

## Guidelines for GEO 458 Research Papers.

Your research papers should be written in a professional way, in the style that you might expect to read in a peer-reviewed scientific journal. It should therefore not use colloquial phrases, or be written in the first person style. It should include an **Abstract**, followed by an **Introduction** (setting out the theme of the paper and the importance of the topic) followed by the evidence or arguments you wish to make. There may then be a **Discussion** section, and a final **Conclusion** section. Use other sub-headings as necessary to divide up the text.

New paragraphs should begin with a “theme sentence” when the text is moving to a new topic or point. Use WORD spell checker & grammar checker. I am not your editor and do not expect to have to check your papers for errors that are easily caught by this software. If I spend a lot of time correcting your English, you will be graded accordingly!

References should be cited as (Balascio, 2000; Karmalkar et al., 2001) etc, and a complete list must be provided at the end of the paper. Do not cite web sites or newspaper articles as these are often unreliable sources. You must seek out original research papers. Contact Maxine Schmidt, Reference Librarian, for help.

You may include figures or tables (for example, cut and pasted from scientific papers) but cite all sources and include a figure caption. It would then be appropriate to refer to the figure in this way: “As shown in Figure 1, the feedbacks are clear...”, or “The feedbacks are quite clear (Figure 1)...”.

Note that plagiarism (copying the work of others without providing credit) is not acceptable & will be grounds for receiving a failing grade. You may quote somebody (generally only a sentence or two) if there is a particularly succinct or pertinent statement that you would like to use. For example, you might say, “This was first noted by Bradley who said, “blah, blah, blah...” (Bradley 2000). That gives appropriate credit to the person who made the statement you have used.

**Use single space or 1.5 line spacing, 12 point font, Times Roman, 1” margins; justify the text to both right & left margins. Number all pages at bottom right.**

The paper should be 12-15pages in length, including figures. References will be on additional pages.

As an example of the format, I include part of a paper that I wrote some time ago...

*Bradley, R.S., 1990: Holocene paleoclimatology of the Queen Elizabeth Islands, Canadian High Arctic. **Quaternary Science Reviews**, 9, 365-384.*

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## **GEO 458 Research Paper: Spring 2010**

### **Holocene Paleoclimatology of the Queen Elizabeth Islands, Canadian High Arctic**

**Raymond S. Bradley**

#### **Abstract**

A wide variety of evidence reflecting the changing climate of the Queen Elizabeth Islands during the Holocene is reviewed. All proxies pertain to summer conditions. Many sources of information provide weak or equivocal paleoclimatic signals, but a general pattern of events can be discerned. Temperatures in the early to mid Holocene were highest (comparable with, or higher than, temperatures prevailing for much of this century). Although much evidence points to a mid-Holocene thermal maximum, there is also considerable evidence that conditions were warmer in the early Holocene, possibly related to orbitally-induced radiation anomalies. The apparent mid-Holocene thermal maximum may reflect lags in the response of the environment and of some proxies in recording paleoclimatic conditions; more direct indices point to warmest conditions in the early Holocene (before 7500 B.P.). Temperatures declined from ~3000 B.P., culminating in exceptionally low temperatures from 100-400 B.P. This may have been the coldest period of the entire Holocene, resulting in glacier advances to post-glacial maximum positions. The period since 1925 has witnessed a pronounced increase in temperature, leading to negative mass balances on glaciers and ice sheets throughout the archipelago. This period is the warmest for at least 1000 years and perhaps for several thousand years. Modern climate in the Queen Elizabeth Islands may thus be characteristic of the early to mid-Holocene and atypical of conditions which prevailed for much of the last few thousand years.

#### **1. Introduction**

The Queen Elizabeth Islands comprise an archipelago of about 1.3 million square kilometers, equivalent to an area the size of Fennoscandia, or of the United States east of the Mississippi/Ohio rivers, excluding Florida (Figure 1). The islands are mountainous and glacierized in the east with large ice caps on Axel Heiberg, Ellesmere and Devon Islands. The highest peaks reach to over 2500m in the Grant Land Mountains, Ellesmere Island. The western islands are generally lower in relief and currently unglacierized. The only exceptions are three small glaciers on Melville Island and a small ice cap on Meighen Island (Paterson, 1969). Glaciation levels and equilibrium line altitudes in the region have been mapped and discussed by Miller et al. (1975)...

#### **References**

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