

**PROCEEDINGS OF THE  
COTTESWOLD  
NATURALISTS'  
FIELD CLUB. VOLUME III**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649155149

Proceedings of the Cotteswold Naturalists' Field Club. Volume III by Various

Except for use in any review, the reproduction or utilisation of this work in whole or in part in any form by any electronic, mechanical or other means, now known or hereafter invented, including xerography, photocopying and recording, or in any information storage or retrieval system, is forbidden without the permission of the publisher, Trieste Publishing Pty Ltd, PO Box 1576 Collingwood, Victoria 3066 Australia.

All rights reserved.

Edited by Trieste Publishing Pty Ltd.  
Cover @ 2017

This book is sold subject to the condition that it shall not, by way of trade or otherwise, be lent, re-sold, hired out, or otherwise circulated without the publisher's prior consent in any form or binding or cover other than that in which it is published and without a similar condition including this condition being imposed on the subsequent purchaser.

[www.triestepublishing.com](http://www.triestepublishing.com)

**VARIOUS**

**PROCEEDINGS OF THE  
COTTESWOLD  
NATURALISTS'  
FIELD CLUB. VOLUME III**



PROCEEDINGS  
OF THE  
COTTESWOLD NATURALISTS'  
FIELD CLUB.

---

VOLUME III.

---



Gloucester :

PRINTED BY JOHN BELLOWS, WESTGATE STREET.

1865.

## CONTENTS.

---

	PAGE
Notes on the Ammonites of the Sands intermediate the Upper Lias and Inferior Oolite. By JOHN LYCETT, M.D. . . . .	3
On some Sections of the Lias and Sands exposed in the sewerage works recently executed at Stroud. By E. WITCHELL, F.G.S., Stroud . . . . .	11
Annual Address, read at Tewkesbury, 26th February, 1861. By W. V. GUISE, F.L.S., President . . . . .	15
On the Drifts of the Severn, Avon, Wye, and Usk. By the Rev. W. S. SYMONDS, F.G.S., Rector of Pendock . . . .	31
Geology of Churchdown Hill, (Part I.) By the Rev. FREDERICK SMITHE, M.A., Member of the Cirencester Natural History Society, &c. . . . .	40
Notes on Calmsden Cross. By CHARLES POOLKY, Esq., of Weston-Super-Mare . . . . .	50
Annual Address, read at the Ram Inn, Gloucester, 26th Feb., 1862. By W. V. GUISE, F.L.S., F.G.S., President . . . . .	51
List of Land, Fluviatile, and Lacustrine Shells, found in and near the county of Gloucester. By JOHN JONES . . . . .	63
Notes on the High Crosses of Bristol and Gloucester. By CHARLES POOLKY, Esq. . . . .	73
On <i>Gryphæa incurva</i> and its varieties. By JOHN JONES . . . . .	81
On some Flint Instruments found on Stroud Hill. By J. JONES . . . . .	97
Annual Address, read at Cheltenham, March 4, 1863. By W. V. GUISE, F.L.S., F.G.S., President . . . . .	113
On the Natural History, Geology, &c., of Sharpness Point District. By JOHN JONES . . . . .	128
Report on Miss HOLLAND's Collection of Lias Fossils. By THOMAS WRIGHT, M.D., F.R.S.E., F.G.S. . . . .	153

List of Reptiles found in Gloucestershire. By JOHN JONES . . . . .	157
On the doubtful Nativity of <i>Daucus carota</i> and <i>Pastinaca sativa</i> . By J. BUCKMAN, Professor of Geology and Botany . . . . .	160
On the Ammonites of the Lias Formation. (Part 1.) By THOMAS WRIGHT, M.D., F.R.S.E., F.G.S. . . . .	162
Notes on the Ancient Crosses of Clearwell, Aylburton, and Lydney. By CHARLES POOLEY, Esq. . . . .	180
Notes on an Ancient British Tumulus at Nympsfield, opened by the Cotteswold Club. By J. BUCKMAN, F.G.S., F.L.S., F.S.A., . . . . .	184
Report on the Skulls from the Tumulus at Nympsfield. By JOHN THURNHAM, M.D., F.S.A. . . . .	189
Letters from JOHN JONES and R. F. TOMES on the position of <i>Gryphaea incurva</i> in the Lower Lias at Bridgend . . . . .	191
Annual Address, read at Cheltenham 9th March, 1864. By W. V. GUISE, F.L.S., F.G.S., President . . . . .	195
On a Deposit at Stroud Hill, containing Flint Implements, Land and Freshwater Shells, &c. By E. WITCHELL, F.G.S. . . . .	208
Notes on the Ancient Cross at Iron Acton. By CHARLES POOLEY, Esq. . . . .	212
On the Rhatic or <i>Avicula contorta</i> Beds at Garden Cliff, Westbury-upon-Severn, Gloucestershire. By ROBERT ERRIDGE, F.G.S., F.R.S.E. . . . .	218
On the Ammonites of the Lias Formation. (Part 2.) By THOMAS WRIGHT, M.D., F.R.S.E., F.G.S. . . . .	235
Annual Address, read at Gloucester, 29th March, 1865. By W. V. GUISE, F.L.S., F.G.S., President . . . . .	246

*Notes on the Ammonites of the Sands intermediate the Upper Lias and Inferior Oolite.* By JOHN LYCETT, M.D.

THE annual presidential address to the Cotteswold Naturalists' Club, 1860, p. 184, comments upon the Fossils of the Sands intermediate the Inferior Oolite and Lias, and contains remarks which have induced me to offer the following notes illustrative of the Ammonites contained in these sands, and intended to afford a concise analytic examination of their natural history, characters, and geological distribution. It has hitherto been generally considered that they all belong to the Upper Lias, by which term is usually understood in this county all the shales, clays, and argillaceous sandstones (the Lias Epsilon of Quenstedt), superimposed upon the Middle Lias, or Marlstone, and beneath the sands which for the most part underlie the Inferior Oolite in England. The following facts will, however, probably be considered very much to modify this view, and to show that a large proportion of these Ammonites have no connection with the *Lias Epsilon*, but are special to the sands, also, that three of them are boundary species, and have only a very limited vertical range, occurring at the junction of Sands with the Upper Lias (*e*), the others at the upper boundary of the sands, and appearing at some foreign localities as species of Inferior Oolite, but in England as species of the Sands. The establishment of these facts will also tend materially to remove an apparent discordance which appears to exist between the Cephalopoda and Conchifera of the Sands, the former being supposed to be exclusively Liassic, the latter consisting of Inferior Oolite and special forms, together with a very small minority of Liassic, the latter also passing upwards only to the lowest fossiliferous zone of the Sands. The following table has been drawn up to shew the vertical range of the Ammonites of the Sands, excluding those which are special to the Lias beneath them.



	Upper Lias.	Sands.			Inferior Oolite.
		Lower.	Middle.	Upper.	
Ammonites opalinus .. ..	..	..	..	■	
• ————— dispansus .. ..	..	..	..	■	
• ————— Aalenis .. ..	..	..	..	■	
————— discoides .. ..	..	..	..	■	
————— serrodens .. ..	..	..	..	■	
————— Comensis .. ..	..	..	..	■	
————— Hirinus .. ..	..	..	..	■	
————— Leckenbyi .. ..	..	..	..	■	
————— Boulbiensis .. ..	■	■	■	■	
————— Jurensis .. ..	■	■	■	■	
• ————— radians .. ..	■	■	■	■	
————— insignis (2 varieties)	■	■	■	■	
• ————— striatulus .. ..	■	■	■	■	
————— variabilis .. ..	■	■	■	■	
————— fimbriatus .. ..	■	■	■	■	
• ————— crassus .. ..	■	■	■	■	
• ————— Ilminsterensis .. ..	■	■	■	■	
————— complanatus .. ..	■	■	■	■	

The Sands have been divided into three portions as they contain three fossiliferous horizons at several localities in the Cotteswolds. The two species which are stated to pass upwards into the Inferior Oolite are given upon the authority of Professor Quenstedt and of Dr. Oppel, the former of whom has figured them (Jura, pl. 42 and 45) from the Brown Jura 'a' of Wurttemberg, in England they have not been found higher than the Sands.

It will be perceived from the foregoing table that of the thirteen Ammonites found in the upper portion of the Sands at Frocester Hill, and other localities, eight do not pass downwards to the Lias, nor lower than the highest bed of the Sands; that the other five occur throughout the Sands, and also in the upper Lias; and that the remaining five species of the lower Sands are also Liassic, but do not pass upwards into the Sands higher than the lowest fossiliferous band near to their base. All the Ammonites of the lowest zone in the Sands are therefore Liassic, but one of them (*A. variabilis*) is a boundary species, and passes downwards into the Upper Lias only a few inches, as will be found in the sands on the coast of Yorkshire, at Ilminster, at Nailsworth in the Cotteswolds, and in France. Of the Ammonites in the Upper Sands two are also boundary species, they have been found rarely very near to the upper boundary of the Sands at Frocester Hill, one of them (*A. opalinus*) has also occurred in the same position at Burton Bradstock, Somerset, and at Blue Wick on the Yorkshire coast. In Wurttemberg, on the other hand, both species occur

\* These species occur abundantly in the Cotteswolds.

only above the Sands in black clays and shales, associated with a fauna which is to a great extent local and peculiar. Of the Ammonites of the Upper Sands *A. dispansus* and *A. Aalensis*, two of the more common forms, are not Liassic, the former more especially probably equals in its numbers all the other Ammonites at Frocester Hill. I will now proceed to offer some remarks upon the Ammonites, scriatum, and in the order in which they appear in the table.

*Ammonites opalinus*, Reinecke. This is one of the more rare forms of the genus in England, where it occurs only at the upper boundary of the Sands; in Wurtemberg, fragments of it are stated to occur in immense numbers at a somewhat higher position at many localities.

*Ammonites dispansus*, Lycett. This was long confounded with *A. variabilis*, and it has only been after a comparison of very numerous specimens of both species, and of all stages of growth, that it has been found necessary to separate them; their geological position is also quite distinct, *A. dispansus* occurs only in the Upper Sands, *A. variabilis* does not pass higher than the lowest fossiliferous bed of the Sands, both are very limited in their vertical range and never occupy the same horizon. Both in the young and adult conditions of growth *A. dispansus* is always more discoidal than the other, the figure of the back more especially differs in its acute keel, the tuberoles upon the inner margin of the volutions are much more faintly marked, and unlike those of *A. variabilis* they are irregular, they give origin to numerous fasciated delicate sigmoidal radii; in *A. variabilis* the radii constitute rigid, nearly straight, and comparatively prominent ribs, the septa in *A. dispansus* have the lobes much more simple, less pointed, and less produced, the test is preserved very rarely and only in young specimens, it is delicate and exhibits the fine hair like sigmoidal radii much more distinctly than the casts. Specimens and fragments are very abundant at Frocester Hill, at Haresfield Hill they are present but are badly preserved. The largest specimen in my possession is  $6\frac{1}{2}$  inches across, but very few exceed 3 inches.

*Ammonites Aalensis*, Zieten. Perhaps none other of the group of the Falciferi exhibits so great an amount of variability in the ornamentation of the surface as this species does, for the most part the varieties upon which its synonyms are founded have each a distinctive character, and their names may be retained for as many true varieties. It has only been after the acquisition of a multitude of examples that I have ventured to arrive at this conclusion, and to select the thirty specimens on the tray before me to illustrate all these varieties, for which purpose a smaller number would but inadequately illustrate them. Two of these synonyms, *Ammonites comptus*, Rein., and *A. costula*, Rein., have priority, but as the former is only a young tumid abnormal variety, and the latter a rare

and very inconstant variety, it will be preferable to adopt Zieten's well-known name *A. Aalensis*, which represents the typical form though not an adult one. D'Orbigny's figures of *A. Aalensis* represent the aged and young conditions of the typical form, his figures of the septa are more complicated and the lobes more produced than is usually seen even in old shells. The first three or four volutions have large, elevated, nearly straight, sometimes fasciated ribs, which gradually become less conspicuous until they are not distinguishable from the faintly marked folds of growth, in old specimens these costated volutions are nearly concealed by those succeeding, which are almost plain.

The second variety "*Costula*," *Ammonites costula*, Reinecke, *A. Aalensis costula*, Quenstedt, *A. Actæon*, d'Orb. (?) is usually more tumid than the typical form, and has narrow, curved, distant, and nearly regular costæ, which disappear towards the keel; in the adult state the costæ become irregular, and gradually disappear. This is a small rare variety.

The third variety "*Regularis*," *Ammonites regularis*, Simpson, from the sands at Blue Wick, and from Frocester Hill, is also a small variety, and more tumid than the typical form; it has acute elevated curved radii much more closely arranged than in *costula*, and in some instances they are nearly regular and equal for an entire volution, in other instances the costæ are less conspicuous and more unequal, but they are scarcely fasciated, it is comparatively rare. Simpson places this form in the Middle Lias, which is an error, as I have ascertained from comparing the original specimen in the Scarborough Museum with other examples from Blue Wick.

The fourth variety "*Comptus*," *Ammonites comptus*, Reinecke, is distinguished in the young state by fine closely arranged sigmoidal radii, which are fasciated at occasional intervals by folds of growth, subsequently they are not fasciated and gradually disappear; Reinecke's figure represents the young condition of this variety which accompanies the other varieties in the Upper bed of the Sands at Frocester Hill.

The fifth and largest variety "*Moorei*," *Ammonites Moorei*, Lycett, figured and described in my little work, "*The Cotteswold Hills*," is more nearly allied to *comptus* than to the other varieties in the characters of its radii, which, however, are not fasciated, they are very fine, acute, but not altogether regular or equal; in large specimens more than half of the last volution is destitute of ornament. A comparison of Zieten's figure of *A. Aalensis* with that of *A. Moorei* will form my best excuse for having in the first instance failed to discover the affinity of the two forms; their dissimilarity is indeed so great that it will require some faith in the foregoing statements to realize the idea of their specific unity in the absence of a good series of connecting specimens. The varieties of *A. Aalensis* may therefore be arranged into the following groups,