CORRESPONDENCE

CLIMATE FROM TREE RINGS

Second International Workshop on Global Dendroclimatology, University of East Anglia, Norwich, U. K., July 7-11, 1980

There is much concern at present over the power of mankind to alter climate by increasing levels of atmospheric carbon dioxide. The eruption of Mt. St. Helens has moreover provided a reminder that natural influences on climate continue to occur. In order to improve understanding of the nature and causes of climatic change as a basis for anticipating future climatic variations, the record of past climate needs to be extended.

The annual rings formed in the wood of many trees from temperate zones of the earth are well established as records of past environments. During the week July 7-11, 56 scientists from 14 countries met to plan a coordinated international approach to the use of tree rings as a record of past climate. The meeting, the Second International Workshop on Global Dendroclimatology, was held at the Climatic Research Unit, University of East Anglia, Norwich, U.K. Dendroclimatology is a multi-disciplinary field and the Workshop involved climatologists, tree-ring scientists, ecologists and statisticians. The participants focussed on two problems. The first was to establish effective communication and collaboration in the use of methods on a global scale. The second was to examine the present availability of suitable tree-ring records and to plan an expansion of the current network, both into new regions and back in time. It is also envisaged that new species and new types of tree-ring measurements will be experimented with.

The timing of the Workshop coincides with the spread of dendroclimatic research to many new geographical regions over the last few years. This had led to the re-assessment of many basic techniques in the light of experience in these new regions. In recent years, work in the Southern Hemisphere has made great progress. It is now possible to construct records of streamflow and temperature for Tasmania for the last 200 years from tree rings, even though direct observations only exist for a few decades. The practical value of such extended records in planning the use of water resources, in civil engineering and in developing energy policy is plain. A study group for Europe concluded that similar success, but for a longer span of years, could be achieved within two or three years, if even a moderate level of research support were made available. Another study group stressed the importance of the past climatic record of Asia and proposed a plan of action to develop a cooperative programme in that vast region. It was agreed to give priority to acquiring tree-ring data in the forests of the Himalaya and the great regions of Tibet and Tien-tsin to their north. This will involve scientists from Europe as well as from the People’s Republic of China. The involvement of scientists from the Academia Sinica, Peking, along with others from North and South America, Australasia, Southern Africa, western and eastern Europe and the eastern Mediterranean was a particularly important feature of the Workshop.

In all the regions discussed there exists the potential to extend the detailed climatic
record back for hundreds and in some cases thousands of years before instruments such as barometers, thermometers and raingauges were introduced. It is imperative that the range of variations in past climate be known. What has occurred in the past, may occur again. The importance of the Workshop was recognised in support from a joint project of the World Meteorological Organization and the United Nations Environment Programme, from the Scientific Affairs Division of NATO and from the United States National Science Foundation. The Workshop was organised by Dr. M. K. Hughes, Liverpool Polytechnic; Dr. P. M. Kelly, Climatic Research Unit, University of East Anglia and Dr. J. Pilcher, Queen’s University, Belfast. Please write to any of them for further information.

P. M. KELLY

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