



3. Viking ships and seafaring

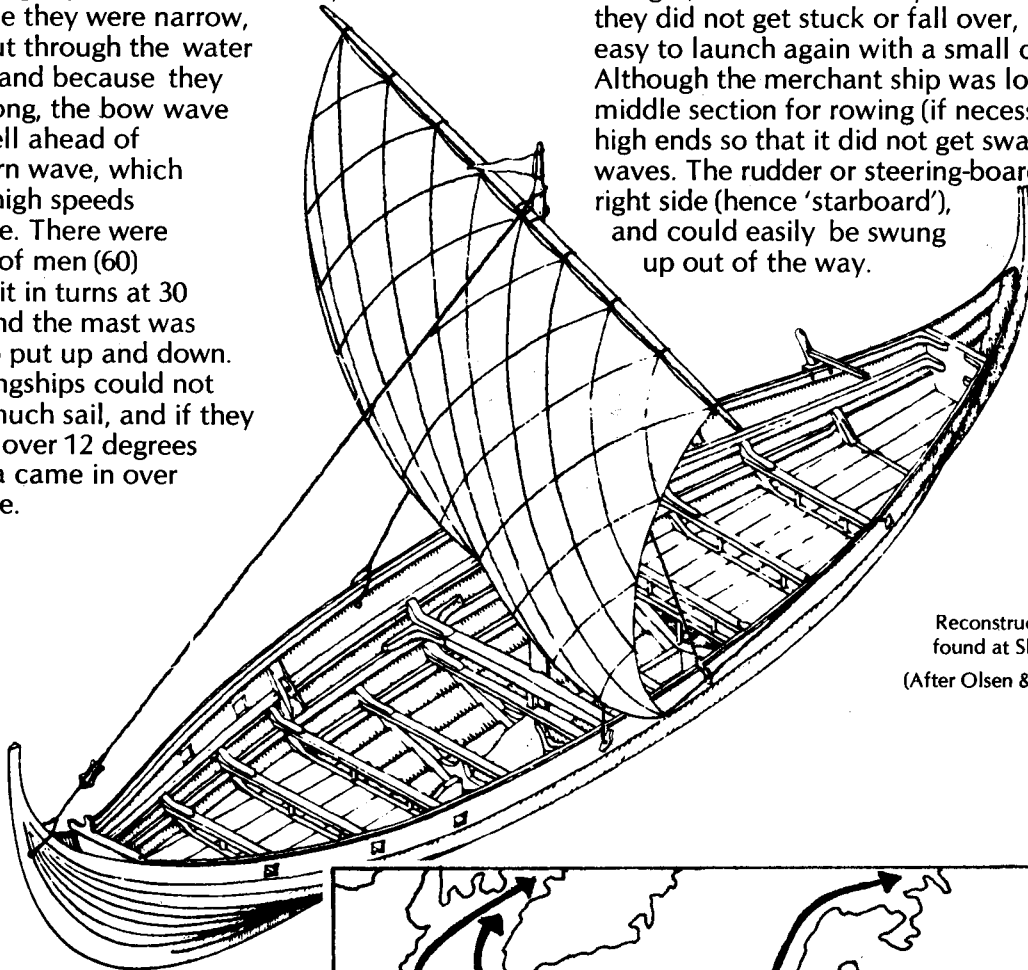
Alan Binns

Viking ships were large open rowing boats, pointed at each end. Small ships like the **faering** ('four-oared') were 6.5m long by 1.4m wide; medium-sized merchant ships were about 13.5m by 3.5m, and long warships were up to 28m by 4.5m. The length of merchant ships was about four times their width, but the length of the warships might be seven times their width – which is why they were called 'longships'.

Longships were fast, and easy to row.

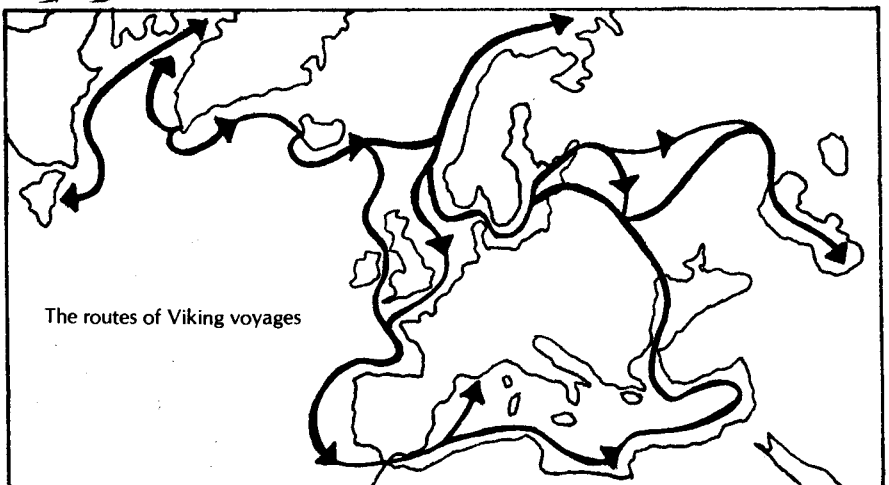
Because they were narrow, they cut through the water easily, and because they were long, the bow wave was well ahead of the stern wave, which made high speeds possible. There were plenty of men (60) taking it in turns at 30 oars, and the mast was easy to put up and down. But longships could not carry much sail, and if they heeled over 12 degrees the sea came in over the side.

A merchant ship was broader and had higher sides; it was not so easy to row, but had a higher mast which was fixed, and could carry more sail. 6 or 7 men could take 4 or 5 tons of cargo perhaps 1500 miles in a fortnight at their usual speed from North Norway to York and then sell it. Unloading was usually done on shelving beaches where pack-ponies could come alongside the ships; and the ships had to be light, shallow and fairly flat-bottomed so they did not get stuck or fall over, and were easy to launch again with a small crew. Although the merchant ship was low in the middle section for rowing (if necessary), it had high ends so that it did not get swamped by the waves. The rudder or steering-board was on the right side (hence 'starboard'), and could easily be swung up out of the way.



Reconstruction of Viking ship found at Skuldelev, Denmark.
(After Olsen & Crumlin-Pedersen)

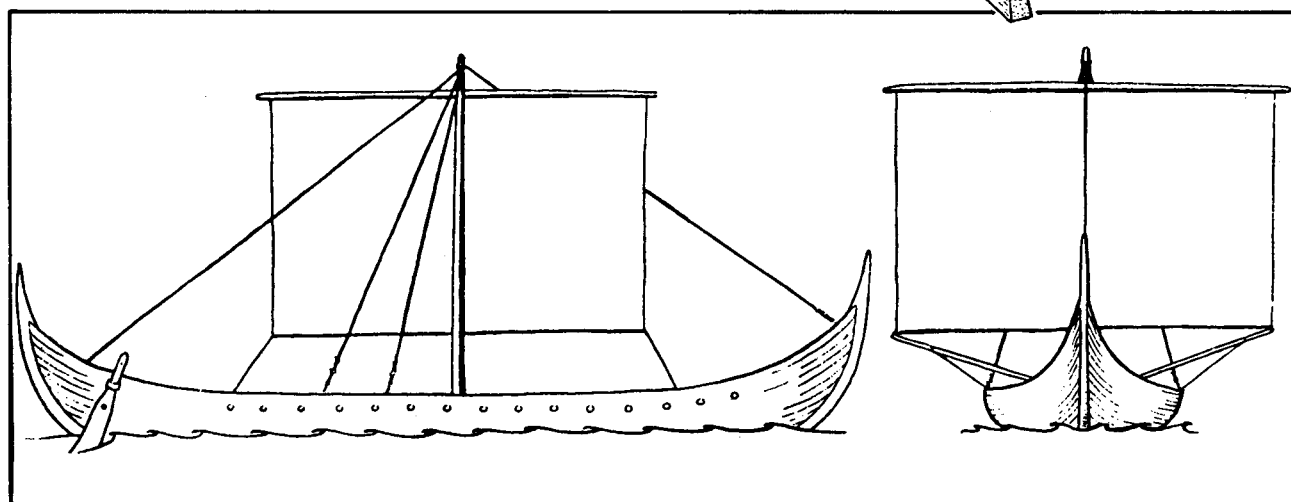
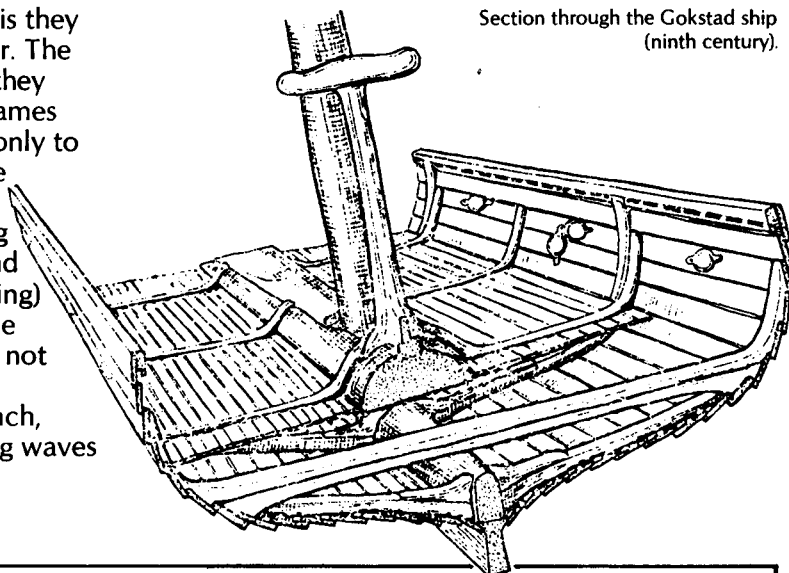
Viking ships could sail close to the wind, but not very well, so they used favourable winds when they could. In spring, the common easterly winds helped them towards Britain, the Faeroes and Iceland, even to Greenland and America, and the usual westerly winds of autumn brought them back to Norway and Denmark, and ports such as Hedeby and Birka.



The routes of Viking voyages

Viking ships were clinker-built, that is they had overlapping planks fastened together. The planks were individually shaped so that they built up the shape of the hull, and the frames that were put in afterwards were added only to strengthen this shell of planks against the pressure of the water. In some other countries, ships were built by first making a rigid wooden framework or skeleton and then nailing planks on to it, filling (caulking) the small gaps between them to make the boat watertight. Because the Vikings did not use this method, their boats were lighter, stronger, more flexible and easier to launch, and they did not leak when twisted by big waves or by beaching.

Section through the Gokstad ship (ninth century).



Suggested rigging of the Gokstad ship.

There is a limit, however, to the size of a ship built in this way. If it is too big, it will bend too much and eventually break up. In later times the Vikings built some very large and fast warships, but they were only safe in smooth waters; King Alfred's Saxon ships were shorter and broader, and could stand bad weather better whilst waiting for the Vikings to arrive. In the same way, Viking merchant ships could not be built large enough to carry quantities of heavy, bulky cargoes, especially if the ships were aground when loaded, as was usual. As a result, quite different types of ship came to be built in Scandinavia after AD 1000 which could cope with this work, and ships of the Viking type only survived in North Norway — where they could still be found in use early this century. The single square sail survives in the Humber Keel even today.

Nobody really knows how Viking seamen found their way over thousands of miles of ocean without light houses or radio beacons, and it is easier to say what they did NOT use than what they did; there were certainly no charts, compasses and chronometers in those days. But they would learn from experience which direction to follow from their departure points for Britain, Iceland, etc., not many of their usual passages would last more than 2 to 3 days, and some rough calculation could be made of their position from the height and direction of the sun. The sun and the direction of the swell were used to keep a steady course, and if they saw land birds they knew they were getting near land, and followed the birds!

Representation of a fleet carved on a piece of wood from Bergen, Norway.
(After Herteig)

