

Kercha. The two latter are small streams flowing, one into the Persian Gulf, and one into the Schott el Arab, near the ancient mouth of the Tigris, both east of it.

Though Professor Haupt supports his opinion with his customary depth of erudition, I doubt if it will be adopted. That part of Genesis was written by the Hebrew author about 650 B. C., and at that period he certainly knew what he was talking about when he mentioned the Gihon and identified it with the river Nile. Professor Haupt's former theory, which recognized this, seems much more plausible.

But all such theories do not touch the kernel of the question. The myth of the Paradise, watered by its four streams, is found in native American mythologies as prominently as in those of the Old World; and no explanation is valid which does not apply to both continents.

The true interpretation is that the four streams refer to the four cardinal points and the four winds, the rain bringers. They are the cosmic and celestial causes of the weather and its changes, and hence of fertility and growth. It were easy to prove this by abundant examples. The Hebrew realist merely endeavored to transport the ancient myth into terrestrial geography.

D. G. BRINTON.

UNIVERSITY OF PENNSYLVANIA.

JAMES D. DANA.

WE cannot pay a tribute to the memory of Dana more appropriate than the letter addressed to him by a number of his older colleagues on his eightieth birthday and communicated by Prof. George P. Fisher to the *Evening Post*.

NEW HAVEN, February 12, 1893.

DEAR PROF. DANA: Having had the privilege for many years, of being associated with you as colleagues at Yale, we wish to bring you our cordial congratulations on the occasion of your eightieth birthday.

It gives great pleasure to your friends that after so extended a period of incessant and most faithful activity you are still able with unimpaired mental vigor to carry forward the studies which have contributed so much to the advancement of science and have conferred so great distinction, not on yourself alone, but equally on the University and on the country.

We recall the circumstance that it was only four years after your graduation, in 1833, that the first edition of your work on mineralogy, a work which has remained a classic to this day, was issued. Two years later you embarked on the voyage of discovery, undertaken under the auspices of the government by the American Exploring Expedition, and during four industrious years collected the materials for the subsequent reports on geology, mineralogy, corals and crustacea, which established your reputation at home and abroad as a scientific man of distinguished ability.

It is now well-nigh half a century since you entered upon your labors as an editor of the *American Journal of Science*, your name having first appeared on the title-page of the journal in 1846. The long series of volumes of this periodical are a noble monument of the extent and thoroughness of your labors as a naturalist.

It is in truth surprising that in connection with this continuous employment and with your work as professor you have been able to send forth from the press, in successive editions, the elaborate text-books and other writings, the solid excellence of which is everywhere recognized.

We cannot revert without admiration to the universally broad field of scientific investigation in which you have maintained your place as an acknowledged master.

It would be a signal achievement for any man to hold this position as regards geology, and the branches of zoölogy connected with it; but when, as in your case, the sci-

ence of mineralogy is added to the list, the eminence which you have attained is quite exceptional.

It is gratifying to know that your services to the cause of science have obtained full recognition from teachers and students of science and from learned bodies in all civilized countries. None will question that the honors which have thus been so abundantly bestowed and so modestly received are well deserved. The consciousness that the motive of your researches has been an unalloyed love of truth and an unselfish desire to enlarge the bounds of human knowledge must give to these testimonials all the value that such marks of honor can ever possess. We congratulate you that your academic relations both with fellow-professors and with pupils have been so uniformly pleasant. The classes which, in long succession, have listened to your instructions, could their voices be heard, would unite in expressions of sincere respect both for the qualities of character and for the talents and learning of their revered instructor. But it is no part of our purpose to enter into a detailed statement of the reasons which render it peculiarly agreeable for us, your old friends and neighbors, to offer to you to-day our heartfelt congratulations. Had it been thought worth while to extend the list of subscribers to this letter, no doubt all the members of the teaching body in the University would gladly have added their names.

But our communication is simply intended as an expression, from a few of your older associates, of interest in this anniversary and of our earnest hope that the blessing of a kind Providence may continue to be with you and with the members of your family.

Very sincerely yours,

TIMOTHY DWIGHT, GEORGE E. DAY,
GEORGE P. FISHER, GEORGE J. BRUSH,
WILLIAM H. BREWER, O. C. MARSH, FRANK-

LIN B. DEXTER, EDWARD E. SALISBURY,
WILLIAM D. WHITNEY, HUBERT A. NEW-
TON, SAMUEL W. JOHNSON, DANIEL C.
EATON, A. E. VERRILL, ADDISON VAN
NAME, SIDNEY I. SMITH.

CORRESPONDENCE.

THE DISTRIBUTION OF SLEDGES, ETC.

DID anybody ever read or hear of sledges, snowshoes or goggles for the eyes in aboriginal South America? I have traced the skee entirely across Asia, the netted snow shoe from the Amur around to Klamath river, Cal., with extension throughout Canada, New England and our northern tier of States. The ice creeper for the foot covers the region of my migration track from southern Kamchatka around to the Yukon. The built-up sledge is everywhere in the Hyperborean area of two hemispheres, the form depending on the exigencies of timber growth. The great broad skee or snow shoe of the Amur is the flat toboggan of the Dominion of Canada.

OTIS T. MASON.

U. S. NATIONAL MUSEUM, April 20.

SCIENTIFIC LITERATURE.

Memoir of Sir Andrew Crombie Ramsay. By SIR ARCHIBALD GEIKIE, Director of the Geol. Surv. of Great Britain and Ireland. London and New York, Macmillan & Co. 1895. Pp. x + 397.

This is really a charming book and ought to be read not only by every geologist, but by every one interested in the story of a noble life. Indeed, the memoir of such a man as Ramsay by such a writer as Geikie could hardly be otherwise than deeply interesting.

Ramsay's career overlaps on the one hand with the old heroic days of the founders of English Geology—Lyell, Buckland, Sedgwick, Murchison, De la Beche, etc., and on the other with modern times and modern methods. He shared with the former the