

## Hand Tools from the St. John's Bahamas Wreck

by Corey Malcom

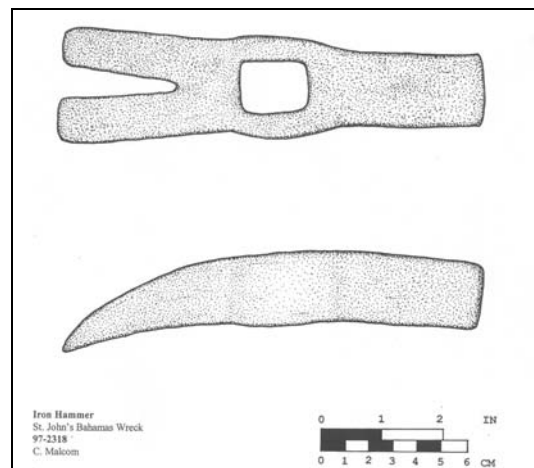
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Though there is no known list of those who sailed on the ship we know as the St. John's Wreck, we can discern what some of the various shipboard occupations were because many of the recovered artifacts reflect specific duties. For instance, dividers would have been used by the pilot, a cauldron by the cook, and medicine vials and an enema syringe by the ship's surgeon. One other group of artifacts we find were essential to a duty which, in turn, was necessary to the well-being of the ship.

Woodworking tools were the domain of the ship's carpenter. It was he who would have overseen any repair needs to the hull, masts, blocks or other wooden components of the vessel. He would have to have been able to not only make repairs, but be a fabricator as well. Even if the ship was grounded, or dashed upon an uninhabited shore, the carpenter would have to be able to design and build a means of escape. As Dr. Diego Garcia writes of the carpenter in his 1587 mariner's treatise *Instrucción Náutica*, "...he is to know the necessary mold (form) for making a long-boat, a shallop, and other things that might present themselves..." He would have carried onboard a full complement of tools to execute such tasks, and from the St. John's wreck we are getting an idea of what exactly these items were in the mid-16th century. The iron portions of a small number of hand-tools have been found on the site, and this group includes two hammers, an adze, an axe, and a drift hook. The collection is small - far from what would have been needed to work effectively - but it does give us an idea of sort of activities conducted by the carpenter. Interestingly, they also show us the sophisticated, "modern" level of tool design that had been achieved at a very early time.

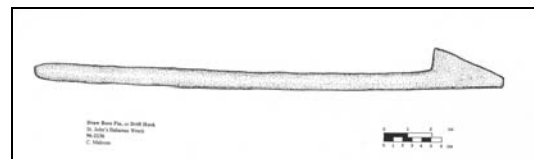
The two hammers are of radically differing styles. One, a maul, is a simple, large block of iron with working faces on both ends, though one side appears to have seen more use than the other. It is very heavy, weighing 7.38 kg (16.28 lb.). A 3.0 cm (1.2") diameter hole for a handle is pierced through the center. Such an item was

used for driving items with a fair amount of force. It would have been useful to knock hull timbers into alignment, and also to drive home the largest of the spikes and bolts. Perhaps not coincidentally, it was found in association with the large *bombardeta* shot, between the three big guns. It may have been used to drive the iron wedges behind their exchangeable breeches.



St. John's Wreck Claw Hammer

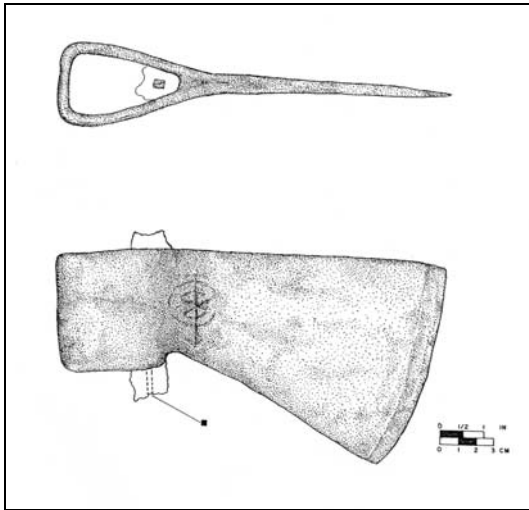
A claw-hammer is of the basic, traditional design associated with carpentry. This same style has been in use since Roman times (Sloan, 1964). It is much lighter than the maul, weighing 635g (1.4lbs.), and it has a 2.8 x 2.1 cm, rectangular opening for a handle. This iron hammer was used for driving and pulling metal nails, and other general purposes.



Drift Hook

An iron drift-hook, or draw-bore pin, of 48.8cm (19.2") was used to align wooden structural elements by driving it like a large nail through pre-drilled holes. It could be tapped back out by knocking upward on the protruding hook. This was all done so the forelock bolts that

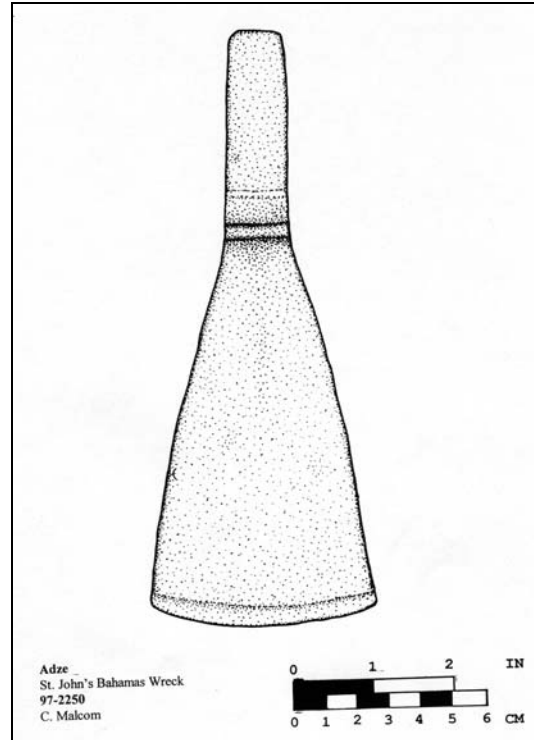
ultimately held the timbers together could be more easily put into place.



Axe Head

An iron axe head was used for cutting wood in any number of situations. It had a drop-shaped eye to receive a handle. It is straight-sided, has no lug, and no thickening at the poll - all characteristics of the Iberian tradition (Salaman, 1975). An indecipherable mark has been stamped into both sides. This axe head compares closely with two from the *San Pedro* of 1596 wrecked near Bermuda (Hoyt, 1985), and those from the *Atocha* of 1622.

A single adze blade is in poor condition, and has only been viewed from one angle through x-ray radiography. It is of a type called the "slot-adze." It has no eye for a handle, but was attached by a narrow tang with an iron strap. Examples of this design have been found from as early as 3-400 BC (Salaman). The adze was used to refine the shape of a timber; its function falling between that of an axe and a plane. Many examples of slot-adzes were also found on the *Atocha*.



Adze Blade

W. L. Goodman (1972, as cited in Salaman, 1975) quotes the typical English shipwright's tool kit used between 1547-1644 as being, "An Axe, Adze; Handsaw; Chisel; Gouge; Shave (or drawknife); various Hammers including a Maul; Auger; Spike Gimlet; Wimble (or Brace); Caulking Irons and a Caulking Mallet; and a Rave Hook. All of the tools found on the St. John's wreck (the drift hook excepted) appear on this list. Those others described in the list can probably be expected to appear as excavation and conservation continue.

It is clear from these tools that a carpenter did sail aboard this ship. His function would have been akin to serving as a "doctor" to the ship itself. If any wooden components needed to be repaired, or new ones fashioned, he was prepared to do so. Apparently though, the St. John's wreck met with a situation that was more than he, and these simple tools, could handle.

Bibliography:

Garcia de Palacio, Diego

1587 *Instrucción Náutica*. Reprinted 1986 as *Nautical Instruction*, J. Bankston, Translator. Terrenate Associates, Bisbee, Arizona.

Hoyt, Cathryn A.

1985 "Tools From Shipwrecks: A Collection of Sixteenth and Seventeenth Century Tools at the Bermuda Maritime Museum." *Tools and Trades*, Vol. 3, pp. 36-55.

Salaman, R.A.

1975 *Dictionary of Tools used in the woodworking and allied trades c. 1700-1970*. Charles Scribener's Sons, New York.

Sloan, Eric

1964 *A Museum of Early American Tools*. Ballantine Books, New York.