

necked Stilt Plover (*Himantopus nigricollis*) from South America, purchased; three Common Badgers (*Meles taxus*) born in the Gardens.

### THE PARIS ACADEMY PRIZES

LAST week the Paris Academy held its annual public meeting, when the prizes for 1878 were awarded. According to old custom, M. Fizeau, the president of last year, was in the chair. He remarked on the unprecedentedly large number of prizes that were not awarded, either because there was no competition or because there were no competitors of sufficient merit. On this account several of the most important prizes have not been awarded this year, and it seems to be the common opinion that some of the problems proposed are much too difficult. M. Dumas read an *éloge* on M. Balard, the discoverer of bromine, and M. Bertrand did the same for Leverrier. M. Bertrand made no allusion to the part taken by Leverrier in the public affairs of his time, and made but slight allusion to his organisation of the Meteorological Service, and that almost as if it were not a thing quite worthy of encomium. M. Bertrand's address does not seem to have given universal satisfaction, and several of the audience on leaving the hall were heard to say: "Quant à l'éloge de Leverrier il est encore à faire." The following are the principal prizes awarded at the meeting:—The Extraordinary Prize of 6,000 francs for the greatest progress in naval construction, to M. Perroy and Lieut. Baills; the Poncelet Prize in Mechanics to M. Maurice Lévy; the Montyon Prize of 1,000 francs, in Mechanics, to Mr. George H. Corliss, for his well-known engines; the Plumey Prize to Capt. Vallesie, for his differential counter to regulate the progress of steamships. In Astronomy the Lalande Prize was awarded to M. Stanislas Meunier, for his researches on meteorites; the Valz Prize to Dr. Julius Schmidt, for his lunar charts. In Physics the Bordin Prize was awarded to M. Reynard for his researches in connection with Ampère's law. In Chemistry the Jecker Prize was awarded to M. Reboul, specially for his memoir on the isomers in the propylene series. In Botany the Barbier Prize was given to M. Ch. Tauret, and encouragements of 500 francs each to M. Cauvet and M. E. Heckel; the Desmazières Prize to Dr. Borner; the Shore Prize to Prof. Ardissonne for his "Floridee Italiche;" in Anatomy and Zoology the Serres' Prize was awarded to Prof. Alexander Agassiz, for his various embryological and other investigations; and the Montyon Prize in Physiology to M. Charles Rechet, for his researches on gastric juice. The Tremont Prize was given to M. Marcel Deprez for his application of electricity to the solution of various problems in mechanics; the Gegner Prize to M. Gaugain; the Delalande Guérineau Prize to M. Savorgnan de Brazza, for his exploration of the Ogové River; and the Prize founded by M<sup>me</sup>. de Laplace to be awarded to the pupil who leaves the Polytechnic School with the highest honours, to M. de Béchevel.

### UNIVERSITY AND EDUCATIONAL INTELLIGENCE

M. FERRY, the French Minister of Public Instruction, has presented a project for the reorganisation of the Superior Council of Universities. According to the proposals of the minister, which are sure to be adopted by the Assembly, the bishops and other religious members are to be excluded, and the Council exclusively composed of persons belonging to the teaching profession. Moreover, it is proposed that all degrees be henceforth granted by the State, and only to those who have taken the curriculum of a recognised university.

THE examiners for the Burdett-Coutts' Scholarship (Oxford) have awarded it to Mr. Algernon Phillips Thomas, B.A., Scholar of Balliol College; and they consider Mr. Henry Nicholas Bidley, B.A., of Exeter College, worthy of honourable mention.

### SCIENTIFIC SERIALS

*Bulletin de l'Académie Royale de Belgique*, No. 12, 1878.—In this number is a paper by M. van Beneden, giving a historical sketch of whale-fishing and of the first Arctic expeditions.—A lecture by M. Houzeau, the president, has for its subject certain enigmatical phenomena of astronomy.—M. van Rysselberghe describes a parabolic regulator, rigorously isochronous, and the

velocity of which can be varied at will. Regarding it, M. Folie reports that it has too many articulations and movable rings for common use, and it hardly realises ideal perfection for physical and astronomical apparatus.—M. Malaise announces the discovery of a mineral species new for Belgium, viz., arsenopyrite or mispickel, and M. Monier describes a hydrophane opal and hydrated transparent silica, obtained by action of oxalic acid on alkaline silicates.—There are also several mathematical papers and reports on prize competitions (subjects chiefly botanical).

*Reale Istituto Lombardo di Scienze e Lettere*. Rendiconti. Vol. xii. fasc. ii.—We note the following papers in this number:—Considerations on a letter of Tyndall's regarding heterogeneity, by Prof. Giovanni.—On the causes of asphyxia and the agglutination of the blood corpuscles in diphtheria, by S. Trevison.—The Sanitary Office of the German Empire, by Dr. Zucchi.—Studies on milk (continued), by Drs. Pirotta and Riboni.—On cortical psycho-sensory centres, by Professors Luciani and Tamburini.

### SOCIETIES AND ACADEMIES

#### LONDON

**Mathematical Society**, March 13.—C. W. Merrifield, F.R.S., president, in the chair.—Mr. J. D. H. Dickson was admitted, Mr. R. Hargreaves and Prof. W. E. Story were elected, and Mr. Donald McAlister was proposed for election into the Society.—Prof. Cayley, F.R.S., spoke briefly but in high praise of the late Prof. Clifford's work as a mathematician, instancing more particularly his papers "On the Canonical Form and Dissection of a Riemann's Surface," "On Mr. Spottiswoode's Contact-Problems," and "The Classification of Loci."—The chairman, the Rev. A. Freeman, and Dr. Hirst, F.R.S., added a few remarks on the loss the Society and the mathematical world generally had sustained, and expressed the hope that steps would be taken to secure the publication, if desirable, of any mathematical papers Prof. Clifford might have left.—Dr. Hirst made a statement respecting the "De Morgan Memorial" Medal to be presented to the Society to be awarded in such manner as the council shall hereafter determine; it appeared that the bust and die for the medal had been executed by Mr. Woolner, and that after all claims had been met there would still be a small sum required to make up the requisite total for the purpose contemplated. The late Prof. De Morgan was the first president of the Society and always took a warm interest in its advancement. It was resolved that a subscription list should be opened in order that old pupils and members of the Society might have an opportunity of aiding in the above design. Subscriptions for this special purpose may be sent to Mr. Tucker (Hon. Sec., University College School, W.C.), or to Mr. Alfred Wills, Q.C., 12, King's Bench Walk, E.C., the Hon. Sec. to the general fund. Copies of the medal were exhibited (Profile with dates of birth and death, on the reverse, Pascal's hexagram, surrounded by the "Zodiac of Syllogisms," and the title President of the London Mathematical Society).—The following communications were made:—On differential equations, total and partial, and on a new soluble class of the first and an exceptional case of the second, by Sir J. Cockle, F.R.S.—Discussion of two double series arising from the number of terms in determinants of certain forms, by Mr. J. D. H. Dickson.—Two geometrical notes relating to surfaces of the second order, by Prof. H. J. S. Smith, F.R.S.

**Physical Society**, March 8.—Prof. W. G. Adams in the chair.—Dr. Hurst and Mr. Jacob were elected Members.—Prof. Ayrton brought forward a new theory of terrestrial magnetism originated by himself and Prof. Perry of the Imperial Engineering College, Japan. It is well known that metal cages act as screens against induction in the case of static electricity or electricity at rest, and hence Clerk Maxwell, at the British Association meeting for 1876, suggested that no earth connection was necessary for lightning conductors, since a cage would be sufficient. But dynamic electricity is different from static in this respect, and Professors Ayrton and Perry found that even a thick block of copper will not screen a coil of wire from the induction of a current flowing in a neighbouring one. Some experiments of Dr. Muirhead, not yet published, would seem to favour the view that a current is a series of intermittent changes of potential, and that the inductive effect was due to a difference in the epochs of the currents in the two coils. It was found by Helmholtz that a quantity of static electricity in mechanical