CRISIS UNDER WATER

THE rare aquatic phenomenon described by Mr. David Tomlinson in the November 1 issue of SCIENCE should be of considerable interest, if our interpretation of it is correct. We have seen at intervals precisely the same thing happen in a small indoor concrete aquarium which we keep supplied with rain water because of the high sodium carbonate content of our tap water. From time to time the water in this aquarium assumes a curiously dead appearance due to the sinking of the algae and the accumulation of organic stain; vascular plants look unthrifty, and the fish gather at the top gasping for air. When this condition occurs it can be remedied almost immediately by dumping a small amount of crushed and powdered limestone into the water. It is even possible to predict the arrival of critical conditions some time in advance, and no doubt this could be done in large reservoirs, thus forestalling the destruction of fish. Our surmise is that the phenomenon represents, in miniature, what happens during the transition of a dying lake from the eutrophic or rich mineral condition to the oligotrophic or depauperate mineral condition, which leads to the formation of an acid bog. In the case reported by Mr. Tomlinson, it would be very interesting to know whether the cumulative development of aquatic life had not sequestered most of the soluble alkaline minerals by the time the unsettled weather conditions of which he speaks made their appearance.

If this explanation is correct the real trouble was due to the inability of the algae to remain alive and release oxygen and only in a secondary sense to the mass decay of organic matter. Although the concept of mineral nutrition as a governing factor in bog formation is well understood in this country to-day, it is absent from so much of our literature on peat that it seems proper to emphasize what appears to be a vivid example of it.

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SCIENTIFIC BOOKS

HISTORICAL GEOLOGY OF THE ANTILLEAN-CARIBBEAN REGION

Historical Geology of the Antillean-Caribbean Region or The Lands Bordering the Gulf of Mexico and the Caribbean Sea. By CHARLES SCHUCHERT, D.Sc., LL.D., professor emeritus of paleontology in Yale University. Published by John Wiley and Sons, 1935. 811 pages, 16 plates, 107 figures.

VERILY as time goes by and brings before us new scenes of ancient life and earth development our primal interests change—hobbies become occupations; avocations become vocations.

We have before us a monumental work by one primarily interested in brachiopod classification and structure. Interest in environmental relations, origin, routes of migration, geographic distribution of life forms led the author into paleogeographic studies of the North American continent. Since fossil faunas seemed frequently to have been derived from the South, through what portals did these immigrants pass, how wide, how deep, and what restriction to such immigration did nature impose? With the zeal of the Renaissance enthusiast unearthing the literature of ancient Greece and Rome, examining and translating every newly found document and interviewing every traveler returning from these classic lands, this author has spared no pains in gathering up all relevant literature, be it the printed page, map, section, diagram or chart or even the portrait of each noted worker. He has corresponded at length with those now living and has solicited many a personal interview. Data so obtained have been carefully credited to their proper sources; analyzed for their bearing on the various phases of the work in hand, and finally assembled for proper deductions.

Naturally, no review in a few paragraphs can give anything like an adequate conception of the contents of this work. One might quite as well attempt to review the contents of a new edition of a large encyclopedia or dictionary. The scope of the work seems to have enlarged from an attempt to indicate the provenance of North American fossil faunas through a "Geological History of the Antillean Region" (1929) to this "Historical Geology of the Antillean-Caribbean Region, or Land Bordering the Gulf of Mexico and the Caribbean Sea." But even this extended title does not adequately convey an idea of the contents of this great volume (xxvi–811 pp., 16 pls., 107 figs.). From the title one would naturally expect to find the work given over to a statement of what is known of the systematic or historic geology of the areas concerned, somewhat after the style of the Correlation Bulletins of the U. S. Geological Survey some forty years ago. Instead, we find, for example, half of the "Summary" devoted to paleogeography and diastrophism—the latter containing such topics as "Late Cenozoic Epeirogeny (Antillean Revolution)," and "Probable Causation of Diastrophism." Neumayr and Lapparent might be surprised at the new uses being made of paleogeography, and Suess and Willis find their work meticulously checked and rechecked in this critical region. Historic geology has clearly become a far more embracing branch of science since the days of correlation bulletins.