The Oreodon Remains in the Woodwardian Museum

My attention has just been accidentally called to some notes on "Oreodon Remains in the Woodwardian Museum, Cambridge" in your number of August 14.

I hasten to correct an error into which your correspondent has fallen as to the locality in which the remains to which he refers were obtained. I did not visit the Mauvaises Terres of Nebraska, but collected all my specimens in the valley of the John Day River, in Upper Oregon, about long. 120° 10′ W., lat. 44° 40′ N.

Most of the specimens are from near the head of a small stream called Bridge Creek, a locality well known to Prof. Marsh, whose new species of Oreodon described in the *American Journal of Science and Art* was possibly obtained there. A few, however, are from the Great Cañon higher up on John Day's River, nearly opposite Old Camp Watson, where I passed the winter of 1871-72.

I was informed by a gentleman who accompanied Prof. Marsh's Yale College Expedition, in October 1871, that they had on that occasion found a skull of a new and unusually large species of Oreodon in one of the places above mentioned. But your correspondent is probably acquainted with all the descriptions that have been published in America, and will know whether the *Oreodon superbus* of my informant has or has not yet been christened in print.

I have regretted much since my return that I only devoted parts of three days to a search for these interesting remains.

WALSINGHAM

Merton Hall, Thetford, Sept. 5

Bright Shooting Stars

I BEG to send you the following particulars of the observed paths of nine bright shooting stars recently seen here.

Ref. No.	Date.	Time.	Apparent Mag.	Began R.A.	Began Dec. N.	Ended R.A.	Ended Dec. N.	Length of path.	Approx. Radiant point.
		h. m.							
1	July 28	11.32	= ♃	210°	49°	200°	38°	14°	Pegasus
2	,, 28	11.48	1st mag. *	202	44½	193½	36	10	Pegasus
3	,, 30	10.45	1st mag. *	42	43½	45	36	8½	χ Persei
4	Aug. 2	11.40	= ♃	43	54	62	56	12	Pegasus
5	,, 7	9.33	2 × ♀	190	59	195	30	30	Polaris
6	,, 9	10.12	= ♀	41	75	196	73	30	χ Persei
7	,, 9	10.29	1st mag. *	37	45	50	42	10	Andromeda
8	,, 9	11.25	1st mag. *	337	59	304	50	20	χ Persei
9	,, 9	11.29	1st mag. *	28	41	11	46	12	Andromeda

No. 5 in the above list was the brightest, and left a very perceptible train just N. of Cor. Caroli for 7°. No. 9 also left a train, visible for 3°, N. of γ Andromedæ.

The evening of August 9 was clear, and two observers counted thirty-five meteors in the interval between 10h. 15m. and 11h. 45m., after which time clouds obscured the sky. During the night of August 10 it remained overcast. Of the thirty-five shooting stars seen on August 9, the great majority were Perseïds, but the radiant region is diffusely extended from the star group at χ Persei to β Camelopardali. There were also indications of radiation from Pegasus and Andromeda. The August meteors of this year appear to have been larger than those seen in former years; at any rate bright meteors have been exceptionally abundant during the dates included in the above list.

WILLIAM F. DENNING

Bristol, August 11

November Meteor Shower of 1872

MR. E. D. JONES, of San Paulo, Brazil, has sent me the enclosed extract from his diary, referring to the meteor shower of November last, which he observed whilst crossing the Atlantic.

HENRY C. BEASLEY

Gateacre, Liverpool, Sept. 3

"Nov. 27, 1872, s.s. *Halley*, N. lat. 11° 30′, W. long. 26° 50′.—There was a splendid shower of meteors this evening. I saw them shooting in profusion as soon as it was dark (about half-past six). I sat in a chair on deck facing the west, where Jupiter was flaring in the tropic sky, and watched the flying messengers from other worlds. I counted no less than 400 in half an hour, that is at the rate of about 14 per minute. They came in shoals, as it were. There would be a long pause, and then five or six would fly across together, reminding me forcibly of the flying-fish we had seen in the daytime. Every now and then a much brighter one than usual would flash into existence, and leave a trail of beautiful reddish light behind. Generally speaking, they were as bright as a star of the second magnitude. But the brighter ones I speak of were quite equal to stars of the first magnitude. One splendid one at about eight o'clock (local time) was so bright that it lit up the sails of the ship; it was of a red colour, and burst in two before disappearing. One later on left a trail which I could distinguish for half a minute. I was able to trace the point in the heavens from which the meteors emanated, viz., a point near the northern extremity of Perseus, between that constellation and Andromeda. About this point I often saw them come into view, and die away with scarcely any apparent motion, on account of their coming in a straight line towards the observer; below this point they fell towards the horizon, above it they fell across the zenith, and so on. Those with the longest path were in the western sky (opposite Perseus), as the view was the least fore-shortened there. The position of the *Halley* was that given at the heading of this extract. The following table shows that we probably did not see the thick of the shower, having passed it by daylight:—

G.M.T.	Time in which 100 were seen.	Number per minute.
8.30 P.M.	8 minutes	12·5
8.38 ,,	7 ,,	14·3
8.45 ,,	7 ,,	14·3
10.5 ,,	17 ,,	5·9
10.22 ,,	17 ,,	5·9
10.49 ,,	22 ,,	4·6
12.15 A.M.	36 ,,	2·8

"The reasons that the first observation gives fewer than the second, may be that the twilight did not allow of the less brilliant meteors being seen; that the eye of the observer was not so well practised in detecting them; and the light clouds flying through the air may have obscured some of them. The other observations show a regular decrease in the numbers from 8·45 P.M.

"I counted 750 meteors in my observations, and saw quantities more besides. Of course I could only see about one-third of the sky at a time, but I was looking in the direction of the thickest fall most of the time, so that I daresay I saw half the number that actually fell; taking this for granted, there must have been 3,500 between 8.30 P.M. and 12.15 A.M., Greenwich mean time."

EXPLORATIONS IN THE GREAT WEST

WE are now in possession of facts which will supplement our last reference to this subject. The following names may be added to the list of scientific men accompanying the Wheeler Expedition engaged on surveys west of the 100th meridian:—Mr. Severance, ethnologist; Drs. H. C. Garrow and J. L. Rothock, naturalists; Mr. H. Stewart Brown, meteorologist; Messrs. Klett and Louis Mell, topographers. The entire force numbers 175 men.

The surveying party of Mr. Clarence King, geologist, designated as the Geological Survey of the 40th parallel, has just finished its work and is recently disbanded. Among the scientific men accompanying it were Messrs. J. G. Gardner (astronomer and geographer), Wilson (topographer), J. D. Hague (mining geologist), Emmons (assistant geologist), Arnold Hague (chemist and mineralogist), Robert Ridgway (zoologist), and S. Watson (botanist). The force is largely absorbed by other expeditions now in the field. The results of this expedition are expected to fill five quarto volumes and accompanying atlases; of which one on mining in Nevada and adjacent territories with folio atlas will be by Mr. Hague, and one on botany is already published. The remaining volumes are well under way and will, it is expected, be completed during the present year.

There is an expedition known as the International