THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

THE SECTION OF GEOLOGY

IN addition to the report of the work of the section published in SCIENCE, January 25, the following papers may be noted:

Results of studies of glacial phenomena: Frank Leverett concludes that the boulders found in the Osage Valley in Missouri and for some distance south of the Kansas River represent a distinct projection of the ice sheet considerably beyond the limits formerly set for it. These boulders have been assigned to floating ice in the past. The till is regarded as of Nebraskan age. Similar conclusions were offered by Walter H. Schoewe, of the University of Kansas, who had carried on an independent investigation on part of the same area.

According to W. G. Waterman the glaciers in Glacier National Park are retreating rapidly. Sperry Glacier has retreated about 300 yards in 18 years, but by far the greater portion of this retreat has occurred since 1919.

Luella Owen presented the results of the last geological work of the late G. Frederick Wright. A comparison of the chemical characters of the loess of China with those of the loess of Missouri was made and the conclusion drawn from fossil and chemical evidence that the rock is of glacio-fluviatile origin. A striking illustration of the influence of glaciation on land values in Indiana was presented by Stephen S. Visher, who states that the average value of the land in the unglaciated portion of the state is about one half that of the land in the area covered by the Illinoisan ice sheet, about one third that of the land in the area covered by the Late Wisconsin sheet and about one third of that over which the Early Wisconsin sheet is spread.

A new relief map of Kentucky was announced by W. R. Jillson, who also described the fault pattern of Kentucky. In another paper a description of the cannel coals of the state was given. These coals are all of Pottsville age. The thicker seams are of comparatively limited areal extent, while the thinner ones extend over much wider areas. S. J. Hudnall offered a valuable correlation table for all coal seams in eastern Kentucky.

A description of the Cincinnati anticline by George D. Hubbard was followed by a paper by Lucien Becker, who presented evidence of the continuation of this structure across Mississippi, and of the possible continuance of slow uplift in this region at the present time.

Interesting examples of ebb and flow springs were discussed by Josiah Bridge, and the conclusion was reached that the peculiar variations in the flow of such springs is due to natural syphonic action. Walter H. Bucher described the unusual dome structures in Shelby County, Kentucky, as due to large bodies of magma intruded at considerable depth. T. L. Gledhill, in a paper on the nephelite syenites of the Sturgeon Lake District, Ontario, assigned their origin to pneumatolytic action, producing a progressive increase in soda. Soda-rich minerals are found replacing earlier minerals and the chemical analyses indicate an increase in soda with development of the later rocks.

Kilauea has always been regarded as a volcano of quiet type, but the studies of William H. Sherzer indicate at least four periods of explosive activity.

In his paper dealing with the teaching of elementary crystallography O. C. Von Schlichten emphasized the importance of a proper understanding of the value of internal structure in crystals, since this is the determining factor in external properties and the subject discussed in most of the recent texts on crystallography.

Arthur C. McFarlan offered a revised classification for the Chester species of the genus Archimedes and suggested that a classification be adopted, placing specific values on one axial and one frond type.

It would appear as though J. Ernest Carman had satisfactorily settled the vexed question of the dividing line between the Silurian and Devonian in Michigan. From a study of the Monroe in Ohio he concludes that the Detroit River dolomite and the Sylvania sandstone beneath it are Lower Devonian in age and that the Silurian-Devonian contact is at the base of the Sylvania sandstone. The evidence presented indicates: (1) That the geographical distribution of the several members of the Monroe in Ohio show that there was an early Monroe and a late Monroe advance of the sea separated by a recession in Middle Monroe; (2) The faunas of the Upper Monroe (Detroit River) and Lower Monroe (Bass Island) formations have very little in common—the Bass Island fauna is definitely Silurian, the Detroit River fauna is better interpreted as Devonian; (3) The Middle Monroe (Sylvania sandstone) is stratigraphically and faunally so closely related to the overlying Detroit River that whatever age is assigned to the Detroit River the Sylvania must go with it; (4) a disconformity and a distinct faunal change is located at the base of the Sylvania sandstone; and (5) a pocket of shale at the top of the Bass Island and apparently beneath the Sylvania sandstone contains distinctive Ostracoderms known elsewhere in the world only as basal Devonian.

E. S. MOORE,
Secretary