

# The Poole Iron Age Logboat

edited by

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and Catrina Appleby

with contributions by

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Cover: 3D laser scan of the physical remains of the Poole logboat

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The volume was edited and prepared for publication by Catrina Appleby.



## Foreword

On 20 August 1964, a dredger working in Poole Harbour, east of Brownsea Island, recovered a large fragment of a logboat. Two weeks later, divers from Bournemouth British Sub Aqua Club (BSAC) located and retrieved a further element of this boat. When the two timbers were laid alongside one another, they formed the near-complete bottom of an oak logboat (see Figure 4.17), i.e. a boat hewn out of a single log. It was subsequently radiocarbon dated to c. 300 BC.

In 1972 I began to document the logboats held in English and Welsh museums. In August 1974, using a measuring tape, a plumb bob, a pencil and a drawing board, I compiled a measured drawing of the Poole logboat remains (see Figure 4.2) as they lay in a tank on display in Poole Museum's Old Town House (now known as Scaplen's Court). The sides of that tank were used as axes for taking the boat's measurements.

Of the 179 logboats I documented in that survey, only 26 had sufficient remains to warrant compiling a hypothetical reconstruction drawing by 'filling-in' those parts of the boat now missing from the remains, so that the original size, shape and features of the ancient boat could be depicted. The Poole boat was one of this small group, with its full length and part of its top edge (sheerline) surviving. Thus its original, overall dimensions were known and a hypothetical reconstruction of the original boat was drawn (see Figure 4.5). From this drawing, a set of hydrostatic curves was calculated and from them, estimates were made of the loads that such a boat could have carried and the speeds it could have achieved under paddle or pole (McGrail 1978, 254–7).

Conservation having been completed, this important boat has been on display in Poole Museum since July 2007. During the last two years, Jessica Berry, CEO of the Maritime Archaeology Sea Trust (MAST) and Professor Dave Parham of Bournemouth University have coordinated and funded the long-awaited research programme undertaken by a multidisciplinary team whose findings are published in this volume. In Chapter 2 the environmental and archaeological contexts of this Iron Age find are evaluated by Dr Eileen Wilkes of Bournemouth University. With full access to the boat now available, the remains have been examined by Dr Damian Goodburn, a specialist in ancient woodworking, who establishes in Chapter 3 the size, shape and special features of the oak tree from which this boat was hewn. Pat Tanner, drawing on his 25 years experience as a builder of wooden boats and ships, recorded the boat using 3-dimensional laser scanning: the data from this recording has been processed by computer, leading to an improved 'as found' drawing and a better understanding of the boat's original size, shape and capabilities (Chapter 4). In Chapter 5 the boat's conservation is documented by conservators Dr Jeremy Hutchings and James Spriggs. Finally, in Chapter 6 Katie Morton and David Watkins of Poole Museum describe the presentation and display of this important prehistoric boat.

The laser scanning of this logboat and the use of computers to investigate and develop that data have resulted in a more accurate 'as-found' drawing of the boat than could be gained from my 'primitive' 1974 attempt; thus a better understanding has been attained of this boat's original size, shape and capabilities. Moreover, much is now known about the great oak tree from which this logboat was created and we have a deeper understanding of its Iron Age environmental and archaeological context. The documentation of the problems encountered during the conservation of the Poole logboat provides useful information for future similar projects.

*Professor Seán McGrail*  
November 2018



# Chapter 1

## Introduction

Keith Jarvis†

(formerly Archaeological Officer, Poole Museums Archaeological Unit)

The discovery of the Poole logboat in 1964 started a 40-year project which has involved many volunteers, sponsors, and staff over the years. In retrospect, the vessel was found at a difficult time, when conservation was in its infancy and had not yet become almost routine. Corporate funding was also scarce until the 1990s and Lottery funding was not available until later still. In 1964, Poole Museums was run by volunteers and Dorchester Museum assisted with the discovery (Peers 1965). Divers helped to recover the vessel, which was found after dredging near the main channel at 6–7 m depth. However, Poole Harbour Commissioners have since confirmed that the dredging would have been to a depth of 2 m; consequently, it is likely that the vessel had slipped into the main channel. This would be consistent with being abandoned in a muddy Iron Age creek, as is often seen with old hulks on mudflats today.

Since the discovery, we now know that Green Island was an international Iron Age trading port in the centuries before the Romans arrived, and had two large stone and timber moles, emphasising its status (Markey, Wilkes and Darvill 2002). Our vessel can now be seen as transporting goods from this trade.

After the discovery, the logboat entered the most dangerous period of its existence. Photographs show it standing in quayside yards, but fortunately there was enough interest and voluntary help to ensure that it survived this stage and did not dry out and disintegrate. By the early 1970s the vessel was safely in a concrete tank of water in the Scaplen's Court Museum. Credit must be due to those unknown persons who constructed this to secure the boat's safety.

From the late 1970s onward, the museum's conservator, Annette Downing, worked on the logboat whilst the curator, Graham Smith, acquired some PEG (Polyethylene Glycol) for conservation. Conservation advice and sampling was provided by the National Maritime Museum. However, when the majority of the PEG was lost through a spillage accident, the project failed to maintain momentum.

In 1995, responsibility for the logboat moved to the Poole Museums Archaeological Unit and the author asked David Watkins to review the project, assess low-cost solutions relying on sponsorship, and formulate a project design. Three options became apparent: the first was to soak the logboat in a tank of PEG but this presented financial difficulties. A second option was soaking in PEG followed by freeze drying, but this would have required the logboat to be cut to fit into the largest available freeze dryer; it was rejected for this reason.

A new, pioneering option was soaking the vessel in sugar before drying slowly; this was attractive due to the lower costs, and support from British Sugar (see Chapter 5). Jeremy Hutchings had completed a PhD thesis on the process but it had not been undertaken on a large object in the UK and would require solving the various problems presented. For museum staff, it involved managing chemistry, conservation and engineering skills. The museum commissioned Jim Spriggs of York Archaeological Trust to advise on the project and work began by removing the top of an old British Sugar road tanker to provide a suitable tank which could be kept in a council depot. Poole Rowing Club helped to move the logboat to the depot where it was immersed in the tank of sugar solution supplied by British Sugar, who also provided laboratory sample analyses. The author continued this work initiated by Watkins and took it through to completion. During this time there were several sugar changes, and many samples were taken, while lack of finance caused delays and setbacks. Jeremy Hutchings, now a lecturer in Norway, continued to advise

and Health and Safety procedures for the tank, aimed at preventing spillage from sugar and biocide, were put in place.

After the soaking, drying needed to be addressed and a Heritage Lottery bid in 2004 to alter the Waterfront Museum gave a target date for display. The next challenge was to construct a heated drying chamber in suitable premises. Expensive hired units and empty council properties were rejected and eventually part of the Scaplen's Court Museum was used as this did not involve any additional costs. At the time there were concerns about large heating bills and damp but these proved groundless.

The construction of the drying chamber required careful design and was based on timber seasoning units. It consisted of a plywood box roughly 12 m by 4 m by 2 m, insulated externally with polystyrene foam slabs and an interior lined with black polythene to protect against damp and rot. Fans and monitoring equipment were set up inside.

In 2004, the day of the move to the chamber came, and with much press attention the sections of the logboat were lifted by crane out of the tank and then cleaned with a pressure hose before being loaded on to a lorry. They were later moved to Scaplen's Court, where the Rowing Club again helped to move the vessel into its drying chamber. The next day required a return to the tank to deal with swarms of wasps attracted by the sugar.

During 2005, some months of slowly adjusting the temperature and humidity controls followed, using technical advice from Jim Spriggs, until the surplus water was removed. At this time, the BBC presenter John Craven visited the logboat chamber for *Countryfile*.

It was now time to move the logboat to its display area and once more the Rowing Club assisted in moving it from Scaplen's Court into the main museum. Here, the cleaning operation started in 2006 with a team of volunteers who removed the sugar from cracks with small wooden picks and water.

Finally the case was completed for the museum opening in 2007. Many of the volunteers, sponsors and staff that had contributed over the years attended and were thanked for their contributions. In retrospect it all looked easy, but there had been many concerns along the way. One concern was for wasps and ants: during the soaking process there had been occasional problems with wasps and at times long poles were used to move sugar-coated debris away from the wasps (thus avoiding stings). With the boat now on display, some had suggested that ants might also become a problem but fortunately this has not happened.

Logboats have, for some time, been recognised as an important prehistoric boat-building tradition of Northern Europe, along with skin-covered boats and plank-built vessels. The studies in this volume will play a significant part in understanding this tradition in more detail and form part of a new era of more detailed analysis of logboats. This will, in turn, lead to more discoveries in prehistoric ship science as further analyses are carried out.

McGrail's monographs containing summaries and drawings of most of the logboats found in the UK have for long been a major source of information on logboats.<sup>1</sup> However, since this corpus was published, other complete logboats have also been discovered and the occasional new discovery will add to the data available.

The studies here will allow the building of a corpus of new, more accurate, information. For example, the laser recording will bring a level of accuracy of just a few millimetres in the drawings of the lines of the vessel after adjustment is made for post-deposition and conservation changes. This more precise recording gives the potential for greater analysis to determine chronological changes in hull shapes.

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<sup>1</sup> Now available on the Archaeology Data Service website (accessed 11 October 2018): <http://archaeologydataservice.ac.uk/library/browse/personDetails.xhtml?personId=6926>

Poole Harbour, for example, is at present calm which would lead to a wide design, whilst it also has a strong double tide making a narrow design desirable.

In conclusion, the detailed recording of the Poole logboat presented here will be a valuable contribution to work in this field and will have implications for studies of logboats both nationally and in the European setting.