

A DIRECTIONAL CHALLENGE: Egret's Atlantic Crossing Patrick Marshall

(Patrick and Amanda come from Emsworth in Hampshire and have both sailed from childhood. They bought Egret, a Sweden Yachts 390, in 2007 when she was 12 years old, and sailed her back from Sweden via the Kiel Canal and IJsselmeer. After years of club racing and summer cruising they decided to take extended sabbaticals or early retirement (they aren't sure which yet) from their jobs as civil engineer and pharmacist, to fulfil their dream of sailing to the Caribbean and perhaps beyond.

They left the UK in July 2011 and sailed south via the west coasts of Spain and Portugal, Madeira, the Canaries and Cape Verdes. By September 2012 they were cruising down the US East Coast from Maine, with plans to reach Panama and cross the Pacific to New Zealand in 2013.

Our front cover photo, of diesel being transferred to Egret from Kiwi yacht Tuarara, is courtesy of Jean Ward to whom many thanks.)



Patrick and Amanda in the Canaries before departure. Photo Mary Machin

islands at 1500 on Tuesday 6 December 2011. We shot through the acceleration zone between São Vicente and Santo Antão in 30 knots of wind, and continued 50 miles south to avoid the islands' huge wind shadow before turning Egret west. By noon next day we were heading directly towards Barbados, 1950 miles away, with full main and the cruising chute set under a blue sky with just a few puffy clouds – we were in the trade winds. In the evening, whilst swapping the 'chute for a poled-out genoa, a large pod of dolphins came alongside and started performing some extraordinary antics

The trade winds beckon

Like most dinghy sailors, I used to have fun sailing my boat without a rudder. One could learn a lot about the optimum set of the sails, heel and fore-and-aft trim in order to keep a straight course, as well as to tack and gybe. Doing it for real in a 39ft yacht weighing 9 tons in mid Atlantic at night with a force 7 wind and 4m waves was an experience we could have done without.

Amanda and I departed Mindelo in the Cape Verde

for our entertainment, leaping vertically out of the water and gyrating on their tails before dropping back in with a big splash.

As usual, we took part in the evening 'Magellan Net' over the SSB radio. This informal 'sked' was hosted by Fatty Goodlander, an entertaining US yachting writer whom we'd first met in Lanzarote and who was crossing the Atlantic with Caroline in *Wild Card* on the final leg of their latest circumnavigation. Any boat could report their position and talk about the important matters of the day, such as the quantity and size of fish caught (the Kiwis being particularly competitive in this field). We were jealous but also a little concerned to hear a couple of boats report that they had sighted some large whales. The morning net was more formal, with a roll-call of all boats at sea, each giving their position, course, distance to go and wind and sea state. We were in contact with about 25 boats strung out across the Atlantic, with a few more already in the Caribbean and a dozen still in the Canaries or Cape Verdes. It was very comforting to hear so many friendly voices over the air waves while alone in mid-ocean.

On the fourth day, with freshening winds, we decided it was time to try our new tradewind rig. This comprised the genoa poled out on one side and a long-footed staysail poled out the other. I'd approached several sailmakers with the idea of a

'downwind staysail' and none had heard of one, but my old friend Dick Batt was keen to have a go and made a beautiful job of it in blue and white striped storm-spinnaker cloth. We were delighted to find that the arrangement worked perfectly, and *Egret* flew down the rhumb line, rock steady, at about 7 knots. Everything became much quieter and more comfortable down below as well. That evening we celebrated 1500 miles to go to Barbados.

The rudder's gone!

The joy of surfing down waves under a full moon ended abruptly with a metallic grating noise from below and the flogging of sails above as *Egret* lurched and careered off course. We thought at first that the

***Our tradewind rig –
110% genoa and
downwind staysail***

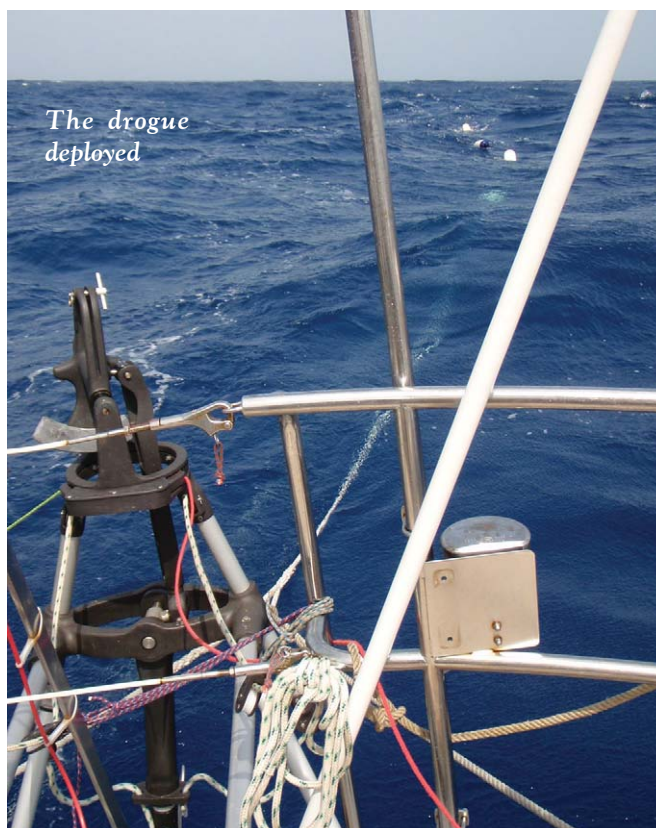


autopilot had malfunctioned, but we couldn't get her back under control with the wheel so we hurriedly furled the sails and lay a-hull to assess the situation. Our next theory was that the linkage between the rudder shaft and wheel had failed, but when the emergency tiller fitted to the top of the shaft couldn't steer her either we knew the problem was below the waterline. Concerned that the force required to break the rudder could also have damaged the hull, we checked the bilge for water and inspected the area where the shaft penetrates the hull, and were relieved to find nothing untoward.

By now it was daybreak, so we decided to have breakfast and then rest until 0900 when we would be able to report our predicament to the 'Magellan Net'. At the start of the net the controller called for priority traffic. They didn't really expect a reply, so Janie aboard *Tsolo* was taken aback when I piped up with the problem of our lost rudder. The response from other crews was encouraging, and the consensus was that we should deploy a drogue astern to steer the boat. Fatty immediately came up with detailed instructions on how to improvise one. We were asked to radio in every two hours with an update, in case we needed further help.

Adapting their suggestions to suit what we had on board, we made a drogue comprising an 8m rope bridle attached to the stern mooring cleats, followed in succession by a 12m warp, 4m of chain, our Bruce kedge anchor with a fender attached, a 4m warp, a fender, another 4m warp and fender, 4m of chain and a final fender. The total length of the drogue was about 32m. Two 25m lines were shackled to the first chain and led to port and starboard through snatch blocks at the midships mooring cleats, then back to cockpit winches. These lines could be adjusted to maintain a straight course and, by pulling hard on one or the other, to tack or gybe.

The next problem was to get *Egret* to sail downwind as opposed to her natural tendency to round up into it. The best she would do with a small headsail set was to sail on a beam reach, but eventually, by setting a staysail to leeward and a small area of genoa hauled out to windward, we persuaded her to bear away to about 120° off the wind. We knew then that we would be able to get more or less where we wanted eventually.



*Our reduced rig – part-furled
genoa and storm jib – as seen
from Awaroa. Part of the
drogue is also visible astern.*

Photo Helen Nicholls

The wind and sea state had been building all day, making work on deck quite demanding, but we had everything under control by the time we reported in to the evening net. John, of *Mary Anne II*, announced that they were sailing towards us to assist if required. Exhaustion helped us to sleep tolerably well during our off watches that night, and it was a huge relief to see a sail appear over the horizon early next morning. *Mary Anne II* stayed in close proximity for the next 48 hours as winds continued unabated at 24 to 30 knots with confused 4m waves.

We had been heading west-northwest, but the GRIB files suggested that the weather would be kinder further south, so on the second morning we succeeded, at the third attempt, in gybing and heading off south-southwest. Sweden Yachts ride well to the seas, our cockpit was almost dry and the motion down below quite reasonable, so we were content to sit it out and rest until conditions improved. We were more concerned about conditions aboard *Mary Anne II*, especially as John had told us that green seas were regularly sweeping her decks and they had to keep changing between sailing and heaving-to, to keep down to our speed. Eventually we persuaded him that, as other boats were nearby, it would be safe for them to leave us and continue on their way. We are very grateful to John and Julia for standing by for so long.

Back on course

Further examination of the steering system brought good news when we detected a small amount of feel through the wheel. This could only mean that there was still a piece of the rudder intact, which would greatly assist steering once the weather calmed down. Sweden Yacht rudders are supported by two ball-bearing races inside the hull and an external bronze shoe about one-fifth of the way down the blade. The stainless steel shaft and tangs embedded in the GRP moulding are massively strong above the shoe but somewhat less so below, designed so that the rudder will snap off under severe



impact without damaging the housing or hull above – a not infrequent cause of total loss of yachts through sinking. It was reassuring to learn that the mode of failure had been exactly as designed.

During the next morning net, Peter, of *Norna*, told us that he had consulted Herb – the legendary Atlantic weather forecaster – on our behalf, and received the advice that we should head south, a huge relief and confirmation of our tactics. Several boats astern had asked if we needed anything, so we had asked for more diesel, just in case we had to do a lot of motoring later. Firstly *Awaroa* kindly diverted to pass close by us, then *Tsolo*, but in both cases we had to abort a transfer due to the conditions. But by the sixth morning wind and sea conditions had eased sufficiently for us to set up two small headsails poled-out and, at long last, we were able to point the bows directly at the Caribbean, 1200 miles away.h

The wind was seldom dead astern, but we found that with a staysail poled-out to leeward and the genoa to windward we could sail comfortably with the wind about 20° on the quarter. We switched between the storm jib and the regular staysail depending on wind and sea conditions, with the genoa furled to match their respective areas. With the drogue adjusted to balance the rig, the autopilot kept us more or less on course once we had adjusted its 'gain' to maximum. The constant whirring of motor and gears as the wheel was spun from lock to lock imposed a great deal of wear and used a lot of juice, and we could only hope that it would keep working. Every now and then the autopilot lost control with a fit of beeps, and though sometimes we could recover with a sharp tug on one of the steering lines, often the boat would round up broadside to the wind and we'd have to back one of the headsails to turn her downwind again. We could maintain better control by hand steering, as well as increase the speed by ½ knot, but we didn't have the energy to keep at it for long. We felt that we could still have continued the voyage even if we had had no rudder at all, but the average speed made good would have been significantly slower.

A visit from Santa

Our request for extra diesel hadn't been forgotten, with the result that Father Christmas arrived a week early, wake-boarding in an inflatable dinghy on the end of a long line behind the Kiwi yacht *Tuatara*. On the first reasonably calm day since the incident, Santa – alias Alan – Claus, with considerable skill and guts and lots of energetic rowing,



Alan, alias Santa, wake-boards towards Egret from Tuatara. Photo Jean Ward

manoeuvred himself alongside Egret and heaved over two drums of diesel and a sack of goodies, including a freshly baked loaf of bread, some chocolate cake and a Christmas card. Declining to stay for a cup of tea, he nevertheless managed to get a glimpse of what remained of our rudder before being hauled back to his mother ship by Jean and Juan. We were overwhelmed by their generous and thoughtful action. The next day we celebrated 1000 miles to go – we were over halfway.

Soon after losing the rudder we had begun to make the most of the facility to send and receive e-mails via our SSB radio. We contacted family members, Falmouth Coastguard and our insurance company, then set about working out options for repair of the rudder. Andy, of *Spruce*, at anchor in Grenada, initiated research via the coconut telegraph into recommended repair locations. Our destination had originally been Barbados, but after weighing up such factors as ease of approach from seawards, the suitability of shoreside facilities and the availability of skilled tradesmen, we plumped for St Lucia. Clive, the owner of the Sweden Yachts 38 *Cosmic Dancer*, was already there having just finished the ARC, and he did a great deal of leg-work talking to the boatyard manager and lining up a surveyor. Mark, of *Macushla* moored at Las Palmas, managed to get a structural drawing of the rudder from Sweden Yachts, and started discussions with the company about supplying a new one.

The story of our plight seemed to be spreading wider and wider, and it was often hard to know how to deal with offers of help from unknown but well-intentioned people. It often takes several attempts to get a connection to one of Sailmail's stations, and then the transmission speed can be very slow, and for quite a while I was spending most of my night watches at the computer receiving, reading, responding to and sending e-mails, somewhat

to the detriment of sailing the boat, keeping a good look-out or simply resting. Fortunately the flow of information eventually subsided, and we thank everyone who gave us the benefit of their time and experience, and also Sailmail for allowing us so much extra airtime free of charge.

Egret was perpetually straining at the leash of the long drogue astern of her, which was slowing her by about 2 knots. The arrangement seemed to

**Alan delivering diesel by dinghy from Tuatara.
Photo Jean Ward**





Our intermediate down-wind rig: part furled genoa and regular staysail

work well and was self-compensating – in light winds the fenders bobbed along the surface providing little resistance; as it got windier they sank lower, providing more drag. The weather was quite unsettled, with a succession of depressions to the north upsetting the regular pattern of the trade winds, but by continual tweaking of the myriad ropes controlling the sails we were regularly able to clock daily runs of over 90 miles. To avoid disrupting our nightly off-watches too often we tended to change down to the storm staysail before dusk, but on one particularly squally night we had to take down the poles and revert to our old arrangement of storm staysail with backed genoa.

Other distractions were the passing ships which we generally spotted first on the AIS, and we called several up on the VHF to ask for a wide berth due to our difficulty in altering course. Nobody on a Korean tuna-fishing boat spoke adequate English, however, while the crew of a fishing boat out of Martinique wanted to render assistance, and it took my best French to convince them that it was not required. Most annoying was the yacht (not one from our radio net, I hasten to add) that showed a green light on our port quarter one night just as we'd completed a particularly exhausting sail change. We tried to call them on the VHF but got no response – presumably nobody was on watch – so we both had to spend another hour gybing *Egret* away from their track.

Christmas at Sea

The early hours of Christmas morning were magical – the first time during the whole crossing when it was cloud-free and I felt inclined to study the night sky. The sea was the calmest ever, the breeze a steady force 3. The moon had set just seven minutes after

Amanda opens our Christmas bubbly

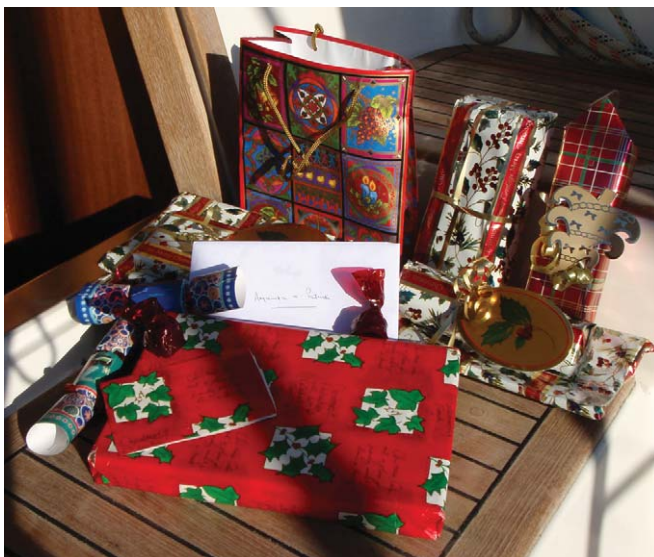
the sun and wouldn't rise again until 40 minutes after sunrise, so it was very dark, providing a brilliant stellar display. As I sat back sipping a mug of freshly brewed coffee and munching a slice of the gorgeous Christmas cake made for us by Amanda's mother, a shooting star illuminated the eastern sky for a few moments with its glittering trail, then fizzled out into the blackness.

Sunrise heralded a perfect day with just a few white clouds in the brilliant blue sky. The morning radio net brought Christmas greetings from boats at sea in mid-Atlantic and at anchor in the Cape Verdes and Caribbean. The gentle breeze allowed us

to hoist our big downwind staysail and to unroll the genoa completely – the first time since breaking the rudder. We opened our presents after breakfast and added the labels and cards to the decorations we'd bought in the Canaries. In the evening we pulled our crackers then dined well, starting with *confit du canard* served with croquette

potatoes, ceps and haricots verts, followed by Christmas pudding, cooked in the pressure cooker, with brandy butter and cream. A rain shower at 2330 forewarned the end of Christmas day, and by 0300 we were on deck wrestling down the staysail and hoisting the storm jib. A succession of squalls passed over, and the seas started to build.

Christmas presents



We made it!

Most of the boats that we had been talking to on the radio net during the crossing had reached their destinations, although another group were just setting out from the Cape Verdes having celebrated Christmas there. The morning net continued across the width of the Atlantic, but only *Miss Molly* was a reasonable distance astern to pick up the pieces if we still needed assistance, and when she eventually passed us and reached Barbados we felt a little isolated. On Boxing Day, with less than 400 miles to go, we began to dare to make predictions about our own arrival date and even time. Friday 30th seemed achievable but – sod's law – the forecast predicted a marked increase in wind to 20–25 knots on that day, which would probably mean gusts over 30 knots, along with wave heights of 4–5m. To help plan our approach we experimented to see in what directions we could sail the rudderless *Egret*, and also how she handled under power.

The gap between St Lucia and Martinique is about 17 miles, which is plenty wide enough in normal circumstances, but after many days so far from land it seemed rather narrow, particularly with our steering being so iffy. For several days we had been taking every opportunity to climb to the north of the rhumb line so that we would be directly upwind of the mid-point during our final approach – we certainly didn't want to end our voyage on a lee shore. We were also trying to time our arrival at this waypoint to a couple of hours after sunrise, when, as well as daylight, there would be a west-going tidal stream combined with the current to sweep us through. Once downwind of the islands we were fairly confident that we could broad-reach across to Rodney Bay. The boatyard had promised to have a suitable boat on standby to tow us into the marina, and Jo and Arny from *Just Jane* said they would come out in their dinghy to assist.

On Thursday afternoon, with the seas building and the sky looking threatening, we made the decision to stow the spinnaker poles and staysail and make the final approach with a small amount of genoa assisted by the engine. We knew by now that the usual laws of sailing no longer applied, and that *Egret* would go best downwind with the genoa sheeted in hard rather than eased. The wind and seas continued to increase through





*Egret, showing
what was left of
her rudder*

the night, with the strongest gust at 38 knots in one squall. We reduced our watches to two hours, spending most of that time perched in the companionway. We needed to be ready to winch in one or other of the steering lines to bring *Egret* back on course should a big gust or wave send her careering off towards either island.

We arrived at our waypoint an hour early, but the lights of Martinique had been clearly visible for some time. We were surprised to hear *Egret's* name being called over the VHF – it was the Martinique branch of the French Coastguard, to tell us they had been tracking us on behalf of Falmouth Coastguard and asking us to report back to them on arrival. It was comforting to know that they were keeping an eye on us.

We altered course to the south, and as the day brightened the peaks of St Lucia became more defined under the stormy sky. Then the familiar voice of Jo suddenly came over the radio to give us encouragement for the final few miles. The boatyard

manager was also waiting for us and ready to send out the launch to tow us in. The seas remained very steep until we rounded Pigeon Island into the shelter of Rodney Bay, where Jo and Arny greeted us with a bag of fresh bread and fruit, then helped us to recover the drogue and take our tow line



The new rudder in its box



A happy man – Patrick back at the helm

across to *Lucky Strike*, which towed us to our berth in the marina. What a welcome end to 26 eventful days across 2200 miles of ocean – and just in time to celebrate New Year!

At the helm again

Our insurer's surveyor, after examining the fracture, agreed that we must have collided with something substantial – a semi-submerged shipping container (one of an estimated 650 lost off ships each year) or perhaps a whale. We could probably have had an adequate rudder made locally incorporating the remains of the existing shaft, but for the long term we really wanted a new one built exactly to the original specifications and dimensions. Fortunately, Sweden Yachts still had the drawings and moulds and were willing to make us a replacement. Our insurers agreed that this would be the best course of action, but the downside was that it would be at least eight weeks before the new rudder reached St Lucia from Sweden, and then it would have to be fitted and antifouled before we could get sailing again. It was air-freighted to us and, like all the best presents, was packed in a large, heavy and beautifully made box. The rudder was perfect, in line with Sweden Yachts' usual high standard of workmanship, and slotted straight into position.

On Tuesday 10 April – four months after breaking our rudder – we checked out of customs to continue our cruise. It was wonderful to feel the helm of our beautiful boat again. 🚢