

# SMALL BOAT WORKSHOP

**At the Hardanger  
Fortøyvernssenter, Kathy Mansfield  
discovered tomorrow's  
boatbuilders  
learn the old  
skills as well  
as the new  
ones.**



*Peter Helland Hansen.*

One could spend a lifetime learning about the fascinating small craft of Norway and one man who did just this was Bernhard Faerøyvik, who in the 1920s carried out the first survey of Norwegian small boats and their heritage. He was a pioneer in the field, setting a high standard for later work in the rest of Scandinavia, the UK and the US. Many of the finest of the craft he collected are now exhibited in the Small Boat Hall of the National Maritime Museum in Oslo, the *Norsk Sjøfartsmuseum*, which we visited to get an overview of Norwegian boatbuilding.

We found boats from all over Norway and beyond. The boats of the south and east were relatively heavier, often built of oak, beamier, with more and narrower strakes, influenced by boats from Holland and further south. The light, pine, wide-planked boats of the west, which because of bigger tides and heavier seas were often rowed as well and pulled up on the beach between trips, closely followed Viking traditions in form and build. In the north, the long, straight-stemmed *fembørings* used for cod fishing and other craft were built of local spruce, or of pine north of the polar line, their length depending on the distance they needed to go and the cargo of fish they had to carry. The boat

traditions of the Lapps used ancient stitched plank techniques. At the nearby Viking Ship Museum, we also saw the supremely graceful small boats from 800 AD which were discovered with the Gokstad boat in 1880. The oak garboard strake on the smallest boat, 21' (6.5m) LOA, was only 1/2" (12 mm) thick; the boatbuilders of 1,200 years ago could have taught us something about using an axe. And on Norway's west coast, besides visiting the Bergen Maritime Museum and the Norwegian Fisheries Museum, I was fortunate enough to spend time with Bernhard Faerøyvik's son Øystein, now well into his retirement years, who has done much to organise and publish his father's work.

Filled with admiration for the boatbuilding traditions of Norway, and having seen settlements along the fjords that are even today accessible only by boat, we spent a few days with Peter Helland-Hanson, the boatbuilder in charge of the Small Boat Workshop at the Hardanger Fortøyversenter. Peter grew up in Bergen but has worked as a boatbuilder in other areas too, recently spending three years further north at the Gratangen Wooden Boat Collection, south of Tromsø near Narvik. He has learned something of the Lapp boatbuilding traditions of Finnmark, building for himself a remarkably boat-like Lapp snow sled, with wire wound round the planks at the 'bow', the shape first formed by frames.

Peter is now using the techniques of the Hardanger area, where boats in the mid 19th century and later were built not

just for local customers but also a thriving export business. Market forces injected an element of flexibility into the normally conservative traditions and thus the builders gained wider experience and proficiency as they adapted boat types to suit different markets and preferences.

## Developing a good eye

The workshop itself is bright and busy, moulds for different boats lining the walls, cupboards full of tools and on the stocks, a slim pine *faering*, 17'6" (5.3m) long, with its three wide strakes – the famously elegant general workboat of the Hardangerfjord. There is a smell of wood shavings and pine tar – not called Stockholm tar here, just tar. An apprentice was fairing the hood ends of the strakes into the stem: no rabbet, just a paring down of the plank to a fine nailed joint. Instead of moulds, a piece of string stretched from stem to stem with fixed lengths down to each strake giving a distance off and a table of measurements providing the correct angles at intervals for the three strakes, ensured sufficient accuracy. Though also at ease with modern methods, boatbuilders are encouraged to develop a good eye: it's often as effective to build in the old way as it is to use moulds and drawings were never used by the old builders.

Lightness and flexibility are the hallmarks of these west Norway boats and all unnecessary weight is dispensed with. The *faerings* and their cousins were kept light for various reasons. The boat must not be too heavy to pull up the



beach by its crew. It must be light to row and instantly responsive. Flexibility throughout gives a strength in the seas. Gunwales are tapered out before the last frame at each end and the thwarts above the frames are removable. The few frames are about 32-34" (1m) apart on the smaller boats, the distance used since Viking times as space for a rower's movements, called a 'room'. A smaller crosspiece, a *birta*, arcs across as a brace against the pressure of the waves. The faering has two 'rooms' – three thwarts – though one thwart is often taken out for extra net space. Two small angled frames at the ends give strength and a widening of the stem at the top strake, a *kan*, functions on older boats as a small, light breasthook.



Faerings with four oars; their larger cousins, the *seksaerings*, with six oars; *attaerings* – eight oars – and *tiarings* – ten oars – are built to order at the workshop. At last year's prices, a faering cost £3,000 ex VAT and delivery for a completed hull; £3,400 tarred and ready to sail, complete with quarter sawn oars, rudder, thwarts and bailer. They are built in the style of a pre-1900s faering, with hewn bottom boards and the *kan* on the stem, requiring a larger wood stock and greater expertise. Grown frames are fastened with trenails, lapped strakes with iron rivets and caulking is a mixture of cow hair and sheep wool.

A more modern pre-War 17'6" (5.3m) *strandebarmar* is also built at £1,950 for the completed hull, using four or five strakes fastened with trenails and galvanised rivets, breasthook and full length gunwales, cotton twine caulking and a choice of tar or Owatrol oiled finish. The workshop also undertakes repairs and restorations.

## Re-learning the skills

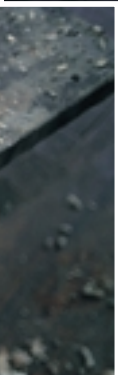
A primary goal of the Small Boat Workshop is to re-learn traditional boatbuilding and associated skills from the older craftsmen – not just by word of mouth but even better, by working alongside them to really understand their use of tools and techniques which could otherwise be lost. Though it takes more time to build a boat while discussing or practising these old skills, they can then be passed on, enriching Norwegian boatbuilding for the future.

Peter and his team hope to build a *gavl* boat with one of the last traditional builders of this local type, now 87 years old, and with photos and videos of work in progress, to learn exactly how the planks were shaped, the tools were used and the boat put together. Connecting young people with these old skills and the people who used them is important, and their interest is palpable: "How was it done at the time? We can do it almost but not quite; we can't get exactly the same effect," says Peter, adding: "The natural posture of a modern boatbuilder with a plane is quite different, for example. We watched an old boatbuilder pulling the wooden plane towards himself, standing up as he did so, using the largest one for the job to economise on effort and in full control of its movement, then using finer planes to finish the piece. It's a different thought-process from just buzzing away with one modern power plane. There's a tendency today to use finer metal tools but they can't take the wood away as quickly or as efficiently. That's a surprise to the modern boatbuilder. We've much to learn."



Next to the Small Boat Workshop is a long two-storey building used as a wood store at one end, a museum at the other. In the wood store, stacks of pine boards were seasoning next to assorted curved trunks and branches, often with a prospective use chalked on the side. The strategy is to harvest pine for just one winter's use, cut between December and Easter when the sap is not running and before increased humidity in the spring which can turn the wood blue with mildew. It is dried outside on the quay first, before being stacked. In the old days, no steaming was done and wood was usually put in the water to make it pliable. Choosing the trees is a learning process, often done in conjunction with the farm owners and old timers. Finding the right shape with the grain running in the right direction is important for frames. Branches are used in building small boats the old way and roots are useful too, though they require more work. Pine is used for the strakes and frames; oak for keel and stems; birch produces nice shapes and is used in Nordfjord for stems. Birch shoots are used for *humlebands*, the loops holding the oars in place. Aspen, which doesn't rot in salt water, was used as rollers, to draw the boats up the beach or to boathouses.

Traditionally nothing was wasted and optimum use was

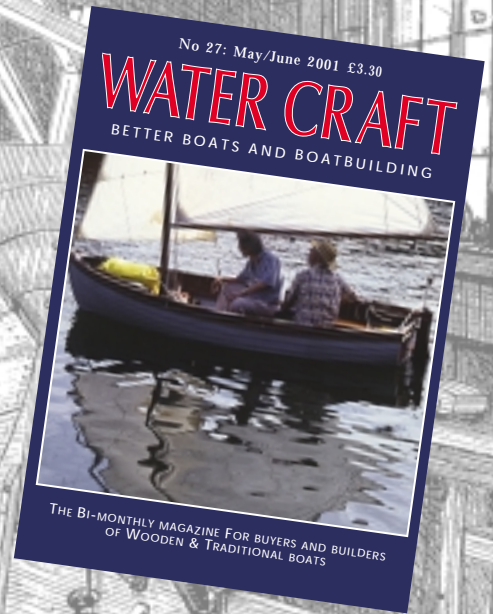
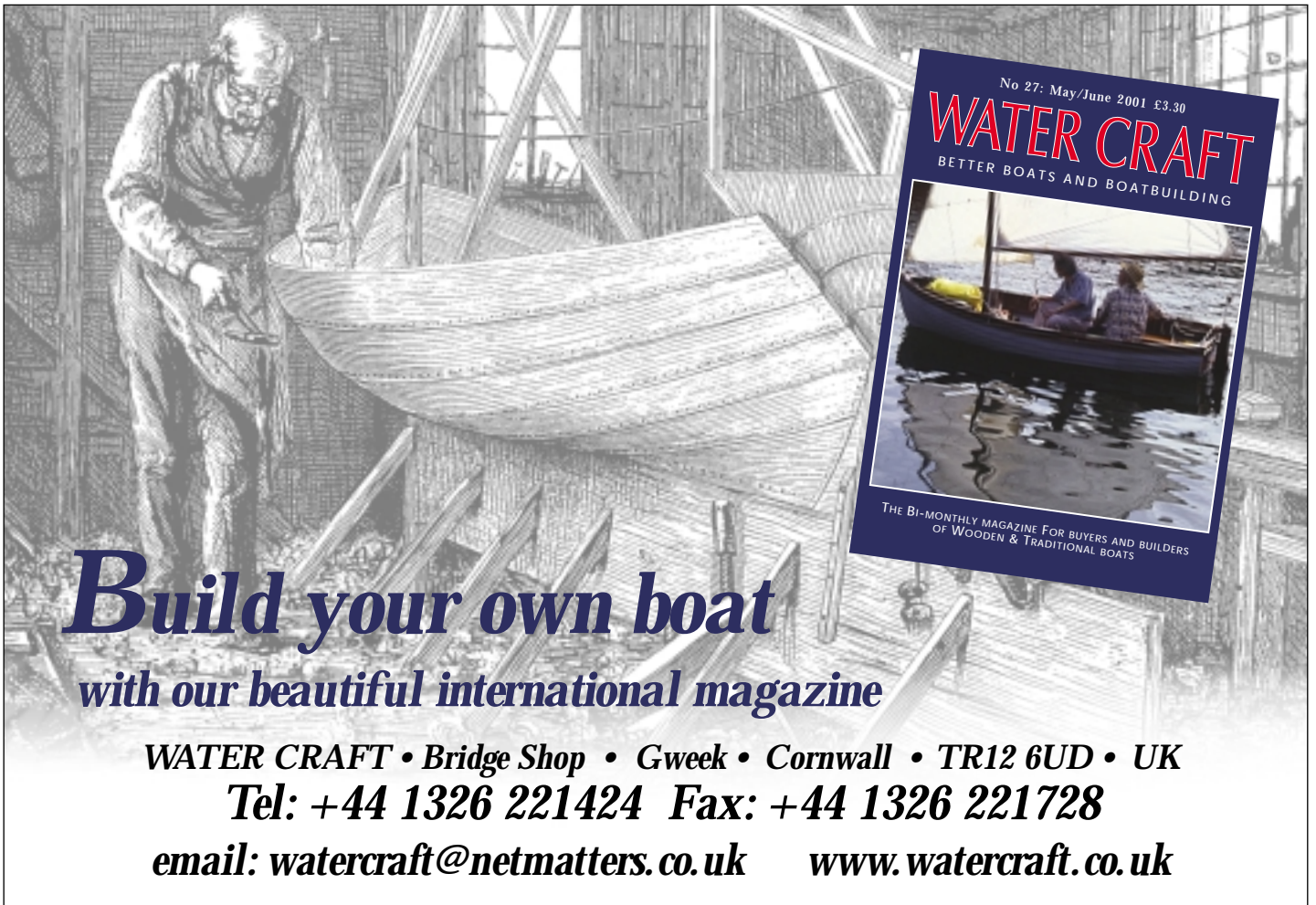


carefully considered. If a plank was 1" (25mm) too wide, it was not trimmed down but saved for a larger boat. The triangular, sometimes square, pine oars of the coastline between Stavanger and Trøndelag, including Hardanger, are a case in point. The heartwood of the log is less prone to rot but it has more knots. This is used for strakes and the cleaner sapwood further out used for oars and for gunwales, where clear grain for flexibility and strength is more important. Oars will be cut from a large log, not from a branch. Weight is also a factor, so the lightest possible wood is chosen, well seasoned and dried. The loom is pared thin to save weight and the inner section where the oar meets the *kjeip* or rowlock is left thick to withstand the stresses of rowing and balance the rest of the oar. Their length is twice the beam of the boat at a particular rowing position and oars are numbered to correspond with the relevant thwart. The blades themselves are narrow, suitable for rowing without feathering in sea conditions. We later rowed the newly launched *attaering* I had seen being built at the Brest Festival less than two months before. There's something organic about these oars, as beautiful as an art form, finely balanced and a pleasure to use.

We visited the museum next, where some fine small boats are exhibited along with tools and photographs of the boats being built and under sail and oar. It's a good place to notice detail. Generally, the older boats seem to have more sheer. Builders used an axe rather than an adze to hew strakes and to put in a bevel, before planing to fair the surface. Trenails are the same thickness as the planks and the frames about three times that dimension, the gunwales even

larger. The garboard is riveted through the keel or nailed where it stands more vertically. Often the garboard is rounded, a slight outward curve pressing the water under the boat, considered in the old days to affect the way the boat worked in a sea. A number of traditional details, such as the moulding along the top of each strake, inside and out, seem to have only a visual effect, there solely to accentuate the beauty of the boat and its curves. Everywhere, the pride of the boatbuilder shines through. Even today, despite their eclipse by new technology, these beautiful, useful and seaworthy boats deservedly contribute to the pride of Norway.





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