

reflected impulse which returns from the open end of the pipe according to Bernouilli's theory, and that these elementary impulses, coming from different distances, may be altogether equivalent to a single reflected impulse from a point at a little distance from the end of the pipe. It is not a little interesting that a confirmation of this little-known fact should have come from so far off, and have been obtained by such simple experimental means.

W. H. STONE

14, Dean's Yard, S.W., January 8

SCIENTIFIC SERIALS

Annalen der Physik und Chemie, No. 13, 1880.—On currents of motion in polarised platina, by H. Helmholtz.—On the course of polarisation currents, by A. Witkowski.—On the changes of form and volume of dielectric bodies wrought by electricity, by W. C. Röntgen.—On Lichtenberg figures and electric valves, by W. von Bezold.—On the electromotive forces of some zinc-copper elements, by Fr. Fuchs.—On the measurement of electric conductivities, by G. Kirchhoff.—Some experiments on induction in conductors, by F. Himstedt.—On the discharge of electricity in rarefied gases, by E. Goldstein.—On the production of harmonic tones through vibrations of a fundamental tone, by R. Koenig.—Researches on the law of dispersion, by O. Hesse.—On fluorescence, by S. Lamansky.—On the law of heat-radiation and the absolute emission-power of glass, by L. Graetz.—On annealing of steel and measurement of its hardness, by V. Strouhal and C. Barus.—On the height of the atmosphere (continued), by A. Ritter.—Researches on the volume-constitution of liquid compounds, by H. Schröder.—On variations of the sea-surface by reason of geological changes, by K. Zöppritsch.—On the theory of Volta's fundamental experiment, by F. Exner.—The theory of the galvanic element, by the same.—Note on the quantities of heat carried away by currents of an unequally heated liquid, by A. Oberbeck.—Note on Herr Siemens' recent paper on electric conductivity of carbon and temperature, by J. Borgmann.

No. 1, 1881.—New researches on Newton's rings, by L. Sohncke and A. Wangerin.—On vapour tension of homologous esters, by O. Schumann.—On the elasticity and the electric conductivity of carbon, by W. Beetz.—Thermal theory of the galvanic current, by J. L. Hoorweg.—On electric light phenomena in gases, by E. Goldstein.—On the phenomena of glow at metallic electrodes within a hydrogen atmosphere of varying pressure, by O. Lohse.—Note on Riecke's paper on the electric elementary laws, by H. Lorberg.—Clausius' law and the motion of the earth in space, by J. Fröhlich.—On the application of the proposition of the virial in the kinetic theory of gases, by H. A. Lorentz.—On the influence of expansion of molecules on the pressure of a gas, by D. J. Korteweg.—On the velocity of light in various quartz surfaces, by W. Hallock.—Reply to Herr Dorn, by E. Edlund.—On tones arising through intermittent radiation on a gas, by W. C. Röntgen.—On phenomena of diffraction before the border of a screen, by O. Tumlirz.

THE *Journal of Physiology*, vol. iii. No. 2, January, contains: Dr. S. H. Vines, on the proteid substances contained in the seeds of plants. To this important paper is appended a classification of aleurone grains and a classified list of the plants whose seeds were examined.—Dr. Sydney Ringer, the influence of season and of temperature on the action and on the antagonisms of drugs.—Dr. C. S. Roy, the elastic properties of the arterial wall, with plates v.-vii.—Dr. J. Ott, on crossed hyperæsthesia, and notes on inhibition.

Journal of the Royal Microscopical Society, ser. ii. vol. i. part 1, February, contains: Dr. C. T. Hudson, on *Æcistes janus* and *Floscularia trifolium*, two new species of Rotifers (plates 1 and 2), and the usual summary of current researches relating to zoology and botany, microscopy, &c.—The minutes of the proceedings of the Society are given at the end of the part.

Journal of the Franklin Institute, February.—On the revolution of a fluid ellipsoid with three unequal axes, by T. Craig.—A newly-discovered property of the ellipse, and its application to the "oval chuck," by F. M. Leavitt.—A simple-transmission-dynamometer, by E. Thomson.—Methods for judging of the wholesomeness of drinking-water, by R. Haines.—The basic dephosphorising process, by J. Reece.—Riehla Brothers' improved vertical testing machine, 50,000 pounds capacity.

THE *American Naturalist*, February, 1881.—L. F. Ward, incomplete adaptation as illustrated by the history of sex in plants.—Sarah P. Monks, a partial biography of the green lizard.—G. K. Morris, a new leaf-cutting ant.—S. V. Clevenger, comparative neurology (continued).—Justin Spaulding, the bee's tongue, and glands connected with it.—Wm. E. Doyle, history of the buffalo.

Revue Internationale des Sciences biologiques, January 15, 1881.—Prof. Hanstein, protoplasm considered as the basis of animal and vegetable life.—D. Debierre, an introduction to the earth's history.—Ch. Letourneau, the ethics of egoism (Schopenhauer's "Aphorisms on Moderation in Life").—J. L. de Lanessan, digestion in vegetables.

The Proceedings of the Linnean Society of New South Wales, vol. iv. part 4, Sydney, 1880.—John Brazier, synonymy of, and remarks upon, Port Jackson, New Caledonian, and other shells, with their distribution; list of land-shells found on Thursday Island, with description of new species; Port Jackson and New South Wales brachiopods; mollusca recently dredged at Port Jackson Heads; on the locality of *Oniscia ponderosa*.—E. P. Ramsay, on an undetermined species of Lalage; contribution to the zoology of New Guinea, part 6.—W. A. Haswell, supplementary note on Australian Leucosiidae; on Australian *Brachyura Oxyrhyncha*, plates 25, 27.—C. Jenkins, on the geology of Yass Plains (3).—W. Macleay, on the Mugilidae of Australia.—C. S. Wilkinson, on the Abercrombie caves.

Journal of the Asiatic Society of Bengal, vol. xlix. part 2, No. 2, August 30, 1880, contains:—Alexander Pedler, on the past and present water supplies of Calcutta.—R. Lydekker, on the zoological affinities of the bharal or blue sheep of Tibet. While forming a very closely connecting link between the sheep and the goat; the author thinks it cannot be referred to either of the genera *Ovis* or *Capra*, and that Hodgson's genus *Pseudovis* should be retained for its reception.—J. Wood-Mason, on a new butterfly (*Hebomoia Roeptstorfi*) from South Andaman, near *H. sulphurea*, Wallace.

Journal de Physique, February.—On radiophony, by E. Mercadier.—Researches on the differences of potential of two metals in contact; results, by H. Pellat.—Dr. Cusco's lens with variable focus, by C. M. Gariel.—On the correction of cooling in calorimetry, by M. Berthelot.—Edelmann's universal support for physical experiments, by A. Terquem.

SOCIETIES AND ACADEMIES
LONDON

Zoological Society, March 1.—Prof. W. H. Flower, F.R.S., president, in the chair.—The Secretary exhibited the cast integument of a large spider (*Mygale bistrata*?) which had been shed in the Society's Gardens.—Mr. G. E. Dobson, C.M.Z.S., read a paper on the anatomy of the family *Erinacidae*, commencing with that of the curious and rare form *Gymnura Rafflesi*, with which the species of *Erinacæ* were compared. *Gymnura* was shown to be a peculiarly central form, the survivor probably of a once widely-spread group. Altogether the anatomy of thirteen species of *Erinacidae* was treated of in this paper.—A communication was read from Mr. F. Moore, F.Z.S., containing the descriptions of some new genera and species of Asiatic nocturnal lepidoptera. The characters of 150 new species were given, representing eighty-two genera, of which twenty-nine were new to science.—A communication was read from Mr. R. Collett, C.M.Z.S., containing an account of the breeding habits of the grey seal (*Halichoerus grypus*), as observed on the Fro Islands, off Trondhjem's Fiord, in Norway.—Mr. R. Bowdler Sharpe, F.Z.S., read a note on the fantail flycatcher of Western Australia (*Rhipidura pressii*), of which he had lately had for the first time an opportunity of examining a specimen.

Geological Society, February 23.—Robert Etheridge, F.R.S., president, in the chair.—William Henry Goss was elected a Fellow of the Society.—The following communications were read:—A letter from Dr. John Kirk, communicated to the Society by the Right Hon. Earl Granville, dated H.M. Agency and Consulate General, Zanzibar, December 20, 1880. "It may be of interest to record the occurrence here of an earthquake shock felt in the island of Zanzibar at 6.58 a.m., mean time, on the morning of the 18th inst. Although the shock was very distinct no damage appears to have been done to any buildings in town. It is now twenty-four years since a similar shock has been here noticed; but on the mainland, espe-