lower ethnic type are coming to the front in statesmanship.

It is not likely that many citizens of the United States will deeply sympathize with our author in this anthropological pessimism. D. G. Brinton.

CURRENT NOTES ON PHYSIOGRAPHY (XI.).

PHYSIOGRAPHY OF CUBA.

Much excellent physiographical material may be found in R. T. Hill's recent 'Notes on the Geology of the Island of Cuba' (based on a reconnoissance made for A. Agassiz; Bull. M. C. Z. xvi., 1895, 243-288, maps and plates). One chapter, entitled 'Geologic history recorded by the topography,' is an excellent example of physiographic methods, which the author knows so well how to employ. The mountains of the interior are described as residual masses rising above a dissected peneplain; while the coast, especially around the eastern end of the island, is fringed with sea-cut benches terminating inland in strong sea cliffs. Hill differs from certain other writers in not regarding the ragged outline of Cuba as indicative of submergence, no downward movement being proved since the beginning of Tertiary time.

GEOLOGIC ATLAS OF THE UNITED STATES.

The folios of maps and text issued by the United States Geological Survey are providing sound physiographic descriptions of various parts of the country. One of the latest, the Estillville sheet, including parts of Kentucky, Virginia and Tennessee, by Campbell, classifies the surface forms with reference to the two well-marked peneplains that have been produced in the Appalachian province: the Cretaceous peneplain of the now dissected uplands; the Tertiary peneplain of the valley floors, now trenched by the rivers. The head of Powell's valley, included in this map, is a region of remarkable geological and topographical interest, well adapted to summer field-work for the geological students of southern universities. It may be noted that in naming the three main divisions of the Appalachian province, Campbell does not employ the usual term, Alleghany plateau. While the central division is all included in the 'Appalachian valley,' comprehending the linear ridges as well as the associated lowland, and while the diverse forms of the eastern division are named the 'Appalachian mountains,' yet the western division is called 'the Cumberland plateau *and* the Alleghany mountains;' no general name being here suggested. It seems unfortunate that the many similar features of this division should not be taken as sufficient reason for giving it some single general name, under which sub-divisions might be afterwards recognized when needed.

DE LAPPARENT ON GEOMORPHOGENY.

Professor A. de Lapparent, president of the Société de Géographie at Paris, contributes an article on *La Géomorphogénie* to the *Revue des questions scientifiques* for April, based in good part on American writings on this subject. He applies the physiographical methods to certain French problems, calling especial attention to the diversion of the Moselle from the Meuse to its present course below Toul. Few foreign writers have shown so full an appreciation as is here manifested of the systematic sequence that characterizes the development of topographical forms during the long process of baselevelling a region.

BIBLIOTHECA GEOGRAPHICA.

The *Gesellschaft für Erdkunde* of Berlin has for many years published in its *Zeitschrift* an annual summary of geographical literature prepared by its secretary, Dr. Koner, from 1853 until his death in 1887. The summary was continued for 1887 and 1888 by Fromm, for 1889 by Wolfsteig, and for 1890 by E. Wagner. Twenty-five years

ago, the list filled 90 pages; ten years ago, 130 pages; for 1890, 270 pages. With the recent changes of editors, the preparation of the lists was much delayed; and hence it has recently been decided to issue an independent bibliography, the *Bibliotheca Geographica*. Its preparation was placed in the hands of O. Baschin, and the first number for 1891 and 1892 has been recently issued in an octavo volume of 506 pages. Another number for 1893 will soon appear, and thenceforwards regular annual volumes will follow. The titles are carefully classified, first under various subdivisions of mathematical, physical and other general aspects of geography, then by countries. Presumably on account of the great amount of space demanded for even the briefest abstracts or critical notices, and probably also because the notices in *Petermann's Mittheilungen* suffice so well for the more important works, nothing but the author's name, the title of his paper, and the reference to its place of publication are given, with abbreviated indication of maps, tables and illustrations. If the *Bibliotheca* can be uniformly prepared and promptly published, it will become a standard work of reference.

JAHRBUCH DER ASTRONOMIE UND GEOPHYSIK.

THE fifth number of this useful annual, edited by Dr. H. J. Klein and published by Mayer, of Leipzig, treats of publications of 1894 and shortly preceding dates. It contains critical abstracts of a good number of the more important books and papers; the headings which concern physiography being topographical form in general, volcanoes and earthquakes, coastlines, the sea, rivers, lakes, glaciers, and meteorology in various subdivisions. Although not intended to be a complete bibliographic reference book, this annual must prove valuable to those who wish for a condensed statement of the best new material on physiographical subjects.

GLACIAL LAKES OF WESTERN NEW YORK.

THE Mohawk valley and the basins of the Great Lakes lie in a subsequent depression that follows the strike of weaker strata (chiefly Silurian) between the old-land area of resistant crystalline rocks on the north and the uplands of harder Devonian and Carboniferous strata forming the Alleghany plateau on the south. When this region first rose from the paleozoic sea, the drainage probably followed the dip of the strata, from the crystalline old-land southward even to the plateau area, after the ordinary habit of streams extending their courses across young coastal plains; but this was so long ago and there has been on all accounts so good an opportunity of rearrangement of drainage lines in later time that the St. Lawrence system now diverts all the headwaters along the lateral line of escape opened on the weaker Silurian strata; and the southward flowing streams of the plateau are reduced to moderate length by progressive beheading. A temporary return to ancient drainage conditions was, however, made during the glacial period, when the subsequent lowland along the weaker strata was filled by ice, and a general slope southward from Canada was restored. Then for a time water was discharged as it was originally; the beheaded streams in the plateau gained short-lived headwaters, either flowing directly from the margin of the ice sheet, or through intermediate lakes which were constrained to overflow into the southward streams by the obstruction of the retreating ice wall on the north. It is the memorials of these lakes that Fairchild describes in a preliminary essay under the above title (Bull. Geol. Soc. Amer., vi., 1895, 353–374), with especial reference to their deltas and outlets. The paper is an admirable beginning of a study which we hope the author may pursue at length.

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