



# HENRYK ARCTOWSKI STATION

## Mixing Science and Tourism

Stuart P. Donachie

Polish Academy of Sciences, Poland

**Abstract:** The establishment of the Henryk Arctowski station on King George Island (South Shetland Islands) in 1977, enabled Poland to commence year round scientific research in Antarctica. The area has since gained the distinction of having the highest concentration of such facilities in Antarctica. The island has in turn become popular with tour operators. The introduction of larger tourist ships poses a danger that research programs and protected areas may be adversely affected. It is suggested that tour operators pay a fee for each client, and that the revenue be used to establish specific areas for tourists, or coordinate their activities. **Keywords:** Antarctica, tourism, environment.

**Résumé:** La station *Henryk Arctowski*: l'alliage du tourisme et de la science. La fondation de la station *Henryk Arctowski* à l'île du Roi Georges (îles Shetland du Sud) en 1977 a permis à la Pologne de faire des recherches scientifiques en Antarctique pendant toute l'année. Maintenant, cette île possède le plus grand nombre de telles installations dans toute l'Antarctique, et elle est devenue aussi un endroit à la mode pour les tour-opérateurs. L'introduction des plus grands navires de croisière crée le danger que les programmes de recherche et les régions protégées souffrent des effets nuisibles. On suggère que les tour-opérateurs paient une cotisation pour chaque client et que les revenus soient utilisés pour établir des endroits spécifiques pour les touristes ou pour coordiner leurs activités. **Mots-clés:** Antarctique, tourisme, environnement.

### INTRODUCTION

Although Poland was the tenth country to ratify the Antarctic Treaty, on 8 June 1961, before Argentina, Australia, and Chile, Consultative status was only attained after the inauguration of its sole permanently manned station Henryk Arctowski, in Admiralty Bay, King George Island, in 1977 (Figure 1).

The bay was not the initial site of choice for the base (Rakusa-Suszczewski 1992a), but it was found to be more suitable than others under consideration in the South Shetland Archipelago. Other countries have since clearly shared the view that the island is ideally situated to the establishment of a (research) station. During the 1980s the region witnessed a veritable stampede of construction workers.

Polish activities in Antarctica gathered pace during the 1970s with the advent of krill (*Euphausia superba*) fishing. This industry was essen-

---

Stuart Donachie, a British marine microbiologist based in Poland (Department of Antarctic Biology, Polish Academy of Sciences, Ustrzycka, 10, Warsaw, Poland) since late 1988, took part in the Polish Sea-Ice Zone Expedition between the South Shetlands and South Orkneys in 1988-89. He also wintered at Arctowski station in 1990.

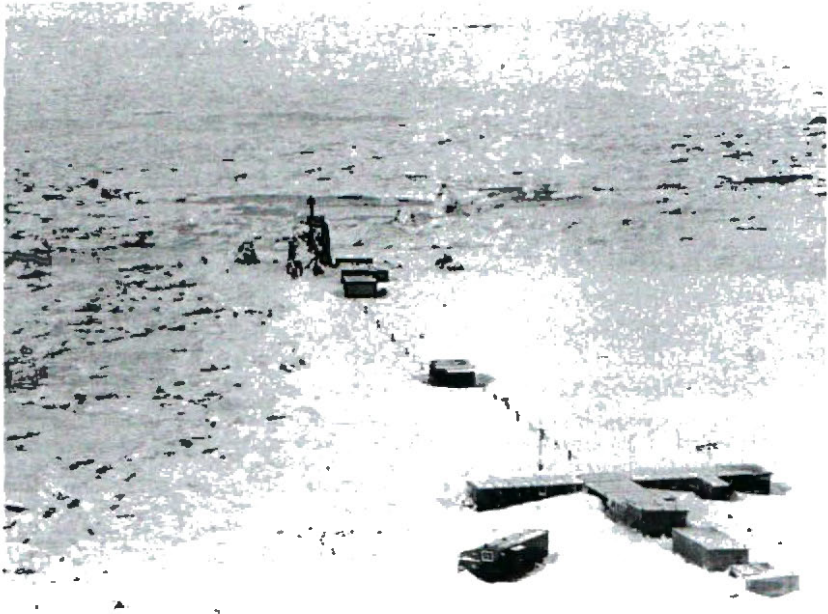


Figure 1. Henryk Arctowski Station (Photo: K. Sierakowski)

tially dominated by the then Soviet Union and Japan (Sherman and Ryan 1988), but early in 1976, two Polish ships were despatched to investigate the potential fishery. Later in the same year two more Polish ships visited the South Shetlands in order to establish the Henryk Arctowski station.

Officially opened on 26 February 1977, this medium-sized station with laboratory and living space amounting to over 1800 square meters can accommodate 20 people during the winter. To date, almost 250 people have wintered at the base, including two Russians, one Briton, and one Argentinean. An additional 550 people have worked at the station during the summer seasons, and scientists from at least 15 countries have conducted their own research programs there. Furthermore, research has been continuous in a broad range of fields, including oceanography, ornithology, geology, and ecology. Such research is required of Poland as a signatory of both the Antarctic Treaty and CCAMLR (Convention on the Conservation of Antarctic Marine Living Resources).

Between 1976 and 1989, there were five Polish marine expeditions to the South Shetlands, each complementing research being carried out at Arctowski, but all equally being conducted within the framework of the BIOMASS (Biological Investigations Of Marine Antarctic Systems and Stocks) program, an international study aimed at providing a firm scientific basis for future management of living resources of the Southern Ocean (El-Sayed 1988). Research at the station is also closely connected to other programs run under the auspices of SCAR (Scientific Committee on Antarctic Research), including BIOTAS (Biologi-

cal Investigations of Terrestrial Antarctic Systems), EASIZ (Ecology of the Antarctic Sea Ice Zone), and Global Change. Of particular relevance to the latter, Polish scientists have noted an intensive glacial retreat in Admiralty Bay over the last 15 years. In addition, Poland has been successful in having the western shore of the bay, close to the station, designated as SSSI (Site of Special Scientific Interest) number 8. The importance, and indeed effectiveness of this designation will be considered in this paper.

Tourist visits to King George Island predated the majority of the bases now present, but as the number of such "attractions" has increased, so the area has become more appealing to both tourists and tour operators alike (Figure 2). Whether or not this concentration of people and facilities (Lorius 1990) on the island is desirable, or even advisable, will not be addressed here. Rather, attention will be paid to how scientists and tourists at Arctowski interact, and how their respective activities have affected the area around the station in terms of flora and fauna. In this respect, Mosley (1986) considers that off-duty scientists and expedition personnel may be grouped alongside tourists insofar as they also have the potential to adversely affect the Antarctic environment. From experience, the author supports this view.

#### TOURISM AT ARCTOWSKI STATION

From its inception, Arctowski station has been popular with tourists, and indeed they were even welcomed during its construction. This popularity stems from the now legendary hospitality shown by the Poles. Visitors, tourists, and scientists leave the station impressed by both the people and the base itself. It has been estimated that 10,000

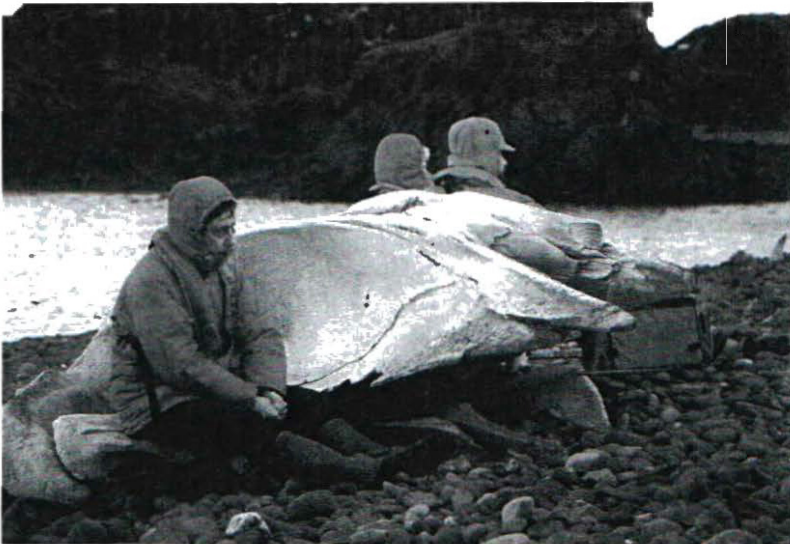


Figure 2. Tourists at Arctowski Station Rest on a Whalebone  
(Photo: S. P. Donachie)

people have visited the base (Rakusa-Suszczewski 1992b), a number that continues to increase at the rate of about 800 per season.

As most visits are short, tourists generally only see the station's main building, comprising accommodation, library, mess, and kitchen, but personnel are frequently asked to provide tours of the greenhouse (Figure 3). During the 1980s, this part of the station proved especially popular, having been originally installed to provide fresh vegetables, particularly tomatoes, for the winterers, and a limited supply of fresh flowers (gardening was also a relaxing hobby). These greenhouse tours were much sought after. At times, it was rather amusing to see crowds of people clad in huge orange jackets trying to negotiate the small aisles between the flower pots. Some of the luckier ones, and then only the women would leave the station with small bouquets of fresh flowers. Tomatoes, however, were not so readily parted with. Unfortunately, the greenhouse no longer operates, as there were some questions about its use of soil imported from outside Antarctica and the potential introduction of micro-organisms and other non-native species.

The library was also a popular tourism attraction, not because of

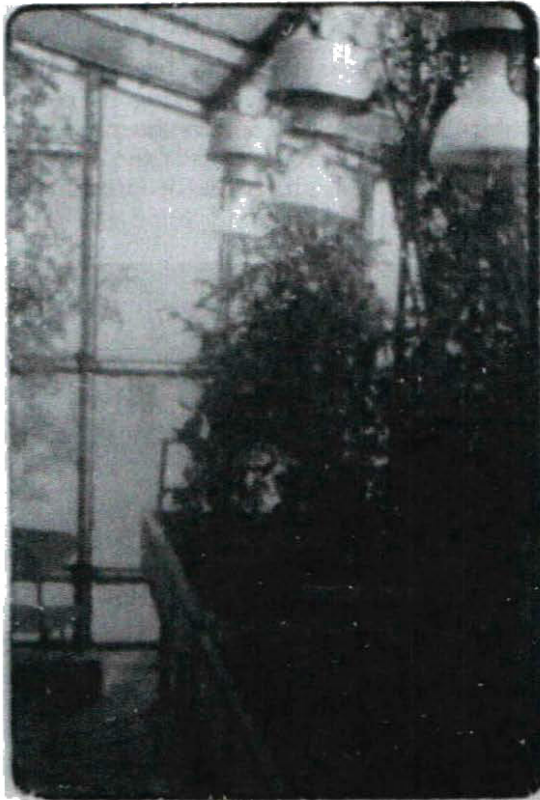


Figure 3. Arctowski Station's Greenhouse was a Popular Tourist Attraction  
(Photo: V. L. Smith)

the collection of books, but for the items displayed and sold as souvenirs to tourists: maps, expedition patches, postcards, shirts, pins, and the like.

The first visitors to the area around Arctowski station, especially prior to its construction, were impressed by the number of whale bones that littered the beach (Figure 4). During the seventies, these relics of a whaling industry that was once based in Admiralty Bay were so numerous that walking through the area was rather difficult. Since then, however, many such bones have fallen victim to further "human activity," having allegedly been removed to museums in various countries. Others have without doubt found their way into private collections, in contravention of regulations explicitly prohibiting their removal from Antarctica.

In this respect residents at the base are told that such bones are not to be disturbed, but these instructions are widely ignored. Non-resident scientific personnel are equally guilty, and station members have on a number of occasions demanded that boxes full of these bones be removed from helicopters and zodiacs belonging to visiting research vessels. Tourists from visiting cruiseships have traditionally been closely monitored, especially by their own guides. Although some such visitors may have succeeded in removing small fragments from the area, it would be practically impossible for them to effect the removal of something so large as a whale rib or vertebra. Laws of the United Kingdom and United States further prohibit their citizens from causing the importation of such material into their own countries. Sadly, nationals of many other states are not subject to similar rules.

In terms of the wildlife on King George Island, the most abundant and diverse animal and plant communities are seen on the western



Figure 4. Whale Skull on the Beach Close to the Station (Photo: S. P. Donachie)

shore of Admiralty Bay. This area has been afforded some protection (by the establishment of the SSSI) against the uncontrolled human interference seen on other parts of the island. But human activity has, nonetheless, affected the flora and fauna in the area as a whole. For example, one can still see vehicle tracks and footprints dating back more than 15 years in fragile moss communities close to the station. These communities have been dated at over 1,000 years, and they continue to suffer each summer.

Man's interference extends to the arguably benevolent activity of feeding the birds. Although this situation appears to exist at many stations, those responsible seem unable to appreciate that such practices are not only detrimental to the health of their feathered guests, but interfere with ongoing ornithological studies. In this respect, Arctowski falls within the territory of a pair of South Polar Skuas (*Catharactas maccormicki*), which are fed by a minority of base personnel on each expedition. The birds are as tame as one would expect after years of such feeding, but their breeding success appears to have been affected by the fact that such a diet is largely unsuitable for rearing chicks.

Probably the greatest loss within the vicinity of Arctowski has been that of a Southern Giant Petrel (*Macronectes giganteus*) (Figure 5) rookery. Up to 1978, a rookery with between 10 and 20 pairs was situated in the Point Thomas region, close to the station's fuel tank. The birds were easily disturbed by human activity and by 1984 only two pairs remained (Myrcha 1992); the rookery was finally abandoned in 1989 (personal communication with Sierakowski). The nearest Giant Petrel rookery is now situated close to Ecology Glacier, immediately south of the station and under protection within SSSI number 8. This one is seldom visited, its relative isolation being its best protection against



Figure 5. Giant Petrels in Admiralty Bay (Photo: S. P. Donachie)

off-duty personnel, and in theory at least, it should only be visited by scientists.

During 1992, however, a guide from one of the more recently introduced tourist ships escorted a group of clients to this rookery. Two days later, perhaps coincidentally, an ornithologist on a routine check noted that two of the 19 nests had been looted by Skuas. Whether or not the tourist visit can be implicated in this loss is open to question, but the guide clearly committed a gross breach of the rules governing entry into the SSSI. The same can be said of his clients, some of whom may be open to prosecution under the laws of their own countries.

Furthermore, two years ago the ship, to which these tourists belonged, made a landing in an area that had been proposed, and shortly afterwards approved, as an SSSI. This area is well away from any research facility and the visit was only noted by chance by a research vessel whose scientists wished to visit the area for an annual bird and seal census. The master of the tour ship made it quite clear that he knew of the area's significance, re-embarked his clients and crew, and departed.

In contrast to the loss of the Southern Giant Petrel rookery at Point Thomas, there appear to have been no adverse effects upon a nearby penguin rookery (Figure 6), by base or tourist activity. The rookery, occupied by Adelie (*Pygoscelis adeliae*) and Gentoo (*P. papua*) penguins, is situated immediately within the northern boundary of SSSI No. 8, approximately 400m from the base. The rookery, which occupies higher land than the base and the adjacent beach, is approached by tourists during their every visit, but guides from the ship who are well-acquainted with the area have ensured, with the exception mentioned above, that the boundaries are not infringed. An incursion by



Figure 6. Adelie Penguin Rookery South of the Station (Photo: S. P. Donachie)

those tourists wishing to take photographs is not necessary, because the birds make their way to and from the sea across a beach that does not come under SSSI protection. It is important to note that nesting is well above the closest point at which tourists can approach.

Once more, some distinction must be drawn between these generally well-supervised tourists paying (*sic*) fleeting visits, and people associated with non-tourist activities. A minority of personnel (Figure 7), including individuals from visiting research and supply vessels, continue to ignore instructions regarding local wildlife and the SSSI. Visiting personnel, in some cases, have probably received no notification of the existence of the SSSI, and some in turn do not understand the significance of such a designation. Furthermore, as with other sites around Antarctica, helicopters from research ships have occasionally contravened regulations governing minimum operating heights.

### PAST, PRESENT, AND FUTURE

Base personnel have been happy to greet all ships, tourist or research. This probably stems from the chance to see new faces and to speak to different people, and as such it provides some diversion from base routine as well as a boost to station morale. These ships are also most welcome, because they have in the past brought long awaited mail, and frequently these passengers are friends who may not have been seen for some considerable time. In addition, early in the season, the tourist ships have given the base much dreamed about fresh fruit, and have also hosted some memorable evenings.



Figure 7. Harassing a Local Resident (Photo: K. Sierakowski)



Paying tourists are, however, frequently accused of disturbing ongoing research programs at some bases, and clearly such accusations may be used to justify imposing controls. It should be borne in mind that any person has the capacity to disturb base routine, regardless of status, simply because his or her presence distracts people from their work. Of course, the potential damage to the environment in physical terms caused by one hundred tourists might be large, but closely supervised and in well-defined areas, such numbers have presented little problem at Arctowski. There may indeed be some effect of a visitor's physical presence (footprints off the beaten track, in the case of non-tourist visitors), and there must be some consideration of the potential danger to wildlife such as the Giant Petrels (mentioned earlier).

It is the duty of base leaders to point out protected areas to all visitors and tour guides alike, and to ensure that these areas are not violated. With respect to their own personnel, they also have a moral obligation to enforce extant regulations. Even though base operators concede that they have no legal jurisdiction over any terrain in or around their facilities, it can only be common courtesy for a visitor to respect the environmental and research considerations of his/her host. The primary concern of guides, in turn, should be to ensure that their clients conduct themselves in an appropriate manner, particularly in the vicinity of penguins (Wilson, Boris, Danfeld and Adelung 1991) and seals. Courtesy is paramount in maintaining those good relations that exist between many stations and tour operators.

In some instances, however, a purely social visit may be inappropriate. For example, a tour ship captain asked a resupply vessel to vacate the only anchorage at a nearby station so he could anchor and not ". . . disappoint [his] clients . . ." Needless to say, this request was politely refused. In addition, a request such as that made to Arctowski during the summer of 1990-1991, at 30 minutes notice, to host 400 tourists from one ship, cannot be encouraged. In this particular case, the request was accepted after lengthy consideration, but the visitors did not disembark because of technical problems.

The principal role of Antarctic bases, in theory at least, is to conduct scientific research. In this respect, there is a real danger that with an increase in the number of cruiseships operating in the area, personnel at some sites may start to spend too much time playing host. For example, one tourist ship every two weeks with 100 guests, greeted with tea or coffee, given tours of the station, and steered towards a small souvenir shop, would stretch the resources of Arctowski. During the austral summer of 1992-1993, Arctowski hosted 33 tourist ships and 3,000 tourists (personal communication with Lipski). This was occasionally at the rate of three ships per day (not including research and support vessels). Furthermore, the largest ship to request a visit to date was unable to land its 500 clients due to bad weather.

The severe economic climate that has resulted from recent widespread changes in Poland has affected the operation of Arctowski station. As a result, new sources of funding are being actively sought, including the establishment of a Henryk Arctowski Foundation. Considering the sums involved in operating a year-round station, however, enterprises such as a souvenir shop can only realize limited profits for

the benefit of the base. In this respect, the suggestion that tour operators be charged a fee for each of their clients who visit the station appears attractive, although it is accepted that some tour ships would likely visit previously undisturbed areas rather than pay. If such a measure were to be widely adopted, though, it could only serve to improve the facilities available. With appropriate management the revenue could indeed be used to establish specific areas that would cater to tourists, and perhaps also provide some form of inspection to ensure that protected areas are not violated. Although this would concentrate tourist activities in specific regions, it may serve to check what has to date been the somewhat uncontrolled nature of this industry.

## CONCLUSIONS

The mixing of science and tourism at Arctowski has not been without its problems. Although none of these were serious, as the union approaches its 20th year, it does appear to have been a success. This success has had its price. The station environment has clearly been affected locally, and in this respect at least, the liaison has been risky for the flora and fauna. A cautionary note to scientists, however, is that one must be wary of adopting a "holier than thou" attitude *vis-à-vis* the increasingly vocal "lobby" to control purely tourist visits to Antarctica. One should not need to be reminded of the environmental effects of past, and even present, scientific research, and activities conducted in its name. Steps must be taken to "put our own house in order," and ensure that one on- or off-duty scientist or technician, does not demonstrate the destructive capacity of the "feared tourist hordes." □ □

*Acknowledgment* — The views expressed in this paper are those of the author, and are not to be considered as representing the views of the Polish Academy of Sciences, its departments or representatives, or the Polish Government. The author is grateful to his wife, Tracey, for helpful comments and criticism throughout the preparation of this paper. In addition, thanks are due to Kazimierz Sierakowski and Valene Smith for providing photographs.

## REFERENCES

- El-Sayed, Sayed Z  
1988 The BIOMASS program. *Oceanus* 31(2):75-79.
- Lorius, Claude  
1990 Science in the Antarctic. *IUCN Bulletin* 21(2):7-8.
- Mosley, Geoff  
1986 Antarctica: Our Last Great Wilderness. Hawthorn VI: Australian Conservation Foundation.
- Myrcha, Andrzej  
1992 Birds. *In Admiralty Bay: A Coastal Maritime Antarctic Ecosystem* (in Polish). Stanisław Rakusa-Suszczewski, ed., pp. 169-194. Dziekanów Leśny, Poland: IE PAN Publishing Office.
- Rakusa-Suszczewski, Stanisław  
1992a The Polish Antarctic Station: Henryk Arctowski. Warsaw, Poland: Department of Antarctic Biology.
- 1992b Functioning of the station. *In Admiralty Bay: A Coastal Maritime Antarctic Ecosystem* (in Polish). Stanisław Rakusa-Suszczewski, ed., pp. 33-40. Dziekanów Leśny, Poland: IE PAN Publishing Office.

Sherman, Kenneth, and Alan F. Ryan

1988 Antarctic Marine Living Resources. *Oceanus* 31(2):59-63.

Wilson, Rory, Culik Boris, R. Danfeld and D. Adelung

1991 People in Antarctica: How Much Do Adelie Penguins *Pygoscelis adeliae* Care?

*Polar Biology* 11:363-370.

Submitted 8 April 1993

Resubmitted 15 May 1993

Accepted 1 June 1993

Refereed anonymously