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About the Institute

The Hunt Institute for Botanical Documentation, a research division of Carnegie Mellon University, specializes in the history of botany and all aspects of plant science and serves the international scientific community through research and documentation. To this end, the Institute acquires and maintains authoritative collections of books, plant images, manuscripts, portraits and data files, and provides publications and other modes of information service. The Institute meets the reference needs of botanists, biologists, historians, conservationists, librarians, bibliographers and the public at large, especially those concerned with any aspect of the North American flora.

Hunt Institute was dedicated in 1961 as the Rachel McMasters Miller Hunt Botanical Library, an international center for bibliographical research and service in the interests of botany and horticulture, as well as a center for the study of all aspects of the history of the plant sciences. By 1971 the Library's activities had so diversified that the name was changed to Hunt Institute for Botanical Documentation. Growth in collections and research projects led to the establishment of four programmatic departments: Archives, Art, Bibliography and the Library.

Pollen
Analysis

Digitized by Hunt Institute for Botanical Documentation

Samuelsson, J.

1910

Scottish peat mosses. Bull. geol. Inst.
Univ. Upsala 10. 197-260. 1910

Digitized by Hunt Institute of Botanical Documentation
2 sep. periods there were more ext. forests than
at present, ind. 2 periods of milder climate
This is cond. in Sweden.

See Fuller 1927

von Post, L.

1916
1924

See Fuller 1927.

turned to pollen in peat.

Swedish warm postglacial periods - "sub-boreal"
Digitized by ~~Herbert~~ ^{Herbert} Hirt Institute for Botanical Documentation
"Atlantic" - Quercus, Tilia, Ulmus abundant
regional studies of such postglacial forests -
mapped; mixed oak forest reached culm. in
"Atlantic" time, decr. in "sub-boreal" & attained another
max. in early sub-atl. & since has been decr.

Jessen, K.

1920

see Fuller, 1927.

Investigations in Denmark show that
its successions in accord with climatic

Digitized by Herbar. Institut für Botanische Dokumentation

all results show Quercus, Tilia, Ulmus, Fagus
much more northern in Br. Isles than
now.

1921

Erdtman, O.G.E.

see Fuller, 1927.

Methods: peat or silt boiled in 10% KOH & residue placed in glycerin for exam. At times, centrifuging may be used.

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Erdtman, O. G. E.

1924

Studies in micro-paleontology 1-12.

Geol. Fören Förhandl. 46:676-681.

See Fuller, 1927.

Digitized by Hunt Institute for Botanical Documentation
from part of a. w. Sweden, n. Scotland + Ireland

1924

Erdtman, O.G.E.

Studies in the micropaleontology of
post glacial deposits in northern Scotland
& the Scotch Isles, with special reference
to the studies of woodlands.

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Journ. Linn. Soc. Bot. 46. 449-504. 1924

(see Fuller 1927)

Shows similarity of pollen spectra from peat
of S.W. Sweden, N. Scotland, & Ireland & more
detailed report of post glacial forests of N. Scotland

Woodhead, T.M.

1924

The age & composition of the
Pennine Plate. Jour. Bot. 62:
301-304.

(see Fuller 1927)

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Erdtman, OGE.

1925

Pollen statistics from Curroogh and
Ballaugh, Isle of Man.

Proc. Liverpool Geol. Soc. 14: 158-163.
(see Fuller 1927)

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Pollen spectra resemble those of early "Atlantic"
of Sweden, est. to have been dep. 65-9500 years

Erdtman, O.G.E.

1926

On the immigration of some British
trees. Jour. Bot. 64: 71-74
(see Fuller 1927).

Shows early postglacial increase of Corylus
Digitized by ~~Hampden~~ Institute for Botanical Documentation
that it was first forest element to reach these
regions in N. migr.
Followed by Ulmus, Quercus, Alnus, Tilia, Fagus
in order named.

Woodhead & Erdtman

1926

Remains in the peat of the southern
Pennines. Naturalist 245-253
(near Huddersfield, England)

Ind. lowest peat formed during warm

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in peat are *Healithia*.

Acc. to de Geer, Atl. period lasted for 3000 yrs,
it about 5200 to 2200 B.C.

Rudolph, K.

1926

(see Fuller 1927)

possibility of dating pollen from
pottery fragments

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Ruedolph, K. and Firbas, S.

1924

1926.

see Fuller 1927

In Bohemia, found ind. of former higher
alt. limits for forests in Erzgebirge Mts.

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not.

Stark, P.

1925

see Fuller, 1927

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1929
~~Pollen Analysis of Dismal Swamp Peat~~
Ivey F. Lewis & E C Cooke

Journ. Elisha Mitchell Sci. Soc.
vol. 45, no 1. Nov. 1929. 37-55

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over

History of veg. -

open marsh covered with grasses + sedges

to closed forest of black gum, white

cedar sweet gum + other trees; interrupted

at 8 ft depth by dist. - less arboreal veg.

Fuller, G. D. -

1929

1927

Peat Bogs & post-glacial vegetation

Bot. Gaz. 87: 560-562. 1929

" " 83: 323-325. 1927

1930

Sears, Paul B.

A record of post-glacial climate
in Northern Ohio

Ohio Jour. Sci. 30:205-217. 1930

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Biscaya Log. charts of pollen ⁽²⁰⁹⁾ & tables (See fig)

Sequence of vegetation:

Abies-Picea, Picea-Pinus (Pinus max),
Pinus-Quercus, Quercus-Mixt Decid.

Sears, Paul B.

1931

Pollen analysis of Mud Lake Bog
in Ohio. Ecology 12: 650-655.
(Ashland Co)

Tables by Hunt Institute for Botanical Documentation

Early coniferous forest (subst. by this & Bueyres)
2 dry periods - 1st cool, toward end of conif. time
2nd warm, occupying most of decid. time
2 humid periods - 1st cool, at beg. of coniferous time
{ moderate, early in decid. time
Present trend → toward more humid. (over)

Pollen:-

Abies - Picea

Pinus - Carya - Quercus

Fagus - Juglans - Quercus

Carya - Quercus

Quercus + mixed meso.

1932

Sears, Paul B. & Couch, Glenn C.

Microfossils in an Arkansas peat
and their significance

Ohio Journ. Sci. 32: 63-68

Digitized by Hunt Institute for Botanical Documentation

Chart, p. 64 (see fig.)
Succession from an impoverished oak-hickory
fossil flora thru a Nyssa stage to an oak-
southern pine flora.

Indicates recent incr. in humidity in central Ark.

Lindsey, Alva. J.

1932

Preliminary fossil pollen of the
Merrillville White Pine Bog.

Butler Univ Bot. Studies, vol 2, paper 15.

Graph, p 80., showing *Pinus*, *Picea*, *Abies*

Abies-Picea; *Picea-Pinus*; *Pinus* & other genera

1935

Fuller, Geo D

Postglacial vegetation of the Lake
Michigan region

Ecol. 16: 473-

July '35

Digitized by Hunt Institute for Botanical Documentation

does not show alt. of humid &
dry that bogs farther south
display

Hansen, Henry P.

1937

Pollen analysis of two Wisconsin
boys of different age.

Ecology 18; 136-148.

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Lane, George H.

1931

A preliminary pollen analysis
of the East McCulloch peat bed.

Ohio Jour. Sci. 31:165-171. 1931

Digitized by [Herbaria Institute for Botanical Documentation](#)
Bog in northern Iowa. Botanical Documentation
table (p 166) & chart (168) (see fig)

Succession of veg.:-

Spruce; fir w. spruce & birch; birch w. fir & oak;
oak; - entrance of herb. forms; grasslands;
Greater aridity at 2 levels ind. by amaranthaceae

Voss, John

Postglacial migration of Forests
in Illinois, Wisconsin & Minnesota
Bot. Gaz. 96: 3-43. 1934

Digitized by Hunt Institute for Botanical Documentation

boss, John

1937

Comparative study of bogs on Cary
and Lazerell drift in Illinois

Ecology 18: 119-135.

(gives many pollen spectra)

Digitized by Hunt Institute for Botanical Documentation

Wilson, L.R.

1938

Postglacial History of vegetation
in n.w. Wisconsin

Digitized by Hunt Institute for Botanical Documentation

Rhodora 40. Apr. 1938



Digitized by Hunt Institute for Botanical Documentation

marion Co — M
Howard — H
warren — W
Hamilton Co — ●
Cass — X
madison — V

Wilson, L. R. & E. F. Galloway

Microfossil succession in a
bog in northern Wisconsin.

Geol. 18: 113. Jan. 1937

Butler Univ. Studies

Nov. 1937

Fossil Pollen Analysis of Fox
Prairie Bog, Hamilton Co., Ind.

Pollen Spectrum of Lake Cicott
Bog, Cass Co., Indiana

Pollen Study of Cranberry Pond
near Emporia, Madison Co., Ind.

Seem to reflect in prominence of oak
nearness to prairie pen. See graphs.

1932

Sears, Paul B.

Post glacial climate in eastern North
America.

Ecology 13: 1-6. 1932

Digitized by Hunt Institute for Botanical Documentation (65)
Comparative table, S.E. Canada, Va., Ohio, Iowa.

Sears, Paul B

1935

Glacial & Postglacial vegetation
Bot. Review, Feb. 1935 T. 37-51

Digitized by Hunt Institute for Botanical Documentation

1935

Sears, Paul B

Types of N. A. pollen profiles

Ecol. 16:488- July 35

Digitized by Hunt Institute for Botanical Documentation

1930

~~Common fossil pollen of the Erie basin~~

Paul B. Sears

Chicago Bot. Gaz. 89:95-106. 1930

Literature, technique &

Key to pollen, with figures

Digitized by Hunt Institute for Botanical Documentation

1933

Sears, Paul P. & Elsie Janson

Rate of peat growth in the Erie
Basin

Ecol. 14: 348-

Oct '33

Digitized by Hunt Institute for Botanical Documentation
see encl., p 354

Moore, Barington

1937

Birch forest in bogs of south-
western England

Ecology 18: 169.

1937

Digitized by Hunt Institute for Botanical Documentation

Cain, Stanley A.

Pollen analysis as a paleo-ecological research
method. Bot. Review, Dec. 1939. vol.5, no.12

Digitized by Hunt Institute for Botanical Documentation

Hansen, Henry P.

Pollen analysis of a bog in northern
Idaho.

Amer. Jour. Bot. April, 1939.

26:225-228.

Digitized by Hunt Institute for Botanical Documentation

1931

Bowman, Paul W.

Study of a peat bog near the
Matamek River, Quebec, Canada,
by the method of pollen analysis.

Ecology 12: 694-708

Digitized by Hunt Institute for Botanical Documentation

graphs & % ages.

Bog 100 ft. above sea level & $\frac{1}{10}$ of total rise in elev.
in this region. About 2,500 yrs old.

Ocean type bog w. sedge in lower levels &

Sphagnum in upper; open marsh to closed forest

1932

Copper, W.S. + Helen Foot

Reconstruction of a late Pleistocene
Biotic community in Minneapolis, Minn.
Ecology 13: 63-72.

See page 72 for age.

Digitized by [Hort Institute for Botanical Documentation](http://www.hort.miami.edu) #66
Fragments of moss, conifer remains, etc.; list #66
A morainic pond, sometimes flooded by silt-laden water
supported mosses, Chara + pondweeds; in arms or
parts of lesser depth - bog trees; uplands adj. - white
spruce, balsam fir, white pine & birch (as now in n. Minn.)

1930

Shenck, B.

Land snails as indicators of
ecological conditions.

Ecology 11: 673-686.

Digitized by Hunt Institute for Botanical Documentation

Fauna of loess indicates that it was dep. under
climate essentially like that of today

Problem of past glacial climates -
evidences from glaciation
coal dep., etc

esp. post glacial climates

evidences from nature of deposits
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" plant & animal remains (Cooper)

pollen analysis of peat bogs
work carried on indep. in Europe & in Amer.