same elevation and are clearly remnants of a once continuous slope or inclined plane.

Antiquity of the Slopes.—In further support of the view of the great geological antiquity or Tertiary age of the initial slopes, reference may be made to the high auriferous gravels of the Sierra Nevada of California, which probably were coincident in formation. Like the ancient detrital slopes of Arizona, they are cut through in all directions by existing rivers. Their great antiquity is undoubted, and is generally regarded as late Tertiary. Russell, in his Quaternary History of the Mono Basin[5] (1889) records his opinion that the excavation of many of the valleys of the Sierra Nevada began long previous to the Quaternary, and are, in fact, relics of a drainage system which antedates the existence of the Sierra as a prominent mountain range.

The detrital slopes of the mountains around the ancient lake Bonneville were found by Gilbert to be older than the lake deposits and to extend below the old shore lines and lighter deposits of the lake. He writes:

> The alluvial cones do not find their bases at the level of upper shore lines, but extend downward continuously to the bottom of the valleys, while the shore-lines are wrapped about them.[6]

So, also, Russell found similar conditions at Lake La Hontan. He uses the term 'alluvial slopes."[7]

Turner, following Russell, has recognized the early Pleistocene or Sierran age of a portion of the materials filling the Great Valley of California and of portions of the alluvial fans of the Great Basin.[8]

Red Earth Deposits.—Upon the surface of the flanking slopes of the southwest, the earth is sandy and gravelly, and there is a general absence of vegetable mold or soil containing humus.

The presence of a large amount of red earth in many places is a notable fact, especially as it is more or less argillaceous, stratiform, and interstratified with coarse gravelly layers. It is found in quantity in some of the sections of the general slope, exposed by erosion of surface waters. At the northern end of the Santa Catalinas, red earth constitutes a large part of the upper slope at about 4,000 feet altitude. It is there largely in terrace form and is suggestive of the red-clay formation of the ancient Lake Quiberis in the valley of the San Pedro, evidently an ancient estuary, or landlocked valley; a good evidence of former submergence.

Conclusion.—If it is objected to these views of the origin of the broad slopes under water that we do not find strongly marked sea-cliffs and beach-shingle in connection with the slopes, an explanation may be found in a gradual but continuous uplift, so that all accumulations of shingle were leveled off by the retreating water. And in regard to the shore lines, if any were sculptured, the great antiquity of the formation has permitted their effacement.

The absence, so far as known, of any marine remains is readily accounted for by the earthy and gravelly nature of the detritus, its rapid formation and its constant disturbance by the tides and ocean currents, preventing the local development of marine life.

William P. Blake
University of Arizona

[5] Eighth Annual Report, U. S. Geological Survey, p. 350.

[6] 'Contributions to History of Lake Bonneville,' Second Annual Report, U. S. Geological Survey, p. 184.

[7] Israel Cook Russell, 'Geological History of Lake La Hontan.'

[8] 'Origin of the Yosemite Valley,' *California Acad.*, Vol. I., No. 9, p. 269, 1900.

QUOTATIONS

THE PRESIDENCY OF THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

The difficulties of the Massachusetts Institute of Technology in finding a president are deserving of more than local interest. President Eliot remarked in substance to one of the trustees recently, "You offered the place to a Latin professor and he declined, and now I see that you have offered it to a professor of Greek," an observation suggesting that for a school of theoretical and applied science the institute does not object to going considerably afield in its search for a president. The trustees answer, however, that the great college administrator is the great president, and that

it is relatively immaterial which branch of higher learning he may make his specialty.

President Benjamin Ide Wheeler, of the University of California, does not at present intend to accept the position. In the strictest sense he has never been formally offered it, but he did agree, in response to the request of the committee, to come here and talk with the members concerning it. Were he willing to accept the place it would be pressed upon him, an arrangement which amounts to about the same thing as a formal tender. Presidents of state universities are becoming increasingly aware of the advantage that they possess in being freed from the necessity of 'begging,' except, of course, from the single source to which they regularly go for funds. Seeking pecuniary aid among friends of an institution is not an agreeable task. This part of the Boston work is believed to be quite as responsible for Dr. Wheeler's present state of mind as anything else, although he in addition realizes his personal unfamiliarity with a considerable range of the institute's educational interests.

Dr. Pritchett, who resigned the presidency a year and a half ago, and has since been carrying on the leadership of the institute while attending to his other duties, thus shouldering a very heavy responsibility, will definitely terminate his work on his departure for his vacation this summer. It is hardly likely that any serious attempt will be made to secure a president between now and that time, but instead a member of the faculty, or perhaps of the executive committee, will be designated as acting president, to carry on the work until the place can be formally filled. Dartmouth College will be next year in the field looking for a president, too. Increasingly difficult it seems to be in the present complexity of university affairs to get the right men for positions of this character.—The Boston *Transcript*.

CURRENT NOTES ON METEOROLOGY AND CLIMATOLOGY

MEISSNER'S 'METEOROLOGISCHE ELEMENTE'

A RECENT book by Otto Meissner, published in the 'Sammlung naturwissenschaftlich-paedagogischer Abhandlungen,' deals with the most essential facts of meteorology in a clear and simple way. The full title of the volume is "Die Meteorologische Elemente und ihre Beobachtung, mit Ausblicken auf Witterungskunde und Klimalehre. Unterlagen für Schulgemässe Behandlung sowie zum Selbstunterricht." The publisher is Teubner (Berlin, 1906, 8vo, pp. 94, figs. 33). The object of this new book, as stated in the title, is to promote meteorological instruction in schools and, by treating the subject in an elementary way, to make it possible for the reader to instruct himself. Special emphasis is laid, in the final chapter, on the relations between the meteorological elements and organic life, and the simple rules for weather forecasting are adapted to the use of individual observers who wish to make local forecasts. The origin of important technical terms is indicated in foot-notes. Meissner's little volume is hardly adapted for use in teaching systematic meteorology—it is too disjointed and too superficial for that—but there are numerous suggestions and illustrations which are not found in other books on the same subject. We regret the wholly inadequate statement as to the deflective force of the earth's rotation (p. 39), which gives the impression that north and south winds only are deflected, although later paragraphs state that Ferrel's Law acts in the case of all winds. We note (p. 42) that the anti-trades are stated 'wenigstens teilweise' to descend at the Horse Latitudes, in accordance with Hildebrandsson's view. Undue emphasis is laid (p. 52) on the effect of dust in promoting condensation, no mention being included of the effect of ionization. And it appears (p. 89) as if the effect of deforestation and reforestation were much greater than the best observations lead us to think. Finally we observe one misprint, and a bad one at that. On page 90 Hann is spelt *Hamm*—and that in a meteorological textbook.

'INTERNATIONALER METEOROLOGISCHER KODEX'

AN official 'Internationaler Meteorologischer Kodex' has been prepared by Drs. Hellmann and Hildebrandsson (large 8vo, Berlin,