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# paradise

Welcome aboard.

Dear passengers and subscribers, welcome to this special diving edition of Paradise. As Minister for Civil Aviation, Tourism and Culture I am extremely proud that diving in Papua New Guinea is being promoted through Paradise.

Safe and adventurous diving amongst coral reefs and World War II wrecks at Milne Bay, Hansa Bay, Rabaul, Manus Island and the Madang region beckons divers from throughout the world. I trust that readers enjoy the articles.

May I invite divers and tourists to visit and experience our valuable assets.

hahan too

Honourable Nahau Rooney CBE, MP Minister for Civil Aviation, Tourism and Culture

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Above Right: Minister for Civil Aviation, Tourism and Culture The Honourable Nahau Rooney CBE MP meets participants at a sing sing.

Above Left: Paradise readership knows no bounds. Cover: Synchronised swimming at its most complex, performed by a massive school of baitfish on a Papua New Guinea reef. Photo by Bob Halstead.

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#### Advertising

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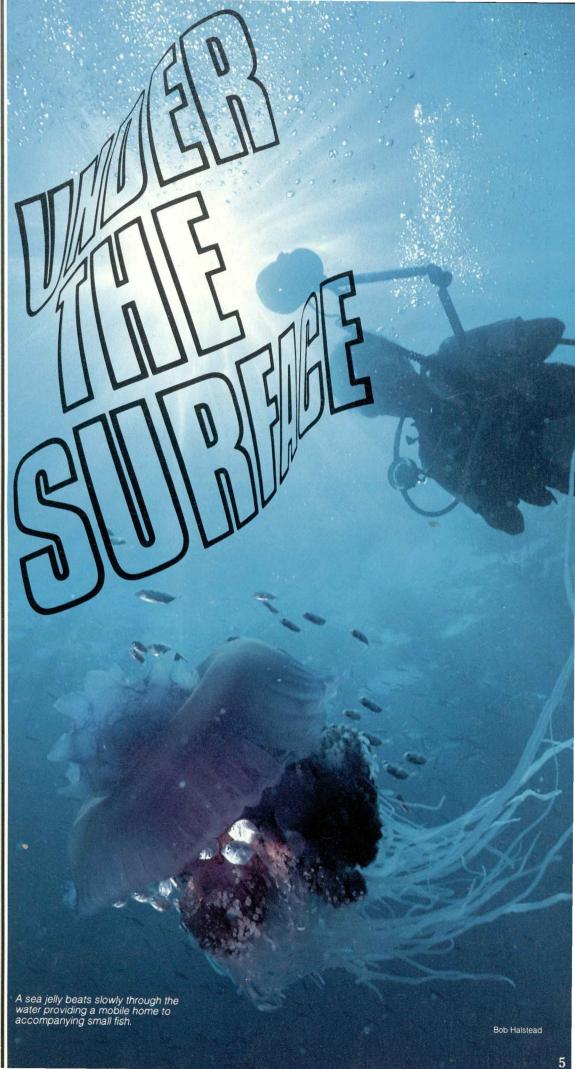
# Another world

Papua New Guinea is an 11-year-old nation, a stable democracy with a developing economy. It is also a frontier land where the realities of the Twentieth Century are face to face with culture and traditions that go back to ancient times. This duality of old and new permeates PNG society and fascinates visitors from overseas.

Scuba divers are among the increasing number of tourists who are discovering the delights of this diverse country. Although PNG has long been known for its lush, mountainous jungles, orchids, birds of paradise and great indigenous art, it has something else as well. Its coastlines are unparalleled for underwater adventure. As diving pioneer Jacques Cousteau discovered, PNG's warm, clear waters teem with life and natural beauty.

Many of the bays and reefs are graveyards of ships, aircraft and men. Their remains are stark reminders of World War II conflict between Japan and its Pacific neighbors. Fish and marine plants have made their homes among them, often providing a camouflage of vibrant, fluctuating colors.

It may seem strange at first that a country that can boast of the mighty muddy rivers, the Sepik and the Fly, can









also boast magnificent diving. In fact they are related, as one of PNG's best known divers, Bob Halstead, explained.

"The nutrients that these and other rivers pump into the oceans provide food for planktonic plants," he said. "These are fed upon by minute planktonic animals and these multiply rapidly, changing the ocean waters into a rich soup for corals and fish to feed on. The hundreds of kilometres of mangroves around the river mouths and along our coasts are the vital nursery grounds for many reef and pelagic (open water) species that eventually migrate to the clearer waters of the offshore reefs and islands.

"Also because PNG's dramatic mountain landscape continues below the waves, the clear, deep waters are usually not far off shore. Along the south coast the Papuan barrier reef is a mere eight kilometres out and in many places on the north coast the mountains continue straight down to the ocean depths, a continental shelf being virtually nonexistent."

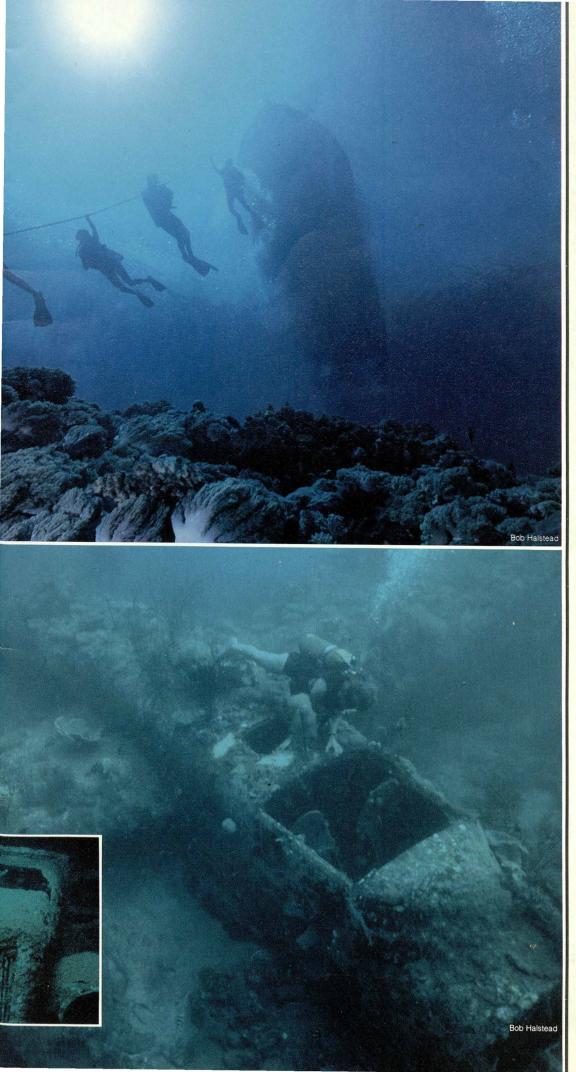
Manus Island now has a permanent dive shop to entice more scuba adventurers to a favored area. It joins Port Moresby, Milne Bay, Rabaul, Madang, Hansa Bay and Wuvulu Island among the best dive sites in the world.

Divers in PNG enjoy surprises not found elsewhere, including tame moray eels and gropers, inquisitive and unaggressive sharks, giant marine plants and hundreds of reefs yet to be explored.

Two Australian visitors, Peter Stone and Stuart Mason, had their thrill of a lifetime

"Nessie" (top), a Bootless Bay moray eel, enjoys a diver's caress and belies the ferocious reputation of her species. The lion fish (centre) is on the two-toea coin of Papua New Guinea. "Gobbler" (bottom), demonstrates how this particular groper earned its name.





Divers descend on an anchor chain (top) to a B25 bomber resting on the seabed near Madang (bottom). A fire truck (inset) on Georges Wreck, Rabaul. Husband and wife professional diving team Dinah and Bob Halstead (below).

when an earthquake struck while they were diving Rabaul. Not surprising since Rabaul is ringed by several active volcanoes one of which erupted violently in 1937, but unnerving to the two friends.

"We were in about five metres of water when we heard a loud rumbling noise," recalled Mr. Stone, who still loves to dive in PNG. "A strange vibration penetrated the water, lasting about 10 seconds and then it stopped abruptly.

"When it began we hugged the reef and looked up to the surface expecting to see a big fishing boat or ship above us but we saw nothing. Even as I looked up I realised something strange was happening because of the sudden beginning and abrupt end to the sound and vibrations. Then they started again and stopped. It was a rhythmic sound, just like a marine engine."

They were still confused until they reached the beach where Mr. Stone's wife, Jan, was waiting. She was relieved to see them unharmed, knowing that an earthquake had just struck. She had had to hold on to a palm tree to stay upright and at the same time dodge falling coconuts.



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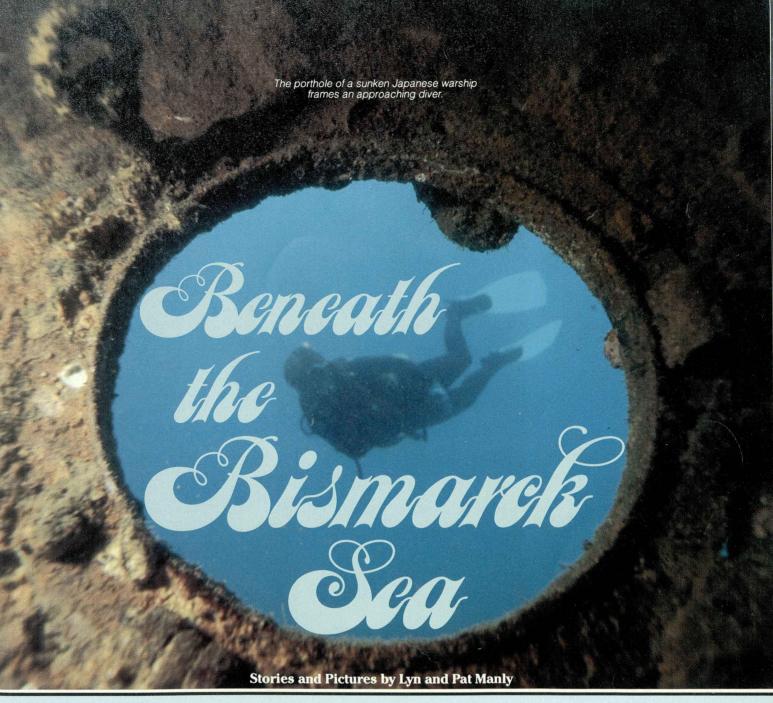
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History and nature live beneath the waves of the beautiful Bismarck Sea which washes Papua New Guinea's northern shores. In three diving trips a husband and wife team explored an astonishing variety of sights in the clear waters.

A s Australian war veterans marched through Sydney streets on Anzac Day, 25th April, we descended to the bow of the World War II Japanese factory ship, Hakkai Maru in Simpson Harbor, Rabaul. I thought of the Anzacs who joined with their mates on this day to remember their fallen comrades. I also thought of the Japanese soldiers, in particular, those



who perished on the Hakkai, on 17th January, 1944; their grave lay 30 metres below on the sea floor.

The chain from the floating buoy led to a thick, algaeencrusted rope. We glided down through schools of trevally, adjusting our buoyancy as we penetrated to the depths of the harbor. The rope ended on a gantry structure which looked like an immense set of goal posts looming up at us from a steel stadium.

Our first sight of the sunken Japanese vessel is one of those instances which remains impressed on the memory for many years to come. I knew the vessel was large; locals said 128 metres long with a beam of 17.5 metres, but these measurements did not register till the vessel was before me stretching out and disappearing into the haze. I could see the outline of the ship's bridge and knew that it was approximately midship, and not on our itinerary for we were heading to the bow.

Peter Stone

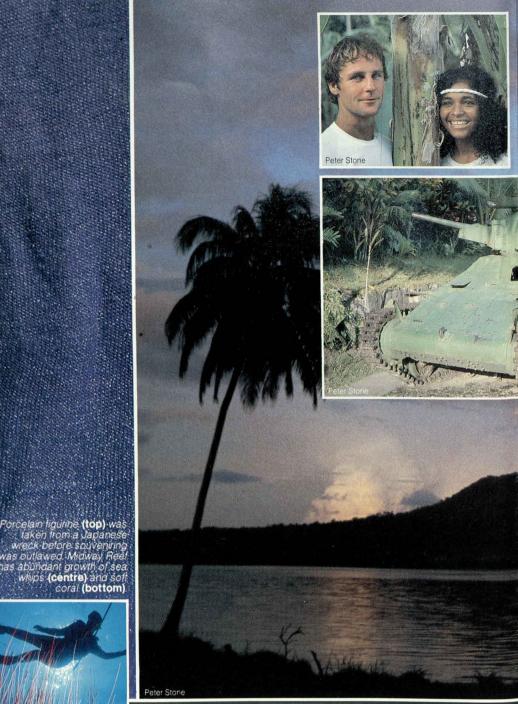
We wanted to photograph the anti-aircraft guns and the large deck gun on the bow and we needed every minute available to us at 40 metres. Beyond the gantry Pat found the ack - ack guns and settled himself on the deck below the guns and proceeded to set up the wide angle photograph using a 20mm Nikor lens on his Nikon. I waited for his signal then glided over the guns trying to be as graceful as is possible when encumbered with so much diving attire.

The guns were covered in stunted growth, so static and still, it seems impossible that



wreck before as outlawed





they once fired with deadly accuracy at Allied planes. Now they saluted towards the surface, silent guns of a silent ship. We realised that photographing a large wreck like the Hakkai would be a tremendous challenge, that only prominent features could be captured on film.

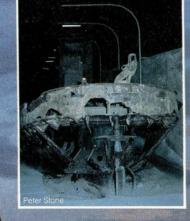
We could now see why the Hakkai was the most popular wreck dive in Rabaul. Divers come from all over the world to experience diving on World War II shipwrecks in Rabaul. The Hakkai will surely delight them; the vessel's size is almost beyond comprehension. At

least three dives are necessary just to explore the outside deck areas.

If you wish to venture inside, then possibly you may have to plan a stay in Rabaul for several weeks, as besides the Hakkai there are many excellent dives.

The Hakkai is only one of ten wreck sites offered through Rabaul Dive and Tour Services. Another wreck dive, although a little different, but just as exciting as the Hakkai, is the site of the Mitsubishi bi-plane located on the open sea side of Rabaul. This site is unique and is probably the only biSimpson Harbor, Habaul, provides a back drop to dive operators Peter Miller and Henrietta Kikutchi **(top)**, a Japanese tank outside General Yamamoto's bunker **(centre)** and guns on the Hakkai Mayu **(bottom)** 





Japanese landing barges in their underground docks at Rabaul.





plane dive available in the world. This is one of our alltime favorite dives. The two seater short range reconaissance seaplane code named "Pete" by the Allies, rests at the bottom of a coral reef in 25 metres.

What a thrill it is to cascade down the barren dropoff and see the bi-plane in the distance, looking more like a

relic from the Great War than a Japanese World War II relic. Unfortunately souvenir hunters have removed the guns from the plane. The brass compass can be seen in the museum in Rabaul. "Pete" would have been a wonderful find for the first divers who drifted along the coral wall in 1975 and stumbled across the plane fully intact. A little research would have shown them that "Pete" could carry two 60-kilogram bombs, possessed one rear and two forward machine guns.

A slight current is always present on the bi-plane site which means any sediment stirred up by divers is quickly carried away, a blessing for the underwater photographer who is forever fighting sediment and flashback problems. Another bonus of the rich currents which traverse the area is that delicate sedentary growths have stationed themselves on just about every section of the plane. They bloom when the current is running and hang limp, when the current is slack. Under the right wing a large pink, soft coral hangs down, slightly moving as the current slides past.

# One of the world's leading business advisers has spent the last 25 years in Papua New Guinea.

Admittedly it may not sound an obvious choice, but twenty-five years ago, Coopers & Lybrand realised that this was a place with remarkable potential for development. In fact,

we were the first international accounting firm to open an office here in Papua New Guinea.

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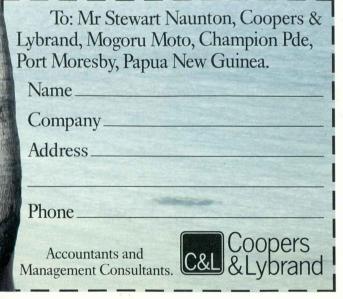
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G iant, 100-year-old sponges dominate Kimbe Bay's fabulous underwater hanging gardens, the steep walls decorated with brilliantly hued marine growth. I explored the reefs from the Walindi Plantation resort, joining others drawn by the growing reputation of the crystal waters, deep dropoffs and abundant sea life.

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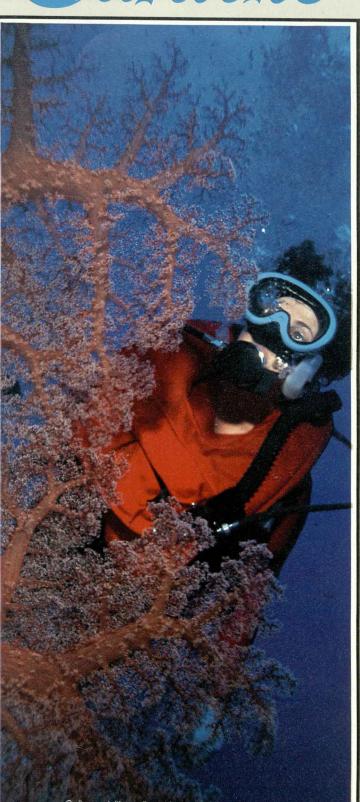
The plantation is something to see too, the biggest privately-owned oil palm plantation on New Britain. It is run by Max and Cecile Benjamin who serve their guests meals in their dining room at the plantation homestead.

When not tending to his guests, mostly divers, Mr. Benjamin is overseeing the daily harvest of orange – colored palm fruit from the lofty branches. He sends it by truck to the local oil extraction plant.

Kimbe Bay is fringed by a volcanic mountain range, the tops often shrouded in cloud. They rise out of the jungles and those that are still active emit gas. Not far from the plantation there are boiling sulphur pools and bubbling mud holes gurgling and plopping. This area is home to the megapode, a bird which lays its eggs in warm, volcanic sand and leaves them to hatch.

Underwater Kimbe is no less fascinating, its topography just as dramatic as the landscape above. Steep pinnacles rise out of the ocean floor hundreds of metres below. Some end just a few metres from the surface, while others taper off in much deeper water.

Divers are drawn to Walindi to experience the exhilaration of plummeting down a pinnacle wall into a crystal clear sea of aquamarine. Many of the reefs



oft coral, like a flowering tree, clings to a sheer wall in the hanging garden. have been charted by Walindi Diving and more are coming to light as the 60 kilometres of the bay are explored.

Oto Reef, over an hour's run from the plantation, is a diver's paradise. We anchored the boat on top of the ridge of the reef in three metres of water. Leaning over the side of the boat, we could see across the shallow coral and down the side of the steep drop-off. Excitement was in the air as the group of divers geared up.

In twos they rolled over the side of the boat into the warm waters of Oto. As I glided over the reef plateau and started my descent down the wall I felt as many divers surely must when they are confronted with an idyllic dive location. A feeling of absolute bliss engulfed me as I watched a school of large barracuda slowly part as I finned through them. They arced in a gentle swimming motion keeping just a few metres ahead. Now I was close enough to see how big they were and it was guite a surprise as they were almost as big as me.

At this time I also realised that I had moved quite a distance from the wall and this fact was a little unnerving. I felt secure next to the wall. Out in the open, hanging over a thousand metres of water, I felt like bait on a line. Back on the dropoff I concentrated on locating some of the spectacular sedentary growth reported to be in the area.

At 35 metres we found a large tree of dusky pink soft coral. Not far from the soft coral, a little further up the wall is a large overhang which housed black coral and long mauve colored tube sponges patterned like fine see-through lace. These sponges grew out from the





cave but our paths were blocked by a tangled mass of feathery black coral branches.

Further down the reef we came upon another arrangement of the same species of tube sponge. Fully out in the open they were easier to examine and photograph. A small fish sat on his fins just inside the opening of one of the tube sponges. Just my luck, camera set up for wide angle shots, and here before me was a perfect macro shot. I felt a little cheated until I spotted a school of baitfish. The entire school was hanging motionless in the water. I edged up the reef towards them hoping I would not scare them away.

Luck was with me, or so I thought, for they maintained their position, completely uninterested in my approach. Then it clicked. This was a cleaning station. Small cleaner wrasse were working over the baitfish and removing parasites. Several of the other divers in the group had also noticed the school and made their way over. We all photographed the school against a backdrop of iridescent corals and clear blue water, then we signalled our models to move in position behind the school. To our delight the school remained in position and subjected themselves to an onslaught of underwater strobe lights.



Kimbe Bay at Dawn is backdrop to Walindi Plantation bungalow (left), plantation owner Max Benjamin (centre) and B25 Mitchell bomber at nearby Talasea.





Gardens of delight **(from far left)** hang on Kimbe's walls.

Looking around the reef I also noticed many smaller species of fish being cleaned by the small wrasse. Cleaner stations are found, although not common, in all tropical waters. Decompression stops on the Kimbe Bay pinnacles were a very pleasant pastime. If we had any film left in the underwater cameras we would take photos of each other sitting atop a coral formation and have a bit of fun to pass away the decompression time.

Day after day we ventured out into Kimbe Bay and the days turned into a week. Never did we run out of dive sites.

We requested the divemaster to return to favored



locations but were always anxious to visit somewhere new. North Emma Reef is one of the most spectacular sites near Talasea. The pinnacle is a spur of deep reef off the main reef.

It is difficult to describe how it feels to fall down through clear water and watch divers far below swimming over the volcanic reef.

A slight current wafted over



the pinnacle bringing plankton to the filter-feeding growths covering every available space on the reef. A school of hammerhead sharks circled the pinnacle quite oblivious to the presence of so many divers. Bliss.



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North Coast Road, from Madang to Hansa Bay, takes travellers along the coast fringing the Bismarck Sea. Dive sites dot the way, each with its own charm.

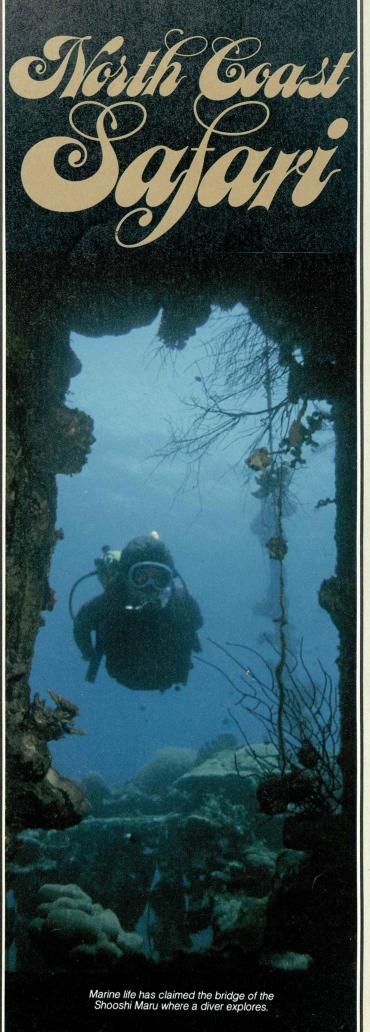
Some, like The Quarry, require a diversion off the main road and a trek through the jungle to the volcanic shoreline. A very popular spot, it has a spur which juts out from the main reef running along the shore. What makes this spur so interesting is the varied profusion of marine growth on the plunging dropoff which ends on sand at 35 metres.

Strong currents running along the shore whip over the spur causing the abundant sedentary life to bend and flutter as the tide surges around it. Immense trees of black coral and gorgonian fans lean out from the dropoff, dangling like fruit trees heavily laden with fruit. Their feathery polyps extend into the current to filter food from the sea.

Along the ridge of the coral reef, schools of blue runners and trevally intermingle with small fish, complementing each other by flashing their vivid colorations in the sunlight. In the distant blue haze out over the wall we could see several silver tip whaler sharks. We waited on the crest of the reef for them to come closer. They edged in for a look, circled half way around to us and were gone in an instant.

Sharks are flighty creatures which appear more frightened of us than we are of them. We always treat sharks with a great deal of respect and do not overly infringe on their territory. After the sharks left the reef we concentrated on the small fish life in the coral.

Not far from The Quarry are several intesting and diverse dive sites. One is The Waterhole which is a favorite for local Madang divers who bring the family here for a day's outing. Children can swim in the salt water lagoon

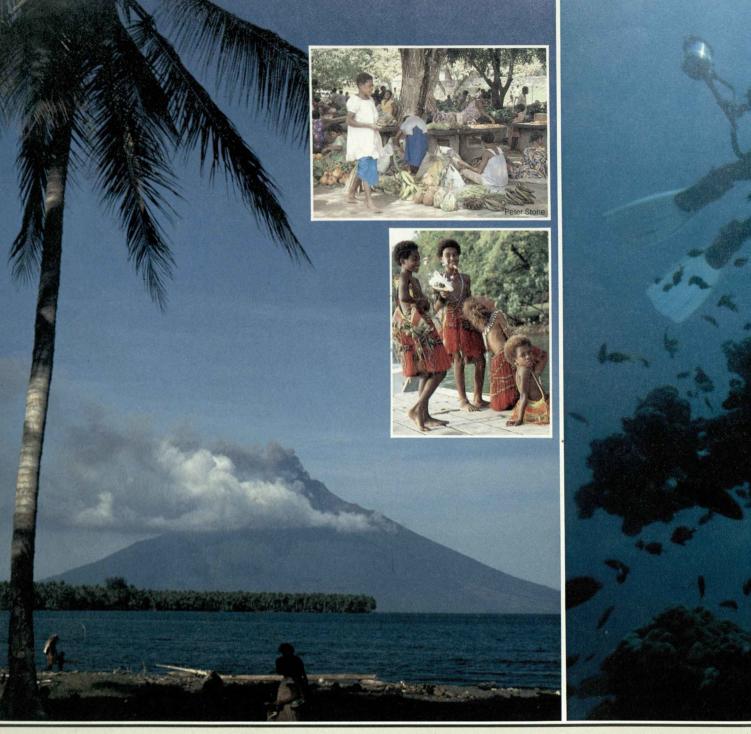


or play on the sand beach. Older members of the family can don their scuba gear and swim from the lagoon through the underwater tunnel into the open sea. The water is warm, clear and encompasses a shallow coral reef abounding in many species of colorful coral fishes. As soon as we ventured out of the cavern onto the reef we were welcomed by swarms of tame fish.

Several tomato clown fish, which live in a symbiotic relationship with different species of stinging anemones, left their anemone hosts and swam right up to us. Instantly we knew that the local divers took food scraps down with them.

We had nothing with us to feed them so we scraped small pieces of algae off the bottom and held them out to the hungry fish. They nosed the offering but failed to show interest. We wished we had carried some bread or fish scraps on the dive. As the reef outside The Waterhole is very shallow we spent nearly an hour photographing our clown fish friends. The exit point from this dive is exactly the same as the entry, a short swim through the shallow tunnel back into the small lagoon.

Also along the North Coast Road is the site of a post-war wreck, The Boston. To dive on this American freighter one enters the water from the shore and swims down the steep incline to 30 metres where the vessel lies slightly to one side. Conditions must be good for the shore entry across sharp volcanic rocks. Currents often sweep along the coast so visiting divers should organise to dive The Boston with one of the Madang dive operators who will supply dive gear, transport and divemaster services. Their divemasters know the area and the wreck, and can advise if conditions are safe. The Boston is a relatively deep dive. Thirty metres to the deck of the ship; 40



Above ground a volcano smokes at Hansa Bay and Madang children prepare for a sing sing near the busy market.

metres to the rubble below the stern.

This is one of the very few wrecks in the world where one can see ship's lamps lying on the main deck; telegraph, gauges and machinery still in the engine room; plates, bottles and tucked away in galley and cabins. The wreck is zealously guarded by the local divers and they should be commended for it is a real pleasure to dive a virtually undisturbed wreck site.

In the dining area behind the bridge, twisted lengths of thin pipe played host to hundreds of small white anemones. We shone our torches into the gloom and were surprised to see the anemones sparkling like white stars on a Christmas tree. Underneath the vessel towards the stern we disturbed a school of large personal items of the crew | barracuda. When we approached they moved off and headed in the direction of the bow.

These three dives along the North Coast Road broke the journey up to Hansa Bay, cleared our heads and cooled our tired dusty bodies. We had much to talk about as we ventured north to the end of the road.

Hansa Bay is a very exciting part of Papua New Guinea.

There are many wrecks to choose from. Our favorites are the Davit Wreck, Shooshi Maru and the Mast Wreck. All are in very shallow water. Maximum depth is on the

Shooshi which sits in 18 metres on a sand bottom. The Shooshi is a large wreck with cargo holds containing fire trucks, truck chassis and thousands of sake bottles. Soft corals and gorgonias grow alongside bright colored sponges and the hull of the ship has been converted through time into a coral reef hosting innumerable coral fishes.

The Davit Wreck, so named because one of the davits protrudes out of the water, is even shallower than the Shooshi. The Davit Wreck with its vast numbers of fish and corals resembles a large

Underwater the engines of war lie silent. A deck gun (top), an army truck (centre) and live ammunition (bottom).

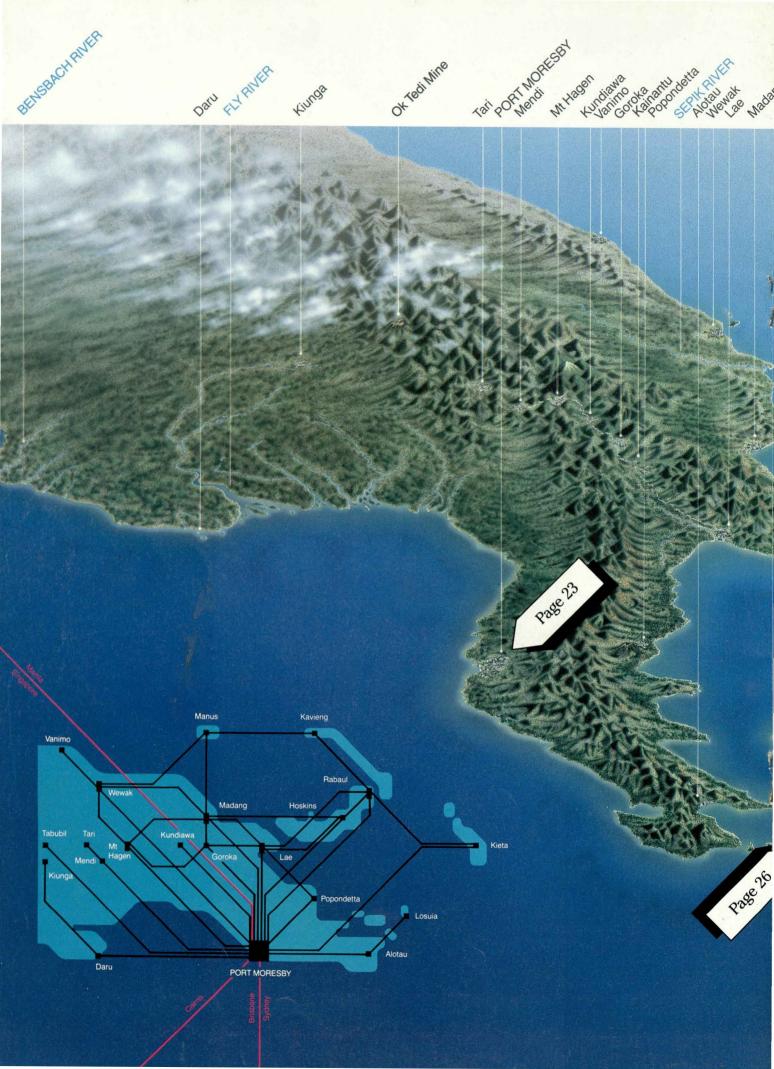


marine aquarium. The whole deck area is covered in anemones. We watched the thousands of clown fish, wrasses and angel fish, milling around about a metre above the deck. This concentration of fish species makes the Davit Wreck unique. The diver interested in fish watching or photography would be in heaven.

The Mast Wreck was once easily located because the vessel's main mast was visible above the surface and could be seen from quite a distance. The steel mast fell away in 1985. A cross strut is just visible on the surface and cannot be seen until one is virtually on the wreck. This wreck may have been carrying coal as all the cargo holds are littered with pieces of coal.

Divers should bear in mind when diving on any ship or plane wreck in Papua New Guinea that they and the artifacts they contain are protected under a Wreck Protection Act and it is a serious offence to violate this act. The war wrecks of Papua New Guinea are a valuable part of the history of this island nation as such they should be respected and preserved.







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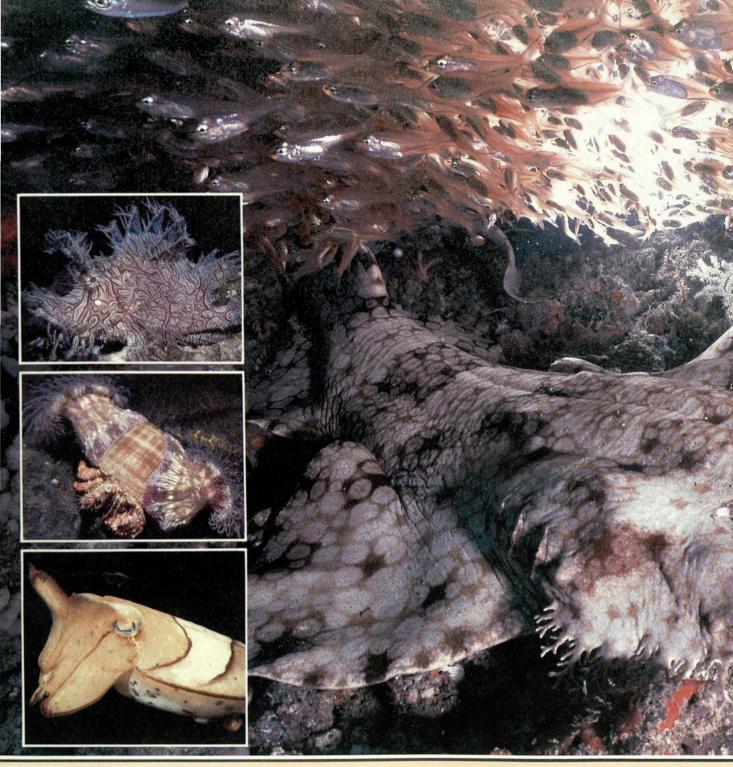
One of the commonest experiences that I have as a diving instructor in Papua New Guinea is the eager inquiry from a diver just surfaced after an exciting dive. It goes something like this, "I've just seen an amazing thing, it's sort of green and roundish but flat and smooth with frills - What Is It Called?".

Occasionally the descriptions are good enough for me to hazard a guess at the identity of the beast – but usually it is sheer frustration, with the diver sure he has seen something rare that I

should nevertheless be able to identify, and myself with not a clue as to what the diver has seen. Sometimes the descriptions give me a strong suspicion that nitrogen narcosis, the intoxication that divers experience in the depths, may be more common than realised. I have learnt to keep a good library of identification books on board our dive boat "Solatai" and usually end up leafing through the pages to see if the diver can recognise his discovery.

So I was a little surprised when my wife Dinah, who knows her marine creatures very well, surfaced with a similar story – "some kind of scorpion fish, green and black with a couple of white spots, very frilly, strange patterns, looks weird!"

A quick check of her mental faculties, then out with the books – not this, not that, in fact nothing like it was to be found. Not wishing, or daring, to dispute my



Merlets scorpion fish (top), hermit crab with two anemones (centre), cuttle fish (bottom), and wobbegong or carpet shark (right).

wife's description, the only solution was to grab a camera and dive myself to see and photograph the creature. What an elegant beast it was. Soon I was as excited as Dinah. On returning to the surface the books were again consulted but with no luck at all – nothing even close could be found.

After much searching and consultation we finally sent a

photograph to the Curator of Fishes at the Smithsonian Institute in the U.S.A. Not expecting to have a reply for several years, as seems to be the norm with institutes of high learning, we were very surprised to get a return reply. The response held dramatic news. Dinah had found the second ever specimen of a newly described species, Rhinopius aphanes, named from a single specimen discovered in New Caledonia. Its common name is Merlet's scorpion fish - if anything so rare can be said to have a common name.

Since this initial sighting in 1980 we have seen more than a dozen of these strange and very scarce fish - most, as was our first, on the various reefs around Bootless Inlet, Port Moresby but a couple in Milne Bay as well. On two occasions we have collected live specimens for the New York Aquarium on expeditions sponsored by the Griffis Foundation with Nixon Griffis. On each occasion the live fish was contained in an oxygen enriched plastic bag inside a small insulated chest and hand carried via several changes of flight, by a curator of the aquarium, to New York. The first specimen survived over a year and the second is still going strong enabling thousands of people to view this fascinating fish. It has proved to be one of their most popular exhibits.

The fish is marvellously camouflaged and so it is not surprising that few have been found. It seems to mimic certain feather stars that inhabit the coral reefs and we have found it with a variety of colors, lime green, brown,



Beautiful brittle starfish come out only at night.

black and even white.

One of the great pleasures that the sport of scuba diving brings is the ability to closely observe some of nature's most exotic animals. Life abounds on the coral reefs and Papua New Guinea is in the heart of the Indo-Pacific the region with more marine species than any other on our planet. Many of these species are undescribed by science and if you do have a yearning to have a species named after you, underwater is the best place to be looking. However on first diving in Papua New

Guinea nearly all the creatures will seem strange. Here are a few to study so that if you do meet them underwater, you can say to me "I've just seen \_\_\_\_\_". A fter the sun goes down in tropical Papua New Guinea, fish hide and sleep, giving over the reefs to their nocturnal neighbors.

Yes, fish do sleep but with their eyes open since they have no lids. And as they snooze other denizens of the deep are out and about, especially crustaceans and molluscs. Many wonderful spots for observing this undersea nightlife are in Milne Bay which for the past seven years has been our favorite diving area.

Early text books on diving

were not too enthusiastic about promoting night diving, often hinting at "increased marine life activity" to put divers off. Well at least the books were right about increased marine life activity, but this is a reason to go diving, not to be discouraged. One of the main attractions of night diving is that the activity is different from that in the day.

Not many fish are likely to be seen swimming on the reefs as most find a crevice in the coral and simply go to sleep. However other species become much more active – lobsters and crabs for example. Shellfish leave their daytime hiding places and roam the reefs,

Another good reason for night diving is to impress non-divers with one's skill and daring, since to the uninitiated it may seem a difficult and risky business. But is is an activity that easily can be accomplished after completing a beginner's open water diver certification course.

An introduction to night diving can be had by attending more advanced or speciality diving courses that are readily available through diving schools in Papua New Guinea, or by simply taking part on escorted night diving trips. Most divers think nothing much of the difference between diving during the day and during the night, and night diving also presents no outstanding problems, indeed, as with driving, in some ways it is a lot easier.

Each diver should be equipped with a waterproof hand-held torch as this enables the diver to keep in contact with his or her diving buddy and to see the amazing array of creatures that are just not to be found in the day time. Sometimes divers carry a "light stick" attached to their tanks just in case a torch fails, others carry spare torches. Even so, some time during the dive, it's great to turn both torches off and sit and watch the bioluminescence of the plankton in the water.

Any movement produces flashes of light like a shower of sparks, better to me than any fireworks display. Moonlight can also provide enough light to find your way around the reef but a torch is still advised.

The best dives are during the new moon when total blackness of the water seems to encourage the maximum amount of activity underwater. This takes place because the usual reef pred-



ators are not active – they have gone to sleep, allowing others to roam in peace.

It is easier to get lost at night so it is important the boat is well lit and simply relocated. Careful divers check their positions several times during the dive and in this way they can surface at the boat to finish the dive. It is probably best to be unsociable underwater during a night dive as keeping track of your buddy can be a problem if groups come together. We have seen couples emerge with different partners from what they started with as they have confused lights and their owners underwater. At least that is their story!

Because of the limits imposed by using hand torches divers find that they often notice far more details at night than they do in the day time when, in good visibility, large scale scenic views are normal. Quite often it changes the whole way that divers look at a reef and suddenly their day time diving has improved as they see so much more than they did before. And for gourmets with a taste for lobsters, crabs and the delicious "bugs" that are walking the reefs at night, night diving can improve their dining as well as their diving.











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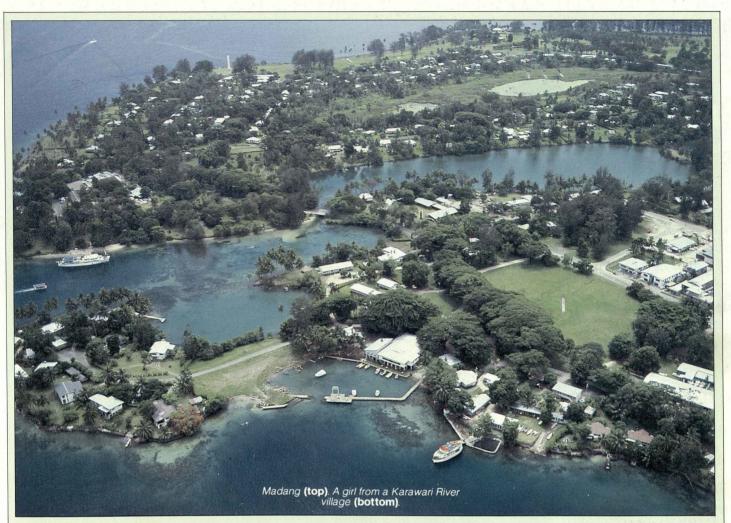


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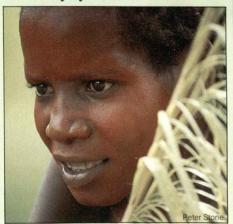
# SEPIK GATEWAY

apua New Guinea is in many ways a difficult place. For the traveller it encompasses a range of so many diverse experiences that no single area of the country completely captures its spirit. Its landscapes vary from steamy, equatorial rainforests to palm-fringed tropical islands and snow-capped mountain peaks. Its wildlife covers crocodiles and birds of paradise; its people include the graceful, sensual Tobriand Islanders as well as the fierce, martial tribes of the highlands.

Madang on the north coast is the gateway to areas which provide visitors with some of the best of what PNG has to offer, up the Sepik River and into the craggy jungle country.

Madang is a sprawling, easygoing town, one of the

Story by Michael Gebicki

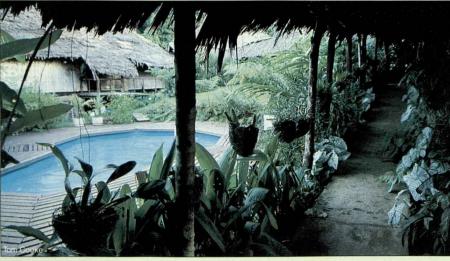


loveliest in the country, set on a peninsula against a backdrop of lush mountain ranges. Once the capital of German New Guinea it has a faintly raffish, Somerset Maugham air about it. The centre has a large and busy market where the women sit over piles of mangoes and sweet potatoes, chewing wads of betel nut.

Madang is the edge of the frontier, a place to relax before sampling the adventures of the Sepik – "Big River" in local parlance. The river's 1,200 kilometres wander through dramatic landscapes and are home to spectacular orchids, former headhunters and birds found nowhere else on earth.

The people of the Sepik are among the finest primitive artists in the world. Their wood carvings, masks, pottery and necklaces of crocodile teeth are masterworks of craftsmanship – powerful, haunting creations inspired by a rich culture of legends and dreams. They still live much as they always have, paddling their crocodile-prowed canoes along the fringes of the river and covering themselves in paint and feathers for their sing







Travelling in style down the Karawari River (top). Luxury in the jungle at Karawari Lodge (centre). Tourist with white cuscus, a native of the Sepik region.

sings, traditional celebrations of song and dance.

Tourists though, travel by modern jets to PNG, and by air conditioned buses and luxuriously appointed boat as they journey into the wilderness and the past. One of the resting places they enjoy is Karawari Lodge, on a ridge high above the Karawari River, a tributary of the Sepik. Its dozen or so bungalows are built in the local style, raised on stilts with walls of plaited grass. Reeds thatch the rooves and verandahs which command a magnificent view of the Sepik River basin.

Days at Karawari Lodge are spent exploring the streams and backwaters which run like a network of fine veins across this waterlogged country. Every morning the hotel sends guests off aboard one of its flat-bottomed boats, skimming across the fast flowing river, past the jutting tree trunks and over swirling eddies.

On either side the forest closes in, dark and impenetrable with huge pandanus palms and prickly sago trees massed at the water's edge. Now and again dugout canoes pass, with oarsmen delicately poised in the stern, digging their paddles into the brown water.

Sometimes the hotel boat stops at villages where traditional ceremonies are re-enacted – headhunting raids or initiation rites, when a young man's back is scarred in imitation of the ridges on a crocodile.

Besides the fascinating tribal cultures and natural splendors of its surroundings, Karawari offers a level of luxury which nobody has any right to expect in the midst of the wilderness. Early in the morning, just as the sun has chased the mist from the river valley a waiter will appear with a tray of coffee and fresh, warm cinnamon rolls which can be munched while the shrill bird cries and the sound of voices drift up from the river below.



# **KARAWARI LODGE**

'... located on the Karawari River, a tributary of the Sepik, the lodge is in the tradition of Treetops and other great wilderness hotels.' *Allan Seiden, Travel Agent Magazine.* 

'Something like a National Geographic expedition. No roads. Thick jungle. Locals poling dugouts. Crocodiles. You wind up at the surprising Karawari Lodge. All kinds of comfort in the midst of a thousand miles of jungle.' *Robin Kinhead, Chicago Tribune.* 'This was the primitive culture we had come to see – the culture so well delineated by (the late Dr) Margaret

Mead and National Geographic editors." Betty Peach, San Diego Tribune. '... the silence and peacefulness is deafening to unaccustomed city ears.' *Heather William*,

#### Sydney Sunday Telegraph.

'Perhaps the view from the Lodge alone is worth the effort . . . but the real attraction could be the people. They have lived as they have for untold generations . . . storytelling, rituals and music.' *Charles Sriber, Pol Magazine.* 



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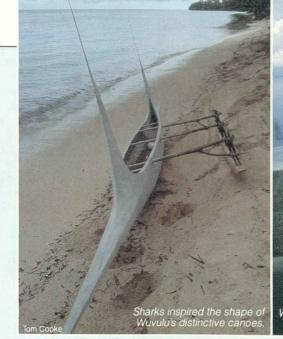
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Wuvulu Island's southern approach.

# WUUUUU

J ames Michener referred to Wuvulu as "the most perfect atoll" in his book Return To Paradise, and it is truly an island of great beauty above and below the water. Sometimes known as Maty, it lies north-west of Wewak in the vast blue of the Bismarck Sea, and is renowned for its crystal clear waters, abundant turtles and unaggressive sharks.

Wuvulu rises vertically from an undersea plateau 2,000 metres deep. It is low and undulating, and is covered with lush tropical vegetation. Old plantation roads, maintained by the islanders follow the shoreline and penetrate much of the interior. The island has 19 kilometres of golden beaches and is surrounded by a fringing reef of unmatched beauty.

The Wuvulu Islanders live in two villages, Auna facing the sunrise, and Onei facing the sunset. Almost Polynesian in appearance, it is thought that their ancestors came by sea from Micronesia or the mainland of Malaysia. Since the first recorded contact with Europeans in 1543, up until the early years

# the perfect atoll re-discovered

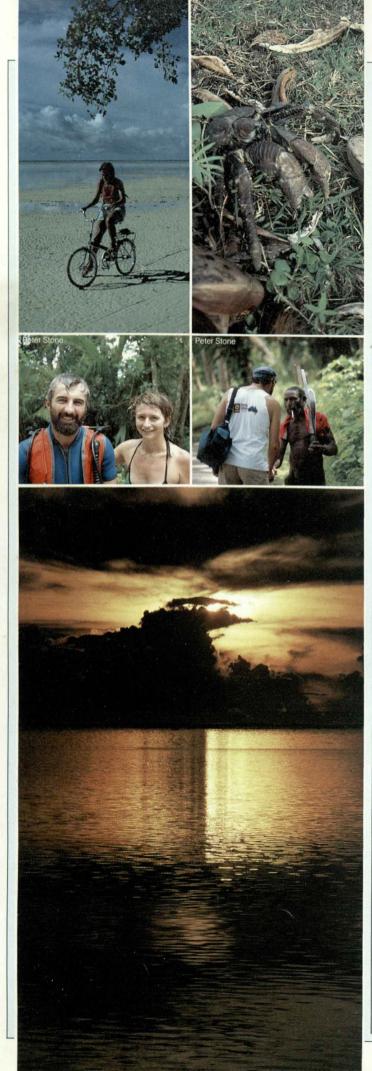
Story by Michael Gilchrist Pictures by Michael Gilchrist and Sylvie Grall.

A view of the drop-off from a depth of 25 metres.

of the Twentieth Century, they were described as fierce and courageous warriors, repelling attempts by Europeans to land on their island domain, and paddling their forty-man canoes across open sea to plunder their neighbors.

The passage of time and the impact of European administration and missionaries, however, have mellowed the people of Wuvulu. Today, they live in peace and harmony with their environment. Their livelihood comes from fishing, cultivating their vegetable gardens, and working the remnants of the old copra plantation. Images of their older ways are preserved by their carvers who produce duplicates of their traditional weapons (for decorative purposes only) and canoes.

It is probably the canoe which has evolved as the symbol of Wuvulu. Ranging in size and capacity from one to 40 men, they are unique in design. The horizontal and vertical protrusions represent the fins of the shark, traditionally their most prized catch. The largest remaining canoe of forty-man, seagoing capacity, is on exhib-



ition in the Berlin Museum, West Germany.

For the visitor now, it is the sea which holds the most attraction. With no rivers or creeks discharging mud and debris, the surrounding water is a deep blue of almost unbelievable clarity. The edges of the fringing reef plunge away vertically and are adorned with a rich variety of hard and soft coral. There are several large underwater caverns and caves at depths of 15 to 18 metres. The walls and ceilings are covered with hanging branches of black coral, brightly colored gorgonia fans and giant sponges. "Alaba", the Wuvulu turtle, can often be found nestled in the corner of a cave. These turtles are prolific in the surrounding waters, and it is not uncommon to have four or five in sight at any time during a dive.

The entire reef area is home to an incredible array of colorful fish, while the four "points" of the island attract large schools of trevally, barracuda and rainbow runner, with the occasional solitary dogtooth tuna patrolling the deeper waters. Sharks are companions on most dives. Small white tipped reef sharks abound in the shallower depths, while larger grey reef and silver tip sharks, and the impressivelooking hammerhead shark cruise at greater depths. The grey reef sharks often appear in schools of six or even ten, and while curious, display no signs of aggression. Also regular visitors, are small formations of spotted eagle rays and the majestic manta ray.

Until recently, visitors to Wuvulu have had to bring in all of their required supplies and equipment and virtually

(Clockwise from top left) Wuvulu's northern beach, a coconut crab, diver Kevin Deacon meets an old friend, Wuvulu sunset, Michael Gilchrist and Sylvie Grall. fend for themselves. But this changed in February 1985 when Lus Development Corporation took over the management of the old Wuvulu Island Lodge and completely refurnished and re-equipped it. The Lodge is managed by two qualified diving instructors and features comfortable accommodation for 12, dining room and licensed bar. The diving facilities feature a compressor, hire equipment, and a dive boat.

For the non-scuba diver, the narrow reef adjacent to the Lodge, provides breathtaking snorkelling. Peering down over the edge of a 2,000-metre chasm, through crystal clear water, you have a wide view of brightly colored coral, fish, turtles, and sometimes a passing shark. The flat coranus "roads" on the island provide easy cycling, and bicycles are available from the Lodge or the villagers for a small daily hire fee. An abundance of bird life and the presence of large tree lizards, as well as the beauty of the island and people make for attractive photography.

Access to Wuvulu is by a regular service flight, leaving the Douglas Airways terminal at Wewak, every Monday. Regular group departures by chartered aircraft are offered which individuals can join. Contact can be made through your local travel agent, Air Niugini, or direct to Lus Development Corporation, P.O. Box 494, Wewak, E.S.P. Telephone 862331

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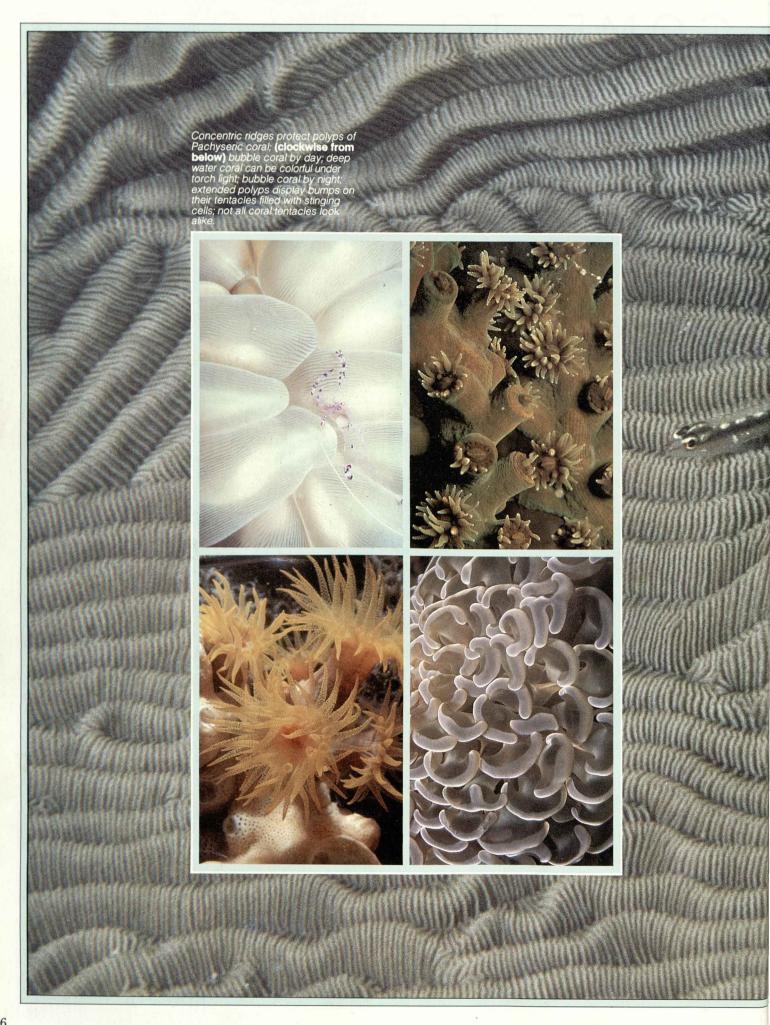
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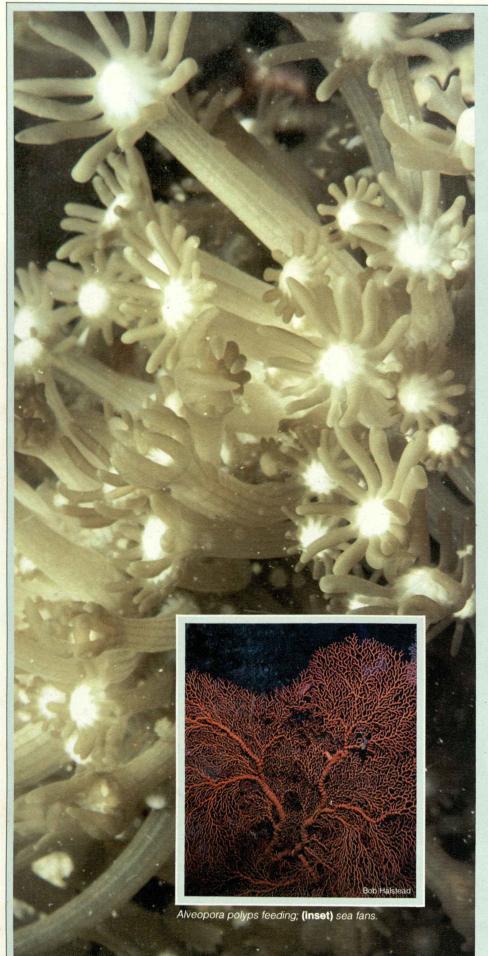
Story and pictures by Norman Quinn and Barbara Kojis

Polyps – tiny, soft and delicate animals – create coral reefs that may last thousands and even millions of years. Painstakingly they build up, layer by layer from calcium extracted from seawater, massive boulders and towering trees of rock which are in fact the polyps' limestone skeletons.

Fused into gigantic colonies, they form the craggy, submarine outcrops which are such a feature of shallow tropical seas. Happily they are found close to the major towns of Port Moresby, Wewak, Madang and Rabaul and can be explored easily by swimmers with mask and snorkel.

Corals are carnivores feeding on zooplankton, the tiny animals that float in the water. To catch these animals corals are armed with stinging cells that release poisonous barbs or sticky threads on contact. The trapped plankton is then engulfed by the coral's mouth and digested in its sac-like body.

But corals do not rely solely on zooplankton for food. In fact, their primary food source is energy from the sun, for the tissues of corals harbour symbiotic, single-celled algae called zooxanthellae. These tiny algae are so abundant in the coral tissues that they make up 50 per cent of the living tissue of a polyp. The algae use wastes produced by the corals (carbon dioxide, nitrogenous wastes), while at the same time releasing sugars and other organic products back to the corals. They are also involved in the production of the corals' limestone skeletons. This means that the growth form of some species of corals changes as light



decreases with depth. For example, colonies of a species that are massive on the surface may be flat and plate-like in deep water. It also means that reefs only grow in water less than about 60 metres deep, with most reef building actually occurring at water depths of less than 20 metres.

Color in reef corals results partly from the presence of algal symbionts and partly produced by pigments or light distorting properties of the corals themselves. In any case, color may vary between individuals of the same species. Thus, the meandering ridges of a brain coral may be bright yellow, while other specimens of the same species may be tan or brown.

Looking at coral, one is struck by the repetition of patterns. Ridges alternate with grooves. The ridges may protect the mouths of the polyps lying in between from rasping fish predators or they may permit more surface area for capturing sunlight. The features of one species resembles a series of terraced rice paddies, while another resembles endless hillocks on a windblown desert. Still another produces concentric circles like the rings of blue-green algae surrounding a geyser. The symmetry is beautiful to behold, but its purpose is illusive. Some corals produce perfectly interspaced polyps while others produce long rows one after another. Just as terraced rice fields entrap water, perhaps the "terraced" species of corals can better entrap the sunlight needed for its symbiotic algae.

The scientist who studies living corals must become a student of the coral features, the patterns that distinguish each species, and even the forms that vary from one individual to the next. But recognition is only part of the job. Behind the form lies function. For among corals, the form that creates their beauty ensures their survival.

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