

undercurrent

The Private, Exclusive Guide for Serious Divers

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Fernando de Noronha, Brazil

unique diving, better than Caribbean prices

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Dear Fellow Diver:

Remote. Isolated. A protected marine park. Reasonably inexpensive. The possibilities excited me. Then, when I heard "Fernando de Noronha" rolling lyrically off the tongues of those who properly pronounce it -- they roll the r's and pronounce the "nh" as the "n" in El Niño -- I was hooked. It's the only inhabited island in an archipelago 120 miles off the Brazilian Coast, four degrees south of the equator. Mention it to a Brazilian and you'll receive knowing smiles. Mention it to anyone else and expect to answer some questions.

As if its remoteness weren't protection enough, its waters and wildlife are well-guarded by the Brazilian government. Development is severely limited. They closely regulate fishing. It's even against the law to dive, snorkel or swim with the resident pod of some thousand spinner dolphins, although you can take a boat tour to see them on or just under the surface. The government regulates the number of tourists on the island, partially through a unique tax system. Pay \$65 US/person for a week's stay, \$170 for two weeks, and about \$800 for a month. The longer you stay, the more you pay per day. Obviously, the government cares more about preserving the ecological integrity than about expanding the economy. So, not many foreign tourists visit the island and the few who do are mostly Europeans. Most visitors are Brazilian, vacationing from the big cities of Sao Paulo or Rio.

The place to stay is in one of the hundred small pousadas, essentially B&B's. Most are very comfortable, while a few are first class. After one day at a bad hotel, which has since closed, we moved to Pousada Ze Maria. The owner, Ze Maria, was a kind and generous host, keeping four



clean and comfortable rooms in a small wooden house surrounded by lush tropical vegetation with beautiful views of the island's spectacular natural beauty. From the pousada's wrap-around porch, we looked in one direction at a valley with distant hills and the Atlantic Ocean visible in the background. In the other direction, beyond rolling fields, a massive volcanic rock jutted a hundred feet above a lushly forested hillside, towering above us like some huge, prehistoric monolith. The small air-conditioned bedrooms had plenty of closet and drawer space. The large, comfortable, common living room, complete with a well-stocked honor bar, opened into the dining area where we

dined with other guests at a large table with Ze Maria sitting at the head. His permanent smile lines and kind eyes set the tone for employees and guests alike. Though he and his staff spoke practically no English -- and we spoke absolutely no Portuguese -- I can't remember ever feeling this level of hospitality anywhere else. (A new pousada, the Dolphin, has a swimming pool with a nearby bar, a sauna, restaurant and English-speaking personnel.)

Resident chef Roberto prepared three elegant meals daily. Brazilian breakfasts featured meats, cheeses, fresh fruit, and coffee. Lunch and dinner were real events, with several main courses served family style. Entrees of fish, beef, or chicken, prepared with succulent and subtle sauces or simply grilled, were complemented by a variety of vegetable and rice concoctions. They provided fresh juices and soft drinks. Beers, bottled mineral water, and liquors were stocked in the honor bar.

Yet why come to Brazil for the diving? Because it's a refreshing change from the Caribbean. Jagged, dramatic boulders, all thoroughly encrusted in extremely colorful sponges, algae, and hard coral, dominate the underwater landscape. On a typical dive, I saw large schools of black margates, Bermuda chub, and smallmouth grunts, as well as conies, barracuda, Spanish hogfish, brown chromis, sergeant majors, parrotfish, stingrays, jacks, spotted goatfish, scrawled filefish, French and queen angelfish, blackbar soldierfish, cocoa damselfish, and long-spined squirrelfish. About half the dives

Bahamas Rogue Downwellings

While aboard Blackbeard's *Sea Explorer* in the Bahamas on a cruise beginning April 28, I witnessed the rescue of several unfortunate divers caught in a nasty downward current.

It was a horrible, rainy and cold cruise, the worst possible conditions for Blackbeard's accommodations. We all bit our lips and did what we could to enjoy the diving.

When we arrived at our next site, we found divers scattered everywhere on the surface. As the crew of another Blackbeard's boat, the *Pirate's Lady*, struggled to get an unconscious diver up the ladder; our skipper, Steve Clark, immediately recognized the problem and quickly maneuvered the boat to recover divers from the ocean. They waited on our boat while first aid was administered to the unconscious diver on the deck of *Pirate's Lady*. A half dozen divers got dragged down by a current as far as 200 feet. Three divers had to be evacuated from Bimini to the chamber and medical facilities in Miami.

One diver told me that he got pulled to 175 feet and had to make a rapid ascent from that depth. He was later evacuated with mild DCS symptoms. Later I talked with Blackbeard's about the fate of the unconscious diver. She had suffered a mild heart attack and fully recovered.

We dove the same site 30 minutes after recovering the others. I saw huge turtles and a reef shark doing figure eights over a section of wall that jutted over the drop off. As I felt a light current running down a chute on the wall, our group of 15 divers completed the dive unscathed.

Bruce Purdy, the owner, said he once experienced a similar current, though apparently not as strong, on another dive during November. He found that both times a strong northeast wind had prevailed for several days and the tide was going out. He said he will advise his captains to avoid the drift dive on this wall off Bimini when the rare northeast wind is a factor. They will also brief divers on the potential of encountering a downwelling and instruct them on how to swim out of it if necessary.

Jim Walls

I saw nurse and reef sharks. I spotted several green turtles, spiny and slipper lobsters, banded coral shrimp, several crabs, and octopuses. Other divers saw a couple of manta or mobula rays. The waters are alive, and though there may be fewer species than at many Caribbean dive locations, the quantity of fishes, as well as the average size, far surpassed most Caribbean locations. I have rarely seen so many large schools of chub, and I've never seen such large schools of grunts. Wide-angle opportunities abound between the beautifully encrusted rock formations and the large schools of fishes, but there were always many small critters and interesting little scenes calling for close-up and macro lenses. Visibility varied from 40 feet to well more than 100 feet, water ran about 82 degrees in May.



Atlantis Divers' Cat

Noronha's three dive operators share the same dock. Atlantis Divers, Agua Claris, and Noronha Divers each run two-tank morning and afternoon trips and travel any night with enough guests. If one has the stamina, four to five dives a day are possible. All the operators provide aluminum 80's and Nitrox on request. Both Agua Claris and Noronha divers can accommodate Trimix fills, using either twin-80's or big, fat, steel 96's rigged with dual regulator valves. They required c-cards as well as a signature on standard liability waivers, then you're off to dive, with no checkout required. (The waivers were in English and the guides spoke enough English so I always knew the drill.)

I dived one day with Agua Claris and though their older, wooden boats were without heads or camera rinse tanks and sport flimsy ladders, I had a great day of diving. Although the boat could hold a dozen divers, there were only seven. All Noronha dive operators require buddy diving, so I buddied with Caio Borghoff, an instructor, who proved to be an excellent diveguide and companion.

My other dives were with Atlantis Divers, which has two new, well-maintained, roomy catamarans, each with a head, camera rinse, and two solid ladders. Their boats hold about two dozen divers and a half dozen staff. Diving is in small groups, avoiding a cattle-boat feel. The staff is helpful, friendly, and competent, calling roll by name to insure all divers are aboard. When one guest got seasick, they returned to port to drop her off between dives. While sometimes the water was calm and flat, other times there was a moderate current or surge. Whenever the plan called for a trip to turbulent waters, the crew generally offered an alternative at a calm and sheltered site. The guides kept divers of similar skills together, planning the dives carefully so no one had to wait long to be picked up. Buddies could stray from the group, but they strictly prohibited solo diving. They point out any interesting critters they find along the way.

Pedras Secas (or Dry Rocks) was a drift dive among colorful boulders strewn along a jagged underwater cliff. Swells of 4-6 feet created a surge as deep as 40 feet. Here, thousands of smallmouth grunts congregated with other species, all milling about amid dramatic piles of sponge-encrusted boulders that formed a labyrinth of pathways, making this a very special dive.

At Cabeço da Sapata, the entire dive took place around one pinnacle. At the bottom of the rock -- about 110 feet deep -- several 6-8 foot reef sharks patrolled the depths, warily maintaining their distance. I shot images of colorful rocks and clouds of grunts and chub, looking up the rock face toward the sun above. Slowly I circled the rock as I ascended, passing fish and critters along the way. I finished

the dive near the pinnacle's peak, where the sun highlighted huge clouds of grunts, chub, parrotfish, conies, and angelfish rocking in the surge. At the surface, the water boiled from the force of the crashing waves. The boat pulled up a few fin kicks from the rock, allowing an easy and effortless end to the dive.

Another classic Noronha dive is deep and not for everyone. The wreck of the Corveta lies upright in the sand at 200+ feet, with the deck at 185 feet. It can be dived on air or Trimix, depending on one's training. Guests diving air used special steel tanks fitted with dual valves for redundant first stages. Atlantis Divers supplied a ScubaPro first and second stage for backup so each diver had two independent reg sets. Highly trained technical divers escorted two or three divers at a time. While bottom time is only 15 minutes, I stayed down 45 minutes to complete decompression. On my first dive to the Corveta, I saw a huge Jewfish -- a.k.a. Goliath Grouper -- hanging around the bow-mounted 40-millimeter deck gun. After he posed for several shots with the wreck and my guide in the background, I took a quick tour of the pilothouse. The ship radio's microphone still dangled on its coiled cord, tempt-

ing me to radio the boat for a few more tanks so I could extend our stay. The wreck was covered in red and orange encrusting growths and swarming with brown chromis and blackbar soldierfish. The 15 minutes went all too quickly, although it was not difficult to use up an entire roll of 36 exposures in the brief time.

When I was not diving, I visited several exquisite sparsely peopled beaches. Transportation around the island is by small cars, like golf carts, which rent for \$30/day. For another \$30 you can get a driver. My wife spent most of her days either relaxing and reading at the pousada, or touring the island with a driver to take photographs. The scenery is spectacular, with rugged volcanic rock formations, tropical forests, gorgeous beaches and scenic mountains. Shopping is limited and the nightlife is nonexistent, so restaurant hopping is the entertainment. While I found it difficult to leave the wonderful fare and hospitality of Ze Maria, I enjoyed the Tartarugao Boldro with its excellent steak and seafood dishes, served on flaming platters. I also enjoyed the Restaurante Ecologico, known for its lobster and octopus. At the

When Your Dry Suit Will Double As Day Wear

Coming soon: forget that change of clothes.

If there's one thing James Bond didn't have, it was decent amphibious — wet and dry — clothing. Just think of all the times he clambered out of water and in

dive gear, only for the bad guys to get a head start while he struggled to get into dry clothes.

Now the US Army's Soldier and Biological Chemical Command Lab in Natick, Mass., has come up with an answer: a dry suit you can wear comfortably out of the water. The amphibious suit is designed so US Navy SEALs can get out of the water ready for action in lightweight garb.

In the water, the dry suit performs like any other, keeping the wearer warm by preventing water from reaching the skin. But once out of the water, the structure of its novel three-layer membrane changes to let perspiration escape, so the wearer doesn't become overheated and have to change into dry clothes.

Navy SEALs are now testing the suit for general comfort and warmth in a range of water temperatures and pressures. It will be at least a couple of years before the suit is ready for use, says Quoc Truong, program manager at the Natick lab, but after that it won't be long before it finds its way into civilian life.

"Compared to a dry suit, it will be a bit heavier because we wanted to use a durable fabric," says Truong. "But it's still very light." And SEALs won't have to lug around an extra set of dry clothes.

So how does it work? The suit consists of a polyurethane-based shape-memory polymer layer, sandwiched between a laminated low-drag stretchable outer fabric and a heat reflective insulation layer on the inside. The transition temperature of the polymer membrane is predetermined; between 55-65 degrees F it has a dense molecular structure that stops water molecules from passing through it. When the temperature rises to between 65 and 80 degrees F, the material softens and becomes more amorphous, so sweat molecules can pass through it.

The suit is also impervious to urine, says Truong. On land, wearers can relieve themselves by way of a zipped opening that reaches from the shoulder to the groin, but in the water, SEALs would have no alternative but to pee in their suit. Truong is confident that the acid in urine will not rot the new suit's material and hamper the diver's activities.

New Scientist, March 31, 2001.

