

materials. These Prof. Spencer intends to secure with all possible speed, and to that end he is already laying plans for renewed exploration of the Bush and the Interior. It is his intention to make the museum at once a thoroughly representative Australian Collection and a great Educational Institute. In this he has a labour of years; and that he will succeed we have not the slightest doubt, for pluck, endurance, far-sightedness and enthusiasm are in him unusually combined.

The work of the Sydney Museum has rapidly developed in interest and importance during recent years; the introduction of "new blood" there, as more recently at Adelaide and now at Melbourne, has brought to bear upon the investigation of the indigenous fauna and the natural resources of the country, now so largely dying out, a body of earnest students intent on work while yet it is not too late. The present memoir, which is an outcome of this movement, may thus be regarded as a sign of the times; and we sincerely hope that those which are to follow will be pushed forward with all possible speed, it being now five years since the discovery of the remains of which it treats was announced.

FLOATING STONES.

DURING my recent visit to South-West Patagonia, in 1899, for excavations in the remarkable Glossotherium or Neomytilodon Cave near the farm Puerto Consuelo or Eberhardt, I made, with my fellow traveller, Dr. O. Borge, the following curious observation. Whilst rowing in the long and narrow channel of Ultima Esperansa, to study the plankton, we observed, when the

fragments had a mean weight of 0.3 gram. The fragments contain no air cavities perceptible to the unaided eye. They must, therefore, not be confounded with the volcanic ejections (and perhaps slags from meteors) with its numerous air cavities which are often found drifting on the surface of the ocean.

The following consideration will help to explain the apparently paradoxical fact that stone fragments of a specific gravity of 2.71 and a weight up to 0.8 gram have been observed floating on a fluid of a specific gravity of 1.005. On examining the floating stones one could discern small gaseous bubbles attached to the under surface of them, and at the shore stones can be seen on the very fringe of the beach which are just beginning to float lightened by gaseous bubbles. Unfortunately, I had not occasion to investigate the conditions more closely, as I was busy with other researches; neither had I any apparatus at my disposal for the collection of the gas that had accumulated under the stones. It is probable that the stones were not only provided with gas bubbles, which can be perceived by the eye, but that they were surrounded by an envelope of gas supported by an insignificant coating of algæ, of which the stones are surrounded. At least, traces of diatoms and algæ are discernible on the stones after drying. The greasy surface of the mineral of which the floating stones consisted also prevented the water from adhering to them, and caused the stones to be surrounded with a concave meniscus, which naturally may have contributed to, and perhaps was the main cause of, their floating, which sometimes was further facilitated by a patelliform shape of some of the bigger stones.

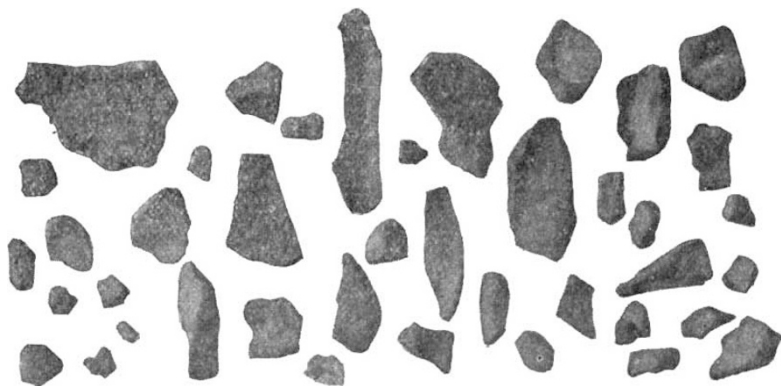
The observed phenomenon is not without some geological interest. In the described manner a considerable transport of solid matter takes place, not only in the narrow Patagonian channel, but no doubt also at several other shores of the ocean; and new strata will be built up possibly enclosing mixture of remains from far distant geological periods.

ERLAND NORDENSKIÖLD.

DR. ELLIOTT COUES.

BY the death, on Christmas Day, of Dr. Elliott Coues, America loses one of its leading ornithologists; indeed, we may say, without disparagement of others, the most prominent since Spencer Baird was taken from us. Born in 1842, at Portsmouth, in New Hampshire, and

graduating in the Columbian University, Coues entered the medical service of the United States Army in 1862, receiving the brevet rank of Captain for his conduct during the war, after which he held several appointments of various kinds, and especially one in Arizona, which gave him the opportunity of indulging his inborn taste for natural history. Subsequently he held in succession the posts of Professor of Zoology in the University of Norwich, in the State of Vermont, of Anatomy in the National Medical College at Washington, and of Biology in the Virginia Agricultural College, besides being, in the interim, surgeon and naturalist to the United States Northern Boundary Commission, and from 1876 to 1880 secretary and naturalist to the United States Geological and Geographical Survey of the Territories. The duties of these different offices seem only to have stimulated his efforts, and the number of his zoological papers contributed to various scientific journals would alone accord him a high place; but, apart from them, his "Birds of the North-West," his "Fur-bearing Animals," and "Birds



Fragments of slate found floating upon the sea-surface at S.W. Patagonia.

sea was calm or only agitated by a slight swell, small fragments of slate which floated upon the surface packed together in larger or smaller clusters. They drove hither and thither in the neighbourhood of the shore, until they were driven away by the strong current which at intervals swept forward in the channel. The quantity was considerable; for instance, 700 of them were obtained at one cast of the net in a few minutes. The stones had evidently drifted out from the beach, which consisted mainly of similar stone fragments washed off from the cliffs composed of a bituminous mesozoic slate. The surface of the stones was dry, and they sank immediately when it became wet by touching or by the movement of the swell.

The slate fragments collected on the sea-surface had a specific gravity of 2.71. The specific gravity of the water in the channel was only 1.0049 at a temperature of 15° C (59° F). The largest stone which I obtained from the surface (pictured in natural size on the accompanying zincotype) weighed 0.8 gram. Twenty of the smaller

of the Colorado Valley," to say nothing of his "Key to North American Birds"—of which a third edition was announced for the ensuing spring—and his "Ornithological Bibliography," each a model of accurate work, proclaim him to have been far in advance of any other contemporary of his own country, or indeed of many others. In the summer of 1884 Dr. Coues visited England, to the great satisfaction of British ornithologists, to most of whom he had been only known by name, for thus his attractive personality attached to him many warm friends. After taking a considerable share in the publication of the "Century Dictionary," of which he was the Natural History editor, he latterly turned his attention to some of the earlier geographical explorations of his own country, and we owe to him admirable editions of the "Travels" of Lewis and Clark, and of General Pike.

Last summer Dr. Coues revisited Arizona, intent on ethnological researches, but found a camp life at the elevation of 7000 feet too much for his powers. Returning to Washington in the autumn, distressing symptoms of a serious ailment soon began to show themselves, and in a touching letter to an English friend, written at the end of November, he announced that the only hope for the prolongation of his life lay in the success of a very formidable surgical operation which he was about to undergo in the Johns Hopkins Hospital at Baltimore. The last mail brought the sad news of its failure, and the ornithologists of Britain will assuredly condole with those of North America in the loss of the most accomplished of their brethren.

A. N.

NOTES.

IN calling attention to the article in another column concerning the future representation of the London University in Parliament, we may state that there is a very widely expressed feeling that such representation, being a matter of national concern, should be considered from an absolutely non-political standpoint. A strong feeling has been expressed in many quarters that if the representative of the University be not a man of European distinction, a great opportunity will have been lost. Among those thought of from this point of view is a distinguished office bearer of the Royal Society. We trust that if he has been asked to serve in such a cause, he will not refuse to come to the assistance of those who are working to promote it.

PROFS. DARBOUX AND MOISSAN have been nominated to represent the Paris Academy of Sciences at the forthcoming celebration of the second centenary of the Berlin Academy of Sciences.

THE Council of the Royal Astronomical Society have awarded the Society's gold medal for this year to M. Poincaré, for his researches in celestial mechanics.

THE Municipal Council of Paris have adopted a proposal by M. Daix, to light the place de la Concorde with acetylene gas during the forthcoming Exhibition.

THE Geological Society has this year awarded its medals and funds as follows:—The Wollaston medal to Prof. G. K. Gilbert, of Washington; the Murchison medal to Baron A. E. Nordenskiöld, of Stockholm; the Lyell medal to Mr. J. E. Marr, of Cambridge; the Wollaston fund to Mr. G. T. Prior; the Murchison fund to Mr. A. Vaughan Jennings; the Lyell fund to Miss G. L. Elles; and the Barlow-Jameson fund to Mr. G. C. Crick and Prof. T. T. Groom.

THE annual congress and exhibition of the Sanitary Institute will be held at Nottingham about the end of August.

THE annual general meeting of the Institution of Mechanical Engineers will be held on Friday, January 26.

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THE Royal Bavarian Academy of Sciences has conferred upon Herr Eugen Wolf, the explorer, its large gold medal for services rendered to science.

THE St. Petersburg correspondent of the *Times* announces that a special separate department has been created in the Russian Council of State, to be called the "Section of Industry, Science and Trade." Under the head of Science, it is intended that this new department shall help to direct the advance of national education, a subject which, in connection with the economical development of Russia, is now beginning to obtain the powerful support so much needed.

WE learn with regret from Prof. H. H. Giglioli that Mr. John Bernard Stallo, of Cincinnati, U.S.A., died at Florence on January 6, in his seventy-sixth year. Judge Stallo, as he was usually called, was well known as a philosopher, mathematician and physicist; he was, during President Cleveland's first term of office, Ambassador of the United States at Rome. Since then he had lived in Florence amidst his books, taking to the very last a keen interest in the progress of science. Prof. Mack's last book is dedicated to him.

WE learn from *Science* that Prof. E. B. Wilson, of Columbia University, has been elected president of the American Society of Naturalists, in succession to Prof. W. G. Farlow, of Harvard University; and Dr. William McMurtrie, of New York City, has been elected president of the American Chemical Society, in succession to Prof. Edward Morley.

SIR WILLIAM MACCORMAC is contributing to the *Lancet* some valuable notes on the treatment of the wounded at the seat of war, and the wounds produced by modern bullets. He is particularly well qualified to express an opinion on the severity of bullet-wounds, for he had excellent opportunities of observing the lesions resulting from bullets during the Franco-Prussian war, and he states that in most cases the damage done by the modern bullet, especially by the Mauser, cannot be compared in severity with that inflicted by the needle-gun or the Chassepôt. His articles put medical men in the possession of much information not hitherto available, and constitute a real contribution to scientific knowledge.

SEVERAL correspondents have sent descriptions of solar halos and parhelia observed from various parts of Sussex and Surrey on Thursday last, January 11, between 9.30 and 11.30 a.m. Judging from the particulars communicated to us, what was seen was a typical exhibition of this meteorological phenomenon, which is not unfrequent in these latitudes, though it is rarely so well defined as it was on Thursday. The halos consisted of (1) a first bow concentric with the sun, red within, blue or green without, and having an angular radius of 21° or 22°; (2) a second circle or halo, similar to the first, but at twice the angular distance from the sun; (3) two inverted arches touching the two concentric halos, blue or green on the concave side, and red on the convex; (4) bright patches or mock suns on the same level as the sun, and apparently lying on the halos. The sky, except near the horizon, was cloudless but misty, the sun being faintly visible. This is the usual condition for the formation of halos, which are produced by the reflection and refraction of the sun's rays by the minute ice-crystals which constitute cirro-stratus clouds. A writer from New Shoreham, Sussex, remarks that the mock suns are there called "sun hounds," and in Kent "sun dogs."

FROM a recent issue of the *Times* we learn of a brilliant daylight meteor which was seen by several observers on the afternoon of January 9. Mr. H. H. P. Bouverie, writing from Glynde Place, Lewes, remarks: "Whilst shooting here to-day I saw a brilliant meteor, which started from near the moon, that was