



Dating the Larry Mathews Bowl: A WAS, WAF, and OWSA Collaboration

by Richard Adams and Larry Mathews

ABSTRACT

In 2010 professional and avocational archaeologists teamed up to radiocarbon date a soapstone bowl recently discovered at site 48SW17902. The date was made possible by the Wyoming Archaeological Foundation. The bowl was found at what appears to be single component, Late Prehistoric habitation site with artifacts and features consistent with occupation by Shoshone Indians. A thick layer of charcoal-ly residue coated some of the bowl fragments. The residue adhering to one of these fragments was dated to 160 +/- BP (Beta 282441), a date which intercepts the calibrated radiocarbon curve several times between AD 1670 and 1800. This is only the third directly dated soapstone bowl in Wyoming. We propose to test the site this summer, if we get Wyoming Archaeological Foundation funding.

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INTRODUCTION

In 2008 and 2009, Larry Mathews of Hudson, Wyoming, found several sherds of a fragmentary soapstone bowl. The bowl had sooty residue adhering to it, making it an ideal candidate for radiocarbon dating. With Wyoming Archaeological Foundation support, we scraped some residue from one of the bowl fragments and sent the sample to Beta Analytic for radiocarbon dating.

Rocky Mountain soapstone bowls are uniquely shaped containers durable enough to go from sub-freezing conditions to the heart of a campfire without experiencing thermal shock. Soapstone is the original non-stick surface, with cooking utility far beyond that of pitch-covered woven baskets, and greater durability than local (Intermountain Tradition) clay pots. The question of who made these soapstone pots explores the intersection of material culture, gender, and social boundaries during a dynamic period of Native and Euro-American contact at the beginning of recorded history in the Greater Yellowstone Ecosystem (GYE). The Rocky Mountain soapstone bowl industry (Wedel 1954; Frison 1982; Feyl 1997; Marceau 1982; Adams 2010, 2006, 1992) is geographically and stylistically distinct from, and appears to be more recent than, other bowl traditions in North America. Frison (1982) concluded that steatite vessels were probably Late Prehistoric to Historic in age, and probably used by Shoshonean groups. A Rocky Mountain soapstone bowl database initiated by Marceau (1982) and expanded by Adams (1992), placed soapstone bowls in Shoshone territory. Later, Adams (2006) showed that the distribution of soapstone bowls and the territory of the Eastern Shoshone overlapped so well that the association was not a matter of chance.

SITE BACKGROUND

In 2010, with WAF funding, we visited the site where the bowl was found, and made a preliminary recording of site 48SW17902. The site is located in the approximate center of the Great Divide Basin, downstream from the confluence of Lost Creek and Eagles Nest Creek. The site is at an altitude of 6700 feet (2042 m) above sea level. Vegetation is sparse sage steppe/desert shrubland.

The site consists of several pieces of a broken soapstone bowl, an obsidian tri-notched projectile point, a chert scraper, a few pieces of debitage, four circular stone lodge pads, and three eroded hearths. The soapstone bowl sherds were found in one of the hearths.

METHODS

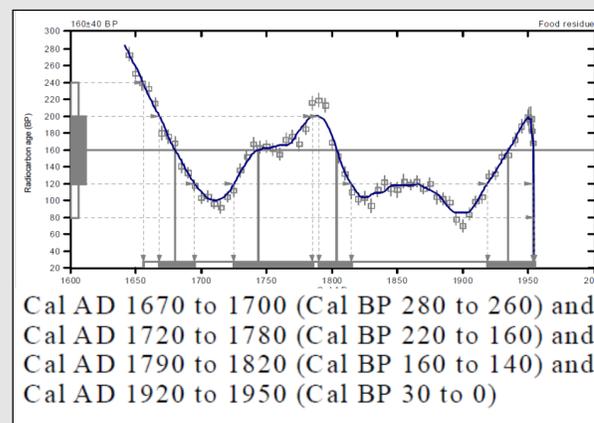
Accelerator Mass Spectroscopy dating is a form of radiometric dating that uses a tiny amount of charcoal. In general, the tiny samples translate into greater precision in dating. The precision of AMS is muted by two things. First is that carbon from the Late Prehistoric and Protohistoric periods is difficult to date because a single radiocarbon date can intercept the tree ring calibration curve at several different spots (see **RESULTS**). Second is that soapstone bowls were known to be handed down from mother to daughter over the course of generations (Shimkin no date), thus having a life span measured in generations.

MATERIALS

About two thirds of the bowl is present in a dozen pieces. Several pieces refit but have not been glued together. The bowl is a classic in that it has a flat flanged base, with outward-tapering side walls. Both the interior and exterior surfaces have been well-worked. There are no obvious metal tool marks on the bowl. There are no decorations or repair holes. Both surfaces show long, parallel striations that are found on so many bowls and that may have been made by some sort of toothed fleshing tool.

RESULTS

The result is 160 +/- 40 BP (Beta - 282441). This intercepts the calibrated radiocarbon curve in several places. Basically the bowl could date from AD 1670 to AD 1950, although it seems unlikely that the bowl appeared on the site after AD 1920.



Cal AD 1670 to 1700 (Cal BP 280 to 260) and
Cal AD 1720 to 1780 (Cal BP 220 to 160) and
Cal AD 1790 to 1820 (Cal BP 160 to 140) and
Cal AD 1920 to 1950 (Cal BP 30 to 0)

INTERPRETATION

The Mathews Bowl is only the third directly dated soapstone bowl in Wyoming. The first was dated by Adams, Daniels (1995) and the WAS. The result was modern. The second bowl was found in the Flaming Gorge area; it dated to the Protohistoric (Palmer 2005).

The distribution of soapstone bowls seems to conform to Shoshone Territory as outlined by ethnographers. The distribution of a class of archaeological artifact—soapstone bowls—conforms to the Protohistoric period territory of Eastern Shoshone published by Euroamerican ethnographers (d'Azevedo 1986, Shimkin 1947).

CONCLUSIONS

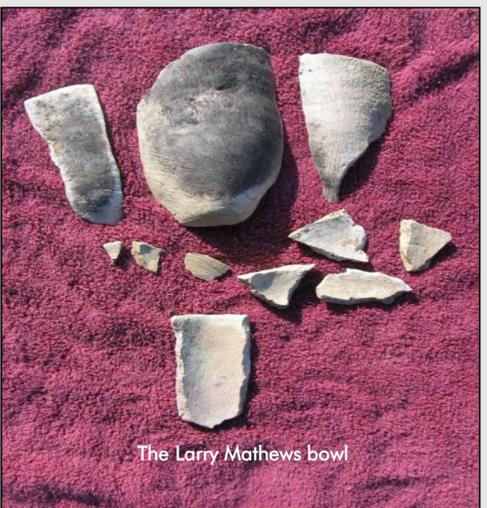
The Larry Mathews site has enormous potential to pin down a dating range for soapstone bowls by dated the two hearths. Better soapstone bowl dating was advocated by Wedel (1954:408) more than 50 years ago.



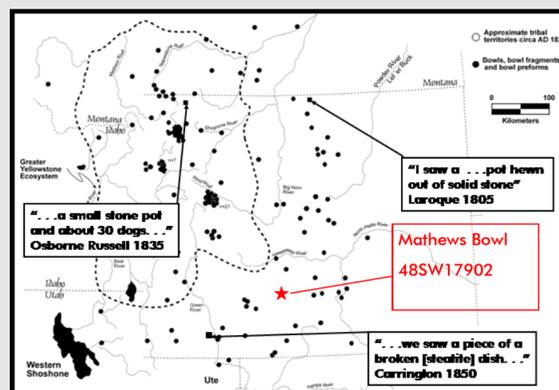
Betty and Larry Mathews



The bowl shortly after discovery



The Larry Mathews bowl



The hearth we hope to date this summer with your help



Brennan & Holly Sullivan, Rich Adams, and Larry Mathews



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