

Meteor Showers

The principal shower of this week is that of the *Aquarids*, radiant R.A. 326°, Decl. 2° S. It is a strong shower, visible just before daybreak, from April 29 to May 2.

GEOGRAPHICAL NOTES

THE Geographical Society of Paris held last Friday its first general annual meeting. M. de Lesseps was in the chair, and delivered an address on the Panama Isthmus and Canal. Amongst the gold medallists are MM. Capello and Ivens, the Pandit Krishna, and Alfred Marche.

M. PELLET, a French explorer belonging to the cavalry, was murdered by an unfaithful guide on his way to Timbuctu, before reaching Insalah, the capital of Tuat.

THE Portuguese Legislature has, at the initiative of the Geographical Society of Lisbon, passed an act relating to MM. Capello and Ivens, of which the following are the main provisions:—(1) They are to receive a pension of 600,000 *reis* (135*l.*) per annum each, in addition to a similar pension granted to them after their first journey; (2) exemption from all taxes; (3) the Treasury is to bear the expense of printing an edition of the account of their last African journey, of which 5000 copies will be given to them, and the copyright will be their property; (4) confirmation of the rank conferred on them, and dispensing with the condition of serving the remainder of the term in Africa in consideration of which the rank was granted to them by law. Portugal, it would thus appear, knows how to honour officially, as a nation, her sons who have done honour to her. MM. Capello and Ivens's work is in the National Press at Lisbon, and the first volume is expected to be published in two months.

THE current number (Band v., Heft 1) of the *Mittheilungen* of the German African Society is full of interesting matter. The contents are divided into two parts: (1) the reports of the Society's explorers in the Congo region, and (2) those in the Western Soudan. The first part contains Dr. Büttner's diary of his journey during July, August, and September last year. Leaving Arthington Falls on July 3, he travelled eastward to the Quango, at its junction with the Quilo, which point he reached on the 21st of the same month. He then turned south along the right bank of the Quango for seven days, as far as Muene Putu, where he stayed for a fortnight, again returning northward, and crossing to the left bank near the spot where the Quilo joins it. Leaving this on August 21, he continued down the left bank to Kiballa, whence he turned westward to Stanley Pool. A map compiled by Dr. R. Kiepert accompanies the diary, and also tables of various measurements calculated by Dr. von Danckelman. The reports from the Expedition in the Western Soudan are written by Dr. Flegel (from Bakundi, on the Tarabba) and Dr. Semon.

THE last number of the *Mittheilungen* of the Geographical Society of Vienna, like so many similar publications just now, is mainly devoted to African geography. It contains, with a description, routes, &c., a map of the neighbourhood of Ango-Ango, by Herr Baumann, a member of Dr. Lenz's Austrian Congo Expedition. The topographical material was collected during a stay at Ango-Ango, and was put together in Vienna. Two further letters from Dr. Lenz are also published: the first describes the journey from Ngombe to Stanley Pool, and the second the journey to the Equator Station on the Upper Congo. It is satisfactory to learn that the Expedition reached this point in excellent health, and that the Free State officials gave it every assistance. The only other paper in the number is the conclusion of Dr. Diener's contribution to the geography of Central Syria. At the end he confesses that it is at present impossible to say whether the physical features of a great part of this region have altered since the days of the Romans. There are facts, historical, climatic, and geographical, which tend in favour of both sides, and the problem is one for solution in the future.

ACCORDING to a recent communication of M. Venukoff to the Geographical Society of Paris (to which we have already referred), the results of a survey of the basin of the Neva, executed in 1884-85, show that hitherto the levels generally accepted by geographers here have been totally incorrect. The following is a comparison of the levels now ascertained with those given by M. Reclus in his "Géographie Universelle" for Lakes Ladoga, Onega, and Ilmen:—

		New Survey		M. Reclus
Ladoga	...	5'01 metres	...	18 metres
Onega	...	34'97 "	...	72 "
Ilmen	...	17'97 "	...	82 "

These figures, and others which might be quoted, show that the region watered by the Neva and its tributaries is much lower than was generally supposed. The new figures refer to the normal zero of Cronstadt, which is itself 0'66 m. above the level of the Baltic at Revel. The absolute heights of the lakes is thus slightly increased, but still the differences between the old and the new figures are very great. As the results of the new survey appear unquestionable, the former hypsometric details respecting the basin of the Neva must be dismissed as wholly incorrect.

THE French Topographical Society proposes that an International Exhibition of Topography should take place in the Palais de l'Industrie next year, under the patronage and with the assistance of the Government. The Committee of Organisation which has been appointed has addressed a circular to French topographers, geologists, geographers, and explorers, asking for their co-operation. The Society, the circular says, has for its aim the popularisation of the science of topography, especially by means of gratuitous lectures, and it is anticipated that an exhibition will give a spur to this work.

SOME RESULTS OF OBSERVATIONS WITH KITE-WIRE SUSPENDED ANEMOMETERS UP TO 1300 FEET ABOVE THE GROUND IN 1883-85

SINCE I had the honour of reading a paper on the first series of observations taken in 1883-84 before the Association in Montreal last year, I have made twenty-five fresh observations at heights above the ground varying from 300 to about 1300 feet, or double the greatest height before attained. I had hoped in have been able to make a greater number and variety of observations, but a pressure of private and other work has stood to the way.

Since, however, in ten of the new observations the upper anemometer was suspended at a height of over 1000 feet above the ground, or 1500 feet above the sea, I trust the results may be thought sufficiently novel and valuable to merit the brief discussion to which I have subjected them.

In dealing with the observations I have included fifteen of those made in 1883-84, and have thus been able to utilise forty observations in all. As the observations were intentionally made as nearly as possible at certain desired heights, so as to afford a regular progression upwards in the scale of height, I have been able to arrange forty-two pairs of observations at two different levels in six groups.

In order to present the results in a form in which they can be readily compared, as well as to exhibit the law of change of the velocity with the height, I have computed for each observation the value of the corresponding exponent in the empirical formula $V = \left(\frac{H}{h}\right)^x$, where V , v , H , h , are the velocities and heights of the upper and lower instruments respectively. The several groups, together with their corresponding heights, mean velocities, and exponents, are given in the following table:—

TABLE I.

Group	No. of observations	Mean height of instrument above ground, in feet		Mean height of both	Mean velocity at both heights in feet per minute	Mean upper and lower velocities		Mean value of x
		upper instrument	lower instrument			Upper	Lower	
* 1	7	250	102	176	1395	1617	1174	0.372
2	3	322	128	225	1955	2232	1679	0.307
* 3	8	407	179	293	1545	1705	1385	0.275
4	5	549	252	400	1940	2107	1773	0.237
5	9	795	481	638	2074	2192	1957	0.250
6	10	1095	767	931	2166	2236	2096	0.194

The general and obvious conclusion to be drawn from this table, as well as from the individual observations (in which a reverse case has never occurred), is that the velocity of the wind

* These two groups comprise observations made in 1883-84 only. The other groups those made in 1884-85 only.