



Cape Verde

Diving the Barlavento Islands

Text and photos by Pierre Constant



The cliffs on the northern coast of Santo Antão Island (above); Peaks above Coculi, Santo Antão Island (previous page)

Located in the central Atlantic Ocean, off the westernmost point of Africa, Cape Verde is an island country made up of an archipelago of ten volcanic islands. Pierre Constant shares his adventure diving, hiking and trekking in the rugged northern group of isles called the Barlavento Islands.

It was a long full-day trip to the Cape Verde Islands. The TAP Air Portugal flight left Paris in the late morning for Lisbon, with a six-hour stopover,

before I could catch the connection to Sal Island at 9 p.m. Fortunately, I managed to sneak into the TAP transit lounge, which made the waiting time somewhat more pleasurable, with food, drinks and internet access!

The plane landed at Amilcar Cabral International Airport well after midnight. Needless to say, I was tired out. The fact that no one was waiting for me upon arrival came as a bad surprise. There was no other option but to take a taxi to the town of Santa Maria. At the hotel, the night watch called the manager, so he could come and check me into a room. "I was expecting you tomor-

row," he confessed, with a mischievous smile. *Gosh!*

A horse-shaped cluster of islands, Cape Verde is a volcanic hotspot, born of the Atlantic Ocean, which lays between 600 and 800km from the coast of Senegal—more precisely, from the tip of Cap-Vert, the westernmost point of western Africa. Located between 17°07' N latitude and 25°17'10 W longitude (Santo Antão), and 14°93' N latitude and 24°38'30 W longitude (Fogo), it consists of ten islands and eight islets, comprising a total land surface of 4,033 sq km. Part of the Macaronesia ecoregion (Azores, Canary Islands

Rough seas in Sal Rei, Boa Vista (above); *Moravia doctorfish*, blackbar soldierfish and yellow cup coral in cave at Tres Grutas dive site (top right); Osprey in flight, with its catch, at Boa Vista Island (centre inset)





CLOCKWISE FROM ABOVE: Fishing boats at the beach in Mindelo, São Vicente Island; Cape Verde lagoon sparrow, *Passer iagoensis*, endemic bird of Santo Antão Island; Volcanic landscape of Vale de Paul, north-eastern Santo Antão; The fort on a rocky islet in Mindelo; Brightly colored houses in Coculi on Santo Antão Island; Black-winged stilt, *Himantopus himantopus*, at Sal Rei, Boa Vista Island

- The southern Sotavento (or Leeward) Islands of Maio, Santiago, Fogo and Brava.

The islands lie on a bathymetric swell known as the Cape Verde Rise. The rise is bounded by the Canary Basin to the north and the Cape Verde Basin to the south. Numerous seamounts are located on the rise. The waters above the Cape Verde Rise constitute the Canary Current, flow-



ing to the southwest. The waters south of the Cape Verde Rise are from the North Equatorial Current. At the eastern end of the rise is the Dakar Canyon,

900km long, between the 14° and 22° parallels.

Geologically speaking, the oldest rocks, east of the rise, would be between 180 mil-



and Madeira), the islands are divided into two groups:

- The northern Barlavento (or Windward) Islands of Santo Antão, São Vicente, Santa Luzia, São Nicolau, Sal and Boa Vista.



Terraces in Alto Mira, northwestern Santo Antão Island (above); Cape Verde sparrow, *Passer iagoensis*, eating Aloe vera flowers (left)

years ago. Most geoscientists agree that the archipelago is fed by a mantle plume, which is responsible for the volcanic activity. A substantial uplift has been noted in the upper mantle. Petrological evidence indicates a deep mantle source. Volcanic and plutonic rocks are distinctively basic in their chemical composition.

The oldest islands are to the east. The largest active volcano, Pico do Fogo, at an elevation of 2,829m, erupted in 2014, resulting in an 8km-wide caldera.

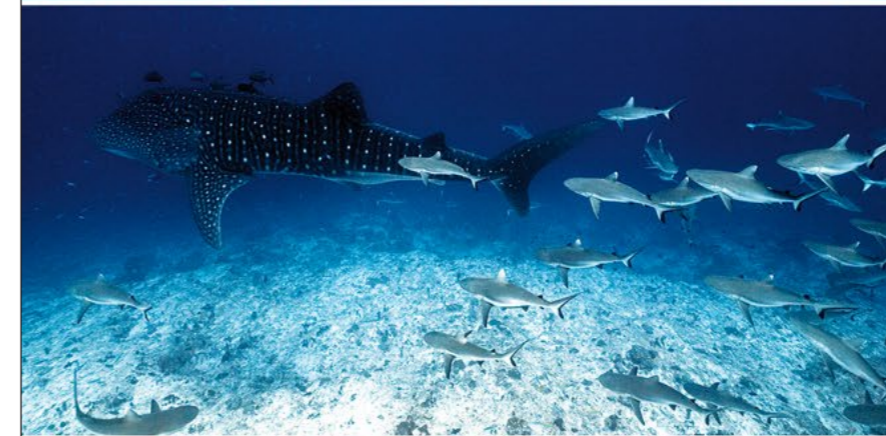
History

Uninhabited until the 15th century, Cape Verde Islands were

discovered by Genoese and Portuguese navigators around the year 1456. Genoa-born Antonio de Noli was appointed governor by Portuguese king Afonso V. Portuguese settlers landed on Santiago Island and founded Ribeira Grande. In the 16th century, the Atlantic slave trade gave prosperity to the archipelago, attracting the interest of pirates.

English privateer Francis Drake sacked the capital twice in 1585. Following an attack by French pirate Jacques Cassard in 1712, the capital was changed to Praia on Santiago Island in 1770. The end of the slave trade in the 19th

lion and 150 million years old. However, the islands would have been volcanically active between 15 million and 7 million



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The salt lagoons of Santa Maria, Sal Island (above); "Kite Beach," a place for kite surfers in Santa Maria (top left); Souvenir shop in Santa Maria (top right); Dog and street art in Santa Maria (right); Mural of a wave, in Santa Maria (centre)

century brought about an economic crisis. But the port of Mindelo, on São Vicente, became an important commercial centre. Aboard the HMS *Beagle*, Charles Darwin made his first stop here in 1832, while on his round-the-world journey.

Despite the change of status from a colony to an overseas province of Portugal in 1951, a growing discontentment amongst the locals led Amílcar Cabral to create the clandestine African Party for Independence

of Guinea and Cape Verde Islands (PAIGC) in 1956. It became an armed rebellion against Portugal.

Portuguese Guinea declared independence in 1973. Despite the assassination of Amílcar Cabral the same year, his half-brother achieved his goal and Cape Verde became independent in 1975. Jose Maria Neves was sworn in as the new president of Cape Verde on 9 November 2021. The democratic republic was praised for its stability.

Sal Island

Following an almost sleepless night, I woke up in Santa Maria. Sal Island is desperately flat, deserts and sandy, with a number of *salinas* or salt lagoons in the southern part. Any trace of volcanoes is absent, for Sal is already a very old island, unlike its younger neighbours to the west.

The town is a collection of hotels, five-star resorts, restaurants, bars and souvenir shops. In the outskirts, it looks like a depressive unachieved





Blackbar soldierfish, Atlantic glasseye, European parrotfish (above), and tiger snake eel (left) at Tres Grutas

Diving

I found the dive centre on the beach, five minutes down the road. The cool-looking “rasta” fellow, sporting a hairdo of bleached locks, greeted me with a warm smile. “No stress!” he beamed, after I started asking all sorts of questions about the boat and logistics. I would be diving tomorrow, first thing.

Twelve-litre steel tanks were used with the DIN system, but opercula (converters) were provided if necessary. The banana boat was minimalistic, with no benches, no sitting area, with standing area only on the sides. South of Sal, the ocean was choppy, with a bit

of wind and waves, and the expected water temperature was 21°C (in February). “Not the best season!” I was told. Never mind, my 5mm wetsuit would do, but the dive centre even provided 7mm wetsuits.

Tres Grutas. We were off to the Tres Grutas dive site, five minutes away. Today, I was the only one on board. Two other dive boats were already on location, and we tied up to the last one. Dive guide Wilson and I hopped into the water against the current, making our way towards the bow of the first boat. As I caught my breath, we followed the mooring line



Atlantic glasseye, *Heteropriacanthus cruentatus*, at Tres Grutas (above); School of blackbar soldierfish, *Myripristis jacobus*, at Tres Grutas (top right)

construction site—not really my expectation of a tropical island paradise. It is all commercial for sure, catering mainly to elderly Europeans and families on a holiday.

The streets are paved, adding some local charm to the eccentric collection of buildings—a mix of old and new, as well as many ugly local houses of cement blocks.





Roughbar frogfish, *Fowlerichthys senegalensis*, at Ancora

down to the bottom at 18 metres. The visibility was poor, and the dull rocky bottom was totally uninspiring.

Wilson led me along a ledge, checking overhangs with his torch. Soon, I noticed the abundance of blackbar soldierfish (*Myripristis jacobus*) and the odd Mediterranean parrotfish (*Sparisoma cretense*)—the female was red with a pretty yellow patch on the tail base. A school of yellow-banded goatfish passed by.

The small caves at the site were a haven for trumpetfish. These were decorated by lots of attractive yellow-cup corals, which literally carpeted the walls. There, I encountered the magnificent Monrovia doctorfish

(*Acanthurus monroviae*), a grey surgeonfish with a round golden dot on the scalpel-like spines of the tail. The Atlantic glasseye (*Heteropriacanthus cruentatus*), which was speckled red and silver, completed the picture, with a number of red squirrelfish.

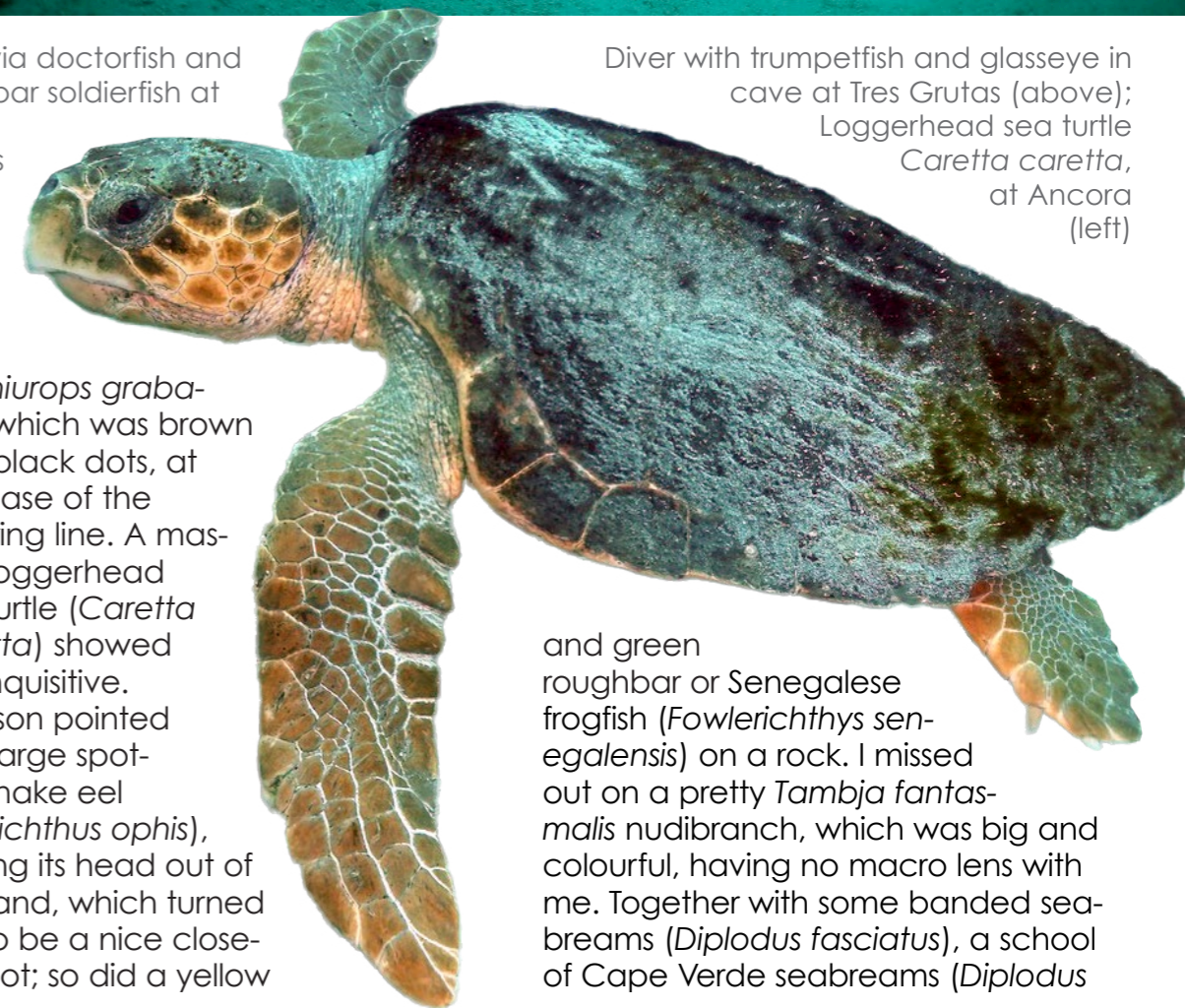
My dive lasted only 39 minutes; I realised that I needed 2kg weight. On top of it all, I was shivering. The one-hour interval time was hard to negotiate, as Wilson wanted to go again after 20 minutes, but I refused.

Ancora. The dive site of Ancora was rather similar, with a succession of short terraces descending into the deep. I fell upon a round fantail stingray



Moravia doctorfish and blackbar soldierfish at Tres Grutas (left)

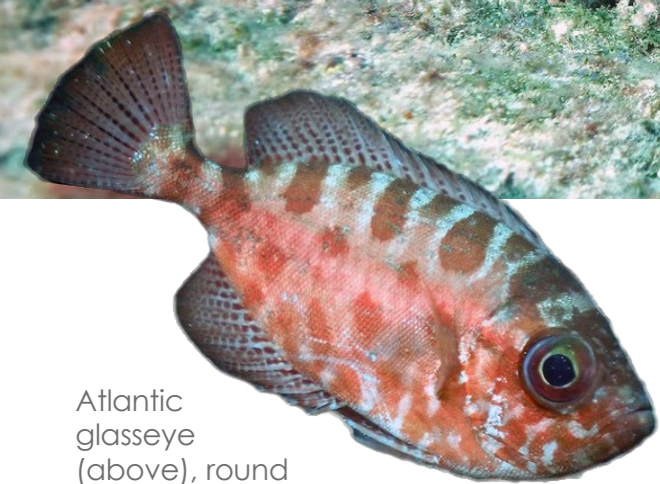
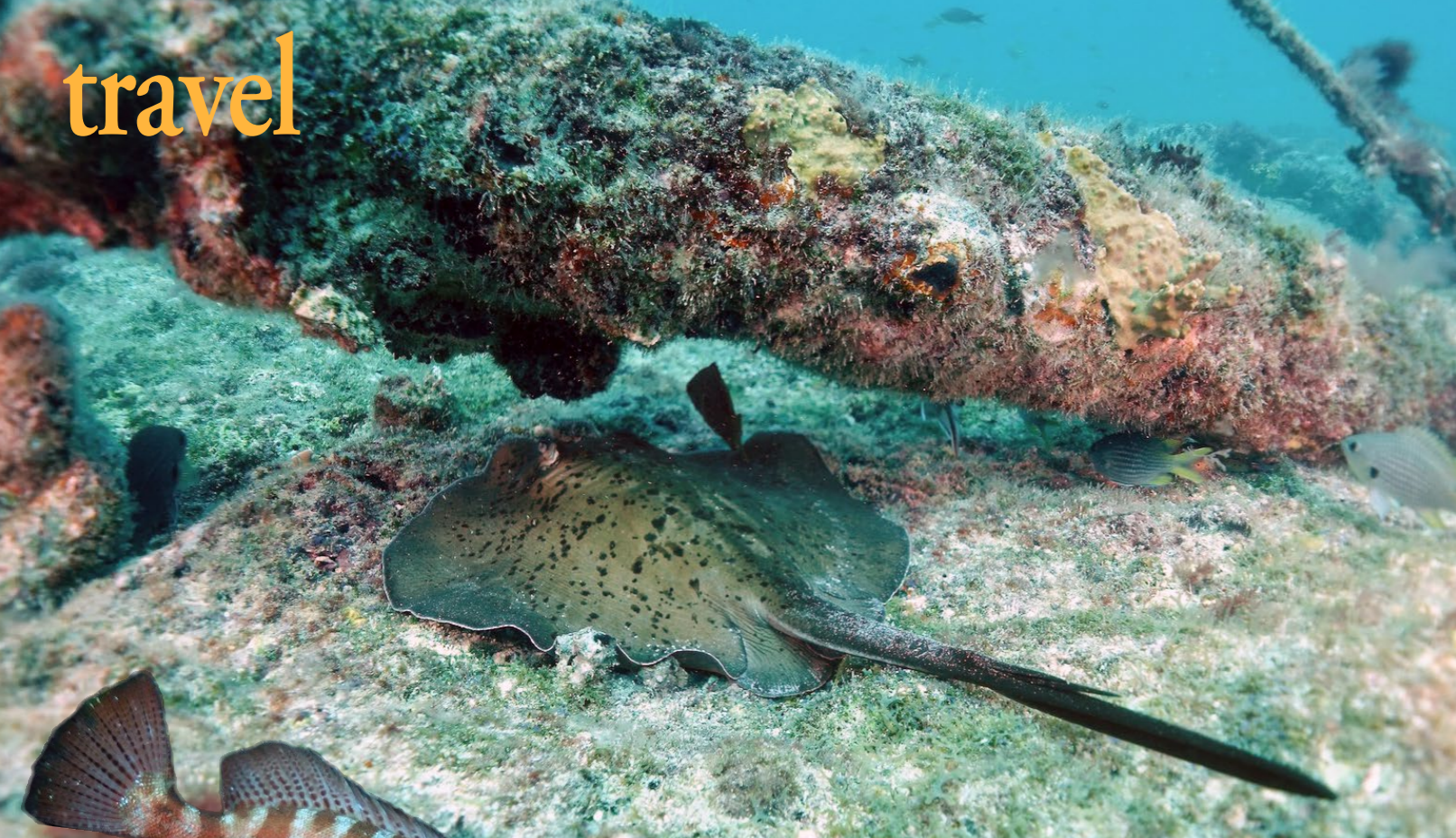
Diver with trumpetfish and glasseye in cave at Tres Grutas (above); Loggerhead sea turtle *Caretta caretta*, at Ancora (left)



(*Taeniurops grabatus*), which was brown with black dots, at the base of the mooring line. A massive loggerhead sea turtle (*Caretta caretta*) showed up, inquisitive.

Wilson pointed to a large spotted snake eel (*Ophichthus ophis*), sticking its head out of the sand, which turned out to be a nice close-up shot; so did a yellow

and green roughbar or Senegalese frogfish (*Fowlerichthys senegalensis*) on a rock. I missed out on a pretty *Tambja fantasmalis* nudibranch, which was big and colourful, having no macro lens with me. Together with some banded seabreams (*Diplodus fasciatus*), a school of Cape Verde seabreams (*Diplodus*



Atlantic glassfish (above), round fantail stingray, *Taenirops grabatus* (top left), and spotted snake eel, *Ophichthus ophis*, in the sand (right) at Ancora dive site

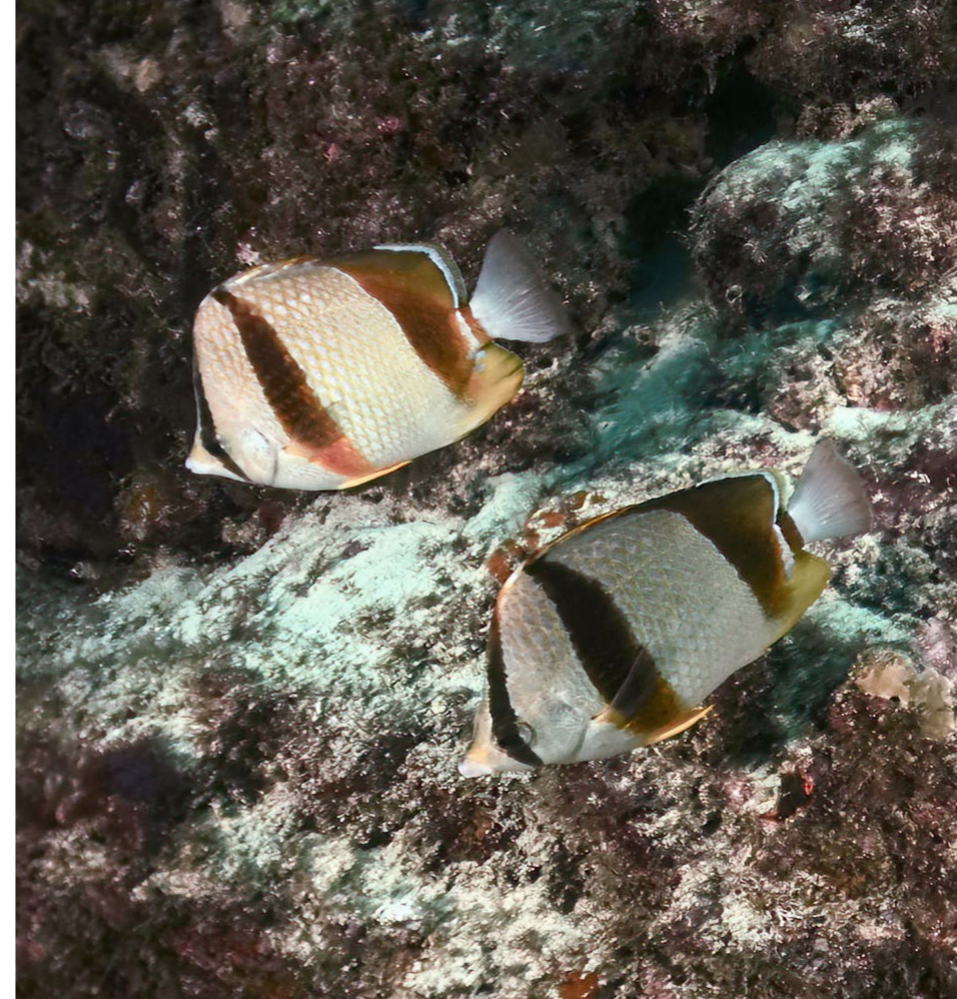


lineatus)—both were endemic to the archipelago—moved along the short wall like a wave. A cute soapfish (*Rypticus saponaceus*) rested placidly on the bottom, while a scrawled filefish cruised shyly overhead. The three-banded butterflyfish (*Chaetodon robustus*) reminded me of the species found in the Galápagos, although with different colours. I was in awe with the African hind (*Cephalopholis taeniops*), a reddish grouper with tiny blue spots. Unfortunately, I could not recognise the Guinean parrotfish (*Scarus hoefleri*), an endemic species, often found on one's dinner plate here—a local delicacy known as *bedion*.

Pontinha. The next day, the sky was overcast, with overall grey weather. There was even some rain, which was not very inviting for diving, but I forced myself to go. "It is very rare in this season," confided the old, white-haired dive shop owner. There would be four divers on board. Ben, the dive guide, was a big Cape Verdian



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African angelfish, *Holacanthus africanus* (left), and three-banded butterflyfish, *Chaetodon robustus* (above), at Pontinha

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fellow, male-sealion-sized.

We headed to the Pontinha dive site near the “farol” (lighthouse), on the southwestern end of the island. I had a 2kg weight belt but did not expect to last too long.

We descended the mooring line to a depth of 18m and followed a ledge with the rocks on our right.



Blackbar hogfish, *Bodianus speciosus*, at Pontinha dive site

The visibility was not clear, and it was rather dark underwater. We encountered a few specimens of the three-banded butterflyfish and some Guinean grunts (*Parapristipoma humile*), which were whitish with a yellow tail, as well as a number of highly inquisitive *Bodianus speciosus*, also known as blackbar hogfish. Brown with black spots, the Canary drum (*Umbrina canariensis*) caught my attention, and I was glad to be able to take a shot of a West African angelfish (*Holacanthus africanus*), which was brownish cream in colour with a black

dot behind the pectoral fin.

Plunging a bit deeper to another ledge, a lovely honeycomb moray (*Muraena melanotis*), which was white with black dots and two little horns, was on the watch for passing prey. It posed gracefully in front of the camera.

Having signalled the dive guide, I turned around with 100 bars left in my tank and slowly headed back to the mooring line, with a strong urge to pee. Back on the boat in the cold wind, feeling miserable, I chose to quit the second dive. “It is the wrong time of the year; I do not blame you. You should come in July to August when the water temperature is 26 to 27°C,” reassured the old-timer, who has been a dive operator here for



Honeycomb moray, *Muraena melanotis*, at Pontinha dive site



Black bar hogfish (above), Canary drum, *Umbrina canariensis* (top right), honeycomb moray, *Muraena melanotis* (bottom right), and banded seabream, *Diplodus fasciatus* (left), at Pontinha

30 years.

You may argue that I was kind of a wimp to feel cold in 21°C temperature, but I am, after all, 68, you see. I recall the days when I was diving in 14°C of water, and even below, in the same wetsuit, with no problems. Time flies, I guess... “Well, you just arrived; you’ve got to tune in to the environment,” comforted the old-timer.

Ecology and oceanography

With very little rainfall, Cape Verde is part of the Sahelian arid belt. Irregular heavy downpours occur in August to October. Sal’s total rainfall of 145mm per year classify as desertic environ-

ment. Other islands, high in elevation such as Santiago or Santo Antão, receive more rainfall due to orographic lift—enough to support rainforest habitat, dry monsoon forest, laurel forest and Canary pine forest.

Being located roughly between the 15th and 20th parallel, north of the Equator in the eastern Atlantic, the archipelago is—from an oceanographic perspective—affected by two major domains: the southeastern boundary of the North Atlantic Subtropical Gyre (NASG) and by the northeastern North Atlantic Tropical Gyre (NATG). These two gyres combine as the Canary Current Large Marine Ecosystem (CCLME). The latter becomes the North Equatorial Current, flowing from the northeast to the west.

The preponderant Canary Current is a cold-water current from the north of the Cape Verde Rise; 1,500km west of the rise is the Mid-Atlantic Ridge. In many ways, the oceanographic configuration of Cape Verde Islands is similar to that of the Galápagos Islands in the eastern Pacific, except that Cape Verde is found north of the Equator and the Galápagos south of the Equator.

The zoogeographic composition of the coastal ichthyo-fauna of Cape Verde archipelago shows a predominance of Guinean species, followed by tropical-subtropical fishes of the Atlantic and several endemic species. The most recent checklist of coastal fish in Cape Verde mentions 315 species (Wirtz & al. 2013), with a





Cape Verde



"Palacio" in Mindelo (top centre); A drink at the marina (right); CV Interilhas ferry departing Mindelo for Santo Antão (top right); WWII cannon at western point of Mindelo (far right)



rate of endemism at 10,2 percent (20 species).

Forty percent of the bony fish comes from the Atlantic, 22 percent from tropical western Africa, 22 percent from eastern Atlantic, and 5.4 percent from Macaronesia (in other archipelagos of the eastern Atlantic). A high degree of endemism is found in the cryptobenthic fish of *Blenniidae*, *Labrisomidae* and *Gobiidae*.

Current endemic reef fishes of Cape Verde include Lubbock's chromis (*Chromis lubbocki*), bulldog dentex (*Virididentex acromegalus*), Cape damsel (*Similiparma hermani*), blackfish drummer or Atlantic Cabo Verde nibbler (*Girella stuebeli*), Cape Verde seabream (*Diplodus lineatus*) and Guinean parrotfish (*Scarus hoefleri*). Other endemics include Cape Verde skate (*Raja herwigi*), Cape Verde

mullet (*Chelon bispinosus*), *Platybelone lovii* needlefish, banded seabream (*Diplodus fasciatus*) and Praya or two-banded seabream (*Diplodus prayensis*), Cadenat's sole (*Pegusa cadenati*), Barbel clingfish (*Apletodon barbatus*). Cape Verde has a high spard endemism attributed to multiple radiations, by populations with different trophic ecologies.

On to São Vicente Island

To make it convenient for, and with sheer consideration of, visiting foreigners, the CV Interilhas ferry bound for São Vicente Island was scheduled to depart at 11 p.m.—for a 14-hour ocean crossing, that is. However, the cargo-passenger boat did not leave before 1 a.m. The ship was obviously full of locals, eager to travel on the cheap. The main lounge turned out to be as lively as a

bird aviary, because the Cape Verdians talk loudly, naturally! (Be forewarned, just in case you thought you might be able to get some sleep on the trip...) By the time I reached Mindelo on the northwestern coast, after a stopover in São Nicolau, it was early afternoon, and I was glad that the ordeal was over.

The second largest city after Praia, Mindelo is the true touristic capital of Cape Verde. It is the musical core of the archipelago, because of the national song, "Morna," a melancholic and lyric tune made world-famous by female singer Cesária Évora—the barefooted "Queen of Morna." Mindelo's carnival is another yearly event that attracts many tourists towards the end of February. This indeed had originally triggered my wish to stay for a week and take the chance to enjoy some diving as well.



LEFT COLUMN, TOP TO BOTTOM: View of the town of Mindelo on São Vicente Island; Colonial street in the old quarter of Mindelo; Carnival reveller in festive mask, Porto Novo, Santo Antão Island



Local with a bronze statue and mural celebrating Cape Verde's "Morna" music, Sal Rei, Boa Vista Island (above)



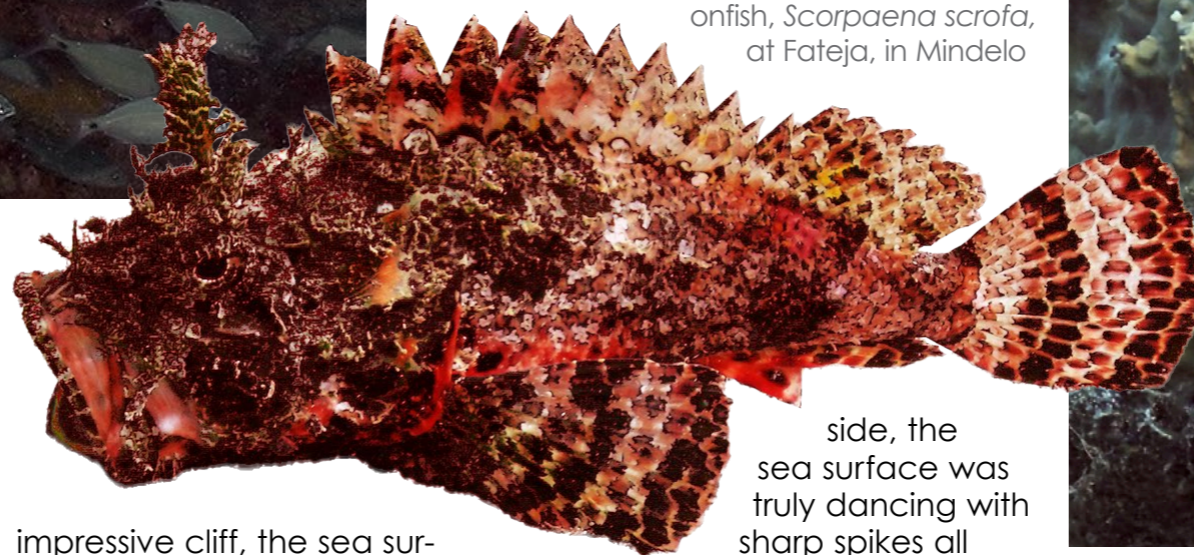


CLOCKWISE: Cape Verde seabream, *Diplodus lineatus*, Mindelo harbour; Planehead filefish, *Stephanolepis hispidus*; African hind, *Cephalopholis taeniops*; and red scorpionfish, *Scorpaena scrofa*, at Fateja, in Mindelo



side, the sea surface was truly dancing with sharp spikes all over! Bad luck again... Finally heading south to a secluded cove, calm waters offered a relief. But the visibility was poor, the sandy bottom among the rocks was boring. Frankly disappointed, I encountered a

large-scaled scorpionfish (*Scorpaena scrofa*), plenty of trumpetfish and a honeycomb moray. A desperate green moray had a fishing hook stuck in the corner of its mouth, attached to a nylon thread and a loose rock. The



impressive cliff, the sea surface had light green waters and was deemed to be unsuitable by the dive guides. We moved back to a rocky islet with an old Portuguese fort, at the entrance of the bay. In the so-called protected

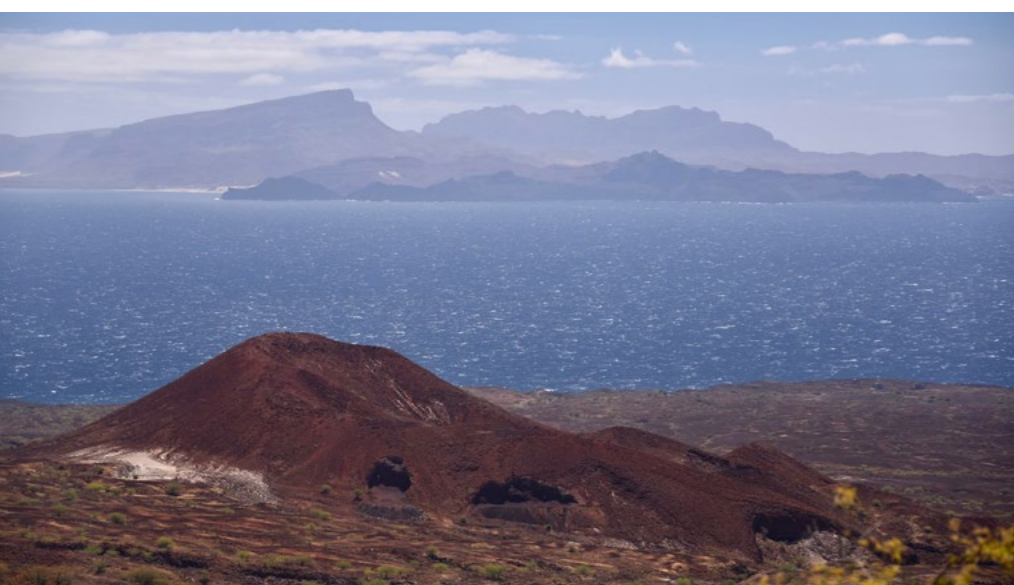
Diving in Mindelo

The dive centre was hidden below a restaurant on the waterfront, a stone's throw away from the ferry terminal, which was a 15-minute trek downhill from my small apartment on the slope overlooking the town. Again, the guys were cool-looking, and I arranged some dives for two days later. The RIB (rigid inflatable boat) looked very professional, with a 150 HP outboard motor. I was to dive with a couple from Holland.

The ocean was rough, as we headed to a dive site north of Mindelo, half an hour away. At the bottom of an



Mediterranean red sea star



TOP TO BOTTOM: Volcanic cones and lava flows, north of Morro do Brejo; "Caminho da Cruz," northern coast of Santo Antão; Tuff cone on Santo Antão, with São Vicente Island in the background



Cova crater, Santo Antão Island (above); Goat in the wild (top right); Wild Aloe vera plant in the highlands of Santo Antão (centre right); Volcanic pinnacle in the morning mist, Vale de Paul (right)

poor thing was thrashing about furiously, trying to get rid of the load, without any success. Then the dive guide nailed the nylon thread with a knife into the sand. The moray got free with probably a torn jaw.

The second dive was a muck dive into Mindelo's harbour—not even worth a mention, besides a school of Cape Verde seabreams (*Diplodus lineatus*). My São Vicente experience was consequently disastrous.

When I found out eventually that I had to buy a ticket for the carnival, I went one early morning to the Centro de Estágio

to purchase one. However, I stared aghast at the 300m-long queue, along a wall on the sidewalk—not really knowing what to expect in the end. "Not for me," I thought.

On to Santo Antão Island

I was off to Santo Antão Island the next day, one hour away by ferry. A new journey would start, dedicated to hiking and trekking a very authentic, although dramatic, island, with volcanic peaks up to 1,800m in elevation, deep valleys and canyons in a mountainous landscape. The volcanic material was abso-

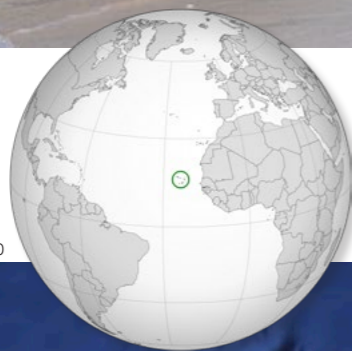


lutely jaw-dropping with rusty coloured tuff cones in an arid countryside (in the southeast),

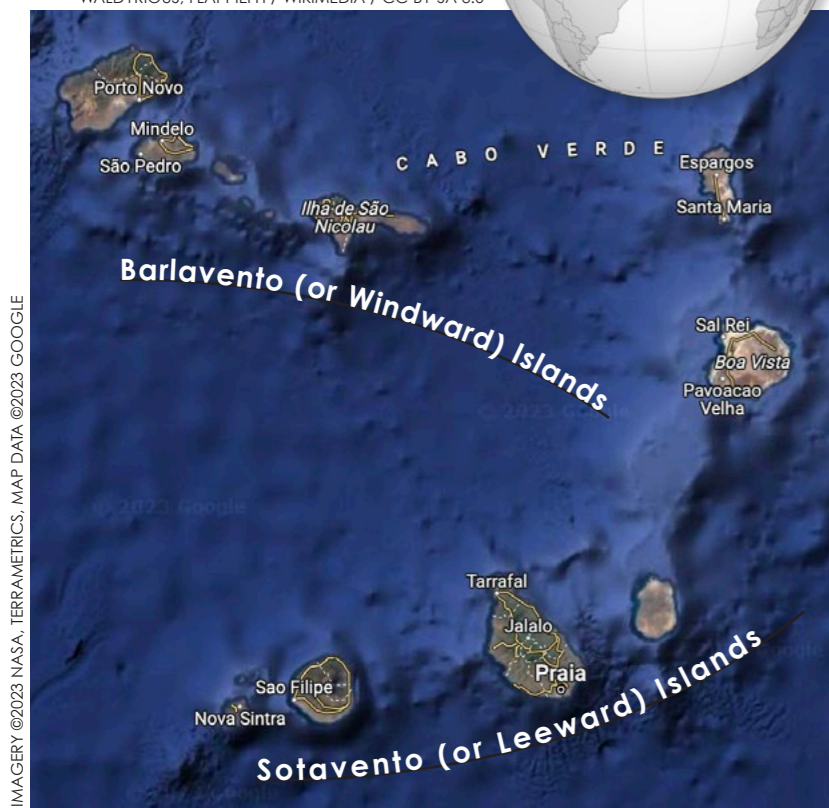
sheer basalt cliffs on the eastern and northern coasts, beds of white ashes intertwined with



Praia da Varandinha beach, Povoação Velha, Boa Vista Island (above)



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layers of scoriae, lava flows and extensive phases of rocky projections and bombs—a true capharnaum of volcanic events.

Needless to say, the trails on paved winding tracks were steep, up and down, over passes, into remote valleys—or following the seashore, along cliff sides overlooking the ocean. The most famous —albeit, touristy—trail started from the top of Cova Crater, up in the highlands at 1,500m, and led steeply down into the valley of Paul and Vila das Pombas, at sea level.

For the sake of exercise and to go against the flow, I chose to climb up from Cabo da Ribeira (500m), instead of going downhill. It only took me one hour and 10 minutes one way, but I was on “4x4-mode,” alright! The only disadvantage was that I found myself in thick fog soon after I started ascending the trail fringed by wild aloe vera plants with yellow flowers—the only touch of colour in an otherwise rocky landscape. Nevertheless, it attracted lots of endemic Cape Verde lagoon sparrows (*Passer iagoensis*), which fed on the flowers.

Before reaching the rim of the crater, I entered the Canary pine forest, with mosses. It had an eerie atmosphere, which

was out of this world. Other treks worth doing included Ponta do Sol to Cruzinha, Alto Mira to Cha Morte, and Boca Ambas Ribeiras to Cha de Igreja.

Afterthoughts

Should you fancy a visit and diving at Cape Verde Islands, just remember to come during the European summer, in July and August, when the water is warm, and visibility is best. Mind you, if you are into kitesurfing, February and March are good. For the windward Barlavento Islands, that is the best season! □

With a background in biology and geology, French author, cave diver, naturalist guide and tour operator Pierre Constant is a widely published photojournalist and underwater photographer. Visit: calaolifestyle.com

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TOP TO BOTTOM: Flock of sanderlings, *Calidris alba*, Varandinha beach; Rocky shore near Paul, Santo Antão; Wreck of MS Cabo Santa Maria (stranded in 1968), Praia de Atalanta, Boa Vista

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