was not distributed and rendered accessible to the public till a long time after it was printed. Indeed, it has often happened that books have been printed, even under other than Government auspices, and held in storage for years before any copies were distributed. In the usual course of trade books are often printed and held in stock, for trade reasons, for issue on a certain date, which is recognized as the date of publication. On a certain fixed day, generally previously announced, the book is placed on the market, and the advance orders for it from booksellers and others are filled on that day, which, in the records of the trade, is the date of its publication. For this purpose books are often dated several months ahead of the time when they are printed, in order that the date on the title page may agree with the date of their issue.

These simple facts show clearly how little claim the date of *printing* has to be taken as the date of *publication*, as advocated in the resolutions here under notice. If the same effort were made to find out the real date of distribution that is contemplated in these resolutions as necessary to establish the date of printing, the result would probably be worth the labor expended, for we should then be placed in possession of the real date of publication. How and by whom this needed work is to be done might form a subject worthy of consideration by even the Zoological Section of the American Association for the Advancement of Science.

J. A. ALLEN.

AMERICAN MUSEUM OF
NATURAL HISTORY, NEW YORK.

SCIENTIFIC LITERATURE.

Geological Survey of New Jersey. Annual Report of the State Geologist (John C. Smock) *for the Year 1894:* Trenton, 1895. Pp. 303, Plates I–XI, fig, 1. One map in pocket.

In the first paper of the volume before us, entitled 'Part I., Surface Geology,' Prof. Salisbury continues the record of his observations on the surface deposits of the northern part of the State, that is, of that portion which lies within or near the terminal moraine. For about one hundred pages the reader will find a valuable record of phenomena, which furnish a basis for subsequent deductions and which are of local importance, both to residents of the district and to visiting geologists. These pages deal with the drift deposits north of the moraine, taking them up under three different areas, viz., (*a*) drift deposits west of Green Pond Mountain, (*b*) drift on the Bearfort, Kanouse, Green Pond and Copperas Mountains, (*c*) drift east of the Green Pond Mountain range. Under each the unstratified drift, till or ground moraine is first described, and then the stratified. The former is chiefly on the mountains, the latter in the valleys. The glacial striæ next receive attention and from about 380 recorded observations it is shown that, as a rule, on the Palisade ridge the ice moved east of south, while west of it the direction is west of south. There are some cases of intersecting striæ and some minor local variations, but the above is the rule. The topics of changes in drainage and lakes are next discussed. The former are insignificant and of the latter the important cases are mostly due to obstructions of drift across streams. The post-glacial changes within the glacial area occupy Section IV. The post-glacial erosion is shown to be small, and the remaining topics—the alluvial deposits, peat and marl, and the changes of level—present little of great moment, except that under the latter the changes of level in the shore lines of Lake Passaic indicate post-glacial deformation in this region.

The remainder of Prof. Salisbury's paper is occupied with the surface formations south of the terminal moraine. The one earlier called the Beacon Hill is first discussed and is correlated with considerable certainty with Dr. W. B. Clark's Miocene beds farther south. The overlying Pensauken formation is considered as an equivalent of the Lafayette, and the still later Jamesburg is made the representative of the Columbia. Surface formations of even later date are briefly cited. A few pages are devoted to road materials and then in the concluding section the author describes the large map that accompanies the report. This exhibits the surface formations over the northeastern portion of the State in as great detail as has ever been attempted for an American area. Thirty different signs appear on the map, a number that

will emphasize at once the refinements in distinctions of glacial deposits that have been adopted.

The second paper of the volume is by Lewis Woolman and continues the important records of artesian wells, that the same writer has contributed to earlier reports. A moment's reflection will convince the reader, that the problem of water supply in the towns of the flat country of southern New Jersey is a serious one. The surface relief is slight and natural head is not available. Artesian wells have been developed with marked success, and, thanks to the careful records of Mr. Woolman, the productive horizons are now well identified. There are six in Miocene strata, of which one, the lowest exceeds the others in productiveness. There are four in the Cretaceous, all large producers. The remaining ones are less uniform and embrace Quaternary sands and gravels, Triassic sandstones and even Archean metamorphic rocks. Mr. Woolman discusses the several geographical areas of the state, and gives many sections and lists of fossils from borings, of which those of diatoms are particularly complete. The report contains a great deal of matter important in connection with water supply, but no less valuable as regards general geology.

The next paper is a Report on Forestry, by C. C. Vermeule and John Gifford. This is divided into a final report on the northern portion of the state by Mr. Vermeule and a preliminary one on the southern by Mr. Gifford. Many interesting topics are discussed and a good forestry map is appended. For the general reader the pages of the latter report that deal with the swamp cedar industry and the resurrection of old and buried logs will prove especially interesting.

The usual mineral statistics of iron ore and zinc ore conclude the volume. Of the former there were mined in 1894, 277,483 tons, a falling off of over 75,000 tons from the production of 1893. Despite this fact New Jersey was eighth on the list and outranked New York, whereas with the larger production of 1893, she was only ninth. The zinc ore raised was 55,582 tons, a falling off from 1893 of nearly 22,000 tons.

The report before us approaches very nearly to what we conceive to be the proper scope of a geological report for one of our older States. It gives, as the reports of New Jersey have given for many years, a large amount of material that the average taxpayer can appreciate and use. At the same time, as much pure science is introduced as may be wise and safe from the administrative point of view.

J. F. Kemp.

Demon Possession, and Allied Themes. By Rev. John L. Nevius, D. D. With an introduction by Rev. F. F. Ellinwood, D. D. Second Edition, pp. 520. F. W. Revel Co., New York. 1896.

The late Rev. Dr. Nevius was for many years a missionary to China, and while there had a number of opportunities to witness or to learn about cases of mental disease which, he became convinced, could not be ascribed to natural causes, but were the result of demonic possession, or the entrance into a man of an alien evil spirit.

In this work he describes a number of such instances and then discusses the naturalistic explanations which have been offered, especially the pathological and the psychological theories. Both of these he rejects, and prefers the 'biblical' theory of demonic possession. He argues that no other explanation is either consistent or proper as applied to the cases recorded in the Gospel, and if they are to be literally understood as of supernatural origin there is no reason why those wholly analogous in course and symptoms which he describes should not also be so regarded.

Against this argument little can be said by one who concedes the premise; but modern psychology does not. It explains the phenomena of the human mind by the ascertained laws of the human mind, and does not grant that any other explanation is necessary. Let us apply this reasoning in the present instance.

Facts such as Dr. Nevius brings forward belong to the most common of irregular mental phenomena. Such seizures are extremely frequent in the Shamanistic cults of savage tribes. They are cited by the hundred among Australian blacks, American Indians and African Negroes. Bishop Calloway, formerly of the diocese of Natal, says that nearly all his converts