

**CLASSIC PASSAGES****SOUTHERN INDIAN OCEAN AND SOUTH AFRICA:  
*Part II. Rounding a Great Cape***

by

Beth A. Leonard

The traditional tropical route for a westabout circumnavigation—the “coconut milk run”—exits the Atlantic through the Panama Canal and the Pacific through the Torres Strait, leaving little room for improvisation. But in the Indian Ocean, the route splits. The majority of circumnavigators exit the Indian Ocean through Bab el Mandeb, the southern portal to the Red Sea. But in any given year, somewhere between a tenth and a third of the boats entering the Indian Ocean head for South Africa to round one of the “Great Capes.”

As discussed in Part I, the Southern Indian Ocean route can be divided into three pieces—the southern Indian Ocean portion from the top of Australia to the Mascarene Islands off Madagascar, the South African portion from Réunion island to the South Atlantic high pressure system roughly centered over Saint Helena and the Atlantic portion from the South Atlantic high to the Caribbean. Part I covered the southern Indian Ocean transit. This part will discuss the South African portion from Réunion, the furthest west of the Mascarene Islands, to St. Helena via the Cape of Good Hope. The sidebar discusses the South Atlantic.

Three factors make the South Africa portion of the route particularly challenging: the Agulhas Current, the lack of sheltered ports and the extreme and unpredictable weather. Yet an experienced crew aboard a well-found yacht with both time and patience to spare and with a clear understanding of weather patterns and currents can minimize these hazards. The route itself can be divided into three parts: the passage to South Africa, Durban to Cape Town and leaving Cape Town.

**Wind, waves and weather**

The passage around South Africa takes boats close to 37°S, about the same latitude as Auckland, and well outside the normal tradewind belt. Boats find themselves south of tropical latitudes for some 30° of longitude, from 45°E under Madagascar to 15°E enroute to St. Helena.

In this region, the unending succession of eastward-moving Antarctic lows and their associated fronts determine the weather. To avoid the ferocious winter gales, this entire area is best transited in the southern summer, between November and March. But even in summer, fast-moving low pressure systems tend to pass under or across the African subcontinent every two to three days, bringing gale force winds and sudden wind shifts while creating high seas in the strong currents along the coast. Occasional high pressure systems characterized by light winds and calm conditions offer mariners the possibility of uneventful sailing, though the windows tend to be short-lived.

Most of the low pressure systems and their associated fronts originate in the Roaring 40s and Furious 50s of the Southern Ocean. While their overall movement is from west to east, they can make landfall almost anywhere along the South African coastline as their birth, development or movement bring them northward far enough to affect the coast. They often reach the west coast of South Africa with very little warning due to the lack of reporting stations in the Southern Ocean. But they also arrive undetected on the east coast where they frequently sweep in from the Southern Ocean and track northwards along the warm water of the Agulhas Current, strengthening as they go.

Even once detected, forecasting remains difficult as lows can follow one of three common tracks—under the continent, across the continent or around the coastline. The actual wind speed and direction experienced at sea depend upon which track the low takes. During our three months in South Africa, the forecast rarely offered a prognosis beyond the next twelve hours and we learned to be exceedingly skeptical when it did. Our experience on the south coast was typical: After waiting a week for a weather window, we left Port Elizabeth with a 48-hour prognosis for light east or northeast winds; less than twelve hours later we were running under the staysail alone in sustained 45-knot easterlies.

To complicate matters further, coastal lows are considered a regular feature along the east coast, sweeping northwards from Port Elizabeth to Richard's Bay in front of frontal systems associated with lows much further south, then tracking eastward under Madagascar. These create the so-called "Buster" or "Southerly Busters." Typically, at the approach of one of these systems, the barometer starts to drop as the NE wind strengthens, often to gale force. When the barometer stops falling, the winds become light and variable. Once the barometer starts to rise, the southwest gale will follow within thirty minutes to an hour. The SW winds blow at least as

hard as the NE winds which came before and often arrive as a gust front—where conditions go from near-calm to gale in less than five minutes.

On the west coast, the cold Antarctic air encounters the hot air mass over the Namib Desert and the arid, high coastline running northward from the Cape of Good Hope. Gale force winds result from this clash of air masses. They can blow from almost any direction, and on several occasions while safely tucked into Hout Bay south of Cape Town we saw two or three successive days of gale-force winds, each day from a different direction.

Along a coast with plenty of natural harbors and without currents, the frequent gales would be of moderate concern. But the east coast from Richard's Bay to Port Elizabeth offers scant protection for even shallow-draft yachts for a hundred miles or more at a stretch, and what harbors do exist have been man made. Along this same coast can be found the strongest part of the Agulhas Current, an ocean current on a par with the Gulf Stream and every bit as dangerous.

The Agulhas Current originates in the tropical waters of the Indian Ocean where the south-flowing Mozambique Current which runs down the Mozambique Channel between Madagascar and Africa joins the branch of the Equatorial Current which runs south along the east coast of Madagascar. These two currents meet off the coast of South Africa at about 28°S and then follow the 100-fathom line just off the continental shelf south and west around the coast past Cape Agulhas and the Cape of Good Hope. There it joins with a branch of the Southern Ocean Current to become the cold Benguela Current flowing up the west coast along the Namib Desert.

The Agulhas Current flows most strongly between Durban and Port Elizabeth where it can reach speeds of six knots, with three or four knots being about average. As in the Gulf Stream, the dominant gale-force winds created by the low pressure systems moving along it oppose the current flow, resulting in wave heights greatly in excess of what one would expect in similar conditions in the open ocean. Giant waves of sixty feet in height occur with disturbing frequency along this coast. Freak waves of much greater height have been reliably reported by freighters and tankers caught off this coast in storm conditions. In all reported cases of freak waves, the dominant waves have come from the SW and the largest waves have been reported between the continental shelf and an area 20 miles to seaward. The appearance of such waves seems to coincide with a low pressure system moving along the coast in a NE direction which

results in the sudden transition between gale-force NE winds blowing with the current and gale-force SW winds blowing against it.

On the west coast, the Benguela Current carries its own dangers. It too can raise large seas in a very short period of time, though not normally of the magnitude of the freak waves found on the west coast. The cold current passing along the hot African coastline often creates fog, and it also tends to set toward land. Among seafarers, the Namibian coastline has long been known as the Skeleton Coast after the many wrecked ships which failed to distinguish the desert from the sea in hazy or foggy conditions.

The key to rounding the Cape with as little drama as possible lies in waiting for the infrequent high pressure systems, then making as many miles as possible before the next low arrives. But patience is essential: waiting a week or two weeks is common, waiting a month is not unheard of. A typical synoptic chart for the area will show two to four low pressure systems in the Southern Ocean or near the subcontinent. All too often, a promising high in the South Atlantic will be pushed north by an unforecast low before it reaches the South African coast. Highs that do bring light winds to the coast are often weak and may be quickly supplanted by a strong front moving northward out of the Southern Ocean. Boats equipped with good light air sails, trustworthy motors and plenty of fuel capacity will be in the best position to take advantage of these short-lived windows when they do appear.

### **Passage to South Africa**

Most boats leave for South Africa from Réunion, the westernmost island in the Mascarene Group, and make landfall at either Richard's Bay or Durban. The passage can be done anytime between late September and early December, however the best time is considered to be early November when the frequency of spring gales around latitude 30°S has decreased and the chance of an early cyclone is remote.

Strong, reinforced tradewinds like those experienced across most of the Indian Ocean mark the start of this 1,450-mile passage, but soon give way to light and variable winds as boats approach the easternmost longitude of Madagascar around 50°E. A few degrees further west, under the bottom of Madagascar, the Antarctic low pressure systems exert their influence, with SW gales succeeding one another every two to three days. Given the length of this passage, picking a weather window to avoid all gales is virtually impossible. Four or five days into the

passage, boats find themselves sailing into whatever weather comes at them off the South African coast. Like the passage to New Zealand from the tropics, the weather boats actually experience by the time they reach the gale-prone area becomes largely a matter of luck. Of the roughly thirty boats we know who've made this passage, we've only met one who didn't encounter a gale or a storm in the 800 or so miles between the southern coast of Madagascar and the east coast of South Africa.

Given the difficulties in forecasting and the speed of the systems coming off the African coast, stopping on the southwest coast of Madagascar to wait for weather doesn't improve the odds of avoiding a gale. While the wildlife in Madagascar may be unparalleled, the number of people we met who had experienced thievery, bribery and worse on the island discouraged all but a handful of boats from stopping there the year we made the passage. Further, the south coast of the island should be given a wide berth: the continental shelf extending southward from Cap Sainte-Marie and the sea mounts located offshore of that create breaking seas and freak waves in gale conditions. Sailing for a point 150 miles south of Cap Sainte-Marie keeps boats out of the dangerous area. Friends of ours on two boats tried to cut this corner by 50 miles during a gale; freak waves pooped both vessels. One boat's boom broke, and the other's stern pulpit was stove in.

Several of the sailors we met who regularly cruised and raced from the Indian Ocean islands to this coast recommended the following strategy for this passage.

- From a point 150 miles south of Cap Sainte-Marie, lay a course for 200 miles ENE of Durban.
- Upon approaching the longitude of 34°E, begin monitoring the weather looking for a weather window to cross the Agulhas Current (1303 GMT on 17665, 4376, 8740.8 kHz; VHF channel 26). The regular weather reports on the VHF include conditions from reporting stations all along the coast and can be very helpful in tracking systems and judging their severity.
- Watch the GPS, water temperature, water color and sea life to determine when the current has been reached. The demarcation tends to be much clearer on the inshore side of the current in terms of color, temperature and speed over ground, but large flocks of birds,

schools of dolphins and fish, cobalt blue water or a stationary cloud bank can all signal the location of the current from seaward.

- If shore stations are reporting a SW gale or if the weather has already deteriorated, heave-to and wait for it to moderate before entering the current. If the weather looks favorable, enter the current and lay a course for Durban. If it begins to deteriorate or if forced northward by a SW gale, put in at Richard's Bay.
- If at any point while in the current the barometer starts dropping by 1 millibar or more per hour, regardless of the forecast, head inshore to just outside the 100-fathom contour, in a position to leave the current as quickly as possible. If the barometer stops falling and the wind dies, get inside the 100-fathom line and out of the current in the hour or so before the SW gale begins.

While nothing much can be done to reduce the risk of encountering a gale on this passage, this approach minimizes the amount of time spent in the Agulhas Current and along with it the chance of experiencing extreme and dangerous waves in addition to gale-force winds.

Throughout South Africa, yachts are required to clear in and out of every port they visit. This can be time consuming and frustrating, especially in Durban and Cape Town where it seems the various officials delight in sending cruisers back and forth between offices. Smaller ports like Richard's Bay and Port Elizabeth are friendlier, but the paperwork is no less onerous. If landfall is made at Richard's Bay, yachts will be directed to the marina and formalities will be conducted there. In Durban, a busy commercial port, yachts should contact Durban Harbour Radio and request permission to enter. They will be directed to either the small boat basin to starboard of the entrance or to the International Jetty at the head of the harbor. The officials will come to whichever place the yacht has been instructed to tie up. If cleared in the small boat basin, yachts will be asked to move to the International Jetty once formalities have been completed.

From either Durban or Richard's Bay, a host of game parks lie within a few hours drive. These are also the best ports from which to venture to Kruger Park, the size of Belgium and home to the widest diversity of wildlife. Zululand, the Drakensburg escarpment and dozens of breathtaking waterfalls can be visited enroute to the game parks. On the International Jetty in

Durban, crews trade off sightseeing with watching others' boats, providing the best security possible and allowing for the maximum enjoyment of this incredibly beautiful land.

### **Durban to Cape Town**

Very few cruisers leave Durban and sail the 750 nautical miles nonstop to Cape Town. Those who do plan to encounter several gales along the way and make sure to leave the current before the SW winds arrive. Most boats do the trip in a series of short hops, waiting days or even weeks for the best possible weather window before heading to the next stop along the coast. Once Durban has been safely reached, the vast majority of boats with the time to wait for weather have a fairly uneventful voyage around the coast, though given the difficulty of forecasting the weather most end up seeing gale-force winds somewhere along the way.

The trip from Durban to Cape Town can be done anytime during the southern summer. The local sailors we met all recommended waiting until January, as the gales decreased in number and intensity and good weather conditions were more frequent and more stable. However, we and most of our friends wanted to spend Christmas in Cape Town, so we left Durban in late November. Over the course of the next three weeks, we spent only five days at sea and the rest of the time sightseeing at the ports along the way while we waited for weather. Had we left in January, we might have gotten to Cape Town in half the time, but we probably wouldn't have had significantly better weather the few days we were at sea.

When leaving Durban to head south, the next safe harbor lies 250 miles down the coast at East London. Though the Agulhas Current offers 75-100 "free" miles a day along this coast, most crews look for a two- to three-day weather window before they leave the safety of the Durban breakwall. Ideal conditions consist of a barometric pressure of 1020 millibars or higher on the leading edge of a large high pressure system with no strong low pressure systems to the south. We and the five boats who left at the same time we did waited ten days for such a weather window. Over the course of those ten days, four low pressure systems passed through, each with winds in excess of 30 knots.

Leaving Durban, the recommended approach for navigating the current is the same as that for approaching Durban. Boats reach the current as quickly as possible, then turn southwest paralleling the coast and staying just outside the 100-fathom line. Here they get the maximum boost from the current but can quickly get inshore if the barometer drops. As the high pressure

system fills in, winds become light and variable. We spent the first five or six hours after leaving Durban under spinnaker, the next twelve motoring. If conditions remain favorable, most boats continue on to Port Elizabeth, another 120 miles beyond East London.

After Port Elizabeth, the Agulhas Current weakens and turns westward, greatly reducing the size and frequency of freak waves even in gale-force SW winds. Safe harbors can now be found every 50-70 miles, allowing boats the option to day sail or to plan longer hops but seek shelter if weather conditions deteriorate. While the weather remains difficult to predict and the current still demands respect, especially around Cape Agulhas itself, the most dangerous portion of the coast has been passed.

Though Cape Agulhas marks the southernmost point of the African continent, the Cape of Good Hope has retained the title of “Great Cape.” Rounding it represented one of the most emotional moments of our entire circumnavigation. We had the best weather of our entire trip around Africa on that gilt-edged afternoon. The sun hung on the horizon, painting the rock cliffs with layers of gold and red. As we close-reached in 15 knots along the shore between Cape Point and the Cape of Good Hope, the sun dipped below the horizon, setting the sky on fire and turning the water to liquid gold. A dozen seals played in our bow wave, and seabirds wheeled along the cliff faces. That moment stands for us as the physical embodiment of the pride and satisfaction we felt upon completing our circumnavigation.

### **Leaving Cape Town**

As the only ocean free of cyclones, the South Atlantic can be transited at any time of year. However, prudent cruisers leave the South African coast behind before the winter gales begin in late March or early April. A mid-January departure works well with most follow-on plans: the Carnival in Brazil in March, cruising in the Caribbean from March through May, a return to the US East coast before the North Atlantic hurricane season begins in June or an April passage through the Panama Canal for West coast boats.

The frequency and ferocity of gales remains daunting while their predictability actually seems to decline. However, the Benguela Current’s northwesterly flow makes strong SW winds far less dangerous than on the west coast. As gales almost always swing from the northerly quadrant to the southerly, boats can leave on the “backside” of a low pressure system and ride the strong SW winds northward with the current. With any luck, boats will experience five to six

days of strong winds on the beam or aft as they transition from the influence of the low pressure system into the outer isobars of the South Atlantic high pressure system. We used this strategy when leaving Cape Town, waiting for the NW winds of the low pressure system to pass and the barometer to bottom out. We left when the barometer started to rise and the winds shifted to the SW and, with some help from the current, made good almost 1,100 miles in six days before encountering the light winds of the South Atlantic high around 20°S.

Several sea mounts lie along the rhumb line between Cape Town and St. Helena in the vicinity of 25°30'S 6°E. The highest of these rises from 6,000 feet below sea level to within 100 feet of the sea's surface. Freak waves have been reported in this area especially in strong SW winds; we were knocked down and pooped by a wave almost without warning in otherwise moderate conditions. Next time, we'll stay at least ten miles away from this underwater hazard.

While the hazards of the Southern Indian Ocean route can sound frightening, almost all the boats who went around when we did experienced little more than discomfort and anxiety. But they all sailed prudently, waited for weather patiently, and took the risks of gales and currents seriously. In return, they rounded a Great Cape, pushed themselves and their boats one more step beyond their old limits and visited one of the most interesting and dynamic countries in the world.