

their right ascension and declinations ; the other nomenclature is that usually adopted in cometary computations.

	α	δ	ζ	b	Ω	i	q	ω
A	44°·5	49°·1	57°·1	30°·7	138°·6	127°·3	0·9643	296°·2
B	41°·3	46°·7	53°·8	29°·1	138°·0	130°·3	0·9836	302°·3
C	47°·3	39°·7	56°·0	21°·2	139°·0	143°·6	0·9674	297°·8
D	62°·7	60°·6	73°·2	38°·7	138°·5	107°·1	0·8046	265°·6
E	52°·5	53°·4	64°·3	33°·2	138°·1	120°·6	0·8839	277°·9
F	35°·3	65°·8	60°·0	47°·9	138°·7	99°·1	0·9759	298°·9
G	30°·0	43°·4	44°·0	29°·1	138°·4	130°·7	0·9982	330°·3
H	105°·3	60°·9	99°·4	38°·0	138°·7	79°·1	0·5145	230°·2
K	19°·5	28°·4	29°·0	18°·6	138°·7	144°·3	0·7495	19°·2
L	5°·3	67°·0	45°·8	56°·1	138°·6	87°·9	1·0028	322°·3
M	118°·5	53°·2	109°·6	31°·7	138°·7	64°·0	0·3811	215°·0
N	314°·7	67°·4	23°·4	72°·9	137°·9	62°·4	0·9872	330°·8
O	323°·5	50°·1	355°·0	58°·8	138°·7	63°·1	0·8402	5°·7
P	14°·0	37°·4	28°·5	28°·7	138°·5	126°·3	0·8046	11°·9

GEOGRAPHICAL NOTES.

THE Royal Geographical Society has determined on a change in the form and alteration in the title of its *Proceedings*, which will materially enhance the value of the monthly publication. The size of each part will be increased to ninety-six pages, and two volumes will be published in the year instead of one as formerly. Internally the arrangement will be slightly altered, and while the strictly geographical character of the publication will be maintained, the notes and record of geographical work from other countries will be made at once more systematic and more popular. A special feature will be the record of the "Geographical Literature" of the month, summarizing all the accessions to the library, both books and memoirs. This will form a subject-index to geographical literature, and serve as a continuous appendix to the exhaustive subject-catalogue of the Society's library which is now being compiled. The editorship of the new series remains in the hands of Mr. J. Scott Keltie, the assistant secretary.

WITH reference to the note on the death of Lieutenant Schwatka, the Alaskan explorer, published last week, we are glad to observe that an official enquiry negatived the theory of suicide, and showed that the fatal result followed from an overdose of morphia taken medicinally.

THE German colonial authorities have recently come to a very important decision as to the official spelling of the place names of their various protectorates in Africa and New Guinea. European names are to retain their ordinary form, but all native names are to be rendered phonetically according to a new set of rules. These rules so closely resemble those put forward by the Royal Geographical Society, and now widely used, that it appears possible by some slight concessions on both sides to make one set serve both for English and German. The letters *c, q, x,* and *z* are dispensed with as redundant, *c* and *z* being rendered by *ts, x* by *ks,* and *q* by *kw.* The guttural *ch* becomes *kh,* the English *ch* being given as *tsh,* and the sound of the English *j* as *dj.* The German *j* sound will be represented by *y,* and the letter *j* used only for the French sound, which is represented in English as *zh.* The German sound of *w* is rendered as *v,* the letter *w* being kept for the English sound. Unfortunately the letter *s* is kept for its soft German sound, the sharp sound of the English letter being shown by *s.* The use of the English *s* would have overcome this difficulty, and removed the most serious obstacle to a common orthography.

CAPTAIN MONTEIL, whose arrival at Kano on his way to Lake Chad was referred to in May last (vol. xlv. p. 110), has at last been heard of, and his mission, although involving two years of travel in the Sudan and Sahara, appears to be successfully completed. The facts could not be put more concisely than in Monteil's official telegram to the French Foreign Office, which arrived on November 15:—"October 17. To-day I entered the territory of Fezzan by way of Tejerri coming from Kuka. Having set out from Kano on February 19, I reached Kuka on April 10, where the reception was excellent. I left Kuka on August 15 with a guide, sent by the Sheikh to accompany me to Murzuk . . . which I expect to reach on or about the 25th, and to stay there just long enough to arrange my departure for Tripoli. Badaire has borne the

journey exceedingly well. My men are all with me, except two left at Kuka." This is the most important journey through the Central Sudan and Sahara since the classical explorations of Barth and Rohlfs.

STROMBOLI IN 1891.¹

STROMBOLI is one of the most noted but least studied of volcanoes. The regularity of the weak explosions which, succeeding each other at intervals of a few minutes, characterize its normal state, gives rise to the idea that its action is always thus uniform and monotonous, and the occasional paroxysms to which it is subject are apt to be overlooked. In reality the so-called Strombolian phase of volcanic activity differs from the Plinian phase exhibited by Vesuvius and certain other volcanoes merely by the absence of intervals of perfect repose between the violent outbursts which are characteristic of the latter type. It is in this difference that the explanation of the fact is to be found, that from time immemorial no explosion in any way comparable to the great explosions of Vesuvius have occurred at Stromboli ; for the ceaseless activity of the latter prevents the accumulation of sufficient force to produce a powerful and destructive effect. But from time to time the throat of the volcano does get more or less choked, and the efforts of the imprisoned vapour to escape result in an eruptive phase of some violence. Such an event took place during the latter months of last year, and the following description of the phenomena is based on the observations of Profs. Ricco and Mercalli, and of Ing. Arcidiacono.

The state of the volcano preceding this outburst had been one of relative calm for two years. In October, 1888, an explosion had opened three new mouths on the upper edge of the Sciarà del Fuoco, from one of which lava was emitted. This was the commencement of a period of increased activity, with repeated issue of lava, lasting nine months till June, 1889. From this date to the eruption of last year, and particularly during the six months just preceding, the activity was less than normal. It is to be noticed, however, that there were two short intervals of recrudescence, lasting only a few days, at the end of December, 1890, and January, 1891.

On June 24, 1891, at 12.45 p.m., two strong earthquake shocks were felt over the whole island at an interval of a few seconds. Loud rumblings and a violent explosion followed each. The shocks were not confined to the island of Stromboli, but were felt at Salina, a distance of 40 kilometres. Even the subterranean rumblings were heard at the latter island. The first shock and the first explosion were, as might be expected, more violent than any which succeeded. Windows were broken at the semaphore station, and a great precipice of rock fell into the sea at the Filo del Cane, and other rocks in the same locality were so loosened that they fell on following days. Two powerful columns of ash, like thick smoke, arose from the crater and ascended far above the summit of the island. Great masses of scoria were ejected and fell toward the northern part of the island, burning the grass and fig-trees. A boat passing to the north-east of the island at the time of the first explosion could not see the semaphore signals, owing to the quantity of ash in the atmosphere. Lapilli fell around the eruptive mouths for a radius of a kilometre and a half, and a fine, dark grey ash rained over the whole island. A stream of lava issued from a point on the Sciarà del Fuoco near to the most western mouth, and a deep fissure formed its upper rim nearly in the same place as that of November, 1882. For two days the lava continued to flow, and loud explosions were frequent. The rumblings were almost continuous. On the 26th the emission of ash ceased, but moderately vigorous outbursts occurred with the ejection of incandescent scoria till the 27th ; but on the 28th and 29th the volcano had resumed its wonted calm. On the 30th, however, a fresh earthquake, accompanied by rumblings and a violent explosion, showed that the volcanic forces were not yet spent. An immense column of vapour and incandescent materials arose from a new breach on the edge of the Sciarà, while an abundant current of lava flowed down the slope reaching the sea at its foot. The whole of the powerful explosions of the 30th were repeated at short intervals, but the activity

¹ Sopra il Periodo eruttivo dello Stromboli cominciato il 24 giugno, 1891. Relazione dei Prof. A. Ricco e G. Mercalli col Appendice dell'Ingegnere Arcidiacono. ("Annali dell'Ufficio Centrale Meteorologico e Geodinamico" [2] XI. Pt. 3, 1892.)