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South Atlantic Natural Capital Project: The values of nature in Tristan da Cunha.



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Review table

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The values of nature in Tristan da Cunha

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INTRODUCTION

This study contributes evidence to a programme of natural capital assessments (NCA) being implemented by the UK Joint Nature Conservation Committee and conducted by the South Atlantic Environmental Research Institute (SAERI) in the UK South Atlantic Overseas Territories. Funded by the Foreign and Commonwealth Office managed Conflict, Stability and Security Fund (CSSF), the work sits under its Environmental Resilience programme which includes objectives to integrate natural capital considerations into economic and social development planning.

The SAERI NCA project manager visited Tristan da Cunha in November-December 2018 and discussed a range of potential natural capital assessments with the Administrator and Tristan da Cunha Government heads of department. There was interest in Cultural ecosystem services and how these might be affected by future changes on the island. Limited surveys were returned, but this document sets out a brief overview of the findings.

BACKGROUND ON TRISTAN DA CUNHA

Tristan da Cunha (henceforth Tristan) is the name of a group of islands in the South Atlantic (Tristan, Nightingale, Inaccessible, and Gough Islands), with Tristan being the main and only permanently inhabited island of the group¹. The archipelago is situated around 2,700 km from South Africa and 3,700 from the shores of South America, making it one the “most geographically isolated island groups in the world” (Caselle et al. 2017, p. 11). Nightingale and Inaccessible Islands are relatively close to Tristan (approximately 30km) and are within reach with a small boat, while Gough is much further, around 380km away. The Tristan da Cunha archipelago is part of the St Helena, Ascension, and Tristan da Cunha UK Overseas Territory, governed by a UK-appointed administrator, and has an elected Island Council (*ibid*). For this project, we focused almost exclusively on the main island, Tristan.

Tristan da Cunha is the remotest inhabited island in the world (Fig. 1), upon which 235² people are engaged in a unique relationship with the natural environment. Being so far from anywhere, with very limited means of contact with the rest of the world for centuries, has created a particular kind of material and symbolic nature-related culture. There is a single settlement on the island, Edinburgh of the Seven Seas (henceforth “Settlement”), and a single road, going from the Settlement to the potato patches, where the residents grow potatoes and other vegetables (more on ‘the patches’ below).

Brief history of human settlement and environmental use

Portuguese navigators discovered the four Tristan islands (Tristan, Nightingale, Inaccessible, and Gough Islands) at the very beginning of the 16th century (1505 and 1506). The Portuguese never settled on the islands, although palynological (plant pollen & spores) evidence suggests that they did land and accidentally introduced some plant species (Ljung and Björck, 2011). In the following centuries and until the late 18th century, aside from sporadic landings, mainly by Dutch East India Company ships, no permanent settlement has been recorded on any of the group’s islands (Wace and Holdgate, 1976) – although again, palynological evidence suggests that “utilization of natural resources on Tristan da Cunha started already in the 17th century” (Ljung et al. 2006, p. 558). In 1790, American sealing crews

¹ Gough Island has a small population (usually < 10 people) manning the weather station of the South African National Antarctic Programme.

² As of March 2019, 235 people live on Tristan; 19 temporary workers with their families and 216 Tristan Islanders. Population data from <https://www.tristandc.com/population.php>.

spent nine months on Tristan, in the first recorded longer term settlement on the island, while other crews spent significant amounts of time on the other islands of the Tristan group (Wace and Holdgate, 1976).



Figure 1. Tristan da Cunha relative to South America, Africa and St Helena.

The first permanent settlement on Tristan was instigated by three men in 1810, led by the American Jonathan Lambert. Their plan was to establish a station for passing ships and trade with them various necessities, and export sealskin and oil (Holdgate, 2016). Goats and pigs were already established on the island when they arrived, and they brought with them more pigs and poultry. The three men and the animals mainly subsisted on the flesh of elephant seals and a now extinct endemic flightless bird³, the Tristan rail, but they also grew a variety of crops including potatoes, cabbage, maize, and others (Wace and Holdgate, 1976). Naturally, as contemporary sources documented, the early Islanders took advantage of the resources closest to them:

The men also caught birds: ‘black-cocks’, by the hundreds with the help of a dog, ‘very fat and delicate’ in the fall. ‘[A]lbatross, mollahs, petrels, sea-hens & c’ orbited their mountain and stood to make fine feathers, a tradable good, were the men not too busy farming. Such birds were not hard to get ... And of course the islanders ate fish. They fished from the rocks, sheltered from the waves by the thick kelp reef ringing the shore. On calm days, they hove off ‘on a kind of raft of six pieces’ and took ‘many sheephead crayfish, gramper, and large mackerel’, but wind and waves usually kept them on shore, where they used sea ‘elephant’ as a bait and brought in ‘Mackerel, Grouper, Perch & crawfish in immense quantities with hook and line’ (Fichter 2008, p. 579).

The three-man venture was not successful, as by 1813 two of the early Islanders had perished.

In 1816, the British annexed the islands and sent a garrison to Tristan to help deter any attempts to liberate Napoleon, exiled on ‘nearby’ St Helena in 1815. The garrison was quickly withdrawn (1817), but Corporal William Glass, originally from Scotland, along with his wife and two other men remained. This meagre population was supplanted by sailors and castaways, and in 1825, after request from the

³ The Tristan rail, *Gallinula nesiotis*, was a flightless bird endemic to Tristan da Cunha. It was extinct by the 18th century as a result of hunting, predation by rats, cats and pigs, and habitat destruction. It is closely related to the Gough Island *Gallinula nesiotis*. Groeneberg et al. (2008) based on genetic evidence consider the two birds subspecies.

bachelors on the island, five women were sent from St Helena to marry on Tristan. As before, settlement was confined to the northern strip of the island. At the time, American sea whalers were spreading to the South Atlantic and around the 1930s they begun to arrive in Tristan, as the island was conveniently placed for vessels sailing eastwards from the US. Thus, Tristan became an important provisioning station for whaling ships, but also for trading ships travelling between the Pacific and Indian Oceans and the Atlantic world (Wace and Holdgate 1976). Between 1830 and 1870 the island prospered as a trading community, and the islanders were growing and trading a variety of crops (mainly potatoes but also cabbages, onion, turnips, carrots, strawberries, apples, pears and peaches) and animals (pigs, cattle, sheep, geese). As Holdgate (2016, p. S24) notes, “Tristan in the 19th century lay on a trade route and was far from cut-off”; for example, in 1851 35 ships called on the island (Anonymous 1947).

However, with the collapse of sealing in the middle of the 19th century, the opening of the Suez Canal in 1869, and the advent of steamships, the trading economy of Tristan significantly declined and the islanders became increasingly isolated. Between 1856 and 1857 60 people left the island. The arrival of rats in 1882 and the tragic loss of 15 men on a boat accident in 1885 made living conditions on the island much worse⁴ (*ibid*). As Wace and Holdgate (1976, p. 29) argue, between 1870 and 1950:

From a prosperous farming and trading community, they were forced to revert to subsistence crofting, supplemented by fishing and by hunting the native and feral animals.

Agricultural produce de-diversified, with fewer types of plants being grown, while animal numbers were allowed to grow beyond carrying capacity, and the Islanders were “forced ... to increasingly exploit the local resources, with devastating results” (Anonymous 1947, p. 692). Fish became an important part of the Islanders diet again, as did bird products (meat, fat, eggs). However, while seabirds were abundant in Tristan up until the 1880s, around the end of the 19th century the wildlife on the island was becoming depleted and the Islanders started their trips to Nightingale and Inaccessible islands to obtain bird fat and eggs, pigs, as well as pelts and blubber from seals. By 1892 the population was down to 50, and between 1911 and 1927, less than a dozen vessels visited Tristan per year, while in 1921 and 1924 no ships visited the islands (Anonymous 1947). In 1906 and 1922 respectively, KM Barrow (1910) and RA Rogers recorded the “average island menu” (Rogers 1926).

As regards food potatoes take the place of bread ... [T]he mutton when we first went was very good – equal, we thought, to the best Welsh mutton ... The people occasionally have beef in the winter [and] there is generally a good supply of milk ... The making of cheese has been quite given up. From July to October the men get a great number of eaglet, penguin, and mollyhawk eggs – all sea fowl. Fish can be caught all year round. Any groceries obtained must come from passing ships. Sometimes months go without tea, coffee, sugar, flour, salt and soap being seen (Barrow 1910, np).

⁴ Lewis Carroll (born Charles Lutwidge Dodgson), the well-known author of *Alice in Wonderland* and *Through the Looking Glass*, in a letter to Lord Salisbury (the PM at the time), dated December 12, 1885, wrote: “The people are on the verge of starvation, and it is a matter of urgency that some steps should be taken at *once*, to remove them to the Cape, or Australia, or somewhere they can live” (Cohen, 1989, p. 159, original emphasis). His brother, Rev. Edwin H. Dodgson, was the local priest in Tristan (1880-1884 and 1886-1889), and was lobbying for the evacuation of the Islanders after witnessing their deteriorating life conditions. Note that many Islanders did not want to leave the island, such as Peter Green, a prominent Tristanian, who wrote in an 1896 letter to the British Admiralty (Munch 1975, p. 114): “There is few cattle on the south side now, and they are in good order. I have been here over 48 years, my wife has been on the island over 57 years. We have not everything we want; but is it not the same in England? So we must take the good times and the bad times.”

They have fish and boiled potatoes or sea-birds or sea-birds' eggs, and sometimes potato puddings or cranberries in addition. Meat is considered rather a luxury and only to be had at times. Fat is scarce, and fried or baked potatoes are thought luxuries (Rogers 1926, np).

Even in the middle of the 20th century it was noted that “the material culture of the islanders is extremely plain and primitive. They subsist in the main on potatoes and fish. Wool is spun on simple spinning wheels and knitted into garments; weaving is not practiced” (Anonymous 1947, p. 692).

The fortunes of the Islanders started changing when a naval garrison was installed on Tristan in 1942, which included a canteen, a recreation hall and medical clinic (Wace and Holdgate 1976). In 1949-1950 a South African company, the Tristan da Cunha Development Company, established commercial rock lobster fishing in Tristan waters and opened the first canning factory. Tristanians were employed as fishers and factory workers, and their payments allowed them to buy food from the canteen, practically launching “trade and a monetary economy” on Tristan (Taylor et al. 1966, p. 396), and relieving some pressure on the biota (Wace and Holdgate 1976). Foraging for seabird eggs, guano, bird fat and meat, and guano continued on Tristan and the ‘top islands’ (Nightingale, Inaccessible), although these were the Islanders’ only impacts on wildlife (*ibid*).⁵ As Munch and Marske (1981, p. 164) observed, the “new economic system ... brought an enormous improvement in the material comfort of the islanders [...it] however, never supplanted the traditional subsistence economy.”

Soon afterwards, in 1961, a major catastrophe hit the island, with a volcanic eruption that destroyed parts of the Settlement. The Islanders were evacuated to England where they stayed for two years. In 1963, in an almost unanimous decision, the large majority relocated to Tristan, where they more or less resumed their pre-eruption lifestyles, as evidenced by the following activity calendar by Chambers and Lewis (1969) (Fig. 2). Tellingly, Tristanian Anne Green writes in a 1974 letter to philatelist May Starr (Green 1975, p. 94):

We have rather a large family now. Two ewe lambs about 3 months old whose mother died. Joanne's is Flossie, and Iris's Sally. Also a puppy two months old called Shep. My father brought home a calf yesterday. He had been caught between some stones. The mother died sometime ago ... We have been busy planting our potatoes, but still have a few more patches to do ... Our winter wasn't so bad. A lot of wind and rain but not as cold as last year. Good for the sheep, too. So many lambs died last year ... The wages here are so low, and prices keep going up. I did hear that there will be a wage increase this month to meet the rising cost of living. I hope so. Without our potatoes, sheep, cattle and fish, I don't know how we would manage.

⁵ Taylor et al. (1966) includes interesting data on local food consumption before 1961: seabird meat included meat from black haglets, mollymawks, peeyoos, petrels; bird eggs from penguins, petrels and mollymawks; fish consumed were rock lobster, bluefish, fivefinger, Snoek, yellowtails, stumpnose and soldier fish.

Table 1. Calendar of activities on Tristan da Cunha

Activity	January–March	April–June	July–September	October–December
Crawfish industry	← 70–80 days during year, when sea calm →			
Other paid employment	← Most men employed on permanent or casual basis on 6-day week when not fishing → Few girls employed as maids, pupil teachers or in hospital			
Potato cultivation	← Harvest (♂ & ♀) →		← Spading (♂) → ← Planting (♂ & ♀) →	← Weeding and spraying (♂ & ♀) →
Visits to Nightingale Island	← Guano trips (1–3) (♂) →	← Fat trip (♂ & ♀) →	← Egg trip (♂) →	
Fishing for home consumption	← Throughout year when sea calm and fish required (♂) →			
Cattle husbandry	Milking done by women and children when cows in lactation		← Winter kill (♂ & ♀) →	Christmas kill (♂ & ♀)
Sheep	Little work involved		← Lambing and shearing (♂) →	
General maintenance		← Thatching (♂) →	← House and boat building and repairs (♂) →	
Carding and spinning wool	← Throughout year when supplies needed. Each woman spends at least 2 weeks in ½ days during year →			
Cutting and collecting wood	← Intermittently throughout year. Men cut wood on mountain, women bring it home on donkeys →			
Holiday				Holiday (2–3 weeks)
		← Nutrition survey 1966 →		
			← Dental survey 1966 →	

Figure 2. Activity calendar compiled in 1966, and published in Chambers and Lewis (1969, p. 239).

The current economy of the island is mainly based on the Marine Stewardship Council (MSC) certified rock lobster fishery (Tristan da Cunha Government and RSPB, 2012). The sole concession is held by a Cape Town fishing company, Ovenstone Agencies, which operates vessels⁶ for offshore rock lobster fishing, and owns the small fleet of dories for inshore fishing operated by the Islanders. The inshore catch is processed at the factory which Ovenstone Agencies operates on the island. Weather conditions and lack of port facilities on Tristan restrict fishing days on Tristan to circa 60 per year⁷. This income is supplemented by the sale of collectible stamps and woollen souvenirs, as well as a modest input from the tourism sector (circa £50,000 in 2017/2018, Acorn Tourism et al., 2019). Furthermore, scientific research and wildlife conservation have been bringing more and more funded projects to the island, and are a source of employment both for Islanders and outsiders (Scott, 2017).

A map of the Tristan with place-names is presented in Figure 3.

⁶ These vessels are equipped to fish and process the catch. They are referred to as freezer factory vessels. <https://www.tristandc.com/newsfishingmsc.php>.

⁷ “Tristan fishing days are decided by a team of two on a daily basis. If they agree on a ‘day’, a ‘gong’ is then rung early in the morning and the fishermen and the factory workers are employed for that day” (Tristan da Cunha Government and RSPB 2012).

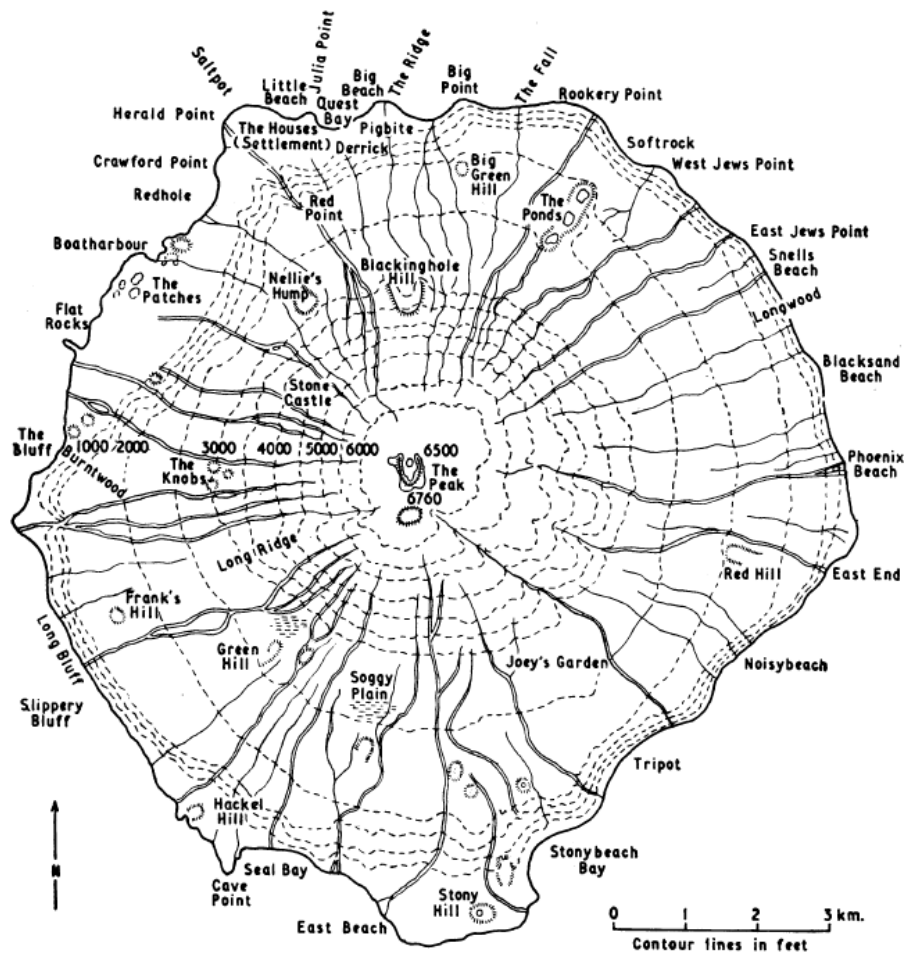


Figure 3. Map of Tristan, including place names. To the North East, we can see the Settlement and the Patches. From Samuels (1963).

RESULTS

Although the sample we are working with is limited, we did receive some diverse and interesting answers. We will mostly present these in qualitative terms, except where a quantitative presentation of the respondents' answers is possible and informative.

Naturally, the remoteness of the islands was highlighted by the respondents, as well as the relationship between humans and nature. Remoteness was not mentioned in a negative way, as it was related to uniqueness, beauty and naturalness ("unspoilt"), or as neutral description: "remote environment with interaction of humans with wildlife and land/mountain and sea". Another prominent aspect mentioned by the respondents was the wind ("windswept", "gales"). Finally, in terms of feeling and experiences evoked by the island, the respondents mentioned the following: "refreshing", "spectacular", "tranquil", "stunning" and "home". The association with home is interesting, and is best exemplified by a longer quote by one of our respondents who when asked to describe the essence of the island mentioned: "A remote beautiful house with the freshest air in the world".

The respondents mentioned 14 different 'places' when asked to name "places that capture the essence of the natural environment" (Fig. 4). The mountain seems to dominate the respondents' answers ("mountain", "ponds on the mountain", "base"). The naturalness, remoteness and wildlife of the mountain were highlighted ("certain places [on the mountain] are so remote they are untouched"; "lots of birds"; "cause this is where the albatross is and for me that is one of the things that make the island

special”), while leisure activities on the mountain were also mentioned (“looking around the mountain”). Secondly, beaches and coasts were highlighted by our respondents (“Stoney beach”, “beaches” in general, “The Bluff”, “Sandy Point”, “rock pools in Runaway beach”, “Pigbite”, “the Caves”). The respondents indicated that wildlife (“penguins and seals”, “seaweeds and fish”), in combination with access and recreation (“Pigbite - closest area that appears to be wild”; “going around to the caves and Stoney beach”) were the reasons why beaches and coasts were mentioned. Outer islands and especially Nightingale was also highlighted, as were the potato patches, both culturally and materially significant for the people of the island for centuries (more below).

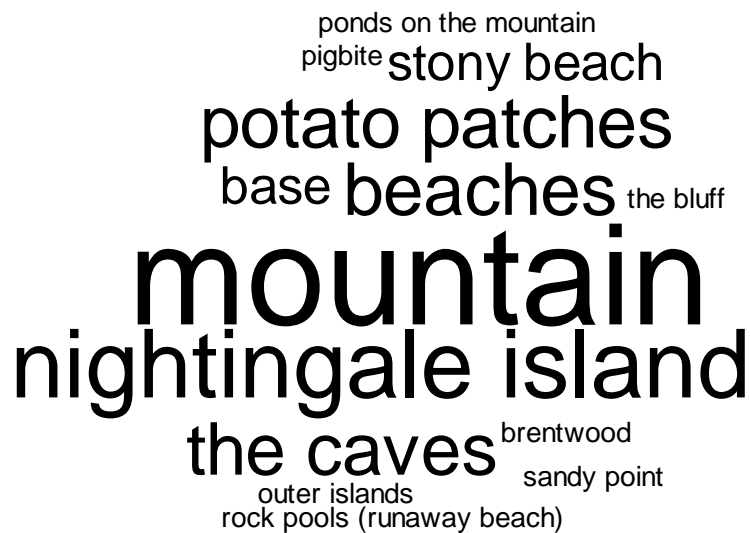


Figure 4. Places that capture the essence of the natural environment on Tristan (min: 1; max: 6)

In terms of natural heritage, the respondents mentioned 19 different elements (Fig. 5), the most common being the potato patches, which is “important as it’s been part of our living for years and years”. Several plant and animal species are also mentioned, which are either “Tristan’s icons” and “relatively unique to this area” (“albatross”, “seals”, “penguins”, “island tree”) or important past or present sources income and/or food (“crawfish”, “albatross”).



Figure 5. Important elements of natural heritage (min:1; max:4).

Outdoors activities

Work

Almost every resident in Tristan, and especially Tristanians, works outdoors very frequently. Outdoors work-related activities are either part of their jobs, or more commonly part of the almost daily activities that are related to food production in the island. Considering that most life on the Island takes place in the north-west plains, between the Settlement and the potato patches, most work-related outdoor activities take place within or in the wider vicinity of the Settlement (including the potato patches) (Table 1).

Thus, almost every respondent (8 out of 9 who answered this question), and from our understanding almost everyone on Tristan, works outdoors at the potato patches as part of their activities that are related to food production, producing mainly potatoes but other vegetables too – they are “part of livelihood” on Tristan. Many island residents also have their own kitchen gardens, where they grow vegetables. Similarly to work on the potato patches, many Tristan residents, mainly Islanders, are “looking after the animals”. Sheep and cows are kept on the island, both in the north-west plains where the Settlement and the potato patches are, but also at the Base⁸ (sheep) and in some small coastal plains around the island (cows in Stony Beach/ the Caves and Sandy Point). Ducks and chicken are also kept on the island and need everyday care.

There are number of additional outdoors activities related to work that were not captured by our small sample. Three examples are worth mentioning because they represent the recent past and present of the islands, and perhaps the future. First, special mention should be made to foraging trips on Nightingale and its islets. Once a year (although not every year), teams of male Islanders go by boat to Nightingale (or its islets) and collect(ed)⁹ northern rockhopper penguin eggs, great shearwater (‘petrel’) eggs and chicks, and guano for fertilising the potato patches (*ibid*). Rock lobster fishing has been the most important industry for the island since the 1950s, with around 35 (2012 data) men employed as fishers, for circa 60 fishing days/year (Tristan da Cunha Government and RSPB, 2012). Furthermore, workers occupied in conservation are also a significant part of the work force in Tristan; witness for example in the recent past the “Darwin team” of 10 government employees who were trained in wildlife fieldwork and carried out much of the 2006-2012 conservation work on the islands (*ibid*).

Table 1. Places of work.

Place	No of Respondents
Potato patches	8
Settlement	2
Shop	1
Runaway Beach	1
Mountain	1
Camping hut	1
Harbour	1

⁸ See Glass (2012), chapter *A day on the Mountain herding sheep* for a description. Glass describes how groups of men (in “gangs”) set out in the middle of the night to earmark, castrate, shearing, and slaughter sheep.

⁹ JNCC (2014, p. 71) mentions “the declines in biodiversity that have occurred recently have not been severe enough to have an impact on ecosystem services, except that due to the low numbers of breeding rockhopper penguins, the traditional (sustainable) harvest of penguin eggs has been suspended.”

Leisure

Diaries and other testimonials from people who have lived on Tristan (both Tristanians and not) suggest that Islanders and other residents of the islands have always spent time outdoors in their free time. Barrow (1910) time after time describes walks she took with her husband, fishing trips, longer treks deep in the mountain, picnics with Islander women and their children, nature photography, swimming in the sea and many other 'practices'. Especially compelling are interview quotes contained in Day (2008) about the way children spent their time before the evacuation to England in 1961. They are worth quoting at length as they speak to the way Islanders' life was interlinked to the natural environment, and sketch the kind of experiences and feelings afforded by that relationship:

We used to go fishing off the rocks ... we didn't have shoes then, only moccasins . . . we used to take them off, tuck up our dresses and go out on the rocks. Sometimes we used to go down Little Beach and go out on the rocks there and fish. I used to go with my mother, then when I was old enough, I used to go on my own and fish. You could go anywhere where you wanted . . . you wasn't afraid . . . there was nobody to harm you or do anything. Sometimes we just go off for the whole day (Day 2008, p. 52)

Growing up on Tristan was fantastic because you had so much freedom, but you didn't realise how much freedom you had until you left and went somewhere else. We used to leave school in the afternoon and go down to the harbour and swim in the rock pools. Most places you could wander quite freely . . . and one of the fondest memories I have of growing up in Tristan is Auntie Martha. She used to take a group of us on picnics. I don't remember what we took to eat, apart from the fudge she used to make, but we always used to have great fun. She took us to the beach and we used to pick berries. We didn't have toys so we had to use our imagination to create things. We wrapped seaweed around stones to make dolls, but the boys used to steal the wheels from our prams to make go-carts. We'd go fishing on Saturday afternoon and sometimes my dad cooked the fish on the beach. When I look back I realise that all the things we did just made our childhood so exciting, and I think it also gave us more of a sense of independence than perhaps kids have today (Day 2008, 52).

What I remember about my childhood ... well, it was definitely the freedom. We used to get up to all sorts 'cos of the amount of freedom. You would always find us around climbing trees, looking for the right-shaped piece of wood to make slingshots. We went all over the place on our bicycles, and we also built go-karts, using the biggest wheels we could find (Day 2008, 52).

Unfortunately, our limited dataset does not allow us to provide this kind of interesting and informative ethnographic information about the present. It does however, in a restricted way, allow us to make some general comments, informed by a reading of the peer-reviewed and grey literature on Tristan.

Our results suggest that people on Tristan do indeed practice outdoor leisure activities. 50% of the respondents practice leisure activities every day, while 50% less frequently. As expected, respondents mainly limit their leisure activities in or in the wider vicinity of the settlement (Table 2; potato patches, Pigbite, Settlement, sheep pen), but they also venture further off (Table 2; Base, mountain, Runaway Beach, the Caves).

Table 2. Places of leisure

Place	No of respondents
Potato patches	3
Beach/beaches	3
Pigbite	2
Base	1
Mountain	1
Runaway Beach	1
Settlement	1
Sheep pen	1
The Caves	1

The activities they practice are shown in Figure 6¹⁰. The most striking feature is that we can see a combination of ‘traditional’ leisure activities such as walking, dog walking, camping, etc., with activities that are typically classified as work, such as sheep shearing, growing vegetables in the potato patches, or feeding cows. Many of these activities are often done collectively, perhaps in extended family or peer groups, and they are often not viewed as leisure nor work *per se*. Conrad Glass MBE, ex-Chief Islander and the island’s only police officer, describes the working at the potato patches in way that perhaps helps us understand why this type of work activity has characteristics that resonate with leisure-related practices:

About a quarter mile outside the village, we see other families going to The Patches in their pickups and Land Rovers, several ahead, others following. Seven minutes later we arrive, to find Jack getting the scrapers and buckets from one of the huts. Jack and I share the work in our patches, either planting or harvesting the potatoes. Most island families do the same. Our fathers worked their patches together for more than 50 years ... Sometimes there is a competition to see who digs the biggest potato. We will have to watch Jack, as he’s usually up to his antics trying to get the biggest spud to put in his heap, claiming he dug it. After digging a few patches the whole family sits down for a picnic lunch laughing at talking to other people who are passing by ... The families in each group take it in turn each weekend to provide refreshments. It’s a time to relax together on the lawn, planning for the next weekend, discussing if any patches need to be dug during next week. Later that day I return my parents to The Patches in the Land Rover. They will spend the weekend there at their camping hut ... My father will either tend his vegetable plot or go fishing from a beach with a land line. Most families have camping huts built at The Patches, where they spend weekends, Easter and Christmas holidays (Glass 2012, np).

Note that this merging of work and leisure activities is not universal on Tristan. From the same book, Glass’s son, who had just returned from studying in England, is adamant: “I will be glad when this bloody work at the Patches is finished. What a boring life style. Work, work, every weekend. No break at all” (Glass 2012, np).

¹⁰ Compare with “sporting activities” recorded in 1979: “Sporting activities include a nine-hole golf course, shooting, swimming, rock climbing, bird watching, walking, fishing and sailing in the longboats” (Helyer 1982, p. 179).

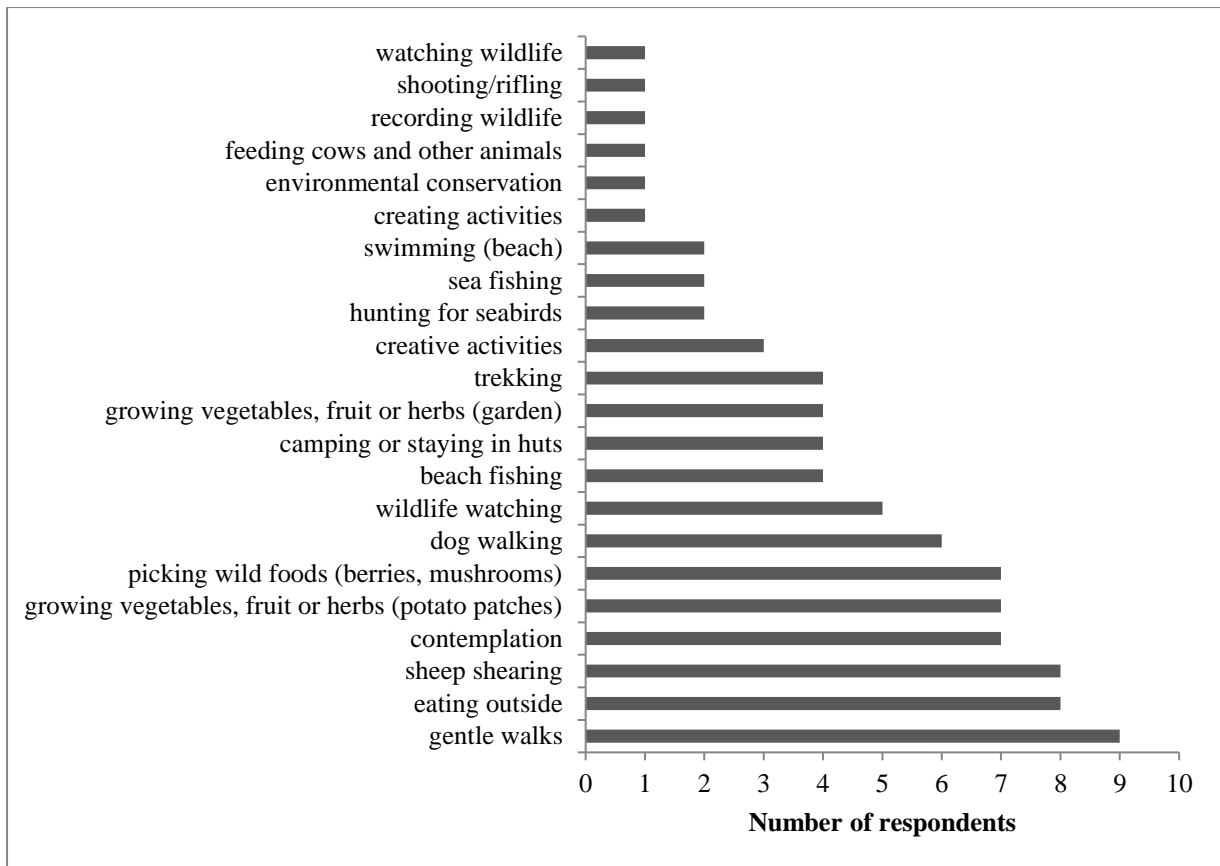


Figure 6. Outdoors leisure activities mentioned by the respondents.

Considering that “it is still the case that the islanders produce a substantial amount of their own food (meat, potatoes, a small amount of vegetables and fish)” (Tristan da Cunha Government and RSPB, 2012), it is not surprising that all respondents are preparing and eating produce grown or caught on Tristan (Figure 7). Similarly, since preparing wool and knitting is a practice historically associated with the women on the island, we see that half of our respondents do mention practicing it.

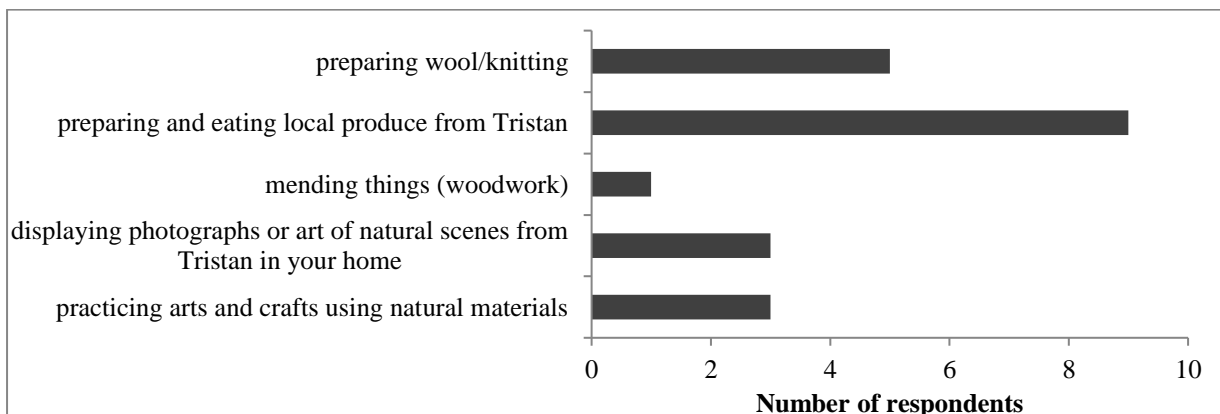


Figure 7. Indoors leisure activities mentioned by the respondents

Cultural ecosystem benefits

Regarding ecosystem benefits, our small sample is compounded by the fact that many respondents did not answer the relevant questions (Tables 3 and 4). We are therefore unable to comment further.

Table 3. Experiences while working outside.

	Tranquillity	Freedom	Exhilaration	Achievement	Belonging
Strongly agree	6	1	1	1	2
Tend to agree	2	4	3	3	1
Neither agree nor disagree	2	3	4	4	5
Tend to disagree/disagree	0	0	0	0	0
NA	2	4	4	4	4
Grand Total	12	12	12	12	12

Table 4. Experiences during outdoors leisure.

	Tranquillity	Freedom	Exhilaration	Achievement	Belonging
Strongly agree	6	2	2	3	3
Tend to agree	2	4	4	1	0
Neither agree nor disagree	1	2	2	5	5
Tend to disagree/disagree	0	0	0	0	0
NA	3	4	4	3	4
Grand Total	12	12	12	12	12

DISCUSSION

We attempted to record the values of nature on Tristan, using a survey of limited sample size and published accounts of life on the island. Our contemporary empirical data do not allow us to confidently talk about the value of nature on Tristan; plus, our task is made more interesting because of the uniqueness of the Tristanian lifestyle. Thus, we close by making some brief tentative comments below.

A. The distinction between (a particular type of) work and leisure is not so clear on Tristan. Owing to the particular form of social organisation on the island (Munch and Marske 1981), and the strong family ties, sustenance provision, while often gruelling, is often *more-than-work*. As an illustration of this point, if we combine the place of work and leisure in one list, we can see that the potato patches clearly dominated in terms of number of respondents who mentioned them (11; the next in row is the settlement with three respondents; Fig. 8). The patches, with its combination of camping huts, potato and vegetable patches, and leisure activities such as fishing is perhaps the place that best exemplifies how Tristanians value the environment as a source of food, recreation, sociality, etc. For example, Tristanian Anne Green describes a day at the Patches (Green 1976):

Yesterday was "Ratting Day." It was traditional before the eruption to hold one day each year before spading started, to hunt and kill mice and rats, and then cut the tails off them. The [potato] patches are in different areas and each area has a name. The men are divided into gangs, each gang taking its name from a group of patches. Our gang is "Bill's Hill," which won the prize this year for the longest rat tail – shared with the Farm who also had a tail the same length: 9-3/4". The prizes are given to the gang with the most tails and the next highest; also a prize for the longest tail. The rats are hunted with dogs ... This day is a holiday for all, with a dance in

the evening. The women go out in the morning to take lunch out for the men, and the children go too.



Figure 8. Work and leisure related places mentioned by the respondents (min = 1; max = 11).

B. Tristan is not only remote, but the topography and the natural environmental can be inhospitable too. We know from published accounts of life on Tristan that everyday activities on the island are mainly confined to the North West plains, while the difficult topographies of the Mountain and the Base are reserved for longer leisure treks or animal husbandry. Only a small part of the island is suitable for habitation, and that is reflected in the places mentioned by respondents for work and leisure (see Fig. 9). Note that a lot of responses are not easily mapped, and are thus missing from the map below. Examples include “the Mountain” or “the Base”, which coincidentally are among the most iconic elements of the natural environment for our respondents. Considering the limited sample size of our survey, the map overleaf should only be seen as provisional.

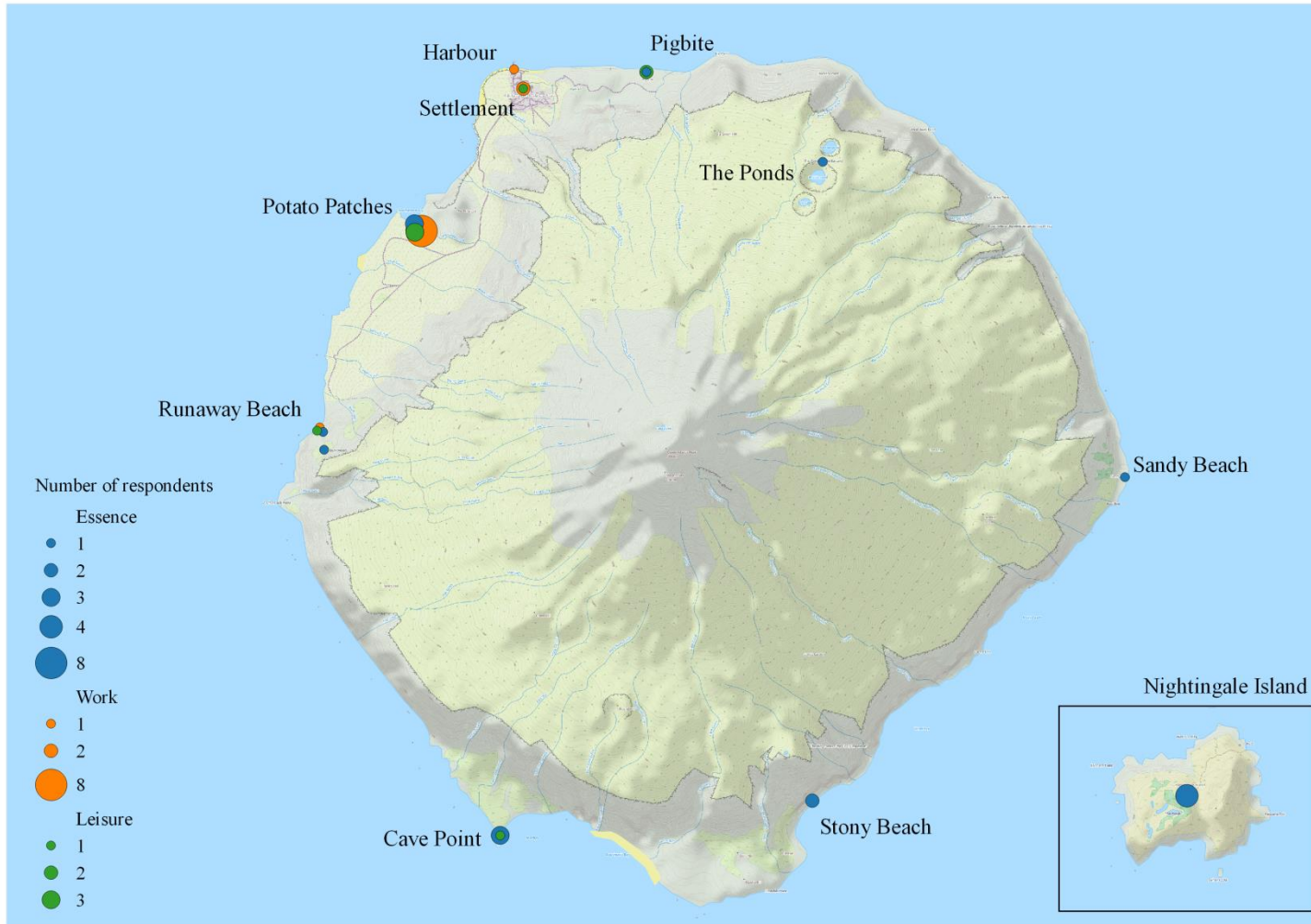


Figure 9. Combined map of iconic, leisure and work places. Background map by Open Street Map.

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