

CARDIFF'S RELIC FROM THE LAST AGE OF SAIL: A NINETEENTH-CENTURY HULK IN THE TAFF, THOUGHT TO BE THE *LOUISA* (1851)

by Mark Redknap and David Jenkins

Around the coast of Wales, usually becoming submerged by incoming tide along rivers or within harbours, or drying amid weed and silt on a tidal foreshore once the sea has receded, lie the remains of ships which have ceased to sail, commonly called hulks. They lie abandoned, gradually rotting and falling apart, until such time as nothing remains visible, or the demands of coastal development result in their being bulldozed away. Those that remain fill with silt or sand as the planks soften and the fastenings spring. While today it can be difficult to find people who can remember their names, these vessels often have historic and archaeological value as the sole survivors of the last great age of sail. Being beyond hope of restoration, most have failed to attract much attention, but their importance as disappearing examples of early naval architecture, each having a lost story to relate, is now recognised by maritime historians and archaeologists (for example, Stammers 1994, 31).

Like many nineteenth century ports, Cardiff has seen the appearance of hulks as ships in a second lease of life. Three former Admiralty ships were permanently berthed in the East Bute Dock and converted to non-military purposes. *HMS Thisbe* served as a Gospel Ship for Seamen, the 36-gun *HMS Havannah* was used as a Ragged School for homeless and vagrant children until broken up in 1905, and the 64-gun 'Leda'-class frigate *HMS Hamadryad*, built at Pembroke Dock between 1819 and 1823 (the same as *HMS Thisbe*), served in the river Taff as a Seamen's Hospital Ship from the 1860s until 1905, eventually being broken up in 1921.

Topography

The river Taff is tidal up to the medieval town (up to Blackweir), drying at low water springs. The most dramatic changes to the area have been man-made, largely occurring as a result of the construction of the Bute Docks and earlier Glamorganshire Canal (1792-4) whose outlet was first at the mouth of the Great Pill about one mile below the town, where a large ship basin could be built. This soon proved inadequate and the canal was continued towards the mouth of the Taff, where a sea lock was constructed.

Remarkably one large nineteenth-century wooden hulk still lies between Clarence Bridge and the new PDR bridge on the river Taff opposite the former site of *HMS Hamadryad* (back cover plate and Figure 27). It lies in a section of river which is destined to be permanently flooded in September 1997, and the Cardiff Bay Development Corporation will probably take ownership of the site in early 1997. The uncertain future of the hulk has resulted in the initiation of an archaeological survey of the site.

The hulk

The survey which started in the summer of 1994 forms the subject of a report by two divers, Mr Jerry Cross and Mr Russell Phillips, for submission as part of a course requirement within the Nautical Archaeology Society (NAS) International Training Scheme in the techniques and aims of underwater archaeology. The NAS held a one-day training course in archaeological surveying on the site on 11th September 1994, which was attended



Figure 27. Detail of the hulk, showing the wooden pillars in the hold, and in the background iron hanging knees. (Photo: National Museum of Wales)

by ten students. The Department of Archaeology and Numismatics is supporting this project, and has undertaken some photographic and measured recording of the site.

The remains of the hull are often fully exposed at low tides (Springs), and fully submerged at high tides (Springs), and consequently survey work is scheduled around the tide tables. This alternation of wetting and drying is promoting decay of the

structure - in particular of the more exposed upper half, though the lower hull, largely waterlogged for most of the tidal cycle, appears sound.

The hulk survives largely intact up to the iron hanging knees for lower deck beams for almost half the original length of the vessel (and two-thirds of the length at keel level), its interior being filled with mud except at the offshore end, where the hulk is exposed to the full effects of tidal stream. The

present beam measures 9.7 m (31 ft 10 in) internal, the ship lying slightly heeled over to the north at an angle of some 15° from horizontal. The stempost and lower part of the foremast can still be recognised, as can the mast-step for mainmast at low tide. The distance between the two masts is 20.9 m (63 ft), and the overall length from main mast to bow is 25 m (83 ft).

The exposed frames, some measuring in cross-section 270 mm (10.5 in) square, are close set, and ceiling planking is 152 mm (6 in) thick. The outer hull planking comprises an inner skin of similar thickness, diagonally sheathed externally with softwood 38-50 mm (1.5 - 2.0 in) thick, which has sprung outwards as the fastenings have failed (fastenings of treenails, iron bolts and occasional bronze spikes may still be seen in various positions). A central division is visible within the hold, comprising vertical wooden hold pillars of rectangular cross-section (measuring in cross-section 110 mm x 340 mm (4 in x 1 ft 2 in) which run longitudinally from the stem post, being regularly spaced above the keelson. To judge from the sag of some of the structure towards the centre of the river, the loss of the stern half of the vessel combined with tidal undercutting of the remaining hull appears to have resulted in the breaking of its back and dropping of midship floors from the underside of the keelson.

Inboard, extensive use of iron can be seen for her supportive and reinforcing components: long wrought iron knees are spaced at intervals of approximately 1.67 m (5 ft 3 in) to provide central supports to former deck beams. The depth of the hold from these knees measures approximately 3.6 m (12 ft). Her full body and flat floors, evident at the exposed end, recall features of earlier bulk carriers. A diagonal system of planking in which skins of external planking were applied to horizontal planking was developed to increase hull strength.

Local lore relates that the ship possessed square bow ports through which cargo, in particular long lengths of timber, could be loaded, and evidence may lie buried beneath the silt for the chain locker and other features.

The identity

Although it is almost impossible to be absolutely certain as to the identity of the hulked remains under consideration here, both the dimensions of her hull and the oral traditions pertaining to her suggest that the vessel in question could well be the 780 gross ton wooden ship *Louisa*, built on Prince Edward Island, Canada in 1851. In a 'boom' decade for shipping, the 1850s saw many British shipowners turning to Canadian yards for new buildings, chiefly because larger vessels could be supplied sooner and considerably cheaper than was the case in yards at home. The *Louisa* was actually built by a Devonian emigrant to Canada, James Yeo, to the order of his son William, who lived in Appledore and owned a number of sailing vessels (Greenhill 1968, 162-3). She was probably employed in the trans-Atlantic trades, especially the import of Canadian timber to Bideford and Bristol.

In June 1873, the *Louisa* was sold to John Rowlands and John Thomas, shipowners and brokers of 3 St. Andrew's Crescent, Cardiff. Her entry in the statutory shipping register of the port of Cardiff, dated 17th June 1873, has her dimensions as 147.0 feet long by 30.5 feet beam by 21.7 feet draught and describes her as having one deck, three masts, ship rig (i.e. square rigged on all masts), carvel build and a female bust figurehead. Rowlands and Thomas appointed Captain Joseph Rees of Aberaeron to be master of the vessel, on condition that he purchased sixteen of the vessel's traditional sixty-four shares, and further small blocks of shares were sold to other investors in the Cardiff area (Glamorgan Archive Service, statutory shipping register, Port



Figure 28. Another Canadian-built vessel that came into Welsh ownership was the *Hope*, completed in 1865 and seen here at her home port of Aberystwyth in the 1870s. The *Louisa* may have resembled this vessel. (Photo: Welsh Industrial and Maritime Museum)

of Cardiff, 1873). Apart from the *Louisa*, the partners were majority shareholders and managers of four other wooden sailing vessels in 1877, but their partnership was terminated in 1882: John Thomas was left managing the *Louisa* alone, whilst Rowlands took control of the remaining ships (*Lloyd's Register*, list of shipowners, 1882).

Only four years later, John Thomas disposed of all his interest in the *Louisa* to her master, Joseph Rees, who thereafter operated her as master-owner. It cannot have been easy to find profitable employment for a wooden sailing vessel aged over forty-five years, but Rees continued to trade the *Louisa* until 1902, when she

disappears from Lloyd's register and the words 'register closed, 1902' appear against her entry in the Cardiff register (*Lloyd's Register* 1902).

It is unfortunate that the register does not provide any indication as to the subsequent disposal of the *Louisa*. Oral traditions, however, maintain that the remains are those of a vessel named the *Louisa* that was deliberately beached where she now lies as an indication of the boundary between the Bute and Plymouth estates. Further oral traditions recall that her hull was copper-sheathed and her timbers copper-fastened; over the years this valuable metal has been removed from the hull for sale as scrap (South Wales

Echo, 23rd & 27th January, 1988). Documentary evidence verifies elements of both traditions; the hulk lies in the approximate vicinity of the point at which the estate boundaries met on the western bank of the Taff (Daunton 1977, 76-7), whilst Lloyd's Register records that the *Louisa* was copper-sheathed and fastened, a vital refinement on a vessel built of Canadian softwood (*Lloyd's Register* 1873, 1902). The dimensions recorded thus far on the hulk do not contradict to that of the *Louisa*, the overall distance of 25 m (83 ft) from mainmast to bow corresponding to that of a vessel of approximately 50 m length, and agreeing with her length. The internal beam recorded on the hulk of 31 feet is not at conflict with this identification if one takes into account the distortion of the hull once its deck and transverse beams had disappeared. This is not conclusive evidence, of course, and further documentary research could help to confirm that it is the *Louisa* - now nearly 150 years old.

Discussion

This hulk in the mud on the banks of the Taff was once a deep sea, wooden square-rigged merchant sailing ship from the final age of sail, a period when iron began to be used for shipbuilding. Shortage of timber and the need for larger ships led to the use of iron - initially in machinery and eventually for structural elements such as knees in place of naturally grown timber knees. The hulk is typical of her type and period, being of composite construction, being built partly of iron with iron knees and straps, and some iron fastenings. The last British square-rigged merchant sailing ship to operate commercially was the *Waterwitch* in 1936, and apart from a few preserved vessels and fading memories, these hulks are all that remains of the commercial sailing vessel (Figure 28) on which the fortunes of cities like Cardiff depended until the advent of the tramp steamer in

the 1870s.

Such sites deserve to be adequately recorded before they disappear along with those memories. Remarkably almost two-thirds of her lower hull has survived. The shipping register for the port of Cardiff describes the *Louisa* as having one deck, and the identification of a series of knees for lower transverse beams requires further investigation. It is hoped that, following the completion of this first stage survey, the potential of such an incomplete hull for permanent public display as a cross-section through a 19th-century merchantman illustrating the complexity of wooden ship construction will be examined, as will the possibilities and implications of its long-term preservation *in situ*. The challenge of securing the appropriate future for this archaeological site would benefit from the support of the Severn Estuary Levels Research Committee, and volunteers with offers of assistance are invited to contact M. Redknap or J. Cross (J. Cross, 9 Plassey Road, Penarth, 01222 711586). It is hoped that this survey will lead to the recognition of the hulk as a key element of the maritime historic landscape of Cardiff Bay, and result in the full recording of the remains and the presentation of the site as an integral part of the future proposals for development in the area.

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