

PROCEEDINGS  
OF  
THE ROYAL SOCIETY  
OF  
EDINBURGH.

VOL. XIX.

NOVEMBER 1891 TO JULY 1892.

EDINBURGH:  
PRINTED BY NEILL AND COMPANY.

MDCCCXCIII.

## CONTENTS.

|  | PAGE |
|--|------|
| Election of Office-Bearers, . . . . .  | 1    |
| Chairman's Opening Address, . . . . .  | 2    |
| Note on a Theorem regarding a Series of Convergents to the<br>Roots of a Number. By Thomas Muir, LL.D., . . . . .  | 15   |
| A Preliminary Communication on the Electrical Resistance of<br>Various Urines. By Dawson Turner, M.D., F.R.C.P. Edin.,<br>M.R.C.P. London, . . . . .                           | 20   |
| Note on a Problem of Elimination connected with Glissettes of an<br>Ellipse or Hyperbola. By Thomas Muir, LL.D., . . . . .   | 25   |
| On the Foundations of the Kinetic Theory of Gases. V. By<br>Professor Tait, . . . . .  | 32   |
| The Lesser Rorqual ( <i>Balenoptera rostrata</i> ) in the Scottish Seas,<br>with Observations on its Anatomy. By Professor Sir Wm.<br>Turner, LL.D., D.C.L., F.R.S., . . . . . | 36   |
| The Tactics adopted by certain Birds when Flying in the Wind.<br>By Mr R. W. Western. (With a Plate), . . . . .  | 76   |
| Note on Certain Remarkable Volume Effects of Magnetisation.<br>By Professor Cargill G. Knott, D.Sc., and A. Shand, Esq., . . . . .   | 85   |
| On the Eliminant of the Equations of the Ellipse-Glissette. By<br>the Hon. Lord M'Laren, . . . . .   | 89   |
| Ptomaines extracted from Urine in certain Infectious Diseases.<br>By Dr A. B. Griffiths, F.R.S.E., F.C.S., &c., . . . . .  | 97   |
| On a Crystalline Globulin occurring in Human Urine. By D.<br>Noël Paton, . . . . .   | 102  |
| On the Blood of the Invertebrata. By A. B. Griffiths, Ph.D.,<br>F.R.S.E., F.C.S., &c., . . . . .   | 116  |
| Note on Dr Muir's Solution of Sylvester's Elimination Problem.<br>By Professor Tait, . . . . .   | 131  |
| Note on the Thermal Effect of Pressure on Water. By Professor<br>Tait, . . . . .   | 133  |

|  | PAGE   |
|--|--------|
| Notes on the Wanyoro Tribe of Central Africa. By Robert W. Felkin, M.D., F.R.G.S., Fellow of the Anthropological Societies of London and Berlin, &c. (With a Plate), . . . . . | 136    |
| Note on the Division of Space into Infinitesimal Cubes. By Professor Tait, . . . . .   | 193    |
| On the Olfactory Organs of Helix. By Dr A. B. Griffiths, F.R.S. (Edin.), F.C.S., &c., . . . . .  | 198    |
| On the Renal Organs of the Asteridea. By Dr A. B. Griffiths, F.R.S. (Edin.), F.C.S., &c., . . . . .  | 200    |
| Note on Uniform Convergence. By Professor Cayley, . . . . .  | 203    |
| On a Certain Locus. By Professor P. H. Schoute, University of Groningen, Holland, . . . . .  | 208    |
| Recent Innovations in Vector Theory. By Professor C. G. Knott, D.Sc., F.R.S.E., . . . . .  | 212    |
| On some Modifications of the Water-Bottle and Thermometer for Deep-Sea Research. By J. Y. Buchanan, . . . . .  | 238    |
| Synthesis by Means of Electrolysis. By Professor Crum Brown and Dr James Walker. Part VI., . . . . .   | 243    |
| On the Volume Effects of Magnetisation. By Prof. Cargill G. Knott, D.Sc., and A. Shand, Esq., . . . . .  | 249    |
| Note on the Law of Transformation of Energy and its Applications. By W. Peddie, D.Sc., . . . . .   | 253    |
| On the Particles in Fogs and Clouds. By John Aitken, Esq., . . . . .   | 260    |
| A New Solution of Sylvester's Problem of the Three Ternary Equations. By the Hon. Lord M'Laren, . . . . .  | 264    |
| Meetings of the Royal Society—Session 1891-92, . . . . .   | 267    |
| Donations to the Library, . . . . .  | 278    |
| OBITUARY NOTICES, . . . . .  | i-lxiv |
| INDEX, . . . . .   | lxv    |