

GENERAL DISCUSSION OF PAPERS IN PART 4

Professor L. R. WAGER commented that it was useful to have some sort of graphical method of relating age data and the biostratigraphic, time-order scale. A graph could show visually the probable error in the ages as estimated by the geochronologist, and, in addition, the range in the stratigraphical assignment; it also showed the general coherence of the data. Holmes's method of plotting maximum thickness of sedimentary rocks against age also enabled the dates of the top and bottom of systems to be read off the graph. Professor Wager asked if the stratigraphers thought any improvement in the estimate of maximum thicknesses could be made and whether it would not be useful to obtain estimates of the maximum thicknesses of some of the subdivisions of the systems, as Dr House had done for the Devonian. Clearly, however, on any one graph the maximum thickness of systems should not be used together with the

maximum thickness of subdivisions of the system.

In some of the graphical presentations of the age data the authors had spaced out the various divisions of the time-order scale without explaining the principle on which the spacing had been done. In some cases a generalized estimate had probably been made from sedimentary thicknesses or numbers of faunal divisions; in other cases a method of plotting ages against ages on a 45° line, combined with a process of successive approximations, had been used, leading to a rough estimate of where the limits of systems on the time-order scale should be placed. The latter method of plotting gave a false impression of precision.

Professor Wager believed there would be some value in improving the estimates of sedimentary thickness to subdivide the time-scale when there were only a limited number of good dates available, as in the Palaeozoic.