

Societies and Academies

Paris

Academy of Sciences, September 21 (*C.R.*, 203, 549-572).

JACQUES DE LAPPARENT: The generating media of montmorillonite and of sepiolite. Deposits of montmorillonite should be classed as pyroclastic rocks, arising from the devitrification of a magnesian glass. Sepiolite can be produced under analogous conditions.

DOUCHAN AVSEC: The experimental verification of the fact, predicted by Lord Rayleigh's theory, of the existence of the stable preconvective regime and on the mechanism of the appearance of convective currents in a gaseous layer, heated uniformly from below.

ROGER TOURNAY: The existence of zinc metaborate. The author has been unable to obtain the zinc metaborate, ZnB_2O_4 , of De Carli. The devitrification of the equimolecular mixture always gives two layers, one of which is formed by the borate $2B_2O_3 \cdot 3ZnO$.

MARCEL PRETTE: The influence of a chemically inert gas on the velocity of the chain reaction of mixtures of normal pentane and oxygen. Study of the influence of the addition of nitrogen on the oxidation and inflammation between 250° C. and 350° C. of mixtures of normal pentane and oxygen.

PIERRE TRUNEL: The electric moments of some fatty diamines.

ANDRÉ VIALARD-GOUDOU: The oxidation of some organic substances by perchloric acid. From the experiments described it is concluded that the attack of organic materials by perchloric acid is due to the direct action of the acid itself and not to that of its decomposition products.

JOSEPH BIECHLER: The organic tricyanomelamines and their relations with the polymerized dicyanimides.

RAYMOND GULLEMET: The aphids of wheat and the effect of their attacks.

Copenhagen

Royal Danish Academy of Sciences and Letters,
January 24.

NIELS BOHR: Properties and constitution of atomic nuclei. The fundamental discoveries of recent years regarding the transmutation of atomic nuclei, have exhibited the extraordinary facility with which nuclei react with each other as soon as direct contact is established. This circumstance may be brought into intimate connexion with the general properties of nuclei, when it discloses a characteristic difference between the problems of the ordinary atomic constitution and the structure of nuclei.

February 7.

L. S. FRIDERICIA: Influence of a vitamin deficiency on the rate of growth of the incisors of rats.

February 21.

HARALD BOHR: A theorem concerning stable motions in the plane.

ELIS STRÖMGREN: Ole Römer's meridian observations and the so-called Mayer formula for the correction of the observed time of transit for instrumental errors. Most of our knowledge of Ole

Römer's work as a reformer of astronomy is derived from the work "Basis Astronomiæ", edited by Römer's pupil Peder Horrebow in 1735. During recent years, with the aid of Dr. Ræder, a series of chapters of this historically important work has been translated into Danish. These translations have been published in *Nordisk Astronomisk Tidsskrift* and partly also in German in *Die Sterne*. The work is being continued, and the next issue of the *Tidsskrift* will contain an exposition of the question of Römer's meridian observations and of the so-called Mayer formula, which, as has been previously proved by the aid of the Römerian "Adversaria" edited by the Royal Danish Academy, is in reality due to Ole Römer and not to Tobias Mayer.

March 6.

ØJVIND WINGE: Investigations on linkage in *Pisum*. An attempt is made to map the genes of *Pisum*, on the basis of crossing-experiments involving 17 genes, and the experiments of other investigators. In all, 37 genes are considered. They are provisionally arranged in eight linkage groups, while the chromosome number is only 7. The inheritance of seed weight has been studied. It is found probable that the genes for seed weight generally act upon the linear size of the seed (third root of its weight). Instances of dominance for high as well as for low seed size are also demonstrated. The genes I (yellow cotyledon) and P1 (dark hilum) show linkage to genes for seed size.

KNUD JESSEN: Some new archaeological datings in Danish pollen diagrams. Some archaeological finds from the passage grave period of the younger stone age and from the Celtic iron age on the Danish isles of Langeland and Als afford an opportunity of fixing the age partly of Zone VIII in the pollen diagrams and partly of a phase in the immigration history of the beech in the southern part of Denmark.

Tokyo

Imperial Academy, July 13 (*Proc.*, 12, 179-204).

T. NAKAYAMA: Note on the sum and intersection of two ideals in an algebra.

M. MORIYA: Division algebras over a p-ad manifold of an infinite algebraic manifold.

M. HASEGAWA: A statistical study of the type of diurnal variations of terrestrial magnetism on quiet days.

Y. ŌSHIMA: Chemical studies on the tannin substance of Formosan tea leaves. Two crystalline catechins, an amorphous tannin and gallic acid have been isolated and their constitutions determined.

T. YOSHIDA: The reaction between ammonia and carbon dioxide. The reaction $2NH_3 + CO_2 = CO(NH_2)(ONH_2)$ proceeds only in the presence of water. It is a consecutive reaction of the second order, involving the formation of the intermediate complex $NH_3 \cdot H_2O$, and has a negative temperature coefficient.

C. MORIYA: Notes on the germicidal properties of the soil flat-worm *Rhabditis pellio* Schneider.

K. KIKUCHI: A new species of *Diaptomus* from Formosa.

S. OKUDA: Description of a new non-motile polychaete, *Thoracophelia ezoensis* n.sp.

S. HIRAYAMA: Germination of pollen obtained from mosaic tobacco plants. Mosaic virus is found to be without effect on the germination.