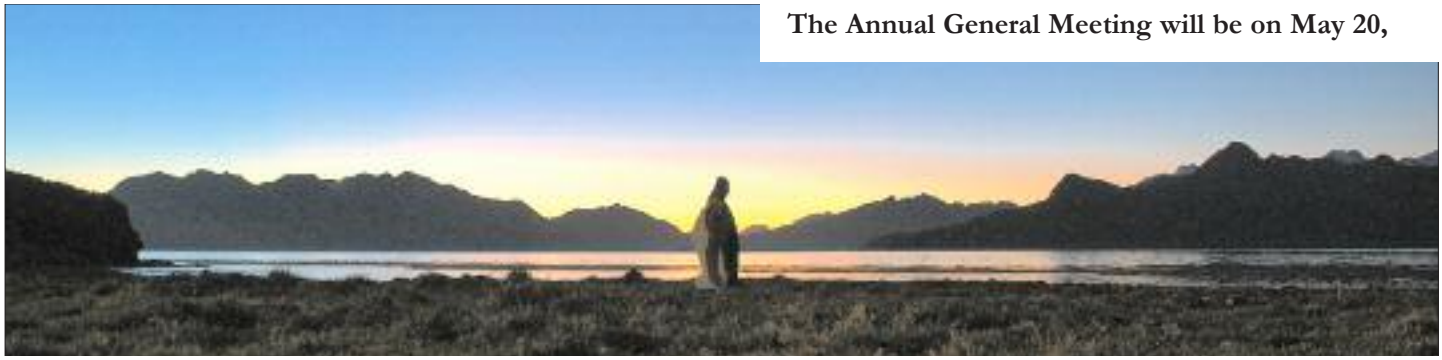
South Georgia Association Newsletter

Number 20 April 2011

Website: www.southgeorgiaassociation.org **ISSN 1747-4302**

The Annual General Meeting will be on May 20,



A lonely vigil. See page 3.

The South Georgia Dive Expedition
Paul Brewin

Dion Poncet surfaces.

Scientists from the Shallow Marine Surveys Group (SMSG) were delighted by the success of their ground-breaking expedition to survey the marine flora and fauna of South Georgia. The shallow marine life of South Georgia is very poorly known, although there have been various localised studies in the past. Not since the *Discovery* Investigations of 1925 have the island's marine habitats been explored in such detail and over such a wide geographic extent.

Based on the Fishery Protection Vessel *Pharos SG* for the three-week expedition in November and December, the team of eight volunteer scuba divers surveyed 25 sites between Bird Island and Cooper Bay, and totalled over 64 hours spent in 0º C waters.

Photographs and samples were collected from between the tidemarks to depths of 18m along the island's north coast. Our expedition surpassed expectations because of the unusually calm weather, the professionalism of the dive team, and the outstanding support of *Pharos SG*'s officers and crew and the staff at King Edward Point. The survey will provide detailed information on species diversity which will be essential for future management of South Georgia's coastal waters.

A total of 4347 specimens of marine invertebrates was collected, including 120 sponge samples and 160 seaweed samples. Settlement plates were also deployed in three locations to determine if invasive species are present. (Invasive species are defined as non-indigenous or 'non-native' plants or animals that adversely affect the habitats they invade economically, environmentally, and/or ecologically.) An important part of the study was the collection of high-quality photographs for future scientific and amateur guidebooks. And the team could not resist taking some amazing photos of the playful and inquisitive fur seals that accompanied every dive.

It was an awesome opportunity to gather information about this unique environment. We are looking forward to spending the next year analysing the data and examining and describing the specimens and the marine ecology of South Georgia. At most sites, large forests of bladder kelp (*Macrocystis pyrifera*) provided an overhead canopy and the very large, trailing *Himantothallus grandifolius* alga dominated the seabed, along with a wide variety of red seaweeds. These provided multi-storied habitats for a huge array of animals living on the seabed and on the kelp itself. Divers

An inquisitive fur seal.

encountered a many varieties of striped topshells, giant red sea spiders, giant isopods, limpets, sea cucumbers, colourful sea slugs and numerous starfish. Beautiful overhangs and rock walls were discovered, overgrown with a vibrant array of sea squirts, anemones and sponges. Intertidal surveys of seaweeds and animals also proved interesting, and recorded many previously unreported species.

Algae specialist Emma Wells (Wells Marine, UK) and sponge specialist Claire Goodwin (National Museums Northern Ireland) joined the group for the expedition. Emma noted 'The diversity of algae is less than some other nearby areas such as the Falkland Islands, but due to the isolated nature of South Georgia there are a number of interesting endemic species'. Claire was particularly excited to encounter volcano sponges in shallow waters. She explained 'These sponges belong to a group called glass sponges which are normally encountered only in depths over 200m. However the fjord-like nature of the South Georgia marine environment means low light conditions at shallow depths. So we found them here in only 8m of water; a phenomenon known as deep-water emergence which is common in fjord environments.'

Due to the extreme diving conditions and remote nature of South Georgia, where there is no diver emergency help (hospitals, decompression chambers etc), considerable preparations had to be made for the safest possible diving practices. Dive Officer Judith Brown said 'The team coped well with the icy waters, with temperatures down to 0°C at some sites. We spent a total of 64 hours underwater without incident'.

The rigorous dive safety plan included setting depth limits (18m maximum), time limits (30 minutes maximum), compulsory safety stops for dives greater than 10m, and the compulsory use of 'pony' bottles for independent back-up air supply in case of regulator 'free-flow' that can occur in zero degree water. A free flow is an unwanted gush of air resulting in a rapid depletion of cylinder contents; potentially dangerous if one does not have reserve air. Safety protocols also included keeping constant watch for potential hazards such as leopard seals and having an underwater signalling device to recall divers if one was seen.

Sea anemone and sea slug.

The photographs, specimens and analyses will greatly improve the understanding of the South Georgia marine habitats. They will aid future planning, managing and monitoring of South Georgia's natural resources, and have already generated interesting questions for future research. Specimens will be preserved, identified and sent to various museums and specialists around the world for future natural and genetic studies. Species records will also be combined with various regional and global online databases for more complete ecological characterisation of this unique part of the world. A return expedition to South Georgia has been proposed to revisit sites surveyed in this study, retrieve settlement plates and also extend the survey to new sites on the south coast.

The first king penguin egg at King Edward Point

The Government website (www.sgisland.gs) shows images from two webcams mounted at King Edward Point. They are worth keeping an eye on to check the weather, shipping and other activities.

On 19 February, Webcam 1, on Larsen House, was trained on a group of king penguins. One was sporting a suspicious bulge over its feet and an enquiry to Sarah Lurcock confirmed that it was incubating an egg. This was the first breeding attempt to be recorded at King Edward Point.

Over the next few weeks the webcam kept track of the penguin as it shuffled around in front of Larsen House, sometimes standing among a group of moulting adults; at other times on its own when they had moved on. Very occasionally the webcam caught the penguin as it lifted the flap of skin and examined its egg.

Alas, on 10 March, the webcam was back in its default position showing the view across the cove towards Mt Paget. There was no sign of the penguin. It transpired that the egg had been abandoned and had been eaten by a skua.

The king penguin population on South Georgia is increasing and new colonies are forming. Breeding success for the pioneering settlers is very poor. They are young, inexperienced birds and and their first attempts result in the egg being lost. When king penguins attempted to breed at the mouth of Penguin River, on Hestesletten across the cove from KEP, it was several years before they successfully raised a chick.

We must hope that the KEP pair will be joined by others and they will eventually prove successful.

More in hope.....

The cattle egret is a regular visitor to South Georgia. It gets its name from its habit of following cattle and other large animals to feed on the insects they disturb as they graze. This egret, photographed in 1977 by Séamus McCann, won't get much help from an elephant seal.

Stray birds seen at South Georgia range from peregrine and barn owl to barn swallow and eastern kingbird. They have presumably been swept out to sea by storms and are very unlikely to return against the prevailing wind.

The British Antarctic Oral History Project (BAOHP)
Allan Wearden

The BAOHP is a collaboration between BAS, the BAS Club, SPRI and UKAHT (with additional funding from the FCO and British Antarctic Territory). Recordings made of notable Antarctic people are deposited in the BAS archives and, eventually it is hoped, will be accessible to download from the Internet.

Last year the SGA gave a grant to the project of £300 to interview a somone who has played an important part in the history and development of the island. After much thought, it was decided to use the grant to record John Croxall, who for many years, worked on South Georgia, especially Bird Island, and led the prestigious seabird research programmes. Two sessions, lasting three hours, were recorded by Chris Eldon-Lee our principal interviewer..

Many more recordings will be made over the coming year mostly funded by UKAHT, although none by BAS Club as I overspent the funding last year! Several planned interviews will have South Georgia connections: The Rev Allan Mcarthur (winter of 1951), Ron Lewis-Smith and Jenny Bonner (who Felicity Aston will interview soon).

Many of the group, most notably the transcribers, are volunteers, and transcribing these recording is a very slow progress. This can be done by anyone with access to a computer and we are always looking for more volunteers. We also need researchers to visit BAS archives to compile briefings for the interviewers. Anyone interested in joining the group? Please contact me at allan.wearden@btinternet.com,

A visit to the South Sandwich Islands
Andy Black

Discovered by Captain Cook in 1775, the South Sandwich Islands lie approximately 300 nautical miles to the east-south-east of South Georgia and consist of an arc of 11 main islands that runs in an approximately north to south direction. At the time of their discovery, Southern Thule Island was the most southerly landmass known to man, hence the name, which means 'the end of the world'.

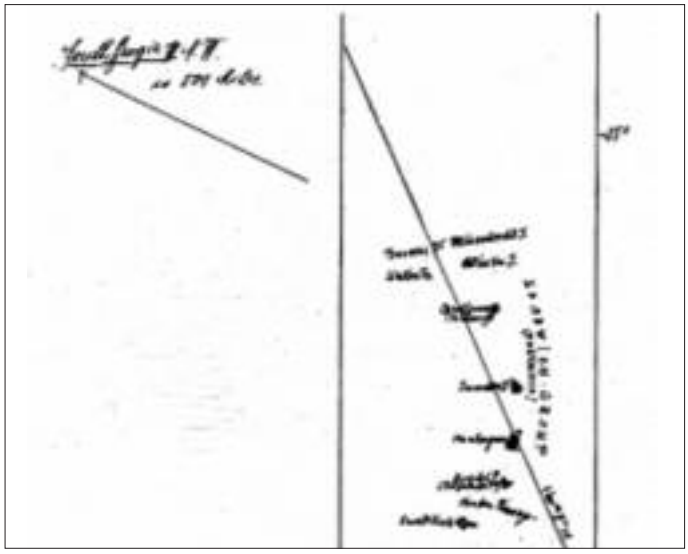
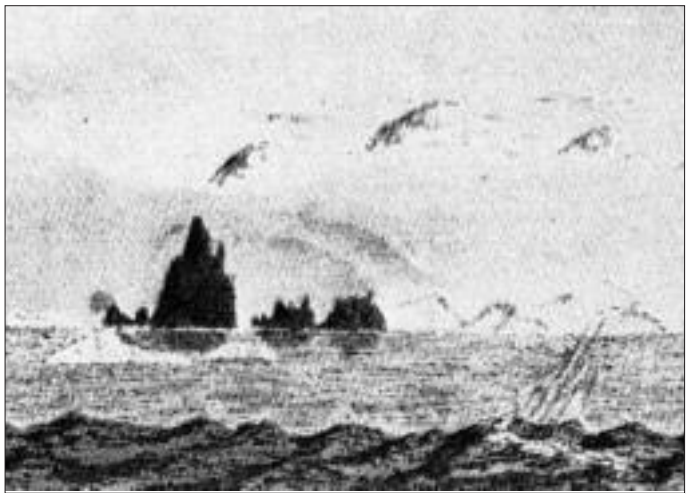


Chart of the South Sandwich Islands drawn by Captain CA Larsen in 1908.

Cook was not impressed by what he saw and described the islands as the 'most horrible shore in the world', which would be a reasonable description to anyone in a sailing boat, without an engine, in uncharted waters with few navigational aids. However, to anyone with an appreciation of stunning scenery, abundant wildlife and a sense of adventure, the South Sandwich Islands have no equal.



HMS Resolution *at the South Sandwich Islands: 'the most horrible shore'.*

The islands have rarely been visited and in January 2011 the opportunity arose for me to join an expedition onboard the yacht *Golden Fleece* with the aim of updating the figures for breeding seabird and marine mammal populations. The yacht had been chartered by a keen amateur photographer but space was available for me and two other biologists. Richard White would help count birds and Tom Hart would collect penguin feathers for his project on the genetics of penguin populations throughout the South Atlantic sector of the Southern Ocean.

On 1 January we set sail from Stanley and arrived at Zavodovski Island on the morning of the 9th. The South Sandwiches have notoriously bad weather and difficult landing conditions. The Antarctic Pilot states that 'Landings can only be made with difficulty, as even in the finest weather there is heavy swell and the coasts are generally precipitous and rocky; where beaches exist they shelve steeply, and there is a strong undertow. On most of the islands landing is probably impossible except by helicopter'. Not very encouraging, and true to form we arrived at Zavodovski in mist and winds gusting up to 50 knots. The heavy swell breaking on the near vertical cliffs was not very inviting and prudence precluded a landing on the first day.

By the second morning the weather had moderated slightly and a landing was made. Although swells were breaking all around, the skipper of the *Golden Fleece*, Jérôme Poncet, knew just the spot where a zodiac, ably driven by his son Dion, could drop us on the rocks. Once the initial excitement of finally getting ashore had passed, the enormity of the task ahead of us began to dawn. Zavodovski is known for its huge chinstrap penguin population and it probably holds two of the largest penguin colonies in the world. With an island population that probably exceeds a million pairs, where do you start?

Chinstrap penguns on Zavodovski Island. Try counting...

In order to determine as accurate a population estimate as possible, we decided to attempt to map the edge of the colonies with handheld GPS units and then apply a nest density to the overall area. However, the convoluted nature of the colonies made this a daunting task. Two days were spent surveying the colony next to the landing site before making the trek across the island to the second colony, which proved to be even larger than the first. After four days of near continuous surveying and frequent head-scratching it was time to move on to the next island. Eventually we landed on all ten of the major islands but access and time ashore was often limited. Leskov was given a wide berth.

Landings soon became routine and were possible on 15 of the 18 days of our stay. This gave us a marvellous opportunity to gain an overview of this little-known archipelago. We quickly learned that the islands have their own individual character. Zavodovski is the classic volcanic cone surrounded on three sides by wide, flat ash plains and is relatively ice-free. The landscape is dominated by the huge penguin colonies.

Visokoi is far higher than Zavodovski, over 1,000m, and is almost entirely covered by an ice cap, which terminates in

vertical cliffs along much of the coast which are prime breeding sites for Antarctic fulmars. At several points, flatter areas exist where penguins can breed and landings are possible.

Vindication is one of the smaller islands in the archipelago and is almost ice-free. However, the precipitous cliffs make access to the interior of the island all but impossible except at one point on the south-east coast. Adjacent to Vindication is Candlemas Island, which has previously been the site of extensive BAS field camps. Candlemas is an island of two halves: the south reaches a height of 550m and is largely covered by an ice cap whereas the north is low lying, ice-free and volcanically active. The largest southern giant petrel population in the South Sandwich group is found here and my main goal was to count the number of breeding pairs. A second day on the island was devoted to the large chinstrap colony on the south-west corner of the island.

Next in the chain is Saunders Island. In marginal conditions an early morning landing was made near the eastern tip of the island. The landscape here is unlike that encountered anywhere else during the voyage. The loose volcanic ash has eroded to form a series of deep scars across the hillside. Along with the ubiquitous chinstraps, the first notable

More chinstraps on Saunders Island.

colonies of Adélie penguins were encountered here.

Montagu Island, the last to erupt, in 2007, is by far the largest island in the chain but most of the surface is covered by ice and possibly 1 per cent of the island's surface area is suitable for breeding penguins. Our time on Montagu coincided with a period of clear weather, which allowed us to land at two sites in the south-east of the island and enjoy the stunning scenery to full effect.

The weather was to change before we reached Bristol, which was shrouded in mist and battered by gale force winds when we arrived. As we approached, all that could be seen of the island was an impenetrable fortress of ice cliffs that were only broken by the occasional outcrop of rock cliff. Perhaps this was the view that greeted Cook and clouded his opinion of the islands. It WAS horrible!

Time was pressing so we pushed further south towards Bellingshausen Island which is one of the smaller islands in the chain and entirely ice-free. We were immediately struck by the number of fumaroles, 'smoking' vents, on the eastern flank and crater of the island. A closer inspection revealed higher than expected numbers of Adélie penguins.

Our journey continued past Cook

Steaming fumaroles on Bellingshausen Island (and even more chinstraps).

Island, another steep-sided ice-covered mass that supports very few penguins but is good habitat for the cliff-nesting Antarctic fulmar, before arriving at Thule Island. Thule is predominantly covered with ice but there are several points where easy landing can be made and the island offers the best anchorage in the entire South Sandwich chain. To complete the set, the briefest of landing was made on Cook Island before the long steam back to Stanley.

While the census of breeding penguins was by no means complete, we will be using high resolution satellite images to fill in some of the gaps in our coverage. Analysis of our observations is underway and we hope that the overall population figures will be updated later this year.

Thanks to the crew of the *Golden Fleece* for getting us there, getting us ashore and back again, and keeping us fed and watered along the way. It is hard to imagine that it would have been possible to get so much done without the experience of Jérôme Poncet, who surely knows these islands better than anyone else.

Montagu Island., with Golden Fleece.

Cricket, lovely cricket, Grytviken-style

An enquiry from the compilers of Wisden Cricketer's Almanac asked whether cricket has ever been played on South Georgia. There have been a few matches over the years and the last was an epic match between BAS/Museum and Morrisons Construction on Boxing Day 2001. Unfortunately Wisden needed a recent match for their 'Cricket around the World' section but this is what the SGA Newsletter investigative journalist has found out.

The Boxing Day match was made possible by boatman Howie's bat and stumps, crafted as a Christmas present by Jude Dickson, and a tennis ball found in the bag of Morrisons captain, Al Wearden. It was played on the flat part of the whalers' football pitch at the back of Grytviken. The combination of shingle and coarse vegetation makes a poor playing surface. For cricket it makes a wicked surface for bowling.

Steve Brown apparently about to make contact with the ball.

Equal teams of 10 were fielded for the Boxing Day match by pressing two American yachties, who had never seen cricket let alone played it.

Reportedly, BAS/Museum trounced Morrisons despite the fielding prowess of the latter's captain Al Wearden.

Pat Lurcock was awarded 'SG Sports Photographer of the Year' for capturing Al catching Tim Carr 'behind'.

Putting South Georgia on the map

Alec Trendall at the unveiling of the bronze bust of Duncan Carse at the South Georgia Museum, Grytviken,

Duncan Carse always intended writing the story of his three expeditions in the 1950s that produced the first accurate topographic map of South Georgia. He died in 2004 before this ambition could be realised. Luckily for us, and for posterity, Alec Trendall, who took part in two of the expeditions, has taken up the baton.

With additional material from Walter Roots, Alec has written, and published privately, a full account of these expeditions. There are stories of man-hauling sledges, mountaineering and close shaves in weather conditions which we all know can be extreme (extremely beautiful or perhap more often extremely horrible.)

All members of the South Georgia community must be very grateful to Alec for bringing the same zeal and tenacity in recording these expeditions that Duncan Carse had in organising and leading them.

Details of *Putting South Georgia on the map* are given on the flyer accompanying this newsletter. It can be bought on-line from www.alectrendall.com.au.

Dick Barton remembered

The older members of the SGA will remember the radio serial Dick Barton – Special Agent. Between 1946 and 1951, the thundering theme tune of the 'Devil's Galop' introduced each instalment of tales of derring-do, in which our hero battled with dastardly villains. In the early episodes he smoked, drank and had a girlfriend but, with millions of children listening, the BBC banned drinking, sex and bad language, and 'Barton's violence was restricted to clean socks on the jaw'. James Bond, he was not.

Many erstwhile devotees will know that Dick Barton was played by Duncan Carse but may not know that he was not the original actor to take the role. It is also widely believed that Dick Barton was replaced by The Archers. In fact, the best-forgotten The Daring Dexters, an everyday story of circus acrobats, came between them.

If this gives you feelings of nostalgia, you will be pleased to know that a hoard of 338 lost episodes (nearly half the total) has been discovered in Australia and a selection will be published as CDs and Downloads by AudioGO (formerly BBC Audiobooks).

Sir Alister Hardy commemorated on stamps

In March 2011 a Continuous Plankton Recorder (CPR) returned to South Georgia. It was towed by the Fishery Patrol Vessel *Pharos SG* which will also carry this set of stamps commemorating the creator of the CPR to South Georgia. It is intended that the CPR will collect data every other month on the *Pharos SG*'s regular route between the Falkland Islands and South Georgia.

The Cointinuous Plankton Recorder was designed by Alister Hardy, an eminent marine biologist famous for his work on plankton and fisheries. He was also an accomplished artist and writer of popular science. He is best known now for his book *Great Waters*, a popular account of the *Discovery* Investigations and for the two volumes of *The Open Sea* .

In August 1921 Hardy was appointed as an Assistant Naturalist at the newly established Fisheries Laboratory in Lowestoft, where he worked on the feeding strategy of North Sea herring (70p stamp). Three years later he was appointed Chief Zoologist to the *Discovery* Investigations. The first expedition south used Captain Scott's RRS *Discovery*, which was refitted for scientific work (£1.15p stamp).

RRS *Discovery* arrived in Cumberland Bay on 20 February 1926. For six weeks the vessel undertook scientific stations around South Georgia, collecting oceanographic data and sampling Antarctic krill (the main food of the whales) and other zooplankton. In October 1926 she was joined by another vessel, RRS *William Scoresby*. The two vessels undertook a survey of the whaling grounds off South Georgia and Hardy transferred to the *William Scoresby*, where he was the scientist in charge.

Recognising the need to sample plankton over time and space, Hardy designed and built a device called the Continuous Plankton Recorder or CPR (60p stamp), which he first trialled (CPR Mk I) on RRS *Discovery* in the Southern Ocean. The CPR collects plankton samples and stores them on a moving band of silk, preserving them in formalin. Later, when based at University College Hull, Hardy designed a MK II version, which was considerably smaller and could be towed behind merchant ships, so enabling information to be collected on plankton distribution from shipping routes throughout the world. The CPR continues to be used worldwide, with only minor modifica

tions from Hardy's original design

Throughout his life Hardy was a prolific and gifted watercolourist, whose pictures gave a powerful dimension to his books. 'A busy day at the whaling station at Grytviken' (95p stamp) was painted, on February 21 1926, from the deck of RRS *Discovery* near the jetty at Grytviken and shows the carcasses of whales awaiting flensing and the discoloured water from the blood of the whales.

In 1928, having returned from the Southern Ocean, Hardy was appointed as the first Professor of Zoology at the University of Hull, where he developed CPR MK II, and worked on his *Discovery* Reports. In 1942 he accepted the Regius Chair of Natural History in Aberdeen and, in 1946, he was appointed Linacre Professor of Zoology in Oxford. Hardy was knighted in 1957.

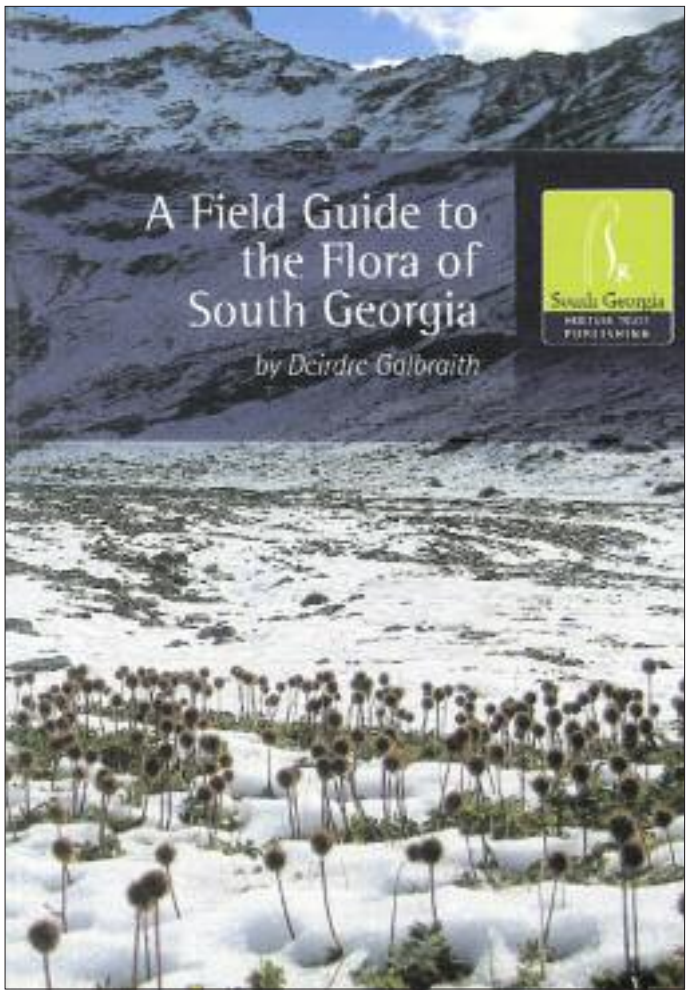
The Sir Alister Hardy Foundation for Ocean Science (SAHFOS) continues Hardy's pioneering research into plankton distribution and abundance. SAHFOS was established as a charitable foundation in 1990 and continues to operate the CPR throughout the world's oceans.

Adapted from a Press Release written by Martin Collins.

Alister Hardy lowers a plankton net from the deck of RRS Discovery.

A Field Guide to the Flora of South Georgia.
Deirdre Galbraith. South Georgia Heritage Trust Publishing
ISBN 978-0-9564546-0-7

Jonathan Shanklin



I first visited South Georgia in 1981/82, and, although Grytviken in particular has changed considerably since then, the native flora of the island has not. At that time I was interested in natural history, but only at a general level. Whilst I soon learnt to recognise the burrs of the burnet *Acaena*, much of the flora escaped my notice. Now I specialise in vascular plants and liverworts and I discovered an addition to the island's flora (cock's-foot *Dactylis glomerata*) on my last visit. There is no doubt that this well illustrated booklet will enable any visitor to identify the native plants, and I can thoroughly recommend it to the beginner.

Any reviewer is likely to have differing views to the author, and will find errors. Those errors that I have found are mostly inconsequential, and could be amended in the second edition, which I am sure the demand will require. Science progresses as knowledge is gathered, and one alien identification that was correct at the time of going to press has changed: what was thought to be wavy bittercress (*Cardamine flexuosa*) turns out to be one of an aggregate of Patagonian species. It could therefore have arrived naturally and this is where my views differ from those who prefer to preserve the island in stasis.

It is worth remembering that whilst an alien species might seem to us to run rampant in a particular environment, we are seeing things in the blink of an eye, and we should take a longer term view. The essays of author Stephen Jay Gould are worth reading in this context, as they do much to shed light on the workings of evolution. Whilst there may be merit in removing species from South Georgia, such as the rats that clearly have an adverse effect on endemic birds, the environment changes and species must evolve. It is somewhat curious in this context that, of the known South Georgian plants, only the hybrid *Acaena* may be endemic. We cannot build a glass case around the island; some new species must arrive and others must perish. We are now a vector for species migration and we should allow evolution run its course, rather than exterminating anything that we think is alien.

It is well over 200 years since the first botanical recording on South Georgia and in that time the climate has changed comparatively little. The climate of 200 years hence will be very different to that of today and the sea is likely to have inundated Grytviken and King Edward Point. If allowed to diversify, the island's flora will have changed with the climate, and I hope that botanists of the period will have a handy guide to help identify South Georgia's plants. The future guide will look very different to the one being reviewed, but it will fulfil the same function. I hope the flora does too!

Shackleton's Gate
David Drewry

In February I had the good fortune to visit Orari Gorge Station in Canterbury, New Zealand with my wife, Gill. It was here that Ernest Shackleton visited three times during the course of his various Antarctic expeditions.

The Station is a 4300 hectare farm set against the rising ridges of the Four Peaks Range of the Southern Alps inland of Geraldine and about 2 hours' drive from Christchurch. The Orari River cuts through mountains in spectacular fashion on the boundary of the property and forms an impressive gorge beyond which it flows in braided distributaries over the Canterbury plains to join the sea.

The Station was established in 1856 by Charles Tripp who had emigrated from Britain, making it one of the earliest settlements in his part of New Zealand. The present owners are Graham Peacock and his wife Rosa (née Tripp). Rosa has maintained a keen interest in Antarctic matters stemming from Shackleton's visits. The house is redolent with Shackleton memories and much memorabilia. In the entrance hall there is a peg on which Shackleton's naval cap has hung for many years, whilst opposite, in a large glass case there is a splendid emperor penguin, now leaning slightly drunkenly. Letters, books, photographs and many other artefacts litter the Peacock's Victorian colonial home. They include several rock specimens left by Shackleton. One is a large volcanic sample taken from Mount Erebus.

Shackleton's naval cap.

Rosa is full of stories of how her great uncle, Leonard Tripp, assisted Shackleton during his time in New Zealand. Leonard Tripp, the son of Charles Tripp, was sent to Cambridge to read law, was called to the bar at Christchurch High Court in 1887 and later founded a prominent law firm in Wellington. Shackleton's association with Leonard Tripp began in 1903 after his early return to New Zealand on the Morning from Ross Island and Scott's Discovery Expedition. This is documented admirably by Margery and James Fisher in their book Shackleton which recalls: 'It was during this time (in Christchurch) that Shackleton met a Miss Tripp who invited him to go with her family to their place at Orari Gorge, and here he got to know the Tripp brothers, Leonard and Bernard; the friendship with Leonard in particular was to last all his life and to be a most pleasant one for him'. The visitors book at Orari Gorge notes '7th April 1903 Ernest H Shackleton, Royal Societies Club, St. James, SW'. Another entry is Will Colbeck, the Captain of the Morning, whose address was given as the RGS.

It is highly likely that Shackleton visited the Station during the preparations for his Nimrod Expedition because there is a photograph of Shackleton in the dining room signed 'Yours in remembrance of all your help. Ernest H Shackleton 1907'. Furthermore in 1909, Shackleton named Tripp Bay and Tripp Island.

Shackleton's later association with Leonard Tripp is also detailed on the Law Hall of Fame website from which I have extracted some passages below (in italics).

Part of Shackleton's plan for the Imperial Transantarctic Expedition was the establishment of the Ross Sea Party from the *Aurora* which would lay depots between McMurdo Sound and the Pole for him to pick up on his crossing. The forced departure of the ship from McMurdo Sound during

Graham Peacock (left) and David Drewry standing at 'Shackleton's Gate' at Orari Gorge Station.

a severe storm left the 10 men without all the supplies they needed and inconveniently located. The *Aurora* eventually made it back to New Zealand. *At this time Shackleton himself was stranded on the other side of the world having just rescued his Weddell Sea party from Elephant Island and thus ex communicado, and his expedition was insolvent. With the war effort on, the British government could not spare money or ships to rescue the men stranded on Antarctica. Tragedy was averted when Tripp, then a well-known and connected Wellington barrister, stepped onto the scene. As Shackleton himself later described it: '... Tripp, when the Expedition was in precarious and difficult circumstances, ... gave his whole time and advice to the best interests of our cause.'*

There were severe problems of finance and responsibility for the rescue of the Ross Sea party. Davis was appointed as Captain - a requirement of the Australian Government's financial contribution – much to Shackleton's chagrin. He heard of this while travelling via South America and the United States to New Zealand. Luckily Tripp picked up the cause and lobbied the New Zealand government hard. £5000 was raised from supporters and a successful rescue took place. *Tripp was the saviour.* His lobbying efforts were successful. He managed to advise and handle a weary and tetchy Shackleton and obtain his agreement to sign on under Captain Davis for the rescue attempt.

The Orari Gorge visitors book notes an entry '25th February 1917 E H Shackleton, London' – the last time he visited the Station Tripp continued to correspond with and offer advice to Shackleton after he had returned to England, including seeking possible employment positions for him.

Graham and Rosa took us out to see something of their property where they farm sheep (not surprisingly), Hereford cattle and deer. At one point we passed through a field boundary close to the Orari River. Rosa said that this was called 'Shackleton's Gate'. Shackleton would ride out with his Tripp hosts. On encountering this particular fence, his horse refused to jump and Shackleton crashed right through the gate. He was embarrassed by his poor horsemanship. But then, he was known not for his riding ability but for his skill as a professional seaman.

Reclaiming South Georgia from the rats
Tony Martin

SGA members attending the 2010 AGM may recall that I gave a short presentation on the South Georgia Heritage Trust's Habitat Restoration Project, the fieldwork for which was due to commence early in 2011. In the article below I outline the rationale for this operation, its methodology, progress and cost. I write these words en route for Stanley from King Edward Point in early April 2011 at the completion of the first year's fieldwork, and so can also bring you the latest news on how that went. The SGA has kindly invited me to address its 2011 AGM in May, so I look forward to seeing many of you in London and having the opportunity of telling you more about this challenging and exciting operation.

Introduced alien species are responsible for a huge loss of biodiversity worldwide, and the effects are especially profound on islands. Of all bird species driven to extinction in historic times, 90 per cent were island residents, and many of those were lost to predation by alien animals introduced by Man, such as cats, stoats and (especially) rats.

At least ten bird extinctions have occurred in the UK Overseas Territories already, with others approaching fast. The result of millions of years of evolution, these birds are being lost on a scale of decades. Although these extinctions were once difficult or impossible to prevent, today things are different. Great strides have recently been made in the eradication of invasive mammals, especially in New Zealand, and increasingly large islands are now being tackled successfully.

Within a decade of Captain Cook's first steps on South Georgia in 1775, the island became a magnet for exploiters of its fabulous wildlife. Although long gone, the sealers and whalers tragically left a hidden legacy of their occupation.

Helicopter spreading bait from the underslung bucket.

Stowaway rats went ashore from their boats, and subsequently spread throughout the vegetated parts of the island. Accomplished predators, rats ate the young of millions of seabirds, to the extent that most species today are completely excluded from areas where rats occur. The world's most southerly songbird - the South Georgia pipit - has similarly lost most of its former habitat.

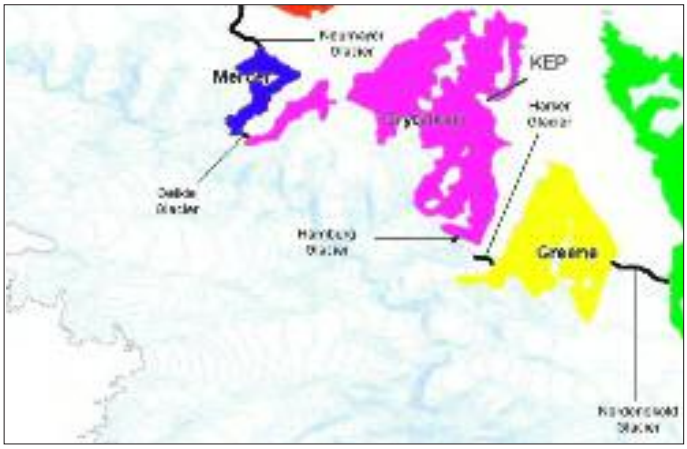
The wildlife of South Georgia is at a crossroads. Without positive human intervention, one bird species will likely become extinct as rats inexorably reach the few places from which they have so far been excluded, and many others will be greatly diminished by being denied the island as a breeding site. But this depressing scenario is not inevitable. While some offshore islands remain rat-free, they act as biological reservoirs from which birds would recolonise the main island if it became rat-free.

The idea of somehow removing rats from the island has been circulating for more than a decade, but the task was so daunting - ten times bigger than any similar project attempted worldwide - that the Government was unwilling to tackle it. Then, some four years ago, the South Georgia Heritage Trust (SGHT) investigated whether the concept was feasible, and subsequently bravely decided to attempt it.

How much does this all cost? The estimate for removing rodents from all of South Georgia is £7m. Eradication operations on anything like this scale are normally funded and managed by Government (as, for example, was the case for the sub-Antarctic islands of Campbell and Macquarie), but in this case the entire cost has had to be found independently. Having raised the funds for Phase 1, SGHT is now actively seeking the £5m necessary to finish the job. When complete, this will be one of the largest privately-funded nature conservation/restoration projects in the world.

South Georgia is so large that its rats could not possibly be removed in a single season, nor could the cost be afforded if 'standard' densities of bait (i.e. number of bait pellets per unit land area) were to be used. The need to divide the work into several seasons meant that the first could be treated as a 'trial' of reduced baiting rates on a relatively small part of the island, the trial area being isolated from all others by large rat-proof glaciers. Termed 'Phase 1', the trial would cover a large block of land around/near the King Edward Point settlement. This would be only some 12 per cent of the area inhabited by rats on South Georgia but, if successful, would still represent the largest invasive species eradication operation in the world.

As I write this in early April, I am delighted to report that the first season of fieldwork has been completed. We have spread rodenticide-laced bait over an area of more than 125 square km with two helicopters and a field team of 11 people in



The 'Phase 1' baiting areas: Mercer, Grytviken and Greene.

less than three weeks. In this we have been greatly helped by in-kind support from commercial sponsors, GSGSSI and British Antarctic Survey. On a good day each helicopter with an underslung bucket and spinner will remove rats from an area the size of the City of London, so progress is rapid when weather allows. It is far too early to yet claim that every single rat has been eliminated from the areas treated (the Greene, Thatcher and Mercer Peninsulas, and Saddle Island), but no live rats or evidence of live rats have been apparent since a week after the bait was sown. I am cautiously optimistic that Grytviken whaling station, King Edward Point and the large area of land on which they stand are all free of rodents for the first time in two centuries. If pipits are not nesting there next summer, I will be surprised and disappointed.

We will return to monitor results in 20 months time, and then (assuming that the money can be found) embark on the second phase of the operation - the clearance of rats from the remainder of the island. This will be a massive task over

The rat-baiting team celebrate. L to R.

two or three seasons, but we face it with cautious optimism after completing the 2011 trial with few major problems. An implausible dream only a decade ago, we are increasingly confident that soon millions of native seabirds will be able to reclaim their ancestral home of South Georgia from the rats. It is an intoxicating prospect.

Sponsor a hectare, invites the SGHT

You can give a hectare of South Georgia back to its birds for only £90/$140. This is all it costs to rid invasive rodents from an entire hectare.

Thanks to generous donors we could fund the first season's work but the SGHT needs your help to finish the job.

You will receive a signed certificate thanking you for your donation.

With your support we will be able declare South Georgia rodent-free in 2015!

Donate on-line at http://www.sght.org/Sponsor-a-hectare

The South Georgia Heritage Trust is a UK charity, so donations can be enhanced by the recovery of tax from UK taxpayers. US citizens can make-tax deductible donations by downloading the form from http://www.sght.org/make-donation.

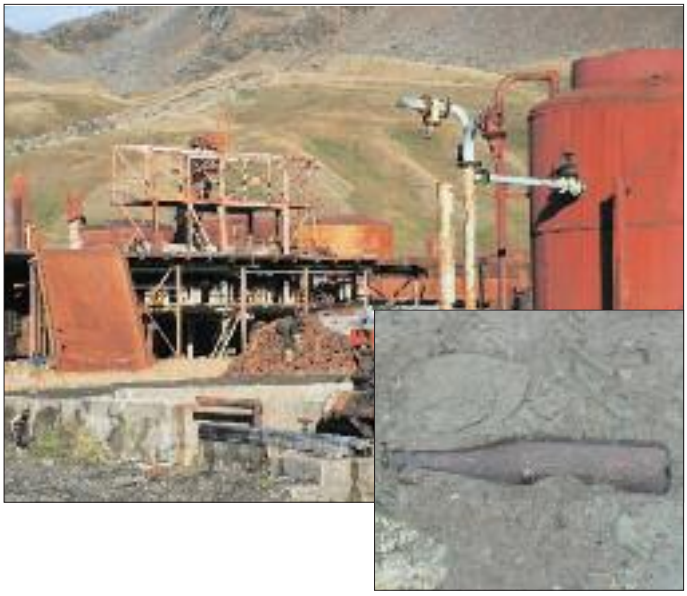
Win a bottle of champagne!

To show SGA's support for the SGHT's rat eradication programme, we will award a **bottle of champagne** to the first person to find a pipit's nest on the Thatcher Peninsula - the area around Gytviken. Corroboration by a second person will be needed.

Pipits are occasionally seen in this area. They are probably young birds that have left their parents' territories and are looking for somewhere to settle. So, once rats are eliminated, colonisation could start soon. Tony Martin says it could be as soon as next summer.

A rare, and perhaps historic, photograph of a live rat on South Georgia.

SOUTH GEORGIA INDUSTRIAL HERITAGE CONFERENCE
7th-9th SEPTEMBER 2011
VERDANT WORKS AND DISCOVERY POINT, DUNDEE, SCOTLAND



The South Georgia Heritage Trust (SGHT), in partnership with The International Committee for the Conservation of Industrial Heritage (TICCIH) and the South Georgia Association (SGA), is organising a conference on the future of South Georgia's Industrial Heritage, which will take place in Dundee from the 7th to the 9th September 2011. One of the principal aims of the SGHT is to preserve, protect and promote an understanding of the historical heritage of South Georgia, including the extensive remains of the island's sealing and whaling industries. To this end, the conference will discuss the options for the future of South Georgia's industrial heritage with reference to comparable sites in the polar and sub-polar regions.

Each speaker will explore an aspect of the island's industrial heritage with the aim of informing future heritage strategies for South Georgia. The conference hopes to address questions relating to the controversy surrounding the restoration or preservation of the remains of an industry which decimated the Southern Ocean seal and whale populations, but which had a profound influence on the economy and culture of both Britain and Norway.

The conference outcomes will form the future heritage strategy for the SGHT and will feed into a decision-making framework for use by the Government of South Georgia and the South Sandwich islands.

Delegate registration (priced £50 for the two days) will be available by mid-April via the SGHT website:
http://www.sght.org/south-georgia-industrial-heritage-conference

Celebration Marking the Tenth Anniversary of the South Georgia Association
Saturday 24 September 2011, London

A flyer giving details of this event is included with this newsletter. You will see that this is more than just a dinner and we do hope you will join us. The more will definitely make it merrier!

The Royal Over-Seas League is an excellent venue, as those who have attended our AGMs will know. It is also very central and easy to reach.

For enquiries please email Melanie D'Souza at events@southgeorgiaassociation.org

Colour copy

We thank Keith Holmes for very kindly paying the extra cost of printing this newsletter in colour.

Photographs courtesy of: Andy Black, Bob Burton, *Discovery* Investigations, Gill Drewry, Diane Gratton, Pat & Sarah Lurcock, Séamus McCann, Paula O'Sullivan, Pobjoy Mint, Royal Over-Seas League, SGHT, Alister Wilson,

The South Georgia Association newsletter is produced twice a year, in April and November.
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