

Coral revival in Bonaire

Carol Marzuola, a long-time NAUI diver now training as a Sports Diver at North Glos BSAC, visits an unusual conservation project in a Caribbean shore-diving paradise

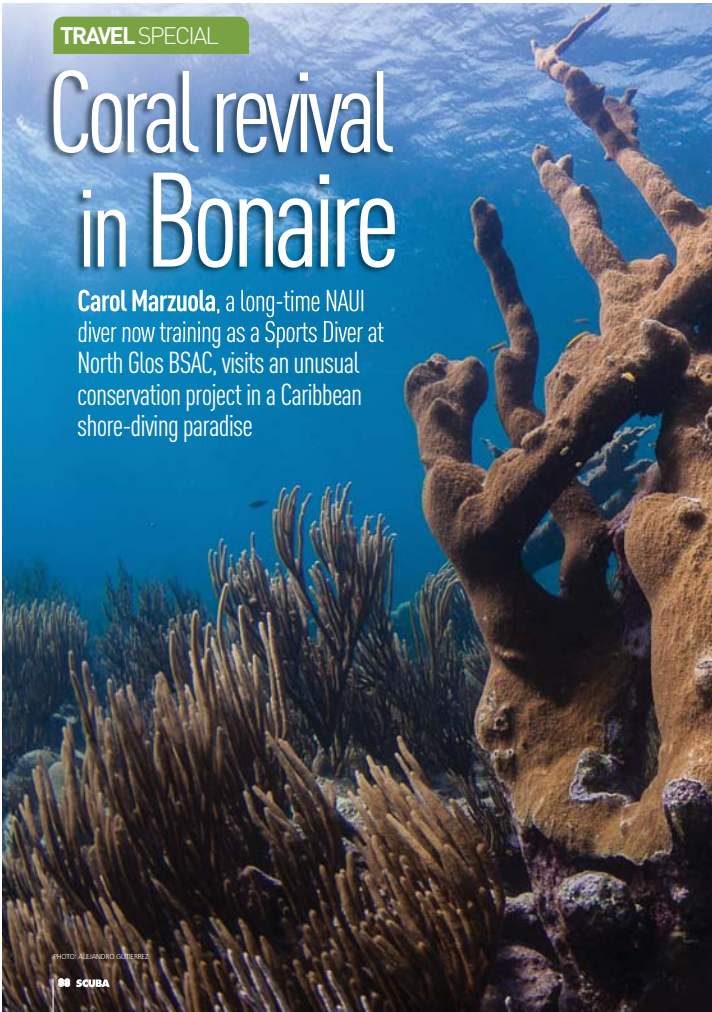


PHOTO: ALEJANDRO GUTIERREZ



Below: Old stand of elkhorn coral among sea rods at Red Slave



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Above: Cultivated staghorn thicket is shelter to striped grunts, lane snappers and a juvenile French angelfish, Torus Reef in west Bonaire

Before the turn of the millennium, Bonaire was relatively unknown, tucked away in the southern Caribbean where few international flights ventured. But as a child of American parents living close by in Venezuela, we visited frequently. Despite moving to Britain as an adult, I still make it back there every now and then for the seemingly unlimited shore diving. A memorable excursion during those early days was to Nukove, in the island's remote north-west. We threw our cylinders and kit into the back of a rented pick-up and drove down a dirt and gravel road along the coast, passing wild donkeys along the way. We stood on an ancient marine terrace among tall cacti and 'divi divi' trees and perused the beach entry.

Coral recovery

Francesca Viridis, director of Bonaire's Coral Restoration Foundation (CRF), thinks natural recovery by spawning or fragmentation in areas near development, pollution and runoff is "almost impossible". She points to the shallows off Buddy Dive Resort, where a field of loose sand and rubble left by storms is still a visible scar. The substrate is not stable enough for larvae to settle or broken pieces of coral to grow and build. So, CRF has set out to help things along. In 2012, Stinapa (Bonaire's park system) allowed CRF to snip small pieces from 10 different wild colonies of staghorn and elkhorn, which today form its rootstock. At Buddy Reef, they hang the clippings on suspended trees in 15m of water, free from smothering sand and predators.

Dangling staghorn grows six to eight times faster (2.5 cm/month) than its wild counterparts. In only eight months, pieces grow big enough for divers to transplant them to restoration sites, where they tie them down onto bamboo squares anchored in the sand. The fragments eventually fuse together to form thickets. The final goal is for the different coral genotypes in the thicket to spawn naturally and mix their genes.

At any time, 9,500 coral fragments hang in one of five nurseries managed by different dive operators. As a volunteer, I visited the biggest nursery of 30 trees at Klein Bonaire, a secluded nearby island. Since starting, CRF claims to have transplanted 10,000 pieces onto 10 restoration sites.

PHOTO: ALEJANDRO GUTIERREZ



Above: Staghorn clippings growing in Bonaire's largest coral nursery, Klein Bonaire
Below: After six to eight months, staghorn pieces are transplanted onto bamboo quadrants to fuse together

PHOTO: ALEJANDRO GUTIERREZ



PHOTO: CAROL MARZUOLA

There was so much hard coral in the shallows that the only way out to the deeper fringing reef was a narrow pathway cut by divers. We could easily see it from land, but a local had warned us to mark its position from open water before descending to avoid problems returning to shore. It was good advice.

Back then, staghorn and elkhorn colonies grew right to the water's surface on most of Bonaire's leeward side. Bonaire's location below the hurricane belt had a lot to do with it, as a significant storm hadn't struck in more than 100 years. But after our early visits, two strange hurricanes, Lenny in 1999 and Omar in 2008, formed below the belt. They didn't actually hit the island but generated waves and surges

that wiped out or smothered pristine, centuries-old stands of shallow coral like those at Nukove.

Fortunately, the storms left the deeper, fragile ring of coral surrounding Bonaire relatively intact, its east side barely scathed. Other Caribbean islands have lost as much as 60 per cent of their coral due to disease, bleaching and human activity. Despite natural events, Bonaire's reefs seem to be faring much better.

In recovery

Many divers today don't know about Lenny or Omar; they've grown accustomed to swimming over barren sandy plateaus to the drop-off of the fringing reef. But those of us who do remember think a coral renaissance is underway in the shallows. "It's coming"



● Above: Drift diving over gorgonians and soft corals, Lighthouse
● Below: A longlure frogfish yawns, possibly for defence, Klein Bonaire

back. And it's exciting to watch," Linda, from Bruce Bowker's Carib Inn dive resort, told me during our February trip.

Coral regeneration is really noticeable in areas away from development. As we suited up at Red Bery, south of Bonaire's iconic solar salt flats and Salt Pier, we looked for the giant parrotfish that we've recently seen foraging on algae growing on the coral that hugs the shore. Having dropped to 20 metres along the fringing reef, we started our return in the shallows, where soft corals better adapted to withstanding storms dominate. At 5-10m, we found fresh, healthy outcrops of staghorn mixed with gorgonian fans, rods and plumes and rope and tube sponges.

Nearby between the Rock and the Invisible dive sites, we also found little sproutings of staghorn, along

with fire and brain coral on the wider, sandy plain, where small sponges, anemones and sea plumes dotted the sand and rubble. A school of palometa and houndfish swam overhead. On separate dives, we bumped into juvenile green turtles and caught a reef squid laying eggs in a crevice of brain coral.

Dives here rarely disappoint. We once spotted a massive adult hawksbill turtle, and on this trip, we saw a longsnout seahorse deeper on the reef. In between two reefs separated by a sandy channel – characteristic of these southern dive sites – we found our favourite garden eels in 25m.

In the hillier north, previous storms had considerably more impact on the hard coral. Nonetheless, we found fresh healthy outcrops of wild staghorn, housing trumpetfish and parrotfish, at 1,000 Steps. On a La Dania-Karpata drift dive, the shallow corals – including staghorn, elkhorn and pencil coral – were remarkably vibrant, some of the best we've seen. Dropping down below 10m, we enjoyed the vertical wall that drops to 35m and beyond. We ended the dive with a peacock flounder and two juvenile green turtles in the shallows.

A dive on the wild side

We decided to break away from the 'swimming pool', as some locals call Bonaire's leeward side and explore its wild, eastern side. Prevailing easterlies pound the coast and you really need to know the entry and exit points or you risk getting carried off by the current or raked over shallow corals. For that we'd need Bas Tol – a Dutchman and east-side, shore-diving guru – to guide us.



First, we drove to the northern, more remote side of Lac Bai, a large inlet filled with mangroves, conches, flamingos and sea turtles. The plan was to swim out towards the barrier reef enclosing the bay, drop down and swirl around a dive site known as Cai.

Our dive, no deeper than 15m, lasted 92 minutes and we saw more marine life than on our previous dives combined. Where we'd see perhaps a few tarpan on a typical west-side dive such as the Hilma Hooker wreck or Cliff, here we saw a school of 20 to 25 of them in the Tarpon Pit. Here at Cai, there were lobsters fighting for space, two or three to a hole. We came across ocean-going fish such as barracuda and triggerfish along with nice-sized Cubera snappers, yellowtail snappers, rainbow parrotfish, green morays, black durgons, grunts, aggressive little sergeant majors, schools of creole wrasse and a field of gorgonian fans and boulder coral.

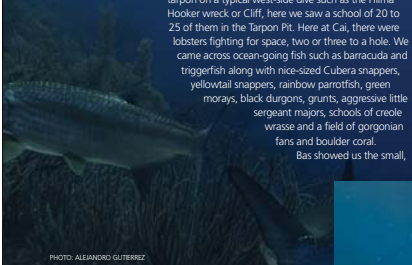
Bas showed us the small,

rarely seen stuff too: juvenile queen angelfish, tiny baby spotted drums and black ribbon brotula. Bas casually speared any lionfish he saw, as he used currents and surf to move us around and save energy and air. They are invaders here.

Turtle city

Sea Turtle Conservation Bonaire told us that most of the 2,500 green, hawksbill and loggerhead turtles found around the island hang out in and around Lac Bai, on the east coast, where they feed on sea grass. Every morning they migrate out to rest on a shallow sandy plateau known as Turtle City.

We went out with Bonaire East Coast Diving, the only regularly scheduled boat operation. They take 10 divers a day on their RIB. After an excellent brief, we drift dived at Funchi, where we saw spotted eagle



● Above: Tarpon cruising over fringing reef, Red Slave
● Right: Adult loggerhead turtle, west Bonaire
● Below: Adult green turtle blends in at Turtle City, east Bonaire



● Below: A giant fire worm hunting on plume coral



● Top: Yellowfin tuna hunting needlefish, Calabas Reef, west Bonaire

● Above: Algae on mature 1.5m loggerhead turtle, west Bonaire

© Right: Natural staghorn coral is a refuge for the wary Caribbean reef octopus, Klein Bonaire

rays, big groupers and large shoals of scad and black drum.

Turtle City was next. As we drifted over a seascape dominated by sea fans, we began to spot turtles camouflaged under coral ledges. Slightly wary, they would move off as we approached. They were everywhere and you could turn around and see four or five rising at a time. Just as I was thinking it was like a turtle minefield, an adult green turtle left its resting area right underneath me. The dive ended spectacularly over fingers of hard and soft coral reef reaching out into the blue.

We think we saw at least 50 turtles. A few days later, a friend on a turtle survey said they counted 63. Seeing adults was a delight, as we usually only see juveniles on the west side. Turtle City is indeed a special and aptly named place, a perfect combination of habitat, depth and abundant food.

Hope and nostalgia

We were newcomers in the 1990s, but a generation of divers before us was already living on the island and reminiscing about the good old days. I was lucky to hear the pioneering Don Stewart talk about the 1979 establishment of Bonaire's marine park. Captain Don has since passed away, but reminders of his legacy – and a few of his friends – are still around.

We hope that they, along with a legion of dive professionals still so committed to protecting Bonaire's reefs. Deepened ties between the Netherlands, and the island since 2010, along with woes in the Red Sea, have caused a recent tourism boom, including visiting divers increasing from 30,000 to 80,000 a year.

On a recent trip, we met several young and passionate guides, including Colombians Alejandro Gutierrez, who provided photographs for me, and Tamarise Salazar. One early morning, Tama and I drove all the way to the southern tip of Bonaire to an unmarked spot near Lighthouse, where there was not another diver or vehicle in sight. We climbed over a small ledge into the waves and surf, and for an hour we drifted along the soft coral gardens and fringing reef full of fish towards Red Slave. Our dive ended in a grove of old-growth elkhorn, a resilient and magnificent reminder of the past. ●



PHOTO: ALEJANDRO GUTIERREZ

Essentials

GETTING THERE: KLM flies from Amsterdam to Bonaire six times per week; return flights from London or Birmingham are between £600 (low season, mid-April to mid-December) and £820 (high season). Nine-day flight / accommodations packages on KLM or TUI are as low as £600 per person (not including island tax) but you must add travel to Amsterdam. **WHEN TO GO:** Visit anytime – Bonaire is warm, arid, and below the hurricane belt. Water temperature ranges between 25.5-29°C. Low season is better for offers and avoiding crowds.

DIVING: Do your own shore diving with a hire truck (£200-250 / week) or dive from boats to Klein Bonaire. Guidebooks and websites detail 100-plus dive sites. More dive operators are on the island than ever before. Most places offer air / nitrox32 at same price. Weekly (six-day) unlimited rates for cylinder hires and fills run from \$125-180. One-off rates average \$11-13 / cylinder. Large operators Dive Friends and Buddy Dive Resort have more drive-in locations. GOODive offers a slightly cheaper self-filling service. In February 2017, Bruce Bowker's Carib Inn had the cheapest tanks and air fills.

WHAT TO TAKE: 3mm wetsuit and booties with sturdy soles. Buy coral-friendly sunscreen and effective insect repellent in Bonaire.

EAST SIDE: For shore dives, contact Bas Tol (www.basdiving.com), for boat dives, Bonaire East Coast Diving (www.bonaireeastcoastdiving.com).

VOLUNTEER FOR CORAL: Take a one-and-a-half-day / three-dive course (£180) and learn how to hang, transplant and maintain a coral garden (www.crfbonaire.org)

ACCOMMODATION: Options range from budget rooms (£370) to resorts (£3,000) for two-person, nine-day stay. Inclusive dive / drive packages are available. Larger groups (four plus) can hire a villa starting at £800 / week during low season.

EATS AND TREATS: Food is getting fancier; spend on gourmet, lionfish sandwiches or save by staying in a self-catering let.

TOPSIDE ATTRACTIONS: Remote and scenic Washington Slagbaai National Park is well worth a visit if you have a vehicle. Or go kite-boarding, wind surfing, snorkelling, bird-watching, hiking, mangrove tours, kayaking and bicycling.