

Environmental Inspection, Gough Island Wildlife Reserve, September 2002

Richard W. White¹ & Bruce M. Dyer²

¹ Conservation Centre, Georgetown, Ascension Island, ASCN 1ZZ, South Atlantic

² Marine and Coastal Management, Private Bag X2 Roggebay, 8012, South Africa

Summary:

Problem areas

- The Gough 47 (G47) Conservation Officer (CO) commented on the lack of support from other team members. This was with particular reference to the *Sagina* issues where team members “were not employed as gardeners”.
- A leak of an unidentified liquid from the rear of the Inflammables Store was discovered.
- Two items of National Department of Public Works (NDPW) cargo were packed in old plywood that had previously been used for cargo at SANAE. While there was no evidence that the old plywood was contaminated with either plant or invertebrate material, this practice should be discontinued.
- Waste food material dumped in Skivvygat does not comply with the prescriptions of the Gough Island Wildlife Reserve Management Plan (GIWRMP) section 5.13.1 which specifies that food should be macerated and no items greater than 10 mm across.

Progress made

- Publication of ‘*SANAP’s Gough Island take-over manual for 2002*’ (Jacobs and Booyse 2002).
- General duties of team members have been extended to include conservation related work (see Appendix II).

Actions required

Actions required

It is useful to have some patches of *Sagina* to show the new team and familiarise them with both the work and the plant. However, efforts should be made to keep the concrete working area of the crane point free of *Sagina* before the relief, as the use of this area for cargo storage increases the risk of the spread of seeds during the relief.

If possible, the CO within the new team should be identified and provided with specific training before leaving South Africa. For example, if the CO is expected to tackle *Sagina* eradication from cliff locations then training in rope access skills is required.

Use of old plywood for packaging by NDPW should be discontinued. Efforts should be made to ensure that all cargo going to Gough for the relief is shown to the EIs when premises are being inspected. Better still, only dedicated Gough containers should be used.

The GIWRMP does not prescribe minimum heights for helicopter overflights of the island or distances from the island around the coast away from the base area. It would be useful to clarify this information.

Use of rechargeable batteries should be encouraged – at present there are only 4 rechargeable AA batteries on the island.

The camping situation needs some attention if regular work is to be conducted in the north of the island. A container at Waterfall Camp containing a tent, sleeping bag, stove, dried food etc would be useful. A repeater station (on the Rowetts or South Peak) to enable communications with Base would also be invaluable.

Also, the use of a GPS system when walking away from Base proved very useful. The two units on Base are out of date and should be replaced with newer, lightweight models.

There are no stocks of rodenticide or bait stations on the island and as a result there is little that could be done quickly to tackle any potential rat introduction, such as a shipwreck on the island. Similarly, there is no stock of rodenticide or bait stations on the MV *SA Agulhas*. This is recommended in GIWRMP (is it?) and the 'Inaccessible Island Management Plan' (Ryan and Glass YEAR).

The fuel staging tank is no longer in use, is rusting and will continue to deteriorate if not dealt with. Removal by helicopter is probably not practical but other methods should be explored.

There is no archive of Environmental Inspector's reports on the island. This would be of value to the CO and to the Environmental Inspectors. There is also a lack of good reference material to stimulate the interest of the resident teams.

The section dealing with the wildlife interest on Gough in take-over manual (Jacobs and Booyse 2002) is out-dated and needs revision.

Background

The South African Weather Service has run a meteorological station on Gough Island (UK) continuously since 1956. It is currently staffed by a team of six personnel who complete a 12 month tour of duty (September-September). In September 2002 the Gough 47 (G47) team was relieved by the Gough 48 (G48) team.

In September 2002, RWW and BMD accompanied the annual relief voyage to conduct the 12th environmental inspection as recommended by the GIWRMP (Cooper & Ryan 1994).

The MV *SA Agulhas* departed Cape Town on schedule on the afternoon of 5 September 2002 and arrived at Tristan da Cunha on the morning of 11 September after an uneventful crossing. BMD and RWW went ashore and met briefly with the Administrator (Bill Dickson) and the Head of Natural Resources (James Glass). The MV *SA Agulhas* remained at Tristan da Cunha for the discharge of cargo until the afternoon of 13 September.

The ship arrived at Gough on the afternoon of 14 September. RWW and BMD went ashore with the first helicopter flight for the Base inspection. Cargo landing areas were agreed and the generally good condition of the Base noted. The EIs remained on Gough Island until 2 October. During this time the relief duties outlined in Appendix III were carried out.

Inspections prior to arrival at Gough Island

Rat free certificates

Rat free certificates were obtained from:

1. Table Bay Marine
2. Department of Environmental Affairs and Tourism (DEAT)
3. MV *SA Agulhas*
4. NDPW

and are attached as Appendix I.

Inspection of cargo packing areas

The MV *SA Agulhas* was first visited by BMD on 26 August. On this date it was noted that 4 out of 10 of the rat-guards were not properly in place. This was drawn to the attention of Chief Officer Hall and was immediately rectified. On 26 August an inspection of the hold found it to be acceptably clean. A further visit by BMD and RWW on 3 September found all rat guards to be correctly in place.

The DEAT store at Paarden-Eiland was visited by BMD on 26 August. Clothing and boots were inspected and found to be spotless. The interior of the store was the cleanest seen by BMD and rodenticide bait stations were noted as being in place. Freshly painted Gough specific containers were inspected and found to be clean, both inside and out.

Table Bay Marine was visited by BMD on 28 August and was found to be acceptably clean and free of rodents, invertebrates and plant material. Rodenticide bait stations were noted as being in place.

The NDPW Wingfield store was visited by BMD with Richard Parker of NDPW on 28 August. The store was neatly kept and all containers (specifically for Gough) were clean and tightly packed. Rodenticide bait stations were noted as being in place. However, the plywood packing containers that arrived on Gough Island were not identified on this visit.

Ovestone Agencies sent no cargo to Tristan da Cunha on this voyage. Lihou agencies sent cargo direct to the ship from warehouses in Johannesburg.

Conservation briefings

The first of these was conducted by John Cooper on the morning of 3 September at the DEAT offices in Cape Town. Further briefings were conducted by RWW on board the MV SA *Agulhas* and after arrival on Gough Island.

Boot washing

The first boot washing ceremony for Gough Island personnel was conducted by the COs on board the MV SA *Agulhas* on the afternoon of 9 September. A further boot washing session was held on the morning of 14 September for those personnel who had been ashore on Tristan da Cunha. An excellent level of co-operation was experienced from all personnel on both occasions.

Helicopter wheel and skids were washed after the helicopter had been used to transfer personnel at Tristan da Cunha.

Inspections on Gough Island

Monthly Conservation reports were submitted by the G47 CO, Chris de Beer (CDB). Some of the information here is drawn from those reports.

General base condition

In general the Base was in good condition, to the credit of the out-going team. The catwalks were clear of vegetation and there was little or no litter. Non-native grass species are growing unchecked on the wooden heli-deck – these were not weeded by the team as the wooden deck is treacherously slippery without the vegetation. This is not an ideal situation, but it does not appear that the non-native grasses are colonising the areas immediately around the helideck. Several larger items of ‘litter’ (e.g. cable drums) were identified during the take-over and were removed to Cape Town.

Cargo transfer

Cargo was offloaded to six points around the Base. The majority of cargo went to the Crane Point and the Helipad. Offloading cargo to other areas was approved during the base inspection. There was little damage to vegetation caused during cargo operations. The main area of concern remains the transfer of *Sagina* seeds from the area around the crane.

As noted earlier, all DEAT containers were Gough specific, freshly painted and clean. However, NDPW containers are not Gough specific. In addition, some of the NDPW cargo was packed in plywood packing cases that had obviously been used before. This undermines the value of the efforts made by DEAT and others to ensure that cargo is clean and uncontaminated.

Non-native species

Plants

No new species of non-native plant were reported by the G47 team and none were found during the relief. However, it is important to recognise that it may take a specialist to detect the arrival of some new species.

Potatoes *Solanum tuberosum* were found growing at three sites around the Base – in the courtyard, beside the Inflammables store and at Skivvygat. These were removed during the takeover. Due to the inaccessible nature of the Skivvygat site it is likely that potatoes will remain established at this location.

Sagina procumbens eradication work in 2001/2002 was conducted by the G47 CO. This seems to have been effective in keeping the population down and CDB is to be congratulated for his efforts in this area. Some of the *Sagina* found during the takeover had been deliberately left by CDB to show to the new team.

The boiler is currently unserviceable. It was hoped that this would be fixed during the coming year by Chris Swanepoel, G48 Diesel Mechanic. The blowtorch is also unserviceable, and as a result all recent control has used herbicides.

A thorough search of the Base area on 21 September 2002 by RWW and BMD found very little *Sagina* away from Crane Point and Joe Roos. In these areas there were numerous small plants but few patches larger than a few centimetres across. CDB had expressed the hope that his efforts had eradicated *Sagina* from the gully to the west of Crane Point. Unfortunately, a small patch (c. 10 cm x 10 cm) was found. Several patches of *Sagina* could be seen on the cliffs below the crane point but it was not possible to conduct an extensive search of the cliffs.

Away from Crane Point and Joe Roos, one patch of *Sagina* was found on the concrete path outside the Generator shed, with another small patch between the Upper Air Building and the VSAT.

All areas away from the Crane Point were sprayed on 28 September. Remaining areas around the Crane Point were sprayed on 2 October after the containers stored in the area during relief had been backloaded.

During the relief a number of containers and cargo were landed on the concrete at the point. Efforts were made to encourage personnel working in this area to comply with boot washing regulations.

The *Sagina* monitoring logbook was brought up to date. The past 12 months of records were photocopied on the MV *SA Agulhas* to be sent to Niek Gremmen and James Glass.

It is clear that continued efforts are required to prevent the spread of *Sagina*. In particular, the continued presence of plants on the cliff areas is a cause for concern and in need of specialist attention, as it is perhaps unreasonable to expect volunteers to be skilled and willing to take on eradication in these areas.

Mammals

There was no record of the numbers of mice caught during the year. During the relief mice were much in evidence around the Base.

Macro invertebrates

No reports of cockroaches or other large non-native invertebrates were made by G47. Weevils were found in flour and unidentified beetles were found in a box of rotten eggs. Both were frozen for return to Cape Town.

Bird strikes

Identified as an occasional problem by the G47 CO but he considered that the problem was under control. Blackouts were well observed during the take-over. A significant bird strike occurred on the evening of 23 September but mortality was low (probably three broad-billed prions *Pachyptila vittata* and one common diving petrel *Pelecanoides urinatrix*) due to prompt action by Base personnel.

Light pollution continues to need vigilance. The suggested use of Velcro to improve blackouts has not been implemented, due to scepticism about the effectiveness of the proposed measure.

In the Emergency Base some of the blackout blinds are narrower than the windows they cover, while in the refrigeration room some light escapes from the gap between the ceiling and the wall.

Waste disposal

During the relief period waste was sorted according to the prescriptions of the GIWRMP. In general, disposal was also in accordance with the GIWRMP. However, food wastes are dumped in Skivvygat without maceration.

The installation of a replacement for the present incinerator was discussed with Dave Hendrikse (NDPW) and Carol Jacobs (DEAT). The proposed replacement is likely to be an enlarged version of the current incinerator on the same site. The specifications of the proposed replacement will be submitted to the GIWRAC for approval.

Path erosion

During the take-over heavy use of the track to Seal Beach and the yellow-nosed albatross study site resulted in some erosion of the track. The track to Tafelkop seemed to be in better condition than has been reported in the past, probably due to the greatly reduced levels of traffic in the past 12 months.

Table 1 Walks, October 2001 to September 2002 inclusive

Destination	Number of visits by G47	During take-over
Admirals/Snoekgat	4	4
Seal Beach/Yellow-nosed albatross	16	7
Swemgat	2	1
Prion Cave	1	4
Tumbledown	0	1
Richmond Hill/South Point	0	0
River/Dam	6	4
Tafelkop/South Peak	4	2
Gonydale	2	2
Rowets and beyond	0	1
960/Waterfall Point	0	0
The Glen	0	0

Marine debris

Small quantities of marine debris were found on Seal Beach. This was not thought to have been of local origin. There were no reports of any wildlife entangled by marine debris during the year.

Pollution

There were three cases of terrestrial pollution during the year.

There was a significant spill of polar diesel in December 2001. Reports following this incident were submitted to DEAT and GIWRAC by CDB. The area was inspected during the relief and there seems to have been little long term damage.

A spill of an unidentified liquid from the Inflammables Store was found by the EIs during the relief. It is not clear what was spilt, or when, or in what quantity although the state of the vegetation indicated that this was not a recent event. The spill covered about 2 m² and was cleaned during the relief. At present any liquid spilt on the floor of the Inflammables Store will drain directly into the environment. It is hoped that Chris Swanepoel will be able to address this problem in the coming year.

A small spill of polar diesel, estimated 15 litres, occurred during the fuel pumpover. The spill was quickly detected and cleaned up using 'Spilsorb' pads.

No oiled wildlife was reported by G47 but the EIs found one oiled rockhopper penguin *Eudyptes chrysocome moseleyi* on Seal Beach on 28 September. The contamination was not thought to be recent and, due to the generally good health of the bird and the lack of adequate care facilities on the island, it was released without any attempt at cleaning.

Fuel pumpover

Pumping of polar diesel took place on two occasions. On the first of these problems were experienced establishing a secure pipeline between the ship and the shore but pumping eventually passed off without any spillage of diesel. On the second occasion a small spill, estimated to be 15 litres, occurred onshore but it was quickly detected and cleaned up.

Vagrant birds and unusual sightings

Two vagrant birds were reported during the year – a 'yellow-billed egret' was presumably a cattle egret *Bubulcus ibis* and an unidentified hirundine was also seen. Dusky dolphins *Lagenorhynchus obscurus* were reported as being regular, sometimes in large numbers and were seen regularly during the relief. In addition, one southern right whale *Eubalaena australis*, a sperm whale *Physeter macrocephalus* and a group of about 8 beaked whales, probably Tasman beaked whales *Tasmacetus sheperdi*, was seen from the Base.

Acknowledgements

Carol Jacobs and Kobus Booyse of DEAT were helpful and responsive to suggestions made by the EIs. Captain Tate and the crew of the MV *SA Agulhas* provided hospitality and support during the voyage to Gough Island. Chris de Beer is thanked for his work as CO during the year, and he and the G47 team are thanked for their hospitality as we invaded their home. Thanks to Gideon Nel and Peter Lekalakala for volunteering to take on the albatross monitoring and *Sagina* eradication programmes. To Chris Swanepoel and the G48 team - best of luck for the next year. John Cooper and Peter Ryan of University of Cape Town provided support and advice before the trip. RWW would like to thank JC and BMD for their hospitality in Cape Town before the trip.

References

Cooper, J & Ryan, P G. 1994. *Gough Island Wildlife Reserve Management Plan*. Edinburgh, Government of Tristan da Cunha.

Jacobs, C & Booyse, K. 2002. *SANAP's Gough Island take-over manual for 2002*. Pretoria, Department of Environmental Affairs and Tourism.

Appendix I

Rat-free certificates.

Appendix II

DUTY STATEMENT: GENERAL TASKS OF ALL GOUGH TEAM MEMBERS

1. REPORTS

- a. Monthly reports as determined by your SANAP Project Leader, supervisor or DEAT.
- b. Year-end report, with the emphasis on recommendations, as determined by your SANAP Project Leader, supervisor or DEAT. This must be completed and handed to the Departmental Coordinating Officer (DCO) of the next take-over before the ship's arrival in Cape Town. It should be addressed to KOBUS BOOYSE at DEAT.

2. TASKS

- a. Skivvy duties as determined by the Team Leader.
- b. Cooking duties as determined by the Team Leader.
- c. Keep own work place and assigned space clean and tidy.
- d. Control stock under post responsibility.
- e. All duties as determined by the Team Leader on a day-to-day basis.
- f. Completion of stock-taking before the beginning of the take-over.
- g. Help with pre-take-over preparations as determined by the Team Leader.
- h. Attend all meetings and gatherings as arranged by the Team Leader.
- i. Assist the Conservation Officer with the eradication of *Sagina* and other conservation tasks.
- j. Assist and help other Team Members where possible.

3. ORDERS

- a. All orders should be completed and sent through to the Directorate: Antarctica and Islands at DEAT four months prior to the scheduled take-over and be addressed to KOBUS BOOYSE.

Appendix III

DUTY STATEMENT: ENVIRONMENTAL INSPECTOR – GOUGH ISLAND

RELIEF DUTIES

Relief duties should be undertaken by the Environmental Inspector, appointed by the Tristan Government, in conjunction with the COs of the outgoing and incoming teams.

1. Inspect all premises where cargo and equipment is stored (*e.g.* DEA&T, NPWD, freight companies) to ensure that these premises are clean, have a current rat-free certificate and are free of plant material that might contaminate cargo.
2. Ensure that all containers are clean and dedicated only for Gough Island use.
3. Inspect the ship to ensure that the vessel has a current rat-free certificate, that rat-guards are effectively deployed while in port and that the cargo areas are acceptably clean of seed, soil and insects.
4. Present a conservation briefing(s) to all Gough Island personnel. The briefing should cover the ecological importance and sensitivity of the island, the environmental guidelines laid out by the GIWRMP, codes of conduct for watching wildlife etc.
5. Inspect the Base area at the start of the relief to agree cargo handling areas and identify potential environmental issues.
6. Inspect all cargo coming ashore to ensure that protocols are adhered to *e.g.* no fresh fruit or vegetables (except washed potatoes)
7. Inspect the Base area, and all paths leading from the Base area, for non-native plant species, notably *Sagina procumbens*. Advise incoming personnel about the locations of affected areas and any restrictions on access to these areas.
8. Train the incoming CO in *Sagina* treatment and monitoring methods, including the use of the boiler. Treat all accessible *Sagina* areas during the relief.
9. Provide training for the incoming CO in the routine albatross monitoring programmes, including the banding of birds.
10. In consultation with helicopter crews and DCO establish no-fly zones to minimize disturbance to wildlife, notably the east coast elephant seals.
11. Monitor diesel transfers to ensure that the line is pressure tested for leaks before pumping commences and that after delivery the line is cleared of diesel by pumping air through the system. Ensure that dispersant, buckets and brushes are available both on the island and on board the vessel.
12. Monitor all activities to ensure compliance with the provisions of the GIWRMP.

beetle on monkey is *Heteromychus arator* (Scarabeidae) – maize pest