

## The *Dartmouth*, a British frigate wrecked off Mull, 1690

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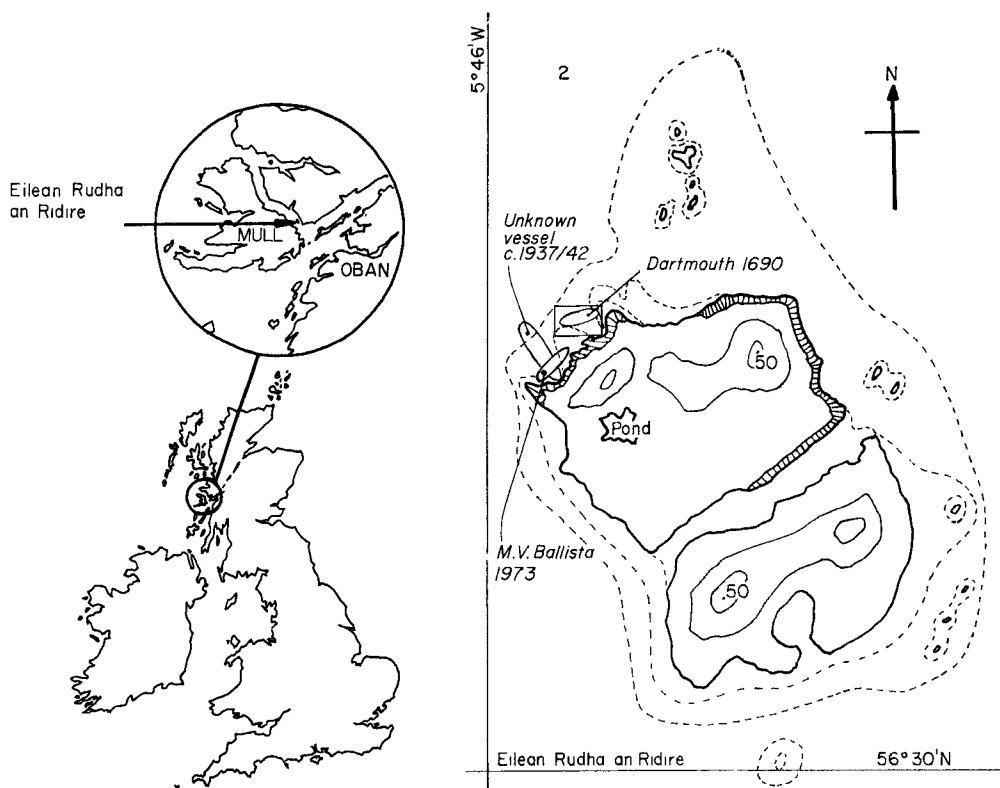
### Introduction

In August 1973, four amateur divers discovered a wreck off Mull, Scotland. The site, which included cannons, anchors, a bell, and timbers, was surveyed. A further one-week expedition took place in November 1973, the discoverers being guided by experienced archaeologists. This note summarizes the results of these two periods. A full assessment will appear in a future issue, incorporating later work.

### The wreck site

The wreck lies on Eilean Rudha an Ridire (Figs 1 and 2). Figure 3 shows the larger objects as found. Close by are two modern wrecks, the coaster *Ballista* 1973, and an unknown ship, c. 1940.

Nineteen iron guns have been located which are badly decomposed. Guns 4, 6, 7, 8 and 9 appear to have been broken in the past, but the remainder preserve their original



Figures 1 and 2. Location plans; 1, Mull; 2, Eilean Rudha an Ridire.

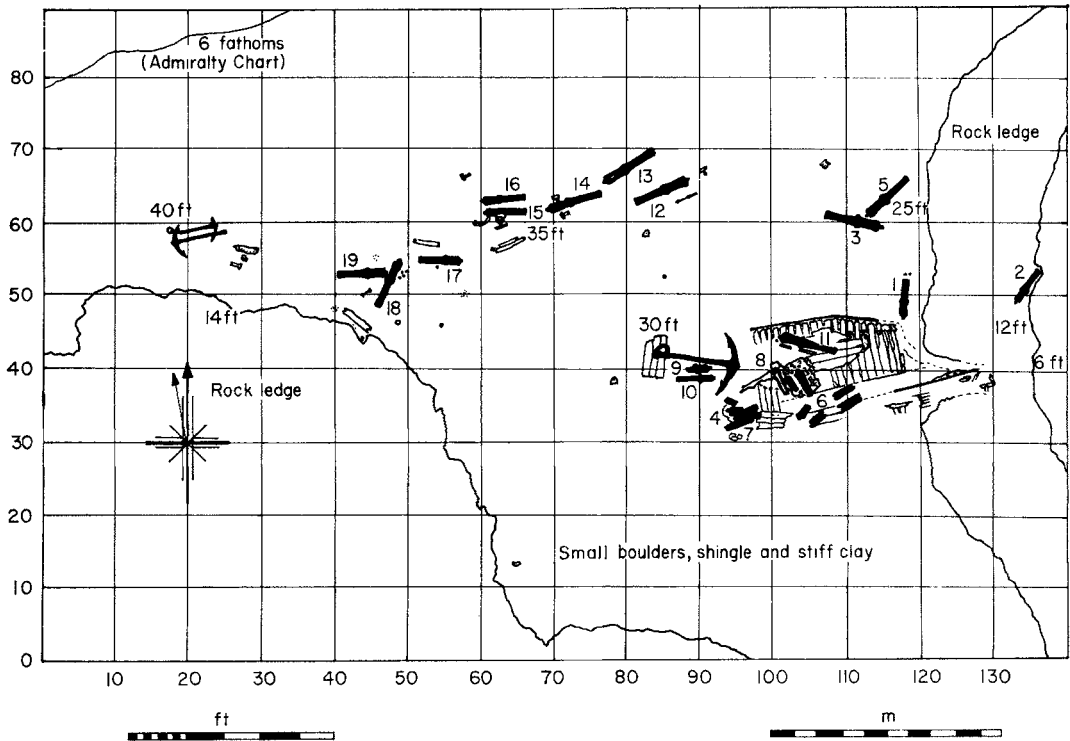


Figure 3. The site plan, Mull. Notes a. In reality, cannon 2 is standing vertically on its cascabel. Here it is rotated to show plan view. b. Spot depths are given to show average recorded working depths. c. All objects are shown in their original positions prior to excavation d. Identifiable cannons are numbered 1 to 19.

dimensions, the shape of the moulding rings being preserved under a layer of concretion. Gun 10 has a broad arrow.

*lengths of guns*

3,5,11,12,13,14,	..	..	..	8.5 ft (2.6 m)
1,2,10	..	..	..	5.5 ft (1.7 m)
15,16,17	..	..	..	6.0 ft (1.8 m)
18,19	..	..	..	7.5 ft (2.3 m)

One 12 ft (3.6 m) anchor and two 8 ft (2.4 m) anchors were found.

Seven lead scupper pipes were located, ranging from 9 in (0.23 m) to 15.5 in (0.4 m) in length. A lead pipe 4.5 ft (1.35 m) in length ending in a sloping flange was trapped under gun 15.

The bell, 15.5 in (0.394 m) in height, 73 lb (32.9 kg) in weight, was concreted firmly to gun 15. One side is inscribed DH 1678 and the

reverse side bears the pheon indicating a Royal Navy ship (Figs 4 and 5).

Timbers are present in several locations, and one area 50 ft (15 m) × 15 ft (4.5 m) has been uncovered. This is part of the hull with the inside ceiling planking uppermost. Under the lower edge, face downwards, are sections of horsehair and pitch paying stuff secured with light deal boards, a 17th century defence against the shipworm (Laird Clowes, 1952).

Also prominent are the frames, and beneath these, the outer skin of the hull the lines of which converge towards the east end of the section. A long timber running at right angles to the frames is thought to be either the keelson or the lower deck clamp.

**Small objects recovered**

A number of small objects have been raised and conserved, after fixing their positions by



Figure 4. The bell.



Figure 5. The bell, showing the pheon.

grid coordinates. Fittings of the ship include lead Roman numerals thought to be draught marks used at stem and stern to indicate trim (Fig. 6). Sometimes they were incised into the timbers (*Int. J. Naut. Archaeol.*, 1, 162)

A lead sheet 5 ft (1.5 m)  $\times$  1.5 ft (0.45 m), edged with nail holes was noted near the small anchors. Small pieces of lead sheet were present at other locations, which were probably used to sheath the keel or the lower part of the rudder, or for damage repair (Laird Clowes, 1952).

Parts of wooden blocks and sheaves have been found. The use of three thick leather discs 3.9 in (0.1 m) in diameter, with a central hole, is not known.

A number of bricks and tiles around gun 15 suggest that this may have been the galley position.

Items in use on the ship included wine bottles, clay pipes, a pewter plate, a brass spoon, a brass candle-holder, and some unidentified bronze objects.

Pottery fragments have been identified as late 17th century. They include Bellarmine and Westerwald stoneware, brown glazed wares probably made in the Midlands, blue and white delft ware, from south-east England or imported from Holland.

Three shaped slates have been recovered. They differ in dimensions but all have one semicircular edge with a hanging hole. A similar slate from an 18th century wreck is said to bear navigational marks, and there are references to 'log slates' in the 19th century [1] (Fig. 7).

A shoe was found under gun 15 associated with some bones.

Two rectangular lead aprons curved to fit the cannon contours, were found. Their use was to prevent water entering the vents. Seven sizes of iron round shot have been found and three sizes of lead shot, which will be matched with the guns on site.

All the iron shot have lost weight due to combination of the iron with the surface concretion layer. Two grenades, 3.5 in (0.089 m) and 4.1 in (0.104 m) in diameter were filled with gunpowder, and in one the wooden plug was still in place.

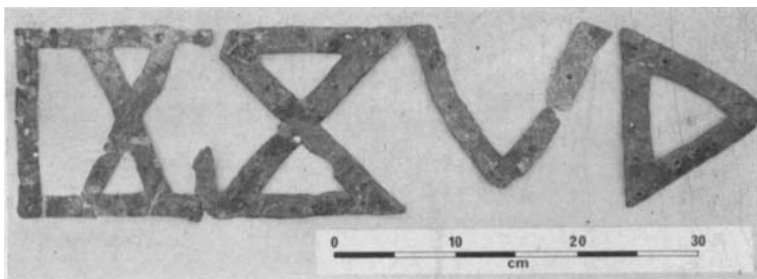


Figure 6. The lead draught marks.

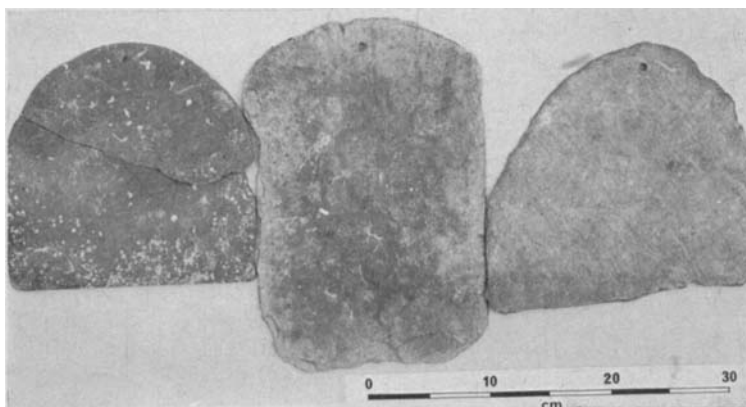


Figure 7. The slates.

### Identification of the ship

The pheen on the bell led to a study of Colledge's index which lists the fate of every Royal Navy ship, where known. The frigate *Dartmouth*, a 5th rate, wrecked 9 October, 1690, is the only Royal Navy ship listed as wrecked off Mull or the west coast of Scotland during a long period subsequent to 1678. The letters 'DH' on the bell suggest the name, an identical abbreviation to that used for the registration port of modern fishing vessels.

While the date is later than the building date (1655), the *Dartmouth's* original bell may have shared with the bell of HMS *Victory* the fate of being damaged in action and replaced. The nearest known refit period was late 1676 but more research is needed on this point.

The sizes and number of guns present are compatible with a 5th rate if it is assumed that some were removed in a contemporary

salvage operation. The dimensions of the site, approximately 120 ft (36 m) × 40 ft (12 m), define an area scarcely larger than the dimensions of a 5th rate.

### Documentary specification of the ship

The *Dartmouth* was first listed in May 1660 (N.R.S. vol. 1, 1903) and subsequently listed in greater detail in 1686:

Built at Portsmouth by Sir John Tippetts, 1655

Length by the keel	80 ft (24.2 m)
Breadth by the beam	25 ft (7.58 m)
Depth in hold	10 ft (3.02 m)
Draught	12 ft (3.64 m)
peace	— 90 men, 28 guns.
war abroad	— 115 men, 28 guns.
war at home	— 135 men, 32 guns.

Another specification of the *Dartmouth* exists (Battine, 1684) where the ship is chosen as a typical example of a 5th rate and minutely specified. The guns are listed below:

The London Gazette of 23 October 1690 recorded that the ship 'was forced from her anchors' in the Sound and driven 'upon a rock, where she broke to pieces'. The

	Lower Deck		Upper Deck		Quarter Deck		Total	
	Demi Culverin	No. tons	Saker	No. tons	3 pounder	No. tons	No.	tons
War	18	26	10	7.5	4	1.5	32	35
Peace	16	23	8	6	4	1.5	28	30.5

A comparison is proceeding of the guns on site against this list supported by lists of later years in the PRO manuscripts.

Battine also gives a wealth of detail on the standard allocation of equipment and stores for a 5th rate which should prove invaluable in the interpretation of the artefacts.

A drawing by Van de Velde the Younger of a 5th rate of 1675 is considered (Robinson, 1958) to be the *Dartmouth*, with reasonable confidence.

Two draughts of 17th century English 5th rates are known to the author. These have not yet been assessed (Deane, 1670) (Keltridge, 1684).

### History and loss of the ship

An enormous volume of contemporary information exists on the history of the *Dartmouth*, which spans an entire spectrum of naval actions extending from the time of the Commonwealth, right through the reigns of Charles II and James II, finishing during the Revolution of William III. A summary will form part of a main article in a subsequent issue of this Journal.

The *Dartmouth* was lost on 9 October 1690. The ship was lying at anchor in the Sound of Mull, not far from the Jacobite rebel stronghold of Duart Castle, the object of its presence.

At 18.00 hrs a violent storm arose which ravaged the Scottish coast and nearly caused the loss of two other Royal Navy ships in the area (PRO ADM 51/345).

commander, Captain Pottinger, was drowned with all but six of his men.

### Protection of the site

By the time this note appears, the site should be finally designated under the Protection of Wrecks Act 1973. Recently unknown divers have disturbed the site, several items being removed. Timbers have been pulled out and left to float around. A plaque should be mounted on the islet, close to the wreck, stating the legal position.

### Objectives of future work

This year more of the hull structure will be surveyed. More work is needed to match the armament with documentary sources, and to research the original number, size and use of the anchors. It is hoped that more information will become available on the loss of the ship, the replacement of the bell, and contemporary salvage attempts.

Representative contemporary models, draughts and pictures will be studied. It is our intention that all items recovered will be displayed in a Scottish Museum.

### Acknowledgements

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## Note

- [1] Log Slate: A slate on which the officer of the watch enters the particulars intended for insertion in the log book. Paach, H., 1901 (3rd ed.), *From keel to truck*.