

SCAR 2020 Conference
Session 36 "Antarctic Heritage"
Programme
27th July 2020: 9:30 – 11:30 GMT



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Zoom Link and Meeting ID: TBA

Session description

2020 is the two hundredth anniversary of the first human interactions with the Antarctic continent. This session invites presentations on all aspects of research and management related to the human heritage of Antarctic activity. These may include:

Antarctic heritage theory and practice:

- historical and physical research of the material evidence of human presence;
- the archaeology of sealing, whaling, explorations and scientific sites;
- conservation, interpretation and management of heritage sites;
- critical issues in Antarctic heritage research, conservation and management;
- Antarctic heritage and contemporary science;

Antarctic heritage governance:

- Studies of the development of heritage assessment and management over time;
- policy-making that impacts heritage;
- addressing cultural diversity, such as in different national approaches to heritage assessment, conservation and management.

Antarctic heritage onwards:

- A critical and analytical review of the current state of research, reflection upon matters raised at SCAR 2020 and consideration of future research agendas.

The session is closely linked to those on Antarctic and Southern Ocean Histories and the changing face of Antarctic tourism, with some overlap and mutual interest in the topics covered in each.

Convenors:

Maria Ximena Senatore, mxsenatore@gmail.com (Lead convenor)
Mike Pearson, mike.p@ozemail.com.au (Co-convenor)
Rebecca Hingley, rebecca.hingley@utas.edu.au (Co-convenor)

Programme

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27th July 2020: 9:30 – 11:30 GMT

9.30 – 9.35	Introduction to Antarctic Heritage Session Welcome and practicalities
9.40 – 9.55	Fully immersive virtual reality experience of Sir Edmund Hillary's Antarctic hut Barbara Bollard et al. (Auckland University of Technology)
9.55 – 10.10	Game Engines, Photogrammetry and Deep Learning for Antarctic Heritage Visualization Peter Morse (University of Tasmania)
10.15 – 10.30	The Geopolitical Deployment of Historic Sites and Monuments: Ulterior Agendas for Antarctic Heritage Rebecca Hingley (University of Tasmania)
10.30 – 10.45	Coffee break
10.45 – 11.00	Antarctic Legacy collaborates to celebrate South Africa's Polar heritage with 60th year anniversary of the Antarctic Treaty Maria Olivier (Antarctic Legacy of SA -Stellenbosch University)
11.05 – 11.20	Audio-visual management of the Antarctic Heritage Cristian Lorenzo et al. (Consejo Nacional de Investigaciones Cientificas y Técnicas CONICET- Universidad Nacional de Tierra Del Fuego)
11.25 – 11.30	12.00 Concluding comments M. Ximena Senatore and Rebecca Hingley

Session abstracts

Fully immersive virtual reality experience of Sir Edmund Hillary's Antarctic hut

Barbara Bollard (Auckland University of Technology)

Antarctic Heritage Trust partnered with Auckland University of Technology (AUT) to create a ground breaking virtual reality experience of Sir Edmund Hillary's Antarctic hut which was launched in early 2020. The virtual reality experience allows people to step inside Hillary's (TAE/IGY) Hut and to explore the first building at what is now New Zealand's Scott Base. Stories of Hillary's 23man team and their mission to further science and exploration in the world's most extreme environment feature within the experience and through accompanying material. It is a fully interactive experience, which includes a guided tour through the hut; it celebrates New Zealand's first presence in Antarctica as part of the Trans- Antarctic Expedition and International Geophysical Year.

The authors used a combination of photogrammetry and lidar technology to map the interior and exterior of this historic hut and create this virtual reality walk-through. By delivering a highly affordable, accessible and immersive virtual reality experience, this research pioneered new science communication tools to improve public and media engagement with Antarctic heritage and climate issues. This presentation will share more about this exciting research and how being at the cutting edge of new technologies, can bring important heritage sites and their stories alive for the public.

Game Engines, Photogrammetry and Deep Learning for Antarctic Heritage Visualization

Peter Morse (University of Tasmania)

Antarctic Heritage presents unrivalled opportunities for contemporary computational visualization techniques. These range from compelling immersive heritage experiences for the general public, through to the more exacting development of accurate digital archives for scholarly use.

Game engines have a wide variety of heritage applications as development environments for computational humanities, digital museology and GLAM-sector applications. Reconstruction of historic

Antarctic sites using satellite and other geophysical data in concert with photogrammetric scene reconstruction enable the construction of physically accurate heritage site models. These can be displayed as immersive screen experiences (e.g. VR, Augmented Reality and Dome environments) and afford novel visual analytics approaches to Antarctic heritage data. Associated historical textual, map, photographic and film materials can be restored, animated, translated into 3D scenes and actors, and coloured using machine learning techniques ('Deep Learning') employed in the film, special effects and games industries.

Immersive interactive simulations that embed historic materials demonstrate new ways of interacting with museum collections and scientific archives, new digital methodologies of historical scholarship and effective ways of exposing fragile archival materials for general and specialist audiences.

Interactive post-cinematic narratives suggest novel opportunities for dramatising the experience of significant artefacts, bringing place, biography, history and science alive. Remote environments, both in space and time, become far more accessible and available to contemporary enquiry.

A demonstration model of the Mawson's Huts Historic Site will be presented, using a computer game engine.

The Geopolitical Deployment of Historic Sites and Monuments: Ulterior Agendas for Antarctic Heritage

Rebecca Hingley (University of Tasmania)

All heritage, no matter where in the world it is found, is constructed by someone for a particular purpose – so who is heritage in Antarctica constructed by, and what is it for? Some historic remains on and around the frozen continent have been multilaterally and officially recognised as possessing historical significance. These sites and monuments, of which there are now almost 100, are recorded on the register for formal Antarctic heritage, that is, the List of Historic Sites and Monuments. This paper will consider three ways in which states might deploy Historic Sites and Monuments (HSMs) for geopolitical means: HSMs as a means to exercise de facto sovereignty; HSMs as a means to nation-build; and HSMs as a means to evade environmental obligations. There is no doubt that Antarctic states are genuinely invested in the preserving and conserving of Antarctic heritage, but by exposing their potential ulterior agendas it is possible to gain a deeper understanding of how the governance of Antarctic heritage has progressed, and where it might lead in the future. In an increasingly uncertain physical, as well as political, climate that stands to threaten the very existence of Antarctic heritage, it is imperative to remain critical of, and continually better, the decisions and processes that manage it.

Antarctic Legacy collaborates to celebrate South Africa's Polar heritage with 60th year anniversary of the Antarctic Treaty

Maria Olivier (Antarctic Legacy of SA -Stellenbosch University)

The Antarctic legacy of South Africa (ALSA) collaborates with various institutions in South Africa to preserve our Polar Heritage. The 60th anniversary of the Antarctic Treaty was celebrated with a few activities. This presentation aims to give a short overview about these celebrations and to emphasise the fact that South Africa has a long standing history with Antarctica since the Heroic Age.

Iziko Museums established a new exhibition - Sentinels of the South. It examines the history, discoveries and current role of South Africa's involvement in the Antarctic region. It takes visitors through the history of early Antarctic exploration, and South Africa's role in this and the role these islands play in helping us understand some of the global issues affecting everyday South Africans. South Africa's multidisciplinary Antarctic scientific endeavours, research facilities and flagship research vessel, the S.A. Agulhas II are showcased.

A Launch was held by South Africa as a Gateway country at the beginning of the Antarctic season. ALSA had an exhibition stall and the 360 footage of the South African National Antarctic Expedition (SANAE) IV was launched at this event

60 years ago the first South African National Antarctic Expedition (SANAE) left from Cape Town harbour on the 3rd of December 1959 bound for Antarctica. In commemoration of this first journey – Chris de Weerd, diesel mechanic of SANAE 1, and Mettie (wife) and Karen Hechter (daughter) of team leader Hannes La Grange – visited Cape Town harbour at East Pier on the 3rd of December 2019.

Audiovisual management of the Antarctic Heritage

Cristian Lorenzo (Consejo Nacional de Investigaciones Cientificas y Técnicas CONICET-Universidad Nacional De Tierra Del Fuego)

We live in a visual age. Audiovisual narratives are part of our everyday life and tell us something about the world. Such narratives shape our understanding. This paper explores the audiovisual narratives of the UK Antarctic Heritage Trust, the NZ Antarctic Heritage Trust, and Mawson's Huts Foundation. In doing so, we examined their websites and posts on YouTube, Instagram, Facebook, and Twitter. The results highlight their main topics of interests and focus on their views about the environment changes in Antarctica, the challenges for the management of Antarctic Heritage, and the future of the Antarctic Treaty System. This presentation aims to evoke reflections and discussions about the role of audiovisual narratives in the management of the Antarctic heritage.