

Science News a Century Ago

The Zoological Society

At a meeting of the Zoological Society on October 23, 1838, letters from three corresponding members were read. M. Julian Desjardins, secretary of the Natural History Society of Mauritius, wrote saying that it was his intention to leave that island on January 1 of the following year for England, with a large collection of objects on natural history, many of which he intended for the Society; Colonel P. Campbell wrote from Alexandria that he had not yet succeeded in gaining any further information respecting the possibility of procuring some white elephants for the menagerie in Regent's Park, and Lieut.-Colonel Doherty, governor of Sierra Leone, wrote that he was using every exertion to procure for the Society a male and female chimpanzee.

Statue of Watt at Greenock

"THE statue of James Watt, by Sir Francis Chantrey, is now placed in the building erected for it in Union-street. It is an 8 feet figure, of statuary marble, and weighs upwards of 2 tons, and the pedestal, which is of Sicilian marble, weighs about 3 tons. On the front of the pedestal is the following inscription, from the classic pen of Lord Jeffrey: 'The inhabitants of Greenock have erected this statue to James Watt, not to extend a fame already identified with the miracles of steam, but to testify the pride and reverence with which he is remembered in the place of his nativity, and their deep sense of the great benefits his genius has conferred on mankind. Born XIX January MDCCXXXVI. Died at Heathfield in Staffordshire, August XXV, MDCCCXIX'. On the right of the pedestal is a shield containing the Arms of Greenock, and on the left strength and speed.' (*Mechanics' Magazine*, October 27, 1838.)

Airy's Compass Experiments

THROUGHOUT 1838, the Astronomer Royal, Airy, was much occupied with the improvement of compasses for iron ships, and, at the instigation of the Admiralty, in the summer made experiments in the steamer *Rainbow*. On October 5 he received an application from the owner of the iron sailing ship *Ironsides* to correct her compasses. He accordingly went to Liverpool where he, as he said, "made a very important improvement in the practical mode of performing the correction". On October 28 he wrote to his wife referring to the *Ironsides*: "I worked up the observations so much as to see that the compass disturbance is not so great as in the 'Rainbow' (35° instead of 50°), but quite enough to make the vessel worthless; and that it is quite different in direction from that in the 'Rainbow'—so that if they had stolen one of the 'Rainbow' correctors and put it into this ship it would have been worse than before." Again, on November 1, he wrote, "On Wednesday I again went to the ship and tried small alterations in the correctors: I am confident now that the thing is very near, but we are most abominably baffled by the sluggishness of the compass". Airy reported on his experiments to the Admiralty and on December 4 had an interview with Lord Minto, the First Lord of the Admiralty, and Mr. Wood (afterwards Lord Halifax), the secretary, but "they refused to sanction any reward to me". His experiments, however, led to a great extension in the building of iron vessels.

Societies and Academies

Paris

Academy of Sciences (*C.R.*, 207, 437–456, August 29, 1938)

H. LEBESGUE: Equivalence of regular polyhedra.
P. LEJAY: Method of calculation of the coefficients characterizing atmospheric obscurity. Variations of this obscurity in the neighbourhood of Shanghai.

A. ROSENBLATT: Series of univalent powers in the circle of unity.

P. LÉVY: Addition of definite aleatory variables of modulus one.

L. I. GAMA: Additivity of the *accumulatif*.

H. BIZETTE, C. F. SQUIRE and B. TSAI: The transition point λ of the magnetic susceptibility of manganous oxide. Curves are given for the susceptibility at 7,000 gauss and 24,000 gauss from about 40° K. to ordinary temperature.

MLLE. M.-L. ALLAIS: New measurements of the *K* spectra of arsenic (33), selenium (34) and bromine (35).

A. DAUVILLIER: The internal structure of the globe, and the genesis of the continents and oceans. An outline of a hypothesis, a feature of which is that the globe, while still incandescent, had five lunar seas which became the basins of the oceans. The atmosphere consisted of hydrogen and helium, and as the temperature decreased, the former reduced metallic oxides of the sial and formed water which eventually condensed and eroded away the lunar relief.

E. LEDERER and MLLE. R. GLASER: Echinochrome and spinochrome. The former, a red pigment from the blood corpuscles of a sea-urchin, has been obtained in crystalline form; while the latter, from the violet spines of a sea-urchin, is formed from it by the substitution of a hydroxyl group for a hydrogen atom.

(*C.R.*, 207, 457–468, Sept. 5, 1938).

K. MENDER: New basis for the development of the geometry of Bolyai and Lobatchefski.

R. WAVRE: A method of Volterra and a theorem of Dive relating to fluid masses.

S. NIKITINE: Experimental study of the photochromism of cyanine.

J. GAUTRELET and MLLE. E. CORTEGGIANI: Liberation of acetylcholine from the acetylcholine complex of mammalian brain by cobra venom.

G. RAMON, A. BOIVIN and R. RICHOU: Obtaining staphylococcal toxin and anatoxin in a medium of definite chemical composition. The medium does not contain peptone.

(*C.R.*, 207, 469–480, Sept. 12, 1938).

R. SALEM: Convergence of Fourier series.

F. LEJA: Approximation of continuous functions by certain harmonic functions.

R. DALMON: Study of the constitution of nitric acid by its absorption spectra.

H. GAULT and E. STECKL: Research on the condensation of acyclic aldehydes with certain compounds containing the carbonyl group. Condensation of formaldehyde and acetaldehyde with cyclohexanone.

MLLE. M. FOURCROY: In *Pinus pinea* each convergent conserves its functional individuality during reduction.

(*C.R.*, 207, 481-508, Sept. 19, 1938).

S. G. WAKSMAN and J. W. FOSTER: Effect of zinc on the plant body of *Rhizopus nigricans*, and the production of acid by that organism. In the nutrition of this organism, zinc acts as a catalyst for the production of fumaric acid.

E. BATSCHLET: Hypothesis of M. E. Lasker relating to polynomial ideals.

P. GILLIS: Equations of Haar relative to the calculus of variations.

G.-A. BOUTRY and R. ZOUCKERMANN: Use of dry [copper-copper oxide] rectifier for the production of continuous high tension [current]. An apparatus giving 10 milliamperes at 100,000 volts and utilizing this principle has been constructed. A similar machine giving the same current at 500,000 volts is under construction.

R. TREMBLOT: The quadruple star 59 Serpent. This star is usually regarded as a visual binary; spectrograms recently obtained suggest that it is a quadruple star.

R. DE MALLEMANN and F. SUHNER: Magnetic rotatory power of hydrofluoric acid.

M. ROSSIGNOL and A. RIBOLLEAU: Action of resorcinol on the bichlorhydrates of the quinine alkaloids.

A. BOUTILLIER: Irregular dilatometric anomalies in the copper aluminium alloys in the region of 12 to 100 aluminium.

J. VIRET: Age of the lignitic clays of Nassiet, near Amou (Landes).

G. DUBOIS and M. LLE. C. DUBOIS: Some peat beds of Haute Tarentaise.

D. LEROUX: Influence of time and variations of temperature on the content of agricultural soils of water-soluble fertilizing principles.

G. BRONSTEIN: Mechanism of the formation of the polyp of *Membranipora membranacea* L.

Brussels

Royal Academy (*Bull. Classe Sci.*, 24, Nos. 6-7, 1938).

C. DE LA VALLÉE POUSSIN: Irregular points. Determination of masses from potentials.

L. GODEAUX: Unit points of the second kind of cyclic involutions belonging to an algebraic variety.

O. DONY-HÉNAULT: Discovery of the thermal metallurgy of zinc in Belgium at the beginning of the nineteenth century. Forgotten documents.

V. WILLEM: Respiratory movements of the frog. A refutation of the conclusions of C. P. Gnanamuthu.

E. DE WILDEMAN: Movements during their development of certain organs of higher plants.

M. BRELOT: Subharmonic functions and balayage.

P. DEFRISE: Curves possessing a hyper-elliptic, cyclic involution without multiple points.

A. FESTAETS: Stroobant's star stream.

R. COUTREZ: Dynamics of spiral nebulae.

R. DEFAY: Two aspects of the second law of thermodynamics in systems having a non-uniform temperature (1) and (2).

G. PETIAU: Eigen functions of the fundamental operators of Dirac's theory of the electron.

J. BRACHET: Localization of proteins containing the sulphhydryl group during growth of amphibians.

R. VANDENDRIES: Homothallism in *Octajuga*.

L. DERWIDUÉ: Fundamental elements of the birational transformations in four-dimensional space.

Z. M. BACQ: Distribution of acetylcholine in the potato plant.

Cape Town

Royal Society of South Africa, August 17.

P. W. LAIDLER: The morphology and classification of ground and polished stone artefacts of South African origin.

J. C. MIDDLETON SHAW: Growth changes and variations in wart-hog third molars, and their palaeontological importance.

H. ZWARENSTEIN: Seasonal variations in sensitivity to progesterone-induced ovulation.

H. A. SHAPIRO: The biological standardization of certain steroids. (1) Seasonal changes in response of *Xenopus laevis* to methyl testosterone. Methyl testosterone can induce ovulation in *Xenopus laevis*. The ovulation response of the animals to different doses of this steroid was investigated in July 1937 and in January, April and August 1938. At least forty animals were injected for each dose-level. The dose in γ was plotted against the response per cent.

September 21.

W. G. SHARPLES: A *coup-de-poing* factory site in the Nieuwveld.

RAYMOND A. DART: Population fluctuation over 7,000 years in Egypt.

Moscow

Academy of Sciences (*C.R.*, 19, No. 8, 1938).

I. D. PAPANIN: Conquest of the Pole.

P. P. SHIRSHOV: Oceanological observations.

E. K. FEDOROV: Geophysical and astronomical observations.

W. N. SHOULEJKIN: The drift of ice-fields.

S. P. KACHURIN: Frozen grounds recede.

N. E. KOTCHIN: Movement of a heavy liquid in a channel with a step on its bottom.

B. G. FESSENKOFF: Astrophysics at the North Pole.

A. A. GRIGOREV: Main physico-geographical features of land in the arctic belt.

A. D. ARKHANGELSKY: Principal features of the tectonics of the northern part of the Atlantic Ocean and the Arctic.

S. L. KUSHEV and J. A. LIVEROVSKY: Principal points in the evolution of the physico-geographical conditions prevailing in the central depression of Kamchatka during the Quaternary.

A. E. FERSMAN: Geochemistry and mineralogy of polar regions.

V. I. VERNADSKY: Some current problems in the study of ice of the arctic regions.

M. V. KLENOVA: Colouring of the Polar Sea sediments.

N. I. TCHIGIRIN: Concentration of calcium carbonate in the waters of the polar basin.

S. W. BRUJEVICZ: Oxidation-reduction and the pH of sediments of the Barentz and Kara Seas.

B. G. BOGOROV: Biological seasons of the arctic seas.

P. I. USACHEV: Biological analysis of ice-floes.

A. A. EGOBOVA: Thermophile bacteria in the Arctic.

V. S. BUTKEWITCH: Bacteria in the seas of the high-latitude arctic regions.

P. J. SCHMIDT: Three new deep-sea fishes from the Okhotsk Sea.