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CERTAIN ASPECTS OF GEOLOGIC CLASSIFICATIONS AND CORRELATIONS¹

By Professor ROLLIN T. CHAMBERLIN

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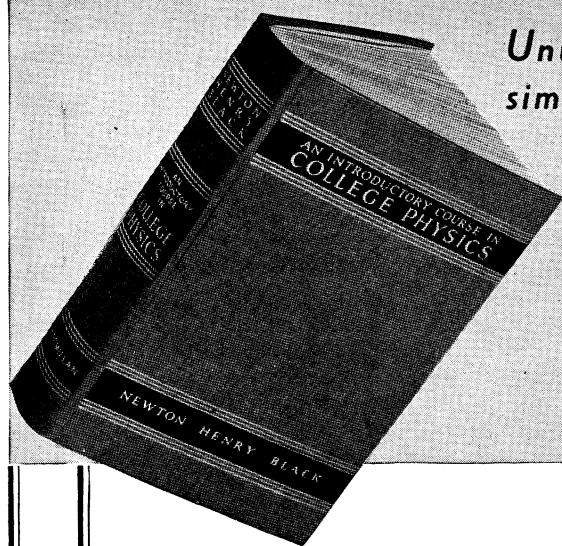
GENERAL CONCEPTS

OUR knowledge of the history of the earth has been developed gradually by fitting together the histories of small areas studied in detail. As the early geologists gradually became familiar with the rock formations of their own districts, they began to classify the strata in groups. Comparison of individual findings with those of geologists in other areas was particularly stimulating and led to more searching and critical study; correlations between different regions were attempted, and historical geology began to over-spread political boundaries. In the course of time the full succession of rock systems came to be recognized and the broader outlines of the geologic history of Europe and North America became established.

¹ Address of the vice-president and chairman of the section on Geology and Geography, American Association for the Advancement of Science, Pittsburgh, December 31, 1934.

Rather notable it was that the rock systems built up from the stratigraphic sequences and fossil peculiarities of Europe were found to be applicable and useful also in North America, though three thousand miles of Atlantic Ocean lay between. Now the same rock systems and corresponding geologic periods do service the world over. Though great variation in local details is manifest, distant regions seem to have enough in common to make possible a general history of the earth in world-terms. Why this is possible, we can now understand.

We know that for long stretches of time the continental land masses have remained relatively free from diastrophic movements of the more declared sort, during which times erosion has lowered the lands and shallow epicontinental seas have spread widely over their reduced surfaces. Part of this spread of the seas has resulted directly from cutting down the lands



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