tornado is in no way a cause of the Florida activity. Energy is not retroactive. Event A, happening to-day, can not be influenced by event B, happening to-morrow. A and B may influence C, and in Warren's example the shoring up of the houses is an important cause of a later event which is "intact houses" after the tornado. Warren, we believe, has interpreted the effects of past experience, learning, as being the effect of some event which may or may not occur at some future time.

Warren has not demonstrated any new causes or principles in evolution. His examples are not energy manifestations, though he appears to use them as such. Any search for causal factors must be directed towards the possible sources from which organisms may derive energy. As has been pointed out by one of us,[4] there seems only one source available for all organisms, and this, the energy of the sunlight, is the motive force behind the appearance and evolution of organisms on the face of the earth. The series of living organisms is a series upon which work has been done, and in the source of this work we are to seek for the cause of evolution.

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THE PALEOBOTANICAL EXCURSION OF THE FIFTH INTERNATIONAL BOTANICAL CONGRESS

IMMEDIATELY following the close of the Fifth International Botanical Congress at Cambridge, England, on August 23, 1930, a tour was undertaken for the purpose of visiting some of the fossil plant localities in England and Wales. The tour was organized by Dr. H. H. Thomas, of Cambridge, and was conducted by Mr. W. N. Edwards, of the British Museum.

The party left Cambridge by motor bus on the afternoon of August 23 for Cayton Bay, near Scarborough, on the Yorkshire coast. Here, under the direction of Dr. Thomas, the Upper Jurassic beds containing the oldest known angiosperms, the Caytoniales, were visited and an opportunity was given to collect material.

The party then proceeded to Leeds where, under the direction of Dr. Hudson, several localities were visited for upper Carboniferous plants. Leaving Leeds the route followed was across the Pennine Moors to Manchester, where two days were spent. Besides visiting the coal mines in the vicinity of Manchester the party was entertained at tea by the botany department of the university and an opportunity was given to examine the magnificent fossil collection in the geological museum.

The party was then accompanied by Dr. John Walton, of Manchester, to north Wales. The first objective was the Teilia quarry near the village of Gwaenysgor for lower Carboniferous plants. Afterwards the Archeosigillaria beds at Denbigh were visited.

The south Wales coal field was the next objective. The route followed was along the scenic highway to Llangollen, then through Shrewsbury and Brecon to Swansea, which is one of the two centers of the coal industry in south Wales. On arriving at Swansea the party was entertained at tea by the mayor and at luncheon the next day by Captain H. Rees, of the Cefn Coed Colliery at Crynant. During the two days following the arrival at Swansea the party was conducted by Dr. A. E. Trueman, of the University College at Swansea, and Miss Emily Dix, of London. Numerous coal mines in the middle and transition Coal Measures were visited and rather extensive collections were made. On the evening of the last day the party was entertained at dinner by the Swansea District of the Monmouthshire and South Wales Coal Owners' Association and the South Wales Institute of Engineers.

The trip was concluded by visiting the mines in the vicinity of Bristol, Gloucester and Bath for upper Carboniferous plants under the direction of Dr. Crookall, of the British Geological Survey. The party then proceeded to London.

The participants of the tour were the following: Dr. T. G. Halle and Baron von Post (Stockholm); Dr. O. A. Høeg (Trondhjem); Professor A. Renier and Mme. Ledoux (Brussels); Professor and Mme. Jongmans (Heerlen); Professor W. Gothan (Berlin); Professor and Frau Hirmer (München); Dr. Sze (China); Professor Rudolph (Prague); Mr. W. N. Edwards and Miss E. Dix (London); Dr. G. R. Wieland (Yale), and Dr. C. A. Arnold (Michigan). Professor B. Sahni (Lucknow) and Dr. J. Pia (Vienna) accompanied the party for the first couple of days.

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THE first attempt at a marine biological station in China was begun this summer at Amoy in southeast-

[4] F. H. Pike, *Ecology*, 10: 167–176, 1929.