

Xochimilco, containing excellent water, but their level is so low that it could only be made available for supplying the city of Mexico by enormous expenditure for pumping machinery. The basin of these lakes is bounded on the south and east by the mountains of the Ajusco and Sierra Nevada, and on the north by the Santa Catarina; a depression to the north-east connects it with the Vallée de Mexico, of which it forms a part. The lakes are fed by springs draining the underground waters from the volcanic formations of the Sierra Nevada and the Ajusco. The paper, which is an interesting study of the physical geography of the region, gives a preliminary account of attempts to tap these underground waters at a suitable level for gravitational supply to Mexico. The impermeable bed, believed to be andesitic, is being sought for below the basalt lavas and detritus by means of borings.

THE technique of basketry as manufactured by the Amerinds is the subject of a very valuable little paper by Dr. Otis T. Mason in the *American Anthropologist* (n.s., vol. iii. p. 109). Those who have desired to describe baskets and other objects plaited by primitive peoples have long wanted a system upon which to base their studies. This Dr. Mason has supplied, and all who study primitive industries once more have to thank their diligent and systematic American colleague.

THE *Kew Bulletin of Miscellaneous Information* (Appendix iii. 1901) contains the usual annual list of new garden plants recorded during last year in botanical and horticultural publications. The list includes, not only plants brought into cultivation for the first time during 1900, but the most noteworthy of those which have been re-introduced after being lost from cultivation.

A SECOND edition of "Marine Boiler Management and Construction," by Mr. C. E. Stromeyer, has been published by Messrs. Longmans, Green and Co. The book is described in the sub-title as "a treatise on boiler troubles and repairs, corrosion, fuels and heat, on the properties of iron and steel, on boiler mechanics, workshop practices and boiler design"; it was reviewed in these columns when the first edition appeared (vol. xlix. p. 410). About sixty pages of new matter have been added, including a chapter on steam, water and the boiling phenomena. No detailed accounts are given concerning water-tube boilers, because little exact information about the various types is available.

THE additions to the Zoological Society's Gardens during the past week include a Sooty Mangabey (*Cercopithecus fuliginosus*) from West Africa, presented by Mr. E. Robinson; a Diana Monkey (*Cercopithecus diana*) from West Africa, presented by Mr. L. Gough; a Northern Mocking-bird (*Mimus polyglottis*) from North America, a Common Chameleon (*Chamaeleon vulgaris*) from North Africa, a Green Lizard (*Lacerta viridis*), European, presented by Miss Betty Cox; two Chaplain Crows (*Corvus capellanus*) from the Persian Gulf, presented by Mr. B. T. Ffinch; two Olive Weaver-birds (*Hyphantornis capensis*), two Alario Sparrows (*Passer alario*), eight Sulphury Seed-eaters (*Criethagra sulphurata*) from South Africa, presented by Mrs. R. Templeman; a Jackdaw (*Corvus monedula*), British, presented by Mr. L. Peavor; a Green Monkey (*Cercopithecus callitrichus*), a Jardine's Parrot (*Paeocephalus gularis*) from West Africa, a Pine Marten (*Mustela martes*), British; three King Snakes (*Coronella getula*), two Mexican Snakes (*Coluber melanoleucus*), a Chained Snake (*Coluber catenifer*), two Corn Snakes (*Coluber guttatus*), two Chicken Snakes (*Coluber obsoletus*), three Testaceous Snakes (*Zamenis flagelliformis*), a Long-nosed Snake (*Heterodon nasica*), an Amphiuma (*Amphiuma means*), three Menopomas (*Cryptobranchus alleghaniensis*), two Menobranchs (*Necturus maculatus*) from North America, deposited; two Barbary Wild Sheep (*Ovis tragelaphus*), a Japanese Deer (*Cervus sika*), a Yak (*Poephagus grunniens*), born in the Gardens.

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OUR ASTRONOMICAL COLUMN.

WAVE-LENGTH OF GREEN CORONA LINE.—In the *Mem. della Soc. Degli. Spett. Ital.* (vol. xxx. pp. 124-128), Sig. Ascarza describes the results of observations made at Plascencia by the party from the Madrid Observatory during the total eclipse of the sun on May 27, 1900.

The instrumental equipment consisted of a Grubb coelostat with a mirror 20 centimetres diameter, furnishing light for a Steinheil objective of 12 centimetres aperture and 1.80 metres focus. This produced on the slit of the spectroscope an image of the sun about 16 millimetres in diameter.

A Dubosq spectroscope was used, furnished with six prisms and eyepiece micrometer reading to 1 : 300th of a millimetre. On account of the absorption of the prisms, only three were used for the final observations.

For the determination, measures were made on the lines 5328.696, 5270, 108 (E), and 5183.792 (δ_1), and the resulting measures of the corona line reduced by interpolation formulæ. The spectroscope not being sufficiently powerful to separate the components of E, the mean of the wave-lengths of the two was adopted.

Preparation was made for both radial and tangential measures, but on account of the diffuse character of the line the tangential method was applied. The results were reduced by two interpolation formulæ, Gibbs and Hartmann, slightly varying values being obtained. The wave-lengths found on Rowland's scale were 5298.7 and 5298.818 respectively. The paper concludes with a note stating the difference of 4 tenth-metres between this value and that of 5303 obtained by Lockyer and Campbell from photographs taken during the total solar eclipse in India on January 22, 1898.

DEFORMATION OF THE SUN'S DISC.—In the *Mem. della Soc. Degli. Spett. Ital.* (vol. xxx. pp. 96-110), Sig. A. Ricco describes a long series of observations, both visual and photographic, of the varying deformations of the disc of the sun by the effect of atmospheric refraction, made at the observatories of Palermo and Catania (Etna). Many of the visual observations were made with a small Ramsden telescope having a terrestrial eyepiece, magnifying five times; photographs were also taken with a Merz telescope of 0.115 metre aperture and 1.93 metres focal length, adjusted to the chemical focus, giving an image about 0.0175 metre diameter.

The paper is illustrated by drawings and reproductions from many of the photographs, which are similar in many respects to those obtained by Colton at the Lick Observatory and published about 1895.

THE MINOR PLANET TERCIDINA.—In the note on p. 265, Prof. Hartmann's observations were misinterpreted. The photographs obtained at the Potsdam Observatory do not confirm the suspected variability suggested by the photograph obtained by Prof. Wolf in November 1899, nor do the later photographs of Prof. Wolf. The apparent variation may possibly be due to instrumental irregularities.

THE TOTAL ECLIPSE OF MAY 18, 1901.

THE following account of the total eclipse of the sun, May 18, is taken from a letter received from Mr. J. Cresswell, who was formerly a student of astronomical physics at the Royal College of Science, and is now engaged at a mining camp near the centre of Borneo (lat. 0° 45' S., long. 113° E.).

The eclipse commenced about 12.20 in a cloudy sky, but fortunately about 15 minutes before totality the whole sky cleared and revealed a crescent sun. There were only one or two small clouds near the horizon, and the landscape appeared to have a peculiar violet tinge. There was no fall in temperature up to this point, the thermometer having remained stationary at 34°.75 C. Four minutes afterwards the landscape appeared as if seen through smoked glass, the temperature now being 34°.5. After the lapse of another 8 minutes the light was like that when a heavy storm is gathering, and shadows had a peculiar transparency; a number of stars appeared in the heavens distant from the sun. After 2½ minutes more had elapsed, second contact occurred and we were in darkness. The accompanying sketch of the corona was made and a photograph was taken with a small camera. The darkness was such that a small