

# Getting back aboard



**PART 2:** Recovering a man-overboard casualty horizontally offers definite advantages over a vertical lift – but requires practice. David Harding explains the practicalities and the problems

**I**t's not easy to bring someone back on deck who has fallen overboard. A fully-grown, fully-clothed, waterlogged man can be extremely heavy and need a lot more lifting power than you might imagine. Even someone who's fit and relatively light can present a problem when wet and cold, especially if unconscious.

In last month's article we saw how members of Newbury Yacht Club had developed systems to recover an MOB (man overboard). The techniques we looked at all used a vertical lift, with a halyard attached to the ring on the casualty's lifejacket (or, in one case, to a recovery sling).

These solutions can work well but have two potential drawbacks. One is that the casualty needs to be able to clip the halyard on to the ring. That's not going to happen if he's unconscious. Even the effects of cold or hypothermia can make it impossible to carry out what seems like such a simple action – and from deck level the on-board crew can often do little to help.

The other drawback relates to the possibility of shock (as a physiological condition). When someone has been in the water for a while, the water pressure (1 bar at just a metre below the surface) reduces the amount of blood flowing through the body. The effect is known as hydrostatic squeeze

and is more pronounced in the legs and feet because they're most deeply immersed. When the casualty is brought out of the water and into an upright position, the blood runs rapidly downwards, towards the feet, resulting in a significant reduction in the blood flow to the vital organs. This can send the body into a state of shock. Heart failure is another danger.

For several reasons, then, it's often preferable to bring the casualty back aboard in a horizontal position. Some recovery devices allow him to be manoeuvred into a submerged sling with the help of a boathook, so he has no need to play an active role. Neither is the wearing of a lifejacket or harness

essential, in the sense that recovery isn't dependent on a line being attached to the ring. A further benefit is that there's no need to lift him as high to clear the guardwires. He can often be rolled over the gunwale beneath the lower guardwire, which is safer than being hauled up in a vertical position, quite possibly as the boat's rolling, until his legs can be brought inboard at stanchion height.



■ Once again we are working with Newbury Yacht Club, Sticky Stapylton (left) of Arrow Yacht Enterprises and Adam Wilson of Aquasafe Powerboat School.

## RECOVERY METHOD 1 PARBUCKLE

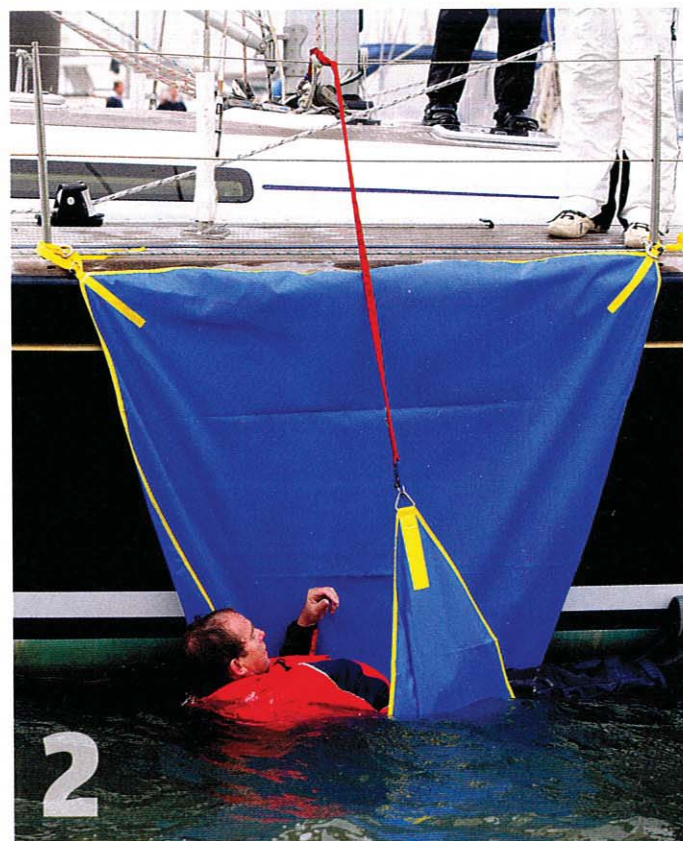
A parbuckle is essentially an isosceles triangle made of strong fabric with a ring or attachment point in each corner. Its base is secured along the gunwale and its apex attached to a halyard before being lowered into the water. The MOB is manoeuvred into the immersed section and the halyard tensioned to raise the head, rolling the casualty up the topsides.

Because of the parbuckle's inherent simplicity some boats don't carry something specifically designed for the job but use a storm jib instead.

The two parbuckles we used in our exercises, both on Bruce Mayhew's Grand Soleil 45, *Emma Keturah*, were commercially-sold devices.



1 Andy Holloway is in the water and Bruce Mayhew uses a boathook to manoeuvre him into the parbuckle. A lifeline extends the spinnaker halyard, one of its ends attached to the head of the parbuckle and the other to the halyard's shackle.



2 Bruce has looped the halyard and lifeline around the upper guardwire to keep the head of the parbuckle out of the water and stop Andy drifting away while he goes aft to man the winch.

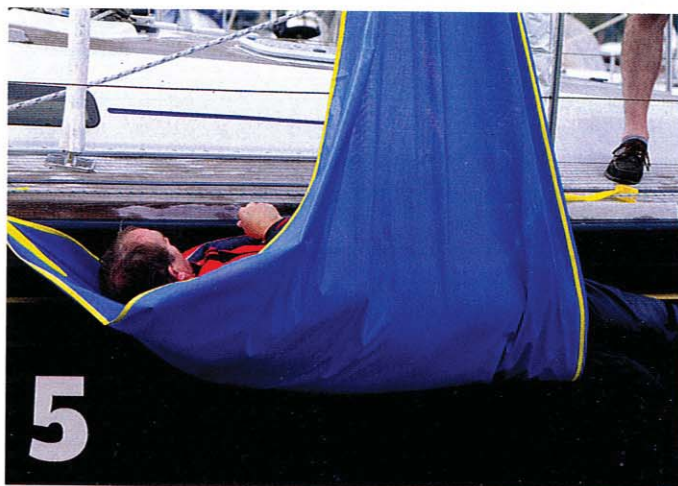




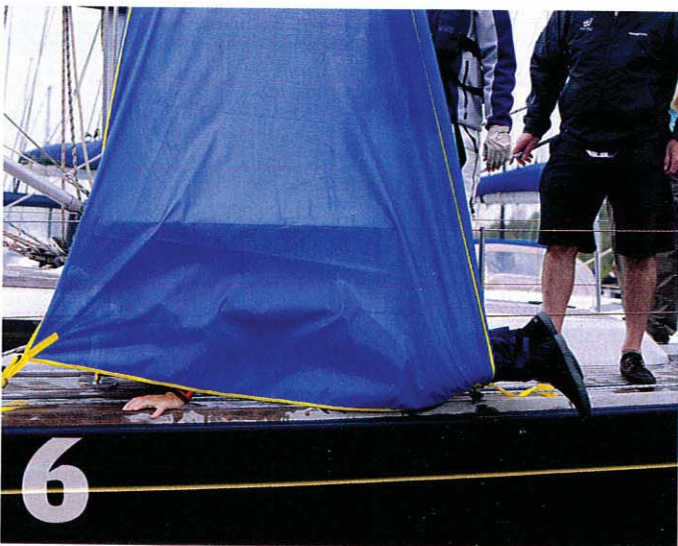
**3**  
As the halyard is tensioned and the head of the parbuckle lifted, Andy is rolled up the topsides, sometimes facing downwards...



**4**  
... sometimes outwards...



**5**  
... and finally upwards again as he approaches gunwale level.



**6**  
Now he's rolled under the lower guardwire and back on to the deck.

**PBO says**

A parbuckle can work well. The biggest problem we found was making sure the head was sufficiently well immersed for the casualty to float in. It was also awkward to stop the parbuckle blowing around in the wind. Used on a boat's leeward side, as would normally be the case, it shouldn't present too much of a problem. On the windward side or with the boat facing into the breeze, however, it would be a challenge.

## PARBUCKLE: what can go wrong (practising alongside)

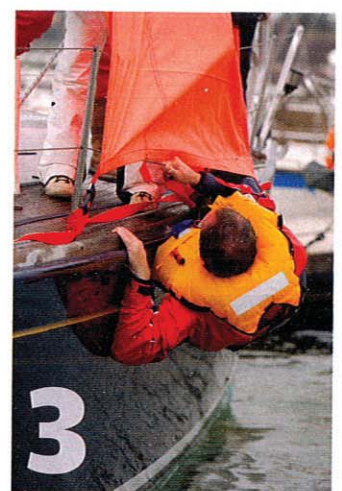
When securing the base of a parbuckle along the gunwale it's essential to pull it tight – as this sequence clearly demonstrates. No one had time to read the instructions and you can see what happened.



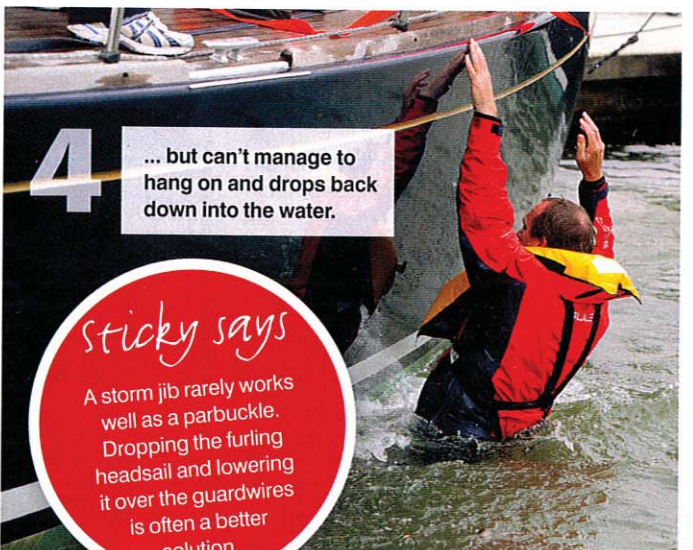
**1**  
This model has a mesh section to encourage it to become submerged, but Emma Keturah's topsides are too high for it to help.



**2**  
Now the problem starts to appear: as he approaches gunwale height, Andy finds the gap between the gunwale and the base of the parbuckle.



**3**  
Winched up fully, the parbuckle is no longer supporting Andy at all. He has fallen through the gap and is clinging on to the toerail and the lower guardwire...



**4**  
... but can't manage to hang on and drops back down into the water.

**sticky says**

A storm jib rarely works well as a parbuckle. Dropping the furling headsail and lowering it over the guardwires is often a better solution.





## PARBUCKLE: Putting it right



A parbuckle without a tightly-stretched base isn't safe to use. This one has loops along the base through which the securing strop should be passed to minimise the gap between the base and the toerail



This time Andy is fully supported as he approaches deck level and, although a gap develops as the parbuckle is hauled all the way up, this time there's no danger of Andy falling through it

### PBO says

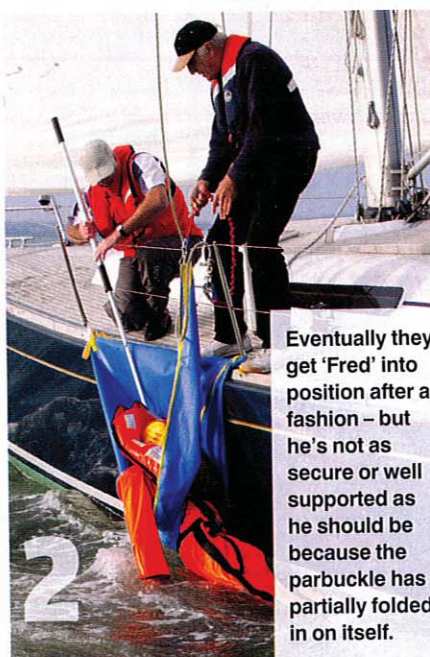
This shows how important it is for the crew to familiarise themselves with their recovery systems: pulling the equipment out of the bag for the first time when you need to use it in earnest is asking for trouble.

## PARBUCKLE: what can go wrong (the challenges presented at sea)

Testing equipment out at sea is far more realistic, and here we learned more about the strengths and weaknesses of the parbuckle. The MOB on this occasion wasn't a live volunteer but a man-size (and man-weight) dummy in the form of Dead Fred.



Emma Keturah is hove to but still moving forward at over a knot, making it harder for Bruce's crew to open the parbuckle and manoeuvre the MOB into it.



Eventually they get 'Fred' into position after a fashion – but he's not as secure or well supported as he should be because the parbuckle has partially folded in on itself.



He's on the way up but doesn't look at all comfortable and might well have slipped out were it not for the boathook's help.

### sticky says

If you don't have a live volunteer, using a dummy is the next best thing – far more realistic than a weighted fender.

### PBO says

Recovery is always easier when the boat's not moving. Some pitching, rolling, yawing and bouncing is almost inevitable out at sea, though steps can be taken to minimise it through careful trim and your choice of sail plan. Stopping the boat moving forward when hove to often takes practice, and boats differ widely in how they behave. As this exercise showed, getting a parbuckle to open fully and then stay open when you're making only a minimal amount of headway can be a real challenge.



## RECOVERY METHOD 2 MOBMAT

The MobMat is a patented device developed by the owners of a Discovery 55. With a semi-rigid mesh base stiffened by battens, it can be folded up into a flat package and either stowed away or kept in its bag on the guardwires ready for instant use.

At a glance it looks not unlike a parbuckle, but instead of rolling the casualty up the topsides it's lifted vertically in its entirety. This is potentially safer and more comfortable, provided it can be controlled as the boat rolls.

This was the first time anyone involved in our exercises had used the MobMat. Mike and Jo Bassett agreed to test it on their Nordship 32, *Hotch Potch*.



**1** As it's lowered into the water, the battening helps to keep the mesh base flat.



**2** With the base immersed and the MobMat opened up, Mike and Jo use a boathook to manoeuvre Richard Giddens in.



**3** The spinnaker halyard is now tensioned to lift the MobMat straight up the topsides. The orange lines at either end can be used to reduce its tendency to swing around when the boat's rolling.



**4** Richard is brought over the guardwires before being lowered on to the deck.

**PBO says**

The MobMat's semi-rigid structure and mesh base helped it to stay in shape and to become submerged more easily than some of the parbuckles. One potential drawback is that, if it's lifted up over the guardwires, it could swing around as the boat rolls and bang the MOB against the hull or rigging. A solution is to release the lower guardwire and lead the halyard beneath the upper one, so the MobMat is held against the topsides as it's raised. The MOB can then be pulled inboard and on to the deck without being lifted up and over at stanchion height.





## RECOVERY METHOD 3 webbing lifelines and handy-billy purchase attached to spinnaker halyard

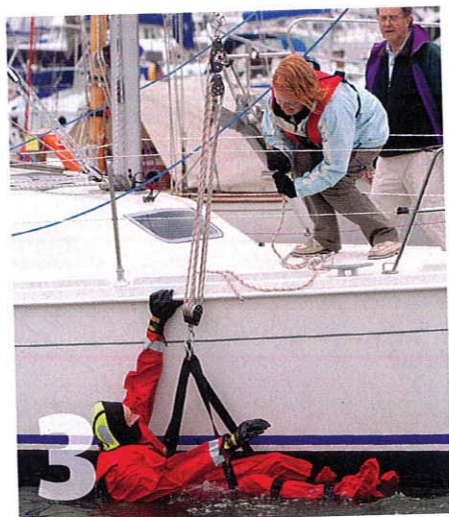
When Mark Turnidge jumped in from his Jeanneau Sun Odyssey 28.1, Toggs, Laura Brolly got ready with two lifelines attached to a 5:1 handy-billy purchase on the end of the spinnaker halyard. Mark secured the straps around himself in the water and Laura hauled on the purchase to bring him back aboard.



The purchase is on the end of the spinnaker halyard and the lifelines are secured to the purchase. Each strap has a carabine hook on the end.



Mark loops the lifelines around himself – one beneath his knees and the other around his back.



Having taken up the slack on the spinnaker halyard to raise the purchase further off the deck, Laura hauls on the purchase to start lifting Mark out of the water.



As soon as he's at gunwale height Mark swings under the lower guardwire and on to the deck – safer than going over the top.

### PBO says

This system worked well in many ways. The most obvious drawback is that, unlike parbuckles or the MobMat, it relies on the MOB being fully conscious and able to pass the lifelines around himself.

### sticky says

Having the fall of the handy-billy at the top and hauling down on it is much easier than pulling it up from a block at the bottom, though in this instance it might have been easier still if the purchase had been raised a little higher off the deck so it didn't end up block-to-block. If yet more purchase were needed, the tail could be led through a genoa car and aft to a primary winch.

## Conclusions

Recovering an MOB in a horizontal position offers many advantages over a vertical lift but inevitably involves more equipment and, accordingly, more practice. If someone relatively young and fit has been in the water for a short time, it's almost certainly quicker to hook a halyard on to his lifejacket or harness (if he's wearing one) and lift him out

vertically. If he's elderly, unconscious, cold or hypothermic, a horizontal-lift method that doesn't call for any action on his part is unquestionably preferable.

Time spent practising with the equipment and learning how to use it is critical. For example, given the need to maintain a tight base with a parbuckle, the spacing of the stanchions needs to be thought about (or,

alternatively, you could secure the strops through the gaps in a slotted toerail).

Wind and sea make life more testing, too, so practice out at sea is far more valuable than in harbour.

### Next month

■ How to get back to the MOB out at sea