

Variable Stars.

Star.	R.A.		Decl.		h.	m.
	h.	m.	h.	m.		
U Cephei ...	0	52.4	81	16 N.	May 2,	2 40 m
ζ Geminorum ...	6	57.5	20	44 N.	Apr. 29,	20 0 m
U Monocerotis ...	7	25.5	9	33 S.	May 1,	M
T Geminorum ...	7	42.6	24	1 N.	Apr. 29,	M
R Crateris ...	10	55.1	17	43 S.	„ 30,	m
T Ursæ Majoris ...	12	31.3	60	6 N.	May 2,	M
U Boötis ...	14	49.2	18	9 N.	Apr. 29,	M
δ Libræ ...	14	55.0	8	4 S.	May 1,	21 38 m
U Coronæ ...	15	13.6	32	3 N.	Apr. 30,	22 56 m
U Ophiuchi ...	17	10.9	1	20 N.	May 2,	2 10 m
W Sagittarii ...	17	57.9	29	35 S.	„ 5,	3 0 M
R Scuti ...	18	41.5	5	50 S.	Apr. 29,	M
β Lyræ ...	18	46.0	33	14 N.	May 5,	1 0 M
S Sagittæ ...	19	50.9	16	20 N.	Apr. 30,	0 m
					May 3,	0 M
T Delphini ...	20	40.2	16	0 N.	„ 1,	M
T Vulpeculæ ...	20	46.7	27	50 N.	Apr. 30,	22 0 M
					May 1,	23 0 m
δ Cephei ...	22	25.0	57	51 N.	Apr. 29,	21 0 M

M signifies maximum; m minimum.

Meteor-Showers.

	R.A.	Decl.	
Near ζ Ursæ Majoris ...	206	57 N.	Slow, bright.
„ β Libræ ...	228	5 S.	Rather slow.
„ δ Serpentis ...	233	10 N.	Swift.
„ ν Herculis ...	239	46 N.	Swift, faint.
„ ξ Ophiuchi ...	255	21 S.	Rather slow, long.
„ η Aquarii ...	337	2 S.	Swift, long, streaks.

GEOGRAPHICAL NOTES.

THE Founder's Medal of the Royal Geographical Society has been awarded to Mr. Clements R. Markham, C.B., F.R.S., on his retirement, after twenty-five years' service, from the Honorary Secretaryship of the Society, during which he has done so much for the promotion of geography. The announcement of Mr. Markham's retirement will be received with regret by all who know the value of the work he has done, both in connection with the Society and otherwise. But as he is still in his vigour we may look for many more years' good work from him. The Royal Medal has been awarded to Lieut. Wissmann, who has twice crossed Africa, and done a great amount of excellent exploring work in the region south of the Congo. The Murchison Grant has been awarded to Mr. James McCarthy, Superintendent of Surveys in Siam; the Gill Premium to Mr. Charles M. Doughty, for his explorations in Arabia; and the Cuthbert Peek Grant to Major Festing for his services as cartographer on the Gambia River. As honorary corresponding members, have been selected Dr. G. Radde, of Tiflis, Dr. H. Rink, of Copenhagen, and Dr. Rein, Professor of Geography at Bonn University.

Two papers were read at Monday's meeting of the Royal Geographical Society, one by the Rev. T. S. Lea, on the Island of Fernando Noronha, and the other by Colonel Sir Marshall Clarke, on Basuto Land. Mr. Lea accompanied Mr. H. N. Ridley on his mission to Fernando Noronha last year. The islands are 290 miles north-east of Pernambuco. The total length of the whole group from north-east to south-west is about 6½ geographical miles, and the maximum width of Fernando itself 1½ mile. The north-east cape of that island is very rugged and precipitous, though of no great height. Boobie Island and Egg Island are also raised masses of reef rock, which again appears on the top of the basalt of Platform Island. Mount St. Michael is a phonolite peak on which the weed invasion has hardly found a footing, and the native plants still flourish. This phonolite is a gray, close-grained columnar rock, and it seems to be the key to the very interesting geology of the island. Platform Island and Egg Island have a connection at low water with the main island, a small mass of reef rock. Morro do Chapeo, or the Hat Rock, seems to represent the residue of a larger block. The north cape of the main island is stony, and there is no great wealth of vegetation, though even here many of the endemic plants may be found. There is a patch of blown sand at San Antonio over which the *Ipomea pes-capræ* trails, and beyond that the ground rises towards the basaltic height on which the town is

built. The basalt is more inclined to be nodular than columnar. Descending from the town hills, the peak stands out clear against the northern sky. It is a huge mass of columnar phonolite, with a talus of debris around it, in shape not unlike a church with a tower. About the centre of the plain rises a round mass of phonolite. On the south coast, like bastions, stand two other phonolite masses, with a ridge of basalt between them, steep on its seaward side, but sloping gradually landwards. The islands of the south coast, with the exception of the minute I. Jones, are also phonolite. Tobacco Point is basaltic, and Morro Branco, in Leão Bay, altered phonolite. There are raised beaches of reef rock on Tobacco Point and to the east of Look-out Hill. Mr. Lea hazards the following observations with regard to the structure and possible history of the main island. Though undoubtedly volcanic in origin, the date at which it was in any way active must be exceedingly remote. No hot springs, or any trace of them, occur; no earthquakes or tidal waves are felt. No site of a crater can be pointed to with certainty, and indeed any attempt to reconstruct its pristine shape from the attenuated remains that are left us must be undertaken with extreme diffidence. As the island is surrounded by deep sea, and as nothing volcanic occurs, as far as he is aware, on the coast of Brazil in its neighbourhood, he is inclined to think that it marks the site of an isolated vent. The number of species of plants, &c., peculiar to the island seems also to point to this, or at any rate to the extreme remoteness of any connection with other land. But there is at least one thing which may throw some light on this matter. All round the island, though interrupted in places, especially on the northern coast, there is a sort of reef formation laid bare at low water, and closely resembling the Recife of Pernambuco. At certain points a very similar rock is found at considerable heights above the sea. On Rat Island this reef attains no great elevation. It rests upon a beach of rounded boulders near the landing, which may be seen underlying it. Boobie Island and Egg Island also have it, and there are traces of it at the summit of Platform Island. On basalt in Cotton-tree Bay, close by Look-out Hill, it occurs at a yet greater height, and again on Tobacco Point and I. Jones it also occurs above high-water mark. Raised beaches, therefore, seem only to exist on basalt, and in close connection with a phonolite peak. Mr. Lea suggests that the phonolite regions mark the sites of the ancient vents of the volcano, the phonolite itself being the plug which remained fixed during subsequent eruptions of lava. The scoria is all but gone, only remaining where the basalt covers it, but the harder phonolite still remains in its place, and the raised beaches show that beneath it lay the forces which manifested themselves in the last expiring efforts of the volcano. The flora and fauna of the group have already been very fully described by Mr. Ridley.

SIR MARSHALL CLARKE'S paper described an official tour he made in Basuto Land, last October, to visit the Baitokoa tribe settled among the mountains. He traversed 400 miles of country, a large proportion of which had never been visited by Europeans. The highest point attained was 10,750 feet; but from thence, both north and south, distant heights appeared at great elevations.

ANTAGONISM.¹

SOME months ago, shortly after I had resigned my office of Judge of the High Court, I was expressing to a friend my fear of the effect of having no compulsory occupation, when he said, by way of consolation, "Never mind, for Satan finds some mischief still for idle hands to do." You may possibly in the course of this evening think he was right. I have chosen a title for my lecture which may not fully convey to your minds the scope of the views which I am going to submit to you. I propose to adduce some arguments to show that "antagonism," a word generally used to signify something disagreeable, pervades all things; that it is not the baneful thing which many consider it; that it produces at least quite as much good as evil; but that, whatever be its effect, my theory—call it, if you will, speculation—is that it is a necessity of existence, and of the organism of the universe so far as we understand it; that motion and life cannot go on without it; that it is not a mere casual adjunct of Nature, but that without it there would be no Nature, at all events as we conceive

¹ Lecture delivered at the Royal Institution, on April 20, by the Right Hon. Sir William R. Grove, F.R.S.