found an interesting proof of it in the island of Sikok, in the form of a small statuette of Buddha, having the characteristic nose and hair of the Negritos.

IT is a well-known fact in biology that bacteria and bacilli absorb anilin and are killed by it. Two German observers—Stilling and Wortmann—have recently considered the possibility of utilizing this property in medical treatment (*Humboldt*). The diffusibility and harmlessness of violet anilin dyes (called, for brevity, "methyl-violet") without arsenic, in small doses, were first demonstrated on rabbits and guinea-pigs. Then certain eye-disorders were produced in those animals, and treated with anilin solution, the results being excellent. The authors proceeded to operate on the human subject. A skin-ulcer on a scrofulous child, which had been treated for a month with the ordinary antiseptic agents without success, was gradually healed by daily dropping a little anilin solution on the sore; and similar good results were had with bad cases of eye-disease. It soon appeared that many surgical cases were open to successful treatment in this way; and that, in general, wounds and sores developing suppuration could be sterilized w ith anilin. It is also thought that cases of internal inflammation, as in pleuritis and peritonitis, may prove to be not beyond the reach of this order of treatment.

MESSRS. FRIEDLÄNDER AND SON, Berlin, have issued an important monograph, by Dr. Max Blanckenhorn, on the development of the Cretaceous system in Central and Northern Syria. The author devotes especial attention to palæontological phenomena.

A MONOGRAPH, by Dr. L. Tausch von Gloeckelsthurn, on the fauna of the "gray chalk" of the Southern Alps, has been issued by A. Hölder, Vienna. The work is illustrated with nine lithographic plates.

IN the Statistical Report of the Colony of Victoria, just issued, the following are given as the latitudes and longitudes of the capitals of the Australian colonies, corrected by Mr. Ellery, the Government Astronomer of Victoria:—

Colony.	Capital City.	Latitude S.	Longitude E.
		° ′ ″	° ′ ″
Victoria	Melbourne ...	37 49 53	144 58 32
New South Wales ...	Sydney ...	33 51 41	151 12 23
Queensland	Brisbane ...	27 28 0	153 1 36
South Australia ...	Adelaide ...	34 55 34	138 35 4
Western Australia ...	Perth	31 57 24	115 52 42
Tasmania	Hobart ...	42 53 25	147 19 57
New Zealand	Wellington ...	41 16 25	174 46 38

WE are glad to learn that after eight years' cessation, Mr. John Fryer, of Shanghai, has revived his Chinese periodical, the title of which is best translated *Science Quarterly*. The first number of the re-issue contains 128 pages of reading matter of great variety. From a review in the *North China Herald*, by Dr. Martin, of Pekin, we gather that the science articles open with a chapter on appliances for illustrating the principles of mechanics. This paper forms a connecting link with the last number of the series, taking up the subject where it was dropped, and promising to carry it on to completion. The second paper begins a treatise on the principles of mechanical drawing, a subject in which the Chinese are beginning to take much interest. This is followed by the great topic of the day—railways. The steps necessary for the initiation and conduct of a railway enterprise are pointed out, the question of gauge is discussed, and statistics of cost are supplied. Then comes an elaborate paper on the state of the silk trade in China, pointing out the way to improvement, and stimulating the Chinese by the example of Japan and Italy. There is a paper on the sanitary conditions to be observed in the construction of dwellings, and one on medicinal plants, one on several strange vegetable productions, and one on entomology. Besides these, there are short papers on Edison's phonograph, the Eiffel tower, and on observatories and telescopes. The dessert which closes the feast is a profound disquisition by Dr. Edkins on the evolution of the Chinese language. It will no doubt surprise the natives to find that a foreigner has something to teach them in respect to their own language, both written and spoken. At the end are mathematical problems, in the estimation of native scholars the first essential of a scientific magazine. Nearly all the papers are profusely illustrated.

THE additions to the Zoological Society's Gardens during the past week include two Lions (*Felis leo*, juv. ♂ ♀) from Kattywar, India, presented by H.R.H. the Duke of Clarence and Avondale; a Grey Ichneumon (*Herpestes griseus* ♂) from India, presented by Mrs. H. F. Pollock; a Common Badger (*Meles taxus*), British, presented by Mr. W. H. B. Pain; a —— Galago (*Galago* sp. inc.) from South Africa, presented by Mr. Walter Carlile; a Spur-winged Goose (*Plectropterus gambensis*) from West Africa, presented by Mrs. Quayle Jones; two Common Rheas (*Rhea americana*) from South America, presented Mr. A. W. Neeld; three Grey Sparrows (*Passer simplex*) from West Africa, a Tintillon Chaffinch (*Fringilla tintillon*), two Yellow-throated Rock Sparrows (*Petronia petronella*) from Teneriffe, a Rosy Bullfinch (*Erythrospiza githaginea*) from the Canary Islands, presented by Mr. Edmund G. Meade-Waldo; a Roseate Cockatoo (*Cacatua roseicapilla*) from Australia, presented by Mr. F. C. S. Roper, F.Z.S.; a Leadbeater's Cockatoo (*Cacatua leadbeateri*) from Australia, presented by Mrs. Obbard; two Common Barn Owls (*Strix flammea*), British, presented respectively by Mr. Charles Faulkner and Mrs. Frederick Tibbs; an American Box Tortoise (*Terrapene carinata*), a Horned Lizard (*Phrynosoma cornutum*) from Mexico, presented by Mr. John Pettit; an Alligator (*Alligator mississippiensis*) from the Mississippi, presented by Mr. C. S. Morris; four Houbara Bustards (*Houbara undulata* 2 ♂ 2 ♀) from the Canary Islands, a Bonnet Monkey (*Macacus sinicus* ♂) from India, deposited; six Speigel Carp (*Cyprinus carpio*, var.), European Fresh Waters, purchased; two Bennett's Wallabys (*Halmaturus bennetti* ♀ ♀), a Derbian Wallaby (*Halmaturus derbianus* ♀), two Four-horned Antelopes (*Tetraceros quadricornis* ♀ ♀), a Burrhel Wild Sheep (*Ovis burrhel* ♀), a Thar (*Capra jemlaica*), born in the Gardens.

OUR ASTRONOMICAL COLUMN.

OBJECTS FOR THE SPECTROSCOPE.

Sidereal Time at Greenwich at 10 p.m. on June 26 = 16h. 19m. 54s.

Name.	Mag.	Colour.	R.A. 1890.	Decl. 1890.
			h. m. s.	° ′
(1) G.C. 4230	—	—	16 37 45	+36 41
(2) β Lyræ	Var.	—	18 46 0	+33 14
(3) α Scorpii	1	Redddish-yellow.	16 22 40	+26 14
(4) β Herculis	2	Yellow.	16 25 30	+21 44
(5) δ Herculis	3	Bluish-white.	17 10 30	+24 58
(6) S Leonis	Var.	Yellowish.	11 5 9	+ 6 3·5

Remarks.

(1) This is the bright cluster of stars in Hercules which is probably well known to every possessor of a telescope. Seeing that it certainly consists of separate and distinct stars, no nebulosity being shown in Mr. Roberts's photograph of it, Dr. Huggins's observation of its spectrum in 1866 is very remarkable. He says:—"Spectrum of the central blaze continuous.

Spectrum ends abruptly in the orange. The light of the brighter part is not uniform; probably it is crossed either by bright lines or by lines of absorption" (Phil. Trans. 1866). As yet we know nothing of the spectra of the components of any star cluster except in the case of the loose cluster of the Pleiades, and in that case we know that the spectra are all of the same type—namely, Group IV. It seems pretty evident that the stars of the cluster in Hercules cannot have spectra of this kind; otherwise, their integrated light would not end abruptly in the orange, and the irregularities would only be obvious in the blue end, where the thick hydrogen lines ought to be visible. The absence of red light would lead rather to the supposition of bright lines than dark ones. Further investigations, with considerable optical power, may therefore lead to interesting results. It may be noted that Vogel, in 1872, recorded simply a continuous spectrum, but his attention had probably not been directed to Dr. Huggins's statement.

(2) The question of the periodicity of the appearance of the bright lines in β Lyræ cannot yet be said to have been satisfactorily settled, and as the star will be visible for some months, further continuous observations are desirable. It is not necessary here to recapitulate all the observations which lead to the conclusion that there is a periodicity in the spectrum. Gothard has probably given more attention to the star than any other observer, and he succeeded in following the variations of the line D_3 through several periods "from a bright, almost dazzling light to complete disappearance. . . . The variation is most marked in the case of D_3; it is much less striking in the hydrogen lines, although they, and probably also the dark bands in the red, are subject to a periodical variation." The period has been provisionally estimated as 7 days, but it does not seem to depend upon the fluctuations in the brightness of the star. In my own observations I have found that the bright lines in this star are best seen when no cylindrical lens is employed, and this has also been noted by other observers. Further observations, to be of any value, should be made as frequently as possible, and over a long period.

(3) Dunér describes the spectrum of this star as one of the most magnificent of Group II., the bands 1–9 being wide and dark. He also states that there is a narrow band between bands 3 and 4. As the spectrum is a bright one, this is a good opportunity for comparing the dark flutings with the brightest flutings of manganese, lead, and magnesium. In the recently issued volume of spectroscopic observations at Greenwich, Mr. Maunder states that he has found the bright green band in α Herculis coincident with the brightest carbon fluting and possessing the same characteristics. A similar comparison should also be made with α Scorpii.

(4 and 5) These stars, according to the observations of Gothard and others, have spectra of the solar type and of Group IV. respectively. The usual more detailed observations are required in each case.

(6) The spectrum of this variable has not yet been recorded. The magnitude ranges from about 9 to <13 in a period of about 188 days. There will be a maximum about July 2.

A. FOWLER.

GREENWICH SPECTROSCOPIC RESULTS.—These results for 1888 contain observations of γ Cassiopeiæ, Mira Ceti, α Orionis, a Herculis, β Lyræ, R Cygni, P Cygni, β Pegasi, and Comets a and e 1888. On October 5, 1888, ten measures were made of a bright line in the violet part of the spectrum of Mira Ceti; the mean wave-length found was 4343·37, indicating that it was the third line of hydrogen. F and D_3 were searched for on this occasion, but without success. The spectrum of α Herculis was compared with those of carbon and manganese, as given by a Bunsen flame on several occasions, and it is noted: "The green band of the carbon spectrum accorded, both as to position and appearance, with the bright interspace or 'zone' to the blue of Band VII. (Dunér's numeration). So far as the dispersion employed would show, no accordance could be more complete, both as to the position of the edge and the gradation of the fading." The blue carbon band was also found to present an approximation in position and appearance to a bright zone in the blue. The wave-length of the brightest bands in the manganese spectrum was determined as 5579, and that of the more refrangible edge of Dunér's Band IV. as 5592, whence it is concluded that the connection of the spectrum of the star with the manganese spectrum did not appear to be made out. A bright line at 5873·92, that is, D_3, was measured in β Lyræ on August 10, 1888, was seen less distinctly a month later, and was found again to be quite distinct on September 19; two days later, D_3 was seen very bright, and C and F were also visible. D_3 was visible, but faint, on October 1; F could not be seen, and C was only suspected. On October 19, C and F were not visible as bright lines, but were first suspected as dark lines, whilst D_3 was glimpsed occasionally as a feeble bright line. R Cygni was observed on September 21, D_3 was identified with probability in its spectrum, and F with certainty; and, on October 1, ten measures were made of the F line in P Cygni. Comet a 1888 was observed on April 19, 1888; its spectrum appeared mainly continuous; two bright bands were just glimpsed, coincident with the bands in the green and yellow of the spectrum of a Bunsen flame, the band in the blue being suspected. On May 3 the spectrum was practically wholly continuous, traces of the green band only being suspected. Comet e 1888, observed on November 27, showed a local ill-defined brightening, corresponding nearly to the great carbon band, but apparently further towards the blue, otherwise it was perfectly continuous.

THE ROTATION OF VENUS.—Signor Schiaparelli has recently made an extended inquiry into the question of the rotation of the planet Venus, and has brought many facts to light concerning it (*Rendiconti del R. Istituto Lombardo*, vol. xxiii.). He finds, from observations of very definite spots, that the time of rotation of the planet is 224·7 days—that is to say, Venus, like the moon, and probably Mercury, rotates on her axis in the same time that she takes to make a sidereal revolution around the sun; the axis of rotation being nearly perpendicular to the plane of the orbit. By investigating the writings of previous astronomers who have estimated the rotation period, Signor Schiaparelli concludes that those observations which have been supposed to fix the time as about 24 hours are open to question. Domenico Cassini's observations of bright markings in 1866–67 are shown to have been wrongly interpreted, a discussion of them indicating that they also support a period of rotation of 224·7 days.

GEOGRAPHICAL NOTES.

THE Russian Geographical Society has received fresh news from M. Grombchevsky as to his attempts to penetrate into Tibet from the north. In the autumn of 1889 the expedition explored the Uprang, a tributary of the Raskem-daria, tried to enter again into Kanjut, and, having failed to do so, explored the tributaries of the Raskem river which flow from the Himalayas. On November 21, M. Grombchevsky, accompanied by two men only, crossed the Kara-korum Pass, and went to the Pahnu mountaineers, who live by sheep-breeding, and suffer a good deal from the Kanjut robbers. On December 7 the expedition was at the small fort of Shahi-dulla-hodja; the winter had come, and the thermometer fell in the nights to − 20° Celsius. Nevertheless, M. Grombchevsky, with two men only and a guide, explored the passes leading to Kara-korum across the Raskem ridge. The tent had to be abandoned, although the temperature was − 35°, and the party was soon obliged to return. On January 7, after having followed for some distance the Kara-kash river, the small party began its ascent of the steep slopes of the Tibet border-ridge. The plateau itself proved to be a desert, 17,000 feet high, upon which a few yaks, *Kulangs*, and mountain sheep were grazing. A very high ridge, called by M. Grombchevsky the Yurung-kash ridge, was crossed, the pass receiving the name of "Russian." But the horses of the expedition were quite attenuated, and on January 13 the party was brought into a perilous condition by a frightful snow-storm and a temperature of − 27°, without having either a tent or any kind of fuel. M. Grombchevsky was compelled to return, marching all day long. After having made another unsuccessful attempt at crossing the Hindu-tash Pass, the expedition went to Kilian, and thence to Polu, thus connecting its surveys with those of Prjevalsky. A telegram received from New Marghelan, in Russian Turkestan, announces that the explorer and his men have returned safely, and are making new schemes for further exploration. A map, annexed to the last issue of the *Izvestia* of the Russian Geographical Society, embodies the surveys made by M. Grombchevsky in 1888 and M. Grum-Grzimailo in 1887.

IN the course of last year the Geographical Society of Berlin published no fewer than thirty-nine remarkable maps. Three of them are reproduced from those of Mercator, now in the