

Stowell, of the Potsdam Normal; Professor William Hallock, of Columbia; Professor C. C. Wilcox, of Starkey Seminary; Professor Henry L. Griffis, of the New Paltz Normal; Miss Sherman, of Ithaca High School; Professor E. R. Whitney, of Binghamton; Mr. Charles N. Cobb, of the Regents' Office; Principal S. G. Harris, of Baldwinsville; Dr. Charles W. Hargitt, of Syracuse University; Mrs. S. H. Gage, of Ithaca; Professor Warren Mann, of Potsdam Normal; Principal Henry Pease, of Medina; Professor O. D. Clark, of the Boys' High School, Brooklyn, and Principal Henry S. Purdy, of Brewster.

FRANKLIN W. BARROWS.

BUFFALO, N. Y.

Secretary.

(To be Concluded.)

CURRENT NOTES ON PHYSIOGRAPHY.

TENNESSEE VALLEY REGION, ALA.

A RECENT report for the Geological Survey of Alabama by Henry McCalley, on 'the Tennessee valley region,' contains a general description of the paleozoic area in the northern part of the State, excepting the Coosa valley district, which is reserved for a later volume. Account is given of the level sandstone uplands, or 'barrens,' in the northwest corner of the State; and of the rolling limestone lowlands with rich red soil in the valley of the Tennessee river; these two districts being the higher and lower parts of the dissected uplands which enter from Tennessee. Next to the east rise the table mountains of the dissected Cumberland (Allegheny) plateau. The waters of the tables often disappear in sinks, and reappear in large springs at the head of coves on the flanks of the 'mountains.' South of the Tennessee, Little and Sand mountains are monoclines or cuestas, with steep and ragged escarpments to the north and gentle slopes to the south. The broad flat 'Moulton and Russellville' valley lies between them, trending east and

west. The Sequatchee valley of Tennessee is called Brown Valley in Alabama, and limits the preceding divisions on the east; it is excavated on an unsymmetrical anticline. An outline map locating these areas would have added much to the ease of interpreting the text. Most of the report is concerned with stratigraphic and economic geology; the illustrations are chiefly of quarries.

THE PREGLACIAL KANAWHA AGAIN.

REFERENCE should have been made, in a recent note on the Preglacial Kanawha, to the studies of Professor W. G. Tight, of Granville, Ohio, and of Professor I. C. White, of Morgantown, W. Va., regarding the changes in river courses of Pennsylvania and Ohio on account of obstructions by ice and drift. An article by the last named writer (*Origin of the high terrace deposits of the Monongahela river*, *Amer. Geol.*, XVIII., 1896, 368-379) should have been cited, along with the note regarding Leverett's work from the Report of the Director of the United States Geological Survey; for both are concerned with identical problems. White describes several channels among the hills of the Allegheny plateau, where the waters of the impounded Monongahela for a time ran over cols; one of these channels being permanently adopted in the present course of the Ohio. When this region is mapped and studied in detail it promises to reveal features of peculiar interest in connection with the rearrangements of river courses by glacial action.

STAGES OF APPALACHIAN EROSION.

ALTHOUGH this series of notes cannot pretend to completeness, it has been the writer's intention to report here on all the more important American essays, and on certain foreign essays that are relevant to modern physiography. It was entirely by oversight that an abstract of Keith's brief

article on 'Some stages of Appalachian erosion' (Bull. Geol. Soc. Amer., VII., 1896, 519-525) was omitted from earlier notice. A tardy note upon it is therefore now presented. Keith contends against the conclusion of Hayes and Campbell regarding the warping of the Cretaceous and Tertiary Appalachian peneplains; he maintains that river basins at different distances from the sea must, in similar rocks and at similar stages of denudation, produce peneplains of different altitudes and of different inclinations; and that part of the inequality of altitude and attitude that was explained by the earlier authors as a result of warping is better explained as a result of difference of distance to the sea. The slopes of a number of peneplains, thus interpreted, is generally so slight that their present altitude is better accounted for by nearly uniform uplift than by pronounced warping. A fuller discussion of the problem is promised. We may then see it illustrated and argued with the detail that so important a matter deserves.

It may be noted that in New England a tilting of the Cretaceous peneplain of the uplands from its former lower and nearly level attitude is well proved; for the sub-mature rivers of to-day run to the sea on flatter grades than the descent of the uplands; and this would be impossible if the peneplain had not been distinctly tilted.

BALTZER ON THE DILUVIAL AAR GLACIER.

THE thirteenth number of the *Beiträge zur Geologischen Karte der Schweiz* is a treatise on the diluvial glacier of the Aar and its deposits in the neighborhood of Berne, by Professor A. Baltzer of that city. It is a handsome quarto volume of 170 pages and seventeen plates. The text is chiefly concerned with the results of glacial action in the neighborhood of the strong terminal moraines and the included amphitheatre of Belp (just above Berne). This

amphitheatre was in general eroded; the moraines outside of it were built up; and the forelying district was broadly aggraded by surcharged glacial rivers. The chief of the latter was the Aar, which shifted its course to the right and left across the foreland, as one part after another was sheeted with sands and gravels. Among the plates special mention should be made of a superb view showing the confluence of the two main glacial branches far up among the mountains, from a photograph by Sella; a pictorial section exhibiting the dimensions of the whole length of the diluvial glacier when it extended even beyond Berne; and several views of the drift topography in the piedmont district. The effect of the Rhone glacier in obstructing the natural outflow of the Aar glacier and requiring it to run over the Brunig pass towards Lucerne is clearly set forth. A large two-sheet map of the district about Berne will prove a valuable guide to foreign students who wish to examine a typical glaciated area in the light of detailed local investigations.

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CURRENT NOTES ON METEOROLOGY.

THE TEACHING OF CLIMATOLOGY IN MEDICAL SCHOOLS.

THE importance of a study of climatology by medical students is urged in a paper by R. DeC. Ward, under the above title, in the *Boston Medical and Surgical Journal* for February 4th. At present very little attention is paid to this subject in any of our medical schools, and a special course in climatology is given in but about half a dozen. Medical men all realize the close relations which exist between climatic conditions and health, but, so long as no instruction is provided for them during their medical course, they are left to pursue the subject as best they can after they begin to practise. In this paper a general outline of