

# ABOVE THE SALT: TEST EXCAVATIONS AT THE SCIOTO SALINE, JACKSON COUNTY, OHIO

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**Introduction** – In 1990 the City of Jackson began an ambitious program to improve an area along the railroad and the valley of Salt Creek in the eastern part of the city. Aware that this area included the site of early salt manufacturing activity, then Director of the Jackson Community Development Office, Deanna Figlestahler, contacted numerous state agencies regarding assessment, preservation and development of the area. When the City of Jackson was unable to obtain any funding for the archaeological project, the author and James Morton volunteered to determine whether any significant archaeological remnants of the pioneer salt-making industry could be found.

**History** – The best known feature associated with the prehistoric and pioneer salt industry of the Jackson area, is Boone Rock, a massive, 57 foot high outcropping of Sharon conglomerate along the northern side of Little Salt Creek, in the northwestern edge of Jackson (Fig. 1). At the base of this bluff is a shallow rock shelter that has revealed extensive prehistoric occupation, including Late Prehistoric and Middle Woodland components (Mills 1912). Here in both prehistoric and historic times, Indians manufactured salt by collecting saline groundwater in shallow bowls carved in the sandstone bedrock of the creek and boiling the water. Also here, in 1778, captive Daniel Boone was forced to manufacture salt for a group of Shawnee Indians. According to local legend, Boone made a daring escape, by jumping from the top of Boone Rock and scurrying down a convenient elm tree (Mills 1912: 184). Boone's own account, however, indicates that after making salt for a period of ten days he returned with the Shawnee to the town of Old Chillicothe in Greene Co. (on the Miami, not present-day Chillicothe on the Scioto) and from there "departed in the most secret manner" (Filson 1784).

The economic significance of the salt-producing area known as the "Scioto Salines" was early recognized by the federal government, which set aside this and other salt licks in the areas as public land in 1796, in order to prevent development of a private monopoly on the salt-making. From this period until Statehood, the area was utilized by squatters who first utilized the old Indian

salt pans in the bedrock, then carved deeper holes and finally used hollow "gum" trees to extend wells as much as twenty feet into the bedrock. In 1803 the newly formed State of Ohio appointed a resident agent who leased small lots to individuals, no one person or company being allowed to work more than 120 kettles nor less than 30. (Morrow 1956:19). By this period, wells and furnaces had extended up Little Salt Creek to the town of Jackson. Eventually, the scarcity of wood fuel created a system of rebates to encourage the use of coal fuel (Conway 1976: 28). During the period of greatest production, ca. 1806 to 1808, there were as many as twenty furnaces in operation, producing an average of 50 to 70 bushels of salt a week (Hildreth 1838). The discovery of stronger saline water in the Kanawha Valley by the Ruffner Brothers in 1808, spelled the rapid decline of shallow but weaker salines such as those at Jackson. (FMC Chemicals n.d.: 9). The year that Jackson CO. was created, 1816, is generally given as the date at which salt production ended at Jackson, and the federal lands were gradually sold piece-meal to provide funding for the county court house and for local schools (Conway 1976: 48).

**Site Location** – In addition to Boone Rock, Conway documented early references to salt boiling activity within the eastern part of present-day Jackson, a location early referred to as "at the foot of Broadway" and lying on the north bank of salt Lick Creek east of the mouth of Sugar Run (Conway 1976: 4). Specifically, Conway located Elias Langham's 1798 map, which locates "salt springs" both at Boone Rock and at the "foot of Broadway" location. He indicates that the latter springs were in lots 9-12 and 16, on the north side of the creek. More recently, the latter area, specifically Lot 10, has been occupied by the city light plant, equipment parking lot and a city dump while Boone Rock adjoins the city sewage treatment plant to the northwest of town. Throughout its history subsequent to the end of salt production, the bottomland or flood plain along Salt Creek in Lot 10 remained unoccupied, except for refuse dumping. In more recent years, this process has been accelerated, as the area has been used by the City for disposing of trash. As Conway observed in 1976, "It is

not being compacted nor covered. Much of it is tree stumps and limbs; however, there is metal, wire, paper, everything there".

**Test Excavations** – Provided with a backhoe by the City of Jackson, the first determination to be made was the depth of recent trash fill. Based upon the 1798 Langham map and present topography, the area selected for testing was in the central part of Lot 10, just northeast of the railroad bridge across Salt Creek and north of an abandoned channel of Salt Creek (Fig. 2). A trench the width of the backhoe was excavated perpendicular to the edge of the fill and in a northwest direction (Fig. 3). Trash encountered included numerous plastic bags of leaves, brick, concrete, chunks of asphalt and other waste material jumbled together. Excavation was very slow, due to the nature of the fill material. At a depth of four feet, a wooden "log" was encountered lying across the excavation, immediately below which was uniform alluvial clay fired to a bright pink color. As it proved impossible to remove this "log" from the trench, which rapidly filled with water, further excavation was forestalled until a pump could be obtained.

At this point, since the depth of the original ground surface had been determined, it was decided to use the backhoe to remove fill from an area ca. 20 feet square. This excavation also proved difficult, as the mixed trash found in the initial trench quickly gave way to a two to three foot cap of blast furnace slag undoubtedly derived from nearby iron furnaces active in Jackson during the 19<sup>th</sup> century. It is inferred that the slag was delivered along the adjacent railroad and dumped into the low area to the east of the tracks. As excavation proceeded to remove the overlying fill, it became possible to remove the "log", which turned out to be not the anticipated hollow gum log used in the pioneer salt well but a much more recent telephone pole that had been discarded with the other trash (Fig. 4).

Excavation with the backhoe was stopped at a depth just shy of four feet, to allow hand excavation of the fill/alluvium contact. As the fill was removed, it was examined for artifact material but only recent trash and abundant furnace slag was encountered.

Despite pumping, water rose rapidly to the level of the original ground surface, and hand excavation became an exercise in excavating mud before it was covered by the rising water. The first indisputable evidence of salt making activity proved to be two fragments of thick iron salt kettle associated with several fragments of broken brick (Fig. 5). No complete bricks were recovered, though several fragments represent nearly half a brick. All of these were clearly hand-made and heavily fire-reddened and cracked.

Continued excavation proved relatively monotonous. Although additional fragments of highly oxidized salt kettle and heavily fired hand-made brick were recovered, the only other artifact material encountered in direct association with the brick and kettle fragments were 1) a half dozen fragments of black-glazed redware that appeared to represent one or more whiskey jugs, as two strap handles were recovered (Fig. 6), and 2) several fragments of redware crock with lead-glazed interior and unglazed exterior (Fig. 7).

The kettle fragments were heavily oxidized and varied up in size up to ca. 25 cm square and nearly 2 cm. thick. One (Fig. 8) retained a badly corroded angulated handle. Another suggested a straight-sided kettle or large pot with the lower edge curvings sharply (Fig. 9). Only eight fragments were recovered, and few of these could be related one to the other.

As excavation of the test area continued, it became clear that the layer of blast furnace slag thinned toward the creek, although it still extended over virtually all of the excavated 20 foot square and extended down to the original ground surface. No pattern could be discerned in the distribution of the brick fragments and kettle fragments scattered over the excavated area, and no discrete features, such as concentrations of coal ash or charcoal were found. In fact, no discrete evidence of fuel was encountered, although the entire area revealed pinkish-orange fired alluvium below the fill.

Along the southern edge of the excavation, immediately below the deposit of furnace slag, which thinned in this direction, a thin (2-3 cm) layer of dark soil produced numerous terrestrial snail shell fragments and several sherds of blue underglaze ("Canton") porcelain and decorated

pearlware. The latter included a hand-painted polychrome sherd of a lid (with finial broken), a brown transfer print of an Oriental scene, and a rimsherd of green comb-edge ware (Fig. 10).

At various times and stages of the excavation Mike Stroth tested water samples for salinity but none of these proved to represent strong connections of salt. Shallow depth of excavations and influx of water from the nearby creek are the probable reasons.

**Interpretation** – The stratigraphy and occurrence of the meager ceramic artifact material recovered from the Jackson excavation is readily interpretable as representing the development of a thin soil or humic layer on which early 19<sup>th</sup> C. ceramic refuse was deposited. Soil development was sufficient to support a terrestrial molluscan population including *Triodopsis* and *Anguispira*.

Estimates of the age of this meager ceramic assemblage can be defined fairly tightly at ca. 1820-1830. Although the green shell-edge pearl ware would date back to ca. 1780, the brown transfer printed pearlware is relatively late. According to Shaw (1970: 234-235), brown transfer prints were introduced in England by 1828. Underglaze hand-painted polychrome ware is generally dated from 1780 to 1830. While the early range of this meager ceramics would fall in the period of salt production, both stratigraphy and the inclusion of brown transfer decoration (albeit and pearl ware) suggests a later period, subsequent to the cessation of salt production at the site. If Conway (1976) is correct that salt production ceased here in 1816, there would have been sufficient for development of the thin forest soil and deposition of ceramic refuse dating to the period 1820-1830.

Subsequently, a large amount of blast furnace slag was deposited over most of the area excavated. This deposit extends on both sides of the railroad, as an attempt to use an auger usually used to dig holes for electric poles auger to test directly south of the light plant and on the creek bank was forestalled by hitting a layer of the slag. Drilling was halted when the auger started to bow. The most likely source for this slag is Star Furnace, a coal – and coke – fired blast furnace that stood just north of the project area and was erected in 1866 and

operated until 1923 (Morrow 1956: 65). Provenience of the slag could probably be confirmed by chemical analysis, as Stout (mss.) provides analyses of three samples of slag from this furnace and notes that it is relatively high in silica and alumina and low in basic elements.

Finally, the area was used by the City of Jackson as a trash dump. Following the 1990 excavations, the test unit was filled and the area is now used as a storage lot for city equipment.

**Conclusions** – The 1990 testing demonstrated that undisturbed archaeological remains are present in the area immediately south and east of the city light and power buildings in Lot 10. Similar deposits, which should be considered to be of substantial archaeological significance, may also be anticipated throughout this area, as well as the south of Salt Creek, currently occupied by railroad yards. Particularly sensitive is the area along the bluff bordering Water Street, as it marks the region of "Purgatory" or "Pop: 'lar Row" inhabited by the salt boilers during the heyday of the Scioto Salines. Any excavation or construction work in this area might be expected to uncover significant archaeological deposits related to the early manufacture of salt.

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## References

- Conway, Emmett, Sr.  
1997 The Scioto Salt Springs and the Scioto Salt Works. Typescript report. Also available on the World Wide Web at: <http://www.users.hockinghills.net/~conway/saltpr.htm>
- n.d. The Scioto Salt Works in Ross County: Relationship of the Scioto Salt works to Early Settlement in the Scioto Valley, Ross County in Particular Typescript of undated (ca. 1977) speech by E. Conway, Sr.

FMC Chemicals

n.d. *The Salt Industry in the Kanawha Valley.* (Charlestown)

Filson, John

1784 *The discovery, Settlement and Present State of Kentucky and an Essay Towards the Topography and Natural History of That Important Country...* Wilmington (De.): Printed by J. Adams.

Hildreth, Samuel P.

1838 *Report on the Salines of Ohio.* Pp. 57-68 in *First Annual Report of the Geological Survey of Ohio.* Columbus.

Mills, William C.

1912 *Archaeological Remains of Jackson County.* *Ohio State Archaeological and Historical Quarterly* 21: 175-214

Morrow, Frank C.

1956 *History of Industry in Jackson County, Ohio.* Athens, Ohio: Lawhead Prss.

Shaw, Simeon

1900 *History of the Staffordshire Potteries: and the rise and progress of the manufacture of the pottery and porcelain; with references to genuine specimens, and notices of eminent potters.* London, Scott, Greenwood & Son.

Stout, Wilber

n.d. *Stout Manuscript Collection.* Ohio Historical Society, Archives-Library.

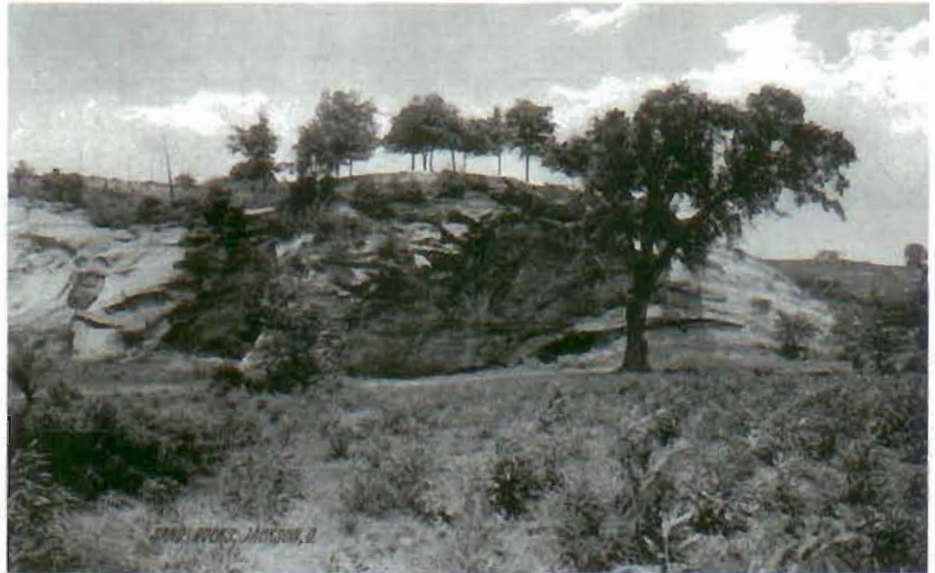


Fig. 1 Boone Rock circa 1910

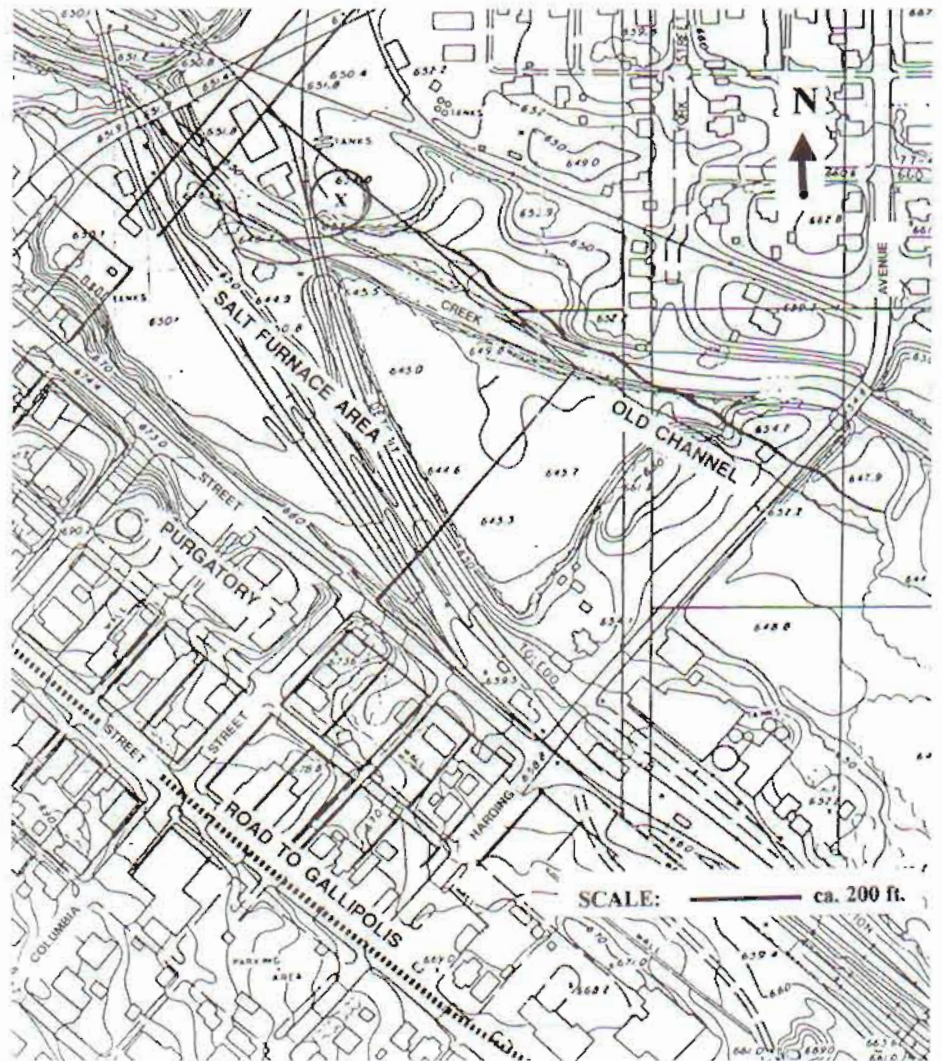


Fig. 2 Map of Jackson, Ohio. Excavation area indicated by "X".



Fig. 3 Water-filled trench with "log" at left



Fig. 4 Excavated telegraph pole at depth of four feet. Railroad bridge in background.



Fig. 5 Brick and iron kettle fragments at depth of four feet. Note water fogged soil.



Fig. 6 Black-glazed redware "jug" sherds.



Fig. 7 Redware crock fragments.



Fig. 8 Kettle fragment with attached handle.



Fig. 9 Salt kettle fragments with edge of house preserved.

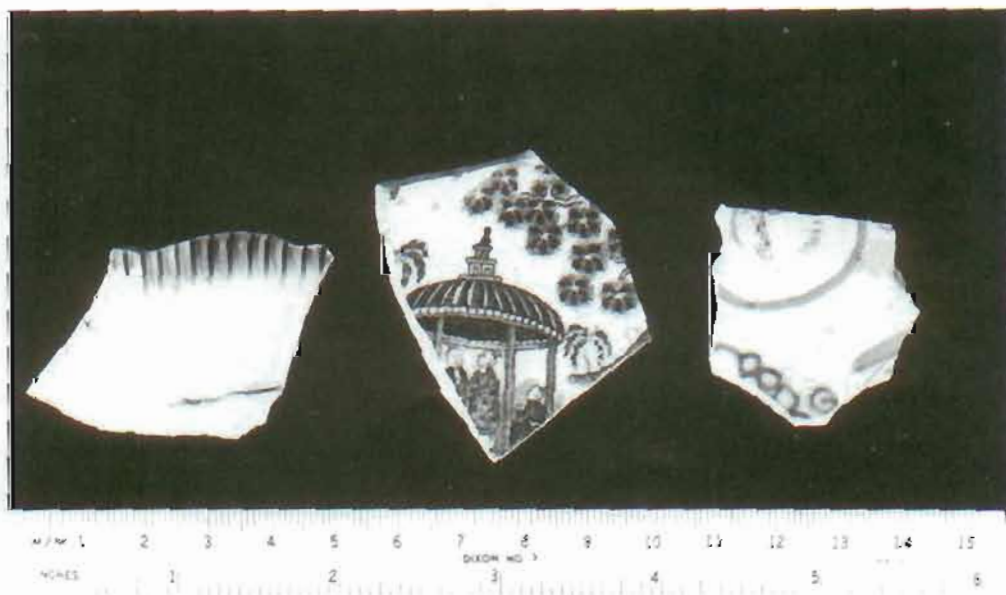


Fig. 10 Green comb-edge ware, brown transfer print, and hand-painted polychrome lid fragment. All are pearl ware.