

# **Frozen history: How different countries research, collect and communicate their Antarctic history**

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*Figure 1 – Teaching in the Discovery Hut for the PCAS course 2014/15, picture credit: James Stone*

**Report for the  
New Zealand Winston Churchill Memorial Fellowship  
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## 1. Executive Summary

*E anga whakamua ai – Me titiro whakamuri*  
Connect to the Past – Prepare for the Future

This report provides an insight as to how different countries collect, research and communicate their Antarctic history. The research draws attention to the fact that with more awareness of Antarctic research through national Antarctic programmes, the wider public would be better informed and see why these efforts are of importance. When the audience understands the historic links to this research, it is easier to communicate current issues. However, when historic events are used to further national ambitions, this can also lead to tensions. Where Antarctic history is positioned in a country's store of nationally important events is also seen in how different institutions (museums, archives, programmes) are supported.

The following methods were used for this research project:

- Studying archives
- Visiting museums - especially behind the scenes
- Discussing procedures for collecting, researching and communicating Antarctic history with representatives of museums, archives, and institutes
- Attending educational programmes

The findings of this research are that while some countries nurture their Antarctic history some do not reflect on it or encourage the wider public to get involved. However, some countries, such as Aotearoa New Zealand, try to intensify their efforts and this is especially evident here in Christchurch, the Antarctic Gateway City.

In conclusion: Aotearoa New Zealand has a strong body of research in Antarctic history but the findings are too often recognised only by the Antarctic community. More comprehensive work has to be done to communicate the facts of our Antarctic history, and the value of such research, to a wider public.

*Recommendation:* More time and resources must be spent on in-depth research. Funding on a bigger scale would enable greater study of the material in archives and museums and also intensify collaboration between historians and the social scientists. Surveys of the wider public could be undertaken that could lead to increased awareness of Antarctic history. School curriculums could be more focused on such history beyond the limited options which are currently available and Antarctic history could be more coordinated nationwide. This would go very well with cross disciplinary collaboration with many subjects, including science (history of science), social studies, geography and even citizenship studies on issues like current climate change. These studies would enable an improved understanding of current situations in a broader context and should include the history of Maori/Polynesians and the involvement of women in the Antarctic.

## 2. Introduction

The Winston Churchill Fellowship was founded in February 1965 to honour the memory of Sir Winston Churchill. The aim of the New Zealand Winston Churchill Memorial Fellowship is to train people of all kind of professions to enhance their skills and knowledge and share it with the wider community. The training involves overseas travel to develop stronger connections with international colleagues and bring the knowledge and skills back to Aotearoa New Zealand.

My research project focused on how different countries research, collect and communicate their Antarctic history. The fellowship enabled me to travel to the USA, Germany, and the UK to study how their Antarctic history is remembered and communicated. The findings and impressions were very diverse in how this history is recognised. I decided not to examine “Antarctic Gateway Cities” (Hobart, Cape Town, Ushuaia, and Punta Arenas) because there is already a project being undertaken on how citizens live in such cities and the results should come out soon (<http://antarctica-hasseg.com/2016/05/909/>). But I did look at Gateway City (Christchurch) and how it is involved in comparison with Washington DC, Columbus in Ohio (USA), Bremerhaven (Germany), Cambridge and London (UK)<sup>1</sup>. The chosen cities have strong connections to the Antarctic, some of which continue to this day.

Christchurch has several societies and associations with strong links to the Antarctic and its historic connections. I am a member of some of these organisations and a trained historian and as such I was always searching for historic links. Events in Christchurch such as the work for the reinstallation of the repaired Scott Statue in October 2017, inspired me for the project. I was consulted in my capacity as an historian specialised in the history of the Polar Regions. That experience has shown that groups of people have been involved in Antarctic matters through societies, institutions or as part of Antarctic events but the wider public was often not aware of the connections in the past. Even the Scott Statue, with its significance for many Cantabrians, proved a surprise when the details of its construction were publicised.

The New Zealand Winston Churchill Memorial Fellowship allowed me to travel to the following cities to find out how they deal with their Antarctic past.

Washington DC and Columbus Ohio were in my focus because of the historic connections through Admiral Richard E. Byrd who chose Aotearoa New Zealand as his gateway to the Antarctic. The collaboration between the USA and Aotearoa New Zealand for undertaking Antarctic Research is vital especially for the latter for its economic impact on Christchurch and the rest of the country.

In Bremerhaven there are two important institutions which represent Polar research and history: the Alfred Wegener Institute Helmholtz-Centre for Polar und Marine Research (AWI) and the German Maritime Museum. These institutions focus on both Polar Regions. Since 2010, the AWI has a polar archive established and works closely with schools and the wider public through certain projects. The German Maritime Museum is just developing a special Polar Gallery which will be extended over the years. In addition, I visited the

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<sup>1</sup> See Appendix 1 – travel diary.

Klimahaus (Climate House) in Bremerhaven. This has collaborated with the other two institutions in developing an impressive approach to communicate climate change all over the world and the Antarctic plays a vital part here.

In Cambridge and London the connections to British Antarctic history are much more visible than in the other cities I visited. Cambridge has the Scott Polar Research Institute (SPRI) and the British Antarctic Service (BAS) as well as the United Kingdom Antarctic Heritage Trust (UKAHT). These institutions provide a rich source of information. Antarctic history in these places is accessible to the wider public. The Royal Geographical Society (RGS) in London and the National Maritime Museum in Greenwich were further institutions where I focused on my research. However, here Antarctic history was not so obvious for the wider public but the National Maritime Museum has developed a Polar Gallery which should be open from September 2018.

More details about the different locations where I undertook this research is in chronological order in the appendix.

### **3. Acknowledgements**

I want to thank the New Zealand Winston Churchill Memorial Trust for the opportunity to visit the places, archives, museums, and institutions to enhance my professional knowledge and bring it back to Aotearoa New Zealand. This will benefit the Antarctic community and beyond, finding new ways to present Antarctic history in a more comprehensive way. Many opportunities are forming already.

My special thank goes to the following individuals especially those overseas who gave their time to help me with my project by contributing their expertise.

USA

Dr. Dorothy Cochrane, Curator of the Smithsonian National Air and Space Museum in Washington DC, as well as Brian Nicklas and Carolyn Russo from the Archives in the Stephen F. Udvar-Hazy Centre in Chantille, Virginia for their help especially in a time when they were preparing for moving locations because of the renovation of the museum and archives. Dian Belanger, the author of the book "*Deep Freeze. The United States, the International Geophysical Year, and the origins of Antarctica's Age of Science*". She was so kind to meet me in the Portrait Gallery in Washington DC and we discussed Antarctic history and the issue that in the USA there are only few signs of this special history for the wider public. A great thank you goes to the archivist, Laura Kissel, of the Byrd Polar and Climate Research Center Archives, Columbus, Ohio. We organised via email my time in the archives because she was not present during my visit. Her staff, Kevlin C. Haire, Assistant Archivist and Halle Mares, Archive Program Assistant, looked after me very well and all the boxes of archival material were already prepared for me so I could work from the very moment I arrived.

## Germany

In Bremerhaven, Germany, Dr Christian Salewski, Head Archivist of the Alfred-Wegener-Institute Helmholtz-Zentrum für Polar- und Meeresforschung (AWI), was very helpful and discussed the beginning of the archives and its purpose in great detail with me. Dr. Martin Weiss, Postdoctoral Researcher and exhibition officer and Jasmin Hettinger, Citizen Science manager, both from the German Maritime Museum in Bremerhaven, openly discussed their plans for a new Polar Gallery in the Maritime museum and answered all my questions. Dr. Christian Ostersehlte, Archivist of the German Maritime Museum, helped me before I came to Bremerhaven by sending relevant archival material via email.

## UK

Dr. Charlotte Connelly, Museum Curator, Scott Polar Research Institute (SPRI), explained in great depth the role of the polar museum and also the emerging insights on female history in the Polar Regions. She also introduced me to the education and outreach assistant, Naomi Chapman, who organises the education programmes in the museum and she invited me to two of her classes. I want to thank her especially for this opportunity. Naomi Boneham, Archives Manager, helped me again, as in the years before, to undertake my research in the archives. I want also thank all staff at SPRI who gave me great advice to widen my research and creating new contacts which gave me a better insight into polar research from different angles. This mainly happens during the morning tea and all gave me the feeling of being a part of the institute. A special thank goes to my colleague Dr. Bryan Lintott, who gave me advice on my project from the very beginning and Prof. Julian Dowdeswell, Director of SPRI, who created the contacts to the Friends of SPRI to whom I could present parts of my research in a public talk. The PhD candidate at SPRI, Morgan Seag, showed me new approaches to research in women and Antarctic history.

At the British Antarctic Survey (BAS) archivist Ieuan Hopkins, was a great help and gave much of his time to discuss especially the digitisation programmes. His team also assisted me with all my queries. He introduced me to interesting people like Linda Capper, Head of Communications at BAS. She was very open and provided me with internet links and brochures. The UK Antarctic Heritage Trust (UKAHT) is also located in the BAS building and I met there Camila Nichol, Chief Executive of the UKAHT. Camila explained in great detail the collaboration and cooperation between the UKAHT, the museums and institutions in the UK and especially in Aotearoa New Zealand with the New Zealand Antarctic Heritage Trust (NZAHT).

Alasdair MacLeod, Head of Enterprise and Resources at the Royal Geographical Society (RGS), discussed with me many aspects of my research and introduced me to Catherine Sauch, Head Research and Higher Education. The discussions with both of them were very inspiring.

Dr. Claire Warrior, Senior Exhibition Curator of the National Maritime Museum, spent much time with me to explain the plans for the new Polar Gallery which should be launched in September 2018.

Aotearoa New Zealand

Many people went along with me from the beginning of my project but the list would be too long because their help and support continues and more and more people join in. Many individuals from these institutions and societies gave their time for my inquiries: Canterbury Museum, New Zealand Antarctic Heritage Trust, Antarctic Attraction, New Zealand Antarctic Society Canterbury branch, and Lyttelton Museum Society. I also want to thank the proof-readers of this report and the people who helped me with advice and pointing in the right direction. A special thank you goes to my colleague Dr. David Harrowfield, a polar historian from Oamaru, who supported my project idea from the beginning. Another special person I have to thank is Baden Norris, the founder of the Lyttelton Museum and an excellent polar historian. He gave me very detailed advice before the project actually started. Unfortunately he could not see the results of the project. He died in August 2018.

A special thank goes also to my husband who supported me all the way through this project and many other projects before.

#### **4. Importance of research**

This research is a valuable contribution to understand the importance of the Antarctic today through the history of exploration. Already in the 18<sup>th</sup> century, scientists tried to understand the magnetism, meteorology and geology in the Southern Ocean. There were also economic and political reasons involved and although the exploration and science of the Southern Continent promoted a geopolitical agenda which was always attached to it from the beginning. The Antarctic Treaty System (ATS) responded to these issues in 1959 but with newly joined countries (China, Korea, India) the system is challenged. Science is the driving factor at the moment. But there are still claims laid in the past with overlapping territories (Argentina, Chile and the UK). With historical research, it is possible to shed more light on these very complex issues which are pertinent even today. For this research it is important that Antarctic history is not standing alone. It needs the context of the manifold history disciplines such as social history, economic history and history of law.

The legacy of this history is still very topical and with the new countries involved in Antarctic research it will be even more important to communicate it. A new part of Antarctic history is just forming on the question as how many countries will get involved in the Southern continent and building stations there to undergo research.

How countries research and collect their Antarctic history tells already about the approaches to communicate the topic. In some countries only a few Antarctic enthusiasts are working hard to preserve and pass on the legacy. Other nations are more open but tend also to see only their own perspective on it. Some institutions have a strong legacy on Antarctic history but want to be more seen in the present and future than in the past. Nevertheless it is still a part of their appearance in the wider public. Museums play a particularly major role in communicating this history and educational programmes are run by most of them. A constant update on new findings is important to incorporate in these education programmes. The more

visibility given to Antarctic history provided for the wider public the more questions will be asked and national approaches will end up in international terms. This is also seen in the discussion currently going on about the re-installing of monuments and statues after the earthquakes in Christchurch. In this light, the restoration of the Scott statue was justified not on the grounds that it is colonial heritage but on the ongoing international effort put into Antarctic research today. Events like these showcase the importance of this research.

The international character of today's approach in Antarctic research make it necessary that not only the same historical narrative is passed on, but also the efforts that other countries put into their exploration of the past. This can shift perceptions when it comes to informed decision making on many levels and underlines the importance of historical research. This is also reflected at international polar conferences such as the Scientific Committee of Antarctic Research (SCAR) in Davos, Switzerland in 2018 where SCAR delegates elected a Standing Committee on the Humanities and Social Sciences (HASSEG), strengthening the work of a diverse group with historians as an acknowledged part within this organisation. Thus underlines the significance of my current research.

New research approaches are also needed to recognise Māori/Polynesian and female involvement in Antarctic history. Because it is an evolving component the narrative is not sufficiently extensive when using the traditional way of practising this form of history.

### **The value overall of this experience**

The value of the experiences I had undertaking this project is invaluable. Everybody I met took extensive time to discuss the matters I brought to the table. I facilitated this by sending out some information on what I required for this project before I had the meetings. Most of the primary contacts I had introduced me to fellows and other institutions who gave good advice and opened new directions. Even when some institutions are focusing more on the present and future, their past is still a part of events and public outreach, especially in Britain. We have great approaches in Aotearoa New Zealand to show our Antarctic history but there is some room for more outreach. A few organisations were not so open to communication with me but this appeared to reflect their reluctance to show certain parts of their institution to the wider public. In these cases there were almost no signs of Antarctic history to find in public spaces, especially in Washington DC. However, despite that experience, individuals were very open and enhanced my knowledge on their country's Antarctic history. What I recognised through this project is the fact that mainly anniversaries are the reason to remember historic events and this is how some institutions communicate history to the wider community. The way history in general is done today has changed and this is also applicable to the Antarctic history. Without the proper context the wider audience will not take on the message but certain narratives will still be a part of the collective memory in each country.

History can, however, also be used for one-sided messages and this is where historians have to be careful. International collaboration between Antarctic historians can definitely help to avoid propagating nationalistic approaches. This is particularly necessary since more



countries joined the Antarctic research and science community and national claims in the Antarctic, which are on hold as long the Antarctic Treaty System is in place, are challenged by these nations.

A professional acceptance of my project and work was achieved when I was invited to apply to become a Fellow of the Royal Geographical Society in London. This was granted in May 2018. Being a Fellow will help me for future funding opportunities to continue my research on Antarctic history.

My position as Institute Associate at Scott Polar Research Institute is still in progress and my application will be discussed in a meeting in November this year.

### **Key questions and methods**

The key questions are partly shown in the title of the project.

- Is there an awareness of Antarctic history in countries with strong connections to the White Continent?
- How do countries deal with their Antarctic history in general in terms of collections, research and communication?
- How are institutions such as museums and archives organised in terms of accessibility and their policies to make research on Antarctic history possible?
- Which role do polar museums and archives play in communicating and educating their countries own and international Antarctic history?
- What is the involvement of Maori/Polynesians and women have in Antarctic history
- The most comprehensive question is: how to commemorate historic events and individuals related to the Antarctic history?

The last question appeared when the Korean National Maritime Museum signed a Memorandum of Understanding in 2017 with the Canterbury Museum in Christchurch. The museum in Busan developed an Antarctic exhibition to show the significance of Antarctic research based on a legacy especially connected to heroic characters such as Robert Falcon Scott and Ernest Shackleton.

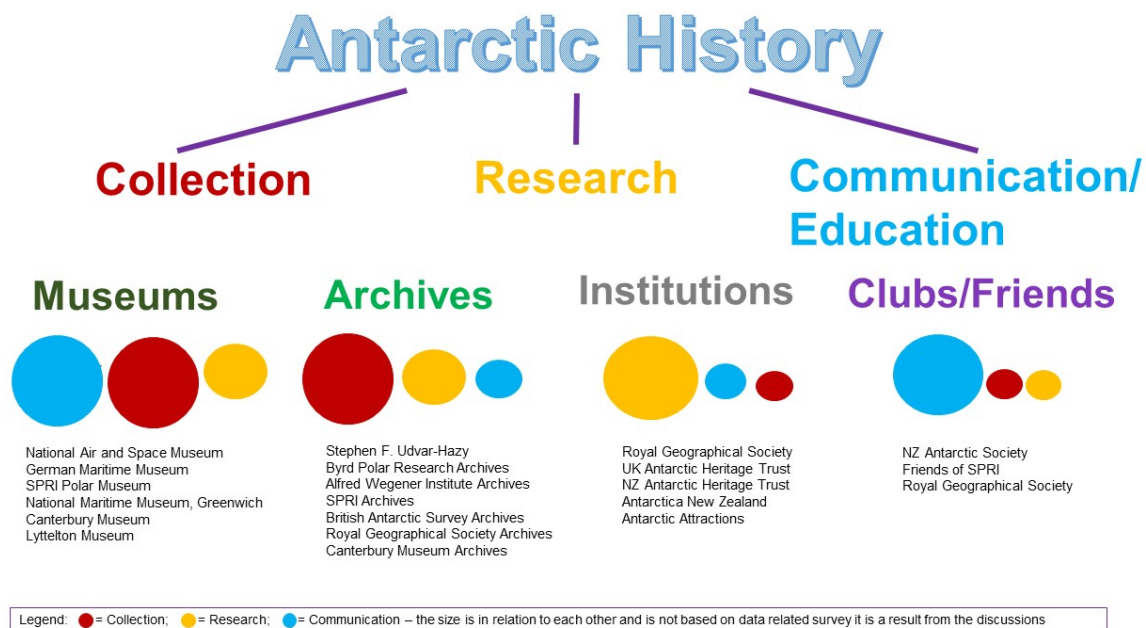
The method was:

- Discussions and interviews with staff of the institutions
- Visits of the museums (also behind the scenes)
- Working in archives on documents
- Attending education programmes

### **Key results**

The following graph shows some results of my research. The size of the coloured dots are not based on survey data collections. They are more experiential and demonstrate the impressions after the numerous discussions I had with the different representatives of the institutions,

museums, and archives and the material which was provided by them. The graph 1 shows the different strengths they represent. It was very obvious in the meetings that the different organisations collaborate very strongly.



Graph 1 – Focus of different institutions regarding to research, collection, and communicating Antarctic history

The research opened new perspectives on how the countries I visited deal with their Antarctic history. In general, in the USA there was almost no sign of their Antarctic legacy, neither in Washington DC nor in Columbus, Ohio. In discussions with individuals it was obvious that it is not part of their national heritage to focus on Antarctic history. In Germany there is more Arctic history present but, in some places, the Antarctic legacy is nurtured. The UK has the biggest acknowledgement of Antarctic history and this message is delivered to the wider public.

The archive stays were very productive to find relevant material for my research, particularly on the beginning of the Antarctic Treaty System. My focus on the research undertaken back home was mainly in Christchurch. However, the institutions I examined in more detail work across all of Aotearoa New Zealand. With the upcoming anniversary of the 4<sup>th</sup> International Geophysical Year (IGY) and the following ATS organisations are already more aware of the need to recognise and promote this in a broader way in Aotearoa New Zealand.

Even with increased awareness of women and Māori contribution to Antarctic exploration, the research in this area is still in its beginnings but on a good way to be explored further. This is especially so for the involvement of women in a country's Polar history.

### Conference presentations

The invitation for an oral presentation was another key result to showcase my reputation within the community of Antarctic humanities research. The presentation was at an

international conference: SCAR (Scientific Committee of Antarctic Research) POLAR 2018 Open Science Conference “Where the Poles come together”, 19 – 23 June 2018, Davos, Switzerland. The session convenors of the OC-3 *The role of polar museums and advanced science* invited me to present my preliminary results of my research undertaken with the New Zealand Winston Churchill Memorial Fellowship on the topic: “How nations research, collect and communicate their Antarctic history”, 22 June 2017 (figure 2)

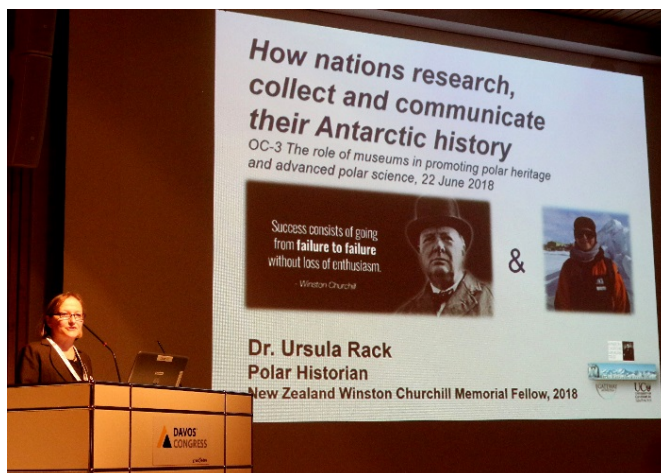


Figure 2 – Davos at the SCAR meeting, 22 June 2018

Another presentation, based on the NZ Winston Churchill Memorial Fellowship, will take place in 2019 at the HASSEG Conference (History and Social Science Expert Group) in Ushuaia, Argentina, 3 – 5 April 2019: “Antarctic Connections at the end of the world: understanding the past and shaping the future”. This oral presentation has been accepted under the title “Historic trails – how gateway cities research, collect and communicate their Antarctic history”

### Public outreach

Gateway Antarctic Facebook page, 20 October 2017 (announcement and description of the fellowship)

UC communication, 20 October 2017 (announcement and description of the fellowship)

College of Science, University of Canterbury, 20 October 2017 (announcement and description of the fellowship)

Christchurch Now – Plains FM96.9, 21 November 2017 - radio interview about the fellowship and what I want to achieve with it - one hour:

<https://kennyardouin.com/2017/11/21/christchurchnowepisode16/>

German Maritime Museum, Bremerhaven, Germany, 20 March 2018; colloquium for students and staff of the museum; title of oral presentation: “Auf den Spuren der

Antarktisgeschichte mit einem Churchill Fellowship” (*On the track of Antarctic history with a Churchill Fellowship*). The presentation was in German.

Friends of SPRI (Scott Polar Research Institute), Cambridge, 11 April 2018; title of oral presentation: “Cold Cases in Antarctic history” was about the Second German Antarctic Expedition 1911 – 1912.

Gateway Antarctica research meeting, Christchurch, 17 May 2018; title of oral presentation: “Frozen History: how different countries research, collect and communicate their Antarctic history.”

Antarctic Talks Series, 27 November 2018; title of oral presentation “Frozen History: Researching, Recording and Communicating Antarctic History” (for the wider public).

## **Publications**

Articles are planned and will be published in 2019/2020 for the:

Polar Journal  
Polar Record  
Antarctic Magazine  
The Press

**The expert knowledge exchanges** will be at the upcoming HASSEG and SCAR conferences in 2019 and 2020. I am also in contact with the International Antarctic Centre (Attraction) to be consulted as history expert when creating their new displays (see appendix).

## **Conclusion and recommendations**

My research would have not been feasible without the New Zealand Winston Churchill Memorial Fellowship. This financial support enabled me to travel to see how other countries’ deal with their Antarctic history. It is obvious that here in Aotearoa New Zealand we are doing so in a reasonably good way but there is still room for improvement. Our communication of Antarctic history needs to be more focused.

That Antarctic history is important in Aotearoa New Zealand may be seen in the title that Christchurch has as a **Gateway City** to the Antarctic. This legacy brings a great contribution to New Zealand’s economy and international scientific exchange. However, the history that is the basis for this status today is not known well enough. The wider public and the Antarctic community must be more educated about this part of their history. Some researchers and members of the public turn their back on this area of our history, in the main because of the emphasis on male heroes. Antarctic history has many more aspects (e.g.: political, economic, and social) and we have to respect changes in the way how history is presented. However, this is a general problem with history that its value is not always appreciated. The concepts of communicating history today have changed dramatically, a point recognised in most of the museums and galleries I visited for my project. An increasing focus is on the female

component in history, apparent here this year in Aotearoa New Zealand as we celebrate 125 years since women's suffrage. Researching and disseminating polar history should now include the role of **women** in the Antarctic as well. More **funding** is required for basic and enhanced research on this topic. **Scholarships** at universities or from the City Councils could be one way to support this kind of research.

Some museums and institutions in Aotearoa New Zealand have already begun to take the new concepts into consideration. Even though the funding situation is still on the short side. But the situation is not likely to change as long as the value of history is not recognised. This is where the education sector and historical organisations have to work together and revise school curriculums to that there is a broader approach to history in the classroom.

I have already begun this task of improving collaboration. My learning from this project can be applied directly for the new Lyttelton Museum and their Antarctic history displays. The International Antarctic Centre is also interested in consulting me when they update their displays. I also give lectures at schools and public talks on Antarctic matters and history. In this way I incorporate more of my findings.

## 5.) Appendices

### Details of research, in chronological order of the stays

#### United States of America

- a) **Washington DC, National Air Space Museum**
  - b) **Steven F. Udvar-Hazy Center**
- 5 – 9 March 2018**

Washington DC was fascinating as a US City but surprisingly there were no signs in public spaces of Antarctic history. From conversations with Americans before my visit I had the impression that there is hardly any monument related to Antarctic connections. Because one appointment was cancelled towards the end of my stay in Washington DC, I had the chance to meet the author Dian Belanger. She wrote a very comprehensive book on the USA and its engagement in Antarctic research: *Deep Freeze. The United States, the International Geophysical Year, and the origins of Antarctica's age of science*, University Press of Colorado, 2006. She also has a connection to Christchurch where she spent time when writing her book. Baden Norris (Antarctic historian) and John Claydon (wing commander at the Commonwealth Trans-Antarctic Expedition, Ross Sea area and supporter of the Hillary group) assisted her work wherever they could. During our meeting, Dian gave me valuable advice on where most of US Antarctic history is stored. This will be a good starting point for upcoming research. She also mentioned that there are few visible signs of Antarctic related history. What there is, is hidden and so not easy to find.

#### a) **National Air and Space Museum**

The National Air and Space Museum is a part of the Smithsonian Institution in Washington DC. My first visit was at the National Air and Space Museum. The first day, I explored the museum by myself to get an unprejudiced impression before meeting my contact person the next day. The US Antarctic pioneers were very much at the far end of the exhibition hall. The displays were interesting and informative but not contemporary (see figure 3).



Figure 3 – First view of Admiral Richard E. Byrd under the category “Flight Pioneers”.

I realised that when I watched young adults rushing through the displays until they saw the plane from Lincoln Ellsworth (see picture below).



Figure 4 – Ellsworth’s plane “Polar Star”

The first attempt to use the *Polar Star* (figure 4) was marked by setbacks. At the second attempt in 1934, the engine broke. The following attempts were better and Ellsworth performed the first Trans-Antarctic flight and became a Polar hero.

### NORTHROP 2B GAMMA *POLAR STAR*

On Nov. 23, 1935, explorer Lincoln Ellsworth, with pilot Herbert Hollick-Kenyon, took off in the *Polar Star* from Dundee Island in the Weddell Sea and headed across Antarctica to Little America. Fuel exhaustion forced them to land 40 kilometers (25 miles) short of their goal on December 5 and they walked for 6 days to reach their destination. They settled in the camp abandoned by Richard E. Byrd several years earlier.

The British Research Society ship "Discovery II" sighted them on Jan. 15, 1936, near the Bay of Whales. Hollick-Kenyon later returned to recover the *Polar Star*. The dent in the fuselage behind the engine was caused by a hard landing on the polar ice. The total distance flown by the *Polar Star* before its forced landing was about 3862 kilometers (2400 miles).

Wingspan:	14.6 m (48 ft)
Length:	9.0 m (29 ft 9 in)
Height:	2.7 m (9 ft)
Weight:	Empty 1589 kg (3500 lb) Gross 3178 kg (7000 lb)
Engine:	Pratt & Whitney Hornet, 710 hp
Manufacturer:	Northrop Corp., Inglewood, Calif., 1933

*Gift of Lincoln Ellsworth*



The Northrop Gamma, designed by John K. Northrop, was the third type in his series of all-metal, low-wing, high-speed monoplanes built in the early 1930s. Design features of these aircraft were later incorporated in such famous aircraft as the Northrop A-17, Douglas SBD, and Douglas DC-3.

Gammas were used by many famous pilots to set speed records. Among them were Frank Hawks, Jacqueline Cochran, and Howard Hughes. D. W. "Tommy" Tomlinson of TWA used a Gamma to explore the upper atmosphere as a prelude to the present day airline operations.

Figure 5 – Technical data on Ellsworth's plane

The panels (figure 5) with the technical information were more interesting to the adults than the younger visitors. There are different museum concepts of presentations and displays discussed by the experts. However, this experience has shown me that some concepts still work.





Figure 6 – Richard Byrd in the Arctic when he claimed to have reached the North Pole with his plane.

These panels (figure 6) will be replaced during the renovation over the next ten years. They seem outdated by design but the information on them is still valuable and many visitors were impressed by the planes and the artefacts in general.

The next day, I met Dr Dorothy Cochrane (Curator Aeronautical Department). She explained the current situation in the museum. In the next ten years, the museum will remain open, but some parts will be closed due to renovation, strengthening the building and refurbishing the displays and bringing them up to the contemporary standards. Plans for the Polar aviation displays are already discussed but could not be shared with me at this point. However, the awareness to focus also on the Antarctic history was a crucial part in the planning. Dorothy brought me then to the museum's archive which will also be moved due to the renovation. There was a great deal of information on aviation pioneering but the emphasis was more on the Arctic and not so much on the Antarctic, at least from the material I have reviewed.

## **b) Steven F. Udvar-Hazy Center**

There was more information in the Steven F. Udvar-Hazy Center which is also a part of the National Air and Space Museum, Smithsonian. The material I could go through gave me more insight into Antarctic aviation. The archivist, Brian Nicklas, gave me great support on how I can get more results in my search in this archive. He also recommended the National Archives and the Library of Congress as sources for further research especially on the political side of that history.



*Figure 7 – Steven f. Udvar-Hazy Center, Museum and Archives building*



*Figure 8 – Steven f. Udvar-Hazy Center Archives: my desk in the Archives*

## Columbus, Ohio

### Byrd Polar and Climate Research Center - Archives, Ohio State University, Columbus, Ohio

10 – 16 March

My next station was Ohio, the Byrd Polar and Climate Research Center Archives (Polar Archives). The Curator of the Archive, Dr. Laura Kissel, was not present, but we organised in advance my stay. I have chosen eighteen boxes with correspondence, papers, and photos from the Admiral Richard E. Byrd collection and his expeditions in the Antarctic. The context of the Polar Archives is interesting itself. The Polar Archives is a collaboration of the Byrd Polar and Climate Research Center and The Ohio State University Libraries. In the archives are the estates from Admiral Byrd, Sir George Hubert Wilkins, Dr. Frederick A. Cook, and the American Polar Society Records. The Byrd estate came into the archival system through the Byrd family from Ohio in 1990.

I did research on the Admiral Byrd collection. The archive stores in *Series 1 – 4* approximately 500 boxes with paper material and photos, *Series 5* contains almost 40 films and *Series 6* eighteen audio tapes. *Series 7* has three boxes with phonographic records from 1930 – 1950s, and *Series 8* contains vast map material from Byrd's Arctic and Antarctic expeditions stored on shelves, not in boxes.

The opening hours are from Monday to Friday, 9 am – 4:30 pm. I used each minute of it and could achieve more than I expected. The staff in the archives supported me wherever they could and so it was possible that I could finish all eighteen boxes I ordered. My work space in the archives is shown in figure 9.

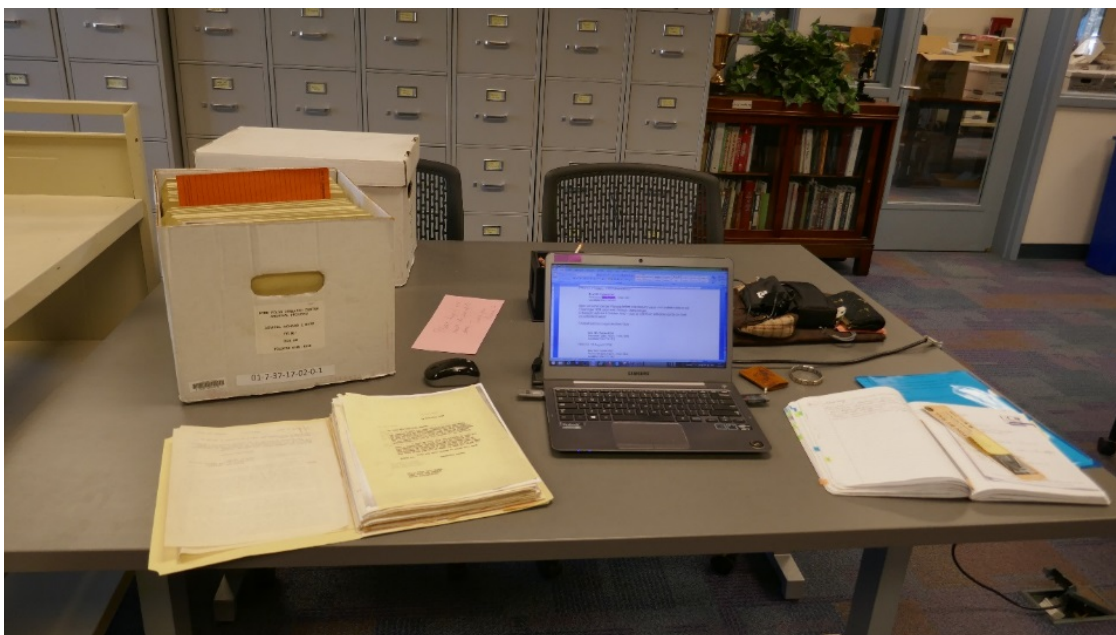


Figure 9 – Byrd Polar Research Archives, Columbus, Ohio – one of the 18 boxes I worked with (approximately 500 boxes of that size are in the archive).

The City of Columbus has also no signs of Antarctic history in public places. However, some links have been recognised: In the *Ohio News* (TV programme) was a report on a rescued Antarctic scientist, and in another programme a space scientist used a quote from Shackleton. This scientist compared the new space program with the Endurance expedition in 1914 – 1917. Nevertheless, Dian Belanger pointed out that 90 % of the US population has never had contact with Antarctic history or current Antarctic matters. Dian gives talks to the wider public and was even invited into a charter school to present Antarctic history. This was a huge success, but she also told me that there is no polar history integrated into the school curriculums. Only personal networks are in place to teach about Antarctic history.

The Polar Archives also stores forty-four interviews which Dian conducted for her book and she donated them under the **Polar Oral History Collection**. Her interview partners were from the Antarctic Deep Freeze Association. As the name already reveals, it was a navy veterans' association beginning with the Deep Freeze Operation during the 4<sup>th</sup> International Polar Year 1957 – 1958 and following Antarctic operations. It is now dispersed because of the age of the members. Other interviewees are from the American polar society. The society was formed in the 1930s and started as veterans club, but now welcomes people interested in the Antarctic and Arctic. As many organisations, it is hard to increase the membership numbers. This society, however, is very active and tries to bring Antarctic history out to the wider public and point out a certain legacy of US engagement in the Antarctic. Dian is active in this society.

During my studies in the Polar Archives (figure 9), I found documents written before the early 1960s showing a great deal of reverence for Admiral Byrd. It seems that after that time, his achievements were not relevant anymore to be recognised for a wider public audience. It would be worth undertaking a more amplified research on that which I will achieve with an application for the Byrd Polar and Climate Research Center Archival Program Research Award in 2019.

During my studies back in Aotearoa New Zealand, I discovered that the National Science Foundation (NSF) published a "*Historic Guide to Ross Island, Antarctica*" and the last edition was printed in 1989. The twenty-five pages booklet was first published in 1971 and was regularly updated. The historical expeditions and monuments in the Antarctic are described in more detail, it is informative and gave some connection to the past. It was especially produced for men and women going down South and health and safety information is on three pages. For the personnel nowadays, there is a comprehensive guide "*United States Antarctic Program Participants guide 2016 – 2018 Edition*" also by the NSF. The only history in this ninety-four pages booklet is about five pages with fragments on the history of the Ross Sea area (pp 1 – 3) and the historic sites (pp 35 – 36).

## Germany

### Bremerhaven

- a) **Alfred Wegener Institute Helmholtz Centre for Polar and Marine Science – Archives**
- b) **German Maritime Museum**
- c) **Klimahaus, Climate House**  
**19 – 23 March 2018**

- a) **Alfred Wegener Institute Helmholtz Centre for Polar and Marine Science – Archive of German Polar Research (AGPR), Dr, Christian Salewski, Hear Archivist**

When my PhD studies started in March 2003, the archives were located in the institute's library and the documents were stored in a few lockers and contained material from the beginning of German Polar research. However, the main body contained documents from Alfred Wegener, Fritz Loewe, Hannes Georgi, and Ernst Sorge from the Greenland Expeditions in 1929 and 1930 – 1931, and material after the expedition related to Wegener's death.

Since 2011, the new archive is still part of the institute's library but the collection has been significantly increased. Records and material, linked to the Alfred Wegener Institute as institution, such as construction plans, minutes of meetings, official documents, and similar documentation are now part of the collection. The archive holds also a vast collection on photographic material from the beginning of German Polar Research. All kept records are handled after the Bremen Archive Law which one of seventeen different Archive Laws in Germany.

All the material is accessible for researchers, journalists as well as lay people with interest on Polar research. This is part of the purpose and the outreach work of the archive. It promotes also polar research through public panel discussions, guided tours through the archive, and small research projects such public readings and theatre performances. Dr. Salewski has published also a research paper based on the archive's documents on Alfred Wegener in World War One. (<http://epic.awi.de/47736/>). In collaboration with the German Maritime Museum, the University of Bremen, and The Bremer Shakespeare Company were texts chosen from August Petermann, Alfred Wegener, Johannes Georgi, Ernst Sorge and Fritz Loewe. Questions such as “have the expeditions changed the view of the world?” but also “which impact had the expedition on the people they undertook the events?” were the focus of the performance. I could not attend the reading because the first performance started at 23 May 2018. The archive also is often involved in exhibitions contributing with polar related themes. One example is the exhibiton “Archivsplitter“ (archive sections) of the “Arbeitskreis Bremer Archive“ (working group of the Bremer archives) on the occassion of a nation wide “Day of the Archives“ under the title “Demokratie und Bürgerrechte“ (Democracy and civil rights). The contribution of the AWI archive was on Fritz Loewe, a meteorologist on Alfred

Wegener's expeditions 1929 and 1930 – 1931 with the title: "Fritz Philipp Loewe (1895 – 1974) Polarforscher und engagierter Bürger (Polar scientist and committed citizen)."

The archive has currently three staff: the research archivist (head archivist), one part time archivist, and on contract archivist. The software FAUST is used to manage 370 meter paper records, and documents, 45.000 photos, 700 maps, and construction plans as well as 60 movies from the surveys, expedition activities, polar vessels, science platforms, and also about peoples from the Arctic from 1920 – 2000.

Dr. Christian Salewski is the head archivist and was very helpful and forthcoming in answering my questions and requests. The picture (figure 10) presents the current location of the archive.



*Figure 10 – Archives of the Alfred Wegener Institute Helmholtz Centre for Polar and Marine Science*

### **b) German Maritime Museum (Deutsches Schiffahrtsmuseum – DSM)**

The German Maritime Museum is part of the Gottfried Wilhelm Leibniz Scientific Community and the building was opened in 1975. It was, however, founded in 1971 to replace the Museum of Marine Science in Berlin which was destroyed during World War Two. The museum is equipped with laboratories and technical equipment to restore and conserve ships and related artefacts. It houses an archive as well as a maritime specialised library which is accessible to visitors interested in maritime history.

Dr. Martin Weiss, postdoctoral researcher, organised a colloquium at the German Maritime Museum where I presented my research. It was well received by staff and students of the museum. The next day I had a discussion with him and Jasmin Hettinger, a citizen science coordinator from the German Maritime Museum. The museum is currently under renovation and plans are focusing on three topics: a) the shipbuilding in the socio-economic context;

b) ships as communicator of furthering of knowledge – this would be also the area where the polar expeditions would find their place; c) ships and environment. For the ships as communicator (b) are already calls for proposals to bring the idea to life. There will be accessible installations be a part of the exhibition and the “*Polarstern*” which was commissioned in 1982 as research vessel for the Arctic and Antarctic will be the starting point. The overall plan is an inclusive research museum. For this goal citizen scientist strategies are already in place and a versatile group of communities have been invited to participate.

### c) Klimahaus (Climate House)

Travel around the world - Eight degree East (8° Ost)

This new exhibition shows nine countries along the longitude 8°34' east. The visitor “travels” with the travel expert Axel Werner 5,000 m<sup>2</sup> through different climate zones and get introduced to the different countries and people they live there. The program is interactive with lots to explore, to listen to, and to feel the temperature and humidity changes in each region. It is very hot in Niger and Cameroon and really cold in the Arctic and Antarctic regions. Single individuals tell their stories about the climate and weather conditions in their country and how these affect them as well as from their customs and way of life.

Stations include: Isenthal in Switzerland; Seneghe in Sardinia; Kanak in Niger; Ikenge in Cameroon.

**Antarctic.** The exhibition room is cooled down to -6° Celsius. This is the average temperature in summer at the Neumayer Station of the Alfred Wegener Institute (AWI). In the next room is the “inside” of the station. Here there is a bit of history. Georg von Neumayer was a great supporter of the Antarctic research and it was because of his efforts that Germany started scientific work in the Antarctic. This is the reason why the station is called after him.



*Figure 11 – In the Antarctic section: temperature -6°C, going through this area the visitor enters a room at the “Neumayer Station” with videos on the daily life at the station and some polar clothing to try on.*

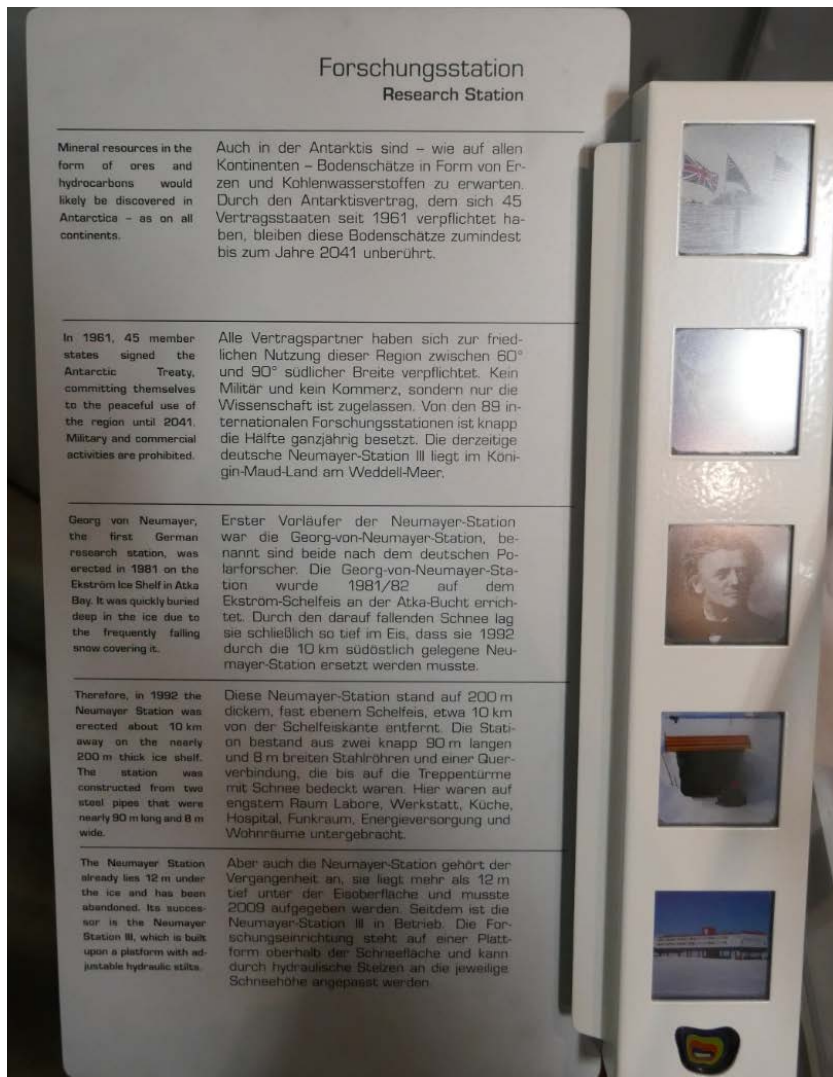


Figure 12 – The Introduction explains in the first two sections the Antarctic Treaty and its history and in the third section some details about the naming of the “Neumayer Station” and a portrait picture shows Georg von Neumayer. The last two sections are about the history of the station. The Neumayer III station has been in full operation since 2009.

The travel continues with Satitua in Samoa and Gambell in Alaska.

It was only a short part of Antarctic history presented but the connection to the AWI was very well done and the displays encourage going next door to the German Maritime Museum to see more of the polar past in Germany. However, the emphasis is on both Polar Regions and the connection of climate change and how it influences different countries compared with the past is very well done.



## United Kingdom Cambridge and London

- a) **Scott Polar Research Institute, University of Cambridge**
- b) **British Antarctic Survey, Cambridge**
- c) **UK Antarctic Heritage Trust, Cambridge**
- d) **Royal Geographical Society, London**
- e) **National Maritime Museum, Greenwich, London**

**5 April – 25 April 2018**

I spent most of my travel time in the UK to explore their way of dealing with Antarctic history. It was a tight schedule because I also fitted in the chance to attend special occasions like the launch of the “Weddell Sea Expedition” in 2019, an attempt, involving several universities including the University of Canterbury, to find the “*Endurance*” which sank in 1915. Along with the search there is a scientific team involved intending to study the Larsen C shelf ice. The launch of this expedition received strong media coverage in Britain. The finding of the vessel “*Endurance*” will spark much interest in this historical expedition but so too will the scientific findings. <https://weddellseaexpedition.org/>

Another occasion was the opening of the “Arctic Dialogue(s)” exhibition created by Jane Rushton in The Polar Museum. She collaborated with scientists to create her art work.

I also had the opportunity to meet the author Isobel Williams. She has published a book on “*William Piers Bruce. Forgotten Polar Hero*”. We had some good discussions about how particular polar explorers never could gain fame while there is strong interest in others, even today.

- a) **Scott Polar Research Institute, University of Cambridge**
  - **Archives - Thomas H. Manning Polar Archive**
  - **The Polar Museum and Education programme**

**Archives – Thomas H. Manning Polar Archive:** Naomi Bonham, Archive Manager

This archive holds a vast amount of **collections** such as written documents, art work, and a photographic collection. The art work alone holds 2,527 items and the picture library over 20,000 photographs. Outreach is another strong pillar of the archive which includes publications and exhibitions for the wider public. The collaboration with the library and the museum is relatively easy because it is all housed under one roof.

I have already worked in the archive several times so I was familiar with the procedures of booking desks and order files. I concentrated on the correspondence of Admiral Byrd with leading British scientists especially with Frank Debenham. My second focus was on the Antarctic Treaty System (ATS) and how much the public was informed about the negotiations and outcome of the ATS but also the reaction of some scientists. I turned my

attention also to the vast Debenham collection. I concentrated on the correspondence related from the beginning of SPRI in the 1920s to Debenham's death in 1965.



*Figure 13 – My desk in the SPRI archive*

Because I could only secure few days in the archive (figure 13), I was allocated a desk in the library (figure 14) where I could work on my research and prepare for other meetings and my public talk for the Friends of SPRI.



*Figure 14 – My desk in the library at SPRI*

**The Polar Museum:** Scott Polar Research Institute: Dr. Charlotte Connelly, Museum Curator; Naomi Chapman, Education and Outreach Assistant

The museum is one of the few Polar museums which is not an attachment to a maritime or fishery/whaling museum. The collection covers the Arctic and the Antarctic. What is missing however, is the female component of the Polar Regions. This was one of the very intense discussion points I had with Charlotte Connelly. It turned out that young students ask where the women are, especially when their mother or other female family members worked in the Arctic or Antarctic. I was also wondering if there are monuments of female Antarctic researchers in Cambridge or London and Charlotte could not recall one. However, there are plans to include female contribution in polar research in the museum in the future. The **outreach** lies in temporary exhibitions, events, and education. A visitor's study group is working on the level of outcome after visiting the museum or participating in the education programmes. Broadcasting new exhibitions are also a way to reach a wider public and the Polar Museum has a free and popular newsletter that one can subscribe to. The "long night in the museum" is also very well received especially by the younger visitors (see more details under: <https://www.spri.cam.ac.uk/museum/events/>).

**Education** is a key factor of the museum. A specific education programme has been developed to cover certain topics in the British school curriculum years 5 – 10, such as "famous Britons". Naomi Chapman invited me to attend two of her classes and she even gave me the material she uses. She introduces major science and research questions on a famous person, especially from the Heroic Era (1897 – 1917). In this case it was Apsley Cherry-Garrard, the author of the "Worst Journey in the World". He was traveling in the Austral winter with Edward Wilson and 'Birdie' Bowers to gather penguin eggs to prove a theory of recapitulation (embryological parallelism) which is today obsolete. The biological studies and the physical obstacles they had to endure were interwoven in Naomi's teaching. This is only one way she is teaching polar history, current research and science. The teaching material is constantly reviewed and updated. This link for teaching resources is available for anybody: <https://www.spri.cam.ac.uk/museum/resources/> Naomi and Charlotte also mentioned that incorporating more female involvement in Polar Regions is not easy when Robert Scott and Ernest Shackleton are a sort of a "national narrative" but that does not stop the two women and their teams trying to change that. Especially for teenager groups there is more female history and current involvement included in their education programme.

The association of **The Friends of SPRI** (established in 1946) is very committed to promote and support in many different ways the important work in science and heritage of SPRI. The public talks are very popular. See more under: <https://www.spri.cam.ac.uk/friends/>

**b) British Antarctic Survey (BAS), Cambridge:** Dr. Ieuan Hopkins, Archive Manager;  
Linda Capper, Head of Communications

The BAS “Archives Service” was established in 1979 for maintaining the corporate memory through the collection of administrative, scientific and other records created by the institution. The BAS is designated a “Place of Deposit for Public Records under s 4(1) of the Public Records Act 1958” Archival material which was created before 1<sup>st</sup> April 1967 is designated as Public Records. Material after this date, when BAS was transferred from the Commonwealth Office to Natural Environmental Research Council (NERC), was not then subject to the Public Records Act. As a place of deposit, BAS Archives follows the standards of access and preservation required by the Act.

As Part of the NERC, a designated public body under the “Freedom of Information Act 2000”, BAS makes information accessible to fulfil its obligations under this ACT and “Environmental Information Regulations 2004”. A small amount of material is under current closure under this regulation. These are materials with sensitive personal data such as accidents or medical reports. The collection is open free of charge at BAS in Cambridge. The reading room and facilities are accessible for wheelchair users, and BAS Archives Services adheres to the recommendations regarding access in the “National Archives’ Standard for Record Repositories. BAS currently working towards publishing an archives catalogue online, including the catalogue entries at item level for this nominated material and digital surrogates, where available.



*Figure 15 – archival storage at BAS*

The **significance** of the material lies in the substantial impact within the UK through the use by BAS and its predecessors to inform and develop world-leading operations to enable the continuing collection of scientific data of global significance. In addition, it is a source of long-term data, and associated information vital to its understanding and continued use,

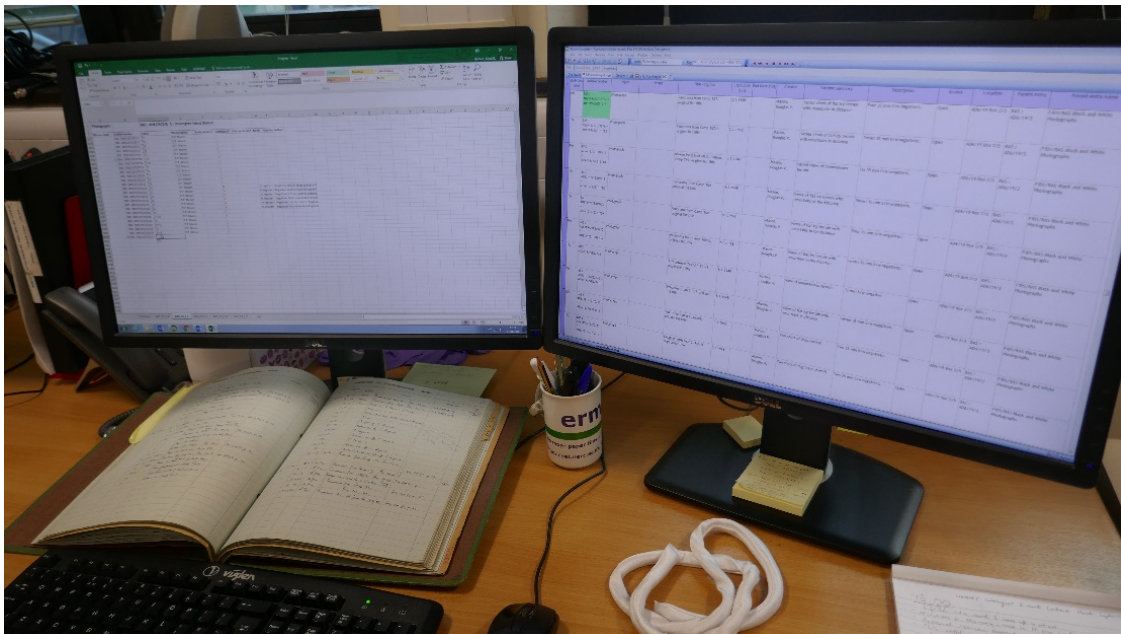
related to globally-significant scientific research. The material is also significant in enabling the continued preservation of British heritage in British Antarctic Territory.

As primary source material, the nominated material is a unique and irreplaceable record. It was created simultaneously with the events it describes, is devoid of hindsight and reinterpretation, and was created by the individuals experiencing and shaping UK Antarctic scientific endeavour. It is un-paralleled in its own right in terms of its richness in documenting all aspects of conducting scientific research, and living and working in Antarctica.

The storage is controlled by 14° Celsius and constant level 45 % relative humidity especially where the photos and film records are stored (figure 15). Digital surrogates are provided to researcher where possible but a project is underway to digitise more of the base and field reports.

### ***The way from an original document/record to the end-user, an example of creating an online catalogue at the BAS – Archives***

It was insightful when Ieuan Hopkins, the archives manager, showed me the step by step process to make archival material online accessible. It is a time-consuming work but in the end it is a helpful tool to enhance searching an archival catalogue or even have access to documents online. During our discussion on how to showcase the process, we realised that we should work together on that. We will create a poster together for the wider public but also for researchers to illustrate the complexity of the process. The photos below will be a starting point (figure 16 and 17).



*Figure 16 – Three elements are to see here: the original document, on the left hand side computer is the excel spreadsheet where the information from the original record is typed in and on the right hand side is the mask of the archival program to make it accessible for users.*

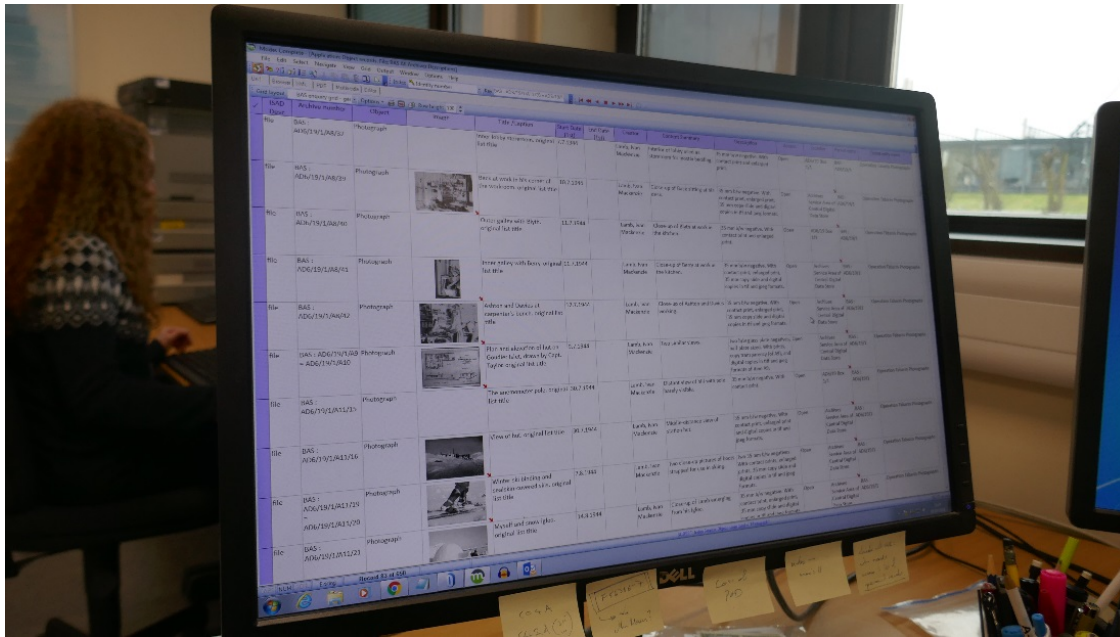


Figure 17 – Finally the program (MODES database) shows the accessible documents as the end-user can work with: document code, description, metadata, accessibility or restrictions.

The MODES database software is also used by SPRI and many other UK based archives and museums to manage their collections when digitising material.

The **outreach** activity of the archive is linked to the outreach programme at BAS. Ieuan was so kind as to introduce me to the Communication and Outreach Manager, Linda Capper. She provided me with valuable information about the education and outreach programme but the Antarctic history captures only a small part of it. However, the three blogs are very valuable for the science outreach because they cover historical aspects. The communication unit works here closely together with the archive. There is a brochure about the history of BAS but most of the outreach in historical terms is done by the UK Antarctic Heritage Trust (UKAHT). However, BAS has a Memorandum of Understanding with the UKAHT which manages BAS' responsibility for the huts and they are often also used for outreach.

c) **UK Antarctic Heritage Trust, Cambridge:** Camilla Nichol, Chief Executive

The UKAHT was established in 1993 and is now a strong voice on all matters of Britain's Antarctic heritage. Their vision is to conserve Antarctic buildings and artefacts, promote and encourage the public's interest in Antarctic heritage. Funding is mainly gained from the trading operations at Port Lockroy. The other funding is through the support of loyal membership "Friends of Antarctica", visitors to Port Lockroy and stakeholders such as the International Association of Antarctic Tour Operators (IAATO), the Foreign and Commonwealth Office Polar Regions Department, and the BAS. The Trust looks mainly after the historic sites on the Antarctic Peninsula:

- Detaille
- Port Lockroy
- Deception
- Wordie
- Damoy
- Reclus Hut
- Horseshoe
- Stonington

The Trust also supports the NZ Antarctic Heritage Trust in conserving and preserving the historic huts in the Ross Sea:

- Discovery Hut at Hut Point
- Hut at Cape Royds
- Hut at Cape Evans
- Hut in Cape Adare

It also takes care of the Oats Collection in Hampshire and developed an education programme on the collection. Another project is the preservation and maintaining of the "Discovery" in Dundee which is also linked with an education programme on Antarctic history.

The UKAHT also has a strong collaboration with SPRI and the Maritime Museum. For the Scott centennial in 1912, the Trust organised, with the British Natural History Museum, an exhibition which came also to New Zealand and was displayed in the Canterbury Museum.

When I got back to Christchurch, I talked with **Adele Jackson**. She worked at Port Lockroy as station leader for some seasons and explained some impressions and observations she made with visitors. Often the first contact with history from the site the visitors get on board when they are briefed before landing. The motivation is often to see wildlife in the first place but then they get curious about the historical connections. The museum is a good place to start discussions and the staff encourage the visitors. When Adele asked visitors about their experience with history then there is almost a hierarchy to recognise: Scott, Shackleton, Amundsen. There is no knowledge about women in the Antarctic. Another important motivation is to "stand on the 7<sup>th</sup> continent". There is a feeling of last chance tourism: "to see

the place before it disappears”. Some visitors however come to see the place where their ancestors worked and lived.

Adele and Camilla work close together on the heritage and educate tourists about the significance of these historic sites.

**d) Royal Geographical Society, London:** Alastair MacLeod, Head of Enterprise and Resources; Catherine Souch, Head Research and Higher Education

The Royal Geographical Society (RGS) does not see itself in the past, it is very focused on current research; however, the legacy of the institution is seen very clearly in its collaboration with museums, galleries and libraries. The Archives at the RGS hold collections of original glass plates and celluloid created by Frank Hurley at the Imperial Trans-Antarctic Expedition 1914 – 1917. This material was processed and presented in high resolution thanks to modern technology. Meredith Hooper, a Polar historian and writer reproduced Hurley’s photo material to new levels of detail. The exhibition has been running under the title “*Enduring Eye. The Antarctic legacy of Sir Ernest Shackleton and Frank Hurley*” in 2016 and has been produced in collaboration amongst others with the UKAHT and BAS.

Another project was “*Hidden Histories of Exploration*” <http://www.hiddenhistories.rgs.org/> Even when the focus was on Africa and Asia it also had the Arctic covered. It was research based but developed massive educational and public outreach that enabled another project, “*Exploring Shackleton’s Antarctic – KS2 Module*” on the occasion of the centennial of Shackleton’s “*Endurance*”- Expedition. It contains six lessons and is a combination of historical and science research: physical geography, human geography, place knowledge (e.g.: South Georgia and Elephant Island), using primary and secondary data sources for geographical investigation what also includes skills to deal with historical events and putting them in context. Catherine Souch sent me some of the Module plans and teaching material for similar projects on Shackleton’s expeditions which show a comprehensive context.

The research done at the RGS and collaborative institutions is supported by the impressive collections in the archive. Because the RGS was a driving force in the historical Antarctic research most minutes of meetings, reports, and international correspondence are available and I worked on a very small part of it for a project two years ago. To prepare the stay in the archive a very practical tool is in place under the Archives Hub:

<https://archiveshub.jisc.ac.uk/search/?terms=Antarctic>

Alastair MacLeod explained to me the construction of the RGS and research and education is the basis of the outreach. Public clarity is a priority. Teachers’ programmes are a focus and geography and history are incorporated to create the necessary context. Local engagement is another focus of the RGS. Some of the projects are financed by Lottery Funds.

Memberships and Fellowship are also a good basis for the work of the RGS. After our discussion, Alastair suggested that I should apply to become a Fellow of the RGS because my studies combine history and geography. Having a Fellowship will give me a good network outside of Aotearoa New Zealand and provide me with information on conferences and



research projects which fit my interests. I followed his advice and became a Fellow of the RGS in May 2018.

e) **National Maritime Museum, Greenwich:** Dr. Claire Worrier, Senior Exhibitions Curator

The National Maritime Museum holds more Arctic artefacts especially from the Franklin Expedition and the rescue attempts in the mid-eighteenth century and decades after the tragic event. However, in 2011, at the time of the Scott centennial, the museum had a great response from visitors. For that the museum bought artefacts and had some on loan from SPRI and the British Natural History Museum. Claire Worrier recognised different responses to the historical Antarctic expeditions between the generations. For the older generation there is still a great national emotion attached to these events and there is much interest in Scott and Shackleton. The younger generation, however, is more interested in the outcome of the expeditions and has a different approach to it. This needs some consideration in organising such exhibitions. In this context, she also mentioned the links between the education programmes and the school curriculum when working on the exhibitions. The concepts of presenting exhibitions also changed and connecting a place with certain events, such as the historical Polar expeditions, is one focus on the current new Polar Gallery which opened at the end of September 2018.

Since the 1950s the Museum has had a Polar Gallery but this was mainly focused on the Arctic and the naval connections. The new gallery has both Poles linked in an interactive, informative and inspirational concept. “*Polar Worlds*” is a gallery of exploration which incorporates current issues such as climate change on a global scale. The interactive table shows management of the fishery in the Polar Regions, engages with sustainability and asks the questions: what does that mean for single countries? The choices we make in politics and economy have an impact and here is especially the younger generation targeted. Other themes such as tourism, resources, sovereignty, and environment are also covered in the new gallery. <https://www.rmg.co.uk/see-do/exhibitions-events/new-gallery-lecture-polar-worlds>

## Research done in Aotearoa New Zealand

### Christchurch

- a) **Canterbury Museum**
- b) **New Zealand Antarctic Heritage Trust**
- c) **Antarctica New Zealand**
- d) **International Antarctic Centre/Antarctic Attraction**
- e) **Christchurch NZ and The Antarctic Office**
- f) **New Zealand Antarctic Society**
- g) **Lyttelton Museum Society**
- h) **List of other Antarctic related connection in Aotearoa New Zealand**

- a) **Canterbury Museum:** Sarah Murray, Curatorial Manager

The **education** programme for the entire museum is especially prepared for school classes but also for the usual visitor. The Antarctic Collection is always part of the program. For school classes from year 1-13, education programs are available on Antarctic history and the Curriculum links social sciences, history planet earth and beyond. These are hands-on programmes working on e.g. diary extracts, clothing, sledges, and the Ferguson tractor, to get an impression of the life of early explorers. Teachers, especially for secondary level courses, can contact the museum and create their own program related to their chosen topic. For primary school classes there is an already developed program. The normal length of the visit is 1.5 hours.

Extensions to the **collection** are ongoing. However, when the events are younger than 50 years, it needs a strong evidence-based explanation of the significance to add a certain item/artefact to the collection. Because the female component in the Antarctic is so young the collection policy is not covering collecting items related to this topic. There are “**behind the scenes**” **tours** available by request only. Even so, they are very popular.

In the 1950s to the 1980s some people who were down in the Antarctic, took artefacts and items from the historic huts. Occasionally, it can happen that family members bring such items to the museum and often they are referred to the New Zealand Antarctic Heritage Trust (AHT).

There are **special collections** held in the Canterbury Museum as well. Some collections are purchased and some are donated and there are written documents, photos, paintings, and artefacts; e. g. Lester B. Quartermain collection (under his guidance the first attempts to save the historic huts were undertaken); John Claydon collection (wing commander of the Commonwealth Trans-Antarctic expedition); Baden Norris (curator of the Antarctic collection and involved preserving historic huts in the Antarctic in the 1960s) or the newest collection from Dr. David Harrowfield (involved in preserving historic Antarctic huts and curator in the 1980s). The collections are accessible in the Canterbury Museum documentary research centre which is part of the National Library System. The “*Records of the*

*Canterbury Museum*” is the publication series that documents the museum’s research findings. The centre is in use most of the time by both researchers and visitors since the material was made accessible again after the earthquakes (2010 and 2011). **Earthquake repairs** are progressed by 50 %. It is not easy to undertake the repairs and strengthening work because the museum holds approximately 2.3 million items.

Special **Antarctic curator positions** are honorary positions and are awarded currently to two curators with wider responsibilities because they are knowledgeable in Antarctic matters.

**Blogs** are used to **communicate** with the wider public to inform about certain items or events and are also used for announcing upcoming or ongoing exhibitions that have Antarctic content such as the current **exhibition** on “*Dogs in the Antarctic*” which was launched at the **Antarctic Season Opening 2018** (End of September). There is also a virtual reality exhibition planned in collaboration with the NZAHT which will give insight to the historic huts in the Antarctic. **Exhibitions** with Antarctic themes are well received by the public such as the

Scott centenary exhibition 2012/13 in collaboration with the Natural History Museum in London. Other collaborations are going on with the Field Museum, Washington DC, where Antarctic fossils were exhibited. The latest collaboration is with the Korea National Maritime Museum in Busan where an exhibition displays items and artefacts from the Canterbury Museum. This exhibition will open in December 2018. A *Memorandum of Understanding* had been signed between the Korea National Maritime Museum in Busan and Canterbury Museum in March 2017.

The **Scott Statue Project** <https://www.ccc.govt.nz/news-and-events/newsline/show/2434> was also a big undertaking by the Canterbury Museum. Public talks about the Scott Statue and its wider history were given for the **Canterbury Historical Association** (which has had one Antarctic lecture in its program since 2010), and the Antarctic Season Opening as well as for the **Friends of the Canterbury Museum**.

**The Antarctic Office** introduces international visitors to the museum to link current Antarctic affairs with the historic state of the city of Christchurch.

b) **New Zealand Antarctic Heritage Trust:** Francesca Eathorne, General Manager AHT, and Lizzie Meek, Artefacts Manager

The Antarctic Heritage Trust is a New Zealand-based charity to restore and preserve the historic huts in the Ross Sea and with a vision of inspiring explorers.

The “*Ross Sea Heritage Restoration Project*” is a long-term cold climate heritage conservation project in the Ross Sea. It is the largest heritage project in the Polar Regions ever undertaken. Through its mission to conserve, share and encourage the spirit of exploration the Trust cares for the remarkable expedition bases of early Antarctic explorers including Captain Robert Falcon Scott, Sir Ernest Shackleton and Sir Edmund Hillary and the approximately 40,000 items they left behind. It shares the legacy of exploration through

outreach programmes and encourages the spirit of exploration through expeditions to engage and inspire a new generation.

In 2017, the AHT celebrated its 30<sup>th</sup> year anniversary. Almost all five historic huts are preserved after the major conservation and repair work which started in 2006.

**Future plans for the AHT**, after the preservation of the five historic huts, are to maintain them. Annual visits are made to survey and detect structural and environmental changes in the huts, and to remove snow. Funding is available for at least 25 years of maintenance trips, with logistics provided by Antarctica NZ. A new management plan for 2018 – 2023 was presented at the end of June 2018. Main points are: a) Conserve Antarctica's heritage and the Trust's care for current and future generations; b) Share the world's greatest polar exploration stories; c) Encourage young people to explore the physical world to educate and inspire them (passing on the legacy); d) Sustain and grow the Trust's programmes, while caring for people and the planet.

Public **outreach** is a major focus for the AHT (see webpage: <https://www.nzah.org/>). An online **newsletter** informs subscribers of the latest events such as the *Inspiring Explorers' Expedition crossing of the Greenland Ice Cap* honouring the first crossing made by Norwegian explorer Fridtjof Nansen 130 years ago. Nansen went on to contribute extensively to polar travel and to win a Nobel Peace Prize for his humanitarian work (Nansen Passport for stateless people in 1923).

Digital demands influence also the way how the AHT is presenting the Antarctic history and the work which is done in the Antarctic on the historic huts. Virtual tours are one part of it. Also exhibition installations like "*Still Life*" which show what life was like for the Heroic Era explorers are supported by the AHT. **Collaboration** with other institutions is also a focal point for the AHT and is working in partnership with the UKAHT to develop conservation plans for historic sites on the Antarctic Peninsula which are managed by UKAHT. Members of the AHT visit schools and work together with Canterbury University in the special summer school program: Postgraduate Certificate of Antarctic Studies.

Over \$20 million dollars has been raised by AHT from a variety of philanthropic, private and corporate sources over the last decade. This money is directly tagged to conservation projects, as AHT receives a small amount of baseline funding from the New Zealand government to support administration.

In the 1950s-80's some items were removed from the huts as souvenirs. Whilst this was not illegal at the time, AHT works to communicate to the holders of such items that the Trust is able to look after such artefacts, that their rightful place is at their original site. A number of items have been repatriated in this manner. Approximately 2000 visitors per year see the historic huts in the Antarctic and that needs certain permits and management plans which are constantly amended to match the changes in tourism and environmental understanding (see [https://www.ats.aq/e/ep\\_protected.htm](https://www.ats.aq/e/ep_protected.htm) for the Antarctic Special Protected Areas and the ATS for the Historic Site or Monument protection).

**c) Antarctica New Zealand:** Anita Kerr, Information and Records Manager

Antarctica New Zealand (Antarctica NZ) does not have particular collections of its history. Documents from its beginnings are stored in the **Archives New Zealand** and via Archway it can be accessed through these webpages:

<https://www.archway.archives.govt.nz/SeriesAdvancedSearch.do> and

<https://www.archway.archives.govt.nz/ViewFullSeriesHistory.do>

The history of Antarctica NZ and its predecessor Antarctic Division, is best documented in collaboration with the NZ Antarctic Heritage Trust and the NZ Antarctic Society. The historian Dr. David Harrowfield has used the historical records to publish a book in 2007 on the developments of this institution under the title: “*Call of the ice: fifty years of New Zealand in Antarctica*” and an additional online publication came out in 2017

[http://travelsdocbox.com/Australia\\_and\\_New\\_Zealand/68970755-New-zealand-and-the-antarctic.html](http://travelsdocbox.com/Australia_and_New_Zealand/68970755-New-zealand-and-the-antarctic.html)

However, Antarctica NZ has a pictorial collection from the 1950s onwards. Archives New Zealand started 2014 – 2015 to digitise and catalogue the pictorial collection which is now accessible via the ADAM system (Antarctic Digital Asset Management). All the items are scanned in high resolution and categorised. The public is encouraged to assist with additional information to the picture collection and this is cross referenced and quality assessed.

Because the system had no particular order or description of the material at its 1950s beginnings, this new system is now a helpful tool to manage the collection for various users such as for research or outreach.

**d) International Antarctic Centre (also: Antarctic Attraction):** Nick Halsall, Head of Sales Manager; Lisa Thomson, Events Co-ordinator; Todd Schmidt, General Manager

The International Antarctic Centre is currently under a review process. A new manager, Nick Halsall, took on this position a few month ago. In 1990, Christchurch International Airport Ltd. had the vision of a visitor centre to show people the importance of the airport for Antarctic scientific programmes. Tim Hobson was commissioned with this task and Warren and Mahoney designed the building. The idea is closely linked to the fact that Christchurch is a Gateway City to the Antarctic. The design of the attraction was extended, but the original layout is still as it was created in the 1990s. There are several offers for visitors such as a Hägglund ride, a 4 D cruise, Happy Feed 4D, and the rescued penguins.

After a discussion with Nick Halsall, Lisa Thomson, and Todd Schmidt it was very clear that they want to change some of the design of the attraction and give it a more future orientation. History will be presented in some way but there are ongoing discussions to link artefacts and messages in the Canterbury Museum. The role of women in Antarctic research, beginning in the 1970s in Aotearoa New Zealand, will be also taken into consideration when reorganising the displays. Details will be announced in the near future.

**e) Christchurch NZ and The Antarctic Office:** Sue McFarlane, Manager – Relationships

The *Christchurch Antarctic Gateway Strategy*, developed by The Antarctic Office and ChristchurchNZ, was approved by Council in May 2018 and sets out a vision for Christchurch to be an Antarctic city that celebrates and realises the value of its gateway status for the benefit of the city and the nation, for current and future generations. The four priorities of the strategy – which is built on three themes of kaitiakitanga, manaakitanga and exploration – are to welcome and deliver excellence, connect and excite, advance knowledge, and champion sustainability.

At the **Antarctic Season Opening** in 2019, the history part was very strongly emphasised. One example is the 30<sup>th</sup> anniversary of COMNAP (Council of Managers of National Antarctic Programmes) which secretariat is currently based in Christchurch. ([Antarctic Gateway pages](#)). The exhibition for this anniversary was in an easily accessible place (at the Art Centre in Christchurch) and well received from the wider public when looking at on given feedback.

At the “**Antarctic Gateway webpage**” two women are represented who are pioneers in Antarctic research: Michelle Rogan-Finnemore (currently the executive secretary of COMNAP). <https://www.christchurchnz.com/christchurch-the-gateway-to-antarctica/polar-explorer-michelle-rogan-finnemore/> Michelle wintered twice in the Antarctic and one of these seasons at the South Pole station. Another female who pioneered Antarctic Research is Margaret Bradshaw. <https://www.christchurchnz.com/christchurch-the-gateway-to-antarctica/margaret-bradshaw-polar-explorer/> Margaret was the first female leader of a deep field party in 1979. Both women actively encourage younger generations, especially female researchers, to take on the challenges and progress in Antarctic research. It is a fine example of how female history in the Antarctic is represented especially for a wider audience.

Looking at the “*Antarctic Gateway webpage*”, there are eight links to historic connections such as “*Canterbury’s Polar Rockstars*”, Antarctic explorers, or “*Local hero: Frank Worsley*”. A very popular exhibition is also promoted on that webpage “*Dogs in the Antarctic: Tales from the Pack*” which will be open until 10 March 2019. Each link has a decent amount of historical information and is popular amongst the Antarctic community as well as the wider public.

**f) New Zealand Antarctic Society:**<sup>2</sup> Dr. Margaret Bradshaw, Oral History Manager

The NZ Antarctic Society was established in 1933. Leigh Hunt was inspired by Admiral Byrd’s exploration when he met him in Aotearoa New Zealand. Hunt wanted to bring together people interested in Antarctic science and business. In the 1950s, the Society was strong enough that they gained influence on the government for a coordinated involvement in

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<sup>2</sup> I am a member of the Antarctic Society since 2007 and a committee member from 2008 – 2017 and from 2014 – 2016 I was the chair of the Canterbury branch.

the Antarctic and especially in the 4<sup>th</sup> IGY (International Geophysical Year) in 1957 – 1958. Over time three branches were established which are still active today: Wellington, Auckland and Canterbury.

Some exceptional individuals were leading the way in important directions. One of them was a senior member of the Society, Lester Quartermain. He was not only the author of two textbooks on Antarctic history he also put in his energy and skills to advocate the rescue of the historic huts in the Ross Sea. He was the information officer of the Antarctic Division of the Department of Scientific and Industrial Research and with his perseverance he led the first restoration team in the Antarctic. The NZ Antarctic Society continued the restoration with a volunteer programme to rescue and preserve the huts. Baden Norris and David Harrowfield were over the years also engaged in this project. The NZAHT is now the organisation which is continuing the work which started in 1960.

The **volunteer programme** is still in use but its focus shifted towards helping to maintain Scott Base. The programme is very successful and is only possible with the collaboration of Antarctic New Zealand.

**Publications** have been always another leg of the Antarctic Society (see reference list). Several books have been published over the years. Another periodical publication is the Antarctic Magazine where different areas are covered such as history, governance in the Antarctic, science, and book reviews. The Magazine is one way to communicate Antarctic issues. A webpage <https://antarcticsociety.org.nz/> is another connecting point as well as Facebook <https://www.facebook.com/NZAntarcticSociety/>.

Different **projects** are also carried out. The latest was a Sled Dog statue, erected in Lyttelton to remember the relationship between dogs and men who worked in the Antarctic. Within the project a children book<sup>3</sup> has been published as well as a new tourist guide to point out the connection between Lyttelton and Antarctica.

Another important work is the Oral History Project. Dr. Margaret Bradshaw is responsible and kept the project alive over some decades. She secured funding for fifty oral history recordings. These recordings and transcripts are held in the Alexander Turnbull Library and Canterbury Museum.

In 1937, for the 25<sup>th</sup> anniversary of Captain Scott's death, the NZ Antarctic Society, Canterbury branch, laid the first wreaths at the Scott Statue to commemorate the men who did service in the Antarctic. Since then, it is an annual event at the Season Opening (End September or beginning of October when the overwinterers come back and the new crew goes down and starts the new season of Antarctic research). The wreath laying ceremony is an important connection to New Zealand's Antarctic legacy (figure 18).

After the earthquakes in 2011, when the Scott Statue fell from its plinth, the ceremony was held in the Canterbury Museum with Tibetan shawls at the Scott bust and after three years the wreaths were laid on the plinth. Since 2017 the Scott Statue is back and the ceremony

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<sup>3</sup> In the reference list are a number of children books listed related to Antarctic history.

continues as it was since 1937. That the statue is back again was the result of collaboration between many institutions and individuals, nationally and internationally, and the Antarctic Society was one of the driving forces behind it.



*Figure 18 – Wreath laying ceremony by the New Zealand Antarctic Society at the Antarctic Season Opening in September 2018. The Scott statue is re-installed since October 2017.*



**g) Lyttelton Museum Society:** Baden Norris, founder of the museum and the committee in which I am a member since 2014.

Baden Norris founded the Lyttelton Museum in 1969. Because Baden was involved in the volunteer programme of the NZ Antarctic Society to rescue the huts, many Antarctic researchers gave him artefacts and other individuals donated items from the Heroic Era. That was the start of the Antarctic collection. He was also curator of the Antarctic collection at the Canterbury Museum, and so he became a highly respected Antarctic history expert.

He established three subjects in the museum:

- Lyttelton's history
- Maritime history
- The port's role in Antarctic exploration.

From the beginning schools used the museum for educational purposes and the Antarctic history was an important part of any visit. The museum was popular until the earthquakes in 2010 and 2011. However, most of the collection was saved and stored in The **Canterbury Cultural Collections Recovery Centre at the Air Force Museum** (Recovery Centre) <https://www.youtube.com/watch?v=X5nBIPYqKnE> where the artefacts could be re-catalogued, cleaned and professionally packed. The collection is still housed there but is inaccessible until the new building is ready for business in 2020.

The committee is working towards a new museum building. The engagement with the public continues and is still a vital part of obtaining funding for the new museum. <http://www.lytteltonmuseum.co.nz/building-news>. A webpage, a Facebook page, and a periodically published newsletter keep the wider community informed. <http://www.lytteltonmuseum.co.nz/about/>. The new building will have an enhanced space for the Antarctic collection and an educational programme will be developed by 2020. In the near future, an online Antarctic exhibition will be published which I am currently working on.

## **List of exhibitions and displays related to Antarctic history in Aotearoa New Zealand (selection)**

The following list represents also links to Antarctic history; however, these institutions were not in the research included as the previous described ones. Although they are an important part on the Antarctic history network and collaboration.

**Akaroa Museum** (Akaroa) – Frank Worsley (Shackleton’s captain 1914 – 1917 and 1922) the new display is open after strengthening work on the museum after the earthquakes 2010 and 2011.

**Air Force Museum** (Christchurch, Wigram) – display of the Auster which was used for the flights during the IGY (in use from 1956 – 1958)

*The Air Force Museum was the hub for over forty societies and museums after the earthquakes in 2010 and 2011 to sort, clean and newly catalogue their collections. The “Recovery Centre” housed also the collection of the NA Antarctic Society. The collection of the Lyttelton Museum Society is still stored at the site but currently not accessible. The director of the Air Force Museum, the late Thérèse Angelo, gave the volunteers also the opportunity to get access to programmes for training in the manifold museums activities such as mounting textiles, managing a collection, and much more. <https://www.beehive.govt.nz/release/canterbury-cultural-collections-recovery-centre-opening-welcomed> and <https://mch.govt.nz/christchurch-recovery-strategy/heritage-buildings/heritage-recovery-projects/project7>. This includes also all Antarctic collections.*

**Air New Zealand** Safety video placed in the Antarctic involves also history in collaboration with the Canterbury Museum school programme

**Hocken Library** (Dunedin) Hocken Archives – Antarctic collection

**Kelly Tarlton Sea Life Aquarium** (Auckland) has a replica of Scott’s hut in the museum. The NZAHT provided the Kelly Tarlton with the information (six main themes and each theme was supported by six subthemes as interactive education material) in 2012. I have been involved in the process in providing the historical background information.

**Macmillan Brown Library** (University of Canterbury, Christchurch) – diverse collections from the early explorers (e.g.: James Cook, Dumond d’Urville) until the 1970s.

**Otago Museum** (Dunedin) Antarctic artefacts introduced on their webpage:

<https://otagomuseum.nz/blog/a-walk-on-the-wild-side/>

## Travel diary:

<b>Date</b>	<b>Location</b>	<b>People/Institutions</b>
5 – 8 March 2018	Washington DC, USA	<p><b>National Air and Space Museum and The Steven F. Udvar-Hazy Centre</b> (is a part of the National Air and Space Museum) Both are part of the Smithsonian. Visited at both institutions the museums and archives)</p> <p>Direct contact with: <b>Dorothy Cochrane</b> (Curator, Aeronautics Department) <b>Brian Nicklas</b> (Museum Archivist)</p> <hr/> <p>Meeting with <b>Dian Belanger</b> – author of the book: “<i>Deep Freeze. The United States, the International Geophysical Year, and the origins of Antarctica’s age of science</i>” (2006)</p>
12 – 16 March 2018	Columbus, Ohio, USA	<p><b>Byrd Polar Research Centre, Archives</b></p> <p>Direct contact: <b>Laura Kissel</b> (Polar Archivist) <b>Halle Mares</b> (Archives Program Assistant) <b>Kevlin C. Haire</b> (Assistant Archivist)</p>
19 – 23 March 2018	Bremerhaven, Germany	<p><b>Alfred Wegener Polar and Marine Research Institute (AWI)</b> – Archives</p> <p>Direct contact: <b>Christian Salewski</b> (Historian and Archivist)</p> <hr/> <p><b>German Maritime Museum (DSM)</b> – museum and archives</p> <p>Direct contact: <b>Martin Weiss</b> (Postdoctoral Researcher, DSM) <b>Jasmin Hettinger</b> (Citizen Science coordinator, DSM)</p>
26 March – 4 April 2018		No archives, museums, and institutions in Europe were accessible due to Easter holidays

<b>Date</b>	<b>Location</b>	<b>People/Institutions</b>
5 – 25 April 2018	Cambridge and London, UK	<p><b>Scott Polar Research Institute (SPRI)</b> Archives and Polar Museum</p> <p>Direct contact: <b>Charlotte Connelly</b>, (Curator, SPRI) <b>Naomi Chapman</b> (Education and Outreach Assistant, SPRI) <b>Morgan Seag</b> (PhD candidate, SPRI: topic on women in the Antarctic) <b>Naomi Boneham</b> (Archives Manager, SPRI) Vegard Nergård (Professor from University Tromsø – visiting scholar at SPRI)</p> <hr/> <p><b>British Antarctic Survey (BAS)</b></p> <p>Direct contact: <b>Ieuan R. Hopkins</b> (Archives Manager, BAS) <b>Linda Capper</b> (Head of Communication, BAS)</p> <hr/> <p><b>UK Antarctic Heritage Trust (UKAHT)</b></p> <p>Direct contact: <b>Camilla Nichol</b> (Chief Executive, UKAHT)</p> <hr/> <p><b>Royal Geographical Society (RGS),</b> London</p> <p>Direct contact: <b>Alasdair MacLeod</b> (Head of Enterprise and Resources, RGS) <b>Catherine Souch</b> (Head of Higher Education, RGS)</p> <hr/> <p>Royal Museum Greenwich, <b>National Maritime Museum</b>, London</p> <p>Direct Contact: <b>Claire Warrior</b> (Senior Exhibitions Curator)</p>
<i>Missing dates between the stays were used for travelling from and to the destinations.</i>		

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Base 'A' Port Lockroy. Visitor guide. A story of British endeavour in the Antarctic, UK Antarctic Heritage Trust, 2014

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Akaroa Museum, Akaroa: <http://akaroamuseum.org.nz/>

Alfred Wegener Institute – Helmholtz-Zentrum – for Polar and Marine Research: <https://www.awi.de/en.html>

British Antarctic Survey, Cambridge: <https://www.bas.ac.uk/>

Byrd Polar and Climate Research Center Archives, Ohio: <https://library.osu.edu/polararchives>

Canterbury Museum, Christchurch: <https://www.canterburymuseum.com/>

German Maritime Museum, Bremerhaven, Germany: <https://www.dsm.museum/>

International Antarctic Centre/Attraction, Christchurch: <https://www.iceberg.co.nz/>

Lyttelton Museum, Lyttelton: <http://www.lytteltonmuseum.co.nz/>

National Air and Space Museum, Smithsonian, Washington DC: <https://airandspace.si.edu/>

National Maritime Museum, Greenwich, London: <https://www.rmg.co.uk/national-maritime-museum>

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## Acronyms:

ADAM	- Antarctic Digital Asset Management
AGPR	- Archive of German Polar Research
Antarctica NZ	- Antarctica New Zealand
ATS	- Antarctic Treaty System
AWI	- Alfred Wegener Institute Helmholtz Centre for Polar and Marine Science
BAS	- British Antarctic Survey
COMNAP	- Council of Managers of National Antarctic Programmes
DSM	- Deutsche Schiffahrtsmuseum (German Maritime Museum)
HASSEG	- History and Social Sciences Expert Group
IAATO	- International Association of National Antarctic Tour Operators
IGY	- International Geophysical Year
NERC	- Natural Environmental Research Council
NSF	- National Science Foundation
NZAHT	- New Zealand Antarctic Heritage Trust
RGS	- Royal Geographical Society
SCAR	- Scientific Committee of Antarctic Research
SPRI	- Scott Polar Research Institute
UKAHT	- United Kingdom Antarctic Heritage Trust