

# **THE CHALLENGE OF PASSAGE PLANNING IN THE SOUTHWEST INDIAN OCEAN**

## **Jonathan Lloyd, Roving Rear Commodore**

*(Jonathan and Anne are in the later stages of a circumnavigation aboard their Malo 42 Sofia. They left the UK in June 2014, and were appointed Roving Rear Commodores two years later. Flying Fish last heard from them when Jonathan wrote about their participation in last year's Van Diemen's Land Circumnavigation Cruise – see Cruising Tasmania in Flying Fish 2017/1.)*

With the route out of the Indian Ocean to the Mediterranean still significantly affected by the threat of Somali piracy, most yachts on a circumnavigation are now faced with the prospect of a passage across the southwest Indian Ocean to South Africa and round her southern capes into the South Atlantic. Yachts starting from Southeast Asia are most likely to take the northern route, involving Sri Lanka, the Maldives, Chagos archipelago, the Seychelles, northwest Madagascar and Mozambique. Those starting in Darwin, Australia usually take the southern route, involving Christmas Island, Cocos Keeling, Rodrigues, Mauritius and Reunion. While yachts can combine elements of the two, the focus of this article is on what happens when a yacht reaches Madagascar on the northern route or Reunion on the southern route. Up until this point passage planning is relatively straightforward, given that the SE trade winds predominate.

From here on two significant weather factors affect passage planning. The first is the Aguihas Current, which starts in the Mozambique Channel and flows southward down the South African coast as far as Cape Agulhas. The continental shelf runs close inshore for much of the coast between Richards Bay and Port Elizabeth and this is where the current flows strongest, often as close as the 200m depth contour. The rate of flow varies along its length, but can reach 4–5 knots between Durban and East London. While this can assist a yacht to make a fast passage down the coast, with many yachts recording their fastest 24 hour run down this stretch, there is a major downside in terms of passage planning – caused by the other significant weather factor in this part of the world. These are the southwesterly depressions which, at regular intervals often as short as two or three days apart, roll from the southern ocean up the east coast of South Africa as far as southern Madagascar. When one of these depressions meets the south-flowing Aguihas Current the resulting seas become very short and steep, creating unpleasant and often dangerous conditions. In severe southwesterly gales waves as high as 20m have been recorded in the Aguihas Current – not a place to be caught out.

There are two further complicating factors when voyaging in these waters. The first is the cyclone season, which affects the waters around Madagascar, Reunion and Mauritius from December to May. This means that yachts need to leave northwest Madagascar or Reunion for South Africa by the end of November at the latest. The second is the lack of safe harbours between Richards Bay and Cape Town. The only

realistic options before the Cape Town area in the event of bad weather are Durban, East London, Port Elizabeth and Mossel Bay. Once round Cape Aguihas there are two safe and accessible harbours either side of the Cape peninsula before reaching Cape Town. The first is Simonstown on the east side in False Bay. The second is Hout Bay on the west side. Both are within easy reach of Cape Town.

Knysna, 45 miles east of Mossel Bay, is only a realistic option in benign conditions. The entrance is tricky and potentially dangerous, a fact highlighted to me by a British yacht that we met on arrival in Cape Town. She had been hit by two monster waves just after crossing the bar on departure, which bent the steering column and spinnaker pole, and did considerable damage to the stainless-steel deck gear as well as drowning all the electronic equipment. The owner told me that had theirs had been a lighter yacht they would almost certainly have broached and rolled over, ending up on the rocks. As it was, her 21 tons was just able to punch through the waves and survive the experience. In my view they had a very lucky escape! It should also be noted that Mossel Bay is only really safe if you can get inside the harbour. If a strong easterly is blowing, the anchorage outside in front of the yacht club becomes a lee shore subject to large swells. While we were there sheltering from just such conditions, a yacht anchored outside broke its anchor chain and ended up on the beach – they were extremely fortunate to be towed off by the lifeboat with apparently minimal damage. Both these incidents highlighted to me the fact that this coast deserves real respect and very careful consideration when it comes to passage planning.

Before tackling the challenge of this stretch of coast, however, one has to get there. In particular the passage between Reunion and Richards Bay or Durban poses its own considerable challenge. The aim here is to avoid getting caught out in a southwesterly depression when rounding the southern tip of Madagascar and especially when crossing the Agulhas Current. The passage is approximately 1400 miles, so will take most yachts 10 to 12 days. These dangers lie at the end of the passage, however, and at the time of departure from Reunion there are no accurate forecasts to predict what the weather will be doing off Richards Bay or Durban. Consequently one has to set off blind in this respect, and be prepared for whatever one might encounter later on in the passage. That said, the first challenge is to round the southern tip of Madagascar. Shallow waters and a wind acceleration zone make this an unpleasant place to be in a southwesterly depression, but by paying careful attention to weather forecasts while in Reunion, one should be able to avoid this situation.

Once safely round Madagascar it is very important to be able to obtain accurate information about the weather in the Mozambique Channel and coastal waters of South Africa, either by e-mail from a weather router or from GRIB files. An Iridium Go system is probably best for this purpose, as Sailmail via HF radio is not particularly reliable until well into the Mozambique Channel. At this juncture one should be in a position to head directly to Richards Bay or Durban if there is a clear weather window before the next southwesterly depression comes through. If, at this stage, a weather window has not opened up, the sensible strategy is to stay further north and head west along latitude 26°S. This keeps one north of the path of most depressions, and one's options open. One is then in a position either to head down to Richards Bay or Durban when a window opens up, or to head north to Inhaca Island off Maputo if one needs to shelter from a southwesterly depression.

The alternative to facing the dilemma posed by a direct passage from Reunion to South Africa is instead to head northwest from Reunion to northwest Madagascar and thence down the Mozambique Channel to Richards Bay or Durban. The advantage of this option is that it breaks the passage into shorter legs, thus providing more accurate weather windows during the latter stages of the passage down the Mozambique Channel as well as several options for seeking shelter in the event of bad weather. It should be noted, however, that this option will take substantially longer, especially if one intends to spend time cruising in the waters of northwest Madagascar, reputed to be a delightful cruising ground. Accordingly, this decision to be made well in advance and factored into one's overall plan for crossing the Indian Ocean – given the vagaries of the cyclone season it is not a realistic last minute option. The passage from Reunion should be undertaken in October, as the subsequent passage down the Mozambique Channel must take place by mid November at the latest in order to avoid risking being caught in a cyclone or severe revolving tropical storm (RTS).

Once safely in Richards Bay or Durban the next challenge is to negotiate the South African coast round to Cape Town. The overall length of the passage is 800 miles from Durban, and a further 85 from Richards Bay. With southwesterly depressions barrelling up the coast every two or three days one would be lucky to make the trip in one go. Therefore the trick is to work out how much progress one can make in the window between depressions before the next one comes through. It should be remembered that the Agulhas Current can provide a significant boost to progress, especially between Durban and East London where it really kicks in 40 miles south of Durban. In favourable conditions it is quite possible to achieve a 240-mile day on this stretch of coast, and this should be taken into account. The other factor to be considered is the weather for rounding Cape Agulhas. In strong conditions, with winds in excess of 20 knots from either direction, the sea state can rapidly become very unstable and unpleasant. A further complication is the likelihood of encountering a cut-off low at some stage on the passage. These are generated off the land and in most cases are of relatively short duration, few lasting more than six hours. Consequently they are harder to forecast accurately. However, their potential impact on a passage plan in terms of imposing delay can be significant. Thus it is important to factor some reserve time into one's plan to allow for the possibility of encountering one.

Unlike the passage from Reunion, where one has to set off blind, there is no need to do so when sailing down the South African coast, as there is a wealth of accurate weather information available from the South African Meteorological Service and other weather sources such as PredictWind, PassageWeather and Windguru. However, it is important to monitor these sources very carefully as the detail changes on a daily basis, particularly with regard to timing. With careful passage planning taking full advantage of weather windows there is no excuse for being caught out in bad weather on this stretch of coast unless one has the misfortune to suffer major gear failure. It is also important to maintain the average speed estimated in the passage plan, and to be prepared to turn the engine on if wind strength drops below what is necessary to maintain the required speed over the ground. Winds in a weather window can often be on the light side, so one should expect to motor for a considerable amount of time – that was certainly our experience down this stretch of coast.



*Leaving Reunion  
behind*

So how did *Sofia* cope with these challenges as we crossed the Indian Ocean to South Africa in the autumn of 2017? Mid October found her berthed in Port de Galets marina in Reunion, with her crew looking for a weather window to depart for Richards Bay. Mindful of the challenges and uncertainties involved in the passage ahead, which had been on our minds for some time, we decided that it would be sensible to employ the services of a professional weather router. After reading an online article in *Yachting World* about why ocean cruisers should consider using a weather router we found Simon Rowell, who is meteorologist for the UK Sailing Team and the Clipper Race. He is also an ocean sailor who has made two passages in these waters, so we were confident that we would receive the advice we needed. We wanted input from him in two respects for our passage planning. The first was, when was the appropriate window to depart Reunion and round the southern tip of Madagascar? The second was to provide ongoing weather advice as we approached the Agulhas Current. His charges were very reasonable and his advice proved to be both helpful and accurate.

After signing on with Simon, Jenny Crickmore-Thompson, our PO/POR coordinator, told us about local South African weather expert Des Cason. Des is a retired ocean sailor based in Durban who provides free, tailored weather advice to any yacht crossing from Reunion or Madagascar to South Africa, or sailing down the coast of South Africa, out of the goodness of his heart. His advice was to prove invaluable both on the passage from Reunion and then from Richards Bay to Cape Town. I would strongly advise any yacht sailing in these waters to make use of his services. Thus armed with advice from Des and Simon we set off from Reunion on 16 October 2017 in company with *Dreamcatcher*, another OCC yacht.

Conditions approaching the southern tip of Madagascar were relatively benign, but at this point we noticed a major tear in our mainsail. In order to prevent further damage we took the sail off and replaced it with the storm trysail, which slowed us down somewhat so *Dreamcatcher* pulled steadily away. By now we were aware of the existence of a strong southwesterly low making its way up the South African coast,



*Des Cason and his wife Nell (left), with the crews of Sofia (right) and Dreamcatcher (end) at the Zululand Yacht Club*



although at this stage it was not entirely clear when it would reach Richards Bay. Consequently, rather than heading directly for Richards Bay, we followed advice from Des to keep our options open by keeping further north and heading west along latitude 26°S. By the time we reached longitude 30°E the situation was much clearer and we knew we had 48 hours in which to cross to the Agulhas Current and reach Richards Bay before the low arrived. The prevailing light winds in the Mozambique Channel would mean motoring hard to cover the distance in the time available, however, and as we had already motored some of the way from Reunion to the southern tip of Madagascar, fuel consumption was now an issue. After some careful calculations we reckoned that we had just enough to make it, with a small reserve for emergencies.

*The author at the Zululand Yacht Club marina*



*Beating to windward  
south of Durban*

After motoring hard for 24 hours we were in a position to take advantage of the favourable winds that Des and Simon had forecast as we approached the South African coast. As the wind backed from northwest to southwest we were able to follow it round and close-reach our way down the coast to Richards Bay. At that point we took a wave over the foredeck, which split the genoa at the foot, so we replaced it with the staysail and were able to make it into Richards Bay on Thursday 26 October after an 11 day passage, with six



hours to spare. Thus we were safely tied up in the smallcraft harbour in Tuzi Gazi by the time the southwesterly gale arrived and roared through the rigging!

At the end of November, after five very pleasant weeks at the Zululand Yacht Club in Richards Bay it was time to head for Cape Town. Most yachts opt for this timeframe for a variety of reasons, although the best time of year for the passage is January to March. We felt confident that, provided we allowed sufficient time for stopovers in the event of bad weather, we could make the 900 mile passage in 10 to 14 days and reach Cape Town by mid December. Armed with advice from Des we reckoned that we could reach East London in our first weather window, even though we might encounter a small cut-off low south of Durban for six hours. Based on Des's comment that conditions might be uncomfortable but not dangerous, we decided to press on rather than call in at Durban. After a bouncy 12 hours tacking south of Durban the wind backed to the southeast and we picked up the Agulhas Current.

With the boost from the current we rocketed down the coast, averaging 10 to 12 knots. Such was progress that we decided to bypass East London and head for Port Elizabeth, where we would wait as the next southwesterly depression came through. It



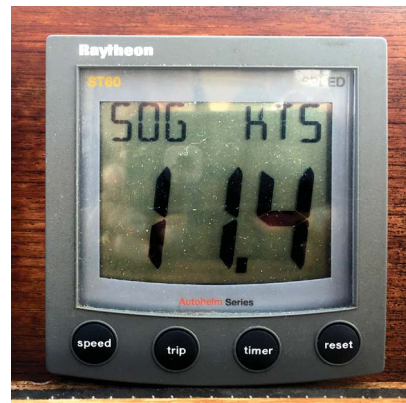
### *High SOG recorded in the Agulhas Current*

should be noted that in spite of a very welcoming yacht club there are two significant problems with Port Elizabeth. The first is surge within the harbour, and the second is coal dust from the coal loading facility right next to the marina, which quickly coats everything. This problem is compounded by the severe water shortage. Restrictions on water usage mean you cannot use fresh water to wash off the coal dust and the harbour water is filthy.

Once the depression had blown through we moved on to Mossel Bay. Unfortunately for us the strong easterlies, which would have been ideal for a quick passage to Cape Town, made rounding Cape Agulhas problematic, so we called into Mossel Bay and ended up on the harbour wall rafted alongside a French yacht that we had met in Port Elizabeth. There we waited for 24 hours for an opportunity to round Cape Agulhas.

Given the go-ahead by Des, we set off at the crack of dawn in order to reach the Cape by midnight, when the wind would be starting to die down. We duly arrived at the appointed hour and had a relatively benign rounding. However, as we were motoring along in calm winds and flat seas towards Cape Point, a cut-off low suddenly materialised with 25 knots on the nose! Consequently we found ourselves beating our way up towards Cape Point, which delayed our arrival in Cape Town.

*Reaching  
along in the  
Agulhas  
Current*



*Table  
Mountain  
with its  
table cloth,  
seen from  
the Royal  
Cape Yacht  
Club marina*



Instead of arriving in daylight in reasonable winds, we found ourselves arriving at midnight in the teeth of the 'Cape Doctor'. Berthing in the Royal Cape Yacht Club's marina in the dark for the first time, with the wind gusting over 30 knots, was a somewhat nerve-wracking experience!

With the benefit of hindsight, the passages between Reunion and Cape Town have certainly been the most challenging of our circumnavigation to date. In light of our experience, the following advice might be useful for those following in our wake:

- Use the services of Des Cason at [sygambit@gmail.com](mailto:sygambit@gmail.com). In our experience his advice is timely, customised to your requirements and invariably accurate.
- Consider additional input from a professional weather router. We found this very helpful, and neither Des nor Simon had a problem with it. It is always useful to have confirmation from an additional source.
- If you dislike uncertainty and have time in hand, consider taking the route from Reunion to the Mozambique Channel via northern Madagascar which has the added bonus of beautiful cruising grounds in northwest Madagascar. However, anyone contemplating this option should consult Des Cason, who can provide detailed information on Madagascar and the Mozambique channel.
- Consider waiting in Richards Bay or Durban until January when weather conditions are likely to improve before heading down to Cape Town. There is plenty to see and do in this part of South Africa.
- Allow at least double the normal time for the passage from Richards Bay or Durban to Cape Town. A 900 mile passage would normally take us six or seven days. We allowed 12 to 14 days and it took us 11.
- Make sure your fuel tank and cans are full, as you are likely to do more motoring than you expect.

