

NEARLY all the ironworks at Pittsburgh, besides some forty iron firms within a radius of thirty miles, are now using the natural gas of the district, as are also most of the glass factories, distilleries, breweries, &c. This is creating an entire revolution in the labour market there. The output of iron and steel at Pittsburgh is about 750,000 tons per annum, and as it takes some 50 bushels of coal to make one ton of iron, it follows that at least 38,250,000 bushels of coal will be dispensed with in the yearly consumption, throwing out of employment an enormous number of miners, firemen, ashmen, roadmen, and other employes of the collieries. The cause of this great change being entirely one of nature's arrangement renders it an impossibility for trade unions and labour agitators to deal with the matter.

WE have received the *Report and Proceedings* of the Bristol Naturalists' Society for the year ending April 30 last. The principal paper is a long one, with illustrations, by Prof. Lloyd Morgan, on sub-aërial denudation and the Avon gorge, in which he has worked out in detail the subject of the influence of geological structure on the scenery of the Avon, more particularly of that section of the Avon basin lying between Bristol and the Channel. There are also papers on the mapping of the millstone grit at Long Ashton near Bristol by the same writer, on a common fin whale stranded in the Bristol Channel by Mr. Wilson, and on the newly-discovered phenomenon of apospory in ferns by Mr. Druey. There are also papers on the rainfall at Clifton in 1884, and meteorological observations with regard to temperature during the same year. Finally Mr. Bucknall prints the eighth part of his fungi of the Bristol district, and Mr. White additions to his *flora* of the Bristol coal-field. The report shows that only a portion of the papers read are printed. Perhaps it is right to add in conclusion that the society is in a flourishing financial condition, for it has not only a comfortable balance on the right side of its current accounts, but has actually a capital to the amount of 17l. 10s. invested in securities.

A REPORT from the Government Astronomer in the *Hong Kong Government Gazette* upon the progressive motion of typhoons gives the following average velocities. The course of the typhoon is here followed from its commencement on the east coast of Luzon, the cradle of the typhoons of the China seas, into the Sea of Japan, beyond which they are dissipated and lost in the North Pacific:—

	Nautical miles an hour
East of Luzon	7
China Seas between 12° and 18° N.	6
China Seas between Hong Kong, Luzon, and Southern Formosa	11
About Hainan	13
East of Formosa	10
In Southern China: Kwangtung, Fokien, and Kiangsi	10
In the Formosa Straits	12
About Shanghai	12
In Northern China	23
About Japan	19
In the Sea of Japan	30

DR. NICKERSON, of New York, has published as a pamphlet the memorial address by him on Joseph Henry and the magnetic telegraph, delivered at Princeton College. It is printed at the request of the President and members of the College, and is published by Charles Scribner and Sons, of New York.

WE have to acknowledge Mr. G. J. Symons's "British Rainfall" for 1884. The issue for 186c, in four pages, is reprinted and bound with the volume, and is interesting as the beginning of the elaborate work which Mr. Symons now publishes every

year. The present volume differs from its predecessors, inasmuch as it contains no articles from observers upon experimental or other branches of rainfall work; but their place has been supplied by notes by the editor scattered throughout the book. He has invited observers to report any facts within their knowledge bearing on the effect produced upon the level of water in wells, &c., by the small rainfall of the year. Consequently observers' accounts occupy a considerable space. Mr. Symons has added a full account of the drought.

WE have received the report of the *Verein für Naturkunde* of Mannheim for the fiftieth and fifty-first years of its existence. The report contains the jubilee address, and also a lecture delivered by the late Dr. Schimper in the year 1834, on the classification and succession of organisms, together with a brief biography of the author and a bibliography of his writings.

THE additions to the Zoological Society's Gardens during the past week include a Purple-faced Monkey (*Semnopithecus leucopymnus*) from Ceylon, presented by Mr. Ernest Greathead; a Weeper Capuchin (*Cebus capucinus* ♂) from South America, presented by Mrs. A. Sinclair; a Ring-tailed Coati (*Nasua rufa* ♂) from South America, presented by Master J. C. Robinson; a Yellow-footed Rock Kangaroo (*Petrogale xanthopus* ♀) from South Australia, presented by Mr. C. W. Holden; and a Levaillant's Cynictis (*Cynictis penicellata* ♀), a Suricate (*Suricata tetradactyla* ♀) from South Africa, presented by Mr. John Constable; four Black Water Voles (*Arvicola amphibius*) from Scotland, presented by Mr. W. Arkwright, F.Z.S.; a White-backed Piping Crow (*Gymnorhina leuconota*) from South Australia, presented by Miss A. Charsley; a Poë Honey-eater (*Prosthemadera Nova-Zelandiae*) from New Zealand, presented by Mr. Charles Clifton, F.Z.S.; a Humboldt's Lagothrix (*Lagothrix Humboldtii*) from the Upper Amazons, a Glutton (*Gulo luscus*) North European, deposited; a Jaguar (*Felis onca*) from America, deposited; two Long-fronted Gerbilles (*Gerbillus longifrons*), two Snow Birds (*Junco hyemalis*), five Common Vipers (*Vipera berus*), thirty Striped Snakes (*Tropidonotus sirtalis*) bred in the Gardens.

ASTRONOMICAL PHENOMENA FOR THE WEEK, 1885, SEPTEMBER 13-19

(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 Sept. 13

Sun rises, 5h. 34m.; souths, 11h. 55m. 44'2s.; sets, 18h. 18m.; decl. on meridian, 3° 38' N.; Sidereal Time at Sunset, 17h. 50m.

Moon (at First Quarter on Sept. 16) rises, 10h. 52m.; souths, 15h. 50m.; sets, 20h. 42m.; decl. on meridian, 13° 54' S.

Planet	Rises h. m.	Souths h. m.	Sets h. m.	Decl. on meridian
Mercury ...	4 6 ...	10 56 ...	17 46 ...	9° 5' N.
Venus ...	8 49 ...	14 3 ...	19 17 ...	9 52 S.
Mars ...	0 27 ...	8 30 ...	16 33 ...	21 31 N.
Jupiter ...	5 10 ...	11 45 ...	18 18 ...	5 56 N.
Saturn ...	22 53* ...	7 1 ...	15 9 ...	22 22 N.

* Indicates that the rising is that of the preceding day.

Occultations of Stars by the Moon

Sept.	Star	Mag.	Disap.	Reap.	Corresponding angles from vertex to right for inverted image
19 ...	13 Capricorni ...	6 ...	20 4 ...	21 23 ...	122 272
19 ...	14 Capricorni ...	5 ...	21 33 ...	22 41 ...	151 273

The Occultations of Stars are such as are visible at Greenwich.

Sept. h. 18 ... 19 ... Mercury at greatest elongation from the Sun. 18° west.