The availability of large databases of pollen diagrams has permitted the mapping of the postglacial vegetation changes across North America, and these data have also been used to quantify climate changes. These vegetation and climate changes influenced human activities and population numbers through alterations of the resource base, at least on a local to regional scale. Increasing human activity also affected the vegetation. A database of archeological radiocarbon dates developed and maintained by the Canadian Museum of Civilization contains data from across North America. We show the spatial and temporal distribution of data in the CARD database in relation to the major environmental changes during the Holocene and analyze these in the context of the continental-scale paleoclimate and paleo-vegetation reconstructions. We analyze the relative change in population in North America through the late glacial and Holocene. Populations remained low until ~10,000 cal yr BP, gradually increased until ~2000 cal yr BP, followed by a rapid growth until the arrival of European disease in the past 500 years. Regional case studies illustrate the close connection between environmental change and human resource use.

The Canadian Archaeological Radiocarbon Database (CARD) was created by the late Dr Richard Morlan of the Canadian Museum of Civilization and is currently maintained by Dr Matthew Betts. It contains over 36,000 radiocarbon dates that had been analyzed from archaeological sites or from paleontological specimens. Information such as the cultural context and taxonomy of the sample dated are included. The database is described in Gajewski et al. (in press) and examples of the use of this database in regional or continental studies are shown here. The database can be used to estimate paleo-populations, if sampling and taphonomic biases can be accounted for.

The map shows the geographic distribution of the dates in the database. It is considered relatively complete for Canada, but less so for the southern United States. The oldest cultural dates are around 14ka, and maximum numbers around 0.7ka, before European contact. Paleoenvironmental dates show several maxima, which may be due to sampling bias as well as population numbers.

**References**


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