In the *American Journal of Science* for September, 1883, Messrs. Hague and Iddings prove that the four great volcanic peaks of Mount Rainier, Mount Hood, Mount Shasta, and Lassen's Peak, rising to heights of from 10,500 to 14,444 feet above sea-level in California, Washington Territory, and Oregon, are mainly composed of andesitic lavas and tuffs, in which hypersthene is the predominating bisilicate.

In the *Geological Magazine* for July, 1883, Mr. Waller describes a similar rock from Montserrat, and I have just analysed one for Prof. Bonney from Old Providence Island in the Caribbean Sea. Prof. Bonney also informs me that he has found the rhombic pyroxene in the andesites brought by Mr. Whymper from Pichincha and Antisana.

It must not, however, be supposed that the rock is limited either to the Pacific region or to the Tertiary and Recent periods.

M. Fouque has shown that hypersthene occurs in the Santorin lava of 1866.

Niedzwiedski described a hypersthene-andesite from Steiermark in 1872. Mr. Whitman Cross and myself have recognised the rhombic pyroxene in many well known Hungarian rocks, in which it had previously been regarded as augite. Lastly, thanks to kind assistance rendered by Prof. Rosenbusch, I have been enabled to show that some Palæozoic lavas and tuffs of the Cheviot region are of essentially the same type (*Geol. Mag.*, March, June, and August, 1883).

J. J. HARRIS TEALL

12, Cumberland Road, Kew

Diffusion of Scientific Memoirs

PROF. TAIT'S admirable remarks on the moral obligation laid upon "every society whose memoirs are worthy of appearing in print" to disseminate its publications must have awakened a cordial response in the minds of many whose lot is cast in some provincial city or outlying local college. It is only too true that the volumes of the *Cambridge Philosophical Transactions* are "almost inaccessible" to many like myself, who often find themselves tantalised by the desire of consulting some of the classical masterpieces of research or analysis therein enshrined, which, therefore, are not to be consulted without a pilgrimage to Cambridge or to London. Yet I hardly understand why Prof. Tait should—save for the occasion of reviewing the happily ephemerous memoirs of Prof. Stokes—have chosen the *Cambridge Transactions* as the one instance of "inaccessibility," since it is at least equally to be regretted that a memoir published in the *Transactions of the Royal Society of Edinburgh*—and there are masterpieces of research and analysis by the score irrevocably buried therein—equally necessitates a pilgrimage on the part of the provincial reader. I, for one, shall be extremely glad if Prof. Tait will act upon his own prescription—that simple, easy cure—and consider himself "bound to disseminate as widely as possible" the memoirs which he has himself consigned to those very inaccessible *Transactions*. I doubt, indeed, if even Prof. Tait has realised the difficulty besetting a would-be reader of original memoirs and researches, who is compelled to journey from one shore of England to the other in order to consult the *Edinburgh Transactions*, the *Cambridge Transactions*, the *Comptes Rendus*, the volumes of *Poggendorff's Annalen*, or those of the *Annales de Chimie et de Physique*, or the memoirs of any one of the five great Academies of the European Continent.

SILVANUS P. THOMPSON

University College, Bristol, December 14

Deer and their Horns

THE question is often asked, What becomes of the horns shed every year in the deer forests? the number picked up or found hardly accounts for all those which have been shed. It is said that the deer themselves eat them. It is difficult to conceive how a deer, with its toothless upper jaw, can eat a hard bone—for such is a shed horn—but it seems probable, nevertheless, that they do so. I picked up a horn recently in the deer forest at Dunrobin which appears to show that it has been in great part eaten away; and this, I think, was the opinion of the members of the Zoological Society to whom I exhibited it last Monday. On inquiry from the head-keeper at Dunrobin, Mr. James Inglis, I find that it is the general belief that the deer do eat the shed horns, whilst the appearance of the specimen here referred to, confirms the popular belief. The marks on it are such as would be made by the broad incisors of the lower jaw, and the appearance generally suggests that the horn has been

gnawed and mumbled by the cutting teeth of the lower and the toothless gums of the upper jaw. It would appear, therefore, I think, that deer do eat some at least of the shed horns, and this

Red deer's horn, eaten (by other deer?), picked up in deer forest, Sutherland, 1883. A young stag's horn.

is rendered the more probable by the fact, according to Mr. Inglis, that there are no foxes or other animals in this particular forest to account for the mischief.

J. FAYRE

December 8

"I BEG leave to inform you that I am unable to say from personal knowledge whether it is the stags or hinds that eat the shed horns in the forest. I have never seen either eating horns, but I have no doubt they do so, probably both stags and hinds.

"I have never known dogs to eat deer-horns, and we have no foxes in our forest, and very rarely any dogs are to be seen in it; 'even although they should eat them,' the number of pieces we find all the year round, nearly all partially eaten, leaves no room to doubt that no other animal could have eaten them. I think they commonly eat them after they have been lying exposed to the weather for some time; the horns are then softer from exposure.

"In every case that I have seen, they commence at the top or point of the horn, and eat down towards the root or burr; the latter part is often left uneaten. As soon as I can collect a few specimens I will send them to you.

"We often find horns entire without any marks of teeth on them, but those are mostly not long shed. I have also got horns that had apparently lain for years without any marks on them. But of course no one would expect all the shed horns to be eaten.

"I am sorry that I cannot give you more information, and I am also sorry that as yet I have not been able to collect more information than I know myself, but when I have any fresh evidence I will let you know.

"JAMES INGLIS

"November 18"

Sprengel on the Fertilisation of Flowers

IN NATURE, vol. xxix. p. 29, is a letter from Prof. Hagen of Cambridge, Mass., calling attention to the fact that Sprengel's treatise on the structure and fertilisation of flowers was not appreciated in his own day. Now it so happened that only a week or two before reading this I took up by chance the "Introduction to Physiological and Systematical Botany," by Sir James Edward Smith, the American edition, dated 1814. On p. 208 the author says:—

"Sprengel has ingeniously demonstrated, in some hundreds of instances, how the corolla serves as an attraction to insects, indicating by various marks, sometimes perhaps by its scent, where they may find honey, and accommodating them with a convenient resting-place or shelter while they extract it. This elegant and ingenious theory receives confirmation from almost every flower we examine. Proud man is disposed to think that

'Full many a flower is born to blush unseen,'

because he has not deigned to explore it; but we find that even the beauties of the most sequestered wilderness are not made in vain. They have myriads of admirers, attracted by their charms and rewarded with their treasures, which very treasures would be useless as the gold of the miser to the plant itself, were they not thus the means of bringing insects about it."

It seems to me that this is a pretty decided indorsement of Sprengel's views.

W. WHITMAN BAILEY

Brown University, Providence, Rhode Island, U.S.A.,

December 4

Salt Rain and Dew

I SENT Mr. H. N. Draper's letter (*NATURE*, vol. xxix. p. 77) to my father-in-law, Dr. Petzholdt, of Dorpat University, who has made a special study of South Russia, Caucasus, Russian Turkestan, &c., and his reply is that it is a fact long known to chemists that the aqueous vapour in the atmosphere due to the evaporation of sea and salt-lake waters invariably contains chloride of sodium, which is precipitated to the ground by rain and dew. Dr. Petzholdt is not aware, however, that the phenomenon is more striking on the coasts of the Caspian and Aral than in other localities. In the *Annalen der Chemie und Physik*, vol. xxxv. p. 329, Liebig writes: "All the rain water which fell in Giessen (Hesse) during two years, in seventy-seven rainfalls, contained salt."

F. GILLMAN

Quintana 26 (Barrio Arguelles), Madrid, December 6

Lunar Rainbow

ABOUT 6.20 this evening I was fortunate enough to observe a fine lunar rainbow. Previous to its appearance there was a halo caused by a band of cirro-strati, which gradually developed into a crescent-shaped rainbow, which, after disappearing for a minute or two, again was observed, only circular, finally fading away as the clouds dispersed about 6.40.

C. H. ROMANES

Beckenham, Kent, December 11

AT 1.30 on the morning of the 12th inst., during the progress of the storm, I looked out of the window in a north-easterly direction and observed a beautiful lunar rainbow. The arc at first was complete, and faint traces of prismatic colours, especially on the outside, were noticeable. A portion in the middle having for a moment disappeared, the complete arc again became visible, but with only a whitish colour.

M. F. DUNLOP

Greenwich, December 15

PROFESSOR NILSSON

THE oldest naturalist in the world, as respects both age and the priority of his writings, has now left it.

S. Nilsson of Lund, in Sweden, was born in 1787, and therefore was nearly a centenarian at the time of his death. His earliest publication was in 1812, being a paper on the various methods of classifying the Mammalia; and in every subsequent year he enriched the scientific literature of his own and other countries. The *Annals and Magazine of Natural History* and the Reports of the British Association for the Advancement of Science, for instance, contained several articles from his experienced pen. He especially devoted himself to the fauna of Scandinavia, and became the pioneer of that host of naturalists who have so ably distinguished themselves by similar researches and publications. He was a zoologist, palæontologist, anthropologist, ethnologist, and antiquary. *Nihil tetigit quod non ornavit.*

His works consisted chiefly of scattered papers; but in 1822 he published his "*Historia Molluscorum Sueciæ Terrestrium et Fluvialium*," which has still a standard

reputation. As it did not include the marine or Baltic Mollusca, the gap was twenty-four years afterwards more than filled up by the eminent Prof. Lovén; and that department of the Scandinavian fauna has now, through the continual labours of the late Prof. Sars and his no less eminent son, Dr. Danielssen, Mr. Herman Friele, the Fraulein Esmark, Dr. Westerlund, the late Mr. Malm and his son, Prof. Steenstrup, the late Dr. Mörch, Dr. Berg, Dr. Collin, and many other conchologists, received as great a degree of attention as has been bestowed on any region of the earth's surface and its circumjacent seas.

The subject of this memoir was, at the last-mentioned date (1822), Regius Professor in the Academy of Lund, and the Director of the Museum of Natural History there. One of his former pupils, Prof. Otto Torell, is well known to all naturalists by his exploration of Spitzbergen, and his present position as the Director of the Geological Survey of India.

We ought to be thankful in recollecting that other veterans of science are still among us, viz. Professors Owen and Milne-Edwards at the age of eighty-three, and Dr. Isaac Lea, in his ninety-third year. The study of natural history is evidently conducive to longevity.

J. GWYN JEFFREYS

SEMITICO-OCEANIC LINGUISTIC AFFINITIES

TO the *Transactions of the Royal Society of Victoria* for May, 1883, the Rev. D. Macdonald contributes a paper, in which he endeavours to establish the identity of the Oceanic and Semitic languages. This is announced as an important discovery both ethnologically and from the theological standpoint. It clears up, we are told, "the hitherto impenetrable mystery surrounding the origin of the Oceanians," because "the Semitic language could only have been carried into Oceania by Semites from the Semitic mainland." It also disposes of the new-fangled "evolution theory," which draws support "from the existence of savages and the supposition that they are descended from 'hairy quadrupeds,' . . . for it shows, as to one of the greatest bodies of savages, that they are descended from the most renowned and civilised people of antiquity." Certainly these are weighty conclusions, which, if established, would fully justify the further inference that "this discovery is more important on the whole than that of the Assyrian or Euphratean inscriptions deciphered of late with such marvellous ingenuity."

By "Oceanic" the writer understands all the languages except the Australian current in the Indo-Pacific insular world. These he evidently regards as constituting a single linguistic family, the Malayo-Polynesian, "comprising the Malagasy, Malayan, Polynesian, and Melanesian, better called the Papuan." His philology has thus not got beyond the days of Forster and Marsden, or the earlier writings of Prof. Whitney, all of whom are appealed to in support of this now exploded theory. The readers of *NATURE* need scarcely be reminded that from the Malayo-Polynesian must henceforth be detached all the strictly Papuan and Melanesian tongues, as constituting a fundamentally distinct order of speech, itself doubtless embracing many stock languages. Hence the same reasoning process that establishes the identity of Semitic and Oceanic would also establish the identity of Semitic with any other stock languages wherever spoken. The process thus proves too much, that is, proves nothing.

Although Semitic is here compared generally with the whole of the heterogeneous "Oceanic" group, it is remarkable that Efatese is taken as the chief point of comparison, not that this is claimed to be a typical member of the Oceanic group, but merely because it happens to be the dialect with which the writer is most familiar. Now in Efate, a small island about the centre of the New Hebrides, there is a good deal of linguistic confusion, strictly Polynesian (Sawaiori) dialects being