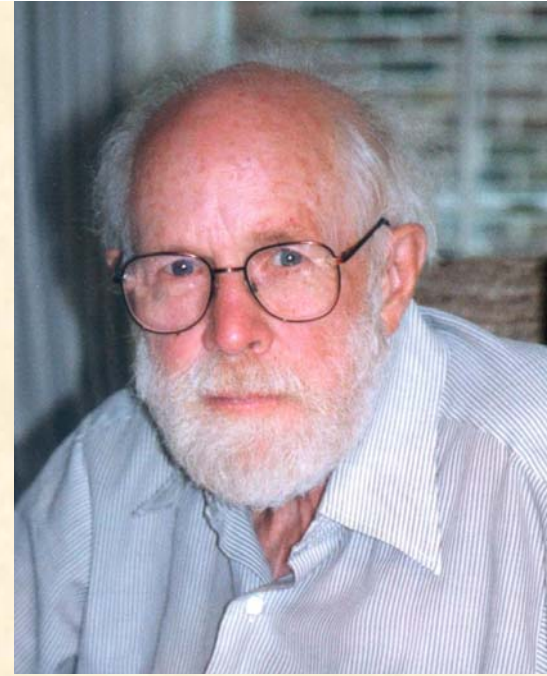


**CONTRIBUTIONS OF  
HERBERT E. WRIGHT Jr.  
TO SCIENCE AND TECHNOLOGY**

John & Hilary Birks

The difficulties in trying to summarise HEW's many contributions to science and 'technology' -



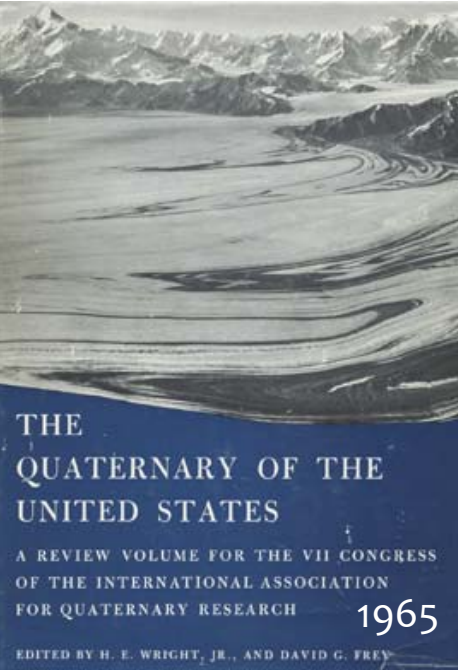
- great breadth of scientific activities
- large geographical interests
- many time-scales of interest
- many scientific disciplines – geology, Quaternary geology, palaeoecology, palaeolimnology, palaeoclimatology, environmental archaeology, ecology, fire history, landscape ecology and management
- unusual approach to technology, particularly field-work or 'field-craft'
- long time span as an active scientist (ca. 60 years)

# Ten Major HEW Scientific Contributions (as far as we know them)

1. Quaternary and environmental history of Minnesota – glacial history, vegetation history, landscape development, climatic history, fire history, lake history
2. Quaternary and environmental history of Great Plains (North and South Dakota), Nebraska, New Mexico (Chuska Mountains), Labrador, Yukon, Alaska, etc.
3. Vegetational history of south-east USA (Florida, Georgia, etc.), in close association with Bill Watts
4. Environmental change and early agriculture in Near East and Balkans, (Iran, Turkey, Greece, Bulgaria, etc.)
5. Environmental, glacial, and vegetational history of Peru

6. Co-ordination with John Kutzbach of the COHMAP project.  
Major paradigm shift in palaeoclimatology
7. Creation of Limnological Research Center, University of Minnesota, the first centre where both neo- and palaeolimnology were studied and where multi-proxy palaeo-ecological studies really developed
8. Recognition with Bud Heinselman of the central importance of natural fire in forest dynamics and the international importance of the BWCA in north-east Minnesota
9. Coring supremo in at least five continents (N. America, S. America, Europe, Asia, Africa) ? not cored in Australasia or Antarctica
10. Scientific editor, copy editor, and manuscript re-writer and shortener. Edited at least 16 major Quaternary books





1965

## PLEISTOCENE EXTINCTIONS

The Search for a Cause

edited by  
P.S. Martin and H.E. Wright, Jr.



1967

## QUATERNARY PALEOECOLOGY

edited by  
E.J. Cushing and H.E. Wright, Jr.

1967

## Late-Quaternary Environments of the United States

H. E. Wright, Jr., Editor

Volume 2

### *The Holocene*

H. E. Wright, Jr., Editor

1983

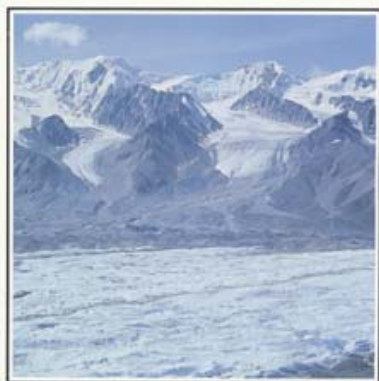
## Late Quaternary Environments of the Soviet Union

A. A. Velichko, Editor

H. E. Wright, Jr., and C. W. Barnosky,  
Editors of the English-Language Edition

1984

## NORTH AMERICA AND ADJACENT OCEANS DURING THE LAST DEGLACIATION



1987

The Geology of North America

## GLOBAL CLIMATES

### *since the Last Glacial Maximum*

H. E. Wright, Jr., J. E. Kutzbach,  
T. Webb III, W. F. Ruddiman,  
F. A. Street-Perrott, and P. J. Bartlein, editors

1993

## PALAEOECOLOGICAL EVENTS DURING THE LAST 15 000 YEARS

Regional Syntheses of  
Palaeoecological Studies of  
Lakes and Mires in Europe

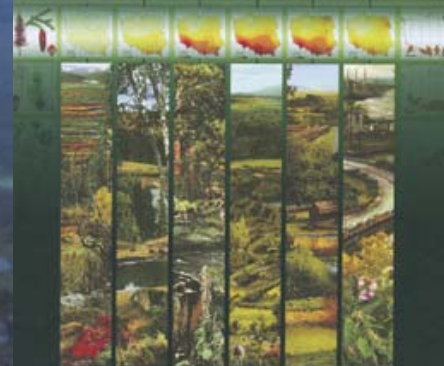
Edited by  
B. E. Berglund, H. J. B. Birks  
M. Ralska-Jasiewiczowa  
and H. E. Wright

1996

WILEY

## Late Glacial and Holocene history of vegetation in Poland based on isopollen maps

Edited by: Magdalena Ralska-Jasiewiczowa et al.



W. Szafer Institute of Botany, Polish Academy of Sciences  
Kraków 2004

2004

# Thirteen Major Contributions to Technology and Field-craft Based on Field-work with HEW

or ‘What we have learnt from being with HEW in the field!’

1. Have good coring equipment – yellow rope is usually not strong enough!





2. Have a field vehicle that starts, especially at low Minnesotan winter temperatures, that has a functional petrol gauge, and that has some flooring so that snow does not come into the car! Also useful to put petrol into the tank.



It also helps to have one with four wheels!





3. Do not go out to the Minnesotan woods at  $-37^{\circ}\text{C}/^{\circ}\text{F}$  – it is very cold! (At least make sure there is someone with you whose jumper you can borrow)



4. When coring, do not push too hard – rods can bend!





5. Always have a torch as daylight does not last for ever at the latitude of Minnesota!





6. Have a proper sized coring raft



7. Do not try ice-fishing with coring wire or metal casing!





8. When coring in areas with afternoon thunderstorms (e.g. Florida), do not use a metal boat!





9. When working in remote areas (e.g. Yukon), bring a map! With a party of 8 working independently, it helps to have more than one map or aerial photograph.



10. When leading expeditions to remote areas (e.g. Klutlan Glacier, Yukon), have a diverse group of people – philosopher, botanist, zoologist, geologist, etc.



It makes for great camp-fire discussions and seminars!





11. Avoid hot areas –  
they can be very hot!



12. Always travel with a roll of gray duck-tape – it is always useful!  
In India this July, we used it to mend boots, tents, rucksacks,  
waterproof trousers, porters' bags, and a camp-bed.

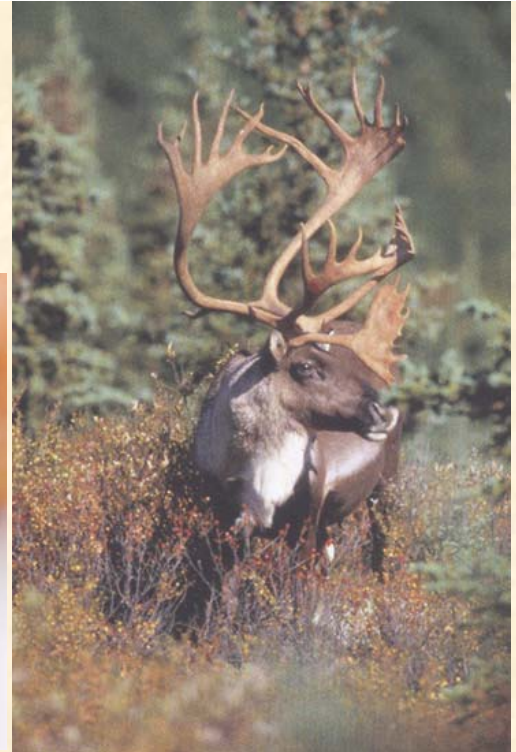
Other potential uses include:

**When the nation is in crisis, apply duct tape as shown:**





13. When on field-work, bring some real food. Lichens, blueberries, and other natural products of the Labrador forest are not suitable substitutes for food!



# Many HEW Contributions to Ourselves in Last 37 Years

1. Importance of multi-proxy studies and of plant macrofossils  
– Sallie Lake, Elk Lake, St Clair Lake, Wolf Creek
2. Introduction to Imbrie and Kipp's numerical work in 1970
3. Value of international collaboration
4. Taught us much about writing and editing
5. Value of maintaining a broad range of interests and of reading and thinking widely. One of the challenges of Quaternary science is that it is, by necessity, a multi-disciplinary subject. It is much more difficult than is commonly assumed by hard-rock geologists or molecular ecologists and systematists



6. Through HEW & his LRC, we met many distinguished researchers who have greatly contributed to our scientific education & development

We have learnt much from

Jock McAndrews

Ed Cushing

Lou Maher

Dick Baker

Bob Bright<sup>†</sup>

Barbara Hansen

Bud Heinselman<sup>†</sup>

Bill Watts<sup>†</sup>

Krystyna Wasylikowa

Roel Janssen<sup>†</sup>

Platt Bradbury<sup>†</sup>

Rick Battarbee

John Kingston<sup>†</sup>

Mel Whiteside

Red Watson

Sheri Fritz

Al Swain

Eric Grimm

Dan Engstrom

George Jacobson

Jim Clark

Paul Glaser

Henry Lamb

Jan Janssens

David Foster

Cathy Whitlock

Dick Wright

**and, of course, Herb**



Happy 90<sup>th</sup> Birthday and Many Thanks