

TRANSACTIONS  
OF THE  
ROYAL SOCIETY OF EDINBURGH.

VOL. X.



EDINBURGH:  
PRINTED FOR WILLIAM TAIT, 78, PRINCE'S STREET;  
AND CHARLES TAIT, 63, FLEET STREET,  
LONDON.

1826.

**TRANSACTIONS**  
**OF THE**  
**ROYAL SOCIETY**  
**OF**  
**EDINBURGH.**

# CONTENTS

OF

## VOLUME TENTH.

---

### PART FIRST.

	Page
I. <i>On the Existence of Two New Fluids in the Cavities of Minerals, which are immiscible, and possess remarkable Physical Properties.</i> By DAVID BREWSTER, LL.D. F. R. S. Lond. & Sec. R. S. Edin. -	1
II. <i>Observations on the Comparative Anatomy of the Eye.</i> By ROBERT KNOX, M. D. Member of the Wernerian Society, and of the Medico-Chirurgical Society of Edinburgh, - - - - -	43
III. <i>Notice of an undescribed Vitriified Fort, in the Burnt Isles, in the Kyles of Bute.</i> By JAMES SMITH, Esq. of Jordanhill, F. R. S. Edin., - - - - -	79
IV. <i>On the Formation of Chalcedony.</i> By Sir G. S. MACKENZIE, Baronet, F. R. S. Lond. & Edin., -	82
V. <i>Notice respecting the Vertebra of a Whale, found in a Bed of bluish Clay, near Dingwall.</i> By Sir G. S. MACKENZIE, F. R. S. Lond. & Edin. In a Letter to Dr Brewster, Sec. R. S. E. &c. - - - - -	105
VI. <i>Description of Hopeite, a New Mineral from Altenberg, near Aix-la-Chapelle.</i> By DAVID BREWSTER, LL.D. F. R. S. Lond. & Sec. R. S. Edin., -	107

	Page
VII. <i>Astronomical Observations made at Paramatta and Sydney.</i> By his Excellency Sir THOMAS BRISBANE, K. C. B. F. R. S. Lond. & Edin., & M. RUMKER. In a Letter to Dr BREWSTER, Sec. R. S. Edin.,	112
VIII. <i>On a Remarkable Case of Magnetic Intensity of a Chronometer.</i> By GEORGE HARVEY, Esq. M. G. S. M. A. S. &c. - - - - -	117
IX. <i>Remarks concerning the Natural-Historical Determination of Diallage.</i> By W. HAIDINGER, Esq.	127
X. <i>Investigation of Formulae, for finding the Logarithms of Trigonometrical Quantities from one another.</i> By WILLIAM WALLACE, F.R.S. Edin., and Professor of Mathematics in the University of Edinburgh,	148
XI. <i>A proposed Improvement in the Solution of a Case in Plane Trigonometry.</i> By WILLIAM WALLACE, F.R.S. Edin. and Professor of Mathematics in the University of Edinburgh, - - -	168
XII. <i>Some Notices concerning the Plants of various Parts of India, and concerning the Sanscrita Names of those Regions.</i> By FRANCIS HAMILTON, M.D. F.R.S. & F. A. S. Lond. & Edin. - -	171
XIII. <i>On a New Species of Double Refraction, accompanying a remarkable Structure in the Mineral called Analcime.</i> By DAVID BREWSTER, LL.D. F. R. S. Lond. & Sec. R. S. Edin. - - - -	187
XIV. <i>On the Specific Heat of the Gases.</i> By W. T. HAYCRAFT, Esq., - - - - -	195
XV. <i>On the Forms of Crystallisation of the Mineral called the Sulphato-tri-Carbonate of Lead.</i> By W. HAIDINGER, Esq. F. R. S. E. - - -	217

## PART SECOND.

	Page
<b>XVI.</b> <i>Inquiry into the Structure and probable Functions of the Capsules forming the Canal of PETIT, and of the Marsupium Nigrum, or the peculiar Vascular Tissue traversing the Vitreous Humour in the Eyes of Birds, Reptiles, and Fishes.</i> By ROBERT KNOX, M. D. F. R. S. ED., and Conservator of the Museum of the Royal College of Surgeons,	231
<b>XVII.</b> <i>On an Anomalous Case of Vision with regard to Colours.</i> By GEORGE HARVEY, Esq. F. R. S. E.	253
<b>XVIII.</b> <i>Observations on the Germination of the Filices.</i> By the Reverend JOHN MACVICAR, Dundee. Communicated by the Reverend JOHN FLEMING, D. D. F. R. S. E. &c.	263
<b>XIX.</b> <i>Description of FERGUSONITE, a New Mineral Species.</i> By W. HAIDINGER, Esq. F. R. S. E.	271
<b>XX.</b> <i>Biographical Account of ALEXANDER WILSON, M. D. late Professor of Practical Astronomy in Glasgow.</i> By the late PATRICK WILSON, A. M. Professor of Practical Astronomy in the University of Glasgow,	279
<b>XXI.</b> <i>On the Determination of the Species, in Mineralogy, according to the Principles of Professor MOHS.</i> By WILLIAM HAIDINGER, Esq. F. R. S. E.	298
<b>XXII.</b> <i>On the Consolidation of the Strata of the Earth.</i> By SIR JAMES HALL, Bart. F. R. S. Lond. & Edin.	314
<b>XXIII.</b> <i>Observations before and after the Superior Conjunction of Venus and the Sun, with the Mural</i>	

	Page
<i>Circle at Paramatta, 1824.</i> By His Excellency SIR THOMAS BRISBANE, K. C. B. F. R. S. Lond. & Edin. - - -	330
XXIV. <i>Observations on Two Comets discovered at Para- matta in 1824, by Mr RUMKER and Mr DUN- LOP.</i> Communicated by his Excellency Sir THO- MAS BRISBANE, K. C. B. F. R. S. Lond. & Edin. in a Letter to Dr BREWSTER, Sec. R. S. Edin. <i>To which are added the Elements of their Orbits, calculated by Mr GEORGE INNES, and Mr JAMES GORDON, A. M. Aberdeen,</i> -	332
XXV. <i>On the Construction of Meteorological Instruments, so as exactly to determine their Indications dur- ing Absence, at any given instant, or at successive intervals of Time.</i> By HENRY HOME BLACK- ADDER, Esq. Surgeon, MED. STAFF H. P. -	337
XXVI. <i>An Examination of Dr PARR'S Observations on the Etymology of the word Sublimis.</i> By GEORGE DUNBAR, A. M. F. R. S. E. Professor of Greek in the University of Edinburgh, -	349
XXVII. <i>Results of the Thermometrical Observations made at Leith Fort, every Hour of the Day and Night, during the whole of the Years 1824 and 1825.</i> By DAVID BREWSTER, LL.D. F. R. S. Lond. & Sec. R. S. Ed. Corresponding Member of the Academy of Sciences of Paris, &c. -	362
XXVIII. <i>A Historical and Critical Introduction to an In- quiry into the Revival of the Greek Literature in Italy, after the Dark Ages.</i> By PATRICK FRASER TYTLER, Esq. F. R. S. E. & Sec. Lit. Class, - - -	389

	Page
<b>XXIX.</b> <i>On the Réfractive Power of the Two New Fluids in Minerals, with Additional Observations on the Nature and Properties of these Substances.</i> By DAVID BREWSTER, LL.D. F. R. S. Lond., Sec. R. S. Edin., and Corresponding Member of the Academy of Sciences of Paris, -	407
<b>XXX.</b> <i>Observations on Two Species of Pholas, found on the Sea coast in the neighbourhood of Edinburgh,</i> By JOHN STARK, Esq. M. W. S. Communicated by Dr BREWSTER, - -	428
<b>XXXI.</b> <i>Description of a new Register Thermometer, without any Index; the principle being applicable to the most delicate Mercurial Thermometers.</i> By H. H. BLACKADDER, Esq. F. R. S. E. -	440
<b>XXXII.</b> <i>On a new Photometer, founded on the Principles of Bouguer.</i> By WILLIAM RITCHIE, A. M. Rector of Tain Academy. Communicated by Dr BREWSTER, - - -	443
<hr style="width: 20%; margin: 10px auto;"/>	
<b>HISTORY OF THE SOCIETY,</b> - - -	447
<i>Laws of the Society, enacted 23d May 1811, and altered on the 26th February 1820, 24th January 1823, 13th January 1824, and 9th January 1826,</i> -	449
<i>List of the Office-Bearers and Members elected since March 3. 1823,</i> - - -	457
<i>List of the present Ordinary Members of the Society in the order of their election,</i> - - -	467

	Page
<i>List of Non-resident and Foreign Members, elected under the old Laws, - - - - -</i>	475
<i>List of Honorary and Foreign Members, elected under the new Laws, - - - - -</i>	476
<i>List of deceased Members, and of Members resigned, from 1823 to 1826, - - - - -</i>	478
<b>PRESENTS received by the Society since 1822, -</b>	<b>479</b>