

e. No. 448. Missing

ABSTRACTS

OF

THE PROCEEDINGS

OF THE

GEOLOGICAL SOCIETY OF LONDON.

SESSION 1883-1884.

Nos. 442-458.

LONDON :

PRINTED BY TAYLOR AND FRANCIS,

FOR THE GEOLOGICAL SOCIETY, BURLINGTON HOUSE.

1884.

OFFICERS AND COUNCIL.—1884.

President.

Prof. T. G. Bonney, D.Sc., F.R.S.

Vice-Presidents.

W. Carruthers, Esq., F.R.S.

John Evans, Esq., D.C.L., LL.D., F.R.S.

J. A. Phillips, Esq., F.R.S.

Prof. J. Prestwich, M.A., F.R.S.

Secretaries.

W. T. Blanford, Esq., F.R.S.

Prof. J. W. Judd, F.R.S.

Foreign Secretary.

Warrington W. Smyth, Esq., M.A., F.R.S.

Treasurer.

Prof. T. Wiltshire, M.A., F.L.S.

Council.

H. Bauerman, Esq.

W. T. Blanford, Esq., F.R.S.

Prof. T. G. Bonney, D.Sc., F.R.S.

W. Carruthers, Esq., F.R.S.

John Evans, D.C.L., LL.D., F.R.S.

Col. H. H. Godwin-Austen, F.R.S.

Henry Hicks, M.D.

Rev. Edwin Hill, M.A.

G. J. Hinde, Ph.D.

John Hopkinson, Esq.

Prof. T. McKenny Hughes, M.A.

J. W. Hulke, Esq., F.R.S.

J. Gwyn Jeffreys, LL.D., F.R.S.

Prof. T. Rupert Jones, F.R.S.

Prof. J. W. Judd, F.R.S.

J. A. Phillips, Esq., F.R.S.

Prof. J. Prestwich, M.A., F.R.S.

F. W. Rudler, Esq.

Warrington W. Smyth, Esq., M.A.,
F.R.S.

J. J. H. Teall, Esq., M.A.

W. Topley, Esq.

Prof. T. Wiltshire, M.A., F.L.S.

Henry Woodward, LL.D., F.R.S.

Assistant-Secretary, Librarian, and Curator.

W. S. Dallas, Esq., F.L.S.

Clerk.

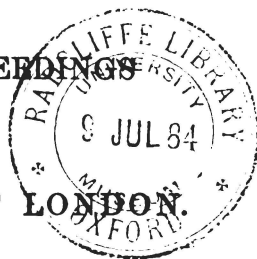
Mr. W. W. Leighton.

Library and Museum Assistant.

Mr. W. Rupert Jones.

[For substitution in List of Fellows.]

ABSTRACTS OF THE PROCEEDINGS
OF THE
GEOLOGICAL SOCIETY OF LONDON.



No. 458.]

[Session 1883-84.

June 25, 1884.—Prof. T. G. Bonney, D.Sc., F.R.S.,
President, in the Chair.

James Campbell Christie, Esq., Old Cathcart, near Glasgow, was elected a Fellow, and Baron C. von Ettingshausen, of Graz, a Foreign Correspondent of the Society.

Nicol Brown, Esq., 34 Canonbury Park, N.; James Charles Chaplin, Esq., 10 Earl's Court Square, S.W.; Herbert W. Hughes, Esq., Assoc. R.S.M., Priory Farm House, Dudley; and Rev. Samuel Pilling, Osborne Terrace, Regent Road, Blackpool, were proposed as Fellows; Professor A. L. O. Des Cloizeaux, of Paris, as Foreign Member of the Society, and Professor Hermann Credner, of Leipzig, as a Foreign Correspondent.

The following names of Fellows of the Society were read out for the second time in conformity with the Bye-laws Sec. VI. B, Art. 6 in consequence of the non-payment of the arrears of their contributions:—G. P. Bevan, Esq., B. P. Bidder, Esq., W. A. Byrom, Esq. J. Coates, Esq., Dr. W. B. Kemshead, Sergeant W. Parsons, R.E., T. J. Price, Esq., F. E. Randell, Esq., S. B. J. Skertchley, Esq., and Dr. J. Shaw of Cape Town.

The List of Donations to the Library was read; it included, among others, the following works:—Lecture Notes on Geology and Outline of the Geology of Canada, for the use of Students, with Figures of characteristic Fossils, by J. W. Dawson; Die silurischen Etagen 2 und 3, by W. C. Brögger; Silurfossiler og Pressede Konglomerater i Bergenskifrene, by Hans H. Reusch; and Il cretaceo superiore e il gruppo di Priabona nell' Apennino Settentrionale, by G. Cappellini

11. "On the Structure and Affinities of the family Receptaculitidæ, including therein the genera *Ischadites*, Murch., (= *Tetragonis*, Eichw.), *Sphaerospongia*, Pengelly, *Acanthochonia*, g. n., and *Receptaculites*, DeFr." By Dr. G. J. Hinde, F.G.S.

The author's observations have been derived from the study of numerous examples of the family from Silurian and Devonian strata in Devonshire, the west of England, Belgium, Silesia, Bohemia, the isle of Gotland, Canada, and the United States. In an historical sketch the author showed that the members of this group have been at various times referred to pine-cones, Foraminifera, sponges, corals, cystideans, and tunicate Mollusca, and that the latest authorities who have written on them consider their systematic position as altogether doubtful.

The present mineral constitution of these fossils is either of crystalline calcite, silica in a secondary condition, iron peroxide, or iron pyrites, or they occur as empty moulds, and from the similarity to the present mineral condition of undoubted siliceous sponges, the author thinks that the Receptaculitidæ were also originally siliceous. The skeleton of the members of the group consists of modified hexactinellid spicules, in which the summit-ray of the spicule is changed into a rhomboidal or hexagonal plate with the four horizontal rays or arms immediately beneath it, whilst the vertical ray or shaft tapers to a point, and terminates freely in *Ischadites* and *Acanthochonia*; in *Sphaerospongia* it is partially absorbed; and in *Receptaculites* it develops a plate at its distal extremity. The spicular rays are traversed by axial canals, as in other hexactinellid spicules, and

these unite in the central point of junction of the rays. The spicules are definitely arranged so that their summit-plates form regularly oblique rows crossing each other and the horizontal rays radiating and transverse rows.

The genus *Ischadites* consists of conical or ovate bodies enclosing a central cloacal cavity with a summit-aperture. The basal nucleus or commencement of growth consists of eight small spicules arranged in a circle; the spicule-plates are rhomboidal; there is no inner plate, as in *Receptaculites*. The genus *Tetragonis*, Eichw., is undoubtedly congeneric with *Ischadites*, and, being of later date, becomes obsolete. *Acanthochonia*, g. n., resembles *Ischadites* in spicular structure, but it is open cup-shaped; it is formed to include a single species, named *A. Barrandei* from Bubowitz, in Bohemia. The genus *Sphaerospongia*, Pengelly (pars Salter), has hexagonal summit-plates, and the vertical spicular rays are only partially developed. The genus *Receptaculites* is cup-shaped; the spicular plates are rhomboidal, and the vertical rays develop at their extremities definite plates, which apparently amalgamate into a continuous perforated layer. The author concluded that the Receptaculitidæ constitute a distinct family of siliceous hexactinellid sponges, whose nearest relationships are to *Protospongia*, *Dictyophyton*, and *Plectoderma*.

The genera *Cyclocrinus*, Eichw. (= *Nidulites*, Salter), *Pasceolus*, Billings, and *Archæocyathus*, Bill., though ranged with the Receptaculitidæ by some authors, were shown to have no structural relationship to that family.