

Mrs. Fleming upon a photographic plate taken in July. The telegram has been communicated to the observatories in the southern hemisphere.

"ASTRONOMICAL JOURNAL" PRIZE.—Owing to the fact that during the past six months only one comet has been discovered, and that its period of visibility was unusually short, and also to the probable prevalence of a bad time of observing weather during the winter, the period specified in the offer of this prize for observation of comets has been extended by six months. The closing time for this prize will now take place September 30, 1894.

COMET BROOKS (OCTOBER 16).—Last week we gave Bidschof's elements and ephemeris for this comet. This week, for the sake of comparison (*Astronomischen Nachrichten*, No. 3194), we give the elements of the comet as obtained from the observations made at Hamburg, October 17; Greenwich, October 18; Pola, October 19; Strassburg, October 23, and Vienna, October 24. They are as follows:—

Elements.

$T = 1893$ September 19^h 20^m 29^s M.T. Berlin.

$$\left. \begin{aligned} \omega &= 347^{\circ} 20' 50'' \\ \delta &= 174^{\circ} 53' 20'' \\ i &= 129^{\circ} 45' 77'' \end{aligned} \right\} 1893^{\circ}$$

$\log q = 9.90992$

The current ephemeris is for 12h. Berlin mean time.

1893.		α App.		δ App.		Br.
		h. m. s.				
Nov. 9	...	12 58 50	...	+30 27.2	...	0 82
10	...	13 0 53	...	31 20.6	...	
11	...	2 59	...	32 14.8	...	
12	...	5 9	...	33 9.9	...	
13	...	7 22	...	34 5.8	...	
14	...	9 39	...	35 2.6	...	0.80
15	...	12 0	...	36 0.4	...	
16	...	13 14 25	...	36 59.1	...	

Unit of brightness occurred on October 17.

MOON PICTURES.—In an article on the "Origin of the Lunar Craters," which has appeared in the last two numbers of *Prometheus* (Nos. 212, 213), the writer has been able to secure some excellent illustrations. These pictures are copies from photographs taken at Paris by the Brothers Paul and Prosper Henry, and illustrate regions near the South Pole. The current number of *Knowledge* also contains two fine reproductions of lunar photographs obtained by MM. Henry, illustrating an article by Mr. A. C. Ranyard, on the tints of the lunar plains.

METEOR SHOWERS DURING NOVEMBER.—During this month, in addition to some minor showers, Mr. Denning's table informs us that there are two which are above the usual brilliancy. The positions of the radiant points are as follows, the two most brilliant being printed in heavier type:—

Date.		Radiant.		Meteors.
		α	δ	
Nov. 13	...	150	+22	Swift; streaks
16	...	154	+41	Swift; streaks
17	...	53	+71	Slowish
20	...	62	+23	Slow; bright
27	...	25	+44	Very slow; trains
30	...	190	+58	Swift; streaks

GEOGRAPHICAL NOTES.

SOME anxiety may have been caused amongst Dr. Nansen's friends by reports published in an evening paper from the slender testimony of some Samoyedes, that the Kara Sea was unusually hampered by ice this season. The *Nowvelles Geographiques*, it is satisfactory to see, reports on the authority of the captains of the Russian vessels carrying railway material to the Yenesei, and of Captain Wiggins, that the navigation of the Kara Sea was particularly easy this summer, the ice being thin and not compact. The Hammerfest whalers also reported that never within human memory has the sea been so free from ice. At the end of December one vessel saw not a single ice-

berg between Nova Zemlya and Franz Josef Land. In the Kara Sea the current, which is usually westerly at that season, was this year running north-north-west, at the rate of a mile an hour. The note indicates that Captain Wiggins entertained no doubt of Dr. Nansen having easily reached the New Siberian Islands, which were to be his real starting-point.

IN continuation of the soundings of the English lakes recorded in this column from time to time during the summer, Mr. E. Heawood, assisted by Mr. Shields, has last week made bathymetrical surveys of Ennerdale, Buttermere, and Crummock Waters.

THE annual report of the Tyneside Geographical Society shows that there is now a membership of 1011, and the society generally in a flourishing state. From its headquarters in Newcastle the Tyneside Society extends its operations over a considerable area, and has established a regular branch in the city of Durham.

DR. JOHN MURRAY, of the *Challenger*, has written an elaborate paper on the first voyage of Columbus in relation to the development of oceanography. It is published in the current number of the *Scottish Geographical Magazine*, illustrated by reproductions of a number of ancient maps. Dr. Murray deals incidentally with the origin of the name America, rejecting Horsford's fantastic guess that it came from the name of the Norse explorer Erik the Red, and inclining towards Marcou's theory of its native origin from the Amerrique tribe of Indians in South America. As to Amerigo Vespucci's connection with the name, the author views it as a playful nickname given to him on account of the similarity of his Christian name, which was superseded by *America*, just as he himself is frequently called "Challenger Murray" for the sake of distinction.

THE EROSION OF ROCK-BASINS.

IN a recent letter to *NATURE* (vol. xlvi. p. 247, July 13, 1893), Sir H. Howorth attacks the views of those extreme glacialists who hold that a glacier is able, by means of the fragments of rock frozen into its under surface, to excavate rock basins: and with justice, so far as the larger basins, such as those of the great Swiss and Italian lakes are concerned, for it has been frequently shown, especially by Prof. Bonney, that such a cause is quite inadequate to account for the excavation of those basins. It seems inconceivable that a glacier which is barely able to move the loose *débris* lying in its path, should be able to plough out hard rocks to any depth whatever below the general valley level. On the other hand, the frequent occurrence of rock basins in regions which are now, or were in former times, subjected to glaciation, is so remarkable, that it appears as though there must be some connection between the two sets of phenomena.

Sir H. Howorth says that, "so far as we know, the mechanical work done by ice is limited to one process. The ice of which glaciers are formed is shod with boulders and with pieces of rock which have fallen down their crevasses. These pieces of rock abrade and polish and scratch the rocky bed in which they lie when they are dragged over it by the moving ice. Without this motion they can of course effect nothing either as burnishers or excavators." But there is another agent of erosion which is only called into play under the peculiar circumstances afforded by glaciers, and one which, I venture to think, is sufficient to account for the formation of these hollows. This is briefly, the action of the water, derived from the melting of the surface of the glacier. It is now some five years since I had the good fortune to be able to explore some of the large glaciers in the higher regions of the Himalayas, and formed the conclusions which I am now about to put forward; but it seemed to me so likely that they had occurred to others, and probably been dismissed as unsatisfactory—though of this I could not assure myself, as it is long since I have had access to any library in which papers relating to such questions might be found—that I hesitated to publish them. It seems, however, from the remark in Sir H. Howorth's letter, quoted above, that no weight has hitherto been attached to this cause of erosion, however slight it may be, and therefore my observations may possibly be of some value.

Before going into details, I wish to draw attention to one or two facts which have been overlooked by Sir H. Howorth, and which have an important bearing on the discussion. In the first place, whatever be the cause of motion, it is an undoubted