

(*Palaornis torquatus*) from India, a Grey-breasted Parrakeet (*Bolborhynchus monachus*) from Monte Video, two White-fronted Amazons (*Chrysotis leucocephalus*) from Cuba, two European Tree Frogs (*Hyla arborea*), European, deposited; a Barraband's Parrakeet (*Polytelis barrabandi*) from New South Wales, purchased; a Mountain Ka-Ka (*Nestor notabilis*) from New Zealand, received in exchange; two Canadian Beavers (*Castor canadensis*), three Gold Pheasants (*Thaumalva picta*), bred in the Gardens.

OUR ASTRONOMICAL COLUMN.

FURTHER COMETARY DISCOVERIES.—Mr. W. R. Brooks, Smith Observatory, Geneva, New York, discovered a new comet, 1888 c, on August 7. The place for 8h. 46m., G.M.T., on August 7 is given as R.A. 10h. 5m., Decl. 44° 30' N. It was observed at Vienna on August 9, 9h. 53' 5m., in R.A. 10h. 21m. 53s., Decl. 44° 49' 26". Faye's comet was picked up by M. Perrotin at the Nice Observatory on August 9, its place at 15h. 19' 5m., Nice M.T., being R.A. 5h. 0m. 27' 6s., Decl. 20° 0' 42" N. There are thus four comets now under observation. The following ephemeris, supplied in the *Dun Echt Circular*, No. 159, is derived from Dr. Kreutz's ephemeris for Faye's comet in the *Astr. Nachr.*, No. 2849, the time of perihelion passage having been increased by 2' 6 days.

Ephemeris for Berlin Noon.

1888	R.A.	Decl.	1888	R.A.	Decl.
	h. m.	°		h. m.	°
Aug. 20	5 28' 5"	19 31' N.	Sept. 5	6 9' 5"	17 58' N.
24	5 39' 0"	19 13	9	6 19' 2"	17 27
28	5 49' 4"	18 51	13	6 28' 6"	16 54
Sept. 1	5 59' 6"	18 26 N.	17	6 37' 8"	16 18 N.

Dr. Backlund's ephemeris for Encke's comet, given in the last issue of NATURE (p. 350), should also have been given for Berlin noon, and not for midnight. The resulting error of the ephemeris at the time of discovery thus becomes O - C; R.A. + 8s.; Decl. - 1' 3".

The following ephemeris, by Dr. H. Kreutz, for Brooks's comet is for Berlin midnight:—

1888.	R.A.	Decl.	1888.	R.A.	Decl.
	h. m. s.	°		h. m. s.	°
Aug. 15	11 8 8	44 25' 7" N.	Aug. 23	12 5 53	42 14' 0" N.
19	11 37 41	43 32' 9"	27	12 32 21	40 33' 4"

ASTRONOMICAL PHENOMENA FOR THE WEEK 1888 AUGUST 19-25.

(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 August 19

Sun rises, 4h. 54m.; souths, 12h. 3m. 18 2s.; sets, 19h. 12m.; right asc. on meridian, 9h. 56' 4m.; decl. 12° 34' N. Sidereal Time at Sunset, 17h. 6m.

Moon (Full on August 21, 16h.) rises, 18h. 18m.; souths, 22h. 38m.; sets, 3h. 3m.*: right asc. on meridian, 20h. 32' 6m.; decl. 19° 20' S.

Planet.	Rises.		Souths.		Sets.		Right asc. and declination on meridian.	
	h.	m.	h.	m.	h.	m.	h.	m.
Mercury..	4	21	11	47	19	13	9 40' 3"	15 45' N.
Venus....	5	51	12	46	19	41	10 39' 3"	10 3' N.
Mars.....	12	30	16	58	21	26	14 52' 2"	17 57' S.
Jupiter..	13	26	17	48	22	10	15 41' 9"	18 58' S.
Saturn....	3	28	11	7	18	46	9 0' 0"	17 47' N.
Uranus...	9	24	15	1	20	38	12 54' 9"	5 12' S.
Neptune..	22	23*	6	10	13	57	4 2' 1"	18 59' N.

* Indicates that the rising is that of the preceding evening and the setting that of the following morning.

Occultations of Stars by the Moon (visible at Greenwich).

Aug.	Star.	Mag.	Disap.	Reap.	Corresponding angles from vertex to right for inverted image.
			h. m.	h. m.	°
21	γ Capricorni	3½	0 58	2 10	125 31 0
21	50 Aquarii	6	20 17	near approach	162
22	ψ³ Aquarii	5	21 46	22 30	29 32 0
22	ψ² Aquarii	4½	21 55	near approach	172

Aug. h. Mercury in superior conjunction with the Sun.

Variable Stars.

Star.	R.A.		Decl.		Aug.	h. m.
	h.	m.	°	'		
Algol ...	3	0' 9"	40	31' N.	23,	0 55 m
λ Tauri...	3	54' 5"	12	10' N.	25,	21 44 m
T Monocerotis ...	6	19' 2"	7	9' N.	23,	23 49 m
R Canis Minoris...	7	2' 6"	10	12' N.	25,	4 0 M
δ Libræ ...	14	55' 0"	8	4' S.	21,	21 M
U Coronæ ...	15	13' 6"	32	3' N.	23,	22 34 m
S Herculis ...	16	46' 8"	15	8' N.	22,	21 7 m
U Ophiuchi...	17	10' 9"	1	20' N.	23,	23 M
						and at intervals of 20 8
W Sagittarii ...	17	57' 9"	29	35' S.	Aug. 23,	20 0 m
U Sagittarii...	18	25' 3"	19	12' S.	23,	1 0 m
S Sagittarii ...	19	50' 9"	16	20' N.	19,	23 0 M
U Cygni ...	20	16' 1"	47	33' N.	20,	20 m
X Cygni ...	20	39' 0"	35	11' N.	22,	2 0 M
T Vulpeculæ ...	20	46' 7"	27	50' N.	19,	20 0 M
						20, 21 0 m
R Vulpeculæ ...	20	59' 4"	23	23' N.	21,	21 M
δ Cephei ...	22	25' 0"	57	51' N.	25,	22 0 M

M signifies maximum; m minimum.

Meteor-Showers.

R.A. Decl.

Near γ Camelopardalis... 54° 71' N. ... Swift; streaks.
290 ... 60 N. ... Bright and slow;
with trains.

GEOGRAPHICAL NOTES.

A WORK of great interest in the history of early European cartography has recently been published by Messrs. Stevens and Sons, of Great Russell Street, and the manner in which it came to be compiled is not a little curious. One of the most famous of the early European cartographers was Johann Schöner, Professor of Mathematics at Nuremberg in the early part of the sixteenth century. He is best known now by a series of terrestrial globes which he prepared, one about 1515, another in 1520, and a third in 1533, all three of which are still preserved at Frankfurt, Nuremberg, and Weimar respectively. Here, so far as cartography is concerned, students would have believed Schöner's work to have ceased, were it not for a small Latin pamphlet of four pages which existed amongst his numerous writings, and which was, in substance, a letter to a high ecclesiastical authority of Bamberg descriptive of a globe on which were marked the discoveries made during Magellan's famous circumnavigation of the globe. Only three copies of this pamphlet were known to exist. It was dated 1523, and it obviously did not refer to the globes of 1515 or 1520, for these did not contain any references to the discoveries in question. Hence it was assumed that another globe, between 1520 and 1533 had been prepared by Schöner, but no trace of this could be found, and, if it existed at all, it seemed to be lost for ever. But in 1885 the late well-known bibliographer, Mr. Henry Stevens ("of Vermont") found in the catalogue of a Munich bookseller a facsimile of a globe which he at once recognized as the long lost work of Schöner. He promptly purchased it, and ultimately it found its way into the remarkable collection of works on early American geography and history made by Mr. Kalbfleisch, of New York, where it still is. But Mr. Stevens, who regarded it as "one of the keys to unlock the many mysteries of early American geography," determined to reproduce Schöner's letter and globe in facsimile, and to append a translation and an introductory sketch of the early historical geography of America. While still labouring at this work he died, but his son took it up, and, aided by Mr. C. H. Coote, of the Map Department of the British Museum, has now succeeded in bringing it to a conclusion. Schöner himself was entirely indebted for his knowledge of the results of Magellan's voyage to a letter written by one Maximilianus Transylvanus, a natural son of the Cardinal Archbishop of Salzburg, and then employed about the Court of the Emperor Charles V., describing for his father the expedition in question. This pamphlet is styled "De Moluccis," and from the descriptions here given, Schöner depicted the new portions of his globe, or, in his own words, "being desirous to make some small addition