

Raven (*Corvus corax*), European, presented by Mr. H. W. Mansell; two Yellow-bellied Liothrix (*Liothrix luteus*) from India, two Grey-headed Love-Birds (*Agapornis cana*) from Madagascar, two Passerine Parrots (*Psittacula passerina*) from South America, a Yellow-rumped Seed-eater (*Crithara chrysopyga*), a Black bellied Weaver Bird (*Euplectes afer*), a Grenadier Weaver Bird (*Euplectes oryx*), a Crimson-eared Waxbill (*Estrellda phanictis*), two Orange-cheeked Waxbills (*Estrellda meloda*) from West Africa, a Superb Tanager (*Calliste fastuosa*) from Brazil, a Parrot Finch (*Erythrura psittacea*) from New Caledonia, two Red-crested Finches (*Coryphospingus cristatus*) from South America, five Amadavade Finches (*Estrellda amadava*) from India, two Chestnut-eared Finches (*Amadina castanotis*) from Australia, three Bar-crested Finches (*Munia nisora*) from Java, a Black-headed Finch (*Munia malacca*) from India, two Banded Grass Finches (*Poephila cincta*) from Queensland, two Lazuline Finches (*Guiraca parellina*) from Central America, a Red-tailed Finch (*Estrellda ruficauda*) from New South Wales, five Indian Silverbills (*Munia malabarica*) from India, presented by Mr. A. J. Aitchinson; a Common Wombat (*Phascolomys mitchelli*) from Australia, an American Siskin (*Chrysomitris tristis*) from North America, three Amphiumas (*Amphiuma means*) from North America, a Black Iguana (*Metopoceros cornutus*) from the West Indies, deposited; a Garden Dormouse (*Myoxus quercinus*), European, received in exchange; two Wapiti Deer (*Cervus canadensis*), born in the Gardens.

OUR ASTRONOMICAL COLUMN.

WOLF'S COMET.—The following is a continuation of the ephemeris of Wolf's comet as computed by Herr Thraen (*Astr. Nach.*, 3506):—

1898.	R.A.		Decl.	Br.
	h. m. s.			
August 12 ...	4 58 8	...	+16 27.9	... 2.4
13 ...	5 0 41	...	17.1	
14 ...	3 14	...	6.0	... 2.5
15 ...	5 45	...	15 54.7	
16 ...	8 15	...	43.3	... 2.5
17 ...	10 44	...	31.6	
18 ...	5 13 12	...	+15 19.6	... 2.5

The comet is moving in the constellation of Taurus, lying some distance to the west of Aldebaran.

DR. GILL ON SIR JOHN HERSHEL.—We have received a reprint (from the *Cape Times*, June 24) of an address which was delivered by Dr. Gill at the prize distribution, Diocesan College, Feldhausen, on June 23 last. On this occasion Dr. Gill uncovered a portrait of Sir John Herschel, which had been presented to the school by Mr. Gordon. The same generous donor has promised also a yearly Herschel prize. In his address, Dr. Gill, after referring to the earlier life of Sir John Herschel, and pointing out how he re-examined, with instruments made by himself, the whole of the nebulae, star clusters, and double stars which had been discovered by his father, and finished this review of the northern hemisphere, mentions how Herschel began a similar study in the southern hemisphere. "Towards the end of 1833, being then forty years of age, he sailed for the Cape, and after a voyage of sixty-three days arrived in Table Bay on January 15, 1834. He selected the house and grounds of Feldhausen for his residence, and on February 22 began the work of observation which he concluded in 1838. On his return to England he spent nine years in the arrangement, the reduction, and the publication of these Cape observations, which were printed in one splendid volume at the expense of the Duke of Northumberland." In a later part of the address Dr. Gill refers to Herschel as "the prose poet of science; his popular scientific works are models of clearness, and his presidential addresses teem with passages of surpassing beauty. His life was a pure and blameless one from first to last, full of the noblest effort and the noblest aim from the time when

as a young Cambridge graduate he registered a vow 'to try to leave the world wiser than he found it'—a vow that his life amply fulfilled."

THE PARIS OBSERVATORY.—On February 8 of this year M. Lœwy presented his report of the Paris Observatory for the year 1897 to the Council of the Observatory. Perhaps the most important fact which he communicated was the reorganisation of the meridian work. Up to the present time the greater part of the *personnel* of the meridian instruments has been employed in the revisions of the zones of Lalande, a piece of work that has been pursued steadily since the year 1854; in this, no less than 600,000 observations of stars of Lalande have been made. As this great enterprise is now nearly completed, M. Lœwy points out that other problems can now be attacked, and consequently a different organisation for meridian studies becomes necessary. The three meridian instruments, according to the new scheme, are each used by two astronomers, who make, reduce, discuss and publish the observations in their own names. The meridian circle *du jardin* has been used for the absolute determination of latitude and its variations, the large meridian instrument for absolute determinations of declinations of fundamental stars, while the instruments of Gambey have been employed for filling up gaps in the observations of the stars of Lalande.

During the year 1897 as many as 16,824 meridian observations were made, together with 333 planetary observations. The large equatorial coude has been devoted to obtaining photographs of the moon which were required to make the series complete. The present report contains a beautiful héliogravure cliché of the moon relative to a phase which presents the greatest photographic difficulties. It was obtained immediately after the sun had set, the moon then having a very low altitude and being only 4 days 6.4 hours old. The equatorials in the east and west towers have been used, as formerly, for observations of comets, minor planets, double stars, nebulae and occultations. The photographic chart of the heavens seems to be progressing, although the year was not very suitable for such work. The catalogue, we are told, is practically finished, with the exception of some isolated clichés. In the spectroscopic research department M. Deslandres has been continuing his interesting investigations. With the large reflector of 1.20 metres and a spectroscope of three prisms he has secured 47 negatives, which will furnish the velocities in the line of sight of the star studied, and in the laboratory he has been experimenting on the question of the relationship between coronal and cathodic rays.

The report contains, further, the work of the bureau of computations, observatory and personal publications, &c.; but even a brief account of these would render this note too long.

THE FRENCH ASTRONOMICAL SOCIETY.—The *Bulletin* of this Society for the current month is devoted nearly wholly to reproductions of some lunar charts obtained by Messrs. Lœwy and Puiseux at the Paris Observatory, and numerous accounts of the nearly total eclipse of the moon which took place on the 3rd of last month. In the former, four of these most excellent lunar pictures are reproduced, and the description which accompanies them points out the most curious objects in special relation to a better understanding of the order and succession of physical forces which have been at work on our satellite. In the observations of the lunar eclipse we are presented with some excellent reproductions from photographs of the phenomenon at different stages.

THE ELECTRICAL RESISTANCE AND MICRO-STRUCTURE OF ALLOYS.

IN a note in *NATURE* for June 18, 1896, on "The Electrical Resistance of Alloys," Lord Rayleigh suggested that the entirely different behaviour of pure metals and of alloys with respect to the resistance which they offer to the passage through them of an electrical current, might be partly due to thermo-electric effects.

Profs. Dewar and Fleming have shown that the resistance of a pure metal tends to disappear as absolute zero is approached, and quite recently Prof. Dewar has pointed out that the resistance of platinum in boiling hydrogen is reduced nearly to $\frac{1}{10}$ th of its resistance when in boiling oxygen. So far as they have been examined, alloys show no such diminution in their