

the most generally popular of the sciences. Already the Corporation has shown that it is disposed to further botanical science by admitting students of the University to the Gardens under certain conditions, while the gates are locked to the general public. It is earnestly to be hoped that this may be the first step towards a permanent policy of encouragement of the study of botany in one of the most densely populated centres in the United Kingdom.

SOME of the American whitefish (*Coregonus albus*) turned into the waters of the Marquess of Exeter at Burghley Park a year ago, were lately caught. They were 7 inches long. This is important evidence as to their adaptability to English waters. The National Fish-Culture Association are incubating a large quantity of the ova of this species for acclimatisation purposes.

SINCE 1878 the Ontario and Western Railway Company has been engaged in re-stocking streams in America within the area of its route. Mr. J. C. Anderson, general freight and passenger agent of the Company, writes to the *American Angler* to the effect that, within the past nine years, 2,220,000 trout have been planted by the Company in the Beaverkill, Willowemoc, Neversink, the east and west branch of the Delaware, and their tributaries.

WE have received vols. xxxix. and xl. of the Proceedings of the Literary and Philosophical Society of Liverpool, containing the principal papers read to the Society during the Sessions 1884-85 and 1885-86. Among the papers of scientific interest in vol. xxxix. are: "Observations on the Nematocysts of *Hydra fusca*," and "The Relationship of Palæontology to Biology," by Mr. R. J. H. Gibson; "On a New Organ of Respiration in the Tunicata," and other papers, by Dr. W. A. Herdman; two papers on "Technical Education," by Mr. F. H. Edwards; "The Armorial Bearings of the Isle of Man, their Origin, History, and Meaning," by Mr. John Newton, and "On the Rocky Mountain Goat," by Mr. T. J. Moore. Vol. xl. contains an address on "Modern Scientific Theories of Man," by the President, Dr. William Carter; "Two Curious Papyri in the Khedivial Museum," by Mr. R. L. Benas; "Recent Locust Plagues in Cyprus and North America," by Dr. Nevins; and "Report on a Successful Importation of Living Soles to the United States," by Mr. T. J. Moore. With vol. xl. is bound "The First Report upon the Fauna of Liverpool Bay and the Neighbouring Seas," written by the members of the Liverpool Marine Biology Committee, and edited by Dr. W. A. Herdman.

THE additions to the Zoological Society's Gardens during the past week include two Macaque Monkeys (*Macacus cynomolgus* ♂ ♂) from India, presented respectively by Mr. W. Spooner and Mr. F. A. Adeney; a Purple-faced Monkey (*Semnopithecus leucoprymnus* ♂) from Ceylon, presented by Mr. W. H. Markham; a Black-tailed Godwit (*Limosa egocephala*), British, presented by Mr. Robert Barclay; a Common Guillemot (*Lomvia troile*), British, presented by Mr. Howard Bunn; a Ring-hals Snake (*Sepdon hamachates*) from South Africa, presented by Mr. W. L. Holms; a Pinche Monkey (*Midas adipus*) from Central America, deposited; two Blue-bonnet Parrakeets (*Psephotus hamatogaster*) from Australia; two Blue-crowned Conures (*Comurus hemorrhous*) from Brazil, purchased; two Viscachas (*Lagostomus trichodactylus*) born in the Gardens.

OUR ASTRONOMICAL COLUMN

BARON D'ENGELHARDT'S OBSERVATORY.—Baron D'Engelhardt has recently published the first volume of the results of the astronomical observations obtained at his private observatory in Dresden. At first the observatory was erected in the Rue

Leubnitz, but was found to be too far from the dwelling-house, and in 1879 the present edifice was erected in the Rue Liebig, close to the Baron's residence, with which it is connected by a covered gallery. The observatory is very completely fitted up. The principal instrument is a fine equatorial by Grubb of 12 inches aperture, replacing one of 8 inches which had been erected in the first observatory. There are two sidereal clocks, a chronograph, a transit-instrument of the bent form, which replaces one by Cook, a very complete Repsold micrometer, and two comet-seekers of special construction. The conduct of the screw of the Repsold micrometer has been very carefully investigated and the inquiry occupies a dozen pages. The observations are principally micrometer measures of nebulae and star-clusters; but besides these there are very many observations of comets and minor planets, of the phenomena of Jupiter's satellites and of the new stars in the great nebula of Andromeda and near χ_1 Orionis, besides meridian observations of the moon and culminator stars. The volume, which is a very handsome one, contains four plates representing different parts of the observatory. The geographical position of the centre of the transit-instrument is given as lat. = $51^{\circ} 2' 19''$ N., and long. = oh. 54m. 54^s.74s. East from Greenwich.

NEW RED STAR.—Circular No. 16 of the Liverpool Astronomical Society states that on the nights of March 23 and 27 a red star, 7.5 magnitude, was observed 5s. f and 3' s of 26 Cygni. There is no star in the D.M. at this place. The spectrum of the new star is a fine specimen of type III. Place of 26 Cygni for 1887, R.A. 19h. 58m. 9s., Decl. $49^{\circ} 46' 9$ N.

THE PARALLAX OF Σ 1516.—It appears, from the researches of M. O. Struve on the relative motion of the components of this double star, that the fainter star does not participate in the proper motion of the brighter component, and that they therefore, in all probability, constitute a merely optical pair without physical connexion. Herr Berberich, from a discussion of a series of measures of distances made by Prof. Winnecke, found the relative parallax of the brighter star, compared with the fainter component, to be $0''.199 \pm 0''.05$ (*Astron. Nachr.*, No. 2624). Recently, Dr. L. de Ball has made a series of observations with the equatorial of the Cointe Observatory at Liège, extending from 1885 April to 1886 June, for the purpose of determining this quantity. From sixty-seven observations of relative position-angle he finds $\pi = 0''.091$, and from sixty-four observations of relative distance, $\pi = 0''.112$, and combining these according to their respective weights, $\pi = 0''.104$, with mean error $\pm 0''.008$.

ASTRONOMICAL PHENOMENA FOR THE WEEK 1887 APRIL 10-16

(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 10

Sun rises, 5h. 18m.; souths, 12h. 1m. 21^s.4s.; sets, 18h. 45m.; decl. on meridian, $7^{\circ} 56'$ N.: Sidereal Time at Sunset, 8h. 0m.

Moon (at Last Quarter on April 15) rises, 20h. 34m.*; souths, 1h. 47m.; sets, 6h. 50m.; decl. on meridian, $11^{\circ} 44'$ S.

Planet	Rises h. m.	Souths h. m.	Sets h. m.	Decl. on meridian
Mercury ...	4 42 ...	10 30 ...	16 18 ...	$3^{\circ} 8'$ S.
Venus ...	6 15 ...	13 59 ...	21 43 ...	$18^{\circ} 32'$ N.
Mars ...	5 25 ...	12 14 ...	19 3 ...	$8^{\circ} 47'$ N.
Jupiter... ..	19 44* ...	0 51 ...	5 58 ...	$10^{\circ} 55'$ S.
Saturn... ..	9 46 ...	17 55 ...	2 4* ...	$22^{\circ} 28'$ 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)

April	Star	Mag.	Disap.	Reap.	Corresponding angles from vertex to right for inverted image
			h. m.	h. m.	
11 ...	49 Libræ ..	$5\frac{1}{2}$...	0 13	near approach	$318^{\circ} 0'$
12 ...	29 Ophiuchi ..	6 ...	1 16	2 19	24 274
15 ...	57 Sagittarii ..	$5\frac{1}{2}$...	2 56	4 9	79 238
April	h.				
15 ...	3 ...				Mercury at greatest distance from the Sun.