Some Large Colonies of Stromatopora Found near Iowa City, Iowa

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SOME LARGE COLONIES OF STROMATOPORA
FOUND NEAR IOWA CITY, IOWA

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The River Products Company of Iowa City recently opened a quarry for crushed stone on the right bank of Iowa river in section 33, township 80 north, range six west. This locality is about one and a quarter miles northeast of Coralville and close to two miles northwest of Iowa City. The rock used is Cedar Valley limestone and the stone is overlain by a few feet of mantle rock largely of glacial origin. The face of the west end of the quarry at the time the first specimens were obtained was a little over fifteen feet high and its floor was from ten to fifteen feet above the water in the river a few yards away.

There are two easily determined horizons in the quarry. The lower of these is a bed of dark limestone filled with a light-colored coarse-stemmed Idiostroma and occasional slender corals belonging to a species of Favosites. There are also colonies of a mammillated Stromatopora, few of which exceed six inches in diameter. This bed as exposed elsewhere has a thickness of fully ten feet. Its top is fifteen feet above the water and its base is not exposed. The other well marked horizon is one in which there is a recurrent bed of Idiostroma which is more slender than the one just described. Moreover the mammillated Stromatopora and the Favosites are not found in this bed. The matrix of the upper Idiostroma zone is a sublithographic limestone of a grayish color on which account the slender-stemmed Idiostroma do not stand out in contrast as do the stems in the dark zone below. The large Stromatopora colonies which are made the subject of this paper occur in the upper Idiostroma horizon or just below it. This bed is three or four feet in thickness and its top is in the neighborhood of twelve feet above the top of the first Idiostroma bed.

The lower of these beds is well exposed in the old Crowley quarry about three hundred feet south of the Burlington street dam in Iowa City. The top of the bed is thirty feet above the water in the river at normal stage. Between the two exposures there are two dams with a fall of approximately ten feet each thus making the Crowley quarry Idiostroma bed only five feet low-
Fig. 1. Side and lower views of two specimens of *Stromatopora coralvillensis* Thomas from the Cedar Valley limestone at the River Products quarry two miles northwest of Iowa City, Iowa. The larger specimen is number 2600 and the smaller is number 2601 University of Iowa Collections. In the figure they are reduced to about one-seventh natural size.

...er than that at the River Products quarry. At the Crowley quarry the top of the limestone is lower than the position of the recurrent fine-stemmed *Idiostroma*. It may be seen, however, at the west end of the Iowa Avenue bridge some three and one-half blocks north of the Crowley quarry. At this point the top of the recurrent zone is twenty-nine feet above the water as controlled by the Burlington street dam. No specimens of the large colonies occurring at the River Products quarry have been observed in the recurrent zone at the Iowa Avenue bridge. Recently Mr. Max Littlefield pointed out to the writer in an abandoned quarry on Templin Road several hundred yards north of the Iowa Avenue bridge a few large specimens which may be of this kind. The exact horizon was not determined.

The large colonies seen in place at the River Products quarry
were all right side up and apparently in the same position as when living. The colonies are roughly hemispherical in shape, the lower surface being flat and marked by concentric bands. These seem to represent stages in the colony’s growth. In a colony with a radius of eight inches there are five or six such concentric zones each being made up of a large number of finer concentric plates which are the edges of the superposed laminae composing the colony. In some specimens the sides of the mass are quite steep, somewhat like the crown of a large derby hat. Others are lower and broader like an inverted basin, while in another the upper part of the hemispherical crown is eccentric in position, giving the whole colony a shape like that of a horse’s hoof. The upper surface is so coated by the matrix that its character can not be seen. In a polished section parallel to the surface there are at intervals of 10 or 12 millimeters centers from which radiate a number of canals of different lengths. None was observed to reach those of a neighboring center. Among these and over the whole section may be seen the ends of rods, there being from three to five in the space of a millimeter. A vertical section shows close-set lamellae which are more or less wavy. Perpendicular to the lamellae are the rods whose ends were observed in the tangential section. The whole makes a network of tissue the interstices of which are completely filled up by the matrix. When broken under the hammer the specimens show a tendency to break between the lamellae. In case the colony has been weathered for some time exfoliation takes place parallel to the lamellar surfaces.

The colonies of spherical Stromatopora in the lower Idiostroma zone are considerably smaller than the large ones in the upper zone at the River Products quarry. Very few of them exceed six inches in diameter and their surfaces bear very distinct monticules. In the Nora limestone of Floyd county are colonies of an Actinostroma ten to fifteen feet in diameter. The colonies from the upper zone of the River Products quarry are not abundant. In size they range from a foot to eighteen inches in diameter and are large colonies for the Cedar Valley of Johnson and adjoining counties but are really small when compared with those of higher beds in the Devonian section of northern Iowa.

The presence of these fine colonies was first noted by Mr. Stanley M. Hands, manager of the River Products plant, who brought them to the writer’s attention. He kindly saved several fine specimens and hauled them to the laboratory in his car. He
says that several colonies were consigned to the crusher by the workmen before they knew he wished them saved.

As far as the author is aware this fine *Stromatopora* has not been previously described. The specific name *coralvillensis* is hereby assigned to it for convenience in references and in discussing the geology of the region. The two specimens here illustrated may be regarded as cotypes. They are numbers 2600 and 2601 University of Iowa Collection.

P A L E O N T O L O G I C A L L A B O R A T O R I E S,

S T A T E U N I V E R S I T Y O F I O W A.