

# Northern Exposure

Only in the Moluccas' equatorial climate and rich volcanic soils did cloves, nutmeg and mace plants flourish. Believed to give protection against the horrendous Great Plagues ravaging 16th century Europe and also preserve and flavour meats, these exotic crops were literally worth their weight in gold. During the great spice race, Christopher Columbus discovered the Americas, Ferdinand Magellan's expedition circumnavigated the world for the first time and Vasco Da Gama rounded Africa's Cape of Good Hope and established the sea route to the Indian sub-continent.

Today, 500km to the southeast in the huge Indonesian archipelago, the five volcanic Spice Islands off the west coast of Halmahera and the Banda group are quiet outposts. Those famous spices are now commonly available in supermarkets.

These days adventurers are again exploring the Halmahera area, but they're searching for exciting places to dive. Ironically, many of the liveaboard vessels are local Pinisi boats modeled on the European sailing ships that visited here in the 16th century!

**A Phenominal Force of Nature** Northern Indonesia first appeared on the international dive map with Bunaken Marine Park on the west coast of North Sulawesi near Manado, and later the critter Mecca of Lembeh Straits on the east coast. In recent years the Raja Ampat area on the northeastern tip of Irian Jaya established a near legendary reputation. The diving in these areas is particularly special because of the Indonesian Throughflow" - the phenomenal flow of water from the Pacific Ocean through northwest Indonesia into the Indian Ocean to the south of the archipelago.

**Raja Ampat** Much has been written about diving here in the last 7-8 years and the area has achieved a cult-like status. There's absolutely no doubt that Raja Ampat truly is



Superb corals at Sardine Reef in Raja Ampat



White pipefish forages in an anemone



Lionfish hunting at dusk on Goraici Island reef

> THE SANDS OF TIME HAVE LONG SINCE WASHED OVER THE REMOTE EAST INDONESIAN PROVINCE OF THE MOLUCCAS. THE AREA IS NOW LITTLE KNOWN WITHIN THE COUNTRY AND FEW FOREIGNERS CAN FIND IT ON A MAP WITH ANY CERTAINTY. BUT JUST OVER 500 YEARS AGO, THE MOLUCCAS TRIGGERED THE SO-CALLED 'AGE OF EXPLORATION' – A 200 YEAR PERIOD WHEN EUROPE'S MAJOR POWERS SENT FLEETS OF SAILING SHIPS TO SOURCE AND CONTROL THE FABLED SPICES OF THE FAR EAST.

A crocodilefish waits patiently for a passing meal



A yellow trumpetfish hangs in the current



A clown fish poses momentarily for the camera



The crew gets ready to go ashore after two weeks at sea!



The SMY Ondina under full sail

one of the last global diving frontiers and I've personally enjoyed some of my most memorable dives here. On this trip I could revisit two of my personal favorite locations – Sardine Reef and Mikes Point.

Sardine Reef is a large circular seamount east of Kri Island on the northern side of the Dampier Strait, which means it's right in the path of the Indonesian Throughflow as it surges through the Strait. The current hits the eastern tip of the seamount and diving the site is a kind of Goldilocks & the Porridge situation – not too hot as it's incredibly difficult to do much more than hold on to your mask... and not too cold, otherwise the phenomenal fish life goes off the boil. Sardine is a very 'fishy' dive and at its peak it's hard to take in the sheer volume of pelagics schooling in the rich current; you'll often hear the 'fish thunder' phenomena produced by cavitation in the water column when a large volume of fish moves rapidly.

Mike's Point is also near Cape Kri on the northern side of Dampier Strait, but rather than being a submerged seamount, it breaks the surface with a small rock roughly 30m in diameter. So strong is the current that can flow past it, that US

forces surveying the area in WWII thought it was the wake of a camouflaged Japanese ship and bombed the island!

There are two things I think make Mike's Point really special in an area that has incredible diving – the massive aggregation of sweetlips on the southern wall and the sublime coral garden in about 10m occupying what appears to be a large crater from the WWII bombing. Exploring the wall and the sweetlip aggregation is an exhilarating first part of the dive, then taking an extended deco stop in the coral gardens with the sun streaming down creating a cathedral-like light effect is to die for...

**Misool** We then headed southwest on an overnight 12 hour cruise to the western tip of this large island and the group of six small islands called the Blue Water Mangroves. As the name suggests, these low-lying islands are densely covered in mangroves, but unlike many other such habitats their position in the Halmahera Sea and their close proximity to each other means they're flushed with clear blue water on every rising tide, creating a unique dive location.

Mangroves normally have high concentration of sediment and other organic detritus so diving in them isn't particularly rewarding... But the Blue Water version at Misool is extraordinary and provides a unique insight into these special ecosystems because you can actually see what is there. The coral growths on the mangroves are particularly interesting, and are quite spectacular when backlit by overhead sun streaming through the dense canopy. Also, in the inlets reaching deep into the mangroves numerous archerfish are found practicing their special method of catching insects with a deadly accurate jet of water spat from their mouths at high speed. Penetrating these inlets on a rising tide is surreal as the water is so clear and so still, it's difficult to tell where the underwater world ends and the archerfish seem to float through the leafy above-water mangroves.

It's also a rather tense experience as the mangroves are also perfect habitat for saltwater crocodiles and a diver was actually attacked by one in April 2009. He lived to tell the tale, but the moral of the story is always tell the divemasters where you're going and be very vigilant.

**Out There...** In the middle of the Halmahera Sea roughly equidistant between Misool and Halmahera Island, and six hours sailing northwest from Blue Water Mangroves is the large banana shaped island of Pisang and the nearby two smaller islands called Batuanyer

Kecil. All three rise steeply from the depths of the Halmahera Sea and are richly coated in dense vegetation. Underwater the two Batuanyer Islands are connected by a reef which is extremely vibrant and covered in hard and soft corals in a kind of mirror image of the dense vegetation above water.

The three islands are right in the path of the Indonesian Throughflow and, as it passes around them, their shapes and underwater topography produce the perilous downdrafts that are a constant potential danger when diving the best sites in Indonesia. Diving such locations requires what Ricard Buxo, the Spanish cruise director of MV *Ondina*, calls a rapid negative entry whereby everybody in the dive tender is geared up and ready to go. The tender then positions itself up-current of the site and on the signal the engine is killed and everybody rolls backwards at the same time, grab cameras and get down quickly before the currents take you away...

The trick is to get to the front of the site where the current hits it, central enough and deep enough to avoid being pulled to the side or taken over the top by the flow of water. This is where the effect of the current is reduced and the best action occurs, plus further down is often where the 'big dogs' can be found.

**Halmahera Island** From Pisang Island it was another six-hour overnight sail to Djongra Island, at the southern tip of Halmahera. Over the next few days we dived the reefs of Karang Dorobi, Ganone and Nenas and then several sites in the Patintie Strait between the east side of Halmahera and the large island of Bacan.

Most sites in the Patintie Strait and particularly those in the Proco Channel between two small islands that sit out in the Strait, are classic big current dives requiring the rapid negative entry and a pair of vigilant dive tenders. On several dives I tagged on behind Ricard Buxo as he placed himself where the current hit the reef and then went down to around 40m looking for the hot spot where the current first touches the reef, bringing with it cold water from the deep rich with the detritus of the sea. Plankton feeders



The Blue Water Mangroves of Misool



Hard coral bommie at Blue Water Mangroves



Densely packed roots at Blue Water Mangroves



Colourful soft corals growing on the mangrove roots

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Of the recognized 110 mangrove species, only about 54 species in 20 genera from 16 families constitute the 'true mangroves', species that occur almost exclusively in mangrove habitats. Demonstrating convergent evolution, many of these species found similar solutions to the tropical conditions of variable salinity, tidal range (inundation), anaerobic soils and intense sunlight. The greatest biodiversity occurs in the mangal of New Guinea, Indonesia and Malaysia.

Because of the limited fresh water available in salty intertidal soils, mangroves limit the amount of water they lose through their leaves. They can restrict the opening of their stomata (pores on the leaf surfaces, which exchange carbon dioxide gas and water vapour during photosynthesis). They also vary the orientation of their leaves to avoid the harsh midday sun and so reduce evaporation.

Red mangroves, which can survive in the most inundated areas, prop themselves above the water level with stilt roots and can then absorb air through pores in their bark (lenticels). Black mangroves live on higher ground and make many pneumatophores (specialised root-like structures which stick up out of the soil like straws for breathing) which are also covered in lenticels. These 'breathing tubes' typically reach heights of up to thirty centimetres, and in some species, over three metres. The roots also contain wide aerenchyma to facilitate transport within the plant.

**Limiting salt intake**  
Red mangroves exclude salt by having significantly impermeable roots which are highly suberised, acting as an ultrafiltration mechanism to exclude sodium salts from the rest of the plant. Analysis of water inside mangroves has shown 90% to 97% of salt has been excluded at the roots. Salt which does accumulate in the shoot concentrates in old leaves which the plant then sheds. Red mangroves can also store salt in cell vacuoles. White (or grey) mangroves can secrete salts directly; they have two salt glands at each leaf base.

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Beautiful sponges at Pisang Island in the Halmahera Sea



Mikes Point in Raja Ampat



love this 'sea soup' and gather where it hits the reef, which creates the foundation of a mini-ecosystem as the other layers of the marine food chain work the area.

Although quite deep, and pretty exciting because of the larger predators that gather there, the current is quite manageable as it only really gathers intense velocity as the depth reduces. We saw numerous large grey reef sharks cruising the current and down deep, way beyond recreational diving limits, were the unmistakable profiles of great hammerheads...

**The Goraici Islands** Another overnight sail took us further northwest into the Molucca Sea and the Goraici group of

islands. These are about 75km south of Ternate and Tidore, the original main Spice Islands off the west coast of Halmahera, and the only place in the world where cloves could be found. The people of the Goraici's have an enviable reputation as pragmatic environmentalists who have kept their reefs healthy and in good condition by preventing the twin scourges of dynamite and cyanide fishing that has done so much damage elsewhere in Indonesia. The area is indeed rich in marine life and at Tagani Bay on the northwest tip of Kayoa Island is where the celebrated ichthyologist Jerry Allen had his highest fish count of 303 species on one dive. Our dives in the area were notable for strong currents, clear blue water, healthy reefs with rich hard and soft corals, plus cruising sharks and pelagics.

We spent two days diving here, but could easily have spent a week in the area, but our journey was coming to an end. We had one more treat in store – Tifore Island in the middle of the Molucca Sea halfway between Halmahera and North Sulawesi. Just about as remote as it gets! On the south side of Tifore is a reef at Pantai Sago known for a school of barracudas said to number over a 1000. We dived the southeast face of the reef where the current hits – it's really a great dive, with superb hard and soft corals deeper down, plus huge shoals of schooling fish.

The day we spent diving Tifore before sailing at night for Lembeh was the perfect end to a fantastic trip – remote locations, big currents and fantastic diving. Hard to beat...

**Off the Beaten Track...**

Reaching Indonesia's remoter regions takes significant commitment – to experience the Halmahera region, be prepared to go the distance and roll with the punches. My journey took an overnight flight from Sydney to Singapore, a morning Silk Air flight to Manado and an 'overnight' stay – sort of – our hotel checkout was at 02.00 for the 04.30 Merpati Airlines departure to Sorong in Raja Ampat. I didn't complain – several of my new best friends were from the US and had already been traveling for over 48 hours by then! Arrival in Sorong was at 07.00 a.m. – we finally boarded the MV *Ondina*. We still had a full day ahead and a chance to try some of the superb local diving before heading for Halmahera, and on to our final stop at Lembeh Strait in North Sulawesi.