

Science News a Century Ago

Methods of Using the Theodolite

BEFORE the Society of Arts for Scotland, on November 28, 1838, Edward Sang, a civil engineer and machine maker of Edinburgh, read a "Notice of an Erroneous Method of using the Theodolite with a Strict Analysis of Various Arrangement of Readers". When conversing with one who had been engaged on the Ordnance Survey, Sang learned of a peculiar arrangement of the readers which existed in some of the instruments used. Expressing the opinion that the method was erroneous, he developed an analysis and submitted it that it might help to remove that blind reliance on the authority of names which was too prevalent. The errors, he said, would not visibly affect maps of counties but they were high enough to render inaccurate determinations of the degree of meridian. In the course of his paper, he said: "Mere opinion has too long held the place of accurate study in the construction of angular instruments. In particular, the question whether the method of repetition or that of frequent readings, be preferable, had been discussed with almost national warmth. Repeated observations were French, single observations were English, as if there be national scientific creeds."

The Botanical Society

At the anniversary meeting of the Botanical Society, held on November 29, 1838, the report of the council showed that 48 members had been elected since the last anniversary and the total number was 98. The number of British plants received amounted to 18,592 specimens, including 1,050 species. The foreign plants received amounted to about 10,000 specimens including about 4,000 species. The distribution of British plants, it was stated, would take place in January, when each member would receive such of his desiderata as were in the herbarium, in proportion to his contribution.

The Royal Society

At the anniversary meeting of the Royal Society on November 30, 1838, the Marquis of Northampton was elected president, while Sir John William Lubbock was elected treasurer, Roget and Christie, secretaries and Capt. W. H. Smyth, foreign secretary. The Copley Medal was awarded to Faraday, the Rumford Medal to J. D. Forbes, and the Royal Medals to H. Fox Talbot and Thomas Graham.

Macroscolides

"THE curious insectivorous mammal called macroscolides," said the *Athenæum* of December 1, 1838, "which inhabits the rocky mountains of the western part of the district of Algeria, has recently been observed by M. Wagner. It inhabits the crevices of rocks, and makes its bed in the underwood of the dwarf palm; it eats the larvæ of insects, grasshoppers and terrestrial mollusca, introducing its rostrum into the snail shells before the animal has time to retreat. It is remarkably gentle, only expressing uneasiness by a low sound, something like a sigh. It raises itself on its hind legs when it hears any sudden noise, and also leaps upon its prey, but never walks solely on two legs like the Jerbra. It disappears in the rainy season, and during the great heat."

Societies and Academies

Paris

Academy of Sciences (*C.R.*, 207, 693-752, Oct. 24, 1938).

D. RIABOUCHINSKY: Supersonic analogy of the electromagnetic field.

L. ROY: Analogy between the forces exerted on currents and magnetic forces.

J. CABANNES: Water of crystallization of gypsum. Examination of a single crystal in ordinary light shows valency oscillations of the molecule H_2O without the complications of liquid water.

M. LUGEON: Geological observations in Antolia.

W. DEBLIN: Kolmogoroff's equation.

G. TZITZEICA: Certain deformations of superior order.

G. PÓLYA: Indetermination of a problem akin to the problem of moments.

S. BERGMANN and M. SCHIFFER: Bounded families of functions of two complex variables in domains with a *surface remarquable*.

G. ROUX: Measurements of the intensity of gravity in Morocco. A Holweck-Lejay pendulum was used.

O. SING-MO: A theorem of Lord Rayleigh [relating to the stability of fluid movements].

L. REINGOLD: Energy study of combustion at constant volume: imaginary and real combustion.

T. DE DONDER and J. GÉHÉNIAT: Internal tensions and the dynamics of the radiating electron.

P. BARCHEWITZ and G. COSTEANU: Absorption spectra in the very near infra-red (6,000-10,000 Å.) of ammonium salts.

B. KWAL: Initiation of an ephemeral electric discharge by ionizing radiation in tubes with plane parallel electrodes.

G. BROOKS: Relation between fluorescence and the chemical constitution of laccol, moreacol and their derivatives. These polyphenols represent a new type of fluorescent body in which fluorescence is connected with the double bond of the C_{16} side-chain.

MME. M. FREYMANN, R. FREYMANN and Y. TA: Absorption spectra in the near infra-red and Raman spectra of ammonium salts.

A. LASSIEUR: Apparatus for the microdosage of carbon in ferrous metallurgical products.

C.-K. LIN: Structure and absorption of benzoylbenzoic acid and its derivatives.

R. DUSCHINSKY: Rotatory power of citrulline; synthesis of the optically active product.

J. FEJFER and M. JAHODA: Double crystal spectrometer with photographic registration, and the measurement of the imperfection of crystals.

J.-P. and P. DESTOMBES: The Albian of Pays de Bray.

P. LESAGE: Researches on the inheritance of acquired physiological characters: precocity. Continuation of experiments with *Lepidium sativum* which maintain early development acquired at a higher temperature when grown at a lower temperature. Similar results were obtained with a dwarf pea.

Mlle. V. KOVARSKY: Is it necessary to re-educate left-handed persons? Examination of 2,500 children leads to the view that left-handedness is a natural phenomenon which does not imply any inferiority, and attempts should not be made to enforce right-handedness.