

Global Change Data Encyclopedia

King William Island

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Dataset Availability Statement:

The dataset supporting this paper was published and is accessible through the *Digital Journal of Global Change Data Repository* at: <https://doi.org/10.3974/geodb.2020.03.02.V1>.

King William Island, part of the Canadian Arctic Archipelago, is located within the Arctic Circle in North America, between Victoria Island and Boothia Peninsula. It is 85 km separated from Victoria Island in its northwest, 155 km separated from Prince of Wales Island in its north, and 3.3 km from the mainland (Adelaide Peninsula) by the Storö Strait and Simpson Strait in its south^[1].

King William Island was discovered by British navy commander Sir James Ross in 1830 and named after King William IV of England. After that, polar explorers explored the island for several times, including Thomas Simpson (1837), Sir John Franklin (1845), etc. It's a must for the northwest passage of the Arctic. The Northwest Passage refers to an important passage from Davis Strait in northeast Canada to Alaska along the northern coast of Canada. This passage is frozen most in a year. Polar explorer Roald Amundsen wintered there in 1903–1904 while on his successful way through the Northwest Passage^[2].

The island has a tundra climate. Its winter is strict and the summer on few occasions is cool, melting part of the ice, with low precipitation, so the island is called a “cold desert”. According to the climate records of the Gjoa Haven airport in Canada (1981–2010) obtained by Environment Canada, the average temperature of the whole day in the King William Island area is above 0 °C only from June to September, and all else of a year is under 0 °C. January is the coldest month in a year, with a daily average temperature of −33.8 °C, while July is the warmest month with a daily average temperature of 8.0 °C^[3].

The plants in King William Island are mainly bryophytes. There is large population of reindeer in the island. More animals residences the island and surrounding area, they are

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polar bears, caribou, wolves, foxes, rabbits etc. In addition to salmon, there are also whales, walrus, narwhals, belugas, seals in the sea, as well as a large number of birds, including crows, eagles, grouse, sea crows, mallard ducks, seagulls, terns and more^[4].

Gjoa Haven, on the southeast of the island, is the mainly community. There is an airport in the northeast of Gjoa Haven. The main attractions in Gjoa Haven are Nattilik Heritage Centre and Northwest Passage Territorial Park, which archived a series of collections recording the history of explorations of the Northwest Passage.

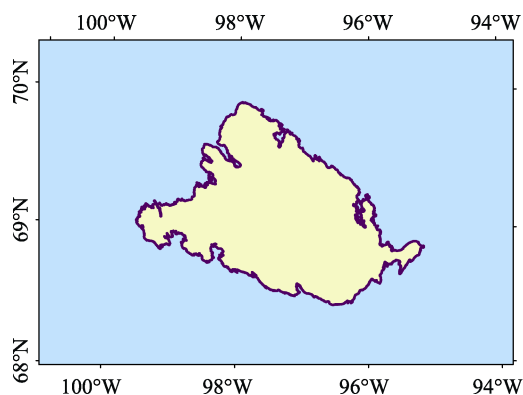


Figure 1 Map of King William Island
(.shp format)



Figure 2 Map of King William Island
(.kmz format)

The dataset was developed based on Google Earth images (2015)^[7] and related maps of Canada^[8]. The dataset is consisted of 24 data files and archived in the .kmz and .shp formats with data size of 2.98 MB (Compressed to 2.06 MB in three files).

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