

The background of the image is a wide-angle aerial shot of the Raja Ampat archipelago. The water is a vibrant turquoise color, transitioning to deep blue further out. In the distance, several small, green, tree-covered islands are scattered across the horizon under a sky filled with wispy white clouds.

Raja Ampat

Reloaded

Text by Andrea Ferrari
Photos by Andrea & Antonella Ferrari





CLOCKWISE FROM ABOVE: The spectacular limestone cliffs of Raja Ampat; Antonella on Wai Island's beach; Huge soft corals at The Passage; Wild Sulphur-crested cockatoo. PREVIOUS PAGE: Antonella snorkelling on Sorido Bay's home reef—not a soul in sight for miles!

Lying on my back, floating on the surface in a lazy, ever so slow current, I feel the warmth of the tropical sun on my face, the bright sunlight tinged with an orange glow on my closed eyelids. I flick them open at the startlingly rau-cous, loud cackle of a passing *Eclectus parrot*, just in time to glimpse a ludicrously bright flash of red and blue fly overhead, a splash of colors against the deep blue skies and the towering, silent clouds soaring far away.

The water is warm and jade green, a few yellow floating dead leaves tickle my feet, and here and there I catch the glint of a reef fish below me. I propel myself lazily with a squid-like push of my hands towards the middle of the lagoon, still lying on my back. The only audible sound is the high-pitched buzz of an occasional mosquito and the faint splash of an archer-fish squirting a jet of water towards a small bug on a branch overhanging the still surface.

Around and above me, I can see vertical limestone cliffs rising vertically towards the sky, eroded in abstract shapes by thousands of years of tropical rainfall, draped in mottled white roots, twisted clinging vines, precariously balanced dry lowland forest trees. Huge ferns and clumps of orchids

hang everywhere, with big swallow-tail butterflies slowly flapping in the warm humid air here and there. Sitting under the stretched canvas roof in the boat a few meters away, Antonella smiles dreamily, points her camera at me and clicks away blissfully. I close my eyes again, absorbing the sun's warmth, submerging my ears just enough to listen to the distant clicks and snaps of the coral reef extending a few feet below me. Yes, this is heaven for me. Welcome to the Passage. Welcome to Raja Ampat.



CLOCKWISE FROM TOP: Blue-water mangroves; Incredible underwater landscape at Mike's Point; Gorgonians and sea fans at Crossover; Big Tasseled wobbegong or carpet shark at Sardines; Tiny, colorful Denise pygmy seahorse at Mike's Point

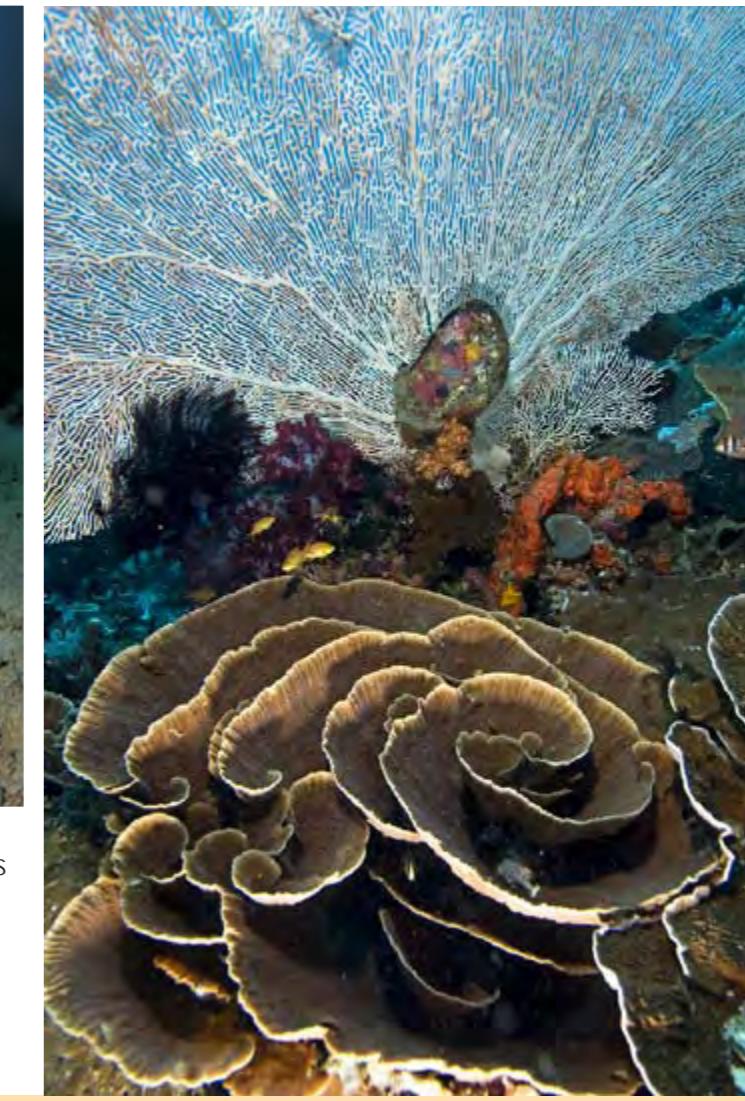
The Passage

The Passage is a five-meter deep, river-like sea fjord snaking inside the forest; the tree canopies often close in above it; strange purple sponges and gigantic orange sea fans almost reach the surface; the sea and the sky above mirror each other, mixing, inextricably blending into each other. It is an almost mystical place, rich in silent grottoes and underwater passages, submerged tunnels leading to still seawater pools hidden inside the forest and sun rays slanting down in the green darkness like light shining through a cathedral's multicolored windows. The Passage is unique, and yet only one of the many wonderful dive sites found in Raja Ampat. Many, many others dot the area, close and not so close to peaceful Kri Island.

Other sites include Mike's Point, possibly the most beautiful of them all and certainly one of the most scenic dive spots on Earth, is a living multi-layered tapestry of pink and orange gorgonians; Sardines, an underwater promontory jutting out in the open sea

where all the action is—raging currents, gigantic schools of fish, lurking wobbegongs waiting among the luscious corals; Cape Kri, marine life Grand Central, is rated as the dive site with the most fish species in the whole world, rivalling in

sheer technicolored spectacle Sipadan's drop-off and Palau's Blue Corner; Myos Kon, an underwater wonderland of stealthy Carpet sharks, pygmy seahorses and schooling yellow-lined snappers; Chicken Reef, a thick coral slope of a



Raja Ampat



CLOCKWISE FROM TOP: Antonella swimming with batfish at Mike's Point; Striped triplefin; Schooling snappers at Myos Kon; Common lionfish displaying at Melissa's Garden

thousand untouched shapes and sizes, crowded with enormous schools of fish; Manta Point, a cleaning station in the middle of Dampier Strait where one can dive—if lucky—with up to twenty gigantic mantas, each up to three meters wide (we had four, three of which were completely black—and it was simply amazing); Melissa's Garden by the remote island of Fam, a submerged psychedelic panorama of mushroom-shaped limestone islets draped in red gorgonians and bright purple soft corals.

And fish—small fish, large fish—everywhere. Schools of fish, fish in the hundreds, in the thousands—jacks, surgeonfish, batfish, snappers, baslets, barracudas, emperors, giant bumphead parrotfish,

spanish mackerels, rainbow runners—they're all here. And even sharks, despite the widespread local fishing pressure, put in an appearance—large, bottom-dwelling, exquisitely camouflaged wobbegong carpet sharks are everywhere, and so are the well-known “walking” *Hemiscyllium* coral catsharks, and huge, inquisitive, swiftly swimming black-tips, *Carcharhinus melanopterus*, even the grey reefs, *Carcharhinus amblyrhynchos*, which had been conspicuously absent two years ago from these waters, now make their presence felt, often closely and threateningly buzzing divers on the reef top.

In a world where truly wild shark sightings are going down to zero in many loca-



tions in a matter of weeks, it is incredibly rewarding being able to report that here shark sightings are actually increasing. Might this mean the actual numbers of these beautiful, endangered predators are rising also in Raja Ampat? True, the practice of shark fishing goes on unabated in the general area, but it is a fact that, at least in the proximity of Kri, blacktip and grey reef sharks (wobbegongs have never been an issue) seem to have found a sanctuary.

The coral landscape does not show any signs of diver damage yet, and coral bleaching is almost unheard of in these waters. Indeed, on this, our second visit to these distant shores (see www.reefwonders.net for a trip report

on the previous one), the spectacular diving and technicolored marine life of Raja Ampat seem to us even more extraordinary than in the past. Oh, and of course we have to add that most of this occurs at shallow depth—most diving takes place in the 5-20 meters range—with the majority of dive sites less than ten minutes away from Sorido's or Kri's wooden piers.

It's quite obvious—good news for the environment, for once—that the presence of Max Ammer's tourist operations—traditional, long-standing Kri Eco Resort and the more luxurious and recently completed Sorido Bay Resort—is actually making a difference regarding conservation.

Local fishing communities seem to be accepting Max's strict views on conservation, and the regular income his business is providing to many Papuans working there is clearly convincing them that protecting nature might actually be a good investment for the future of their children.

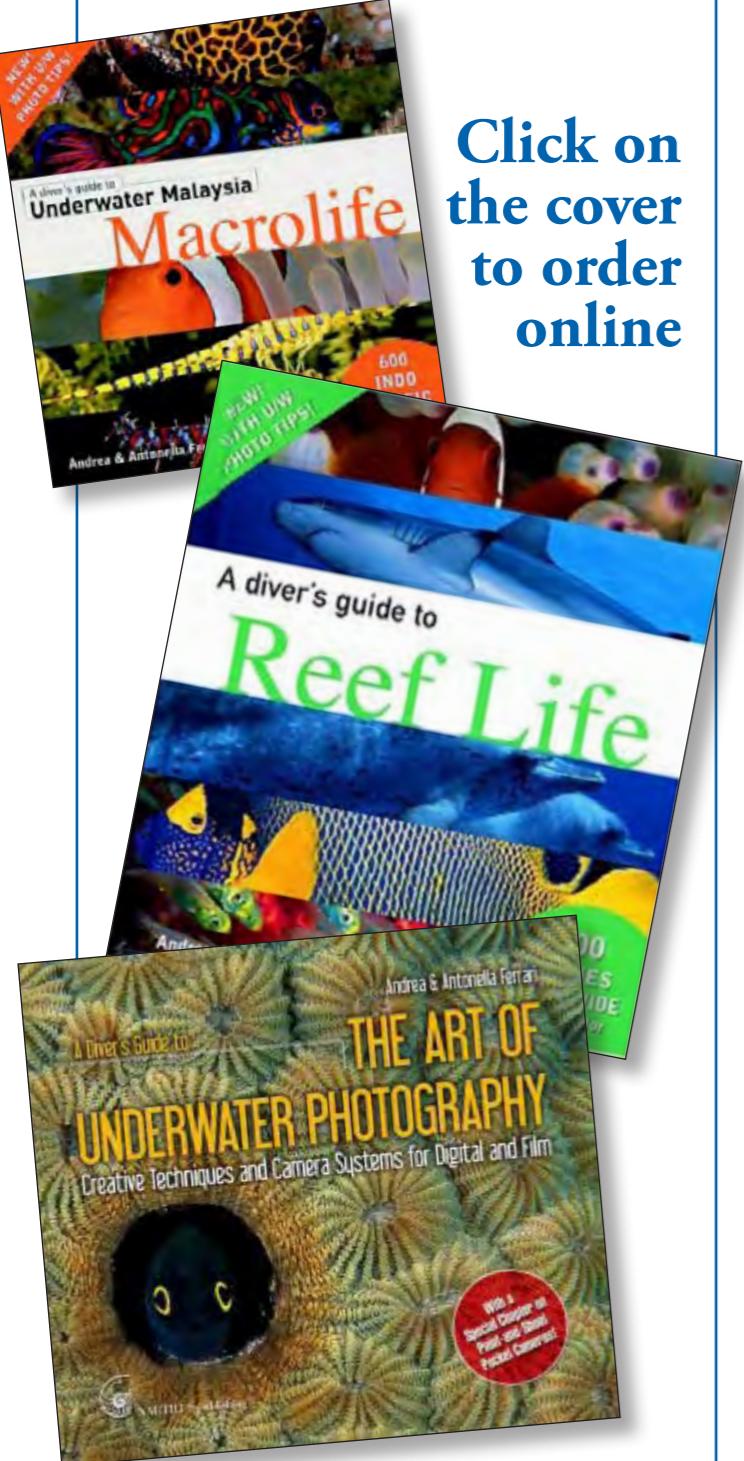
In fact, the whole of Raja Ampat is apparently being taken very seriously by conservationists worldwide and even by the Indonesian government (to which West Papua is subject). Max recently wrote us

THIS PAGE: Diving with the black Mantas of the Dampier Strait with the towering jungle-clad limestone cliffs of Raja Ampat above—pure heaven and a unique experience!



travel

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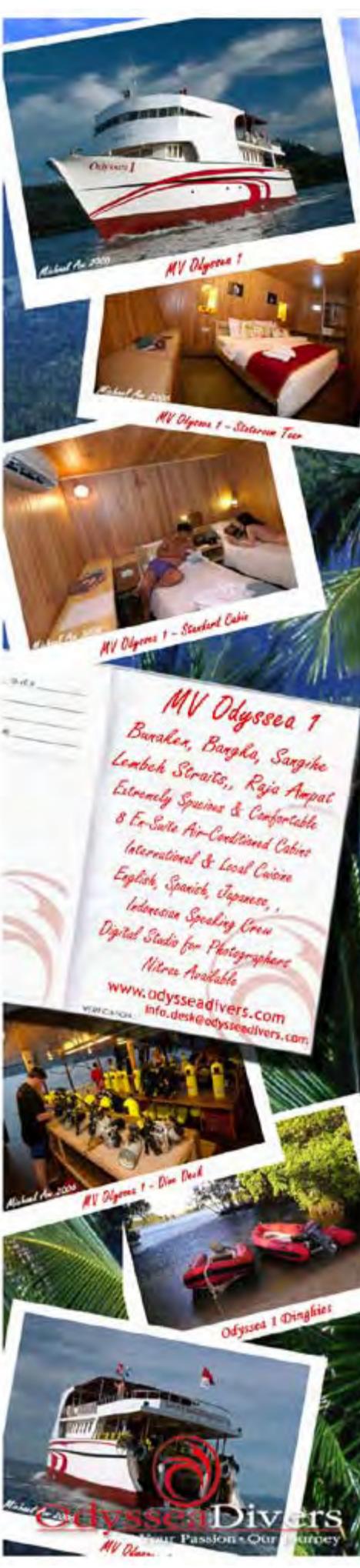


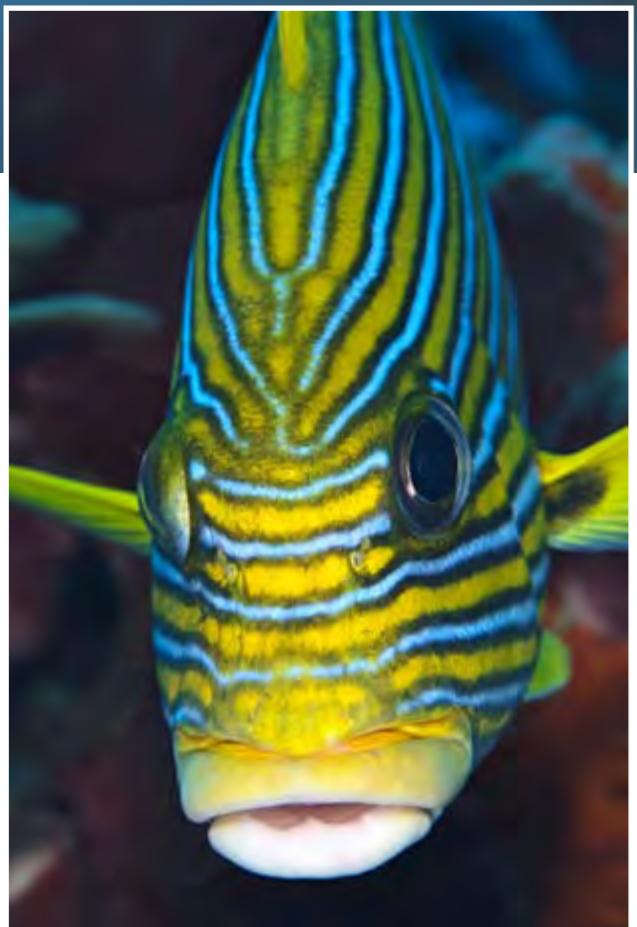
CLOCKWISE FROM LEFT INSET: Flame basslet; Sorido Bay Resort's jetty seen from the open dining terrace; Antonella admiring huge soft corals at Gam Island

and said: "The Raja Ampat Regency Government in West Papua, Indonesia, has announced the launch of an annual tag system for visitors to their newly declared network of seven Marine Protected Areas (MPAs). The annual plastic tag, modified from the successful Bunaken Marine Park tag, will be valid for 13 months from the first of each calendar year and will cost Rp500,000 (US\$55) for international visitors and Rp250,000 (US\$22) for Indonesian citizens. Seventy percent of the funds will be managed by a multi-stakeholder team for conservation and community development programs. Thirty percent of the funds will go to the Tourism Department for tourism development. The local government engaged the assistance of three major International NGOs—Conservation International, The Nature Conservancy

and WWF—to help define the most valuable areas of Raja Ampat for protection. Currently, they are helping to develop management plans with the local communities and enforcement agencies appropriate for each area. The Coral Reef Alliance assisted with the development and socialization of the tag system with the diving community. Raja Ampat has been found to have the highest biodiversity of fish and corals within the Coral Triangle. All visitors to Raja Ampat will need to pay this fee. We will collect payment at our two resorts (Sorido Bay & Kri Eco) on behalf of Conservation International and the local government."

That's great news for the marine environment—let's just hope the funds will be properly utilized and not dispersed by the local government as it often happens in these cases.





CLOCKWISE FROM TOP: Amazing panorama of the Raja Ampat islands in the Dampier Strait; Local boy fishing from his dug-out canoe; Our Dutch friend Rinie Luykx shooting a Manta; Dawn at Sorido Bay; Close up of a beautiful Ribbon sweetlips



Raja Ampat is in the news

It's a hot destination, the place you cannot miss visiting. For those who do not know yet, Raja Ampat is a large area at the tip of Vogelkop (or Bird's Head) peninsula at the western tip of the island of Papua New Guinea, which is itself equally split in the middle in two separate nations: independent Papua New Guinea proper in the East, and West Papua, a province of Indonesia once known as Irian Jaya, in the West.

Raja Ampat itself comprises about 600 limestone islands and islets, the great majority of which are completely unpopulated and shrouded in virgin lowland forest, often with impenetrable, thick, blue-water mangrove belts surrounding them. Dugongs are often sighted in these habitats—occasionally in groupings—and I strongly suspect the presence of saltwater crocodiles even if their presence is denied by the local Papuans. The karst nature of the rock—covered by an incredibly

thin layer of fertile soil originated by decaying organic matter—is responsible for the very dry nature of the place, with abundant seasonal rainfall disappearing almost immediately in the crevices of the rocky substrate. Fresh water is a premium, and at the same time its scarcity is a blessing in disguise—as it makes development of most islands impossible.

Max Ammer's Kri Eco Resort and Sorido Bay Resort on Kri island (www.papua-diving.com) currently are the only land-based operations, while Andy Miners is busy working on the newly announced Misool Eco Resort (www.misoolecoresort.com, still unfinished and a long way further southeast on Batbitim Island). A few traditional-style liveaboards also show up regularly in the area—but to all extents, this is a real frontier (the last one?) where daily ordinary maintenance is still very challenging, costs of living are still very high (everything has to be brought in by boat, from screwdrivers to fuel and





CLOCKWISE FROM LEFT:
Enormous schools of
silversides and scads
at Arborek Island in
the Dampier Strait;
Aamazing underwater
landscape at Sardines;
Close-up of a Mushroom
coral



from lightbulbs to boat engines) and where professional underwater photographers and marine life scientists from all over the world are busy congregating.

Drop in at beautiful, well-appointed (and quite expensive, bear that in mind) Sorido Bay Resort, and you might bump into people like David Doubilet, Gerry Allen, Stephen Wong and Takako Uno or the Tacketts anytime—why, you might even meet the Ferraris there!

Seriously, as a dive travel destination goes, Raja Ampat has few equals in the world—spectacular marine life (all sorts of stuff including carpet sharks, mantas, dolphins, rare flasher wrasses and four different species of pygmy seahorses—bargibanti, denise and two undescribed

ones, possibly pontohi and colemani), incredibly scenic topside views, unique land wildlife (Sulphur-crested cockatoos, *Eclectus* parrots, Cassowaries, Cuscus—a cuddly, small, tree-dwelling marsupial—and two Birds of Paradise!), colorful, spirited and very friendly local people, and finally a good all-year round tropical climate.

Occasionally, currents can be extremely strong (veteran dive guides Otto and Nikson know that in advance, however, and act accordingly) and visibility less than optimal, but these are—however bothersome to the underwater photographer—guarantees of a healthy, vital environment. No wonder all who can afford it are flocking there (well, flocking might be too big a word—Raja Ampat currently gets less than 500 visitors a year), even if it's a long, tortuous and occasionally unpredictable route; from Manado (Northern Sulawesi) on, you are advised to expect sudden flight cancellations and the like by the day. But it's all part of the game. After all, Raja Ampat would not be the same without the unexpected, would it?



Travel information

Raja Ampat (meaning "The Four Kings") refers to four large jungle-clad islands (Batanta, Waigeo, Misool and Salawati) which are part of a 600 islands and islets archipelago west of the coast of the Vogelkop or Bird's Head Peninsula in West Papua, formerly known as Irian Jaya (this is the half of the island of Papua New Guinea politically belonging to Indonesia today). Culturally and historically rather similar to the Malukus (or Moluccas), the islands of Raja Ampat were ruled in the 15th century by the Sultanate of Tidore, originating from Halmahera in the Malukus, and offer today unsurpassed topside scenic beauty, crystal-clear water and an unbelievable richness of marine life. The region can be easily reached with a short turboprop or jet flight by local airlines from Manado in Northern Sulawesi to Sorong, the harbour town from which

transfer boats leave to Kri Eco Resort and Sorido Bay Resort.

English is spoken almost everywhere at travel junctions and at the resorts. All necessary documents, flight reconfirmations and travel permits are obtained for visiting divers by the local staff of Papua Diving (www.papua-diving.com) in Sorong and handed to you in Manado—remember, however, flight delays and cancellations are always possible due to a variety of reasons, so be prepared for the occasional hassle. When in Manado, stay overnight at Tasik Ria (www.eco-divers.com). Besides their beautiful swimming pool, they've now got a lovely new spa offe-



this deadly mosquito-borne illness; when we go there, we take our Malarone pills regularly and never have a problem. Be advised that given the owner's religious beliefs—Max Ammer is a Seventh Day Adventist—Saturdays are strictly observed holiday days with no guided diving until 7.00 pm.

IT'S A BIRD, IT'S A PLANE!
Raja Ampat offers exceptional opportunities for bird watching and WWII wreck hunting,

CLOCKWISE FROM LEFT: The uniquely beautiful Raja Ampat landscape; Antonella at Wai Island; Sorido Bay's unspoilt beach; Local Papuan kids on their dug-out canoe

ring free jet-lag massages!

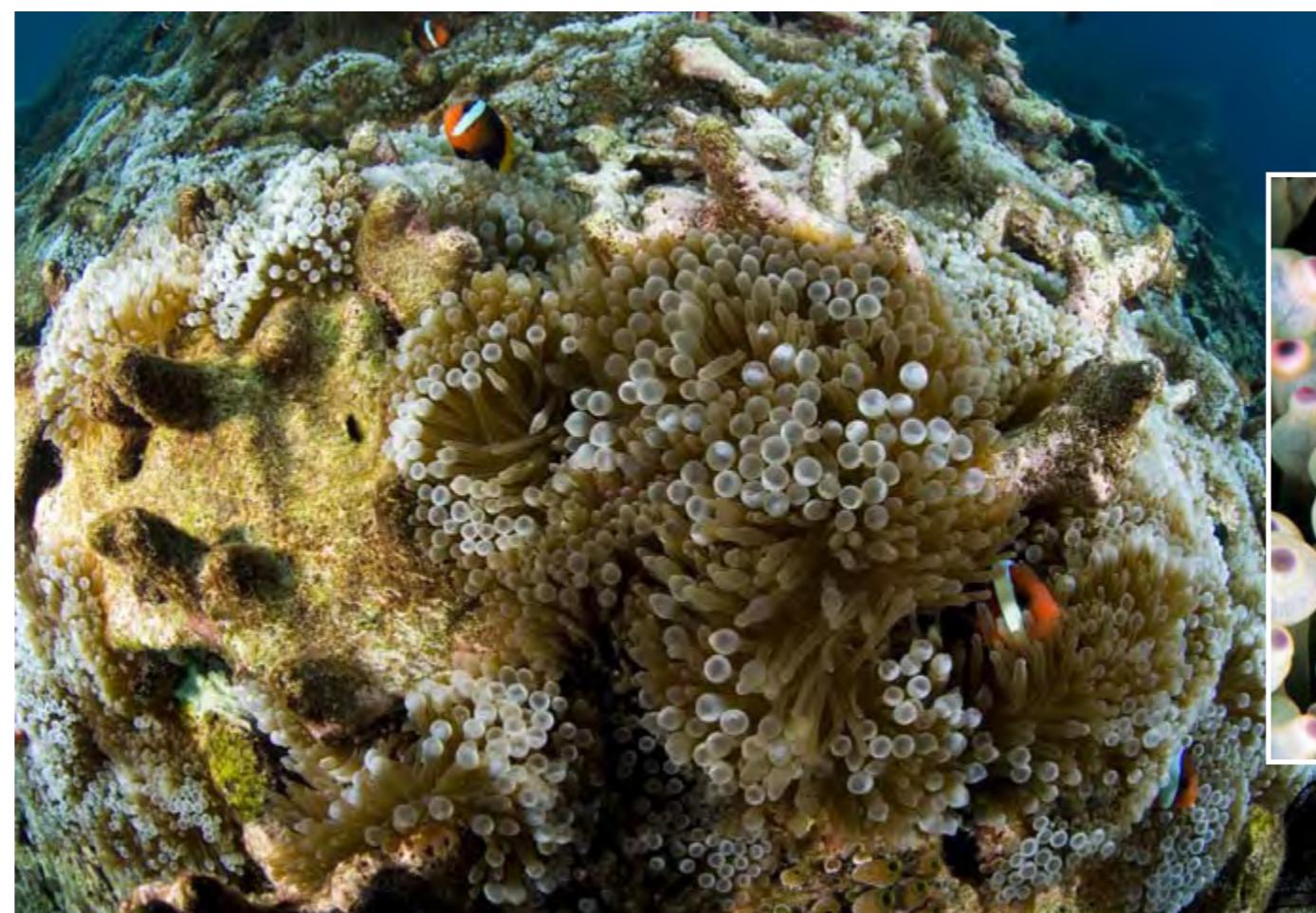
While camera and video facilities in Kri Eco Resort are rather basic, Sorido Bay Resort is exceptionally well-geared towards professional photographers and videographers, offering communal freshwater rinsing tubs on the jetty, Apple computer stations in a dedicated air-conditioned camera room by the library and recharging power banks in every bungalow. Bali-built fiber-glass dive boats are very comfortable, sturdy and fast, being equipped with oxygen and a very welcome canvas roof. Nitrox is available in both Sorido and Kri. Electricity is 220 V, being available 24 hours a day.

Cerebral malaria is present in the area—especially if you go for land excursions in the forest—so always remember to obtain recently updated, reliable medical information and do not underestimate the very real danger posed by

two activities which can often become as obsessively absorbing as diving itself. Spectacular bird species encountered in the area include the common Sulphur-crested Cockatoo, the large flightless Cassowary, huge Sea Eagles, shockingly colorful Eclectus parrots and naturally the incredible Wilson's and Red Bird of Paradise, *Paradisea rubra*, endemic to Waigeo and Batanta and reliably sighted if trekking with the local guides to a few protected sites in the forest (but be warned—you'll have to wake up at 4:00 am on Saturday morning!).

If wrecks are your cup of tea instead, you'll go nuts over the incredibly well-preserved P-47 D Thunderbolt "Razorback" lying on its back in 20 meters of water off the Wai island reef. This US Army Air Force single-engine fighter-bomber was one of seven ("Tubby Flight" of 311th Fighter Squadron) which took off from Noemfoor Island on a bombing and strafing mission to Ambon Harbor and subsequently ditched in the area on 21 October 1944 after having run out of fuel. The plane is in perfect shape with only a nicked propeller blade and all dashboard instruments and wing armament intact—a moving and





FAR LEFT: Tremendous fish action and huge gorgonians at Sardines
LEFT: Sweetlips in the current at Chicken Reef

fascinating testimony to the young pilots, both American and Japanese, who bravely flew, fought and often died above the sea of this area during the Second World War.

Literally hundreds of other occasionally well-preserved wrecks—boats, tanks, airplanes—can be seen in the region, but most require special trips. Max, however, is a wreck aficionado (WWII relics are in fact his main reason for relocating to Raja Ampat from his native Holland almost 20 years ago) and will be happy to show you his collection of incredible photographs and artifacts—including rusty but still live bullets, airplane maintenance hatches, bomb aiming devices and even a couple of hefty Browning machine guns!

Raja Ampat

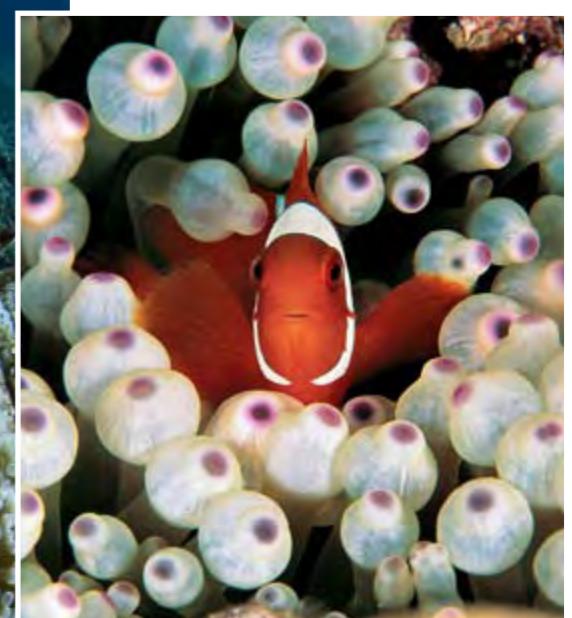
Getting there:

Sorong in West Papua can be accessed via Jakarta, Manado and Makassar. Merpati operates daily flights from Jakarta to Sorong via Ujung Pandang and Manado. Lion Air flies from Manado, and Express Air from Makassar. SilkAir operates regular flights from Singapore to Manado. Many major airlines fly to Jakarta. Make arrangements with your dive operator to be met in Sorong.

Dive Season

Tropical climate and diving is possible throughout the year. In general, wet season is from April to September, with the dry season being from October to March. Water temperatures are generally warm (28/ 29°C), so a 3 mm suit or equivalent should be sufficient.

For more information, please visit Andrea & Antonella Ferrari at www.reefwonders.net ■



Clownfish galore at Mike's Point

fact file

Raja Ampat, Indonesia



SOURCES: ANDY FERRARI US CIA WORLD FACT BOOK CITYSEAHORSE.COM

History Humans first settled New Guinea at least 50,000 years ago when it was connected to Australia by a land bridge. A British attempt at colonization in 1793 colony was evacuated within two years. The Dutch were next, proclaiming in 1828 that the natives of the western half of New Guinea were to be subjects of the King of the Netherlands. They opened Fort du Bus to protect their lucrative trade with the spice islands from other European powers, but abandoned the area after only ten years. No continuous settlement was established in West Papua until 1897, and no substantial development was undertaken within the country until the 1950s. In 1949, the Dutch ceded sovereignty of Dutch East Indies to the Indonesian Republic, but excluded Dutch New Guinea (West Papua). A long and tortuous history followed. The controversial West Papuan version can be examined at www.newint.org/issue344/history.htm. Government: Republic of Indonesia, Papua is one of 27 provinces with its capitol in Jayapura. As of late 2004, Raja Ampat has a separate district government.

Geography Located in Southeast Asia, Raja Ampat is the most western district of the Indonesian province of Papua. Raja Ampat consists of an area

surrounding four major islands off the western coast of the Bird's Head Peninsula of New Guinea Island, the western half of which is Indonesia and the eastern half, Papua New Guinea. The province was formerly called "Irian Jaya".

Climate Tropical, hot and humid. The water temperature is normally 84-86F / 28-29C year round, with an occasional "chilly" 82F / 27C spot. Divers have no problem with cold when diving 4 -7 long dives per day in 1mm neoprene suits, however some people prefer 3mm.

Environment Logging. The rainforests within the combined West Papua/Papua New Guinea land mass are second in size only to those of the Amazon, making it 'the lungs of Asia'. In 2001, there were 57 forest concession-holders in operation around the country and untold other forest ventures operating illegally. Mining. Tailings from copper, nickel, and gold mining are real threats.

Currency The currency is the Indonesian rupiah. ATM machines generally offer the best exchange rates, dispense rupiah and are readily available in most major cities or where there are many foreign visitors. Large denominations (\$100 bills) of cash in US dollars are fairly easy to exchange,

however all bills must be issued after 1999 and certain series of bills are almost impossible to exchange. Travelers' cheques are becoming quite difficult to use except at banks.

Visa cards, and cash in major currencies are widely accepted at banks, money changers and hotels in major cities and tourist destinations. When visiting Raja Ampat it is unlikely you will have an opportunity to use an ATM or exchange money. Check with the dive operator for forms of currency they accept, or bring cash in rupiah for tips and purchases. Tipping, generally not practiced but appreciated.

Population All of Papua Province's total population: 2.1 million (2.5 million). Indigenous: 1.3 million (1.5 million). Migrants and transmigrants born in other parts of Indonesia: 350,000 (850,000).

Language Bahasa Indonesian, in addition to 253 tribal languages. West Papua and its neighbour, Papua New Guinea, contain 15% of all known languages. English, Spanish, German are spoken on some liveabards. Bahasa

RIGHT: Detail map of Raja Ampat

BELOW: Global map with location of Raja Ampat highlighted



Indonesian and English are generally spoken at hotels and airports along the route and in Sorong.

Security Although they are in an active Independence movement in Papua, tourists have not been impacted.

Electricity Standard electricity is 220V, 50Hz. A few hotels and liveaboards have transformers to provide 110V. Bring smart chargers for rechargeable batteries. The plugs have two prong round plugs.

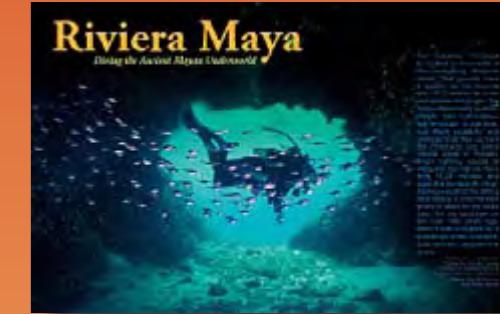
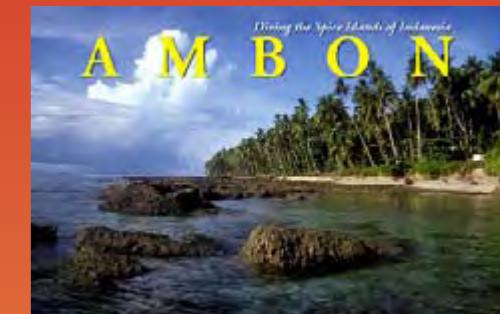
Health & Vaccinations Nearest decompression chamber: Manado. Malaria is common in the area. Check with WHO or your dive operator for prophylactics recommendations. Larium is not effective in Papua. Take into consideration that malaria prophylactics may have significant side effects. Be prepared with insect repellents containing DEET. International Certificate of Vaccination required for Yellow Fever if arriving from infected area within five days.

Visas & Permits Passports must be valid for at least six months. A 30-day visa-on-arrival facility is available to nationals of the USA, UK, most European countries and many Asian countries. Check before leaving. The fee is currently US\$25 for visitors from most countries. Check with the Indonesian Embassy or Consulate nearest to you for a longer visa. All passports must be valid for a minimum period of six months beyond your intended stay. To enter Papua, you need a *surat jalan* which is issued by the local police. This can be arranged by your dive operator. You'll need three passport-sized photos, three copies of the details page of your passport, and three copies of the page with the Indonesian visa or entry stamp. Check current requirements with your operator prior departure.

Communication GSM coverage and international roaming is available in Sorong, as is Internet connectivity, but not on the Raja Ampat islands. Some liveaboard operators have satellite phones onboard.

Time Zone
GMT + 9 hours ■

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White nights
at the
white Sea

Text by
Gunild & Peter Symes
Photos by Peter Symes
& Andrey Bizyukin, PhD



THIS PAGE (LEFT SIDE): Scenes from St. Petersburg, a bustling cultural city of history, art and romantic canals



The train is very comfortable and provides a rare low-stress environment where you can do nothing than chill out, perhaps stretch across your generously wide berth and read a novel while the red-star adorned locomotive pulls you steadily northbound across the endless expanses of wilderness.

Going north

After a couple of days of much commendable sightseeing in Sct. Petersburg – one of the most beautiful cities in the world, and home to an incredible collection of art – we had ample time to check out of our hotel and leisurely catch our train around noon. It is a 26 hr ride north and with an arrival time at the tiny whistle stop of Chupa, a small dispersed urbanisation some 40kms south of the artic circle you need not worry about oversleeping either. Meals onboard are sturdy but that is part of the real experience.

In hindsight the train ride was just as memorable and a highlight like St. Petersburg and the diving

Russia. I am here. I am gripped by a sense of disbelief. As the tundra flies past the train window recollections of grainy tv-images from my childhood keep popping up. The marching soldiers and missile batteries being paraded across the red square before the pouty looking Leonid Breshnev and the politbureau looking on from the top of Lenin's mausoleum. That was scary days. The Iron curtain was impenetrable and Russia was a place only for spies and covert business men and diplomats. That is what it felt like anyway. So here I am, sipping tea in a old, but very confortable sleeper wagon heading up north from Sct. Petersburg towards the artic circle and some spectacular diving during the long days.



that awaited us ahead.

Getting off the train, we were struck by the fresh crispness of the air that characterises the high north – you just had to inhale deeply – and as the train leaves and you listed to it disappearing in the distance it gets really quiet. The kind of quietness that just transplants itself into your mind. Soon, some non-descript ex-military four wheel drive vehicle that looked like a hybrid between an Asian minibus and a ww2 amphibious landing craft screeched up on the scene. Our ride to the dive resort had arrived.



THIS PAGE (RIGHT SIDE): Scenes from the journey to the White Sea from St Petersburg

PREVIOUS PAGE:
White nights reveal harmonies of purple and blue hues on the bay in Chupa

Our ride to the dive resort



travel



THIS PAGE: Built in the hull of a ship, Nereis dive center and hotel has comfortable, clean rooms with traditional decor and delicious local cuisine, ventilated drying cabinets for dive gear and a sauna

BELOW: NASA worldwind satellite image of location. Click on image to open in Google Maps



White Sea

A Spanish galleon?

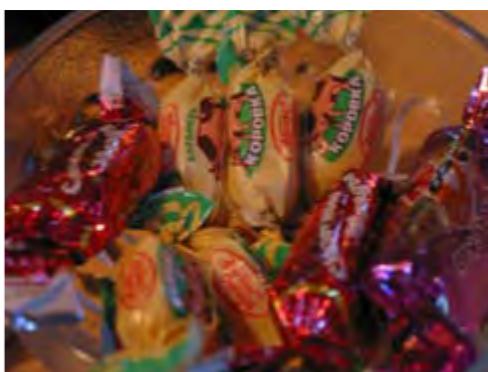
40kms out of dirt roads later we got a "Close encounter of the Third Degree" experience as something that looked like a yellow Spanish Galleon appeared behind the spruces in the wilderness. But that, Ladies and Gentlemen, should soon turn out to be the artistic superstructure of the dive center and our abode for the next week. To this day I have never been able to make up my mind whether this construction was silly, childish, funny, remarkable, daring or plainly just an eyesore.

But it was surprisingly functional and roomy inside. Very nice rooms, good dining facilities and great view from the upper deck, lots of storage and changing room downstairs, effective drying facilities and, off course, the indispensable sauna.

Diving

The thing we came to do. The dive centre sits right by a little

shallow bay or inlet, which constitutes a sort of ..uhm... housereef. Only is there no corals here, at least not in the shallows, but a lush vegetation of kelp in which numerous species of nudibranchs crawl about. I could spend hours – until I was called out of the water as dinner was to be served – just watching the critter spectacle



going on under the leaves of the kelp. There was a little headland in front of the divecenter with a drop-off permitting some deeper diving. The water was flat and still and the sky was just magnificent – at these high latitudes it is just soft and have a lot of tones. As we were sitting for a while in the surface before submerging it was so tranquil that we could

hear each other breathing. The water is clear and cool. At first I can't see a thing as I marvelled a bit too long at



White Sea



magnificent installations, being careful not to kick up too much sediment. Not only are we trying not to destroy the visibility but the kicking up particles are



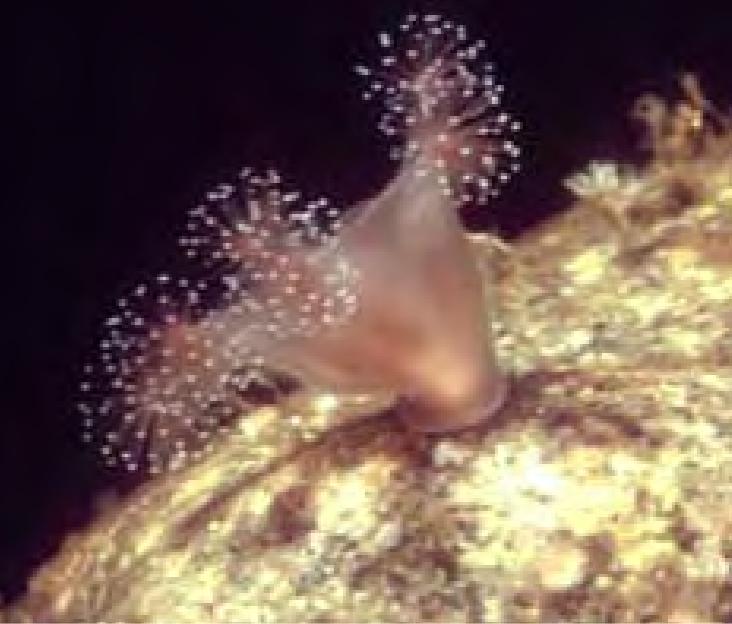
the bright sky before going down but soon I see the bushes of lightly coloured softcorals all over the mulch coloured and textured bottom. It is like a garden down here, not unlike the tropics in a sense, only is the colour schemes reversed. The corals are bright and the bottom dark. And oh... it is pretty cold under the thermocline and crystal clear. But who's affected by the temperature, we are not diving in skins up here. Bring a thick wetsuit, or better still, a drysuit which is much more comfortable anyway. Andrey and I hover around some of these

not good for the coral either. They are filter feeders and catch their food by sifting through the water. Would you like to get a handful of gravel thrown in your plate of ravioli with parmesan? I guess not, so be considerate around soft corals.

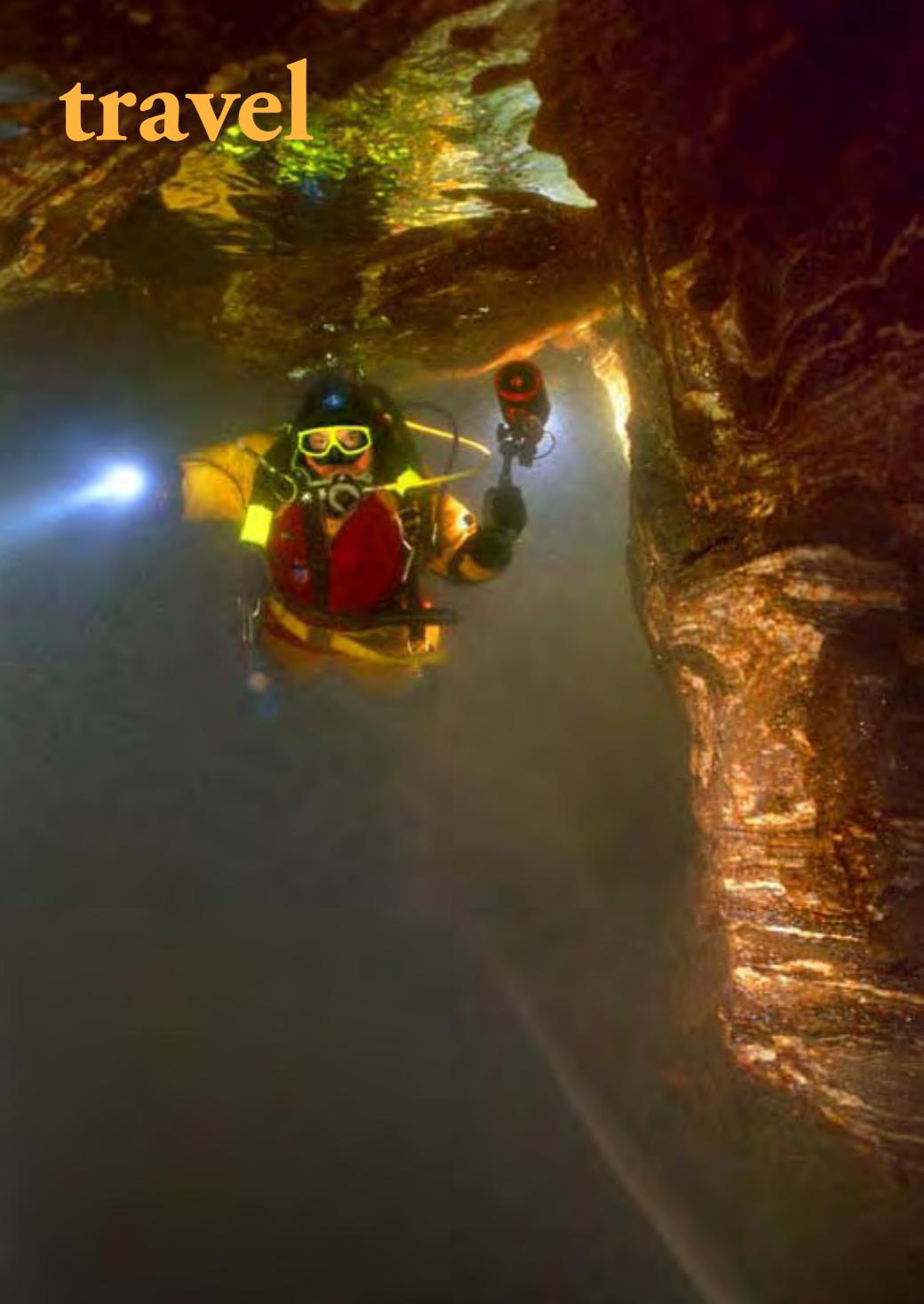
Things are kept straightforward and basic up here. Meals are not five star gourmet cuisine but they are good, solid and genuine. And there is plenty of it and more where it came from. The samovar is constantly brewing tea and with a piece of candy or cookies you soon make yourself very comfortable after a meal either with a good book or more likely with a conversation into the long bright evenings. You are so blissfully disconnected up here. No TeeVee, no emails, no cell phone connection, no nada. Just you and the grand wilderness outside. I asked Yurij, the



THIS PAGE: Scenes from Chupa, an opportunity to dive and enjoy the wilderness of northwestern Russia, fresh smoked fish on the sea shore, wild blueberries under the brush; delicate stauromedusa attached to a frond of kelp



travel



director of the dive centre whether they had internet – via interpreter as he didn't speak English and my Russian was less than rudimentary but he gave me this look, pointed to the sky and said 'Sputnik' followed by the international handsign for "pricey". Who needs it anyway.

The next day we sail out the narrow fjord on the dive boat. It is, obviously, some former fishing vessels that has been transformed into absolutely decent dive platform with a roomy aft deck. It ain't fancy but it gets the job done. Where the fjord meets the White Sea proper there is a little archipelago into which we soon weave in and out between the spruce, birch and fyr draped islets. We anchor in another sheltered cove nearby a drop-off that leads to a cavern. The visibility is less good today but once you break through

THIS PAGE: Diver explores a cave in the White Sea; Huge fronds of kelp sway on the rocky sea floor; Diver sheds light on the craggy walls of a cave; Double-vision, split-view of the dive boat moored near Chupa; Giant sunstar decorates a boulder on the sea bed

White Sea



White Sea

and get under the thermo-cline it get clears as usual – and dark and cool. It is like a netherworld with an almost Gothic atmosphere. But otherwise the diving is easy as I haven't encountered any current or wave action. If you can deal with being cocooned in a puffy drysuit to keep you warm for the duration this place is very pleasant and exciting to visit. I swim slowly forward along the cliff and then I see it. A giant gaping black hole into the rock – and it is draped by some of the most intense coral festoons hanging down from the overhang. I carefully swim closer to take a closer look. It is not always easy to look upwards in a drysuit without incidentally letting some air out of some cuff or valve – or worse, also let is a squirt of cold water along the neck seal

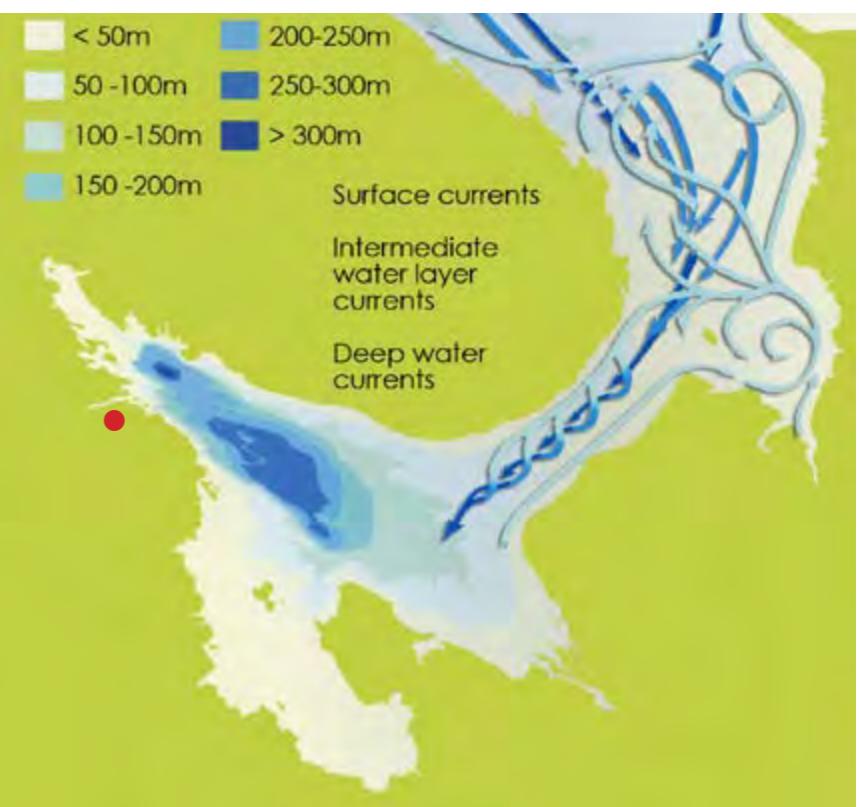
as you stretch to turn your head. I hate when that happens. It is as bad as stepping into cold water in a bathroom soaking your warm comfy socks on a cold winter morning. But for now I manage to gently hover around like a levitating monk, without touching anything precious and fragile. The images speaks for themselves.

Fodder

Lunch is made local style. We anchor in a little cove, where the skipper makes a camp fire. Here he boils freshly caught blue mussels, fish and some mushroom. They also have some, rather smelly, smoked fish of an indeterminate species on offer which among our Russian friends seem to be a great delicacy. The squeamish Westerners had no hesitation in giving it a pass, but the mussels which were served with a little bit of butter and garlic were just irresistible. And so was the strong tea with lots of sugar that I have come to favour. After lunch we went for a little leg-stretcher along the coastline. There were lots of flowers, mushrooms and delicious sweet blueberries which we eagerly collected along the way. And then we came past some dung, that looked like the pellets that rabbit or deer leave behind, only supersized. We were puzzled but upon our return to camp we were told that what we have come across was a brown bear's 'business card'. Glad that I didn't know that when I ventured into the wilderness.

Night dives are hard to come by

Bottom profiles and currents in the White sea. Composite illustration adapted from Siminov et al 1991 and Naumov, Fedyakov, 1991





White Sea

at this time of year. Being close to the arctic circle around midsummer means that there is virtually daylight round the clock. The sun barely dips below the horizon. But you can have some awesome evening dives in the almost perpetual twilight. In the dense kelp forests in the shallows there is plenty of nudibranchs, shrimps, shellfish, anemonae and small fish with ogling sculpins being omnipresent. And a hot cup of tea with ginger cookies is never far away.

Close by the centre, only minutes of sailing time away, there is a wreck of a



COUNTER-CLOCKWISE FROM ABOVE: Soft corals hang from an overhang at the entrance to a cave; Huge soft corals glow against the dark sea floor; A flocked Christmas tree in the deep? No, a diver meets a large delicate coral; Extra large Russian-size sea anemone



small fishing vessel. It lies close to a cliff so this is another site where you can anchor along the coast and dive from the shore.

fee only to return later in the day with a happy-elated expression smeared all over his grinning face.

The wreck isn't the greatest but it there and decent and adds to the diversity of dive sites in the area. There is also a submerged mine close by that can be dived. I didn't go but our good colleague Andrey, who is a die hard cave diving aficionado, couldn't help him self, of course, and off he went one early morning while we are still sipping our morning cof-

I didn't even bother to ask him if it was good.

At the end of the fjord, at a strategic position, there is a marine research station which belongs to one of the faculties under St. Petersburg University. Here we are greeted by professor Victor Berger who give us a tour of the facilities and explains the geography and ecology of the region. We are struck by how dilapidated and run down the facilities are. Underfunding in science and scientists struggling to make ends meet seem to be a global ailment but the Russians are better than any to do great science on a shoestring. Necessity is the mother of invention. Out here we have another couple of dives between the islets.

On the way back we come by a group of cheerful seals playing in the surface. Every day we see something new. On occasions the white whales also pay the inlet a visit, but we were not that lucky. Back at Nereis someone has fired

White Sea

up the sauna. It has been a long day and the evenings can be cool so that is a very welcome diversion after the trip back along the fjord. And, oh yes, they do the whole thing, even throwing some vodka on the coals. Not that it did much other than add a little scent of juniper but in this country vodka comes cheaper than bottled spring water. After 20mins in the sauna my tensions are melted away and with knees that feel like rubber I stagger out to get dressed before having a late supper.

That evening I
feel asleep
before
my

head
hit the pil-
low.

Every morn-
ing the cook

produces a very generous stack of pancakes, which took me about 8 seconds to become addicted to. I still reminisce about these solid breakfasts served at the most wonderful view. All around us we could see the wilderness. On one side we had the water with the inlets and headlands, on the other side we had the forest. Nereis sits in a little fishing village which is partly abandoned. We were told that many of the locals used to work in the local mines, which has now been closed down and abandoned for lack of profitability – after perestrojka, I guess – while others have simply left for better jobs and careers in bigger places. We don't see many people and those we see seem to be mostly pensioners. The areas also seem popular with canoeists and hikers. We also see some big and expensive SUV's belonging to wealthy anglers from St Petersburg, Moscow and Finland. They seem a bit out of place here.

Meeting an angel

I was surfacing from a dive in the fjord, when I caught this orange flicker out of the corner of my eye. Some strange creature, about an inch long, with stubby wings and horns on a rounded head were hurrying across the open water in flapping motion. I handed up my tank on the boat and went after



THIS PAGE: Some of the sea creatures divers can find in the White Sea include (left to right from above) Nudibranches, Sea angel, anemone fronds feel the current, bottom dwelling fish

angel, *Clione antarctica*, which defends itself from predators by synthesizing a previously unknown molecule, named pteroenone. Pteroenone has been shown to cause significant feeding deterrence in antarctic fish species known to feed on planktonic organisms. *Clione Antarctica* is commonly found near the undersurface of the sea ice and is sparse in water deeper than twenty meters. Localized population density down to twenty meters depth may be as high as 300 per cubic meter.

The verdict

In a diving world starving for novelty, this is a real deal. It is easy,



White Sea

it is (for Europeans at least) close by and it is inexpensive. And as the trip will inevitably take you in through St. Petersburg the traveller will get the option of a couple of days stay-over in St. Petersburg that will almost be a crime to take as well as a pleasant and beautiful train ride it is a whole package that gives you plenty of diversion and adventure before you arrive back home. The diving is not technically challenging in any way but does require cool water garment and it is not a technical dive site either, though the tekkies can find their spots here too. The logistics are pretty basic and while the rental equipment was all new Aqualung BCs, tanks and regulators, the compressor did not deliver more than 150bar (2200 psi) which was fine for a single dives but not for two on one tank. It is a place for kids? It depends. There doesn't seem to be anything around that can harm them, but there are no facilities and no entertainment for them either. Overall our stay was very pleasant and relaxing, the diving was diverse and exciting and the whole experience a refreshing novelty that gave left a good impression and a desire to bring back friends next time. Excellent value for your money. ■

THIS PAGE: Scenes from Chupa on the White Sea



fact file

White Sea, Russia



SOURCE: CIA WORLD FACT BOOK NASA

History After 200 years of Mongol domination in the 13th-15th c., the Principality of Muscovy, which was established in the 12th c., was able to emerge and gradually expand with the conquest of surrounding principalities. The Romanov Dynasty continued the expansion across Siberia to the Pacific in the early 17th c. Territorial conquest continued with the Russian Empire through to the 19th c. The devastation left by the two World Wars led to the overthrow of the royal family in 1917. Soon Lenin and Communism came to power at the formation of the USSR. Russian dominance of the Soviet Union was strengthened by Stalin at the cost of millions of lives. Stagnation in the economy and society followed until Gorbachev introduced glasnost (openness) and perestroika (restructuring) in the 80's. Swift changes led to the splintering and fall of the Soviet Union in 1991. A struggle to establish a democratic political system and market economy has occupied Russia ever since. Recentralization of power and erosion of some democratic institutions have occurred under President Putin while guerilla conflict in Chechnya still plagues Russian leadership.

The important port on the White Sea is Arkhangelsk. For much of Russia's history this port was Russia's main center of international maritime trade. Norwegian and Russian sailors, merchants and fishermen interacted in the region of the White Sea during the 18th and 19th c. During Soviet rule, the port became an important naval and submarine base and the White Sea was closed to Nor-

wegians by 1918. The 1990's saw a reopening of the sea to Norwegian and other western scientists, plus trade and tourism. Government: federation. Capital: Moscow

Geography 17,075,200 sq km; Northern Asia bordering the Arctic Ocean, between Europe and the North Pacific Ocean. Regions west of the Urals are included with Europe; Terrain: broad plain with low hills west of Urals; vast coniferous forest and tundra in Siberia; uplands and mountains along southern border regions; Coastline: 37,653 km; Resources: wide natural resource base including major deposits of oil, natural gas, coal, many strategic minerals, timber; Formidable obstacles of climate, terrain, and distance hinder exploitation of natural resources; largest country in the world in terms of area but unfavorably located in relation to major sea lanes of the world; despite its size, much of the country lacks proper soils and climates (either too cold or too dry) for agriculture; Mount El'brus is Europe's tallest peak.

An inlet of the Arctic Sea, the White Sea is located on the North Western coast of Russia. Karelia lies to the west of the sea and the Kola peninsula lies to the north.

Climate ranges from steppes in the south through humid continental in



ABOVE: Map of Chupa and surrounding area
LEFT: Location of White Sea on globe



much of European Russia; subarctic in Siberia to tundra climate in the polar north; winters vary from cool along Black Sea coast to frigid in Siberia; summers vary from warm in the steppes to cool along Arctic coast.

Population The population of Russia is 143,782,338 (2004 est.), Ethnicity: Russian 81.5%, Tatar 3.8%, Ukrainian 3%, Chuvash 1.2%, Bashkir 0.9%, Belarusian 0.8%, Moldavian 0.7%, other 8.1%; Religion: Russian Orthodox, Muslim and other religions.

Currency Russian ruble (RUR). Exchange rates: 10 RUR = .27 EUR / .36 USD.

Language Russian

Diving maximal depth of the White Sea (340 m); salinity varies from 0‰ in estuaries to 30‰ in places exceeding 200 m. Surface salinity in open sea is about 25‰. Upper water layer ranges

12-15°C and are inhabited by boreal species. Deep sea areas are occupied mainly by arctic fauna.

What to see: Anemones, large soft coral, huge starfish and sunstars, but the enormous Russian sea kelp is seasonal and can only be seen in warmer weather. Dry suit required.

A deco-chamber is located at Nereis Dive Center in Chupa.

Dive Center

Nereis Dive Centre
www.nereis.spb.ru

Web sites

Russian Tourism
www.russiatourism.ru
St. Petersburg
www.saint-petersburg.com
Hermitage Museum
www.heritagemuseum.org
White Sea Biological Station
www.zin.ru/wsbs

Books

White Sea Ecology & Environment
V. Berger and S. Dahle, eds.,
Zoological Institute - Russian
Academy of Sciences, \$34 USD
Akvarplan-niva, Tromsø, 2001.
www.akvarplan.niva.no ■

Press Release:

Just for Divers!

Reef Relief Founder Craig Quirolo has created a new webpage on coral reef health at www.reefrelief.org that is designed to introduce divers and snorkelers to what they will encounter on a coral reef entitled "Pre-Dive Introduction to Reef Health." This new section of the Reef Relief website expands the non-profit grassroots organization's efforts to educate various coral reef user groups and provide them with tools and information on coral reefs.



"When a diver is able to identify healthy corals as well as those that are diseased or showing other signs of stress, it makes the dive a more meaningful experience; the diver will go away more informed about coral reefs. Hopefully, it will encourage them to get involved in the global effort to protect the biologically diverse, but increasingly endangered, coral reefs of the world," notes Quirolo.

The "Pre-Dive Introduction to Reef Health" is drawn from Reef Relief's Coral Photo Monitoring Survey that features images from the Florida Keys, Bahamas, Cuba, Mexico, Puerto Rico, Jamaica, Honduras and St. Kitts. Quirolo has been surveying coral reefs for the past 14 years and has created an Online Archive of images on the website. The survey was begun from the funds received with the first Robert Rodale Environmental Achievement Award in 1993.

For more information, contact Reef Relief at www.reefrelief.org or call (305) 294-3100 email reef@reefrelief.org.