

A SOLO NON-STOP CIRCUMNAVIGATION AROUND THE SOUTHERN OCEAN'S FIVE GREAT CAPES

Jeanne Socrates

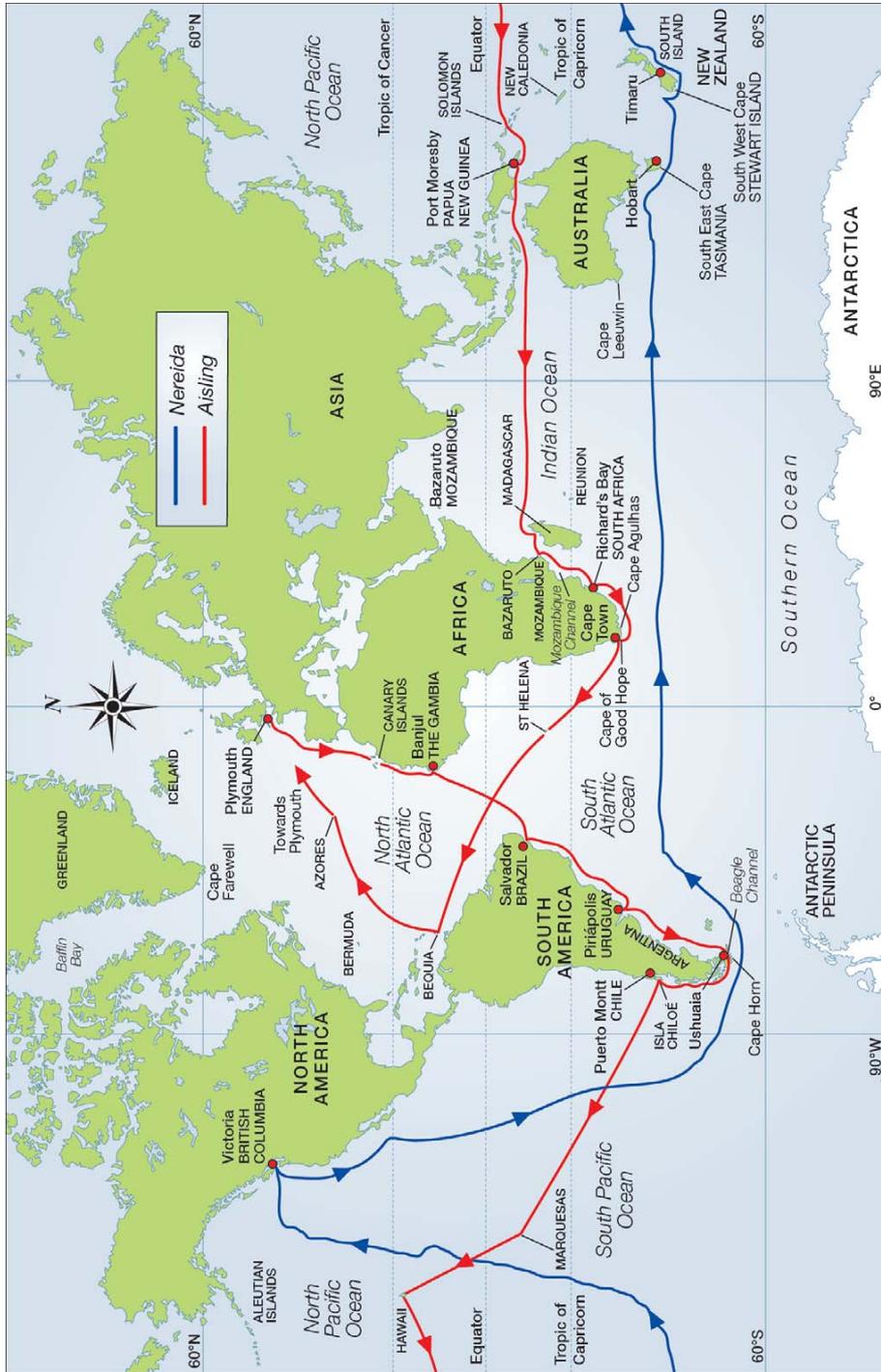
(Jeanne and her Najad 380 Nereida need little introduction to OCC members – or to the wider sailing public for that matter. She began her first solo circumnavigation in 2007 – for which she received the 2008 Rose Medal – followed by the Barton Cup for 2013 following her first solo, non-stop circumnavigation (albeit at the third attempt) completed at age 70. In 2014 she was presented with the Cruising Club of America's Blue Water Medal, followed by the Royal Cruising Club's Seamanship Medal. Most would have settled back to rest on their laurels, but not Jeanne...)

I'm writing this while in quarantine in West Australia during the Covid-19 pandemic. I made many radio friends in Australia while sailing south of the country last year and two of them have made me welcome while I sit out the 'lockdown' here. I travelled overland from Sydney as the crisis developed, meeting and being 'hosted' by other radio friends as I explored the country ... until forced to stop. All my remaining planned meetings and talks, several to yacht clubs, have been cancelled due to the pandemic, of course.

What an amazing welcome we had on our arrival back in Victoria, BC in September 2019! There were so many boats with friends wanting to wish me well and escort me towards the finish line. People were crowded onto the Ogden Point breakwater, many having waited since morning. More boats came as the day progressed – it was lovely to see so many familiar faces after so long away. After being becalmed overnight, occasional short-lived gusts gave a false impression that the wind was picking up, but it remained determinedly light and mostly from almost dead astern making it difficult to reach the line.

*Nereida passing Race Rock
on her return to Victoria,
BC. Photo John Greene*







*A Canadian Navy
Fireboat display.
Photo James
Holkko*

As we neared the harbour both the Canadian Navy and Victoria Harbour Fire Boats came out and gave magnificent displays from their water jets – the Navy boat seeming often to spin on the spot, forming a moving curtain of water. Eventually, just before 1700, the wind came up a touch more and we were able to get closer, finally drifting across the finish line in almost no wind to a cacophony of horns and cheering. There was another big welcome waiting ashore as we were towed to the dock.

Thus ended my fourth solo circumnavigation and my second successful non-stop one. I had become the oldest person to have sailed alone, non-stop and unassisted around

Greeted by friends on stepping ashore, 7th September 2019. Photo James Holkko



the world via the Five Great Capes of the Southern Ocean – despite a long catalogue of challenges along the way that had to be overcome in order to keep going.

In 2016 I had started two non-stop, unassisted circumnavigation attempts, also from Victoria, on 19th October and 13th November. They ran into weather and gear-related problems and both attempts were thwarted. A major three-day storm off Oregon in October, with winds gusting to near 60 knots and correspondingly big seas, caused damage requiring a return to Victoria and, despite sailing a lot further south on my re-start, I was forced to pull in to San Diego in December for urgent repairs. I planned to re-start, again from Victoria, in 2017 but a nasty fall from a ladder at deck-level onto the hard just a week before my planned departure caused serious neck, rib-cage and internal injuries which resulted in postponing that year's attempt to October 2018. This time I expected to be at sea for seven or eight months, but a surprising number of problems caused my journey to take just over 11 months to complete so that, instead of arriving back in early June, I eventually (and with great relief!) made landfall on 7th September 2019.

Provisioning is always of interest since all the food for my time at sea had to be with me from the start of my journey. Fresh eggs turned daily lasted several months, fresh onions and potatoes lasted most of the way, and I also had plenty of canned and dried food – meat, fish, seafood, vegetables, rice, pulses, cereal bars etc. (My switched-off fridge became a dry locker.) I also had UHT milk* and fruit juices to supplement my water supply, which was boosted by a desalinator, with dried milk in reserve. Because I'd provisioned so generously I didn't run out of food (except digestive biscuits!) despite taking so much longer than expected. Nevertheless I did lose a lot of weight, which I put down to a lack of regular exercising of arm and leg muscles, with infrequent winching and no running around the deck!

When storms were expected I'd use the big pressure cooker to make thick, hearty meals-in-a-soup which lasted four days or more. Everything to hand went into those soups, which I started by pre-soaking a variety of beans overnight, then frying some onion, chopping potatoes and adding diced ham, lentils, barley, tomatoes, sweetcorn, green beans, chick peas ... and some excellent bouillon paste for extra flavour. When the ocean temperature, and therefore the boat, is at only 6–10°C (43–50°F) for long periods it's morale-boosting to have plenty of hot, nutritious food quickly available with little effort.

My initial course took me almost due south down the Pacific, which meant that for over two months my time zone did not change. Once into the Southern Ocean, the frequent change of time zone can be quite confusing to the body and mind – quite soon it becomes more a matter of sleeping when tired and eating when hungry. Breakfast would often become brunch but, seas permitting, I always tried to cook an evening meal – before sunset, while daylight was good. Sunrise and sunset were enjoyable markers and other fixtures were daily radio scheds on ham radio or cruiser nets, and real-time downloads of weatherfaxes. An important event was noting the daily 1900 GMT position to give a 24-hour run which was incorporated into a blog posted to my website each day. Notable high points were observing a total lunar eclipse on 21st January 2019 in the South Atlantic, and later that year, on 2nd July, a near-total solar eclipse while heading back north up the Pacific.

* Ultra High Temperature, sometimes referred to as Long Life.

Fishing fleets caused me concern on several occasions. On 9th November we were just outside the French Polynesia Fishery Zone, 600–700 miles east of Polynesia, surrounded by seven fishing boats displaying weird MMSI numbers such as 111111650 on AIS, so presumably illegal. The screen did not display their call signs or IMO numbers and their status was shown as 'Not defined'. All their AIS transmissions were missing a lot of information. I got no response when I tried calling on VHF but they kept well out of my way. Heading back up the Pacific the following July I was forced to heave-to for more than six hours to avoid a problem with several Chinese fishing vessels nearby at night. Again there was no reply on VHF, but NZ MRCC* were very helpful and, several phone calls later, Beijing MRCC came back to say that I was safe to sail on north.



A selfie in the Pacific, November 2018

Many people have asked how I coped with the loneliness of being at sea for so long – but I talked each day to people on land around the world using my HF/SSB radio (which was also used for e-mails and weather info), so I wasn't quite alone! That regular radio communication with so many people made a big difference – far more so than the occasional satellite VOIP calls that I was also able to make using the Aurora system I'd been kindly loaned. VOIP calls are only one-to-one (and expensive), whereas a group of people can join in a (free!) radio session – very helpful in emergencies or when trying to troubleshoot equipment problems. I frequently received highly supportive emails, frequently from people unknown to me who had come across my daily blogs, which were often copied to my Facebook pages by friends. That support, from so many who were willing me to succeed, became important to me when things were looking bleak – I often felt as though they were with me in spirit aboard *Nereida* – I couldn't let them down!

So what were the problems that resulted in my voyage taking so much longer than anticipated?

I met with far more stormy weather in the Southern Ocean than I'd previously encountered, interspersed with large, unavoidable, high pressure areas which often gave days of little useful wind. I found myself having to avoid many more deep lows headed southeast into the Atlantic from South America, in addition to the usual Southern

* Maritime Rescue Coordination Centre, in this context at least.

Ocean lows, and the doldrums definitely lived up to their frustrating reputation. I also suffered from a lot of gear failures – despite, in 2016, re-rigging in readiness for this attempt and all sails being either new or nearly so. I had a wide range of spares and tools aboard but I still lacked one or two items (eg. a riveter and a tap and die set / thread-cutter) that could have been helpful.

Of course, taking more time at sea than expected meant that much more wear and tear on everything, culminating in my discovering that the steering cable had chafed badly just as I was approaching Cape Flattery at the entrance to the Strait of Juan de Fuca on my homeward leg. I was seriously concerned that, if it gave way close to the frequent shipping in the Strait, I'd have to get a tow on the very last day of my voyage, negating all my efforts up to then! As it turned out, my jury-rig worked well enough but the wind kept dying and we were at the mercy of an ebb tide while between a rocky shore and the shipping lanes...

Other problems that cropped up were not so very unexpected – such as the seawater pump impeller failing in the small diesel generator that backed up the two 150 watt solar panels and the Superwind wind generator on overcast, windless days. Poor design meant that I had to remove the pump unit in order to reach the damaged impeller, so I kept a second pump handy. Also not entirely unexpected were electrical problems, including

failed solar panel connections and wiring, both to the batteries and to the charge controller. These started on 17th October and, despite a lot of time and effort trouble-shooting and re-wiring, were not finally resolved until 21st November, 35 days later.

Removing the seawater pump unit on the back-up generator

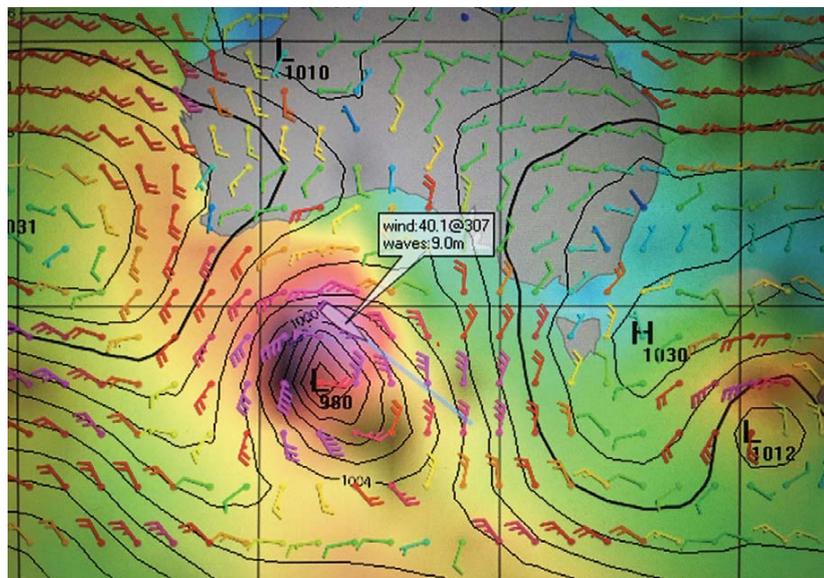
I'd previously found that adhesive-lined, heat-shrink butt connectors exposed to the marine environment succumb to corrosion with time, and eventually replaced them with screw-on connectors. Replacing the four connectors just below the solar panels on the stern arch meant working perched over the stern, clipped onto the backstay, with one arm around the backstay for stability in the swell. Reaching up to expose, cut, clean and replace the eight connectors on the solar panels above my head with



multimeter, cutters and crimper was a real challenge! Of course this was all being done in between sailing the boat and dealing with other repairs – problems with both headsail foot shackles, the staysail, the wind display, reefing line, reefing strops, etc.

The storm south of Australia

Other failures, while lying to my Jordan Series Drogue in two major storms south of Australia around Easter, were of the plotter and connected instruments,



including the wind display which had already been erratic and which eventually gave up. I had cleaned the plotter's circuit-breaker terminals thoroughly after the instruments all went down on 3rd November, and that helped initially, but now it would only run if separated from all other items in its circuit. The autopilot control head (a spare one) had to be independently wired to the course computer in order to keep the autopilot functioning, important as the windvane steering had been put out of action. Melbourne's harbour was very tempting... The battery bank started to fail near the start of the Pacific homeward leg but, surprisingly, I was able to persuade it to take a decent charge again. On nearing landfall I powered up the dedicated depth display from a nearby 12 volt outlet.

I had plenty of spares for running rigging and, after the first reefing line failed, I ran the line outside the boom, adding blocks to lead it forward from the boom end to the mast. Other breakages occurred in the topping lift, the mainsheet traveller line, the genoa car lines and both lazyjacks. The starboard lazyjack gave way three weeks before Cape Horn – as I began to reef I heard a sudden noise and saw the lines were flying around. I managed to grab one end but the other was high up in the shrouds. Not having that lazyjack to hold the sail became an ongoing nuisance until, eventually, we reached Timaru, New Zealand.

For the first time in all my voyages I had major sail problems, with either the genoa or the mainsail being unusable for several weeks, which obviously added noticeably to the time taken. The genoa became unusable twice – for five weeks from 4th December after it landed in the sea when the furling line came undone, and for three weeks from 19th August after it was shredded in strong winds.

Two weeks before reaching Cape Horn I unfurled the small staysail and furled in the genoa, ready for more wind, but as I put a turn of the sheets around the furled genoa to keep it safe in strong winds, I heard a noise – the end of the furling line had become disconnected from its drum. The big headsail rapidly unfurled itself and began madly flapping in the wind, with its sheets lashing out at everything around ... nightmare! I had to stop it from flogging and get it down. I heaved-to and pulled in on the upwind genoa



The genoa partly overboard ...

sheet to keep the foot of the sail inboard. To lower it meant releasing the halyard bit by bit, going forward in between to try to grab as much of the loose sail as I could and bring it inboard. I managed most of it, but some ended up in the

sea. That still left the furling line problem – if the genoa was to be used again the furling line needed to be fixed back securely onto the drum, with plenty of spare turns so the problem didn't repeat ... not as simple a job as it sounds.

Getting the genoa out of the sea while hove-to worked well using a block, rope and winch, but it required a lot of work. Then it had to be doubled and re-doubled and lashed down safely on the side deck, which the seas were washing regularly. I finally replaced the furling line on 23rd December and untied, untwisted and hoisted the sail on 7th January. So I sailed around Cape Horn without the genoa, but in the mostly strong winds the staysail did good service.

Even worse was the mainsail problem. It tore along the leech on Thursday 17th January while I was hove-to, was lowered on Sunday 20th, and it was not until mid-May, 18 weeks later, that I was finally able to raise it again near Dunedin, NZ. Any kind of swell made working on it difficult. On Saturday 26th it took all day to stick tape on both sides to hold the torn edges together. On Tuesday 29th, drifting off Gough Island, I hoisted



... and lashed down on deck after recovery



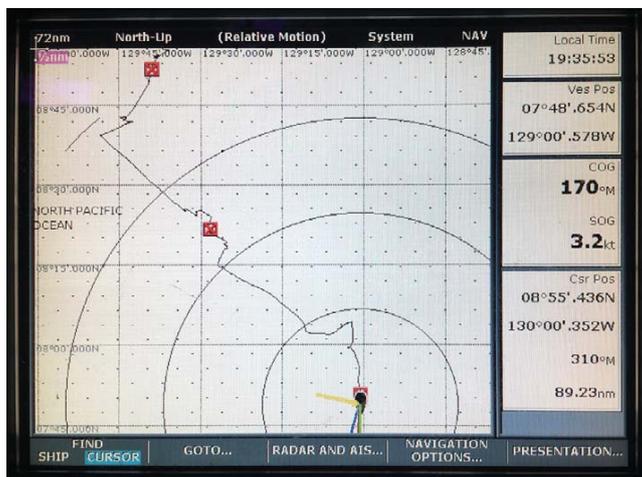
The torn leech on the mainsail

Repairing the mainsail

Sunset – time to stop work for the day

the trysail above it but had to undo the boom and kicker lashing over the trysail track. On Saturday 2nd February I found sail material for tabling over the leech repair and heat-sealed the edges. It took many more days on deck to sew the repair as and when conditions permitted – a difficult and time-consuming task. Afterward, more tabling had to be sewn elsewhere on the leech and other repairs were continually needed.



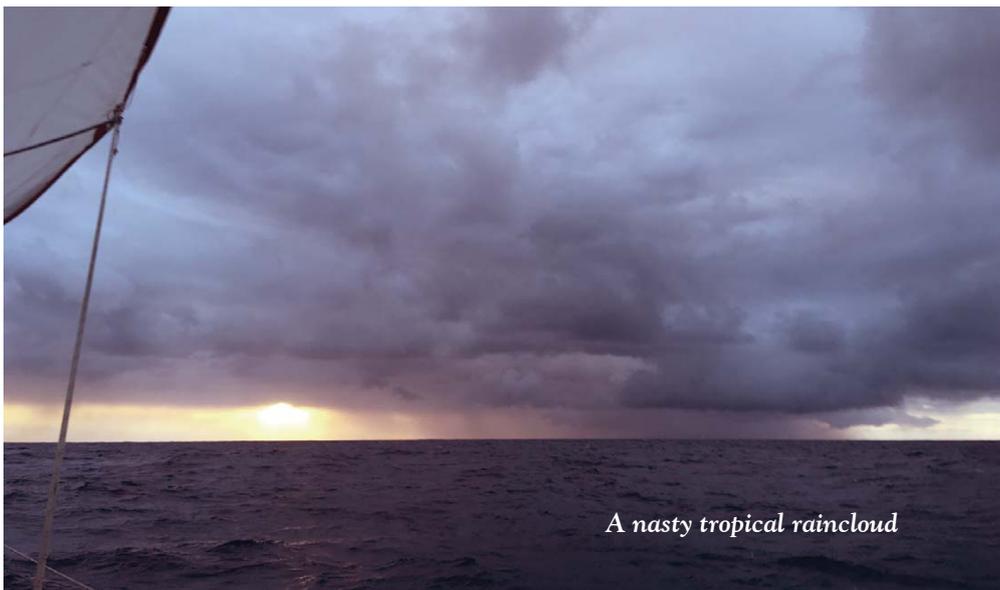


Nereida's track south through the Inter Tropical Convergence Zone

As we sailed south we initially made excellent speed by taking careful note of the weather forecasts to keep in good wind – though several friends got worried when our south-southeasterly track seemed to be taking us towards Mexico's Baja Peninsula just

as a hurricane started heading up that way. In fact we kept well clear of it, managing to head south-southwest before it got too close. The system seemed to disrupt the winds, however, resulting in frustrating, often light, southerly winds to which were added a lot of calms which often halted our progress completely. Crossing the unstable Inter Tropical Convergence Zone between 10°N and 6°N, with its frequent rainsqualls or drizzle, was extremely slow as was sailing further on southwards in very light, flukey winds.

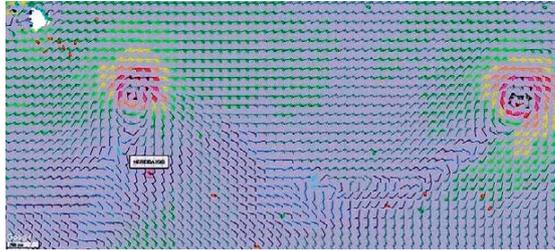
Little did I know it, but the threatening Mexican hurricane was an indicator of things to come. Crossing the Indian Ocean in early March, a strong cyclone, heading south from just east of Madagascar, made us slow down for several days before finally forcing us to retrace our path for three days to keep out of its firing line – losing a good week. Then, unbelievably, as we sailed north at a good speed towards the Hawaiian islands at the end of July, *two* cyclones threatened – Tropical Cyclone *Erick* and, just a few days behind, Tropical Cyclone *Flossie*. Again we had to slow right down, as there was no guarantee that we'd stay clear of the systems if we tried to sail north as fast as possible, although I was tempted. In the event there was little wind southwest of *Erick*



A nasty tropical raincloud

Tropical Cyclones Erick and Flossie ENE of Nereida and SSE of Hawaii, which forced us to slow right down

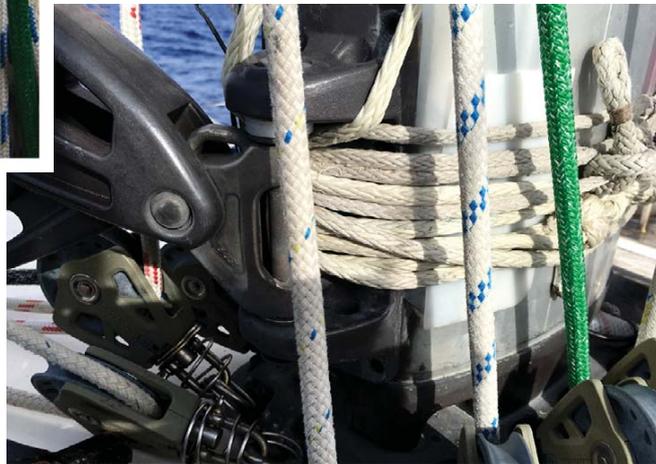
so it was a good thing I resisted temptation and allowed both cyclones to pass well away – we'd have been a sitting duck!



On 22nd November, happy to have resolved the solar panels issue at last, on swinging the boom over while gybing I saw it jerk upward – the rod-kicker had pulled away from the base of the mast. All the rivets had been torn out so the first job was to get rid of the protruding bits – out with the hammer, pliers, file and drill! Clearly the fitting was not going to sit on the mast as snugly as it had, but I thought I'd be able to lash it so it would move very little. So I set to, and eventually lashed it all up reasonably well using a thick Spectra line. We could sail on...

The torn rod-kicker rivets sticking out of the mast

A lash-up ... but it worked!



Having seen what had happened to the rod-kicker connection it was clear the gooseneck could fail in a similar way. It is similarly riveted and subjected to the same stresses if the sail jerks the boom around in light winds and a swell. Not wanting to risk a similar failure and lose the use of the boom, I lashed the gooseneck fitting to the mast with some more thick Spectra line. If those rivets were to fail, my hope was that the lashing would hold.

In the fortnight before we reached Cape Horn there were typically rough, big seas and strong winds, with some rain. *Nereida* surfed at 9 or 10 knots in winds of often 30 to 35 knots gusting 40. 'I'm on the edge of my comfort zone', I reported! We heaved-to a

couple of times to avoid nasty weather, but the final day's run was enjoyable – conditions were pleasant, islands were visible ahead in the fading light, and a wandering albatross soared nearby with a few prions and white-chinned petrels. Just after midnight I saw a light flashing on a grey mound – Isla Hornos, 9 miles to the northeast. The seas and wind were up a bit and there was still light in the west.



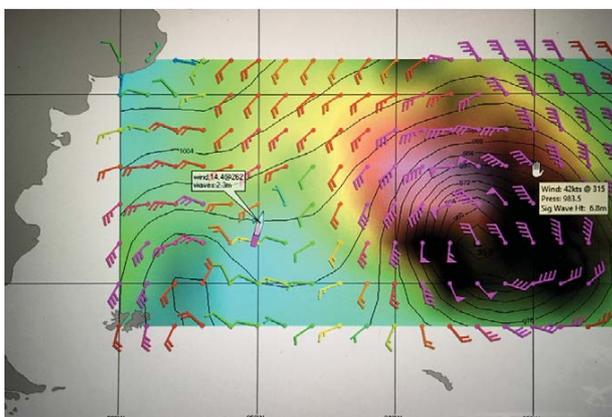
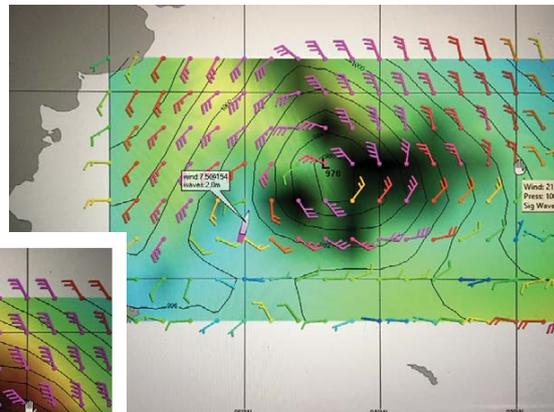
At 0243 UTC on Wednesday 19th
***Approaching Cape Horn
in the midsummer twilight***



December 2018, in lovely twilight, we passed the Cape. Being close to midsummer and with a bright moon there was enough light around to see it clearly and the scattered cloud above allowed plenty of stars to be seen as well. The wind was cold but the occasional albatross was flying around. It was a definite high point for me – I felt very happy!

Uku of *One and All*, who was

rounding at the same time, mentioned that gales headed east were expected to cross our northeast path north of the Falklands on Christmas Day and again on December 26th. In fact Christmas Day was grey and damp with a dying east-southeast wind, and we were drifting west-northwest at 1.6 knots when some



***The storm forecast
for Christmas Day ...***

***... building and
growing more intense***

Peale's dolphins – an unexpected Christmas treat



Peale's dolphins appeared and starting leaping around – a real high point!

Trying to get northeast of the Falklands and towards Africa proved difficult with these nasty storms. I hove-to several times and progress was slow. Then at 1230 on Sunday 13th January the AIS alarm sounded. The *Shen Zu 86*, a brightly-lit Chinese fishing vessel, was on a collision course and approaching at 12 knots – I changed course rapidly. She passed within a mile, but there was no response on VHF and they were clearly not keeping watch.

On 15th May we were trying to get past Stewart Island's South West Cape at the southern tip of New Zealand, and had been making excellent progress in strong conditions before even more intense conditions arrived. The wind was 25–30

Running under goose-winged trysail and headsail, February 2019





The solar panels and wind generator pre knockdown ...

knots, gusting higher, with rough 6m seas throwing us around. I changed down to a well-furled staysail and ran overnight and into the next day in west-northwest winds of around 40 knots gusting to 47, with 7–8m seas. Often we surfed on overtaking waves at up to 12 knots, and there were frequent thumps on the hull as waves hit us.



Chaos below following the 15th May knockdown



Suddenly, at around 1900, I got thoroughly soaked – we'd been knocked down by a wave crashing violently into and over the boat. Fortunately, I was unhurt, although soaking wet, as was my bunk – the dorade vent overhead had been completely torn away, leaving a hole in the coachroof. The cabin was in wet chaos. Both solar panels and a wind generator blade were gone, the radar, GPS etc damaged, the wind display gone, the hard-top window stove in, and lockers and fittings damaged. The Jordan Series Drogue had self-deployed and its cones were lost. Fortunately the mast, rigging, staysail, autopilot, instruments, radios and my personal computer were undamaged. I headed north to keep away from the following storm and later turned back to round the South West Cape. Sailing past Stewart Island near dawn was wonderful – another memorable experience!

Although the lee of South Island provided some shelter for working, I now needed somewhere really calm to do urgent repairs. Timaru harbour on the island's east coast was the answer so I picked up a buoy and set to work. I made further repairs to the mainsail, replaced both lazyjacks, de-sulphated the batteries, filled the diesel tank from my jerry cans and more, and by midnight on 8th June we were underway, heading towards Polynesia and home.



Confronting a storm is like fighting God. All the powers in the universe seem to be against you and, in an extraordinary way, your irrelevance is at the same time both humbling and exalting.

Franciose LeGrande