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A Cromwellian Warship wrecked off Duart Castle, Mull, Scotland, in 1653

Colin Martin

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Chapter 11

CONCLUSIONS

The nature of the wreck formation, its general cohesion, the survival of much of the lower hull, and the collapse of the upper hull to port, have informed reliable estimates of the dimensions, form, and displacement of the ship. This, viewed in conjunction with artefact distributions and other evidence, has enabled a three-masted rig and the internal layout of the vessel to be postulated with some confidence. An apparent lack of ordnance on the midships part of the main deck would be explained by the use of this space for rowing banks, an attribute documented for *Swan* and reinforced archaeologically by the identification of an oar-port lid. Since neither of the two merchant vessels lost with *Swan* in the 1653 incident would have carried oars this reinforces the already-strong evidence that the latter is the wreck off Duart Point, and for the purposes of the following discussion this identification is assumed.

A hypothetical reconstruction of the hull indicates a keel-length of 60ft, a maximum beam of 25ft, and a laden displacement of about 135 tons. The beam-length ratio of 1:2.4 is more appropriate to a warship (albeit a rather beamy one) than to a merchant vessel (Thrush 1991: 32). Her underwater lines indicate a blunt entry and a fine run reflecting the dictum 'head of cod, tail of mackerel' (Adams 2013: 115–16). The ship was probably built 'bottom-up' or 'frame-led' with perhaps three pre-erected frames faired by ribbands to control the alternating placement of floor-timbers, futtocks, and planking as the hull-structure progressed (Adams 2013: 130–1). This form of construction is believed to have originated in the Low Countries during the 15th century (Hocker 2004: 80–2), and was common in northern Europe during the 16th and 17th centuries.

The disposition of ordnance on the main deck is unusual. Two long pieces, identified as 5-pounder sakers, appear to have been mounted in the bow, pointing forwards. Paired broadside pieces of perhaps saker and minion calibre occupied the aft deck on either side. Finally, at least one and perhaps two minion drakes were placed astern, firing through the lower transom.

Though light, this armament would have been well-suited for operations against the castles and galleys of Scotland's western seaboard. The ship's two forward guns would be effective in the chase, and in combination with her rowing capability she would be a formidable pursuit-craft. Good sailing characteristics supplemented by oars would have allowed her to out-run larger and more heavily armed pursuers. The aft-pointing drakes would have countered attacks by small craft attempting to board from astern – her most vulnerable quarter. This capability would be augmented if the guns were loaded with case-shot of the kind identified on the wreck. Her modest broadside of two guns on each side would have sufficed to deal with most merchant ship adversaries in ship-to-ship encounters.

This armament, coupled with her shallow draught and oar-given manoeuvrability, would have given her a strong tactical advantage against static shore targets such as castles. How such an action might be fought is illustrated in a contemporary depiction of an attack by Elizabethan warships on a fortified headland at Smerwick Harbour in South-West Ireland in 1580 (Martin & Parker 1999: 68, fig 9). While the anchored fleet stands off in deeper water to maintain a long-range bombardment, smaller vessels take advantage of their shallow draught to run under sail towards the fort, firing their forward guns as they approach, before coming about at the last moment to present first their broadsides and then their stern guns at close range. This tactic could be repeated on a cyclical basis to maintain continuous fire.

The ship's upper stern contained a small but lavishly appointed cabin with panelled sides and door, cupboards, glazed windows, and quarter-galleries, indicative of an occupant of high status. The presence hereabouts of a London-made pocket-watch, a high-quality sword, and a top-of-the-range snaphaunce pistol by Charles II's dagmaker in Scotland, further emphasise this individual's status and wealth. A person of such eminence enjoying the isolated and relatively luxurious accommodation in the aft cabin can only have been *Swan's* captain, Edward Tarleton.

The captain's quarters would not have been the same aboard a merchant ship of comparable size. Recent investigations of trading vessels of similar date preserved almost intact in

the deep Baltic show quite different arrangements to those postulated for *Swan*. For economic reasons merchant ships were designed to be operated by as small a crew as possible, and their rigs were simplified accordingly. The crews, moreover, were generally kin-based, with familial rather than systemic shipboard hierarchies. Such coherent social groups could live in close proximity without compromising authority, sleeping and performing bodily functions in a communal stern cabin, eating and relaxing in the warmth of an adjacent galley and fuel-store (Eriksson 2014: 104–12).

Internal spatial arrangements reflecting hierarchical divisions aboard a warship were radically different. The emphasis was not on economic operation, but on exacting maximum performance from a much more complex and efficient rig to gain tactical advantage and deploy strong offensive and defensive capabilities. Crews were consequently much larger, with a structured cadre of officers and specialists, and the large body of men required to work the ship, man the guns, and fight. Hierarchies were defined by systemically imposed ranks and duties, and these in turn defined rigidly controlled protocols of space and movement within the ship. There were zones for performing particular tasks, defined routeways for authorised movement between them, and space for eating, sleeping and excreting. The captain occupied what was in effect the 'driver's seat' in the stern cabin, while the rest of the zone abaft the mainmast was largely reserved for officers and key functionaries. Midships and forward areas were the preserve of the crew. This arrangement ensured that authority and supervision visibly emanated from the narrowing and upwardly sloping stern, from which the ship's executives could view, control, and dominate activity throughout the vessel (Eriksson 2014: 142–8). The evidence that the Duart Point wreck was organised in this way is strong, and further indicates that the vessel had been conceived from the outset as a warship.

To operate in all three of her potential configurations – sailing, rowing, and fighting – *Swan* would have required a crew of at least 94, comprising 54 oarsmen (at an estimated three per sweep), 30 seamen (the number she was credited with at Liverpool), and (say) ten executives and specialists, including the Captain, Master, Purser, Carpenter, Boatswain, Surgeon, Gunner, and their various mates. Most of the crew accommodation would have been on the main deck, where in the absence of guns and with the 18 sweeps hung on the upper-deck beams 65 6ft × 2ft (1.8m × 0.6m) sleeping spaces would have been available. Further accommodation could have been found on the aft part of the main deck, in the forecastle, and in the hold if this was not filled with cargo or provisions.

Thus organised, the ship could readily adapt to her specialist roles. As a sailing ship with a reasonable hold capacity she could transport goods and if necessary fight with a 30-strong crew, and in ballast was probably quite fast (hence her employment as a dispatch vessel). In an offensive capacity she could operate under oars and if necessary use the 54 oarsmen as soldiers who could fight from the ship or be deployed ashore. For localised operations she could carry additional troops in the hold. These capabilities might be enhanced, as evidence from the wreck has shown, by an ability to provision herself from local resources. For her size *Swan* was a powerful naval unit with a wide range of capabilities.

The origins of this versatile ship-type are to be found in the endemic piracy of the late 16th and early 17th centuries. Much of the maritime conflict between England, Spain and the fledgling Dutch republic was prosecuted by private ships operating, however loosely, under their respective states' authority. Though hostilities were usually motivated by religious divisions and economic rivalries, the motives of the participants were primarily predatory. From 1584 Catholic privateers operated out of Dunkirk, dominating the shipping lanes into and out of the English Channel, while the coastal waters around Britain were infested with Irish and Scottish privateers operating under various shades of legitimacy (Ohlmeyer 1989; 1990; Murdoch 2010). From further afield Moorish pirates of the North African coast, who had previously confined their attentions to shipping in the Mediterranean, broke loose into Atlantic waters to prey on ships and capture slaves along the coasts of Spain, France, the British Isles, and ultimately as far as Iceland (Jamieson 2012).

Paradoxically, the problem was exacerbated during the first two decades of the 17th century by the growth of state-owned and state-controlled European navies. An emphasis on size, powerful armaments and prestige led to increasingly large ships which could take their place in the disciplined formations of large-scale fleet actions. Such ships could secure dominance over the seaways they patrolled, but they could not protect humble merchant ships or fishing boats on the open ocean from small, nimble and well-armed predators. Nathaniel Butler, himself a reformed pirate from the glory days of Elizabethan privateering, compared the big sailing warships to 'a giant, strong and (if you will) invincible at close and grappling, but for all that so weak and impotent in his legs that any active and nimble dwarf, keeping out of reach, may affront and scorn them, may hurt and endanger him, without receiving the least harm and revenge from him' (Perrin 1929: 250).

In analysing the generally superior performance of small warships built in the Low Countries over their English counterparts, Butler considered the following factors relevant (Perrin 1929: 43–4): the ships are light, and carry little cargo or artillery; their underwater lines are good – long rake and good full bow; they have a fine run; they have narrow rudders; they are masted just right; the masts are properly stayed; and they are not over-rigged. Expanding on these factors, Butler continues:

> a fleet may and must receive these yere [desirable] and nimble sailers mixed amongst them, these ensuing particulars worthily held in special account: that they are ready at all hands to wait upon it, upon all occasions; that is in calms, or small store of wind, if they may be fitted with oars (as they may easily and conveniently be), they may be advantageously employed in all chases, and that upon occasions they may anchor near the shore, where the great ships cannot, and may be fitly used to fetch in all strange ships whatsoever (Perrin 1929: 250).

But in their attempts to replicate such ships, Butler asserts, the innate conservatism of English shipwrights had proved a hindrance. 'For the most part we build them so very strong, and consequently heavy; so full of timber and timbers; we building our ships for seventy years; they theirs for seven; we for stowage [load capacity], they for stirring [speed]' (Perrin 1929: 249).

Charles I's heavy battleships had proved powerless against the swift-sailing privateers operating from shallow-water Flemish ports during England's war with Spain between 1625 and 1630. In 1628 ten sail-and-oar pinnaces called the *Lion's Whelps* were built to counter them, but their over-heavy build and excessive armament compromised performance and they were not a success (Thrush 1991: 40–1). Like the Duart Point ship they had a three-masted rig and auxiliary oars, but their armament was immensely heavier. *Ninth Whelp's* guns, recorded at Waterford in July 1635, included two brass sakers, six iron demi-culverin drakes, four iron culverin drakes and four iron demi-culverin drakes (Thompson 1977; see also Howard 1979: 152). These 16 guns, if shotted to the full weight of their respective classes, would have thrown a total of 262lbs (118.8kg) against an estimated 34lbs (15.4kg) capability of the Duart ship's guns, a mere 14% of *Ninth Whelp*'s firepower.

It is difficult to see how the *Whelps*' ordnance, even if composed of lighter and shorter drakes, would not have filled all the available space on the main deck, including the waist, so it would have been necessary to dispose the sweeps among and between the guns. The number of oars mounted by the *Whelps* is nowhere explicit, although a summary contract for their building (TNA SP16/58) specifies a total of 320 32ft (9.75m) oars for all ten ships. The same document lists the total of masts and spars for all the *Whelps* which if divided by ten gives the correct complement for each ship, suggesting that the oars were similarly quantified and so there would have been 32 sweeps per vessel, or 16 on each side.

It is impossible to reconcile these numbers of guns and oars with the space available for them. Even if the main deck was entirely clear, and oar-ports provided at 4-ft intervals (the minimum distance required to accommodate the inboard stroke of the 3-man oar teams specified for the *Whelps*), only 15 ports per side are possible, and this presupposes that the decks were not encumbered with 16 pieces of ordnance, most of them mounted on the broadside. A further factor is the 96 oarsmen who would be required to man the 32 sweeps, plus seamen and supernumeraries, who cannot be reconciled with the 60-strong crew typically assigned to these ships (Thompson 1977). As with the unrealistic weight of ordnance, the evident desire to cram the *Whelps* with an unmanageable number of oars may be yet another example of wishful thinking outweighing reality on the part of the incompetent and ill-fated duke of Buckingham.

It is tempting to see the slightly later *Swan* as a similar but lighter and much more lightly armed and sensibly oared alternative, perhaps conceived in the knowledge of the *Whelps*' shortcomings, with a more realistic number, size, and distribution of guns which left adequate space to work them while leaving the waist free for the banks of oarsmen.

In 1637 a Flemish privateer called *Swan* (unrelated to the Duart ship), single-decked and fitted with oars, was captured. She served as a model for two English-built pinnaces, *Greyhound* (100 tons) and *Roebuck* (120 tons, 50 crew), though again a strengthened build compromised their performance. In 1637 Thomas Wentworth, Lord Deputy of Ireland, acquired a 160-ton Dutch-built ship which he equipped with oars in 1639, and was subsequently described as 'an extraordinary good sailer' (Thrush 1991: 42–3).

During the earlier part of the 17th century the naval policies of James VI/I on the western seaboard of Scotland, articulated and applied under the Statutes of Iona, sought to demolish clan-based naval power in the area and bring about the demise of the traditional sailing galley or *bírlinn*. But there was still a need for a locally deployed naval force under the control of magnates loyal to the crown. By this time Clan Campbell, through political guile and growing military strength, was close to achieving hegemony in the maritime west over its ancient rivals, the Macdonalds. In 1624 Clan Ian of Ardnamurchan (a branch of the Macdonalds), whose acts of piracy were notorious throughout the region, rebelled against the crown. The following year, on the orders of Scotland's Privy Council, a ship and pinnace were prepared and manned at Ayr to support Archibald Campbell, Lord Lorne (later the Marquess of Argyll), in executing a commission of fire and sword against them. The frigate was rated at 150 tons, and manned by 24 mariners and 24 soldiers; the pinnace at 50 tons had 12 soldiers and 12 mariners. John Osburne, son of the frigate's owner, commanded both vessels and was directed to 'pursue the rebels with all kind of rigour and hostility'. Clan Ian was ejected from Ardnamurchan (Gregory 1836: 410–11), and a Scottish and a Flemish ship which had been seized by Clan Ian were recovered (*RPCS*, ser 2 vol I: 19, 26; Gregory 1836: 405–12; Macinnes 2011: 69).

Other sporadic references record private naval activity by Argyll. In 1639 he purchased a frigate in Holland called *Lorne* (the title he had borne prior to his succession to the earldom), which he sold on in 1642 (Stevenson 1973: 128). Other references imply the existence of what was, in effect, a private navy on the western seaboard during the incumbency

of the marquess. At the time of Alasdair MacColla's invasion of Ardnamurchan on behalf of the king in 1644 Argyll had three ships in service. They included *Swan* (which, as argued in Chapter 2.2, was very probably the Duart Point vessel) under Captain James Brown, *Antelope of Glasgow* commanded by Captain Richard Willoughby, and *Globe*, based at Dunollie (Campbell 2002: 217).

During Britain's complex civil wars – the so-called Wars of the Three Kingdoms (1639–51) Scotland was governed by a Committee of Estates dominated by the Covenanters. The leading Covenanter was the Marquess of Argyll who, though not a member of the Committee, had a profound influence over it rather in the manner of a king over his parliament. He was, in effect, commander-in-chief of its military and naval forces. On 24 October 1645 the Committee found it necessary to confirm that 'the frigate and the galley which have been kept in service on the west coast [should] continue to be entertained at public expense' (Stevenson 1982: 9). Shortly afterwards the Committee issued Letters of Marque to two ships and a galley of which a draft survives, with blanks for the names of the ships and their captains to be inserted:

> The ship called the [*blank*], of which [*blank*] is master, is employed by the estates for guarding the west coast and stopping supplies being sent to the enemy. The ship may encounter frigates and other vessels of these covenanted kingdoms; thereby the committee hereby warrants [*blank*] to provide the ship with men, victual, cannon, and other warlike equipment, for defence and to pursue such frigates and other vessels, goods, or whatever else belongs to the common enemy. [*blank*] has hereby full warrant, power, and commission to pursue, sink and destroy the common enemy, seizing their goods and making them lawful prizes. He shall receive orders from the marquess of Argyll, and shall be accountable for what he takes as others have been in this work. The commission is to last six months, and those employed by [*blank*] in this service shall be allowed as part of the present levy (Stevenson 1982: 42).

Though the names of these vessels are missing, it is quite likely that one of them was Argyll's *Swan*. If so, an intriguing question arises. The reconstruction of the Duart Point wreck's decorated stern (Illus 147) strongly suggests that the ship bore the Stewart royal arms, while the associated badge of the Heir Apparent indicates that the monarch concerned was Charles I, since Charles II did not have a direct male heir. If *Swan* was a private warship belonging to Argyll the link with the crown must be explained. Argyll's loyalties were complex. On the one hand he was a royalist and unionist, anxious to reinforce his territorial and political power within a greater Britain. On the other he was implacably opposed to Charles I's religious autocracy, especially the imposition of episcopacy and the Book of Common Prayer over Scotland's established Presbyterian church. As a leading Covenanter he had been in rebellion against the crown during the Bishops' Wars of 1639–40, but had reached an accommodation with the king and a year later, when Charles came to Edinburgh to concede virtually all the Covenanters had demanded, Argyll was created a marquess. This rapprochement – though suspicion and enmity remained on both sides – might well have resulted in the application of the royal arms to Argyll's frigate.

When and where this ship was built is not known, but it seems certain that she was strongly influenced by contemporary Dutch practice and the 'Dunkirk frigate' philosophy described above. Her close dimensional similarity to the 1628 *Lion's Whelps* is striking, though her lighter build and much lighter armament suggests that her design, if influenced by the *Whelps*, was modified in the knowledge of their shortcomings, which by *c* 1640 must have been glaringly evident.

Swan as reconstructed from her remains seems to have been designed specifically for the conditions of Scotland's western seaboard. In this respect she may perhaps be seen as a 'super-*bírlinn*', intended to meet the changing requirements of naval force in the area during the second quarter of the 17th century. As such, and by then in the service of the Commonwealth navy, she was well-suited to the 1653 campaign. Its aims were to establish forts on Orkney and Lewis, reduce the Mackenzie strongholds at Stornoway and Eilean Donan, invade Skye to neutralise the Macleods, and land troops and artillery on Mull to seize and occupy the Maclean stronghold of Duart. The ship may be categorised as a mobile gun-platform, troop-transport, bulk-carrier, reconnaissance craft, and fast dispatch boat, her capacity to operate in adverse winds or currents enhanced by auxiliary oar-power. Her broad bottom provided good cargo capacity and an ability to beach in remote locations. Grounded at low tide on any convenient shore she could load or unload without harbour facilities, like the smacks and puffers of later eras.

A parallel for Swan's unusual disposition of guns and oars (pp 155–6, Illus 214) is provided by the much larger 493-ton *Charles Galley* of 1676 (Endsor 2008). She is depicted in almost-photographic detail on a panel painted by Willem van de Velde the Younger for the cabin decoration of Charles II's yacht *Charlotte*, launched in 1677. Its accuracy is confirmed by van de Velde's graphite and wash portrait of the same ship (National Maritime Museum, Greenwich, PA17276). Though *Charles Galley* was nominally a 4th-rate with two gun-decks mounting a total of 32 pieces, 22 are shown on the upper deck. The remaining ten are disposed at either end of the lower deck, leaving the entire midships area clear for rowing banks, 20 on each side. Apart from an additional two forward-firing guns, reflecting her greater beam, *Charles Galley*'s lower gun-deck was arranged in just the same way as archaeological evidence suggests for *Swan*'s single gun-deck. It implies an intended predatory (or anti-predator) capability, and it is surely no coincidence that *Charles Galley* was designed to counter Barbary corsairs in the Mediterranean (Endsor 2008: 269).

These characteristics allowed her, when necessary, to sustain herself from local resources, just as a chief's progressions through his maritime dominions in earlier times depended on 'sorning' (see Chapter 1.1). Manifestations of predatory behaviour are seen in the evidence of the animal and fish bones, the hand-mill, the acquisition of Mackenzie-owned pewter, the high-quality Scottish pistol and the presence of a touchstone, with which the values of confiscated precious metals might quickly be assessed. Similar idiosyncrasies in material cultural assemblages have been applied to the recognition of sites associated with predation or piracy (Skowronek & Ewen 2006; Ewen & Skowronek 2016).

A vessel of this type could probably engage in such activities for sustained periods without shore-based support, being careened when necessary on any convenient beach. She would from time to time require more extensive overhauls, for which facilities existed at Dumbarton and Ayr. The bulk of her crew could no doubt have been obtained locally – seamen familiar with the operation of *bírlinns* would readily adapt to the tasks of working a three-masted rig, while they would have been bred to rowing and fighting. But operating the guns would have required more specialised training and experience, as would some of the executive functions on board, and these duties may have called for suitably qualified outsiders. Her captain in 1644, James Brown, was clearly not a Highlander, while her skipper at the time of her demise was a Liverpudlian, and at least one of his crew came from Yorkshire.

Ships and guns provided a means of transporting latent violence over distance, and of applying it with focused precision. It was as effective in the limited theatre of the Irish Sea and Scotland's Atlantic seaboard as it was on the global scale by which Europe's maritime nations were creating and controlling their world empires. Whatever *Swan*'s origins, her design and equipment appear to reflect an intention to project force and influence among the labyrinthine seaways of Scotland's politically unstable and frequently warring Highlands and Islands. In the mixed loyalties and partisan interests surrounding the Covenanting movement, the Bishops' Wars, the wider civil conflicts of the 1640s, the execution of Charles I, and the Cromwellian invasion of Scotland, *Swan* appears to have played significant roles for more than one side.

In conclusion, this project has drawn together a multiplicity of evidence from several sources and disciplines to create a three-dimensional hypothesis which reconstructs, from the deconstructed chaos of a wreck, the reality of a ship and her people as an organised entity within a sharply focused historical context.