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THE PRIORITY OF DANA, 1846-48, VERSUS  
HALL, 1847, AND OF ROMINGER, 1876,  
VERSUS HALL, 1876 (?1877)

BY  
ERWIN C. STUMM



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*Director:* LEWIS B. KELLUM

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VOLUME VII

1. The Priority of Dana, 1846-48, versus Hall, 1847, and of Rominger, 1876, versus Hall, 1876 (?1877), by Erwin C. Stumm. Pages 1-6. Price \$.25.

THE PRIORITY OF DANA, 1846-48, VERSUS  
HALL, 1847, AND OF ROMINGER, 1876,  
VERSUS HALL, 1876 (?1877)

By ERWIN C. STUMM

THE official publication dates of Dana's *Zoophytes* versus Hall's *Paleontology of New York*, Volume I, and of Rominger's *Fossil Corals* versus Hall's *Illustrations of Devonian Fossils* have been a source of much controversy among students of Paleozoic corals. The establishment of priority is important in the first case since the decision affects the status of the genus *Favistella* Dana versus the genus *Favistella* Hall. In the second case the decision on priority determines the genoholotype of *Emmonsia* Edwards and Haime and the validity of several species. The priority of the Devonian coral species should be settled in advance of the forthcoming coral section of the *Illustrated Catalogue of Devonian Fossils*.

DANA VERSUS HALL

With regard to Dana, certain authors have considered the publication date of his *Zoophytes* in *United States Exploring Expedition* to be 1846, and others, notably Lang, Smith, and Thomas (1940, p. 173), believe that the part of the work containing Dana's descriptions of corals did not appear until 1848. A letter, dated April 27, 1940, from Daniel C. Haskell, of the New York Public Library, to Miss M. F. Willoughby, of the U. S. Geological Survey, gives the following information concerning important points in the controversy:

There is no question as to the fact that Dana's complete report was printed in the early part of 1846. For printed confirmation of this fact see the first paragraph of the article by B. Silliman, Jr., in the *American Journal of Science* for March, 1846, Ser. 2, Vol. 1, p. 189. It is there stated that two hundred copies were printed. This includes both the official Government issue of one hundred copies printed by C. Sherman and the author's private issue, also of

one hundred copies published by Lea and Blanchard. Curiously enough, while all of Dana's private issue was printed at the same time, some of them bear the date "1846" while others bear the date "1848." I have seen six copies of Dana's private issue dated "1848" and three dated "1846." Two of the latter were presentation copies from Dana, one to Agassiz, now in the Museum of Comparative Zoölogy at Cambridge, a second to the Brothers Society of Yale College, now in the general University Library.

The contention of Lang, Smith, and Thomas that only pages 1-120 and 709-720, which do not include the part describing genera and species, appeared in 1846, and that the complete work did not appear until 1848, is explained as follows in Mr. Haskell's letter:

Dana published at that time (1846) a book of 132 pages with the title: *Structure and Classification of Zoophytes*, Philadelphia, Lea and Blanchard, 1846. My note on this reads as follows: An issue of pp. 2-120, Chapter 1, Introduction, and pp. 709-720 of the Appendix, printed from the type of the official edition and issued with a new half-title and prefatory remark.

It is easy to determine from these carefully collected data that, at least so far as the official Government issue is concerned, the publication date is 1846.

Hall's *Paleontology of New York*, Volume I, did not appear until 1847. The major taxonomic problem thereby created is that *Favistella* Hall, 1847, is preoccupied by *Favistella* Dana, 1846. This leaves us in the dilemma of trying to establish the genotype of *Favistella* Dana. Lang, Smith, and Thomas (1840, p. 80) present the following data:

Genoholotype (by monotypy):—*Columnaria alveolaris* Van Cleve, figured in "Western Fossils" according to Dana. Dana gives no reference to J. W. Van Cleve's paper. The only paper by the latter seems to be in *Proc. Amer. Assoc. Adv. Sci.*, 1 (Philadelphia), 1849, pp. 19-24: fossil list on pp. 22-24. On p. 22 Van Cleve mentions "*Columnaria alveolata* Goldf., yellow limestone, Dayton." His large work was never published, though the MS. and plates were prepared; but the plates were published by C. A. White ("Van Cleve's Fossil Corals" in *Dept. Geol. Nat. Hist. Indiana*, 11th Ann. Rept., 1881, 1882, pp. 376-401, pls. xliiv-lv), and by J. Hall ("Van Cleve's Fossil Corals," in *Dept. Geol. Nat. Hist. Indiana*, 12th Ann. Rept., 1882, 1883, pp. 239-270, pls. i-xiv), with a list of Van Cleve's determinations and their equivalents, according to Hall, on pp. 241-243. (Note the comments of Hall on pp. 269-270 that the figures of Van Cleve are often copies of Goldfuss's.) According to Hall's list and paper (p. 257), Van Cleve's MS. contained a specimen identified by the latter as *Calamopora alveolaris* Goldfuss (= *Favosites hemisphericus* Yandell & Shumard according to Hall). But nowhere does Hall quote a reference in Van Cleve's MS. to *Columnaria alveolaris*. It is probable that Dana meant to refer to one

of the two species mentioned by Van Cleve, 1849, pp. 22-23, i.e., *Columnaria alveolata* Goldfuss, and *Favosites alveolaris* Goldfuss, or else to Van Cleve's MS. name *Calamopora alveolaris* Goldfuss (?=*Favosites alveolaris* Goldfuss). At any rate, Dana's *Favistella* can accordingly be dismissed as indeterminate, and founded on a non-existent or mis-named species.

This opinion of Lang, Smith, and Thomas was written on the assumption that Dana's work did not appear until 1848 and, therefore, that Hall's genus had priority. However, since *Favistella* Dana, 1846, antedates *Favistella* Hall, 1847, the problem becomes of far greater importance.

C. A. White (1882, pl. 44) illustrates the first plate of "Van Cleve's Fossil Corals" showing two views of one species with his own (White's) designation of *Favistella stellata* in the explanation of the plate. Undoubtedly this is the original of *Columnaria alveolata* Goldfuss, Van Cleve, 1849, p. 22, and is clearly referable to *Favistella stellata* Hall. The drawing shows the absence of mural pores and the presence in each corallite of twelve septa, of which the six major ones reach or closely approach the axis and the six minor ones are approximately one half as long. *Favosites alveolaris* (Goldfuss) Van Cleve was illustrated by Hall (1883, pl. 5), with Hall's designation of *Favosites hemisphericus* Yandell and Shumard in the plate explanation. This illustration is of a turbinate *Favosites* with complete tabulae and no septa.

Dana (1846, p. 635) describes his new subgenus *Favistella* as follows: "The name is here applied to a part of the true *Favosites*, in which the cells are stellate with twelve distinct rays, which in some species are quite broad. A species of this subgenus is well figured by Van Cleve in one of his plates of Western fossils, and named *Columnaria alveolaris*."

It can easily be determined from the foregoing description that Dana was referring to Van Cleve's illustration of *Columnaria alveolata* and that his trivial name *alveolaris* is a clear example of a *lapsus calami* for *alveolata*. Therefore *Favistella* Hall, 1847, is a synonym as well as a homonym of *Favistella* Dana, 1846, and the genotype of *Favistella* Dana is *Columnaria alveolata* Goldfuss Van Cleve in White, 1882, pl. 44 (named *Favistella stellata* by White in the plate description), which is congeneric with *Columnaria alveolata* Goldfuss

and conspecific with *Favistella stellata* Hall. It is interesting to note that Dana (1846, p. 363) confused Goldfuss' genus *Columnaria* with *Lithostrotion* and was led by this circumstance to propose a new subgeneric term for the *Columnaria alveolata* lineage.

#### ROMINGER VERSUS HALL

Volume III (1876) of the *Geological Survey of Michigan* contains two parts: Part I, Geology of Lower Peninsula, and Part II, Paleontology, Fossil Corals, with Rominger as the author of both parts. Part II was first published and distributed separately from Part I. A paper-bound copy of Part II, with full text and plates, was accessioned by the Library of Congress on October 28, 1876. At a later date the two parts were combined to form Volume III, and presumably were distributed in either November or December of 1876.

Of *Illustrations of Devonian Fossils: Corals of the Upper Helderberg and Hamilton Groups*, Lang, Smith, and Thomas (1940, p. 187) make the following statement: "With regard to Hall's work, Dr. R. Ruedemann, of the New York State Museum, has informed us that Hall's illustrations were submitted on 21st December, 1876, and paid for by warrant 'before Sept. 30, 1877' according to the Comptroller's Report in the Law Library. It was therefore delivered in print before that [the latter] date which was then the end of the fiscal year, but there is no evidence showing the exact date of delivery to the Director of the Museum. As it was not submitted until the end of 1876, it is safe to say that it was not delivered until near the end of the fiscal year." Thus Rominger's work has undisputed priority over Hall's. In both works the new species *Favosites emmonsii* appears. Hall (1883) concedes Rominger's priority when, on pages 242 and 256 and in the explanation to plate 4, he credits Rominger as the author of *Favosites emmonsii*. The matter of greatest importance is the establishment of the genoholotype of *Emmonsia*, of which *Favosites emmonsii* is the genotype species. Fenton and Fenton, 1936, erroneously credited Hall with the authorship of the species and illustrated a lectotype of their choosing from Hall's syntypes. However, with Rominger's priority established, the genosyntypes are the originals of Rominger's figures 1-2 on plate 7.

This raises another problem, which has been ably solved by Swann, 1947, page 266. Rominger, 1862, page 397, described the new species *Favosites heliolitiformis* from the drift of Ann Arbor (probably originally from the Onondaga limestone of Ontario). In 1876 he included the holotype (pl. 7, fig. 2) of *F. heliolitiformis* as one of the two syntypes of *F. emmonsii* sp. nov., described on page 77. Here we have a situation in which the holotype of a previously described new species is made a syntype of a later described new species by the same author. Swann recognized that the two genosyntypes were not conspecific and selected the original of figure 1 as the lectotype of *F. emmonsii*. This selection is fortunate, for if the original of figure 2 had been selected, *Favosites emmonsii* Rominger, 1876, would have become an exact synonym of *F. heliolitiformis* Rominger, 1862, and since this species is a typical *Favosites* possessing complete tabulae and no squamulae, the genus *Emmonsia* would have become congeneric with *Favosites*. However, in selecting the original of figure 1, a specimen from the Jeffersonville limestone, Charleston Landing, Clark County, Indiana, the genolectotype of *Emmonsia* becomes a specimen with well-developed squamulae which is congeneric and probably conspecific with *Favosites emmonsii* Hall (non Rominger), homonym used by Fenton and Fenton, 1936, plate 1, figures 8–10, to illustrate the internal features of *Emmonsia*.

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