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THE MID-ATLANTIC
LOGBOAT REGISTRY

A TRIBUTE TO
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VERNACULAR WATERCRAFT IN THE MID-ATLANTIC UNITED STATES

The Archeological Society of Virginia's registry of Maryland, North Carolina, and Virginia logboats

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Archaeological studies in the southeastern U.S. have revealed that Native Americans were crafting and using dugout canoes for thousands of years. Within the Mid-Atlantic region, numerous pre-contact (i.e., prior to contact with the first Europeans) dugout canoes have been discovered, the oldest dating back more than 4,000 years. First-hand accounts of European explorers Thomas Harriot and John Smith, along with Theodor DeBry's detailed engravings of John White's drawings, tell us how Native Americans constructed dugout canoes and relied on them for transportation, fishing, defense, and the projection of power.

Canoe builders used fire and tools made of stones, shells, and antlers to hollow out and shape logs in various forms and sizes to meet their needs. Observing the importance and versatility of dugouts, English and French settlers soon acquired canoes from the indigenous people they encountered. They also used their iron axes and adzes to hew out tree trunks to make their own canoes. Early colonial settlers were heavily reliant on logboats for transportation, commerce, fishing, and exploration of the Chesapeake Bay and its tributaries as well as the shallow sounds of what is now North Carolina. With the abundance of large-diameter pine and bald cypress trees, as well as the cheap cost of construction, boat builders over time fashioned multi-log vessels of up to nine or more logs; their design and function were tied closely to the oyster industry and the transport of agricultural goods. Even after European style plank-on-frame boats became more common, log-built boats continued to be used well into the late 19th and early 20th centuries until there were no longer any suitably sized trees to construct them.

There is no doubt that the dugout canoe

used for millennia by Native Americans is the evolutionary precursor to the multi-log boats constructed in the Mid-Atlantic region. In *Chesapeake Bay: A Pictorial Maritime History*, M.V. Brewington, the preeminent Chesapeake Bay watercraft historian, recognized that, "Throughout the course of development from canoe to [multi-log] bugeye, the original dugout log bottom was always apparent in this most truly American craft."

THE MID-ATLANTIC LOGBOAT REGISTRY

In 2018 under the auspices of the Maritime Heritage Chapter of the Archeological Society of Virginia, we launched the Mid-Atlantic Logboat Registry, an ambitious project to catalog all known logboats in Maryland, Virginia, and North Carolina, in order to analyze and classify the evolution and development of these significant vernacular watercraft. The registry is based solely on one criterion: the boat's hull must be log-built. Our goal is to create a searchable, multi-variable database for the Mid-Atlantic region that will serve as a resource for researchers interested in the comparative study and history of logboats. Over the past two years our team has been cataloging logboat

data obtained from a variety of sources. The heart of the registry is the archived archeological files maintained by the Maryland Historical Trust, the Virginia Department of Historic Resources, and the North Carolina Department of Natural and Cultural Resources. Other information sources include graduate student theses and dissertations, professional journals, archived newspaper and magazine articles, state and national historic registries, museum and historical society record searches, and prominent books on log-constructed boats. Much of our work involves collaboration with the three State Historic Preservation Offices, museums and historical societies to identify known or possible logboats, obtain their provenance, collect additional archived data, and take measurements, drawings, and photographs. We also work with private citizens and property owners to document known or suspected logboats that are in their possession.

DETAILS INCLUDED IN THE REGISTRY

We currently have cataloged 181 logboats, including 109 single-log dugout canoes (52 recorded as pre-contact), and 72 multi-log (2 to 9-log) boats. The principal wood types documented

PHOTOS: OPPOSITE PAGE: THE MARINERS' MUSEUM AND PARK

Opposite page: Dugout canoe, ca. 1630, found in Powhatan Creek near Jamestown, VA. This page: Map showing sites mentioned in article.



for hull construction are pine and bald cypress. Occasionally, we found laboratory confirmation of wood type included in the archival record. Otherwise wood type identification in the archival records appears to be based on the prevailing tree species available and traditionally used by local boat builders. Radiocarbon dating was used to make an age and time period (pre- vs. post-contact) determination only for the single-log dugout canoes. In the absence of radiocarbon dating, archival records indicate that a determination as to whether a single-log dugout canoe was pre- or post-contact is based on the presence of observable charring from fire (pre-contact) or iron tool (adze and axe) marks (post-contact). The scarcity of laboratory data leaves considerable room for doubt concerning the documented

Both pre-contact and post-contact dugout canoes have been found in Lake Waccamaw, N.C.. Radiocarbon dating shows that these canoes were fashioned and used on the lake for several hundred years between the early 1400s and the late 1800s. State historical information indicates that European colonists settled in the area around the lake, harvesting timber and producing shingles. The Underwater Archaeology Branch of the North Carolina Department of Natural and Cultural Resources has conserved many of the dugout canoes discovered throughout the state, loaning them to state museums, parks, government facilities, and academic institutions for display.

No pre-contact logboats have been identified in Virginia or Maryland. Possibly the oldest dugout canoe from

Lake Drummond and the Dismal Swamp offer the possibility of finding multiple logboats in a single natural lake-wetland environment. The area has a well-documented history of Native American and “Maroon” (escaped slaves) settlements, logging, shingle production, and trapping. So far, our registry includes one post-contact single-log dugout canoe and two multi-log boats from this area. Discoveries of single-log dugout canoes in Virginia and Maryland have been chance events, usually occurring after major floods or during severe droughts. With very few exceptions, finds consist of only a single-log canoe or fragment along a shore or embedded in a bank with no other associated cultural material. Historically, log canoe use along the Chesapeake Bay’s tributaries was widespread. David

The canoes are associated with other archaeological artifacts, such as spear points, cooking vessels, and pottery, dating back to almost 9000 B.C.

age and wood type, especially on poorly preserved specimens.

SINGLE-LOG CANOES

Seventy-eight of the 109 single-log dugout canoes in our registry are from North Carolina, including 52 that have been identified as pre-contact. Radiocarbon dating for 30 of the single-log dugout canoes reveals ages ranging from about 2400 B.C. to A.D. 1810. Unique to North Carolina is the discovery of 47 dugout canoes in six natural lakes; 25 of these are from Lake Phelps. All are considered pre-contact, ranging in age from 2400 B.C. to A.D. 1400, with the largest ones over 30 ft in length. The canoes are associated with other archaeological artifacts, such as spear points, cooking vessels, and pottery, dating back to almost 9000 B.C., indicating that the area around the lake supported a significant indigenous community for thousands of years. With the exception of four canoes, all were left *in situ*.

Virginia in our registry was documented by Ben McCary in 1964 and is in storage at The Mariners’ Museum and Park in Newport News, VA. The fragmentary canoe was found in Powhatan Creek in the area of the original (1607) Jamestown settlement. McCary suggested a date of around 1630 for the canoe because of the presence of both charring and iron tool marks, and the location where it was found. He interpreted the canoe as having been initially constructed by Native Americans and later reshaped by colonists for their own needs.

One explanation regarding why our registry contains fewer entries from Maryland and Virginia is that those states do not possess the numerous natural lakes found in North Carolina. The natural resources of the lakes provided long-term subsistence for the indigenous populations and later supported European settlement and trade in naval stores, lumber, and shingles. In Virginia only

Moran, Senior Researcher at the Deltaville Maritime Museum in Virginia, has cited several sources, including census records from the 1800s that document families owning several canoes for work and personal transportation. Such regional historical records may be key for identifying potential canoe sites for further investigation.

MULTI-LOG WATERCRAFT

To date, only seven multi-log boats from North Carolina have been documented in the registry. Of these, six are of two-log construction and may be linked to the unique split-log design influenced by the French Huguenot settlers, according to Michael Alford in *Origins of Carolina Split-Dugout Canoes*.

Opposite page, top and bottom left: Pre-contact dugout canoe showing charring; Post-contact dugout canoe showing tool marks. Right: Recovery of pre-contact canoe, Lake Waccamaw, NC.



PHOTOS: OPPOSITE PAGE TOP LEFT CLOCKWISE: MARY HAYES; NC DEPT OF NATURAL AND CULTURAL RESOURCES; VA DEPT OF HISTORIC RESOURCES



PHOTOS: OPPOSITE PAGE: NC DEPT OF NATURAL AND CULTURAL RESOURCES; DELTAVILLE MARITIME MUSEUM; THIS PAGE: CHESAPEAKE BAY MARITIME MUSEUM

Maritime archaeologists with the North Carolina Department of Natural and Cultural Resources believe that several of the state’s natural lakes may still hold dozens of undiscovered pre-contact dugout canoes.

Virginia and Maryland, by contrast, dominate in the number of multi-log boats, with 65 documented in the registry. In *Chesapeake Bay Log Canoes and Bugeyes*, M.V. Brewington identifies Poquoson, Pocomoke, and Tilghman as the primary methods of multi-log boat construction, each aptly named according to the Chesapeake Bay region where it originated. The Poquoson method, called “rack of eye” by Brewington, was a technique handed down over the generations of local boat builders in Poquoson, Seaford, and Dare, Virginia. David Moran’s research discusses in detail the Poquoson-style canoe, as well as the influence of skilled African-American boat builders on its design. The Pocomoke and Tilghman construction methods used by Maryland boat builders relied on half-model designs and rising lapstrake and carvel planking, respectively. Canoes of three-log and five-log construction were

typically double-ended, powered by sail, up to 35 ft in length, and built specifically for oyster tonging. Competition among the watermen to get harvested oysters to market gave rise to competitive sailing races on the Chesapeake Bay that continue to this day. The registry includes 21 racing canoes from Maryland listed on the National Register of Historic Places that were constructed from the 1860s through 1947 primarily using the Tilghman method. Today, the majority of these canoes are privately owned, have been restored, and continue to race competitively.

During the mid-to-late 1800s there were thousands of log canoes on Chesapeake Bay working the oyster beds. With the advent of the gasoline engine, many of the sailing log canoes were either converted to engine power or were deemed obsolete and abandoned. The introduction of dredging in the 1870s, and the increased

demand for oysters, resulted in the construction of larger multi-log bugeyes and buyboats, some exceeding 60 ft. Our registry includes three of these fully restored and operational nine-log workhorses of the Chesapeake Bay: the 53-ft dredging bugeye *Edna Lockwood* built in 1889 at Tilghman Island, MD and currently at the Chesapeake Bay Maritime Museum in St. Michaels, MD; the 60-ft bugeye/buyboat conversion *Wm. B. Tennison* built in 1899 at Crabb Island, MD and homeported at the Calvert Marine Museum in Solomons, MD; and the 62-ft Poquoson-style buyboat *F.D. Crockett* built in 1924 at Seaford, VA and berthed at the Deltaville Maritime Museum in Deltaville, VA. All three

This page, from left: 30-ft pre-contact canoe, Lake Phelps, NC; Restored nine-log buyboat F.D. Crockett. Opposite page: Nine-log bugeye *Edna Lockwood* under sail.



vessels are listed on the U.S. National Register of Historic Places.

THE PATH FORWARD

We are only in the first phase of what promises to be an exciting multi-phase, multi-year project. For Phase I we are cataloging logboat data using an Excel spreadsheet format that includes 140 searchable fields. Our priority for Phase II is to finalize the data fields and use the spreadsheet as the template to build a multi-variable database that will become the cornerstone of the project. As new information becomes available, we will continue to fill in gaps as well as add new logboats as they are identified. Our registry has identified records for well over 40 logboats whose whereabouts and final disposition are unknown. Several of these logboats were left *in situ* after being surveyed or were recovered but remain in the possession of private citizens. We plan to conduct follow-up field surveys to relocate *in situ* logboats, and investigate what became of those in private hands. Maritime archaeologists with the North Carolina Department of Natural and

Cultural Resources believe that several of the state’s natural lakes may still hold dozens of undiscovered pre-contact dugout canoes. We hope to be part of any future investigative and recovery efforts at those sites. Lastly, our public education efforts will continue as we promote the purpose and value of our work to state agencies, museums, historical societies and academic institutions, and strive to be recognized as a central source for all logboat data in the Mid-Atlantic.

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SUGGESTED READING

Alford, M.B. 1992. “Origins of Carolina Split-Dugout Canoes.” *The International Journal of Nautical Archaeology* 21.3: 191-203.

Brewington, M.V. 1956. *Chesapeake Bay: A Pictorial Maritime History*. Cornell Maritime Press.

Brewington, M.V. 1963. *Chesapeake Bay Log Canoes and Bugeyes*. Centreville, MD: Tidewater Publishers.

McCary, B. 1964. “An Indian Dugout Canoe, Reworked by Early Settlers, found in Powhatan Creek, James City County, Virginia.” *Quarterly Bulletin, Archeological Society of Virginia* 19.1: 14-19.

Moran, D.A. 2017. “The Poquoson-Style Log Canoe: African-American Influences and the Concept of Technology.” *Quarterly Bulletin, Archeological Society of Virginia* 72.2: 59-82.

Phelps, D.S. 1989. “Ancient Pots and Dugout Canoes: Indian Life as Revealed by Archaeology at Lake Phelps.” North Carolina Humanities Council. <http://ancientnc.web.unc.edu/exhibits/shipwrecks/lake-phelps/>

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