

THE Geographical Society at Antwerp has given a reception to the distinguished geographer, Dr. Chavanne, editor of the *Mittheilungen* of the Vienna Geographical Society. He has undertaken the task of drawing up a complete map of the Congo territory, showing the stations of the African Association. He will leave for the Congo at the beginning of next month.

THE first maps of the Algerian survey have been published and presented to the Paris Academy by Col. Perrier.

THE largest ice cavern in Carniola has lately been discovered by Prof. Linhart of Laibach, having hitherto been known only to a small circle of woodcutters and hunters. It is now called the Friedrichstein Cavern, and can be reached in about two to three hours from Gottschee. The upper aperture is large and rectangular, the back is formed by a limestone rock rising some 80 metres perpendicularly; there is also a colossal gate fringed by icicles some metres in length. The sides are very steep. The area of the cave is about 450 square metres, nearly circular in shape, the level ground being covered with ice several feet deep. Altogether the cave seems to offer one of the grandest aspects imaginable.

News about the Russian expedition to Western Africa under Herr Schulz von Rogosinski was communicated at a recent meeting of the Berlin Geographical Society. The expedition has investigated the district north and east of the Cameroon Mountains, and discovered a large native settlement or town, Kumba by name, on the Mungo River east of the mountains mentioned. They intend to penetrate still further to the east. Dr. Pauli and Dr. Passavant of Basle have started also for the same districts on an exploring tour. A letter was also read, dated Ibi, September 30, in which Robert Flegel makes some official business communications.

THE additions to the Zoological Society's Gardens during the past week include a Black-handed Spider Monkey (*Ateles geoffroyi*) from Central America, presented by Mr. Colin Wm. Scott; two Yellow-bellied Liothrix (*Liothrix luteus*) from India, a Goldfinch (*Carduelis elegans*), British, presented by Mrs. Edwards; an Indian Elephant (Mottled Variety) (*Elephas indicus* δ) from Burmah, a Slow Loris (*Nycticebus tardigradus*) from Sumatra, a Gray Ichneumon (*Herpestes griseus*) from India, deposited; a Rufous-necked Wallaby (*Halmaturus ruficollis*) from New South Wales, a Brush Bronze-wing Pigeon (*Phaps elegans*) from Australia, received on approval; an Axis Deer (*Cervus axis*), three Brown-tailed Gerbilles (*Gerbillus erythrurus*), a Babirusa (*Babirusa alfurus*), born in the Gardens.

OUR ASTRONOMICAL COLUMN

A SOUTHERN COMET.—A telegram from Melbourne addressed to Prof. Krueger of Kiel, editor of the *Astronomische Nachrichten*, notifies the discovery of a small comet on January 12 in R.A. 22h. 40m., and N.P.D. 130° 8', and consequently in the constellation Grus. It is stated to be moving quickly to the south-east.

Possibly this comet may add to the very small number of cases where one of these bodies has been telescopically discovered in the other hemisphere, and the elements of the orbit have wholly depended upon southern observations. We can call to mind only two such instances: (1) the comet of 1824 detected by the late Carl Rümker at Parramatta, and observed there by him and by Sir Thomas Brisbane, the founder of that observatory, and Governor of the Colony. The orbit was first calculated by Rümker, and has lately been more completely investigated from the Parramatta observations by Dr. Doberck; (2) the comet of 1833, discovered by Dunlop (Rümker's successor) at Parramatta at the end of September, and observed there from October 1 to 16: orbits by Henderson, Peters, and Hartwig.

PONS' COMET.—For the convenience of readers who are observing in the southern hemisphere we subjoin an ephemeris of this comet, deduced from the provisionally corrected ellipse

of MM. Schulhof and Bossert. The positions are for Greenwich mean noon:—

1884	R.A.			Decl.	Log. distance from		
	h.	m.	s.		Earth	Sun	
Feb. 5	...	0 44	33	...	-31 38'8	...	9'9506 ... 9'9024
9	...	0 55	27	...	35 10'7	...	
13	...	1 5	10	...	38 14 2	...	0'0019 ... 9.9284
17	...	1 14	0	...	40 54'4	...	
21	...	1 22	14	...	43 15'8	...	0'0440 ... 9.9628
25	...	1 30	7	...	45 22'4	...	
29	...	1 37	52	...	47 17'2	...	0'0772 ... 0'0011
March 4	...	1 45	40	...	49 2'8	...	
8	...	1 53	40	...	50 41'4	...	0'1029 ... 0'0401
12	...	2 2	0	...	52 14'9	...	
16	...	2 10	50	...	53 44'6	...	0'1225 ... 0'0781
20	...	2 20	19	...	55 11'3	...	
24	...	2 30	34	...	56 36'0	...	0'1374 ... 0'1143
28	...	2 41	44	...	57 59'4	...	
April 1	...	2 53	58	...	59 22'0	...	0'1489 ... 0'1483
5	...	3 7	27	...	60 43'6	...	
9	...	3 22	23	...	62 4'1	...	0'1583 ... 0'1800
13	...	3 38	59	...	63 22'5	...	
17	...	3 57	27	...	64 37'4	...	0'1668 ... 0'2095

The theoretical intensity of light on February 5 is sixty-nine times that on the day of discovery; on April 17 only six times the same. Probably the comet may be discernible with the naked eye until the end of February.

Dr. G. Müller of the Astro-physical Observatory at Potsdam records a second remarkably sudden increase in the brightness of this comet. On January 1 at 5h. 47m. M.T. its appearance was very similar to that of the preceding days, the nucleus large and diffused; photometric comparisons showed that it was following pretty nearly in the calculated light-curve, and harmonised with the measures on December 29 and 30. At 7h. 20m. he was astonished at the altered aspect of the comet. In place of the previously diffused nucleus, there was now an almost stellar point, equal in brightness to a star of the seventh magnitude, so that he was at first under the impression that a bright star was seen through the comet. By comparisons with two neighbouring stars, estimated in the *Durchmusterung* 7'0 and 6'8, the following magnitudes were determined:—

h. m.			h. m.				
At 7	28	...	7'53 m.	At 8	27	...	7'03 m.
7	41	...	7'35	8	38	...	7'00
7	58	...	6'97	9	0	...	7'13
8	7	...	6'89	9	7	...	7'33

With the help of a curve the observations appeared to fix the maximum of the development of light to 8h. 12m. M.T. at Potsdam corresponding to 7h. 20m. Greenwich M.T. At 9h. 30m. the comet's aspect had again changed and resembled that presented at the previous day's observations. The whole variation amounted to about 1'3 mag. On that evening the comet's distance from the sun was 0'90, and that from the earth 0'65.

Attention will be no doubt directed in the other hemisphere to these abnormal variations in the light of the comet. It will be remembered that the first remarkable change occurred about September 22, three weeks after the discovery by Mr. Brooks, when the distance from the sun was 2'18, and from the earth 2'14.

PROFESSOR HAECKEL ON THE ORDERS OF THE RADIOLARIA¹

II.

[THE following translation of a recent paper of mine, by Miss Nellie Maclagan, has been revised by myself.—ERNST HAECKEL.]

Systematic Survey of the 4 Orders, 10 Sub-orders, and 32 Families of the Class Radiolaria. (Compare the former survey of the families in my Monograph, 1862, and in "Prodrömus," *l.c.* 1881).

I. Order I. ACANTHARIA, Hkl. (*Acantharia*, Hkl., 1881 = *Acanthometrae*, Hertwig, 1879 = *Panacantha*, Hkl., 1878).

Central capsule originally (and usually permanently) spherical; nucleus usually early divided into numerous small nuclei. Cap-

¹ "Separat-Abdruck aus den Sitzungsberichten der Jenaischen Gesellschaft für Medicin. und Wissenschaft." Jahrg. 1883. Sitzung. v. n 16 Februar. C. included from p. 276.