

the atmosphere, that later in the day we traced the smoke from the steamer's funnel for a distance of nearly fifteen miles.

The accompanying woodcut is from a sketch which I made on board the vessel at the time, and I doubt not will be interesting to your readers.

SCIENTIFIC SERIALS

Zeitschrift der Oesterreichischen Gesellschaft für Meteorologie, August 15.—This number contains a description, with diagrams, of Theorell's printing meteorograph, a very ingenious instrument, likely to be of much service in meteorology. It differs from other meteorographs in this, that instead of tracing curves, which have to be afterwards translated into figures, it prints the figures at once, thus saving much future trouble. One of the three already made has been in use at the Royal Observatory of Vienna since September 1874, and has been so adapted as to record, by electric communication, the state of the following instruments, placed in any situation: anemometer, vane, wet and dry thermometers, and barometer, once in every quarter of an hour. The moving force is a galvanic current connected with a clock. Dr. Theorell's account of the instrument referring to the plates will be continued in the next number of the *Zeitschrift*. In the "Kleinere Mittheilungen" Prof. Hoffmann, of Giessen, compares the sum of the daily maxima of solar radiation in several years with the time of the flowering of certain plants. His results in 1875 bear out his expectations derived from four previous years' observations, 1866-69, and in certain cases his forecast of the time of flowering was nearly correct.—There is besides a paper by Dr. Schreiber on a new registering air thermometer; also a letter from Mr. Ferrel on the theory of storms.

Jahrbuch der Kais.-kön. Geologischen Reichs-Anstalt, Band 24, Heft iv.—Nearly all this part of the *Jahrbuch* is occupied by the second part of Dr. Guido Stache's elaborate memoir on the Palæozoic regions of the eastern Alps. In this part he summarises all that is known respecting the geology of the western slopes (Cadoric Alps) of the area embraced in his review.—The only other paper is one by M. V. Lipold—"Explanation of the geological map of the environs of Idria, in Carniola." A coloured map and plate of horizontal sections accompany the paper.—In Dr. Tschermak's "Mineralogische Mittheilungen" Dr. R. v. Drasche concludes his paper, entitled "Petrographic-geological Observations on the West Coast of Spitzbergen." The editor describes the *Labradorite* of Verespatak; and a notice of two other minerals, *Fanatinite* and *Wapplerite*, is given by A. Frenzel.

The Boletín de la Academia Nacional de Ciencias exactas en la Universidad de Cordova (South America), Entrega iii., 1874, contains some papers of interest. We note the following:—On the chemical composition of the water of the La Plata River, by Señor Kyle.—On the formation of saline deposits, by D. Fred. Schickendanz.—On the chemical and physical action which took place in the formation of the pampas of Cordova, by Dr. A. Doering.—Critical notices on some entomological publications, by Dr. D. C. Berg.

The Annali di Chimica applicata alla Medicina (August) contain the following papers of note:—On salicylic acid, by Dr. D. Gibertini.—Note on chloral-santonine, by C. Pavesi.—On the health of smokers, by Dr. Bertherand.—On the substitution of iron shot for lead shot for the purpose of cleaning bottles in hospitals, barracks, &c., by Sig. Fordos.—On the comparison of human milk with cows' milk with regard to the nutrition of infants, by Ph. Biedert.—A number of papers of minor interest.

SOCIETIES AND ACADEMIES

VIENNA

Imperial Academy of Sciences, July 15.—On the solubility of calcic chloride in water, by H. Hammer.—On the decrease in the temperature of the maximum of density of water through pressure, by C. Puschl.—On the system of vessels of the tube-bones, with notes on the structure and development of bones, by C. Langer.—Researches on the capacity of gas-mixtures for conducting heat, by J. Plank.—On the theory of the composite eyes and the seeing of motions, by Dr. S. Exner.—On the graduation of induction apparatus, by Dr. E. Fleischl.—Researches on the motion of the imbibition-

water in wood and in the membrane of the vegetable cell, by Prof. Wiesner.—On the morphology and biology of Lenticellæ, by G. Haberlandt.—Meteorological observations made at Hohe Warte, near Vienna.

July 22.—(Last meeting before holidays).—Remarks on the variations in the velocity of light passing through quartz which is subjected to pressure, by J. Merten.—The Crustacea, Pygogonida, and Tunicata of the Austro-Hungarian North Polar Expedition, by C. Heller.—On the finer structure of bone substance, by Prof. von Ebner.—On the construction of the reflection goniometer, by Prof. von Lang.—(The next meeting will take place on Oct. 14.)

K.K. Geologische Reichsanstalt, May 31.—Report from Dr. O. Lenz on his travels in Africa.—On the occurrence of marine petrefacts in the Ostrau layers, by D. Stur.—On the coal deposits of Drenovec, by Dr. R. Hörnes.

June 30.—On the Island of Kos, by Dr. M. Neumayer.—On fresh-water strata amongst the Sarmatic deposits near the Sea of Marmora, by Dr. R. Hörnes.—On the landslip near Unterstein, on the Salzburg-Tyrol Railway, by H. Wolf.

July 31.—On some fossil plants from India, by O. Feistmantel.—On the formation of the terra rossa, by Th. Fuchs.—On mountain folds, by the same.—On secondary infiltrations of carbonate of lime into loose and porous formations, by the same.—Report by D. Stur on his travels in Silesia.—On the fauna of the Schliers of Ottang, in Upper Austria, by R. Hörnes.

STOCKHOLM

Kongl. Vetenskaps Akademiens Förhandlingar, March 10.—The following papers were read:—Genera et species Lithobioidarium dispositi, by A. Stuxberg.—Review of all Lithobioidæ hitherto known in North America, by the same.—Report on the bryological researches in Norway during 1874, by C. Hartman.—On the moss flora of Lulea (Lappmark), by P. J. Hellbom.—On the observation of two crossing rainbows, by O. Gumaelius, with some remarks on the same, by R. Rubenson.

April 14.—On the marine Entomostraca collected during the Swedish Scientific Exhibition to Spitzbergen, by W. Liljeborg.—On the formation of the smaller bays, of the river valleys, of lakes, and of sea banks, by A. Helland.

GÖTTINGEN

Nachrichten von der königl. Gesellschaft der Wissenschaften, Aug. 7.—The following papers were read:—On lens fibres, by Prof. J. Henle.—On the linear differential equations of the second order which possess algebraic integrals, and on a new application of the "invariant" theory, by Prof. L. Fuchs.

CONTENTS

	PAGE
THE SCIENCE COMMISSION REPORT ON THE ADVANCEMENT OF SCIENCE	459
THE GOVERNMENT RESEARCHES IN PATHOLOGY AND MEDICINE	470
THE INFLUENCE OF THE PRESSURE OF THE ATMOSPHERE ON HUMAN LIFE	472
OUR BOOK SHELF:—	
The Royal Tiger of Bengal; his Life and Death	474
Newton's Introduction to Animal Physiology	474
Abstracts and Results of Magnetical and Meteorological Observations at the Magnetic Observatory, Toronto, from 1841 to 1871	474
LETTERS TO THE EDITOR:—	
" Tone " and " Overtone ".—ALEXANDER J. ELLIS	475
Colours of Heated Metals.—Prof. A. S. HERSCHEL	475
Changes of Level in the Island of Savaii.—RICHARD WEBB	476
Origin of the Numerals.—W. DONISTHORPE (<i>With Illustration</i>)	476
Pugnacity of Rabbits and Hares.—G. J. ROMANES	476
OUR ASTRONOMICAL COLUMN:—	
" 35 Camelopardi," B.A.C. 1924	476
The Double Star Σ 2120	477
The Minor Planets	477
The August Meteors	477
THE CLINICAL LABORATORIES ANNEXED TO THE PARIS HOSPITALS	477
NOTE ON HÆMATITE INDIAN AXES FROM WEST VIRGINIA, U.S.A. By Dr. CHARLES C. ABBOTT (<i>With Illustration</i>)	478
DOHRN ON THE ORIGIN OF THE VERTEBRATA AND ON THE PRINCIPLE OF THE SUCCESSION OF FUNCTIONS. By E. R. L.	479
THE NEW METAL GALLIUM, By R. MELDOLA	481
UNPUBLISHED LETTERS OF GILBERT WHITE	481
NOTES	482
SOME LECTURE NOTES UPON METEORITES	415
OBSERVATIONS ON A REMARKABLE FORMATION OF CLOUD AT THE ISLE OF SKYE. By THOMAS STEVENSON, F.R.S.E., &c. (<i>With Illustration</i>)	487
SCIENTIFIC SERIALS	488
SOCIETIES AND ACADEMIES	488

ERRATA.—Vol. xii. p. 455, col. 1, line 8 from bottom, for "time t " read "very small time t ." P. 463, col. 1, line 21 from bottom, for " $2_n + 2$ " read " $2_n + 2$."