# Notes on the History of the Paleontological Collection, Department of Geology, Indiana University

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## Introduction

In the past, paleontologic papers, especially those printed prior to 1930, commonly did not indicate the repository of the collections on which the published record was based. Workers generally assume the collections reside at the institution to which the author was associated as either student or faculty. Some early workers were not associated with any academic institution, and early collections have been scattered or destroyed. Because inquiries are made frequently to Indiana University concerning both the University and Indiana State Geological Survey collections, this paper provides some general information on earlier collections insofar as is presently known.

According to Wylie (36), the records of Indiana University prior to 1883 were largely destroyed by fire. Wylie (36:31) quoted statements concerning geological collections from as early as 1852 in legislative acts affecting the University, e.g., "The Lecturers were also to make geological examinations, and collect mineralogical specimens for the cabinet by volunteer donations." No attempt has been made to reconstruct possible paleontological collections, other than the Owen collection, based on any extant University catalogues or Reports of the President of Indiana University published prior to 1883, and I assume that any geological collections or catalogues prior to this date were lost in the 1883 fire reported by Wylie (36:83).

## The Owen Collection

Our knowledge of the Indiana University Department of Geology (IUB) paleontological collections begins with the collection of David Dale Owen. Owen collected fossils and minerals during his lifetime from all the areas in which he had initiated geological surveys (Indiana, Kentucky, Arkansas, Iowa, Wisconsin, Minnesota, the Dakotas, and Nebraska). During Owen's lifetime the collections were housed in New Harmony, Indiana, in a succession of four buildings, the last of which was a laboratory and museum constructed for this purpose. The famous English geologist Sir Charles Lyell visited New Harmony and examined the collection on his second trip to North America (21:270-271). On Owen's death the collections contained 85,000 items (18:136).

D. D. Owen died in 1860, and his heirs asked Richard Owen, D. D. Owen's younger brother, to dispose of the collection. Richard Owen, also a geologist, and one who had worked under his brother on geological surveys of Indiana, proposed in 1861 that the laboratory and museum collections of his brother be offered to the Indiana State Board of Agriculture in order to form the basis of a college or mining school. No action was taken on this proposal, perhaps due to the Civil War, and the museum collections were sold to Indiana University in 1870 (18:136-137).

According to Wylie (36:80), the Owen collection filled several (railroad) cars and was stored in a warehouse until 1873 when a new building was erected to house the collection and the University library. Winchell (34:139) reported that additions were made to the collections by purchase and that Richard Owen arranged and labeled specimens. Winchell also indicated that the only collections saved from the fire were a "few type specimens, which were in separate portable cases."

D. S. Jordan, then president of Indiana University, arranged for the remaining material to be sent to the United States National Museum (USNM) (letter of J. S.

Kingsley to J. W. Powell, October 1, 1887). J. C. Pilling of the United States Geological Survey, wrote a memorandum recommending that the USNM obtain the types but that it was necessary to send someone to Bloomington to relabel the collection and check it. This was apparently done and the USNM (Accession No. 19889, December 2, 1887) received the part of the Owen collection rescued from the 1883 fire.

According to the USNM accession cards, the remains of the Owen collection comprised three boxes of fossils containing types of 22 species described by Owen (24) and 327 specimens representing 42 genera and 65 species of Silurian, Devonian, and Carboniferous fossils from various localities in the northwest (the upper Mississippi Valley region). The accession card was prepared by C. D. Walcott. Five types from Owen (25) were also part of the collection. All of these types appear in the Schuchert et al. (1905) catalogue of the USNM collections.

The Owen collection now comprises about 110 numbers (USNM 17856-19755, 20242-20253) in the USNM catalogue. Twenty-two specimens or catalogue numbers are marked in the catalogue as having been returned to Indiana University, apparently as part of the arrangement made by D. S. Jordan. The Owen collection at Indiana University is catalogued as IU697, 705-715, and 2533. However, no specimens are now preserved for IU707. The following Owen specimens now in the Indiana University collections are types, that is, specimens figured or otherwise cited in Owen's published works.

697 *Lonchocephalus hamulus* Owen, 1852, p. 576, Table 1B, fig. 12. Syntype.
703 *Dikelocephalus minnesotensis* (?) Owen, 1852, p. 574, Table 1A, fig. 3. Syntype.
704 *Dikelocephalus minnesotensis* Owen, 1852, p. 574, Table 1A, fig. 1.

*Lonchocephalus hamulus* Owen, 1852, p. 576, Table 1A, fig. 8. Syntypes of both species on different sides of same slab.
708 *Dikelocephalus minnesotensis* Owen, 1852, p. 574, Table II, fig. 9. Syntype.
715 *Lingula pinnaformis* Owen, 1852, p. 583, Table 1B, figs. 1, 8. The figured syntypes are on opposite sides of the same slab, which has apparently been altered so that figures 4, 6 and part of 8 can no longer be identified.

Echinoderm specimens published by Owen and Shumard (26; 27; 28) are now in the Field Museum of Natural History (University of Chicago) collections as reported by Springer (33:7) and are cited in the published catalogues of that museum (14; 15).

## Twentieth Century Collections

Some early collectors apparently donated materials to the IUB departmental collections, but only a very few specimens obtained from M. N. Elrod and G. K. Greene can now be documented. The great bulk of the present collections begins with the work of E. R. Cumings, who was Chairman of the Department of Geology for more than 40 years (1901-1943), his colleagues, and students.

At present, the earliest Indiana University catalogue of paleontological specimens consists of 3 × 5 cards and contains numbers 1-2215. The first cards were hand written, perhaps by J. W. Beede and E. R. Cumings. Cumings did not remember who had prepared the cards when I asked him about departmental catalogues in October 1965. Some of the early cards contain a second typewritten card with the same information, and most of the last half of the card catalogue is typewritten. Beede apparently made the notations on the Owen specimens in the Indiana University collections.

In conjunction with his research on Paleozoic Bryozoa, Cumings and his students prepared more than 6000 thin sections, which are housed in approximately 250 boxes, each containing 25 sections. The boxes now comprise the catalogue sequence IU9101-9250. Cumings and J. J. Galloway kept a card file (Lists of thin section numbers

under each taxonomic name) of their bryozoan thin sections, but this information was never converted into a formal catalogue listing. Consequently, one must rely on cryptic locality labels, some of which were published by Cumings (7), in order to obtain fuller stratigraphic and geographic information on the specimens from which the thin sections were obtained. On the basis of handwriting, Cumings probably prepared the cards for the first hundred boxes and Galloway prepared the cards for subsequent boxes of bryozoan thin sections. This thin section collection was the basis of a number of papers by Cumings and his students, but box and thin section numbers were cited explicitly only in the papers of Coryell (3), Cumings (8), and Cumings and Galloway (11).

In October 1965, discussions with John Huddle, a student of Cumings, revealed that the bound catalogue entry book in the departmental collections was initiated in 1932 or 1933 after J. J. Galloway returned to Indiana University. Huddle helped make some of the original entries, but many entries were made with National Youth Administration help at 35 cents per hour. Catalogue numbers 2216-7000 were made from 1933 to 1964, after which the present system of catalogue sheets was adopted.

The general contents of the IUB collections have been summarized by Glenister et al. (13). The collections contain more than 600 primary types and 2200 referred specimens cited in approximately 150 published works, including the following studies in which IUB is not explicitly indicated as the repository: Ausich, Kammer, and Lane (1); Beede (2); Cumings (4); Cumings (5); Cumings (6); Cumings (7); Cumings and Galloway (9; 10); Frey and Cowles (12); Greene (16); Gutschick (17); Shaver (31); and Shrock (32).

In general, the IUB collections do not include materials published before 1900 in the volumes of the Indiana Geology and Natural History Survy. These collections were reposited in the Indiana State Museum, and their history has been summarized by Richards (29:483). From the salvaged collections obtained by Indiana Geological Survey personnel (29:483) the following published specimens have been identified and are reposited at IUB.

8995-434 *Bellerophon gibsoni* White, 1882, p. 360-361, pl. 41, figs. 4-6. Text and figures reproduced in Cumings (6: pl. 24, figs. 5, 5a, b). Holotype.
8995-435 *Gomphoceras minum* Hall. Kindle, 1901, p. 740, pl. 25, fig. 8. Hypotype.
8995-436 *Aethocystites sculptus* Miller, 1894, p. 264, pl. 2, fig. 2. Holotype.
8995-437 *Platyceras multispinosum* Meek. Kindle, 1900, p. 723, pl. 17, fig. 3. Hypotype.
8995-438 *Ceraurus (Crotacephalus) niagarensis* Hall. Kindle and Breger, 1904, p. 483, pl. 23, fig. 1. Hypotype.
8995-439 *Goniasteroidocrinus tuberosus* Lyon and Casseday. Miller, 1892, p. 661, pl. 9, fig. 11. Hypotype.

During the past 20 years several requests concerning the Silurian specimens described and figured by Kindle and Breger (20) have been directed to the Indiana University Department of Geology. Most of these materials, which apparently were part of E. M. Kindle's personal collection, were donated to the USNM in 1916 and presently comprise USNM numbers 53933, 62258-62369.

### Indiana Geological Survey Collections

Since 1964, paleontological collections obtained and published by Indiana Geological Survey (IGS) personnel have been curated as part of the IUB collections. The published IGS localities 1G-7G are now assigned to IU 8251-8257 respectively, and the separate InGS number sequence is assigned to IU 8995. Note that individual specimen numbers within localities (catalogue numbers) remain as before; only the locality number has changed.

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