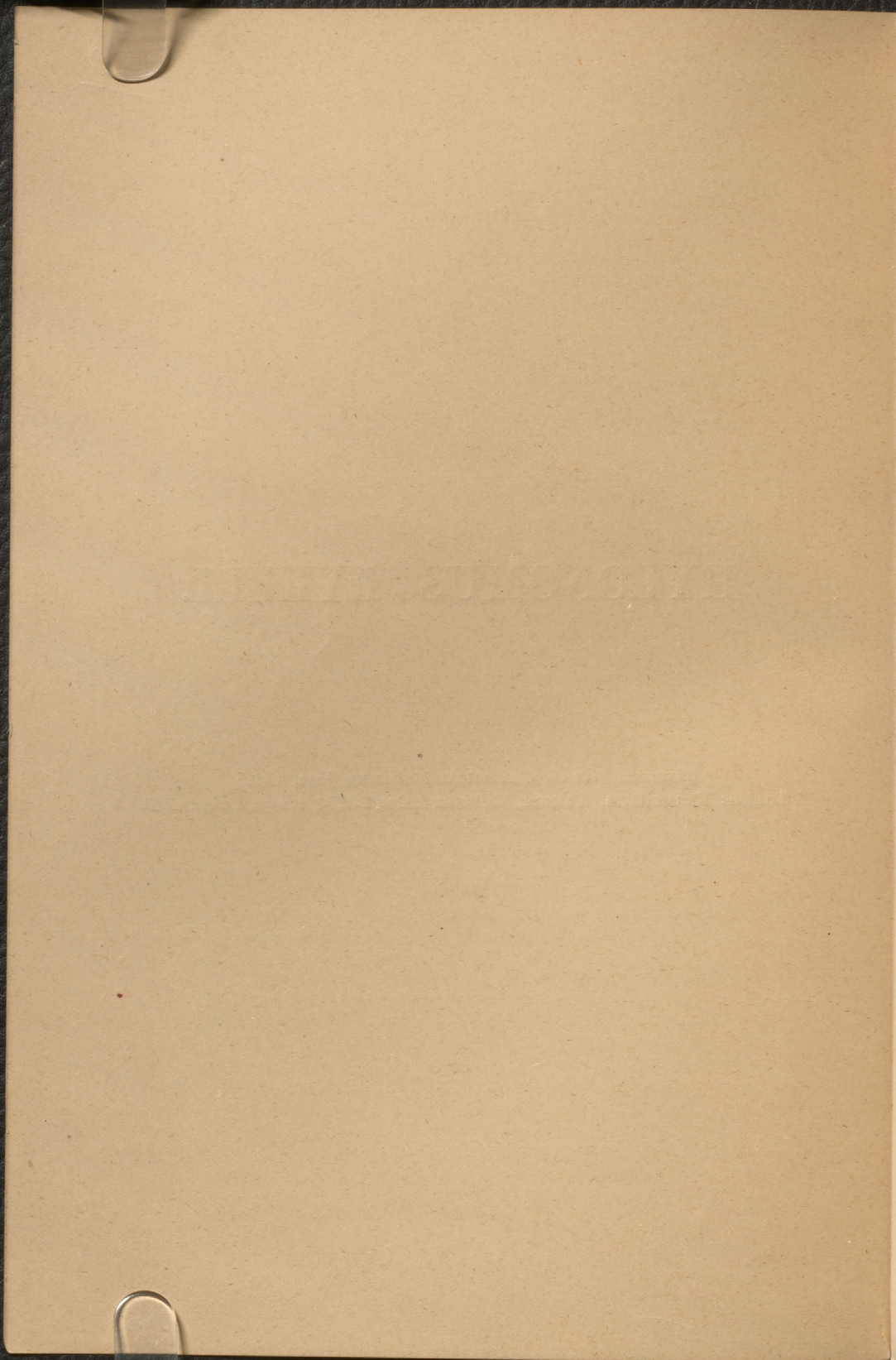


250

HYLONOMUS LYELLI.

[*Extracted from the* GEOLOGICAL MAGAZINE, June, 1891.]

London: KEGAN PAUL, TRENCH, TRÜBNER & Co., Ltd., 57 and 59, Ludgate Hill.



NOTE ON *HYLONOMUS LYELLI*, WITH PHOTOGRAPHIC REPRODUCTION
OF SKELETON.

By Sir J. WILLIAM DAWSON, F.R.S., etc.

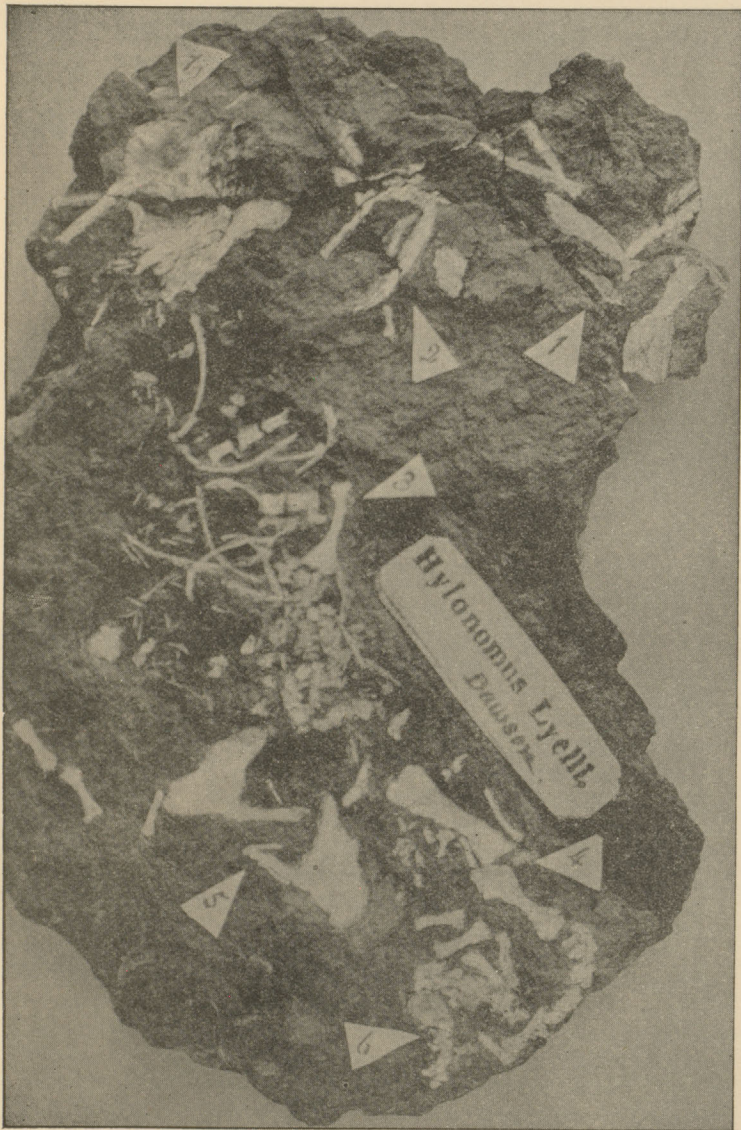
(PLATE VIII.)

AS a sequel to my recent paper on new specimens of *Dendroperpeton*, I have thought it desirable to reproduce by photogravure, for comparison, the type specimen of *Hylonomus Lyelli* now in the collection of the Geological Society of London. The reproduction (Plate VIII.) is of the natural size, though less distinct than in the original. Though the bones are scattered, this specimen enabled me, by measuring the separate bones and adding the cuticular scales found on other specimens, to restore the animal in my "Airbreathers of the Coal Period."¹

The specimen represented is one of the largest found. Most of the others represent smaller (probably in some cases half-grown) specimens, though not showing any structural differences. It will be noticed that the caudal vertebræ are seen in this example, a fact which I had forgotten when the former paper was written. In the species of *Hylperpeton* and *Fritschia*, though the teeth are different, the development of the limb-bones seems to have been similar. In *Smilerpeton occidentatum* the limbs would seem to have been shorter than in the case of other forms in the erect trees, and the skull long and narrow.

The specimen here delineated, though the bones are scattered, has the advantage of lying on a flat plane of lamination. Some of the thinner bones have, however, scaled off, or have been removed by aqueous infiltration. The cavities left by these have been touched with white so as to bring them out. The difficulty in restoring most of the specimens in the erect trees arises not from the absence of the bones, but from these being scattered through non-laminated material, sometimes soft and crumbling, in other cases hard and arenaceous. In either case it is a work of time and care to uncover the bones, and many of these cannot be reached without risking the

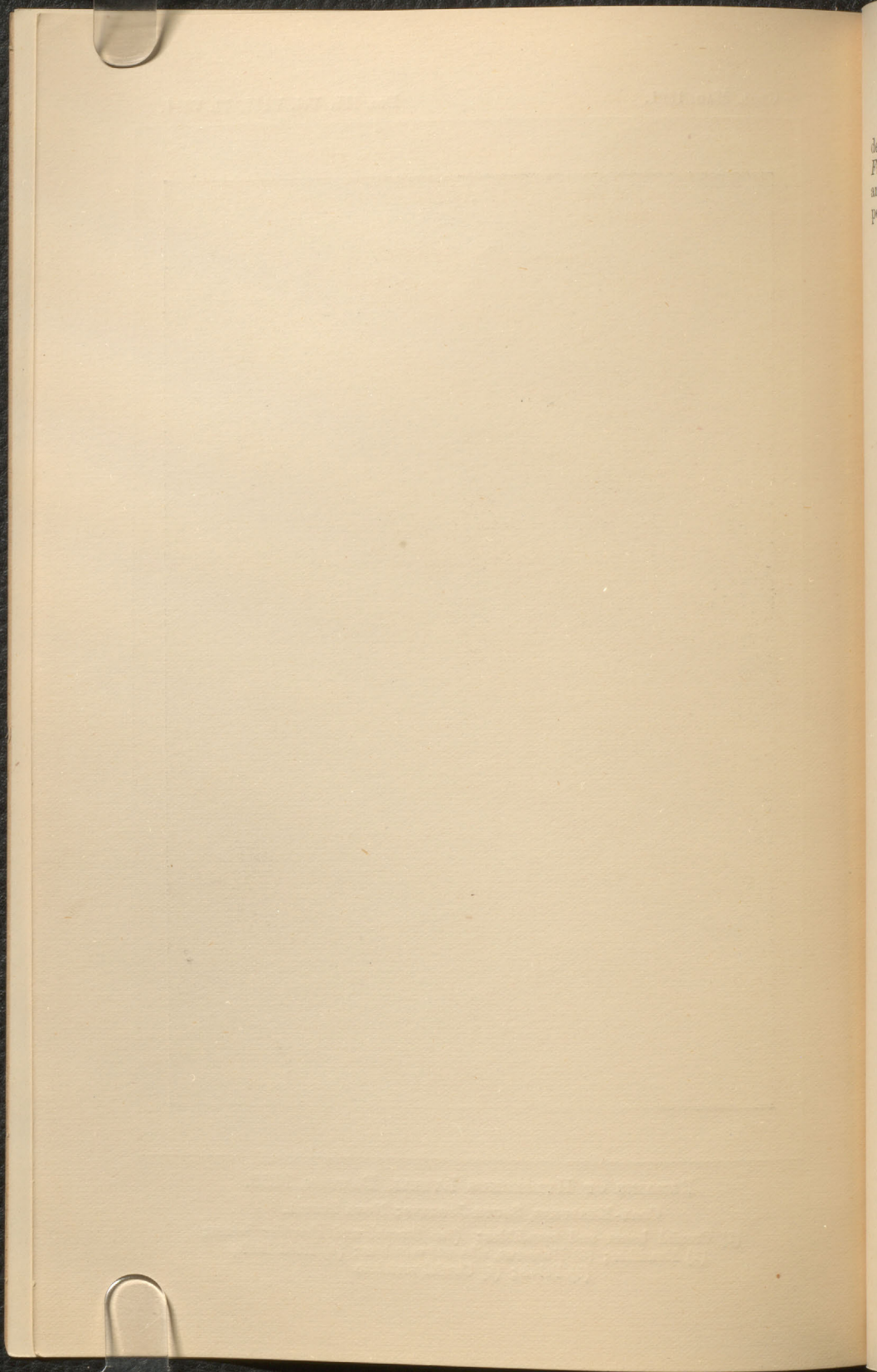
¹ Also on a larger scale in "The Chain of Life in Geological Time."



REMAINS OF HYLONOMUS LYELLI, DAWSON, 1859.

COAL-MEASURES, SOUTH JOGGINS; NOVA SCOTIA.

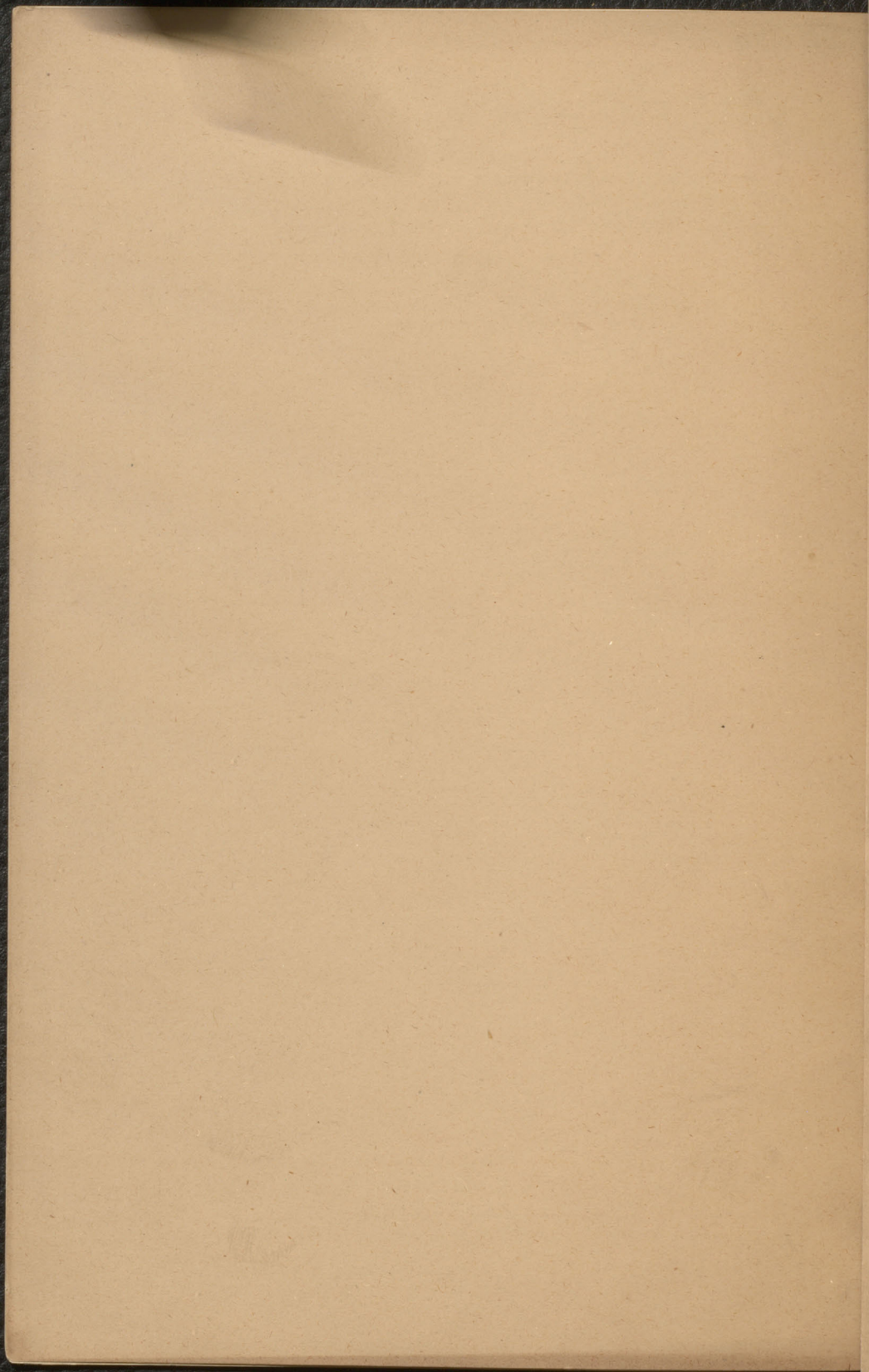
- (1) Cranial bones and mandibles; (1a) Sternal and shoulder bones;
- (2) Mandible; (3) Humerus, ribs and vertebræ; (4) Hind limb;
- (5) Pelvis; (6) Caudal vertebræ.



destruction of others. Some material of this kind representing *Fritschia*, *Hylperpeton*, etc., is still only in process of development, and may perhaps yet enable their skeletons to be reproduced more perfectly than heretofore.

REFERENCE TO PLATE VIII.

- (1) Skull and Maxillæ; (1 α) Sternal and Scapular bones; (2) Mandible;
(3) Humerus, Ribs and Vertebrae; (4) Hind Limb; (5) Pelvis;
(6) Caudal Vertebrae.



Spirorbis and Millepede

Nodule at

Magan Creek, Ill.

J. W. Dawson

[From the Proceedings of the Boston Society of Natural History,
Vol. XXI, March 2, 1881.]

NOTE ON SPIRORBIS CONTAINED IN AN IRONSTONE
NODULE FROM MAZON CREEK, WITH MILLIPEDE.

BY J. W. DAWSON.

The shell pointed out by Mr. Scudder as occurring in the same nodule with *Acantherpestes major*,¹ is minute and discoidal, not enlarging rapidly, dextral, and with about two volutions. The external surface can be seen only in a small part of the shell. It is marked with strong transverse irregular ridges, on which are finer irregular transverse lines or striae. It is not distinguishable either in form or markings from specimens of *Spirorbis* in my collection from the coal formation of Nova Scotia. These I refer to *S. (Microconchus) carbonarius*² which is common to America and Europe, and the present specimen may be referable to the same species, which is very variable in its markings; but a single specimen, and this so imperfect, is not sufficient to render this determination certain.

The shell does not seem to have been attached to the Millipede, but to have been loose. This is however a very common mode of occurrence with *Spirorbis carbonarius*, which was frequently attached to submerged plants and on their decay was set free. This little *Spirorbis* is so very plentiful in beds containing terrestrial remains, that there is nothing singular in its having been drifted between the legs of a dead millipede.

In the Report of the Geological Survey of Illinois, Vol. II, p. 462, Lesquereux notices the occurrence of worm-shells referred by him to *Spirorbis carbonarius* on ferns and other plants at Colchester, Illinois. The figures which he gives (pl. 38, fig. 6) show a variety somewhat more rapidly expanding and more smooth than the present specimen. Professor Whitfield has recently described³ another species, *S. anthracosia*, from the

¹ See Memoirs of the Society, Vol. III, Art. 5 (in press).

² *S. (Microconchus) pusillus* of Martin is not improbably the same, in which case his name has priority.

³ American Journal of Science, Vol. XXI, No. 122.

“higher strata of the coal-measures” at Marietta, Ohio, the description of which would scarcely separate it from *S. carbonarius*, as the “knots or points” seen near the umbilicus sometimes occur in that species. In the Nova Scotia coal-field all the numerous varieties I have found appear to me to be referable to two types, *S. carbonarius* and *S. arietinus*,¹ the latter being more especially characteristic of the upper part of the series. A careful comparison of these shells from the carboniferous of different parts of America is much needed, and would be greatly aided by the revision of the European species recently published in the Geological Magazine (1880) by Mr. R. Etheridge, Jr.

The following is a list of the contents of the volume, as far as they are known. The list is given in the order in which the papers were received by the Editor. The names of the authors are given in full, and the titles of the papers are given in full, or in part, as the case may be. The list is given in the order in which the papers were received by the Editor.