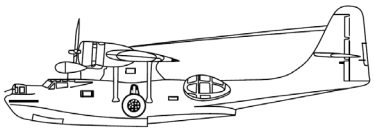
# THE CATALINA FLYING MEMORIAL LTD

ACN: 103492440

**Patrons:**
**Sir Richard Kingsland AO CBE DFC**
**Neville Kennard**



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*In association with:-*

Lake Macquarie City Council
Rathmines Catalina Festival Committee
Rathmines Catalina Memorial Park Trust
Rathmines Memorial Bowling Club Co-operative Limited
Seaplane Pilots Association of Australia
Toronto and Districts Historical Society

Airborne from Rathmines

it is the aim of this Memorial, in conjunction with its associates to acquire, restore and operate a flying example of the PBY Catalina flying boat to be maintained and operated from a Hangar/Museum complex to be built on the site of the heritage listed Rathmines Flying boat base on Lake Macquarie.

In addition to becoming a major tourist attraction the Memorial will serve to honour and recognise the major contribution these aircraft and the Rathmines base made to Australia's survival during the 1941-45 Pacific War. Unfortunately there is scant information in the Australian War Museum in Canberra on the Catalina and their operations.

It has been said that the Catalina did for Australia what the SPITFIRE did for England.

It wasn't long after Pearl Harbour that the Japanese took over, or destroyed, all the available Pacific airfields. This meant that Flying Boats which could operate off the water, and in many cases the open sea, became essential.

The RAAF, who were the exclusive operators of these water birds finally operated some 168 Catalinas. Sadly over 320 aircrewmen and their flying boats did NOT return. Their operations, after training at Rathmines No. 3 OTU (Operational Training Unit), one of the world's largest flying boat bases consisted of long range bombing, mine laying, air sea rescues, aerial reconnaissance, servicing our "Coast Watchers" and a multitude of operations all well behind enemy lines.

General Douglas McArthur could not have returned to Manila if twenty eight Australian Catalinas had not mined and bombed Manila harbour beforehand. It was only the Australian CATS which had the retractable undercarriage removed along with the heavy armor plating and fuel tank sealing, so they could make the distance and carry the heavy mines.

These days most aircraft are "pressurised" so they can operate above the weather at 30-40,000ft. The passengers and crew are all in relative comfort.

During the war the unpressurised Catalinas had to fly down low, rarely above 10,000ft. In the tropics where Australian CATS had to operate the inter-tropical front and the monsoons spawned cyclonic weather. Without radio aids they tried their best to fly around and through these storms and navigate by dead reckoning. Just getting there and back was a mammoth task without considering at the same time there were ZEROS and Ack Ack guns trying to shoot them down. The Catalina was flat out doing 100 knots! Their only defence was their camouflage in black.

During the war there was something very CIVIL about maritime aviation. Whereas aircraft in general became weapons of mass destruction, bombing cities and civilians and strafing people on the ground, the flying boats, Sunderlands and Catalinas had a more benign role and never attacked civilians. They were the "Gentle Giants" of aviation. Their main activity in wartime was attacking Japanese submarines to prevent them from sinking merchant ships, rescuing downed airmen, servicing the coastwatchers and laying mines against enemy warships – all defensive or counter offensive operations and always out at sea.

At the same time, they were exposed to dangers from being shot down by fighters or anti-aircraft gunfire. They were large targets, relatively slow and not very manoeuvrable.

Our RAAF lost most of our Sunderland's and some 32 Catalina's.

On final arrival over a target our CATS were required to drop their mines very accurately from a nominated data point in much the same way as the DAMBUSTERS – and then find their way through the tropical storms back home again - usually a flight of up to 20 hours.

Most CAT pilots claimed they owed their lives to two men – Mr Pratt and Mr Whitney. The Pratt and Whitney 1830-92 radial engines of the CAT were common to the military C47 Dakota (also the well known Civilian DC3) and the Liberator Bomber and proved to be reliable and indestructible.

During the war and for many years after, these operations were TOP SECRET. The Japanese never knew how the mines got there – (and sometimes our CAT pilots never did either!)

Just some of these stories are now being told, and as most of our original crew members are leaving us there is a heightened awareness that we must preserve this important part of our history.

We have available a number of books, records, videos and DVD's which make exciting reading. These are listed here.

**Books**

The Catalina Chronicle by David Vincent
Black Cats by Bill Minty
Cats at War by Gaunt and Cleworth
The Fabulous Catalina by Robert Cleworth

**Videos and DVD's**

Black Knights
Operation Black Cat
Flying the PBY
Great Planes PBY

Lake Boga at War by Brett Freeman
The Boats I flew by Bryan Monkton

Flight of the Felix
Operation
Catalina Heritage

Catalina Dreaming by Andrew McMillan
PBY – THE Catalina Flying Boat – Roscoe Creed

**PURPOSE OF THIS RESTORATION**

The significance of this purchase cannot be underestimated, there were 168 Catalina's used extensively in WW11 by the RAAF and it was to Australia what the SPITFIRE was to England. The Catalina's wartime exploits were the stuff legends are made from, including finding the German ship *Bismarck* in the mid-Atlantic, and of course, the *Coral Sea Battle*. It played a vital role when the enemy was at our doorstep and virtually 'Saved Australia'. Sadly 322 Australian Catalina aircrew did not return from long range bombing missions, fighter strikes, mine laying, and air-sea rescue and reconnaissance missions.
The CATALINA is a symbol in Australia's history. Our population today is more than twice our wartime numbers. Many are the grandchildren of our war heroes but they are to a large extent, migrants, refugees and their children from other countries. They have little knowledge of Australia's history and there is little effort to inform them. It is our intention to maintain and operate this beautiful 'Cat' in its original configuration, to then house it at Rathmines at Lake Macquarie NSW. We not only want to honour *all* our war heroes, but also to educate and inform the general public, our present and future generations.
Catalina Flying Memorial is an initiative to acquire, bring to Australia and restore an example of this historic aircraft, designed in the 1930's of which few examples still exist in the world. The particular aircraft we have acquired was found in Portugal, where it was last used as an aerial fire-fighting water bomber and is a 1945 model PBY6A. The Rathmines connection for the flying Catalina has special significance for the Lake Macquarie and Newcastle region, as this was the world's largest flying boat base hosting some 30 Catalinas at a time, together with Sunderlands, Dorniers, Seagulls, Walruses, etc.

**HISTORY OF VH-CAT**

Our PBY6A Catalina is now registered as VH-CAT. Her history makes for interesting reading.

She started life during the final months of the Second World War as serial number 46665, rolling off the Consolidated-Vultee production line in New Orleans as part of an order for the US Navy. The naval air arm accepted her on 22 March 1945 and she was delivered three days later.

She flew with the US Navy as BuAer 46665 until March 1947, mainly in the Aleutians and Alaska. Following an overhaul in May 1948, she was assigned to Norfolk, Virginia, and was later dispatched to a squadron engaged in submarine warfare trials near Key West, Florida. The next significant event in her career occurred in March 1951 when, after another overhaul, she was involved in a 'Category C' mishap at a naval base in Chincoteague, Virginia. Apparently, her brakes failed while taxiing and she hit a parked Grumman TBM-3E Avenger.

On 29 March 1953, she was placed in storage at Litchfield Park, Arizona, having accumulated 2512 flying hours. She was removed from the naval inventory in August 1956 and given the US civil registration number N9555C.

In 1957, she turned up on the Chilean civil aircraft register as CC-CNG. The registered owner was an outfit called TRANSA, who mothballed her until 1959, when she was acquired by the prominent Chilean aviator Commandante Roberto Parrague, becoming CC-CNP in the process. Parrague owned a company called ASPAR, and he christened CC-CNP *Manutara II* in honour of a previous Catalina that he had flown from Chile to Easter Island in 1951.

Incidently*,"Manutara"* means '*frigate bird'*

By coincidence, PG Taylor – the famous Australian flyer – had stopped over on Easter Island soon after Parrague's visit in 1951. PG noticed a derelict Catalina called *Manutara* marooned on the island, but he did not realise the significance of the plane at the time and flew on to his destination, Valparaiso, without giving the matter much thought.

It seems that when Parrague was getting ready to fly *Manutara* back to Chile, the Easter Islanders had warned him that according to legend, their sacred frigate bird would never leave the island. And so it came to pass that as Parrague took off, rough conditions snapped the Catalina's wing, causing her to 'die' on the island as prophesied. Her broken body was still there at the time of PG Taylor's stop over.

When PG saw the wreck he was glad that he had equipped his own Catalina, the serendipitously named Frigate Bird II, with JATO (jet assisted take-off).

PG, with so many Pacific crossings under his belt, had the greatest respect for frigate birds – an appreciation that he clearly shared with Parrague. He admired the way in which the birds inhabited vast expanses of the ocean, forever skimming the wave tops and seeming never to rest.

As a reward for completing their pioneering flight from Sydney to Valparaiso in '51, all PG's crew were made honorary officers of the Chilean Air force, while PG was awarded a government decoration, Al Merito Bernardo O'Higgins (named after the founder of the Chilean Republic). He also met Parrague, learning the story of *Manutara's* ill-fated takeoff from Easter Island.

In 1961, Parrague flew CG-CNP (alias *Manutara II*) to Easter Island and, four years later, took her on a long-distance flight to Tahiti. But she was used mainly to ferry freight and passengers to and from the Juan Fernandez Archipelago. Parrague's company ASPAR diversified into the firefighting business during the late '60s and CC-CNP was sent from Santiago to Canada to be converted into a fire bomber fitted with internal water tanks and 'drop doors'. In this new role, CC-CNP was first given the tanker number '65' but later became '35'.

CC-CNP flew to Spain in July 1988 when ASPAR was awarded a firefighting contract there. She worked for the Spanish government department ICONA under a charter arrangement and was re-registered EC-593. This change was short lived, however: by the end of the decade, her Chilean registration of CC-CNP had been restored. She was now working as a chartered fire bomber in Portugal for Aerocondor, which was owned by Victor de Brito.

By this stage, CC-CNP's firefighting technology had been rendered out of date due to the advent of more efficient, special-purpose Canadian CL415 aircraft. She was retired from service and stored at Seia in the Portuguese Sierras, where she waited patiently for the Catalina Veterans of Rathmines in Australia to save her from laying one sacred frigate bird egg and dying.

She will be reverting to the role to which she was born, that of a Black Cat, but while she is now registered in Australia as VH-CAT she will always keep her avian personal name, *Manutara II.*

**STOP PRESS!**

We have been contacted by James Walruff, of 1904 Meadlowlark Drive, Raymore, MO 64083, Missouri, USA, who has kindly provided us with some fresh and invaluable information about our Catalina. James informs us that:

> ***In late 1945 I was in Patrol Bombing Squadron 62 (VPB 62) based at Whidbey Island, Washington State. About that time the squadron received new PBY-6As, replacing our old PBY-5As. I was in crew No. 1 and 46665 was assigned to us. I flew in her for most of a year. We rotated to the Aleutian Islands during this time [and] flew through the island chain from Kodiak to Attu, as well as to Nome and up the Bering***

***Straits to Point Barrow. Attached is a copy of my flight log for the last two months I was there, which indicates many of the places the plane took us. I was discharged a few months after returning to Whidbey Island.***

***I had been aware that later this went as surplus to Chile, then to Canada for conversion to a fire bomber, then to Spain and Portugal. And now by going to Australia it will have covered a good part of the globe. Congratulations and a big thank you for enabling the old girl to live a long and fruitful life.***

We are most grateful to have received James' message.

By a strange coincidence Patricio Parragué, nephew of Roberto Parragué Singer just turned up as an immigrant to Australia and is now our most enthusiastic volunteer member working with sleeves rolled up on VH-CAT at Bankstown.

VH-CAT, as she is now known, has been purchased, overhauled and flown to Sydney. She is now purring at Bankstown Airport with new engines under the tender care of our volunteer engineers and waiting for her grooming with an Australian CofA and a kennel being built at Rathmines.

If you would like to give her a pat you are more than welcome to visit the CFM "Clubhouse" in Gypsy Street, alongside Airag Services at any time (preferably on Saturday's when the volunteers are hard at work).


Some of the volunteers hard at work – *photo by Colin Cool*

## CORPORATE SPONSOR

We need to attract a Corporate Sponsor who should earn a lot of publicity for their participation. VH-CAT is very photogenic when alighting and taking-off from water which is quite spectacular.
It is certain to attract media photographers and TV exposure.

During "Adventure" Flights from Rathmines VH-CAT will be engaged in coastal surveillance, sea searches, shark patrol, etc. as part of the new Marine Rescue organisation.

## DONATIONS

Donations are tax deductible and are URGENTLY required.
Catalina lovers and supporters should send their cheque contributions to:

The Catalina Flying Memorial Ltd
Building 2, 35 – 41 Waterloo Road, Macquarie Park 2113
**OR**
Direct Deposit - ANZ Bank - BSB 012 172, A/C No. 8370 26202

**To obtain a tax deductible receipt for your *direct deposit donation* please email your details to:**
**CatalinaMemorial@dulhunty.com**

**(Please note this a special email address for direct deposit donations only)**
**OR**
We accept Visa / Mastercard / Amex.
*Please call Christina on (02) 98707 277 to make your credit card donation*

Touchdown at Rathmines - *7 December 2008*

**JUST ONE EXAMPLE OF THE CLOAK AND DAGGER CATALINA OPERATIONS**

Now that most of the restrictions imposed for security purposes have been lifted more is being heard of the activities of the "cloak-and-dagger" men in the CAT squadrons.

The flying-boat work entailed landings at night without a flare path in bays, rivers, harbours and even the open sea, hundreds of miles behind the enemy lines.

The trips were of long duration, a minimum of twenty hours. The longest recorded was one of thirty-eight hours.

One example operation began again in September when Flight-Lieutenant Bruce Daymond of Sydney with Flight-Lieutenant Jack O'Meara of Swan Hill (Victoria) began his marathon in which he flew just on a hundred hours in seven days, approximately thirty-three of which were spent over enemy controlled waters and territory.

An immediate signal had come in from a party of agents to say there had been a lot of enemy air reconnaissance of their island and that now an enemy submarine had come into the bay. From all indications a search party was being put ashore to capture them. They would try and avoid the Japs till an aircraft could arrive.

When the signal arrived Flight-Lieutenant Daymond and his crew were sleeping off the effects of their three trips in four days in which some seventy hours had been done. He was ordered to get the agents back at all costs. The information they had gathered was vitally important and it had to reach headquarters.

On reaching the target the aircraft was flying at fifty feet. A flashlight signal was received from the ground giving the all clear for landing. The agents stated afterwards that the submarine had gone away that afternoon. All stood by for the landing, but while on the down-wind leg, the bow turret gunner called up on the "intercom." to say that the submarine was in the middle of the bay.

The aircraft came in low over the submarine, touched down and taxied on the step down moon in a whirl of spray, almost reaching flying speed in doing so.

Engines had to be cut and the anchor thrown out, otherwise the agents in their rubber dinghies could not have come alongside against the slipstream.

Fortunately the down-moon position helped to prevent the exact location of the aircraft from being discovered.

As the submarine moved in to do its worst, the agents-were unceremoniously dragged aboard. There was no time to load their equipment; this was cast adrift in the dinghies. The anchor cable was slashed with an axe.

The engines, those wonderful Pratt and Whitney's started without a splutter. A down-wind takeoff straight over the submarine again, a turn, flat on the water, behind the Cliff face and the aircraft was safely away.

Bruce Daymond's exploits are typical of hundreds of others which are only now being told by Robert Cleworth in his book The Fabulous Catalina.

**THE "DOUBLE SUNRISE" FLIGHTS**

After the fall of Singapore in 1942 physical contact with Europe and UK was cut off. Catalinas with their long range tanks were used to fly directly from Perth to Colombo, a distance far greater than any "normal" plane could make.

Although they would make the distance they were very slow (100-115 knots) and took a long time to get there. In fact they would experience two sunrises during the voyage.

A special "Double Sunrise" Certificate was presented to passengers, mainly all V.I.P.'s

**THE CAT CAME BACK**

(This story was originally published in *Blackwoods Magazine (UK)* and was kindly sent to us by the author Bryan Monkton to be published here.)

They fly through the sky with a nonchalant air,
They play with the Zeros like tortoise and hare.
They'll sink all your ships, so Jap-men beware,
For the Cat-boats, the Cat-boats are flying tonight-

From 'The Catalina Song' to the tune of
'That Daring Young man on the Flying Trapeze'.

"Left, left ... left, left," orders the navigator, Flight Lieutenant Evans. His voice comes to me through my earphones from his position in the bow of the Catalina flying boat, from where he is directing our approach to the target area. I immediately rotate the rudder control knob of the auto-pilot and watch as the directional gyro indicates the rum.

"Steady.... steady."

I stop the turn and wait. We must be getting close to the distinctive promontory on the enemy coastline that is the datum point for beginning our mine-laying run. From here on, the required course, height and speed must be maintained precisely so that the two

sea mines we carry are dropped accurately into the shipping channel. I take a quick glance at the other instruments. on the panel. The pointer of the radio altimeter is spot-on two hundred feet and 1 see that the co-pilot, Flying Officer Abbott, has one hand on the elevator control knob, ready to correct any deviation from our low height above the surface of the sea. His other hand is on the throttles, adjusting the engine power to maintain the right speed. Everything seems to be in order.

“Righ-eet ... righ-eet,” comes the navigator's voice again and, as I commence the turn, he says, “I see the datum now. Positively identified.”

It is a black, moonless night and there is a thick cover of stratocumulus cloud above us-ideal conditions for sneaking into enemy territory, and so far we have met no opposition either from the ground or the air, which is an agreeable change. The flying boat is entirely blacked out to avoid detection from the ground or attack from the air. Also the engine exhausts are fitted with long flame traps, and the whole aircraft is painted a dull black. Except for the faint glow of the cockpit instruments and green fluorescence from the shrouded radar screen back in the radio compartment, there is no light anywhere.

“Steady ... steady stand by, datum coming up Steady . . . steady ... steady - DATUM!”

As I quickly run the aircraft through the small angle necessary to bring it onto the correct heading for the run, the wireless operator begins to call the seconds of time over the intercom: “One . . . two . . . three ... fower ... fife. . . .” I concentrate now on holding the right heading exactly. Another glance at the instruments tells me that Abbott is doing his job well - height still spot-on two hundred feet, air-speed within a knot. “First mine armed and ready,” advises the navigator calmly. He came down from his perch in the forward gun turret as soon as we passed over the datum and is now crouched at the bombaimer's panel, ready to release each mine at the precise moment.

The wireless operator is still calling off the seconds: “… thirty-two ... thirty-three ... thirty-fower ... thirty-fife DROP ONE ... thirty-seven”. “First one released.” Evans has triggered the bomb release at the exact second and the 2,000lb mine should now be heading for its allotted position in the shipping channel. An instant later the voice of the armourer, Corporal Fell, comes to us from one of the blisters in the gun compartment amidships where he has an unobstructed view of the mines suspended beneath each wing. “Number one dropped clear... parachute open.”

What he refers to as a parachute is really nothing more than a small drogue, its sole purpose being to tilt up the tail of the long cylindrical mine as it falls, so that it will enter the water cleanly, nose first. The Armourer is required to observe the release of each mine and particularly the operation of the drogue, for, should this fail to open, the mine will fall in a flat attitude (so we have been told), possibly bouncing into the air again as it hits the water and almost certainly damaging the firing mechanism, thereby rendering itself useless. We have also heard, unofficially, that there is a remote chance that a mine landing flat may explode on impact, although there have been no reports of this ever happening.

“Second mine armed and ready.” “..fifty-fower ... fifty-fife… in-tones the wireless operator, fifty-six.... DROP TWO.” “Second mine released.” “Number two dropped cl… PARACHUTE FAILED TO OPEN! “

Damn and blast, I curse to myself. What a bloody waste of time and effort, dragging that hulking mass nearly a 1,000 miles over the South China Sea only to have it lie on the sea bottom, impotent and useless. I can only hope that the one mine we have

dropped successfully will end up sinking a 20,000-ton tanker! In considerable disgust, I reach up to disengage the autopilot so that I can run rapidly back towards base. But before I can do so, the clouds above are lit by a great, blinding flash and the next instant the ‘Cat-boat’ bucks as though kicked by a giant boot from below. At the same time, the tail of the aircraft is thrown up, the nose goes down into a steep dive and the control yoke slams back into my stomach.

The remote chance has happened, and two thousand pounds of high explosive have erupted right under our feet!

We had started the mine-laying mission from the Philippines, taking off about an hour before sunset from a U.S. Navy base on the island of Jinamoc in Leyte Gulf. MacArthur had recently retaken Manila, and although the general had not yet fulfilled his promise to return to Bataan and Corregidor, there were signs that the tide of war was at last beginning to run against the Japanese. Just the same, the enemy was still firmly entrenched in Burma, Malaya, Borneo, Sumatra and many other strategic places. These forces continued to be well supplied by ships from Japan, despite the increasing number of American submarines patrolling the ocean 'routes. For the Jap ship-captains had become cunning. They now hugged the land where shore-based aircraft could give them some protection and took the longer routes in preference to the open sea, weaving their way through the islands and narrow passages in relatively shallow waters where it was difficult for a submarine to operate.

It had therefore become the principal role of the Black Cat Squadrons of the Royal Australian Air Force, working under the direction of the U.S. Navy, to plug these alternate routes wherever possible by laying mine patterns in harbour entrances, straits and channels. Most of our targets lay deep in enemy territory, often involving as much as a nine-hour flight in both directions. The ‘Cat-boat’ was a slow old bird, especially when pushing its load of blunt-nosed mines through the air. We usually carried either four one-thousand-pound mines or a pair of two-thousand-pounders, these being just about the maximum load a Cat with full tanks could lift.

As our mines began to take their toll, the Japanese were forced to choose between risking their ships in the minefields or playing hide-and-seek with the American submarines waiting for them in the open ocean. It was a strategy that worked well. The inshore route from Japan to Burma hugged the coast of China for part of the way and at one point passed between the mainland and the island of Hainan. On this occasion, four Catalinas of No. 43 Squadron had been ordered to lay mines in Hainan Strait to a carefully designed pattern. Each aircraft was to operate independently of the others. Our flight to the target area had been relatively uneventful. In about latitude 15 degrees north we had passed through the zone of bad weather known as the inter-tropic front, flying low beneath the threatening cumulonimbus clouds and dodging the worst of the thunder-storms and rain squalls. We had continued to keep below a thousand feet the rest of the way to avoid the strong head winds at higher levels, as well as the enemy radar as we approached the land.

When the great flash lit the sky around us and the aircraft reacted so violently, my first thought was that we had suffered a direct hit by a rocket from some unseen enemy night-fighter; but, as we plunged headlong at the sea, I had no time to dwell on the possible cause while the effect was putting us in such peril. I snap out the autopilot and heave hard on the control yoke. To my surprise it comes back without much effort, but the movement seems to have no immediate effect on our nose-down attitude. We are going to hit the water in a matter of seconds unless 1 can get the nose up quickly. My

horrified stare takes in the radio altimeter, which indicates we are now less than a 100 feet from the surface.

“Power!” I yell. “Quick! Full power!”

Abbot, never the fastest to react as a rule, on this occasion moves with the speed of light. In one swift action he slams the propeller controls and throttles forward and there is instantly a surge of power from the two engines. All this has taken less than twenty seconds and during this time my eyes have remained fixed on the instruments that foretell so clearly our impending fate. The radio altimeter now reads less than 50 feet while the vertical speed indicator still shows we are going down. I brace myself mentally and physically for the shock of crashing into the sea. In those few critical seconds I am almost in a trance, still with the control yoke pulled hard back. The needle of the radio altimeter now begins to kick erratically between zero and 50 feet-a sure sign we are almost on the surface. But then the needle steadies momentarily on 30 feet-and, as I watch unbelievingly, reads 50, 60, 70, a 100 feet! We have miraculously missed the sea - but by how much one can only guess.

As the aircraft continues to climb, 1 ease the elevators forward and motion to Abbott to adjust the engine controls to give normal power. Then I take my microphone and call on the intercom: “Skipper to all stations-anyone hurt?” Someone replies that the tail-gunner and the second engineer were both thrown badly when we were hit by the blast but appear to have suffered only cuts and bruises. The armourer comes forward to tell me that it was definitely our mine that did the damage; he had watched it hit the sea and exploded.

“Chief,” I call to the first engineer in his remote position up in the centre-section pylon, “get the second engineer and the air-frame fitter to check round for any damage. There's something screwy with the elevators either they're bent or we've got a broken control cable.” We continue to climb slowly and at eight hundred feet level off just below the cloud-layer. The aircraft is staggering through the air with its nose up and barely making one hundred knots. Something is seriously wrong but I have no idea what it can be. “Engineer to Captain. Sergeant Irvine reports that nearly all the fabric has gone from the wing trailing edge and the ailerons. He also says that, as far as he can see, it has gone from a large part of the elevators too.” So that's the reason the aircraft is only just flying and the controls feel so mushy. The trailing edge comprises about one-third of the wing and on the Catalina is simply a strong framework of metal ribs and stringers covered by a skin of stretched aircraft fabric. If this fabric covering has gone, blown off by the terrific blast of the exploding mine, we must be losing a large amount of lift from the wing. In fact, it's a wonder we are still flying at all!

“Engineer again, sir. Irvine says we have a few holes in the bottom of the ship where bits of mine casing have come through. Some of them are quite large.”

“All right, engineer,” I reply. “Perhaps you can try to stuff some-thing in the holes before we get to base, although we may have to run her up on the beach if she leaks too badly.” Our air-speed is still at about a 100 knots, despite the high engine power we are using, and suddenly it occurs to me that under these conditions we may not get back to base at all. “Engineer, what's the fuel situation?” “Six hundred and twenty gallons, sir, and the flow is eighty-two. I reckon about seven and a half hours to dry tanks.”

“Hell!” I yell across to Abbott. “At this rate we're not going to make it. Get Evans to come up here.” The navigator comes forward and confirms my fears. He estimates we have 890 miles to go and that we will not average better than 110 knots even though the

winds are favourable most of the way. If he is right we have at least eight hours to go to Jinamoc but won't make it with the remaining fuel unless we can do something to improve the performance of the aircraft.

We start by trying to better the trim, moving the two heavy life-rafts forward from aft to amidships. Then we reduce weight as much as possible. The four guns are dismounted and heaved overboard together with all the belts and boxes of ammunition and all other loose equipment. After this is done and everyone has stopped moving about, there is a small but definite improvement. We are now able to use less power for a slightly better speed, and this gives us some hope.

Dawn is breaking as we come up to the inter-tropic front and there is just sufficient light to see the black rain squalls and thunderstorm areas beneath the cloud mass. This formidable barrier has developed quickly during the night, as is usual over the sea, and we are glad that we did not have to penetrate the turbulent area in darkness with our ineffective ailerons. As it is, we have a few anxious moments in the rough patches and are forced to make several wide deviations from our course, wasting precious fuel. Eventually we emerge from this hazardous zone and in another hour the radar operator reports he has a blip on his screen that could be an island 25 miles ahead. But the visibility is still so poor that his range is down to 2 miles before we actually see the land.

We fly along this coastline and soon Evans says he thinks he can identify it on his chart. If he is right it is the island of Mindoro, which puts us almost exactly where we should be and means we have about 300 miles to go. He estimates this will take another 2 hours and 40 minutes. The rest of the figures will decide our fate and 1 immediately ask the engineer for the fuel readings.

“Gauges show a total of 140, sir,” he replies. “I've got both engines leaned down as far as they can safely go and the flow is sixty-eight”

“Good man. But that still leaves us about 30 minutes short. What do you think the chances are of the gauges erring in our favour?”

“Not much, I'm afraid, sir. They're usually pretty accurate.”

“Then in that case we won't make it.”

I call the wireless operator. “Sparks, you can break radio silence now. Try to contact Jinamoc and tell them we may have to make a forced landing and that they should prepare for a rescue operation. There are still a lot of Japs on these islands and we won't want them to find us first.”

There is nothing more we can do now but pray.

We pass to the north of a large island and recognize this from the chart as Panay. We now know exactly where we are, but the figures are still against us. They say we will run out of fuel about 50 miles short of base.

We have about seventy miles to go when the engineer calls, “Left gauge shows empty, skipper. Right is reading 15.”

“O.K. be ready to slam on the cross-feed when the left engine quits and I'll land wherever I can while we still have power. Get everyone into ditching positions now.”

So near and yet so far. But the minutes tick by and still the left engine continues to run with its fuel-gauge reading empty. If it were not for another problem I would continue

on to the last drop, but the last 40 miles before we can reach the safety of Leyte Gulf are over land, and once we start to cross it we shall be committed to the possibility of a forced landing in hilly bush country, which would mean almost certain disaster. Should I land now while we still have water under us or shall I make the final choice? If the left tank has more fuel in it than shows on the gauge, why shouldn't the right also? I grit my teeth and head over the land. We are almost halfway across when the engineer calls, “Both tanks read empty now, sir.”

“Hang on, we might just make it.”

Slowly, painfully, the ground creeps beneath us, and each minute seems like an hour. Abbott and I scan the terrain constantly, searching in vain for any flat area where we might get down. Suddenly, the aircraft slews hard to the left and without even so much as a backfire the engine on the port side loses all power.

“Cross-feed on, skipper. Both engines on the right tank,” calls the engineer.

With a roar the left engine comes to life again but now we are using fuel twice as fast from an almost empty tank. It must run out soon and this time both engines will stop permanently. It is a terrifying situation.

Now the blue water of Leyte Gulf is tantalizingly in sight but to our anxious eyes appears to get no closer. Nevertheless, slowly but surely we pass over the ground until, hardly daring to believe our luck, we approach the shoreline and within reach of safety. Without bothering about identification procedure, I head straight for Jinamoc Island, swing round to parallel the long, oily swells running into the bay and ease the ‘Cat-boat’ on to the water. I keep her planing on the step until we are among the other moored flying boats, then cut the power and let her settle. The ramp crewmen are waiting for us in their work-boat, ready to attach the beaching gear, and we are happy to let them take over.

The hard-boiled crew chief, his U.S. Navy cap on the back of his head and a stubby cigar clenched between his teeth, pokes his head through the open hatch.

“Whatsa matter wit’ you Aussie guys?” he growls. “Why all the panic to beach th' ol' bucket?” “You'll find out soon enough, Chiefy, if you don't hurry,” the engineer tells him happily as he watches the water rapidly swirling in over the floor-boards.

Overhauling a RAAF Catalina of 43 Squadron at Doctors Gully Darwin 1944 (Courtesy the late Reg Marr DFC)