the remains of whaling activities have also increasingly been considered as industrial heritage (Basberg 2004).

These stages are to some extent connected or associated with shifts in ownership of, and thus formal responsibility for, the stations. For some years the stations remained under the ownership of the original whaling companies from Norway, Argentina and Britain. In 1975 they were all taken over by the Scottish company Salvesen which had

PLATE 2
The whaling station Prince Olav Harbour in decay. Photo: Author

FIG. 2 — Grytviken whaling station – site plan. Source: NARE 92/93.

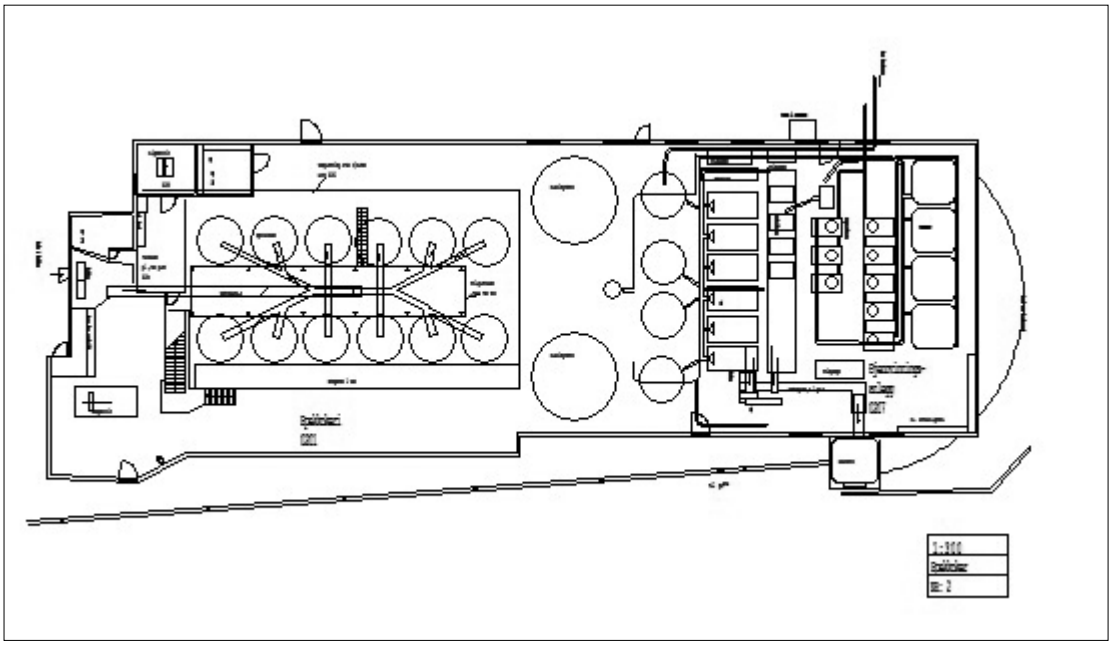

FIG. 3 — An example of a building plan; Leith Harbour blubber cookery: Source: NARE 96/97.

been operating Leith Harbour, Stromness and Prince Olav Harbour. In 1991 Salvesen transferred ownership to the Government of South Georgia and the South Sandwich Islands (GSGSSI), which has been responsible for the management of the sites since then.

When awareness of the derelict state of the stations grew during the 1980s, the question arose of whether it might be possible to survey them before the structures completely collapsed. To some extent it was too late, but throughout the 1990s funding became available from the Norwegian Antarctic Research programs (NARE) for three extensive surveys of the remains of the whaling stations. The project was called "South Georgia Industrial Archaeological Project". Fieldwork lasted from four weeks to more than two months, and the sites were recorded in detail by teams with backgrounds in industrial archaeology, economic history, ethnology and architecture — some with experience specifically from related work at Spitsbergen.

After a halt, the surveys were continued in 2009 in Prince Olav Harbour and Ocean Harbour as part of the so-called LASHIPA project (Large Scale Historical Exploitation of Polar Areas). This was a project within the International Polar Year with funding from the Dutch and Swedish research councils. LASHIPA conducted fieldwork both in the Arctic and the Antarctic, and two fieldtrips/surveys took place at South Georgia and other sub-Antarctic islands. And it brought to a conclusion the South Georgia whaling station surveys about 20 years after the idea was born.

So what was accomplished? All the sites were surveyed and revised station maps were made (Basberg 2004, Avango *et al.* 2011). Systematic photo documentation both of exteriors and interiors was undertaken. This included every single room as far as they could be located. But even in severely collapsed structures this was often possible, and about 2000 rooms were identified and surveyed. Every individual structure or building was also measured and plan drawings of some 400 structures were made.

Revised functional station maps were constructed (fig. 2). The various buildings were grouped in categories according to their function: production, workshops, accommodation, stores etc. indicating that these stations were really small industrial communities, housing about 300 men on a seasonal basis.

Another category of maps was made up of building plans consisting of the interior layout of every physical structure (fig. 3). This part of the work contributed new knowledge to our understanding of these stations. From archives, photographs and other sources on these sites much is known about how the stations operated and what they looked like. But details about how they looked *inside* — especially the accommodation quarters — were less known. Possibly the most important outcome of this research was a much more detailed understanding of the whalers' living and working conditions.

FROM SCRAP TO INDUSTRIAL HERITAGE

What was the purpose of these extensive surveys? When the project was conceptualised in the late 1980s there were no plans for physical preservation and restoration. The sites were gradually collapsing, and it was believed that detailed surveys could be one way of at least preserving the knowledge about this industry, and also be a source of information for further historical research on the whaling industry at South Georgia.

This proved to some extent to be a valid justification, but the 1990s also marked a turning point in the attitude towards the former whaling stations which can be captured in the phrase "from scrap to industrial heritage".

In 1990 the South Georgia Museum was founded — located in the former Manager's Villa in Grytviken. The intention of its founder, Nigel Bonner, was to create a whaling museum and the museum was originally and for many years called the South Georgia Whaling Museum. But the focus was gradually broadened and it now displays most aspects of South Georgia history and heritage. Visitors are mainly cruise ship passengers. The annual numbers reached about 8000 during the peak seasons before 2009 (South Georgia Museum, Annual Reports).

An indication of the increased interest in South Georgia's past was the foundation of Øyas Venner (Friends of the Island) in 1997. This is an association for former South Georgia whalers based in Norway. The South Georgia Association, founded in 2001, is comprised mainly of former scientists and servicemen who had worked there. Such associations show how past experience is still a source of human enrichment for those involved. Both associations are also involved in projects at the island, and Øyas Venner has in particular focused its interest on the Whaler's Church in Grytviken and the graveyards around the island.

The South Georgia Museum was created by a private initiative, but was very much supported (and paid for) by the GSGSSI. The GSGSSI's active role at this time was evident: in 1990 an initial environmental clean up operation was undertaken, primarily focusing on removing oil from various tanks. This was continued in Grytviken in a very extensive operation in 2003 that involved three main tasks. The first task was the removal of the remaining oil from tanks. The second task was removal of asbestos which had been used extensively, mainly for insulation of tanks and pipes in the stations. It became a major concern for the government and the main justification for the project (Pasteur & Walton 2006). The third task was to dismantle a number of buildings to make the site safe for visitors. The main installations, equipment and machinery were left *in situ*, so that Grytviken now appears as an "Open Air Museum" (pl. 3). However, the clean up obviously altered Grytviken, and some advisers suggested a much more careful approach which included paying more attention to preserving buildings (Morrison 2011). On the other hand, four other former whaling stations are still complete ruins and left to decay naturally. Grytviken is the only station that is freely accessible for visitors and interpretation signs have been provided. The former whaling and sealing vessels that for years were semi-sunk along jetties have also been stabilised and beached. Plans are being made for their restoration.

No buildings, other than the ones occupied by the museum, have so far been restored in Grytviken. Potential projects are being considered, for example the former whalers' accommodation barracks (*Nybrakka*) and the so-called Discovery House at King Edward Point where the Discovery Investigations for many years had its shore-based site. So far, only one building outside Grytviken has been restored: the Manager's Villa in Husvik Harbour. It has for many years been used as accommodation by visiting scientists. However, the house is not used at present due to the need for more asbestos clean-up, illustrating the heritage challenges at these sites. In summary, there may be several examples of important heritage at South Georgia that could be sources of "human enrichment" in a wide sense, but any

PLATE 3
Grytviken after the environmental clean-up. Photo: Author.

PLATE 4
The former Manager's Villa in Stromness where Ernest Shackleton and companions arrived in May 1916. Photo: D. Nævestad, NARE 89/90.

restoration is challenging and certainly involves substantial expenditure.

THE SHACKLETON LEGACY

Visitors to South Georgia are fascinated by the whaling heritage, but no doubt the historical "hero" of the island is Ernest Shackleton. He died there in 1922 and was buried there; his gravesite is a major attraction (Burton & Venables 2001). The museum exhibits his legacy. A replica of the lifeboat *James Caird* that took him from Elephant Island to South Georgia in May 1916 is now on display. The former Manager's Villa in Stromness where Shackleton and his companions arrived after the epic crossing of the island is still *in situ*. Repeating this crossing — in part or in full — has been popular for several years. The Shackleton story has also become a model for leadership. Thus, in several very different ways his legacy contributes to human enrichment today.

For many years the Manager's Villa in Stromness that was in use when the station closed down in the early 1960s, was also believed to be where Shackleton arrived and there were plans for a museum there and for restoration. Fortunately, before anything was done, it was verified that that house was not set up in Stromness until years after Shackleton's visit and the correct building (pl. 4) (i.e., the former Manager's Villa) was identified (Basberg & Burton 2006). Plans for a restoration of *this* building are being discussed, but nothing has so far been done because the building is almost beyond repair, and secondly, the house is in the centre of the Stromness site which, due to the asbestos there, is out of bounds for visitors. Except for Grytviken, there are 200-metre exclusion zones around all the stations. This means that if anything should be done in terms of restoration of this particular building, an expensive environmental clean-up operation will have to be completed. Again, costs are substantial and highlight some of the problems faced for heritage work at South Georgia.

NATURAL HERITAGE AND HABITAT RESTORATION

Antarctic tourists in general are primarily interested in wildlife and the scenery — penguins and ice. Such attitudes probably also apply to the sub-Antarctic tourists (Basberg 2010). South Georgia in particular has some spectacular wildlife which is a decisive part of the experience of modern visitors and a source of human enrichment. To preserve this natural heritage should be a priority, and has indeed been argued for by numerous visitors to the island. It has been forcefully advocated in books, some of which themselves are sources of human enrichment. One example is Pauline and Tim Carr's *Antarctic Oasis* where they conclude: "Above all else we wish that the name of South Georgia will forever represent an icy paradise, a place where nature is still mostly robust and the way of life of millions of birds, penguins, and seals goes on almost unaltered by the peripheral presence of humans" (Carr & Carr 1998, p. 254).

Preservation of the natural heritage requires management. The overall responsibility for the management of this part of the heritage lies with the GSGSSI. Another important institution at South Georgia is the British Antarctic Survey (BAS), which operates two research stations (King Edward Point and Bird Island) and for some decades has been undertaking research at the island of relevance to the natural heritage. South Georgia Heritage Trust (SGHT) has become a third important stakeholder, founded through an initiative of the government in 2005. It is a private trust, registered and managed in Dundee, Scotland.

The aims of the trust are twofold, namely to engage in projects (raise money and give grants) relating to both the natural and the historical heritage of the island. Among the historical heritage work, the trust is managing the South Georgia Museum and has so far restored one building (Husvik) and has plans for more. An oral history project has also been undertaken (www.sght.org).

Among natural heritage projects, the trust has sponsored several research projects and publications, but is now focusing on one very large project: the so-called Habitat Restoration Project. This project is about eradicating Brown Rats (*Rattus norvegicus* (Berkenhout, 1769)), which were introduced to the island by sealers and whalers over two centuries. It is a challenging project logistically as well as financially, and is justified by the fact that some of South Georgia's unique birdlife is threatened. Together with the removal of introduced Reindeer (*Rangifer tarandus* (Linnaeus, 1758)), a project in the planning by GSGSSI, it will take South Georgia closer to its original state.

A first phase of the Habitat Restoration Project was undertaken during the 2010/11 season. The trust is working with, among others, New Zealand experts, and uses the same methods (spreading bait from helicopters) that have been used at Campbell Island and Macquarie Island. However, South Georgia is a larger and topographically more complex island than Campbell and Macquarie islands, and after the first season when only about 10% of the rat-infested area is treated, it is already the largest project of its kind in history (www.sght.org/sght-habitat-restoration-project).

CONCLUSIONS

In the context of the topic of the sub-Antarctic as a source of human enrichment, it may be asked what role — what "function" — this and other similar islands may have. They obviously are and have been important in many ways. They have been sites for commercial activities, from the earlier exploitative industries of sealing and whaling, to today's fishing and tourism. They are also important sites for science and research.

In one way or another such functions relate to "human enrichment", although we may primarily associate this concept with the experiences of modern tourist visitors. Since these visitors appear to be mostly interested in the natural heritage, and some may see the whaling industry in a very negative way, a management or policy option today could be a complete removal of the former whaling stations so that the island really could be brought back to a pristine nature reserve. This is not the view taken here. Instead it is argued that South Georgia's uniqueness is very much about its *mixture of natural and historical heritage*. There are few places where a spectacular example of sub-Antarctic nature meets with a unique historical heritage. South Georgia is one such place.

The historical heritage is very much associated with exploitative industries. They were industries that we tend to disapprove of today. The heritage can nevertheless educate us about what went wrong — and therefore still be a source of human enrichment. So, the sources of human enrichment

at South Georgia in the future should — at least to some extent — be based on the heritage of these industries in combination with its unique nature and natural heritage.

POSTSCRIPT

Heritage work at South Georgia is continuing and being escalated. Assessments during the 2011/12 season have shown successful results for the first phase of SGHT's Habitat Restoration Project, and the project is planned to continue in 2013. GSGSSI is planning for a removal of introduced reindeer in the same period. Relating to the cultural heritage, in December 2011 the governments of Norway and the UK signed an agreement on polar research in which some projects (possible restoration of houses and vessels) are destined for South Georgia.

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