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## U.A.S. Newsletter, no. 84 (December 1, 1962)

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# U. A. S. NEWSLETTER

Number 84

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Published approximately every six weeks by THE UNIVERSITY ARCHAEOLOGICAL SOCIETY at Brigham Young University, Provo, Utah. The purpose of the Newsletter is to disseminate non-technical but reliable information on the results of recent archaeological research, especially discoveries bearing upon the Latter-day Saint scriptures; also knowledge of the archaeological activities and viewpoints of the Society and its members. Subscription by membership in the Society: three dollars per year; or Life Membership, fifty dollars. (Membership also includes subscription to other publications of the Society and of the BYU Department of Archaeology.)

84.0 EXCAVATIONS AT THE NAUVOO TEMPLE SITE, 1962 SEASON. By Dee F. Green. (The following article, describing an interesting current project in historical or "historic site" archaeology, was specially prepared for the Newsletter by Mr. Green, who was field supervisor for the excavation of the remains of the Mormon Temple at Nauvoo, Illinois, during the summer of 1962. A former editor of the Newsletter and recently-elected general officer of the UAS—Newsletter, 82.1—he is presently working on his doctoral degree in anthropology at Southern Illinois University. Ed.)

84.00 Background to the Excavation. In the fall of 1961 Dr. Melvin L. Fowler, archaeologist at Southern Illinois University and member of the Society, was contacted by Dr. LeRoy Kimball, a Salt Lake City physician, about his availability to conduct preliminary archaeological excavations on the Nauvoo Temple site. Dr. Fowler consented to do so, and during the Christmas holidays he sank three shallow test pits and four test trenches in hopes of locating the foundations of the temple.

Dr. Fowler's preliminary work resulted in the following: (1) four large masonry piers were discovered, which at first seemed to represent the southern wall of the temple; (2) the location of the east wall was established; (3) an idea of the stratigraphy of the site was obtained, the basic outlines of which remain essentially the same (see accompanying drawing); (4) a previously bulldozed area was located, which has proved costly in terms of lost data; and (5) the well, traditionally thought to have been inside the Temple, was proved to be so. Thus, the temple sat on the northwest corner of the temple lot, rather than in the center as some had supposed.

As a result of Dr. Fowler's investigations, presented in a field report to the First Presidency of the LDS church by Dr. Kimball, funds were appropriated for additional archaeological investigation at the site. The contract for the excavation was awarded to Southern Illinois University, and Dr. Fowler was named director of the project. The writer was asked to supervise the actual field work on the site in Nauvoo.

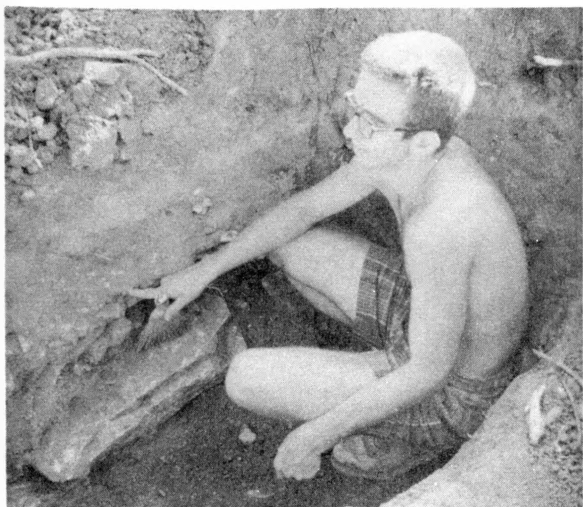
84.01 Historical Research. Prior to the beginning of excavation some time was spent in an attempt to find as much historical information as possible about the construction and destruction of the temple. There yet remains a great deal to do along these lines, especially in the LDS Church Historian's Office in Salt Lake City and in the State Archives in Springfield, Illinois.

Nevertheless, for the purposes of this article we can presently outline a few of the important dates and events for the benefit of UAS readers. The temple was begun in 1841 and the capstone laid in 1845. Historical sources disagree as to the measurements of the building, but the majority seem to prefer between 125 and 130 feet for its length and between 85 and 90 feet for its width.

Destruction of the temple occurred in three stages. First, it was burned in 1848. Second, a tornado leveled all but the west wall in 1850. And third, the west wall and the stones from the other walls were mined and re-used by the citizens of Nauvoo. The group primarily responsible for the removal of the stones was the French Icarians, who purchased the temple after the Mormon exodus. This early communistic society attempted to rebuild the temple after the fire but were discouraged from doing so by the 1850 tornado, and instead used the stones for foundations and walls of other buildings.

Although we have heard several rumors about the existence of floor plans of the temple, we have not been able to locate any. If any are ever found they will add an interesting dimension to the archaeological record.

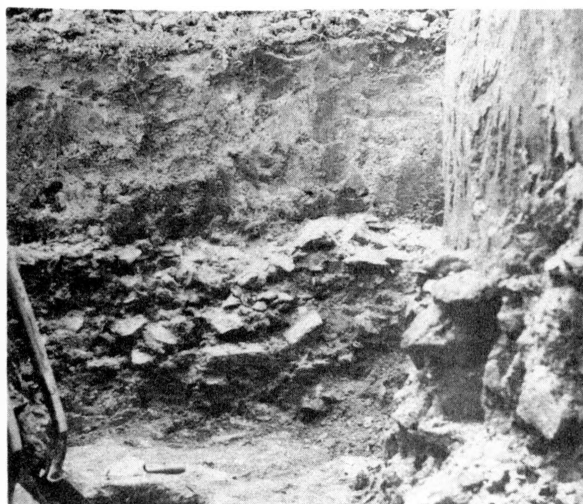
84.02 Plan and Execution of the Excavation. The summer field season was begun on June 15, 1962, with students from Southern Illinois University and Brigham Young University, and some local laborers participating. Betty Marker and Joan Hunt of Salt Lake City were employed as staff artist and field recorder-secretary, respectively. Miss Marker is a graduate of BYU with a minor in archaeology. Other BYU students participating were Richard Daly, Iris Hodges, and Ruth



Fred Lange discovers the first of several remaining foundation stones along the south wall.



Iris Hodges measures stones thought to represent an interior partition at the east end of the temple.



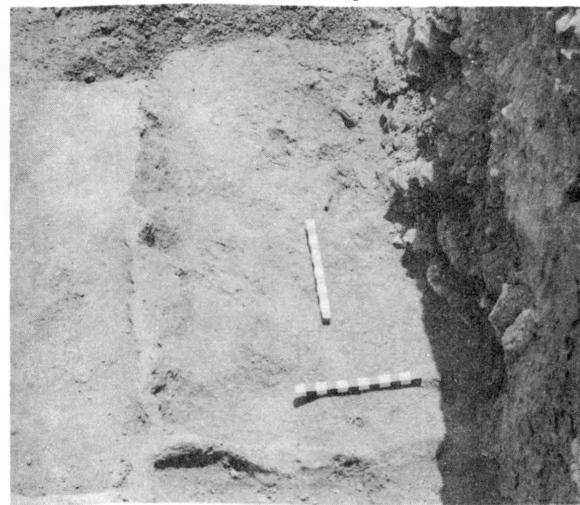
Profile of Trench 1, looking west just above Pier 4. Rubble and mottled fill layers can be distinguished.



Staff Artist Betty Marker sketches profiles near Pier 4, 10 feet below present ground surface.



View of the stone tunnel which might be a drain for the baptismal font. The excavation is 10 feet deep.



The impression of the northwest corner stone. To the right, an unexcavated area by the north wall.

Ann Smith. Larry Bowles and Matt Hill, both graduate anthropology majors at Southern Illinois, acted as assistant field supervisors.

Cleaning up Dr. Fowler's trenches, the sides of which had partially collapsed during the winter, and setting up a permanent transit station, were the first projects undertaken. The transit station is a concrete slab about five feet square in which fitted holes for the transit tripod were made. Set just to the south of the south wall and approximately in the center of the length of the site, this permanent station allows for maximum control of the entire area being excavated.

An arbitrary datum level was established 200 feet below a permanent point on the transit station, and all depth measurements were calculated from it. Horizontal control was effected by laying out two base lines. The east-west base line runs over the control point on the transit station, and the north-south base line lies 100 feet to the east of this point. Thus, the temple site is located entirely within the northwest quadrant formed by the bisecting of the base lines.

The five-foot squares into which the site was staked for excavation received their code numbers from their southwest corners. The code numbers marking each square were arrived at by giving the direction north and west from the intersection of the base lines and the number of feet in each direction. Thus, the permanent point on the transit station marked the southwest corner of square N 0 W 100. At least 468 squares were needed to lay out the entire temple area.

Each five-foot square--with the exception of a few squares in the bulldozed area--was removed by hand excavation, and the artifacts from the various natural strata were placed together in cloth bags for shipment to SIU laboratories for processing and study. A stratigraphy sheet containing transit readings, measurements, data on artifacts, and other pertinent information was kept for each square.

However, the most important field recording was that done by the artists, who drew the profiles of every square. The drawings were laid out on large sheets of graph paper, and the various natural strata were then drawn to scale with the aid of transit readings and tape. When complete, there will be available for study, profiles of the entire site on every five-foot line, both north-south and east-west.

At the beginning of the season the first job was to locate the walls, since the contract called for the depth of the excavation to "be on a horizontal level with the bottom of the old temple foundation walls." Dr. Fowler had previously located the east wall, and the masonry piers uncovered in his Trench 2 at first appeared to be piers of the south foundation, which had supported the wall pilasters. As we began test-pitting northward in

an attempt to locate the north wall, it soon became clear that either the temple was much narrower than the supposed 85 to 90 feet or else the south wall lay farther south than previously supposed and the piers constituted interior supports. In his preliminary work Dr. Fowler also discovered a thick layer of ash representing the 1848 fire, just to the north of the piers. Although rubble was found south of the piers, the upper layers were interpreted as having resulted from the 1850 destruction and the lower layers from the time of construction.

This same type of stratigraphy was anticipated for the north wall. Our test pits on the north, however, revealed an entirely different picture. First, the concentration of rubble along the north wall came sharply up against the sterile yellow clay which surrounds the site. It also rested on yellow clay for a distance of about five feet to the south, where an east-west brick wall was uncovered. This wall was only one or, in places, two brick courses high, with the bricks placed end to end. Extending south from this brick wall was a layer of sand which rested on clay and was about as thick as the bricks. There were only faint traces of ash and charcoal near the top of the sand.

Meanwhile, a crew of workers excavating squares to the north of the piers found that as the ash was removed and sifted the floor sloped down, presumably toward the area of the baptismal font. Furthermore, the deeper the excavation went, the deeper the ash became, until at one point the excavation reached 10 feet below present ground surface, four feet of which were ash.

With this information in hand, we re-examined Dr. Fowler's Trench 1, which had been cut south into yellow clay and found that the east profile showed rubble butting up against yellow clay as was the case with the north-wall area. Next, a series of test trenches were cut along alternate five-foot squares for the length of the presumed north and south walls. These trenches revealed sufficient profiles and foundation stones to confirm the hypothesis that the south wall lay to the south of the piers and that they must therefore have served some function relating to the interior of the building. With this accomplished, the remaining squares were removed in order to expose the entire length of the walls.

The west wall was exposed only for a few feet along its northern end. The remainder lies inside property which at this writing still belongs to the Reorganized LDS church. However, verbal agreement has been reached on the sale of the property to the LDS church, and it is anticipated that in a subsequent season this property will be available for excavation.

As the overburden of rubble and fill was removed from the walls, a few inches were left to be carefully troweled and brushed in the hope of finding impressions of the stones which had been mined out by the Icarians.



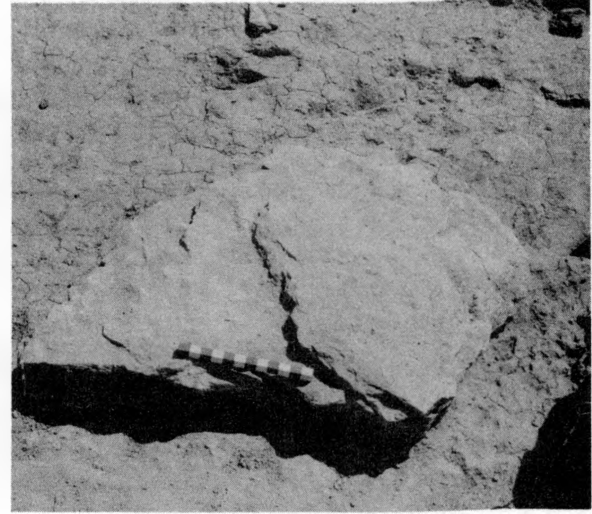
Western and central portion of the north wall, looking northwest, showing Vickie Ziegler and George Rauback.

In places this technique met with some success; however, the stones used in the foundation were irregular rather than square-dressed, and the mining activities contributed to the obliteration of some of the impressions. The most destructive force along the north wall, however, was the bulldozing of a few years ago. Parts of the north and east walls were completely destroyed, as well as the floor, brick wall, and most of an interior partition wall near the northeast corner. By some miracle the impression of the northeast cornerstone was spared.

With the north, east, and south walls located and several test squares excavated to floor level in the interior of the building, several important details became apparent. First, the basement contains two floor levels. The upper is located close to the walls and extends for a distance of about 15 feet toward the interior. At this point the piers so far discovered seem to separate the outer and inner parts of the basement. This upper level is divided into several rooms from 15 to 20 feet wide which were probably used for robing. The remains of six interior partition walls, one on the south and five on the north, have so far been discovered. The "ghost" impressions of two more partition walls along the south side have also been located.

The lower floor level is that of the interior of the basement proper. This is the area that contained the baptismal font and was covered by a thick layer of ash. The floor slopes from about five and one-half feet below present ground surface to at least nine feet and possibly deeper in unexcavated areas.

Besides the information on floor levels and walls we can also point to what appears to be the outline of the northwest stair well. This area is roughly circular and is marked by a heavy concentration of burned timbers immediately on the clay floor. A small part of this



One of the original foundation stones of the north wall in situ.

feature extends into unexcavated squares, and only a couple of squares within the area have been taken down to floor level. Nevertheless, it appears that the whole area may be covered with burned timbers; possibly some idea of how the stairs were constructed may be obtained in the future with careful excavation. The whole could then be preserved intact as a permanent exhibit by covering the feature with clear glass or plastic.

The final stage of excavation in the 1962 season was the removal of the rubble and fill overburden to the depth of the foundation walls. In areas where there is a heavy ash concentration a layer of rubble was left on top of it in the hope that this would offer some protection from the winter elements. At the close of the season all features were covered with a layer of sand and then polyethylene sheets to prevent water and snow from destroying them. The ideal covering for this site would be a geodesic dome, which would allow all-year tourist viewing, plus protection from the elements, and would do away with the need for interior supports which would mar the site.

84.03 Accomplishments of the First Season. The major accomplishment of the 1962 season was the uncovering of the north, east, and south walls. Although only a few foundation stones remain, still there are sufficient stones and impressions to give archaeologists an idea of the construction of the entire foundation and its dimensions.

Another major goal reached was the removal of the five feet of overburden on all but the western end of the site. This will allow for easier removal of the critical ash layer at a later time, as well as prevent the danger of cave-ins, which was earlier present in a few squares that had been excavated to a depth of 10 feet.

Over 1200 bags of specimens have been sent to the SIU laboratory, as well as numerous pasteboard boxes

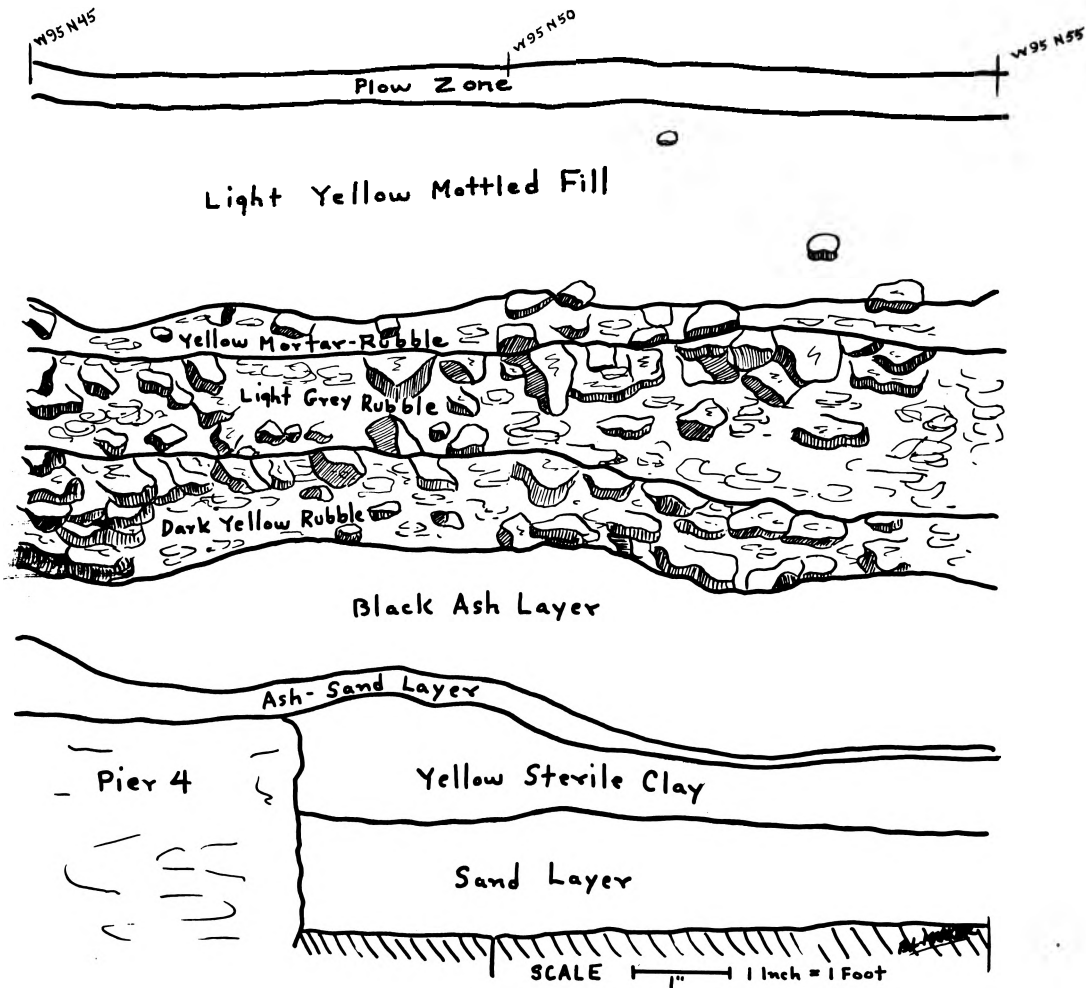


Chart by Staff Artist Betty Marker shows the stratigraphy of two squares next to Pier 4.

containing brick and faced stone. The analysis of all this material will require a great deal of time and research into the culture of the 1840's. One aspect of the artifact study which appeals to the writer is the ceramic analysis. This will be accomplished by using the "type-variety" concept for classifying the sherds, without his having previously done any research into the historical ceramics, however. After the sherds are all classified, then historical research will be undertaken in order to see whether the archaeological classifications match the historical ones. This should prove to be an interesting check of the archaeological ceramic analysis.

The most intriguing and unexpected find of the season was a large stone tunnel. It was uncovered just inside the south wall and runs obliquely through a test trench under the south wall for a minimum distance of 36 feet and into the interior of the temple for a minimum distance of 10 feet. It was impossible to

probe any farther in either direction, since silting has filled up the structure at these points. Although the interior of the tunnel measures only a foot square, the stones which form it are large and are supported by additional stones which add to the size of the feature. The interior surfaces of the stones are dressed and cut square but are not mortared together as are the pier and wall-foundation stones.

The most plausible interpretation of this tunnel so far put forth is that it served as a drain for the baptismal font. However, until it can be fully excavated and its relationships with the font shown, the above interpretation must remain a working hypothesis and nothing more.

Other important information on the temple, some of which has already been discussed above, includes the defining of two floor levels in the basement; the uncovering of two stone steps leading from one of the south rooms into the font room; and the circular impres-



sion of the northwest stair well and what may be its complement in the southwest corner, although here only a very small section has been excavated. Besides the four piers discovered by Dr. Fowler in 1961, the remnants of at least two others have been found and more are predicted. We also located a large interior wall near the west end which appears to be the wall described in some historical accounts as that used to give additional support to the temple tower.

Enough sculptured stone fragments were found in an area thought to be close to the font to support the idea that the original wooden font was replaced by a stone font. This appears to be the case, especially in light of historical accounts by Kane and Buckingham which report a stone font as late as 1847. In addition, fragments of sun, moon, and star stones have been recovered, as well as various types of stone molding presumably used around windows, at the tops of columns, on the frieze, etc.

84.04 Prospects for Another Season. Should the LDS church and SIU renew their contract for another season, archaeologically the following should be accomplished: (1) the removal of the overburden still covering the west wall; (2) the careful removal of the ash layers in the font area; (3) the careful excavation of all partition walls and of all floor levels, including a possible brick floor in one of the rooms along the north wall; (4) excavation of the stone tunnel along its entire extent in order to investigate its manner of construction, its length, and its function; (5) excavation of all piers or their "ghost" impressions in order to determine as far as possible their extent and manner of construction; (6) a very careful study of the font area and the well; (7) excavation and preservation of the stair wells; and (8) excavation of all additional features that may come to light during the course of any of the above work.

In addition, the work should be done with an eye toward stabilization of the features so that they might be preserved for public viewing.

84.1 PUBLICATIONS OUT OF PRINT. The UAS general secretary-treasurer has announced that three of its publications are out of print and can no longer be obtained from the Society office: (1) UAS Newsletter, No. 67, July 7, 1960; (2) Special Publications, No. 1, Discovering the Past; Introductory Readings and Visual Studies in Archaeology (1954. 347 pp.). Selected and arranged by M. Wells Jakeman; and (3) Special Publications, No. 2, Stela 5, Izapa, Chiapas, Mexico; A Major Archaeological Discovery of the New World. Detailed Commentary on the Carving (1958. 88 pp.). By M. Wells Jakeman.

It is anticipated that Special Publications, Nos. 1 and 2, because of the demand, will be reprinted at

a later time. The principal parts of UAS Newsletter, No. 67, will also be included in a later publication, it is expected.

#### 84.2 EXTRA PUBLICATIONS SENT TO MEMBERS.

Two publications, in addition to the regular UAS series, have recently been mailed free of cost to Society members.

84.20 Thirteenth Symposium. Copies of a 68-page mimeographed publication entitled, Papers of the Thirteenth Annual Symposium on the Archaeology of the Scriptures, April 1, 1961, were mailed during the last week in September to all UAS members whose membership was then current. Edited by Dee F. Green, symposium chairman, it contains the full text of all papers read at the 1961 meeting (Newsletter, 75. 1).

The talks were taped, transcribed, and published by the Department of Extension Publications, BYU. By special arrangement with that department, Society officers purchased at cost sufficient copies for each member. It was further arranged that, following the September mailing, copies would be sold by Extension Publications only. Orders should NOT be sent to the UAS. The cost is \$1 per copy.

84.21 Kinderhook Plates. Dr. Welby W. Ricks, UAS president since June (Newsletter, 82. 0), is the author of a four-page article in the September, 1962, issue of the Improvement Era. Entitled "The Kinderhook Plates," the article sets forth his findings concerning an extraordinary discovery made at a small Illinois town in 1843. Dr. Ricks has been doing research on this subject for eight years or more. On April 2, 1960, he spoke briefly on the plates before the Society's Twelfth Annual Symposium on the Archaeology of the Scriptures (Newsletter, 66. 05).

By arrangement with UAS officers, reprints of Dr. Ricks's article were mailed to all members together with Newsletter 83.

84.3 SYMPOSIUM PAPERS TO BE PUBLISHED. Plans are being made to publish the papers of the Fourteenth Annual Symposium on the Archaeology of the Scriptures in full, according to Dr. Welby W. Ricks, Society president. The last previous symposium, held on April 1, 1961, was published in full by the Department of Extension Publications of BYU (see above 84.20). The publication was so successful that it is hoped a similar arrangement can be made for next April, when the 14th symposium is scheduled (Newsletter 83. 0).