chemicals supposedly to try to gain an insight into the chemical composition of the material. Perhaps their silence on this matter, as contrasted with their relative multiloquence on the pedigree culture data, is indicative of a capacity to judge the comparative importance of the facts, rather than a crafty masking of inefficiency.

E. M. EAST

NEW OCCURRENCE OF THE BELT TERRANE IN MONTANA

No occurrence of the Belt Terrane in central Montana has been reported east of the Little Belt Mountains which were mapped in 1892-97 by Weed and Pirsson in Folio 56 of the United States Geological Survey.

Recently the writer has discovered over 100 feet of the top of the Belt Terrane in the Big Snowy Mountains. These mountains are about thirty miles long and are located east of the Little Belts, from which they are separated by a pass several miles broad called Judith Gap. The Big Snowies are the result of an anticlinal fold and contain no igneous rock, thus differing from all the rest of the outlying ranges in Montana. The summit of the uplift was reached at Half Moon Pass in the eastern part of the range, and the exposure of the Belt Terrane is on the south side of this pass in the canyon of Swimming Woman Creek.

The exposure of the Belt consists of dark gray, reddish and greenish shale or fissile slate. The rock is hard and highly fractured. Veinlets of iron stained quartz and calcite containing small amounts of gold and copper fill some of the fractures and joints in the strata. The Belt Terrane is exposed over an area of possibly two or three hundred acres. The Belt is overlain by more than 1,000 feet of Cambrian strata at the base of which is a quartzitic basal conglomerate. The walls of Swimming Woman Canyon are composed of the Cambrian and the hard Devonian and Mississippian limestones. There is an angular unconformity of a few degrees between the basal Cambrian quartzite and the Belt Terrane, but the Belt shows no evidence of extensive erosion. No fossils were seen in the Belt rocks.

The Big Snowy Mountains have never been mapped geologically, and the discovery of Belt strata in them extends the known area containing Algonkian strata forty miles farther east than hitherto reported.

O. W. FREEMAN

STOCKTON, CALIF.

THE SCALES OF THE FOSSIL FISH EOBRYCON

OWING to the remarkable distribution of the Characinid fishes in the neotropical and ethiopian regions and consequent questions as to their origin and migrations, any scrap of information concerning fossil forms is of value. In 1898 Dr. A. S. Woodward described and figured *Tetragonopterus avus* from the Tertiary of São Paulo, Brazil. He considered that it might belong to the subgenus *Hemibrycon*, which is now considered a quite distinct genus. However, in 1907 Jordan made it the type of a new genus *Eobrycon*. In 1920 Dr. Eigenmann sent me a specimen, lacking the head, for examination. I found that the scales were exactly those of *Salminus*, and I think the fish must be placed in that vicinity. In his very excellent work on the fishes of western South America, just published by the Carnegie Museum, Dr. Eigenmann, in accordance with most ichthyologists, neglects to use or refer to the finer characters of the scales. I venture to predict that the time will come when scale-characters will be considered more valuable for generic diagnosis among the Characidæ or Characinidæ than the presence of an adipose fin or the completeness of the lateral line. More valuable because more constant and characteristic of natural divisions.

T. D. A. COCKERELL

UNIVERSITY OF COLORADO
JANUARY 30, 1923

SCIENTIFIC BOOKS

LOFTFIELD ON STOMATA[1]

NOT since the appearance of Lloyd's "Physiology of Stomata" in 1908 has there appeared in America a book which has taken up the problems involved in the behavior of stomata on the broad and comprehensive scale, and as

[1] "The Behavior of Stomata." By J. V. G. Loftfield. Publication No. 314, Carnegie Institution of Washington. Pp. 104; 54 figures in text, 16 plates with 27 figures. Washington, D. C., 1921.