

# CHAQ2020 - Snow Hill Island - Spatial data

**SND-ID:** 2020-129-1. **Version:** 1. **DOI:** <https://doi.org/10.5878/6m3n-1124>

**Is part of collection at SND:** [CHAQ 2020 - Cultural Heritage Antarctica](#)

## Download data

Meshes/Readme\_Meshes.txt (3.35 KB)

Meshes/SnowHillSiteDrone.zip (229.49 MB)

Meshes/SnowHillSiteSFMHQ.zip (1.43 GB)

Meshes/SnowHillSiteSFMLQ.zip (51.34 MB)

Meshes/WinterStationExterior.zip (790.3 MB)

Meshes/WinterStationExteriorPreview.zip (37.35 MB)

Pointclouds/Decimated/Readme\_Decimated.txt (8.59 KB)

Pointclouds/Decimated/SnowHillSiteDronePlusPreview.zip (3.58 GB)

Pointclouds/Decimated/SnowHillSiteSFMPreview.zip (3.32 GB)

Pointclouds/Decimated/SnowHillSiteSFMPreviewLow.zip (1.89 GB)

Pointclouds/Decimated/WinterstationExterior022-039Preview.zip (2.06 GB)

Pointclouds/Decimated/WinterStationExterior034.zip (156.54 MB)

Pointclouds/Decimated/WinterstationExteriorReflect000-033Preview.zip (2.35 GB)

Pointclouds/Decimated/WinterstationExteriorSFMPreview.zip (565.94 MB)

Pointclouds/Decimated/WinterstationInterior001Preview.zip (439.44 MB)

Pointclouds/Decimated/WinterstationInterior002Preview.zip (501.83 MB)

Pointclouds/Decimated/WinterstationInterior006Preview.zip (356.97 MB)

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Pointclouds/Decimated/WinterstationInterior011Preview.zip (747.3 MB)

Pointclouds/Decimated/WinterstationInterior012Preview.zip (348.59 MB)

Pointclouds/Decimated/WinterstationInterior013Preview.zip (368.77 MB)

Pointclouds/Decimated/WinterstationInteriorAttic026-030Preview.zip (868.77 MB)

Pointclouds/Decimated/WinterstationInteriorGround000-024Preview.zip (1.62 GB)

Pointclouds/HighRes/Readme\_HighRes.txt (9.59 KB)

Pointclouds/HighRes/SnowHillSiteDrone.zip (445.37 MB)

Pointclouds/HighRes/SnowHillSiteDronePlus.zip (12.53 GB)

Pointclouds/HighRes/SnowHillSiteSFM.zip (8.7 GB)

Pointclouds/HighRes/SnowHillSiteSFMclean.zip (6.37 GB)

Pointclouds/HighRes/WinterstationExterior22-39.zip (2.83 GB)

Pointclouds/HighRes/WinterstationExterior32-39.zip (779.48 MB)

Pointclouds/HighRes/WinterstationExteriorReflect000-033-3.zip (12.51 GB)

Pointclouds/HighRes/WinterstationExteriorReflect22-39.zip (2.13 GB)

Pointclouds/HighRes/WinterstationInterior001.zip (1.35 GB)

Pointclouds/HighRes/WinterstationInterior002.zip (1.38 GB)

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Pointclouds/HighRes/WinterstationInterior007.zip (1.36 GB)  
Pointclouds/HighRes/WinterstationInterior011.zip (3.84 GB)  
Pointclouds/HighRes/WinterstationInterior012.zip (1.17 GB)  
Pointclouds/HighRes/WinterstationInterior013.zip (1.3 GB)  
Pointclouds/HighRes/WinterstationInteriorAttic.zip (2.96 GB)  
Pointclouds/HighRes/WinterstationInteriorGroundFloor.zip (7.93 GB)  
Pointclouds/HighRes/WinterstationInteriorGroundFloorReduced.zip (2.96 GB)  
Pointclouds/HighRes/WinterStationSFMCloud.zip (3.31 GB)

### **Associated documentation**

Spatial data file formats.txt (1.42 KB)

### **Download all files**

2020-129-1-1.zip (~96.95 GB)

### **Citation**

Westin, J., & Almevik, G. (2021) CHAQ2020 - Snow Hill Island - Spatial data (Version 1) [Data set]. University of Gothenburg. Available at: <https://doi.org/10.5878/6m3n-1124>

### **Creator/Principal investigator(s)**

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### **Research principal**

[University of Gothenburg](#) - Centre for Digital Humanities

### **Description**

The first Swedish Antarctic Expedition (1901-1903), led by Otto Nordenskjöld, sailed to Antarctica on the ship Antarctic captained by CA Larsen, and established a research station on Snow Hill Island. There six members overwintered and performed paleontological, meteorological, geomagnetic and geological studies, while the rest of the expedition set sail for South Orkney.

After the winter, on the way back to Snow Hill Island, the Antarctic got stuck in the ice and sank. At this point, the expedition members were divided into three groups. One of these overwintered an extra year on Snow Hill Island, whereas the other two groups were forced to build stone huts in order to overwinter at Hope Bay and Paulet Island. An Argentinean vessel, the Corbeta Uruguay, rescued the expedition in November 1903.

CHAQ 2020 is an Argentinean-Swedish project with fieldwork in the area around the Antarctic Peninsula aiming to investigating and documenting the historical remains of the first Swedish South Polar expedition under the leadership of Otto Nordenskjöld 1901-1903. The material was collected in January and February 2020.

This catalogue entry collects the spatial data from Snow Hill Island, which include point clouds and textured meshes produced through laser scanning with a Faro Focus m70, and structure-from-motion

photography.

The scanning of the interiors of the winter station took place on the 12th and 13th of January 2020. In total, point clouds from 31 different positions were collected, ranging between 150 and 500 million points per scan. In addition to all the raw files, seven key positions have been processed and are available in full resolution through the repository and as previews below. The interior scans have also been registered and combined into two point clouds, one for the ground floor and one for the attic. The ground floor point cloud is 2.6 billion points and the attic point cloud consists of 354 million points. These dense clouds can be downloaded from the repository, and sparse representations of these are available below. The winter station exteriors, as well as the hill it stands on, have been captured through 54 scanning positions at four different occasions between January 13 and 19, 2020. These are available both as individual raw scans through the repository and as two pointclouds combining several of the scans. The first one collects 34 exterior scans in greyscale of the station and hill (2.3 billion points) from January 13 and 14, while the second one in colour collects the 19 scans done on the January 18 and 19 of the winter station exteriors. Sparse versions of these point clouds are available below.

In addition to laser scanning, several models were produced through Structure-from-Motion photogrammetry, using both handheld cameras (Fujifilm X-T2 and iPhone XR) and drone (DJI Mavic 2 Pro and DJI Phantom 4). The exterior ground-based models of the hut and the hill were computed using 6657 photos captured with the Fujifilm X-T2, and a model of the landscape was created through 1428 photos captured with the drone.

**Data contains personal data**

No

**Language**

[English](#)

**Time period(s) investigated**

[20th century - 21th century](#)

1902-01-01 - 2020-02-10

**Data format / data structure**

[Geospatial](#)

[3D](#)

**Type of archaeological investigation**

[Watching brief](#), [Archaeological field evaluation](#), [Planning basis](#)

**Type of archaeological remains**

[Feature](#), [Buildings](#), [Settlement remnants](#), [Building remains](#)

**Geographic spread**

Geographic location: [Antarctica](#)

Geographic description: The documentation was gathered at Snow Hill Island, Seymour Island (Marambio), and Hope Bay.

## Responsible department/unit

Centre for Digital Humanities

## Contributor(s)

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Luleå University of Technology

KTH Royal Institute of Technology

Swedish National Heritage Board

## Commissioning organisation

Swedish National Heritage Board

## Research area

[History and archaeology](#) (Standard för svensk indelning av forskningsämnen 2011)

[Structure](#) (INSPIRE topic categories)

## Keywords

[Antarctica](#), [Antarctic region](#), [Nordenskjöld, otto, 1869-1928](#), [Swedish antarctic expedition, 1901-1904](#)

## Publications

Almevik, G., Avango, D., Contissa, V., Fontana, P., Lindström, K., & Westin, J. (2021). Built cultural heritage in Antarctica : remains and uses of the first Swedish SouthPolar expedition 1901–1903. Riksantikvarieämbetet. <http://urn.kb.se/resolve?urn=urn:nbn:se:raa:diva-6230>

**URN:** [urn:nbn:se:raa:diva-6230](http://urn.kb.se/resolve?urn=urn:nbn:se:raa:diva-6230)

**ISBN:** 978-91-7209-891-6

If you have published anything based on these data, [please notify us](#) with a reference to your publication(s). If you are responsible for the catalogue entry, you can update the metadata/data description in DORIS.

## Polygon (Lon/Lat)

-59.915108267717, -62.532594345486

-59.915108267717, -65.146114847564

-54.144495800247, -65.146114847564

-54.144495800247, -62.532594345486

-59.915108267717, -62.532594345486

## Accessibility level

Access to data through SND

Data are freely accessible

## **Use of data**

[Things to consider when using data shared through SND](#)

## **License**

[CC BY 4.0](#)

## **Versions**

Version 1. 2021-03-02

## **Homepage**

[A portal to the material that was collected during the research expedition 2020 to the remains from Nordenskjöld's expedition 1901-1903](#)

## **Contacts for questions about the data**

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## **Related research data in SND's catalogue**

[CHAQ2020 - Snow Hill Island - Spatial data - CHAQ2020 - Snow Hill Island - Raw data](#)

## **Is part of collection at SND**

[CHAQ 2020 - Cultural Heritage Antarctica](#)

## **Download metadata**

[DataCite](#)

[DDI 2.5](#)

[DDI 3.3](#)

[DCAT-AP-SE 2.0](#)

[JSON-LD](#)

[PDF](#)

[Citation \(CLS\)](#)

[File overview \(CSV\)](#)

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