



*Indonesia's*  
**Raja Ampat**  
Text and photos by *Steve Jones*  
*The Four Kings*



Close encounter with a manta at Blue Magic, one of many premier dive spots in the Dampier Strait

**Swirling unicorn fish surround me and seem to have accepted me as one of their own. I can no longer see the surface nor anything else, save for a wall of fish. Only four minutes into the dive and it's already evident that this site is living up to its reputation, literally boiling with fish. Moments like this remind me why I dive.**

All too quickly the fish blanket parts and the moment ends. Pressing on into

the current I'm distracted by a huge school of jacks tempting me to abandon my plan. I resist, reminding myself that something greater may await. I pass a wobbegong posing perfectly under an overhang filled with colorful soft corals. I rudely ignore it.

At last, I reach the end of the reef, alone, and stare into the blue while I calm my breathing down. As the minutes pass, doubt creeps into my mind as to whether I've made the right decision. Everyone is enjoying the busy reef behind me and I am missing it all! As I am about to give up, I glance a dark shadow before me in the blue, growing larger every second. I swim out from

the reef and am greeted by the largest manta ray I have ever seen. Welcome to Blue Magic, a dive site that typifies the wonders to be found in Dampier Strait, one of the hotspots in Raja Ampat.

### Diversity!

Over the past ten years or so, Raja Ampat has often been described as having some of the best diving to be found anywhere, but what makes this area so special? From my perspective, it can be summed up in one word: Diversity! It is prevalent here, not only in the habitats to be found, which in turn support the myriad of species, but also



Schooling jacks at Blue Magic in the Dampier Strait (above); Crinoids and soft coral at Four Kings, Wayilbatan Island (top right). PREVIOUS PAGE: Four Kings dive site in the Misool area is typical of the stunning reefs to be found in the south of Raja Ampat

**WHAT'S IN A NAME**  
The name *Raja Ampat* (Malay for *Four Kings*) is derived from the four largest islands that make up this archipelago: Salawati, Misool, Batanta and Waigeo. These accompany over 1,500 smaller islands and islets found on the northwestern tip of the province of West Papua, which itself forms part of Indonesia's tenure of the west half of New Guinea, the second largest island in the world after Greenland. The eastern half of the island forms the mainland of the separate country of Papua New Guinea. ■



Red sea whips in the Fam Islands, which lie to the west of the Dampier Strait (left); Pair of scorpionfish at Cape Kri, in the Dampier Strait (right)

in the type of diving that can be experienced.

Those who enjoy stunning fish-packed seascapes that explode with colour will struggle to find a better location anywhere on the planet. Thrill seekers can enjoy high octane drift dives in those same currents that bring in manta rays. Those that enjoy the smaller things in life, the critters, will find themselves in the most biodiverse area of the world. Indeed, there are no less than 42 species of mantis shrimp in the area!

### By land or by sea?

There are two ways to experience Raja Ampat. If you wish to concentrate on a specific area with a more laid back approach, then a resort will be a good choice. However, if you want to sample the full variety of seascapes here, then a liveaboard is the only way to sample what this huge 50,000 sq km area has to offer.

Around 40 vessels currently operate here, yet given the size of the Raja Ampat, you will generally encounter

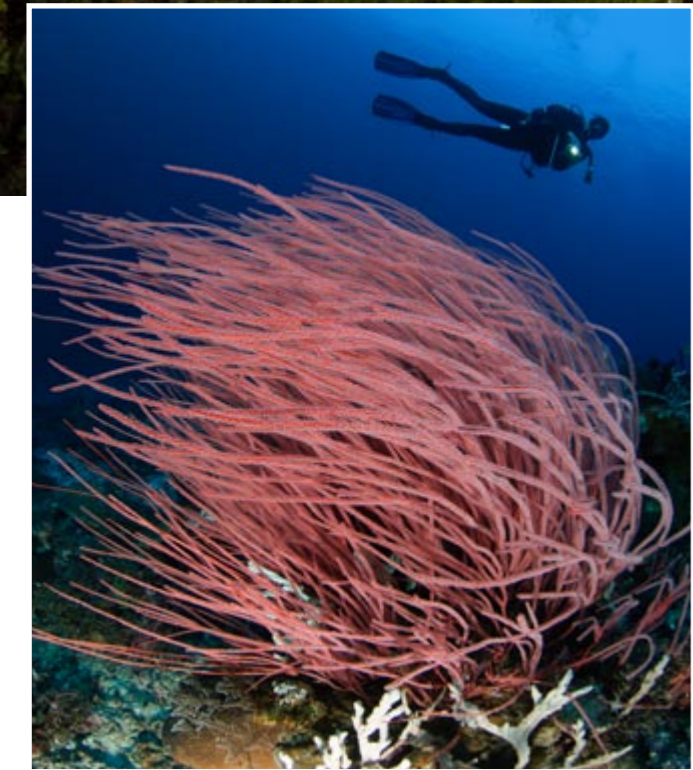
only a handful of other boats during your whole trip. Vessels also generally co-operate and avoid diving the same site at the same time as another boat, so your group will always have the reef to yourselves.

### North or south?

Shorter liveaboard itineraries will generally follow either a northern route taking in the reefs of the islands around Waigeo, or head south to Misool. Itineraries approaching two weeks will allow the

north and south to be sampled. These areas offer very different diving, so if you have the chance, make sure you visit both. Many cruise directors choose to round off the trips with dives in the current washed, spectacular reefs of the Dampier Strait.

Incidentally, current is an ever



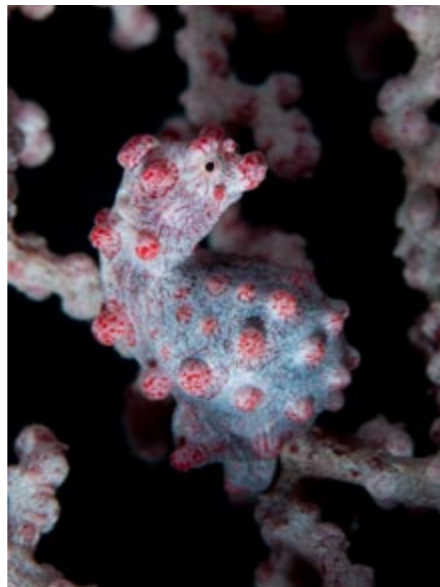


Stunning soft coral growth at Neptune Fan Sea, a channel full of sea fans in the south Raja Ampat

present feature of the dives in the region and of course, this is what makes the reefs so healthy. The common saying here is “no current, no life”. However, with good timing and the right choice of site, you’ll be able to see the reefs when they are at their best—that is



Pygmy cuttlefish in Anjui Bay—a haven for many critters



Pygmy seahorse on sea fans in Anjui Bay; Hawksbill turtle cruising the Farondi Islands, near Misool (lower right)

when there is a mild current, enough to concentrate all the fish upstream, but not so strong that you are swept away from the “sweet spot”—the point where the current splits around the reef and where the most dense fish life will be found.

## The northern areas

Northern itineraries will often head towards the spectacular limestone lagoon of Wayag—without doubt the most photographed topside location in Raja Ampat. A 30-minute hike up the steep limestone cliffs will allow a spectacular view of this stunning lagoon and provide great photographic opportunities.

Wayag and the surrounding islands are part of the Kawe Marine Protected Area (MPA) and the local village clans that steward these reefs have adopted a traditional approach, known as “Sasi” where no-take zones are seasonally rotated, allowing marine life stocks to

recover between harvests. These traditional and effective stewardship techniques are ones that many western fisheries have been unable or unwilling to adopt. Furthermore, on the nearby island of Piai, a guarded turtle rookery is helping the local populations of green and hawksbill turtle to

recover—all good indicators that conservation efforts in Raja Ampat are able to turn words into actions.

One of the most stunning dives in this northern region is Magic Rock. Head to the north west side and you will find a large archway that leads into a hollowed out



Limestone islands of Wayag



**THE GLOBAL EPICENTER OF MARINE BIODIVERSITY**  
Raja Ampat lies at the tip of a densely forested peninsula that juts out from mainland West Papua. The region is known as the Bird’s Head Seascape and runs from Triton Bay in the south, encompasses Raja Ampat and rounds the northwestern tip of West Papua, deep into Cenderawasih Bay. Located at the convergence of tectonic plates, millions of years of geological upheaval have carved out diverse habitats—quiet sandy bays, undersea mounts, drop-offs, mangroves, fast-flowing channels, the list goes on, and these habitats, fuelled by nutrient-rich upwellings from deep water in turn support the incredible variety of marine species to be found in this area. Over 600 hard coral species and over 1,700 reef fish species have so far been documented in the Bird’s Head area, which is more than in any other region of this size on Earth. This is the Global Epicentre of Marine Biodiversity. ■

COUNTER-CLOCKWISE FROM RIGHT: Giant manta ray at Blue Magic, Dampier Strait; Wreckage of a World War II P47 Thunderbolt at Wai Island; Wobbegong shelters under an overhang at Blue Magic; Sweetlips found at a bommie in deep water at Cape Kri



chamber. The floor here is filled with life and provides shelter from the current, allowing you to watch the masses of fish that gather just outside the archway.

Eagle Rock is another dive that typifies the northern Raja Ampat experience. This site is good for spotting manta rays, dogtooth tuna and humphead parrotfish. Large boulders that have broken off and rolled down to deeper water are alight with a dazzling array of orange

Dendronephthya soft corals. As you make your way back up the slope towards your safety stop, be sure to check under the many



overhangs, and you may be lucky to find a wobbegong.

## Tranquil waters

A common overnight anchorage in the north is in the sheltered Aljui Bay which lies on the western side of Waigeo, the largest of the main

four Raja Ampat islands. The steep vegetation covered walls provide good shelter. However, this area is also an excellent location for critter spotting, so liveaboards will often spend a day here.



Wire coral shrimp found on the slopes of Anjui Bay

## Raja Ampat

**CENTER OF THE CORAL TRIANGLE**  
It was not until 2001 that the area's importance was fully realized when Conservation International sent an expedition to the region following lobbying by renowned ichthyologist Gerry Allen. This area lies at the center of the "coral triangle", the region noted for its supremely high marine biodiversity that covers the intersection between the Indian and Pacific Oceans and spans the rest of Indonesia, Malaysia, Papua New Guinea, Philippines, Timor-Leste and the Solomon Islands. Leading scientist Dr Mark Erdmann has described this area as a "species factory" for the rest of the Coral Triangle. The majority of fish species found throughout the Coral Triangle are present in the Bird's Head Seascape. ■



The nutrient-rich waters in the bay host one of the region's largest pearl farms, the pier and fuel dock making for great night dives.

Here, you'll see barchin scorpionfish, cockatoo waspfish and Berry's bobtail squid amongst a myriad of other species.



Mayhem is a stunning dive in west Waigeo; *Chromodoris annae* nudibranch grazing in Anjui Bay (below)

this area, after diver David Shem-Tov luckily survived an attack by a saltwater crocodile in 2009.

Even sightings of “salties” are rare since their numbers



## Raja Ampat

area.

Actually the majority of great diving around Misool is to be found in the reefs off the south-east of the island. Here, you will find sites such as Boo's famous Window Wall, an image of which adorns the cover of Burt Jones and Maurine Shimlock's, *Diving Raja Ampat*, which was the

have been put under huge strain by human expansion into their territories, and they are quite rightly now protected in some regions. Nobody with a true love of the natural world would want a predator exterminated to make it safer for visitors, so the live-boards have taken the pragmatic approach of now avoiding this



White arrow is another splendid critter dive where the undersea terrain slopes steeply to 30 metres and beyond. Amongst the soft corals and sea fans you'll find yellow examples of the pygmy seahorse (*H.bargibanti*), ornate ghostpipefish and the unusual solar-powered nudibranch, which contains algae in its skin that helps feed the host nudi through photosynthesis.

### The journey to the south

The journey to the south and Misool involves covering a fair distance, but on the way down there are some incredible dive sites around Gam island, which lies to the south- west of Waigeo. On the aptly named “Mayhem” I encountered some of the most dense and diverse fish schooling I have ever seen on a single dive; I struggled to count the species

before me. Fusiliers swarmed over the reef, intermingling with unicornfish, surgeonfish, snappers and batfish whilst Spanish mackerels, huge trevallies and tunas glided through the schools waiting for opportunities to feed.

From Gam, it is an overnight run down south. Well-known images from this region, of soft corals with a backdrop of mangrove, were taken in the Nampale blue water mangroves off the north west of Misool. However, most live-boards now avoid



Sweeper at Blue Magic, Dampier Strait; Crinoid and soft coral growth in the Misool Region (right)



definitive dive guide to the region, now superseded by an expanded version that covers the entire Bird's Head Seascape.

## Exceptional reefs

The region is protected by the South East Misool Marine Protected Area, which administers most of the region's best dive sites (at least those that have so far been discovered—new dive sites are being found in Raja Ampat regularly and exploration is encouraged). Far out

east, the less visited reefs around Daram Island are wonderful with Andiamo regarded as one of the finest. This reef consists of a submerged pinnacle in front of two small islets. It was here that whilst I was diving amongst profuse sea fan growth on the north side, awash with fusiliers, that a juvenile



COUNTER-CLOCKWISE FROM ABOVE: Snappers grace the stunning reef that leads to Boo Windows; View towards Boo Windows near Misool; Juvenile spadefish under Arborek jetty in the Dampier Strait—the jetty is a stunning dive and no deeper than 5m; Exploring a cavern in the Farondi Island, near Misool

whale shark casually cruised by in the blue, unbothered by our presence.

Moving back towards Misool, there are dive sites that may well cause you to rethink your definition of a good dive. At No Contest, we descended down a near vertical coral-covered wall and were barely able to hold position with a mod-



## TOURIST DESTINATION

Raja Ampat's growth as a tourist destination has only recently begun to accelerate, with marine tourism forming one of the strategic initiatives of the conservation programmes working to conserve the Bird's Head Seascape's unique heritage. Visitors to the area pay a park entrance fee of Rp.1 million (approximately US\$102), which is valid for a year. The money is split between conservation, community and tourism development programmes.

Even today, whilst Raja Ampat is possibly no longer true "frontier" diving, it is far removed from the popular resort destinations found in other parts of the world. As of 2013, there are seven resorts but the majority of operators use liveaboards, generally Pinisi sailing boats built in the traditional Indonesian way.

With West Papua being Indonesia's poorest province, there are many challenges for diving operators to overcome. Veteran operator Txus Reiriz has been operating the liveboard *MSY Seahorse* in the region for over eight years. "I heard about how good the diving was in Raja Ampat," said Txus, "but when I visited, I found it exceeded way beyond my already high expectations. The reefs, landscape and biodiversity are stunning, and even now, after over eight years operating in this area, we keep finding new dive sites on almost every trip. But the biggest challenge is it's a long journey for the guests to get here, and because of the remoteness, it's even harder for us to get the supplies we need. Logistics are hell, but it's completely worth it!" ■

erate current washing against the reef.

We were truly in the sweet spot—large schools of longfin spadefish were silhouetted against a scene of absolute chaos as thousands of fusiliers danced in the planktonic waters and two species of



Surprise encounter with a large pelagic manta at Blue Magic; Elephants ear sponge at Blue Magic, Dampier Strait (right); Soldierfish at Mioskon, Dampier Strait (lower left)

life—here also are some of the most exhilarating dives in West Papua.

Mike's Point, named after the son of Raja Ampat diving pioneer Max Ammer, has some of the best fish action in the area. The island above this reef (Kerupiar Island) was repeatedly bombed in World War II, since the U.S. Air Force thought it to be a camouflaged Japanese ship.



barracuda competed with baramundi cod for our attention. On the reef wall itself not a single centimetre was devoid of coral growth, with sea fans competing with *Dendronephthya* soft corals for a space on a reef that exploded with colour. Our ascent had to be done with care, as a downwash runs over the top of this thin long reef. To cap it all off, a sea snake accompanied me to the reef top.

There are currently over 25 described dive sites in this south east region of Misool, and that number is ever increasing. Leaving these behind and heading back north caused mixed emotions since the reefs here are so endearing, but I needn't have worried. The final chapter of our itinerary is the zenith of Raja

Ampat's high octane diving—The Dampier Strait.

## The Dampier Strait

Baring the name of the British explorer William Dampier, this huge channel runs between Waigeo and Batanta, two of the four kings, and is not to be confused with the similarly named body of water in Papua New Guinea. Here, you'll find very strong currents, which is one of the reasons cruise directors leave this place until last, once the divers have settled in. However, it is these currents that bring the reefs to

When you see the wake coming off the island when the tide is running, it's easy to understand why.

Down in deeper water, there are large gulleys where a resident school of hump-



Mantas are not the only species to be found at Manta Sandy. These robust ghostpipefish were found amongst the coral

## Raja Ampat



head parrotfish can often be sighted. However, it is on the up-current side where you will find the fish action, and here you can often find large schools of sweetlips with fusilier

and unicorn fish schools so dense they will often obscure the surface.

The strong nutrient-rich currents that run through the Strait also attract another visitor—manta rays. Manta Sandy and Manta Ridge are two sites where mantas can be reliably seen, provid-



CLOCKWISE FROM LEFT: Soft coral growth near Wayilbatan Island, Misool region; Giant barrel sponge at Four Kings, Misool Region; Exploring the caverns of Goa Farondi, Misool Region; Elephants ear sponge growing on the slopes of Blue Magic, Dampier Strait

is also here that you have a very good chance of encountering a reef shark.

One of the striking things about Raja Ampat's reefs in general is the absence of sharks. This whole region has in the past been heavily overfished by shark finners, and anyone who denies that shark overfishing is a problem should visit here and see if their views still reconcile with the visual evidence (or rather lack of it). Yet, shark numbers are now actually starting to climb back from the brink in Raja Ampat, with shark sightings increasing across the whole region. This has been helped by the conservation initiatives, and in December 2012, the area became legally protected as a shark and ray sanctuary, giving hope that one day the master of



ed there is a little current present. Although it should be said that you also have a chance of manta encounters at many other sites in Raja Ampat.

Manta Sandy has a small rubble wall that indicates the boundary that divers should not cross, to ensure they do not disturb mantas when they are at the cleaning station. Wait low on the sand bottom, and you may be blessed with a close encounter with one of the black mantas that frequent this site, complete with yellow

pilot fish dancing around their mouths.

Cape Kri rivals Mike's Point in terms of sheer fish density. You normally begin your dive on the west side and keep heading east on this sloping reef on the south of Kri island. As you approach the easterly point, the big fish action builds to a crescendo above the reef, with large snapper, emperor and barracuda hovering in the current whilst large trevally speed around picking off unfortunate fusiliers from the large schools. It



the seas will once again patrol the beautiful seascapes of Raja Ampat.

**Getting there**

To dive Raja Ampat, you need to get to Sorong in West Papua. Makassar Airport on Sulawesi has direct flights to Sorong, and Makassar connects with Singapore, Jakarta and Manado. ■

*The author would like to thank Txus Reiriz of the MSY Seahorse Liveaboard (Indocruises.com) for his help and considerable support in preparing this article and Jay Monney and Eموke Vizhanyo for their ever patient modelling*



during the author's various visits to the region. For more information, visit: **Millionfish.com**

REFERENCES AND RECOMMENDED READING:  
B. JONES AND M. SHIMLOCK, *DIVING INDONESIA'S BIRD'S HEAD SEASCAPE*





# Mark Erdmann

*Raja Ampat*

*Conserving the Planet's Heritage*

Text and photos by Steve Jones  
Portraits courtesy of Mark Erdmann

**Dr Mark Erdmann is a coral reef ecologist and senior advisor for Conservation International-Indonesia's marine program, with a primary focus on managing CI's marine conservation initiatives in the Bird's Head Seascape in West Papua. Having lived there for over 20 years, he has dedicated the majority of his time to the conservation of Raja Ampat and the broader Bird's Head Seascape since 2004. Erdmann is also the regional coordinator of the Bird's Head Seascape marine conservation initiative, which is a multi-institutional initiative involving Conservation International, The Nature Conservancy, WWF-Indonesia, the State University of Papua (UNIPA), RARE, the Papua Sea Turtle Foundation, WWF-US, Sea Sanctuaries Trust and a variety of private sector marine tourism groups.**

Mark Erdmann

*SJ: You've been at the forefront of conservation efforts in the Bird's Head Seascape for many years, but what led to you realizing the richness and importance of the marine environment in this region? Why is it so important that this area is protected?*

ME: My first trip to Raja Ampat was in 2002, when I was asked by the Nature Conservancy to join a small expedition to

"ground truth" the report that had recently come out from Conservation International that claimed that Raja Ampat was the global epicenter of marine biodiversity. Within a few dives in Raja, I quickly had the data from the perspective of mantis shrimp (stomatopod) biodiversity to wholeheartedly agree with these claims. Within a few years I had recorded 56 species of reef-associated mantis shrimp from

across the Bird's Head, which is far and away the highest diversity of anywhere this size in the world. At the same time, what we also found on that first trip was that Raja Ampat was far from pristine, with abundant threats from blast and cyanide fishing, shark finning and turtle poaching. It was clear this was an amazing global heritage badly in need of conservation efforts.

*SJ: Please tell us about the structure, strategy and guiding principles of conservation efforts in this region, including the Marine Protected Area Network.*

ME: From a western perspective, one of the things that most stands out about Raja Ampat and the Bird's Head is its amazing marine biodiversity and spectacular beauty both above and below water. At the same time, it is also

very important to note that the Papuan people of Raja Ampat are of Melanesian culture that includes a strong tradition of marine tenure (wherein locals own not only land, but also the reefs and marine resources).

We knew from the outset that the key to preserving and sustainably managing these reefs would be to have the full support and involvement and in fact leadership of the local tenure

holders and traditional leaders in any conservation efforts. We knew that while these leaders would certainly be proud to be the custodians of the world's highest marine biodiversity, this alone was not going to be a strong enough motivator.

So instead, we consciously made the strategy to get to know these villages inside and out, and really get to understand what issues most mattered to



The islands of Wayag in the north of Raja Ampat (left); Mark Erdmann (below)



immoral, and rob coastal communities of the future of their fisheries and any tourism potential.

In any given community, it is only a minority few that are actively engaged in these destructive practices, and they should not be “rewarded” by being given special treatment to seek alternatives. This may sound harsh, but my views have been shaped by the very strong and angry words of the many coastal villagers who DON’T participate in destructive practices and are having their futures pillaged by these criminals.

Blast fishing and cyanide fishing are marine environmental crimes, and they need to be treated as such. Police are not expected to provide “friendly alternative livelihoods” to drug dealers or child traffickers, and in my opinion, bomb fishers fall into this same category. Quite frankly, one can NEVER come up with

an alternative that easily makes them as much money—this is a lost cause.

We prefer to focus on empowering and protecting those fishers engaged in sustainable practices, and the “bad guys” simply need to adapt or get sent to jail.

As Raja Ampat’s reefs continue to improve in quality, there are many more opportunities for local villagers to derive benefits from marine tourism, aquaculture and sustainable fisheries—and those opportunities are available to all.

*SJ: How are conservation efforts able to benefit local communities in the short term? Do you think communities see the link between conservation and these immediate benefits?*

ME: As I noted above, the conservation

them, and then try to couch our marine conservation thoughts in terms that mattered to them.

What we found almost immediately was that the local communities were very concerned about their food security and the fact that outside fishers were pillaging their resources. So, when we introduced the idea of a network of marine protected areas, it was not as a tool to protect marine biodiversity, but rather as a way to legally strengthen their marine tenure claims and give them full management authority over their marine areas, restricting the access to outside fishers and thereby ensuring their long-term food security.

We then took the unprecedented step of recruiting the MPA managers and staff directly from these local communities—and while this meant that we were mostly getting staff with

2nd and 3rd grade educations, they were nonetheless intimately familiar with their resources, highly passionate about saving them, and we of course targeted local community members with strong leadership skills.

It meant we needed to invest a long time (five years or so) in training them in marine biology, marine resource management, and even basic computer skills, but the end result has been fantastic, and we are confident will mean that this initiative is truly sustainable, having built a strong local foundation.

We could have instead brought in outside talent comprised of well-trained Indonesians with university degrees, but not only would they likely not be very accepted by local communities, they also wouldn’t have the intense passion to save their own reefs, and they would

over time of course want to return home to their families in Jakarta or wherever.

It took a bit longer to train local community members instead, but the result—we believe—will be ultimately more sustainable. Local communities therefore play the primary role in managing the reefs of Raja Ampat—this is a 100 percent local affair.

*SJ: What alternatives exist for local fishermen and villagers currently engaged in destructive practices? What incentives are in place to help them pursue more sustainable practices?*

ME: As for providing alternatives for local fishers engaged in destructive practices, if I may be blunt, I have learned over two decades in Indonesia that this is a romantic and foolish notion. Destructive practices like bomb fishing are illegal,



PHOTO COURTESY OF MARK ERDMANN



Fusilier schools are in abundance on Raja Ampat's reefs; Giant barrel sponge at Four Kings, Misool Region (lower left)

ME: One of our flagship programs in Raja Ampat has been the *Kalabia* program. You can also see more about it at the following link: [blog.conservation.org](http://blog.conservation.org)

The *Kalabia* (named after Raja Ampat's endemic walking shark) is a converted 34m tuna longliner that now travels around Raja Ampat to each of the 130-plus villages, delivering a three-day customized experiential conservation education program for elementary school children. On board are six highly-dedicated environmental educators (again, local community members that we recruited and trained intensively)

who bring this program to the communities.

The climax of the three-day program is when the children are all taken snorkelling on their reefs, and they also do mangrove and seagrass bed walks and learn all about MPAs and their benefits, the ecological values of sharks, etc.

At night, the whole community comes down to the village dock to watch the videos shown by the *Kalabia* team. It is a fantastic program. The teachers from the local schools are all included in all activities, and we leave the curriculum materials with all the school teachers so that they can

continue to use them in their classrooms after the *Kalabia* leaves.

SJ: What are the notable successes so far and what remain the top threats to the region that will be focused on in future?

ME: I reckon the biggest success has been the setting up of this network of over 1.2 million hectares of the most biodiverse reefs on the planet, which are now being actively managed by local community members and strongly and passionately enforced. We've seen numerous outside bomb fishers and shark

program in Raja Ampat has been developed WITH the local communities to answer their most pressing concerns of food security and empowering their traditional rights of tenure and resource management. Protection of biodiversity is a handy side benefit, but this is not the primary goal of Raja Ampat's MPA network and conservation initiative.

The main aims are to ensure food security and long term sustainable livelihoods from the marine resources, and to provide additional legal support for them to exclude outside fishers from utilizing their resources. These benefits are more or less immediate and only continue to grow, and it is clear that the villagers of Raja Ampat "get it"—in that we continue to get requests to expand the boundaries of the MPAs or create



new MPAs in areas that are not currently protected.

SJ: Does conservation feature in the day-to-day education within

schools and do schools currently teach the value of the marine ecosystem for the long term well being of the Indonesian nation?



Crinoid and soft coral growth in the Misool Region



The spectacular colours of the south of Raja Ampat (left); Intense fish action at Mike's Point, one of the most spectacular dives in the Dampier Strait (below); Sweetlips school on the deep bommies at Cape Kri (lower right)



*SJ: Given its position at the epi-centre of marine biodiversity, what will be the likely cascading impact to other regions, if the Bird's Head marine environment is not successfully managed?*

ME: Raja Ampat and the Bird's Head act as a repository of a mind-boggling percentage of the Earth's coral reef biodiversity. With over 600 species of hard coral, this region alone is home to approximately 75 percent of the world's hard coral species! So it is imperative to protect and manage this.

finners actually put in jail, and the reefs, fish and sharks of Raja Ampat are actively recovering.

I also believe this is reflected in the dramatic increase in marine tourism development, which we've actively encouraged—going from one resort and one liveaboard and about 300 guests a year in 2000 to now 40 liveaboards, seven resorts and about 7500 guests a year.

The Raja Ampat entrance fee system is now raising over US\$350,000 per year. The Raja Ampat government now actually believes that marine tourism and sustainable fisheries can be the motors of its economic development, and has forsworn any further mining development. And we've cemented this in the West Papua spatial plan, which prioritizes Raja Ampat as a region for marine tourism, marine

conservation, and sustainable fisheries and aquaculture and NOT industry and mining as with much of the rest of Papua.

I also note that overall, incidences of blast and cyanide fishing have decreased dramatically. We've largely addressed turtle poaching (especially in the main nesting beaches) and the recent passage of the regency law declaring Raja Ampat a shark and ray sanctuary gives strong legal teeth to the ban on fishing sharks and rays.

In terms of ongoing threats, interestingly enough, they are now coming more from the land than from the sea. We continue to have the issue that as shark populations have stabilized and even started to increase in the best protected areas (Misool, Wayag), they are increasingly

a beacon to illegal shark fishers from across Indonesia. But this we can hopefully deal with.

More concerning though are the impacts of the ongoing land-based coastal development in Raja Ampat - especially road construction in Waigeo and various and other plans for airports and even transmigration camps on other islands. There is a major influx of immigrants into the capital city of Waisai, and this is a concern both in terms of carrying capacity as well as dilution of cultural traditions.

We've also seen a huge increase in plastic and other trash in the oceans, mostly coming from both Waisai city and Sorong—both of which are growing very rapidly with immigration. These are all new challenges that we are having to adapt to.





Erdmann

Soft corals at Citrus Ridge, near Waigeo in the north (left); Manta Rays at Blue Magic (above)

*SJ: It is known this area has suffered heavily from shark finning practices. Do you think the region will ever be able to recover its shark populations, or have we passed the point of no return?*

*ME: I am exceedingly positive about the situation with sharks in Raja Ampat. The area has indeed long suffered from shark finning; my neighbors in South Sulawesi*

*when I was doing my PhD work in the early 90's were actively finning around Raja Ampat even back then. However, Raja Ampat has now implemented the first shark and ray sanctuary in the Coral Triangle (across all of its waters), and the regency law #9/2012 (passed in December 2012 and announced in February 2013) provides serious legal sanctions (and NO LOOPHOLES!) for*

We moreover hypothesize that this region is, in fact, an active cauldron of evolution, or “species factory”, which is, as we speak, still generating novel biodiversity. As diversity provides the building blocks for adaptation to global change (climate, etc), it is imperative to maintain as much diversity as we can to give reefs and, in fact, humans the best chance of surviving the coming changes facing our planet. If the Bird's Head is not properly managed, we'll lose this repository of diversity.

*SJ: Conversely, how does the conservation programme in the Bird's Head Seascape benefit other regions in the Coral Triangle?*

*ME: Obviously, if we can properly*

manage the Bird's Head, we'll keep this diversity available for adaptation to global changes.

But there are other benefits of proper management of this area as well. The Bird's Head continues to serve as an “incubator” region for testing new management approaches, including the strategy I elaborated above about heavily investing in building the capacity of local villagers to manage their own resources on a large scale.

But there are a number of other new initiatives being tested in the Bird's Head, including the first shark and ray sanctuary in Indonesia and the Coral Triangle, the most successful tourism entrance fee system in the Coral Triangle (in terms of annual revenues), the first real marine tourism management regulations in

Indonesia (including a licensing system that caps the number of liveaboards able to operate, etc), and the first attempt to gazette a comprehensive MPA network of seven MPAs within a single regency.

Besides serving as a management “classroom” (the lessons learned from which are now being shared around Indonesia), Raja Ampat's position at the top of the “Indonesian Throughflow” of waters from the Pacific towards the Indian Ocean means that having healthy populations of reef fishes and other organisms here can actively “seed” other reefs in eastern Indonesia due to the strong currents passing through Raja Ampat and towards the Maluku spice islands.



Limestone islands at Wayag



Hard coral growth at Jamur Boo, near Misool (left); Sunset at Wayag (below)

EcoResort, Cape Kri near Papua Diving, and the Kawe-Wayag MPA), we can already see significant recovery of shark populations. Max Ammer at Papua Diving has now several times tried putting down bait (minced tuna) off his dock and within five minutes has had up to 30 adult blacktip sharks racing around.

Around the reefs near Misool EcoResort, it is now possible to see silvertip sharks or sometimes three to five grey reef sharks—something you would never see even four years ago. It will take time, but recovery is underway.

*SJ: Finally, what is your perspective on the overall outlook for Raja Ampat?*

ME: Bright! There are still a

number of challenges facing Raja Ampat, but I strongly believe that because we were able to initiate these conservation programs before the current wave of development washed over Raja Ampat, that the communities are now sufficiently aware of the threats to their resources that much of this development poses, and they are now empowered to make their own decisions about the future management of these resources. We've done our best to train them to be good stewards, and I optimistically believe this will allow Raja Ampat to continue to improve its management and the quality of its marine environment.

— Dr Mark Erdmann has

*published 107 scientific articles and four books, including most recently the three-volume set, Reef Fishes of the East Indies, with colleague Dr Gerald Allen. Erdmann was awarded a Pew Fellowship in Marine Conservation in 2004 for his work in marine conservation education and training for Indonesian schoolchildren, members of the press, and the law enforcement community. Erdmann lives with his wife Arnaz and three children in Bali, and maintains a deep personal commitment to do whatever is necessary to ensure his children will be able to enjoy the same high-quality underwater experiences that continue to provide the inspiration for his dedication to the marine environment. ■*



anyone catching, injuring, transporting, molesting, or in any way exploiting sharks and rays in Raja Ampat.

We, of course, need to work hard to make sure this is broadly socialized and effectively implemented, but I am confident the government and communities

are up to this challenge as they understand how important sharks and rays are both to healthy reef fisheries but also for marine tourism.

In the areas of Raja Ampat that have already been strongly protected for the past three to five years (e.g. around Misool

## Erdmann

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*Indonesia's*  
**Raja Ampat**  
Text and photos by Don Silcock  
*Incredibly Rich Waters*

***Arus kencang* are the words you need to listen out for—you will hear them in the rapid interchange between the dive guides and the boat boys, as they discuss the practicalities of safely immersing a group of “bule” (slang for foreigners) in the waters of Raja Ampat. *Arus kencang* means strong current in Bahasa Indonesia, and the emphasis given to those two words will give you an instant insight into what awaits you below.**

The incredible reefs and tremendous biodiversity of the Raja Ampat area have made this remote part of the Indonesian archipelago one of the hottest dive locations in the world, and those currents are the very lifeblood of the area. For they carry the rich nutrients from the deep basins of the Pacific Ocean to the northwest of Raja Ampat and have helped to create what are generally considered to be the finest coral reef ecosystems in the world.

The amazing biodiversity of the area, and the currents that flow through it, are two sides of the same coin, and a basic understanding of this mechanism is the key to truly enjoying one of the best diving experiences there is.



### Location, location, location...

The remarkable landmass of New Guinea is the largest tropical island in the world, and it sits just below the equator along

the southern rim of the “Ring of Fire”—the belt of volcanoes and tectonic plates that runs around the edge of the vast Pacific Ocean.

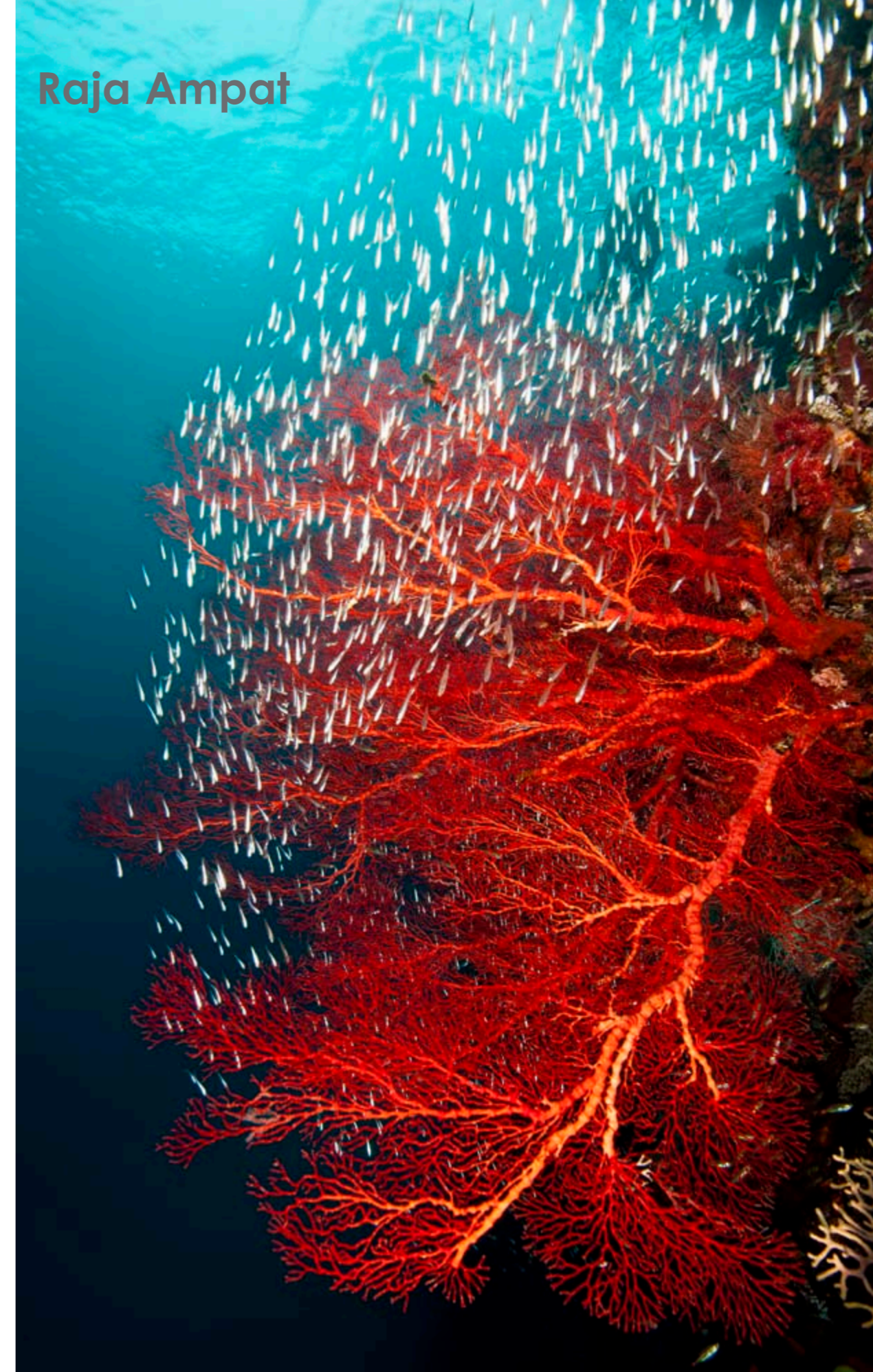
Divided by colonial legacy and cold-war geopolitics into two roughly equal halves, the eastern part of the island is the independent country of Papua New Guinea

(PNG), while the western half, which is now generally known as West Papua, became part of Indonesia in 1969. Although occupying less than half of 1% of the Earth’s



The Passage at Waigeo (above); Cuttlefish (left); Robust ghost pipefish (below)

## Raja Ampat



Large red gorgonians decorate the reefs of Raja Ampat



surface, the island contains up to ten per cent of the planet's species and is a veritable storehouse of biodiversity.

The waters that surround New Guinea offer some of the very best diving in the world, with PNG long-established as a diver's Mecca, but it is Raja Ampat on the northwest tip of West Papua that has become the place to have in your log-book.

Just ten years ago, your choices were limited to one dive resort and a couple of liveaboards, but now there are several well established resorts and up to 50 boats operating in the area at the peak of the diving season.

Thanks to the excellent work of Conservation International, The Nature Conservancy and WWF-Indonesia a network of 12 marine protected areas (MPAs) have been established in West Papua to counter the impact of tourism and over-fishing. These marine protected areas cover an area of almost 3.6 million hectares, or 25 percent of Indonesia's total national MPA coverage, and have played a major role in keeping the underwater environment in excellent overall condition.

More recently, in February 2013, the local government of Raja Ampat declared four million hectares of coastal and marine waters as a sanctuary for sharks, manta rays, dugongs, whales, dolphins and turtles—tacitly recognizing that these creatures are much more valuable alive than sold as by-catch.

### The Four Kings

Raja Ampat means four kings in Bahasa, and the name comes from the local myth of a woman who finds seven eggs, four (ampat) of which hatch and become kings (rajas) and occupy four of the area's biggest islands, whilst the other three become a ghost, a woman and a stone.

Those four islands are Waigeo, Salawati, Batanta and Misool are surrounded by about 1,500 smaller islands and about 40,000 sq km of water. Surveys of the area have identified over 600 species of hard coral, which is nearly 75 percent of the world's total, and in excess of 1,700





Diver on one of the many beautiful reefs of Misool



The incredible scenery in Waigeo area; Superb nudibranch, Black Beauty in Batanta (below)

species of reef fish—more than any other similarly-sized region on the planet. Raja Ampat truly is the global epicenter of marine biodiversity!

### Diving Raja Ampat

There are three principal areas to dive in Raja Ampat: in and around the Dampier Strait that separates the main islands of Waigeo and Batanta; Waigeo itself; and the area around the island of Misool in the south. Triton Bay on the south coast of the main island is also technically part

of the Raja Ampat area, but its remoteness means that it is treated as a separate trip.

All three areas offer spectacular diving and underwater experiences, which could fill a couple of books, but there are certain signature dives in each area that really should not be missed.

### The Dampier Strait

The dives sites of the Dampier Strait are where most liveaboards start and finish their diving programs, because they are the closest to the town of Sorong and its airport, which is currently the point of entry to the Raja Ampat area.

For those of you familiar with fluid dynamics, the Dampier Strait can be thought of as a venturi, where a restriction in diameter automatically increases the velocity of the fluid passing through it.

For all the rest of us, think strong currents—because the Strait is the principal channel through which the flow of water from the Pacific Ocean passes through on its way south. These currents and the rich nutrients in the water have created some of the most spectacular reefs, bommies and encounters you are ever likely to experience.



Pipe fish with eggs at Szonic Jetty in the Dampier Strait

## Raja Ampat

### DIVING IN STRONG CURRENTS —*The Do's and the Don'ts*

The trick to diving in strong currents around Raja Ampat is to understand the basic mechanism and work with it, because you just can't fight it. Strong currents are the life-force of vibrant reefs systems, and they are at the strongest around the edges and at their most manageable in the center.

Picture a large submerged bommie or pinnacle that rises up from the deep and faces into the predominant current. Where that current hits the reef first is where its velocity is low, and the deeper you go at that point, the less that velocity will be. But as the current goes around the sides, the velocity increases dramatically, and where it goes over the top of the bonnie or pinnacle, particularly if it is shallow, the velocity is at its maximum.

So, when you enter the water, it should be upcurrent from the bommie, and you must get down on the front as quickly as you can, which is the sweet spot where the current is manageable and where the most prolific fish activity is. Miss the front, and you will think you are in a washing machine, as the currents sweeps you around or over the top. ■





**Manta Mantra.** Various referred to as Manta Mantra, 3M, Manta Ridge and Manta Sandy, this site is a manta ray cleaning station on the southern side of the large reef that separates Mansuar

Island from the much smaller Airborek Island at the western end of the Dampier Strait.

The cleaning station is a number of small bommies located in the channel between the main reef and a smaller one to the south. Strong currents run through the channel, which together with the numerous cleaner wrasse and butterfly fish on the bommies, have created the perfect conditions for mantas to come in and be cleaned of their parasites. As many as 30 mantas have been

reported on the site, but on the days I dived it we saw between five and ten—but on every dive.

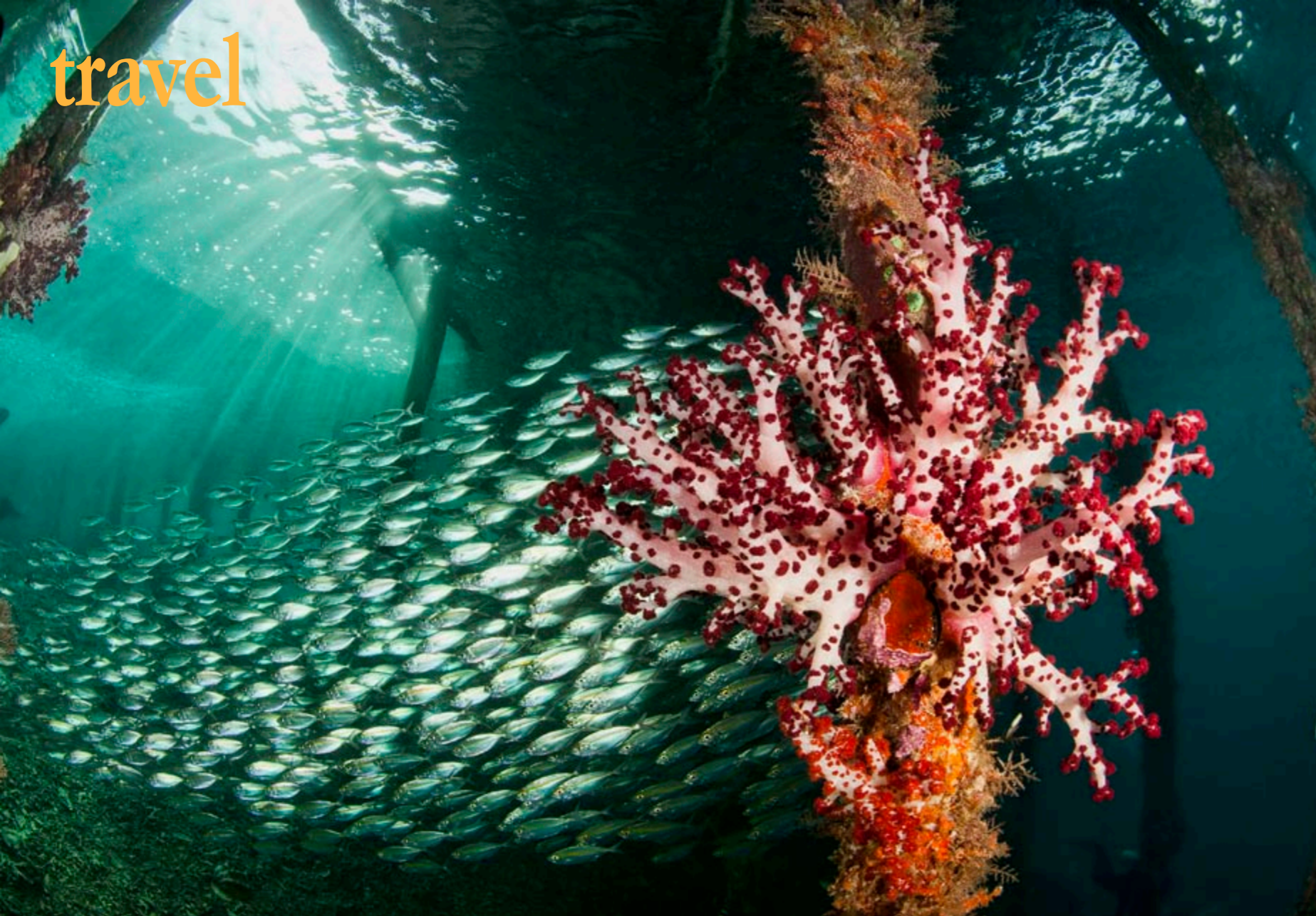
The site is very popular, and to ensure the presence of so many divers does not

drive away the mantas, a strict demarcation code is enforced at the site. A line of rocks has been laid out in about 16m of water, close enough to the bommies so that divers can observe and photograph the mantas, but far enough away to allow them to be cleaned in relative peace.

The thing to do at Manta Mantra is get yourself in position somewhere along the demarcation line where you can comfortably hold on against the currents and then wait. The site is fairly shallow, and so bottom time is not an issue. As the mantas complete their cleaning rituals, they often come and check out the waiting divers with some upfront and personal interactions. Altogether a tremendous dive site and not one to be missed!



THIS PAGE: Mantas visit the cleaning station at Manta Mantra



Airborek jetty in the late afternoon

Airborek Jetty. Another signature dive site that should not be missed are the two jetties on the small island of Airborek. Here, the Dampier Strait currents flow around the jetties, creating a mini-ecosystem on the wooden structures, with rich growths of vibrant soft corals on the vertical piles and resident schools of jacks and batfish patrolling in between.

Late afternoon on a calm day produces a perfect setting for wide-angle photography as the sun's rays create stunning backdrops to the abundant subject matter under the jetty. Then, if

you tire of that, the local kids make excellent models as they swim down to pose for the camera.

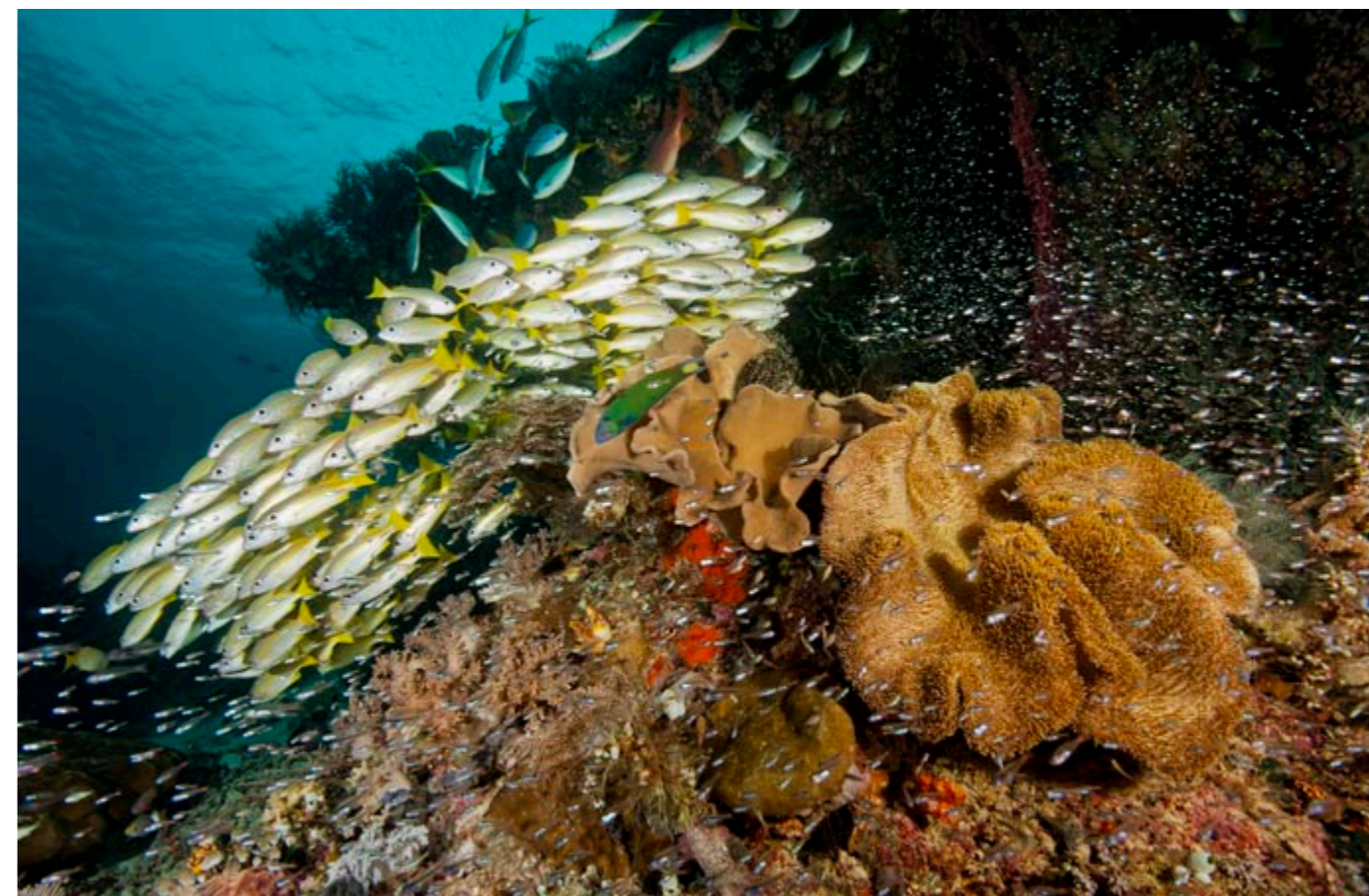
Down in the coral rubble on the slope around the jetties, you will find jawfish, pipefish and other critters, while the bommies at 18m are home to some schooling sweetlips and numerous critters.

**Mioskon.** This small island on the northern side of the Dampier Strait is near where the southern end of Kabui Bay exits in to the strait between the large islands of Gam and Waigeo. There are



Schooling bat fish underneath Airborek jetty

## Raja Ampat



Mioskon reef in the Dampier Strait; Local kids from Airborek village pose underwater (top right)



Wobbegong shark and diver at Mioskon reef

Superb soft  
corals at  
Mioskon reef

several other superb dive sites in the area, such as Cape Kri, Sardine Reef and Mike's Point, but for sheer consistency the eastern side of Mioskon is hard to beat.

Known above water for its large population of flying foxes, below water you will find a superb reef with numerous bommies densely coated in soft corals and a resident school of yellow snapper patrol that sweeps up and down the reef in a flowing motion that adds to the very dynamic feel of the site.

Throw in the numerous wobbegong sharks to be found and the plethora of creatures and critters in amongst the bommies and soft corals, and



## Raja Ampat



Late afternoon at Mioskon reef

this is one tremendous site that can be dived time after time without getting bored.

### Waigeo—The Passage

In the northern area of Raja Ampat, around the western tip of the island of Waigeo are several good dive spots such as the critter site Waterlogged and the nearby Pearl Farm jetty in Alyui Bay. But the narrow channel that separates the islands of Gam and Waigeo is very much the signature dive in Waigeo.

The channel's proper name is Kabui Passage, and it connects the western side of Kabui Bay to the Halmahera Sea, but it is universally referred to as simply The Passage.

Roughly one nautical mile long, The Passage is about 60m wide and is subject to some really strong currents that can make the journey



Beautiful sponges (left) and superb soft corals (above) in Waigeo's Passage

through it feel a little bit like white rafting!

Although it looks just like a fast flowing freshwater river making its way through dense jungle, it is actually sea water, and in the many small

inlets along the side of The Passage, mini-ecosystems have been established. These are quite special, particularly the ones on the southern side near Kabui Bay where large sea fans, soft corals and colorful sponges

have grown in shallow waters under the overhanging jungle creating quite unique photo opportunities.

Diving The Passage around mid-day offers the chance to capture the sun's rays, as they pierce the overhead canopy and illuminate the colorful growth below creating a superb and mysterious effect.

Then, there are the mangroves and archer fish hunting their prey in their unique "spit-and-stun" technique and small schools of halfbeaks up in the inlets, but don't forget to look out into The Passage itself, as you will often see passing sharks, turtles and jacks—what a dive!

### Local knowledge

The indigenous people of the Raja Ampat area predominantly live in small coastal colonies where the traditional tribal culture, which revolves around the sea, still prevails. Apart from tourism, there is virtually no industry, which means that the sea is the principal source of sustenance, but extracting that bounty from the rich waters of Raja Ampat requires a quite unique skill set—one which, when learned, is ideally suited to safely immersing "bule" (tourists).

Mikel Merin from Dome Island near Sorong has been the principal



Mikel Merin in his element!



Traditional mask (left); Misool Eco Resort (above); Fan corals on reef; Ornate ghost pipefish (lower right)

boat boy on all the trips I have done to Raja Ampat—which have been with Deb Fugitt's City Seahorse dive travel company.

Fugitt has been leading trips to Raja Ampat since

1999 and met Merin on that first trip, when he helped her find the best spots to dive safely.

Watching Merin study the surface currents and direct the cover boats is to observe somebody who is comfortable with these forces of nature and can intuitively understand what is happening under the water from the patterns above. Those skills are past down from generation to generation by the people

of Raja Ampat, as they learn how to take their canoes out in to the currents of the Dampier Strait, understand where the fish will be, how to catch them and (most importantly) how to get back to the village with that catch.

Merin sat with me one evening on my last trip to Raja Ampat and explained how his uncle had mentored him from an early age to do this by first showing him how to paddle his canoe with and against the currents, then how to interpret the state of the tide from the phase of the moon—no clocks or tide tables required.

Once confident on the water, the next steps were to read the surface patterns created when the currents sweep around a reef or large bommie, so that the canoe can be safely anchored in the sweet spot closest to the fish.

Merin also shared with me stories of what had happened to him when he got it wrong in the early days, as he started to go out by himself. One mis-

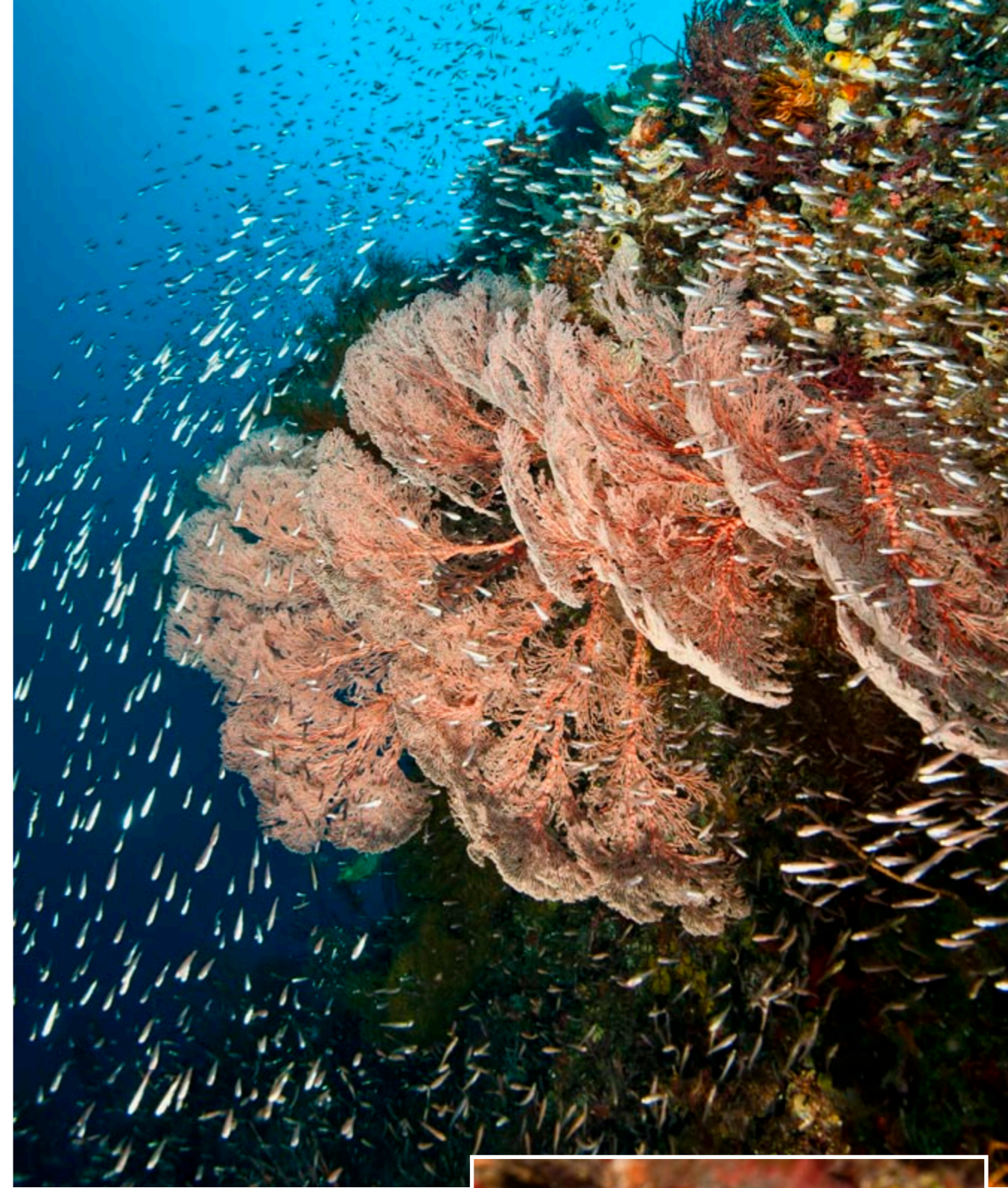
adventure he related had him caught in the fierce currents of the Sele Strait between the islands of Batanta and Salawati, as night was falling.

He managed to turn his canoe around and make it back to Dome Island by dawn the next day, but had he not, he would have been swept out into the Halmahera Sea with the next chance of landfall some 300km away—character building.

### Misool

Some 130km to the south of the Dampier Strait area, and roughly half-way to Ceram in the Molluccas, is the large island of Misool and what are probably the very richest and most vibrant reefs in the world. This is a remote area in a remote area, and Misool's isolation has allowed it to become the epicentre of biodiversity in an area that is already recognised as the most biodiverse in the world.

It is hard to imagine a more pictur-



esque and inspiring area, both above and below the waters. But it is not like this by accident, and much of the credit for the current excellent status of the area's reefs and marine habitats are the results of the conservation work pioneered by the Misool Eco Resort. A superlative example of what can be done to arrest decline and convince local communities that the seas are not an inexhaustible resource, the resort has





THIS PAGE: The incredible corals and gorgonian fans at Fiabachet in Misool

really done a tremendous job and is to be applauded.

**Fiabachet.** Is this the best reef in the world? Hard to answer in a quantifiable manner, but subjectively, Fiabachet has to be in the top ten if not the top five—it is simply that good!

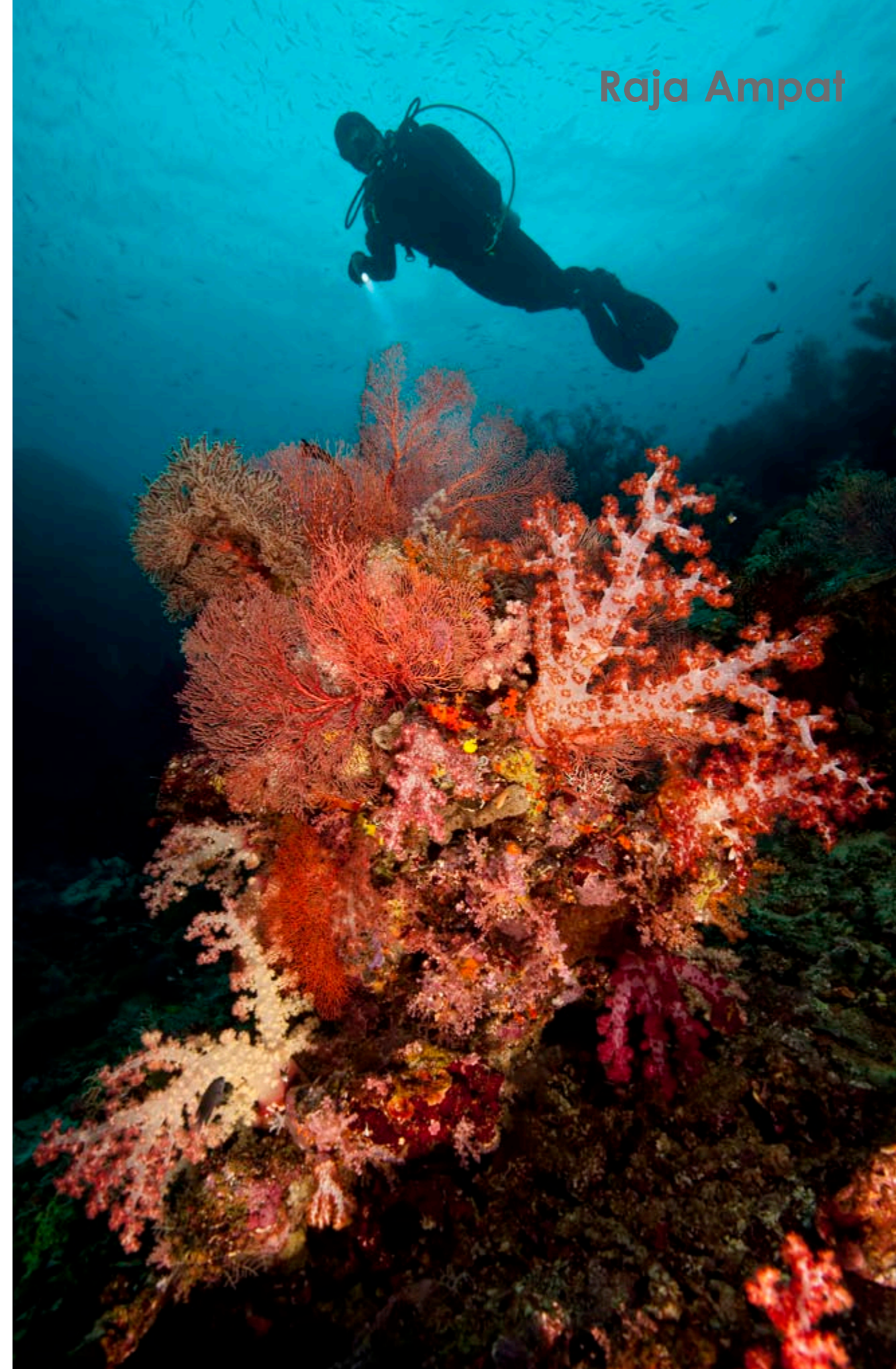
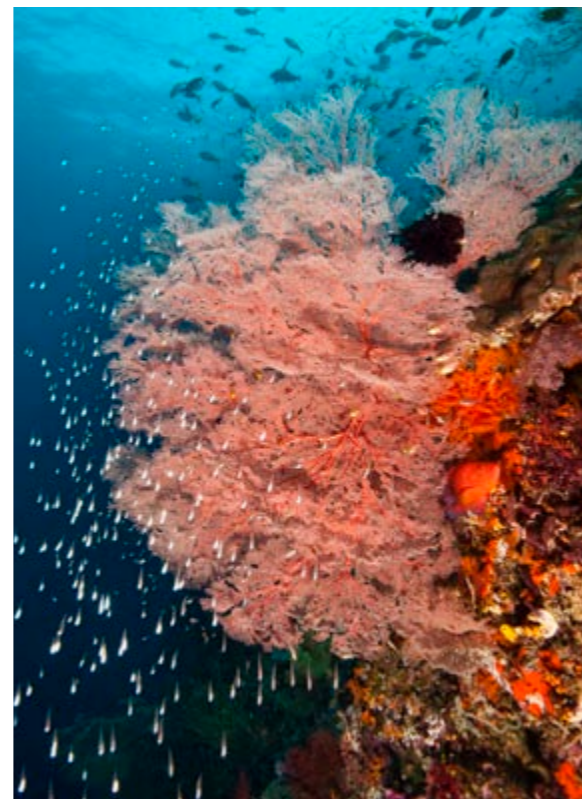
There are numerous other tremendous sites in a string of islands to the southeast corner of Misool, but Fiabachet is the jewel in the crown and a simply amazing experience. The actual site is a long underwater ridge that runs west to east and connects two rocky outcrops: Nudi Rock at the western end and Tank Rock at the eastern end.

The underwater area around Nudi Rock, which takes its name from the remarkable similarity its above water

shape bears to a nudibranch, is positively stunning and probably the best and most dynamic part of Fiabachet. The quality and quantity of the hard and soft corals, sponges, gorgonian fans, sea whips and general fish life will take your breath away!

But the area around Tank is phenomenal as well, and if you went there first, you would probably think it can't get much better than this, only to journey down the ridge to Nudi and find somewhere that takes it to the next level. Once upon a time there were many other places just like Fiabachet.

**Batu Boo.** It's hard to pick the next best dive site after Fiabachet, as there are so many to choose from, but nearby Batu Boo is quite something, too. It is also





Raja Ampat



Diver in Boo Windows at Batu Boo (above); School of batfish at Batu Boo (top right); Brilliant sunset over Raja Ampat (right)

known as Boo Windows because of the two large, shallow underwater holes in the main island that create excellent photo opportunities at certain times of the day when the sun streams through them. The site is a large underwater seamount that runs north to south, and at the northern end, there is a large oval shaped rocky outcrop, while at the southern end there is a small outcrop with a single tree growing on it—which has been christened Batu Jamur,

or mushroom rock, for obvious reasons. The two “windows” are at the southern end of the main rock and face west to east, making them perfect for the sun’s rays.

Besides the windows, there is a great deal to see at Batu Boo, starting with the walls of the seamount that is richly covered in soft corals and gorgonian fans—many with pygmy seahorses. The blue water around the rock is host to numerous pelagic fish, and the

area around Batu Jamur is rich in soft corals and has a resident school of yellow snappers.

### Conclusion

The Four Kings is without a doubt one of the top dive destinations in the world, and the danger is that its very popularity will severely degrade its tremendous biodiversity. While there are signs of degradation, there are also significant efforts being made to arrest the decline, and the work

done by Conservation International, The Nature Conservancy and WWF-Indonesia together with the very hands-on and proactive approach of the Misool Eco Resort is tremendous.

The creation of the huge marine protected areas (MPAs) and shark sanctuary indicates that the local authorities are getting the message that a healthy and vibrant Raja Ampat is much more valuable than a plundered

one. The area’s spectacular above-water scenery would justify the long journey to get there in itself, but for divers, Raja Ampat offers a chance to see the underwater world at its very best and is something you simply should not miss! ■

*Don Silcock is a Bali-based underwater photographer and writer who focuses on the diving in Indonesia and Papua New Guinea. His images, articles and extensive location guides can be found online on his website: [www.indopacificimages.com](http://www.indopacificimages.com)*



SOURCES: U.S. CIA WORLD FACTBOOK, WIKIPEDIA, INDOCRUISES.COM, MARK ERDMANN

# fact file

## Raja Ampat, Indonesia



**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. From 1942 to 1945, Japan occupied Indonesia. 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](http://www.newint.org/issue344/history.htm). Strife continued in Indonesia's unstable parliamentary democracy until President Soekarno declared martial law in 1957. Soekarno was removed from power following a fruitless coup in 1965 by alleged Communist sympathizers. President Suharto ruled Indonesia from 1966 until 1988. Suharto was

toppled in 1998 following a round of riots, and in 1999, free and fair legislative elections took place. Indonesia is the world's third most populous democracy, Government: Republic. Capital: Jakarta. Note: 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 Southeastern Asia, Indonesia is an archipelago situated between the Indian and Pacific Oceans. Coastline: 54,716km. Terrain consists primarily of coastal lowlands, with interior mountains on larger islands. Raja Empat is the most western district of the Indonesian province of Papua. Raja Empat consists of four major islands off the west coast of 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, with more moderate climate in the highlands. The water

temperature is normally 28-29°C (84-86°F) year round, with an occasional "chilly" 27°C (82°F) spot. Most divers use 1mm neoprene suits. However, some people prefer 3mm.

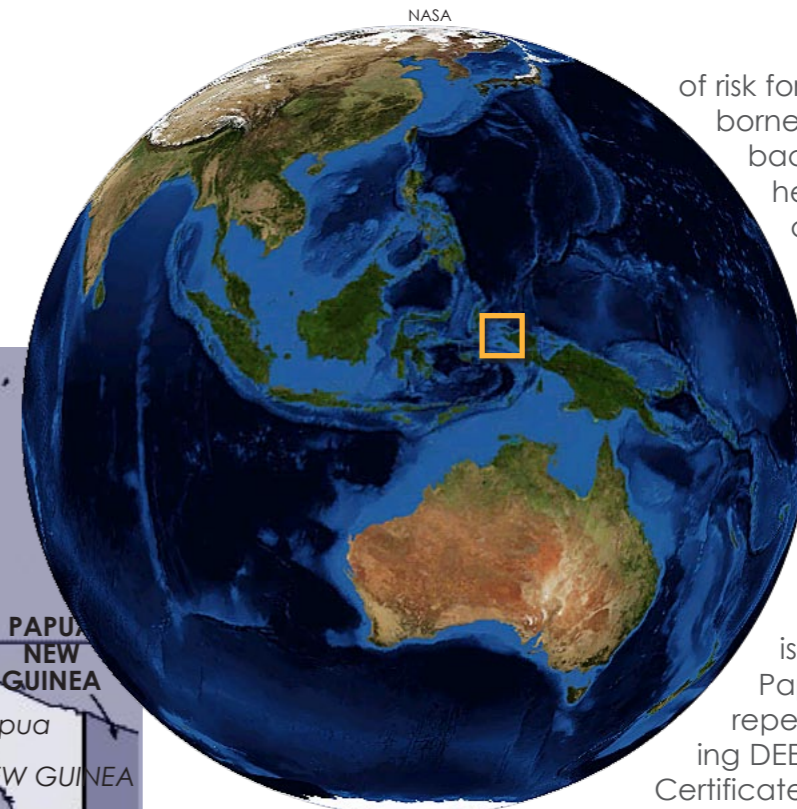
### Environmental issues

Challenges include industrial waste water pollution, sewage, urban air pollution, deforestation, smoke and haze due to forest fires. 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.

**Economy** A vast polyglot

nation, Indonesia has experienced modest economic growth in recent years. Economic advances were made with significant financial reforms. In 2009, when the global financial crisis hit, Indonesia fared well compared to its regional neighbors. It was one of the only G20 members posting growth in 2009, alongside China and India. However, the government still faces ongoing challenges of improving the country's insufficient infrastructure, labor unrest over wages, and high oil prices affecting fuel subsidy programs.

**Currency** Indonesian rupiah (IDR). Visa cards, Euros and U.S. Dollars (large bills issued after 1999) are widely accepted. ATM machines in tourist areas offer the best exchange rates, Travellers cheques are becoming quite difficult to use except at banks.



Exchange rates:  
1 EUR=12,723IDR;  
1 USD= 9,737IDR;  
1 GBP=15,127IDR; 1 AUD= 9,972IDR; 1 SGD= 7,908IDR

### Population

251,160,124 (July 2013 est.) Papua Province: 2.5 million—1.5 million of which are indigenous people. Ethnic groups: Javanese 40.6%, Sundanese 15%, Madurese 3.3%, Minangkabau 2.7%, Betawi 2.4%, Bugis 2.4%, Banten 2%, Banjar 1.7% (2000 census). Religions: Muslim 86.1%, Protestant 5.7%, Roman Catholic 3%, Hindu 1.8% (2000 census). Note: Indonesia is the largest Muslim country in the world. Visitors are encouraged to respect local tradition and dress modestly. Internet users: 20 million (2009)

**Language** Bahasa Indonesian, plus 253 tribal languages. West Papua and its neighbour, Papua New Guinea, contain 15% of all known languages. English, Spanish and German are spoken on dive liveaboards.

**Health** There is a high degree

of risk for food or water-borne diseases, such as bacterial diarrhea, hepatitis A and E, and typhoid fever, as well as vector-borne diseases such as chikungunya, dengue fever and malaria. Check with WHO or your dive operator for prophylaxis recommendations. Larium is not effective in Papua. Bring insect repellents containing DEET. International Certificate of Vaccination required for Yellow Fever if arriving from infected area within five days.

### Decompression chamber

Raja Ampat has a new chamber at Waisai (capital city on south side of Waigeo near Dampier Strait). The next nearest chambers are on Sulawesi: Manado: Malalayang Hospital tel: +62 0811 430913 Makassar: Rumah Sakit Umum Wahidin Sudirohusodo tel: +62 0411 (584677) or 584675

### Travel/Visa/Security

Passport valid for six months beyond intended stay is required. There is a Visa-On-Arrival for 35 countries including USA, UK, most European and Asian countries. It is US\$25 for a stay of up to 30 days. To enter Papua, you need a surat jalan, which is issued by the local police, and arranged by your dive operator. Although there is an active independence movement in Papua, tourists have not been impacted.

### Web sites

Indonesia Travel [www.indonesia.travel/en](http://www.indonesia.travel/en)

