

*Ephemeris for Berlin Midnight.*

1889.	R.A.		Decl.	Brightness.
	h.	m.	s.	
April 18 ...	5	10	18 ...	15 30'6 N. ... 0'92
22 ...	5	8	57 ...	15 22'9 ... 0'91
26 ...	5	7	53 ...	15 15'2 ... 0'91
30 ...	5	7	4 ...	15 7'5 N. ... 0'90

The brightness at discovery is taken as unity.

**ASTRONOMICAL PHENOMENA FOR THE WEEK 1889 APRIL 21-27.**

(FOR the reckoning of time the civil day, commencing at Greenwich mean midnight, counting the hours on to 24, is here employed.)

*At Greenwich on April 21*

Sun rises, 4h. 53m.; souths, 11h. 58n. 35'0s.; sets, 19h. 5n.; right asc. on meridian, 1h. 57'6n.; decl. 12° 1' N. Sidereal Time at Sunset, 9h. 5m.

Moon (at Last Quarter on April 22, 14h.) rises, 1h. 0m.; souths, 5h. 0n.; sets, 9h. 0n.; right asc. on meridian, 18h. 58'1m.; decl. 22° 38' S.

Planet.	Rises.		Souths.		Sets.		Right asc. and declination on meridian.	
	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.
Mercury..	4 50	.. 11 43	.. 18 36	... 1 42'5	.. 9 35	N.		
Venus ...	4 37	.. 12 48	.. 20 59	.. 2 47'7	.. 22 45	N.		
Mars ...	5 25	.. 12 59	.. 20 33	.. 2 57'7	.. 17 4	N.		
Jupiter ...	0 42	.. 4 38	.. 8 34	.. 18 35'9	.. 22 55	S.		
Saturn ...	11 25	.. 19 5	.. 2 45*	.. 9 5'2	.. 17 54	N.		
Uranus ...	17 44	.. 23 12	.. 4 40*	.. 13 12'8	.. 7 0	S.		
Neptune..	6 12	.. 13 57	.. 21 42	.. 3 56'3	.. 18 46	N.		

\* Indicates that the setting is that of the following morning.

April.	h.	
24	.. 23	.. Jupiter stationary.
25	.. 7	.. Mercury in superior conjunction with the Sun.

*Variable Stars.*

Star.	R.A.		Decl.	h. m.
	h.	m.		
U Cephei ...	0	52'5	.. 81° 17' N.	Apr. 21, 2 53 <i>m</i>
R Canis Majoris ...	7	14'5	.. 16° 11' S.	.. 26, 2 33 <i>m</i>
δ Libræ ...	14	55'1	.. 8° 5' S.	.. 23, 0 23 <i>m</i>
U Coronæ ...	15	13'7	.. 32° 3' N.	.. 24, 21 37 <i>m</i>
S Herculis ...	16	46'8	.. 15° 8' N.	.. 24, <i>m</i>
U Ophiuchi... ..	17	10'9	.. 1° 20' N.	.. 21, 20 19 <i>m</i>
and at intervals of 20 8				
U Aquilæ ...	19	23'4	.. 7° 16' S.	Apr. 26, 23 0 <i>M</i>
R Vulpeculæ ...	20	59'5	.. 23° 23' N.	.. 26, <i>M</i>
S Cephei ...	21	36'6	.. 78° 7' N.	.. 28, <i>M</i>

*M* signifies maximum; *m* minimum.

*Meteor-Showers.*

	R.A.	Decl.	
Near ζ Ursæ Majoris ...	206	.. 57° N.	.. Slow; bright.
.. β Libræ ...	228	.. 5° S.	.. Swift.
.. β Serpentis ...	233	.. 16° N.	.. Very swift.
.. π Herculis ...	256	.. 37° N.	.. Swift.
	272	.. 20° N.	.. Swift.

**GEOGRAPHICAL NOTES.**

To the current number of the Proceedings of the Royal Geographical Society, Mr. George Taylor contributes a valuable paper on Formosa and its aborigines. Mr. Taylor, while resident on the south coast of Formosa, had good opportunities of studying the natives, and the information which he has otherwise collected renders his paper the best summary of our knowledge of Formosa which we have at present. Mr. Taylor thus summarizes the geography of Formosa. On the western side, the land is composed of low level plains, extending from the sea-shore to some distance into the interior, the country appearing flat up to the more pronounced elevations which precede the steeper mountain slopes. The splendid watershed from the central mountains shows in the numerous rivulets which spread like a network over the plains, and renders them especially suitable for the cultivation of rice and sugar-cane. The western

sea-board partakes of the nature of the land, the coast being lined with mud and sand-sanks intersected by channels, this formation extending some distance out to sea. Within, Formosa is comparatively hilly, but large areas are covered with tea plantations, which form the principal industry. The east coast is rugged, precipitous, and exposed to the full fury of the north-east monsoon, which blows hard throughout eight months of the year; therefore, except in the Pilam plain and a few small valleys, little attempt is made at cultivation. To the south, the land terminates in huge masses of coral limestone, and coral branches may be traced in peaks elevated 2000 feet above sea-level. The sea-shore is lined with a semi-vitrified conglomeration of clay, sand, and coral, which presents a serrated surface so sharp and ragged as to be impassable to all beasts; and the natives, when fishing, are obliged to protect their feet with sandals composed of many folds of boar-skin. Mr. Taylor's account of the aborigines is specially valuable. While the pure aborigines from the interior are of an essentially Malayan type, still there is extraordinary diversity of features, indicating a considerable mixture of types. Among the Paiwang, probably the earliest settlers, head-hunting prevails. The Tipuns, again, seem to be of northern origin. To the naturalist—whether geologist, botanist, or zoologist—the interior of Formosa offers an almost virgin paradise.

ACCOUNTS are to hand of M. W. Delcommune's recent exploration of the Lomami, one of the most important southern tributaries of the Congo. Both Cameron and Wissmann met with the Lomami far to the south, and the latter connected it with the Sankuru. M. Delcommune, however, navigated the river from its mouth in the Congo, about 100 miles below Stanley Falls, for a distance of 580 miles, to a point only three days' journey from Nyangwé in the Lualaba. The river is reported to traverse a magnificent country, to be free from all obstructions, and to all appearance it continues to be navigable for some distance beyond M. Delcommune's farthest point.

MESSRS. W. AND A. K. JOHNSTON have sent us a copy of the third edition of their small map of Central Africa, in which Mr. Stanley's recent route is laid down in red. The next edition ought to have the Lomami delineated in accordance with M. Delcommune's recent exploration.

AFRICA fills a large place in the new number of *Petermann's Mitteilungen*. Dr. K. W. Schmidt has an article which deserves serious attention on the surface or soil conditions of German East Africa. Dr. Schmidt writes from careful personal observation, and his estimate of the capabilities of the German sphere is not very encouraging. Freiherr von Steinächer contributes some useful notes on German South-West Africa, with a map of Herreo Land and neighbouring regions. Dr. R. Lüddecke describes at some length the features of the new map of Africa, in six sheets, which has been prepared for the new edition of Stieler's "Hand-Atlas."

In an interesting account in *Les Missions Catholiques* of a missionary's journey through Ecuador, it is stated that of the many towns and village, as Archidona, Canelos, &c., the names of which appear on maps of the country, scarcely one exists. The natives do not live in villages, and even where there is a church, they live miles away in the forest in small solitary communities. Hitherto the missionaries have failed in inducing the natives to take to communal or social life.

M. ROGOZINSKI, who has been in Europe for some time, has returned to Fernando Po, and intends to resume his explorations in the Cameroons region, and especially to endeavour to ascertain the existence or non-existence of the Lake Liba, which still figures mysteriously in maps of Africa.

THE death is announced of M. V. A. Malte-Brun, son of the great geographer of that name, and who himself for the last forty years had been a student of and writer on geography.

**AFFORESTATION IN CHINA.**

THE question of afforestation in China is at the present time attracting a great deal of attention. China is a treeless country, and to this, perhaps, are due the devastating floods which work such ruin there, and the fearful seasons of drought, which are almost as destructive as the floods. The timber used