

$C_7H_8N_4O_3$, and therefore most intimately allied to theobromine and caffeine.—M. Tschermak presented a paper containing observations on a meteoric iron from the desert of Atacama in Chili. It is a large shield-shaped mass, weighing 103 pounds, and when broken not only shows the usual figures after treatment with acid, but even before the application of acid thin lamellæ of triolite are recognisable, inserted parallel to the hexahedral surfaces and interrupting the octahedral texture. A similar phenomenon is presented by a meteoric iron from Jewell Hill, Madison County, North Carolina.

February 9.—A memoir by Prof. Linnemann, entitled "A Contribution to the further knowledge of Pinakone," was read, and its author claimed the priority in the discovery that formaldehyde is produced by the dry distillation of formiate of lime, and that from it methylic alcohol and other compounds may be obtained. A memoir on the employment of an electrometer for the stroboscopic determination of the elevation of notes, by M. A. von Obermayer, was read.—A paper by Prof. A. Weiss, on the structure and nature of the Diatomaceæ, was communicated. The author stated that the silica of the Diatomacean frustule polarises light, that the Diatomaceæ are composed of innumerable, minute, but perfectly individualised, cells, and that it is to these that the markings of the silicious shells are due.—Dr. E. Klein presented a memoir on the median germ lamella, and its relation to the development of the first blood-vessels and blood corpuscles in the embryo of the fowl, and communicated a paper on the finer nerves of the vaginal mucous membrane, by Dr. A. Chrschtschovitch of Kasan.—Dr. A. Schrauf presented a second series of his mineralogical observations, in which he noticed certain forms of crystals of gypsum, crystals of argentite, the properties and paragenetic relations of the Azorean azorite and pyrhrite, a new mineral from Leadhills, to which he gave the name of eosite, and the characters of vanadite, dechenite, and descloizite.—Dr. S. Stern read a memoir on the theory of the resonance of solid bodies, with reference to the accompanying vibration of the air; and Prof. Reuss presented the first of a series of memoirs by Dr. Manzoni, on Mediterranean Bryozoa. In this the author notices sixteen species (one *Hippothoa*, one *Membranipora*, and fourteen *Lepralie*).

February 16.—A memoir by Dr. U. R. von Jeparovich, on diaphorite and freieslebenite was read. The author stated that two species, one monoclinic, the other rhombic, have been included under the name of freieslebenite. Their composition is identical, but they differ in density. For the rhombic species he proposes the name of diaphorite.—A memoir was also read on the theory of gases by Prof. L. Boltzmann.—Prof. Reuss communicated a memoir on some fossil star-fishes from the Rhenish grauwacke, by Dr. S. Simonowitch. Four new species were described, namely, *Asterias acuminatus*, *Aspidosoma petaloides*, and two species forming a new genus, *Xenaster*, *X. margaritatus* and *simplex*.—Prof. von Oppolzer reported upon the calculations undertaken by him for the re-discovery of the lost planet (62) Erato.—Prof. F. Simony made some remarks on the Lacustrine erosion of shore-rocks belonging to various limestone formations.

I. R. Geological Institution, March 28.—Theodor Petersen read a paper on "Cœruleolactin." By this name he designates a new phosphatic mineral, which has been found in the mine of Rindsberg, near Katzenellenbogen (Nassau), in a layer of brown iron ore. It must be placed between Kolaite and Wawellite. The specific gravity is 2.59, the hardness 5.—Variscite. This mineral described by Breithaupt from Plauin had never been analysed. Petersen determined its sp. gr. to be 2.408.—Diabase from Nassau. Exact inquiries have proved that diabase very often contains small quantities of metallic compounds, and is probably the original source of different strata of ores. The felspar in diabase is usually oligoclase, and not as had been generally supposed labradorite.—F. Karrer and Th. Fuchs on the "Relations between the different strata of the marine deposits of the Miocene Vienna Basin." From many new sections which they obtained along the aqueduct now in construction between Vienna and Gloggnitz, the authors endeavour to show that the clay of Baden and that of Geinfahm, the sandstones of Pötzleinsdorf, the limestones (leithakalk), &c., are not deposits of different geological ages, as had hitherto been generally supposed, but represent different facies of the same age, and like the zones of living organisms in the seas of our day, pass into each other without any exact limit.—M. F. Posepny spoke of the penetration of Klastic masses through eruptive or sedi-

mentary rocks. The so-called Glam in the Transylvanian mining districts is an evident example of this phenomenon, and may be compared with the dowkies in N.W. England, and the Gangthonschiefer in the mines of the Harz. An exact study of the phenomenon showed that it originated from very different causes. Sometimes the klastic masses were formed by mechanical friction, in other cases they have been successively deposited by water, sometimes they are masses of mud and pebbles, which penetrated in open veins or cavities of the rock.

BOOKS RECEIVED

ENGLISH.—British Insects; their Form, Structure, and Habits: E. F. Staveley (L. Reeve and Co.).—On Intelligence: H. Paine, translated by T. D. Haye, part I. (L. Reeve and Co.).—The Bijou Gazetteer of the World: W. H. Rosser (Warne and Co.)

AMERICAN AND FOREIGN.—A Synopsis of the Family Unionidæ: Dr. Isaac Lea, New York.—(Through Williams and Norgate).—Lehrbuch der Spärischen Astronomie: Dr. F. Brunow.—Mémoires de la Société de Physique et d'Histoire Naturelle de Genève, tome XX.

DIARY

THURSDAY, APRIL 13.

MATHEMATICAL SOCIETY, at 8.—On Diagrams of the Stresses in Warren and Lattice Girders: Prof. Crofton, F.R.S.—On Quartic Surfaces: Prof. Cayley, F.R.S.

FRIDAY, APRIL 14.

ASTRONOMICAL SOCIETY, at 8.
QUEKETT MICROSCOPICAL CLUB, at 8.

SATURDAY, APRIL 15.

ROYAL SCHOOL OF MINES, at 8.—Geology: Dr. Cobbold.

MONDAY, APRIL 17.

ANTHROPOLOGICAL INSTITUTE, at 8.—The Position of the Australian Languages: Dr. W. H. J. Bleek.—Comparative Table of the Australian Languages: Rev. G. Taplin.—Mental Characteristics of Primitive Man as exhibited in the Aborigines of Australia: Mr. Wake.

TUESDAY, APRIL 18.

STATISTICAL SOCIETY, at 7.45.
ZOOLOGICAL SOCIETY, at 9.—On the Dodo, Part II.;—Notes on the Articulated Skeleton of the Dodo (*Didus ineptus*) in the British Museum.—On Japanese recent Brachiopoda: Mr. Thomas Davidson.
ROYAL INSTITUTION, at 3.—On the Geology of Devonshire, especially of the New Red Sandstone: William Pengelly, F.R.S.

WEDNESDAY, APRIL 19.

METEOROLOGICAL SOCIETY, at 7.—On Deep-sea Thermometers: Staff-Commander John E. Davis, R.N.
SOCIETY OF ARTS, at 8.—On the Economical Construction of Workmen's Dwellings: Dr. J. H. Hallard.

THURSDAY, APRIL 20.

ROYAL SOCIETY, at 8.30.
SOCIETY OF ANTIQUARIES, at 8.30.
CHEMICAL SOCIETY, at 8.
LINNEAN SOCIETY, at 8.
ROYAL INSTITUTION, at 3.—On Sound: Prof. Tyndall.

CONTENTS

	PAGE
THE PROPOSED SCHOOL OF PHYSICAL SCIENCE AT NEWCASTLE-UPON-TYNE	461
THE UTILISATION OF NATURAL HISTORY MUSEUMS FOR SCIENTIFIC INSTRUCTION IN GERMANY.—II.	462
THE DESCENT OF MAN.—II. By Dr. P. H. PVE-SMITH. (<i>With Illustrations.</i>)	463
HELMHOLTZ'S TONEMPFINDUNGEN. By SEDLEY TAYLOR	465
OUR BOOK SHELF	466
LETTERS TO THE EDITOR:—	
Pangenesis.—J. MARSHALL, F.R.S.	467
The Spectra of Aurora and Corona.—H. R. PROCTER	468
The Aurora.—T. H. WALLER	468
Solar Science at the Pleasure of Secret Referees.—Prof. C. PIAZZI SMYTH, F.R.S.	468
Ocean Currents.—J. J. MURPHY, F.G.S.	469
Sun Spots.—W. H. WALENN, F.C.S.	469
Echoes of the Royal Albert Hall.—W. MATTIEU WILLIAMS, F.C.S.	469
Gun Dammur.—H. POCKLINGTON.	470
THE IRON AND STEEL INSTITUTE	470
NOTES	471
EXAMPLES OF THE PERFORMANCE OF THE ELECTRO-MAGNETIC ENGINE. By Dr. J. P. JOULE, F.R.S.	474
OBJECT TEACHING AND SCIENCE IN AMERICA	475
TRANSMISSION THROUGH PNEUMATIC TUBES. By ROBERT SABINE, C.E.	476
SCIENTIFIC SERIALS	476
SOCIETIES AND ACADEMIES	477
BOOKS RECEIVED	480
DIARY	480