Vegetational History. Eleven essays are combined in this book* written by different authors in honour of Harry Godwin, who retired from the Chair of Botany at Cambridge University in 1968. The introductory essay by R. G. West is entitled "Pleistocene History of the British Flora" and is the keynote to the volume as a whole. The account is based on fossil records derived mainly from sites in East Anglia and the need for more regional studies is emphasised. The essay by Winifred Pennington admirably illustrates the point in her detailed survey of vegetation history in north-west England, a survey based upon pollen diagrams from more than sixty sites. Changes in Late-glacial vegetation are related to climatic change, but in Post-glacial times from about 3000 B.C. the activities of man become more significant, primary forest being replaced by arable farming in the lowlands or by peat communities in the uplands.

The influence of Mesolithic and Neolithic man is discussed more fully by A. G. Smith, while Judith Turner writes of the disturbance of vegetation during Post-Neolithic times. In south-east England parts of the chalklands had been largely deforested by the time of the Bronze Age, and from about 2000 B.C. and throughout the Iron Age forest clearance continued on an ever increasing scale. Ireland's contribution to Quaternary history is based on the chequered career of the Ericaceae and is told by G. F. Mitchell and W. A. Watts. They detect "a ribbon of Ericaceae" which can be traced from the coasts of Portugal to the Shetland Islands and inevitably the old problem of the so-called Lusitanian element in the Irish flora comes to mind. But the authors conclude that the full history of the Ericaceae in Ireland cannot yet be written. Relevant to their discussion are references to changes in level of the Irish sea during the Quaternary Epoch and a comparable topic is dealt with by J. J. Donner in an essay on land/sea level changes in Scotland. The evidence for these is derived mainly from pollen analysis and radiocarbon dating of submerged peats.

The direction and rate of development in some Post-glacial hydroseres is the subject of an essay by D. Walker in which there is much detailed information about successive stages and rates of accumulation of deposits at selected sites. When a hydrosere attains the floating-leaved macrophyte stage, its conversion to fen may take less than a thousand years and bog formation may be equally rapid although not invariably so. The ecological history of a specially selected bog is traced by F. Oldfield, dealing with Blelham Bog in North Lancashire, attention being devoted particularly to changes during the last two centuries. There is again clear evidence of man's activities in and around the area, yet the present vegetation remains extremely varied.

The relation of temperature to plant distribution is closely examined in a major contribution by Ann P. Conolly and Eilif Dahl. More than a hundred arctic montane species occurring in Britain are considered and remarkable correlations with annual maximum summit isotherms are demonstrated. Twenty maps show present-day distribution of selected species, as also their fossil occurrences where these are known. This essay will appeal to the plant-geographer, but the Tables on pp. 204–214 are none too easy to consult.

It is appropriate that the concluding essays should deal with the Cambridge pollen reference collection, contributed by R. Andrew, while the study of plant macrofossils is presented and illustrated by C. A. Dickson. All the essays which together form this volume testify to the large amount of Quaternary research which has been accomplished since the publication in 1956 of *The History of the British Flora* by Professor Godwin, and the presentation of the volume to him is a fine tribute to one who has himself contributed so greatly to our knowledge of the floristic and vegetational history of the British Isles.

J. R. MATTHEWS

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