LESSONS FROM CAPE HORN

FEW SCENARIOS ARE MORE FEARED THAN A SOUTHERN OCEAN STORM. SEAN MCNEILL HEARS FROM THOSE WHO'VE SAILED THROUGH THEM ON HOW TO HANDLE SEVERE CONDITIONS

"The closest I've ever been to mortality was the capsize at Cape Horn. That was just a horrific experience," says American sailor Rich Wilson. "But I never thought I would die. The greatest fear is not of dying, but of something breaking that couldn't be fixed."

Wilson was part of an elite panel of ocean sailors and bluewater adventurers speaking at a special seminar on handling heavy weather during the Cruising Club of America's centennial celebrations this autumn. The panel (see right) featured Vendée Globe veteran Wilson; Randall Reeves, who completed a 'Figure 8' circumnavigation; Jean-Luc Van Den Heede, who has sailed around the planet solo six times; and high latitudes explorer and mountaineer Steve Brown.

The quartet's tales of seamanship are awe-inspiring. Adventurers and survivalists at heart, they have seen the beauty and wonder of the remotest parts of the planet. They've also lived through terrifying experiences that would make even seasoned ocean sailors blanch.

All four skippers spoke of the importance of preparedness. "Inspect your equipment and know how to use it," noted Steve Brown. But the overarching theme of the seminar was positivity, and the importance of maintaining hope no matter how dire the situation.

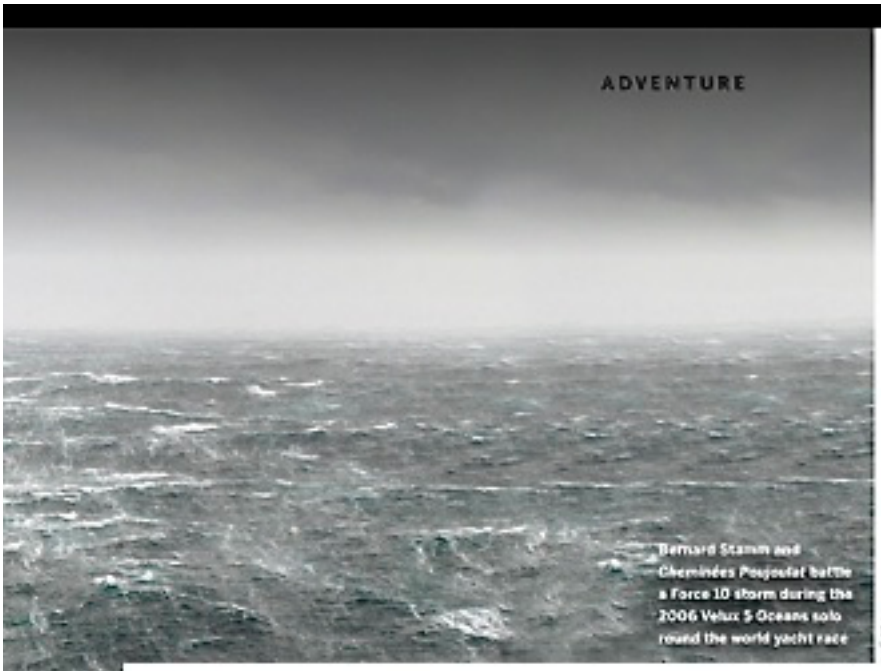
"I have a nephew in the military academy and his survival course says job No1 is to maintain a positive attitude. If you think you can get through it, you can get through it," says the 60-year-old Reeves, who took on his Figure 8 challenge after a two-year single-handed cruise of the Pacific Ocean. "Remember, this was all your idea being out here, you wanted this."

STREAMING LINES

Positivity, and a survivalist's mentality, were two of the crutches that got Wilson and crewmate Steve Pettengill through a 'horrific' capsize in November 1990 when they were attempting to break the clipper ship record from San Francisco to Boston via Cape Horn on the 60ft trimaran *Great American I*. They were some 2,000 miles from Cape Horn and starting to plan their approach, when they were overtaken by a massive storm with hurricane force winds and seas of 25-35ft, with 50ft breakers.

A day later they were down to bare poles and trying to slow the 60ft-long, 40ft-wide tri by dragging a series of warps with overhand knots every 6-8ft. In a previous single-handed transatlantic race Wilson had deployed a solid cone drogue on a 35ft trimaran, but the attaching nylon line stretched as the drogue gripped and then recoiled, dragging the trimaran stern-to up the waves, before eventually disintegrating. Wary from that experience, Wilson and Pettengill opted instead to deploy up to 1,000ft of line off the stern of *Great American I*.

"The warps worked well and since there wasn't a lot of load on them we could tie them to anything, stanchions,



Bernard Stamm and Cheminées Poujoulat battle a Force 10 storm during the 2006 Velux 5 Oceans solo round the world yacht race

Jean-Marie Liot/Alea

cleats, pad eyes. We ended up with 12 lines dragging over the side – spare sheets, halyards, dock lines – whatever we had, then we got to critical drag," says Wilson. "We were controlling the boat, going down the seas at 12 knots and up at 8. We were under bare poles and had the autopilot working, taking the seas about 15° off the quarter."

The next day, Wilson recalls, "things started getting crazy". The recording arm on the barograph had dropped off the drum, below 926mb, and they were in communication with shore-based weather router Bob Rice, a leading maritime meteorologist of the time.

"We were in touch with Bob on HAM radio the day before the capsize," says Wilson. "He said we should be seeing 50 knots of wind. We said, 'Bob, we're seeing 72 knots right now.' Thirty-two years ago, we didn't have the great weather forecasting resources we have now."

The storm raged and on US Thanksgiving Day, *Great American I* capsized. It wasn't so much the wind that was the problem but rather the sea state. "We got sideways ▶

Above: storm sail and mountainous seas for Randall Reeves during his Figure 8 circumnavigation of the Americas and Antarctica

Dan Namby

SOUTHERN OCEAN VETERANS

Jean-Sébastien Evrard/Getty

Vendée veteran **Richard Wilson** holds the record for being the fastest American to complete a solo circumnavigation after finishing the 2016/17 Vendée Globe in 107 days. He was awarded the CCA's Blue Water Medal in 2004 for his three world records set between 1993 and 2003 (San Francisco to Boston, New York to Melbourne, Hong Kong to New York).

Englishman **Steve Brown** is an accomplished mountaineer, and recipient of both the CCA's Far Horizons Award in 2020 and the Royal Cruising Club's Tilman Award for his 32,000-mile circumnavigation of the Americas, through the Northwest Passage, Alaska and Chile. He also stopped in South Georgia to attempt the Shackleton Traverse.

American **Randall Reeves** received the Cruising Club of America's Blue Water Medal in 2020 for his Figure 8 circumnavigation of the Americas and Antarctica. Reeves left the Americas to port and Antarctica to starboard – and twice rounded Cape Horn within 130 days – over a total distance of 39,000 miles, spending 237 consecutive days offshore.

Philippe Petit-Paris Match/Getty

Frenchman **Jean-Luc Van Den Heede** has sailed round the planet solo six times and won the 2018/19 'retro' Golden Globe Race. He was awarded the CCA Blue Water Medal in 2019. Van Den Heede also holds the world record for the fastest solo westabout non-stop circumnavigation.

Drogue deployed on Jean-Luc Van Den Heede's Matmut during the Golden Globe Race

'Suddenly we're upside down, 400 miles west from Cape Horn'

on the wrong wave and rolled over gently," Wilson says.

"Suddenly, we're upside down. I was pretty sure the mast was intact after the capsize, but we were upside down 400 miles west from Cape Horn at 55°S, 079°W. We immediately got the EPIRB going and into our survival suits. The last thing we had done before leaving San Francisco was to move the survival suits from the forepeak into the main cabin so they were ready to go.

"About an hour and a half later, another wave came along, it must've been far bigger than the rest. Steve's a truck driver and he said it sounded like 10 tractor trailers in a pile up on the highway when the wave came.

"I don't remember hearing it, but I got launched and bounced off the floor, and knocked out. I came to underwater, flailing around, found something with my feet and pushed off and came to the surface. Now I'm neck deep in water. I heard Steve yelling for me, he was in the wheelhouse area and I was in the main cabin area."

Miraculously, neither sailor suffered any injuries during the two flips of their trimaran. Upon re-righting, the mast and boom, which had been intact underwater, were both broken in multiple pieces. The hull, while awash, was mostly intact. *Great American I* had 12 watertight compartments and only the port bow showed any real damage, likely from the first capsize.

Cold, wet and tired, Wilson and Pettengill spent Thanksgiving Day huddled in the sail locker forward of the mast bulkhead with the EPIRB and an Argos transmitter both emitting alerts. About 16 hours after righting, in the dead of night amidst a raging storm with 30-50ft seas, the two sailors were rescued by a passing container ship running from New Zealand and around Cape Horn, a route travelled no more than once a week. In a remarkable feat of seamanship, the captain manoeuvred the 800ft *New Zealand Pacific*, at the time the world's largest refrigerated container ship, alongside and upwind of *Great American I*, so that the sailors could clamber up a rope ladder in the lee of the storm.

Jean-Luc Van Den Heede/PPL/GGR

Van Den Heede's Matmut suffered a pitchpole – but he went on to win the Golden Globe Race

Jean-Luc Van Den Heede/PPL/GGR

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DROGUE DEPLOYED

Steve Brown, a 69-year-old mountaineer at heart who took up bluewater adventuring almost 20 years ago as a means to tackle items on his bucket list, often had a crew of five or six for his expeditions aboard *Novara*. He talked about the importance of keeping crew morale positive.

"I'm neither a solo sailor nor a racing sailor. My preparation is about making sure everything inside the boat is well prepared," said Brown. "With crew, make sure not only that you are well rested and fed but the crew is too, to eliminate the fear factor, to give confidence in the boat and you as a skipper. That seems to work quite well. It's different on a crewed boat because there are more people to worry about, not just your own morale."

While Wilson decided against the use of a drogue to slow *Great American I*, Brown is a vocal proponent of the Jordan Series Drogue, which weaves a series of small cones into a tapered line with a small weight at the end. The maximum design load and the number of cones is determined by the displacement of the boat.

"The principles of a drag device are to slow the boat down and keep the bow or stern to the face of the waves," says Brown. "My go-to is the Jordan Series Drogue. It's a fantastic piece of kit. It enables you to do things you can't do without it." (Brown recommended dragdevicedb.com for a comprehensive list of drag devices and first-hand accounts, and the reference book *Heavy Weather Sailing* as a great guide to preparation.)

Brown deployed his 'JSD' when attempting to cross the South Atlantic Ocean from South Georgia to the Falkland Islands in June 2017. He and his crew had ventured to South Georgia some five weeks earlier to visit the remote island with its abundant wildlife, and to attempt the Shackleton Traverse, which explorer Ernest Shackleton and two others famously completed in 1916 to save the 22 lives of his crew who were stranded on Elephant Island, some 700 miles away.

When the time came to leave South Georgia, Brown and the crew set off on *Novara*, an aluminium-hulled Bestevaer 60C configured as a schooner with fore and aft Aero rigs. But they were soon engulfed by a horrific storm that blew down off the Andes Mountains in Chile, with winds of 45 knots gusting 65, and breaking seas of 25ft.

"We'd been waiting out a series of storms which kept us in South Georgia longer than we wanted," Brown says. "I thought we had a window and we set off, but then the storm came and we had to run off. We had the drogue on deck and ready to deploy. I think we put it out in 35 knots of wind, which built to 65-plus. So, we set it, shut the hatch and went below. We ran off for 42 hours under the drogue. We slept, ate and played cards for 42 hours.

"The boat yawed no more than 10°," Brown continues. "We were doing 1.5 to 2 knots and covered about 82 miles in that period. The waves were mountainous, but we had water in the cockpit only about four times."

Brown says that he and crew practiced using the JSD when they initially departed the Falklands. After launching and retrieving in manageable conditions, they decided to fix the two-piece, 24mm bridle in place to the stern bollards, fed through the stern hawseholes.

Brown noted that the bridle suffered chafe through the hawseholes and ordered a larger bridle with better chafe protection. He also noted that the first few cones were ▶

Steve Brown flakes his Jordan Series Drogue on deck in preparation for deployment from the stern (below)

too close to the surface and frayed apart; a longer lead line helped solve that problem. They retrieved the drogue when the wind abated to 25 knots.

"When gathering it back in, we put the boat into reverse to take some way off. If you go about it the right way you can pull it in by winch hand-over-hand.

"It's all about preparation and practice. Know the equipment you have, inspect it thoroughly before use and know how to use it properly," Brown says.

SELF-CARE STRATEGY

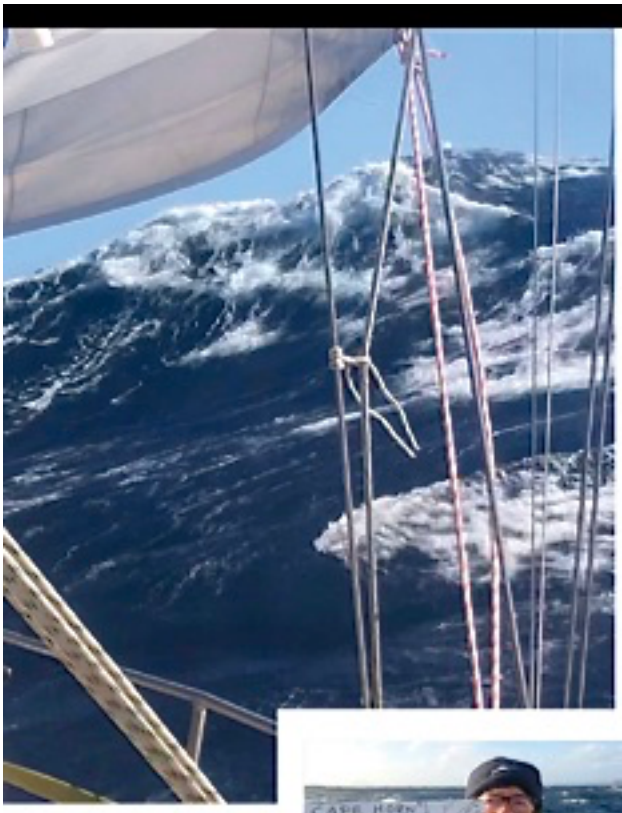
Randall Reeves is also a proponent of the JSD, which he deployed three times during his two attempts at the Figure 8 voyage. "The JSD is a very good device, but it does need some practice and adjustments," says Reeves.

"It's what's called a stopping drogue. You're not steering, the sails are all wrapped up. Monitoring chafe is the biggest problem. My bridle passes through 'chalks' (stern hawseholes), and they're high chafe points. So other than monitoring the chafe, there's nothing to do. Once it's launched, you're on the drogue until the gale abates; have a cup of tea and watch the world go by."

Reeves also had a different type of drogue aboard, known as a 'shark', which is shaped like a hot air balloon. "It's more of a slowing drogue, it takes the boatspeed down from 7-8 knots to 4-5 knots," explains Reeves.

"There's a lot more stability aft with a tug at the stern. It's a very different device from the JSD. I used it a couple of times in the second passage, when there was heavy weather or something worse ahead. I launched it to slow down enough to allow the big weather to slide by."

Reeves stressed the importance of preparing for heavy weather. His yacht *Mõõ*, an aluminium-hulled 45ft cutter,



Randall Reeves rounded Cape Horn twice during his figure 8 circumnavigation on *Möli*

only made 150 miles per day, or 1,000 miles per week. He wasn't going very fast, so outrunning storms was mostly out of the question. Instead, he sought to position himself within wind bands of 30 to 40 knots around the storm. *Möli* displaces 20 tonnes and, designed for high latitude cruising, was robust enough to withstand the conditions.

In advance of every storm, Reeves would diligently prepare *Möli*, and then prepare himself for a stretch of being tossed about. "And that's the order, take care of the vessel first and then take care of yourself," he says.

Reeves would check all the chafe points and move around lines that showed signs of fraying. If below 44°S, he'd cover his dorade vents to prevent water from pouring in. If the wind was forecast to be particularly strong, he'd store the solar panels below deck and put extra lashing on the mainsail. He'd get two drogues ready, double checking the lashing and re-flaking if necessary, so that both were ready to deploy. There's scant time to uncoil a tangled drogue when it's needed in distress.

"Finally, if you have the time, make time for some self-care," Reeves says. "My strategy in the Southern Ocean was to sleep in 90-minute increments, but in the south, you spend a lot of time working so there isn't a lot of time to sleep. Cat-napping was important; extra sleep before a low was important. Hygiene is also important. So, get clean, clean up the cabin, dry out your clothes, if possible,

make double portions of meals. The worst of every low seems to come at night, so I would make some extra coffee and move my sleeping bag to the doghouse. You must stay as fresh and ready as possible."

CALM BEGINNINGS

In all his laps of the planet, Jean Luc Van Den Heede has been rolled or knocked down three times. Most recently it occurred in November 2018 during the first edition of the Golden Globe Race, which he won.

Van Den Heede's Rustler 36 *Matmut* was thrown from the face of a wave while the skipper was below decks in his bunk during a violent Southern Ocean storm about 1,900 miles west of Cape Horn.

The Rustler 36 went bow first down the face of the wave, hit the trough and then rolled over onto its side. Van Den Heede estimates that he was knocked over to about 150°. In anticipation of the storm, he had screwed the floorboards down and reduced sail to just enough to allow the windvane something to drive to.

"We had no electronic equipment, no autopilots," says Van Den Heede of the race, where competitors are limited to retro electronics and equipment. "I had a wind vane, but the problem with the wind vane is that the boat does not go straight as with an autopilot. The boat was going left and right, and left and right, and I suppose there was a combination of a big wave and the moment where the boat was too close to the waves. The boat was not rolled completely, but slapped down side to side."

Besides a messy cabin, the only damage *Matmut* suffered was to the hounds of a lower diagonal shroud. Van Den Heede thought at one point that he might have to make port to effect repairs, but was able to affect a jury rig that lasted to the finish and victory in the race.

"To be prepared when you see a storm coming, it's absolutely necessary to know that the danger is not at the beginning," says Van Den Heede. "The damage is usually at the end of the low pressure because at the end the sea is more confused because wind has turned direction a bit and the waves are higher and bigger.

Van Den Heede continues, "Rest at the beginning of the gale, sleep well, eat well. When people see the barometer going down, they start to be afraid. Don't be afraid about that, you must keep cool and stay positive. Try to rest and sleep because at the end of the storm it might be important to take the helm – because you are always better than a pilot." ■