

Greenland is milder than that of Baffin's land, partly owing to a warm current which skirts the land northward as far as Melville Bay, and partly owing to a difference in the prevalent winds. Greenland is being depressed, probably owing to an accumulation of ice, which is now being taken off from the glaciers where they enter the sea. The American side is rising north of Labrador.—Temperature and ohmic resistance of gases during the oscillatory electric discharge, by J. Trowbridge and T. W. Richards. Although a vacuum tube will offer a resistance of several thousand ohms to a continuous discharge, its resistance to an oscillatory discharge may not exceed ten or twenty ohms, as shown by the feeble damping impressed upon the discharge. The latter is determined by spark photographs, and by finding what wire resistance will produce the same amount of damping.—Does a vacuum conduct electricity? by John Trowbridge. It does.—The affinities of *Hesperornis*, by O. C. Marsh. Points out that his characterisation of *Hesperornis* as a "swimming ostrich" in 1872, has since been verified (see NATURE, vol. IV. p. 534).

SOCIETIES AND ACADEMIES.

LONDON.

Royal Society, April 8.—"Double (Antidrome) Conduction in the Central Nervous System." By C. S. Sherrington, M.A., M.D., F.R.S., Holt Professor of Physiology, University College, Liverpool. Received February 15.

In a paper presented to the Society last year, I drew attention to the fact that if, after transection over the bulbospinal axis, the *funiculus gracilis* be excited, at the *calamus scriptorius*, the excitation evokes movement (contraction, relaxation) in the idiolateral hind limb. If instead of *f. gracilis* the *funiculus cuneatus* be excited, the movement (contraction, relaxation) is in the idiolateral fore limb. The movement in the hind limb is in the monkey usually adduction and flexion of hallux, in the cat flexion of knee, hip, or ankle. In the monkey the fore limb movement is usually flexion and adduction of pollex, often with extension of the other digits; in the cat, more usually flexion of elbow with protraction of the shoulder. The movements which occur are, however, various, and I will here only add that those from the *f. gracilis* include the vaginal and anal orifices, the tail, and the abdominal muscles, those from *f. cuneatus* the diaphragm; but that neither from *f. gracilis* nor *f. cuneatus* have I obtained idiolateral extension of elbow or of knee.

The reaction is obtainable when the transection has been made altogether below the *nuclei graciles et cuneati*. It therefore does not necessarily involve the cells of those nuclei.

The reaction from the left *f. gracilis* is annulled by severance of the left dorsal column, that of the right by the severance of the right.

What, then, is the nature of this reaction obtainable from the *f. graciles* and *cuneati*? The reaction is evidently one which involves each dorsal column of the cord as a conducting path, in many cases even employing its whole length. In light of the evidence given above, I infer that although certainly, as has been long established, the dorsal column is, with the single exception of its short, scanty, and deeply-placed ground-bundle, a functionally pure *upward* path, consisting of nothing else than sensory root fibres, the vast majority of which—and the entirety of the longest of which—are ascendant; the conduction along it in these experiments is *downward*, even extending its whole length. That is to say, the conduction must be downward and cellulipetal along ascending axons which function in a cellulifugal direction; that is to say, the propagation of the impulses artificially started in my observations must have been *antidrome* instead of *orthodrome*. The motor discharges evoked I refer to the spread of the excited condition into the collaterals of the axons excited to antidrome conduction, their collaterals impinging upon motor neurons.

The direction of propagation occurs therefore in opposition to the law of the "*polarisation dynamique des neurons*" put forward by Ramon y-Cajal and V. Gehuchten. It offers, however, no contradiction to what James has termed "the law of forward direction"; it only emphasises that that law predicates the existence of at least two links in its conduction-gear.

The reaction is, therefore, in my view, an extreme illustration of double (antidrome, *doppelsinnige*) nervous conduction. After

du Bois' fundamental observation with frog's sciatic and the electrical sign, it has been Kühne's *sartorius* experiment, and Babuchin's reversed discharge in the electric organ nerve-fibre, which have laid a satisfactory foundation for double conduction in peripheral nerves. But between those experiments and these, the subject of this note, there are, it is true, differences. In the latter, (a) propagation occurs over relatively huge distances and (b) the reaction occurs within the field of the central nervous system. These differences need not, however, negative the relationship of the phenomena. They render it the more instructive.

It is obvious that there must be opportunity for detection of antidrome conduction in parts of the central nervous system besides the dorsal spinal columns. Thus, on exciting, especially with electric currents, the mammalian metencephalon (*vermis cerebelli*) and *isthmus rhombencephali*, subsequent to ablation of the parts above, I have seen movements produced in the limbs and trunk, and also inhibitions occur. Thus, in instance of the latter, inhibition of the tonic extensor spasm of the fore and hind limbs combined with contraction of the flexors of knee and elbow, such as is seen under local spinal reflex action. It will have to be determined whether in such cases as the former we have not before us instances of antidrome conduction along ascending paths. The antidrome phenomenon, while of valuable assistance when recognised, may, if unrecognised, give rise to very misleading inferences. Its methodic use should place in our hands a fresh instrument of value for neurological research.

"On the Breaking-up of Fat in the Alimentary Canal under Normal Circumstances and in the Absence of the Pancreas." By Vaughan Harley, M.D., M.R.C.P., Professor of Pathological Chemistry, University College, London. Received March 18.

In this paper the author, after stating the results of his previous experiments, in which he found that from 21 to 46 per cent. of the total fat given in a milk diet was absorbed from the alimentary canal in the space of seven hours in normal dogs, found that in those dogs in which the pancreas had been entirely removed two days previously, no evidence of any absorption could be obtained during the same time.

The fact that no marked absorption of fat occurred in dogs after the extirpation of the pancreas, seems to confirm the old view that the pancreatic secretion was necessary for absorption.

This alleged action of the pancreatic juice in preparing fat for its absorption, is usually supposed to be due to the fat-splitting ferment and the alkaline sodium carbonate, which combines to form soaps with the free fatty acids.

In the author's paper he investigated whether, after the removal of the pancreas, fat continued to be broken up in the alimentary canal. For this purpose animals were fed on milk, and seven hours later the contents of the stomach, small intestines, and large intestines were separately analysed with regard to the quantity of neutral fat, free fat acids, and fat acids as soaps.

As far as the stomach is concerned, the quantity of fat acids was increased in the dogs in which the pancreas had been removed. It seems that this increase is probably due not to a greater splitting-up action of the fat, but to the longer retention of the fat in the stomach; for after the pancreas is removed, the motility of the stomach is much diminished.

Soaps also were formed both in the normal and pathological dogs, so that both in the normal dogs as well as in those in which the pancreas had been removed, the stomach is capable not only of splitting up neutral fat into free fat acids and glycerine, but that, further, they are capable of finding an alkaline substance with which they can form soaps even in the acid stomach contents.

The power of the free fatty acids for forming soaps is, however, extremely limited in the stomach. In normal dogs the principal fat-splitting action really begins not in the stomach, but after it has left the pylorus.

The normal dogs contain no less than 72.22 per cent. of the total fat as free fat acids, while, when the pancreas had been entirely removed, no less than 61.62 per cent. of the total fat was thus present. There can be no doubt, therefore, that even where no pancreatic secretion has reached the intestines, a very considerable quantity of neutral fat is split up into free fat acids in the small intestine, although the quantity there formed is not

so great as when the pancreatic secretion has been able to share in the work.

The formation of soap is also carried on as in the normal dogs.

In the contents of the large intestine, the normal dogs, and those in which the pancreas had been previously removed, for all practical purposes showed an equal breaking-up of the neutral fat.

Linnean Society, April 15.—Dr. A. Günther, F.R.S., President, in the chair.—Mr. H. Fisher, the naturalist attached to the Jackson-Harmsworth Polar Expedition, gave some preliminary observations on the plants collected by him during his two years' residence in Franz-Josef Land.—On behalf of Mr. A. O. Walker, an abstract was read of a paper on some new Crustacea from the Irish Seas. Of the four species of *Edriophthalma* described as new, two of them, viz. *Leuconopsis ensifer* and *Stenothoe crassicornis*, were taken, at a depth of 33 and 23 fathoms respectively, during the dredging and trawling operations of the Liverpool Marine Biological Committee, in April 1896. Of the other two novelties, *Apsudes hibernicus* was taken by Mr. Gamble between tide-marks during a week's collecting at Valentia Harbour; and *Parapleustes latipes* was found by Mr. Walker, while naming the collection of Amphipoda in the Dublin Museum of Science and Art. Four specimens were taken in 750 fathoms off the south-west coast of Ireland.—The Secretary gave an abstract of a paper by Dr. A. J. Ewart, on the evolution of oxygen from coloured bacteria. The author found that coloured bacteria, under certain appropriate conditions, possess the power of evolving oxygen in greater or less amount. In some the oxygen appeared to be absorbed from the air by the pigment substance excreted by the bacteria. The process, he considered, was not a vital one. The substances contained in an alcoholic extract were found to have the same power, though less marked, of occluding oxygen; but this property was soon lost. The purple and green bacteria, in which the pigment forms an integral part of the bacterial plasma, when exposed to radiant energy showed a very weak evolution of oxygen, continuing for an indefinite period under favourable conditions. In the former of these the assimilatory "pigment" is "bacterio-purpurin," in the latter "chlorophyll." The process in this case is a vital one, and the oxygen evolved is apparently derived from the assimilation of carbon dioxide.

Zoological Society, April 29.—Sixty-eighth Anniversary Meeting.—In the absence of the President, the chair was taken by Dr. Edward Hamilton, Vice-President. After the auditors' report had been read and a vote of thanks accorded to them, and some other preliminary business had been transacted, the report of the Council on the proceedings of the Society during the past year was read by Dr. P. L. Sclater, F.R.S., the Secretary. The total receipts of the Society for 1896 had amounted to 27,081*l.* 10*s.* 4*d.* The ordinary expenditure in 1896 had amounted to 23,788*l.* 1*s.* 2*d.* Besides this, a sum of 2617*l.* 15*s.* had been paid and charged to extraordinary expenditure, of which amount 2600*l.* had been paid on account of the construction of the new house for ostriches and cranes. A further sum of 1000*l.* had also been transferred to the deposit account, leaving a balance of 1066*l.* 15*s.* 4*d.* to be carried forward for the benefit of the present year. The number of visitors to the Gardens in 1896 was 665,004. The number of animals in the Society's Gardens on December 31 last was 2473, of which 902 were mammals, 1132 birds, and 439 reptiles and batrachians. Amongst the additions made during the past year eighteen were specially commented upon as of remarkable interest, and in most cases new to the Society's collection. Amongst these were a young male manatee, from the Upper Amazons; a young male klipspringer, from North-east Africa; a young female gorilla, from French Congoland; a pair of lettered aracarais, from Pará; a young Brazza's monkey, from French Congoland; a Loder's gazelle, from the Western Desert of Egypt; three ivory gulls, from Spitzbergen; and three Franklin's gulls, from America. The report having been adopted, the meeting proceeded to elect the new members of Council and the officers for the ensuing year. The usual ballot having been taken, it was announced that William Bateson, F.R.S., Colonel John Biddulph, Dr. Albert Günther, F.R.S., Osbert Salvin, F.R.S., and Joseph Travers Smith had been elected into the Council in the place of the retiring members, and that Sir William H. Flower, K.C.B.,

F.R.S., had been re-elected President, Charles Drummond, Treasurer, and Dr. Philip Lutley Sclater, F.R.S., Secretary to the Society for the ensuing year.

PARIS.

Academy of Sciences, April 26.—M. A. Chatin in the chair.—On the Insemineæ with two integuments, forming the subdivision of the Bitegmineæ, by M. Ph. van Tieghem.—Researches on the composition of wheat, and on its analyses, by M. Aimé Gerard. The chemical analysis should in all cases be preceded by a mechanical separation of the different parts of the grain, approximating to the process of milling, if the analysis is to be of any service to the baker. For baking purposes it is not sufficient to determine the total gluten only, but this must be supplemented by finding the ratio of glutenine to gliadine.—On the immunity of the fowl against human tuberculosis, by MM. Lannelongue and Achard. The effects produced on fowls and pigeons by inoculation with tubercle bacilli, appear to be the same whether the organisms are alive or dead. But although the bacilli appear to lose their power of spreading, they remain alive and virulent in the local lesion, the blood of the fowl not containing any substance capable of destroying, or even interfering with the growth of the bacilli.—Influence of surfusion on the freezing point of solutions of sodium chloride and alcohol, by M. Raoult. The relation between the true lowering of the freezing point, C , the observed lowering, C' , and the surfusion, S , is given by $C = C' (1 - KS)$, where K is a constant. It follows that for the same surfusion, with the same instrument and method of working, the ratio C/C' is constant, and that the error due to surfusion is without effect upon the meaning of the results. Experiments are given for aqueous solutions of sodium chloride and of alcohol, six concentrations of each. The results are in accordance with the theory of Arrhénius.—Monograph of the quaternary fossils of Algeria, by M. A. Pomel.—Memoir on a method for the rapid determination of distances, by M. N. Ursalovitch.—On the theory of flying, by M. Chantron.—Remarks by M. Bouquet de la Grye on presenting the results of the triangulation of Corsica.—On the electric properties of the radiations emitted by bodies under the influence of light, by M. Gustave Le Bon. Some experiments are quoted, which show that the criticism of previous results, based upon the supposed transparency of the ebonite plate used, was unfounded. Substances under the action of light emit rays which cause the discharge of electrified bodies, the rapidity of discharge varying with the nature of the substance. This action has already been shown for uranium by M. Becquerel, which appears to be only a particular case of a general law.—The thermoluminescence caused by the rays of M. Röntgen and M. Becquerel, by M. J. J. Borgman.—On the biphosphide of silver, by M. A. Granger. Reduced silver kept in an atmosphere of phosphorus at 400° is slowly transformed into a definite phosphide, AgP_2 , which is decomposed again at 500°, so that silver, like gold, presents the peculiarity of absorbing phosphorus at 400°, giving it up again at 500°, and retaining it again at 900°.—On nitrosomethyl-diphenylamine, by M. Ch. Cloëz. All attempts to prepare a dinitrosomethyl-diphenylamine were fruitless, the mono-nitroso-derivative being always obtained. The amine being a very feeble base, for a good yield an excess of concentrated hydrochloric acid is necessary, and the mixture must be well cooled.—New Coccidia in the digestive canal of Myriapods, by M. Louis Leger. One of these is found in the digestive tube of *Lithobius impressus*, where it is so numerous that during six days the excrements were almost entirely composed of hundreds of cysts of this Coccidium. It appears to be allied to the genus *Barroussia* (A. Schneider), but is clearly distinguished from the *B. ornata* of Népe, by the form of the cyst and spores. The second is found in several species of *Lithobius*, especially *L. castaneus*, *L. forcipatus*, and *L. Martini*, and is identical with the genus *Bananella* of M. Labbé.—On a supposed disease of truffles caused by worms, by M. Joannes Chatin. The worms observed in truffles are simple saprophytes, offering no danger to man.—On the nutritive apparatus of *Cladochytrium pulposum*, by M. Paul Vuillemin. The nutritive apparatus of this parasite is a naked granular protoplasmic mass, containing numerous rings and bundles of striated muscular fibrillæ. It acts upon the cellulose membranes.—The radical cure of hernia by injections of chloride of zinc, by M. Demars. A description of six cases, all of which were cured, apparently permanently, by the above method.—

Note on the preceding communication, by M. Lannelongue.—On the locomotive action of the anterior members of the horse, by M. P. Le Hello. As a result of the photographic study of the horse in motion, mechanical apparatus has been constructed demonstrating the muscular actions.—The action of the sun and the moon upon the atmosphere, and on the anomalies of the pressure, by M. P. Garrigou-Lagrange.

DIARY OF SOCIETIES.

THURSDAY, MAY 6.

ROYAL INSTITUTION, at 3.—Liquid Air as an Agent of Research: Prof. J. Dewar, F.R.S.
 SOCIETY OF ARTS, at 4.30.—Kafiristan: its Manners and Customs: Sir George Scott Robertson, K.C.S.I.
 LINNEAN SOCIETY, at 8.—On Desmids from Singapore: W. and G. S. West.—The Problem of Utility: Captain W. F. Hutton, F.R.S.—On New Species of Mollusca from the Island of Madeira: Rev. R. Boog Watson.
 CHEMICAL SOCIETY, at 8.—A Bunsen Burner for Acetylene: A. E. Munby.—On the Reactions between Lead and the Oxides of Sulphur: H. C. Jenkins and A. E. Smith.—Ballot for Election of Fellows.
 GRESHAM COLLEGE (Basinghall Street), at 6.—Planets Saturn, Uranus, and Neptune: Rev. Edmund Ledger.

FRIDAY, MAY 7.

INSTITUTION OF MECHANICAL ENGINEERS, at 7.30.—Experiments on Propeller Ventilating Fans, and on the Electric Motor driving them: William G. Walker.
 GEOLOGISTS' ASSOCIATION, at 8.—Coral Islands: W. W. Watts.
 GRESHAM COLLEGE (Basinghall Street), at 6.—Planets Saturn, Uranus, and Neptune: Rev. Edmund Ledger.

SATURDAY, MAY 8.

ROYAL BOTANIC SOCIETY, at 4.
 GEOLOGISTS' ASSOCIATION—Excursion to Southborough and Tunbridge Wells. Director: G. Abbott. Leave Charing Cross Station (S.E.R.) 9.22 a.m.; arrive Southborough 10.50 a.m.
 LONDON GEOLOGICAL FIELD CLASS.—Excursion to Caterham to Redhill, *via* Godstone. Upper Greensand. Leave Cannon Street 2.17; arrive Caterham 3.12.

MONDAY, MAY 10.

SOCIETY OF ARTS, at 8.—Design in Lettering: Lewis Foreman Day.
 ROYAL GEOGRAPHICAL SOCIETY, at 8.30.—Recent Journeys in Sze-Chuan, Western China: Mrs. Bishop.

TUESDAY, MAY 11.

ROYAL INSTITUTION, at 3.—Volcanoes: Dr. Tempest Anderson.
 ROYAL HORTICULTURAL SOCIETY, at 1.—Diseases of Plants.
 ANTHROPOLOGICAL INSTITUTE, at 8.30.—A Lantern Demonstration on the Anthropological Features of the External Ear: Dr. A. Keith.—*Probable Papers*: A Quinary System of Notation used in Luchoo: Prof. Basil Hall Chamberlain.—Ancient Measures in Prehistoric Monuments: A. L. Lewis.—Rock Paintings and Carvings of Australian Aborigines: R. H. Mathews.
 IRON AND STEEL INSTITUTE, at 10.30.—Annual Meeting.
 ROYAL PHOTOGRAPHIC SOCIETY, at 8.—Portraiture: Harold Baker.—Mr. Rogers, of Watford, will show his Acetylene Burner for Portraiture.
 ROYAL VICTORIA HALL, at 8.30.—More about Röntgen and other Rays: Prof. A. W. Porter.

WEDNESDAY, MAY 12.

SOCIETY OF ARTS, at 8.—Motor Traffic: Technic Considerations: Sir David Salomons, Bart.
 GEOLOGICAL SOCIETY, at 8.—The Gravels and Associated Deposits at Newbury (Berks): E. P. Richards.—The Mollusca of the Chalk Rock, Part II.: Henry Woods.
 IRON AND STEEL INSTITUTE, at 10.30 a.m.—Annual Meeting.

THURSDAY, MAY 13.

ROYAL SOCIETY, at 4.30.—*Probable Papers*: An Attempt to cause Helium or Argon to pass through Red-hot Palladium, Platinum, or Iron: Prof. Ramsay, F.R.S., and M. W. Travers.—On the Negative After-Images following Brief Retinal Excitation: Shelford Bidwell, F.R.S.—A Dynamical Theory of the Electric and Luminiferous Medium. Part III. Relations with Material Media: Dr. J. Larmor, F.R.S.—On a New Method of Determining the Vapour Pressures of Solutions: E. B. H. Wade.—On the Passage of Heat between Metal Surfaces and Liquids in Contact with them: T. E. Stanton.—On the Magnetisation Limit of Wrought Iron: H. Wilde, F.R.S.
 ROYAL INSTITUTION, at 3.—Liquid Air as an Agent of Research: Prof. J. Dewar, F.R.S.
 MATHEMATICAL SOCIETY, at 8.—On Cubic Curves as connected with certain Triangles in Perspective: S. Roberts, F.R.S.—An Analogue of Anharmonic Ratio: J. Brill.—An Essay on the Geometrical Calculus (Continuation): E. Lasker.—On the Partition of Numbers: G. B. Mathews.
 INSTITUTION OF ELECTRICAL ENGINEERS, at 8.—The Generation of Electrical Energy for Tramways: J. S. Raworth. (Discussion).—Disturbances of Submarine Cable Working by Electric Tramways: A. P. Trotter.

FRIDAY, MAY 14.

ROYAL INSTITUTION, at 9.—Explosion-Flames: Prof. Harold Dixon, F.R.S.
 ROYAL ASTRONOMICAL SOCIETY, at 8.
 PHYSICAL SOCIETY, at 5.
 MALACOLOGICAL SOCIETY, at 8.

NO. 1436, VOL. 56]

SATURDAY, MAY 15.

GEOLOGISTS' ASSOCIATION.—Excursion to Chislehurst. Directors: W. Whitaker, F.R.S., and T. V. Holmes. Leave Charing Cross (S.E.R.) at 1.35; arrive at Chislehurst 2.19.
 LONDON GEOLOGICAL FIELD CLASS.—Excursion from Snodland to Aylesford, to view the Gault. Leave Cannon Street 2.37.

BOOKS, PAMPHLETS, and SERIALS RECEIVED.

BOOKS.—A Treatise on Rocks, Rock-Weathering, and Soils: G. P. Merrill (Macmillan).—Birds of our Islands: F. A. Fulcher (Melrose).—A Plea for the Unborn: H. Smith (Watts).—Through a Pocket Lens: H. Scherren (R. T. S.).—Researches on the Evolution of the Stellar Systems: Dr. T. J. J. See, Vol. 1 (Lynn, Mass., Nichols).—A Course of Practical Histology: Prof. E. A. Schäfer, 2nd edition (Smith, Elder).—Dynamic Sociology: L. F. Ward, 2 Vols., 2nd edition (New York, Appleton).—A Handbook to the Birds of Great Britain: Dr. R. B. Sharpe, Vol. iv. (Allen). Papers and Notes on the Genesis and Matrix of the Diamond: Prof. H. C. Lewis (Longmans).—The North-Western Provinces of India: W. Crooke (Methuen).—Grundriss der Entwicklungsgeschichte des Menschen und der Säugethiere: Dr. O. Schultze, Zweite Hälfte (Leipzig, Engelmann).—First Stage Physiography: A. M. Davies (Clive).

PAMPHLETS.—Le Climat de la Belgique, 1896: A. Lancaster (Bruxelles). Réunion du Comité International Permanent pour l'Exécution de la Carte Photographique du Ciel, Mai 1896 (Paris, Gauthier-Villars).—A Study in Insect Parasitism: L. O. Howard (Washington).—Philosophical Transactions of the Royal Society of London: On the Capacity and Residual Charge of Dielectrics as affected by Temperature and Time: J. Hopkinson and E. Wilson (Dulau).—A Summary of Progress in Petrography in 1896: W. S. Bayley (Waterville, Me.).—Hermann von Helmholtz: Gedächtnissrede von Emil du Bois-Reymond (Leipzig, Veit).

SERIALS.—Chambers's Journal, May (Chambers).—History of Mankind: F. Ratzel, translated, Part 18 (Macmillan).—Journal of the Chemical Society, April (Gurney).—Century Magazine, May (Macmillan).—Bulletin of the American Museum of Natural History, Vol. 8 (New York).—Proceedings and Transactions of the Nova Scotian Institute of Science, Session 1895-6 (Halifax, N.S.).—Proceedings of the American Association, Buffalo, N.Y., August 1896 (Salem).—Report of the International Meteorological Congress held at Chicago, August 21-24, 1893, Part 3 (Washington).—Contemporary Review, May (Isbister).—National Review, May (Arnold).—Journal of the Essex Technical Laboratories, Vol. 2 (Chelmsford).—The Humanitarian, May (Hutchinson).—Quarterly Journal of Microscopical Science, April (Churchill).—Proceedings of the Royal Society of Victoria, Vol. ix., new series (Melbourne).—Himmel und Erde, April (Berlin).

CONTENTS.

	PAGE
Scientific Worthies. XXX.—Stanislao Cannizzaro. (With Portrait.) By Dr. T. E. Thorpe, F.R.S.	1
Experimental Researches on the Physiology of Reproduction. By J. B. F.	4
Shakespearean Natural History. By R. L.	7
Our Book Shelf:—	
“Chapters on the Aims and Practice of Teaching”	8
Upton: “Star Atlas”	8
Lewis: “A Protest against the Modern Development of Unmusical Tone”	9
Griffiths: “Respiratory Proteids: Researches in Biological Chemistry”	9
Wundt: “Outlines of Psychology”	9
Letters to the Editor:—	
Organised or Sectional Work in Astronomy.—W. F. Denning	9
Shelly Glacial Deposits.—G. W. Lamplugh	10
Sieve for Primes.—Robt. W. D. Christie	10
The Effect of Sunlight on the Tints of Birds' Eggs.—David Paterson	11
Physiological Specific Characters.—Prof. T. D. A. Cockerell	11
An Archæological Survey of the British Islands	12
The International Photographic Catalogue and Chart	13
Notes	13
Our Astronomical Column:—	
A Remarkable Relation between the Distances, Masses, and Surface Gravities of the Planets	17
The Double Star 44 Boötis	17
Report of Mr. Tebbutt's Observatory	17
The Twelfth German Geographical Congress	18
The Institution of Mechanical Engineers	18
Annual Meeting of the U.S. National Academy of Sciences	19
Continuation of Experiments on Electric Properties of Uranium. By the Right Hon. Lord Kelvin, G.C.V.O., F.R.S., Dr. J. Carruthers Beattie, and Dr. M. S. de Smolan	20
University and Educational Intelligence	20
Scientific Serials	21
Societies and Academies.	22
Diary of Societies	24
Books, Pamphlets, and Serials Received	24