

# TRANSACTIONS

OF THE

## ROYAL SOCIETY OF EDINBURGH.

VOL. XXIII. PART II.—FOR THE SESSION 1862–63.

### CONTENTS.

	Page
ART. XVI.— <i>On the Representative Relationships of the Fixed and Free Tunicata, regarded as two Sub-Classes of equivalent value; with some General Remarks on their Morphology.</i> By JOHN DENIS MACDONALD, R.N., F.R.S., Surgeon of H.M.S. "Icarus." Communicated by Professor MACLAGAN. (Plate IX.), . . . . .	171
XVII.— <i>On the Zoological Characters of the Living Clio caudata, as compared with those of Clio borealis given in Systematic Works.</i> By JOHN DENIS MACDONALD, R.N., F.R.S., Surgeon of H.M.S. "Icarus." Communicated by Professor MACLAGAN. (Plate, IX. fig. 3), . . . . .	185
XVIII.— <i>Notes on the Anatomy of the Genus Firola.</i> By JOHN DENIS MACDONALD, R.N., F.R.S., Surgeon of H.M.S. "Icarus." Communicated by Professor MACLAGAN. (Plate IX. fig. 4), . . . . .	189
XIX.— <i>On the Structure and Optical Phenomena of Ancient Decomposed Glass.</i> By SIR DAVID BREWSTER, K.H., D.C.L., F.R.S., &c. (Plates X., XI.), . . . . .	193
XX.— <i>On the Polarisation of Light by Rough and White Surfaces.</i> By SIR DAVID BREWSTER, K.H., D.C.L., F.R.S., &c., . . . . .	205
XXI.— <i>Observations on the Polarisation of the Atmosphere, made at St Andrews in 1841, 1842, 1843, 1844, and 1845.</i> By SIR DAVID BREWSTER, K.H., D.C.L., F.R.S., &c., (Plate XII.), . . . . .	211

[For remainder of Contents, see last page of Cover.]

## ERRATUM.

I regret that, owing to the circumstances under which the last of the Meteorological data were obtained, an error has crept into one of the tables, and from the table, somewhat into the text also. The Meteorological data for the quarter ending December 1862 were obtained from the Observatory, on slips of paper, from time to time, as they were reduced. I was obliged in this way to anticipate their publication, as the time for reading my paper was fixed for the 2d of February. Unfortunately, in constructing Table B, the slip of paper with the figures representing *the number of rainy days, the rainfall in inches, and the direction and force of the winds* for November 1862, was employed in the October column, the figures which ought to have been there finding their way into the November column. This error in Table B still exists.

The errors in the smaller tables of the text, arising from this transposition, are not of serious import; and indeed, if they had not occurred, the inferences drawn from the tables would generally have been only more apparent. The errors do not exist in Tables A and C, nor in the Diagrams; and in order to correct the errors of the smaller tables, it is only necessary to test the accuracy of the figures, by reference to one of the latter tables, in the few instances in which the rainfall and winds of October and November 1862 are quoted as illustrations.