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#### FOUL FORTIES:

A run and a reach turns into a Southern Ocean slog

by

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We sailed through a sea of albatrosses. Dozens of them lay becalmed in the glassy patches on the surface of the Southern Ocean, riding its slow heave patiently, waiting for the wind that would lift them again and allow them to soar. The few still airborne could not maintain their usual motionless gliding but were reduced to the indignity of flapping every few seconds. Most of these landed splay-footed in our wake, mistaking *Hawk* for a working fishing boat with handouts. Half a dozen different species including Gray-headed Buller's albatrosses, yellow-nosed Salvin's albatrosses, and white-capped Shy albatrosses were all in view as I scanned the waters around our 47-foot, aluminum Van de Stadt sloop, *Hawk*. Interspersed among these "small" albatrosses, none of which has a wingspan of less than six feet, were some of the giants of the bird world, the Royal albatrosses whose bodies reach the size of a man's torso and whose wingspans average close to 10 feet.

*Hawk* was doing better than the albatrosses, making good a bit over 3 knots sailing at 50 degrees apparent in 5 knots of true wind, nodding her way into a two-meter swell. But we hadn't made much progress in the last few hours, and the white lighthouse on the cliff at Taiaroa Head still lay bold on the horizon. Our passage from New Zealand to the Austral Islands just south of Tahiti in French Polynesia was off to a slow start, but my partner, Evans Starzinger, and I were relieved to be off at all.

Of the more than forty passages we have made, each has had its own distinctive character, a remembered face and personality that sums up the ocean's moods and the various high and low points that punctuated those days at sea. Each has also had its own rhythm, including its own beginning and ending which often had little to do with casting off docklines or sighting land. This passage was to be no different. Though we had only untied the docklines that afternoon, we had already been at sea for over a week.

#### WAITING FOR WEATHER

We had left the Otago Yacht Club just outside of Dunedin on the southeast corner of the South Island of New Zealand around noon that day to catch the ebbing tide out Otago Harbour, a seven-mile long estuary sheltered by the Otago Peninsula. This was to be the start of our catty-corner run across the Pacific Ocean, from the bottom of New Zealand's South Island to the top of the British Columbian coast. We intended to cover the more than 8,000 nautical miles in three roughly equal legs, from Dunedin to the Austral Islands south of Tahiti, from there to Hawaii and then on to British Columbia. We would not sail a straight line but would instead scribe a sloppy, elongated "S" across the ocean's face, hoping to maximize favorable winds on what is traditionally regarded as a predominately light air, upwind route (see sidebar: Passage Routing).

Our summer's cruising of the South Island of New Zealand had, at least in part, been designed to get us as far south as possible for the first leg of our voyage. We hoped to avoid the headwinds and light variables we could expect if we left from the top of the North Island, at 35°S. Departing from Dunedin at 46°S and heading east in the Roaring Forties, we anticipated strong westerlies and a fast downwind run for the start of our voyage. Ten days earlier, our plan had seemed to be working out perfectly. A low pressure system sweeping toward us across the Tasman Sea was supposed to bring 25-30 knot southwest winds that would give us a fast five or six hundred mile start to our voyage.

We got that forecast on a Friday and arranged for Customs to clear us out on Tuesday morning, when we expected the front to come through bringing strong southwest winds. On Saturday, Evans and I went to the weekly fresh produce market and bought kilos of fresh vegetables, fruit and potatoes, most with the dirt still clinging to them. We spent the rest of the weekend preparing *Hawk* for passage. We checked over the rig, pulled out and checked storm sails and drogues, set up our jacklines, deflated and stowed the dinghy, plugged the hawsehole for the anchor chain and stowed everything securely down below. By Sunday afternoon we could tell the weather was not shaping up as forecast. By Monday we had easterly winds, by Tuesday they were building to gale force. By Wednesday the winds had reached 45 knots along much of the east coast of New Zealand, and the news services were reporting major damage from the storm's five meter swells along the normally-protected coastline.

We spent that week neither on land nor at sea. When we had done the last of the provisioning and put the boat in order for the passage, we had made the mental break from shore, and now we found we couldn't return. As the days wore on, we fell into a listless cycle of waking, walking into town to buy a newspaper, studying the weather forecast over breakfast at a local diner, and then heading to the Internet café for another take on the weather in hopes it might be different from what the paper had shown. By the time Saturday rolled around again, we had changed diners because we couldn't deal with the cheerful Kiwi waitress greeting us with, "Still here?" each morning.

By then, we could tell this wasn't an aberrant storm but a stable weather pattern, one where everything was topsy-turvy. The high pressure systems were tracking where the lows should have been and visa versa, which meant the winds in the Southern Ocean were reversed. The ten-day forecasts were now showing a recurring three- to four-day pattern of what for us would translate into strong to gale-force headwinds followed by a short period of fast downwind sailing before the wind died out and the cycle started all over again. There was no sign of the steady westerly winds we'd counted on. It might be weeks before we had favorable weather, but we couldn't wait that long without risking a winter storm in the Southern Ocean or a tropical storm in the North Pacific.

At least we could leave when the winds were light so we'd have a few days to acclimate and get well offshore before the first of the easterly gales overtook us. Nine days after we provisioned and prepared the boat and six days after we had intended to clear out, we were finally underway, surrounded by becalmed albatrosses. I sympathized with their obvious annoyance at the lack of wind, but unlike them, I knew that when the strong winds returned they wouldn't be any more to my liking.

HEAVE HO

I came out of a half-sleep with my muscles tensed and my elbow hooked through the strap holding up the lee cloth on my bunk. Before I had consciously registered the sibilant roar of the wave, it crashed into *Hawk*'s side with a metallic "thwunk" that sounded like a slow-motion fender-bender. She rolled away from it for two quick counts then snapped back upright and only my arm lock on the strap kept me from colliding with the padded hull side face first. At the same instant, the water from the wave thundered across the decks and hard dodger ending in a waterfall rush as it fell in a torrent into the cockpit. For several minutes after *Hawk* came back upright, the remnants of the wave sloshed back and forth across her decks as she reared up and plunged down over each successive sea.

In the wave's aftermath, I became aware of the throaty roar of the wind. Some authorities claim that the term "Roaring Forties" comes from the sound of the wind in these latitudes. What I was hearing could be likened to the roar of the freight trains passing the Otago Yacht Club in Dunedin. But this noise had a depth and texture that those freight trains lacked. A thin whining from a shroud, the bass moaning from a spreader and a fluting from the running backstay joined a chorus of other sounds punctuating the white noise background roar, which itself rose and fell in pitch as the wind varied in intensity.

I looked at my watch hanging from the strap I had clung to a moment ago. It was late afternoon and we had been forereaching under the double-reefed main into northwesterly winds for a bit over twenty-four hours. The contrary weather pattern we had left with had indeed persisted. This was the third and worst front to slam into us since we glided among the albatrosses thirteen days before. Each front had brought 25 to 35 knot headwinds before shifting abruptly into the southwest and giving us a day of fast downwind sailing. The wind would gradually get lighter and lighter, and we would sail as long as we could keep the boat moving and motor when we couldn't. Then the wind would begin to build as it shifted to the northerly quarter with the arrival of the next front, starting the whole process over again. Our progress across the chart went in fits and starts, one day barely making 100 miles forereaching and the next flying downwind averaging 8 knots and more.

With a predominance of strong northerly winds, the challenge had been to whittle away at the 1,500 nautical miles of northing we had to make to reach the Australs. We had spent almost three-quarters of our time with the wind forward of the beam and more than a third of it sailing as close as wind and waves allowed. The first front had forced us south of the Chatham Islands, and we'd had to regain precious degrees of latitude after it went through. We had almost avoided this latest front by getting north of its track, but it had deepened and widened, ensnaring us in its edges. We were hundreds of miles north of the low center in an area forecast to have a few hours of 25 knot northwest winds. Instead we'd spent a day in a steadily worsening gale, and by the bass note in the rigging I could tell that we now had 40 knots of true wind. The Roaring Forties had turned particularly foul this time, though I was grateful not to be further south receiving the full brunt of a true Southern Ocean snorter.

Even that thought couldn't keep me from feeling miserable as I counted up the indignities of this passage. My throat and ears ached, and my head was stuffed up so that I could hardly breathe or hear. This nasty cold had hit me three days out of Dunedin, and it had only gotten worse with minimal sleep and chilly, damp night watches. Bad as I felt, I was better off than Evans, who'd been seasick for ten of the fourteen days we'd been out as a result of a fuel leak that had plagued us since leaving Dunedin. Raw diesel had been seeping into the bilge at a slow but steady rate, and the pervasive fumes had made it virtually impossible to stay forward of the galley for any length of time without getting seasick. We had spent hours searching for the leak. On my stomach with my head in the bilge, my throat burning from the diesel fumes, feeling along the

sides of the diesel tanks, I could last about ten minutes before I had to get some fresh air in the cockpit. The day before, just as the leading edge of this front came through, I had finally located the leak around the fitting where the outtake hose attached to the port tank. We had hove to and Evans had tightened the hose clamps and wrapped the hose and the fitting in plumber's tape before getting sick, but the leak had not abated and it looked as if the weld around the fitting had cracked. Through all of this, *Hawk* had ably taken care of herself while looking after her pitiful crew.

Tired of counting my woes, I hauled myself out of my berth. I pulled on foul weather gear over the two layers of thermal underwear I had been wearing in my bunk and put on my sea boots. Then I climbed to the top of the companionway. Evans was sitting under the hard dodger on the lee cockpit seat, dark shadows under his eyes, his cheeks gaunt under several days' growth of beard. The wind instruments were reading 40-plus knots of true wind, with the occasional bounce up to 45. The seas were truly majestic – great mounds of rolling blue water wearing manes of frothing white which the wind tore to shreds and sent tumbling in long plumes down their faces. The constant procession of wild blue waves clawing at the sky had turned the horizon into a heaving, jagged edge pressing in on us from all sides.

“You know, we could have left *Hawk* in New Zealand and chartered a boat for a few months in British Columbia,” Evans said.

“With a full crew,” I said, “and a gourmet cook.”

“Who'd make us Chateaubriand and Baked Alaska.”

“And serve us breakfast in bed.” Thus began our favorite activity in these conditions – fantasizing about an alternate lifestyle that doesn't involve having our home leap off fifteen foot waves. By the time we reached the cabin in the woods with the fireplace and cat stage, we had each managed a small smile.

A few hours later, the wind dropped below 30 knots for the first time in twelve hours. It didn't stay there, jumping back to between 35 and 38 knots almost immediately. But that brief pause reassured me. We were through the worst. We didn't see 40 knots again.

## REACHING TO RAIVAVAE

“You can just see the island,” Evans said very softly. I was awake and crawling out of my bunk before he had even finished speaking. Without bothering to put on any clothes, I climbed quickly into the cockpit. I stared out over the cobalt blue trade wind seas to where they danced on the distant rim of the horizon. It took a moment, and then my eye picked out one dark, pointed shape that wasn't heaving with the rest. A single volcanic peak had risen just above the horizon, our first glimpse of the island of Raivavae.

When the gale had abated five days earlier, the wind had swung into the southwest and we'd enjoyed two fast, downwind days before it died out completely. A half day of motoring had brought us into the trade winds. In 24 hours, the water temperature jumped from the low 60s to 77 degrees and the air temperature with it. The water color went from the slatey blue-green of the higher latitudes to the bright indigo of the tropics, a color so vivid and intense it never quite seems real. That day, a White-tailed tropicbird accompanied us for almost an hour, its single long tail feather twice the length of its body streaming out behind it as it dipped and darted around the

boat. As *Hawk* thundered along, foot long flying fish launched themselves out of the bow wave, shimmering in a rainbow of colors, and glided for hundreds of feet before splashing down again.

After nearly four years in the high latitudes, we'd both forgotten how completely different the tropics were, how much more benign and less demanding. It was so pleasant to be wandering around with almost no clothes on, to spend all of my time on deck letting the strong sun bake away my cold, to have the hatches open so the tropical breeze could drive away the lingering smell of diesel, and to have those lovely trade winds driving us along at speed. All of our easting in the Roaring Forties paid off now – we'd spent the last two days under bright blue skies filled with lazy cotton ball clouds reaching along at 8 knots with the wind just behind the beam.

We should have been filled with a sense of closure, of completion. But passages have their own rhythms and their own personalities. If this passage started a week before we cast off the docklines, it finished five days before we made landfall, in that moment when the wind dropped below 40 knots and we knew the strong headwinds would soon be behind us. Since then, the northing had come too easily and the sailing had been too lovely to belong with the first two weeks of this voyage. Despite these last few days, this passage would forever wear a forbidding frown in our memories, its rhythm a stuttering, stop and start as we fought our way north. Beautiful trade wind sailing, passing through the reef into the inner lagoon at Raivavae, the greeting we would get there where we would be the first boat of the season – these all belonged to a different passage. But they would serve to blow any lingering fantasies of woodland cabins and fireplaces right out of our heads.

#### FOR ILLUSTRATION: POSITIONS/MILEAGE/MAJOR EVENTS

All positions are as of 0100 UT each day. Conditions are average for the 24 hour period. Miles are nautical miles made good toward our destination, not nautical miles sailed.

3/21/05 – 45°51.9'S 170°33.8'E – Untie docklines from dock at Otago Yacht Club

1. 3/22/05 – 45°24.9'S 173°14.6'E – 117 nm; SE 5-7 true
2. 3/23/05 – 44°08.1'S 175°40.6'E – 106 nm; Variable 4-8 true
3. 3/24/05 – 44°22.2'S 178°44.6'E – 135 nm; NW 7-10 true
4. 3/25/05 – 44°41.4'S 177°24.3'W – 165 nm; NE 18-25 true. **Forced south of Chathams as first front approaches.**
5. 3/25/05 – 44°22.0'S 173°16.3'W – 94 nm; NE 25-30 true. **First front.** Forereached for 12 hours. Crossed dateline/repeat day.
6. 3/26/05 – 42°48.9'S 171°23.1'W – 192 nm; W 28-35 true.
7. 3/27/05 – 44°13.8'S 168°47.1'W – 120 nm; Motored 5 hours in light winds, then NW 15-18 true.
8. 3/28/05 – 42°28.5'S 165°55.8'W – 143 nm; **Second front.** NE 20-25 true. Kept sailing.
9. 3/29/05 – 41°11.2'S 163°38.1'W – 166 nm; SW 20-25 true.
10. 3/30/05 – 40°24.3'S 159°15.8'W – 160 nm; S 15-18 true.
11. 3/31/05 – 39°11.0'S 156°35.4'W – 143 nm; Variable 2-4. Motored 12 hours.
12. 4/1/05 – 38°14.0'S 153°52.7'W – 139 nm; NW 15-20. Next front approaching.
13. 4/2/05 – 37°25.7'S 152°26.1'W – 82 nm; NW 30-35. **Third front.** Forereaching.
14. 4/3/05 – 36°17.1'S 150°34.5'W – 112 nm; NW 38-42, forereaching for first six hours; then W 15-20.
15. 4/4/05 – 33°58.9'S 148°53.6'W – 168 nm; SW 20-25.
16. 4/5/05 – 31°31.7'S 147°56.8'W – 155 nm; SW 20-25 first eight hours; then S 12-15.
17. 4/6/05 – 29°32.1'S 147°30.9'W – 121 nm; Variable 2-6 true; motored twelve hours.
18. 4/7/05 – 26°49.2'S 147°03.3'W – 164 nm; ESE 15-20. **Trade winds.**

19. 4/8/05 – 23°51.7'S 147°41.3'W – 178 nm; ESE 15-20. **Landfall.**

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Sidebar to “Foul Forties:”  
PASSAGE ROUTING

Our passage from Dunedin at the bottom of the South Island of New Zealand to Raivavae (Rah-ee-vuh-vay) in the Austral Islands about 500 miles south of Tahiti had to be made within the larger context of our run across the Pacific from New Zealand to British Columbia. We have a strict rule about being out of the trade wind belts during tropical storm season, and we make every effort to avoid the high latitudes during the winter. Our timing along that longer run was therefore determined by three things: the start of winter gales in the Southern Ocean, the end of cyclone season and establishment of the trade winds in the South Pacific and the beginning of cyclone season in the North Pacific.

Severe winter storms in the Southern Ocean can come as early as the end of March, and the percentage of gales more than doubles from March to April. The South Pacific cyclone season runs from December through April or May, though tropical storms only very rarely make it as far east as Tahiti and we could find no record of one coming east of the Cook Islands after mid-March. The winds in French Polynesia tend to be light and variable during the cyclone season, with periods of westerly winds as low pressure systems move through the sub-tropics. The easterly trade winds are usually well established in the Society Islands by mid-April, extending as far south as 25°S. The North Pacific hurricane season starts in June or July and runs through November. Putting all that together, we planned to leave the South Island of New Zealand sometime after the middle of March, arrive in the Australs in early April, reach Hawaii by mid-May, and be north of 35°N by mid-June.

Our strategy for leaving from the bottom of the South Island came after studying the *Atlas of Pilot Charts (South Pacific)*. The pilot charts showed that in March westerly winds predominate south of 40°S with an average strength of Force 4-5 (11-21 knots) and anywhere from 6 to 11 percent of gale-force and higher winds. Between 40 and 35°S, the chart shows variables, with almost an equal percentage of winds from all points of the compass, an average strength of Force 3-4 (7-16 knots) and less than 4 percent of gale-force or higher winds. North of 35°S, easterly winds begin to dominate, though it isn't until north of 25°S that the majority of winds come from the easterly quadrant. The pilot charts are averages, so any given year can be quite different. In his *World Cruising Routes*, Cornell cautions that in some years the westerlies extend all the way north to 32°S, in others, sailors are hard pressed to find them even south of 40°S. He recommends staying south of 40°S to 155°W to ensure sufficient easting. By starting at 46°S, we thought we'd be far enough south to guarantee westerly winds. We planned to stay as far south as necessary and run down our easting to 155°S, then turn north for the final reach up to Raivavae in the Austral Islands.

But our strategy backfired when the normal pattern of lows and highs reversed itself and we found ourselves with easterly and northerly winds instead of westerly and southerly winds. The weather charts showed that there were still westerly winds in the Southern Ocean – at about 55°S, way too far south to be of any help. Before we left Dunedin, we considered coastal sailing to the top of the North Island and then heading for Raivavae from there, but the weather charts showed

almost no wind at all north of 35°S, so that option would have entailed many days of motoring. Instead, we changed our strategy and made northing whenever conditions allowed in hopes of getting over the top of the low pressure systems tracking from the top of the North Island south into the Roaring Forties. If we could do so, the strongest winds would be westerly instead of easterly. We had accomplished this by the last front, where we had northwest winds instead of northeast, and if it had not been so much stronger than forecast we would have been able to sail right through it. As it was, the southwest winds on the back of that last low carried us to the trade winds with only a minimum of motoring. When we couldn't go north, we went east, so that by the time we reached the trades we were able to enjoy a very comfortable reach the last few days into Raivavae.

We ended up spending more than a quarter of our time with the wind forward of 45° apparent on what we had worked hard to make a downwind and reaching passage. And though we had a lot of light winds, less than 10 knots more than a third of the time, we also had apparent winds over 28 knots 13 percent of the time, the highest of any passage we have ever made. As they say, the best laid plans of mice and men...