



# paradise

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# paradise

No. 3. January 1977

In-flight magazine of Air Niugini, the National Airline of Papua New Guinea. Published quarterly by Air Niugini's Public Relations Department, ANG House, Hunter Street, Port Moresby. For advertising and editorial, contact the Public Relations Officer, P.O. Box 84, Port Moresby, Papua New Guinea. Telephone: 259000. Telex: NE22177. NE22158.

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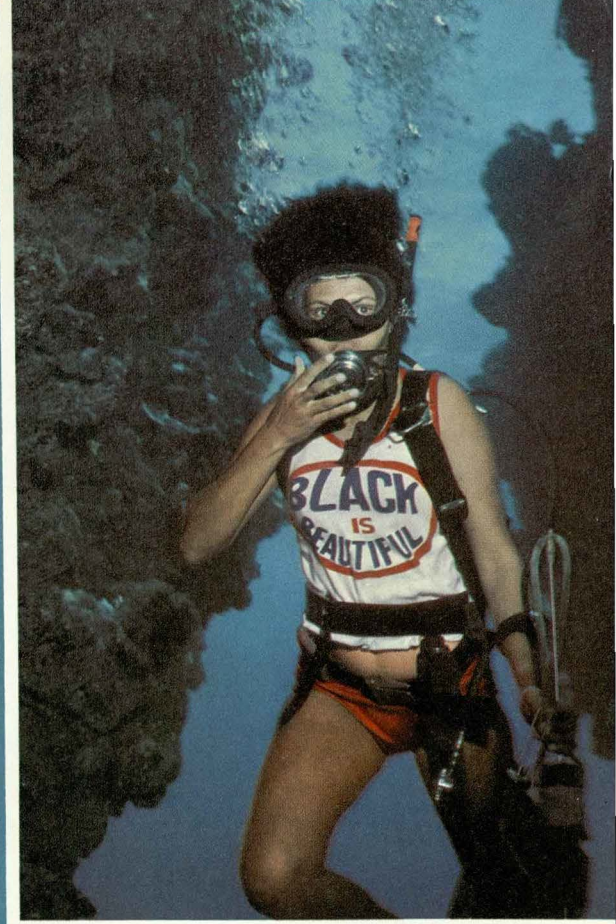
Design: Robert Purnell

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Quality in Air Transport



Hello and welcome

It's 1977 and soon Air Niugini will be spreading its wings to Kagoshima in south-western Japan. Who knows? Perhaps we'll be going even further afield before the year is out.

Isn't that a lovely shot of Dinah Halstead up there? The photography is that of husband Bob who gives us the come-on to explore the magic of Papua New Guinea underwater in this issue.

Other highlights include an invitation to sow the seed of your own pearl in the Milne Bay Province, the memories of pilot Bertie Heath of the New Guinea Goldfields, the colour of PNG's multitudinous indigenous and migrant birds (courtesy of Brian Coates and camera), the epic of the Battle for Henderson Field in the Solomons and the story of our Flying Bishop, Archbishop Leo Arkfeld. Not forgetting the work of photographer Shisei Kuwabara who recently toured PNG-wide to record the beauty of our nation exclusively for Air Niugini. Our cover of Salamaua peninsula and the magnificent shot of Lae's golf course and airport in the centre spread are samples of his work.

C. B. Grey  
General Manager

## PHOTO CREDITS

PNG Office of Information  
Shisei Kuwabara  
Brian Coates  
Bob Halstead  
Denis Fisk  
Bob Hawkins

## COVER PICTURE

Salamaua peninsula - the starting point for the wearying trek into the New Guinea goldfields in the twenties and thirties; scene of intense struggles during the Pacific War; and today, as Bob Halstead tells us (page 4), a paradise for divers in search of reefs and wrecks. Photographer: Shisei Kuwabara

# Decisions. Decisions.

SP Draught Lager, SP Greenies, SP Brownies,  
and Anchor in cans and bottles.

They all taste so good it's difficult to decide  
which one to try first.





# Come—take a dive

Story and pictures by Bob Halstead

For diving enthusiasts, Papua New Guinea offers a challenge unparalleled in the South Pacific. The Great Barrier Reef, off Queensland, is renowned worldwide but, as many visitors have discovered, to get to the outer reefs is difficult. It requires a long boat ride or flight.

The long barrier reef on the Papuan coast – running from Port Moresby to Tagula Island in the Louisiade archipelago – is just as exciting and has the advantage of lying for most part only a few minutes by boat from the shore.

This reef is characterised by dramatic drop-offs, clefts and overhangs as it rapidly plunges to the ocean depths.

And it can be dived all year round.

Papua New Guinea offers much more than this one reef. Following it down the coast to the Milne Bay Province, the adventurer is greeted by a multitude of islands and friendly island people. Here, city life can soon be forgotten as the traveller escapes into a world of palm-fringed islets, trading sailing canoes and peaceful villages.

At Iwa, in the Marshall Bennett group between the Trobriands and Woodlark Island, the cliffs plunge vertically hundreds of metres into crystal water – except for one ledge near a small coral sand beach, where divers can explore caves formed by long fallen

sections of cliff. They are alive with coral and fish.

At the Laughlan Islands, a group of coral atolls to the east of Woodlark, I was fortunate to join divers on an expedition in search of a rumoured wreck. Villagers said they knew of something and set off with us across the lagoon.

Soon we were on top of the reef, not far from the surf breaking on its outer edge. A small boy with goggles suddenly grabbed our line, leapt over the side and tied us to the bottom. When we joined him we found he had tied us to an old cannon.

Diving in those waters, we would



often see the hulls of small canoes skimming overhead. As we broke the surface we would be greeted with cheerful shouts of joy. Until they got used to the time we could stay submerged the children would say they thought we had disappeared for ever, a few minutes being their normal maximum dive time.

On the barrier reef south of Ware Island near Samarai the wartime Liberty ship, *President Grant*, rests awaiting your exploration.

Travel to these distant places is more difficult than following the recognised air routes. But charter boats can be hired at Alotau which is serviced by regular flights from Port Moresby.

Alotau on the Milne Bay, which gives the province its name, is the site of an important Pacific War battle. My wife, Dinah, was born nearby. We have spent many hours diving in Milne Bay, inspecting war junk including the wreck of a coal-refuelling barge, many small landing craft, and assorted relics including a tractor with its tyres still inflated. The sunken plane with a cargo of silver which crashed at the end of the bay awaits our discovery. The search for it is hindered by the muddy waters flowing in from a nearby river.

Milne Bay Province has a lot to offer the adventurous tourist with its culture, history, sheer beauty and fabulous diving. But diving does not end with Milne Bay alone. Rabaul's Harbour, in East New Britain Province, is a must for the experienced diver wishing to explore wrecks. There is an exceptional number of well-preserved vessels from the Imperial Japanese Fleet, resting about

**Top:** In the blue of Papua New Guinea waters Bob Halstead and his wife Dinah have photographed many fascinations, like the spectacular lion fish; **bottom:** when the young boy dived over to secure their boat to the bottom he chose this old cannon as his anchor point

25 metres down. In fact, war wrecks – ships, submarines, aircraft – lie in shallow waters in several PNG coastal areas, many within reach of the sport diver. No doubt, some are still to be found.

Most of the main centres on the coast provide access to good diving. Madang has splendid reefs just five minutes by boat from town. One has been named Magic Pass by divers because of the ‘magic’ dives they have as they pass between two islands.

Wewak, Kieta and Kavieng have dramatic reefs and wrecks in idyllic surroundings. Lae offers wrecks and reefs around the nearby Salamaua peninsula, a couple of hours by slow boat south of the city. Tufi, in the Northern Province, has coral reefs in a magnificent fjord setting.

Most of these centres have active diving clubs which will supply visitors with air for their aqualungs. There is even a club in Goroka, deep in the mountains of the Eastern Highlands Province. There, enthusiasts train in a swimming pool and then arrange weekend charters around the country.

The largest club is in Port Moresby where the Sub-Aqua Club has more than 80 members. It has two qualified instructors who train and certify divers to World Federation standards.

Learning to SCUBA-dive is not difficult for anyone who is confident in the water and reasonably fit. But it is essential to learn correctly. Ignorance and carelessness are usually the causes of diving accidents.

Diving is considered a dangerous sport by many but the fact is that no



**Top:** From below, a passing canoe ripples the ocean's surface; **centre:** silenced for ever, a gun on US liberty ship The President Grant; **bottom:** diver John Bita examines precious black coral

diver among the more than 1500 trained and certified by qualified local instructors has ever had a serious diving accident in Papua New Guinea.

A basic SCUBA course lasts about 30 hours. It involves lectures and tests on theory, pool sessions and at least one snorkel dive and four SCUBA dives in the open sea.

The Port Moresby Sub-Aqua Club welcomes visitors on its weekly outings on the club boat but divers wishing to SCUBA-dive must produce evidence of certification to at least basic third class diver standards. Details can be obtained from club instructor Len Capon on Port Moresby telephone 253359.

It is hoped that all clubs will be co-ordinated through the Papua New Guinea Underwater Federation which is applying for recognition by the

world body. When this happens club instructors will be able to be trained and certified in PNG.

Coastal Papua New Guineans often are natural swimmers and divers, traditional spearfishing methods having provided an important source of food for centuries. They find now that they can enjoy the underwater world at a more leisurely pace than that afforded by one gulp of air.

SCUBA divers are encouraged to leave their spearguns for use only when skindiving. Otherwise, larger fish found deeper on the reef soon become scarce and impossible to tame. Under attack, they learn to hide from aggressors.

More and more divers are becoming interested in underwater photography and local stores are having difficulty keeping up with the demand for suitable cameras and lighting equipment.

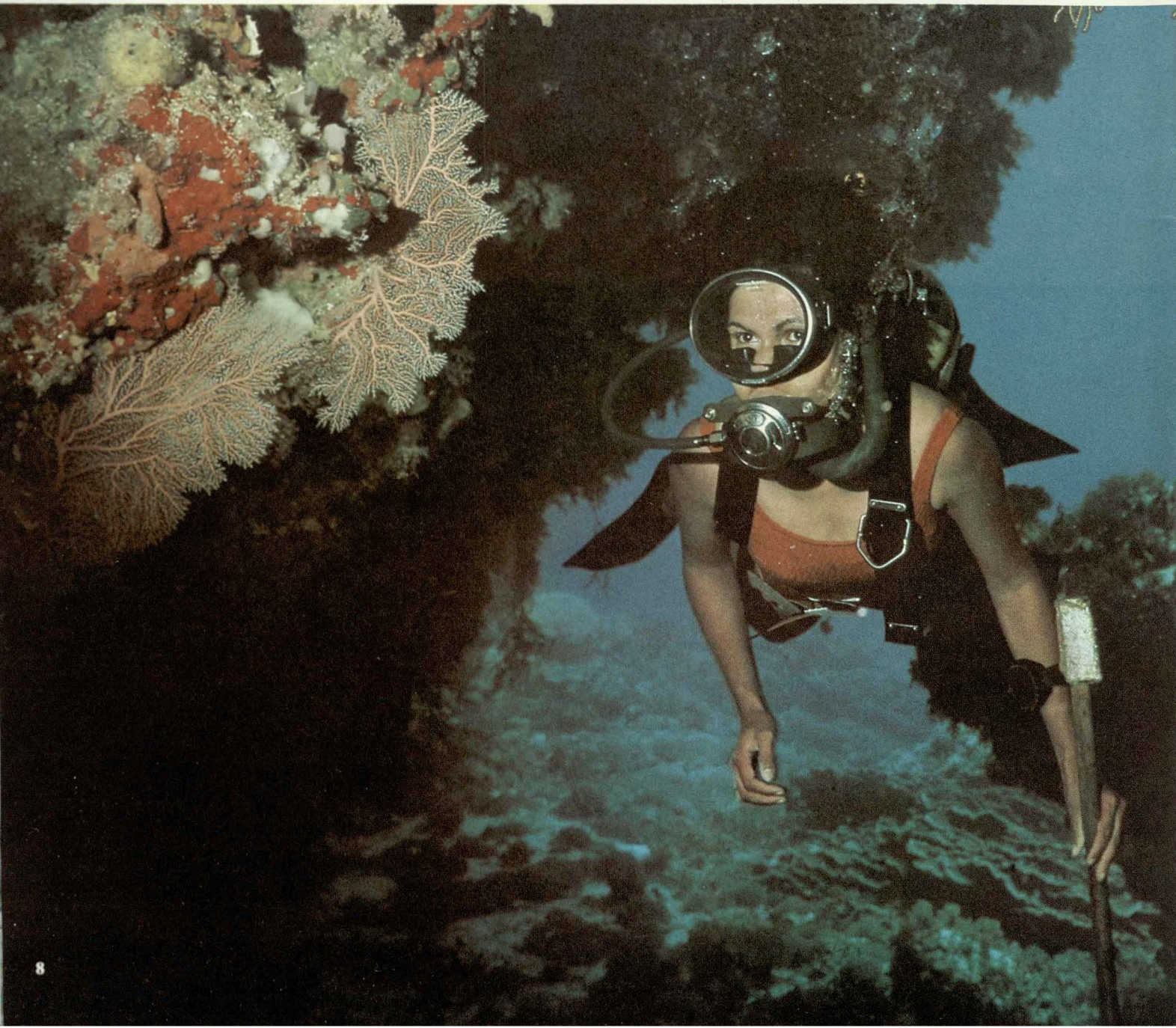
The Sub-Aqua Club is planning to bring a professional underwater photographer from Australia for a weekend session to teach members how to improve their techniques.

Other popular reef activity includes shell collecting, 'junk' collecting from wrecks and catching small tropical fish for saltwater aquaria.

The oceans surrounding Papua New Guinea constitute one of the nation's greatest resources. The fishing industry potential is enormous. As more people tell of the country's underwater marvels and more come to see them, so diving can add to these resources.

Remember. The water never gets cold. See you soon - under water.

*Bob Halstead is a schoolteacher in Port Moresby.*







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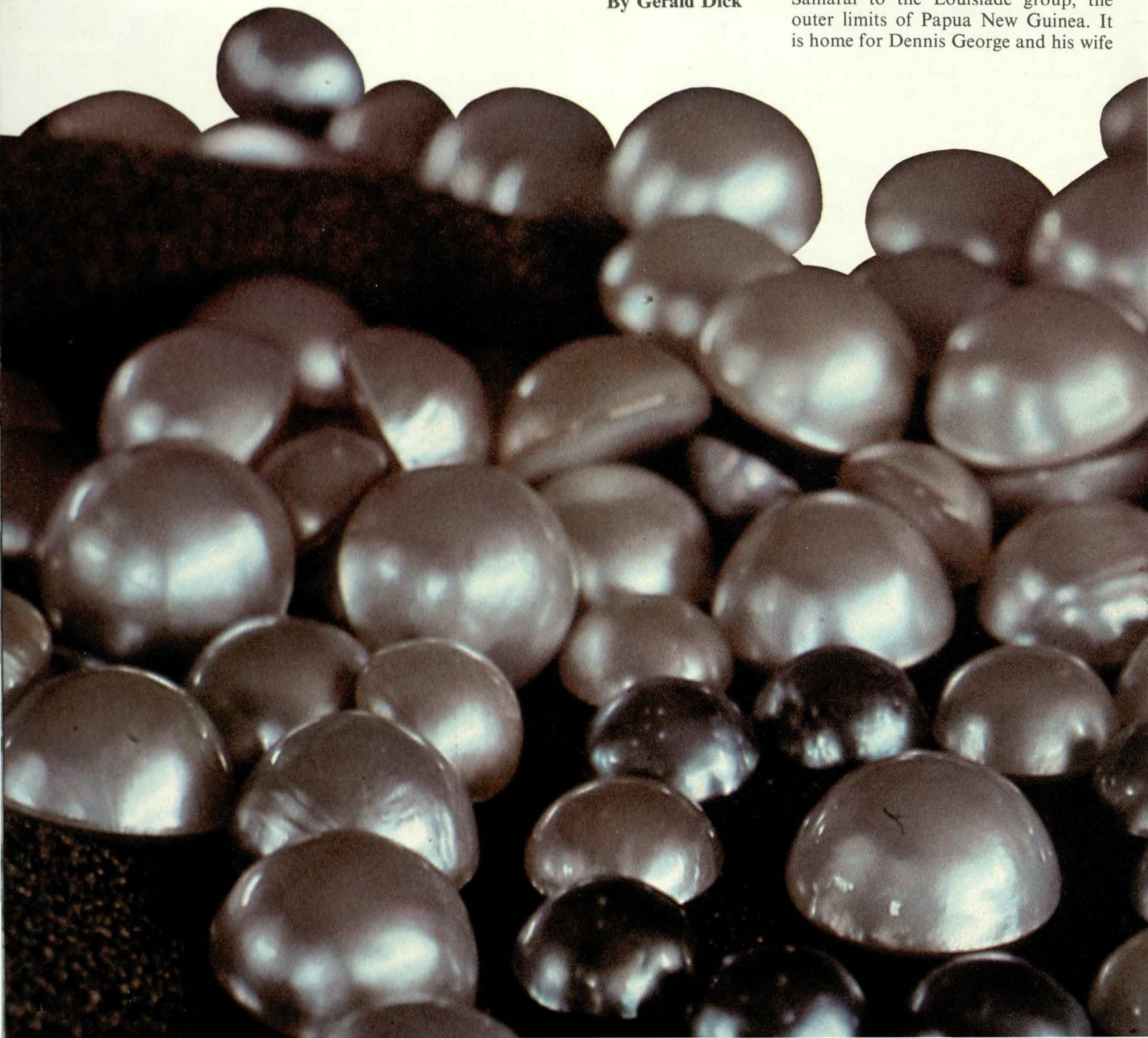
*Clockwise from above: Dennis and Yurie George on Sariba Island; oyster trays; paddling to the oyster beds; Milne Bay maiden with cultured jewelry; the finished products*

# Pearls of the Coral Sea

By Gerald Dick

'Come on. Make you own pearl.' This invitation awaits visitors who get off the beaten Papua New Guinea track and find their way down to the south-eastern tail of the bird which many say the island of New Guinea resembles.

Sariba is among the myriad islets which stretch necklet-like away from Samarai to the Louisiade group, the outer limits of Papua New Guinea. It is home for Dennis George and his wife





Yurie and one of three islands around which the Milne Bay Pearl Association farms its oyster beds.

To Dennis, Sariba is Pearl Island, a pearl in one of the most sparkling areas of ocean found anywhere in the world. The Milne Bay Province, which embraces a tip of the mainland, 160 named islands and more than 500 islets and atolls, covers a land area of about



20,250 square kilometres in more than 250,000 square kilometres of ocean.

For travellers determined to return, Dennis George offers the pleasure of inviting them to insert into an oyster a tiny piece of foreign matter – and, perhaps 18 or so months later, to call again, re-open their own oyster and claim its pearl.

It may sound easy. But, in the intervening months, that oyster – and all its bedfellows – require hours of gentle care.' Dennis George who migrated to Australia from Greece about 30 years ago first began to read about pearl farming in books from Sydney's Mitchell Library. After two years he felt he had a pretty good grasp of his subject. But Dennis readily admits that he knows less about the cultured pearl now than he thought he knew after his two years of poring in the Mitchell Library.

In between bouts of hitch-hiking to and from Sydney to wash dishes to raise cash to support his hermit existence, Dennis George, in the years that followed, was involved in oyster experimentation and farming in many parts of Australia. After a spell in Sydney Harbour and Botany Bay he headed off first to the Queensland coast

near Mackay, then up to Whitsunday Island, a little further north, and later to Cairns, Cooktown and Thursday Island off Cape York.

He arrived on Thursday Island in 1957 and, soon, after 'drifting' off to the small uninhabited Packe Island, he began to get good results.

Japanese admiration for his techniques and the interest of an Australian financier led to bigger things. But Dennis somehow missed out – Japan had the technical knowledge, Australia offered the resources. From there it was to Western Australia – and back again to Thursday Island. Still in pearls he returned to Sydney where he processed them for a leading Australian jeweller to whom he later sold his share of a Western Australia-based pearl farm for A\$10,000.

Then he was off to the northern hemisphere, working first for the Burmese Government and later the Philippines Government. A Churchill scholarship broadened his horizons further, allowing him to tour the pearl farms of the world and to accept short-term engagements with companies in Mexico and Israel.

By this time Dennis had married Yurie. a marine biologist he met in

Japan. Today Yurie, with more than 15 years experience in pearl farming techniques, is a driving force behind the Milne Bay project.

It was Sir John Guise, now Governor-General and then Speaker of the PNG House of Assembly, who invited Dennis George to start a pearl farming project in his home province of Milne Bay.

In the years since he has established 15 pearl farms in the region and won the approval of the United Nations Development Program which sees a K2 million a year potential for the industry.

To get to Sariba Island – and the other two islands used by the Milne Bay Pearl Association – is easy enough providing you have the time.

It means a flight from Port Moresby to Alotau – on the tip of the main-land – which is rapidly replacing Samarai, on an offshore island, as the province's administrative and business hub. From Alotau it is 20 or so miles by boat, out past Samarai.

As long as numbers are small, it's possible to overnight on Sariba. Dennis George, wife Yurie, and children Nick, 12, Theodore, 10, and Neleride-Costa, 8, have won themselves a reputation for their warm hospitality. And there's a lot more to Sariba Island than pearls.

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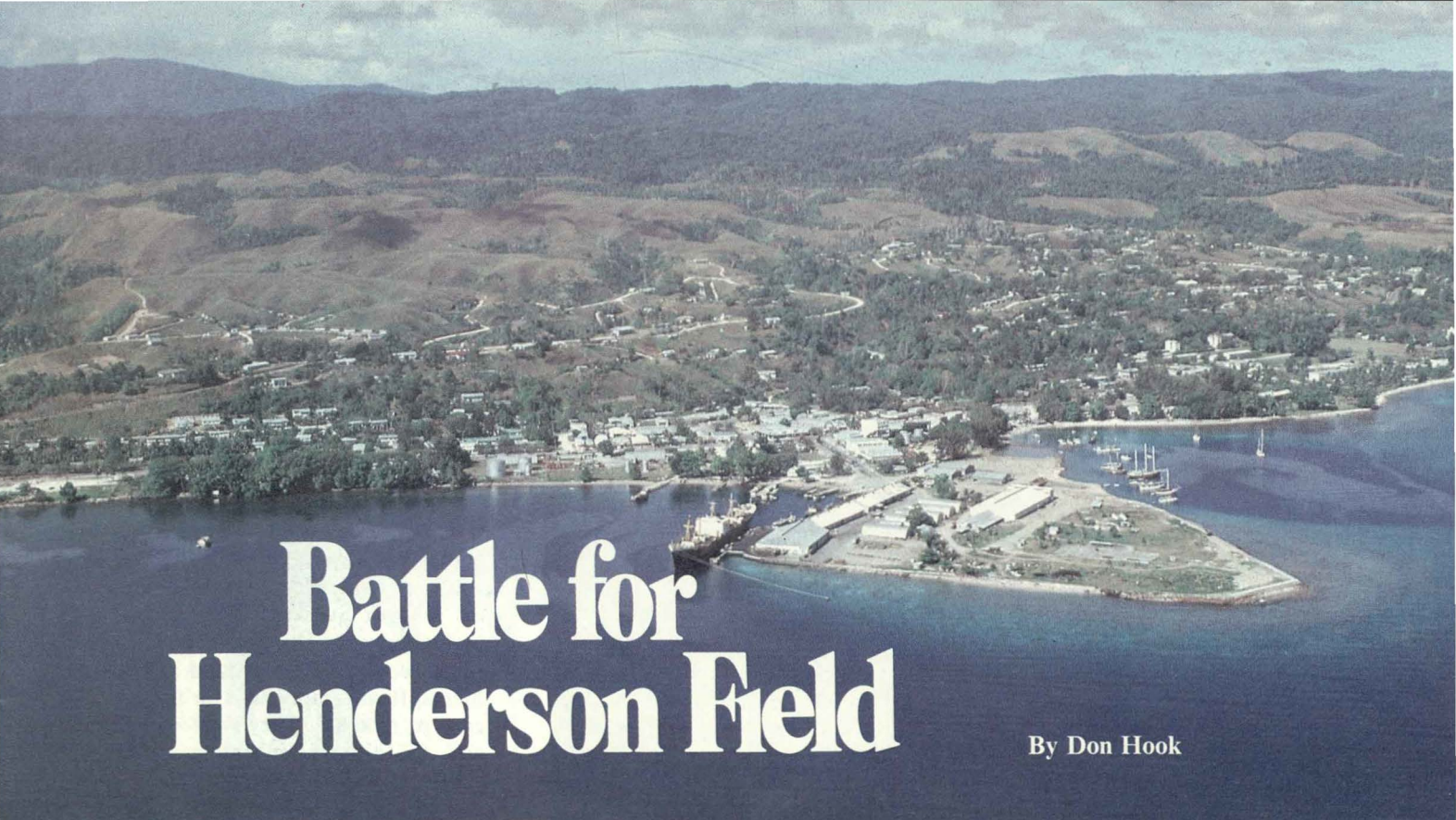
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# Battle for Henderson Field

By Don Hook

In the Solomon Islands in 1942 Japanese and American troops were locked in a fierce and desperate battle for a strategic airstrip, known to the Americans as Henderson Field.

Today, Japanese and American veterans of that battle use the same airstrip as they return to the Solomon Islands to pay homage to their fallen comrades of the Pacific War.

The story of Henderson Field began in May 1942 as the Japanese swept all before them in their push through South-east Asia and the Pacific. A Japanese reconnaissance party chose the plains on the north coast of Guadalcanal Island as a site suitable for an airstrip.

The Japanese wanted the airstrip so they could advance from their forward base at Rabaul through the Solomon Islands to the New Hebrides, Fiji and Samoa. This would have enabled them to cut the lines of communication to Australia, isolating it from its allies in the north.

To achieve their objective, the Japanese landed a force of about 2,000 men on Guadalcanal on July 4, 1942.

Initially, a Japanese airstrip on Guadalcanal was not regarded as a serious threat to the allied route to Australia or the American advance on Rabaul. However, it was recognised as a potential threat which would have to be neutralised or, preferably, captured by the allies for their own use as they pushed northwards.

Accordingly, on August 7, 1942, United States marines landed about six kilometres east of Lungga Point. By 4pm the next day the first battalion of

the 1st Marines had secured the airstrip, meeting very little opposition in the process.

The Americans found that work on the airstrip was well advanced. With little effort they extended the runway to 1160 metres and the first American aircraft landed on August 12.

Fuel and other supplies were brought in by sea but conditions for the American troops were extremely difficult. The strip itself was said to have been covered with black dust which penetrated the aircraft engines and which, in wet weather, turned into a quagmire which made take-offs extremely hazardous.

The living conditions of the troops were described as appalling and their morale was not helped by nuisance raids every night by two Japanese planes which earned for themselves the names of 'Louie the Louse' and 'Washing Machine Charlie'.

Things looked up a little when a transport aircraft dodged Japanese fire and managed to land with one-and-a-half tons of cigarettes and candy for the troops. Their joy was shortlived, however as in September 1942 the Japanese began an all out effort to recapture the airstrip. The following weeks brought fierce and bloody fighting.

Between September 12-14, a Japanese force under General Kawaguchi advanced inland after landing some distance east of Lungga Point. The Japanese were met on a ridge just south of Henderson Field by an American force under Colonel M.A. Edson.

After a desperate battle the Japanese withdrew. The encounter was given the



**Top:** Honiara, the town which replaced Tulagi as capital of the Solomon Islands after the Pacific War; **above:** a modern day patrol pushes through jungle which became a nightmare for troops on both sides during the war



*Left: Monument at Tulagi to Japanese who fought in the Solomon Islands with Japanese fishing boats in the background; below: war relics, like this one near Tambia along the coast to the west of Honiara, are a common sight in the Solomons*

name 'The Battle of Edson's Ridge' or, as the marines knew it, 'Bloody Ridge'.

On October 13-14, the Japanese launched another major assault on the airstrip - this time using naval guns, field howitzers and aerial bombardment.

On the morning of October 14 the strip was a shambles and unusable. Out of some 90 American aircraft on Henderson Field only 41 were operational. Most fuel was destroyed.

October 25 was another bad day and was long remembered by the Americans as 'Dugout Sunday'. They had to sit and take it as the Japanese pounded them with air and ground bombardments. It was impossible for the Americans to retaliate. They were outgunned and the airstrip, including the grass runway, was unusable because of heavy rain. On the same day the Japanese launched what was to be their last major ground attack on Henderson Field.

The Japanese forces under the command of Lieutenant-General Maruyama cut a trail through 25 kilometres of jungle to reach the edge of the airstrip. But again they were beaten back.

Hostilities on Guadalcanal came to an end in February 1943 but Henderson Field continued to play an important part in the Pacific War. By the end of the war it had developed into a vast air base with little resemblance to the muddy strip of 1942.

Henderson field was opened to commercial flying in 1950. In 1968 the runway was strengthened and lengthened to 1,860 metres by British army engineers. Today it handles Air Niugini Flights from Port Moresby and Kieta which connect with services operated by Air Nauru, Air Pacific and the local airline, Solair, which flies to about 20 centres in the Solomon Islands.

A short bus journey away is Honiara, the capital of the Solomon Islands. Japanese and American veterans, sometimes accompanied by their families, make this their base as they revisit the battlefields of nearly 35 years ago.

Honiara, population 15,000, is one of the most pleasant towns in the Pacific. It was developed as the capital after the Pacific War. The pre-war capital on the island of Tulagi, to the north of Guadalcanal, was destroyed in 1942. Today, the Solomon Islands, with a population of 200,000, is self-governing



*Don Hook is the Australian Broadcasting Corporation's senior correspondent in Papua New Guinea.*



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# LAE

Japanese photographer, Shisei Kuwabara, has captured the greenness, neatness and beauty of Lae, Papua New Guinea's second largest city. Kuwabara was commissioned by Air Niugini to take a series of photographs of airstrips throughout the nation. In a 10-day swing through the country he shot nearly all major airstrips. You'll be seeing his work in future editions of *Paradise*.

Lae Golf Course is regarded by many as Papua New Guinea's finest. The wreck of a Japanese vessel, the *Tenyo Maru*, for many years hung precariously on the reef just off the end of the airstrip until a *guria* (earth tremor) shuddered it out of sight about 10 years ago. Before its disappearance many pilots admitted to using it as a beacon when searching for Lae airstrip in bad visibility.







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By Bob Hawkins

'When did you start flying Bertie?' 'Oh! That was only just in the war.' The war, for Bertie Heath, was the world's first. It is 60 years since he took his first flying lesson – and more than 30 since a trio of Japanese pilots forced him to hang up his goggles.

But at 83, Bertie Heath recalls with amazing clarity not just his 27 flying years but much of the finer detail of what, at the time, was the greatest airlift the world had ever known – from Lae in the Huon Gulf of Papua

# Three Zeros – and Bertie hangs up his goggles



**Above:** *Guinea Airways terminal office with a recent delivery of Victoria Bitter*



**Left:** *Bertie aloft after joining (from left) Litchfield, Kingsford-Smith, Ulm and McWilliams, on their emergency mudflat landing strip in the Kimberleys of Western Australia*

New Guinea to the Bulolo goldfields in the early thirties.

Bertie is always good for a yarn about the days when he and a band of seat-of-the-pants fliers – like Pard Mustar, Frank Drayton, Les Trist, Ray Parer, Eric Chater and others – made the dream of Cecil J. Levien a reality. Between them, in one month, they carried more equipment for Bulolo Gold Dredging's operations than was carried in a whole year in the United States. By the time they were finished, equipment to build seven dredges at Bulolo and one at Wau had been flown in from Lae.

Levien, who was to die in 1932 of meningitis, was the mastermind behind the idea of dredging the Bulolo valley for alluvial gold. After seeing prospectors find gold at Wau and Edie Creek, he sensed there had to be more in the valley below. He was right but he knew it could never be exploited without a massive dredging operation – and to get the equipment in it had to be by air.

Bertie isn't the sole survivor of those airborne adventurers. But, as far as he

knows, he's the only one to have chosen to make Papua New Guinea his permanent home.

Today he lives on Lae's Boundary Road. His house is almost under the flight path he has flown on innumerable trips up and down the Markham Valley and over the mountains to Bulolo and Wau.

Just across the road is the Lae Golf Course – probably the finest in Papua New Guinea – where Bertie was a regular player until a few years back when arthritis started to slow him down.

Now, unable to walk without the help of sticks, Bertie Heath is finding it hard to come to terms with his aching joints. To make matters worse, he's never yet accepted the fact that he is old enough to retire. Bertie drives into his office at the South Pacific Breweries factory across the airstrip every day. He has no plans to give up work yet.

Born in Gladstone, South Australia, in March 1893, Bertie had already packed a lot into his life before he came to Lae in 1931 to fly Junkers G31s – tailor-made for dredge part freighting.

A member of South Australian reinforcements in 1915 for the Light Horse he eventually turned up in France with the Artillery and became a despatch rider. But it was the Air Force he had his eyes on. He successfully applied to join the Royal Flying Corps, learnt how to fly and, after finding Europe 'too damned cold' and succumbing to 'all sorts of things', he was shipped out to the Middle East where he flew in Egypt, Palestine and Greece before the war ended.

From there it was back to the 'ferry pool' in London – flying machinery and equipment to wherever it was needed – before being chosen to carry VIPs to and from London for the Paris peace conference. That's where he met Lawrence of Arabia for a second time. He found him a 'quiet, unassuming type, sincere and thorough in his work.'

Through the twenties he flew in Western Australia and, in 1929, found himself searching the Kimberley region for Charles Kingsford Smith's Southern Cross, missing on a flight to Wyndham. Another pilot spotted 'Smithy' and crew – co-pilot Charles Ulm, navigator H.A. Litchfield, and radio operator T.H. McWilliams from New Zealand – and Bertie had the job of putting his aircraft down on the tidal mud flat that Kingsford Smith had found after running out of fuel.

Bertie got a hero's welcome. Smithy and crew hoisted him aloft and a few days later a photograph of the occasion



## Life with the Junkers G31

Guinea Gold people in Adelaide invited Bertie Heath to join the Junkers G31 team in Lae. 'I thought it was a good idea,' said Bertie, 'and duly came up.'

The three-engine G31s had been in Lae about six months before Bertie arrived in 1931. While capable of carrying into Bulolo the biggest piece of equipment necessary, they had to have a hatch cut into the roof of the fuselage to allow for awkwardly-shaped pieces.

Anything and everything went into them – trucks, cranes, cables, machinery for power stations, cattle. Average loading was about 2,720 kg. Bertie remembers that 'four trips a day (160 km return to Bulolo from Lae), if you could keep it up six days a week, was pretty good going'.

Australian author Ian Idriess, in *Gold-dust and Ashes* records that in 3½ years Bulolo Gold Dredging's £180,000 (1931 prices) fleet of G31s, Junkers W34s and Moths carried about 5.5 million kg and nearly 7,000 passengers on just under 6,000 trips.

Bertie, modest as ever in recall, believes that the Lae-Bulolo run led the aviation world in loads carried simply because there 'weren't the places in other parts of the world so inaccessible as Bulolo and Wau. . .'

The G31 pilots didn't take risks, says Bertie. But then he goes on to talk about 'normal' flying and, to the listener, everything sounds risky: 'You couldn't get the thing (the G31) up to a big altitude. These G31s with a big load wouldn't get up to more than 12,000 feet. Sometimes the stuff was higher than that. We had no instruments like they have at the moment. No ground-to-air control. The ground stations were at Wau, Bulwa, Lae, Salamaua and Bulolo. About nine o'clock in the

*Above: The G31 – big enough for any dredge part but a hatch had to be cut into the roof of the fuselage to handle some awkward pieces*

morning they came together telling us the conditions they could see. They couldn't see what was in the upper atmosphere. If you heard from Wau that at seven o'clock the fog was just lifting you could immediately take off because you would know that by the time you got there it would be clear.'

Bertie remembers one occasion that 'wasn't pleasant': 'I had another fellow in the seat and he didn't seem able to get the aircraft over a ridge only a few miles from Lae. I took over the controls and asked him to have a look inside. He found there wasn't any hatch on the thing. He looked over the side and saw it wedged against the tailplane. We went down and landed at Nadzab, unloaded some of the cargo and tied the hatch back on, flew back to Lae and, a week later, after repairs, we flew the cargo into Bulolo.'

The biggest lift? Bertie remembers a total load of 3,630 kg. It involved two stators for a power house. Although they weren't as big as the tumbler shaft (the largest single piece ever flown in for the dredges), by the time all the necessary packing had gone in to fit the diametrics of the stators – and three bags of rice down on the tail controls to get the balance of the aircraft correct – the load was just under 3,630 kg.

Nobody told the Department of Civil Aviation about the three bags of rice, said Bertie, but 'it wasn't a dangerous load. We just cut down on petrol. We had enough to get in with perfect weather conditions with about 10 minutes to spare. .!' – *Bob Hawkins, AIS.*



*He didn't seem able to get the aircraft over a ridge . . .*

appeared on the front page of the Sydney Morning Herald.

It turned out that Bertie had caught Kingsford Smith with his pants down. At least that's what the SMH's photograph revealed in its first edition. In the second, Smithy's trousers had been suitably adjusted.

Then came Bertie's New Guinea flying years which met an abrupt end one morning in 1942 when he was tailed into Bulolo by three Japanese Zeros.

Bertie still admits to surprise that the Japanese pilots found the three G31s in Bulolo. Because of the Japanese threat, the Junkers were kept in Bulolo, one of them flying down to the coast each day.

He didn't know it at the time but, as Bertie flew back into Bulolo, the three Zeros got on to his tail. They probably could have blasted him out of the air. But they were after bigger spoils. They played a waiting game until Bertie landed. Then they came down the airstrip, guns blazing. Bertie's, and the other two G31s, went up in flames.

That, said Bertie, was the last time he took the controls himself. With a nonchalance one becomes accustomed to, Bertie just dismisses the question why he never flew again with 'Not interested'.

Bertie's name lives on in the Morobe Province for another reason. As well

as his flying, he also took over a small plantation on the Markham River side of the road out from Lae toward the famous wartime Nadzab airfield, soon to become a major air centre again for the province.

He found it good for very little but *kaukau* (sweet potato). He had taken a lease on it in the hope of establishing rubber but it was too wet. Later Heath's plantation was to become a Japanese stronghold before falling to Australian forces in September 1943.

*Bob Hawkins is a journalist with the Australian Information Service and Counsellor (Information) at the Australian High Commission, Port Moresby.*



# Shell

Wherever you are  
Wherever you go  
Go well Go ....



# Welcome visitors

Story and pictures by Brian Coates

About this time each year numbers of foreign visitors camp on the shores and open spaces of Papua New Guinea. They arrive in October and stay until April or May. They come from the north – from Siberia, Alaska, Japan and China.

These visitors know no political boundaries. They come and go as they please. They are migratory wading birds – sandpipers and plovers and their kin which breed in the Arctic and sub-Arctic wilderness, then fly south each year to escape the northern winter.

These birds possess remarkable powers of flight, some species flying great distances over the open sea. The Japanese snipe (*Gallinago hardwickii*) for example, flies south to 'winter' in Australia passing through Papua New Guinea on the way.

Papua New Guinea is famous as the home of birds of paradise. Rightly so, these birds are given most attention and publicity. Yet birds of paradise form only a part of the bird community of Papua New Guinea which, as a whole, ranks among the richest of the world. They present a wonderful variety of form and colour. In the forests are

great flightless cassowaries, brilliantly coloured parrots and kingfishers and the great billed hornbill. Stately long-necked white egrets stand motionless in swampside vegetation, knee-deep in water where jacanas run on incredibly long toes over the surface on floating vegetation. Above, soar the ever watchful birds of prey.

The many varied habitats in this tropical land range from seashore to mountaintop and swampland to moss forest.

On remote islands are active, noisy terns, most numerous being the dark plumaged white-capped noddies (*Anous minutus*) which build substantial nests of vegetation in tree forks.

Some trees support scores of nests. The lovely, ethereal white tern (*Gygis alba*), however, makes no nest, merely laying its egg in a depression on a branch.

Large areas of swampland are to be found in parts of Papua New Guinea. In the warm lowlands they may support large populations of birds such as egrets, herons, ducks and cormorants. Waigani Swamp, just out of Port Moresby, is a favourite with local birdwatchers. One of the most abundant birds there is the little black cormorant (*Phalacrocorax sulcirostris*), which is attracted to the place by the large quantities of tilapia fish.

A highly sociable species, this cormorant is often seen in congregations which may number hundreds. A closely packed fishing group will swim rapidly around a lagoon to herd the fish together. Then they dive amongst them

**Clockwise from left:** Red-necked stints and sharp-tailed and curlew sandpipers; Papuan hawk owl; dwarf kingfisher; yellowish honeyeater; white terns; and whistling kite





and it is a free-for-all until the fish have dispersed.

The first natural habitat to be encountered by overseas jet flight visitors is the Port Moresby savannah: eucalypt-studded grassland more typical of Australia than PNG.

The birdlife, too, has much in common with Australia. Conspicuous savannah and suburban garden birds such as the helmeted friar bird (*Philemon novaeguineae*), yellowish honeyeater (*Meliphaga flavescens*), peaceful dove (*Geopelia striata*), rainbow lory (*Trichoglossus haematodus*), and black-faced cuckoo-shrike (*Coracina novaehollandiae*), are all found in Australia.

The yellowish honeyeater is commonly found in parts of Port Moresby suburbs where its pleasing trills in response to others in the vicinity are often heard at sun-up and again in the late afternoon.

Great areas of the country are still clothed in forest. This is the true home of the nation's wildlife heritage. The nature of the forest changes with altitude, the cool, cloud-shrouded high mountain moss forest being a very different place to the rainforest of the warm, humid lowlands. As the forest changes so do the feathered inhabitants.

A good place to see lowland rainforest birds is in the Brown River area near Port Moresby. As geographical altitude sorts out different species so, to a lesser degree, does the vertical structure of the forest.

Above the treetops, hawking insects, are small, sickle-winged swiftlets and swifts. In the tree canopy are various

parrots, fruit doves, imperial pigeons, honeyeaters, cuckoo-shrikes, mynahs.

Just below the canopy is where the exquisite little king bird of paradise (*Cicinnurus regius*), may be found – a crimson and white gem of a bird. Here the male has his display arena: favoured horizontal branches and vertical vines where he spends much of his time many months of the year.

Lower down, in the mid-storeys of the forest are roving bands of rusty pitohuis (*Pitohui ferrugineus*), and rufous babbler (*Pomatostomus isidori*), which busily inspect accumulations of leaf litter, tear off strips of tree bark or probe crevices in search of the small creatures which form their diet.

The kingfishers are probably runners-up to the birds of paradise from an international viewpoint, for here are found a greater variety than anywhere else. Twenty-five species are found in PNG of which most are woodland birds, often living well away from water.

Most spectacular are the five or six species of paradise kingfishers which have beautiful plumage and long central tail streamers. The largest kingfisher is the blue-winged kookaburra (*Dacelo leachii*), of more open country, and smallest is the tiny dwarf kingfisher (*Ceyx lepidus*), which seems to consist of more bill than bird. Most unusual are the crepuscular hook-billed kingfisher (*Melidora macrorhina*), and shovel-billed kingfisher (*Clytoceyx rex*), which shovels into the ground for earthworms.

Oddly enough, it is some of the most accessible birds which are hardest to



find – shy ground dwelling babblers, pittas and doves which live their lives in a world of gloom and shadows.

Unfortunately this is not the case with the goura pigeons. In the past these magnificent turkey-sized pigeons were common on the forest floor but now, due to excessive hunting, they have sadly been exterminated from accessible areas. Goura pigeons are found only on the island of New Guinea.

In the hill forests are a number of species not usually found in the low-

lands, while a number of lowland species are missing. One of the more attractive birds in the forests about Sogeri is the ruddy paradise kingfisher (*Tansiptera danae*), replacing the galatea paradise kingfisher, but it is uncommon.

One of Papua New Guinea's finest birds, the great New Guinea harpy eagle (*Harpyopsis novaeguineae*), used to be found in forests over much of the country. Its large wing and tail feathers are much sought after for use in ceremonial head-dresses and now it, too, is becoming rare.

Most visitors to PNG sooner or later head for the Highlands. The broad, cleared valleys of the Wahgi, Asaro and others have a characteristic, if somewhat impoverished, avifauna.

These mid-mountain grass-lands with 'pit-pit' (wild sugarcane) and patches of scrubby regrowth are largely the result of the shifting type of agriculture practised by primitive man over thousands of years.

Pied chats (*Saxicola caprata*), colonists from Asia, are abundant, perching on roadside vegetation. In the 'pit-pit' are handsome schach shrikes (*Lanius schach*). The small brown birds in the grassland are pipits, bushlarks, finches and fantail warblers. The yellow-breasted bower bird (*Chlamydera lauterbachii*), is found in the patches of scrub and old gardens.

High mountain forest is readily accessible by road from the main Highlands centres. The Highlands Highway itself traverses high passes with forest on either side. For the naturalist, the atmosphere of the place is one of fascination and wonder. The trees are festooned with mosses, lichens, orchids and other epiphytes; the ground is littered with fallen limbs, all thickly carpeted with spongy green moss, wet from the previous afternoon's soaking cloud blanket. It is a world apart from the warm lowlands.

Here may be seen strange and beautiful birds not found elsewhere. It is

Below: yellowish honeyeater; right: white-capped (black) noddy; top right: darters and little black cormorants at sunset





the home of the spectacular long-tailed birds of paradise such as the sicklebills (*Epimachus sp.*), the ribbon-tail (*Astrapia mayeri*), and Stephanies birds of paradise (*A. stephaniae*).

Most incredible of all is the Saxony bird of paradise (*Pteridophora alberti*), with its two long enamelled plumes extending from the back of its head.

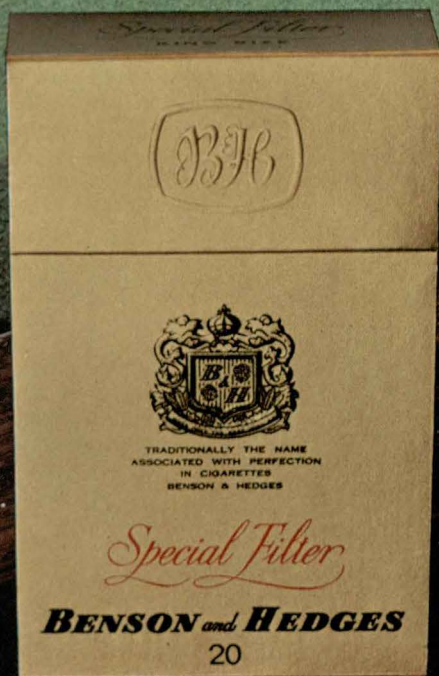
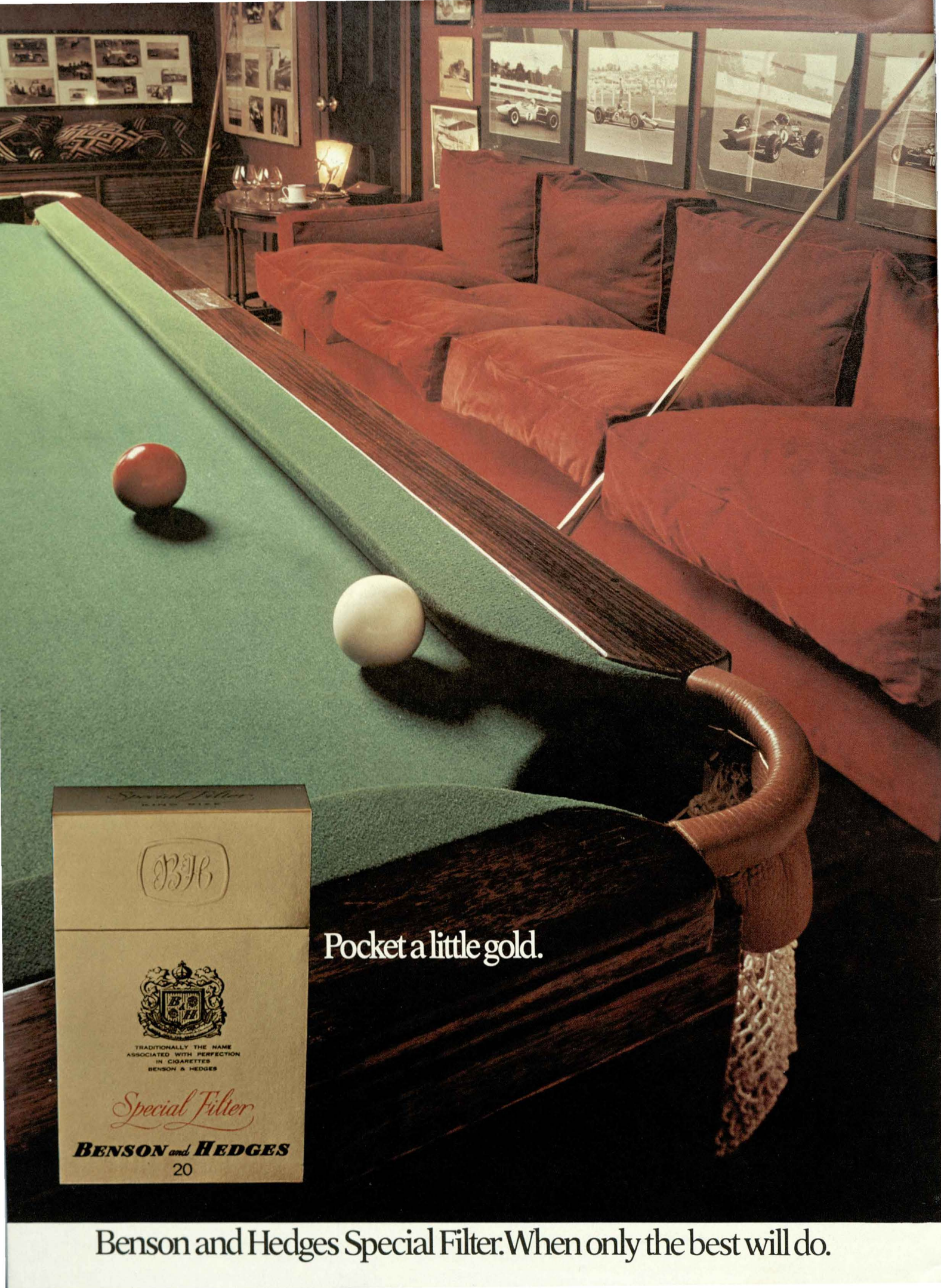
North and east of the mainland lie the New Guinea islands – the Bismarck Archipelago and North Solomons which were colonised mainly by adventurous species from the mainland. Through isolation many evolved into separate, and sometimes striking, species such as the New Ireland drongo (*Dicrurus megarhynchus*), with its spectacular outer tail feathers.

The distribution and speciation of birds through these islands presents fascinating study. A classic example is

the island friar bird – a large, noisy honeyeater with dark bald patches on the head. On the mainland the helmeted friar bird (*Philemon novaeguineae*), is common and conspicuous. In the past it colonised New Britain, New Ireland and even out as far as Manus. Now these island birds are known as three separate species – *P. cockerelli*, *P. eichhorni* and *P. albitorgues*, respectively.

The Papuan hornbill (*Aceros plicatus*), or kokomo, is more common on New Britain than in most places on the mainland. It is a very fine bird and a powerful flier, being found on all larger islands from South-east Asia to the Solomons. The sound produced by its wings in flight is like the noise emitted from a steam engine. At sunset, parties of hornbills may be seen flying over trees to roosting places, their bizarre forms against the sky making a memorable sight symbolic of the wild glory that is this nation's heritage.

*Brian J. Coates is the author of Birds in Papua New Guinea, published by Robert Brown and Associates of Port Moresby, which will be available early in 1977.*



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# On a wing and a prayer

## PAPUA NEW GUINEA'S FLYING BISHOP

By Francis Mihalic

As you go jetting over Papua New Guinea, several miles beneath your wings there might well be several dozen smaller aircraft criss-crossing the jungles, swamps and grasslands.

Mostly they will belong to half a dozen missionary flying organisations. They will surely be heading to or from some outpost far beyond the end of the beaten path. Thousands depend on them for contact with the outside world, for the necessities of life, for emergencies – and sometimes for their lives.

If you have good eyes and the weather permits, scan the terrain down below for tiny airstrips atop mountain ridges, in valley bottoms, and carved out of the sides of hills. Close-up you would notice that some are as steep as ski runs, some are dogleg strips, some water-logged, some slippery. Many have been hand-made with picks, shovels and wheelbarrows. Stones and soil have been carried away in netbags on women's backs or in bark baskets and hods on men's shoulders. There are literally hundreds of these small airstrips in Papua New Guinea and most are open only to missionary air services.

Mission pilots are a special breed. They are past masters at 'short take-offs and landings' – STOL for short. They can tell you stories of puddle jumping on landing, of losing a wheel on takeoff, of crated cattle getting loose in the plane, of babies being born in mid-air and of caskets opening in flight. These pilots fly by the seat of their pants, use few navigational aids, and go where the mapmakers have not yet arrived.

Cumulatively Papua New Guinea mission pilots fly more than 50,000 hours a year. Almost all are unsalaried and risk their lives daily out of pure dedication. Since World War II they have piloted everything from open cockpit Tiger Moths to DeHavilland Austers, which did not have enough ceiling to get over the central ranges, to twin-engined fabric-covered biplane Dragons, which looked like a throw-back to some of the Wright Brothers' originals.

Then came the push-pull Cessnas and the 170s, 180s, 206s and 402s. Twins like the Beechcraft Bonanza and Piper Aztec also became part of the fleet. There were even a few pontoon planes.

One with the registration letters WET found a watery grave in the Sepik River.

The combined fleet of missionary organisation aircraft in Papua New Guinea makes up the largest third level air grouping in the country. The MAF (Missionary Aviation Fellowship, which flies jointly for half a dozen Protestant groups), the Roman Catholics' six air fleets, the Lutherans and the Seventh Day Adventists between them have more than 35 aircraft which they fly and maintain.

To the outsider the concept of a poor missionary flying about the countryside seems contradictory. But it is not. It is the only practical and economic way he has to get where he wants to go in a land where you can still count the highways on one hand.

Generally speaking a small plane can travel in one minute what it takes the best hiker an hour to walk. Besides, it can carry up to half a tonne of supplies which would require a couple of dozen carriers who would also need their own food and wages and spend days on trek.

There was so much flying out of the

Wirui airstrip adjoining the Catholic Mission in Wewak during the 1950s due to the Gibbes Sepik Airways and the mission's Wirui Air Services that, in the southern hemisphere, only Sydney had more take-offs and landings per day. One of the persons who helped make some of those statistics was Archbishop Leo Arkfeld, SVD, DD, known the world over as the Flying Bishop.

He pioneered missionary aviation in what was then the Sepik District of Papua New Guinea. When appointed bishop of this area in July 1948 he was already a pilot. He had taken up flying in Lae in order to get to the goldfield parishes of Bulolo and Wau. He no sooner arrived in Wewak with his mitre and crozier and Auster aircraft than word got out that henceforth all mission stations were to be built adjacent to possible airstrip sites. Today there are 45 of them.

Many oldtimers in the backwaters of the Sepik River system – and even in the faraway Enga Province – saw the first wheel in their lives when the bishop landed his plane on their semblance of an airstrip. In those days the standard request he received was: 'We want a missionary and salt.' But not necessarily in that order.

In the Ambum Valley near Wabag back in 1957, when Bishop Arkfeld's Cessna would come to a halt, crowds of locals in their leafy aprons would encircle the big bird. Women would bring up their toddlers to pat the sides of the plane; the menfolk were more curious about identifying the sex of the 'white man's gadget' and wondering how it multiplied itself.

Archbishop Arkfeld has accumulated about 8,000 flying hours, enough to take him around the world 30 times. It was back in the 1920s, on a farm in Iowa in the US, that he first dreamt of imitating the American hero of the day, Charles Lindberg, who had just flown solo across the Atlantic. In fact the two look alike: both gangling six footers.

And then there was the memorable unofficial night flying episode. He was still a fledgling with only 60 hours in the air and flying a Tiger Moth when nightfall found him still far from home base, Madang.

As he circled over the town in the darkness with nary a navigational light showing, the practical European population down below rounded up every Jeep in town and had them all head out toward the airstrip to shine their combined lights on the runway. One mechanic tied a 44 gallon drum of aviation fuel onto his Jeep, opened the cap, and sped down the side of the strip with a stream of the petrol spurting out the



back. This he intended to light as a flare.

But he did not have to. The Bishop landed after seven gradually descending circuits of the aerodrome. His main worry was to clear the trees at the end of the runway. His flying was complicated by a strong tail wind. That was the last night flying he has ever done.

Actually the most bizarre story about His Grace the Pilot can be found in Australian storyteller Frank Clune's book on Papua New Guinea. As he tells it, whenever Bishop Arkfeld used to land at the uphill strip on Kairiru Island off Wewak he had to hold both doors of the plane open as additional brake and land flap or he would have overshot the airstrip. In other words, the manoeuvre, as Clune describes it, would be a perfect case of 'Look, Ma, no hands.' As anyone knows, you can only try that once landing a small plane. There are no repeats. . . . and the bishop is still flying. So are Clune's yarns. . .

There is still another tale about the time Archbishop Arkfeld lost his licence for infringing civil aviation regulations. He was grounded only a short time when lightning struck the control tower at Wewak. The authorities felt the heat; His Grace was soon back in their good graces.

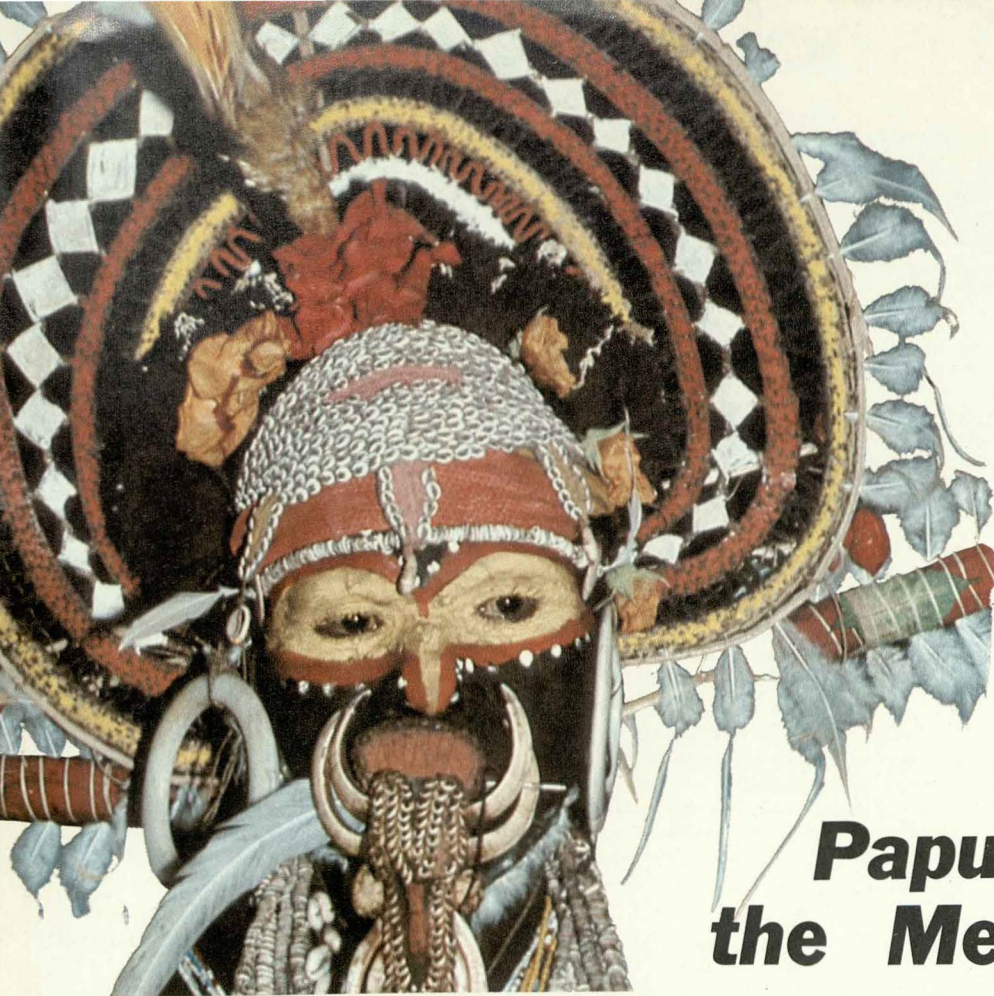
Archbishop Arkfeld is now beyond 60 and manages both the archdiocese of Madang and the diocese of Wewak.

*The Flying Bishop watches as the late Father Joe Walachy refuels the Tiger Moth which Archbishop Arkfeld flew blindly into Madang one night*

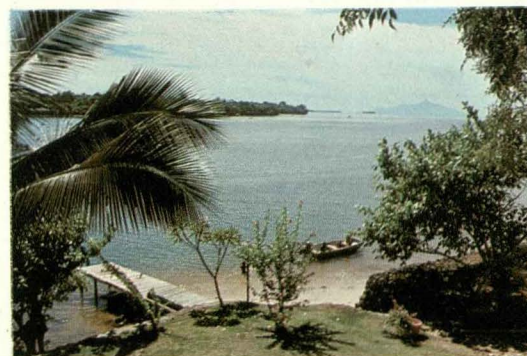
He can continue to do the work of two bishops because of a Cessna 180. There is no diocese in the world where personnel get to see their bishop as often as they do in the Wewak and Madang areas. His Wirui Air Services uses two Cessna 180s and a German Dornier. In 28 years it has given flying experience to dozens of volunteer pilots who donate their services to the mission and in return amass the sums of flying hours prerequisite for climbing into higher flying jobs.

'Bishop Leo', as he is called by the local people, is perhaps the oldest regularly active licensed pilot in the country. He flies on a wing and a prayer. This formula has always brought him back home unscathed – even when the wing was flapping a bit. He was recently awarded the OBE for services rendered to the country and its people. But that is life to him. That is why he came. Service is his business – and a pair of wings has been one of his best tools.

*Father Francis Mihalic is the author of Introduction to New Guinea Pidgin.*



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