

TIMING AND EXTENT OF HOLOCENE PEATLAND FORMATION IN ALBERTA, CANADA

Linda A. Halsey, Dale H. Vitt, Barbara J. Nicholson, Department of Biological Sciences, University of Alberta, Edmonton, Alberta, T6E 2G1, (403)-492-1899; FAX: (403)-492-1899; DVITT@GPU.SRV.UALBERTA.CA
and **Stephen C. Zoltai**, Canadian Forest Service, Northern Forestry Centre, 5320-122 Street, Edmonton, Alberta, T6G 2E9, (403)-435-7304; (403)-435-7359.

Radiocarbon dates of basal peat deposits from 42 locations across Alberta indicate that peat formation began approximately 8,000-9,000 years ago in nucleation zones along the foothills, Swan Hills/Saulteaux River area and in the northern uplands of Alberta (Cameron Hills, Caribou and Birch Mountains). Initial peat development lagged behind deglaciation by several thousand years corresponding to an "early Holocene warm period" in northern Alberta. From 8,000-6,000 years B.P. peat formation expanded eastwards paralleling the foothills and southwards from nucleation zones in northern uplands. Southwards expansion was particularly extensive in eastern Alberta reaching mid latitudes by 6,000 years B.P. After 6,000 years B.P. the trend of southwards and eastwards peatland expansion continued. Peatland formation was delayed until about 4,000 years B.P. in the lower elevations of the Peace River drainage basin, corresponding to a northern extension of the Low Boreal Mixed Woods Ecoregion of Alberta. Peatlands are youngest in the Aspen Parkland region having begun forming around 2,000 years B.P.

Linda A. Halsey

Linda is an environmental geologist who completed her M.Sc. at the University of Alberta examining the geomorphology and sedimentology of aeolian deposits. For the past 6 years she has continued to examine Holocene landforms in western Canada as a research associate with Dale Vitt. In this role she, Dale, Barbara, and Steve have produced maps of the peatlands for much of western Canada.

Dale H. Vitt

Professor of Botany and Director of the Devonian Botanic Garden, Dale has developed a major research program in biodiversity and peatland restoration. He and his research team are actively investigating the role that peatlands play in boreal to arctic ecoregions of western Canada.

Barbara J. Nicholson

Barbara is a post-doctoral fellow in the Biological Sciences Department of the University of Alberta where she is examining the impact of predicted green-house warming on peatlands in the Mackenzie Basin. Barbara completed her M.Sc. and Ph.D at the University of Alberta with Dale Vitt examining the paleoecology and development of peatlands at various sites in Alberta.

Stephen C. Zoltai

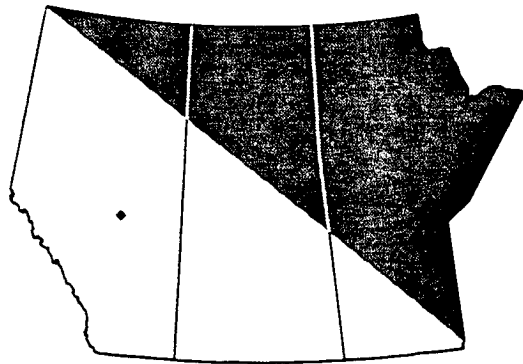
Steve is a research scientist in the Canadian Forest Service and is world renown for his work in northern wetlands. He was instrumental in developing a classification system of Canadian wetlands that resulted in the publication of the book "Wetlands of Canada".

FILE COPY / RETURN TO:

**PUBLICATIONS
NORTHERN FORESTRY CENTRE
5320 - 122 STREET
EDMONTON, ALBERTA
T6H 3S5**

Climate, Landscape
and
Vegetation Change
in the
Canadian Prairie
Provinces

Program and Abstracts



May 8-10 1995
Edmonton, Alberta

Sponsored by the Canadian Forest Service and the Geography
Department of the University of Alberta