

PROCEEDINGS
OF
THE ROYAL SOCIETY
OF
EDINBURGH.

VOL. XX.

NOVEMBER 1892 TO JULY 1895.

EDINBURGH:
PRINTED BY NEILL AND COMPANY.

MDCCCXCV.

ERRATUM.—Page 158, line 12 from top, *delete the words*
“(Little Auk).”

CONTENTS.

	PAGE
Election of Office-Bearers,	1
Opening Address. By Sir Douglas Maclagan, <i>President</i> ,	2
On the Madder-Staining of Dentine. By W. G. Aitchison Robertson, M.D., D.Sc., F.R.C.P.E., Physiological Laboratory, University of Edinburgh. (With a Plate),	14
On the Comparative Histology and Physiology of the Spleen. By Arthur J. Whiting, M.D.,	21
Induction through Air and Water at Great Distances without the use of Parallel Wires. By Charles A. Stevenson, B.Sc., F.R.S.E., M.Inst. C.E. (With a Plate),	25
On a New Apparatus for Counting Bacterial Colonies in Roll- Cultures. By J. Buchanan Young, M.B., B.Sc., Public Health Laboratory, University of Edinburgh. <i>Communicated by Sir Douglas Maclagan.</i> (With a Plate),	28
Abstract of Paper on the "Digestion of Sugars." By W. G. Aitchison Robertson, M.D., D.Sc., F.R.C.P.E.,	30
On Properties of the Parabola. By Professor Anglin,	35
Preliminary Note on Observations of the Minor Planet Victoria in 1889. By Dr D. Gill, H.M. Astronomer at the Cape of Good Hope,	47
On the Early History of some Scottish Mammals and Birds. By Professor Duns, D.D.,	50
On a Remarkable Glacier-Lake, formed by a Branch of the Hardanger-Jökul, near Eidfjörd, Norway. By Robert Munro, M.D., M.A. (With a Plate),	53
On the Compressibility of Liquids in connection with their Mole- cular Pressure. By Professor Tait,	63
On certain Concretions from the Lower Coal Measures, and the Fossil Plants which they contain. By H. B. Stocks, F.C.S. <i>Communicated by John Murray, LL.D.,</i>	69
On some Observations made without a Dust Counter on the Hazing Effect of Atmospheric Dust. By John Aitken, Esq., F.R.S. (With a Plate),	76
Breath Figures. By John Aitken, Esq., F.R.S.,	94

	PAGE
On the Reproductive Organs of <i>Noctua pronuba</i> . By A. B. Griffiths, Ph.D., F.R.S. (Edin.), &c.,	98
Data on the Phenomena of Colour-Blindness, chiefly derived from Foreign Sources. <i>Compiled and arranged by</i> Dr William Pole, F.R.S., F.R.S.E.,	103
Preliminary Note on the Compressibility of Aqueous Solutions, in connection with Molecular Pressure. By Professor Tait,	141
Elimination of Powers of Sines and Cosines between Two Equations. By the Hon. Lord M'Laren,	145
Preliminary Account of Natural History Collections made on a Voyage to the Gulf of St Lawrence and Davis Straits. By Mr Alexander Rodger, University College, Dundee. <i>Communicated by</i> Professor D'Arcy W. Thompson,	154
Abstract of Paper on the "Rate of Fermentation of Sugars." By W. G. Aitchison Robertson, M.D., D.Sc., F.R.C.P.E. (<i>From the Physiological Laboratory, University of Edinburgh</i>),	164
On the Penguins observed during the Sealing Voyage of the s.s. "Active" in the neighbourhood of Erebus and Terror Gulf. By C. W. Donald, M.B. <i>Communicated by</i> Professor D'Arcy W. Thompson,	170
Preliminary Note on the Hygrometric State of the Atmosphere at Ben Nevis Observatory. By Andrew J. Herbertson. <i>Communicated by</i> Dr A. Buchan,	177
The Second and Fourth Digits in the Horse: their Development and Subsequent Degeneration. By J. C. Ewart, M.D., F.R.S., Regius Professor of Natural History, University of Edinburgh,	185
Note on the Focus of Concavo-Convex Lenses the Surfaces of which are of Equal Curvature. By George A. Berry, M.B., F.R.C.S. Ed.,	192
Telegraphic Communication by Induction by Means of Coils. By Charles A. Stevenson, B.Sc., F.R.S.E., M. Inst. C.E. (With Two Plates),	196
On two Stereo-Isomeric Hydrazones of Benzoin. By Alexander Smith, B.Sc., Ph. D.,	201
On certain Electrical Properties of Iron Occluding Gases. By S. Kimura, Rigakushi. (With Two Plates),	203
Note on the Antecedents of Clerk-Maxwell's Electrodynamical-Wave-Equations. By Professor Tait,	213
The Rise and Progress of Anthropology. By Robert Munro, M.A., M.D. (With a Plate),	215
On the Compressibility of Fluids. By Prof. Tait,	245
On a New Water-Bottle for Collecting Samples of Sea-Water from Moderate Depths. By H. N. Dickson, F.R.G.S.,	252
Hydrolysis in some Aqueous Salt Solutions. By James Walker, D.Sc., Ph.D.,	255

	PAGE
The Pallial Complex of Dolabella. By J. D. F. Gilchrist, M.A., B.Sc., Ph.D. <i>Communicated by Professor Ewart, F.R.S. (From the Natural History Laboratory of the University of Edinburgh.)</i> (With a Plate),	264
Coordinates <i>versus</i> Quaternions. By Professor Cayley,	271
On the Intrinsic Nature of the Quaternion Method. By Prof. Tait,	276
On the Application of Van der Waals' Equation to the Compression of Ordinary Liquids. By Prof. Tait,	285
Note on Magnetic Induction in Nickel Tubes. By Professor C. G. Knott, D.Sc., and A. Shand, Esq.,	290
Note on the Volume Changes which accompany Magnetisation in Nickel Tubes. By Professor C. G. Knott, D.Sc., F.R.S.E., and A. Shand, Esq.,	295
Note on Professor Cayley's Proof that a Triangle and its Reciprocal are in Perspective. By Thomas Muir, LL.D.,	298
A Problem of Sylvester's in Elimination. By Thomas Muir, LL.D.,	300
Note on Dr Muir's Paper, "A Problem of Sylvester's in Elimination." By Professor Cayley,	306
The Reproduction of the Edible Crab (<i>Cancer pagurus</i>). By Gregg Wilson, M.A., B.Sc., Natural History Laboratory, University of Edinburgh. <i>Communicated by Prof. J. C. Ewart, M.D., F.R.S.</i> ,	309
On the Chemical Composition of Sea-Water. By John Gibson, Ph.D.,	315
On a Theorem regarding the Difference between any Two Terms of the Adjugate Determinant. By Thomas Muir, LL.D.,	323
On the Measurement of Simple Reaction Time for Sight, Hearing, and Touch. By Professor Rutherford, M.D., F.R.S.S. Lond. and Edin.,	328
An Experiment on the Influence of Thyroid Feeding on the Proteid Metabolism in Man. By J. J. Douglas, M.B., C.M., F.R.C.P. Edin. (<i>From the Research Laboratory of the Royal College of Physicians of Edinburgh</i>),	330
Further Note on the Volume Changes which accompany Magnetisation in Iron and Nickel Tubes. By Professor C. G. Knott, D.Sc., F.R.S.E., and A. Shand, Esq.,	334
Notes on a Peculiarity in the Form of the Mammalian Tooth. By J. Smith, M.D. (Illustrated),	336
On the Absorption of Carbohydrates by the Intestinal Epithelium: An Experimental Inquiry into Pavy's Theory of the Action of the Epithelium on Carbohydrates. By D. Noel Paton, M.D., F.R.C.P.E., and G. Lovell Gulland, M.D., F.R.C.P.E. (<i>From the Research Laboratory of the Royal College of Physicians of Edinburgh</i>),	347

	PAGE
Note on Normal Nystagmus. By Prof. Crum Brown,	352
On the Torsion of the Molluscan Body. By J. D. F. Gilchrist, M.A., B.Sc., Ph.D. <i>Communicated by</i> Professor Ewart, F.R.S.,	357
Further Note on a Problem of Sylvester's in Elimination. By Thomas Muir, LL.D.,	371
Note on the Action of Sodium Mercaptide on Dibromo-Malonic Ether. By Prof. Crum Brown and Robert Fairbairn, B.Sc.,	383
A Sketch of Lake-Dwelling Research. By Robert Munro, M.A., M.D.,	385
On a Human Cyclops. By Alexander Bruce, M.D., F.R.C.P.E. (With Three Plates),	412
On M. Dubois' Description of remains recently found in Java, named by him <i>Pithecanthropus erectus</i> . With Remarks on so-called Transitional Forms between Apes and Man. By Professor Sir William Turner, F.R.S.,	422
On Drops. By J. B. Hannay,	437
On the Rendering of Animals Immune against the Venom of the Cobra and other Serpents; and on the Antidotal Properties of the Blood-Serum of the Immunized Animals. By Professor Thomas R. Fraser, M.D., F.R.S. (With a Diagram),	448
Further Observations on Antivenene, and on the Production of Immunity against Serpents' Venom; with an Account of the Antidotal Properties of the Blood-Serum of Venomous Serpents. By Professor Fraser, M.D., F.R.S.,	465
On the Dorsal Branches of the Cranial and Spinal Nerves of Elasmobranchs. By J. C. Ewart, M.D., F.R.S., Regius Professor of Natural History, and F. J. Cole, <i>Zoological Department, University, Edinburgh</i> ,	475
On the Behaviour of Various Alloys in a Steady Magnetic Field. By J. C. Beattie. (With Two Plates),	481
On the Variation of Resistance in a Steady Magnetic Field observed in Nickel, Antimony, and Tellurium Plates. By J. C. Beattie. (With a Plate),	493
Systems of Plane Curves whose Orthogonals form a Similar System. By Prof. Tait,	497
Meetings of the Royal Society—Sessions 1892-93, 1893-94, and 1894-95,	499-523
Donations to the Library,	524-545
OBITUARY NOTICES,	i-lxxiii
INDEX,	lxxix-lxxxvi