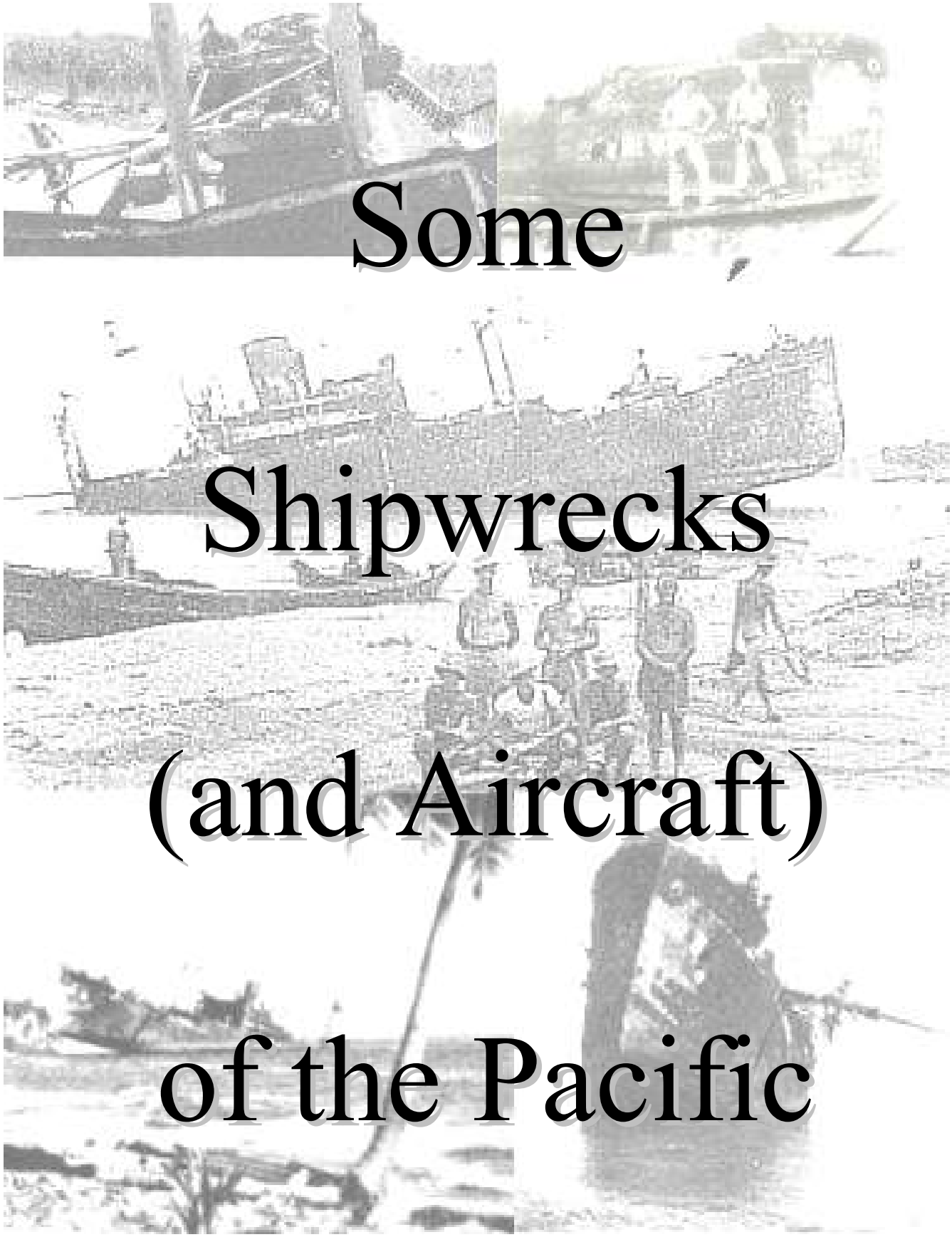

Some Shipwrecks (and Aircraft) of the Pacific

Michael McFadyen

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Comments, corrections and suggestions welcome!
Cover Photo: A montage of photographs of the *Kinugawa Maru* at Honiara, Solomon Islands

Some Shipwrecks (and Aircraft) of the Pacific

Short Histories of some of the Shipwrecks and sunken Aircraft of the South Pacific and lower Northern Pacific Ocean

Michael McFadyen

Foreword

For almost 20 years I have dived shipwrecks of the Pacific Ocean. Of course, the first shipwrecks I dived were those in Sydney, my hometown, and New South Wales. As I dived these wrecks, I decided to find out more about the history of the ships and how they came to be sunk. After amassing a great deal of information, I decided to share my knowledge, so I wrote articles for *DIVE Log Australasia.* In the mid-1990s, with the expansion of the use of the World Wide Web, I set up my own Web Site (Michael McFadyen's Scuba Diving – www.michaelmcfadyenscuba.info) and published the articles there. This book is a consolidation of the articles on the Pacific wrecks (not including NSW and the wreck of the SS *President Coolidge*) together with a very comprehensive index and a table that provides details of how to find the wrecks.

Of course this book does not include every wreck in the Pacific or even every wreck in the lcoations I have visited. It does, however, have all the wrecks I have dived and these are most of the major ones visited by divers from Australia.

I have dived all of the wrecks except a couple (this is indicated in those articles). Not all the wrecks in the book are suitable for all divers. Where a wreck is for experienced (or even very experienced) divers, I have indicated this in the relevant chapter. Please be certain, this comment is not included lightly, unless you are of the experience stated, do not attempt to dive that ship.

I would like to thank a number of people who have helped me. First, thanks to Barry Andrewartha and Belinda Barnes of Mountain Ocean and Travel Publications, heaps of thanks for encouraging me to write for their publications, *DIVE Log Australasia* and *Sportdiving*.

Second, thanks to Frances Prentice of the National Maritime Museum Library who has been of great assistance in permitting me to use the resources of the Library. Many a time I have called her for information on a ship and the next day I have received copies of the information via her husband and my work colleague, Michael.

Next, thanks to those regular buddies who have dived with me on these wrecks, Eddy Labour, Daryl Gibbs, Andreas Thimm and Heinz Bendinger.

Finally, thanks to my partner, Kelly Jandik, not only who took some of the photographs in this book and looked after me when I was ill in Chuuk Lagoon in 2004, she continues to support all my diving efforts.

This is not meant to be a definitive book on the shipwrecks of the Pacfic or even a complete listing. It is purely a record of my journalistic output to date on the subject of shipwrecks in the Pacific Ocean that can be dived.

I accept that there are errors in this book as some things included have not been able to be confirmed as correct. In addition, I am unsure about copyright of some photos which were given to me by people. My apologies if I have inadvertently breached copyright. My intention is only to publish a few copies for my friends and a couple of libraries. I welcome comments, suggestions and corrections which can be sent to me as per the inside cover.

Michael McFadyen
Sydney, Australia
30 September 2005

Other Books by Michael McFadyen

Shipwrecks Along the NSW Coast

The South Pacific's Greatest Shipwreck - SS President Coolidge

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USS *Aaron Ward* - DD 483

The Battle of Guadalcanal started on 7 August 1942 when the US Marines, supported by the US Navy, Royal Australian Navy and the Royal New Zealand Navy as well as the US Air Force stormed ashore at the beaches east of the now capital of the Solomon Islands, Honiara. The battle was one of the fiercest of the whole of World War II, with huge loss of live on both sides. This was not going to be a short battle, it was assured of being long-term due to the nature of the land and the fact that the Japanese had been in "ownership" of the land for quite some time.

Just over 24 hours into the battle saw the first of the warship losses of the campaign. The US warships USS *Vincennes*, *Astoria* and *Quincy* and the Australian heavy cruiser HMAS *Canberra* were lost in one 20 minute battle with a Japanese fleet that sailed in, attacked, and quickly left. The US Navy still says that this is "the worst defeat in a fair battle" (note that the Japanese made what was possibly their worst mistake of the war in not coming back and continuing the attack). After this the fleet needed reinforcing and over the coming months, dozens of additional ships were committed to the battle by the Allies. One of these ships was to be the USS *Aaron Ward*.

Figure 1 - Miss Hilda Ward smashes a bottle of champagne across the bow of the USS *Aaron Ward*

In September 1940 an order was placed for a new destroyer. On 11 February 1941 the keel of this warship was laid down at the Federal Shipbuilding and Drydock Company yard at Keany, New Jersey. The vessel was USS *Aaron Ward*, a *Bristol* Class destroyer (also called Benson/Gleaves Class) and was the second to carry the name. The new ship was the second named after the late Rear Admiral Aaron Ward who in July 1898 during the Spanish American War was the skipper of USS *Wasp*. He was comm

ended for gallantry when his vessel and another snuck into an enemy port and sunk a cruiser. He later served as a Naval Attache in Berlin, St Petersburg and Paris and even after retirement in 1914 he continued to work, travelling to Europe for the Red Cross to assist with their war work. He died on 5 July 1918 and was buried in the Green-Wood Cemetary, Brooklyn, Kings County, New York state. Nine months later, the first USS *Aaron Ward* was christened. As indicated above, this new ship was the second *Aaron Ward*.

On 22 November 1941, just over nine months after the keel laying, the new ship was launched by Admiral Ward's daughter, Miss Hilda Ward. The USS *Aaron Ward* was 348 feet 4 inches long, 36 feet 1 inch wide and displaced 1,839 tons (2,395 tons full load). Over the next four months the ship was fitted out and on 4 March 1942, the USS *Aaron Ward* was commissioned as DD483. Powered by 2 shaft geared Westinghouse geared turbines (total 50,000 shp) with steam from four oil fired Babcock and Wilcox boilers, the ship was capable of 35 knots and could cruise at 12 knots for 6,500 nautical miles, with a load of 453 tons of oil. The ship carried 250 crew.

The original armament for the new ships was to be four 5 inch guns, four twin Bofors 20mm anti-aircraft guns and 10 21 inch torpedoes. However, there appears to have been many changes to these armaments over the period of the construction of the Bristol/Benson/Gleaves Class of ships as well as after they were built. The final

Figure 2 – The USS *Aaron Ward* with her sister ship USS *Buchanan*

composition, at least for the *Aaron Ward*, appears to be four 5 inch guns, two by two 40 mm guns, and seven 20 mm guns and five torpedo tubes. However, the *Aaron Ward*'s armaments do not appear to meet the specifications in any papers I have read on these ships.

The first Commander of the USS *Aaron Ward* was Commander Orville F. Gregor. Her first runs were out of Casco Bay, Maine with the battleship USS *North Carolina* and some minor work was then done at the New York Navy Yard.

The first job of the new ship was to escort a number of ships to the coast of England together with the USS *South Caroline*.

On 20 May 1942 the *Aaron Ward* sailed via the Panama Canal and San Diego for the Pacific. She was escorting the SS *United States* and RMS *Queen Elizabeth*, two of the largest and fastest passengers liners in existence. These ships were said to be carrying a total of 40,000 troops, although this may be a high figure. It is possible that the two passenger liners only went as far as the Panama Canal.

Durward B. Allaman reports (see references) that from San Diego the *Aaron Ward* travelled to Alaska to intercept Japanese landings. He says that Commander Gregor had a Japanese cruiser in his sights but was refused permission to fire. I think that this is unlikely. They were next ordered to stand off Wake Island. This is a long way from Alaska! They returned to San Diego.

After this, the ship's role was as part of Admiral William S. Pye's Task Force One (TF1) which included seven battleships and the aircraft escort vessel USS *Long Island*. When the *Long Island* was sent back to San Diego on 17 June 1942, the *Aaron Ward* was her escort.

After some work along the West Coast, the ship was sent on 30 June 1942 to Hawaii and from there she sailed to Tonga with TF18. Her next real role was to escort the oiler USS *Cimarron* to Noumea, New Caledonia. On 5 and 6 August 1942, the *Aaron Ward* thought that she encountered submarines and depth charges were used. Two probable "kills" were claimed but this was not true. The ship's next job was to escort and screen ships during the Guadalcanal battle. In August 1942 she was part of Air Support Group Force, Group 3, at Guadalcanal.

During 23 to 25 August 1942 the *Aaron Ward* was part of Task Force 18 of Task Force 61 when the Second Battle of the Solomon Sea occurred.

On 15 September 1942 she was with the carrier USS *Wasp* when she was torpedoed by the Japanese submarine I-19 (note that I have read that this was on 12 November 1942 but I do not think this is correct, see next paragraphs). Note that this person also claimed that the *Aaron Ward* sank the Japanese submarine and it then came up under the ship's hull. How ironic was this? Aaron Ward was the skipper of the USS *Wasp* in the Spanish American War and here the ship named after him was present when his ship's namesake was sunk.

On 13 October 1942, the *Aaron Ward* was seen by the USS *Salt Lake City* off Espiritu Santo. The *Salt Lake City* was on her way to Luganville in Segond Channel. It would appear that the *Aaron Ward* was on her way back to the Solomons.

On 17 October 1942 the *Aaron Ward* was off Lungga Roads (this is the general area around Honiara, especially to the west). While waiting for a marine liaison officer to board to direct shelling operations, the ship was approached by five Japanese planes. At about 0724 they attacked the ship. The ship's anti-aircraft guns as well as those from the shore immediately opened fire and the ship set off at full speed, manoeuvring as she went. Three bombs fell close by, 100 to 300 yards (metres) off. Three of the planes were shot down, two by the shore guns and the third claimed by both ship and shore.

At 0800, the ship embarked three persons (including the marine liaison officer) and moved to a target area 40 minutes away. After shelling a gun emplacement and ammunition dumps, the ship returned to Lungga Roads at 1216 and disembarked the people and rejoined her task force.

Figure 3 - USS *Aaron Ward* in camoflauge paint

On 20 October 1942, the USS *Chester* was attacked and hit by the submarine I-176. The USS *Aaron Ward* attacked the I-176 with depth charges but was not successful in damaging the Japanese ship. The *Aaron Ward* then escorted the *Chester* to Espiritu Santo and was probably there on 26 October 1942 when the SS *President Coolidge* sank. On 30 October 1942 she was back at Guadalcanal and carried out more shore bombardment off Lungga Point (near the international airport and near where the USS *John Penn* would later sink), firing 711 rounds of 5 inch ammunition.

In mid-November 1942 the USS *Aaron Ward* was part of Task Group 67.4, part of Task Force 67. This was during the Third Battle of the Solomon Sea when her skipper, (now) Commander Gregor, had Captain Robert G. Tobin, ComDesRon 12, aboard and the *Aaron Ward* was the Flagship of the Task Group.

On 11 and 12 November 1942, she screened transports unloading material and men and claimed one plane and two hits on the 11th and two more on the 12th. In the evening of the 12th, the *Aaron Ward* headed east with five cruisers and seven destroyers. Just after midnight on 13 November 1942, radar picked up Rear Admiral Hiroaki Abe's Volunteer Attack Force consisting of two battleships, one light cruiser and 14 destroyers. This was the start of the First Naval Battle of Guadalcanal.

While attacking the Japanese, two torpedoes passed under the *Aaron Ward* at 0155, hitting USS *Barton* and sinking her. At 0204 the ship had to go hard-a-port to avoid a collision with the USS *Sterett*. Shortly after she starting firing at a Japanese ship (possibly the destroyer IJN *Akatsiki*). After 25 salvoes, the Japanese ship exploded and sank. Soon after, the *Aaron Ward* was hit by a shell which put the director control (which is above the bridge and controlled the ship's main guns) out of action and within minutes, another eight shells hit the ship. By 0225 steering was lost and at 0235 power lost from the forward engine room, flooded by water. By 0500 emergency repairs had the ship (slowly) underway but only 30 minutes later power was lost again. At 0618 the ship was underway again and at 0620 the attack transport USS *Bobolink* arrived to take her in tow. However, the battleship IJN *Hiei*

opened fire and three shells landed near the *Aaron Ward*. One report says she was hit by the third salvo. The *Hiei* was then attacked by planes from Henderson Airfield (now the site of the international airport) and the *Aaron Ward* was taken in tow by the *Bobolink* at 0635, having lost power again. The *Aaron Ward* had been hit a total of nine times or perhaps ten times. Hits included the rangefinder, gun director, radar antennae, searchlights, radar room and hull.

The US suffered very heavy losses in this battle, the USS *Barton* (90% killed), USS *Laffey* (56 killed), USS *Atlanta* (172 killed), USS *Juneau* (all but 10 survived, with the loss of the five Sullivan brothers), USS *Cushing* (71 killed) and USS *Monsson* (110 killed - *Monssen*?) were sunk. In addition, USS *Aaron Ward* (15 killed), USS *Sterrett* (71 killed) (26 killed), USS *O'Bannon* (0 killed), USS *San Francisco* (115 killed) and the USS *Portland* (16 killed) were seriously damaged. The Japanese had lost IJN *Akatsuki* (all hands killed - about 200) and the IJN *Hiei* (about 450 killed), IJN *Yudachi* (unknown number killed) and some other destroyers had minor damage. This was a huge defeat for the USA.

At 0650 a local patrol boat took over the tow and at 0800 or 0830 the *Aaron Ward* anchored in Tulaghi Harbour near Makambo Island. There were 15 dead sailors and 57 wounded (one report says 12 dead, 3 dying and 57 wounded and another 15 dead and 39 wounded). It is reported that the ship was taken to the New Hebrides (now Vanuatu), probably to Espiritu Santo since there was a large floating dock stationed there. In any case, temporary repairs were made to the ship and the *Aaron Ward* sailed for Pearl Harbor, Hawaii, escorted by an old four stack WWI destroyer, arriving 20 December 1942.

Quickly repaired (during which there may have been some modifications to armaments), the *Aaron Ward* rejoined the fleet in the Solomon Islands on 6 February 1943, at first undertaking escort duties. On 4 March 1943 the *Aaron Ward* was anchored in Segond Channel, Espiritu Santo, New Hebrides (now Vanuatu). At 0935, the *Aaron Ward* together with USS *Radford*, *Waller*, *Mahan* (interestingly this was the lead ship in a class of vessel that would include USS *Tucker* which was sunk at the southern end of Segond Channel on 4 August 1942), *Fletcher*, *Nicholas* and *Conway*.

Figure 4 - Admiral F. J. Becton

On 19 March 1943, the USS *Aaron Ward* was again in Segond Channel. She was still there the next morning. Later that day, (20 March 1943), it would appear the the *Aaron Ward* was escorting a convoy back to the Guadalcanal area when one of the ships was attacked by Japanese planes and the *Aaron Ward* fought off the planes.

On 7 April 1943 the USS *Aaron Ward* was now skippered by Lieutenant Commander C. Frederick Julian Becton. Lt Commander Becton was later to become the skipper of the USS *Laffey* (see above) and in 1956 the huge battleship USS *Iowa* and later again, a Rear Admiral. She was escorting the transport USS *Ward* and three tank landing craft from the Russell Islands to Savo Island (about 40 km north west of Honiara). The ship sailed ahead to provide air cover but at 1330 orders were received to leave the small convoy to cover the tank landing craft LST-449 off Togoma Point (I cannot find this on my chart of Guadalcanal but it must be to the east of Honiara). At 1419 the *Aaron Ward*'s skipper ordered LST-449 to follow her and zigzag if Japanese planes were sighted.

At about 1502 some 67 "Vals" and 110 "Zekes" or Zeros (some reports only say 48 planes) were sighted over Savo Island. Of these, 18 went in the direction of Tulaghi and it is reported that 15 of these went for the biggest target there, the USS *Kanawha*. However, in view of the fact that at this same time the *Kanawha* and HMNZS *Moa* were also attacked and sunk, it seems that more planes went in the Tulaghi direction.

The *Aaron Ward* sighted planes over Savo Island and these planes heading south over Tulaghi (in the Florida Islands north-north-east of Honiara). At 1512 three "Vals" attacked out of the sun and the *Aaron Ward* went to full speed and hard port. She opened fire and bombs from the planes scored direct hits or near misses. The first bomb missed but the explosion tore holes in the ship's side, flooding the forward engine boiler room. The second bomb hit the engine room causing a loss of power to the 5 inch and 40 mm guns. The guns kept firing, using manual power. The third bomb also missed but holed the port hull near the aft engine room. Steering was lost and the ship went in circles to the left. Three more Vals attacked, with two bombs exploding within five yards. The hull plates were sprung.

After the attacks, 20 men were dead, 59 wounded and 7 missing.

The *Aaron Ward* was doomed, taking water quickly. Anti-submarine vessel USS *Ortolan* and attack transport USS *Vireo* towed the *Aaron Ward* towards shallow water (a sand bank) off Tinete (or Tintete) Point on the Florida Islands. At 2135, the USS *Aaron Ward* was reported to have sank stern first about 600 metres off the sand bank. This was west of Mbungana (or Bungana) Island.

In October 1991, Dr Bob Ballard, discoverer of the wrecks of the RMS *Titanic* and the Nazi battleship *Bismark*, was in the Solomon Islands searching for Japanese, US and Australian warships lost in World War II. Ballard used side scanning sonar and he located the wreck of the USS *Aaron Ward* at that time. He was using an Australian charter vessel called *Restless M.*. Two of the crew on the ship were someone called Evan and another person (let's call him P as his name is not known to me). Both these realised that the *Aaron Ward* was in diveable depths and thus knew the rough location of the wreck (Ballard came back in August 1992 while I was there and explored in detail the deeper wrecks like HMAS *Canberra*, USS *Quincy*, *Astoria* and *Vincennes*, all sunk on the night of 8-9 August 1942 as mentioned above.

After this, Evan went to work for Rick Belmare as a skipper of one of his charter boats. More about Evan and P later.

In May 1994, Ewan M. Stevenson, from Auckland, New Zealand, arrived in *Honiara*, the postwar capital of the Solomon Islands to undertake more research for a book he was planning on World War II shipwrecks. Ewan was convinced that the USS *Aaron Ward* was in diveable depths (that is, less than 240 feet [72 metres]). During this time, Ewan accompanied his friend, Brian Bailey, on some diving charters on his boat *Wyuna*. Some of these were scientific charters, where scientists searched for and collected things like algae and shells.

In late August and early September 1994, an opportunity came up while on one of these charters to search for the wreck of the USS *Aaron Ward* as they were going to be in the vicinity of the place it was believed to have sunk. On 3 September 1994, the *Wyuna* was anchored off Ghavutu Island. Ewan and the divers visited the wreck of HMNZAS *Moa*. The next morning, 4 September 1994, Ian Gardner came over from Honiara in his 16 foot boat. He wanted to dive the wreck of the USS *Kanawha*, a US oil tanker sunk the same day as the *Moa* and the *Aaron Ward*. Brian was ill with a bad case of the flu and so was not feeling very well. In addition, the ship had had equipment problems, so Brian had spent most of the charter repairing things and so had not been able to dive much diving. As can be imagined, a person with the flu and unable to dive in such perfect dive locations can also get a little cranky.

Brian had decided that that it was not worth diving the *Kanawha* from the yacht's dingy (because the seas were quite choppy) and too much trouble to take the yacht over to the wreck (probably due to his condition) so when Ian Gardner arrived, it was good news for

Ewan. Ewan and the divers boarded Ian's boat and motored the short distance to the *Kanawha*. They all had a great dive on the huge wreck.

Figure 5 – One of the forward 5" guns
Photo by Peter Fields

After the dive, they returned to the *Wyuna* and had lunch. After lunch, Brian moved the yacht to the north-western side of Bungana Island where they intended to do a second dive. Brian was still not feeling well and was not really interested in searching for the *Aaron Ward*. The divers who chartered the *Wyuna* went for a dive and Ewan "lectured" Ian on the *Aaron Ward* and where he thought the wreck would be found. Ian was convinced, they set off in Ian's boat towards where Ewan "knew" the wreck would be found. Soon they were running around, with the depth sounder showing the bottom to be about 190 feet (51 metres). Ewan decided that the land at Tintete Point was too close and the depth too shallow. Moving away from the shore, they reached a depth of 210 to 220 feet (63 to 66 metres) but Ewan thought it was still too shallow. They moved further out to 230 to 240 feet (69 to 72 metres) and decided to follow this depth. The seas were rough, but the idea of finding the *Aaron Ward* made them forget this.

"What's that?" Ian suddenly exclaimed. The depth sounder showed a sudden rise in depth from 200 to 160 feet. It was less than 20 minutes from the time they had started searching for the wreck. They turned around and ran over the object and this time it only rose a little off the bottom. Was this a coral reef? It looked like one. Another run over the object this time was the same as the first. This looked like a wreck, not a reef.

Ian and Ewan went back to the *Wyuna* and convinced Brian to come and have a look at what they had found. Even though he was still ill, there must have been something in what they said as Brian decided to accompany them. They ran over the object and immediately Brian shouted "That's a wreck". However, when they ran over it from the opposite direction he was not so convinced. Eventually, they decided that it was probably a wreck.

Of course, the only way to be certain was to dive on the object. However, the seas were not good and to make matters worse, Ian and Ewan had already dived to over 50 metres that morning. They could not stay and dive it the next morning as the divers on the *Wyuna* had to be back in Honiara that evening and Ewan had to travel to the western and northern parts of the Solomon Islands for more research. Before Ewan left for the western Solomons (after they had discovered the "object"), he heard from Ian that Evan had mentioned something about a US destroyer been found near Bungana Island. Ewan ran into Evan by chance on the beach in front of the Point Cruz Yacht Club. He asked him about the destroyer but Evan's answer led Ewan to believe that he knew more than he let on.

Ewan ended up staying away from Honiara for longer than planned and he returned in late October 1994. Brian had departed for Invecargil, New Zealand, on 4 October 1994, to resume his abalone diving. On Sunday 30 October 1994, Ewan and Ian headed across from Honiara to the Floridas to dive the object. However, once anchored, the current was so fierce that they had to abandon this idea.

Ewan's visa had expired, so on 1 November 1994 he travelled back to New Zealand. In January 1995, Brian phoned Ewan from Invecargil saying he would be in Auckland in February and on 22 February 1995 he phoned and said he was in Auckland. In this conversation, Brian informed Ewan that he and Ian had already dived the object and yes, it was the wreck of the USS *Aaron Ward*. On 25 September 1994, a few weeks after Ewan had gone to the Western Solomons, Ian and Brian went over to the Floridas.

Brian and Ian descended through the dirty water (only 7 to 9 metres visibility) and found the anchor just hooked into the bow. They made their way towards the stern, taking the anchor with them. They dived the wreck again the same day, with visibility now about 15 metres. The next weekend, Sunday 2 October 1994, they attempted to dive the *Aaron Ward* again. However, this time they reached the bottom to find that they were anchored on coral reef with a raging current. They abandoned this attempt to dive the wreck. Brian flew to NZ two days later.

In early 1995 Evan started searching again for the wreck and on March 1995 he apparently found it and did a bounce dive on it. He later dived the wreck with Rick Belmare. They believed that they were the first to dive the USS *Aaron Ward*.

The other person who worked for Bob Ballard on the *Restless M.*, P, arrived back in the Solomons in late 1994. He became the skipper of the new dive charter boat, *Solomon Sea* owned by Fred Douglas. They also apparently found the wreck in 1995, perhaps after being shown it by Evan. In any case, I was originally told that Fred was one of the discoverers. It is likely that all three groups thought that they were the ones who first dived the USS *Aaron Ward*, but the truth is that Ian Gardner and Brian Bailey were the first to dive her.

While it is possibly true to say that Dr Bob Ballard and his team discovered the wreck, to date they do not appear to have claimed this honour. The discoverers of the wreck are really Ewan Stevenson and Ian Gardner with great assistance from Brian Bailey.

As indicated, the wreck was found south-west of Tinete Point which is the western-most point of Nggela Pile. Today it sits on a sandy bottom of just over 70 metres, with the bow facing east. The ship is moored just behind the bridge on the starboard side.

As can be imagined, the depth of this wreck severely limits the available bottom time. A first dive of about 15 minutes will permit you time to swim right around the deck, examining the props as well as the bow. It will even leave you time to quickly look in the bridge.

As you descend you will first see the bridge. More about this later. You will have be down 2 minutes and the depth will be about 61 metres. Adjacent to the mooring you will see the forward funnel has totally collapsed and see the torpedo launching system. There are five tubes. Only one has a torpedo in it, the one on the port side. You will see this later when you pass by on the other side. From the mooring you should held towards the stern on the starboard side. The first thing you will see past the torpedo tubes is the rear funnel. Adjacent to this is a 20 mm anti-aircraft gun. Further on you will see a huge searchlight and then a twin barrelled Bofors gun. Next is the first of the 5 inch stern guns. Right behind is the second gun. It will have taken you 5 minutes to get here and the depth is 63 metres.

You will immediately notice that the stern section is totally broken and sitting at an acute angle. It seems that the *Aaron Ward* went down stern first and when the ship hit the bottom, the stern was broken right across. You can see the depth charge racks at the stern, one on either side of the ship. Drop over the side and you can see that the port prop shaft is bent and still attached to the stern section while the starboard prop is still lying where it should be in relation to the ship. Just parts of one blade is showing of this prop. The depth here is 71 metres and the time as you go back to the deck is about 7 minutes.

Cross over to the other side of the ship and swim forward. You can see the main guns from the other side and then the port twin 40 mm gun and the rear cabin area. There is a door and on a later dive you can enter this area and come out the other side. Next to the funnel is the 20 mm AA gun and as you approach the torpedo tubes you will see that while the closest tube is open, the four other tubes have their doors closed. From the front of the system you

will see that there is a torpedo in the nearest tube and that there is also another torpedo on the deck. The depth here is back up to 62 metres and the time will be about 11 minutes.

The bridge appears intact as you approach it. There are more guns here and ahead. First you will see a 20 mm AA gun at the back port side of the bridge, partially collapsed from memory. In front of the bridge there is another 20 mm AA gun and then you will see the second of the 5 inch bow guns and then the first gun. Impressive. Like the stern, the bow is bent up, although not as bad as the stern. It appears that when the hull of the ship came down it hit some rocks that are under the bow and this forced the hull to break. The depth is about 60 metres and the time about 13 minutes. Come back to the bridge and you will notice that there is yet another gun here, strangely sticking out of the front of the bridge itself. This is not mentioned in any book about the *Aaron Ward*'s armaments, although there is mention of a 20 mm gun in front of the bridge. This is bigger than that and appears to have little ability for movement apart from straight ahead.

There is another 20 mm AA gun on the starboard front side of the bridge and one more at the starboard back side of the bridge.

Ascend to the top of the bridge and quickly look inside. It is obvious that there was some damage to the bridge during the battle as the floors have collapsed. You will not have much time to explore this dive. Behind the navigation bridge there is another structure. This is a small cabin and has two round "pipes" that stick out each side. This is the automatic control system for the 5 inch guns. This controlled the guns remotely, sighting the target and automatically turning and ranging the 5 inch guns. The depth here is about 55 metres and the time 15 minutes.

Time to ascend. Decompression for this dive was 2 minutes @ 12 metres, 4 minutes @ 9 metres, 9 minutes @ 6 metres and 21 minutes @ 3 metres. Together with ascent and about 8 to 10 minutes of extra decompression, the total bottom time was 64 minutes.

On later dives here you can do a bit of exploring. On my second dive I looked in more detail at the torpedo tubes, dropped over the side to examine the hull sides to see if their was any obvious damage (there is not). I went back to the cabins under the rear funnel and swam through from the port side to the starboard side. I then went forward to the area under the bridge and entered the starboard door. In here is the communication area, a galley and probably the officers' mess. There were plates, cups, bowls and chairs further forward (I did not go in there).

From here I went to the bow and look a bit closer at the guns. Back to the bridge and I dropped inside, as far as I could. The steering binnacle was visible as was what appeared to be the compass binnacle. This is a mess, with wires and metal hanging everywhere. Another look at the cabin above the navigation bridge did not help my buddy or I understand what it may have been, although as I mention above I think it was the gun control system.

On this dive I did a bottom time of almost 18 minutes and had to do decompression of 2 minutes @ 12 metres, 5 minutes @ 9 metres, 9 minutes @ 6 metres and 22 minutes @ 3 metres. Together with ascent and about 8 to 10 minutes of extra decompression, the total bottom time was 67 minutes.

Visibility on the wreck was between 15 to 20 metres. Water temperature was between 26 and 27°C.

This is a great dive, probably one of the top two or three dives I have ever done. After the first dive, I was asked what I thought. My answer was "If it is possible to have an orgasm underwater, then I just had one". It is that good!

As you can imagine, the USS *Aaron Ward* is only for experienced deep divers. It is a much more difficult dive than the SS *President Coolidge* since it is a square profile and more time is spent at a greater depth. However, it is much easier than made out by some technical "gurus" and no harder than the deep wrecks off Sydney. If you dive them without problems, then you can do the *Aaron Ward*.

I dived with Solomon Sea Sports. This operation changed ownership in early 2002 and is now called Solomon Islands Diving, Dive Tulaghi and is run by a number of (ex-)Sydney divers. They have moved location to Tulaghi.

Dives:

- 25 October 2001
- 26 October 2001

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Aikoku Maru

The story of the *Aikoku Maru* is one of the saddest and most frightening of World War II. The final moments of this majestic ship were captured on photograph and truely present an impressive case for the utter stupidity of war.

The *Aikoku Maru* was a very beautiful ship. She looked a lot like a smaller version of the famous P&O vessel, SS *Oriana*. The *Aikoku Maru* was launched on 25 April 1940 for the Osaka Syosen KK (Osaka Merchant Marine). Designed as a passenger-cargo vessel, she was planned to be used on the Japan to Africa run with two sister ships, the *Gokoku Maru* and the *Hokoku Maru* but in fact never entered this service (see later). There was to be accommodation for 48 First Class passengers, 48 "Special" Third Class, 304 "Regular" Third Class. She was built by Tama Shipbuilding, Tama, Japan for Osaka Merchant Marine. The *Aikoku* was 10,438 tons gross, 150 metres (492.1 feet) long, 20 metres (66.3 feet) wide and powered by two Mitsubishi B&W diesels (total horsepower of 15,833hp) giving a maximum speed of 20.9 knots. Lloyds Register reports that the engines were 12 cylinders each built by the Tama Shipbuilding Co. She entered service on 31 August 1941, being used exclusively in domestic waters, including Japanese occupied areas.

However, she had already been acquired by the Imperial Japanese Navy and converted for use as an armed merchant raider. She had guns placed on the bow and stern as well as four guns adjacent to or near holds 2 and 3. Another two are believed to have been placed aft of the superstructure. There may have also been two twin torpedo launchers on the main deck behind the superstructure and two sea planes were known to have been carried at times. These were located on the hatches of holds 4 and 5. Machine guns were installed on top of the bridge and behind the funnel and anti-aircraft guns placed on the rear corners of the superstructure.

During the war, the *Aikoku Maru* was used as part of the Special Cruiser Squadron 24. The fleet included the *Hokoku Maru* (sistership of the *Aikoku Maru*) and the *Kiyozumi Maru*. On 12 December 1941, only a few days after the start of the war, the *Aikoku Maru*, together with her sistership, attacked the SS *Vincent* a fair distance north of Pitcairn Island in the South Pacific Ocean as she steamed in convoy from Sydney to New York via the Panama Canal. The crew apparently abandoned the *Vincent* and it was then sunk.

On 31 December 1941 the SS *Malama* was sighted by a sea plane from one of the ships. The crew abandoned the *Malama* the next day when another plane warned them that she was about to be bombed. They scuttled the ship rather than let the Japanese capture her (she was bombed by the plane anyway) and the cargo of trucks, trailers and plane spares went to the bottom. This was south of Tahiti. The two ships then returned to Japan via Chuuk.

At the Kure Naval Yard, the *Aikoku Maru* was rearmed with newer guns (but still quite old) and new Rufe sea planes acquired. The *Aikoku Maru* and *Hokoku Maru* then moved to Singapore and cruised the Indian Ocean, attacking ships as well as tendering submarines. On 9 May 1942 they captured the Dutch tanker *Genota*, sank the *Elysia* near Durban in South Africa on 5 June 1942, and captured the New Zealand ship SS *Hauraka* on 12 July 1942 while this ship sailed from Fremantle in Western Australia to Columbo in Ceylon (now Sri Lanka). The SS *Hauraka* was renamed *Hoki Maru* and now is one of the wrecks of Chuuk Lagoon, only just over a kilometre from the *Aikoku Maru*.

On 11 November 1942 the two ships attacked a Dutch tanker, the *Ondina*. She was being escorted by the Royal Indian Navy minesweeper *Bengal* which returned fire, blowing up the *Hokoku Maru*. The *Aikoku Maru* fled at high speed while the *Ondina* limped to Fremantle. The idea of using merchant raiders soon lost support and the *Aikoku Maru* was moved to a role of transport. It is reported that the *Aikoku Maru* was again modified in June 1943 at the Kure Naval Yard, but this may have been the work previously mentioned. On 16 July 1943 while on her way to Chuuk (although another report says she was on her way to Rabaul from Chuuk), she was attacked by the submarine USS *Halibut* and suffered a torpedo hit, killing

21 people. When repairs were made at the Kure Naval Yard in August 1943, the main guns were then removed and two 8cm guns placed in the stern and bow platforms.

Around this time the *Aikoku Maru* started being used to transport soldiers (normally "rikusentai" - navy sailors trained as infantry) and supplies from Japan to Rabaul in Papua New Guinea. She may have even been in this used when she was torpedoed. The ship made at least four trips to and from Rabaul.

On 25 January 1944 the *Aikoku Maru* in convoy with the *Yasukuni Maru*, escorted by three destroyers, left Yokosuka via Tateyama for Chuuk. The submarine USS *Trigger* attacked the convoy on 31 January 1944, sinking (?) the *Yasukuni Maru*. The *Aikoku Maru* escaped to Chuuk, arriving 1 February 1944.

She then left for Wake Island with reinforcements but was forced to go to Pohnpei due to American aircraft activity. She arrived there on 14 February 1944 but could not discharge completely her cargo of soldiers and supplies. The next day she left for Chuuk, arriving in the lagoon late on 16 February 1944. Almost immediately, loading of ammunition began, for it appears to have been the intention for the *Aikoku Maru* to depart for Rabaul as soon as possible.

On the first day of "Operation Hailstone" (the attack on Chuuk Lagoon), the *Aikoku Maru* was anchored off the channel between Eten and Dublon Islands. This was one of the main anchoring points in Chuuk Lagoon and was close to the *San Francisco Maru* and *Nippo Maru* as well as many others. A photograph taken very early shows the *Aikoku Maru* lying untouched facing the east.

At about 0815 the *Aikoku Maru* was attacked by Grumman TBF *Avenger* dive bombers from USS *Essex* and USS *Intrepid*. At the same time, an *Avenger* TBF-1C (serial number BN 25270) from the *Intrepid*, piloted by Lt James Erwin Bridges, with crew Robert Ellis Bruton and James Albert Greem were approaching the ship from wave height. She was hit by two bombs in the front part of the ship by planes from the *Essex*. These bombs had a devasting effect, causing the *Aikoku Maru* to violently explode. Lt Bridges' (incorrectly referred to as Briggs in some reports) plane had just released its torpedo and was making good its escape, pulling up to clear the ship it had just attacked when the other planes' bombs exploded. Lt Bridges, his plane and crew were destroyed. It is also possible that the plane was damaged by anti-aircraft fire and crashed into the bridge, falling into the hold causing the explosion. Whatever happened, it is known that Lt Bridges' Avenger did not return to her ship.

To say that the resulting explosion was massive is to understate the situation. Two photographs taken by the attacking American aircraft show a huge "nuclear-bomb" type mushroom cloud rising over the wreck. Within a few seconds the cloud has risen thousands of feet in the air. Within 60 seconds of the fatal attack, the *Aikoku Maru* sank with the loss of not only all lives on board, but also the lives of some men on adjacent smaller boats and barges. It is not known how many died, but it is estimated that at least 450 men were lost.

The *Aikoku Maru* was discovered by Jacques Cousteau's expedition in 1969 and then refound by Sam Redford in 1972. In July 1980 the remains of about 400 crew were recovered by a Japanese group, cremated and the ashes returned to Japan.

Today the *Aikoku Maru* lies upright on a sandy bottom. The depth of the bottom is about 62 metres, although as you will see later, it is a bit deeper on some parts of the wreck.

Dive boats generally tie up to a mooring which is attached to the rear of the main superstructure. The depth here is about 33 metres. As this is a huge wreck and it is very deep, you will need two dives to see all the wreck in a bit of detail, although you could get a quick overview on one dive. The following is a description of the first dive as well as a bit of extra information you could do on a second dive.

To start the dive you can swim to the stern where there is a huge gun platform with a large gun, still pointing high towards the rear (depth 48 metres). Under the stern you can drop down to 62 metres to see the twin props and single rudder. Only the tips of a single blade on each prop show as well as the top of the rudder. From here, ascend to the stern house where

you can easily enter the compartments and have a quick look around. They are very large and safe to explore as the deck of the poopdeck was timber and has been totally eaten away.

The rear hold appears to be empty as is the next hold forward (I did not explore either). The hold straight behind the superstructure is elevated from the main deck and is not as big as normal holds. It contains hessian bags, possibly full of cement. The depth here is 57 metres.

After coming up out of the hold you can enter the superstructure either of two doors on the next level up. These take you inside the living area of the ship. It appears that there were cabin walls all along the port and starboard sides but these have been removed or perhaps eaten away by worms. In any case, there are numerous wash basins all along the now very open areas. In between the two areas, in the centre of the ship, there are a number of passageways that run from one side to the other. These give access to a dozen or more bathrooms. Each bathroom has a normal bath (as distinct from the Japanese baths in most other Chuuk wrecks) and toilets or bidets. Care needs to be taken as there are some wires hanging down in the passageways and open areas. The depth in here is about 42 metres.

By this time you will need to start ascending a bit so exit out a door or window onto the top of the superstructure. Here you will see a number of very interesting things. The first and most obvious (and already seen on the way down) is the huge funnel (top 27 metres), still standing erect. On each of the two rear corners of the top deck there is a single twin barrelled anti-aircraft gun. The port gun is frozen in the firing mode, with one barrel fully extended and the other retracted. The gun is aimed low, possibly firing at the plane (or planes) that sank the *Aikoku Maru*. The starboard gun is aimed high but was probably not firing at the time she was destroyed.

There is a huge platform located between the two guns. It looks like a platform, possibly for a searchlight. In front of this there is a plaque to the Japanese who died on the ship. There are also a number of skulls and bones located on and/or around the the plaque.

This is normally the end of a single dive although you could quickly swim forward to see where the ship was blown in half.

On a second dive I would swim forward to along the port side of the superstructure. All of a sudden, the ship just ends. This is dramatic. It is as if a giant guillotine has plummetted out of the sky and landed straight in front of the funnel. The ship comes to a complete end. In front of here there is nothing at all, just a hole in the sand bottom, caused by the massive explosion, and a couple of pieces of hull plating. No other traces appear to remain at all.

Where the ship has been split the port hull is bent back a little but the main part of the ship is just cleanly cut through. Once you have examined this frightening and amazing scene, drop to the sea floor in front of the middle of the wreck. This leads to the engine room. You will be at about 63 metres. As you approach the engine room, you can see a significant set of stairs that drop down into the engine room. Unless you are planning to just explore the engine room, there is only time to shine a torch down there and then start your ascent to an upper deck. As you go up you will see a door on the port side (the right side as you look at it). This leads onto a main deck and you can explore through here. There is evidence of many more cabins having been originally been located here as there are wash basins galore. Swim towards the stern and then cross over to the starboard side and continue towards the rear. You can exit a number of places, but I went out the end most door. This puts you over the smaller hold referred to above (which has cement bags in it).

Depending on the time spent examining the deeper section at the break, this is about all you will have time for on this dive.

Subsequent dives could be done into the areas deeper under the superstructure or below the stern area.

On my two dives here I did about 17 to 19 minutes each dive. This requires decompression of about 2 minutes at 9 metres, 5 minutes at 6 metres and 11 minutes at 3 metres.

An awe inspiring wreck that really frightened me, not about the dive, but about the futility of war. The almost vertical, clean cut across the hull in front of the funnel is amazing to see, emphasizing the strength of the explosion. A must do wreck for the more experienced diver.

Dives:

- 7 November 1997
- 15 November 1997

References:

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HMPNGS *Aitape*

In September 1965 the Australian Government decided to update the Royal Australian Navy (RAN) by ordering a series of new vessels. The 14 vessels ordered were patrol boats, with the intention for them to serve Australia for the next few decades. As it turned out, they served with the RAN for far less. In October 1965 an additional 6 boats were ordered.

The new boats were named Attack Class Patrol Boats, named after HMAS *Attack*, the first to be built . The vessels were 32.6 metres long, 6.1 metres wide and displaced 146 tons at full load. The boats were powered by two 16 cylinder Davey-Paxman Ventura 16 YJCM turbo-charged diesels, each (??) of 3,460 hp, driving twin props. Maximum speed was 24 knots. They had one 40 mm gun on the bow, two 0.5 inch machine guns and one 81 mm mortar. Mines and depth charges could also be carried. The machine guns were removable and when needed, mounted at the bow and stern. The boats carried a crew of 19 men (and they were all men).

Figure 6 - HMAS *Aitape*

A total of 20 were ordered, 15 for the Royal Australian Navy (RAN) general service and 5 for the Papua New Guinea division (then part of the RAN). The ships were built in equal numbers by two Queensland shipbuilders, Evans Deakin and Company Pty Ltd of Brisbane and Walkers Ltd of Maryborough. Built from 1967 to 1969, the new vessels were steel hulled with alloy superstructure. Other features included air conditioning, high definition radar, flare projector and high and ultra-high frequency radios. Average cost of the ships was a then A$800,000 each.

Of the 20 boats, HMAS *Arrow* was destroyed by Cyclone Tracy which wiped out the city of Darwin, Northern Territory, on Christmas Day 1974 and HMAS *Bombard* and HMAS *Advance* appeared in the Australian Broadcasting Commission (as it was then named) TV series *Patrol Boat* in 1978 to 1979.

Some of the boats were disposed of by donation to nearby countries, including some that were almost new. HMAS *Bandolier* (16/11/73) and HMAS *Archer* (21/10/74) were given to Indonesia on the dates shown. Five boats, HMAS *Aitape*, HMAS *Lae* HMAS *Madang*, HMAS *Ladava* and HMAS *Samarai* which were all part of the Papua New Guinea division of the RAN were all given to Papua New Guinea on 14 November 1974, presumably to assist them as they became a new nation the next year.

Later, when the much larger *Fremantle* Class Patrol Boats came into service, more were donated to Indonesia, HMAS *Acute* (1983), HMAS *Attack* (1985), HMAS *Barbette* (1985), HMAS *Bombard* (1983) and HMAS *Barricade* (3/82).

Today, HMAS *Attack* is on display at the National Maritime Museum at Darling Harbour, Sydney (next to the Pyrmont Bridge) and HMAS *Ardent* is in Darwin as a memorial. Of interest, HMAS *Bayonet* was scuttled off Cape Schank, Victoria on 18 October 1999.

The first boat to be started was HMAS *Attack* which was laid down in September 1966 and launched on 8 April 1967. It was commissioned on 17 November 1967.

In November 1966 the hull of HMAS *Aitape* was laid down at the Walkers Ltd shipyard at Maryborough. It was launched on 6 July 1967 by Mrs Maloat Paliau, wife of the member for Manus in the Papua New Guinea House of Assembly. Numbered P84, the boat was named after the Aitape area of Papua New Guinea. This is on the northern coastline and was the area devastated by a tsunami (tidal wave) after an earthquake on 17 July 1998, killing about 2,200 people. I assume that the Member for Manus also represented the Aitape area. After trials in the Hervey Bay area, the *Aitape* was commissioned on 13 November 1967 at Brisbane. Guests included the Queensland Governor, Sir Alan Mansfield. Therefore, although not the first completed, HMAS *Aitape* was the first of the Attack class patrol boats to be commissioned into the Royal Australian Navy.

The first commanding officer of the *Aitape* was Lieutenant-Commander W. S. G. Bateman. After some work around Sydney, the vessel left for PNG on 20 December 1967 and arrived at Manus Island (off the northern coastline) sometime in January 1968. The crew of the new boat included five PNG members of the RAN. In mid-1968 her sistership HMAS *Lae* arrived at Manus. The *Aitape* was the senior ship of the Papua New Guinea division.

In February 1969 *Aitape* arrested a Taiwanese fishing vessel operating within the Territory's waters and towed it to Lae. On 18 February 1969, HMAS *Aitape* and HMAS *Ladava*, another new patrol boat, entered the massive Sepik River and over the next three days they travelled over 370 kilometres up the river as far as Ambunti. Depths on the river were recorded as over 39 metres. The trip was a bit hazardous, as many logs were encountered, being swept downstream at speeds of up to five knots (almost 10 km/h).

The next month, on 5 March 1969, the *Aitape* and *Lae* made history when they became the first Australian patrol boats to cross the Equator on a voyage to Pohnepei and Chuuk in the (now) Federated States of Micronesia. They were also the first Navy boats with PNG crew to cross the Equator.

The *Aitape* was certainly busy in 1969 as in the middle of the year (with *Ladava*) she landed troops on islands in the Milne Bay area.

Figure 7 - The port prop and rudder

The next year started off with excitement when 12 survivors of an Indonesian vessel, *Averius*, were rescued. The ship had hit a reef 192 kilometres north of Wewak. During April and May 1970 *Aitape* visited outlying islands in the Solomon Islands. The skipper was now Commander J. Lattin.

In December 1970 the *Aitape* set out on an adventure that must have been a fantastic trip. Together with *Ladava*, she entered the Fly River and navigated 795 kilometres to Kiunga. They returned to Port Moresby on 17 December 1970.

January 1971 saw Lieutenant-Commander J. Yeates was skipper and the *Aitape* rescued the crew of the MV *Wailawa*, a 15 metre vessel, from Long Island (to the east of Madang). In March 1971, the *Aitape* and another sistership, HMAS *Samarai*, escorted the Royal Yacht

Britannia, from Manus Island to Madang. On board was the Duke of Edinburgh. These boats visited the new town of Alotau in Milne Bay the next month.

After being transferred to Papua New Guinea, the patrol boat was renamed HMPNGS *Aitape* (Her Majesty's Papua New Guinea Ship) and served in the Papua New Guinea Defence Force till 1985. She was the first of PNG's patrol boats to be paid off and it stood around in Port Moresby Harbour for many years. Finally, in 1995 she was sunk as a dive site.

After a refit in Sydney, the *Aitape* returned to PNG in February 1972 under the command of Lieutenant-Commander K. J. Heynatz. In March 1972 she was one of 10 patrol boats that participated with HMAS *Anzac* in Exercise Panti Manua (pidgin for Many Warships) in the Milne Bay area. After Cyclone Hannah devastated the north-east coast of Papua and *Aitape* (with *Ladava*) transported stores and medical supplies to the area.

In August 1972, *Aitape* again entered the Sepik River, this time with *Samarai*. Again, they travelled to Ambunti. On 17 and 18 September 1972, *Aitape* arrested four Taiwanese fishing vessels. In November 1972, *Aitape* again entered the Fly River, this time with *Lae*.

In early 1973,, Lieutenant-Commander Mike Bennett took over command of the *Aitape* and in March 1973 with *Samarai*, she moved troops on exercise in the Samarai area.

From July to September 1973 the *Aitape* underwent a refit in Cairns, returning to her base at Manus Island on 8 October 1973.

On 14 November 1974, *Aitape* was transferred to Papua New Guinea and renamed HMPNGS *Aitape* (Her Majesty's Papua New Guinea Ship) Papua New Guinea was to become a sovereign nation on 15 September 1975. The boat served in the Papua New Guinea Defence Force till 1985. She was the first of PNG's patrol boats to be paid off and it stood around in Port Moresby Harbour for many years. Finally, in 1995 she was sunk as a dive site.

Today the wreck is located south-east of Port Moresby Harbour, on the inside of the reef that protects the coast. It is buoyed (located a few metres below the surface).

As you descend the mooring line you will see huge numbers of very large fish. They are everywhere. Big trevally, mangrove jacks, sweetlips, batfish and other species. The mooring is attached to the stern of the boat, which is 27 metres. First thing to do is drop over the rear railing and have a look at the props. The two props and the rudders are clearly seen. Each prop has two of the four blades showing. Going back to the deck, you will see a number of hatches. The rear most one leads to a stern compartment and can be entered. Be aware, though, that all are quite tight squeezes and there is a lot of wiring and cables hanging down everywhere (no tidying up of the boat appears to have occurred before it was scuttled).

Figure 8 - The port prop and rudder

The next hatch is more interesting, enabling a bit of exploration. You can enter and swim forward a bit but it soon comes to an end as there is a bulkhead. Going back along the deck you will see another hatch, this gives access to a larger section of boat. The depth inside the hull is about 28 to 29 metres. You can swim along inside exploring for a couple of minutes.

You will see a toilet and other interesting things. Do not forget a torch, you will need it as it is very dark.

Exit the wreck here and you will be just behind the bridge. Enter the upper bridge area, the depth is about 25 to 26 metres. You will see that all portable items have been removed, probably back when it was put into mothballs, and used for the remaining PNG patrol boats. You can exit out the large windows or the other side of the boat. Moving forward again and dropping back to the deck, There is another hatch here, giving access to crew compartment areas. The mount for the 44 mm gun is near here and further forward a winch. You can drop over the bow and this makes a good photographic opportunity. Depth here is also 30 metres. Return back to the stern via the opposite side of the boat and examine the superstructure above the bridge. You will see the two funnels as you go.

You have probably been down now about 20 minutes and will soon be entering decompression. If you do not want to enter deco, ascend now. Otherwise, stay a few more minutes examining the outside of the boat as well as the prolific fishlife.

This is a nice easy dive, with an interesting wreck and good fishlife. Visibility when I dived was not too good but it normally averages 10 to 15 metres. Water temperature was 26°.

Dives:

- 24 November 2003

References:

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IJN *Akitsushima*

The Imperial Japanese Navy ship *Akitsushima* was launched 25 April 1941 at the Kawasaki Shipyard at Kobe, Japan. but the ship was not completed until over a year later on 29 April 1942 (no wonder Japan lost the war, the US and British were finishing similar ships in months). The IJN *Akitsushima* was a seaplane tender/carrier. The ship displaced 4724 tons, had a waterline length of 113 metres waterline (118 metres overall) and was 15.7 metres wide. The ship was powered by four diesel engines driving twin props, a total of 8000 shp, giving a maximum speed of 19 knots.

The IJN *Akitsushima* was armed with 10 25 mm anti-aircraft (AA) guns, four five inch (50 cal) guns (two guns each with two barrels) and carried one large Kanwanishi flying boat. Five similar *ships* were planned under the 1939 Program but only one was built.

During the Battle of Guadalcanal in early August 1942, the IJN *Akitsushima* was in the Solomon Islands. On 7 August 1942, the Americans recaptured Ghavutu Island (opposite the now Capital, Honiara, during one of the bloodiest battles of World War 2 up to that time, with the 1st Parachute Battalion (acting as infantry) landing on the small island from the sea (it is only a couple of hundred metres long and maybe a hundred across) and then being reinforced the next day by even more marines. The Japanese were entrenched on the island in caves and bunkers. The marines suffered when they were shelled and bombed by their own forces. The island was connected to the adjacent island (Tanambogo) by a causeway and the fight for that island was carried out at the same time.

Figure 9 - IJN *Akitsushima*

During the attack, the Japanese flying boat tender *Akitsushima* was seen in the area on its way to Gizo where it was going to establish a sea plane base. There had been a Japanese seaplane base at a Ghavatu.

Figure 10 - Diagram of the IJN *Akitsushima*

Just over 18 months later on 17 February 1944, the *Akitsushima* was anchored off the southern side of Dublon Island in Chuuk Lagoon . During the first raids by American aircraft from USS *Enterprise* (Strike 1AE) she was hit by two 1,000lb bombs dropped by dive bombers. One hit was forward of the bridge and the second at the stern. Further attacks by the Big E's aircraft missed the *Akitsushima*. However, aircraft from USS *Intrepid* also attacked the *Akitsushima* scoring hits on the port beam and starboard quarter. it is reported that the ship's sides were blown out and a fierce fire seen to start.

Later on the same day, a Douglas SBD *Dauntless* torpedo bomber from USS *Enterprise* (Strike 1BE) attacked the *Akitsushima* scoring a hit just aft of amidships. It is reported that an explosion was seen and a fire followed.

It is believed that the IJN *Akitsushima* escaped through the South Pass and lived for another day. The ship travelled via one of the Caroline Islands and then went to Palau for emergency repairs. She only stayed a few days before leaving for the Philippines. This apparently was just before the attacks by the American Task Force 58 on 30 and 31 March 1944 which sank at least 36 ships.

After further repairs, possibly in the Philippines, the *Akitsushima* ended up in late September 1944 taking refuge with a convoy of at least 12 Japanese ships in the Busuanga Island area of the Northern Palawan group of the Philippines. Eight of the ships were anchored in Coron Bay, the rest to the west and at least one on the northern side of Busuanga Island. The IJN *Akitsushima* was anchored to the west of Lusong Island with the oiler *Okikawa Maru*.

Late on the afternoon of 23 September 1944, Fast Carrier Task Force (TF) 38 under the command of Vice Admiral "Bull" Halsey positioned itself for an attack on the ships in the Coron area. At 5.50 am on 24 September 1944, 180 Grumman F6F *Hellcat* and Curtiss SB2C *Helldiver* (not made by Grumman as claimed by one source) planes lifted off the American and headed off on the 350 kilometre flight for the waters of Coron Bay. This was to be the longest carrier based (and return) attack ever carried out. At 9 am the planes reached Coron and located at least 18 large Japanese vessels and started their attack.

The planes attacked the ships in Coron Bay and the ships to the west first. After a frenzied 45 minute attack the planes left, leaving behind numerous sunken ships. It is reported the IJN *Akitsushima* was attacked by *Helldiver*s, opening fire with all 10 AA guns. However, the supply vessel was no match for the American aircraft and she was hit on the port side hull. Soon the ship was expoding and on fire and soon after sank in the passage between Lajo and Manglet Islands. Most of the ships anchored around Coron were also sunk. Today 14 of these wrecks have been located and most can be dived from Coron.

I have not dived this wreck but from all reports it is excellent.

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Amagisan Maru

The *Amagisan Maru* was a large freighter launched on 6 November 1933 by Mitsui Bussan Kaisha Ltd of Tama, Japan. The ship was 7,620 tons gross, 137 metres (454.0 feet) long and 18.3 metres (60.0 feet) wide. Powered by a single 8,470 hp Mitsui Bussan (Mitsubishi) B&W six cylinder diesel engine, she entered service on 26 December 1933 for the builders, Mitsui. Although built as a cargo vessel, she also carried passengers.

The *Amagisan Maru* was used on the New York to Japan route but on 28 September 1941 the ship was placed in the service of the Japanese Navy as a special transport. On 14 February 1942 she was attacked by the submarine USS *Swordfish* and suffered some damage.

Two years and three days later the *Amagisan Maru* was anchored off the south-western corner of Uman Island in Chuuk Lagoon when the first planes of *Operation Hailstone* flew into the vast lagoon. The *Amagisan Maru* was the largest of the ships anchored on this side of the island and the planes from USS *Bunker Hill* targeted her for death. Five Curtiss SB2C *Helldiver* dive bombers attacked the *Amagisan Maru* during Strike 3D at about 1250 hours. One 1,000lb bomb hit and then four Grumman TBF *Avenger* torpedo bombers made their run on the ship.

Photographs show a single torpedo hitting the ship (the second edition of *WWII Wrecks...* - see references below - has this on page 173 and incorrectly calls it the *Sankisan Maru*) and soon after a huge smoke pall rising from the ship. The hit was on the starboard side just in front of the bridge. The *Amagisan Maru* sank within 15 minutes.

The wreck was discovered in 1973 by Sam Redford. This is not one of the most dived wrecks, for reasons which I cannot fathom. I assume this is because it is probably the most remote of all but one of the Chuuk Lagoon wrecks. It certainly cannot be because it is too deep or not interesting enough.

Today the *Amagisan Maru* lies on a gentle slope with the bow in less than 30 metres and the stern in 58 metres. The wreck has a 45 to 50° list to the port and faces back towards the southern end of Uman Island. The starboard rail is about 31 metres deep towards the bow, 34 metres at the bridge and the port side is 41 metres below hold one. Dive boats generally anchor on the bridge.

As this is a very large wreck, it takes a number of dives to even get an overview of the wreck. For a first dive (the only one I did on the wreck), stick to the area in front of the bridge. After descending to the bridge, swim the short distance to the huge torpedo hole on the starboard side in front of the bridge. As you travel over the hull you will see the degausing cable that surrounds the hull. The torpedo hole leads into hold three. There is much twisted and destroyed metal plate and girders inside the hull from the explosion. The hold is full of hundreds of 200 litre drums. The depth here reaches 45 to 50 metres.

Hold three is elevated over the front two holds and after exiting it you drop a level to the deck above hold two. This is a very interesting hold, with many items, some of which are unique to the *Amagisan Maru*. As you enter the hold, look towards your right on the "floor" of the 'tween deck. Here there is an almost fully intact sedan car. The body of the car lies front towards the stern but the chassis is at 45°. As the ship has sunk, the car has somehow fallen off the chassis. The engine is now out in the open (it is a six cylinder). The body has some damage, including a dent in the roof and boot. The roof has now almost totally corroded away, presumably because of the damage. It is reported that there is another car behind this car, but I neglected to see it on my single dive on the wreck (my two buddies did though).

In front of the car there are at least seven bicycles. They are mostly packed in pairs, perhaps in timber boxes. The depth here is 48 metres.

This hold also has heaps of timber, mostly in the bottom of the hold (that is, towards the back as you enter the hold). The timber is planking and some larger pieces like wharf piles.

Timber is also found in the 'tween decks near the cars. There are also some more 200 litre drums in the bottom of hold two.

This hold is either particularly large (and therefore could be called hold one) or it was originally roughly partitioned from hold one. Either way, it looks like one large hold once you are inside it. In the rear part of hold one, at the bottom section, there are more drums and, more interestingly, some aircraft parts. There are a number of aircraft wings and in the 'tween decks there are more wing sections. Some of the parts may actually be aircraft tails. As you exit the hold you can see the covers from hold one (and maybe hold two) lying on the port deck and over the railing onto the sand. There are even more drums out on the sand.

At the bow there is a gun platform and gun. This is not a particularly large gun like many of the other Chuuk wrecks, but it is still quite attractive. The forecastle on which the gun platorm rests can be entered but I do not recall seeing anything of particular interest.

As you leave the bow to head back to the bridge area, you will see the front mast angled out over the sand due to the large list of the ship as it rests on the bottom. To exagerate this further, the derricks from this now rest touching (or almost) the sand on the port side. Follow the mast and derricks out to the sand and a surprise is waiting. As well as seeing more 200 litre drums, there is an almost fully intact truck which was probably a petrol tanker. This rests upright facing the bridge. Unfortunately, the derricks have landed right on top of the tank, crushing it a bit and moving it off the chassis as well. However, the truck is a very attractive looking object and photographers and videographers should make sure that they leave time to make use of its natural attributes. The radiator, driver's compartment, engine and rear part are all good opportunities for a great photo of piece of footage.

From here, swim back towards the ship, aiming for hold two. Ascend a bit to conserve air and bottom time and then go to the bridge. As you approach the bridge you will rise up a deck to hold three (the one you came through after the torpedo hole) and right behind it there is another hold. This is very small and has a lot of coal in it. This is strange as it is a diesel powered ship and there was no need for coal storage. Perhaps this ship was originally steam powered (it is the right age) and then converted later. I will check on this by doing some more research in the Australian Maritime Museum library this summer.

Between this hold and the bridge there is a three or four metre long cylindrical object lying on the deck. This is not a torpedo as you might first think but a minesweeping paravane (similar to but larger than the ones on the *Nippo Maru*).

The bridge is very open, with the flying bridge (built from timber) having totally rotted away. The lower decks of the bridge can be easily entered a number of ways. The funnel still sits in place and behind it there are the engine room skylights.

This is about all you will get to see on a single dive but there is heaps more to be seen in the rear section of the ship. Perhaps I will see it on my next trip.

The visibility here is normally in excess of 30 metres so it makes the dive even more exciting. I did a bottom time of 22 minutes which required 1 minute at 9 metres, 5 minutes at 6 metres and 13 minutes at 3 metres. A dive for the more experienced diver, but one that is not out of reach of most divers who go to Chuuk Lagoon.

The *Amagisan Maru,* a truely great, underated wreck, well worth one and even two dives. Brilliant!!

Dives:

- 19 November 1997

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Boeing B-17E *Flying Fortress - Bessie, Jap Basher*

The Boeing B-17 *Flying Fortress*, probably the best known bomber in history, had its origins in a 1933 USAAC (US Army Air Corps) bomber requirement specification that looked far into the future. The specification, known as "Project A", required companies to propose a bomber with a wing span of 45 metres, a maximum weight of 27.25 tonnes, range of 8,050 kilometres and a bombload of over 900 kilograms. On 28 June 1934 a contract was issued to Boeing for the construction of one aircraft. This plane was known to Boeing as Model 294 and the military as XB-15. various changes were made to the specification and on 8 August 1934 Circular 35-26 was issued for a modified aircraft.

On 18 June 1934 design work began on "Model 299". In late 1934 construction began on on a prototype and on 17 July 1935 it rolled out of the factory at Seattle, Washington. The plane was registered as NX13372 (civilian rego) and at the event, a reporter who was present nicknamed the plane the *Flying Fortress*. The plane first flew on 28 July 1935 and 12 days later it was ready for delivery to the USAAC.

On 10 August 1935 the plane was flown from Seattle to Wright Field, Dayton, Ohio. The 3,379 kilometre flight took nine hours. Unfortunately, on 30 October 1935 the plane stalled on takeoff and crashed at Wright Field. The two pilots died as a result of the crash and it was ascertained that the accident was caused by the crew not releasing some external locks on the elevators when she was on the ground.

Despite the problems, 13 aircraft were ordered on 12 January 1936 as YB-17. Of interest, the original contract was issued to Douglas for a plane called the Douglas B-18 *Bolo* - a twin engined bomber based on the Douglas DC-3/C-47 *Dakota* that was unspectacularly used in the early days of WWII.

The YB-17 was later redesignated as Y1B-17 and, after a few problems (including the loss of the third aircraft), the USAAC ordered 10 production planes on 3 August 1937. This was the start of the B-17!

The first version was the B-17B and a total of 39 were built till production ceased in March 1940. None of these were used during World War II. Another 38 B-17Cs were built and production of this model ended in November 1940. The next model, B-17D, started in February 1941 and 42 were built by April 1941.

On 5 September 1941 the first B-17E made its first flight. This was a major model change with the rear fueslage and tail greatly modified to the classic shape familiar to most people. During November 1941, 25 B-17Es were built.

The Boeing B-17E *Flying Fortress* had a wingspan of 31.6 metres (over 103 feet) and length of 22.8 metres (almost 74 feet). Powered by four 1,200 hp Wright R-1829-65 nine cylinder turbo-charged engines, the B-17E was capable of a maxium speed of 318 mph (512 km/h), a cruising speed of 226 mph (364 km/h) and a range of 3,300 miles (5,310 km). Maximum weight was 53,000 pounds (24,062 kg) and a service ceiling of 36,000 feet (10,980 metres). Armament was twin guns in top, bottom and rear turrets, one gun in radio compartment firing through roof and one on each side ahead of the tail. All guns were Browning M-2 0.50 inch (12.7 mm) machine guns. The B-17E could carry a normal bomb load of 6,000 lbs (2,742 kg).

The B-17 was used extensively in the all spheres of the Second World War, including the Pacific campaign. During July 1943, Boeing produced over 2,400 B-17s. A total of 12,731 B-17s were built and a couple were still being used as late as 1985 as fire-fighting aircraft in the US.

On 17 November 1941, a Boeing B-17E built at the Boeing Seattle plant, designated 41-2420, chassis 2231, was delivered to Salt Lake and then (on 20 November 1941?) to Sacremento Air Depot, McClellan Army Air Force Base, California. The plane was later named *Bessie, Jap Basher* or *Bessie the Jap Basher* (not *Bessie the Jap Smasher* as is sometimes stated). On 15 December 1941, this plane was assigned to the 42nd

Bombardment Squadron of the 11 Bombardment Group (42BS/11BG) of the Thirteenth Air Force, South Pacific Theatre of Operations. The Squadron transferred to Hickam Field at Honolulu, Hawaii, on 22 July 1942.

It is possible that 41-2420 was moved to Honiara on the island of Guadalcanal in the Solomon Islands in late September 1942. This guess is based on information in Peter Stone's book *The Lady and the President* on the wreck of the SS *President Coolidge* which also discusses the building of airstrips on Espiritu Santo in Vanuatu (ex New Hebrides). The first one was opened only days before this plane was lost so it is likely that the plane arrived on Guadalcanal from Santo.

On Thursday 24 September 1942, Boeing B-17E serial number 41-2420 - *Bessie, Jap Basher*, was part of the 42nd Bombardment Squadron on a bombing mission over the Shortland Islands (about 600 kilometres to the north-west of Honiara, just south of Bougainville) when it was attacked by a number of Japanese Mitsubishi A6M Zero-Sen fighters and badly damaged. It lost power in one engine and was attempting to limp home to its base at Henderson Airfield on Guadalcanal. Unfortunately, the plane was in severe trouble and when it gained the coast of Guadalcanal the pilot, Lieutenant Charles E. Norton, radioed Henderson that he was going to attempt to ditch the plane off the shores of Japanese-occupied northern Guadalcanal.

Lieutenant Norton put the plane down on the water just 50 metres or so off the village of Ndomo (or Domo), only 12 miles short of Henderson Airfield (now the international airport for Honiara). Two young boys from the village heard the plane passing overhead and then heard the plane crash into the water. They immediately went to the ocean's edge but they did not see anything other than some waves from the crashed plane. Unknown to the boys, at least two of the eight crew escaped from the plane. It is possible that they all got out, either parachuting earlier or once it crashed. Anyway, after it hit, it is certain that Lieutenant Norton and Sergeant Bruce W. Osborne somehow got out of the plane and made it to shore.

The two boys went looking for the plane the next morning, swimming out from the shore and diving down in an attempt to find the remains. They were not successful.

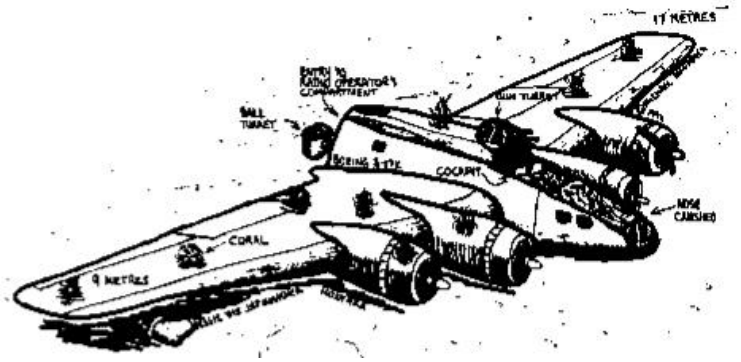

Figure 11 - A drawing of the B-17 at Honiara as it was in August 1992

Lieutenant Norton struggled to shore and pulled himself up the rough coral beach into the jungle. As indicated earlier, this section of Guadalcanal was occupied by the Japanese Army so he was unable to get assistance. Presumably he also did not know if the natives could be trusted so he did not seek them out. He was badly injured, with a broken leg among his injuries. He made a splint from pieces of wood and fixed it with his belt. He ate nuts to survive. For six days he hid successfully from the Japanese. On Wednesday 30 September 1942, while hiding under long grass, a Japanese soldier found Lieutenant Norton.

Lieutenant Norton was taken to the Japanese Battalion Headquarters where he died as he arrived.

Sergeant Osborne also got ashore but it is not know what happened to him. His skeleton was later found in the jungle by American troops. Perhaps he came ashore with Lieutenant Norton, we will never know. The fate of the other six crew is also not known (The rest of the crew were First Lieutenant Bruce B. Barker, First Lieutenant Leo M. Eminger, Staff Sergeant Peter F. Novak, Staff Sergeant William Hotard, Staff Sergeant Fred S. Croyle,

Sergeant James R. Mathewson and Edward A. Carroll.) They were not found in the plane so they obviously got out. It may have been that these six parachuted before the plane hit the water. Whatever happened, they did not survive. In January 1944, Lieutenant Norton's briefcase was found under the pilot's seat by the Seebees when the Americans finally gained control of Guadalcanal and a search team found the plane.

It is reported that during an apparent salvage attempt by Seebees at this time, the tail section behind the ball-turret gun was broken off and is now not to be seen. The remaining forward section of the plane is in one piece. The plane was condemned as salvage on 8 October 1944.

Figure 12 - The starboard engines of the huge plane

The plane lies on a sloping sandy bottom with the port wing at 17 metres and the starboard wing in 9 metres. The ball turret lies on the sand behind the fuselage and you can enter the plane through this area. There is not much room inside, but you can move through the radio operator's compartment into the bomb-bay area. The dorsel turret's twin 0.50 in. machine guns still point menacingly away from the plane and make a great photograph.

From the outside, the cockpit can be examined as it is a bit broken open here. There is a fair bit of damage to this section of the plane. The engine and rudder controls are still plainly visible but watch out for a very aggressive little fish that lives near the throttle controls, he took a large bite out of one of my gloves.

The nose section of the plane has been damaged by the crash landing but is still intact, if somewhat bent. The engines and wings are complete and the propeller blades are mostly still on their hubs. Deeper, away from the plane, are some pieces of the Boeing that are interesting to examine. One thing to look for between the shore and the plane are the garden eels which normally sway to and fro in the surge with their bodies out of the sand. As you approach they withdraw into the sand and after you pass they again appear.

The visibility here can be good (about 15 metres) but it can also be easily stirred up as the sand is very fine. Good buoyancy here is very important, especially if you are interested in photographing the wreck.

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Cessna 402

The Cessna 402 is a "third level airliner" (to quote a source book) and is a 10 seater, twin engined plane. With a wingspan of 12.2 metres and a length of 11 metres, the plane is powered by two 300hp Continental flat-six engines (like a Subaru's engine). In approximately early 1991, this plane, owned by North Coast Aviation (NCA), was flying to Madang, Papua New Guinea, when it ran out of fuel (so I was told by a former pilot of NCA) and crashed into the ocean near Pig (Tab) Island off Jais Aben Resort. As this pilot told me over a beer on an Air Nuigini plane, it was the most preventable of accidents.

After the accident (in which everyone survived), the plane was towed into Jais Aben Resort for some reason (so it could be examined by investigators?) and dumped off the resort's wharf. It now lies in a maximum of 11 metres of water. On my first visit to Madang I was not even told about this plane but on my most recent trip one of the local divemasters told one of our group about the plane. He then told the rest of the group about the plane.

The plane is fully intact and lies only 15 metres from the wharf. After a dive, it is a simple matter of keeping 50 bar of air and instead of off-loading your gear onto the wharf, you put it back on and drop off the boat or wharf and swim down to the wreck.

Apart from major damage to the fuselage at the rear door area where the plane has broken its back and a missing nose cone, the plane suffered little damage from its ditching. You can enter the plane through the door on the port side and go right up to the cockpit. Some of the seats are still in place as are most controls and gauges. Inside the plane you can see x-ray fish (I do not know their real names) which are small fish about 25mm long and with transparent bodies. Near the door there are a number of striped pipefish, but these are unlike any I have seen in PNG fish books. These fish are striped (obviously) but have a brilliant red and white horizontal striped tail. Very beautiful.

You can also look through the pilots window/door which opens. The port engine cover is missing and you can see the engine. Although the plane ran out of fuel, the props must have been turning over, albeit slowing, as each blade on the two props are bent back by the force of the water as the plane hit the ocean. The plane has wingtip fuel tanks which have collapsed under the water pressure, proving they were empty when it sank.

The plane's registration number can be clearly seen on either side of the upper fuselage and the name "North Coast Aviation" is faintly visible while "NCA" is prominent on the tail. The rudder moves easily but other parts (aerilons etc) do not.

While you can easily see the whole wreck in five minutes or so, a more realistic dive is 15 to 20 minutes as you examine the plane in detail. An excellent third dive for the day, so much so that I made it my one thousandth dive!

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Consolidated PBY Catalina

In 1933 the US Navy put out a specification for a new long-range patrol flying boat. The Consolidated P2Y and Martin P3M flying boats were the main aircraft in this category then and Consolidated Aircraft Corporation decided to start with the P2Y to create a new plane to tender. The designer of the P2Y, Isaac M. "Mac" Laddon, modified the design by raising the wing, changing the tail and some other modifications including new engines. The proposed plane was called the Model 28 and the prototype, XP3Y-1 was first flown on 28 March 1935. The plane was handed over to the Navy for service trials and returned in October 1935. Although still under testing, on 29 June 1935, the US Navy placed an order for 60 aircraft, unprecedented in those times, with Consolidated. The plane was a pure flying boat, with no amphibian capability. Despite this, the floats at the end of each wing were retractable. Once the plane was underway, the floats retracted outwards and the float itself formed the actual wingtip (the bottom becoming the outside edge of the wing).

Coinciding with the production of this new aircraft, Consolidated Aircraft Corporation moved its headquarters from Buffalo to San Diego, California, with plants at San Diego and later Vultee Field California as well as Nashville, Tennessee, Wayne, Michigan, New Orleans, Louisiana, Miami, Florida and Allentown, Pennsylvania.

The Navy asked for some modifications, including better engines (already specified for the 60 on order) and new tail surfaces. The modified plane, now called XPBY-1 first flew on 19 May 1936 and after testing was delivered to the Navy during October 1936, the same month the first of the 60 planes, now called PBY-1, were delivered to US Navy Squadron VP-11F.

A second order for PBY-2 was placed on 25 July 1936, PBY-3 on 27 November 1936 and PBY-4 on 18 December 1937. The first of the PBY-4s was returned to Consolidated for the installation of retractable wheels to make the planes amphibious. The main wheels came up into the side of the hull and the nose wheel retracted into the bottom of the nose. This plane was completed in November 1939 and redesignated as XPBY-5A. The uncompleted planes in an order for PBY-5s (33 of them) were delivered with this modification and called PBY-5A. An order for another 134 PBY-5s was placed on 25 November 1940 and they were delivered in late 1941. Around the same time, the Naval Aircraft Factory built 156 aircraft as the PBN-1. They had modified hulls and the nose wheel replaced by a tail-wheel.

Consolidated PBYs were in service with not only the US Navy, by late 1939, the Soviet Union started producing their own version, the GST as well almost 200 US built planes. In July 1939, Model 28-5 was sent to the UK for evaluation. An order for 50 followed the start of the European war. These were called Catalina I. Like most US warplanes, the common name was that given to the planes by the British, although it is also stated that the name came from someone at Consolidated (eg the North American P-51 Mustang was named by the British). The Catalina I was similar to the PBY-5 but with different armaments. Delivery began in early 1941. A total of about 700 were eventually delivered to Britain, all but 11 were pure flying boats. Some were built by Boeing of Canada and other versions for other countries built by Canadian Vickers Limited as well as the Soviet Union as mentioned above.

France, Australia, the Netherlands and Canada also ordered Catalinas (as these planes would become more commonly known). All up, about 4,000 planes were built (records are not accurate due to Soviet Union's poor records). Of these, only about 1,400 were amphibians.

In June 1940, the Australian Government placed an order for seven Consolidated PBY-5 Catalinas and in September another order was placed for more. The aircraft were constructed for the Royal Australian Air Force (RAAF) at the San Diego plant. Two of these planes were allocated Australian serial numbers A24-3 and A24-6. The model of these aircraft was officially Model 28-5MA, similar to the British Catalina IVA which are equal to the US PBY-5. These are non-amphibious planes. The Catalina IVA was 19.5 metres long with a wingspan of 31.7 metres. The plane weighed 9,485 kg empty and had a maximum take-off weight of 16,066 kg. Power came from two 1,200 hp Pratt and Whitney R-1830-92

Figure 13 - The nose gunner's compartment

Twin Wasp 14 cylinder twin row radial engines with supercharger. This gave the plane a maximum speed of 282 kph and a cruising speed of 182 kph. Range with full military load was 3,782 km. Armaments were normally one 0.5 inch machine gun in each waist blister (between wing and tail), one or two 0.303 inch machine guns in the bow turret and one 0.303 inch machine gun in rear ventral hatch and up to four 454 kg bombs, mines or other items stored under the wings. A total of 168 Catalinas ended up in service with the RAAF.

In December 1941 the merger of Consolidated Aircraft Corporation with Vultee Aircraft Incorporation started, although this was not to be finalised until March 1943. The new company was called the Consolidated Vultee Aircraft Corporation.

A24-3 left San Diego on 27 February 1941 under civilian registration VH-AFD (standing for Air Force D?) and was flown by Qantas to Sydney. It was handed over to the RAAF at Rose Bay Flying Boat Base on 4 April 1941. I do not know what it did in the five weeks in between. On 29 May 1941, it was allocated to 11 Squadron, then on 14 August 1941 to 20 Squadron and then allocated to the Rathmines Flying Boat Base on Lake Macquarie, just north of Sydney, on 24 December 1941. It was used for sea plane training by the bon 8 January 1942. It returned to 11 Squadron on 19 January 1942 and presumably moved to Port Moresby, in then Papua, soon after.

A24-6 left San Diego on an unknown date under civilian registration VH-AFG (standing for Air Force G?) and was flown by Qantas to Sydney. It was handed over to the RAAF at Rose Bay Flying Boat Base on 5 July 1941. On 11 August 1941, it was received by 11 Squadron, then on 14 August 1941 it was allocated to 20 Squadron and then used for sea plane training by the Seaplane Training Flight from 6 September 1941, presumably at the Rathmines Flying Boat Base on Lake Macquarie, just north of Sydney. It returned to 11 Squadron on 15 January 1942 and presumably moved to Port Moresby, in then Papua, soon after.

Figure 14 - The starboard engine points to the sand

The 11 Squadron of the RAAF had moved to Port Moresby in September 1939 to carry out survey work for suitable landing sites in Papua and New Guinea. It had two C Class Flying Boats and two Seagull Mk5 amphibians. The new Catalina aircraft moved to the Territory of Papua (now part of Papua New Guinea) and were based in Port Moresby from probably late January 1942. This is only just over six weeks after the start of the Pacific War. On February 1942, the Catalinas from 11 Squadron made night raids on Rabaul, Territory of New Guinea. Here they encountered Japanese aircraft for the first time. During the attack, A24-3's radio operator was wounded in both ankles and the plane had to escape by diving into the smoke from the volcano on Matupit Island.

On 10 February 1942, A24-6 was lead aircraft when an attack was made on Japanese shipping and landing forces at Gasmata on the south coast of New Britain, New Guinea (this is the other side of the island from Kimbe, where Walindi Resort is now located). Both planes may also have been on a raid on 27 February 1942 when Rabaul was again attacked.

On 28 February 1942, four aircraft of the 11 Squadron were at the Napa Napa slipway (this is now the main wharf for the Napa Napa Oil Refinery). Three planes were moored south of the slipway and the other (A24-2) was on the slipway. On this day, at least 11 bombers and 5 Mitsubishi A6M Zero-Sen *Zeke* fighters made the 4th Japanese Air Raid on Port Moresby. The Zeros attacked the Catalinas, coming in from the south right up Port Moresby Harbour towards Fairfax Harbour (some references state that the planes were in Fairfax Harbour but this is an incorrect interpretation of the town's waterways). The planes did Himmelman turns near Tatana Island and came back again. This may have occurred a few times.

A24-3 and A24-6 suffered grave damage during these attacks and caught fire. The other planes were not damaged. Crew and maintenance staff leapt into the water. Leading Aircraftman Pop Woods was in the crash rescue boat, pulling a man into the boat when the man was shot in the stomach by one of the strafing Zeros. They were thrown into the water and Woods towed the man to shore. One maintenance man is said to have died (perhaps the man shot in the stomach) and another injured. Both planes were on fire and they drifted north where both sank. One ended up in the location where the oil refinery wharf's retaining wall now stands (it appears to have been built over the plane) and the other ended up sinking a little to the north on the edge of a reef. One of the Zeros was said to have been shot down. The pilot survived and was taken to Cowra in New South Wales, Australia. He was killed in the massive Japanese breakout from the prison camp.

Over the years since 1942, many people have attempted to find the planes without success. Without access to things like magnetometers and not knowing exactly where the planes had been moored, different methods were required. Mark found a photograph in a Neil Whiting's book, *Wrecks and Reefs of Port Moresby - PNG* that showed the Catalinas at their moorings. Guessing that the photo had been taken from the residence of the Governor-General, in 1999 Mark talked his way onto the grounds and was able to confirm the exact location of the moored aircraft.

The Club dived at the location and found one of the mooring lines but a search showed no sign of either plane. They deduced that the planes had drifted further than thought. Since the prevailing wind in the harbour is a southerly, it

Figure 15 - The large dark angled structure is the port wing and the float is at the bottom of the struts

was likely that they had drifted north. Search was complicated by the fact that the oil refinery being built just to the north made it had to search this area as the wharf was being constructed right where it was possible that the planes may lay. In fact, a little later this was confirmed when one plane was discovered almost totally buried under the wharf's retaining wall. It is now lost forever, totally covered by rubble and concrete.

In late 2002, information came to the Club that Oro, a young man from the island of Tatana, had sighted what he thought was a wing of an aircraft while spearfishing. Oro had passed this onto David Dudai from Koki who regularly goes out with the Club. In early December 2002, the Club began searching the area to the north-west of the Napa Napa wharf. Finally, on 14 December 2002 after being lost for more than 60 years, the plane that sank on the edge of the reef was discovered by the Port Moresby Sub Aqua Club led by President Mark Palmer. However, to date, the exact identity of this plane has yet to be discovered.

Figure 16 - Is this the Elsan toilet?

Nowadays this plane sits on a sandy bottom about 100 metres north-west of the northern end of the oil refinery wharf. There is a buoy on the wreck, located on the starboard wing tip. The reef here runs north-south and the plane lies facing south. You anchor just off the wreck (the buoy is on a light line) and swim over on the surface. As this is a fair way up the harbour, the visibility here is often limited to a few metres.

After descending, you will see that the starboard wing tip is resting on the top of the reef in about 11 to 12 metres. The retractable float is down and this is what has caused that major break up of the plane. This float has landed on the reef top and the port float has landed on the sand, over four metres deeper, thus suspending the fuselage in mid-water. Unable to handle the weight of the plane, the wings have broken and the fuselage dropped to the sand. At this time, or perhaps before, the fuselage has broken just behind the wing. The tail section, comprising all the fuselage rear of the wing except for the hull and floor back to the end of the planing hull, has flipped over and is now facing the north. The tail section is about 135° to its normal vertical orientation, that is, the top of the tail is lying on the sand, this section tipped over to the side.

Starting from the starboard wing tip where you have arrived on the wreck, follow the wing towards the fuselage. The first major thing you will see, apart from the broken wing, is the starboard engine. This lies tilted forward and the propeller hub is in the sand, with one blade visible. Next is the fuselage. This is a very wide aircraft, the cockpit bigger than any World War II aircraft I have ever seen. Even much larger such as Boeing B-17 Flying Fortress and the Short Sandringham S25 do not have as much room as the Catalina, they all have very cramped cockpits. You can see the pilots' seats, the rudder pedals, the throttles etc. Looking back into the cabin you can see what is almost certainly the radio set.

Forward of the cockpit is the front gunner/bomb aimer's position. This consists of a small compartment, with a machine gun and a window for aiming. On the port side of this position you will see the aircraft's anchor, attached to the fuselage. The port engine is right next to this, broken completely off the wing and now lying propeller down on the sand. The wing is broken again just past here, as the port float lies on the sand, pushing the wingtip far higher than the rest of the wing. The float and support struts are more recognisable on this wing and give a good indication of what the plane looked like when operational.

As you swim back along the trailing edge of the wing you will notice that the ailerons and flaps are totally missing. The broken rear fuselage soon comes into view, the floor of the plane clearly visible. The only item of interest is what at first appears to be an urn, but which

I believe is an Elsan toilet. Perhaps any more knowledgeable reader can advise me after looking at the attached photograph.

You can see the tail section from here and also the ailerons and flaps which lie on the eastern side of the plane now. The bottom of the plane's tail clearly shows the ventral tunnel gun hatch, a rectangle hole in the hull. On my dive here I did not notice the beam gun openings, I suspect that the plane broke at this section. I did, however, notice the frames for the cupola windows lying on the sand, but I cannot remember exactly where they were now.

In summary, this is a fascinating wreck, the only Australian World War II aircraft that I know that can be dived anywhere in the World.

Figure 17 - The anchor on the port side of nose

Dives:

- 28 November 2003

References:

- *Jane's All the World's Aeroplanes* - pages 218
- *American Warplanes of World War II* - pages 48-54
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- Pacific Wrecks Web Site - Catalina A24-3 page - http://www.pacificwrecks.com/aircraft/pby/A24-3.html
- Pacific Wrecks Web Site - Catalina A24-6 page - http://www.pacificwrecks.com/aircraft/pby/A24-6.html
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MV *Coral Queen*

In November 1958 the MV *Coral Queen* was built by the Pacific Islands S.B. Co Ltd in Hong Kong as a ferry and general cargo vessel for the High Commissioner for the British Solomon Islands Protectorate in Honiara, Solomon Islands. It was used for trading in New Guinea, Solomon Islands, New Hebrides (Vanuatu), Gilbert and Ellice Islands. The new vessel was 31.7 metres long and 7.37 metres wide and was powered by two eight cylinder 212kw Gardner diesel engines through twin props. In the early 1960s ownership was transferred to the Western Pacific High Commision, also of Honiora. Presumably this was the same organisation with a new name.

From 1966 to 1971 the *Coral Queen* was unregistered and in the latter year was registered as being owned by Seaworm Pty Ltd of the United Kingdom. I presume that it was still used in the Pacific, but its exact whereabouts is not yet known to me. For the next 22 years the vessel remained in the same ownership but after 1993-94 she was no longer registered.

The wreck is now located at Madang, Papua New Guinea.

As mentioned, the MV *Coral Queen* was another island freighter with two large holds. The maximum depth is 32 metres on the sand, with the deck being 28 metres, 30 metres in the holds and engine room and 23 metres on top of the bridge. The dive boat moors to the forward mast and you descend right onto the bow. The forecastle has two entrances, with quite a few cabins. You can also go through the starboard doorway and drop down into the forward hold. From here you can swim through the two holds and into the engine room. There are one or two exits to the upper deck from here and a maze of corridors and cabins. Despite this, there is no real risk in exploring the stern section. You can exit back onto the deck or right out through the stern.

From the stern, you can drop over the edge and see the twin props, port rudder (no starboard one). There are some beautiful soft corals here and along the side. There is also quite good fishlife on the wreck.

This wreck is also well known for another thing, in fact it is more often dived not because it is a wreck, but because it has flashlight fish. I have dived this wreck three times now, twice at night. The idea of doing a 30 metres plus dive at night, without the use of a torch, and seeing hundreds (and thousands) of flashlight fish *Anomalops kataoprton* is exciting. These fish are about 100 mm long and below the eye there is a “luminous organ”. In fact, the organ is composed of millions of tiny bacteria that produce the light that flashes on and off as the fish swims around.

The first time I dived the wreck the cabins were literally alive with fish, creating a glow that emitted out through the doors and portholes. The second dive was during the day and the third time there were not as many fish, but they put on a spectacular show by streaming out of the funnel area and “balling” together off the wreck. An amazing sight!

A dive to remember, especially at night.

References:

- *Lloyds Register* 1959-60, 1966-7, 1970-1, 1972-3, 1992-3 and 1993-4

Douglas A-20A Havoc

On 26 October 1938 a privately developed aircraft made its first flight at El Segundo in California. Designed by Jack Northrop and Edward Heinemann, and originally developed to meet a US Army Air Corps attack specification, the new plane was powered by twin engines and had a tricycle undercarriage. Unfortunately, this plane was destroyed in a fatal crash on 23 January 1939. It appears that the plane failed to gain the US order and was further developed to meet an order for 100 placed in February 1939 by the French Government for the Armee de l'Air. The new aircraft, a high winged twin engine attack bomber, was at first called the Douglas DB-7. On 17 August 1939 the first production aircraft made its maiden flight. In January 1940 the first deliveries began of the plane to the French and on 31 May 1940 they began operations.

After the fall of the French Government, the remaining aircraft from the order and additional planes were delivered to the British Government and an order was also placed for more aircraft and an order also placed by the US. The new plane was known by a variety of names. The British called it the Boston, while the US called it the A-20 Havoc and it also went by the designations BD-2, F-3 and P-70.

After 63 A-20 aircraft, the sub-type changed and the Douglas A-20A was the first produced in numbers (153). This model was 14.6 metres long with a 18.7 metre wingspan. It was powered by two 1,600 hp Wright R-2600-11 Double Cyclone 14 cylinder two row radial engines with two speed supercharger with three-bladed propellers. These gave the plane a maximum speed of about 475 to 500 kph and a cruising speed of 439 kph. Maximum take-off weight was perhaps 7,575 kg but later versions 12,338 kg. Range was 1,600 to 1,754 km at normal bomb load. Armament for the A-20A was (I think - hard to find out) two 0.303 inch Browning machine guns in the lower nose together with (not always though) one 0.303 machine gun on each side of the lower nose. There was a twin 0.303 machine gun in the dorsal gun position as well as a single 0.303 machine gun under the fuselage for attacks from below and behind. Additional Browning guns could also be mounted in the rear of each engine nacelle. These were pointed straight back and operated by the dorsal gunner using a foot pedal. Bomb capacity was 454 kg. Crew was pilot, dorsal gunner and nose gunner/bomb-aimer.

Figure 18 - The port prop shows no sign of being bent,this engine was not running when the plane hit the water

Planes were built at the El Segundo (all 63 A-20s, all 153 A-20As), Long Beach (all 998 A-20Bs), California and Oklahoma City (668 A-20Bs and all 2,850 A-20Gs) plants as well as by Boeing (140 A-20Cs) at (I think) Seattle, Washington. I do not know where the 402 A-20Hs and the 450 A-20Js were built. Many of these planes were converted to other variants.

There are reports of two different planes being located in the Loloata Island area of Bootless Bay. I will give details of both as I am not yet sure which one is correct. In 1940 two Douglas A-20A-DE Havoc attack fighter/bombers (DE signifying Douglas and El Segundo),

serial numbers 40-176 and 40-173, were built at the El Segundo plant. They eventually ended up in New Guinea, 40-176 with the 89th Bomb Squadron of the 3rd Bomber Group which began using Havocs out of Port Moresby on 31 August 1942 and 40-173 with the 5th Air Force's 3rd Attack Group. These planes may have been among the ones modified by Major Paul I. "Pappy" Gunn for low-level strafing by the addition of extra nose armaments. He later came up with a method of attacking ships by bouncing bombs into their sides (a la Dambusters) with A-20 Havocs and later North American B-25 Mitchells.

Whichever plane is the correct one, it was returning from a mission to Guadagasal on the Salamauato Wan track. The plane was about to turn onto the line for landing at Jacksons Airfield (now Jacksons International Airport) when it appears to have suffered an engine failure. The port engine failed (one report about 40-173 says the starboard engine failed but see later why we know that it was the port - perhaps this confirms that there is another plane nearby), so the pilot (given as First Lieutenant Edward R. Richardson for 40-176 and 2nd Lieutenant William Langley for 40-173 - also called "Strawberry Roan"), lowered the flaps and made a very successful landing on the water. The plane is said to have spun around 90° to port (left). The crew apparently escaped the plane before it sank. The date given for the crash of 40-173 is 23 April 1943 and no date is given for 40-176.

Figure 19 - The tail - note the fabric covered rudder and elevator

On 6 November 1980, Dik Knight, owner of Loloata Island, located about 20 km east of Port Moresby, was out snorkelling with a researcher on a reef off the south-eastern end of the island when he spotted the nose of an aircraft. He and the researcher started looking for the plane and within a short time, Dik had found an aircraft. This was the A-20 Havoc.

Today the aircraft is located on the eastern side of a small coral reef at about 16 metres and is buoyed. The actual location of the plane is GPS Reading 9° 33' 07"S 147° 17' 35"E using WGS84.

The water here is quite dirty and visibility only a few metres. Swim to the buoy before descending (as you may not find it due to poor visibility). You will the plane sits relatively flat on the bottom, facing the south with the cockpit (remember the nose is missing) hard against a coral reef. The bottom is about 18 metres or so. Starting from the cockpit, you can see that the gauges have virtually all been stripped from the plane but the seat, throttles, joystick and other controls remain intact. You will see that the propeller of the port engine is intact, not bent back at all. This proves that the engine was not running when the plane hit the water as if it was, the blades would be bent back as the starboard engine's blades are bent. Both wings are intact, with no sign of machine gun damage, further indicating that the cause of the crash was engine failure, unrelated to enemy action.

As you swim back from the tip of the port wing to the fuselage, you will notice that the port aileron (which was fabric covered, like the tail rudder and tail elevators) is angled up. The corresponding aileron on the starboard side is angled down. This would be as expected if the pilot was struggling with a failed port engine and counteracting the now "heavier" port side. Closer to the plane, both the inboard and outer flaps are fully extended on both wings.

Moving towards the tail you will see almost immediately the dorsal gun position. The canopy is missing, presumably discarded by the gunner as the plane prepared for a crash landing. The twin barrels of the machine gun are clearly visible, stowed away in its storage compartment. As mentioned before, the fabric covered rudder and elevators are noticeable on the trailing edges of the tail. The rudder and rudder tab both move, it is possible to push both of them from port to starboard and back again.

Figure 20 - The dorsal gun in its compartment

Swimming back along the starboard side of the fuselage and you will come to the starboard wing. You will notice the that this engine was running as the blades are bent backwards from contact with the water. You will also notice that the bend in the blades is not as dramatic as the blades on the Republic P-47D Thunderbolt located a little to the north. This is probably because the Havoc landed much slower than the Thunderbolt (with flaps down compared to no flaps).

If you have not already noticed, you will have seen that the engine nacelles do not appear to have the rear mounted machine guns that are sometimes included on the A-20A models. you will also notice that the nose is missing. It is apparently located 50 metres away, but without knowing which direction, it would be very hard to find.

This is a very interesting dive, especially for aircraft and World War II enthusiasts. Visibility on the day I dived it was perhaps three metres and water temperature 26°.

Dives:

- 26 November 2003

References:

- *Allied Bombers of World War II* by Bill Gunstan - pages 56-7
- *Jane's All the World's Aeroplanes* - pages 226-7
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- *Wrecks and Reefs of Port Moresby, Papua New Guinea* by Neil Whiting - pages 231-5
- Douglas A-20 Havoc Web Site - Chapter 25 by Joe Baugher - http://www.csd.uwo.ca/~pettypi/elevon/baugher_us/a20-25.html
- Douglas A-20 Havoc Web Site - Chapter 10 by Joe Baugher - http://www.csd.uwo.ca/~pettypi/elevon/baugher_us/a20-10.html
- A-20 Havoc Web Site page - http://www.a-20.com/
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FS-172 (formerly thought to be USS *Boston*)

The town of Madang is often called the “prettiest town” in the whole Pacific. I must say that I agree with this description as it is very beautiful and ideally located on the shores of Madang Harbour, a harbour that comes close to Sydney Harbour in terms of size, protection and beauty. Numerous parks, lagoons and creeks are found in and around the town and there are plenty of trees that add to its appeal. To the north there are three other harbours, Nagada, Mililat and Sek Harbours. In reality, these are really just parts of the one, huge harbour protected from the open ocean (not that there is any real big seas) by a barrier reef and a number of small islands. The vast majority of the diving here is carried out in and around these harbours. Just north of Madang is a very interesting shipwreck.

This ship has been known as the USS *Boston* or SS *Boston* since 1946 but this is, in fact, not correct. It has also been said that it was a minesweeper but there was no minesweeper by this name in the US Navy. See later for details.

Figure 21 - A photo of FS-177, identical to FS-172

Before World War II the US Army had a number of small oceangoing vessels classified as "Freight and Passenger Boat" (FP). During the war this designation was changed to "FS" for "Freight and Supply." The designation was applied to numerous small vessels of widely different designs and sizes and also to converted merchant vessels. The sizes ranged from 180 to 573 gross tons and construction from wood to steel. One of the designs was called Design 330-D. These carried the designation FS-162 to FS-234.

One of the Design 330-D ships was FS-172 which was launched in early 1944 from the Higgins Industries shipyard at New Orleans, Louisanna. It was about 180 feet (54 metres) long with a beam of about 33 (10 metres) and a draft of 10 feet (3 metres). The new ship was built of steel with a gross tonnage of 573 tons. It was powered by two 500hp diesel engines turning twin screws. Many references state that the engines were General Electric but I think that they were actually General Motors diesel engines. The engines were probably General Motors Model 6-278A V6 engines, with a serial number range of 15901 to 16451 inclusive used. Speed was 13 knots.

Figure 22 - The stern of two similar ships, FS-525 and FS-291

It appears that this class of ship had about 24 crew. This consisted of six officers in the superstructure on the Main Deck, 12 crew members on the First or Platform Deck aft of the Engine Room and six crew members forward

in the forecastle (used during World War II for the gun crew). Most people have probably seen a ship like this as in the famous movie, "Mister Roberts" (which starred James Cagney, Henry Fonda and Jack Lemmon) was set on a ship almost identical to the FS-172.

FS-172 was commissioned on 19 May 1944 and assigned to the South West Pacific area. Most of the FS ships were crewed by US Coast Guard personnel. The FS-172 also had a Coast Guard crew. It appears that it may have been used in the Australian area as a book called "Forgotten Fleet" (see references) says that James Francis Savage from Port Kembla (just south of Wollongong which is about 80 kilometres south of Sydney) joined the FS-172 as a crew member. Apparently he was on the ship in the 1945-46 period. As an aside, over 3,000 Australian men and boys served on US Army small ships during the War.

After the War was finished, the ship was still in use. Anyhow, in July 1946 the ship was being used to transport surplus US supplies and war records from Sydney to Guam (I was told but it may have been to Guam and then onto Manila). It is also possible that the ship was carrying all the records for the small ships operations in the South Pacific as they all appear to have been lost. The US Transportation Corps Museum apparently has very few items about the South West Pacific Area operations. It is implied in the book that Mr Savage was still on the ship on this voyage.

On 4 February 1969, John E. Cohill, SVD, the Catholic Bishop of Goroka in Papua New Guinea wrote a report about the sinking of this ship which he calls the *Boston*. This occurred when he was the Parish Priest based at Mugil, just north of Madang. He was about 39 in 1946. This is his full report:

> I was stationed at Mugil as the Parish priest in 1946 when the American ship, the *Boston*, went ashore on the coast near the village of Bonu, just some miles of the Mugil Plantation.
>
> The skipper of the Boston had miscalculated the set of the tide and hit the rocks on the shore line. This happened between 5:00 and 5:30 AM. A report was immediately brought to me by a native who was much perturbed and thought the Japs were making a landing to assault the village.
>
> When I arrived at the scene, the crew members and some of the Army personnel were trying to get ashore by jumping from rock to rock. They did not know where they were and were extremely frightened of the natives, who were watching them from behind the coconut trees. They were completely astonished when I approached them and told them I was an American, a Catholic priest and assured them they were in good hands.. By this time, the *Boston* was being knocked around. Some of the officers went ashore for some sort of equipment. The natives, of course, had come into the open upon my arrival. I had the Americans meet the natives and everyone seemed happy.
>
> The Natives wanted to go aboard the ship and take out all the supplies but Captain de Santo, the skipper, refused saying that he would not want to be responsible for the death of any native. The Captain declared the *Boston* abandoned. Then the party of eighteen men came to my house for whatever lunch I could give them.
>
> Immediately, I sent a runner to the Kiap in Madang with a message for the U.S.A. Authorities in Guam. In about two days a small boat arrived in the Mugil Harbour. It was the small skip, *Pius*, owned by the Catholic Mission in Alexishafen.
>
> The Americans were brought to the Government headquarters in Madang.
>
> Within a day an American plane, I think it was a B 25, landed with great difficulty in Madang, after having paid their respects to me by flying over my residence in Mugil.

I recall the plane was loaded with cigarettes. I was told American cigarettes were being smoked by Europeans and natives all over Madang.

I may be of interest to know some of U.S. Military personnel knew friends of mine from my China days with the Marines in Peking.

Some weeks later an American party from Manila visited the scene of the wreck, handed me a letter or commandation and told me no one was allowed to investigate the wreckage, which at the time was in ten fathoms of water.

I recall later of some gentleman wanted to explore the wreck, but the Government (Australian) refused permission. However, I cannot vouch for it.

Over the years, I have kept in contact with members of the crew and several officers, in particular Captain de Santo, a native of Boston.

As far as I remember, the *Boston* was about 500 tons, carrying office equipment and files from Sydney, Australia to Manila. Some years later a rumour reached me that this was a put up job, because some of the files were detrimental to some prominent U.S. personnel. However, I would not like to repeat this in print (sic).

The Americans were always grateful for the help I was able to give them and I am sure Mugil and the days they sent there will never be forgotten.

To add a religious note to this missive, I shall tell you a touching incident that came out of this wreck.

After the Americans came to my house, I suggested we have a Mass of Thanksgiving to God for their rescue. I naturally invited the Catholics among them to attend, at the same time extended the invitation to the Protestants, too. All to a man showed up at the services.

Among them was a fellow, Doris by name, the chief engineer, a really tough, big man, who had shipped all over the world. Religion made no impression upon him whatsoever; but he said he might just as well join the boys at Mass.

About seven years ago, I received a note from the Sister Matron of a San Francisco Hospital telling Mr. Doris had died. Before he died, to the a amazement of all the Sisters, nurses, and everyone else in the hospital, he called for a priest. When the priest arrived, he asked to be instructed hurriedly in the Catholic Faith and be baptised before he died.

Later the sister in charge asked Doris why he had made this unexpected decision. His only answer was that Mugil did it.

Evidently, there was something that took place within him at Mugil. Was it the kindness of the natives, perhaps of me. Was it the attendance at Mass? Anyway, God moved him some way, somehow. We shall never know in this life, but perhaps in Eternity.

I had many notes on the *Boston* episode; however about twelve years ago when I was staioned at Annaberg, Ramu, a fire destroyed my residence and with it all my belongings.

Sometime in the near future, I shall visit Madang and supply you with some interesting side lights of the *Boston* incident.

The U.S. Navy divers told me the *Boston* was projecting on a ocean ridge about ten fathoms below. However if the *Boston* were to topple over this

ridge it would fall many fathoms more. The divers also told me there were molested by "gropers". I believe that's what they called the fish.

As I write these lines, I cannot help but recall with the greatest delight the days I spent with the *Boston* crew. Our trips through the Mugil bush. The stories and simplicity of men who had tasted of the crude things of life. Their utter concern that no native would be inconvenienced by their presence among them. Then there was their exemplary behavious in their association with the natives.

Figure 23 - Gavin Grant and a porthole from the FS-172 - about 1994/5

About three months ago, I revisited Mugil and reminisced with the older natives the day on which the *Boston* was wrecked.

As can be seen from this firsthand report, the ship was certainly known to people as the *Boston*. It is not stated in Bishop Cohill's report, but it is said that the ship sank in a storm. Bishop Cohill died 16 June 1994 aged 87.

Gavin Grant emailed me:

> I used to run the dive shop at Madang Resort back in 1994/95 and the "USS Boston" was a great dive. No one ever seemed to question its name and it was thought of as a minesweeper.
>
> On one occasion I met an old guy at the dive site who was walking over the coral in bare feet! He remembered the day it came ashore. From what I remember he told me it came bow up onto the shore. When they went up to the ship, several soldiers on the bow who I think were just scared, started pointing guns at them and they ran back into the bushes. Later the situation pacified (maybe when that priest arrived?).
>
> They helped them secure a bow and stern line to the shore and he pointed to some trees which they used! The ship then went into reverse to try and bring the ship parallel to shore. The cable or rope got wrapped around the prop and caused all engines to stop. (On a dive I remembered seeing one of the prop shafts bent)

I have noticed that many of the FS ships also appear to carry the name of a US city or locality. I am not sure that this was an official name, perhaps it was a nickname. The name appeared in the format FS-xxx abcdef. Many that I have seen have had names beginning with B or C. Therefore, it is possible that the FS-172 was also known as FS-172 Boston, but there is no evidence apart from folklore from Papua New Guinea. Note that the skipper of the ship was from the US city of Boston, perhaps this is why the ship carried the name Boston, at least with the crew.

Volker Leidner lived in Madang from 1966 till 1970. He and some amateur diving friends (including John Dean - now resident in NZ) rediscovered the wreck of FS-172. As mentioned above, it is located north of Madang at a place called Cape Croislles. While there, Volker and others salvaged many items from the wreck. He and his wife and some friends found a spare prop on the deck between the front portside railing and the adjacent hold. They prepared well, taking spare air tanks and empty drums leading up to the recovery day. The prop was loosened (not sure how it was attached) and the drums attached to the prop. The spare tank's air was emptied into the drums and up went the prop. The plan was to use a small dingy with a 15 hp engine to tow the prop to a nearby beach but upon surfacing, Volker found his wife and a friend in the dingy going around in circles. The current was far too strong for the small dingy's engine and there was no way they were going to get it ashore.

Figure 24 - One of FS-172's clocks
Photo courtesy of Volker Leidner

They let the prop drift northwards for a while and eventually they sank it in four to six metres.. Volker covered the prop with some coral blocks to hide it. The idea was that they would come back and salvage it from its new location. However, Volker was transferred for work from Madang to Rabaul and then onto Noumea in New Caledonia. It is assumed that the prop is still located where they left it.

Volker and his wife recovered many other items from the wreck. As well as the bell which is shown above, he salvaged two clocks (see one below), a barometer, an oil lamp which was on the telegraph, a glass ink well and one Corning dinner plate.

In March 2005 I received an email from Fritz Herscheid. Fritz had a salvage company in New Guinea from 1967 to 1976 and one of the wrecks he worked on (in 1970) was the "Boston" before ultimately working the Hansa Bay (Japanese) wrecks. He originally told me that he was taken to the wreck by Volker Leidner but further investigations by

Figure 25 - The bell of FS-172 which led to its identification

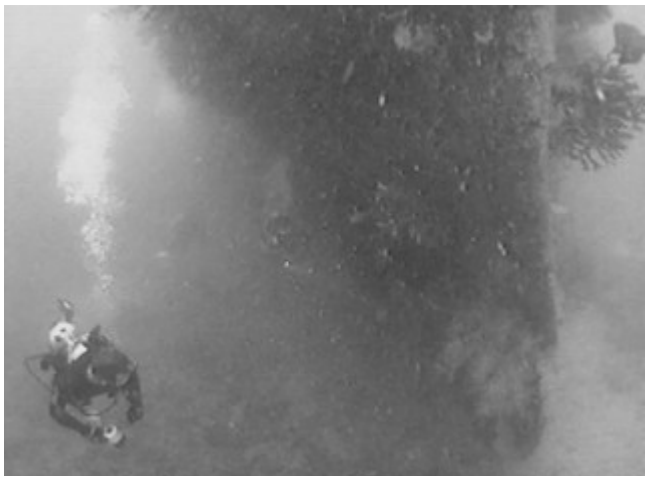

Figure 26 - The bow of FS-172

Volker (who could not remember him) revealed that an Austrian signboard painter called Rudy Caesar (who Volker reckons spent 80% of his time in his wetsuit - or at least his wetsuit pants) was the person who took Fritz to the wreck. Fritz salvaged one of the spare props (I assume this is a different one to the prop Volker attempted to salvage) as the ship's propellers were buried in coral and he figured that it was too much work. He also found one of two bells from the ship. This bell is the key to discovering the name of the wreck. Until Fritz emailed me he was of the opinion that the ship was the USS *Boston*. Once he read this page, he realised that the name of the ship had been staring him in the eyes for over 35 years. The bell that he salvaged contains the inscription "FP 172 1944" (see photo below). Until reading this page he "just didn't know what it meant!". This confirms that the ship was the FP-172 later changed to FS-172, a US Army ship rather than a US Navy ship.

Fritz also told me that Dave Barnet who visited the wreck some months after him took the two little "piss ant" propellers. He apparently swore that it took more explosives then it was worth.

The wheel was salvaged in the late 1960s. An earthquake in October 1970 caused the anchor chain to break in several spots, damage to the coral on and around the wreck as well as causing many doors to fall off their hinges and some previously jammed doors to open.

The wreck is about 45 minutes by mini-bus north of Jais Aben Resort (about 50 km) at Cape Croisilles and is normally done as a double dive with nearby reef dive (more about this in another article). The wreck is fully intact, with a maximum depth of 39 metres below the stern. It is normally done as a drift dive by starting off up current and drifting a short distance back onto the wreck itself before surfacing in the nearby shallows.

In the two times I have now dived FS-172, I saw sharks, barracudas, turtles and other big fish. The wreck has winches and cables on the deck. The bridge is at about 33 metres as is the bow which has some damage above the waterline. The port hull is also badly cracked amidships. The front hold contains filing cabinets, ink wells, pens, hole punchers and paper weights. As mentioned above, there used to be a spare prop (or props?) near this hold but it was lost during salvage in the late 1960s or in 1970. As stated above, an earthquake in October 1970 caused the anchor chain to break in several spots, damage to the coral on and around the wreck as well as causing many doors to fall off their hinges and some previously jammed doors to open. This damage can still be seen. The anchor is alongside the wreck. It has very nice growth on it.

Figure 27 - Inside a hold of FS-172

The second hold has some other objects. I am not sure exactly what they were, but they looked like whitegoods. That is, they might have been refrigerators or freezers as they had electric motors and a large cabinet. Unable to spend too long looking at them, I could not exactly make out what they might be.

From here I went into the engine room before going into the area under the bridge. This has numerous cabins and corridors that can be examined. I then went though the bridge before finishing off the dive on the wreck by spending a minute or two on the top of the bridge.

It is about a 40 metre swim to the reef. I did 23 minutes on the wreck which entailed a five minute decompression at three metres. In fact, we ended up spending 20 minutes on the reef and found it quite an enjoyable section of reef.

This is a very enjoyable wreck dive, worth doing a number of times. However, its distance up the coast makes it a bit hard to do more than once on a trip.

Dives:

- 16 February 1995
- 20 October 1996

References:

- Report dated 4 February 1969 by Bishop John Cohill
- Various e-mails dated September and October 2004 from Volker Leidner, New Caledonia
- Various e-mails dated March 2005 from Fritz Herschied
- Conversations with Charlie Edmonds in 1995 and 1997, Manager, Jais Aben Resort
- http://www.coltoncompany.com/shipbldg/ussbldrs/wwii/boatbuilders/usarmy/cargoships.htm
- http://www.uscg.mil/hq/g-cp/history/FS_Vessels.html
- http://www.navsource.org/archives/09/14idx.htm
- Email from Gavin Grant

Fujikawa Maru

On your dive trip to Chuuk Lagoon, it is almost certain that the first wreck you will dive is the *Fujikawa Maru*. This ship is very easy to find, located as it is between Eten and Uman Islands and sitting upright with the rear mast sticking out of the water. This is also the most popular wreck for night dives.

Figure 28 – The *Fujikawa Maru* before the war

The *Fujikawa Maru* was built as a passenger-cargo ship by Mitsubishi Heavy Industry at Nagasaki. It was launched on 15 April 1938 for Toyo Kaiun. Displacing 6,938 tons, it was 132.6 metres long and 17.8 metres wide. Unusually, there appears to be absolutely no mention of the ship in any edition of *Lloyds Register*.

Originally used on the Japan/North American run and then chartered to Mitsui Busan for use to South America and India. On 9 December 1940 it was taken over by the Imperial Japanese Navy and converted to an aircraft ferry. It was used all over the Pacific and on 12 September 1943 on a trip from Kwajalein to Chuuk, the *Fujikawa Maru* was torpedoed by the submarine USS *Permit*. Despite extensive damage, she arrived in Truk three days later. By January 1944 the vessel had been repaired in Japan (it is not clear how it got there when damaged) and these repairs can be seen today on the port side waterline near the funnel. Some other work (possibly to balance the repairs) can be seen on the starboard side.

On 17 February 1944, planes from USS *Bunker Hill* and *Monterey* attacked the *Fujikawa Maru* and in strike 3E-1 two torpedos were dropped and at about 1420, one hit just rear of the funnel. The ship did not sink immediately (it is reported that it did not sink until the next morning) and there is a report that it was hit by a 1000 lb bomb on the port quarter but this is not confirmed (there is no obvious damage).

The size of the *Fujikawa Maru* and the huge amount of items to see in the ship means that at least two dives are needed to cover the whole ship. The dive boats anchor on the bridge and this enables you to easily examine the front and rear on separate dives.

On your first dive head to the bow. The huge gun is engraved (RC [?] 6 In. B. B. No12469. 1899) and sits right above the forecastle and aims out to the starboard quarter. There is a bow telegraph on the port side of the bow

Figure 29 – Kelly Jandik with the bow telegraph

itself. The anchor chains hang down and make great photo opportunities as they are covered in soft and hard corals.

Hold one has drums on the 'tween deck level, full propeller blades, wing tanks, coils of wire, one torpedo ('tween deck port side - eroded at the prop end), tail sections of fighters, engine cowlings, machine guns, wings and shells (for the bow gun and another size - in boxes). On the bottom of the hold there are at least two large water tanks (box shaped). On top of one of these tanks there is an outboard motor lying over a plane tyre, more shells, plane propeller blades, wings (including some tail wings), drums, a radial plane engine and some small arm munitions (bullets).

Figure 30 – One of the Zero fighters

Hold two is even more interesting, with several Zero fighter aircraft to be found inside. These are in separate parts, mostly lying on top of 200 litre drums, with fuselages, full wing sections, tails, engines, full props and other pieces stored apart from each other. There are probably five planes to be found, composed of two, possibly three, different types. I think that the planes are mostly "Zeros", with one "Val" tail section and a different cockpit section which I have not been able to identify yet. I do not believe that any are "Judys" as stated in some books on the Chuuk Lagoon wrecks. At least three still have some gauges in the dashboards and the joysticks move. One plane is upside down and all that can be seen is the bottom of the wing. This has one of the wheel doors open and the tyre is visible. Most of the planes have their wingtips folded (they are carrier aircraft). There are a large number of spares in this hold, including engines, dozens of propeller blades and some wings. More engines are found lower down in the hold as well as drums.

The third hold has drums inside and a lot of wood. It is very dark and only worth a cursory glance. On the top 'tween deck there are two engine cowlings, one of which is broken in half, as well as more drums. You can enter the bridge from the 'tween deck through a door. This leads to a couple of rooms (some saki bottles here) and then into the engine room through another door.

The engine room can be entered from here, the skylights or as detailed above and it is an excellent exploration. The multi-level catwalks are extremely interesting and the engine (together with a spare piston) can give you a top value dive. You can explore around and under the engine but the best bits will probably require a guide. The engine room is quite large and open. The engine is a six cylinder diesel, with the cylinders in two lots of three. Under the main engine level at the front (access via stairs on starboard side) there is a large telegraph indicator so that the engine crew could adjust the speed of the ship as required by the bridge. Next to here there is a large electrical board and then a wooden telephone box (used so that the crew can hear over the engine noise). From here, go back to the stairs, pass them and see the fuel tanks on the left. Go right around the engine and back up the port side. Here you will find the ship's machine room. Inside there are a plethora of machines and items. There are vices, lathes, drills, etc and forward of the room there is a spare parts room. Inside there are lights, fans and other parts. Return to the top of the engine via the same set of stairs you came down.

To the rear of the bridge area is another hold (four) but it is empty. In between the fourth and fifth holds there is a huge hole on the starboard side where the the torpedo struck. The hole is about five metres across and three or four metres high. Most of the hole is below the sand level. This enabled the water to enter into both holds, causing the damage that eventually sank the *Fujikawa Maru*. Today you can swim through these holds and a good dive is to exit the ship out the hold and swim to the stern to examine the prop. It is about 34 metres deep here and after a quick look (remember, this is probably your second dive on the wreck due to its size). From here, ascend to the stern deck and have a look inside the deck house where there are ropes and blocks and tackles. The stern gun is also a very impressive sight, covered in beautiful soft corals.

Figure 31 - Hold One of the *Fujikawa Maru*

The fifth hold contains an outboard motor and the between decks includes a compressor with ten storage cylinders. This is a giant fire extinguisher for the engine, the CO_2 piped into the engine in case of fire. There is also galley equipment (kettles, rice bowls, bottles, plates etc) on the first between deck.

The bridge area has plenty to see. From the stern, enter on the main deck one of the doors. On the port side there are some toilets on your left, then two large baths and then the bridge. Above here is the bridge area. It is extremely open and easily explored. As well as the normal parts of a ship, there are medicine bottles, beer and liquor bottles as well as the galley which has a huge stove. There are also toilets and urinals. There are many artefacts inside this area. On the top of the bridge, the funnel is listing badly to starboard (I am sure that it was upright in 1994) and in very poor condition.

On the port side of the main deck in front of the bridge there is a plaque to the loss of the *Fujikawa Maru* and the wrecks of Chuuk Lagoon. It reads as follows:

Fujikawa Maru
Sunk February 17, 1944 during US Navy's "Operation Hailstone".
This plaque, placed February, 1994 on the 50th Anniversary of this action,
is dedicated to the preservation of and respect for the remaining ships,
aircraft and artifacts as a heritage for the people of Truk Lagoon

For a dive of 46 minutes, exploring the prop, deeper parts of the holds, will require about three minutes of decompression at three metres.

The *Fujikawa Maru* is probably the most beautiful wreck in Chuuk Lagoon. Together with the *Shinkoku Maru* it is the most covered with hard and soft corals. The whole wreck is totally covered in red, crimson, yellow, green, white, pink and other colour soft and hard corals. It is truely an amazing sight to see, far better than any natural coarl reef I have seen in the Pacific.

This is really an excellent dive site, worth at least two dives. If you get a chance, try a night dive on the *Fujikawa Maru* when the colours are even more prominent.

Dives:

- 15 November 1991
- 15 November 1991 (night)
- 16 February 1994
- 22 February 1994
- 5 November 1997

- 15 November 1997
- 4 September 2004

References:

- *Hailstorm over Truk Lagoon* by Klaus Lindeman
- *WII Wrecks of the Kwajalein and Truk Lagoon* by Dan E. Bailey

IJN *Fumitsuki*

The Imperial Japanese Navy ship *Fumitsuki*, a Mutsuki class destroyer, was planned in 1923 and built during 1925. She was launched on 16 February 1926 from the Fujinagata Zosen shipyard at Osaka, although then she was simply known as "No 29". She was completed on 3 July 1926. The name *Fumitsuki* did not come until 1928 (alternative spellings are *Fumizuki* and *Humiduki*). The new ship originally displaced 1,772 tons and was 103.3 metres (338.7 feet) long and 9.2 metres (30 feet) wide. She was powered by four oil fuelled Kampon boilers which supplied steam to two Parsons geared turbines. The resulting 38,500 shaft horsepower propelled the ship at 33.5 knots fully loaded and 37.5 knots when lightened considerably. The two props are three bladed and high pitched.

The new ship was quite well armed, with four 45 calibre guns, two 7.7mm guns, two by three torpedo launchers, 16 mines and 18 depth chargers. However, in 1941-42 the *Fumitsuki* was refitted and many changes were made. The displacement was increased to 1,913 tons, the aft torpedo launchers removed, mines removed, all guns removed and in place two 50 calibre guns and ten 25mm anti-aircraft guns installed. An additional 18 depth charges were carried and four throwers installed. As would be expected, maximum speed dropped to 34 knots.

As part of the 5th Destroyer Flotilla, the *Fumitsuki* saw service in the Solomon Islands in 1942-43, mostly around Guadalcanal. Many of her sisterships were also involved in this action and many lost. In fact, none of the 12 Mutsuki class destroyers lasted to the end of the War. After Guadalcanal, the ship was stationed in Rabaul, Papua New Guinea. In March 1943 the *Fumitsuki* was attacked and damaged by American planes while travelling from Finschhafen to Kavieng (New Ireland) and on 3 April 1943 was again attacked and damaged, again while on her way to Kavieng. One of the boilers was flooded after a near miss opened up the hull.

On 5 and 6 October 1943, the *Fumitsuki* was involved in the evacuation of Guadalcanal and got caught in a fight with US destroyers. Her group withdrew but the other ships in the Japanese fleet remained and lost. On 9 October 1943 while on her way to Rabaul and Kavieng (surely a hex destination for the *Fumitsuki*), she was damaged again by US planes. On 4 January 1944 the *Fumitsuki* was attacked by planes from the USS *Bunker Hill* and USS *Monterey*.

The *Fumitsuki* was definitely destined for disaster as on 31 January 1944 she was again attacked and damaged (at least the fourth time in 10 months) by Consolidated Vultee B-24 *Liberator* bombers while moored in Rabaul. This damage was severe but she was still able to proceed under her own power, as escort for a convoy, to Chuuk for repairs. The convoy arrived in Chuuk on 6 February 1944. Repairs apparently began almost immediately, with boilers, machinery and other items disassembled. Most ammunition was also removed. The *Fumitsuki* was anchored about half way between the northern points of Dublon and Fefan Islands, near the *Kiyozumi Maru* and *Kansho Maru*.

On the morning of 17 February 1944, the first photos taken during *Operation Hailstone* (the attack on Chuuk Lagoon) show the *Fumitsuki* lying as described in the preceding paragraph. After the first wave of American aircraft pummelled the Chuuk fleet, the *Fumitsuki* made urgent repairs to the one boiler and turbine available and made off to the north-west using one prop. At about 1030 hours she was attacked by planes and a near-miss fell adjacent to the port of the aft engine room. This apparently had a delay fuse and it exploded under the ship causing a deal of damage to the hull. The only fully assembled engine was now out of service.

The captain dropped anchor and the crew attempted to make urgent repairs to the leaking hull. A tug (or perhaps the destroyer IJN *Matsukaze*) came to try to move the *Fumitsuki* to Dublon but the ship was low in the water, her anchor still out (there was no power to pull it in) and the wind was against her. This was futile and the crew abandoned ship some time

after midnight. At about 0530 hours on 18 February 1944, the *Fumitsuki* sank stern first. She was located to the north-west of Fefan Island and west of the southern end of Moen Island.

The wreck of the *Fumitsuki* was found in April 1987 by Tomoyuki Yoshimura and Blue Lagoon Dive Shop using Mr Yoshimura's research (war reports and talking to survivors, including the captain).

Today the wreck of the *Fumitsuki* lies on a sandy bottom at a maximum depth of 36 metres. The wreck is intact but is not really very large. As such, it does not sit high above the bottom. The wreck has a list of 15° or so to port. The superstructure is about 30 metres, the starboard side about 31 metres and the port side a bit deeper at 33 metres. Therefore, this wreck must be done as a first dive as there are no shallow bits.

The first thing you notice as you descend to the wreck is the compact size of the ship. It is narrow, very narrow (less than 10 metres). Starting at the stern, a description of the wreck is as follows. Of the two props, the starboard shows parts of all three blades and the port one only has one blade showing, the rest is buried in the sand. There is very obvious damage to the starboard side of the stern as well as the port side, although the reports state that the bomb near-miss was on the port side. Perhaps this damage is from the stern hitting the bottom when she sank. There is also a hole on the port side from the bomb explosion and damage across the deck. There are depth charges and launchers just back a bit from the stern.

In front of here there are two guns platforms. They originally were both mounted by guns but the rear-most one was removed, presumably in the refit. The remaining gun appears to be identical to the bow gun. In front of the platforms is where the second set of torpedo launchers was mounted. These were removed in the refit but you can see where they were located as the railway tracks used to move the torpedoes across the deck remain visible. All that remains in this spot, apart from the tracks, is empty deck space.

The rear funnel is forward of here and the first section of superstructure. Behind the funnel is a search light platform and in between the funnels there are two machine guns (orginally a heavy gun). The forward funnel has fallen over and you can look into the engine room and see two of the four boilers. Alongside the funnel area you can see the apparatus that housed the torpedoes for the forward torpedo launcher (more about this later). The entire bridge area is destroyed, not as one would imagine from a bomb, but just through erosion over the years. This happened in 1988. There is some china in this area as well as some gas masks.

In front of the bridge is the only remaining torpedo launcher. It looks like three huge pipes with a steel wall at one end. The pipes held the torpedoes and the "wall" was a shield for the operators. The launcher could hold three torpedoes, presumably they all had to be loaded facing the shield but this may not have been the case. The launcher was pivoted in the middle and it rotated to port or starboard so that it could fire. The torpedoes were loaded from the rear of the ship.

On the same level as the torpedo launcher is the forecastle. This can be accessed via either of two doors loacated on each side of the ship. The room is quite open and has a wheel apparatus on the starboard side near the door. There are some hatchways leading to the lower level of the forecastle. You can drop down there but it is very cramped.

Above and i front of the torpedo launcher is the bow. You can see the front gun platform here as well as the main gun. There are some (four I think) shell boxes here as well as some loose shells and free cordite.

The bow is quite interesting. As well as seeing the anchor chain from the starboard side streaming out from the wreck, the shape of the bow, a large winch, the deck in the bow area and the hull for the first 10 or 15 metres is quite different from most other wrecks you will ever see, especially in Chuuk.

This is also an excellent wreck, a good introductory first dive of the day. Visibility is not as good as some other wrecks but at 15 to 20 metres, very good for what most divers are used

to back home. I spent about 28 minutes on the wreck and had to do seven minutes decompression at three metres.

Dives:

- 6 November 1997

References:

- *Hailstorm over Truk Lagoon* by Klaus Lindemann
- *WII Wrecks of the Kwajalein and Truk Lagoons* by Dan E. Bailey

Gosei Maru

The *Gosei Maru* was launched in August 1937 from the Tsurumi Seitetsu Zosen KK (Tsurumi Iron Works Dockyard) at Yokohama for Koun Kisen K. K. Although owned by this company, the new ship was managed by Yamashita Kisen Kaisha. She was a coastal freighter of 1,931 tons gross, 82.3 metres (271.6 feet) long and 12.2 metres (40.0 feet) wide. Powered by a Tsurumi built coal powered steam engine, the *Gosei Maru* was not a particularly large ship.

I am unsure of her early life, but it could be assumed that she was used for a few years to transport cargo and/or passengers around Japan and the Pacific.

Once the war started, or perhaps even before, the ship was taken over by the Imperial Japanese Navy and used as a support ship for Japanese submarines. She was based with the Sixth Fleet. and was used to transport supplies for the submarines, things like torpedoes, depth charges and spare parts.

Figure 32 – The *Gosei Maru* being hit

On the morning of 17 February 1944, the *Gosei Maru* was lying at anchor on the eastern side of Uman Island in Chuuk Lagoon. The Lagoon had already been wracked by hundreds of American places over the past 24 hours as *Operation Hailstone* was unleashed on the Japanese fleet anchored in the lagoon. On 17 February, she was attacked by dive bombers. The photo above appears to show the *Gosei* under attack, perhaps a bomb exploding on the port side amidships. The ship faced into the easterly wind when at about 0918 hours aircraft of USS *Monterey* and USS *Bunker Hill* (Strike 3C) attacked the helpless ship. A torpedo bomber from the *Monterey* attacked the *Gosei Maru* (after two unsuccessful attempts by other planes) and scored a direct hit on the starboard side near hold one.

Today the *Gosei Maru* lies on a steep incline with the maximum depth of about 35 metres being under the bow (which is 31 metres). She has a very pronounced list and is almost totally over on her port side. The depth to the stern is only 2.5 metres. As such, it is a very easy wreck to find as it can easily be seen from the surface. Dive boats normally anchor or moor at the stern.

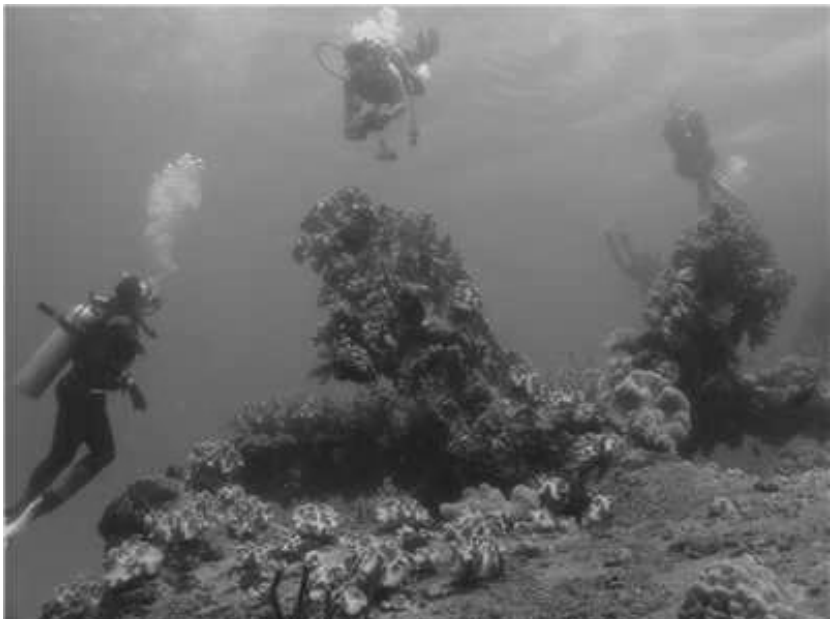

Figure 33 – The prop of the *Gosei Maru*

As you descend to the wreck the first thing you will see is the prop. It is four bladed and very

Figure 34 – The bow of the *Gosei Maru*

much photographed due to its shallow depth. Rather than look at it now, head straight to the bow area along the railing of the starboard side. As you approach amidships, if the visibility is not too bad you will see the torpedo hole that caused the sinking of the *Gosei Maru*. The torpedo hole is adjacent to hold one and this is the easiest way to enter this hold. The torpedo hole is very large, with the hull plates bent in dramatically from the explosion. This hold appears to be mostly empty, but there are many 44 gallon (200 litre) drums and some artillery shells. The hull behind the torpedo hole is extensively damaged, with a large ripple (wave is probably more accurate) running from the deck to the bottom of the hull.

Swim in through the torpedo hole and go to the bow. If you are a photographer, I especially recommend going a little off the wreck to look back. You can get a very good photo, with the mast hanging out over the sand. From here, head back along the wreck.

Behind here there is the bridge (situated forward rather than in the middle of the ship). When I first dived this wreck back in 1997, this could be explored easily and there were many toilets, baths and other things to be seen. However, it has now collapsed and it would be quite difficult to enter.

Hold two is straight behind the bridge area. This is the most interesting part of the wreck. It contains dozens of torpedoes. They are located all over the port side of the wreck (the bottom as you look at it) and are in two or three parts. Some of the torpedoes have exploded (more about this later) but others are still intact. There are the body sections, warheads and engines. They are everywhere, scattered up and down, lying port and starboard. Look carefully and you will see at least one of each of the parts. The torpedoes have contra rotating props, that is, two propellers that run in opposite directions, thus making the torpedo run far straighter than a single prop torpedo. You will also see oxygen cylinders which provided the propulsion for the torpedo.

Figure 35 – A torpedo inside Hold Two – note the contra-rotating props

Some of the torpedoes exploded in the early 1970s, not from the warheads exploding, but by the compressed air or oxygen in cylinders inside the bodies exploding. In 1976 it was decided to explode the remaining bodies for safety reasons. Despite this, the hold is still very interesting. It also contains other items, including

bottles and loads of what appears to be gravel.

Hold three is straight behind hold two and is connected. It is empty as far as I remember except for some more gravel (which also extends outside both holds). Behind here is the kingpost (I think) and there is what looks like a very small hold here. However, I am pretty sure that this is in fact the coal bunker.

You can swim into the engine room from hold three and the coal bunker via a door. There are other access points via the funnel and skylights. The engine room is quite compact and very dark but you can still explore around and under the engine itself. The boiler firebox door is open and you can see how the coal would have been shovelled into the firebox from the coal bunker. There are also many steam pipes and valves as well as large wheels for huge valves.

As mentioned above, you can enter/exit via the skylights. This brings you out near the stern. The stern (for this is where the engine is located), has many levels to be explored, all open as the timber decking and some of the upper hull has disappeared, either eaten or rusted away depending on the material. There are toilets, baths and urinals within. As you exit the compartments, you can see the almost fully intact funnel still in place.

The stern of the ship has some interesting artefacts on it and you can get some really good photographs of these items.

Last but not least, now you can take time to examine the large four bladed prop. If you are a photographer, spend the rest of the dive taking photographs of the prop from under, behind and above. You may even get a prize winning shot.

While this is one of the smallest wrecks in Chuuk Lagoon, it is still worth diving. Usually done as a second dive, although you may do it as a first dive. The visibility here is not too bad, getting up to 30 metres at time, but more likely 15 to 20 metres. Like all Chuuk Lagoon wrecks, the water temperature is about 28 to 30 degrees Celsius. This wreck is well worth doing. Another great Chuuk wreck.

Dives:

- 11 November 1997
- 4 September 2004

References:

- *Hailstorm over Truk Lagoon* by Klaus Lindemann
- *WII Wrecks of the Kwajalein and Truk Lagoons* by Dan E. Bailey
- *26 Principal Shipwrecks of Truk Lagoon* by Capt. Lance Higgs
- *Lloyds Register* 1938-39, 1945-46

Grumman F6F-3 *Hellcat* - Serial Number 25839

In the late 1930s and right up to the start of World War II, the Japanese had far superior aircraft to the United States and the Allies. This meant that their initial actions overpowered the Allies, with the Zeros and other aircraft outflying the American, Australian and New Zealand planes. However, it was not long before the Americans started turning out aircraft that equalled or even out performed the Japanese planes.

Based on the Grumman F4F *Wildcat*, a new plane was designed by the Grumman Aircraft Engineering Corporation in early 1942 and the prototype first plane flew in August 1942. This was the Grumman F6F *Hellcat* and by the end of 1944 over 8,500 had been built. A total of 12,272 were built in all. The *Hellcat* had a wingspan of 13.05 metres, length of 10.2 metres and typically weighed 6,000 kilograms fully loaded. It was powered by a 2,000 hp (after January 1944 2,200 hp) Pratt & Whitney R-2800-10 (after 1944 R-2800-10 W) Double Wasp 18 cylinder two-row radial engine with a three blade Hamilton Standard Hydromatic propeller. Maximum speed was over 640 km/h with a range of 2,880 kilometres. Armament was six 0.5 inch Browning machine guns with 400 rounds each. There were underwing attachments for six rockets and centre pylons for 2,000 lb of bombs. The plane was aluminium with fabric-covered flaps and tail.

On 26 June 1943 a Grumman F6F-3 *Hellcat*, serial number 25389, manufacturer number A553, was delivered to the US Marines from the Grumman factory at Bethpage, Long Island, New York. It was one of 4,402 planes of this version. On 10 July 1943 the plane was delivered to the SD Pac and on 14 July 1943 it arrived at Noumea, New Caledonia. On 13 September 1943 the plane was allocated to VF 38 based at Fighter One, Guadalcanal, British Solomon Islands.

Richard "Dick" Moore grew up in La Grande, Oregon. He did a civil pilot's course at East Oregon State College and joined the US Naval Aviator Corps on 19 November 1941. He trained at Corpus Christi in Texas and did his carrier landing at Chicago, Illinois. He then spent three months at Alameda, California before serving on a carrier in Attu, Alaska and in August 1943 he moved to the South Pacific.

On 29 January 1943, Lt Jnr Dick Moore was shot down over the Munda area of the Solomon Islands and on 31 January 1943 he shot down three Mitsubishi A6M Zeke "Zero" fighters, two bi-planes and crashed off Kolombangara Island. He was rescued by natives and was awarded the Medal of Honour for this feat (the kills, not the crash).

Sometime after this, the Grumman F5F-3 *Hellcat* serial 25389 was allocated to Lt Dick Moore. He named it "Betsy II" after his wife, Betty.

At 1315 on 16 September 1943, Fighter Squadron VF38 based at Fighter One on Guadalcanal, left Munda airfield for Ballale Island. Ballale Island is between Bougainville in Papua New Guinea and the Shortland Islands. The planes were over the target area 1145 to 1435. The planes were to provide low level cover for 24 Grumman TBF *Avenger* torpedo bombers and 31 Douglas SBD *Dauntless* dive bombers. There were 13 *Hellcats* of VF38, 11 *Hellcats* of VF40, other *Hellcats*, Chance Vought F4U *Corsairs*, Curtiss P40 *Warhawks* and Lockheed P-38 *Lightnings*, a total of 71 support planes in all.

They ran into 40 to 50 Japanese planes, mostly Zeros but with also some Kawasaki Ki-61 Hien "Tony" fighters. There was also anti-aircraft fire up to 12,000 to 13,000 feet from the Shortland and Bougainville Islands. The planes fought a fierce battle from 13,000 feet right down to 400 feet.

During the battle, three Zeros were shot down with one probable and one possible kill. Three *Hellcats* were shot down and one *Hellcat* flown by Lt Wayne Riley, USNR, was missing in action. Another made it to Munda damaged.

Lt Moore was flying when he was attacked by what he at first thought was a Zero. However, it soon became obvious to him that it was in fact a F4U *Corsair*. The pilot of this plane was Major Gregory "Pappy" Boyington, one of the highest scoring aces of World War II.

Boyington was a member of the famous "Flying Tigers" who flew in the China area of the War (remember the John Wayne movie?). He later commanded a group in the Pacific which gained the name "Black Sheep", later made famous in the TV show "Baa Baa Black Sheep". Perhaps this is how he became an Ace!

Anyway, Boyington attacked at a distance of 100 yards and hit the *Hellcat* at least twice, one behind the cockpit and once high on the port side of the engine (there appears to be two obvious hits on the plane, one at the front bottom of the tail and once behind the cockpit). The *Hellcat* sprung an oil leak (not from the oil tank as the armoured tank is intact). Moore fired a warning shot back at Boyington and this appears to have stopped the attack. Since the plane was definitely hit in the engine, it seems it was hit by at least three of Boyington's bullets.

The *Hellcat* was leaking oil and this caused smoke to come from the engine. The loss of oil was obviously going to eventually cause the engine to seize so Moore nursed his plane all the way from Bellale Island back to the area to the north-west of Gizo. When three kilometres south of Kolombangara Island in Blackett Strait, Moore landed his plane in the ocean, presumably after the engine seized or started to seize. Flaps fully down and in a full stall, this was a perfect landing. The time was 1530. Moore climbed onto the wing, inflated his life jacket and raft. The plane was reported as being about 100 feet from a reef. It was located between Blackett Strait and Vonavona Lagoon, between three small islets and near Queue Island.

Before Moore could get into his raft, a canoe with 15 natives arrived and they attempted to get him to get into their canoe. Another canoe arrived with 6 natives and a Private Nash from the US Army. Moore got into one of the canoes and was taken to an island where Lt Evans of the Australian Army was based (Evans also rescued President John F. Kennedy and his crew when his patrol boat was sunk).

Evans gave Moore dry clothes, a cup of tea and lime-ade. He sent Moore in a canoe to another island (time was now 1630) and at 0800 on the next morning, 17 September 1943, Moore arrived at Munda, about 20 kilometres away. By 1030 he was back at Fighter One on Guadalcanal.

Dick Moore also crashed in August 1945 near Japan but was rescued by a destroyer.

In 1985, Danny Kennedy, owner of Adventure Sports, found the wreck of the *Hellcat*. Today it lies in about 11 metres of water, in a cleared patch of coral. The plane faces south and appears to be fully intact. The starboard wing is mostly buried in coral. The flaps are fully down and the cockpit open. All the instruments appear to be still there and you can read the serial number of the plane quite easily.

When I dived it, we were asked to replace some 0.50 inch rounds stolen from the plane a week earlier by a group of Sydney divers. The ammunition magazines are open, the covers ripped off by divers over the years. As I indicated above, the plane has two obvious bullet holes, one in the front of the tail and one behind the cockpit. The engine cover is missing and you can see the oil tank, with its armoured cover providing protection from the front. There does not appear to be any hole in the tank so it would appear an oil line was hit.

If you remove your tank and BCD, you can sit in the plane's cockpit.

This dive is down normally as a third dive using the remains of your second tank. A very nice little dive, worth 20 minutes or so. Visibility was about 15 metres or so.

Dives:

- 18 October 2001

References:

- *Allied Fighters of World War II* by Bill Gunston
- *Jane's Fighting Aircraft of World War II*

- *Albany* (Oregon) *Democrat Herald* - Family and Leisure Section - 23 July 2000, pages D1 and D4
- Combat Report by Lt Jg W. G. Keil (?), Acting CI Officer, VF38, 17 September 1943
- Note to Danny Kennedy dated 5 January 1991 by Mike Biddford (?), El vendreil, Spain
- Aircraft History Card for serial number 25389
- Book (?) *In the Wake of USS Jenkins* - by le Blanc
- War Diary of VMF-112 for January 1943, Hist Div # 23220
- *American Warplanes of World War II* edited by David Donald

Heian Maru

The largest wreck in Chuuk Lagoon is the *Heian Maru*. This was not always correct as the largest vessel sunk in *Operation Hailstone* was the *Tonan Maru No 3* which was 535 feet long and displaced 19,209 tons. However, the *Tonan Maru* was salvaged after the war by a Japanese company. It was towed to Japan, rebuilt and on 8 October 1951 recommissioned as the *Tonan Maru*.

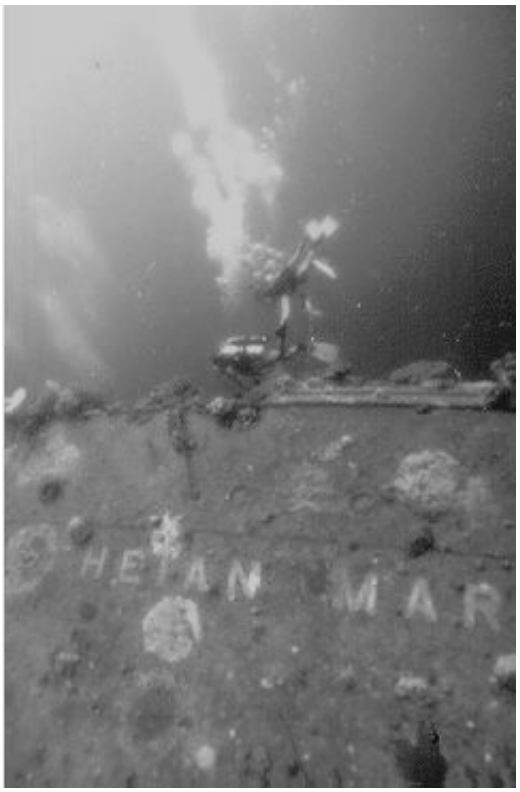

Figure 36 - The bow of the *Heian Maru* has the name clearly visible - Photo by the late Noel Hitchins

The *Heian Maru* was launched on 16 April 1930 and went into service on 24 November 1930. Built by Osaka Iron Works, Osaka Japan, for Nippon Yusen KK, the *Heian Maru* was 155 metres long (511.6 feet), 20 metres (66 feet) wide and had a gross tonnage of 11,616 tons. Powered by two eight cylinder Burmeister and Wain diesel motors giving a total of 13,404 hp, she was capable of a maximum of 18.4 knots. The ship was a passenger and cargo vessel and her maiden voyage was from Hong Kong to Seattle in the US. From 1935 she ran on the Kobe to Seattle route. In August 1941 the *Heian* was taken over by the Japanese Imperial Navy and in the Yokohama shipyards was converted to a submarine tender. After October 1941 she was a tender to 12 submarines and was based in Kwajalein. These submarines sank one carrier (USS *Wasp*), one cruiser, two destroyers, one submarine and damaging a carrier and a battleship. Of the 12 subs, only two remained by the end of 1943.

During *Operation Hailstone*, the *Heian Maru* was sunk by a torpedo on 18 February 1944. It is reported that one the first day the ship was attacked during the third strike by Grumman F6F *Hellcats* at 1010. This appears to have started a fire in the vessel but there is no apparent damage from this attack. This fire raged out of control and the crew abandoned ship. The next day, Grumman *Avenger*s from USS *Bunker Hill* attacked the still burning ship and one hit her on the port side with a torpedo amidships in the engine room. The *Heian Maru* sank soon after ending up on her port side.

Figure 37 – Heinz Bendinger deep inside one of the holds

The wreck is located in 33 metres of water, an excellent depth for diving. The hull is about 12 metres down and is, as one would expect, an enormous wreck. The dive boats generally anchor in the bridge area. As you drop over

the side of the hull you can really appreciate the size of the wreck. The masts lie down towards the sand and there are a number of kingposts. You can swim under these as you explore the (former) top of the ship.

I have now done three dives on the *Heian Marubb* but as it is so big, I still cannot report first hand on all it has to offer. However, from what I have seen, it is worth many dives, a minimum of two if you can.

Starting from the bow you encounter a large gun turret but the gun is nowhere in sight (perhaps it fell off as the ship sank and is now under the wreck?). On the top of the bow the anchor is still in place while the port anchor chain runs out below. Under the bow there is the ship's mooring buoy and one of its three huge anchors (the other two are located off holds two and four). On the starboard side of the bow the ship's name can still be seen in both English and Japanese characters. Inside the forecastle there are a number of large shells, presumably for the missing bow gun.

The second hold has covers in place and the access is through narrow, long slits. Inside the hold there are a large number of torpedoes, mostly bodies and engines but a couple of warheads> The rudders and props make an interesting sight as the stand up out of the bottom (port side) of the hold. This hold may have been a workshop for the torpedoes.

Figure 38 – Four (maybe six) periscopes

Behind this hold is the bridge area. You can drop onto the main promenade deck compaignway from the port side and here you can see four periscopes which are lying on the wall (floor to you). They are about 10 metres long and are thicker at one end than the other. There are two types, ones with a very small top which were attack periscopes and larger topped ones that were for normal or night work. Most have handles exactly like you see in movies, both at the bottom and towards the middle.

After swimming along this passageway you can drop down a level (actually the same level but further towards the centre of the ship) and there are five more pericsopes here. You can exit out the back of the superstructure from this passageway.

After swimming along this deck you can exit out and look at the funnel, engine room skylights and anti-aircraft mounts (the gun is apparently below on the sand). To the rear of this area is a kingpost and then hold number four which is covered. There are two gun barrels under this hold, perhaps one is the bow gun but what is the other? There is a mast just behind the hold, over a mast house. This can be explored. There is also another mooring buoy here on the sand.

At the stern there is another gun platform but no gun (is it the one under the hold?). The twin propellers are excellent photographic sites, with the upper starboard one missing its hub (opposite to what Klaus Lindemann says in his excellent book *Hailstorm Over Truk Lagoon*).

Once again, an excellent dive, waiting to be explored even further.

Dives:

- 16 February 1994
- 5 November 1997
- 13 November 1997
- 3 September 2004

References:

- *Hailstorm Over Truk Lagoon* by Klaus Lindemann
- *WWII Wrecks of the Kwajalein and Truk Lagoons* by Dan E. Bailey
- *Warships of the Imperial Japanese Navy, 1869 - 1945* by Hansgeorg Jentschura et al
- *Lloyds Register* 1931-32, 1945-46

MV *Henri Bonneaud*

In 1951 a vessel called MV *River City* was built for The Wanganui Shipping Co Ltd of Wellington, New Zealand by Schps De Hoop NV in Lobith, Holland. The vessel was 45.85 metres long with a breadth of 7.48 metres and a gross weight of 397 tons and was powered by a single six cylinder diesel engine driving a single prop. For the next 13 years or so, the *River City* plied its trade around the New Zealand coastline till 1964 when it was sold to the Holm Shipping Co Ltd, also of Wellington. The *River City* was renamed MV *Holmbrae* and it was planned to be used on the South Island to Plymouth route. The Holm Shipping Co ran a series of coastal traders in New Zealand. They did not keep the vessel for long as it proved to be unsuitable for a shallow river port like Wanganui and the *Holmbrae* was too small for the planned service (one report says it was too big to use the main port it was planned to use).

In 1966 the *Holmbrae* was purchased by Captain A. R. Rudsen and renamed MV *Paulmarkson* (sic) (also reported as *Paul Markson*) and moved to Port Vila, Vanuatu. For the next three years or so it was used around the islands of Vanuatu until sometime in 1969 when it was sold to Comptoirs Francais des Nouvelles-Hebrides, also of Port Vila and renamed MV *Henri Bonneaud*. The *Bonneaud* continued to trade around the many islands of Vanuatu for more than 16 years. The vessel was last registered in 1985-86 and about this time was unable to pass survey.

In late 1989 the proprietor of Aquamarine Diving, Kevin Green, purchased the *Henri Bonneaud*. On 19 December 1989, he sank the ship only a few hundred metres from the main beach of Bokissa Island Resort where he was running the dive operation. More by luck than design, the scuttled wreck landed on its keel in 40 to 45 metres of water.

After more than six years, the wreck has gained a considerable amount of marine growth and the resultant fishlife. On the two times I have dived it, there has been 30 and 45 metres visibility.

Kevin usually anchors near the bridge area and after reaching the bottom you can drop over the (shallower) starboard side and swim about 20 metres off the wreck. Looking back at the ship you can see the whole wreck laid out in front of you. From here, swim along the starboard hull to the bow. There are some very nice gorgonias and sponges that make ideal photos. Swim out 20 metres in front of the bow onto the sand. This view of the ship, seemingly steaming towards you, is a sight that will stay with you for a long while. Ascend to the deck of the bow and examine the front crew cabins which you can enter through two separate doors. It is a bit tight for more than two divers at a time, but check out the bunks and galley.

Drop into the forward hold and swim towards the stern. Below the bridge in the rear hold, you can easily access the engine room, although it is a bit cramped finding your way around the huge diesel motor. The engine is intact, with gauges, valves and other equipment still visible. A series of ladders lead up out of the engine room and makes a different, if somewhat tight, way to return to the outside of the vessel. The bridge and crew quarters can be seen in this area before you swim out one of the many doors or windows.

If you have time, drop over the stern where you can see the propeller, already covered with dozens of feather stars. This makes a colourful and interesting photograph.

The upper levels can be explored as you start your ascent back to the anchor line which should be easily visible.

Due to the nature of the wreck, this really is multi-level diving and a dive computer will come in very handy. You do not need a guide for this dive.

An excellent dive, one worth doing even though you might have to give up a dive on the *Coolidge*.

References:

- *Lloyds Register* 1952-53, 1964-65, 1966-67, 1969-70, 1985-86
- *History of Holms Shipping*
- *Fair Winds and Rough Seas - The Story of the Holm Shipping Company* by Allan Kirk

Henry Leith

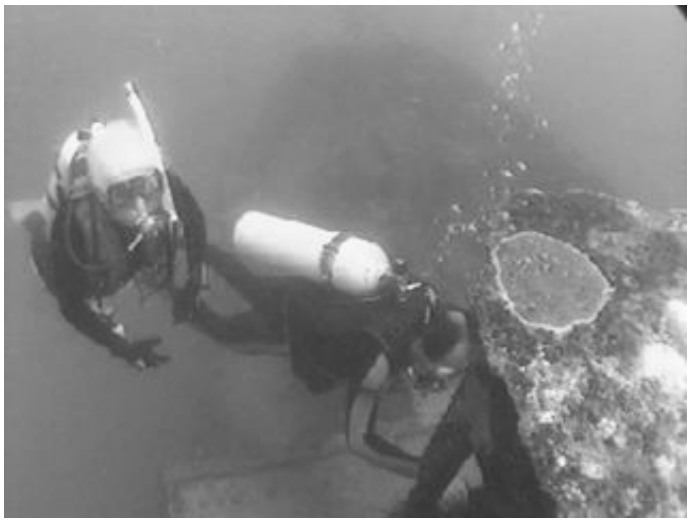

Figure 39 – Les Caterson and Tim Rigg above the bow of the *Henry Leith*

At the northern end of Nagada Harbour in Madang, Papua New Guinea, there are a couple of islands, the smallest of which is Wangat (or Wangad or Wonad) Island. This is located only metres inside the barrier reef. The island is very small, it only takes a few minutes to walk across it. Located off the south western corner of the island is the wreck of the *Henry Leith*. Originally a 32 metre long coastal freighter, I have not been able to find anything about this ship yet. All I know is that it was sailed from Sydney in 1969 for Lae (where it was to be used) and that it broke down and was towed to the Russell Islands by a Japanese boat. In the 1970s or 1980s it was purchased for one kina by Kevin Baldwin and scuttled by him and Bob Halstead as a dive site. It is perfectly placed in terms of depth and location.

Maximum depth on the wreck is about 20 metres on the sand under the stern. The deck is about 16 metres and it is 18 metres inside the three holds. The shallowest part is the bridge which is about 14 metres.

Starting from the bow you will see that it is a very square bow, with no rake at all. It is not too far to the bridge area and this area is very broken up from rust and by now (2005) may have collapsed totally. The other superstructure is also very rusted and may also be gone by now.

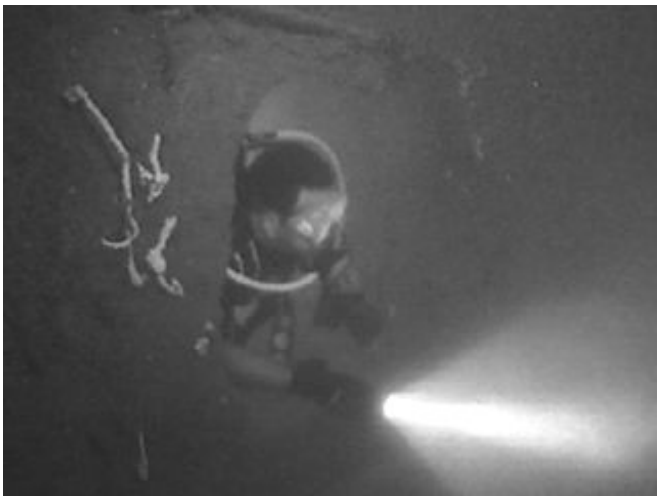

Figure 40 - Eddy Labour goes through a hatchway

As you swim along the deck or sides you will see that there are some extremely nice soft corals, sea whips, gorgonias, sponges and anemones all over the deck and hull. As well, the fishlife is quite good, with numerous firefish, coral trout, trevally, wrasses and triggerfish swimming in, over and around the wreck. At the stern, there are some excellent hard corals (only small) but the smaller fishlife is really prolific.

Under the stern you will see the rudder and the prop shaft hole. There is no prop, it was obviously removed prior to scuttling.

From here you can explore the inside of the wreck. There is a lot to see on the wreck, the holds and engine room. Since I am writing this many years after the event, I cannot remember the exact details of the inside, but you can enter the engine room from a number of spots, including the holds, the upper deck and from inside the superstructure. I cannot even remember if the engine was

still inside, although I assume that it was there. You can penetrate the wreck in safety, although commonsense must be used. A great second dive.

Reference:

- *The Dive Sites of Papua New Guinea* by Bob Halstead - page 104
- A phone call from ?? who was on the *Henry Leith* when it sailed from Sydney to Lae in 1969

Hino Maru No 2

The *Hino Maru* No 2 was launched on 16 September 1935 from the Mitsubishi Jukogyo KK (Mitsubishi Heavy Industries) at Kobe for Nippon Shokuen K. K. She was powered by a single six cylinder Mitsubishi diesel engine. A cargo ship, she entered service on 14 December 1935. The new ship was not real big, only 999 tons gross (later rated as 977 tons) and 61 metres (200.1 feet) long and almost 11 metres (35.1 feet) wide. It has many alternative names, including *One-Gun-Boat*, *Gun High Wreck* (both for obvious reasons that will be detailed later), *Dai-ni Hino Maru, Dai-Futa Hino Maru* and sometimes *Tenno Maru*. It is certainly not the *Tenno Maru* which is, in fact, the *Hikawa Maru* No 2. Dan Bailey in his book *WII Wrecks of the Kwajalein and Truk Lagoon* claims that the the Gun High Wreck is not the *Hino Maru* No 2 but he seems to contradict himself (see pages 143 verses 147-8).

The *Hino Maru* No 2 was used as a gunboat during the war but I do not have further details.

Figure 41 – The gun that gives the *Hino Maru* No 2 its common name

In any case, the ship appears to have been anchored on the western side of Uman Island in Chuuk Lagoon, a few hundred metres to the north of the *Sankisan Maru*, on 1 May 1944 during the second carrier raids (12 US aircraft carriers attacked over the two days of 30 April and 1 May 1944). It is reported that it was damaged by a 500lb bomb at about 1445 hours.

Today the wreck of the *Hino Maru* No 2 lies with the bow in less than three metres. The ship is very badly damaged, in fact, the most broken up of any of the wrecks I have dived on in Chuuk Lagoon. It is normally done as a snorkel and that is about all it is worth.

The dive boats anchor near the bow and the first thing you will see is the bow gun. This will give you a good idea why it was called the *Gun High Wreck*. This presents an excellent photographic opportunity.

Even this section of the wreck is utterly devastated. The anchor chain and winch are still recognisable and you can swim down into the forecastle area. Behind this there are the remains of hold one and hold two. There are bits of hull, some hold partitions, masts and other parts of the ship but it is a big mess.

This is about all there is to see. Again, do not give up a dive on another wreck but spend a few minutes to snorkel it on the way to the *Sankisan Maru*.

Snorkel:

- 15 November 1997
- 12 September 2004

References:

- *Hailstorm over Truk Lagoon* by Klaus Lindemann
- *WII Wrecks of the Kwajalein and Truk Lagoon* by Dan E. Bailey
- *Warships of the Imperial Japanese Navy, 1869 - 1945* by Hansgeorg Jentschura et al

- *Lloyds Register* 1936-37, 1945-46

Hirokawa Maru - Bonegi 1

Two of the vessels lost in the Battle of Guadalcanal in the Solomon Islands were the Japanese troop and supply ships *Hirokawa Maru* and *Kinugawa Maru*. Located 13 kilometres west of Honiara near the Bonegi Creek, the wrecks are more commonly known as *Bonegi 1* and *Bonegi 2* respectively. Both wrecks are only metres from the beach and are done as shore dives.

The *Hirokawa Maru* was built in 1940 by Kawasaki in Kobe for Kawasaki Kisen K.K. and was 6,872 tons. Its length was 479 feet and it was 62 feet wide. The ship was powered by two eight cylinder diesel engines driving twin props. The ship had a normal cruising speed of 16 knots with a maximum of 21 knots.

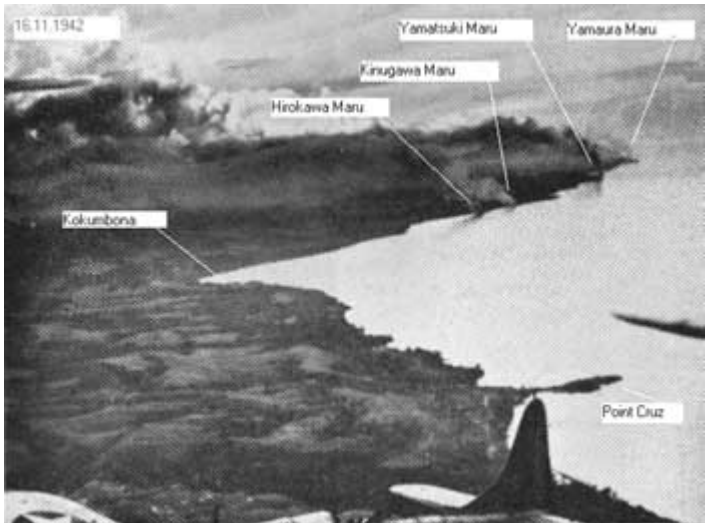

Figure 42 - This aerial photo taken the day after the *Hirokawa Maru* was wrecked clearly shows the wreck on fire Photo taken by Bob Gibson, see *Kinugawa Maru* page for details

It is assumed that the ship may have been used for her original purpose, but it is also possible that she was only ever intended to be used to support the upcoming Japanese expansion into the Pacific. In any case, the *Hirokawa Maru* ended up being used as a support vessel for the Guadalcanal theatre of the Pacific war. It is reported that the ship first arrived at Guadalcanal on 4 September 1942.

Some three months after the Americans (Marines, Navy, Air Force), Australians (Navy) and New Zealanders (Navy and Air Force) started their attack on Guadalcanal in an attempt to take back the Solomon Islands, the *Hirokawa Maru* was waiting near New Georgia in Papua New Guinea as part of a troop convoy. There were 11 transports and cargo ships and 12 escorting destroyers. The ships carried 10,000 troops, weapons and 10,000 tons of supplies. The convoy was sighted by a patrol plane at 0830 on 14 November 1942 about 150 miles from Guadalcanal.

Planes from Henderson Airfield on Guadalcanal and the USS *Enterprise* attacked the convoy, sinking seven of the tranports with another two damaged. The remaining four transports continued on towards Guadalcanal. At dawn on 15 November 1942, the four transports were found by the Americans to be on or near the beaches west of the now location of Honiara. At 0500 field guns from the 244th Coast Artillery Battalion opened fire from west of Lunga Point. Even though they were 20 kilometres away, they hit one ship which began to burn (this was most likely the *Hirokawa Maru*). The 3rd

Figure 43 – Anemone fish in the shallows

Defense Battalion's five inch batteries opened fire at 0545 and hit a second ship about 16 kilometres away. This ship also caught fire and listed to port. The destroyer USS *Meade* moved from Tulaghi and shelled the these two ships.

Planes from Henderson and the USS *Enterprise* attacked the two remaining ships. By noon, all four ships were on fire and sinking. Three were ashore and the fourth sank off shore.

Originally the ship was stranded right up on the reef but over bthe years it has broken up under the effects of storms, rust and some Australian salvage work (in the 1960s).

Nowadays, the shallower sections of the ship are pretty well broken up while the deeper parts are almost complete. The bow section is virtually nonexistent, only scattered remains exist. This section is about five metres deep with the main attraction being the fantastic coral and fishlife.

The middle and stern section of the *Hirokawa Maru* is lying on its port side and runs from 10 metres down to over 50 metres. It is far more intact and the two propeller shafts and rudder make a very interesting dive. The props were salvaged, as I mentioned above, in the 1960s, probably by Wally Gibbons. The holds are empty and what remains of the ship's interior are not all that interesting. The king-posts and masts are stretched out from the wreck to the sand and make interesting explorations. Your aim in diving this wreck should be to go staright to the deepest point you wish to visit and then slowly return back up the vessel, finally ending up in the shallows.

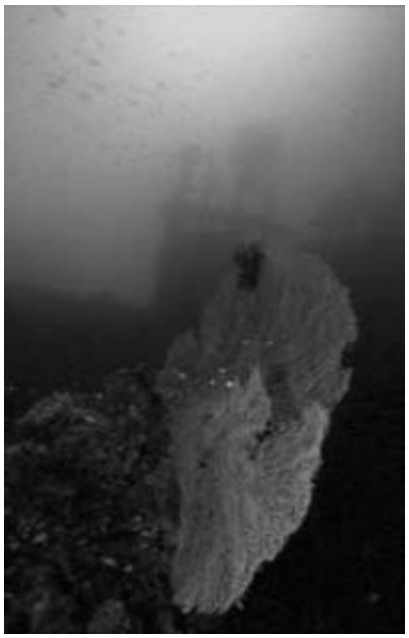

Figure 44 – A large gorgonia with the bridge in background

The water on these dives was pretty clean with about 18 metres visibility. In August the water temperature was 27 to 28 degrees and does not vary too much from this.

Although these wrecks do not have the intactness or artefacts of the Chuuk Lagoon wrecks, they still make excellent dives and are a very good (and cheaper) alternative to those wrecks. Other advantages of Honiara diving includes the closeness to Australia, the (far) cheaper accommodation, food, drink and diving and the very good exchange rate between the Australian and Solomon Islands dollars. One big advantage for people with non-diving partners and children, both these wrecks (and some of the others) can be snorkelled.

In summary, the diving in Honiara is very good and I can certainly recommend it for diving.

References:

- *Lloyd's Register* 1942-43
- Papers provided to me by Troy Griffiths in 1992, then owner of Dive Solomons
- *Death of a Navy* by Andrieu D'Albas - page 143
- *The United States Army in World War II - The War in the Pacific - Guadalcanal: The First Offensive* by John Miller, Jr, pages 185 to 189
- Email from Bob Gibson formerly of US Navy, now deceased

Hoki Maru - formerly MV *Hauraki*

The *Hoki Maru* is one of the lesser dived wrecks of Chuuk Lagoon but it is not only a vastly underrated dive, it has a very interesting history. Originally built as the MV *Hauraki*, the ship was constructed by William Denny & Brothers at Dumbarton in Scotland (a nice little town just a few kilometres north of Glasgow). As an aside, the shipyard was established in 1844 and one of the most famous in the UK. She was launched on 28 November 1921 and displaced 7,113 tons gross and was 137.5 metres (450.3 feet) long and just under 18 metres (58.2 feet) wide. The new ship was powered by two eight cylinder North British Diesel Engine Works diesel engines (built in Glasgow) (963NHP) and she entered service on 13 May 1922 (although *Lloyds Register* for 1922-23 says March 1922). The ship was the first Denny vessel designed as a large diesel powered ship (I think some may have been built before but they were designed as steamships). She was primarily a cargo vessel but had accommodation for 12 passengers.

Figure 45 - The MV *Hauraki* before it was seized by the Japanese

The ship was built for the Union Steam Ship Company of New Zealand Ltd and was their very first diesel powered vessel. She was used in the trans-Pacific cargo trade, mostly Sydney or Melbourne to Fiji where sugar was taken on board and then to Vancouver in Canada. On the return trip, timber and general cargo was carried. Sometimes she called in at Rarotonga in the Cook Islands on the return journey. In April 1932 she was moved to the Sydney - Suva (Fiji) - Rotuma - Navau - Sydney route, with apparently some other longer trips.

In February 1936 the *Hauraki* departed California with Australia's very first Douglas DC-2 as deck cargo. The plane was covered in grease and surgically taped on all openings to protect it from salt water. Approaching New Zealand the ship encountered a wild gale which threatened to tear the plane off the deck. However it survived without damage. On 14 April 1936, the ship and plane arrived in Melbourne. The new plane was owned by a company called Holymans Airways which seems to have had some connection with the Union Steam Ship Company of NZ, as together with Huddart Parker Ltd, they had tendered to operate an air service across Bass Strait from Melbourne to Tasmania. This is probably why the *Hauraki* carried the plane from the US to Australia. The new plane was transported by road from the port of Melbourne to Essendon Airport, via a very torturous route to avoid low bridges etc. The plane was registered VH-USY and was soon taken over by the new Australian National Airways Ltd (ANA) which had been formed by an amalgamation of Holymans and Adelaide Airways. An interesting fact is that VH-USY made an emergency landing in a field near Dimboola in Victoria on 8 February 1940 after a fire in the starboard engine. No lives were lost.

In 1940 the *Hauraki* was requisitioned by the British Ministry of War Transport. The ship under Captain A. W. Creese and staffed mostly by New Zealanders, was used on "special service". However, the ship remained in the Company's service to North America until February 1942 when she was dispatched from Sydney to Aden, Port Said and Haifa.

On 4 July 1942 the MV *Hauraki* left Fremantle in Western Australia bound for Colombo in Sri Lanka (formerly Ceylon). She was on her way from New Zealand to the Middle East

with a load of war supplies. On 12 July 1942 at about 2150, the MV *Hauraki* was ambushed by the armed merchant cruisers *Hokoku Maru* and *Aikoku Maru* and captured. She was taken to Singapore (Penang is mentioned in Union books) and the crew sent to Ofuna Camp and through other camps to the Mitsubishi Shipyard in Japan. The Captain, A. W. Creese and 23 crew survived the war. It is ironic that the *Aikoku Maru* was the ship that captured her, as today the *Aikoku Maru* lies less than a kilometre away, totally cut in half. For more information see my article on the *Aikoku Maru*.

On 31 December 1942 the MV *Hauraki* was renamed *Hoki Maru* and designated as a special transport. Prior to this, some modifications were made to the ship including adding a deck to the bridge and making certain repairs, including some of the "damage" done to the ship by the New Zealand crew on the trip to Singapore after being siezed.

In early January 1944 the ship left Yokohama for Chuuk (Truk) carrying coal, defence materials and other supplies. The ship arrived in late January.

On the morning of 17 February 1944 the *Hoki Maru* was anchored to the east of Eten Island in Chuuk Lagoon. She was attacked several times and at about 1245 on 17 February she was torpedoed by a Grumman TBF *Avenger* from USS *Bunker Hill*. The torpedo hit the port side and the fuel oil, petrol and diesel she was carrying in drums ignited and set the front of the vessel alight.

The ship was discovered and then lost before being rediscovered in 1980.

Today, the *Hoki Maru* lies upright on a sandy bottom of less than 50 metres. The stern deck is 30 metres, the bow 36 metres, the bridge area is 25 metres and the depth gets to 49 metres inside some holds.

The dive boats generally anchor near the bridge which has suffered a good deal of bomb damage. From here it is best to go to the stern as the more interesting holds are the rear ones. There is a mast straight behind the superstructure and then hold four. For the moment, go past this hold to hold five. There is a kingpost between holds four and five.

Hold five has a bulldozer and a tracked catapillar-type machine (if it is a bulldozer it does not have a blade) on the girders of the 'tween decks. There are also two trucks and another bulldozer which lies below the girders facing across the ship and pointing down at 45°. There appears to be a lot of coal in the 'tween decks of this hold. On the starboard side of the 'tween decks, at the front, there is what appears to be a giant stone/rock crusher (to make blue metal for roads/runways). This is a long cylindrical object with holes all over the barrel.

From here you can swim into hold four via a hole in the hold partitions adjacent to the stone crusher. This hold has two large compressors on the first 'tween deck level. The second 'tween deck level has six trucks and a tractor. Three of the trucks are lined up facing the rear of the ship and are very intact, possibly the best examples in Chuuk Lagoon. There is also a bulldozer and a steamroller. The bottom of the hold has many drums. There are also many rolls of mesh, perhaps fencing but more likely I think of mesh that was put on swampy ground so cars, trucks and planes do not get bogged. Some of the rolls are behind the trucks. Hold four also has beer bottles and drums. There are also three radial engines for aircraft in the hold.

On the deck adjacent to hold four there are some other interesting things. The port side has what appear to be railway tracks while the starboard side has girders and more railway tracks. The derrick has fallen into the hold.

This is about all you will see on a single dive on the *Hoki Maru* as the dive described will take about 22 minutes giving you a decompression of two minutes at six metres followed by eight minutes at three metres.

This is an exceptionally good wreck, known locally as the Bulldozer Wreck (for obvious reasons). Well worth doing.

Dives:

- 11 November 1997

References:

- *Hailstorm over Truk Lagoon* by Klaus Lindemann
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- *History of Union Steam Ship Company of New Zealand Ltd 1875 - 1940 Union Steam Ship Co*
- *Union Line - A Short History of the Union Steam Ship Company of New Zealand Limited 1875 - 1951* Union Steam Ship Co
- *Union Fleet 1875-1975* by I J. Farguhar. Published NZ Ship & Marine Society 1976
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- *A History of Union Steamship Co. of New Zealand - Vol 1 The Company* by A. L. Arbon
- *The Line that Dared - A History of the Union Steam Ship Company - A Centenary* Edited by Gordon McLauchlan (includes a photo on page 99)
- *New Zealand's Maritime Heritage* by David Johnson (a photo of a painting, possibly of MV *Hauraki* page 142)
- *Lloyds Register* 1922-23, 1941-42
- *Airliners in Australian Service Volume 1* by Eric Allen
- *Business History Vol XVI No 1Jan 1974* - pages 36 to 47, article by Paul L. Robertson, Shipping and Shipbuilding: The Case of William Denny and Brothers
- *Air Crash Volume 2* by Macarthur Job, pages 10 to 13
- *The Forgotten Giant of Australian Airways - ANA* by Peter Yule, page 41

I-1

Just over 40 kilometres to the west of Honiara in the Solomon Islands is the village of Tambea. Also located here was the Tambea "Resort". Although this resort was operating in August 1992 and 1997 it is now a wreck due to the political problems in Guadalcanal. Note that you cannot dive this wreck as of October 2001 due to the danger of travelling in the area and the fact that no dive operator exists in Honiara.

If you travel up here, the first dive of the day is normally the Japanese submarine *I-1*. **Note that this is not the *I-123* as is sometimes reported. See comment below.** The *I-1* was a Junsen (cruiser submarine) Type 1 submarine launched on 15 October 1924 as No. 74 but completed 10 March 1926 as *I-1*. One of four constructed by Kawasaki at Kobe (all were lost in the war), the *I-1* was a very large submarine displacing a maximum 2135 tons at the surface. She was 319 feet long and powered by twin shaft M.A.N. 10 cylinder 4 stroke diesels giving 6000 bhp and two electric motors of 2600 ehp. The *I-1* had six torpedo tubes and carried 20 *Type 95* oxygen-driven torpedos.

On 12 December 1942, the Royal New Zealand Navy ships HMNZS *Moa* (under command of Lt Commander Peter Phipps), HMNZS *Kiwi* (under command of Lt Commander C. G. Bridson, RNZNVR), HMNZS *Tui* and HMNZS *Matai* left Espiritu Santo in the New Hebrides (now Vanuatu), arriving at Tulaghi in the Solomon Islands on 15 December 1942. Four days later the four ships started work, patrolling the Guadalcanal area.

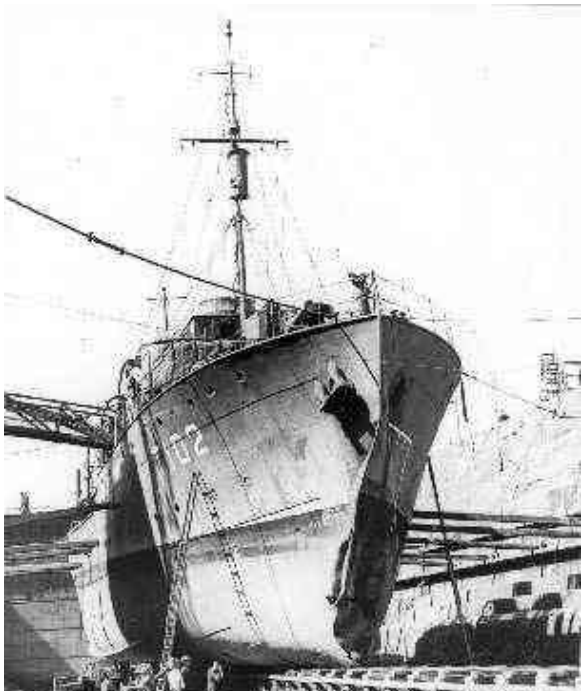

Figure 46 - HMNZS *Kiwi* in drydock after the submarine sinking

On the night of 29 January 1943 the *I-1* was under the command of Lieutenant Commander Eiichi Sakamoto off the Kamimbo Bay area (near Tambea). It was being used in the Solomon Islands for transporting troops and stores. The submarine was detected by the New Zealand corvettes (they were operating as minesweepers) HMNZS *Kiwi* and HMNZS *Moa*. These two ships were sister vessels, built by Henry Robb in the early 1940s. They were 51.2 metres long and 9.1 metres wide, displacing 825 tons. See HMNZS *Moa* page for more details on the ships. They were crewed by 35 men and had one 4" gun as well as 2 Hotchkiss light machineguns and one twin Lewis gun. The Lewis gun was replaced in 1942 by a 20 mm gun and in 1943 another 20 mm gun was fitted unofficially.

As the New Zealanders approached, the phosphorescent outline of the submarine could be clearly seen so the *Kiwi* dropped six depth-charges. Shortly after, it dropped another six and the submarine was forced to the surface with its electric motors apparently disabled. Switching on its diesels, the *I-1* made a run for it and a surface battle ensured, with all three vessels exchanging gunfire. During the short battle, the submarine altered course to starboard just before the *Kiwi* rammed it on the port side abaft of the conning tower. Numerous hits were landed at this time. The *Kiwi* again rammed the submarine and an officer, probably the Japanese Captain, was seen to be hit by machine-gun fire. A third ramming damaged both vessels and the *Moa* took up the chase, following the submarine while continually firing its gun. More than two hours after the first attack, the I-1 hit a reef that was to become its final resting place. The next morning revealed the *I-1*

projecting about 40 to 50 feet out of the water at an angle of 45 degrees. The HMNZS *Moa* was later sunk at Tulaghi Island in the Florida Group.

In some (many) reports, I have read that the sinking of the *I-1* was also claimed by USS *Gamble*. However, the truth is that the *Gamble* sank the submarine *I-123*, also off Guadalcanal. It would appear that somehow the submarines have been mixed up and what was meant in the *Gamble*'s reports was that it sank the *I-123*. The *Gamble*, by the way, laid the minefields that sank the SS *President Coolidge* and USS *Tucker* at Espiritu Santo in Vanuatu.

In the late 1960s or early 1970s, Australian Wally Gibbons blew up the bow section of the submarine in search of valuable metals. Although this caused a great deal of damage (there were one or two live torpedoes still inside), the bow sections of the sub are still on-site, but opened up as if attacked by a huge can opener. The front one-third is basically destroyed with the remaining section still virtually intact. The *I-1* now lies with the bow in five metres and the stern in 30 metres of water.

After gearing up behind the beach at the Resort, it is a short boat ride to the reef where the submarine finally came to grief. The boat anchors on the reef top and as soon as you descend you see the bow. It is a simple matter to follow the wreckage to the main part of the wreck. At about the 18 metre level you can enter the submarine and penetrate right through to near the stern. This is very safe and easy.

At the stern you can see the submarine's dive planes, rudder and propeller shafts. The return dive can be done on the outside. On the sand adjacent to the vessel's port side near the 15 metre level is a huge battery compartment with hundreds of wet-cell batteries in and around it. Other interesting objects to be seen include air-bank cylinders (used for discharging ballast tanks) and the huge electric motors that powered the vessel underwater.

This is an excellent dive and like most of the wrecks around Honiara, the coral and fishlife in the shallower sections are very good. This dive was in very clear water (25 metres visibility) and very enjoyable. If you go to Honiara on a diving trip, do not miss diving the *I-1* as I think that it was the best single dive I did while in Guadalcanal.

Note that as indicated above you cannot do this dive as at October 2001 as there is no dive operator in Guadalcanal and you cannot safely travel to the Tambea area.

References:

- *Warships of the Imperial Japanese Navy, 1869-1945*
- *The Imperial Japanese Navy* by A.J. Watts and B.G. Gordon
- Personal conversation with researcher Peter Cundall, 22 September 1997
- *Fair Winds and Rough Seas - The Story of the Holm Shipping Company* by Allan Kirk
- *Australian and New Zealand Warships 1919-1940* by Ross Gillett page 293-5
- *Royal New Zealand Navy* by S. D. Waters, various pages

IJN *Irako*

The Imperial Japanese Navy ship *Irako* was planned under the Third 1937 Supplementary Program. The IJN *Irako* was a "large fleet refrigerated supply ship" but, as I will mention later, she may have been used for other purposes. The hull of the new ship was laid down May 1940 at the Kawasaki Shipyards at Kobe, Japan. The ship was launched on 14 February 1941 and completed 5 December 1941.

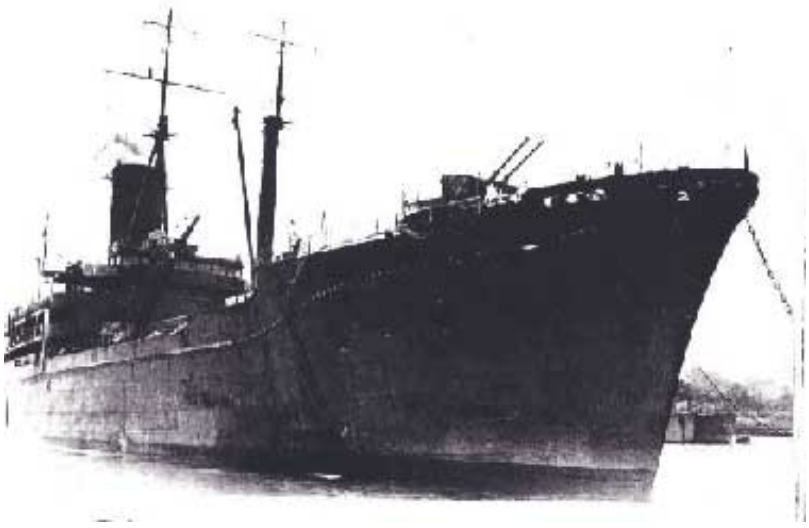

Figure 47 - IJN *Irako*

The ship was quite large, 9723 tons, 143.5 metres waterline, 146.9 metres overall and 19 metres wide. The engines were two steam powered geared turbines (8300 shp) driving twin props. The steam came from from 6 Kampon boilers (I am not sure if it was coal powered but I would suspect it was oil fuelled due to when it was built) and provided a maximum speed of 17.5 knots. Note the long construction time. The Americans and British were building similar ships in a total time of less than nine months or so during the war although this ship was 99.9% built before the war started.

The IJN *Irako* was one of three planned to be buil under this program but the other two were not built and finally cancelled after the Battle of Midway due to the Japanese losses of warships and the need for carriers and submarines.

The ship was armed with four 127 mm 40-calibre guns (two guns each of two barrels, one each at the stern and bow). There were also 13 x 25 mm anti-aircraft (AA) guns and depth charges. Forward there was a mast and the rear had a kingpost. There were four additional cranes.

I do not know much about the early life of the IJN *Irako*.

In late September 1944, some Japanese ships, including a convoy of 12 Japanese ships, took refuge in the Busuanga Island area of the Northern Palawan group of the Philippines. Eight of the ships were anchored in Coron Bay, the rest to the west and at least one on the northern side of Busuanga Island.

Late on the afternoon of 23 September 1944, Fast Carrier Task Force (TF) 38 under the command of Vice Admiral "Bull" Halsey positioned itself for an attack on the ships in the Coron area. At 5.50 am on 24 September 1944, 180 Grumman F6F *Hellcat* and Curtiss SB2C *Helldiver* (not made by Grumman as claimed by one source) planes lifted off the American ships and headed off on the 350 kilometre flight for the waters of Coron Bay. This was to be the longest carrier based (and return) attack ever carried out. At 9 am the planes reached Coron and located at least 18 large Japanese vessels and started their attack.

The planes attacked the ships in Coron Bay and the ships to the west first. After a frenzied 45 minute attack the planes left, leaving behind numerous sunken ships. It is reported the IJN *Irako*was beached after suffering severe damage from Task Force 38's aircraft. Today

14 of these wrecks have been located and most can be dived from Coron. See my Coron Page for more information.

I have not dived the wreck of the IJN *Irako* but reports to me indicate that it is a very good dive. I have also been told by Noel Hitchins of South West Rocks Dive Centre that the ship appears to have been used for more than a simple refrigerated supply ship. He told me that there are some brackets or stands welded on one part of the deck that appear very strange. His thoughts are that these may have been used to hold *Kaiten* suicide submarine/torpedos. I am presently investigating this with other expert sources.

References:

- *The Imperial Japanese Navy* by A. J. Watts and B. G. Gordon - page 512
- *Warships of the Imperial Japanese Navy 1869-1945* by Hansgeorg Jentshura, Dieter Jung and Peter Mickel - pages 247-8
- *Dive Right Coron* Web Page - http://www2.mozcom.com/~diving/c-history.htm

SS *John Penn*

> And the rockets' red glare, the bombs bursting in air
> Gave proof thro' the night that our flag was still there...
> And where is that band who so vauntingly swore
> That the havoc of war and the battle's confusion,
> A home and a country should leave us no more?
> Their blood has wash'd out their foul footsteps' pollution.
>
> **Francis Scott Key**
> ***The Star-Spangled Banner***

The SS *John Penn* started its life as the SS *Excambion*. Built in 1931 as one of three (or four) identical vessels by the New York Shipbuilding Company, Camden, New Jersey, for the Export Steam Ship Corporation (founded 1919). As well as the SS *Excambion*, the new ships were the SS *Exeter*, SS *Excalibur* and SS *Excochorda*. Collectively they were known as the "Four Aces".

The *Excambion* displaced 9360 tons and was 450 feet long. In 1938 the Export Steam Ship Corporation became the American Export Line. The following history of the ship is partly based on a report in the *Dictionary of American Naval Fighting Ships*, Vol. III 1963 Edition pp. 541-542, published by the U.S. Navy Historical Center.

The new ship (as well as her sisterships) were used the New York to Mediterranean run and provided a regular service. The ships served New York, Gibraltar, Marseilles, Genoa, Leghorn, Naples, Alexandria, Jaffa, Heifa and Beirut.

In November 1940 the *Excambion* exacuated adults and children refugees from Nazi persecution. The boarded the ship in Lisbon (this may have now been a regular stop) and travelled to New York. Also in 1940 (perhaps on the same trip), the ship carried the famous artist Salvador Dali and his wife as they fled France for the US.

The SS *Excambion* was acquired by the US Navy on 8 January 1942 and renamed the SS *John Penn*. She was commissioned 6 April 1942 with Captain Harry W. Need in command. I had originally presumed that like the TSS *John Penn* now wrecked in New South Wales, Australia, it had been named after the famous naval architect, John Penn. However, this is incorrect. The ship was actually named after one of the United States' earliest patriots.

John Penn was born in Caroline County, Virginia, USA, in 1740. He became a lawyer at twenty-one. At twenty-three, on July 28, 1763, he married Susannah Lyme. The couple took up residence in Williamsboro, North Carolina and Penn entered politics. In 1775 he was elected to the provincial congress and the Continental Congress. A committed revolutionary, he wrote to his close friend Thomas Person:

> "For God's sake, my Good Sir, encourage our People, animate them to dare even to die for their country."

He voted for and signed the Declaration of Independence, serving in the Congress until 1780. His character may be discerned by his conduct in an unusual affair of honor. Henry Laurens, President of Congress, challenged him to a duel. Since they were boarding at the same inn, they had breakfast together on the appointed morning. They started out together for the "field of honor", but after Penn had assisted his elderly opponent across a terribly muddy street, he suggested that they forget their quarrel. Laurens agreed. After the Revolution, Penn returned to the practice of law until his death in 1788.

As I indicated above, the *John Penn* was commissioned 6 April 1942 with Captain Harry W. Need in command. After fitting out and training, the *John Penn* began preparations for what was to be one of the largest overseas expeditions ever undertaken: the North African Invasion.

From 4 to 16 October 1942, *John Penn* loaded Army equipment, cargo and troops at Norfolk, Virginia and topped off with fuel. She sortied from Hampton Roads on 23 October 1942 with Admiral Hewitt's Western Naval task Force. As a unit of Rear Admiral Monroe Kelly's Northern Attack Group, she arrived 8 November 1942 in the transport area off Mehdia, Western Morocco where she began landing troops and putting cargo ashore. Although hampered by heavy surf and fire from enemy shore batteries, she unloaded with efficiency and dispatch. At 1053 an enemy aircraft attacked the *John Penn* (a Vichy French P-36) but her aft-batteries splashed the intruder. On 15 November 1942 she departed for Casablanca, arriving that same day and unloaded the remainder of her cargo. She sailed for Norfolk 17 November 1942 arriving on 30 November 1942.

The *John Penn* departed Norfolk, Virginia, on 17 December 1942 for deployment to the Pacific, arriving in New Caledonia via the (Panama) Canal Zone on 18 January 1943. She was carrying a load of Sea Bees and their construction equipment (personal comment by E. Wallace Haynes - see references). She departed New Caledonia on 24 January 1943, touching at Espiritu Santo. Three days later, she got underway to pick up survivors from the cruiser USS *Chicago*, sunk off Guadalcanal on 29 January 1943. In all she rescued 1,003 men and 63 officers, including Captain R.C. Davis, the lost cruiser's commanding officer. After debarking her grateful passengers at Noumea, New Caledonia, she spent the next six months delivering supplies, equipment and troops to Guadalcanal from the New Hebrides [now Vanuatu], the Fiji islands and New Zealand. Reclassified APA-23 on 1 February 1943, she continued to bring supplies and troops into this bitterly contested island.

Figure 48 - SS *John Penn* on 13 September 1942
National Archives 80-G-10847
The wreck of the Japanese plane is located in the dark spot to left of bridge near main deck

On one trip to Noumea in New Caledonia (perhaps the first and only one), a new jeep was collected at the Army Base by E. Wallace Haynes, MoMM First Class. He brought it back to the *John Penn* and it was loaded aboard. On board the ship was a Commodore, perhaps by the name of Anderson. This jeep was for his use. When the *John Penn* was in New Zealand collecting suppliers, Mr Haynes drove Commodore Anderson around in the jeep.

On the evening of Friday 13 August 1943 the SS *John Penn* had just completed unloading its cargo of supplies off Henderson Airfield, the main airfield of Guadalcanal, when it and other nearby vessels were attacked by Japanese torpedo planes. The planes were Nakajima B5N2 *Kate* torpedo bombers that had left Southern Bougainville between 1845 and 1900. There were seven planes, two of which were carrying flares and bombs while the others had torpedoes.

The planes were sighted by radar at 2020 and the alarm was raised on the *John Penn*. However, after a considerable period had passed, no real action had been seen except for some bombs dropped from height on Lunnga Point and the nearby sea and some flares dropping from nowhere.

Just after 2110, all hell broke loose as when a supporting destroyer started firing at a low flying aircraft. Two more destroyers started firing at different planes, all converging on the

John Penn. The first plane attacked from the direction of Tulagi, towards the starboard side amidships. The plane was 50 feet off the water and was under tremendous attack from not only the *John Penn*, but USS *Fuller* as well. At the same time, another plane was attacking from direction of the bow. When 150 to 200 metres away, it dropped a torpedo, although the *Dictionary of American Naval Fighting Ships* mentioned above says 50 yards. More about this later.

A third plane also attacked at the same time. Two reports [from the above mentioned book and Ewan M. Stevenson (see references)] says that when the transport took one of the planes under fire while attacking the stern, it burst into flames and crashed into her mainmast or aft section. However, this is not mentioned in another source.

In December 2000 I was e-mailed by E. Wallace Haynes, MoMM First Class, who was a member of the *John Penn* until the day it was sunk. He told me:

> I was a fireman member of a Higgins boat landing craft for several trips in the South Pacific but had progressed to MoMM 2.c when she went down. I was a lookout on the port flying bridge when the plane crashed [into] the superstructure and the torpedo hit the ammunition magazine, abandoned ship starboard side bow, picked up by a boat crew from the Island boat pool and spent the night in a fox hole. Next day the *Hunter Liggett* took some survivors to Noumea. Fourteen days was aboard the SS *President Jackson*.

In October 1999, a friend of mine, Jason McHattan, had a look at this page and sent me the following e-mail in response to the paragraph before the one above:

> When I was there in 94 I discovered the wreckage of a Japanese aircraft, which I believe to be a 'Kate'at the intersection of the deck and bridge, on the sand at about 60m. Upon surfacing and telling the local operators about it, they said that they'd read the reports of an aircraft hit, but neither they nor anyone else had ever seen it. Kevin Denlay went in but couldn't find it, so the operator then dived and confirmed my find... Also, when I dived it in 95 I found a Jeep on the sand nearby, also previously unknown. If you go out from the bridge, (which collapsed late in 95), the Jeep is sitting upright about twenty metres from the wreck. I don't know if the bridge has collapsed onto the aircraft remains which consisted of the entire tail section from about three feet forward of the vertical stabiliser, and an oleo strut (wheel leg).

The jeep was obviously the one collected by Mr Haynes in Noumea and used in New Zealand.

Figure 49 - One of the holes ripped in the bottom and side of the hull by the ammunition

Anyhow, at 2123 hours (9.23 pm) the USS *John Penn* was struck by the torpedo on its starboard side, either amidships or towards the stern at hold five. It was also alledged to have strafed by this and the other aircraft. However, Mr Haynes has told me that the ship was not strafed but was hit by gun fire from a US destroyer which was using a radar controlled gun to shoot down the torpedo plane. The *Penn* was rocked by two or three explosions, the first being the torpedo and the second the ship's after magazine in hold five. The third may have been the plane hitting the ship. The torpedo and subsequent explosions caused considerable damage to the ship. A large hole was torn in the starboard side, a fire started in the after holds, the after gun platforms were blown towards the stern and the main mast and 30 ton boom were thrown about the upper deck (this was possibly from the plane hitting the mast). All engine and

electrical power was lost and the watertight compartments aft were observed to be filling with water. At 2133 (10 minutes after the attack) there was only three inches of freeboard aft and orders were given to abandon ship. At 2150 the SS *John Penn* disappeared from view and became another casualty of the Battle of Guadalcanal.

Of the crew of the ship and the marines on board unloading the cargo, 98 were dead or missing.

George Parker was 18 years old and a crew member of the *John Penn*. He e-mailed me in November 1999 when he was 75 years old. This is what he told me:

> I enjoyed reading your article about the USS *John Penn* [sic] at Guadalcanal. I was a seaman 1st class on the number 1 gun on the bow. I was on board when the ship was hit. Your article is pretty accurate as far as I remember although I do not recall being strafed by an aircraft. I remember the torpedoes and the plane hitting just forward the bridge. I don't remember the plane strafing us, although it could have. There was much confusion. ... I appreciate your article - it is the most detailed and informative I've seen yet.

Therefore, from the above three first hand reports, it is quite obvious that the ship was hit by a Japanese plane that contributed to its sinking.

The following is a report by CM1 James J. Altemueller, USN, who was a crew member of the SS *John Penn*. It was sent to me by his son John S. Altemueller.

> Since I was an experienced master carpenter (my father was a builder) I was detailed from the *Penn* to Tulagi to work on the landing craft at the amphib boatyard. General Vandegrift (CO of the 1st Marine Division, the first on Guadalcanal) had the idea to create these boat pools so there would be enough seaworthy landing craft for the jarheads [slang for marines] to use for their assaults. The Japanese sent bombers down from Rabaul (on New Britain) pretty regular to tear things up, but our fighters from Henderson Field (on Guadalcanal) swarmed up like hornets to hit them.There was something sweet about the sound of those engines on the Grumman fighters (Marine F4F's) [*Wildcats*]. Like a bulldog's snarl. Didn't have to see them.You knew right away they were ours. With the enemy planes it was different. One bomber-we called him "Washing Machine Charley" - had his engines desynchronized so they made a hell of a racket when he came over at night. He dropped a bomb or two, mainly just to keep us awake and on edge. I found out later that Charley had the bad luck to fly home one night just as our planes were finishing an air raid on his base. He got caught in the searchlights and was shot out of the sky by his own antiaircraft. That was the end of Charley. We got the word that the *Penn* was gone the evening of the 13th [the night it was sunk]. Sailors get attached to their ships. She becomes your home after a while, especially after all we'd been through in North Africa and here in the Solomons. We'd lost friends and shipmates and our home - that was a terrible feeling.

Today the SS *John Penn* lies on the bottom of Iron Bottom Sound on its starboard side. I had been told that it was discovered in 1972 by Australian Wally Gibbons and the Chief Fisheries Officer for the Solomon Islands, Dick James and that Wally Gibbons, Mike Laurent and Gary Dalton salvaged the bonze spare propeller (16.25 tons, 18.25 feet diameter). They discovered that the ship was in two pieces, the stern not yet found.

However, on 16 June 2003, Gary Dalton e-mailed me and told me that he had a salvage boat and he was salvaging ships in the South Pacific and ended up in the Solomon Islands. Mike Laurent and Wally Gibbons had the salvage rights but there was only about six or seven months to left. Mike went back to Australia and Wally turned more to spearfishing and collecting shells (I presume armament shells not animal kind). Most of the bronze had been collected so Gary went looking for new stuff. He was working the area off the Lunga

River/Red Beach area, dropping small charges to free oil contained in equipment that he thought had been dumped from a large gas tanker that had blown up there. He went well off shore and one of his charges created an oil slick. He was crossing back over the slick when the depth sounder showed a huge school of fish and then, a huge wreck. This was the SS *John Penn* and he did a dive on it even though it was almost dark. He spent three months salvaging the wreck and reported that there were nearly always very strong currents and nearby, lots of sharks. He found the stern section about 1/4 mile (say 400 metres) behind and in line with the wreck. This had the prop shaft and propeller. He salvaged three of the four blades. He told me that he got bent putting charges on the prop, doing two bounce dives to 236 feet (about 72 metres) with only a total bottom time of three minutes. Gary got to the surface and was totally paralysed so Wally Gibbons put him back in the water (hitting him on the head in the process with an anchor used to get him down - he still has the dent in his head).

Figure 50 - A large winch on the forward deck (now vertical) of the ship

In 1973, Brian Bailey did some more salvage work on the condenser, but had an accident when part of the wreckage fell on him, knocking the hookah hose out of his mouth. Luckily he was wearing scuba as well and this saved him as the plate hit the tank rather than his body. He used the tank, slipped out of the harness, regained the hookah hose and then released the tank. This was apparently the end of the salvage.

When I dived the wreck in 1992, a mooring line was attached to a field gun which was sitting on the rear port hull. I assume that at sometime it was partially salvaged and placed here, but for what reason I do not know. As I indicated above, the stern of the ship is separated from the main section of the wreck but I cannot attest to this as on my one dive we only went to the bow area. The explosion in the after compartment obviously was devastating.

The USS *John Penn* is located off Lunnga Point and is affected by the tidal currents. Apparently you can only dive here on the top or bottom of the tide. The visibility as you descend is not very good, especially when compared to other Solomon Island dives. Maximum visibility when I dived was of the order of 8 to 10 metres and the water a little cooler than normal at 25 degrees. A fairly thick layer of silt covers the entire wreck.

Figure 51 - Swimming through the superstructure of the SS *John Penn*

The shallowest part of the wreck is the port hull which is about 36 metres and there are plenty of portholes to examine. As well, there are a number of medium sized holes which appear to have been caused by internal explosions, probably the ammunition in the after magazine.

A short swim brings you to the upper deck of the vessel and you drop over into the dark void. There is plenty to see here, including the bridge, holds, forward gun and derricks, masts and winches. On my only dive on the vessel, we went to 48 metres looking at the forward hold and gun. We also penetrated a short distance into the medical area where we saw bed pans and drug vials. The sand below the *John Penn* is about 56 metres.

This is a large ship and the one dive I did was not enough to properly examine it. A number of dives would be required to get a good feel of the ship and a guide is essential.

The SS *John Penn* is an excellent shipwreck for the experienced deep diver. I would encourage such divers to dive the wreck on their visit to Honiara.

In her naval service, the transport had played a key role in the assault and occupation of French Morocco and contributed greatly to the struggle for Guadalcanal. She certainly lived up to the ideals of the patriot John Penn and did not let his great name down. In war there are always losses, but *John Penn*'s crew, reassigned to other ships, took part in later decisive naval victories.

SS *John Penn* received one battle star for World War II service.

NOTE:

After the loss of the *John Penn*, a new Liberty ship was named SS *John Penn* in honour of the fallen ship.

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- Personal experiences of CM1 James J. Altemueller, USN [see above] sent to me by John S. Altemueller (anticus@anet-stl.com)
- USS *Salem* Web Site on US Fighting Ships - http://www.uss-salem.org/danfs/auxil/ap51.htm
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USS *Kanawha*

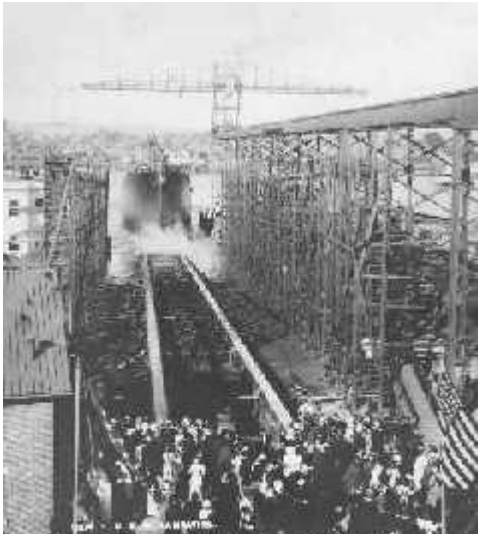

Figure 52 - The Launching of the USS *Kanawha*

In 1907-08, the US Navy did an around the World cruise (not sure how many ships were involved) and they ran into many logistical problems. The major of these was the fact that they had to rely on foreign shipping for refuelling. Although at this time the fuel was coal, this was still a problem. As a consequence, the US Government decided to build two fleet colliers and purchase three merchant colliers. Although experiments were conducted at sea when coal was transferred from one of the colliers to USS *South Caroline*, it was soon apparent that transferring bags of coal was not efficient and also that coal was now an outdated fuel. New ships were being built to run on oil rather than coal.

As such, the US decided that some new "fuel ships (oilers) were required. The USS *Kanawha* was laid down 8 December 1913 at the Mare Island Navy Yard, San Francisco, California. She was launched 11 July 1914 (or perhaps 7 July), sponsored by Miss Dorothy Bennett and commissioned on 5 June 1915 as AO-1, the lead ship in the *Kanawha*/*Cuama* class fleet oiler program. An interesting fact is that the second ship, the USS *Maumee* (powered by diesel engines rather than steam) had as the Executive Officer, Chester W. Nimitz, later to be an Admiral and in charge of the US Pacific Fleet in WWII and to have the huge USS *Nimitz* aircraft carrier named after him.

A total of six ships were built, three of which were to be lost in World War II. The ship was named after the Kanawha River in West Virginia. The first skipper was Lieutenant Commander Richard Werner and the ship had a total crew of 136.

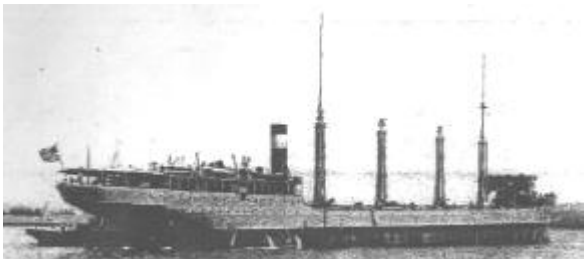

Figure 53 - The *Kanawha* on her commissioning

She was a large ship, 457 feet 7 inches (just over 137 metres) long, beam of 56 feet (17 metres) and a full load displacement of 14,500 tons. Powered by two 5,200 hp reciprocating steam engines (steam from oil powered furnaces) driving twin screws, the ship was a oil tanker. Compare this to the *Shinkoku Maru* at Chuuk Lagoon which is 150 metres by 20 metres but displaces less at 10,020 tons.

The ship carried 55,700 barrels of oil (hence her nickname of "The Fighting Fueler" - later during World War II she was called "The Oilcan of the Fleet") and had a maximum speed of 12 knots and an economy speed of 9 knots. It was originally armed with four 4 inch main guns (although these are not apparent in a photo I have of the commissioning) and no anti-aircraft guns. Of course at this time aircraft were hardly a problem for ships, especially large ones.

As originally built, the *Kanawha* was a lot different to look at than later during World War II. When launched, the ship's Bridge was right at the front of the ship, just behind the foredeck. It was a very strange looking Bridge and also strangely located. There were two large masts, one behind the Bridge and one in front of the funnel. In between the masts there were two smaller masts that appear to carry refuelling booms and equipment. The stern deck

of the ship was quite clean, with a deck over the main deck but little other construction on this deck.

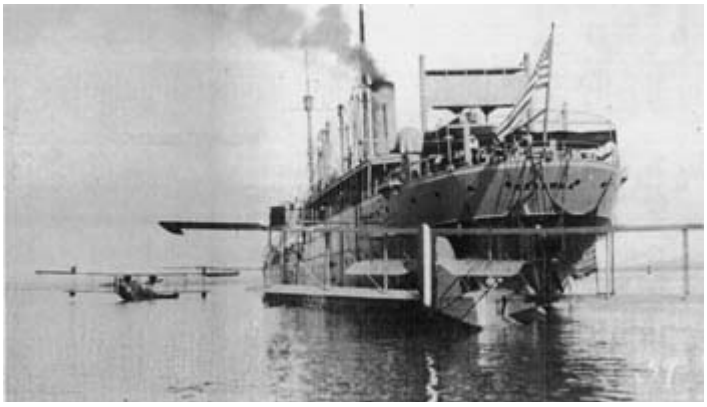

Figure 54 - The USS *Kanawha*, perhaps refuelling these sea planes

At sometime, certainly by the time of WWII, the USS *Kanawha* had been modifed. The first modifications appear to have been additions to the stern deck, with new structures built on there. It is not obvious from photos what these were. A major change was the removal of the Bridge and its replacement by a new Bridge built behind the front mast. Probably at the same time, the two smaller masts were removed and replaced by one right behind the Bridge. The two main masts appear to have been lowered in height. Around the same time, it appears that a falsebb deck or roof was constructed over the whole of the main deck. See the photos of the ship below. In the photo with the two sea planes, the Bridge appears to be in the orginal location but the stern has some modifications (the large square structure). In the photo with the USS *Texas*, the *Kanawha* has her new Bridge, the masts have been moved and further modifications to the stern. However, there do not appear to be any guns at the stern, amidships or at the bow. Also see comments later.

On 9 June 1915 the *Kanawha* left San Diego in California and sailed to Newport, Rhode Island via the Panama Canal (presumably). Here she was to be part of the Atlantic fleet (but appeared to not actually serve with it) and over the next 12 months she made seven trips to Port Arthur, Texas, for fuel oil and petrol. On 11 October 1916 she joined the Atlantic Fleet proper.

Soon after the US's entry into World War I on 6 April 1917, the USS *Maumee* travelled from the US to Europe along with a large number of destroyers. Nimitz was assigned the job of devising a method of refuelling ships at sea and together with Lt Glenn B. Davis, Chief Boatswain Michael Higgins and Lt Fred M. Perkins, he came up with a solution. This was to "tow" the ship being refuelled using three lines and refuell through two three inch hoses. This was successful. It is assumed that the USS *Kanawha* also took up this method. It is known that on 17 June 1917 the *Kanawha* travelled to St Mazarie in France as part of the convoy transporting the first AEF (American Expeditionary Force). This may have been the same voyage referred to above.

On 2 July 1917 she left France and headed back to New York, arriving 10 August 1917. Here she underwent some repairs. On 23 September 1917 the *Kanawha* sailed again. From then until 1 November 1917 she refuelled cruisers and convoys in the Atlantic closer to America. She returned to Philadelphia for some repairs on 1 November 1917.

On 8 January 1918 the *Kanawha* rejoined NOTS (North Atlantic Service) and served with it until after the end of the war. For this period, the *Kanawha* travelled between Halifax in Canada and the United Kingdom and France carrying fuel oil. She arrived back in New York on 1 April 1919.

On 24 July 1919 she left Port Arthur, Texas, and went to San Pedro, California, arriving 9 August 1919. From 1919 to 1929 the *Kanawha* operated in the Pacific Ocean (except for three trips to Port Arthur). She was involved in the Army/Navy manoeuvres in Hawaii in April 1925 and from there travelled to Australia and New Zealand on a goodwill visit. On 25 September 1925 she returned to North America.

Figure 55 - The USS *Kanawha* refuelling the battleship USS *Texas* before WWII - note the changed stern, bridge and masts

On 18 December 1929 the USS *Kanawha* was decommissioned at Puget Sound Yard, Washington state. On 5 June 1934 she was recommibssioned and on 21 June 1934 she left Bremerton, Washington, for San Pedro. For the next six years she served on the West Coast of America, travelling between the various naval ports with some occasional trips to the Caribbean (via the Panama Canal) and Hawaii.

On 11 to 13 June 1939, the USS *Kanawha* and the USS *Saratoga* conducted underway refuelling tests along the south coast of California and demonstrated the ability of refuelling aircraft carriers at sea.

At some time the ship had two 5" guns installed on the stern. These are the guns on either side of the centre stern gun. These came from the battleship USS *Maryland*. There is a brass plate stating this at the base of each gun. There were also a large number of anti-aircraft (AA) guns installed, including two on either side of the top of the bridge and one on either side between the bridge and the funnel. There were 20 mm guns on the port and starboard sides, a 3" 50 calibre gun between these two guns on the forecastle. There were others.

As indicated at the start of the article, other changes made at some time included modifications to the masts and oil refuelling booms. It appears to have had two main masts (one in front of the funnel and one in front of the bridge) and at times it had one or two other masts (between the bridge and rear mast) that supported the booms. However, in the 1940s it only had the main masts and one other mast right behind the bridge. At this time there was also a deck or roof of some sorts constructed between the bridge and funnel. The photograph below is the ship as she ended her days.

In 1941 the *Kanawha* travelled to Midway Island, Wake Island and Alaska. On 6 December 1941 (just a day before the attack on Pearl Harbor), she entered the Mare Island shipyard for an overhaul. This may have been where the modifications mentioned in the above two paragraphs occurred. On 21 March 1942 she left San Pedro with a convoy bound for Pearl Harbor, Hawaii. From then until 18 May 1942 the *Kanawha* travelled between California and Pearl Harbor. On that date, she arrived at Tongatabu in the Tonga Islands. From here she headed went to Noumea, New Caledonia and then north-east to Espiritu Santo in the New Hebrides (now Vanuatu). She also went to Efate Island, probably on the way to Santo.

Figure 56 - USS *Kanawha* in a photo captioned "South Pacific Harbor". This is actually Segond Channel, Espiritu Santo in Vanuatu

See the photo at left. This is captioned as being a "South Pacific Harbour - 8 August 1942" and was told to me to be Noumea. However, the island in the background is almost certainly Aore Island, located on the south side of the Segond Channel, Espiritu Santo. At some time the ship transported one Japanese Mitsubishi Zero fighter and one two-man submarine to the US for study. These were carried aft of the bridge.

On 12 October 1942 the *Kanawha* left Pago Pago (pronounced Pango Pango) in American Somoa bound for San Francisco, arriving there on 29 October 1942. After some repairs and an overhaul, she departed America and returned to Pago Pago on 13 February 1943.

Figure 57 - The USS *Kanawha* after being modifed, probably late 1930s or early 1940s - note bow gun, guns on side of Bridge and gun to right of Bridge

The skipper of the *Kanawha* was now Lieutenant Commander Brainerd Norton Bock. Lt Commander Brock was from Middle Haddam, Connecticutt, and graduated from the Naval Academy in 1924. "Brainless", as he was nicknamed, had a reputation for good natured sarcasm, always ready to do a good turn and fighting. I am not sure when he became the skipper. From Pago Pago she travelled to the Solomon Islands, probably via Espiritu Santo in the New Hebrides (now Vanuatu). On Thursday 18 March 1943, the USS *Denver* was in Segond Channel. This is the main waterway of Espiritu Santo (Santo). At 0825 the *Denver* moored alongside the *Kanawha* and commencerd refuelling. She took on 123,984 gallons of fuel. At 1004 refuelling was complete.

The USS *Kanawha* appears to have returned to the Solomon Islands and then served in the area around Guadalcanal for the next two months.

On 7 April 1943 the USS *Kanawha* was anchored in Tulaghi Harbour in the British Solomon Islands. As well as the *Kanawha* there were 15 torpedo boats and their tender *Niagara*, three tugs, the Navy transport *Stratford*, six transport ships, eight landing craft. HMNZS *Moa* was refuelling from the tanker USS *Eskine M. Phelps* (in some reports called a "hulk"), the minesweeper USS *Conflict*, the net tenders *Buttercup* and *Aloe*, the US coaster *Awahou* and some auxiliary ships.

Figure 58 - Lt Commander Brainerd N. Bock - Photo 1924

The *Kanawha* had been in Tulaghi for seven days and was awaiting an escort so she could leave. At 1230 the skipper of the *Kanawha*, Lieutenant Commander Brainerd Bock, heard that planes had been sighted leaving Bougainville heading for the Guadalcanal area. When the escort arrived (USS *Taylor*??) she refuelled the ship. At 1445 hours she left. The *Kanawha* joined escorts PC-85 and USS *Taylor*. The time was about 1502 and some 67 "Vals" and 110 "Zekes" or Zeros (some reports only say 48 planes) were sighted over Savo Island. Of these, 18 went in the direction of Tulaghi and 15 of these went for the biggest target, the USS *Kanawha*. If there is a choice with sinking a

warship or an oil tanker in the war, then the oil tanker is the better target. Imagine, sinking an oil tanker can cripple or severely hurt dozens of warships while sinking one warship has a smaller impact.

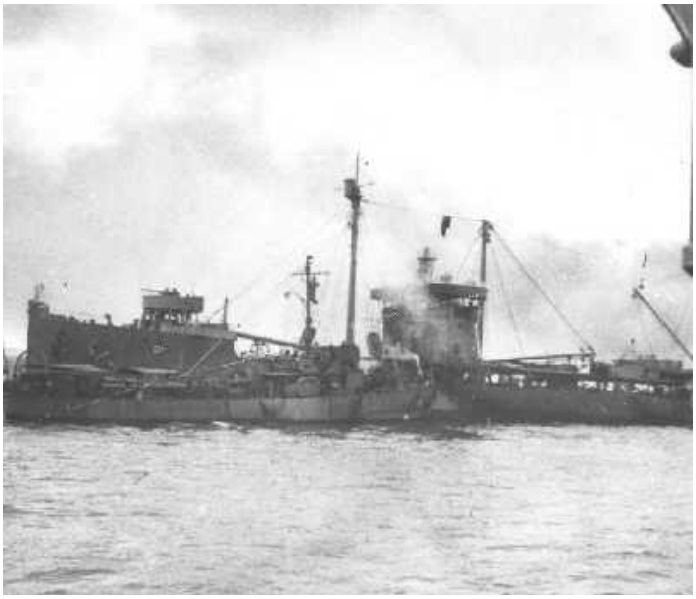

Figure 59 - The *Kanawha* is on fire, attended by a smaller vessel, possibly USS *PC 85*

At 1502 the *Kanawha* was attacked by five "Vals". William Wes McGill of South Knoxville, Kentucky, enlisted in the US Navy in 1942. In 1943 he was the Captain of the gun crew on the *Kanawha*. Wes (as he was better known), later said:

"I look back now and remember thinking I was dead. I thought there was no way the ship could take it. I remembered firing and firing until the word came to abandon ship. The one thing they taught you was to never jump into the water in white because it would attract sharks and here I went over the side in my white underwear. I was worrying about sharks and waiting until I was picked up a couple of hours later by P.T. Boat and the Marines adopted us when we got there and saw that I got some new clothes".

While in the water and still fearing sharks, McGill pulled a bleeding sailor from his home state to safety and tied him to a floater hose until they were rescued.

This incident was later contained in the book *Profiles in Courage* written by the then Lieutenant John F. Kennedy, later to be President of the USA, who witnessed the incident from his vessel PT 109.

Forest Cotton of Brush Prairie, Washington, was one of the AA gunners that afternoon. He was manning the gun on the starboard bow and reports that his gun crew shot the wing off the first plane to attack, its 500 lb bomb a near miss on the starboard side. This bomb exploded about three metres from the hull near the forecastle/main deck line. Even though it missed, it put a large hole in the hull. The ammunition magazine was located just aft of this line in the middle of the ship. The magazine was flooded by this explosion as the water-tight doors gave way under the water pressure..

One of the planes got lucky and one bomb hit the oil tank forward of the bridge. This bomb went right into the oil tank A-113) and exploded. Another bomb went right through the funnel and into the engine room. It is possible that there were one or two hits/near misses the hull near the engine room. There were three near misses, these perhaps opened more holes. The ship was on fire.

The USS *Kanawha* was mortally wounded with a total loss of engine power. Fuel oil was all over the main and cargo decks and all the hatches from A-111 to A-118 (presumably the frontmost to the rearmost tanks) blown off. Tank A-111 caught fire soon after. All $C0_2$ cylinders were connected to the fire extinguisher system and soon after the fire in A-111 stopped. It is not certain if this was due to lack of fuel or the action of the extinguishers. A bucket brigade was started to put out the fire in the engine room but this was useless and soon stopped. The fuel powered handy billy pumps located at the bow (wrecked) and the stern area (lost) were of no use. The fires were now out of control and the ship was almost dead in the water. The USS *Kanawha* was sinking. The only ship nearby was the USS *PC 85*. The USS *Taylor* had left the area. From the photo at left, it is obvious that the *PC 85*

came alongside and took off some of the crew. Lt Com Bock ordered the *Kanawha* to be abandoned. The ship was checked for any remaining crew before the skipper, together with the Executive Officer William. F. Connor, Lt Sowls and six crew left the ship. When they were 200 metres away they saw two men jump from the port side of the ship. There is also a report of two men been locked in the bunker pump room in an attempt to escape the fires. They were not released till the crew of an LCT heard their rapping on the hull at 1800 on 7 April 1942. The Captain reported that they were not sighted or heard when he and the Executive Officer inspected the ship prior to abandoning it.

The USS *Rail* fought the fire and had the fire near the bridge under control. However, the 20 mm and 3" 0.50 calibre boxes exploded and the *Rail* left. The aft magazine was also now on fire and it exploded 200 feet into the air. Oil on the water caught fire. Efforts were made by the USS *Chestnut*, USS *Rail*, USS *Monenomee* and a LCT to salvage the ship but they were unsuccessful. The USS *Kanawha* sank at 0400 on 8 April 1943 with the loss of 19 men.

The crew who were killed were:

Lt John W. Beedon	Paul Glenn Hough	Gene Harding Spillman
Paul Ahlfinger	Delmar Joseph Johnson	Charles Edward Stuart
Ralph Everett Bell	Tarpley Johnson	Frank Samuel Veltri
George Lee Dalthorp	Francis John Lipinski	Elbert Wood
Harry Raymond Eames	Leslie Bennett Marshall	Henry John Zimmerman
Lloyd C. Fawl	Neil McKeller	
Herbert Miller Griffith	Newton Bruce Muller	

Capatin Bock stated that he believed that the ship sank because the the watertight hatch leading from the shaft alley to the after parts of the ship failed.

On 8 April 1943 the USS *Pathfinder* departed Tulaghi for Espiritu Santo but had to return to Tulaghi to pick up approximately 50 survivors of the sinking of the *Kanawha*. The next day the *Pathfinder* dropped anchor in Palikula Bay, Espiritu Santo, New Hebrides (now Vanuatu) with these men.

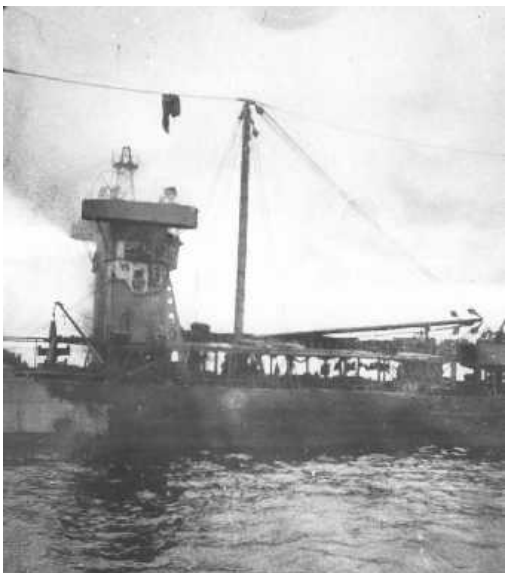

Figure 60 - The Bridge area of the *Kanawha* shows the damage suffered

On 4 December 1943, Commander Brainerd N. Bock was the skipper of the USS *Kennebago*, a fleet oiler, when she was commissioned. Later he became the skipper of USS *McCracken* APA-198, a 6,720 ton attack transport, taking command on 21 October 1944 when this new ship was also commissioned. He ended up back at Guadalcanal on 31 January 1945 and was there six weeks (of interest the *Kennebago* was they for a few weeks from 11 February 1945).

An interesting fact was that the *Kanawha* was carrying US$50,000 in cash in two safes in the Disbursing Officer's office.

I am not sure who discovered the USS *Kanawha* but its location has been known for some time (since the 1980s at least). It is reported that Brian Bailey (who was the first to dive the USS *Aaron Ward*) found at least one of the safes and may

have collected the money inside, although I was also told it was much damaged (you could hardly take it to the US Reserve Bank to get new notes!).

Today the wreck of the USS *Kanawha* lies north east of Soghonangola Island at the entrance to Tulaghi Harbour. She faces the island and is on a sandy bottom at a maximum depth of about 57 metres. There are moorings at the bow and stern.

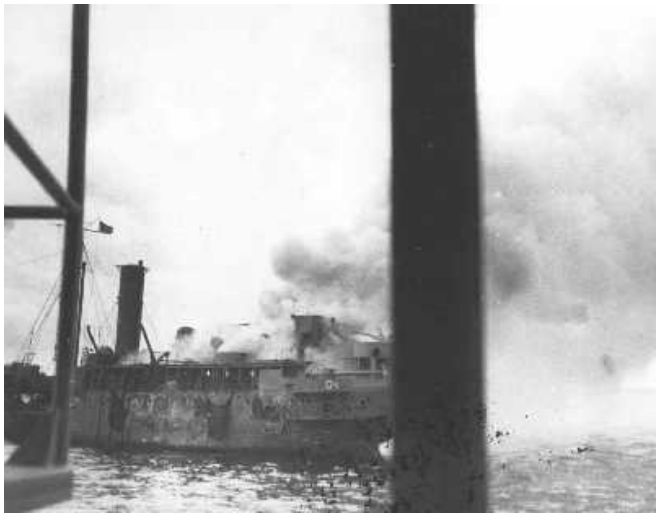

Figure 61 - The stern of the *Kanawha* shows the severe damage to engine room

The first dive is normally done at the stern. The mooring line is attached to the engine room skylights. At the stern there is a large raised gun on a platform with large guns on either side (48 metres). Under the platform there is a huge winch. There are also two anti-aircraft guns just forward of the two outer guns. The raised gun has shells lying around it (depth 45 metres). Dropping over the side brings you to the props. Both props are buried in the sand, but a small part of one blade of each are visible. The rudder is hard starboard.

Climbing back to the deck near the engine room you see that the engine room is very open, with holes in the hull on both sides. These appear to me to be bomb holes rather than salvage holes (as I was told they were) since they are punched inwards. Remember, even though the ship had two large holes in the engine room, the ship was an oil tanker so the empty tanks would have provided a lot of buoyancy. You can drop into the engine room and the depth here is about 55 metres.

Back on the main deck (52 metres), you see that the funnel has collapsed. There are some more AA guns forward of here.

Figure 62 – Divers over the engine room
Photo by Peter Fields

This is about all you will see on your first dive as this will have taken about 20 minutes and you will have decompression of about 3 minutes at 9 metres, 7 minutes at 6 metres and 17 minutes at 3 metres. This is based on an Aladin computer.

The mooring on the bow is located on the booms of the forward mast, just behind the forecastle and on the starboard side. Travelling forward and dropping over the ship's side you will see that there are no anchors on the starboard side (there is space for two anchors) and on the port side there is one. The view from in front of the bow is quite spectacular. Coming back up onto the deck you can rise up to the large forward gun. It is

also on a raised platform at a depth of about 44 metres. Under the platform there is another huge winch.

Either side of this gun there are two more large guns (depth about 46 metres). There are two anchors just behind the forecastle on the main deck, one on either side (depth about 48 metres). The hull on the port side has a huge ripple in it and the bow area is damaged, meaning that the ship probably went down bow first.

As you move along the ship you see many entrances to the fuel compartments. I would not examine them as they are as black as night and even with a torch almost impossible to safely examine. Also, from experience, you can get covered in oil and sludge if you disturb the remaining contents, no matter how little remains.

Figure 63 – One of the guns on the *Kanawha*
Photo by Peter Fields

The bridge is located a bit further along and it is badly damaged. As indicated above, the bridge caught fire so it must have been hit when the bomb hit the area forward of the bridge. There must have been some AA guns here as there is a lot of ammunition of remaining on and near the bridge. It is impossible to enter the bridge using twins but you can see the telegraph (depth about 43 metres). Behind the bridge there is a false deck, probably an awning installed to provide protection to troops being carried during the War (I have read that 350 men were carried on the ship). You can see this in the photo of the fire on the bridge. Halfway to the engine there are two more large guns.

At the end of the dive I ascended the forward mast rather than the mooring as it rises to 25 metres and then went across to the mooring line which was easily visible (check on your way down).

With a bottom time of just over 22 minutes, decompression of 2 minutes at 9 metres, 7 minutes at 6 metres and 18 minutes at 3 metres is required.

As you can see, this is a huge wreck and two dives only just give an overview. The dives are deep but quite easy for experienced divers. Visibility on my dives averaged 20 metres or so. There was no current. Water temperature was 27°C or higher.

I dived with Solomon Sea Sports. This operation changed ownership in early 2002 and is now called Solomon Islands Diving, Dive Tulaghi and is run by a number of (ex-)Sydney divers. They have moved location to Tulaghi.

Dives:

- 23 October 2001
- 24 October 2001

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Kawanishi H6K5 *Mavis* Flying Boats

The Honiara area of the Solomon Islands has some very good diving, both on Guadalcanal itself and the nearby island groups. Across Iron Bottom Sound from Guadalcanal are the Florida Islands. First "discovered" by the Spaniard Mendana in 1568, they are more correctly known as the Nggela Islands. The group is made up of Nggela Sule, Nggela Pile, Buena Vista Island, Sandfly Island (wouldn't you love to visit there!) plus 50 smaller islands.

Before World War II, the capital of the Solomon Islands was Tulaghi. This is a small island but ideally located with a protected harbour. One of the smaller islands in the Floridas is Ghavutu Island, about four kilometres east of Tulaghi. Ghavutu is about 500 metres long and 250 metres wide. Before the war, Ghavutu was the base of Lever Brothers. They operated extensive coconut plantations in the Tulaghi/Guadalcanal area. They had substantial infrastructure on the island, including docks and buildings.

On 3 May 1942 Japanese troops took Tulaghi and seized control of all the adjacent areas. On the north-eastern corner of the island there was a substantial concrete wharf constructed by Lever Brothers or the Japanese (it is not clear who built it but it was there in early August 1942). As well, there were seaplane slips located to the east of the wharf (past the small inlet if you are standing on the wharf looking east). There are bits still visible today). Ghavutu was connected to the west to Tanambogo Island by a 300 metre small concrete causeway. Tanambogo Island is even smaller than Ghavutu, only 300 metres by 75 metres or so. North of the two islands is another even smaller island. In between the smallest island and the other two islands, Japanese seaplanes were moored. When the US invaded on 7 August 1942, there were 13 sea planes based at Ghavutu Island.

Soon after invading the Tulaghi area, the Japanese commander began building an airfield on Guadalcanal. This was planned to be finished on 15 August 1942. This would enable Japan to have large bombers within range of Australia and other countries like New Caledonia and new Hebrides (now Vanuatu). The US decided to invade the Solomons, hopefully before the airfield was completed.

On 7 August 1942, the first day of the invasion (the Battle of Guadalcanal), Ghavutu was to be invaded in conjunction with the invasion of Guadalcanal itself and nearby Tulaghi. At 1145 on that day, Douglas SBD *Dauntless* SBD dive bombers attacked Ghavutu for 10 minutes and then the Tulaghi Fire Support Group (a cruiser and two destroyers but I am not sure what the ships were) bombarded the island for five minutes while the 1st Parachute Battalion (acting as infantry) approached the island in landing craft. At 1200, the parachutists landed on the island in the area of the slips. The first wave reached shore but the next groups were hit hard by the Japanese. It is reported that one in ten were hit. Within two hours the Americans were approaching the island's lone hill, still under heavy fire. The Japanese were entrenched on the island in caves and bunkers (you can see some of these today as you walk up the track to the top of the hill). They were also firing from Tanambogo Island.

By 1800 the Americans had captured the hill. By the next day, the island was totally in American hands, with the 1st Parachute Battalion now supported by two companies of the 2nd Marines. It is reported that the parachutists and marines suffered when they were shelled and bombed by their own forces. As mentioned above, Ghavutu Island was connected to the adjacent island Tanambogo by a causeway and the fight for that island was carried out at the same time. On 7 August 1942 B Company of the 2nd Marines attempted to invade the island after a short aerial and water based bombardment but this failed. At 1130 on 8 August 1942, the 3rd Battalion of the 2nd Marines and two light tanks attacked Tanambogo from the beach and causeway. By late afternoon most of the island had been captured. It is reported that by dusk all the Japanese on the island were dead.

During the attacks on the two islands, 108 marines were killed or missing and 140 injured, quite a heavy toll when the size of the islands is considered. Marines estimated that they had fought 1000 Japanese but the real figure was about 500.

During the attack, the Japanese flying boat tender IJN *Akitsushima* was seen in the area on its way to Gizo where it was going to establish a sea plane base. Just over a year later on 17 February 1944 the *Akitsushima* was in Chuuk Lagoon and damaged during the first raids by the American aircraft. It escaped through the South Pass and lived for another day. It was also in Palau just prior to the attacks by the Americans on 30 and 31 March 1944. The *Akitsushima* was finally sunk by the Americans on 24 September 1944 at Coron in the Philippines.

The Americans used Ghavutu as a patrol boat base. There was also an observation post on the top of the island, togther with a large gun, some concrete water tanks (built by US SeaBee's unit CB26 on 9 April 1943) and a flagpole. The men who worked there lived on Tanambogo and went across to Ghavutu each time they were on duty. Apparently the Americans still believed that there were Japanese on Ghavutu even months after they had taken the island. This was probably not true, the island is not that big, but they reported that it made them jittery when they were on night shifts.

During the War, the Royal New Zealand Air Force (RNZAF) had a squadron of Consolidated Vultee Model 28 PBY *Catalina* flying boats based in the Solomon Islands. I am not sure where they were based, but it is possible that the RNZAF were based at some time at Ghavutu, utilising the Japanese seaplane slips. I base this guess on the fact that I found some 1939 NZ beer bottles under the Ghavutu Island Wharf. It is also possible (probable) that the US based *Catalinas* here as well.

In 1992 and 2001 I visited Ghavutu Island. On both trips I did two dives in the area. The diving here represents both phases of the occupation of the islands. One of these dives on each trip was off the Ghavutu Wharf and the other was on Japanese "Mavis" flying boats.

In 1992 our dive was to be on a Japanese "Emily" flying boat (at least this is what we were told at the time) which was located in the small bay to the north of Tanambogo Island. The plane was allegedly one of four or five sunk at their moorings by US aircraft, presumably on 7 August 1942 by the Douglas SBD *Dauntless* dive bombers. The other planes had at that time not been located.

The Kawanishi H8K1 "Emily" flying boat is universally recognised as the finest flying boat of World War II. The plane was huge with a wingspan of almost 125 feet and a length of over 92 feet. The "Emily" was powered by four 1,825 hp Mitsubishi Kasei 14 cylinder radial engines and was mostly used for bombing and reconnaissance purposes and sometimes transport. Compare those dimensions and power plants to the British Short Sunderland flying boat (similar to the Qantas Sandringham in Port Vila Harbour) and the Boeing B-17E *Flying Fortress* (north-west of Honiara) which had wingspans of almost 115 feet and over 103 feet respectively. Both were powered by four 1,200 hp engines. (Note: The Japanese designation H8K1 means H=Flying Boat, 8=8th in the flying boat series, K=Kawanishi and 1=model).

In late July 1942, Kawanishi H8K1 Emilys were responsible for three attacks on Townsville in Queensland. On the night of 25/26 July two Emilys bombed Townsville port but the bombs fell wide of the mark and landed on mudflats. The planes, W-45 and W-46, were not intercepted and no anti-aircraft guns fired on them. On 27 July one Emily was attacked a it flew over Townsville and it dropped seven of its eight bombs on the Many Peaks Range. This aircraft was W-46.

The third and last raid was on the night of 27-28 July when two Emilys (W-37 and W-47) left their base (I am not sure where this was yet) but W-37 had engine problems and turned around. The remaining plane continued and was attacked by Bell P-38 Aerocobras between Magnetic Island and the mainland. The Japanese plane dropped its bombs and they hit the mud below (one remained in the plane). During the attack by two Aerocobras, the bomb fell out of the bomb bay and hit the ground destroying a palm tree. Cannon fire from the fighters

exploded in the rear gunner's compartment. The planes continued their attack until they ran out of ammunition. The Emily made it safely back to base.

During research to update these web pages, I corresponded with Raymond Holyoak (who was writing his thesis on the defence of Townsville during WWII) by email about the Solomon Island wrecks and provided him with copies of some photographs I took on my 1992 trip. Mr Holyoak advised me (and this confirmed something that I had suspected) that the plane at Ghavutu is in fact, not an Emily.

Mr Holyoak told me that from the shape of the exterior photograph of the cockpit (see left), the aircraft at Ghavutu is definitely a Kawanishi H6K (codenamed "Mavis" by the Allies). The front window shape is definitely different to that of the H8K Emily. Both the Emily and the Mavis were four engined, the Emily mainly being used for bombing and the Mavis for recon (there are some other main differences that confirmed this - I will detail later). There is, however, an Emily to be dived in the Pacific. This is located at Chuuk Lagoon. See the separate article on that wreck.

History

Kawanishi Kokuki Kabushiki Kaisha (The Kawanishi Aircraft Company Limited) was established in November 1928 with its factory being located at Naruo Mukogun Hyogoken near Kobe. During the war it built four types of sea planes, two very large planes and two small fighters. It also built a land based derivative of one of the fighters. As well as the Emily detailed above, Kawanishi designed and built the Kawanishi H6K Mavis, Japanese designation Type 97 Flying boat, model 23.

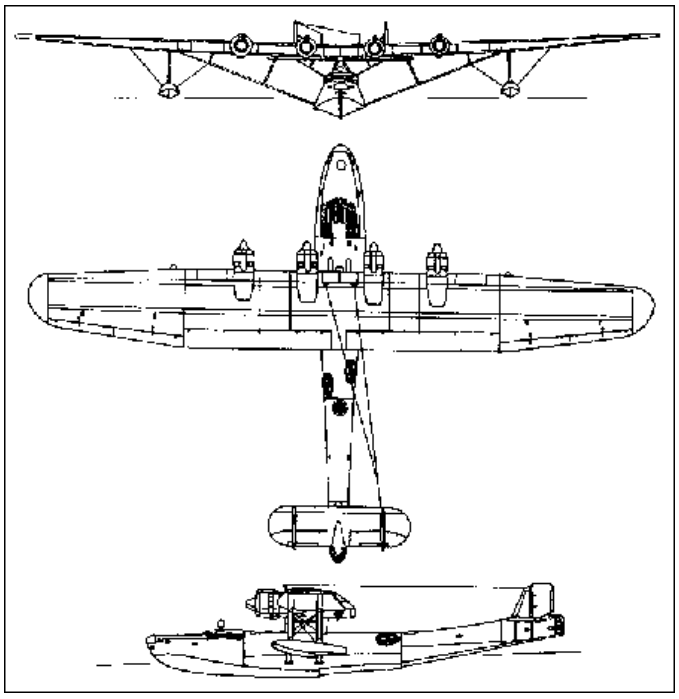

Figure 64 - Diagram of Kawanishi H6K Flying Boat

In early 1933 the Japanese Navy issued a specification for a new flying boat to Kawanishi and they put up two prototypes. One was a four-engined Type Q and the other a three-engined Type R. Both monoplanes, the Navy was not satisfied with either proposal. In early 1934 the Navy revised its specifications seeking a four-engined machine with performance superior to the Sikorsky S-42 (a range of 2,500 nautical miles at a cruising speed of 120 knots). Led by Yoshio Hashiguchi and Shizuo Kikahura, Kawanishi designed a flying boat with a parasol wing mounted above the hull on inverted V struts and braced by parallel struts mounted low on the hull. It also had two floats under the wings and twin vertical tail surfaces (although I have seen photos of one with three tails).

It was given the designation Type S and was powered by four Nakajima Hikari 2 nine-cylinder air-cooled radials of 840 hp output driving three-bladed propellers. It made its maiden flight on 14 July 1936 with Katsuji Kondo as pilot. Some minor modifications were made after this first flight to improve its characteristics on water. The manufacturer’s trials went smoothly and the prototype was formally handed over to the Japanese Navy on 25 July 1936.

The prototype was underpowered but it was the first Japanese aircraft of either service to have a power-operated dorsal turret. There were three 7.7mm machine guns, one an open

nose position, one in the dorsal turret and one in the tail. It carried either two 1,764 lb. torpedoes or a maximum load of 2,205 lb. of bombs attached to the wing support struts. Another two prototypes were delivered in 1937 and one more in early 1938. These differed from the first prototype in having longer ailerons, enlarged tail fins and a redesigned dorsal turret.

Versions

The Mavis had a wingspan of 131 feet (40 metres) and a length of 84 feet (25.6 metres). That is, it had a greater wingspan than the Sandringham, the *Flying Fortress* and the Emily but it was really smaller than all of them (as I will explain below). (Note: The Japanese designation H6K5 means H=Flying Boat, 6=6th in the flying boat series, K=Kawanishi and 5=model).

Service trials being complete, the first, third and fourth prototypes were re-engined with 1,000-hp Mitsubishi Kinsei 43 fourteen-cylinder radials (three-bladed propellers were retained on all versions), and these became the first to enter service with the Japanese Navy as the Navy Type 97 Flying Boat Model 1, or H6K1. The next production variant was the H6K2 of which 10 were built. Aside from minor internal changes, they were identical to the re-engined H6K1s. The seventh and eighth H6K2s were converted into staff transports with the designation H6K3. Although there was a need for a military and a civil transport version, the Navy decided to continue with the basic maritime reconnaissance variant. The next version, the H6K4, or Navy Type 97 Flying Boat Model 22, became the major production type.

Figure 65 - A Mavis in flight

The H6K4 had fuel capacity increased from 1,708 gallons to 2,950 gallons. To lighten and simplify the aircraft, the dorsal turret was replaced by two beam "blisters" similar to those on the Consolidated Catalina each with a single 7.7mm machine gun. Two other hand-held guns of this calibre were housed in the nose position and in an open dorsal position and in the tail was a hand-held 20mm cannon. Later H6K4s were re-engined with Kinsei 46s but they were still called H6K4. There were 127 H6K4s were built between 1939 and 1942, with 66 in use at the beginning of the Pacific War. Besides performing their primary duty of maritime patrol, H6K4s were also used as bombers in the Dutch East Indies and at Rabaul, New Britain. But the Mavis, as the Allies code-named her, was far too vulnerable to ground fire and interceptors due to her lacking armor and self-sealing fuel tanks. It was withdrawn from bombing missions as soon as possible once sufficient numbers of land-based Mitsubishi G4M Bettys were available to replace it.

It was still valuable in the maritime recon role and its superb range made the Mavis very suited to patrolling the Pacific.

As indicated above, all planes after the 114th H6K4 were built with four 1,300-hp Kinsei 53 radials as "insurance" in case the new Kawanishi H8K1 Emily was delayed in production. It also had the open nose gun replaced with turret. This aircraft served as the prototype for the next version H6K5 Model 23. Some of the H6K5s were powered by the Kinsei 51 which differed only in minor details from the Kinsei 53. After 36 were completed, production of the basic H6K maritime recon version ended in favor of the H8K.

As more H8Ks came into use, remaining H6K4s and 5s were withdrawn from normal service and fitted with bench seats converting them into troop transports.

Purpose-built transport versions of the Mavis were also built. The first two were H6K3s and once production of the H6K4 was underway, Kawanishi began making a small number of transport versions both for the Navy and for Greater Japan Air Lines (Dai Nippon Koku

K.K.). These were designated H6K2-L or Navy Type 97 Transport Flying Boat. Despite the version being H6K2-L, they were actually based on the H6K4. Modifications made including the deletion of all armament, the installation of a mail and cargo compartment forward of the cockpit, a galley behind the cockpit and a midship cabin with eight seats or sleeping accommodation for four. Next there was a passenger cabin with seating for 10 (but no sleeping accommodation), a toilet and finally another cargo compartment. There were 16 Kinsei 43-powered H6K2-Ls. After this, 20 Kinsei 46-powered H6K4-Ls (with extra windows along the sides of the passenger cabins) were built and two patrol fyling boats were converted to H6K4-L.

Of the transports (called code-named Tillie by the Allies), 20 were used by the Navy as transports and the Ocean Division of Greater Japan Air Lines used the other eighteen to serve Yokohama-Saipan-Palau-Timor, Saipan-Truk-Ponape-Jaluit and Saigon to Bangkok. Several of these planes were intercepted and destroyed by the Allies, but the survivours remained in service until the end of World War II. A total of 215 Mavis and Tillie variants were built, production ending in 1943.

Armaments

H6K1 and H6K2

One flexible 7.7mm machine gun in open bow position, one flexible 7.7mm gun in a powered dorsal turret, and one hand-held 7.7mm gun in tail position; two 1,764-lb. torpedoes or up to 2,205 lb. bombload carried externally.

H6K4 and H6K5

One 7.7mm gun in either open bow position (4) or bow turret (5), one 7.7mm gun in open dorsal position, one 7.7mm gun in each beam blister, and one hand-held 20mm cannon in tail position; two 1,764-lb. torpedoes or up to 2,205 lb. bombload carried externally.

Summary of Models

- H6K1 prototypes (1936-38) - 4 of which 3 were modified in 1938 as H6K1 Model 1
- H6K2 Model 11 (1938-39) - 10 of which 2 were modified in 1939 as experimental transports H6K2-L
- H6K3 (1939) - 2
- H6K4 Model 22 (1939-42) - 127 of which 2 were modified in 1942 as transports H6K4-L
- H6K5 Model 23 (1942) - 36
- H6K2-L (1940-42) - 16
- H6K4-L (1942-43) - 20
- **TOTAL: 215**

Summary

As mentioned above, the Mavis differed from the Emily in that it was a parasol strut-braced wing (the wing was one piece and was elevated over the hull on struts) while the Emily had a wing connected directly to the top of the fueslage. In some ways, the Mavis looked a little like a Consolidated Vultee PBY-5 "Catalina" from the side but it was much larger while the Emily looked like a Sunderland/Sandringham. I have also read that the Mavis was originally designed as a civil flying boat so it was set up for carrying passengers (up to 20) but in war duties it carried a crew of 10. The plane's fueslage was not that big, so it was not a huge plane in overall terms. It was generally used for reconnaissance purposes. Some Mavis planes were used for recon over Townsville for the attacks detailed earlier in this article.

Wrecks in the Solomons

As mentioned above, north of Tanambogo Island and between that island and a smaller island to the east, there was a Japanese seaplane base. I now now that on 7 August 1943 there were at least 7 large seaplanes, probably all Kawanishi Mavis aircraft, moored here. There were also reportedly a few more to the east of the small island. The US planes supporting the landings strafed the seaplanes or bombed them, causing all to sink. These planes are probably H6K5 but may be H6K4.

Figure 66 - The cockpit of Mavis No 1

Nowadays there are between 10 and 13 wrecks of this model plane that can be dived here (advice by dive operator in October 2002).

Kawanishi H6K5 Mavis - No 1

On 11 August 1992 I dived a Mavis that sat on the bottom at 42 metres. The fuselage is lying on its starboard side and it is pretty well intact. The wing is broken off, lying across the fuselage where it would normally be but on the port side of the plane. The struts that originally held the wing in place are still partially connected and form a "spider web" entanglement. This was what made me suspect that the plane was a Mavis rather than an Emily as the latter did not have any supporting struts or wires but the wreck has a whole series of metalwork that held the wing in place.

The rest of the plane seems to be basically fully intact. However, there is a great deal of growth over the wreck.

Figure 67 - An ammunition cannister from Mavis No 1

From the tip of its nose to the tail, things to see include the nose which still has the anchoring point on it, the cockpit (including windows that are covered with growth or broken, inside the fuselage, the wings and scattered bits and pieces like ammunition canisters.

The bottom here appeared to me to be silt. The visibility on this dive is not real good, probably only two to three metres. A lot of very fine silt covers the plane and it is very easily stirred up whereupon it can virtually totally block out all visibility. Extremely good buoyancy is required on this dive. When I dived it the viz was about two metres. Hence my problems in identifying the plane.

Kawanishi H6K5 Mavis - No 2

In October 2001 I again visited the Tulaghi/Ghavutu area and dived on another Mavis. This is almost fully intact and is said to be the best of the ones found so far. The plane sits at about 30 metres on a sandy (rather than silt) bottom. Facing south, the plane has a mooring attached to its own nose mooring ring. The nose is broken just in front of the cockpit and is bent up a bit. You can see where the nose gunner/camera operator sat right at the front. There is a recon camera sitting behind this spot.

Figure 68 – The cockpit of Mavis No 2
Photo by Peter Fields

You can look into the cockpit, seeing the seats and controls as well as instruments (all obviously unreadable due to water impact). There is also a

thermos, with the outer metal casing almost gone, the outer glass case broken in spots and the inner glass case intact. It is really too small to get inside the plane. Above and behind the right hand pilot's seat there is a navigator's bubble. Back under the wings there are some funny looking compartments that I could not ascertain the use for. Further along the fuselage there are gun/observation windows on both sides. Above this there is a glass plate aerial camera and also two glass photographic plates. There are also some more inside the plane.

Figure 69 – The inner port prop of Mavis No 2
Photo by Peter Fields

The plane has two tail fins. A large area of the fins and the tail were fabric covered so these are now just metal supports. The tail gunner's spot is easily visible, but there is no gun.

Returning forward, you come to the wing. As mentioned earlier, the wing sits well clear of the fuselage on struts. The port wing is almost 100% intact. The very tip of the wing is broken, but both engines are intact. The port float is still in place under the outer engine.

The starboard wing is a different matter. As far as the inner engine the wing is intact and the inner engine is there. However, once the outer engine is reached, the wing stops. It appears that the plane may have been hit in the outer engine area and the wing broken off here. The engine is nowhere to be seen, although the props and hub lie on the sand straight under the engine's original location. The starboard float is also missing as one would expect but the remaining section of wing lies only a few metres away (perhaps the engine is under it).

Therefore, it is likely that the plane was bombed or hit by bullets in the outer starboard engine, causing the engine to break free of the plane. This would cause the float to collapse and the plane would then tip over on its starboard side and more than likely, take in water and sink.

Figure 70 - The nose of Mavis No 1 flying boat

This is a lovely plane to dive on, very interesting indeed. Visibility is much better, at least 15 metres and the depth of 30 metres means a good period can be spent on it without going into decompression.

I dived with Solomon Sea Sports. This operation changed ownership in early 2002 and is now called Solomon Islands Diving, Dive Tulaghi and is run by a number of (ex-)Sydney divers. They have moved location to Tulaghi.

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Kawanishi H8K2 *Emily* Flying Boat

Kawanishi Kokuki Kabushiki Kaisha (The Kawanishi Aircraft Company Limited) was established in November 1928 with its factory being located at Naruo Mukogun Hyogoken near Kobe. During the war it built four types of sea planes, two very large planes and two small fighters. It also built a land based derivative of one of the fighters.

Before World War II, Kawanishi had an association with Short Brothers of Belfast (builders of magnificient flying boats like the Sunderland/ Sandringham) but their first large flying boat, the H6K Mavis was based more on the Sikorsky S.42. In 1938 the Imperial Japanese Navy issued specifications for a new flying boat that was 30% faster and with a 50% greater range than the Mavis.

As a result, Kawanishi came up with a proposal for the H8K Emily flying boat. It was reported as being the single biggest leap in flying boat design and other manufacturers did not catch up to the design till after the war was over.

The prototype H8K1 made its maiden flight in January 1941. However, there were some problems with the hull porpoising as it ran over the water (that is, jumping up and down). Modifications were made and after two pre-production craft, the new plane went into production in August 1941. A total of 14 H8K1 were produced during 1941 to 1942. (Note: The Japanese designation H8K1 means H=Flying Boat, 8=8th in the flying boat series, K=Kawanishi and 1=model. The "Emily" name was the English name given to the plane. All Japanese planes were named by the Allies, eg the Zero was actually called Zeke by the Allies but the Japanese name is about the only one used commonly.)

The Kawanishi H8K Emily flying boat is now universally recognised as the finest flying boat of World War II. The Japanese designation was Type 2 Flying-boat, Model 12. The plane was huge, with a wingspan of almost 125 feet and a length of over 92 feet. The Emily was an all aluminium high-wing aircraft with a deep fuselage. It had four engines and the plane was stablised on water by two large, fixed stabilising floats.

The production Kawanishi H8K1 was powered by four 1,530 hp Mitsubishi Kasei 12 14 cylinder radial engines driving a four bladed Hamiliton type constant speed prop. Maximum speed was 433 km/h with a cruising speed of 296 km/h. Service ceiling was 8,540 metres (28,000 feet) and it had a range of either 4,800 km, 6,257 km or 7,200 km (I have seen all these figures). It had a maximum take off weight of 30,870 kg (although I have read 24,500 kg). Normal crew was ten. There were 14 or 17 H8K1 built.

The next version was the H8K2 and this was powered by four 1,850 hp Mitsubishi MK4Q Kasei 22 14 cylinder radial engines Maximum speed was 466 km/h with a cruising speed of 296 km/h. There were 114 built from 1943 to 1945. Two H8K3 prototypes were built in 1944 (similar to H8K2) and two H8K4 prototypes modified from H8K3 frames in 1945. There were also 36 H8K2-L transports built from 1943 to 1945. They carried up to 64 passengers. Only a total of 165 or 167 Emilys were built.

The Emily was nicknamed "The Flying Porcupine" due to its heavy armament of five 20 mm guns and four 7.7 mm guns. The H8K2 had a bow turret with a single 20 mm type 99 model 1 cannon, a dorsel turret also with a single 20 mm type 99 model 1 cannon and a tail turret again with a single 20 mm type 99 model 1 cannon. In the cockpit hatch there was a single 7.7 mm machine gun and each side hatch had a single 7.7 mm machine gun. There was another single 7.7 mm machine gun in the ventral hatch. Finally, there were single 20 mm type 99 model 1 cannons in beam blisters. Offensive weapons, carried under the wings, consisted of either two 1,764 lb aerial torpedoes or eight 551 lb bombs or depth charges.

The Emily was mostly used for bombing and reconnaissance purposes and sometimes transport. This plane was much larger and powerful than such famous planes as the British Short Sunderland flying boat (similar to the Qantas Sandringham in Port Vila Harbour) and the Boeing B-17E *Flying Fortress* (north-west of Honiara) which had wingspans of almost

115 feet and over 103 feet respectively and take off weights of 26,332 kg and 27,240 kg. Both were powered by four 1,200 hp engines.

The plane is believed to have had its first combat outing during an attack on Oahu, Hawaii, on the night of March 4-5, 1942. This was the second attack on Pearl Harbor. In late July 1942 Kawanishi H8K1 Emilys were responsible for three attacks on Townsville in Queensland. On the night of 25/26 July two Emilys bombed Townsville port but the bombs fell wide of the mark and landed on mudflats. The planes, W-45 and W-46, were not intercepted and no anti-aircraft guns fired on them. On 27 July one Emily was attacked a it flew over Townsville and it dropped seven of its eight bombs on the Many Peaks Range. This aircraft was W-46.

The third and last raid was on the night of 27-28 July when two Emilys (W-37 and W-47) left their base (I am not sure where this was yet) but W-37 had engine problems and turned around. The remaining plane continued and was attacked by Bell P-39 Aerocobras between Magnetic Island and the mainland. The Japanese plane dropped its bombs and they hit the mud below (one remained in the plane). During the attack by two Aerocobras, the bomb fell out of the bomb bay and hit the ground destroying a palm tree. Cannon fire from the fighters exploded in the rear gunner's compartment. The planes continued their attack until they ran out of ammunition. The Emily made it safely back to base.

During research to update these web pages, I have corresponded with Raymond Holyoak (who was writing his thesis on the defence of Townsville during WWII) by email about a plane I had dived on in the Solomon Islands in 1992. This was alleged by the dive operator to be an Emily. I provided him with copies of some photographs I took on my 1992 trip. Mr Holyoak has advised me (and this confirmed something that I had suspected) that the plane in the Solomons at Ghavutu is in fact, not an Emily but a Kawanishi "Mavis". See the "Mavis" for more details.

The Emily at Chuuk Lagoon is located off the south-western end of Dublon Island, just to the south of the Japanese seaplane base. It is in about 16 metres of water so it is an easy, relaxing second (or more likely third - see later) dive of the day. It is very badly damaged, having broken up into four major pieces. These pieces are:

- The entire wing section, in one piece and lying upside down.
- The nose section back to the wing area, badly damaged and upside down.
- The rear section of the fuselage, again upside down.
- The main body of the aircraft, once again upside down.

From the damage, it appears that the plane was not attacked as there is no bullet damage visible but the cockpit may have been hit as it is so badly damaged this cannot be clarified. Klaus Lindemann in his book *Hailstorm over...* (see references), says that it was returning to Chuuk when it was attacked by US fighters and hit. He says that it landed heavily but up the right way and sank soon after due to the bullet damage. I do not accept this explanation.

It appears to me that the plane landed very heavily, so much so that it immediately flipped over its nose, with possibly the nose section breaking off. The remainder of the plane then went along upside down. This hypothesis has credence as all parts are upsidedown and further, the two inner engines (the ones most likely to be kept running if fuel was low) were running when the plane hit the water and as such, it is possible to tell the direction of travel of the plane at that time. This is because if an aircraft's engines are running when it crashes, afterwards the propeller blades of the running engines are ALL bent by contact with the water/land. The strange thing is that the tips of these two inner engines are bent forward, not backward as one normally sees. This confirms that the plane was travelling backwards at the time the props hit the water. As it is physically impossible for the props to be bent forward or even touch the water any other way if the plane is travelling forward, then this is what must have occurred.

I suspect that the impact broke the back of the plane in a number of places and as the plane sank, it broke up into the four pieces found today.

The front section of the plane can be entered, but not too far as there is a great tangle of wires and other pieces blocking the way. The wing section is intact, check out the bent props on the inner two engines. The main hull section is accessible via the rear part but there is not much to be seen. This is because you are in the lower deck of the plane. You can look into the upper section through a small door. The rear tail section is quite small and cannot be entered.

Part of the cockpit's dashboard is lying on the sand behind the wing. You can still see the dials and knobs on it and read the writing on them. There are some other pieces around the wreck, including huge batteries.

As per the "Betty" bomber wreck, I would not give up a dive on one of the shipwrecks in Chuuk. However, if you have done all the shallower wrecks, it is worth doing the plane double.

Maximum depth is about 16 metres and a bottom time of 20 to 30 minutes is sufficient to see it completely.

Dives:

- 14 November 1997

References:

- *The North Queensland Line. The Defence of Townsville in 1942* – an unpublished thesis by Raymond Holyoak
- *Jane's Fighting Aircraft of World War II*
- *Hailstorm Over Truk Lagoon* by Klaus Lindemann
- *Desecrate 1* by Klaus Lindemann pages 312-3
- Imperial Japanese Aviation Resource Group - Kawanishi H8K "Emily" Page - http://www.warbirdsresourcegroup.org/IJARG/kawanishih8k.html
- Combined Fleet Kawanishi H8K Page - http://www.combinedfleet.com/ijna/h8k.htm
- Kawanishi H8K - IJN Flying Boat Page - http://www.angelfire.com/fm/compass/H8K.htm
- Kawanishi H8K 'Emily' Page - http://www.214th.com/ww2/japan/h8k/

Kansho Maru

The *Kansho Maru* was launched on 30 June 1938 from the Tama Shipbuilding Co Ltd at Tama, Japan (alternate sources say Mitsui Dockyard) for Inui Kisen K.K. of Kobe, Japan. The new ship was 4,862 tons gross, 116 metres (384.4 feet) long and 16 metres (52.5 feet) wide. Powered by a single six cylinder 642 NHP Tama diesel engine, the vessel was built as a combined passenger-cargo ship. She was used before the war by Mitsui and Kawasaki Line but commandeered by the Navy straight after the start of the War. Alternative spellings for the name of the ship are *Kensho Maru* and *Kensyo Maru* (used by *Lloyds Register*).

The first role of the *Kansho Maru* during the War was taking supplies from Japan to the Marshall Islands. After the Battle of Midway, a bow gun was installed on the ship. Just after this she was dry docked and some modifications made to the ship. This included removing the timber hatch covers on hold three and replacing them with steel and the 'tween deck plated over. This area was then turned into a small hospital.

During the following years the modified ship continued to take supplies to various islands but on return trips to Japan she carried wounded personnel.

On 4 December 1943, the *Kansho Maru* was attacked and damaged while in Kwajalein Lagoon. This attack was by US aircraft from a carrier fleet (a forerunner to the attack on Chuuk). The engine room was partially flooded and the ship is reported to have been run aground. It is not clear what happened after this as there are different reports about how she got to Chuuk Lagoon. In *Hailstorm over Truk Lagoon*, Klaus Lindemann says that the *Kansho Maru* was towed to Chuuk by the *Momokawa Maru* arriving on 6 January 1944. In *WWII Wrecks...* by Dan E. Bailey, it is stated that the *Kansho Maru* towed the *Ikuta Maru* to Chuuk Lagoon, having left Kwajalein on 3 January 1944.

Whatever is the case, on 17 February 1944, the *Kansho Maru* was anchored off Fefan Island, in the channel between that island and Dublon Island. It is likely that the ship was hit right on the stern by a bomb dropped by aircraft from USS *Yorktown* (Strike 1AY) at about 0630 hours. The same morning at about 0800 hours, dive bombers from USS *Essex* (Strike 2B) attacked three ships in the area where the *Kansho Maru* was anchored. A hit was scored on one ship amidships. It is believed that this may have been the *Kansho Maru*.

On 18 February 1944 during the second day of the attack, the *Kansho Maru* was attacked by aricraft from USS *Enterprise*, USS *Monterey* and USS *Bunker Hill*. During Strike 3B from the *Bunker Hill*, it was reported that a torpedo hit the *Kansho Maru* amidships. It is also possible that one aircraft dropped a belly tank on the ship causing a fire.

The *Kansho Maru* was not seen to sink.

On 24 June 1980, while on their way to the *Kiyozumi Maru* after searching for ships, the outline of the *Kansho Maru* was spotted by Klaus Lindemann's wife, Mary.

The wreck of the *Kansho Maru* lies upright with a list of about 15-20° to port. It is fairly level, with the bow being 21 metres, the stern a bit deeper and the sand under the stern just under 40 metres. Dive vessels anchor on the bridge area but a dive usually starts at the bow.

Both anchors are out and the bow has a very nice gun, well worth a photograph. The forecastle cannot be entered as both doors are closed. Behind here is hold one which is empty. The section of deck between holds one and two is badly damaged. The deck has collapsed all the way from the forecastle to the end of hold two. The damage is most severe around the mast house between the holds. On the outside of the ship, the hull is also damaged. It almost looks as though a giant has pushed his finger on the top of the mast causing the deck to implode down pulling the top of the hull on either side inwards a bit. Despite all this, there is no real explosion damage.

Hold two is empty and rising a deck brings you to hold three which is elevated. This hold has two 'tween decks. The top one has a door that takes you into the area under the bridge and thence into the engine room.

The engine room can be entered by the abovementioned door or the skylights (this is the easiest way). From hold three, you pass by some toilets and a bathroom before entering right above the engine. The engine room on the *Kansho Maru* is probably the best of any of the wrecks in Chuuk Lagoon. It is very large and airy, access is easy and it is very photogenic. The diesel engine consists of two sets of three cylinders in a line. You can explore under and around the engine. The depth here is about 27 metres. Exit the room via the skylights or a door on the port side (this goes almost straight to the galley). The skylight brings you out behind the still standing funnel.

Behind the engine room skylights there is another skylight. This gives access to the galley. You can drop down the skylight and come out over top of a huge woodburning combustion stove. The galley is quite interesting, with crockery, a teapot, pots and pans all over the place. There is another smaller stove to the starboard side and the whole room is tiled. You can exit out either side of the galley and by then going towards the stern you can exit out from the superstructure over hold four.

Hold four has a large pump or compressor (stated by Lindemann in his book) located on the port side of the 'tween deck. The remainder of the hold is empty. I think it is a pump as there are some large hoses coming in and out of it. My guess is that it is a salvage pump placed there to try and keep the engine room (and possibly other areas) empty of water after its misfortune in Kwajalein Lagoon in December 1943.

Behind here is hold five which is mostly empty. It has some welding cylinders and two hatch beams have fallen into the hold. There are some bicycles, hoses and pipes in here as well. Unlike a lot of ships, the shaft tunnel is covered in timber.

The stern has suffered a great deal of damage. There appears to have been a direct hit right on the rear railing area and the whole poop deck is opened up leaving a three metre wide hole. You can enter into the rear section by either of the two doors near hold five or through the hole caused by the bomb. You can see the steering gear inside the poop deck which has been jury-rigged with ropes to try to back it usable. You can exit from a different way than you entered and see that there is no rear gun. Drop over the side and there is a large four bladed prop sitting partially in the sand.

From here, return to the bridge area (you will probably not have had time to do all this on one dive). There are some artefacts sitting around the large funnel and bridge area (including a clock) and a quick examination of the bridge shows two radios under the main bridge level, the helm on the main level (with rudder indicator and compass bowl) as well as other interesting objects. The bridge telegraph handle still moves. The depth here is about 15 metres and the top of the funnel about seven metres or so.

A dive of about 35 minutes requires three minutes decompression at three metres. Another excellent wreck, especially the photogenic engine room.

Dives:

- 17 February 1994
- 6 November 1997
- 12 November 1997

References:

- *Hailstorm over Truk Lagoon* by Klaus Lindemann
- *WII Wrecks of the Kwajalein and Truk Lagoons* by Dan E. Bailey
- *26 Principal Shipwrecks of Truk Lagoon* by Capt. Lance Higgs
- *Lloyds Register* 1939-40, 1941-42, 1945-46

Kinugawa Maru - Bonegi 2

Two of the many vessels lost in the Battle of Guadalcanal in the Solomon Islands were the Japanese troop and supply ships *Hirokawa Maru* and *Kinugawa Maru*. Located 13 kilometres west of Honiara near the Bonegi Creek, the wrecks are more commonly known as *Bonegi 1* and *Bonegi 2* respectively. Both wrecks are only metres from the beach and are done as shore dives.

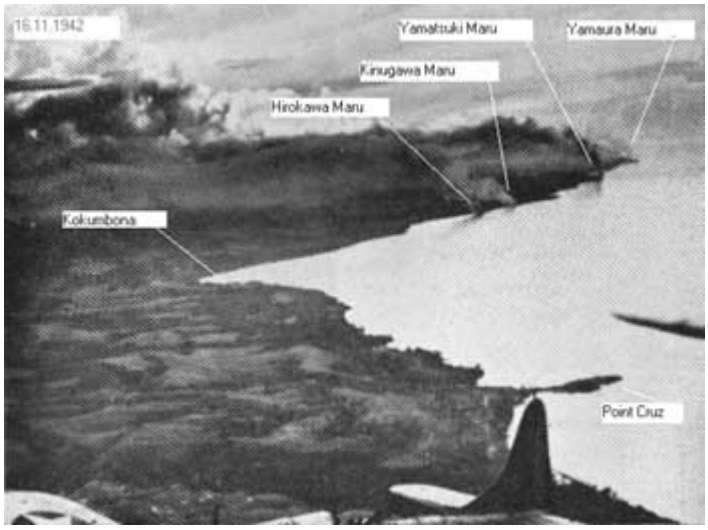

Figure 71 - This aerial photo taken the day after the *Kinugawa Maru* was wrecked clearly shows the wreck on fire - Photo taken by Bob Gibson, see below for details

The *Kinugawa Maru* was built in 1931 by Mitsubishi in Nagasaki for Toyo Kaiun K.K. It displaced 6,937 tons and was 437 feet long and 58 feet wide. Powered by two six cylinder Mitsubishi Jukogyo diesel engines driving twin props, the ship had a cruising speed of 13.5 knots and a maximum speed of 16 knots.

The ship was obviously used for normal cargo trade around the Pacific until shortly before the start of World War II. At some time it was taken over by the Japanese forces and then used in the move south towards Australia. In late 1942 the *Kinugawa Maru* ended up being used as a support vessel for the Guadalcanal theatre of the Pacific war. It is reported that the ship first arrived at Guadalcanal on 25 September 1942.

Some three months after the Americans (Marines, Navy, Air Force), Australians (Navy) and New Zealanders (Navy and Air Force) started their attack on Guadalcanal in an attempt to take back the Solomon Islands, the *Kinugawa Maru* was waiting near New Georgia in Papua New Guinea as part of a troop convoy. There were 11 transports and cargo ships and 12 escorting destroyers. The ships carried 10,000 troops, weapons and 10,000 tons of supplies. The convoy was sighted by a patrol plane at 0830 on 14 November 1942 about 150 miles from Guadalcanal.

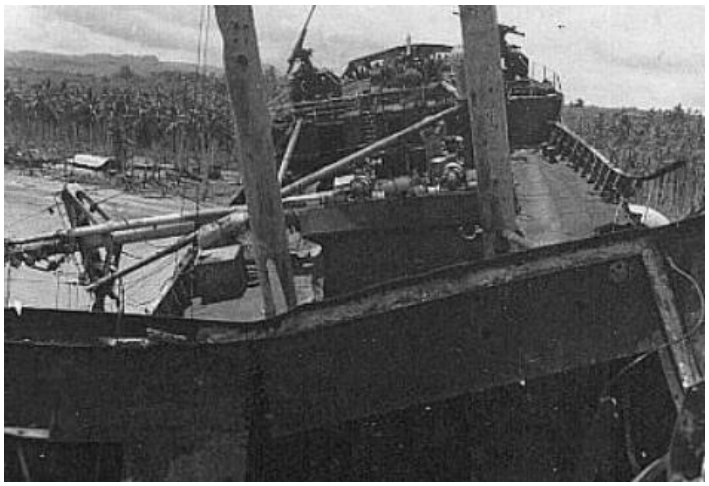

Figure 72 – A shot on board the ship in 1944

Planes from Henderson Airfield on Guadalcanal and the USS *Enterprise* attacked the convoy, sinking seven of the tranports with another two damaged. The remaining four transports continued on towards Guadalcanal. At dawn on 15 November 1942, the four transports were found by the Americans to be on or near the beaches west of the now

location of Honiara. At 0500 field guns from the 244th Coast Artillery Battalion opened fire from west of Lunnga Point. Even though they were 20 kilometres away, they hit one ship

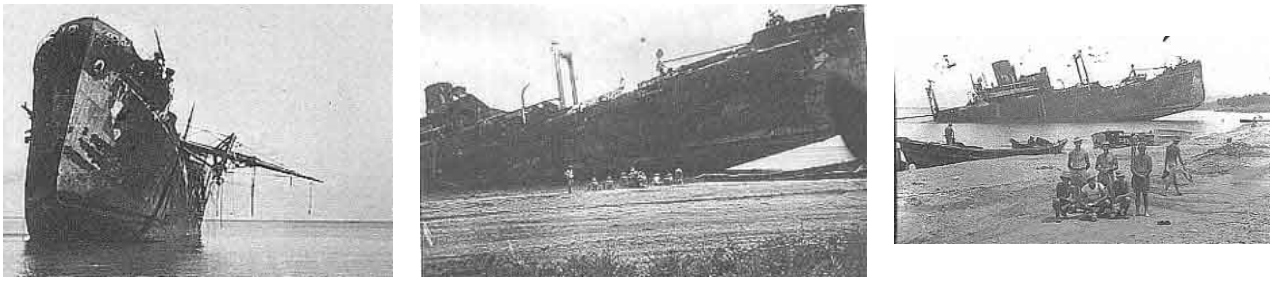

Figure 73 - Photos of the *Kinugawa Maru* in 1944

which began to burn (this was possibly the *Hirokawa Maru*. The 3rd Defense Battalion's five inch batteries opened fire at 0545 and hit a second ship about 16 kilometres away. This ship also caught fire and listed to port. The destroyer USS *Meade* moved from Tulaghi and shelled the these two ships.

Planes from Henderson and the USS *Enterprise* attacked the two remaining ships. By noon, all four ships were on fire and sinking. Three were ashore and the fourth sank off shore.

Bob Gibson (Ensign Robert D. Gibson during the war) e-mailed me as follows:

> As a young man I flew dive bombers on the USS *Enterprise*. On November 14, 1942, I found the Jap fleet and laid a bomb, the last one to hit the *Kinugasa*, after circling the fleet for over an hour while sending contact reports. The *Kinugasa* thereupon sank. Right after noon that same day, on a flight with Marines from Guadalcanal, I bombed the *Brisbane Maru* hitting it midships and saw it break in two and sink immediately. The next morning I bombed the *Kinugawa Maru* and it blew up, and out, with a blast coming out the side as well. I took photos of all three ships, and the one you show smoking is the *Kinugawa Maru*. Another of my pictures that was featured in Life Magazine shows all four beached ships and another SBD flown by my wingman.

Bob died on 1 March 2002, aged 85. He had been awarded the Distinguished Flying Cross, the Bronze Star, the Air Force Commendation Medal with Oak Leaf Cluster, the Legion of Merit with Oak Leaf Cluster and the American Defense Service Medal for his actions during the War. He ended service as a Colonel.

Figure 74 – The *Kinugawa Maru*, believed to have been taken in 1942

Originally the ship was stranded right up on the reef but over the years it has broken up under the effects of storms, rust and some Australian salvage work (in the 1960s).

Nowadays, the shallower sections of the ship are pretty well broken up while the deeper parts are almost complete. The bow section is virtually nonexistent, only scattered remains exist. This section is about five metres deep with the main attraction being the fantastic coral and fishlife.

Today the bow section of the ship juts out of the water only 800 metres to the north of the *Hirokawa Maru* and only a few metres from the shore. The side of the shallow section of the hull is diveable but the inside here is not accessible. The back part of the bow can be dived as the hull has fallen away giving access. Further down, the stern is more intact, although sections have been badly affected by bombing and corrosion. The propeller shafts and

rudder are easily dived at 30 metres and some interesting swim-throughs and penetrations are possible. In the rear hold there are the remains of a truck with the front axle and left wheel visible. Like the *Hirokawa Maru*, the shallow sections abound with coral and fishlife and very long safety stops can be spent without getting bored.

The water on these dives was pretty clean with about 18 metres visibility. In August the water temperature was 27 to 28 degrees and does not vary too much from this.

Although these wrecks do not have the intactness or artefacts of the Chuuk Lagoon wrecks, they still make excellent dive and are a very good (and cheaper) alternative to those wrecks. Other advantages of Honiara diving includes the closeness to Australia, the (far) cheaper accommodation, food, drink and diving and the very good exchange rate between the Australian and Solomon Islands dollars. One big advantage for people with non-diving partners and children, both these wrecks (and some of the others) can be snorkelled.

Figure 75 - Lieutenant George Lee Peters, 25th Signal Company (left) and Sergeant Striker (?). Photo taken either November 1942 to July 1943 or October 1944 to August 1945. Photo supplied by Lt Peters' son, Michael

In summary, the diving in Honiara is very good and I can certainly recommend it for diving.

References:

- *Lloyd's Register* 1942-43
- *Death of a Navy* by Andrieu D'Albas - page 143
- Papers provided to me by Troy Griffiths in 1992, then owner of Dive Solomons
- E-mail and photograph by Michael Peters (mpeters45@hotmail.com)of Oak Park, Illinois, USA
- E-mail from Bob Gibson formerly of US Navy, now deceased
- The United States Army in World War II - The War in the Pacific - Guadalcanal: The First Offensiveby John Miller, Jr, pages 185 to 189

Kiyosumi Maru

The *Kiyosumi Maru* was launched on 30 June 1934 and entered service on 5 October 1934. She was built by the Kawasaki Dockyard at Kobe. The ship was 137 metres long and 18.6 metres wide and displaced 6,983 tons. The ship was powered by a seven cylinder 8,375hp Mitsubishi-Sulzar diesel engine and was capable of 18.73 knots. The name of the wreck is often given as *Kiyozumi Maru, Keyusumi Maru* or *Keyosumi Maru* (this is perhaps the most correct English spelling, but I will stick to the most commonly used spelling). Note that the spelling in *Lloyds Register* is *Kiyosumi Maru*.

Figure 76 - A diver examines a light cover in a forward hold

The *Kiyosumi Maru* was a fairly modern design for her days. Although primarily a freighter, she also carried up to 12 passengers and the smoking saloon was said to be designed in Jacobean style. She was owned by bbb of Tokyo.

The ship was officially taken over by the Japanese Navy on 1 November 1941, over four weeks before Pearl Harbor, and converted to an armed auxiliary cruiser with eight guns, anti-aircraft guns and two torpedo launchers. It is thought that she may have been converted as early as August 1941. She was used in the Battle of Midway in May and June 1942. In October 1943 she was reconverted to an armed transport.

On 4 November 1943 she was bombed and damaged while travelling from Truk to Rabaul, Papua New Guinea. She was towed into Kavieng, PNG, by CL *Isuzu* where she was again attacked on 25 December 1943. On 30 December 1943 the *Kiyosumi* left Rabaul bound for Truk (Chuuk) Lagoon together with DD *Yukaze* and Minesweeper No 22. On 31 December 1943 she was spotted by the US submarine, USS *Balao* near the Bismark Archipelago, 400 kilometres north of the Admiralty Islands. The *Balao* followed and at 2345 hours on 1 January 1944 it fired a salvo of six torpedoes. Three hit home but although the *Kiyosumi* did not sink, she was disabled and the forward hold flooded. The cruiser *Oyodo* towed her into Truk where she was still being repaired when the US attacked Truk Lagoon on 17 and 18 February 1944.

The *Kiyosumi Maru* was attacked at 0900 on 17 February 1944 by Douglas SBD *Dauntless* dive bombers from USS *Yorktown* and suffered a direct hit in hold two and again at 1330 by Dauntless's from USS *Enterprise* on both sides of the bridge. It is reported that 43 people were killed and 9 seriously injured. As a result of the torpedo damage and the bomb hits, the *Kiyosumi Maru* sank shortly after.

Today the *Kiyosumi Maru* sits on her port side at a maximum depth of 31 metres with the starboard hull at 12 metres. The ship has six holds, three in front of the bridge and three behind. As indicated earlier, the ship originally had eight guns but these are not now on the ship. It is assumed that they were removed while the ship was being repaired. However, the gun platforms remain. There is one on the bow and stern, and pairs adjacent to holds one, two and five.

In the forecastle there is a hidden and hard to find feature that is quite amazing. There is a door on the starboard side and this goes in about five metres. There is another door above you and if you rise up through this and look back towards the rear of the ship, you will see a whole wall of lanterns, all perfectly intact and sitting on their sides on the storage shelves. There are 10 to 12 of the lanterns in this little hidey hole.

The front hold (one) is plated over on the 'tween decks and access is via manholes (try the bottom right one) or from hold two (see later). The beams from the top level are scattered

over the side of the hold, deck and sand. There are two large containers (water or ???) inside the hold, towards the bow and high in the hold.

You can enter hold two from hold one via some doors in the 'tween deck. You can also enter via the hold or the bomb hole. This is a large hole on the upper side of hold two, that is the side of the hull along the waterline. This was presumably from the first attack of the morning. The hold has some more large containers on the bottom towards the bow but is otherwise empty.

Hold three also has damage, this time under the keel. This appears to have been a refrigerated hold. There are somr spare parts in here, including a drive shaft for a ship.

The bridge is damaged badly from the two bombs but still is very interesting for exploration. You can swim through the lower levels and exit behind the superstructure over hold four. The engine room is very large and can be entered through one skylight, the damaged area or a couple of doors inside. Behind the engine room is the funnel.

I cannot remember what was in hold four but the fifth hold has some has one black container and some bicycles in the 'tween decks. The lower hold is covered by plating.

The torpedo launchers can be seen on the rear hold and inside there are more containers and on the 'tween decks, back wall, there are four blades for a ship (but not the *Kiyosumi Maru*. The prop and rudder are still in place. There are other bits and pieces to be seen in the holds and in the under bridge area.

All in all, this is an excellent wreck (like all those in Chuuk) and is usually dived as a second dive.

Dives:

- 17 February 1994
- 9 November 1997
- 18 November 1997

References:

- *Hailstorm over Truk Lagoon* by Klaus Lindemann
- *Wrecks of the Kwajalein and Truk Lagoons* by Dan E. Bailey
- Personal conversation with researcher Peter Cundall, 22 September 1997
- *26 Principal Shipwrecks of Truk Lagoon* by Capt. Lance Higgs
- *Warships of the Imperial Japanese Navy, 1869 - 1945* by Hansgeorg Jentschura et al
- *Lloyds Register* 1938-39, 1945-46

Kogyo Maru

The *Kogyo Maru* was built in 1938 by Uraga Dock Co Ltd, Uraga, Japan for Okada Gumi KK. The new ship was 6353 tons, 423 feet long and 59 feet wide. She was powered by two oil fuelled steam turbines (517Nhp) geared to a single shaft. The engines were built by Ishikawajima Shipbuilding and Engineering Co Ltd, Tokyo. Her home port was Osaka.

I have yet to find out any more about the early career of the *Kogyo Maru* or how it came to be in the Philippines in September 1944.

In late September 1944 with some Japanese ships, including a convoy of 12 Japanese ships, taking refuge in the Busuanga Island area of the Northern Palawan group of the Philippines. Eight of the ships were anchored in Coron Bay, the rest to the west and at least one on the northern side of Busuanga Island. The *Kogyo Maru* was anchored in the area between Tangat and Lusong Island with a number of other ships. She was apparently carrying aircraft spares.

Late on the afternoon of 23 September 1944, Fast Carrier Task Force (TF) 38 under the command of Vice Admiral "Bull" Halsey positioned itself for an attack on the ships in the Coron area. At 5.50 am on 24 September 1944, 180 Grumman F6F *Hellcat* and Curtiss SB2C *Helldiver* (not made by Grumman as claimed by one source) planes lifted off the American ships and headed off on the 350 kilometre flight for the waters of Coron Bay. This was to be the longest carrier based (and return) attack ever carried out. At 9 am the planes reached Coron and located at least 18 large Japanese vessels and started their attack.

The planes attacked the ships in Coron Bay and the ships to the west first. After a frenzied 45 minute attack the planes left, leaving behind numerous sunken ships. It is reported that after the *Olympia Maru* was damaged, the *Kogyo Maru* was then attacked and sunk. She took 39 Japanese sailors to their death. Most of the ships anchored around Coron were also sunk. Today 14 of these wrecks have been located and most can be dived from Coron.

I have not dived this wreck so I cannot comment on what it is like.

References:

- *Lloyds Register* 1939-40
- Dive Right Coron Web Page - http://www2.mozcom.com/~diving/c-history.htm

Kyokuzan Maru

Thousands of feet below me, littered on the brilliant blue waters, are a dozen or so very small islands. Off the plane's port side there is a huge reef running out from Mindoro. The view is magnificent as the plane starts its slow descent towards the small dirt airstrip I can just make out ahead.

We make a giant turn and I can see off to my right our destination, Dimakya Island. It really looks idealic from up here. Straight below there is a long thin island which, with a few smaller islands, makes a very protective harbour. This is the resting place of the *Kyokuzan Maru*, a Japanese ship sunk by the US Navy during World War II.

A few minutes later we make a smooth landing at the small "airport" (that is being very generous) at Decalachao (a location, not a town - a least from what I saw), although the airport has apparently the grand name of Yalu King Ranch. One hour and ten minutes ago we had taken off from Manila and we were now on Busuanga Island in the Calamian Group of the Philippines. Busuanga Island is a fairly decent sized island, about 55 kilometres long and 20 kilometres at its widest. It has a few hills, with some rugged jungle sections as well as quite large grassed cattle stations in the centre.

On this part of my trip I am stayed at Club Paradise on Dimakya Island. You can stay here and dive the *Kyokuzan Maru* or you can stay in the bustling town of Coron and take an overnight trip to this place to dive shipwreck. As you travel to the protected harbour that I flew over earlier, you pass by small villages. What an ideal location, so unlike Manila or even Coron.

The run to the wreck of the *Kyokuzan Maru* from Club Paradise is about 60 minutes by fast banca. From Coron it is a longer trip requiring an overnight stay on the banca or a local island.

I have not yet been able to find much information about the *Kyokuzan Maru*, especially the early life of the ship and its specifications.There is no record of any ship under the name *Kyokuzan Maru* in any Lloyds Register in the late 1930s and early 1940s. In any case, the ship is approximately 160 metres long and a cargo vessel. However, the *Coron History Report* by Peter Heimstaedt (see references) says that the ship was 135.9 metres long, with a breadth of 17.8 metres. The ship was said to displace 6,492 tons and was powered by a 3,882 shp geared turbine driving a single prop.

In late September 1944, some Japanese ships, including a convoy of 12 Japanese ships, took refuge in the Busuanga Island area of the Northern Palawan group of the Philippines. Eight of the ships were anchored in Coron Bay, the rest to the west and at least one on the northern side of Busuanga Island. The *Kyokuzan Maru* was anchored in a very small harbour on the northern side of Busuanga. Apparently the ship was disguised as an island!

Late on the afternoon of 23 September 1944, Fast Carrier Task Force (TF) 38 under the command of Vice Admiral "Bull" Halsey positioned itself for an attack on the ships in the Coron area. At 5.50 am on 24 September 1944, 180 Grumman F6F *Hellcat* and Curtiss SB2C *Helldiver* (not made by Grumman as claimed by one source) planes lifted off the American and headed off on the 350 kilometre flight for the waters of Coron Bay. This was to be the longest carrier based (and return) attack ever carried out. At 9 am the planes reached Coron and located at least 18 large Japanese vessels and started their attack.

The planes attacked the ships in Coron Bay and the ships to the west first. The final wave of planes attacking (VB-19) were only reaching the northern side of Busuanga Island when the other planes were attacking the ships south-west of Coron. They were ordered to attack the *Kyokuzan Maru* and two other ships anchored in this area. It is reported that the planes scored a direct hit on her port side and a number of near misses. This ship was reported to have caught fire on the port side near the living quarters. She did not sink and there does not appear to be any damage that may have caused her to sink, although the hull may have

suffered cracks/splits that are now not visible. It is also report that she was finally scuttled by her crew.

Today the wreck of the *Kyokuzan Maru* sits upright in just over 40 metres of water at 12° 09' 58"N and 120° 09' 19"E. It is basically fully intact and two dives on the wreck are just enough to gain an impression of the ship. The wreck is almost fully intact, very much like the Japanese wrecks in Chuuk Lagoon. The forecastle area of the bow is quite interesting, with easy access into the rooms and a few things to see. On the starboard side there is evidence of a bomb exploding and causing quite a bit of damage.

Behind this there are three holds, with upper and lower decks. When we dived here there was a strange, milky fog in the lower hold so I could not examine it. The 'tween decks has a bit to see, including 200 litre drums and the remains of some unidentifiable objects. Around the join of hold one and two there is a large hole where the torpedo that sank the ship hit. It must be below the level of the middle deck as I could not see it from inside the wreck. Hold three is quite fascinating, with a Toyota Lexus (yes, Lexus) to be found there. This is allegedly the only one left in the World. As you move to the rear you pass the first of the two kingposts and two masts.

The third hold has a coal bunker which gives access into the engine room. There are other ways to get into the engine room including from the bridge area, through the skylights or, even easier, through a large hole where the funnel once stood. The engine has been salvaged, but the boilers and other bits remain. The funnel lies over to the starboard side and is an enticing swim-through.

Above the engine room, the bridge is an excellent place to explore, with many different cabins to see. On the port side there is a large bath and just behind this, a hole in the roof where a bomb dropped by the Americans went straight through the roof and the floor. I did not have time to explore under this to see if it exploded, but I suspect that it did not go off as there was no real damage to the floor. The bridge area also has some crockery and kitchen items to see.

To the rear of the bridge there are two more holds, both with the fog and some items, including drums and rope. In the rear hold you can see the prop tunnel and the damage caused when the prop shaft was removed by explosives. You can swim into the shaft from outside (there is, of cause, no prop but the rudder is there) and exit in the hold.

Above the stern there are the remains of a gun turret, only the skeletal remains of the mount are still there. There are more holes to explore in this area.

This is an excellent dive, as good as many in Chuuk, but not containing as many artefacts.

After our first dive here we go a few kilometres to an island where we have lunch on a small beach. Despite my comments above about the quality/cost of the food, the lunch here is excellent, well worth the cost. After a couple of hours we do our second dive on the wreck and then have a leisurely trip back to the resort.

References:

- Dive Right Coron Web Page - http://www2.mozcom.com/~diving/c-history.htm
- *Coron History Report* by Peter Heimstaedt - http://boracay.vasia.com.ddivers/ph_history.htm - Note Mr Heimstaedt emailed me a number of times in the late 1990s telling me that the information I had then on my site about this wreck was wrong but refused my requests for the real information. On his site he has a number of derogoratory remarks about me.

Kyusyu Maru - Ruiniu Wreck

In July 1942, US reconnaissance planes reported that Korean labourers were building an airfield (later to be named Henderson Airfield) on the main island of Guadalcanal in the Solomon Islands, just east of the now capital of Honiara. The completion of the airfield would have given the Japanese a strategic foothold to enable them to attack further south into what is now Vanuatu, New Caledonia and Fiji. Seeing the problems this would cause, the US decided to take action and at daybreak on 7 August 1942, US Marines (supported by US, NZ and Australian warships) stormed ashore at Red Beach. Over the next six months a huge battle ensued, on land, on water and in the air. So many vessels were sunk in the waters off Guadalcanal that it was renamed Iron Bottom Sound. These ships included HMAS *Canberra*, USS *Quincy* USS *Vincennes* and USS *Astoria* all sunk on the night of 7-8 August 1942 in what the US would later call "our worst loss in a fair fight".

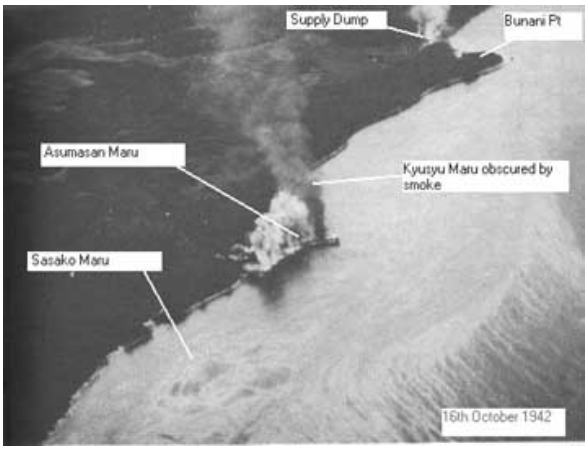

Figure 77 - This aerial photo taken the day after the *Kyusyu Maru* was sunk shows her location behind the smoke

Figure 78 - *Kyusyu Maru* aground in 1945. Photo taken by father of Stephen MacMinn, Schenectady, New York, U.S.A.

One of the ships sunk at Guadalcanal is the wreck of the *Kyusyu Maru* but better known by the name of the nearby creek, Ruiniu. The name of the ship is also spelt as *Kyoshu* or *Kyushu*. Some say this last one is probably the correct spelling but I will use the more common spelling and the one on the ship, see photo below.

Now lying about 18 kilometres west of Honiara (by road), the *Kyusyu Maru* was a 8,666 ton cargo vessel, 467 feet long and 62 feet wide. A twin screw Mitsubishi Jukogyo 14 cylinder diesel engined powered cargo vessel built in 1937 by Mitsubishi for Harada Kisen K.K., it was requisitioned by the Japanese military for their war effort. On 13 and 14 October 1942, the Japanese shelled and bombed Henderson Airfield. This appears to have been cover for a Japanese naval force which sailed into Sealark Channel (the the east) on the night of 13 October 1942. By the afternoon of the next day, Henderson was out of action due to the damage (and plane numbers down from 90 to 42 in two days). Luckily the SeeBees (Construction Battalion) had built a rough runway south-east of Henderson. This was still useable.

Figure 79 - Shot of the *Kyusyu Maru* from the opposite direction, taken 1944

It is reported that the ship first arrived at Guadalcanal on 2 October 1942. It is possible that she unloaded men/equipment and headed back to Rabaul.

At dawn on 15 October 1942, five Japanese transports and 11 escorting warships were sighted at Tassafaronga, 16 kilometres west of

Lunnga Point (near Henderson). One of these ships was the *Kyusyu Maru*. The tranpsorts were attempting to land troops, weapons, supplies and ammunition. There was also a fuel shortage at Henderson Airfield and after a lot of searching for unused drums, 400 drums were found, enough for two days operation by the remaining planes.

Figure 80 - The *Kyusyu Maru*, possibly soon after wrecking, note there are more coconut trees. Photo taken by father of Stephen MacMinn Schenectady, New York, U.S.A

In the morning of 15 October 1942, US aircraft attacked the ships, sinking one transport (the *Kyusyu Maru*) and setting two more alight. All this action was over by 1100. The ship had been sunk next to the Ruiniu River, hence its other name of the Ruiniu Wreck All the Japanese ships were successful in landing all the troops (betwen 3,000 and 4,000) and 80% of their cargo.

After the war the *Kyusyu Maru* may have been used for bombing practice by the Americans and in the 1960s there was some salvage work carried out by Australians, probably Wally Gibbons.

An interesting event occurred in early 1999 when digging holes for a gate near the beach, the remains of a Japanese soldier were found a metre under the surface.

Nowadays, the *Kyusyu Maru* is lying on its port side at an angle of 45 degrees, running from 3 metres down to just over 45 metres. The propeller shafts (port one partly buried) and rudder are visible at this depth and at 40 metres you can enter the rear hold. This deeper section is fairly intact and you can easily penetrate the hold and then swim up through the hull to the engine area. Along the way you can see rifle rounds, biscuits (burnt in the fire that destroyed the ship and preserved under sand), pieces of china and cattle bones.

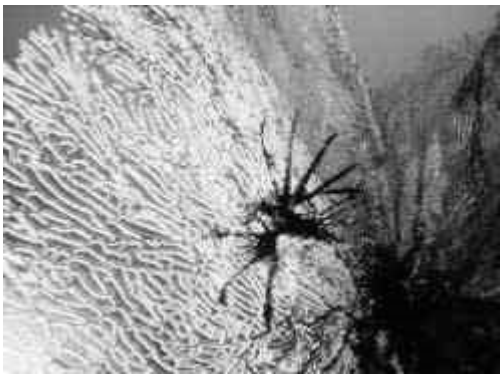

Figure 81 - A firefish on a huge gorgonia in the shallow section of the wreck

The ship is broken open near the engine area and you can see the major pieces of the engine. From here you can swim on the outside to the shallower sections which are very broken up and do not even resemble the bow of a ship. I dived this wreck in 1992 but I cannot really remember the details of tehe wreck enough to describe it in detail.

Like all the Honiara wrecks, there is excellent coral and fishlife on the remains near the 3 to 10 metre range and you can easily spend 30 to 40 minutes at the end of a dive just in this area.

A great way to spend your surface interval is to go to Fred Kona's Vilu War Museum and then dive the Boeing B-17E, Bessie, Jap Basher.

References:

- *Lloyd's Register* 1938, 1939-40
- *Death of a Navy* by Andrieu D'Albas - page 126

- Photograph from personal archives of Stephen MacMinn, Schenectady, New York, U.S.A., whose father took it in 1945
- *The United States Army in World War II - The War in the Pacific - Guadalcanal: The First Offensive* by John Miller, Jr, pages 149 to 152
- *The Lost Ships of Guadalcanal* by Robert D. Ballard, page 117

La Dieppoise

The *La Dieppoise*, a French Navy minesweeper, was scuttled only a few minutes from Amadee Island, off Noumea, New Caledonia. Built of aluminium and timber, the vessel sits upright on a 26 metre bottom. The ship, 40 metres long and 9 metres wide, has two large props that rest on the sand.

La Dieppoise is home to many large fish and they follow you as you examine the holds and hatches. Some easy exploration is possible inside the living areas and bridge. Quite unusually, the ship's wheel is still in place, although the wooden handles are gone, eaten away by borers and worms. The timber hull is basically intact, but already ravaged by the animals, especially above the water line. The rear deck is 22 metres, the front deck 18 metres and the flybridge 15 metres. Soon it is time to finish the dive. As I ascend I see a striped sea snake swim under the other divers and pass into the blue.

MV Macdhui

In December 1862 James and John Burns arrived in Brisbane, Australia. In 1865 they started a shop in the Gympie goldfields and within 10 years they had moved to Townsville and started a shipping service to Brisbane and Sydney. In 1876 they set up an office in Sydney and in 1883 Burns Philp and Company was started (no idea who Philp was yet). Soon, the new company was running various merchant operations and shipping right across the western Pacific Ocean.

Burns Philp became the most famous company in the Pacific area. As well as running all the major shipping routes between Australia and its neighbours, it also ran a huge network of integrated industries, shops and hardware for example. It also owned at one time the ship *Star of Russia* which is now wrecked in Port Vila Harbour in Vanuatu.

In February 1929 Burns Philp Company came to an agreement for a five year mail contract for the Pacific Islands with the Australian Government. This took effect in April 1929. As part of the agreement, the company agreed to build a new vessel for the Singapore run within three years and planned to move the MV *Malabar* to the Sydney to Rabaul (in then New Guinea) run. In addition, they decided to replace the SS *Marsina*, a 1905 vintage triple expansion steam engine powered ship of only 1,932 tons. However, before this new vessel came into service on May 1931, an accident to the *Malabar* would change the company's plans. On 2 April 1931, the MV *Malabar* ran aground in Sydney's Long Bay and was totally destroyed.

The *Sydney Morning Herald* of 14 March 1930 carried the news that Burns Philp had signed an agreement to build a new ship with Barclay, Curle and Company Limited of Whiteinch, Glasgow, Scotland.

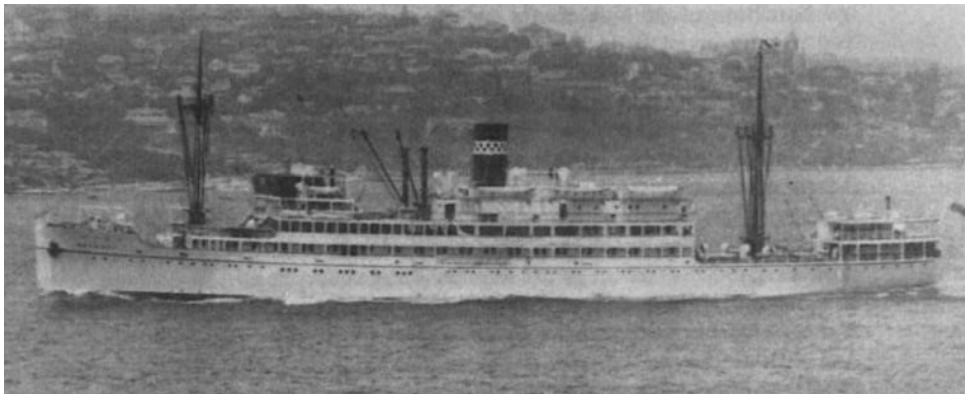

Figure 82 – MV *Macdhui* going down Sydney Harbour, past Rose Bay

The new ship was Yard No 644 and on 23 December 1930, the MV *Macdhui* was launched at the Clyde River shipyards of Barclay, Curle and Company, Scotstoun, Glasgow. Like virtually all the ships built for the Burns Philp fleet, the new vessel was given a name starting with M and containing 7 letters (*Malabar*, *Morinda* for example). Presumably the ship was named after the Scottish mountain, Ben Macdhui, perhaps where James Burns came from. Miss Margaret Burns, daughter of the Burns, Philp Chairman, James Burns, swung the bottle of champagne to send the ship sliding down the slipway.

The new ship was, like the unfortunate MV *Malabar*, a motor vessel rather than a steamship. She was 113.6 metres long and 17 metres wide, a little shorter than the *Malabar* but wider. It displaced 4,561 tons (about the same) and was powered by a four-stroke diesel engine of 4,710 hp built by John Kincaid and Company Limited of Greenock, just north-west of Glasgow. The engine was an eight cylinder Kincaid-Harland-Burmeister and Wain single acting four stoke diesel engine. Working at 106.5 rpm, the engine gave the ship a top speed of 15 knots and a cruising speed of 14 knots. This was slightly faster than the *Malabar*. A total of 456 tons of fuel oil could be carried, about 30% less than the *Malabar*.

Like the *Malabar*, the *Macdhui* had an auxiliary exhaust gas boiler, although it appears to have been a little different. While the *Malabar* boiler drove a steam engine which provided electricity, the *Macdhui*'s did not. The *Macdhui* had a Clarkson boiler driven by the exhaust gas but I am not sure if it was part of the funnel like the *Malabar*. The other boiler was a Cochran oil fired boiler. This was only used when the main engine exhaust was not available (normally in port). The steam was used for heating, cooking and other purposes. The ship also had four three cylinder Allen auxiliary generating units.

The new ship was built under the supervision of Mr W. G. R. Snellgrove, the Superintendent Engineer of Burns Philp. As you can tell from the above, the *Macdhui* was a modified version of the *Malabar* which was the second diesel powered ship in Australia (built 1925). There were three decks along the whole of the ship, with the bridge and boat decks above. There were five cargo holds, two behind the engine and three ahead. A total of 15 derricks on two masts, with 10 winches (and perhaps two additional 20 ton derricks) loaded and unloaded cargo. Some of the cargos space was insulated for carriage of frozen meat and cooled fruit.

The ship carried 138 passengers in two, three and four-berth cabins. The public rooms were said to be roomy. The dining room could hold all of the ship's passengers in one sitting. There was also a music room, smoking room (oak panelled) and a large deck area that was said to be able to cater for a game of cricket. The ship was not air conditioned but had a ventilation system that changed the air 18 times an hour in cabins and 40 times an hour in the public rooms.

The between decks of the stern carried "natives between interisland ports". I have no idea how many people were able to be carried here but it included "isolated promenade spaces and culinary arrangements".

After launching, the *Macdhui* carried out speed and endurance trials on the Firth of Clyde on 9 March 1931. Of interest, while on the trials, the ship received a radio message from Sydney, the longest such transmission ever successful to that date. The ship was originally painted black but was repainted white before leaving Glasgow.

The ship collected a cargo of coal (I suppose to help pay for the delivery voyage) and on 16 March 1931, the *Macdhui* left Glasgow bound for Sydney. In command was Captain E. J. Hillman with Mr A. Campbell Chief Officer and Mr R. L. Waddell Chief Engineer. Captain Hillman had been on holidays in Britain and the other two officers were formerly on the *Malabar*. First port of call was the Azores and then Kingston, Jamaica. The Atlantic was rough but the ship handled it well. At Kingston, the engine was examined (since it was still being run in) and everything was found to be okay. From here the ship went through the Panama Canal and soon after leaving there, a radio signal was received advising that the MV *Malabar* had been destroyed when she hit the rocks of Long Bay, Sydney. See the *Malabar* page for information about this sinking.

From Panama, the ship sailed to Suva, Fiji, arriving 24 April 1931 where the cargo of coal was unloaded. The *Macdhui* continued on to Sydney arriving 3 May 1931. She berthed at 10 Walsh Bay. Average speed on the voyage varied between 13 and 14 knots.

Captain G. E. Williams, former skipper of the SS *Montoro*, was appointed skipper of the *Macdhui*. Mr Waddell stayed on as Chief Engineer.

The new vessel commenced work between Sydney, Papua and New Guinea in May 1931, with her maiden voyage from Australia commencing on 16 May 1931. Ports on this voyage were Brisbane, Samarai, Rabaul, Kavieng, Manus Island, Tumleo, Seleo, Madang, Finschafen, Salamaua and Lindenhafen before the ship arrived in Port Moresby. In Rabaul, there were celebrations for the new ship's arrival and on 26 Mary 1931, local residents were invited on board for a dance and supper on board. The ship arrived back in Sydney on 14 June 1931.

On 3 December 1931, residents of Port Moresby were invited on board to examine the new ship. The *Macdhui* was said to be quite comfortable and was immediately popular with the public and was virtually always operating at capacity.

At 1 am on 20 June 1937, the *Macdhui* was off Fortification Point between Lae and Madang. Two fires broke out, the first in an oil bunker and another, less serious fire, started at 5 am in Hold Four. While the first fire was being fought, the 38 European and 150 native passengers (they must have really stacked them in!), took refuge in the lifeboats. This fire had been controlled at about 4 am when the second fire started. The *Neptuna* arrived on the scene and took on board the passengers and then towed the ship to Salamaua. A survey of the vessel was carried out and some repairs undertaken here. The ship then sailed under her own power arriving in Sydney on 9 July 1937.

The *Macdhui* was repaired at the Cockatoo Island Dockyard, going back into service on 28 August 1937. In 1938 a new ship, the MV *Bulolo* joined the *Macdhui* on the Papua and New Guinea run.

Even after the start of the Pacific War, the *Macdhui* continued on the run. In December 1941, the *Macdhui*, together with *Neptuna*, evacuated civilians from Manila in the Philippines (and perhaps Darwin in the Northern Territory) back to Port Moresby in Papua and then went onto Rabaul in New Guinea where she evacuated women and children. Together with the *Neptuna*, *Katoomba* and *Zealandia*, the *Macdhui* carried evacuees south to Australia.

Soon after, the ship was taken over by the Australian Government for transporting troops and supplies from Australia to the New Guinea campaign. On some runs, the *Macdhui* only travelled as far as Townsville, taking evacuees to Australia and troops and supplies to Port Moresby. It apparently included over 400 survivors from ships sunk by German raiders near Kavieng, New Ireland.

From early 1942 the *Macdhui* was used to move troops from Sydney to Port Moresby. When in Port Moresby, the ship came under fire from Japanese aircraft a number of times but no damage occurred. The MV *Macdhui* was delayed in Sydney Harbour when the Japanese mini-submarines entered the Harbour in May 1942 and finally it sailed on 6 June 1942 for Townsville and Port Moresby under the command of Captain J. C. Campbell. On this trip it was in convoy and carrying a load of aviation fuel (I presume in 44 gallon - 200 litre - drums). Before leaving Townsville, 154 troops boarded and the ship arrived in Port Moresby at 5 pm on 15 June 1942.

The MV *Macdhui* berthed at Port Moresby's wharf and started unloading cargo. At 6 am the ship was moved to an anchorage in the harbour despite the cargo not being totally discharged. This was so another vessel could unload its cargo. While at anchor, the fuel was unloaded into barges and transported ashore. The air raid alarm sounded so Captain Campbell weighed anchor and attempted to evade attack from the six Japanese Mitsubishi A6M Zero-Sen *Zeke* fighters were seen but they did not attack the *Macdhui*. The all clear siren sounded.

Captain Campbell returned to his anchorage and restarted unloading the cargo. In anticipation of further raids, Campbell only put out a minimum of anchor chain so that he could quickly get underway if needed. At 9:45 am the siren went off again and the 61st air raid on Port Moresby had begun. There had been 21 air raids in May so the town was now used to attacks. Captain Campbell again weighed anchor at 10:07 am and moved the *Macdhui* to the south-eastern entrance to the harbour, near the Paga Hill anti-aircraft battery. Between 10:30 am and 11 am 14 or 18 Mitsubishi G4M *Betty* bombers came over the town at 21,000 feet. Of the estimated 56 bombs that fell, one scored a direct hit on the bridge of the *Macdhui*. It went right through three decks and exploded in the first aid station in the Dining Saloon, killing Dr Tunstall, two crew and a soldier. Four people were wounded. Fires broke out but these were contained within 40 minutes. After the raid the ship was damaged but in now danger of sinking. Captain Campbell moved the ship back to the main wharf and continued unloading the cargo.

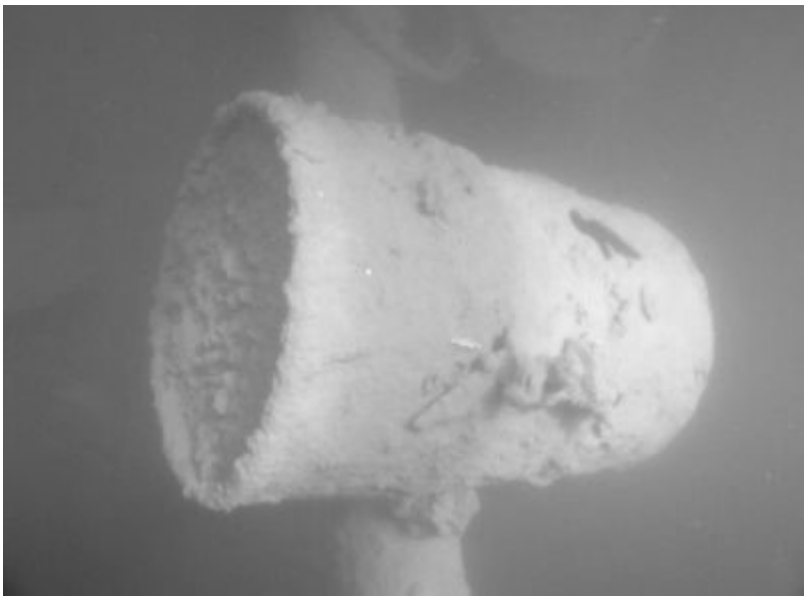

Figure 83 - One of the 200 litre fuel drums still in the rear holds

As well as unloading, some work was done to fix up the ship by removing the damaged sections of ship. The next day the Japanese bombers returned, the air raid alarm sounding at 10:05 am. The *Macdhui* was back on the move but the planes were far more accurate this time, at 10:25 am 17 twin engine bombers (perhaps Betty bombers again) dropped 68 bombs of which 4 hit the ship. One of these hit the poop deck, killing the gun crew and making steering impossible as the equipment was severely damaged. One bomb landed in the number three hold, causing the aviation fuel to explode and start fires. The other direct hits were on the Bridge and Boat Deck. The explosions had damaged the water lines and this meant that the fire crews could not fight the fires.

The ship was doomed, on fire and sinking. It had a heavy list to port and so Captain Campbell directed the ship towards shore, as difficult as this was with the damage to the steering gear. He gave the order to abandon ship. Although lifeboats had been launched, it is said that they began to sink "in the shark and crocodile infested waters", a vast exaggeration if I have ever read one. Crash boats from the Royal Australian Air Force Catalina base and together with other boats, the crew of the *Macdhui* were rescued. They were put up in Army houses for 10 days.

Six more crew had been killed in the latest attack, including the Second Officer. Seven crew had been wounded, including Captain Campbell. In the two attacks, 10 out of 77 crew had been killed. It is also possible that the five gun crew killed, said to be from the 39th Battalion, were additional to these numbers.

The ship came to rest about 750 metres off shore and about 1.3 km south-east of Tatana Island. The ship did not completely sink, the water being too shallow, but it rolled almost completely over on her port side. The bell of the ship was salvaged and used by the Royal Australian Air Force Marine Section and the other bell was found in 1946 by Chaplain Samuel Ramsden, RAAF, and also of St Johns Church, Port Moresby. The bell is still in use in the church today. At some time, one of the masts was removed and today it stands in front of the Royal Papua Yacht Club (a very nice place indeed). In 1971 the prop was removed and later, 10 tons of fuel oil was removed by Harry Heath and Company. The oil had been leaking so they cut holes in the hull and pumped the fuel out.

As mentioned before, the wreck is in shallow water and so today the wreck is a very visible reminder of World War II and the attacks on Port Moresby. You can see the wreck from most of the main part of Port Moresby. It is located to the north-west of the yacht club, only a few minutes run by boat. The wreck lies facing the south with the whole section of boat from the bow to about midships above water. On the land side of the wreck at the bow, the water is about four metres deep and it extends to about 12 metres under the stern.

After anchoring on the shallow side of the wreck, you can descend and swim over to the bow. Straight away you will see bits of tangled wreckage, parts of masts and derricks, all over the place. Swimming under the bow you will see the sky through the anchor pipe and, if the sun is in the right place, a spectacular stream of sunlight comes through onto the sand. As such, the middle of the day is probably the best time to dive the wreck. From here swim along the bottom of the hull to the north. There are some very nice anemones and clownfish along here as well as many firefish. The hull appears to be still intact.

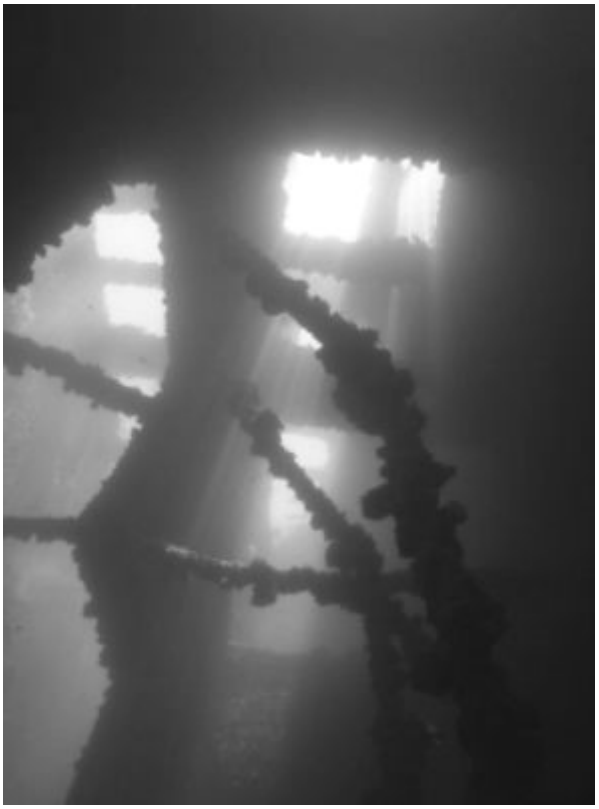

Figure 84 - Sunlight pours though windows in the upper decks of the ship, creating spectacular patterns

After about 10 or so minutes you will arrive at the stern. The rudder is still in place, reminding me immediately of the rudder of the MV *Malabar* back home in Sydney. The propeller is missing, salvaged and even the prop shaft appears to have been blown away in the attempt. From here the dive really gets interesting. You swim back along the eastern side of the wreck, along the deck. There is so much to see. The rear two holds (Holds Four and Five) can be entered, both still containing remnants of the cargo of aviation fuel. There are 200 litre drums all over the wreck, obviously full when the ship sank, as they are still intact and not squashed as they would be if they were empty and sealed. In the rear holds you can see at the bottom (of the ship) the prop shaft tunnel. I also found some 40 mm shells in these holds.

From Hold Four you can enter the engine room. This is quite large and the engine itself looks very similar, if not identical, to the *Malabar*'s engine. There are catwalks, steps, ladders and all sorts of things inside and you need to zigzag a bit to get through. You can exit from the engine room at the other end from memory. Around here the starboard hull above you is above water and you can see sunlight streaming through rust holes and portholes. It makes for a very spectacular scene and great photographs. At one point I had to back track as we came to a bulkhead with no way forward. We were, I think, at the bottom of Hold Three. Turning around we went back the way we came. We decided to go back towards the stern a bit and then returned towards the bow, this time not deep in the ship but along the Main and Upper Decks. This was very interesting as well. There is even more sunlight streaming though this section of the ship, as light comes in the windows which are above water. See the photograph on the right.

The area of the Bridge and under is damaged as one would expect. Despite this, you can still explore here. Finally, we ended up in the front two holds where there are more drums.

After exiting the ship, we swam out to midships on the eastern side. First thing you come across is a pontoon. All around there are hundreds of gas bottles, huge ones and very large

ones. There are also two large barges (they appear to have been powered at one time). The masts and derricks lie across the sand. There is also quite good fishlife in this shallow section.

This is a very interesting shipwreck, even though it is very shallow. I ended up spending over 70 minutes diving here. Visibility varied from about five metres at the bow to three at the stern and over 10 metres inside the wreck. Water temperature was 27.5°. A very good dive.

Dives:

- 24 November 2003

References:

- *The Main Line Fleet of Burns Philp* by B. A. Wilkinson and R. K. Willson - pages 121-6
- *Marine Section* by Leslie R. Jubbs - page 11
- *Wrecks and Reefs of Port Moresby, PNG* by Neil Whiting - pages 109-14
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- Australian Merchant Navy Web Site - Burns Philp - About the Ships - http://mns.ewebs.com/burns_philp/the_ships.htm
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MV *Mikhail Lermontov*

There are a number of fantastic shipwrecks in the South Pacific. The SS *President Coolidge*, the *Yongala*, the *Toa Maru* and the deeper wrecks of Honiora. The most recent of all the real shipwrecks is the MV *Mikhail Lermontov* in New Zealand.

The*Mikhail Lermontov* was one of five ships built in built in Wismar, Germany (then East Germany) for the Baltic Shipping Company, owned by the USSR. The builder was Mathias Thesen Werft of East Germany. Launched in 1972 into the Baltic Sea, the new vessel was 155 metres long, 23.6 metres wide and had a gross tonnage of 20,351 tons. Powered by two 7,723Kw Sulzer diesel engines driving twin props. The ship was named after Mikhail Yurievich Lermontov, a famous Russian novelist and poet who died during a duel at the age of 27.

The ship was capable of carry 550 passengers and every cabin had private facilities. There was a pool, cinema, beauty salon, one restaurant, five bars, shops, library, disco and an hairdresser. As well, there was a lounge where shows were staged. The crew numbered about 330.

Patrick Ford e-mailed me as follows:

> I was reading on your site about the *Lermontov*.You happened to mention that you did not know her history prior to 1980. She used to sail from Montreal to London and then on to Leningrad. It was regular passenger service. My wife and I sailed on her in May 1972 so everything was new. We went from Montreal to London (Tilbury Dock) Students took the trip because it was cheap.The food stunk so did the washrooms.I found a very large roach in our so called stateroom.The Vodka was dirt cheap so we were pissed for most of the journey.The swimming pool was closed and the staff were typical Russians who couldnt care less. We only went the one way (we flew home) Hope this answers a few questions. Best place for that tub is on the bottom.

By the 1980s she was spending six months in European waters (when she was painted black) and the remaining months in the Pacific (when she was painted white). In the mid-1980s she had a refit at a cost of £11,000,000 (NZ$36,000,000). The ship's final owner was the Baltic Shipping Company of Leningrad, USSR.

The *Mikhail Lermontov* left Sydney on about 6 February 1986 for a New Zealand cruise. She had first visited various ports on the North Island of New Zealand before arriving at the Capital, Wellington, on 15 February 1986. Late that day (probably after midnight), she left Wellington on 15 February 1986 to cross Cook Strait for Picton on the top of the South Island. This is normally a three hour trip, although in 1999 it took me 3.5 hours to cross and 4.5 hours for the trip back due to huge seas - and I mean huge - 8 to 9 metre seas.

Anyway, on this trip there were 408 passengers, 330 crew and 3 pilots, a total of 741 persons, although I think that this (passenger) number was was when it left Sydney rather than as it crossed the Cook Strait. One record tells me there were 738 passengers and crew but as this misses the above figure by 3 (the number of pilots), then I guess that this was the same number. She arrived at Picton at 8am on Sunday 16 February 1986 after the Captain decided that it was unsafe to enter Tory Channel (the entrance to Queen Charlotte Sound from Wellington) until daylight. It is a relatively narrow channel, affected greatly by incoming and outgoing tides. In normal circumstances (using the cross-straight ferry) it takes about 1.5 hours from Wellington to the entrance and it then about 1.5 hours from the entrance to Picton. The trip along Tory Channel into Queen Charlotte Sound is spectacular, one of the best views I have ever seen anywhere in the world.

The north-eastern part of New Zealand's South Island is known as Marlborough Sounds. The main sound is Queen Charlotte Sound and the main town in the area is Picton, located nearly at the head of the sound. The sound is 49 kilometres long, and many kilometres wide in most

places. It was named by Lieutenant James Cook in January 1770 when he passed through the area while circumnavigating New Zealand's two main islands.

While transitting Wellington Harbour, Marlborough Sounds (and the intention was later for Milford Sound), the *Mikhail Lermontov* was under the control of Captain Don Jamison. He was the Marlbourough Harbour Master, Pilot and Acting General Manager. Assisting him was Captain G.F. Neill, Deputy Harbour Master. The previous year, her sister ship, the MV *Alexander Pushkin* also visited Picton, presumably also under Captain Jamison's control.

Picton is an amazing little town. Located between the water and the surrounding hills, Picton is a very popular town on the itineraries of all backpackers visiting New Zealand. It has heaps of backpacker lodges, excellent restaurants as well as great pubs and bars. The main attraction for the backpackers is the Queen Charlotte Track. This 67 kilometre long walking track extends most of the way along the Sound. In late 1999 I walked the track with four other members of the St George Scuba Club. A fantastic trip by the way!

Anyway, on board the ship as the passengers and normal crew, were Australian entertainers. These included Bunny Gibson (who was married to John Mellion, one of Paul Hogan's co-stars in *Crocodile Dundee* and VB ads - even to this day although he died more than 10 years ago) and Horrie Dargie. In 1976 or 1977, Bunny appeared in a musical, *Annie Get Your Gun* (co-starring the original film star, Howard Keel) at South Sydney Juniors Rugby League Club in Sydney. I was working in the Club at that time and after each show, she would come and have a drink with us mere mortals. And a drink. And a drink. And a drink. Like John, she liked a drink!

Well, after a great day in Picton, the ship departed at 3 pm for Milford Sound on the West Coast of the South Island.

On this trip the *Mikhail Lermontov* was under the control of Captain Vladislav Vorobyov. He was not the regular skipper of the ship but had captained her in 1983 for four months and had been skipper for almost four months while the normal captain was on leave. The Chief Navigator was Sergey Stepanishchev, Second Mate and Foreign Seagoing Navigator was Sergey Gusev (more than three years on the ship) and the Helsman was Anatoliy Burin.

After leaving Picton Wharf, the *Mikhail Lermontov* moved into the adjacent Shakespeare Bay so the passengers could see the (wreck) of the *Edwin Fox* (built in 1853). In 1999 this wreck (and it is a wreck) is located in a drydock next to the main wharf and is "under restoration". Big chance, every single piece of timber will need to be replaced so I would not call this restoration (a bit like the *James Craig* in Sydney). While doing this it is reported that the ship almost hit the shore, stopping only 30 metres from land. From here she motored up the sound towards Cook Strait where she would round Cape Jackson and head towards the West Coast and ultimately, Milford Sound. At 4.15 pm, near Luke Rock, the Deputy Pilot departed in the Pilot Boat.

The Pilot instructed the speed to be increased to 15 knots and the Captain concurred. It is reported that the ship sailed along the western shore "...so close to the shore that you could just about have reached out and touched the leaves on the trees". At 4.30 pm the Captain left the Bridge, telling the Second Mate that the "pilot had changed the track of the proposed course and intended to manoeurve the ship around Ship Cove." The Captain reported that the ship was as close as 182 metres to the shore, a bit close considering the size and the speed she was travelling.

In 1769, Lieutenant James Cook, RN, visited Queen Charlotte Sound in HM *Bark Endeavour* on historic voyage to the South Pacific. He landed at Ship Cove where he collected water and other supplies (today there is a monument here to Cook).

Leaving Ship Cove, the ship was on a course of 040 and after 8 or 10 minutes, the Pilot changed the course to 030. Navigator Gusev said in Russian that they were too close to shore. He told Chief Navigator Stepanishchev to speak to Pilot Jamison. Stepanishchev said to Jamison "Captain, why are you taking us into such a dangerous place?" He replied that he was giving passengers a close look at Cape Jackson.

As the ship reached the Queen Charlotte Harbour Limit, the ship turned to port and was heading just off the point of Cape Jackson. As she approached the Cape, one passenger commented that "...I could see white water ahead" and another said to his wife "If he doesn't hit those rocks, I'll eat my hat".

Pilot Jamison ordered the ship to turn 10 degrees to port. The Russian crew were astounded to hear this change of course. Navigator Gusev said "I can see a line of white water in there, what is he doing?" and he apparently told Chief Navigator Stepanishchev of his concern. It is then said that Chief Navigator Stepanishchev said to Pilot Jamison "Captain, why are you taking us in so close?" "There is no need to worry, there is plenty of water here" said Jamison (or something similar). Another change of direction, port 10 degrees, was ordered by Jamison.

Ahead the Russian crew saw white water, caused by the tidal run over shallow and narrow waters. The ship passed over the white water and the crew thought that they were safe. At 1737, the ship hit rocks.

The *Mikhail Lemontov* had hit reef between Cape Jackson and Walker Rock, a reef that is clearly marked on charts and was marked first by Lieutenant James Cook when he passed by on his exploration of the South Island. When the ship hit the rocks, glasses flew off tables when the ship shook very badly.

There was a 12 metre hole in the port side of the ship, exposing a number of watertight compartments. The ship was doomed. The Chief Navigator ordered the engines to be stopped and the Pilot was reported as being white in colour, saying in response to a question by the Captain as to what had happened, "I don't know". Chief Navigator Stepanishchev said that "The pilot recommended that I should allow him to take the ship through the pass to give the passengers a good look at Cape Jackson and the lighthouse. He assured me that it was safe to do so."

The Pilot ordered a turn 15 degrees to port but the Captain overrode it with a turn to starboard. The Captain also ordered the port engine half ahead and the starboard engine half astern (this assists the turn). Reports of water entering the refrigerated store then the laundry, gym, refrigerated machine room and the printing room showed water entering very fast. The starboard ballast tanks were pumped as there was already a 10 degree list.

At 1743 (six minutes after hitting the rocks), the Captain ordered the watertight doors closed and a general alarm sounded. An announcement was made for emergency parties to gather. The lower levels of the ship were examined and it was discovered that if all the compartments that currently had water in them filled, the ship would sink.

A Mayday was sent at 1801 (why you would wait this long is anyones guess?) and received by Wellington Radio. An LPG tanker, MV *Tarihiko*, was anchored about 17 nautical miles away and she sped to the scene. Despite reports that the ship was being turned to starboard, diagrams kept by the Navigator show that after a turn to starboard, the ship turned hard to port as to continue to starboard would have hit the rocks again. The time was 1804. The ship continued to turn to port and slowly headed into Port Gore. At 1819 the Mayday was recalled and never broadcast again. However, the *Tarihiko*, which had up anchored and started to help, continued towards the *Lemontov* and at this time was 9.5 miles away. The Captain of the *Tarihiko* decided to continue as the reported list was heavy.

A further turn to port happened at 1825 and at about 1840 a turn to starboard. The ship continued on this course and at 1900 a report came in that water was entering the electrical switchboard. The Captain was advised that the power was likely to be cut, causing the engines to stop. The Captain ordered full speed ahead and at about 1905 the final turn, to port, happened. At 1920 the *Lemontov* requested the *Tarihiko* to stand by. At 1915 the power failed and the pumps stopped and the engines were cut by automatic safety switches. At 1932 the crew were evacuated from the engine room. The *Mikhail Lemontov* was 1450 metres from the southern end of Port Gore bay. She drifted until she grounded 155 metres off the shore. At 1941 the *Tarihiko* sighted the *Lemontov* and advised Wellington Radio and all vessels in the area that assistance was needed.

At 1950 some lifeboats were seen in the water, apparently trying to ferry passengers ashore. At 1954 the Captain requested a tug to pull/push the ship further aground (the trouble was that the tugs were over five hours away) and informed the *Tarihiko* that the assistance of its lifeboats was not required. At 2019 the assistance was requested. At 2059 she took aboard about 80 to 100 passengers. The Cook Strait ferry, MV *Arahura* arrived on the scene at 2135 after travelling from near Picton (she left there at 1953) and at 2207 another lifeboat came alongside. At 2215 the *Lemontov* was listing 40 degrees to starboard. More lifeboats came alongside and at 2245 the *Lemontov* is believed to have sunk. At 2255 three more lifeboats and a raft came alongside. There were 356 people from the *Lemontov* on the *Tarihiko*.

A large number of smaller craft also assisted in the rescue. All passengers were rescued and only one person was missing. There were 327 Australians, 36 British, 6 Americans, 2 Germans and 1 New Zealander and 8 unknown. I think the missing person was a crew member. Some passegers were taken to Picton but most went to Wellington.

There was some salvage work done on the ship. Involved were Ian Lockley of Fiji (who salvaged the oil from the SS *President Coolidge* in 1972) and Ricke Poole, co-owner of Pro Dive in Sydney.

I have not dived the MV *Mikhail Lemontov* but it is relatively shallow. The shipwreck can be dived from Picton. There are a number of dive shops and charter boats that dive the wreck, although not on a regular basis. Try searching the web for possible shops and charter operators.

References:

- *The* Mikhail Lermontov *Enigma* by Michael Guerin
- *Death of a Cruise Ship* by Tom O'Connor

Mitsubishi A6M Zero-Sen *Zeke* Fighter

The most famous Japanese aircraft of the Second World War is undoubtably the Mitsubishi A6M Zero-Sen fighter, code named *Zeke* by the Allies but more popularly known by its Japanese name of Zero. (Note: The Japanese designation A6M means A=Carrier Fighter, 6=6th in the carrier fighter series, M=Mitsubishi). Built as a land-based, carrier borne and even as a seaplane, the Zero was truely a fantastic plane. The plane was designed by Mitsubishi to a 1937 Navy specification for a carrier aircraft. It first flew on 1 April 1939 but was certainly no April Fool. Mitsubishi and Nakajima built 10,937 of the 11.0 metre wingspan, 9.0 metre long Zero.

Different models of the Zero were armed with various guns, but a common setup was two 20mm cannons in outer wings, two 12.7mm guns in the fueslage. It was powered by a single engine, a common one being the 925hp Nakajima NK1C Sakae 12 14 cylinder two row radial engine giving a maximum speed of 570km/h and a range (with drop tank) of about 1,920 km.

The Zero was used in all theatres of the Pacific war, its most famous role being as part of the attack on Pearl Harbour in December 1941. In the early stages of the War the Zero was almost unstoppable, its manoeuvrability and range making it far superior to any Allied plane. After the Battle of Midway, the new Grumman F6F *Hellcats* and Vought V-166B F4U *Corsair* (possibly the greatest combat aircraft of all time) of the US Navy finally took control of the air.

There are a number of Zero fighters that can be seen throughout the Pacific.

Zero No 1

In Chuuk Lagoon there is a Zero fighter that can be seen only a few metres from the end of the former airstrip on Eten Island. This Zero appears to have suffered a terminal engine failure on take off (there is no obvious bullet damage but I may be wrong) and is lying upside down in 10 metres of water. The plane is fully intact except where it has broken in two a metre behind the wings. The wheels are missing, the doors open. The propeller is not bent indicating that the engine was probably dead when the plane hit the water. This plane is usually snorkelled by divers while having their lunch on Eten Island although some use the remains of the air from their previous dive. A nice distraction from lunch.

Figure 85 – The Zero at the western end of Eten Island, Chuuk Lagoon

Zero No 2

There is a Zero fighter in Palau. It is located between the town and Jellyfish Lake. At high tide you can snorkel over the plane and at low tide you can walk around it. The plane is fully intact, with virtually no real damage except for bullet holes in the engine area. Interesting but not worth missing something else.

Zero No 3

At Gizo in the Solomon Islands there is a Zero right off the main market area, in line with the Catholic Cathedral. Located at a depth of 8 to 10 metres, the main part of the plane is upright on a sand bottom. Although it does not appear to have crashed in this location as their is no apparent accident damage (eg the prop is not bent nor is anything else). Perhaps it was dropped off a ship or wharf?

The fuselage is broken behind the cockpit and the tail section is upside down. The landing gear appears to be down and the port wing is buried in the sand. The starboard wing is cracked and the tip is broken. There are no guns or instruments, leading to the view that the plane was deliberately put into the water. Only one blade of the propeller is showing. A nice snorkel or third dive using remaining air.

More Zeros

There are Zeros in the holds of the *Fujikawa Maru* (fantastic ones) and more Zeros in the water in Chuuk, but I have not dived/snorkelled/seen these ones.

Reference:

- *German, Italian and Japanese Fighters of World War II* by Bill Gunston
- *Jane's Fighting Aircraft of World War II*

Mitsubishi G4M *Betty* Bomber

In 1938 the Japanese Navy put out a specification for a new bomber. The result was the Mitsubishi G4M, nicknamed *Betty* by the Allies. (Note: The Japanese designation G4M means G=Attack Bomber, 4=4th in the attack bomber series, M=Mitusbishi). This was the premier Japanese bomber of the Second World War with 2,479 being built by Mitsubishi Jukogyo KK. The plane was powered by two 1,850hp Mitsubishi Kasei 22 14 cylinder two-row radial engines (the company tried to talk the Navy into four engines) with a wing of 24.9 metres and a length of 19.6 metres. The plane was armed with one 7.7 mm gun in the nose, one 20 mm gun in dorsal turret and additional 20 mm guns in the tail and each beam window. It carried up two and 1,000 kg of bombs.

The *Betty* was capable of a maximum speed of 455 km/h with a range of up to 5,000km, depending on actual model. Unfortunately, as the plane was totally strained by the load being carried and only powered by two engines, the aircraft was almost totally without protection. This meant that when hit by flak or bullets, the plane inevitably caught fire and crashed. This led to another unofficial Allied nickname of *one-shot lighter* or *Flying Cigar*.

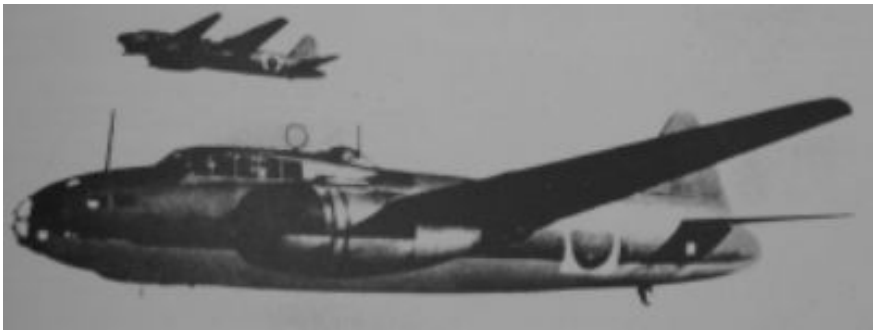

Figure 86 - Three Betty bombers in flights

When the Japanese started fortifying Chuuk (Truk) Lagoon in the middle of the Pacific Ocean, they almost demolished the island of Eten by bulldozing one half of it into the lagoon and building a runway. When completed, Eten Island resembled a giant aircraft carrier, with the runway looking like the deck of the ship and the remaining hill looking like the bridge of the carrier (there are some really interesting buildings on Eten and you can usually examine them during your lunch break on the island).

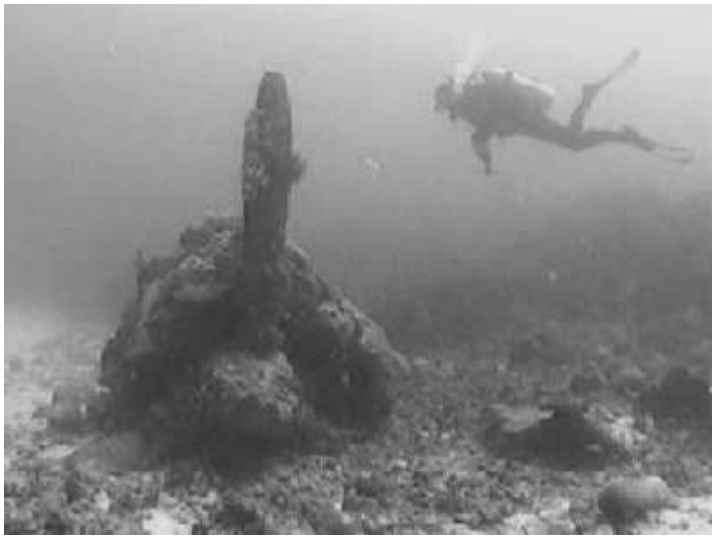

Figure 87 - One of the engines of the Betty

There is a wreck of a *Betty* bomber right off the end of the Eten Island runway in 15 metres of water. It is about 300 to 400 metres from the island. The plane appears to have crashed on take off, possibly from engine failure or during a very aborted landing, possibly running out of fuel. This is because of the following reasons:

- The plane's engines are located about 75 metres closer to the island than the body and wings of the aircraft proving that the plane was travelling away from the runway.
- Being heaviest, the engines fell off as soon as the plane hit the water and the plane kept on going forward.

- The plane dug in by the starboard wing and spun to the right and ended up facing back towards the engines (this is confirmed by the engines being on the opposite side of the plane now to where they should be and the starboard wing having now broken off at the tip).
- The propeller blades were not bent back at the ends proving that the engines were not running when the plane hit the water (when a plane hits the water with its engines running, the very tips of the engines are bent backwards by the force of the water).

The plane is almost intact, but the nose is quite damaged, with the window frames badly bent. The wings are in one piece but the two engines are missing. In fact, as indicated above, they are located about 75 metres away between the plane and the runway. There is no obvious damage from being shot down. The plane can be entered from the front or the gunners' bays towards the rear. An interesting thing to do is open the observation window behind the cockpit. Amazingly, after more than 50 years it still opens easily.

Figure 88 - The nose of the Betty

There is one gun lying on the port wing (it is from one of the side gunners' bay) and there are some items like radios, batteries, pilot's seat and other bits on the sand around the wreck.

This is an interesting dive. It is usually done as a pair with the nearby "Emily" Flying Boat. You do the first half of a tank on this plane (about 20 minutes) and then travel the short distance to the "Emily" where you use the rest of your cylinder. It is usually done as the fourth dive of the day if you are diving from the SS *Thorfinn*. If this is your first trip to Chuuk (and/or you only have a few days there), I would not give up a dive on one of the shipwrecks to dive this plane.

Dives:

- 16 November 1991
- 14 November 1997

References:

- *Bombers of World War II* by Bill Gunston
- *Jane's Fighting Aircraft of World War II*
- *Hailstorm Over Truk Lagoon* by Klaus Lindemann
- *WWII Wrecks of the Kwajalein and Truk Lagoons* by Dan E. Bailey

HMNZS *Moa*

HMNZS *Moa* was one of three Bird (or Kiwi) class corvettes constructed for the Royal New Zealand Navy. The other ships were HMNZS *Kiwi* and HMNZS *Tui*. The *Moa* was ordered 2 May 1939 and launched on 15 May 1941 as hull 314 from the Henry Robb shipyard at Leith, Scotland. The new ships were based on the experimental minesweeping trawler HMS *Basset* built in 1935 and the second HMS *Mastiff*. However, they were larger.

HMNZS *Moa* was commissioned on 12 August 1941 with the number T233. The *Moa* was 51.2 metres long overall and 9.1 metres wide, 600 tons standard and 923 tons deep load. Powered by a triple expansion steam engine of 1,100 ihp (steam from one oil fired one cylinder boiler) built by Plenty and Sons Ltd of Newbury, the ship had a maximum speed of 13 or 14 knots and a cruising speed of 10 knots. The ship was crewed by 35 men (one report says 54 men) and had one 4" BL Mk IX gun, two .303 machine guns, a twin Lewis gun and 40 depth charges. In 1942 the Lewis gun was replaced by one Oerlikon 20 mm gun when she was being repaired in Boston. In 1943 another 20 mm was installed without official approval. This was said to come from USS *Majaba*, a freighter that had been torpedoed off Guadalcanal on 7 November 1942. These additions increased the displacement to 1,025 tons.

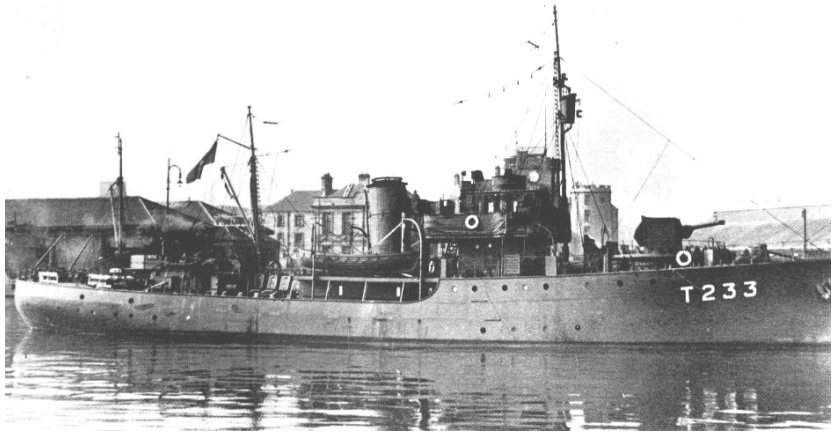

Figure 89 - HMNZS *Moa*

After leaving Greenock, Scotland, on 1 November 1941, the *Moa* sailed as part of a convoy to St Johns, Newfoundland, Canada. She then went on to Bermuda, Jamacia, Panama and San Diego. She was to then go to Honolulu but after Pearl Harbor was attacked, the *Moa* left 8 January 1942 for Papeete, Tahiti and Suva in Fiji, arriving 4 February 1942. Some repairs were required at St Johns and Panama. The *Moa* stayed in Suva until HMNZS *Viti* returned from a refit at Lyttelton, Christchurch, New Zealand. While in Fiji, the *Moa* hit a coral reef and damaged the asdic (sonar) dome. She finally arrived in Auckland on 11 April 1942 after a trip of over five months.

The ship was immediately placed under the command of Lieutenant Commander Peter Phipps and became part of the 25th Minesweeping Flotilla, together with the HMNZS *Kiwi* and HMNZS *Tui* which had arrived in New Zealand in May and August 1942 respectively.

On 30 July 1942, the *Moa* left Auckland and during August and September 1942 was based in Noumea, New Caledonia. In October 1942 she went to Norfolk Island to protect freighters unloading there before continuing on to Auckland for fuel and stores. On 27 November 1942 she left Auckland and returned to Noumea. In mid-November 1942 the *Kiwi* and HMNZS *Matai* had travelled from Noumea to Port Vila in the New Hebrides (now Vanuatu) and then to Espiritu Santo, also in the New Hebrides. They returned to Noumea and as of 8 December 1942, they were back in Noumea as was the *Moa* and the *Tui*. On 9 December 1942 they all left Noumea and escorted a convoy via Espiritu Santo to Tulaghi in the Solomon Islands, arriving 15 December 1942. Four days later the four ships started work, patrolling the Guadalcanal area, especially off Tulaghi and Lunnga.

On the night of 2-3 January 1943 the Japanese made a large push down The Slot towards Guadalcanal. There were eight ships and HMNZS *Moa* was on guard off Kukum Beach when the Japanese arrived and off-loaded their supplies. The *Moa* stayed silent right through this episode and was not discovered, even though they were only a mile away and the voices of the Japanese could be clearly heard.

On the night of 29 January 1943 the Japanese submarine *I-1* was under the command of Lieutenant Commander Eiichi Sakamoto off the Kamimbo Bay area (near Tambea or Cape Esperance), west of Honiara, when it was detected by the New Zealand corvettes HMNZS *Kiwi* and HMNZS *Moa*. The *I-1* was a Junsen (cruiser submarine) Type 1 submarine launched on 15 October 1924 as No. 74 but completed 10 March 1926 as *I-1*. One of four constructed by Kawasaki at Kobe (all were lost in the war), the *I-1* was a very large submarine displacing a maximum 2135 tons at the surface. She was 319 feet long and powered by twin shaft M.A.N. 10 cylinder 4 stroke diesels giving 6000 bhp and two electric motors of 2600 ehp. The *I-1* had six torpedo tubes and carried 20 *Type 95* oxygen-driven torpedos.

As the New Zealanders approached, the phosphorescent outline of the submarine could be clearly seen so the *Kiwi* dropped six depth-charges. Shortly after, it dropped another six and the submarine was forced to the surface with its electric motors apparently disabled. Switching on its diesels, the *I-1* made a run for it and a surface battle ensured, with all three vessels exchanging gunfire. During the short battle, the submarine altered course to starboard just before the *Kiwi* rammed it on the port side abaft of the conning tower. Numerous hits were landed at this time. The *Kiwi* again rammed the submarine and an officer, probably the Japanese Captain, was seen to be hit by machine-gun fire. A third ramming damaged both vessels and the *Moa* took up the chase, following the submarine while continually firing its gun. More than two hours after the first attack, the I-1 hit a reef that was to become its final resting place. The next morning revealed the *I-1* projecting about 40 to 50 feet out of the water at an angle of 45 degrees.

The next night, the *Moa* was still on patrol in the Cape Esperance area. At 0300 on 31 January 1943, the ship's crew spotted four Japanese landing craft. They went after them, sinking two but the other two escaped into the shallow water and could not be sighted. The *Moa* was hit by one 4" shell from one of the landing craft. Quite a few New Zealanders were injured from burns and splinters, but none too seriously.

On night of 12 February 1943 the *Moa* towed a former Japanese landing barge to the Russell Islands. The barge was to be used to investigate the Russells. On the way the ship was attacked by a US *Catalina* PBY flying boat but was not damaged.

On 17 February 1943 the *Moa* left Guadalcanal with officers of the American 43rd Division as well as from the Navy and Marines. She sailed over to the Russell Islands and just after dark, the men were landed on Banika Island. They transferred to a landing boat and went ashore at Renard Sound. For the next day, these men reconnoitered the island to determine whether there were Japanese on the islands and to find landing beaches and sites for airfields. They returned to Guadalcanal on the night of 18-19 February 1943, possibly also on the *Moa*.

A few days before (or even on) 7 April 1943, the *Moa* hit a coral reef and totally lost the asdic (sonar) dome.

On 7 April 1943 the HMNZS *Moa* was refuelling from the oil storage barge (described as a tanker in some reports) USS *Eskine M. Phelps* at the end of Tulaghi Harbour in the British Solomon Islands. As well as the oiler USS *Kanawha*, there were 15 torpedo boats and their tender *Niagara*, three tugs, the Navy transport *Stratford*, six transport ships, eight landing craft, the minesweeper *Conflict*, the net tenders *Buttercup* and *Aloe*, the US coaster *Awahou* and some auxiliary ships.

At about 1230 news came through that planes had been sighted leaving Bougainville heading for the Guadalcanal area. At about 1502 hours 67 *Val* dive bombers and 110 *Zeke* (Zero) fighter planes were sighted over Savo Island to the west. Of these, 18 went in the

direction of Tulaghi and while 15 of these went for the biggest target in the harbour, the oil tanker USS *Kanawha*, at least some attacked the HMNZS *Moa*.

The *Moa* was hit at least one bomb (other reports say two bombs) in the commanding officer's cabin (the other is reported as hitting the boiler room). It is also reported that there were two near misses. The *Moa* sank in 3.5 to 4 minutes. Five crewmen were killed, Leading Seaman J. C. O. Moffat, Able Seaman K. Bailey, Leading Stoker H. D. Crawford, Stoker E. J. Buckeridge and Telegraphist C. Duncan. Lt Com Phipps and seven others were severely injured and another seven injured to a lesser degree. During the action, Lieutenant C. Belgrave dived under the water and rescued Assistant Steward W. J. Malloy who was unconscious. Leading Signaller J. L. W. Salter and Ordinary Telegraphist Bright saved Signaller F. Thomas who was also severely wounded and on the bridge. Salter and Bright were awarded the British Empire Medal.

Today the ship lies at a depth of 40 metres. With a slight list to port, she lies facing south. The mooring is on the stern.

Figure 90 – John Black and the gun of the *Moa*
Photo by Peter Fields

The first thing you see when you reach the bottom are the twin depth charge racks. Below these is the prop and rudder. The deck here is about 36 metres. The superstructure of the ship has collapsed. As you swim along the port side you get closer to the bottom as the hull at the bow seems to have collapsed. There is a large gun here (the 4 incher) and the depth is about 38 metres.

Back along the starboard side the hull is higher up (36 metres) and behind the gun and in front of the engine room, the starboard hull is rippled from bottom to top and the ship cracked right across. The engine room is open but as this is a small ship, it is very difficult to do any penetration as the hatches and doorways are quite small. The engine room is home to some firefish.

You quickly return to the stern area. As mentioned, this is a very small ship and you can easily cover it all quickly in 10 minutes. Only one dive is needed. We did this as a second dive after the USS *Kanawha* (with a long surface interval) and 21 minutes gave us decompression of 1 minute at 6 metres and 11 minutes at 3 metres.

I dived with Solomon Sea Sports. This operation changed ownership in early 2002 and is now called Solomon Islands Diving, Dive Tulaghi and is run by a number of (ex-)Sydney divers.

Dives:

- 23 October 2001

References:

- Personal conversation with researcher Peter Cundall, 22 September 1997
- *Fair Winds and Rough Seas - The Story of the Holm Shipping Company* by Allan Kirk
- *Australian and New Zealand Warships 1919-1940* by Ross Gillett page 295
- *The Navy in New Zealand* by Grant Howard
- *Royal New Zealand Navy* by S. D. Waters, various pages

- *New Zealand Naval Vessels* by R. J. McDougall, pages 54 to 61
- *History of US Naval Operations in World War II* - Vol V - The Battle for Guadalcanal August 1942 to February 1943, pages 349-50
- *Allied Escort Ships of World War II* by Peter Elliott, page 410
- *Australian and New Zealand Warships 1914-45* by Ross Gillett, page 293
- *The United States Army in World War II - The War in the Pacific - Guadalcanal: The First Offensive* by John Miller, Jr, page 353

Momokawa Maru

One of the lesser dived wrecks of Chuuk Lagoon is the wreck of the *Momokawa Maru*. This is hard to understand as it is an excellent shipwreck. The *Momokawa Maru* (also spelt *Momogawa Maru*) was launched on 17 August 1940 by Kawasaki Dockyard Co Ltd at Kobe in Japan. It was constructed as a timber transport for Kawasaki K.K. with the intention to transport timber from Siberia to Japan. As the seas between Russia and Japan are mostly very inhospitible and subject to ice, the hull was specially strengthened to withstand the impact with icebergs and solid ice.

Displacing 3,829 tons, the *Momokawa Maru* is not especially large, only 107.3 metres long and 15.2 metres wide. Powered by a single coal powered steam turbine (unusual for a ship of this vintage), the *Momokawa Maru* was requisitioned by the Japanese Navy on 18 June 1943. Little is known about the wartime role of the ship, but it is reported that in *Hailstorm over Truk Lagoon* by Klaus Lindemann that the *Momokawa Maru* towed the badly damaged *Kansho Maru* from Kwajalein Lagoon to Chuuk Lagoon arriving on 6 January 1944. There is no reference to the ship in any *Lloyds Register*.

During *Operation Hailstone*, the *Momokawa Maru* was anchored on the eastern side of Dublon Island very close to the *Aikoku Maru*. On the first day of the raid, 17 February 1944, planes attacked a number of ships near the *Momokawa Maru* (including the *Aikoku Maru* which was sunk) but the *Momokawa Maru* was hit and damaged but did not sink. On the next day, Curtiss SB2C *Helldiver* from USS *Bunker Hill* attacked the ship, with one 1,000lb bomb finding its mark amidships. She sank almost immediately, leaving the bow above water for a short time.

The ship was discovered on 29 March 1982 by Klaus Lindemann using a depth sounder. Today it lays at a maximum depth of 41 metres under the bow. The bridge is about 27 metres and the deck about 33 metres. The ship has a heavy list (about 70-75°) to port.

As you descend to the ship, the first thing you generally see is the front kingpost where the dive boats tend to anchor. The bow is close so have a quick look at the two anchors which are both out. There is no gun platform or gun on the forecastle.

Hold one is straight behind the forecastle. It has plenty to see, including at least three tail sections of a large aircraft. Lindemann claims that they are Betty bombers but this is definitely incorrect. The Betty bombers have a tail gunner and these planes do not have any such hole for a gun and gunner. There are many propeller blades (individual blades), drop tanks, some wings (probably for fighters). There are also hundreds of sheets of corrugated iron, some shells, at least four radial aeroplane engines, heaps of bomber tyres and some big truck tyres. A fantastic hold, as good as the best on the *Fujikawa Maru* and *San Francisco Maru*.

Hold two is next and this is also a treat. There are at least four trucks, three of which are facing the port side on the 'tween deck hatch beams. The other truck is facing the stern underneath these three trucks. The bottom of the hold is full of 200 litre drums, aircraft belly tanks, at least one plane wing section, many more propeller blades and parts of aircraft fueslage. Fantastic!!

Between hold two and the bridge is an elevated hold. This is quite small and is full of coal (for the engine presumably) and 200 litre drums. The bridge can be entered throught the main windows on the port side. As you ascend through the different levels, you come across the telegraph and the helm (the wheel is gone). The floor is timber but it is not all rotted away yet. The top is open.

On the top of the ship, the funnel is quite damaged (it may have been hit by a bomb). The engine room skylights are open but the starboard ones are covered by a fallen ventilator. The port ones are too small to provide entry to the engine room. From the rear you can enter the superstructure through a door. The floor used to be timber covered but it has been eaten away. However, this has not opened the decks up as the floor was steel overlaid with timber.

You can swim towards the bridge and enter a large room, actually a number of rooms but the walls have been rotted away. These rooms were bathrooms and toilets as the various fittings and floor tiles can be seen. There are also other rooms in this area missing walls.

There is so much to see on this wreck you will not even get a chance to see the area from the superstructure to the stern on one dive. I did 25 minutes on the wreck and this required 4 minutes decompression at 6 metres and 13 minutes at 3 metres. A magnificient wreck, another must-do Chuuk Lagoon wreck.

Dives:

- 14 November 1997

References:

- *Hailstorm over Truk Lagoon* by Klaus Lindemann
- *WII Wrecks of the Kwajalein and Truk Lagoons* by Dan E. Bailey
- *26 Principal Shipwrecks of Truk Lagoon* by Capt. Lance Higgs

Nansin Maru

In June 1914 a new ship was completed by Irvine's Shipbuilding and Drydock Co Ltd, West Hartlepool, UK. The new ship was christened SS *Corinthic*. She was 385 feet long, 52 feet wide and displaced 4806 tons. Powered by a triple expansion 395 Nhp steam engine built by Richardsons, Wesgarth and Co Ltd, Hartlepool, UK, the steam came from three coal-powered scotch boilers.

The first owner W. H. Cockerline and Co. In 1919 the SS *Corinthic* was sold to Lancashire Shipping Co Ltd (J. Chambers and Co Managers) and renamed SS *Thurland Castle*. About 1923 the ship was sold to City Cate Line Ltd (H. W. Dillon and Sons Managers), registered at Liverpool, and again renamed, this time SS *Hemisphere*.

In October 1924 the ship was again sold, this time to Kohun Kisen KK of Kobe, Japan and renamed *Kohki Maru*. It is not clear, but the sale date may have been August 1925 instead.

About 1930 the *Kohki Maru* was sold once more, this time to Ishihara Gomei Kaisha (registered Fuchu) and renamed *Nanshin Maru*. In about 1935 the ownership changed to Ishihara Sangyo Kaiun KK (possibly just a name change of company). In 1938 the *Nanshin Maru* was renamed *Nansin Maru*.

At some time, probably before the start of the Pacific War in December 1941, the *Nansin Maru* was requisitioned by the Imperial Japanese Navy.

At 5.50 am on 24 September 1944, 180 Grumman F6F *Hellcat* and Curtiss SB2C *Helldiver* (not made by Grumman as claimed by one source) planes lifted off carriers of Vice Admiral William F. "Bull" Halsey's Task Force 38 and headed for the waters of Coron Bay. At 9am the planes reached Coron and located at least 18 large Japanese vessels and started their attack. After a frenzied 45 minute attack the planes left, leaving behind sunken ships. Today 14 of these wrecks have been located and most can be dived from Coron.

One of the wrecks is the *Nansin Maru* (still known locally as *Nanshin Maru*). I have not dived this wreck but it is reported to be very good.

References:

- *Lloyds Register* - 1914-5, 1919-20, 1922-3, 1924-5, 1925-6, 1926-7, 1928-9, 1931-2, 1935-6, 1936-7, 1937-8, 1939-40.
- *Merchant Ships 1942* by Talbot-Smith

Nippo Maru

The *Nippo Maru*, as many other Chuuk Lagoon wrecks, was sunk on 17 February 1944. During the first raids of *Operation Hailstone* (the attack on Chuuk Lagoon), it was hit by three 500lb bombs in the stern area causing its demise.

The *Nippo Maru* was launched on 16 September 1936 from the Kawasaki Dockyard Co Ltd in Kobe, Japan. It displaced 3,764 tons and was 353 feet long and 50 feet wide. She went into service on 9 November 1936 for Okazaki Honten KK and then possibly later Mitsubishi. The new vessel was 3,763 tons gross, 107 metres (353.6 feet) long and just over 15 metres (50.0 feet) wide. Powered by two Kawasaki coal powered steam turbine engines (500NHP total) geared to the one shaft, the *Nippo Maru* was capable of 16.3 knots.

In 1941 the ship was requisitioned by the Japanese defence force and used for various transport purposes. At the time of its sinking, the *Nippo* was being used to carry water, fire wood and other supplies as well as armaments to Japanese troops on the many Pacific islands they occupied.

Figure 91 – Kelly Jandik hovers over the Japanese one man tank

In 1969, the *Nippo Maru* was filmed by the Cousteau expedition but not identified. It was then "lost" until rediscovered on 16 June 1980 by Klaus Lindemann. The *Nippo* lies on a sand bottom in 48 metres of water, lying in an east-west direction with the bow slightly shallower than the stern and having a slight list to port. The wreck is basically intact, with only slight damage to the bridge area and stern visible.

The dive boats generally hook on to the bridge area, the shallowest part of the wreck. The best way to explore the *Nippo* is to head towards the stern to do the deeper sections first, although if you are planning a shorter dive, the bow is probably better. The first thing you notice is the funnel which has collapsed to the port side. Behind the funnel are the engine room skylights. The starboard ones are partially open but they are not wide enough to give access to the engine room. At the present time I am unsure of how to gain access.

Figure 92 – A truck on the sand on the port side

Heading to the stern and travelling along the deck on the starboard side you will come across three small artillery pieces, American made and believed to have been captured in the Philippines. Klaus Lindemann writes in his book *Hailstorm over Truk Lagoon* that the artillery guns were affixed to "mounts" on the deck. There are certainly three strange looking objects welded to the deck

near these guns but I must disagree with Mr Lindemann's thoughts on this matter. His claim does not seem to make sense and this was confirmed by others diving with me. A lot of artefacts are located on the guns, including binoculars, plates, tea pots, gas masks and cooking utensils. There used to be a thigh bone here as well but on my last visits in February 1994 and November 1997 it was not seen.

Further along there are two large barrels for field guns lying on the deck against the starboard edge of the hold.

Hold four right behind the superstructure has batteries and huge aluminium water containers. Hold five, the rear most hold, has at least five more gun barrels, gun breeches, gun sighting mechanisms and large gun turrets. There are also other objects. In the hold you reach the greatest depth of the dive of about 48 metres. Behind hold five there is a spare anchor against the sternhouse.

Behind the ship there is a small "hill" of sand and most of the stern section is level with the sand. Head to the front again (unless you are doing this as a "back section only dive") to see the rest of the wreck.

As you approach the main superstructure area from the port side you will pass over a bomb-like object resting against the railing. Right between the hold and the superstructure there are another three identical objects. At first these appear to be bombs, one resting on the deck, another on top of a vice and the third partially through the deck. On the passageway at the rear of the superstructure there are another 10 or more identical "bombs". However, they are not bombs, but minesweeping paravanes. These objects were towed behind a vessel and used to explode mines. Check out the ring on the nose for towing as well as the fins on the nose and side of the body, how they would cause the thing to dive under the water. The four on the deck have obviously fallen out of the passageway as the ship was sinking.

Figure 93 - One of the minesweeping paravanes

There appears to be another small hold (the Chuuk books do not mention it) right in front of bridge. This contains coal for the engine and it probably just a coal bunker. You can swim into it from below the bridge and exit through a chute which leads to the top of the bridge.

Hold three (the main one in front of the bridge) has some beer bottles in the 'tween decks.

For now, bypass the bridge and go forward. On the port side in front of hold three and adjacent to hold two is a small tank, the same type as the three on the *San Francisco Maru*. The tank is intact except for the gun barrel that is no where to be seen. This is because the barrels were generally removed while being transported and it is likely that it is inside the tank.

On the sand below the port side of the bow there is a truck. All that remains is the chassis, wheels (dual rear), engine, radiator and the fallen steering wheel. There is a large gorgonia on the radiator that makes an excellent photograph. Also on the sand around the truck are two large acid bottles, one large lantern (all great photo opportunities) as well as various other bits and pieces. The front mast also lays across the port side out over the sand and is a very interesting backdrop.

Ascending to the bow you can see another truck which is half over the deck railing. It is very damaged, with no radiator, just the chassis, engine and wheels (dual rear) remaining. The forecastle can be entered and it is also quite interesting.

Figure 94 - An acid bottle in front of a truck chasis on the port side

Enter hold one and you will find hundreds of shells, hundreds of 200 litres drums (most stuck to the ceiling), gas masks, firewood (stacked in at least four rows at rear of hold). At least one hatch beam has fallen into the hold.

Hold two has at least four more enormous aluminium water containers on the bottom. The 'tween deck has beer bottles, scaffolding (at least that is what it looks like), personal water bottles and perhaps a periscope. I have not seen this mentioned in any book about Chuuk but this is what it appears to be to me. The depth gets to 42 metres here.

Spend your final moments in the area under the superstructure and finish examining around the bridge which is extremely interesting. The bridge has the telegraph and steering helm to see as well as other interesting compartments and objects such as radio sets.

This is a deeper dive, but even relatively inexperienced divers should be able to dive it. The conditions are nearly always ideal, with flat seas, no current, 29°C water and visibility of 24 to 30 metres. These conditions make it far different to diving, say, the SS *Tuggerah* off Sydney which is a similar depth. With a dive computer (Aladin Pro) you will only get about nine or ten minutes no-deco time. A 20 minute bottom time will require decompression of two minutes at six metres and seven minutes at three metres while 22 to 25 mins will require another two minutes at three metres, depending on where you actually dive on the wreck.

The *Nippo Maru* is a fantastic wreck, one of the best in Chuuk Lagoon. It is worth visiting at least two times to see it even briefly. A must do dive when you visit Chuuk.

Dives:

- 21 November 1991
- 16 February 1994
- 18 February 1994
- 8 November 1997
- 10 November 1997

References:

- *Hailstorm over Truk Lagoon* by Klaus Lindemann
- *WII Wrecks of the Kwajalein and Truk Lagoon* by Dan E. Bailey
- *26 Principal Shipwrecks of Truk Lagoon* by Capt. Lance Higgs
- *Lloyds Register* 1936-37, 1938-39, 1945-46

North American B-25D *Mitchell* Bomber

The town of Madang is often called the "prettiest town" in the whole Pacific. I must say that I agree with this description as it is very beautiful and ideally located on the shores of Madang Harbour, a harbour that comes close to Sydney Harbour in terms of size, protection and beauty. Numerous parks, lagoons and creeks are found in and around the town and there are plenty of trees that add to its appeal. To the north there are three other harbours, Nagada, Mililat and Sek Harbours. In reality, these are really just parts of the one, huge harbour protected from the open ocean (not that there is any real big seas) by a barrier reef and a number of small islands. The vast majority of the diving here is carried out in and around these harbours.

On a dive trip to Madang in Papua New Guinea in 1996, I was able to dive a number of wrecks, amongst them two aeroplanes. While most people go diving in New Guinea for the reefs, there are some excellent wreck diving all around the country. As well as the famed *Blackjack* Boeing B-17 located far to the south from Madang, there are a number of other planes to dive in PNG. One of them is a Cessna 402 and the other is a North American B-25D *Mitchell*.

Introduction

Figure 95 – A Mitchell B-25D

At the northern end of Nagada Harbour in Papua New Guinea north of Madang, there are a couple of islands, the smallest of which is Wangat (or Wangad or Wonad) Island. This island is located only metres inside the barrier reef. On 5 September 1979, David Pennefather, who was living in Madang at that time, was snorkelling off Wangat Island looking for a rumoured plane when he found the wreck of a North American B-25 *Mitchell* plane a few hundred metres to the south of the island (this is from Walt Deas and the Pacific Wrecks Database – references below). However, Charlie Edmonds, the Manager of Jais Aben Resort (not sure if he is still there now), told me in October 1996 that he discovered the wreck with one or two others in 1979. Maybe they are both right, perhaps the snorkeller found the wreck and Charlie and friends (including Pennefather?) were the first to scuba dive the plane.

Chris Jamesson (see references below) has advised me that two B-25s are reported as being lost near Madang. One is reported as 3/4 nautical miles (this is 3 to 4 nm I believe) from Madang and the other "off shore at Madang". The first is serial number 41-30118 and the second 41-30183. Therefore it appears to me that the first, 41-30118, is likely to be the plane wrecked off Wangat Island, as this is approximately the distance from the Madang Airfield to the plane. More about this later.

Brief B-25 History

North American Aviation Incorporated was responsible for the design and construction of two very famous World War II aircraft. The first was probably the second most famous fighter aircraft of all time, the North American NA-73 P51 *Mustang*. The other was the North American NA-62 B-25 *Mitchell* bomber. The *Mitchell* was built in larger quantities than any other US twin-engined combat aircraft and has been often described as the best aircraft in its class during the war.

The US Army Air Corps indicated in 1938 that it was thinking of acquiring a medium bomber. North American Aviation Incorporated had already started work on a twin engine bomber as a private venture. This plane, the NA-40 was first flown by Paul Balfour in January 1939. The same month, a competition was announced for medium bombers, with a closing date of 5 July 1939. The prototype, NA-40B, was delivered to Wright Field in March 1939. This plane was destroyed after only two weeks in an accident. The USAAC instructed North American to continue development and the revised plane, the B-25, was completed in September 1939. Despite not being finished, the USAAC issued a contract for 184 aircraft on 10 August 1939 (costing $11,771,000).

The first production aircraft flew on 19 August 1940. It had a gross weight of 12,388 kg.

The production plane was 15.54 metres long with a wingspan of almost 20.6 metres with a gross weight of 12,909 kg. Power was from the two 1,700 hp Wright Double Cyclone R-2600-9 14 cylinder two-row radial engines with two speed superchargers driving a Hamiliton Standard propeller. Maximum speed was about 443 km/h at 13,000 feet with a ceiling of 23,800 feet and a range of 2,173 km.

The *Mitchell* bomber was one of the most famous aircraft of the war, especially for one raid early in the Pacific war. On 18 April 1942, 16 B-25Bs under the command of Lt-Colonel Jimmy Doolittle took off from the USS *Hornet* and flew 800 miles to Tokyo and bombed the city. They then flew on to China where they landed. Although little damage was caused, the attack raised morale greatly within America.

After the 24 planes were B-25s and then there were 40 B-25As (difference was mainly armour protecting the pilots and self sealing tanks). In 1941 the 1939 order of 184 aircraft was finalised as B-25Bs (119 planes and one written off in a crash before actual delivery). These planes had Bendix dorsal and ventral turrets with 12.7 mm machine guns. A lot of these planes ended up in British hands and 40, destined originally for the Netherlands, ended up in Australia with the 3rd Bombardment Group of the USAAF.

In December 1940 the US Government decided to build new aircraft production facilities away from the West and East Coasts where they might be susceptible to attack by Germany if the US ended up at war with Germany (and Japan should it enter the war). The new plants were built in the middle of the country. One of the new plants was built at Kansas City, Kansas (as well as Dallas, Texas). The Kansas plant was owned by the Government but leased to North American Aviation Incorporated. The plan was to build the new light bomber at this plant (as well as elsewhere) with work carried out by North American and Fisher Body Division (a subsidiary of General Motors Corporation), but primarily by Fisher. As it turned out, North American ended up doing most work.

The next model was the B-25C. Delivery started at the very end of 1941. The original Inglewood plant made 1,619 planes (not sure where the remaining six were made) . The B-25D was virtually identical and built at the same time. I have read that the B-25D was built at the Kansas and Dallas plants. A total of 2,290 B-25Ds were constructed.

An order for 1,200 B-25D *Mitchell* bombers to be built at the Kansas plant was approved on 28 June 1941. The first two planes were delivered in February 1942. While the initial B-25Ds were almost identical to the B-25C, during the production run there were a number of changes to the base plane. The B-25D had two Wright R-2600-13 1,700 hp supercharged engines (a significient upgrade from earlier models) giving a maximum speed of 485 kilometres per hour and a range of 2,414 kilometres. I assume that the other 1,090 were built at Dallas, although I have also read that all were manufactured at Dallas.

There were no B-25E or B-25F produced but there was the XB-25E (one converted B-25C), XB-25F (one converted B-25C) and the XB-25G (one converted B-25C). This led onto the B-25G (400 new planes and 5 converted B-25C). Other versions were B-25H (1,000 planes) and the B-25J (4,318 planes). Some planes were converted to other designations for trainers, transport and reconnaissance and there were US Navy versions PBJ-1C (50 planes), PBJ-1D (152 planes), PBJ-1G (1 plane), PBJ-1H (248 planes) and PBJ-1J (255 planes). All of these were equivilent to the B-25 of similar letter designation.

The major changes to the plane (and relevant to this article) relates to the armaments installed on the plane's various models (I will only detail up to the B-25H). The original B-25 and B-25A both had a single 0.30 inch machine gun in the nose (that could be moved to one of three positions), one 0.30 inch machine gun in the waist, one 0.30 inch machine gun in the dorsal position and one 0.50 inch machine gun in the tail. The B-25B had two turrets with twin 0.50 inch machine guns. One was mounted in the belly and the other was on top between the wings and tail. The tail gun was removed. The B-25C (1,625 of them) and B-25D (a total of 2,290) models were constructed at the same time and started off essentially the same and with indentical armaments as the B-25B. The main difference was that the B-25C was constructed in the North American plant at Inglewood. Note that none of these two models had waist guns nor a tail gun (important as you will see later).

Starting with the B-25D-5 version, the 0.30-inch machine gun in the nose was replaced with a pair of fixed 0.50-inch machine guns and a single flexible 0.50-inch machine gun. The dorsal and belly turrets remained. Later on, the B-25H was produced. This had a lot of changes to the previous main model the B-25C/D (E, F and G were fairly specialised one-off or short production runs). The main ones were that the dorsal (top) turret was moved forward to a position in front of the wing (two 0.50-inch machine guns with 400 rounds per gun - rpg), waist guns were added (two 0.50-inch machine guns - 200 rpg), twin tail guns were reinstalled (two 0.50-inch machine guns - 600 rpg) and the ventral (bottom) turret was removed totally. In addition, one 75-mm T13E1 cannon was placed in the nose with 21 rounds and four 0.50-inch machine guns installed in the nose with 400 rpg, two 0.50-inch machine guns in individual blisters were now on the right-hand side of the fuselage with 400 rpg and later on, two 0.50-inch machine guns were added in blisters on the left-hand side of the forward fuselage.

Modifications to B-25s after leaving the factory

During the Second World War, a lot of USAAF planes were based in Townsville, Northern Queensland, Australia. From here they did sorties into the South Pacific, especially to New Guinea and the Solomon Islands. In response to troubles with attacking Japanese shipping with the earlier versions of the B-25 and the difficulty of hitting a ship from altitude with a small bombload, an idea was formulated to try low level attacks and skip the bomb off the water into the side of the ship under attack. However, during attacks such as these, the B-25 was very vulnerable to frontal attack due to its poor offensive ability. After some thought, a modification was created in Townsville where the existing nose armaments were removed and a formidible array of guns installed.

It appears that the idea of modifying the B-25 (to be called a "strafer") came from a North American Aircraft field service officer, Jack Fox, and Major Paul I. "Pappy" Gunn of the 3rd Bombardment Group. Mr Fox and Major Gunn satisfied General George Kenney, Commander of 5th Air Force in the Pacific, that this was a good modification and approval was given to try it out. However, the first flight of the modified B-25C was not carried out till February 1943.

At first I believed that there must have been some other modifications to some B-25D-5s as the plane at Madang is certainly modified from the original state. This was where the original armament of a pair of fixed 0.50-inch machine guns and a single flexible 0.50-inch machine guns was replaced by four fixed (0.50-inch?) machine guns and maybe a cannon (this is not visible on the wrecked plane). In addition, waist guns and tail gun/s appear to have been reintroduced. This was based on the fact that the wrecked plane appears to be a B-25D and has two machine guns in the waist but only one gun in the tail. Thus it is very much like a B-25H but it does not have the twin tail guns and the dorsal turret is between the wings and tail. Therefore the Madang aircraft could have been (and probably was) one of the planes modified in Townsville in 1943.

405th Squadron of 38th Bomber Group

The 38th Bomber Group was constituted on 20 November 1940 and brought into active service on 15 January 1941. Ground crew from the 38th Bomb Group were sent to Australia

arriving in Melbourne on 31 January 1942 and travelled to Queensland. They assembled aircraft shipped over from America. On 22 August 1942, the 405th Squadron (known as the "Green Dragons") and the 71st Squadron arrived at Breddan near Charters Towers in Outback Queensland. Walt Deas says that at least some of the planes were flown across the Pacific, taking a week to cover the distance.

Construction Information about 41-30118

One of the B-25D-5 models built at the Kansas plant was serial number 41-30118 (chassis number 87-8283). It was received by the USAAF on 13 January 1943. This information comes from the Air Force Historical Research Agency (AFHRA - see references). Walt Deas says that this plane was named *Green Dragon* with a large green dragon painted on either side of its nose (as was the fashion with all US warplanes).

History of 41-30118

The Air Force Historical Research Agency says that after 41-30118 was delivered to the USAAF on 13 January 1943, it was assigned to Kellogg Army Air Force Base, Michigan on 17 February 1943. It was then assigned to the Sacramento Air Depot, McClellan AAF California, on 28 February 1943. It departed the US on 26 March 1943 and was assigned to the Fifth Air Force, Pacific Theatre of Operations. It was declared missing due to enemy action on 18 August 1943. No other details of the plane are known to the AFHRA. This is consistent with information I have found about the 405th Squadron of the 38th Bomber Group and the modification of B-25Ds.

Figure 96 – Eddy Labour and the upper gun turret

As I indicated above, I think that the *Mitchell* bomber at Wangat Island is probably serial number 41-30118 which was reported to have crashed on 4 August 1943. The aircraft was said to have been hit by anti-aircraft fire after an attack on Madang. Walt has since told me that this hit the left (port) engine. This confirms to me that this is probably what happened as the plane has no obvious damage from an attack by other aircraft or from the ground except for the fact that the port engine is missing. At first I was working on the assumption that this plane crashed in 1942 (as Walt Deas had posted this date on some sites on the internet) but he has since confirmed to me (as I had suspected) that the correct year was 1943.

Walt Deas says that the plane was called *Green Dragon* (with a Green Dragon painted on its nose) and it was part of the 405th Squadron of the 38th Bomber Group. On the plane on its final mission were Command Officer Major Williston M. Cox Jr (from Tennesse), Pilot Captain Robert Herry (Texas), 2nd Lt. Robert J. Kascelnak Co-pilot (Orange, California), First Lieutenant Louis J. Rittaco, Navigator (Port Chester, New York), T/Sgt. Hugh W. Anderson, Radio Operator (Aspermont, Texas) and S/Sgt. Raymond J. Zimmerman, Engineer/Gunner (Oregon City, Oregon). All except Sergant Zimmerman survived the crash.

The other crew were apparently captured and all but one eventually murdered in ritual executions. Major Cox ended up a prisoner of war in Japan and survived the war but a web site dedicated to the 38th Bomber Group says that Major Cox was killed in action on 4 August 1942 (note date). However, Walt has confirmed to me that he has spoken to Major Cox's son and seen newspaper reports of Major Cox's return to the US so this site is

obviously incorrect (probably based on missing in action reports with the year wrong). The only other member of the crew listed on the above site as being recorded as killed or missing is T/Sergeant Hugh Anderson. Walt has contacted a few relatives of the crew for a planned documentary on the aircraft.

As I indicated above, I had at first thought that the plane located off Wangat Island was a B-25G or H, or a G modified to be a model H. The basic B-25G as modified had a top turret (located towards the rear whereas later models had the turret over the cockpit), a rear machine-gun, two waist guns as well as a fearsome six or eight guns facing forward. There were four guns in the nose and either one or two located either side of the cockpit. The plane at Madang certainly has four guns in the nose but I cannot tell if it had more on the side of the nose. I was told by Raymond Holyoak (see references below) that this plane was probably one that was assembled and modified at Base Two in Duckworth Street, Townsville, Queensland. These were crated over from the US, had their perspex nose removed and had the extra guns installed.

The Aircraft Wreck

The plane off Wangat Island is located at a depth of 15 to 25 metres. It is fully intact except for the port engine which is missing, the port wing tip is at 15 metres and the starboard wing at 25 metres. The main body of the plane is about 18 metres deep. Starting from the front, the four 0.5 inch guns are very obvious and through the damaged nose section the four ammunition hoppers that fed the guns can clearly be seen. There is still a considerable number of rounds still in the hoppers but they are cemented into place by concretions.

Figure 97 – The front guns of the B-25D

The cockpit is open and a small diver can fit inside. The controls are still there, but all gauges are long gone. Behind the cockpit there are two huge hoppers that feed the side guns (so this impies that there were at least two extra guns - I will have to check my video to see what side they were on) and you can see the bomb-bay and navigator's area. The back section of the plane can be viewed, but the only entrance is through the port and starboard waist bulges (gun spots) but these are far too small for anything but your head. The turret can be examined (it was remotely operated) and the periscope that enabled the operator to sight the enemy can be clearly seen. Inside the turret you can see the ammunition (0.50 inch) in the hoppers that feed the twin guns. The rear gun appears to be only a single gun. Between the huge twin tail fins there is an enormous gorgonia fan.

Figure 98 – Eddy Labour and the starboard propellor – note that the blade is bent back

As indicated earlier, the starboard engine is intact and the engine appears to have been running when it hit the

water as the blades of the propeller are all bent backwards by the force of the water. The port engine is missing, neatly ripped away, whether by the crash or an earlier incident (eg, enemy fire or a major malfunction). This is consistent with Walt Deas's belief that it was hit in the port engine by ground fire. There is no apparent damage from gunfire to the wings or body of the plane.

The water temperature for this dive was a minimum of 29°C, extremely pleasant. The visibility ranged from eight to ten metres, more than enough to fully enjoy the plane.

References:

- *The North Queensland Line. The Defence of Townsville in 1942* - and unpublished thesis by Raymond Holyoak
- *Bombers of World War II* by Bill Gunston
- *Jane's Fighting Aircraft of World War II*
- E-mail from Chris Jamesson (flyboy@gil.com.au) concerning B-25.
- Information from Walt Deas (waltdeas@broad.net.au)posted on a number of WWII plane chat sites
- Pacific Wrecks Database - http://www.pacificwrecks.com/provinces/png_madang_diving.html
- Some web pages on B-25s - http://pages.prodigy.com/jing_bao/b25d.htm
- *North American B-25 Mitchell* book - http://www.csd.uwo.ca/~pettypi/elevon/baugher_us/b025i.html by Joe Burgher
- Serial Numbers of US Aircraft - http://home.att.net/~jbaugher/usafserials.htm
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- *American Aircraft of World War II* by David Monday
- 38th Bomber Group - http://members.aol.com/_ht_a/n2clplanes/extreme
- Light Bombers Web Site - http://www.lightbombers.com/groups/38thBG.html
- E-mail from Archie DiFante, archivist, Air Force Historical Research Agency, dated 24 March 2001
- Various e-mails from Walt Deas (waltdeas@broad.net.au) in early 2001
- *American Warplanes of World War II* edited by David Donald

Olympia Maru

Launched in August 1927 from the Nagasaki shipyards of Mitsubishi Zosen Kaisha Ltd, the *Olympia Maru* was 122 metres long and almost 17 metres wide, displacing 5612 tons. The ship was originally powered by a steam engine but during 2 June to 2 August 1930, an oil two stroke six cylinder engine producing 582hp was installed. The ship was built for Mitsubishi Shoji Kaisha Ltd and was owned by them right up till it sank (it was requisitioned by the Japanese Defence Forces during the War but was still owned by Mitsubishi Shoji Kaisha Ltd). I do not know anything else about this ship yet.

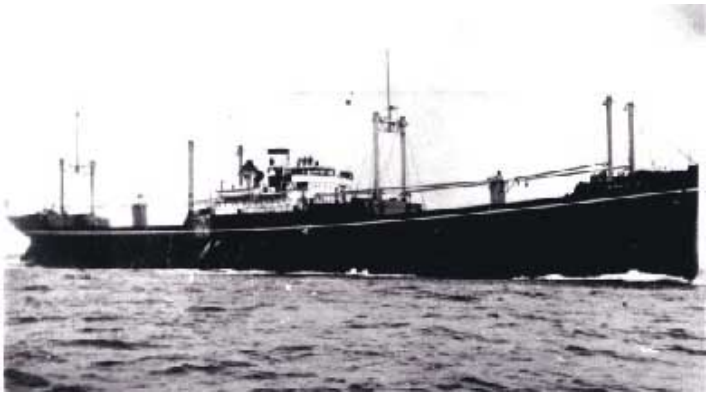

Figure 99 - Olympia Maru before the war

In late September 1944 with some Japanese ships, including a convoy of 12 Japanese ships, taking refuge in the Busuanga Island area of the Northern Palawan group of the Philippines. Eight of the ships were anchored in Coron Bay, the rest to the west and at least one on the northern side of Busuanga Island. The *Olympia Maru* was anchored off the western side of Tangat Island.

Late on the afternoon of 23 September 1944, Fast Carrier Task Force (TF) 38 under the command of Vice Admiral "Bull" Halsey positioned itself for an attack on the ships in the Coron area. At 5.50 am on 24 September 1944, 180 Grumman F6F *Hellcat* and Curtiss SB2C *Helldiver* (not made by Grumman as claimed by one source) planes lifted off the American carriers and headed off on the 350 kilometre flight for the waters of Coron Bay. This was to be the longest carrier based (and return) attack ever carried out. At 9 am the planes reached Coron and located at least 18 large Japanese vessels and started their attack.

The planes attacked the ships in Coron Bay and the ships to the west first. After a frenzied 45 minute attack the planes left, leaving behind numerous sunken ships. It is reported that the *Olympia Maru* was attacked by 10 aircraft and the fourth apparently scored a direct hit amidships, perhaps on a fuel tank, and the engine was disabled.

It is reported that at 1:30 pm there was a raging fire. The ship started sinking and at 2:26 pm she went down stern first, taking with her 19 Japanese sailors. Most of the ships anchored around Coron were also sunk. Today 14 of these wrecks have been located and most can be dived from Coron.

This wreck used to be more popularly known as the Tangat Wreck as it lies a few metres off the south-western side of Tangat Island. It was also known as the *Morazan Maru*. For a while, it was also thought to be the *Ekkai Maru* formerly SS *Morazan*. It was also known locally as *Morazan Maru* or *Moruzan Maru*. However, the correct name is *Olympia Maru*. The SS *Morazan* was sunk in Manila Harbour on 22 September 1944.

The ship is quite large, more than 120 metres long. The main deck lies in 18 to 24 metres and the wreck is fully intact lying upright. The bow section is very interesting and the forecastle area quite exciting to explore. Behind this there is a kingpost and then two holds. There is not a enormous amount to see in the holds but there are bits and pieces here and there.

Despite the fact that the bridge area is fairly intact, the section of ship above the engine has been dramatically altered from its original. Whether this was from the American attack or later salvaging (or perhaps a combination) was hard to tell on only one dive. Either way, the

engine has been salvaged although the boilers are still in good condition. The engine is very open but there are still many areas to explore under and between the boilers.

Two more holds are found behind the bridge and inside them go can see the prop shaft alley and salvage efforts. Like most (all?) other wrecks here, the prop has been salvaged and it is possible to swim into the shaft and exit inside the hold. The stern section of the wreck also has some smaller compartments that can be entered, but some care is needed. The whole wreck is covered in growth, making the wreck seem like a live reef. Fishlife is also very good, with many schools of large fish swimming over the wreck and between the four kingposts.

All in all, an excellent shallow dive of a real, Japanese war wreck.

References:

- Dive Right CoronWeb Page - http://www2.mozcom.com/~diving/c-history.htm
- *Coron History Report* by Peter Heimstaedt - http://boracay.vasia.com.ddivers/ph_history.htm - Note Mr Heimstaedt emailed me a number of times in the late 1990s telling me that the information I had then on my site about this wreck was wrong but refused my requests for the real information. On his site he has a number of derogoratory remarks about me.

MV *Pacific Gas*

In 1967 a new vessel was built by the Kanawa Dock Company Ltd**Error! Bookmark not defined.**, Hiroshima, Japan. The ship was named *Nanoyo Maru* and the owner was Okuda Gyogyo KK. The ship was 65.3 metres long (waterline 60 m) and 10.5 metres wide with a gross displacement of 1,131 tons. It was powered by two 650 hp six cylinder Daihatsu Kogyo four stroke diesel engines (built in Osaka) in tandem which drove a single prop. Top speed was 12.9 knots. Electricity came from two 32 kw 225 volt generators and a total of 150.5 tons of fuel was carried. The ship had two large gas containers mounted in the two front holds. There was a smaller one at the bow and the larger one behind, right in front of the bridge. The containers held a total of 1,374 cubic metres of LPG.

The *Nanoyo Maru* was used on the Japan, Taiwan, Singapore run under the Esso flag with a home port of Shiogama. In 1972 the vessel was sold to Liquefied Gas Carriers Pty Ltd and moved to the Papua New Guinea to Australian run. The ship was now under Australian flag with PNG crew. It carried gas for Boral Gas Pty Limited. At the same time it was sold, the vessel was renamed MV *Pacific Gas* and its home port became Port Moresby, PNG. Gross displacement was now given as 1,196 tons.

Figure 100 - The tug Pacific Gulf moves Pacific Gas into position for scuttling

The ship served from 1972 till the early to mid-1980s carrying gas from Australia to Papua New Guinea. The ship was then removed from service and the two huge LPG tanks removed. One was sold for use in Lae and the other for use in Port Moresby. At the same time or shortly after, the ship was sold to a group of PNG businessmen including Hugo Berghuser. He later bought them out, valuing the *Pacific Gas* at 65,000 kina. His plan was to ground the ship off Ela Beach, the main beach of Port Moresby, located on the southern side of the city's Central Business District. He was going to establish a seafood restaurant on the grounded ship but the Town Planner refused permission (thank God, what an eye sore it would have been).

The ship remained moored in Port Moresby Harbour near Tatana Island. On 14 June 1985, the PNG Harbours Board gave notice to Berghuser to remove the ship from the port within two months. A year later the ship was till there. On 11 June 1986 a final ultimatum was issued demanding that the ship be remove within 14 days. Berghuser asked for an extension as he wanted to use the ship in a timber operation but the Department of Transport declared the *Pacific Gas* unseaworthy.

Hugo Berghuser then gave the ship to Bob and Dinah Halstead who were at that time operating a dive operation, Tropical Diving Adventures, out of Port Moresby. Halstead removed all the doors, hatches and windows or had them locked open and cut a hole from the engine room to the second hold, giving more light and access to the engine room. Apart from that, little was done to make the wreck safe for diving.

Figure 101 - The *Pacific Gas* is well on its way to the

At 6:30 am on the morning of 15 October 1986, the Pacific Towing tug, *Pacific Gulf* towed the MV *Pacific Gas* from Port Moresby Harbour. The final destination was to be the south-east side of Padana Passage. This is located to the south-east of Port Moresby and the passage is the main access to Bootless Bay. Arriving at the predetermined scuttling position at 10:30 am, Ian Short (now the operator of the PNG Recompression Chamber and provider of air fills to many Port Moresby divers), together with an assistant, set the explosive charges. Soon, Ian and his assistant hurriedly exited the ship and soon after, three explosions rocked the ship. Several minutes passed before the *Pacific Gas* was visibly affected and soon after it started to sink.

The spot selected for sinking was a sloping bottom, with the depth running from a bit over 30 metres down to 45 metres. Today the wreck of the MV *Pacific Gas* is moored, with the buoy located just under the water. The GPS Reading for the site is 9° 35' 13"S 147° 17' 18"E using WGS84. Descending to the wreck you soon see huge numbers of large fish. Even people who detest wreck dives should do this dive just for the fishlife. The mooring is attached to a winch on the bow and there is something very exciting to be found right here. In the winch there lives a leaf scorpionfish. This one is bright pink and only about 75 mm long. It is an amazing and very beautiful fish.

Figure 102 - The stern railing

Follow one of the sides of the ship to the stern and you drop deeper. Go down the side of the hull and you will see that this wreck has very good growth, almost as good as some of the Chuuk Lagoon shipwrecks. The railings and hulls are covered in fixed marine growths like gorgonias, hard and soft corals as well as featherstars galore. After only a couple of minutes you will reach the prop. This is 45 metres. From here, ascend to the stern and look at the colourful railing. The depth here is about 36 to 38 metres. After this you can swim along the passageways that extend from here forward on both sides of the ship. It is a little tight but not too hard. An alternative is to enter the engine room and you can do this through a door on either side, just below the funnel. This leads to a large opening and from here you can drop down into the engine room. The engine room is quite open and easy to explore. The depth is 41 metres and both engines can be seen clearly. You can exit a number of ways, the easiest is by the hole that Bob Halstead cut in the bulkhead on the starboard forward side of

the engine room. This leads you out to Hold 2 and then you can rise a little and then come back a bit along the passageways I mentioned earlier. Depth here is 35 metres.

Figure 103 - A beautiful pink leaf scorpionfish on the wreck's bow winch

A few metres along there are doors on either side of the ship that lead to the saloon and crew cabins. There is a stairway here (the stairs are mostly gone) and you can ascend up to the next level. This has the radio room on the rear starboard side and forward of this the Captain's Cabin. Depth is about 32 metres. Once again, you can go up a level to the Bridge where the depth is about 28 metres. As you go up these stairways and in the cabins, beware that there are many wires and cables hanging down and it is easy to get caught up, I did once. However, this said, it is easy to get free of the entanglement. Note that there is plenty of light entering all these compartments. You can see the compass and steering binnacles and other parts of the Bridge. Exit can be via the windows or doors.

If you have time and air, drop down into the holds and you will see that there is a lot of junk on the floor. Start ascending, aiming for the bow. If you have time, spend some of it looking at (or for) the leaf scorpionfish. Once you have decided to ascend to the surface, you can go back up the mooring line or, more interestingly, up the forward mast. This goes to about 8 metres and you can easily see across to the mooring line to complete your decompression/safety stop. This also gives you an excellent opportunity to see and photograph the hordes of fish, trevally, mangrove jacks and other species, that swirl around the mast.

This is a great dive, both for the wreck and the fishlife. When I dived here visibility was about 15 metres, although I was told that it is normally about 20 metres or more. Water temperature was 26°C. I did a 26 minute actual bottom time which required a six minute stop at three metres. I went into decompression at 13 minutes.

Dives:

- 26 November 2003

References:

- *Wrecks and Reefs of Port Moresby, Papua New Guinea* by Neil Whiting - pages 236-45
- *Lloyd's Register - 1968-9*
- *Lloyd's Register - 1986-7*

MV *Petaj* or MV *Roylen Petaj* - Ex-RAN Fairmile ML 805

After the entry of Japan into World War II, the Royal Australian Navy decided that there was a need for a class of vessel to be used for local tasks, including convoy escort, local patrols and submarine hunting. In September 1942, the first of 35 Fairmile B motor launches was laid down.

The Fairmile was 112 feet long, 17.1 (or 18' 4") feet wide and had a displacement of 75 tons. Powered by two Hall Scott Defender petrol engines each of 650 hp, the ships were capable of 20 knots. Range was 840 miles at 12 knots. Armaments included one two pounder Mk XIV gun, one 20 mm Oerlikon, one 4 barrel .303 inch Vickers machine gun, two .303 inch Lewis machine guns and one Y gun. They carried 14 (or 16) depth charges from two depth chargers, two .303 Lewis machine guns that were portable, three rifles and 24 grenades. During the War most had the two pounder replaced by a single 40 mm Bofors and an additional two 0.5 inch Browning machine guns. Two 20 mm Oerlikons replaced the Lewis and Vickers machine guns. The ships had a crew of 16.

The 35 ships were numbered ML (Motor Launch) 424 to 431 and ML 801 to 827 and were built from 1942 till April 1944. Four were built in Brisbane and 31 in Sydney, 11 in one shipyard and 20 in another. The 20 built in Sydney by Green Point Naval Boatyard were built on prefabricated hulls sent from the United Kingdom. The hull was constructed out of timber planks, with a copper sheafing over it (at least below the waterline).

From the bow the ships consisted of: forward stores, chain locker, Officer's mess, galley, engine room, fuel tanks, officer's cabins and wardroom, toilets and wash areas, pantry, magazine, bosun's store and stern compartment.

As well as the original roles, the Fairmiles were used during the War for troop transport, air-sea rescue, boom defence, special operations, coastal and island patrols as well as attacking maritime and shore tasks.

None of the Fairmiles was lost as a result of enemy action but one, ML 827, was lost on 20 November 1944 when it capsized while being towed and on 13 August 1944, ML 430 was badly damaged when accidently fired upon and hit by ML 819 when in New Guinea. She sank the next morning.

Twenty eight of the Fairmiles served outside Australia, mostly in New Guinea, northern Australia and some Pacific Islands. Apparently there were some problems with the original petrol engines and the cost of replacing them after the War was so high, the remaining 33 ships were disposed of in 1947-8.

Fairmile ML 805 was built by Green Point Naval Boatyard on one of the UK hulls. It had twin Hall-Scott defender petrol engines. ML 805 served in New Guinea under the command of Lieutenant E. H. W. Stuart, RANVR. With ML 802 she assisted in landings at Wilde Bay, New Britain. In late July 1945 it became known to the Intelligence staff of the Royal Australian Army's 6th Division that the Japanese on Muschu Island off Wewak in New Guinea were willing to surrender. On 1 August 1945 ML 805 was fitted with broadcasting equipment and that night she approached (with ML 809) the island, broadcasting news and invitations for the Japanese to surrender. These sorties continued unsuccessfully until 17 August 1945.

On this night, two days after the formal Japanese surrender, the two boats flew white flags and announced the surrender. A small party of Japanese surrender in what was the first actual encounter after the War between Allied and Japanese troops in the South West Pacific. Army intelligence officers went ashore and a conference occurred.

On 10 September 1945, Rear-Admiral Sata, commanding officer of Kairiru and Muschu Islands, surrendered the Japanese forces on the islands to Major-General Robertson, commander of 6th Division on board the ML 805.

Three days later another surrender was signed by General Adachi on shore, using the wardroom table of ML 805.

As indicated above, the Fairmiles were disposed of at the end of the War. Of the 33, 10 (with two Army target towing ships of similar design) were sold and started operating as tourist boats in the Whitsunday area of Queensland. Of these, nine ended up being used by a company called Roylen based at Mackay which acquired them from 1948 till the mid to late 1960s. The ships were renamed *Roylen xxxx*. The boats were refitted with two 150hp Hercules diesels and modifications made, including new wheelhouses/bridges, extra points of access and bulkheads.

In the 1960s, ML 805 was one of the boats sold to Roylen and it was renamed MV *Roylen Petaj*. The ship was used for a variety of tourist purposes, including as a dive charter boat. Other modifications appear to have been made, either at this time or later. An aluminium sun-protection roof was installed along the boat from the bridge to the stern. It is said that Prince Charles was a guest on the boat during this time.

By 1986 all but one of the boats had been sold by Roylen. I am not sure of what happened to the *Roylen Petaj* during this period but in 1994 the boat ended up in the Solomon Islands, renamed MV *Petaj*. The boat was used as a cargo boat to transport staff and to service the outposts of the Indian Pacific Seafood Company. I have yet to find any more information in the *Lloyds Registers* about the boat.

In 1997 Danny Kennedy, owner of Gizo's Adventure Sports dive charter business, heard that the boat was to be sunk in deep waters off New Georgia. He purchased the boat for SI$2,000 and towed the boat from Noro to Gizo. The ship was cleaned up along the way and permission sought from the relevant authorities to sink the boat in Gizo Harbour.

This approval was granted and the scuttling began in front of Danny's dive shop, with half the population of Gizo watching. However, the authorities had a change of mind about the sinking and sent the Police to order Danny to halt the sinking. He informed them that it was too late and that the boat was far too gone to be saved. Nothing further came of this about turn.

Today the boat lies about 20 metres off Adventure Sports' wharf, in front of the PT-109 Restaurant/bar. A mooring buoy shows the wreck's location. It is a simple matter to drop off the wharf and sink to the bottom before heading north. The wreck lies stern to shore, with the depth here being 12 metres. The twin props are visible as are the rudders. The boat is intact, with a moderate list to port. As you swim along the hull you see that the copper sheafing is corroded in spots, exposing the timber underneath. In addition, the above waterline hull is paint covered timber. At the bow the depth is 14 metres and there are large numbers of batfish living under the port side.

As you swim along the deck you see the strange modifications to the bridge and the sun protection roof. You can drop slightly into the engine room (look for the firefish resident here) before returning to the stern.

To the west of the *Petaj* is another hull, a trimaran type thing. It is quite strange, I am not sure of its exact configuration.

As well as the two wrecks, there is some excellent fishlife to be seen on this dive. As well as the batfish and firefish, there are schools of trevally circling the wrecks. On the sand there are quite a few anemones with resident clownfish. Also look carefully on the sand and you will see pipefish, including some pregnant males (in spring).

A good dive, worth 15 to 20 minutes or so after your normal dives. Keep some air from the second dive, say 60 to 70 bar.

Dives:

- 16 October 2001

References:

- *Royal Australian Navy Profile No 3* by Michael Wilson, pages 17 to 19.
- Adventure Sports Leaflet entitled MV *Petaj*
- *Fairmiles in the Wewak Campaign* a paper by Sub-Lt T. F. Hogg, RANV and Sub-Lt J. L. Smart, RANV

SS *President Coolidge*

I have not included the wreck of the SS *President Coolidge* in this book as it make this book overly long. See my book SS *President Coolidge*.

Republic P-47D Thunderbolt

In June 1940 the specifications for a new fighter were drawn up at Wright Field in California by the chief designer for the Republic Aviation Corporation, Alex Kartveli. The design was affected by on lessons being learnt in Europe about current Allied and German aircraft. Kartveli's idea was that to meet the targets set by Army Air Corps for fighter performance, he decided to use the 18 cylinder Pratt and Whitney R-2800 Double Wasp two row supercharged engine. To fit this engine, he had to produce an innovative designed for the engine placement and build the plane around the engine.

The first experimental prototype was the XP-47B which was first flown (pilot Lowry L. Brabham) on 6 May 1941 at Mitchel Field, Long Island, New York. This plane was destroyed in an accident on 8 August 1942. Production started in November 1941 and delivery of the first model P-47B started 18 March 1942 and they began to arrive in Britain in November 1942. The first operation mission was on 8 April 1943. The new plane was given the name Thunderbolt by the British (who interestingly, gave names to all US warplanes, none received their now well known names from the manufacturer or the US Air Force - although one web site says that it was C. Hart Miller, Republic's Director of Military Contracts who named it). It received the nickname, "Jug".

After the P-47B came the P-47C (sent mostly in crates to Britain) and then the P-47D. There were a number of variations of the P-47D. The first ones were very similar to the P-47C but later ones varied dramatically. The P-47D was powered by an 18 cylinder Pratt and Whitney R-2800-59 2,300 hp Double Wasp two row supercharged engine driving a four-bladed propeller. It also had water injection, which gave a 15% increase in power for brief periods. This version was 11 metres long with a wingspan of 12.4 metres. It had the unprecedented weight of 4,853 kg empty and a maximum take-off weight of 8,800 kg. Its maximum speed was 690 kph with a service ceiling of about 43,000 feet and a range of 1,600 km or 3,060 km with external tanks. Armament was eight 0.5 inch Colt-Browning M-2 (four in each wing) as well as racks for fuel tanks, bombs or rockets. This was a formidable fighter, probably only exceeded in ability by the North American P-51 Mustang. It was the largest single seater propeller driven fighter ever built.

A total of 15,660 Thunderbolts were built, of which 12,602 were P-47Ds. Both these were records, more P-47s were built than any other US plane and the number of model Ds made was the greatest number of any fighter sub-type in history. It was used by Australia, Brazil, France, Soviet Union, UK and USA. The planes were built in a number of different locations: Farmingdale, Long Island; a new factory in Evansville, Indiana; by Curtiss-Wright at Buffalo, New York.

All the first P47-Ds (3,962 at Farmingdale and 1,461 Evansville) were what was called "razorbacks". This meant that the fuselage behind the cockpit started above the pilot's head and sloped back to the tail. The cockpit hood was a sliding affair that slide back over the "razorback". All later models (except those made later at Buffalo) had bubble hoods over the pilot's head and the fuselage was basically straight from the nose to the tail. These models were designated P-47D-1RE to P-47D-22RE where the 1 and 22 indicated the sub-sub-type and RE indicates Farmingdale and P-47D-2RA to P-47D-23RA with RA indicating Evansville.

The new planes were used for a lot of roles. Its main role in Europe was to escort bombers all the way into Germany and back. Other roles were strafing and light bombing.

In June 1996, divers in Port Moresby were given some information by residents of the Vabukiri village, located on the south-eastern outskirts of the city. The information was that there was a wrecked World War II aircraft located a short distance off the shoreline to the south of the village. Divers soon located the wreck, a Republic P-47D Thunderbolt in relatively shallow water. It is an early model P-47D "razorback", but to date its serial number has not been identified as far as I know.

Figure 104 - The huge four-bladed prop of the Thunderbolt

The aircraft is located about 500 to 750 metres from the shore, to the east of Manubada Island (also called Local Island). It is on the south-western side of a reef (5-6 metres deep), lying in water 9 to 13 metres deep. The plane lies facing the reef.

After anchoring on the reef top, you descend and swim to the plane. You will come across the plane within a minute or two. The huge four-bladed prop stands almost square to the plane and sand, with each of the tips of the four blades bent back at right angles to show that the engine was running when the plane hit the water. Compare this to the Douglas A-20A Havoc located to the south-east at Loloata Island (I will bring this up later). This is about nine metres deep. The canopy is open, indicating possibly that the pilot survived the crash landing. This is highly likely as the plane is virtually fully intact, without much crash damage. The cockpit itself is interesting, with the seat, joystick, throttle controls and some gauges intact. Most gauges are missing, but from memory, some are there.

Have a look at the port wing. The four 0.5 inch machine guns have the classic barrel extensions for an aircraft, the outer gun's barrel barely extending out of the wing, then next 100 mm, the third 200 mm and the final gun perhaps 300 mm. A strange thing is that the flaps are not down, as would be normally expected of a plane that has crash landed, especially one that is relatively undamaged. The port wing tip is 8 metres.

Figure 105 - The four 0.5 inch port guns and the cockpit

There is a bit of growth on the plane, with some weed and hard and soft corals on the wings and props especially. The tail section is about 13 metres deep. You can see the intercooler exhaust doors clearly visible on both sides of the fuselage just in front of the tail. The starboard wing is about 12 metres at its tip. This wing is very interesting. If you look carefully, there are a number of holes in the wing. There are 8 or 10 small holes, most of which appear to be in two lines. These run from the rear section of the wing near the fuselage towards the middle of the leading edge of the wing. It appears to me that the plane

has been strafed by another aircraft, possibly this is what caused the plane to crash. I had been told that the plane had run out of fuel and this is why it crashed. However, the condition of the propeller blades shows that the engine was still running, quite strongly I feel, and the plane travelling quite fast as the blades are bent back at 90°C (when other planes I have seen that are known to have landed on water slowly have less angled blades - see the Havoc page). Perhaps the attack caused a sudden drop in fuel, but it must have been very sudden for the pilot to not use the flaps to slow the plane down.

I have searched the Internet for more details on Thunderbolts lost in the Port Moresby area in the war but so far I have not found this information. If anyone can provide more details, please e-mail me using link below.

After viewing my photographs of the wreck, I am of the view that the plane is probably a P-47D-22-RE or P-47D-23RA as the tailplanes on this model appear to be slight "deeper" and squarer (that is, not as triangle shaped) than other models.

This aircraft is located close to shore and as such, is prone to poor visibility as the sand around the small reef is quite fine and a little silty. Visibility was about four to five metres, water temperate about 27.5°.

Dives:

- 24 November 2003

References:

- *Allied Fighters of World War II* by Bill Gunstan - pages 142-5
- *Jane's All the World's Aeroplanes* - pages 254-5
- *American Warplanes of World War II* - pages 222-9
- *The Hamlyn Concise Guide to American Aircraft of World War II* by David Mondey - pages 216-22
- USAF Museum Web Site - http://www.wpafb.af.mil/museum/research/p47.htm
- Republic XP-47B Web Site page - http://home.att.net/~jbaugher1/p47_1.html
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Rio de Janeiro Maru

The *Rio de Janeiro Maru* was built in May 1930 by Mitsubishi Zosen Kaisha Ltd at Nagasaki in Japan for Osaka Syosen KK. She had four sisterships built from 1925 to 1929. The *Rio* was 140 metres (461.2 feet) long, with a width of 18.9 metres (62.0 feet)and a gross tonnage of 9,627 tons. Powered by two six cylinder Mitsubishi Sulzer diesel engines of 7,515hp each, the ship was capable of 17.6 knots.

The *Rio de Janeiro Maru* was a pasenger/cargo vessel (total of 1,140 passengers) used on the Japan, Hong Kong, Singapore, South Africa, South America, Panama canal, US West Coast and back to Japan. This took an average of 46 days. On 8 October 1940 she was requisitioned by the Imperial Japanese Navy and converted into a submarine tender as the navy shipyard in Sasebo. This included the addition of two artilley guns, anti-aircraft guns and a degaussing coils (more about this later). Up until 10 July 1942 the *Rio de Janeiro Maru* was based in Hiroshima and then operated to and from Chuuk Lagoon, but it is not known if she was based there. She may have been based in Penang, Malaysia.

On 27 July 1942 the *Rio de Janeiro Maru* was attacked by the submarine USS *Spearfish* 152 kilometres east of Camranh, Vietnam. The next day the Captain reported that she had suffered "medium" damage but was able to proceed to Hong Kong where it is believed that she was repaired. After 15 April 1943 (September 1943 in *WW II Wrecks...* - see references) she was used as a transport ship and apparently based in Chuuk Lagoon. The same reference says that the *Rio* underwent another conversion at this time in the Sasebo shipyard.

During *Operation Hailstone*, the *Rio de Janeiro Maru* appears to have been hit during the first attacks of 17 February 1944, possibly by planes from USS *Yorktown* and USS *Bunker Hill*. It is likely that she sank overnight.

Today, the *Rio de Janeiro Maru* sits at a maximum depth of about 34 metres, with the ship lying on its starboard side. It is located on the eastern side of Uman Island, perhaps a few hundred metres offshore. As you swim down onto the wreck it is quickly obvious that this is a huge wreck, the fourth biggest in Chuuk Lagoon in terms of tonnage. Dive boats generally anchor on the bridge area.

One of the first things you see is the degaussing coils which were installed when she was taken over by the Navy. These coils, huge steel cables which are wrapped around the ship's hull just below (I think) the waterline, were an important part of any ship used in a theatre of war.

The huge expanse of the port hull (10 metres) is covered in small patches of hard and soft corals. The growth is not as prolific as other wrecks in Chuuk.

There are numerous portholes, mostly still in place. After reaching the ship, a dive can begin by dropping over the side and moving towards the bow of the ship. From the bow you see the anchor chain running out to the anchor which apparently lies about 50 metres in front of the wreck. There is a large gun mounted on the bow forecastle and there is considerable damage which confirms that ammunition exploded inside the ship and blew holes in the hull as it went up. On the top of the hull at the bow it looks as though a giant has repeatedly punched the inside of the hull. The plates are bubbled everywhere and there are also a large number of holes where shells exploded from inside hold one to the outside. After entering the hold you can see that another large explosion occurred in the front hold causing considerable damage to the 'tween decks, the starboard hull and other bits of the vessel. Some remains of the artillery shells which caused the explosion can be seen. You can exit out the starboard side and swim under the ship back to the area of the masts and kingposts.

The second hold contains two large gun barrels and a couple of cylindrical shaped objects, probably gun turrets and other parts of large guns. There is also coal and bags of cement in here.

Behind the second hold is the bridge. I have not closely examined it but it is said to be quite interesting. From outside, there is more damage behind the funnel on the starboard (bottom)

hull from a direct American hit. This is probably the hit that caused the ship to sink. As you swim aft you can go under the two masts (there are no kingposts).

Hold four contains another gun base which lies from the lower section of the hold over the 'tween deck and almost reaches outside. There is more coal in this hold. You can swim into the next hold via the 'tween deck.

The rear hold (five) has thousands of beer bottles. The bottles are packed in 20s in wooden boxes deep inside the hold. Many have spilled out of the boxes (and therefore the deeper part of the hold) onto the 'tween deck. There is also a lot of timber, perhaps these are the remains of bottle crates.

As is the norm, there is another large gun on the stern and some shells. Under the stern the single rudder and the large twin four-bladed props are clearly visible. The depth on the shallowest prop is about 24 metres.

This is a wreck which needs many dives to fully appreciate it. I would recommend a minimum of two dives here if you get the chance.

Dives:

- 21 February 1994
- 7 November 1997
- 17 November 1997

References:

- *Hailstorm Over Truk Lagoon* by Klaus Lindemann
- *WWII Wrecks of the Kwajalein and Truk Lagoons* by Dan E. Bailey
- *Warships of the Imperial Japanese Navy, 1869 - 1945* by Hansgeorg Jentschura et al
- *Lloyds Register* 1931-32, 1945-46

San Francisco Maru

This is **THE** wreck of Chuuk Lagoon. The *San Francisco Maru* was a passenger/cargo vessel built in March 1919 by Kawasaki Dockyard Co Ltd in Kobe, Japan for Kawaski Dockyard Co Ltd. Launched on 1 March 1919 and placed into service on 14 March 1919, the new ship was 5,831 tons gross, 117 metres (385.0 feet) long and 15.5 metres (51.0 feet) wide. The *San Francisco Maru* was powered by a single compound coal powered (two boilers) steam engine built by Kawasaki producing 440 NHP. It had a crew of 40. It is said that this ship was a predecessor to the US Liberty ships but as they were 2,000 tons larger, diesel powered and built in a different country, I find this hard to believe.

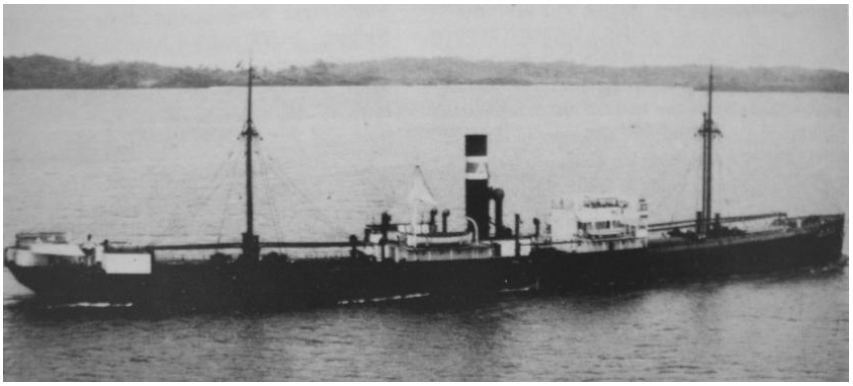

Figure 106 - *San Francisco Maru*

Sometime between 1921 and 1922 the ship was sold to Kohusai Kisen Kabushiki Kaiska and in January 1923 she was converted to an oil powered steamship. In about 1937 she was again sold, this time to Yamashita Kisen KK but all through this, her port of registry remained Kobe. It is alleged that when the war started the *San Francisco* was in semi-retirement.

During the war the ship was used by the Yokosuka Navy Transportation Department to ferry equipment and supplies. It arrived in Chuuk on 5 February 1944 as part of a convoy but had remained there when the convoy sailed on the 12th. On 16 and 17 February it was attacked by US Navy planes and it was sunk on the 17th by planes from the USS *Essex*. It was hit by six 500lb bombs and immediately caught fire and sank stern first.

The wreck was discovered in 1972 by Sam Redford. Today the *San Francisco Maru* sits on a sandy bottom with the bottom of the stern at 57 metres (not 70 as reported in some books). The bow end is a bit deeper, say 60 metres and the sand on the port side is about 63 metres. This is not a dive for the inexperienced.

The dive boats normally anchor on the bridge area, although they sometimes get a hold behind the main superstructure. The first thing you see when descending is either the front mast which reaches to 30 metres or the rear kingpost. As you pass them you glimpse the outline of the ship, dropping deeper into the clear blue warm water until you see the bridge.

On your first dive here you should do the bow section and on a subsequent dive the stern section. The following is a description of the two dives.

Dive One

From the bridge go straight to the port side and if the visibility is good enough (it usually is 30 metres or more) you should see a small steamroller lying on the sand. Drop down to it (63 metres) and you will see that it has equal size front and rear rollers (obviously powered by an internal combustion engine not a steam engine). Spend only a minute looking at it before starting to ascend towards the deck area in front of the bridge. As you come over the railing the depth is 50 metres. The first thing you see is a small tank on the port side right in front of the bridge. It is facing across the ship (at least it was originally) but now it is partially over the deck railing. There are two more tanks on the starboard side. The tanks are Japanese Mitsubishi Type-95 "Ha-Go" light tanks. These carried a crew of three. It had ½ inch armour and weighed 7.5 tons. Armament was one 10 mm main gun and two 7 mm machine guns. It was powered by a six cylinder air cooled diesel engine which could propel

Figure 107 - Two tanks on the starboard side of the ship

the tank up to 30 mph. The rear one is possibly partly over the rail as well and both lie facing out. Inboard of the two tanks is a truck. This is a ute (pickup) and seems to have cargo in its tray. It lies partly over the front tank. It is highly likely that the steamroller was carried in front of the tank on the port side and that it fell off the deck as the ship sank, landing on the sand. It is also probable that another truck was carried inboard of these two items (there is a truck on the sand off the port side of the rear section of the wreck, more about this later).

In hold two (the one between the tanks) there are two small fuel tankers, the fuel tanks standing out prominently. You can sit in the driver's seat of one and have your photograph taken. Between the trucks there are two small tractors (when I first dived this wreck I thought they looked like golf carts!!). There appears to be more tractors underneath the tankers and tractors. Behind the port tanker there are many triangular objects with a small wheel at the pointy-most end. These appear to be the rear undercarriage assemblies of aircraft, probably bombers. There are more objects in this hold but time does not permit further investigation. The depth in the hold is about 55 metres.

Towards the bow you go, into the forward hold one. Hundreds of hemispherical beach mines together with the detonator horns packed separately but nearby. You may notice that it doesn't look like photographs you have seen. What has occurred is that many have been taken (stolen by dynamite fishers for the powder). This happened in about mid-1991. This hold also contains crates of empty shell casings (in pairs) and hundreds of Bakelite boxes of cordite (or a similar explosive). The cordite looks like spaghetti. There also quite a few large (200kg??) aircraft bombs packed individually in wooden crates.

There is a very nice bow gun worth looking at (and photographing). The chain locker on the bow but is is quite empty (bottom 52 metres and very dark).

A quick swim back to the bridge and if time permits, a look through the top of the bridge.

Actual bottom time on this dive varies between 12 and 17 minutes depending on your air consumption and what decompression you want to do. For 17 minutes you will require 1 @ 9 metres, 5 @ 6 metres and 13 @ 3 metres. The water temperature is a constant 28 to 29C, visibility normally 30

Figure 108 - The steamroller on the sand on the prot side

metres and always a fantastic dive. A must do dive for the more experienced diver.

Dive Two

The second dive on the *San Francisco Maru* is the back half of the ship. From the usual anchoring place on the bridge, drop straight through the skylights into the engine room. This exits out to hold four which has a hole on the 'tween deck on the port side towards the front. I did not examine this carefully, but it was caused by an explosion from inside the ship. It is a hole about one and a half metres across. The beams on the 'tween deck have two trucks on them. These trucks are facing the stern and the rear axle has fallen away from the port side truck. In the 'tween decks there are a lot of ammunition boxes containing bullets and shells. Most of the shells are packed in smaller boxes of four that contain the heads.

Hold five has many torpedoes, mainly bodies and engines. I did not see any warheads. There are hundreds of depth charges and 200 litre drums in this hold, mostly in the 'tween decks. There is a considerable amount of damage between hold five and the poop deck. The back of the ship is broken here. There is no stern gun and dropping over the deck you can see the prop just showing above the sand. The depth here is about 57 metres. The rear deck is about 50 metres and the bottom of the holds 55 metres.

As you return to the bridge from the stern, travel along the port rail and look out to your left. If the visibility is very good, you will see a section of the derrick from the rear mast on the sand. Coming a bit forward you will see another exciting find. Adjacent to hold four there is a fully intact truck on the sand about 20 metres or so from the wreck. The truck faces away from the wreck. It is likely that the truck came from the port side in front of the bridge. This is same location where the steamroller, which lies a bit further forward, came from. This makes sense as it would balance out the two tanks and one truck on the starboard side.

If you have time you could drop down and look at the truck or continue forward and spend a bit more time looking at the bridge area.

As I have indicated, this is, without doubt, the best wreck dive in Chuuk Lagoon and among the top two or three dives anywhere in the world. The visibility here is normally excellent. On my four dives here I have had from 30 to 40 metres visibility. A must do dive for the very experienced diver.

Dives:

- 17 November 1991
- 20 February 1994
- 7 November 1997
- 15 November 1997

References:

- *Hailstorm over Truk Lagoon* by Klaus Lindemann
- *WII Wrecks of the Kwajalein and Truk Lagoon* by Dan E. Bailey
- *26 Principal Shipwrecks of Truk Lagoon* by Capt. Lance Higgs
- *Warships of the Imperial Japanese Navy, 1869 - 1945* by Hansgeorg Jentschura et al
- *Lloyds Register* 1919-20, 1921-22 to 1925-26, 1936-37 to 1938-39, 1944-45, 1945-46

Sankisan Maru

It is surprising that one of the best dives in Chuuk Lagoon is only half a wreck. The *Sankisan Maru* was so badly damaged when it sank that only the section in front of the bridge area remains intact.

Some confusion exists as to the history of the *Sankisan Maru*. *Hailstorm over Truk Lagoon* by Klaus Lindemann claims that it was launched on 29 January 1942 at the Harima Dockyard, Japan for Kaburagi Kisen. It is listed as displacing 4776 tons and 112 metres long and 15.8 metres wide. Lindemann claims that on 7 October 1943 it was requisitioned by the Japanese Navy for cargo carrying purposes. There is no mention of the ship in any *Lloyds Register*.

However, *WWII Wrecks of the Kwajalein and Truk Lagoon* by Dan E. Bailey states that the ship was launched as the SS *Red Hook* in 1920 at the D.D. Todd & Construction Corp. in Tacoma, Washington, USA. This book gives the ship's dimensions as 4752 tons, 380.3 feet long and 53.1 feet wide. According to this version, the ship went through the names *Commercial Traveler* [sic], *Nelson Traveler* [sic] (1936), *Point Estero*, *Estero* (1939) and finally *Yamakisan Maru* (internal to Japan). It is claimed that the ship was captured by the Japanese in 1942. This ship is mentioned in various *Lloyds Register* but I could not find the final Japanese name.

Whatever is the case, the *Sankisan Maru* was used for carrying munitions, including depth charges, artillery shells, beach mines and rifle/machine gun rounds. Despite the damage to the ship, it is certainly a great dive and shows fully the horrors of war.

Again, conflicting stories about the final moments of the ship are given in the two books (even in the same book), but I prefer the version in Lindemann's book for the following reason. A photo on page 173 in Bailey's book allegedly shows the *Sankisan* exploding from a torpedo hit on the starboard side in front of the bridge. However, Lindemann's book says this is the *Amagisan Maru* and a close examination of the exploding ship and earlier photos of the *Sankisan* and *Amagisan Maru*s show that the exploding vessel is really the latter (compare masts and kingposts). Also the *Sankisan Maru* does not appear to have any torpedo damage on the starboard side in front of the bridge.

It is possible that on 17 February 1944 in Strike 3D, four Curtiss SB2C *Helldivers* from USS *Bunker Hill* attacked the ships anchored west of Uman Island. One of these ships was the *Sankisan Maru* and it was reputedly hit by one 1000lb bomb forward. However, there is no obvious damage in this area. It is stated that on the second day of *Operation Hailstorm*, 18 February 1944 (the correct dates for the attacks are 17 and 18 February 1944, some books give the American time dates of 16 and 17 February), the *Sankisan Maru* was attacked in Strike 3A by five *Helldivers* and at 0600 it was hit by planes from the USS *Bunker Hill*. A hit aft of amidships was recorded, with a subsequent large fire. However, no explosion was reported.

Nowadays, the *Sankisan* sits on a sandy bottom of 24 metres about 500 metres off the southern end of Uman Island. While the front half of the ship is very well preserved, the back half is totally destroyed, with the hull, deck, machinery and superstructure mangled beyond recognition. It is very obvious that the fire started by the single hit spread into the rear holds which held ordinances and caused a series of massive explosions, probably centred on hold five, which ripped the ship apart.

Today your dive boat anchors on the forward mast, which is about a metre below the surface. A dive starts by going to the bow and swimming out past it to give you a good perspective of the ship as it "steams" towards you. Examine the port anchor and then the bow gun. You can then go into the forecastle under the bow and drop down into the chain locker. Back to hold one and you will see millions of rounds (bullets). These are in wooden boxes, in clips and loose. Originally this hold also contained depth charges but they were removed in 1974 for safety reasons. Adjacent to the hold you will see a number of trucks on

the deck. There are two trucks on the port side and another on the starboard side just to the rear of the hold.

Hold two contains a fabulous amount of material. There are five trucks in the hold and on the between deck as well as at least three radial engines (probably Zero engines) and engine cowlings. There are also a number of aircraft undercarriages (again, Zeros), a large compressor and parts of plane fuselages.

It is also reported that at least 30 glider bodies are also in this hold, but I did not identify them. There are also some unidentified objects that resemble folded ponchos (but they are not).

Hold three can be entered from hold two or above. The only interesting thing in here is a huge pile of coal and the damage area. Journeying further towards the rear you can find the remains of the engine room (you must look under every bit of twisted metal) as well as the propeller shaft. It is reported that the prop and a small section of the stern remain about 100 metres to the rear of the rest of the ship.

One of the best things about the *Sankisan Maru* is the coral and other marine growth on the wreck. Nearly every piece of the vessel is covered in soft and hard corals. Great photo opportunities exist on the kingpost, mast, the derricks and the anchor chains.

The depth of the wreck goes from 24 metres on the sand (not much to see there), 18 metres for the deck to 24 metres around the broken up midships. The ship extends up to almost the surface. A dive of 60 minutes is easily achieved using a computer.

In summary, the *Sankisan Maru* is one of the best dives in Chuuk Lagoon, with great marine life, lots of artefacts and interesting places to explore. A "must do" dive on your visit to Chuuk.

Dives:

- 19 November 1994
- 22 November 1994
- 10 November 1997

References:

- *Hailstorm over Truk Lagoon* by Klaus Lindeman
- *WII Wrecks of the Kwajalein and Truk Lagoon* by Dan E. Bailey

USS *Saratoga*

It was 8.35 am on 25 July 1946 and the beginning of the end of the USS *Saratoga* came very dramatically. The explosion was centred 27 metres below the water and 300 metres or so away from the *Saratoga*. Less than a sixth of a second after the explosion, a pressure wave of 5,900 psi hit the hull of the ship. Eleven seconds after the bomb exploded, a wave estimated at 94 feet high crashed into the starboard bow corner of the 888 feet long aircraft carrier. So powerful was the wave, it lifted a large stockless Navy anchor 54 metres from the seabed and another 16 metres out of the sea so that it crashed down onto the ship causing damage to the flight deck. The same wave lifted the bow of the 43,500 ton vessel 42 feet into the air. Water poured over the aircraft carrier's deck, washing away five aircraft, a number of vehicles (including two tanks) and some other equipment. The wave from the explosion also caused the ship's funnel and foremast to collapse while the pressure wave made a huge 15 cm indentation in the starboard side of the hull (for almost half its length) as well as cracking the hull in the same area. The flight deck collapsed from the stern more than 60 metres towards the bow under the weight of water that had flowed across the ship.

The combined effort of these two waves and another two tsunami sized waves pushed the *Saratoga* 500 metres away from the origin of the explosion before the wind blew it back 300 metres. The *Saratoga* started to sink, water entering its 1000 airtight compartments via the large crack on its starboard side and hundreds of other smaller pressure fissures. By 3.45 pm the sea was lapping at the stern flight deck. At about 4.30 pm, eight hours after the explosion, the *Saratoga* sank stern first, its bow slowly disappearing from view. The Saratoga was sitting upright on the coral/sandy bottom, 54 metres below the now calm waters of the lagoon.

This was not, of course, a normal type of bomb that exploded that beautiful summer's day in the North Pacific Ocean. This was Baker, nicknamed "*Helen of Bikini*", the world's fifth atomic bomb (the first was on 16 July 1945 at Alamagordo in the New Mexico desert, the second was over Hiroshima on 6 August 1945, the third was over Nagasaki on 9 August 1945 and the fourth was at Bikini Atoll on 1 July 1946). This latest explosion was also at Bikini Atoll Lagoon. The bomb was of the same type as that dropped on Nagasaki. Its yield was later estimated as being 20.3 kilotons and it lifted 2,000,000 tons of water (as water and steam) and 2,000,000 tons of lagoon bottom into the classic mushroom column. It also dug a hole eight metres deep in the lagoon under the bomb's detonation point.

The construction of the USS *Saratoga* was originally started on 25 September 1920 as a "Lexington" class heavy cruiser in the Camden, New Jersey shipyard of the New York Shipbuilding Company. On 1 July 1922 the US Congress approved the conversion of the uncompleted hull into an aircraft carrier. On 7 April 1925 the *Saratoga* was launched into the Delaware River as the heaviest warship ever launched. On 16 November 1927 the *Saratoga* was commissioned, the fastest and largest aircraft carrier in the world.

Before World War II, the *Saratoga* was engaged with her sistership USS *Lexington* in developing the new role of the aircraft carrier. When Japan attacked Pearl Harbor, the *Saratoga* was in California entering San Diego Harbour after a refit at Puget Sound, Washington. Within 24 hours it was on service in the Pacific. The most famous US Navy officer of the War, Fleet Admiral William F. "Bull" Halsey commanded the *Saratoga* for two years and was Rear Admiral on her for another two years. During the war, the *Saratoga* served in the Battle of Guadalcanal and attacked Rabaul, Sumatra, Iwo Jima and Java.

The *Saratoga* was torpedoed twice and on 21 February 1945 she was hit by five kamikazes killing 123 men, injuring 192 and tearing a huge hole in the ship's side. After repairs, the *Saratoga* was steaming towards Japan when the war ended. From November 1945 to January 1946 she carried 29,204 servicemen home from the Pacific theatre of war.

On 22 January 1946 the *Saratoga* was attached to Task Unit 1.2.2 for Operation Crossroads. On 23 May she left Pearl Harbor for the last time and arrived at Bikini Atoll on 31 May 1946. During "Able", the first atomic test at Bikini, the *Saratoga* was moored over 2,000

metres from the detonation point. The enormous heat and radiation from the bomb caused the wooden flight deck to catch fire. This fire was extinguished.

Capable of almost 35 knots, the *Saratoga*'s flight deck is 888 feet long, the waterline length is 830 feet and a beam of 105 feet. The flight deck is about 75 feet above the keel.

Today, the *Saratoga* lies at a maximum depth of 54 metres, with the flight deck at 27 metres and the top of the bridge area about 12 metres below the surface. Fully intact, the *Saratoga* is the world's biggest shipwreck that could be dived using normal scuba equipment by virtually all experienced divers. It is one of at least twenty wrecks that sank in the Bikini Atoll Lagoon, at least eight of which are well worth diving.

While I have not yet been able to visit Bikini Atoll, hopefully I will one day.

References:

- *The Archeology of the Atomic Bomb: A Submerged Cultural Resources Assessment of the Sunken Fleet of Operation Crossroads at Bikini and Kwajalein Atoll Lagoons* by James P. Delgado, Daniel J. Lenihan and Larry E. Murphy - US Parks Service
- *Ghost Fleet - The Sunken Ships of Bikini Atoll* by James P. Delgado

MV *Semle Federesen*

On my trip to Vanuatu in late 1995, I dived the wreck of the *Semle Federesen* in Port Vila with six other members of our group. The *Semle* was an island trader which had a fantastic history all over the world.

In 1949, the shipbuilding company Navals de Caen of Blaineville sur Orne (Calvados, Normandie) which is (I think) near Le Harve, France, built a side fishing trawler named *Le Touquet* for Pollet Freres and Cri of Boulogne sur mer (on the sea), France. The new ship was 43.5 metres long (although I have also been advised that it was 39.6), 7.5 metres wide and it displaced 297 tons gross. Its registration number was B2506. It had two four cylinder diesel engines (built, I think, by Christiansen & Mayer) driving twin props which were changed to twin five cylinder engines at some time. In July 1958 the *Le Touquet* was sold to Jules Lefort, Albert Massif, Gaston Tocque and Philippe Lemesle who (I think, owned) Societie D'Armement des Saleurs Fecampois of Fecamp, France. Its registration was now F1161.

Figure 109 - *Le Torquet* in the mid to late 1950s

This was a short-lived ownership as in June 1959 it was sold to Milford Fisheries Pty Ltd from Milford Haven in Wales. It was obviously used as a fishing vessel but over the next few years it was modified a fair bit. The first was that the twin engines were removed in 1960 and replaced by an eight cylinder diesel engine (this was removed, reconditioned and refitted in 1968). The ship was converted to a single prop at the same time. In 1962 it under went even more changes. First, the *Le Touquet* was sold to Fosnovag Havfiske of Alesund, Norway (Alesund is a decent size town in the fjords of Norway near where I dived in October 2000 - Fosnovaq [correct spelling Fosnavaq] is a smaller town on the island next to where I dived). At the same time it was renamed *Fosnavaq* but more importantly, it was lengthened and modified as a general cargo motorship. An almost five metre section was added to the vessel bringing the length to 48.2 metres and increasing the displacement to 405 tons. For the next 19 years or so the *Fosnavaq* traded the Nordic countries.

In 1981 the vessel was renamed MV *Semle Federesen* and may have been sold then to the Baltic Schooner Association Ltd of Georgetown in the Cayman Islands. However, *Lloyds Register* shows the vessel as being still owned by Fosnovag Havfiske until 1983-84. Presumably she traded around the Caribbean for the next few years. In about 1984 the ship was sold to Vanua Navigation S.r.I. of Port Vila, Vanuatu but it was appears to have been unable to meet survey as in 1985 it was scuttled as a dive site a few kilometres outside Port Vila Harbour in about 30 metres of water.

Figure 110 - The holds and bow of the *Semle Federesen*

As I have indicated above, the *Semle Federesen*, was originally sunk in relatively shallow water. However, the MV *Semle Federesen* was moved to deeper water by the huge seas whipped up during Cyclone *Uma* in 1987 (an enormous storm as I arrived in Port Vila a few days after the storm hit and experienced the damage first hand).

The *Semle Federesen* now sits upright but with a bow down attitude. The prop is in about 40 metres (the stern is in about 35 metres) of water and the bow in more than 55 metres.

I dived the wreck with Nautilus Scuba. The trip out to the wreck was very relaxing in their largest and slowest boat. The site is moored and we quickly descended down the line to the wreck. The visibility was very good, at least 25 metres, so I swam off to the port side of the wreck (41 metres) from where I could see the entire wreck. As I videoed the scene, my buddies had reached the deck and started their examination. I joined them and examined the bridge area (30 to 33 metres) before we dropped into the second hold where I reached 45 metres. The holds are quite large and extend down to almost 55 metres. We only spent a minute or so in this area before entering the engine room from the hold.

The engine room is very spacious area, unlike the engine room of the similarly sized MV *Henri Bonneaud* at Espiritu Santo which is very tight and cramped. We swam around, looking at everything to be seen and then exited through a hatch into the lower bridge area before moving outside onto the deck. While I swam out over the stern to video the scene from this direction, the others examined a different section of the rear end of the ship. Soon our time was running low and a last minute videoing of a large firefish on the top deck saw us start our ascent after a 16 minute bottom time. We only had a three minute deco to do, but since this was the last of our 17 dives in Vanuatu, we decided to do an extended safety stop of about 25 minutes for obvious reasons.

Figure 111 – The bridge and stern of the *Semle Federesen*

All in all, this was an excellent dive. The *Semle Federesen* is well worth doing if you ever visit Port Vila. Nautilus Scuba's service was exceptional, if somewhat over protective and seemingly aimed at the lowest common denominator. However, even though they had briefed us on the maximum depths and times we were permitted to spend on the various wrecks we dived with them, they did not take exception to us exceeding those margins. Even inexperienced divers should have no problem with this wreck if they are with more experienced divers. As I indicated above, the water visibility was excellent and must have been about 30 to 35 metres.

References:

- *Lloyds Register* 1986-87, 1985-86, 1983-84, 1984-85, 1964-65, 1963-64 to 1960-61, 1959-60, 1950-51
- E-mail and photos dated 11 July 2003 from Jack Daussy (jack.daussy@wanadoo.fr) of Fecamp, France

Sepik Reliance

Another ship I have dived is a 40 metre long tug, *Sepik Reliance*. I have not yet been able to find any information about this vessel from the normal sources (eg *Lloyds Register*). This scuttled wreck is located between Pig (Tab) Island and Massus Island at Madang, Papua New Guinea. This is a deep dive, with the stern being about 43 metres and the section under the bow 56 metres. You can reach 60 metres easily while dropping to the seafloor to get a great perspective of the wreck.

Like the other wrecks, the *Reliance* is intact, and presents a sensational sight as you descend from the reef where the dive boat has anchored. The visibility is excellent, in the order of 40 metres or so, and the ocean surface clearly visible from 60 metres.

From the stern, you can swim straight to the bow and look at the silhouette of the tug as the bow sits well clear of the bottom, balanced by the heavier stern. The bridge and cabin area can be examined and the engine room entered. The engine is missing, but the multi-directional prop is prominent under the stern.

I did 17 minutes on the wreck and had to do one minute at nine metres, four at six metres and ten at three minutes. This is easily done as you swim back to the shallow reef and spend your time watching the small reef fish. An excellent deep dive for the experienced diver.

The minimum water temperature on these dives was 28°C, although in the shallows it was more like 30°C or more. The visibility ranged from 15 to 40 metres (we experienced a night of extreme rain and worst visibility was one and two days later).

Shinkoku Maru

The second largest wreck in Chuuk Lagoon is the 10,020 ton oil tanker *Shinkoku Maru*. Sitting upright on the sandy bottom, the *Shinkoku* is a wreck that can be dived by anyone, its depth ranges from 11 metres on the bridge down to 39 metres near the prop. Being so large, this is one wreck that can be dived many times. I would suggest that a minimum of two dives should be made to adequately see the vessel.

The *Shinkoku Maru* was built in 1940 by Kawashi Jyuko Co. of Kobe for Kobe Sanbashi K.K. (Kobe Pier Co. Ltd). It was 150 metres long and 20 metres wide and was requisitioned by the Japanese Navy in 1941, four weeks before Pearl Harbor. The *Shinkoku Maru* was one of eight oilers that refuelled the Japanese fleet that attacked Pearl Harbor. There is no mention of the ship in any *Lloyds Register*.

The books on the wrecks of Chuuk Lagoon report the following. On 17 August 1942 she was torpedoed by a US submarine but only received minor damage. The USS *Peto* torpedoed the *Shinkoku* on 7 July 1943 but it was repaired at Singapore and was operational again by 15 August.

It is also possible that the *Shinkoku Maru* was attacked in Singapore Harbour by Australian commandos who used the famous vessel *Krait* to clandestinely enter the harbour and attack Japanese ships. It is reported that a vessel resembling the *Shinkoku Maru* was attacked by placing three limpet mines on the prop shaft, three on the port side of the engine room and three on the starboard side of the engine room. However, there were a large number of *Shinkoku* class oil tankers built and it may have been one of them that was attacked. In November 1997 when I visited Chuuk Lagoon I tested this theory by checking around the port starboard sides of the engine room. Despite the heavy coral growth you can see the plates of the hull. There does not appear to be any obvious damage that may have been repaired, especially as an interim measure. It would therefore appear unlikely that the *Shinkoku Maru* was the vessel attacked in Singapore by the Australian commandos from the *Krait*.

The *Shinkoku* arrived in Chuuk prior to the strikes of 17-18 February 1944 and is believed to have been hit amidships by one bomb dropped by the Douglas SBD *Dauntless* dive bombers of the carrier USS *Yorktown* on 17 February 1944. The next morning, six torpedoes were fired at the ship by planes from the USS *Bunker Hill* but they all missed. Later the same day, Grumman TBF *Avenger*s from an unknown aircraft carrier sunk the *Shinkoku Maru* in a torpedo attack that opened a large hole on the port side and flooded the engine room.

However, in an email to me, the author of *Hailstorm over Truk Lagoon*, Klaus Lindemann , advised me that since he wrote his book, some Japanese veterans from the *Shinkoku Maru* gave him a vivid description of the attack on the boat. They told him that it was during the night when they were hit, in the small hours of the second day. This makes it certain that the *Avengers* of the USS *Enterprise* were the ones who dropped a close miss on the starboard side near the engine room and opened the hull. The damage is consistent with a bomb near miss as torpedo damages look different (they are generally much larger).

The ships masts originally stuck up out of the water but they were blown off at some time. The ship was "discovered" by divers in December 1971.

Some of the more interesting parts to see of the *Shinkoku Maru* are the bridge area, the crew accommodation areas, the engine room and the engineering areas behind the bridge as well as the large deck.

The dive boats generally anchor on the bridge providing an excellent central point from which to begin your explorations. On the first dive here (if you are experienced), swim to the rear and examine the stern gun. Descend over the stern to see the propeller and rudder. Once you have examined them, swim along the port side the 20 metres or so to the torpedo hole. Enter the hole and you will now be in the engine room. Have a quick look around and

ascend to the upper levels of the engine room and exit throught the doorway into the rear compartments. You will see more interesting things (baths, toilets) and return onto the deck.

Start heading towards the bow. Along the way, keep an eye out out for human remains and other artefacts. Continue on towards the bridge, zigzagging across the deck as you go. Behind the bridge on the port side is a small hut like object that gives access to the engineering areas. There are also a number of other access holes nearby. Make sure someone stays on the deck as you and your buddy enter the hole. Down you drop, deep inside the bowels of the ship, past ladders and catwalks until you reach the bottom at 33 metres (below the deepest part outside the ship here). There are huge pressure gauges and valves all over the place, but be careful as there is a thick layer of silt on the bottom. Return to the deck.

Explore the area below the bridge. Here there is a lot to see, including the sick room (with operating table), urinals, toilets, baths, sinks and galley (together with heaps of cooking utensils). Ascending to the top of the bridge you will see three telegraphs, a compass and on the top, some more artefacts, including lights, first aid kits, pots, pans and other items. This is about all you will see on one dive. I am, of course, assuming that you have been using a computer, otherwise you would certainly be out of bottom time by now.

On your second dive on the *Shinkoku Maru* (it is well worth two or more dives), head towards the bow and drop to the sea-bed. Both anchor chains hang down and run away from the vessel. Massive amounts of marine growth, including soft and hard corals, camoflage the chains and hull. Returning to the bow (12 metres), examine the bow gun before entering the forecastle via either the port or starboard doors. There are ropes and refuelling pipes in here. Exit out the other door.

Back towards the bridge you will see some hatches. In one of these you will find the remains of more oil transfer pipes. Below this there is a wooden structure and boxes (I am not sure of their purpose) and at the bottom an oily, mucky slime lies. Finish your dive examining the bridge again. The main deck goes from 18 metres near the bow to 24 metres near the stern. Dive times of around 50 minutes are possible using a computer.

The *Shinkoku Maru* is still leaking oil over 50 years after its sinking. The oil can be seen as a rainbow sheen while anchoring, but is even easier to notice from its smell. While doing your deco or safety stops, you will see small mushroom shaped amber objects slowing coming up towards you. These are small droplets of oil ascending from the wreck. Luckily, the oil is very light and evaporates within minutes of hitting the surface of the water.

In summary, the *Shinkoku Maru* is another great wreck, one of the best in Chuuk Lagoon.

Dives:

- 16 February 1991
- 17 February 1991
- 18 November 1994
- 20 November 1994
- 9 November 1997

References:

- Lloyds Register
- *WWII Wrecks of the Kwajalein and Truk Lagoons* by Dan E. Bailey
- *Hailstorm over Truk Lagoon* by Klaus Lindemann
- Personal Email Comments by Klaus Lindemann to Michael McFadyen dated 16 February 1997
- Transpacific Steam by E. Mowbray Tate

- Personal conversation with researcher Peter Cundall, 22 September 1997
- *Warships of the Imperial Japanese Navy, 1869 - 1945* by Hansgeorg Jentschura et al

Short Sandringham S25 Mk 4

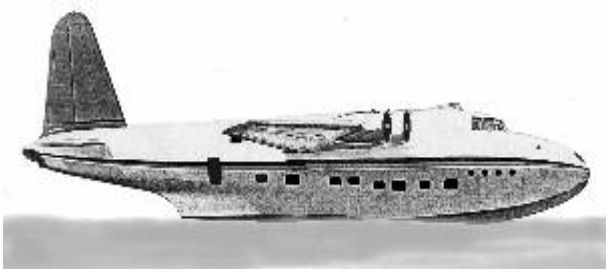

Figure 112 - A drawing of the Qantas Flying Boat as it looks today

Like most Australians, I am proud of our own airline, Qantas. I have flown numerous times with them and have always been impressed with the service provided and the quality of the flying by the pilots. It therefore came as a great surprise to discover on a trip to Vanuatu four years ago that a Qantas plane had been wrecked there. Even more surprising was the fact that the plane was still there, sitting upright almost completely intact 41 metres below the surface of the Port Vila Harbour. So what was the story behind this plane?

In the late 1940s Qantas flew to numerous Pacific Islands, far more than it does today. It decided to expand its world-wide operations and therefore needed to increase its fleet of planes. Because of the nature of the Pacific islands that it served, Qantas looked to purchase additional flying boats to augment its traditional flying boat fleet.

However, there was still a shortage of new planes after the war and it made the decision to purchase used machines from other airlines. After a lot of searching, it purchased five Short Sandringham S25 Flying Boats.

In 1934, the British Air Ministry asked Short Brothers (Rochester and Bedford) Ltd, the oldest airplane manufacturers in the World, to design a long range four engined flying boat. At the same time, Imperial Airways (later to become British Overseas Airways Corporation - BOAC and then British Airways), in conjunction with Qantas Empire Airways, asked Shorts for a flying boat capable of carrying 24 passengers from London to Sydney in seven days. Shorts came up with the S.23 "Empire" "C" Class flying boat, of which 42 were built. The military version, designated S.25 "Sunderland", was first flown in 1937. It looked quite different to the civilian version, with a totally different cockpit and nose area. A total of 749 Sunderlands (Mk I, II, III and V) were produced by Shorts.

During December 1942, six Sunderland Mk IIIs were modified to civilian use and after the war another 18 modified. These became known as "*Hythes*". One of these was then further modified in June 1946 and became the first Short Sandringham Mk I.

After the war there was an excess of war-surplus military aircraft and between 1946 and 1948 Short Brothers, the original manufacturers of the Sunderland, converted another 26 (giving a total of 27) Sunderland Mk V aircraft into passenger carrying Sandringhams at their Belfast plant. They were sold to various airlines throughout the world, with BOAC purchasing a total of 13 aircraft, exactly half the total production. Some new Sandringham S25 MkVs may also have been produced. Of interest is that the Belfast plant where the conversions took place (and indeed where some may have been originally produced) was owned by Short and Harland, Ltd. This company was set up in June 1936 by Short Brothers (Rochester and Bedford) Ltd and Harland and Wolff Ltd (manufacturers of the RMS *Titanic* and, of more relevance to the Qantas plane, the *Star of Russia*, a ship now found at the bottom of Port Vila harbour) to manufacture Shorts aircraft.

The Short Sandringham was produced in seven marks, with each having a different internal layout. Some had sleeping quarters, dining room or bar as well as the seating compartment. Apart from the Mk1, the mechanical components were basically identical in all the Sandringhams. Powered by four 1200hp Pratt and Whitney R-1830-92D Twin Wasp 14 cylinder two row radial engines, the Sandringham had a cruising speed of 283 km/h and a range of 3,943 kilometres. The planes had a wingspan of 34.4 metres, a length of 26 metres

and a height of 10 metres. The modified plane had a tare weight of 15,505b kilograms and a maximum take-off weight of 25,425 kilograms.

Between 13 April 1950 and December 1951, Qantas purchased five Sandringham Mk 4 and Mk 5 aircraft, registered VH-EBV to EBZ. On 18 April 1950, Qantas's second Sandringham S25, construction number SH30C, was acquired and registered as VH-EBW. This plane was originally a Sunderland Mk V and after conversion into a Sandringham Mk 4, it was sold to Tasman Empire Airways Ltd (TEAL - the forerunner of Air New Zealand) in 1946. This plane was registered as ZK-AMB and named "*Tasman*". The "new" plane was one of four Mk4s purchased and they were called the *Dominion* class. Eventually, all four planes would end up in Australia with Qantas and Ansett Airlines.

On 18 April 1950 as indicated above (or in June 1950 as I have read elsewhere) , Qantas Empire Airways, acquired ZK-AMB from TEAL and registered it as VH-EBW. In the official history of Qantas by John Gunn (*Challenging Horizons*) the new plane does not have a name attached, although the other Sandringhams were christened *Pacific Chieftan*, *Pacific Warrior*, *Pacfic Explorer* and *Pacfic Voyager*. This is probably because the last three planes were not received by Qantas till after EBW was lost. In any case, the dive shops in Port Vila, Vanuatu, and some diving articles refer to the plane as the *Tasman* although this was the name when it was flown by TEAL.

Immediately placed into service on the Pacific runs, VH-EBW soon set a Trans-Tasman record between Australia and New Zealand of just under eight hours. However, less than one year after it was purchased, tragedy struck the plane when on 4 April 1951 it was seriously damaged while landing at Rose Bay in Sydney Harbour under the command of Captain Hugh "Smokey" Birch, DFC, MID. Extensive wing and float damage occurred when the failure of the port stay wire caused the starboard float to break off and the wing to dip into the water. The plane was saved by the crew and passengers climbing out onto the port wing and balancing the plane to keep the other wing out of the water. An interesting aside is that Capt. Birch was the first pilot to ever land a Sunderland Flying Boat (the plane from which the Sandringhams were derived) on the open Alantic Ocean when in World War II his plane rescued some torpedoed seamen.

Repaired and placed back into work, only two months later VH-EBW had another even more serious accident that was to end its flying days.

On 10 June 1951, with Captain P.J.R. Shields at the controls, VH-EBW was attempting a take-off in Port Vila Harbour enroute to Espiritu Santo when it had to avoid a dugout canoe powered by an outboard that strayed into its path. Unfortunately, this action forced the pilot to turn hard to starboard and the plane struck a coral noggerhead (outcrop) and the hull was holed in several places. In about 1994 I spoke to Hugh Birch (see paragraph above - he died on 3 January 1996) who was not crewing but a passenger on the plane and he confirmed this story to me.

The pilot rammed the plane up on a nearby beach and although the plane did not sink, it was extensively damaged to such an extent that Qantas wrote the plane off and abandoned it in Vila. It lay for some time near Irriki Island Resort (then the British Commissioner's Residence) until the authorities tired of it.

Either soon after the accident or while abandoned, the plane was stripped of its engines and other valuable items. A photograph shows the plane at a dangerous angle with men in a small boat attempting to remove the engines. Eventually the plane was scuttled in a corner of Port Vila Harbour and lost and forgotten.

In 1978, scuba divers "discovered" the wreck of the aircraft lying upright a fair distance from where it was originally scuttled. It appears that the last flight of the Sandringham was actually underwater as it glided to the bottom over 40 metres down.

Today the wreck is a popular diving site for visiting Australian divers. Its depth makes it an excellent build up dive for divers travelling to the northern island of Santo to dive the famous wreck of the SS *President Coolidge*, but it is an excellent dive in its own right.

In 1991 and late 1995 I had the opportunity to dive the plane and found it an exhilarating dive. The wreck is located in the south-eastern corner of Port Vila Harbour between the main passenger wharf and the navy base. After submerging, you sink into the water, following the dive boat's mooring line. As you approach the 30 metre mark, you see the tail-fin jutting up out of the gloom. The top of the huge tail is at a depth of 35 metres and the top of the hull is 38 metres down. The visibility here drops dramatically, only two or three metres on the two times I have dived here. The rudder is very corroded as are the tail wings, with the port one cracked at its base. After quick look around the tail area, you travel forward towards the nose. The wings are intact except for where the engines were removed. The wings are so big that near the hull you can swim inside sections of them. These compartments used to hold two liferafts each in case the plane went down over the ocean.

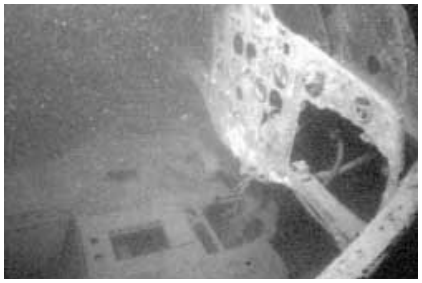

Figure 113 - The cockpit of the plane from the starboard side

Below the wings, the side windows are clear, with the perspex long gone. This enables you to look into the upper and lower decks. In front of the wings, perched high above the sandy bottom is the cockpit. Like the other windows, the windscreen is also clear except for a section on the port side where a broken piece of perspex remains. Like the rest of the plane, the perspex is covered in a layer of silt.

Inside the cockpit, the seat frames remain and you can see the gauges and controls and the remains of the gauges that once enabled the pilots to fly the great plane. In front of the cockpit, 26 metres from the tail, is the mooring ring, still with a rope attached. Just above this is the observation hole that enabled the boat to be manoeuvred and moored safely. It is still covered with its perspex covering. Below here the hull tapers away from the nose towards the rear, the sand at 41 metres enabling it to sit higher than it would have in the water.

Below the cockpit on the port side there is the main cabin door. With care, you can enter the plane and explore the lower deck. As you follow the line that runs to the rear through the three main compartments, you can see the frames of the seats as well as other fixtures of the plane. It is a tight squeeze, but with care it is not too hard to explore the interior. You can return to your starting point or exit out the rear door on the starboard side.

The plane lies with its port wing lying on the sand and the starboard up in the "air". Behind the starboard wing is the cargo door which enables you to enter the rear cargo compartment. You can swim into the compartment and exit through a large hole in the tail. This is a very safe and easy penetration, although care needs to be taken to not silt up the floor.

This is a very large plane, almost 35 metres across the wings, and at this depth it is not possible to examine in minute detail the whole wreck in the one dive. This fascinating piece of Qantas's history will be around for a long time and many more divers will be able to enjoy it. I can certainly recommend the dive as being worth the time and money, do not let anyone talk you out of it.

Visibility here is not great, only two to four metres, but it is more than adequate to explore the plane. Due to the depth and very poor visibility, I would only recommend that experienced divers do this wreck. When in Port Vila, you can dive the wreck with Nautilus Scuba who are located in the main street just past the Waterfront Restaurant.

References:

- Personal conversations with the late Captain Hugh Birch (former Qantas pilot)
- *Sydney Morning Herald* 15 January 1996 - obiturary for Hugh Birch
- *Challenging Horizons* by John Gunn
- *Jane's Fighting Aircraft of World War II*

- *Airliners in Australian Service* - Volume 1 by Eric Allen
- *British Warplanes of World War II* edited by Daniel J. March

Shotan Maru

The *Shotan Maru* is an oldish looking ship, the exact details of builder and owner which I have not yet been able to find out but Dan Bailey in his book *WWII Wrecks...* (see references) claims it was built in 1942 as one of 14 Standard Type 1D ship. In that book, he gives the name as the *Matsutan Maru* with alternate names of *Matsutani Maru* and *Shotan Maru*. I will use the most commonly used name, *Shotan Maru*. Whatever is correct, the ship was not real big, 1,999 tons, 87 metres long and 12.8 metres wide. Powered by a coal burning vertical triple expansion steam engine, it was capable of 12.5 knots.

As stated above, the look of the ship and its engine do not really match up with the build date of 1942. I have yet to find more about this ship and even with more research, I have yet to be successful. There is no record of the ship under any of the above three names in *Lloyds Register* or *Warships of the Imperial Japanese Navy, 1869 - 1945* by Hansgeorg Jentschura et al.

On 17 February 1944, the *Shotan Maru* was in Chuuk Lagoon but I have no information about the original anchoring point of the ship (see next two paragraphs). From Bailey's book, it is possible that the *Shotan Maru* was attacked by planes from USS *Enterprise* during Strike 1AE on the first day of the attack. Heavy damage was reported from the hit amidships (this tallies with the wreck- see later). It is possible that she was also seen aground on a reef east of Dublon Island (maybe the small island mentioned in the next paragraph?). This ship was hit by torpedo bombers from USS *Essex* at 0820 hours (there is no obvious damage from a direct torpedo hit). Nevertheless, it is assumed that the ship sank during *Operation Hailstone* (the attack on Chuuk Lagoon).

Nowadays the *Shotan Maru* rests to the east of Eten Island, very close to the *San Francisco Maru*. She lies in a valley with the bow pointing to a small hill and the stern lower than another large sand hill which is primarily on the starboard side. The bottom of the valley near the wreck is 50 metres and the bow is about 40 metres. The bridge is 37 metres and the bottom of the holds about 47 to 49 metres. The wreck is upright with a slight list to port. It was found in 1980.

This is another ship that does not get regularly dived, for reasons I cannot understand. The dive boats anchor in the bridge area. From the bridge, you can easily swim straight to the bow where you can see that there is no gun. As both anchors are up, it does not appear that the ship was anchored when she was hit. Verbal reports given to me by Blue Lagoon Dive Shop dive guides (McKenzie and Randy) state that captain of the ship was trying to run his vessel up on nearby Fanamu Island. It is aimed right at the island and is not too far off, so I guess they might be correct.

The forecastle is accessible through either of the two doors but there is not much to see, only some paint cans.

Behind here is hold one. This hold does not have any 'tween deck and there are two trucks on the hold beams, facing the port side. These trucks have small cranes behind the cabins and they have twin rear wheels. However, one of the sets of wheels has fallen off one truck and lies down in the hold. There is another truck on the sand on the port side. This hold also has two sorts of shells, some packed in fours (small timber boxes covering warheads), others packed in larger packs. There are also grenades and bottles in the hold. Holds one and two are not really totally separated and you can swim right through from one to the other. In between the two holds there are large numbers of piles (for wharves?) and timber planks.

Hold two has more items of interest. There is more timber on the starboard side and at the rear of this hold. This hold has dozens of bags of cement, beer bottles, some 200 litre drums, some other items (mess kits?) and a diesel engine (on 'tween deck). Also on the 'tween deck there is also another very large object, perhaps a large compressor but I thought it looked more like a small steamroller.

From hold two you can exit back out the hatch and then enter the bridge via one of the doors. Using the starboard door, swim along the passageway and you will a door on the right. This leads into the engine room. The engine room is quite dark as the skylights are closed and the glass covered with growth. It is not very large and only a couple of people can enter at any one time. After looking at the engine, exit out the same door and continue towards the stern. You then go out another door which comes out over hold three. This is almost empty except for a few 200 litre drums and the beams of the hatch cover.

Hold four (which is empty) appears to have been hit by a bomb on the starboard side towards the rear of the hold. The whole deck around the hold has collapsed. There is also damage on the port side. There is a hole about two metres across and it looks as though a bomb has exploded on the outside. The damage is certainly no consistent with torpedo damage on other ships in Chuuk. The whole hull has cracked in this area. It is possible that this damage was caused by the torpedo mentioned earlier exploding while the ship was aground. Perhaps the torpedo hit the reef and exploded a bit away from the ship.

Out of the hold, the deck has collapsed two or three metres behind the hatch. The rear mast has fallen over the starboard side of the wreck. On this side there is a sand mountain encroaching on the wreck. It is far higher than the wreck and is already starting to come over the main deck. The mountain also lies behind the wreck. There is a gun platform and gun on the stern. The barrel faces the rear.

This is about all the time you will have at the main part of the ship. Returning to the bridge area you can see the funnel intact but there is some damage behind it. The fly bridge was made of timber and it has now totally rotted away. The timber floor of the bridge is gone but the helm can be seen. There is no telegraph to be found.

This is another excellent wreck, well worth diving. On my only dive here I did a 19 minute bottom time which meant doing a decompression of 1 minute at 9 metres, 5 minutes at 6 metres and 12 minutes at 3 metres. The visibility here was excellent, in excess of 30 metres, similar to all the wrecks in this part of Chuuk Lagoon.

Dives:

- 18 November 1997

References:

- *Hailstorm over Truk Lagoon* by Klaus Lindemann
- *WII Wrecks of the Kwajalein and Truk Lagoon* by Dan E. Bailey
- *26 Principal Shipwrecks of Truk Lagoon* by Capt. Lance Higgs

Star of Russia

Figure 114 - The *Star of Russia* as a ship, about 1900 in San Francisco Bay

One of the more amazing wrecks I have ever dived is the wreck of the iron hulled barque *Star of Russia*. Located in Port Vila Harbour in Vanuatu, the *Star of Russia* (Yard No 88) was a three masted sailing ship launched on 12 December 1874 as at Belfast in Northern Ireland (it may have been commissioned on 12 February 1975). The builder was Harland and Wolff, who 40 years later built the RMS *Titanic*. The *Star* was large vessel, almost 83 metres long and 12 metres wide with a tonnage of 1,981 tons. The first owner was James P. Corry & Company of Belfast which used her to transport jute from India to Europe as well goods to Australia. She also carried many migants to Australia. The ship was also reported to carry coal (2,750 tons) and wheat (2,660 tons). Her official British Registration No was 63958 and signal NSLB. Corry's had a large number of clippers, most, if not all, built by Harland and Wolff. The *Star of Russia*, together with her sister *Star of Bengal* was the largest of Corry's ships.

During this period of time, the *Star of Russia* set a best day's run of 388 miles (during a 23 and a half hour day - sights to sights). This was an average of over 16.5 knots, an incredible speed for such a large sailing vessel. The amazing day's run occurred during her tenth voyage, a trip from London to Melbourne in 1884. On 19 September 1884 the *Star* left England under the command of Captain Simpson carrying a 4,000 ton load, mostly cement, for Australia. She rounded the Cape of Good Hope on 6 November 1884. Before she arrived at the Cape, the *Star* was caught in a storm when her upper topsail yard was carried away and after this she was unable to set full sail. Despite this, between the Cape of Good Hope and Cape Leeuwin in Western Australia the *Star of Russia* made runs of 310, 308, 327, 314, 299 and 300 miles in consecutive days. She arrived in Melbourne on 4 December 1884, 75 days from London.

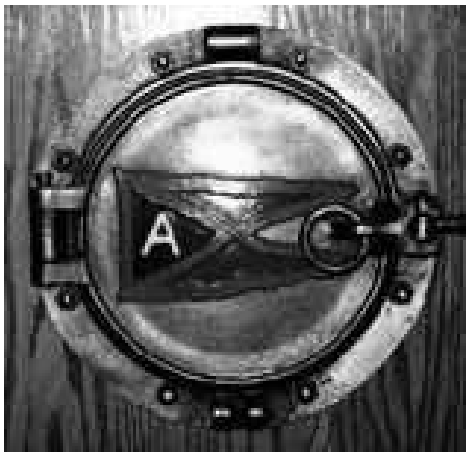

Figure 115 - One of the portholes of the *Star of France*, identical to some on the *Star of Russia*

In about 1895 the ship had an incident when the helmsman permitted the ship to luff. The bow went right under water and a huge wave swept over the deck, washing the mate and the entire watch overboard. They all drowned.

In 1898 James P. Corry & Company was swallowed up during the Federal Cunard Combination and went out of business.

As a result, in March 1898 the *Star* was sold to Shaw, Saville & Company and it would appear was sold almost straight away (probably also in 1998) to J.J. Moore and Company of San Francisco. Soon after, on 1 November 1901 she was again sold to the Alaska Packers Association where she transported things such as cannery supplies. For 25 years the *Star*

appears to have sailed the Alaskan waters. Not only did the Alaska Packers cut her down to a barque, they added unique portholes to all their ships, including the *Star of Russia*. The portholes have the APA's house flag cast in relief on the cover - a swallowtail flag with an "A" in the center. There are actually two versions of the porthole, a right-hand and left-hand version where the flags point in opposite directions.

Figure 116 – The crows' nest

On 29 July 1905, the *Star of Russia* ran aground on Chirikof Island in Alaska. She was salvaged and repaired but the cost was a substantial US$56,000.

The *Star of Russia* had a sistership, the *Star of France* which had similar owners and trades from when they were built till they were laid up in 1926. On 24 March 1926 the *Star of Russia* was sold to Burns Philp Company (owners of the MV *Malabar* wrecked in 1931 in Sydney). Burns Philp were the biggest company in the South Pacific and it is assumed that they purchased the ship for trading between the islands. The ship left Tacoma with a load of lumber and left Flattery (not sure where this is) on 4 June 1926 and sailed to Apia, Samoa. It is reported that the ship was converted to a floating warehouse.

In 1929, the *Star of Russia* (as she was then named) was in Sydney Harbour and was visited by an old friend, Sir James Corry. He went aboard and found that the hull was sound but that the rest of the ship was in poor condition. It is likely that the ship was still owned by Burns Philp as its headquarters was in Sydney.

It is also reported that at some time the ship had new owners who were French and the ship had been renamed *Bougainville*. I am not sure that this last bit is true but it is reported at the Fortune City web site. This may have been after 1929.

In any case, she ended up in New Caledonia where she was used as a barge for various purposes. At some time she was also owned by the Pacific Colonial Company (it would appear that this was after 1929) and was renamed *La Perouse*. Meanwhile, the *Star of France* remain in America until in 1940 when she was rammed and sunk in 31 meters of water off Los Angeles harbour.

Figure 117 - The steering gear of the *Star of Russia*

Eventually, the *Star of Russia* ended up in Port Vila Harbour as a floating warehouse. She was a hulk, stripped of her fine assets. In July 1942 the *Star of Russia* was known as the *Dupetit Thours*. She was described as a "copra hulk". During this month, the Burns Philp ship SS *Morinda* came under the control of the US Navy and she discharged all her cargo into the *Dupetit Thours* in Port Vila Harbour. It is of interest that the *Morinda* later

made many trips to Espiritu Santo, the location where the SS *President Coolidge* was to be sunk in late 1942.

At some time the *Star of Russia* sank just to the north-west of the main wharf of Port Vila harbour. She now lies in 35 metres of water just s shorht distance from where the cruise ships moor.

The deck of the *Star of Russia* lies at 26 to 28 metres and one mast sticks up to about 17 metres. The wooden decking has been eaten away but all the "joists" are still in place and the hull is almost 100% intact. Things to see include the rudder (with a place you can swim through), the steering gear, the bow and some wooden railing. You can explore the lower decks before exiting through a cargo door or a small doorway. You can follow one mast out past the crow's nest to the sand (37 metres here). The *Star* is a very big wreck and you cannot explore it all in detail on just one dive. However, you can get a very good understanding of the ship in one dive if you do not linger too long in one spot. All in all, an excellent dive.

The visibility here is usually only fair (say seven metres) although it can get up to 15 metres on good days. This is an excellent dive, even for the novice diver. It is a very good build up dive if you are going to Santo to dive the SS *President Coolidge* but it is also a top notch dive in its own right. I dived the *Star of Russia* with Nautilus Scuba Centre and can recommend their service. They can be found just south of the Waterfront Restaurant on the main street of Vila.

Thanks to Steve W. Lawson for the photographs of the *Star of Russia* and the porthole.

Summary of Some of the Voyages of *Star of Russia*
From The Maritime History Virtual Archives homepage by Lars Bruzelius.

Date	**Voyage**	**Time**
April 5 - July 10 1875	London to Calcutta	97 days
August 14 - November 17 1875	Calcutta to London	95 days
January 27 - May 1 1876	London to Calcutta	95 days
May 14 - August 16 1878	London to Calcutta	94 days
March 7 - June 10 1879	London to Calcutta	95 days
March 3 - June 7 1880	London to Calcutta	96 days
October 28 - January 25 1881	London to Melbourne	89 days
October 21 - January 20 1882	London to Melbourne NOTE: Had to return to the Downs after having lost the topsails in a gale on October 24-25. Left the Downs on October 27 and reached Melbourne 84 days out from the Downs.	90 days.
October 31 - January 24 1883	London to Melbourne	85 days
September 18 - December 4 1884	London to Melbourne	77 days
November 22 - February 16 1886	London to Melbourne	86 days

December 5 - April 11 1887	London to San Francisco	128 days
February 20 - May 14 1889	Antwerp to Melbourne	83 days
March 3 - May 30 1890	London to Sydney	88 days
June 23 - August 17 1890	Sydney to San Francisco	55 days
September 23 - January 15 1890	San Francisco to Sharpness	114 days
April 4 - June 19 1891	Barry to Port Pirie (South Australia)	76 days
January 11 - April 25 1892	San Francisco to Queenstown	105 days
June 28 - August 31 1892	Cardiff to Cape Town	64 days

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References:

- *Lloyds Register* various years
- *Shipbuilders to the World* by Michael Moss and John R. Hume - page 33
- Personal e-mails from Steve W. Lawson, writing a book on the *Star of France*
- *The Scuba Diver* Magazine - Vol 1 No 2, 1982, article by Steve Hills, pages 40 to 43
- *The Last of the Windjammers* pages 165 to 167
- *Epics of the Square-Rigged Ships* by Charles W. Domville-Fife
- The Maritime History Virtual Archives homepage - http://pc-78-120.udac.se:8001/WWW/Nautica/Ships/Merchant/Sail/S/Star_of_Russia(1874).html - by Lars Bruzelius.
- Alaska Historical Society Web Site - http://www.alaskahistoricalsociety.org/calendar July.htm
- Irish Ships Web Site - http://www.irishships.com/
- SS *Morinda* Web Page on Merchant Marine Web Site - http://mns.ewebs.com/Burns_Philp/ss_morinda.htm
- Fortune City Web Site - http://www.fortunecity.com/
- A Web Site - http://fp.redduster.f9.co.uk/CORRY2.htm

IJN *Susuki* - Patrol Boat 34

The IJN *Susuki* (also spelt *Sutsuki*) was a *Momi* class destroyer built in 1921 by Ishikawajima Zoensho at Tokyo. She was 84 metres long and displaced 935 tons. Powered by two direct drive turbine engines of 12,000 ship driving twin props, the ship was capable of 36 knots. In 1939 she was modified and then retitled as a special patrol boat. Major modifications included removing one boiler (reducing speed to 18 knots). At the same time the *Susuki* was also renamed to Patrol Boat 34. Just prior to the start of the Pacific War, she was further modified by the removal of one funnel and the rear torpedo tubes, the stern was altered to enable a landing craft to be pulled up on the deck. One gun was removed and the number of depth charges decreased to 18.

On 6 March 1943, Patrol Boat 34 collided with the destroyer IJN *Yakaze* at Kavieng in New Guinea and badly damaged. it would appear that the entire bow and a fair section of the hull was either totally cut off in the accident or so badly damaged that it had to be removed later. The boat was then towed to Chuuk Lagoon for repairs. The bow of the ship was removed and a new, definitely non-maritime architect designed bow installed (see later). The ship sank on 3 July 1944 but it is not known how this happened. It seems to have had a major fire around this time.

The ship is now found a few hundred metres from the western shore of Dublon Island. It has a slight list to port and the bow is only a few metres below the surface. The sand under the stern is about 15 metres.

This ship is normally done as a snorkel by Blue Lagoon Dive Shop after the first dive of the day. I also did the wreck as a night dive when I stayed on the SS *Thorfinn*. It is not worth giving up a dive on one of the major wrecks in Chuuk Lagoon but as a snorkel, it is very interesting. If you are on one of the liveaboards and want a different night dive from the normal ones.

The first thing you notice as you swim over the wreck is the modified bow. It is very poorly done and consists of straight plates of steel welded onto the hull giving a very blunt "pointy end" as distinct from the original very sharp bow. As you swim towards the stern, you see the main superstructure which is also very badly damaged. The remaining funnel has fallen over and is adjacent to the wreck. At the stern you will see the sloped stern and just before there are a couple of depth charges.

If you are diving, you can drop below the stern and see the props. You can enter the hull in a number of locations and explore its somewhat compact interior. The forward section can be entered via many holes in the hull and deck. The rear section can be entered via a manhole on the deck. The engine room is particularly interesting and can be entered via the skylights.

An interesting snorkel, a good night dive, but not good enough to give up a dive on the other wrecks in Chuuk Lagoon.

Dives and snorkels:

- 16 November 1991 (Night)
- 21 February 1994
- 7 November 1997

References:

- *Hailstorm over Truk Lagoon* by Klaus Lindemann
- *WII Wrecks of the Kwajalein and Truk Lagoon* by Dan E. Bailey

Taiei Maru

In late September 1944 with some Japanese ships, including a convoy of 12 Japanese ships, taking refuge in the Busuanga Island area of the Northern Palawan group of the Philippines. Eight of the ships were anchored in Coron Bay, the rest to the west and at least one on the northern side of Busuanga Island. The *Taiei Maru* was anchored in the area between Tangat and Lusong Island with a number of other ships. Note that this shipwreck was originally thought to be named the *Olympia Maru* but is now thought to have been called *Taiei Maru*. The shipwreck formerly known as *Taiei Maru* is now believed to the *Okikawa Maru*.

Late on the afternoon of 23 September 1944, Fast Carrier Task Force (TF) 38 under the command of Vice Admiral "Bull" Halsey positioned itself for an attack on the ships in the Coron area. At 5.50 am on 24 September 1944, 180 Grumman F6F *Hellcat* and Curtiss SB2C *Helldiver* (not made by Grumman as claimed by one source) planes lifted off the American carriers and headed off on the 350 kilometre flight for the waters of Coron Bay. This was to be the longest carrier based (and return) attack ever carried out. At 9 am the planes reached Coron and located at least 18 large Japanese vessels and started their attack.

The planes attacked the ships in CoronBay and the ships to the west first. After a frenzied 45 minute attack the planes left, leaving behind numerous sunken ships. It is reported that the IJN *Akitsushima* was the first to be attacked and then they went for the *Taiei Maru*. She was soon hit and on fire, fuelled by the oil in her tanks. From my examination of the wreck, there appears to be three direct hits on the port hull side at the bow. The ship did not sink and drifted away from her anchorage. It is said that after another attack in early October 1944, the *Taiei Maru* finally sank on 9 October 1944. Most of the ships anchored around Coron were also sunk. Today 14 of these wrecks have been located and most can be dived from Coron.

There were at least six ships called *Taiei Maru* in Japan during World War II, so it is difficult to find out which of these, if any, is the one sunk at Coron. I have yet to find out any real information on the *Taiei Maru.*

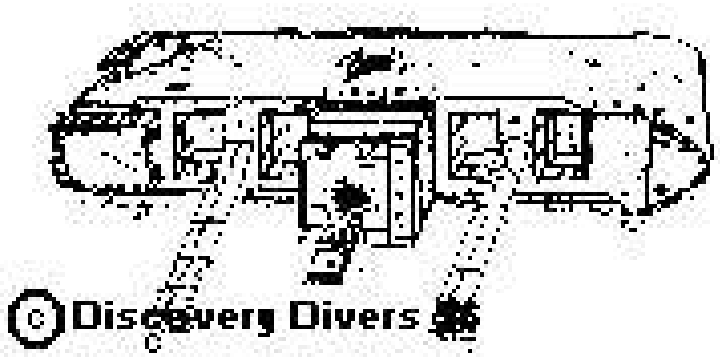

Figure 118 – A diagram of the *Taiei Maru*

Located on the north-eastern side of Lusong Island, the *Taiei Maru* is a smaller vessel than the previous wreck. Like most of the Coron wrecks, it also is a freighter but this one lies on its starboard side in 25 metres of water. We are anchored at the stern and after a quick look at the rudder and prop shaft hole we swim a short distance over the hull before entering a doorway. This takes us into the rear hold and we have a very quick look around. Unfortunately we are only staying one night in this location and have to fly out around lunch time tomorrow. For this reason, we have to dive very conservatively to ensure we do not suffer DCS. We swim along the ‘tween decks into the third hold. This immediately reminds me of the SS *President Coolidge* in Vanuatu. Although it is a fraction of the size of the *Coolidge*, swimming along this way is very similar to some sections of the larger American. Down and up, under and over we go before we pass the engine room and funnel. The engine has been partly salvaged, with a large hole cut in the port hull to facilitate this work (again, like the *Coolidge*). We only spend a few seconds here before continuing on our way, along the same passageway we have been using. This is on the port side of the wreck and I assume that you can do the same thing on the other (deeper) side of the wreck.

We pass another two holds and finally exit the wreck through another door right near the bow. I am following someone and before I get out of the wreck he has again disappeared

inside another hole. I see that there are three bomb holes here. I look in a few before seeing his torch lighting up the dark interior. My other buddy and I enter and examine a few areas before we all return to the hull. We decide to spend the rest of the dive on the hull which is mostly shallower than 15 metres.

We have a look at the outside of the vessel, especially the bridge, holds and kingposts. The funnel is lying on the sand below its original location. Like the other wrecks here, there is some excellent soft coral growth and not bad fishlife, the highlight of which is a large school of razorfish. Razorfish are quite small fish which swim forward while pointing vertical. A great sight.

This has been very good dives. While not of the same calibre as the SS *President Coolidge* or those in Chuuk Lagoon (being salvaged and mostly without the original freight inside), the wrecks at Coron are ideal for those wreck divers who have already been to Chuuk, Santo and the Solomons.

After the dive we again relax on our trip back to Coron. Gunter (of Discovery Divers) has placed an esky on the banca and we have a beer or two and relax as the sun drifts towards the horizon. What a great day's diving and a fantastic location, skimming over the millpond water, a beer in hand, interesting people to chat to and a good book to read. Life can be pretty good!

References:

- *Lloyds Register* 1928-9, 1939-40
- *Merchant Ships 1942* by Talbot-Smith
- Personal conversations with researcher Peter Cundall, 22 September 1997 and email dated 28 September 1997.
- Dive Right Coron Web Page - http://www2.mozcom.com/~diving/c-history.htm
- Coron History Report by Peter Heimstaedt - http://boracay.vasia.com.ddivers/ph_history.htm. Note Mr Heimstaedt emailed me a number of times in the late 1990s telling me that the information about this wreck was wrong but refused my requests for the real information

Toa Maru No 2

The *Toa Maru No 2* was a passenger/cargo ship built at Nagaski, Japan, for the Osaka Shosen Kaisha (OSK Line). Launched on 8 December 1938, the ship was 133.8 metres long, just under 18 metres wide and displaced 6,732 tons. Powered by an eight cylinder diesel engine, the ship's first voyage was from Kobe to West Africa. In 1941 the ship was called into war service and used to transport men and equipment about the Pacific.

On 14 January 1943 the *Toa Maru No 2* was on her way to or from the Solomon Islands (probably on her way back to Rabaul - see later) when she was attacked by the submarine USS *Nautilus*. One torpedo actually hit the *Toa Maru* but it was a dud and the ship lived for another day.

On 22 January 1943 the *Toa Maru* left Rabaul under escort by IJN *Hiyodori* and Subchaser No 23 bound for Kolombangara Island in the Western Province. As this should only take a day or two, it is likely that she went back to Rabaul for another load and left again on 29 or 30 January 1943.

On 31 January 1943 the *Toa Maru* was carrying equipment and supplies to Kolombangara again. Her destination was Vila Harbour (also called Disappointment Cove) on the south-eastern corner of the island where there was a Japanese supply base. The ship was spotted by coastwatchers (mostly Australian and British men stuck there when the war started) leaving Rabaul on New Ireland in Papua New Guinea a few days earlier. On 31 January 1943, 12 Douglas TBF *Dauntless* (note these may really have been Grumman TBF *Avenger* aircraft as the designation TBF is the *Avenger*) torpedo bombers from the Marine Scout/Torpedo Bomber Squadron VMSTB -142, as well as perhaps some Douglas SBD *Dauntless* dive bombers (not sure how many), left Henderson Airfield on Guadalcanal to the south with the aim of attacking shipping in Vella Gulf. They were escorted by eight Grumman F4F-4 *Wildcat* aircraft from Marine Fighter Squadron VMF-112 (it was not necessarily mentioned in reports that the aim was to find and destroy the *Toa Maru*).

Two of the *Wildcats* had to return with mechanical problems while the rest of the planes continued forward. These planes were led by Lt James Secrest, with other planes under the command of Lt Jefferson DeBlanc, Lt Lynch, Lt Maas, Lt Hughes and Staff Sergeant James Feliton.

The reports about the action differ a little but the following is what appears to have occurred.

The dive bombers made their first attacks on the *Toa Maru* without any apparent hits (see my comments later). Seeing this, Lt Secrest, made a strafing attack on the ship, despite the fact that they were supposed to be support aircraft protecting the bombers from Japanese fighters. He also had another problem, he had almost no ammunition as his armourers had failed to rearm his plane properly that morning.

Secrest and his section attacked the *Toa Maru* and Lt DeBlanc and his section followed in support. As they passed over the ship, the *Toa Maru* burst into flames.

In fact, it would appear that the dive bombers had hit the *Toa Maru*. The wreck today has two bomb holes in the bow. The first is a large hole in the hull on the port side in Hold One and the second is a smaller hole between the Chain Locker and Hold One, also on the port side. It is also reported that the rear holds was hit, probably by the fighters. The *Toa Maru* sank sometime after on the northern side of Sepo Kokiti Island which is located about seven kilometres to the north of Gizo township.

After the attack, the SBD were departing when they were attacked by two Japanese float biplanes. Lt DeBlanc shot both these planes down. While this was happening, at least 10 Mitsubishi Zero fighters attacked the group. Lt DeBlanc shot down one of the Zeros and Lts Lynch and Maas got one each. During the dogfight, Lt DeBlanc's plane was hit and he is reported to have had problems with a fuel leak from a mechanical problem. He also ran out of ammunition. Lt Secrest attempted to help DeBlanc by flying at the Zeros even though he had no ammunition.

DeBlanc's plane was hit again and he was seen to bail out at 200 feet and his plane went into the water. A report says that DeBlanc's parachute was seen in trees on the north-western corner of Kolombangara Island but this was not true. Also shot down was Staff Sgt Feliton who was last seen attacking one of DeBlanc's attackers. The same report that said DeBlanc ended up on leand said Feliton ended up in the sea. This was incorrect. DeBlanc ended up in the water and Feliton's plane crash landed in the jungle on Kolombangara Island and he landed there as well after parachuting.

In the meantime, DeBlanc was in the water and would have to swim for six hours till he reached Kolombangara Island. He was hidden by natives before being taken to a missionary. Two weeks later he arrived back at Henderson Airfield. Feliton was also rescued and had returned to Henderson earlier, although it was reported to me that he returned on the same *Catalina* flying boat as DeBlanc. Feliton's plane was found at some time and in 1999, Dennis Letourneau of Alberta, Canada, and his father refound the plane in a remote swampy area of Kolombangara Island. The plane had crashed, exploded and burned.

In the late 1960s or early 1970s, the *Toa Maru* ship was subject to some salvage work by Australian divers. The team was led by Barry May and included Reg Thomas (later the operator of a dive shop in Honiara and now a resident of there) and, I think, Wally Gibbons. They removed the prop and cut a salvage hole in the hull to access the engine room. Some other objects have been removed from the holds or deck and placed on the topside of the port hull. More about this later.

Today the *Toa Maru* lies on her starboard side on a sandy bottom at a maximum depth of about 37 metres. The ship is not far off the beach on Sepo Kokiti Island and aimed right at it, indicating that the skipper had been attempting to beach her there. There is a mooring on the bridge.

The following is a description of the wreck from the bow to the stern.

The hull above the bow is about seven metres. The bow itself is a bit deeper. The two anchors are in place. Just behind the port anchor there is a hole from one of the bombs. It is right on the bulkhead between the Chain Locker and Hold One. It is definitely not a salvage hole as the hull is pushed in and there is no logical reason for there to be any salvage work in this area. You can use this hole to enter Hold One.

On the deck there is a gun platform and mount but the gun has fallen off when the ship turned on her side. I did not notice it on the sand. In front there is the chain locker which can be entered. There are lots of ropes and pipes in there. The forecastle does not appear to be able to be entered. On the main deck behind the forecastle there is a spare anchor on the port side, that is near the top.

Hold One is next. This hold has thousands of bags of cement, all rock hard after exposure to the water. As mentioned above, you can also enter/exit the hold via the bomb hole at the back left corner as you look into the hold or via the other bomb hole at the front bulkhead. For now we will continue aft.

Between Holds One and Two is a mast. This is still in place and extends right out over the sand. Behind the mast is the hold. The most obvious thing you will see here is a two man tank. This is sitting upside down on the side of the hold's entrance. The turret is easily seen as is the small gun barrel that extrudes from it. Behind the tank there is another track. Whether this was a spare or from another tank buried under debris I do not know. In the hold there are thousands of beer bottles, steel girders and some ammunition. What we noticed most were timber packs containing four mortar bombs. There are hundreds of these. You can exit from Hold Two into Hold Three via a rust hold at the top left of the hold or you can go back outside.

If you come outside you will notice some very interesting things between the holds and on the sand under the opening to Hold Three. There is a large kingpost (the H shaped part of a ship) and above the uppermost support there is an object that Danny Kennedy of Adventure Sports dive shop at Gizo says is a motorcycle. He said that it originally had a side car.

Nowadays it does not resemble a bike at all (apart from the seat perhaps). There are other objects here that appear to me to be parts of a largish field gun. I say this after my three trips to Chuuk Lagoon where I saw a lot of this on wrecks. To me, the "bike" looks like the parts of a gun where the crew sit and adjust the gun. However, Danny assures me that in the mid-1980s when he moved to Gizo it definitely looked like a bike. Despite this, I am confident that the other bits here are a gun. Why? Because on the hull above here there are at least two (or maybe three) large barrels and trigger assemblies, a gun mount and other parts of field guns. It is likely that the salvage attempts moved these here to get at other items in the holds or perhaps they had some intentions to later salvage them.

Hold Three is mostly empty but just outside the hold there is a large truck. At the back of the upper level of this hold there are some lanterns. They look very nice when you put a torch inside them. In Holds Two and Three, Danny's dive guides have hidden away a lot of artefacts that they pull out to show you. Some of the things include large ampules, bottles of pills and other items. There are also plates, cups, thermos flask and other items on display on the holds' edges.

Behind Hold Three is the bridge. The funnel is still in place, amazing after almost 60 years and considering that it is lying on its side. This is the only WWII shipwreck on its side that I have seen that still has its funnel in place. Behind the funnel are the engine room skylights which give access to the engine room. There are also the davits for the ship's lifeboats.

You can enter the bridge a number of ways. First, there are some windows at the front that enable you to enter the lower areas of the bridge. You can exit the bridge area at the rear of the bridge through some doorways or drop into the engine room or exit through the skylights.

Inside the bridge you can see the navigation level and the steering binnacle. The wheel is not there, probably as it was timber it rotted away. A level down is the communications area. There is a typewriter, telephone and radio equipment here. Further back there is the galley, with a stove, pots and other kitchen equipment. These can be access from the rear doorways. I seem to recall that in the bridge our guide also showed us a glass jar full of condoms!! Somewhere we also saw a pile of Japanese newspapers.

The engine room can be entered numerous ways. As indicated above, you can get in via the lower levels of the bridge or the skylights. When the salvage work was done on the ship, two large holes were cut in the hull at the bottom of the engine room. These provide access. If you are starting a dive by doing the engine room first, this is probably the best way to get inside. In this area you will see a huge amount of equipment. There is a telegraph here, as well as the lower parts of the diesel engine. In one spot you can see an exposed piston.

The upper levels of the engine clearly show the cylinder heads. As well, there is a small machining room, with grinding wheels, lathes and other maintenance equipment. There are also some spare glass for portholes here.

Behind the bridge is Hold Four. This is empty. Below the entrance to the hold there are at least two trucks lying on the sand, covered with seagrass or kelp. Behind here is the rear H shaped kingpost. You can swim from Hold Four into Hold Five as it is really one big hold. Hold Five has piles of timber logs and beams. They are everywhere.

Coming out of this hold you will see a jeep to the rear under the rear mast. Hold Six contains hundreds of 44 gallon drums. Just outside the entrance to this hold there is a small fuel tanker, lying on its left side with the engine towards the wreck. The tank cylinder has rusted a fair bit and most of it has gone. It is 37 metres deep here.

The stern of the ship has a raised sterncastle. You could enter this but it did not appear to have much to offer from my quick examination. The stern has another large gun platform and mount. The gun is not on the mount but is located on the sand below, falling off when the ship went over.

Dropping to the sand and moving off the ship a bit gives a great view of the wreck. The depth out here is 40 metres. Swimming under the stern you come to the rudder and propeller shaft. As indicated earlier, there is no prop as it was salvaged many years ago.

This is a large and relatively deep wreck so it takes quite a few dives to see it all. I would recommend at least three dives on it to be able to take it all in.

Summary:

The *Toa Maru* No 2 is a very good wreck, the equal of many of the Chuuk Lagoon shipwrecks. There are numerous items to see, including tanks, trucks, jeeps and other artefacts. In fact, it is a much better wreck than I had expected from what other people had told me about it. Visibility averaged 15 to 20 metres with water temperature about 28°C.

Dives:

- 15 October 2001
- 16 October 2001
- 17 October 2001

References:

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- IJN *Hiyodori*: Tabular Record of Movement - Lone Lancers Web Site
- Book (?) *In the Wake of USS* Jenkins - by le Blanc
- War Diary of VMF-112 for January 1943, Hist Div # 23220
- Email from Dennis Letounneau of Alberta, Canada.
- Report dated 31 January 1943 by Captain R. B. Fraser, US Marine Corps, Executive Officer of Marine Fighting Squadron 112
- *Skindiving in Australia and the South Pacific* Volume 13 No 1 February/March 1983

Tokyo Maru No 11

The *Tokyo Maru No 11* was a fishing trawler. I have yet to find out its early history but I will as soon as possible. It is about 40 metres long.

After spending Spring of 1987 fishing, the Japanese owned trawler decided to take a break from fishing and spend the Christmas holidays anchored in the protection of a section of the Solomon Islands.

On 24 December 1987 the trawler attempted to come in a passage near Ferguson Passage, between New Georgia and Ghizo Island. However, what they did not know was that the local natives were not overly happy with the Japanese fishing boats coming and "stealing" their fish and, as you will see later, probably not happy with other things they did ashore. So it came about that the locals had moved the starboard channel marker closer to shore by a hundred or more metres.

The *Tokyo Maru No 11* came into to what it thought was a safe channel, with the starboard channel marker on their right hand side. The boat almost made it. So close. It scraped the reef top. So slight was the impact, the skipper and crew may not have even known that they had hit the reef. The coral had just touched the keel of the boat, only touching a section of hull about 750 mm wide and 500 mm long. However, this alone would not have caused the boat to sink as there was no hole put in the hull from this impact. The trouble came because the boat's depth sounder transponder was located at this location, and the reef caught on it. The transponder was pushed back 20 mm or so. This was enough. There was now a hole in the hull about 20 mm by 40 mm through which the water entered.

The skipper of the *Tokyo Maru No 11* decided to anchor near the western end of Vonavona Island. The whole crew appears to have gone ashore to celebrate the Christian holidays and, so it is said, to have "fun" with some local ladies. They do not appear to have left anyone on board and the ship was therefore unattended over that night and apparently into Christmas Day.

It appears that the ship gradually took on water and eventually it started to sink. I am not sure if it sank before the crew returned, but it certainly sank.

Danny Kennedy, owner of Gizo's Adventure Sports dive shop was contracted to dive on the wreck for the insurance company. He salvaged the bell and today it stands in his house in Gizo.

Today the wreck of the *Tokyo Maru No 11* lies in about 38 metres. The mooring is located at the bow. As you reach the wreck you see that the boat is lying on her port side facing north. The anchor is lying out towards the reef, disappearing off in that direction.

The wreck is fully intact. As you swim over it you pass the bridge, the masts and hatches. There are large winches and all sorts of fishing gear.

Dives:

- 18 October 2001

References:

- Discussions with Danny Kennedy, Owner of Adventure Sports, Gizo.

USS *Tucker*

On 16 June 1934 the keel was started for a new US warship. She was officially laid down on 15 August 1934 and launched on 26 February 1936.

Figure 119 – A shot of the USS *Tucker* shortly after she was launched

Designated DD-374, the USS *Tucker* was a *Mahan* class destroyer built by the Norfolk Navy Yard at Portsmouth, Virginia, USA. The USS *Tucker* was named after Commodore Samuel Tucker, USN, who was a famous Captain during the American Revolution. The ship was christened by Mrs Leonard Thorner, a distant cousin. One of 18 identical *Mahan* class destroyers built for the US Navy, the *Tucker* was commissioned on 23 July 1936 with Lt Commander George T. Howard in Command. Of these, six were sunk during the war and another two were severely damaged at Pearl Harbor but subsequently rebuilt. An additional three *Mahan*s were built for the Brazilian Navy.

The *Mahan* class was an advanced ship, with an unprecedented engine/boiler combination. Based on the *Farragut* class destroyers the Mahans were powered by two shaft General Electric turbines and four Babcock and Wilcox boilers giving 49,000 shaft horsepower. This gave the *Tucker* a maximum speed of 36.5 knots. Carrying up to 522 tons of oil, the ship had a range of 6500 nautical miles at 12 knots. Displacing 2103 tons at full load, the ship was 101.8 metres long and 10.67 metres wide. It was armed with five 5 inch guns, four half inch guns and 12 torpedo tubes. One of the *Tucker*'s distinguishing features was that its superstructure was largely constructed of stainless steel.

The *Tucker* became part of the destroyer forces attached to the US Battle Fleet and was based at San Diego, California. She was part of Destroyer Squadron 3, Destroyer Division 6 and served before World War II along the US West Coast and Hawaii. In February 1939 she travelled to the Caribbean where she was part of Fleet Problem XX, an exercise observed by President Franklin D. Roosevelt.

Figure 120 - Lt Com (later Admiral) William R. Terrell Skipper of the USS *Tucker*
Photo courtesy of his family

As the situation detoriated, with war imminent, the *Tucker* moved to Hawaiian waters and remained there till early 1941. On 14 February 1941 she arrived back in Pearl Harbor, Hawaii, from San Diego, and then sailed for Auckland, New Zealand. She arrived thereon 17 March 1941. This was primarily a public relations exercise.

Back in Hawaii she did some more exercises, getting back to San Diego on 19 September 1941. Soon after she returned to Hawaii as part of Task Force 19 and in early November started operations around the Hawaiian Islands. After a month she returned to Pearl Harbor for an overhaul of a tender boat.

At 0755 on 7 December 1941, the USS *Tucker* was at berth X-8, East Loch, Pearl Harbor, undergoing the tender

overhaul when the Japanese attacked Pearl Harbor. Lt Commander (later Admiral) William R. Terrell, was now the skipper of the *Tucker*. He had graduated from the US Naval Academy in 1921.

Chief Electrician Paul Thompson (later of Omaha, Nebraska), had enlisted in the Navy in 1938. He was on board the USS *Tucker* when the Japanese attacked. His post was inside the ship to make sure all the power to the turrets and other machinery kept running. He said that he was outside on-deck for a few moments and it is reported that he could see the Japanese pilots and even the expressions on their faces. When he looked over toward Battleship Row, which should have been a fairly clear view, he said there was so much smoke you really couldn't see all of what happened.

The crew of the *Tucker* fired at the attacking Japanese aircraft as soon as they appeared and steamed out of the Harbor shortly after 1000 hours. The ship claimed three enemy aircraft destroyed. It suffered no damage to speak of. Therefore, the *Tucker* apparently claimed the honour of firing the first American shots of the War as the Japanese attacked Pearl Harbour but this is incorrect. It is more likely that it fired the first shots inside Pearl Harbor as another ship outside the harbour (USS *Ward* I believe) sank a mini-submarine as it attempted to enter Pearl Harbor. The claim about firing the first shots of the War were also made to me by Hillary Bryan, the Grand-daughter of Admiral Terrell. Presumably this is what her Grandfather told her and her mother.

Immediately after the attack the *Tucker* patrolled off Pearl Harbor. Over the next five months the *Tucker* escorted convoys between San Francisco and Honolulu. From April 1942 she moved to the South Pacific and then spent four months escorting ships around Fiji, Australia and New Zealand.

Figure 121 - USS *Gamble* after she was converted

Her first job was to escort USS *Wright* to American Samoa and then on to Suva in Fiji and then to Noumea in New Caledonia. The *Tucker* then went to Sydney arriving 27 April 1942. She took on fuel and travelled to Melbourne, Fremantle (Western Australia) and then back to Sydney. My guess is that she was escorting cargo ships in convoy on both these jouneys. From Sydney, she escorted the *Wright* to Suva, arriving 3 June 1942. For the next month she operated from Suva and on 10 July 1942, she relieved the USS *Boise* on convoy escort. On 30 July 1942 she arrived in Auckland and the next day she left for Fiji.

When in Fiji, the *Tucker* was directed to escort a ship to Espiritu Santo, New Hebrides (now Vanuatu). The ship, SS *Nira Luckenbach*, departed Suva on 1 August 1942 and travelled via Efate and Malekula, both part of the New Hebrides. Note that the *Luckenbach* may be the same ship that the SS *President Coolidge* travelled in convoy from San Francisco to Melbourne in January 1942.

Just after midnight on 3 August 1942, USS *Gamble*, USS *Breese* and USS *Tracy* left Luganville in Espiritu Santo, New Hebrides, to lay a series of minefields to protect Segond Channel. USS *Gamble* (DD123) and USS *Breese* (DD122) were *Wickes* class destroyers built around the end of World War I (there were 111 built). They were 314 feet long and displaced 1,090 tons and were extremely fast at 35 knots. At some time the *Gamble* was converted to a destroyer/minelayer and renumbered as DM-15. I am not sure at this time if the *Breese* was similarly converted. The USS *Gamble* was also involved later in the sinking of the Japanese submarine *I-123* off Guadalcanal (not the *I-1* as is sometimes claimed).

The USS *Tracy* (DD 214) was one of 162 *Clemson* class destroyers. They were 1,190 tons and 314 feet long. She was modified at some time and converted to be a destroyer/minelayer and redesignated as DM-19.

Figure 122 - The *Breese*, unknown date

Segond Channel was the main "harbour" of Espiritu Santo (or Santo as it is more commonly known). The three ships laid mines at three locations. These were on the south-western entrance to Segond Channel, between Malo Island and the mainland (Field One), between the south-western corner of Aore Island and the mainland (Field Two) and between Bogacio Island (now called Bokissa Island) and the mainland, basically on the eastern side of Aore Island (Field Three). This field was laid in two, parallel sections, with a small gap between that was the intended entrance to Segond Channel. Later on, two other fields were laid, one further east of this point and another along the eastern coast. In total, 171 Mark VI mines were laid on the morning of 3 August 1942.

These actions basically made Segond Channel accessible through only one point, the eastern channel via the southern channel between Tutuba Island and Aore Island, on the eastern side of Bokissa Island.

The USS *Tucker* arrived off Santo on the evening of 3 August 1942, less than 22 hours after the mine field had been laid. The skipper of the *Tucker* was still Lt Commander William R. Terrell. He planned to enter Segond Channel along Bruat Channel (between Malo and Aore Islands) and then through the south-western entrance which he believed, quite reasonably, to be open.

Figure 123 - Another shot of the USS *Tucker* at an unknown date

At about 2130 hours, Chief Electrician Paul Thompson was on his way to the engine room to fix a light that was broken when someone gave him a more important order. He went away from the engine room to the other location.

As the USS *Tucker* turned from Bruat Channel into Segond Channel, she hit a mine from Field Two. The time was 2145 hours. The mine is reported to have lifted the ship out of the water, the ship's back was broken. Three men, the entire steaming watch in the forward fireroom, were killed in the explosion. Thus, a very lucky Paul Thompson survived the hitting of the mine due to his fortune in being ordered to another location. The Captain of the escorted ship refused to come closer to the foundering ship (understandable) but he sent his lifeboats to help the stricken warship.

The *Tucker* did not sink immediately and the crew jettisoned a lot of equipment, including torpedoes, shells, depth charges, generator and 20mm guns. In the very early hours of 4 August 1942, patrol boat YP-346 towed the ship as close to the shore as it could. The *Tucker* drifted and kept slowly disappearing under the surface. The Captain abandoned ship, thinking the *Tucker* was about to go under. However, she did not sink and the anchor, which

had been dropped, was stopping the ship from being towed to safety (presumably for salvage purposes).

Paul Thompson reported that he was in the water for an hour or so before he was picked up. However, as the land is so close to where the ship hit the mines, it seems unlikely that it was this long.

The Captain went back aboard with some men and using a hacksaw, they released the ship. It was towed but within a couple of hours it broke up further and grounded off a small village, Abnetare, on Malo Island. The time was 0445 on 4 August 1942. Lt Com Terrell's daughter, Mrs Jean Terrell Crane, has told me that her father said that he went back (by swimming he claimed) to the ship to get his cap as he was almost bald and tried to protect the top of his head from sunburn.

At 1235 on 4 August 1942, the USS *Breese* came alongside the *Tucker* and 35 crew and three officers were removed from the ship. It is not explained how the men came to be back on the boat again, perhaps they had been in the *Luckenbach*'s lifeboats. At about 2100 on 4 August 1942, the USS *Tucker* sank. It is also reported that the stern sank during the morning of 4 August and the bow was scuttled by a diving crew later.

As indicated earlier, three men had been killed when the mine exploded and it was later learned that another three men were missing. They were:

Recovered

- Edward F. Hewitt, Water Tender
- Ray J. Stanbaugh, Fireman
- Glen R. Steinow, Fireman

Not Recovered

- James R. Clark, Chief Water Tender
- Raymond H. Ross, Boiler Maker
- Charles W. Simpson, Fireman,

The first three men were apparently buried on Santo. Lt Cm Terrell stayed on Espiritu Santo for a while before being returned to Washington, DC. While on Santo, he said that he played a lot of poker with the Australians and New Zealanders stationed there. Lt Cm Terrel's daughter, Mrs Jean Terrell Crane said that this event was the most devastating thing that ever happened to her father, losing his ship and the six men. She said that she had had thought there were only three killed.

The following is a memo about the sinking of the USS *Tucker*:

> **USS *TUCKER***
> **23/10/42**
> **MESSAGE FROM:** COMMANDER IN CHIEF US PACIFIC FLEET
> **TO:** THE SECRETARY OF THE NAVY
> **SUBJECT:** SINKING OF USS *TUCKER*
>
> Forwarded, concurring in the statement that no blame can be attached to the Commanding Officer, USS *TUCKER*.
>
> The causes of the loss appear to be:
>
> The failure by Commander South Pacific Fleet to note that the first despatch, which indicated that the mine field was laid, was four days old when decoded, and that the *TUCKER* and *NIRA LUCKENBACH* were then approaching Espiritu Santo.

> The misaddressing of COMINDIV TWO 302358, July, [a message obviously] to COMSOWESPAC [Command South West Pacific] instead of COMSOPAC [Command South Pacific]. The resonsibility for this is undetermined.
>
> The failure of COMINDIV TWO to note that notification of the field had not been made by COMSOPAC and not stationing warning craft until this was done.
>
> In view of the situation at that time no further action is recommended.
>
> C.W. Nimitz
> Commander in Chief
> Flag Office

On 19 November 1942 the Commander in Chief of the US Fleet and the Chief of Naval Operations advised that they concurred with Admiral Nimitz's recommendation that no action be taken against Lt Cm Terrell. This is quite reasonable considering the minefield had only been laid the day before and no notification was given to the *Tucker*, on in fact any ship, that the entrances to Segond Channel had been mined.

It obviously did not adversely affect Lt Cm Terrell's career since he later became an Admiral.

On 7 August 1942, the USS *Navajo* arrived at Santo to salvage the *Tucker*. As the bow had still not hit the bottom, the first action on 8 August was to sink it and this action caused the ship to be completely separated into two sections. Salvage operations were then carried out. It is not known for certain what was removed, but it is believed that the guns, turbines, anchors and chain were brought up. One thing that was certainly found was Paul Thompson's tool box which he was to retain till his death at the age of 81 in late 1999 or early 2000 (he later served on another destroyer and then the battleship USS *Texas* at the Normandy landing and the bloody invasion of Okinawa).

An interesting fact is that on 4 March 1943, the USS *Mahan*, the lead ship in the class of ship that the *Tucker* was derived from, was anchored in Segond Channel, not far from the *Tucker*'s last resting place.

It is also alleged that the *Tucker* was apparently used for target practice during the war, but Peter Stone in his book on the SS *President Coolidge* (see references) claims that it was bombed by American planes that thought the sunken warship was a submerged Japanese submarine.

In 1954, Reece Discombe, a New Zealander (who by the way discovered the fate of Jean-Francois de Galaup, Comte de Laperouse, who had left Botany Bay in Sydney, Australia, in February 1788 and was never seen again - Discombe discovered one of Laperouse's ships *La Broussole* or *L'Astrolobe* off Vanikoro in the Solomon Islands) dived on the *Tucker*. He recovered two condensers and a lot of three inch shells (two or three tons). He also removed the stainless steel ladders (remember it was basically stainless steel) and a boiler feed pump.

In the 1960s, Admiral William R. Terrell was retired and residing in Lawrence, Kansas, when a diver, who was exploring the USS *Tucker*, found his sword. This was a ceremonial sword given to him when he graduated from the US Naval Academy in 1921. Arrangements were made and eventually the sword was returned to Admiral Terrell. He and his wife were thrilled to have it back. It was remarkably well preserved and he had it stored it framed in a shadow box. The sabre was given to his only grandson after his death and is now in Georgia.

In the 1970s, the wreckage was further damaged with explosives by Australian diver Barry May (so he told me at the 1995 Sydney Scuba Expo) while salvaging metals (May was famous, or perhaps infamous for his use of explosives and long time Sydney diver, Les Caterson, reckons that May never dived without a stick of gelignite). He removed the condensers. Totally ripped into half by all the damage inflicted on it, the *Tucker* now lies in

21 metres of water off Aore Island with the stern section upright and the bow lying on its port side.

As indicated above, the superstructure is constructed of stainless steel and therefore the majority of the wreck is still in good condition considering it has spent more than 50 years underwater. Unbelievably, the handles of many hatches still work and some can still be opened and closed.

The stern section has a number of decks that can be examined, although the decking is rusted very badly and there are holes everywhere. Ammunition lies in some of the compartments and there are lathes in the rear section of the hull. The props are not visible (the shafts are under sand) but I assume that they were salvaged in the 1970s. This is not clear. The hull and superstructure are covered in corals, although the stainless steel bits can be brought to a brilliant shine by a few rubs of a glove. Amazing!

It is about 80 to 100 metres between the two sections of the wreck and along the way you encounter many pieces of engine. The boilers lie split between the two parts of the ship and the remains of the turbines are out in the open, still connected to the driveshafts which run under the stern section.

The bow section has a very large gun emplacement on it and there are a number of holes to examine, including a bathroom right behind the gun turret. You can swim right back at least three decks into the hull in front of the turret.

It is easy and safe to swim in and out of the wreck without a guide. There are lots of openings to examine and things to see. Anywhere else in the world the Tucker would be the main attraction of an area, but here, of course, the *Coolidge* overshadows it. Well worth seeing.

After the *Tucker*, it is an easy 20 minute ride back to the Luganville township. This dive is an excellent complement to the *Coolidge*. Aquamarine Diving does this dive on a regular basis.

References:

- *US Destroyer Operations in World War II* by Theodore Roscoe pages 45, 47, 48, 165, 214 and 529
- *Dictionary of American Naval Fighting Ships* - Vol III pages 590-1
- Various emails from Jean Terrell Crane, only Daughter of Lt Commander William R. Terrell, Skipper of USS *Tucker*
- Various emails from Hillary Ryan, Grand-daughter of Lt Commander William R. Terrell, Skipper of USS *Tucker*
- Personal conversation with researcher Peter Cundall, 22 September 1997
- Personal conversations with Barry May, Scuba Expo, Sydney, 1995
- Official USN Records from World War II
- *The Lady and the President - The Life and Loss of the S.S.* President Coolidge by Peter Stone
- *Destroyers OnLine* - www.plateau.net/usndd
- USS *Tucker* DD-374 Alumni Organisation - www.army.mil/VETINFO
- USS *Gamble* DD-15 Alumni Organisation - www.army.mil/VETINFO
- USS *Tracy* DM-19 Alumni Organisation - www.army.mil/VETINFO
- USS *Salem* Web Site on US Fighting Ships - http://www.uss-salem.org/danfs/destroy/dd374txt.htm

- Emails dated 3 and 7 June 2001 from David Crociani (dcrociani@home.net), friend of Chief Electrician Paul Thompson
- Peter Dunn's Australia at War Web Site - http://star.net.au/~dunn/ozatwar/campdarley.htm

Unkai Maru No 6

The *Unkai Maru No 6* was originally built as the SS *Venus* by William Gray and Co, West Hartlepool, England. She was powered by a single three cylinder coal powered steam engine with two scotch boilers (although in *WII Wrecks of the Kwajalein and Truk Lagoon* by Dan E. Bailey it is claimed that it is a diesel engine - see later in article) and was 3,152 tons gross, 93 metres (331.0 feet) long and 13.3 metres (49.2 feet) wide. The ship was launched in December 1905 for Cornhill Steamship Co Ltd. It was managed by Harris and Dixon Ltd of London.

In about 1911 it was sold to Leander Steamship Co Ltd (Managers Scaramanga Brothers) and in about 1918 the Manager changed to Petersen and Co Ltd. It was still registered in London. In about 1920 the SS *Venus* was again sold, this time to Thompson Steam Shipping Co Ltd with W. Petersen and Co managing her. This ownership was shortlived as in about 1921 she was sold to S. Nakamura of Kinoye, Japan, and renamed the *Unkai Maru No 6*. The ship appears to have remained owned by the same person/company with some minor name changes (1930 to Nakamura Gumi Ltd, 1940 to Nakamura Kisen KK) till its demise. At some time it was sold for £32,500. However, this is reported to have happened in 1911 to a Japanese company, possibly Nakamura Kisen K. K., and renamed *Unkai Maru No 6*. I think that this was possibly the sale in about 1921. It may have operated at some time under charter to the Japanese Navy (this is what is implied in *Hailstorm over Truk Lagoon* by Klaus Lindemann).

On 17 February 1944, the *Unkai Maru No 6* was anchored just over half a kilometre north of Uman Island, about a third of the way towards Eten Island. There a two different reports of the sinking of the ship in the two references listed below. The first report in *WWII Wrecks...* it is reported that during the first day of *Operation Hailstone*, the ship was attacked a number of times. The first was by Grumman TBF *Avenger* dive bombers from Strike 2B from USS *Essex* and hits on the port side and port quarter were reported. It was reported to be listing to starboard. Later the same day she was also hit by a plane from USS *Yorktown* (Strike 1EY) and USS Bunker Hill (Strike 3E). A fire was seen to erupt after this attack. The next day she was again attacked by Douglas SBD *Dauntless* dive bombers from the USS *Essex* with two direct hits on the bow and three hits on the rest of the ship.

In *Hailstorm...*, Klaus Lindemann says that at about 1200 hours on 17 February 1944, a plane from Strike 3D from USS *Bunker Hill* torpedoed the *Unkai Maru No 6* . It was reported that the next attack (Strike 3E) had two near misses with bombs and one miss with a torpedo (another hit a coral reef).

It is not clear which of these two reports is correct, but there is no obvious torpedo damage and, from what I remember, no obvious major bomb damage that might have caused the ship to sink.

The ship was found by Klaus Lindemann on 4 July 1980 during a search using photographs from the attack and a depth sounder.

Today the *Unkai Maru No 6* lies upright on a sandy bottom. The depth to the sand is about 40 metres and the decks 23 to 25 metres, shallower on the bridge.

After anchoring on the bridge, a short swim takes you to the bow where you can enter the forecastle which is totally open as the deck has been completely eroded away. There is a very nice bow gun and right at the bow you can drop into the chain locker where you will see that the port anchor must be out as the chain is nearly all out. The starboard chain is completely in the locker. There is a spare anchor behind the forecastle.

Hold 1 is very interesting (it is not empty like Lindemann says). There are sandshoes, boots, gas masks, bottles, shells, a wheelbarrow on the starboard side and piles of newspapers. Hold 2 is mostly empty except for some large bits of timber. There are no 'tween decks in either hold.

Behind hold 2 is the bridge. You can enter through the port side door and here you will see a small hold. This hold goes up through the superstructure and is full of coal (for the engine). It seems that this hold joins hold 2 as well. Around this area you can catch glimpses of the two boilers through various doors and even through the back of the small hold (you cannot enter these areas as it is too small).

The engine room can be entered through a door on the port side of the engine. From here you can only just see the engine and it is a bit of a tight squeeze to get into the main section of the room. You go first down and then around to your right before coming out in the engine room. However, once you do it is very open and light and the engine can be clearly seen. This is quite clearly a steam powered engine. You can also see the boilers from here but it is very crowded/cramped there. You can exit the engine room via a door on starboard side (the skylights are open but I cannot recall if you can enter/exit through them. From here you swim to the rear and exit out another door at the rear of the superstructure. Hold 4 is located here. It is empty as is hold 5, although there appeared to be some large hoses at the bottom.

The stern of the ship is quite nice. There is no gun but the steering mechanism is out in the open (as it was on ships of this vintage). There are two depth charges on the port side of the stern and another small hold. There is a very large prop which can be clearly seen. The depth here is about 38 metres.

Returning to the bridge you can see the large funnel. It is lying on the port side of the superstructure, with the top facing the stern. There is some damage in this area, but it is not clear if this was caused by the bombs or the ravages of time.

On this dive I did a 27 minute bottom time which meant I had to do decompression of about 11 minutes at 3 metres. An excellent wreck that does not have a great deal of artefacts to be seen but can be explored in one dive.

Dives:

- 12 November 1997

References:

- *Hailstorm over Truk Lagoon* by Klaus Lindemann
- *WII Wrecks of the Kwajalein and Truk Lagoon* by Dan E. Bailey
- *26 Principal Shipwrecks of Truk Lagoon* by Capt. Lance Higgs
- *Lloyds Register* 1906-07, 1911-12, 1913-14, 1919-20, 1921-22, 1922-23, 1925-26, 1931-32, 1935-36, 1941-42, 1945-46

Wreckage - Hundred Thousand Dollar Point

In Vanuatu there is a dive location call Million Dollar Point. This is located on Espiritu Santo, just seaward from the wreckage of the SS *President Coolidge*. This site gained its name from the then value of the surplus World War II equipment dumped there by the departing US forces in late 1945 or early 1946.

Elsewhere in the Pacific there are a number of similar dumps (but none rivalling Million Dollar Point in size or fame). In the Solomon Islands there are at least three more. One of these is a spot on the northern end of Tulagi Island in the Florida Islands group. Prior to the start of WWII, Tulagi was the colonial capital of the British Solomon Islands. The island is quite tiny, less than a kilometre across and not more than four or so long. There is only one road and that snakes its way around the outer edge of the island.

Tulagi is separated from the main island of the group by a small channel. The channel is quite shallow on the north-east corner of the island but it then deepens as you head west to the open sea or south to Tulaghi Harbour.

At the end of the War, a whole lot of equipment and supplies was dumped off the road just seaward of the shallow water (say about a kilometre at the most), just past the small village and petrol sale building visible from the sea and road. It has also been used as a rubbish dump since then as there are post-1970s items (beer cans for example).

You could do this dive as a boat or shore dive. The site extends over about 200 metres along the shore and to a depth of about 30 to 35 metres. Things to be seen include at least six trucks or jeeps, including at least one 6 wheel drive truck, a number of very large engines, dozens of complete wheels and tyres, many wheel rims, many tyres, some pontoons, thousands of Coke bottles, aluminium (?) canisters with screw lids at both ends of unknown purpose, girders, trailers, at least one tip truck,

All in all, a very interesting second dive after a deep dive on the USS *Aaron Ward* or USS *Kanawha*.

I dived with Solomon Sea Sports. This operation changed ownership in early 2002 and is now called Solomon Islands Diving, Dive Tulaghi and is run by a number of (ex-)Sydney divers. They have moved location to Tulaghi. It could also now be done as a shore dive following the dive operation's move to Tulaghi.

Wreckage - Million Dollar Point

During my first dive trip to Espiritu Santo in Vanuatu, I had opted not to dive Million Dollar Point as I had been told by some people that it was not really worth the loss of a dive on the SS *President Coolidge*. However, during my 1995 and 1998 trips to Santo I decided that I really did want to see the amazing junk pile that in some ways showed why the Allies won the Second World War.

Million Dollar Point is located on Segond Channel less than a kilometre to the east of the *Coolidge*. At the end of the war, the Americans had insufficient space on its ships returning to the US to fit all the masses of equipment that had accumulated in Vanuatu. It was considered, quite reasonably, that the space was needed to take the hundreds of thousands of troops home rather than the equipment. Additionally, it was also thought that if all the equipment returned to the US, it could severely affect the US economy as no-one would want to buy new trucks, bulldozers or jeeps when they could pick up a very cheap ex-Army one. It has also been reported to me that the vehicle/equipment manufacturers actually had clauses in their contracts with the US Government which forebid the return of equipment sent overseas. This was to protect their post-war market in the USA. I am not sure if this is true, but it could be correct.

Figure 124 – A dozer and other wreckage

Before and during the War, most of the non-native residents of Santo were French. Apparently the US offered to sell all the surplus equipment to the residents and/or the Colonial (French-English) Government (possibly to the residents via the Government) at a very low price. However, in a gamble that failed, the residents and the Government refused to pay in the expected knowledge that the Americans could only fit a small amount of the equipment onto their ships. The thought in the back of their minds was that the Americans would just up and leave and the equipment would be theirs to have free of charge. This was a bad tactic as the Americans had other ideas.

The American Army lined up all the surplus equipment on the shore with engines running. Hand throttles were slammed on and bricks placed on accelerators and the equipment rumbled into the channel, disappearing into water 35 metres deep just a few metres off the shore. From that day on, the site received its name due to the (then) value of the equipment dumped into the water.

After the war, there was some salvaging of the equipment by locals and fortune seekers. Reece Discombe, a New Zealander now resident in Port Vila, states that in 1948/9 he salvaged 14 bulldozers and hundreds of tyres. The bulldozers, despite being in the water for more than three years, were simply dragged out, washed in freshwater, new oil, batteries and electrics installed and they started. These dozers were sent to Australia where they were sold to the Joint Coal Board of New South Wales, Australia. He also reports that he salvaged propellers, propeller shafts, copper and copper wire.

If it was located anywhere other than a few kilometres from the SS *President Coolidge*, Million Dollar Point would be a major attraction in its own right, attracting divers from all

over the world. As it is, the site is an excellent second dive after a deep morning dive on the *Coolidge*.

Figure 125 – An upsidedown tip truck

This is an extremely easy dive, either from the shore (so long as the seas are flat) or from a boat. As soon as you enter the water, masses of equipment can be seen. One of the first things you can see is the wreck of the *Jedele* (this is what it looks like to me from my video but it is also reported as the *Dedelle*), a small island trader that was scuttled at Million Dollar Point in the late 1970s or early 1980s. It is the first thing seen as you approach from the eastern end of the site with its bow pointing up to the sun. Five or ten minutes gives you a good look around the whole ship. Under the wreck there are a number of tracked cranes.

After leaving the wreck, start following the wreckage to the west along the sand bottom (about 35 metres) and you will be amazed by the type and quantity of equipment dumped here. As well as dozens of six wheel drive Studebaker or General Motors trucks and Willys jeeps, you will see bulldozers, tracked excavators, graders, forklift trucks, tractors, steam-rollers, motorised scrappers, low loaders, prime movers, semi-trailers and even scaffolding. It is sometimes hard to figure out exactly what you are looking at, things are so intertwined.

After about 25 minutes of the dive the equipment peters out a bit so it is time to return to your starting point. Come up a bit into the 15 metre range for the return trip and you will see more wreckage. Steering wheels, spare tyres, Coke bottles and other items abound everywhere. Soon you see another shipwreck. This vessel is the *El Retiro*, a 600 ton vessel, which was being used by Donald Gubbay in a salvage attempt (both above and below the water). This ship was apparently anchored while salvaging the equipment (in the late 1940s or early 50s). When the tide went out, it is rumoured that a dozer blade went though the hull and it sank but Peter Stone in his book *The Lady and the President - The Life and Loss of the S.S.* President Coolidge, says that Reece Discombe (mentioned above - he was also a famous early diver and discoverer of Laperouse's ships in the Solomon Islands) told him that the ship sank when the wind blew the ship close to shore and then the tide went out and the hull was pierced by something, but not a bulldozer blade as he had never seen one in that area. Just desserts some may say. There is very good coral growth on the wreck and excellent fishlife in this shallower area.

Figure 126 – Andreas Thimm and Eddy Labour examine some of the wreckage

Further along you come across what looks like packs of sheets of corrugated iron in between trucks and dozers. Eventually you return to the bow of the *Jedele*.

There was a lot of material salvaged during the late 1940s and 1950s but even so, there is still a huge amount of equipment left to see.

Despite my earlier misgivings, this is an excellent dive and shows the extravagance of a victorious and rich nation. I would only suggest doing one day dive here (and maybe a night dive) as once you have seen one bit of wreckage, the rest is much the same. This is also good for non-divers who could easily see the main bits by snorkelling.

The visibility here is quite good, even better than on the Coolidge. An average of 20 metres is probably to be expected.

References:

- *The Lady and the President - The Life and Loss of the S.S. President Coolidge* by Peter Stone.

Yamagiri Maru

One of the more interesting wrecks in Chuuk Lagoon (not that any are uninteresting) is the *Yamagiri Maru*. According to the 1938-39 Lloyds Register, this ship was built by Mitsubishi Jukogyo KK (Mitsubishi Heavy Industries) of Yokahama, Japan, as a passenger/cargo vessel for Toyo Kisen KK and launched in 1938 (however other references say she was launched on 3 May 1939 and put into service on 30 June the same year). The *Yamagiri Maru* was 133 (436.4 feet) metres long, 17.5 metres (58.3 feet) wide and grossed 6,442 tons and powered by a single six cylinder Mitsubishi diesel engine of 1166 NHP. This gave her a maximum speed of 17.0 knots and a maximum speed of 15.0 knots. In about 1939 or 1940 the ship was sold to Yamashita Kisen KK.

The *Yamagiri Maru* was requisitioned by the Navy on 15 September 1941 as a special cargo transport. On 28 August 1943 she was torpedoed by USS *Drum* when travelling as part of a convoy west of Mussau Island in the Admiralties. The two torpedoes that hit caused a great deal of damage, so much so that when she arrived at Rabaul in Papau New Guinea for repairs she was shown by Allied aerial photographs to be lying down by the bow. The ship was in Rabaul from at least 1 September till 1 October 1943. When Rabaul was under almost daily attack at the end of 1943, she was taken (either under tow or her own power) to Chuuk for additional repairs. Photos taken early during *Operation Hailstone* (the attack on Chuuk Lagoon) show her still heavy in the bow, indicating that the damage may not have been completely repaired even by then.

The *Yamagiri Maru* was anchored to the north-west of Fefan Island and was attacked on 17 February 1944 and was possibly hit once by a dive-bomber and had two near misses by bomb and torpedo. The next day she was attacked by Curtiss Curtiss SB2C *Helldivers* from USS *Bunker Hill* and one scored a direct hit (maybe two). There was apparently a large explosion and fire and the ship must have sunk fairly soon after as photographs taken later that day show an oil slick in the vicinity of where the *Yamagiri Maru* was previously seen.

Today the wreck lies in 34 metres of water on its port side (why are most of the Chuuk wrecks that are on their side on the port side?? On second thoughts, so are most of the Sydney shipwrecks as is the SS *President Coolidge*!). The starboard hull is about 15 metres and it is a bit deeper towards the bow.

The most spectacular feature of this wreck is to be found in hold five which is the second last hold, near the stern. Inside the hold there are at least 30 huge shells for the Japanese battleships IJN *Yamato* and IJN *Musashi*. These giant shells are more than one metre long and almost half a metre across and weigh 1,460 kilograms each. Capable of sending a projectile 42 kilometres, the shells are mostly scattered around on the wall (floor as you look at the wreck) of the hold or on the side of the shaft tunnel. However, some are contained in their original packing which appear to be metal containers in mining box-cars.

This hold also contains a small steam-roller (perhaps two, it is a bit hard to identify everything). The front roller of the machine is quite obvious lying on the side of the shaft tunnel right in the middle of the hold and there is a large object near it which may be the engine section of the roller. I also was of the opinion that there was an artillery gun here as well. There is other machinery, perhaps heavy road building equipment. There is certainly a largish cement mixer (it may be part of a cement truck) but only the barrel can be seen right at the front of the hold as well as other small gauge railway cars. There are also some spare propeller blades as well as two (I think) complete small props. The blades are mounted on the rear wall of the hold (to your right as you enter). Even more amazing things are in this hold, including boilers. What an interesting hold!

Hold six is behind this hold and contains some drums. There are some more drums on the sand outside the hold. There are also two large ventilators on the sand in this area.

As you exit this hold and swim to the stern you will see a telegraph on the starboard side of the ship. The handle still moves a little. From here you can go over the stern and go to the

prop. There is a single propeller which has two of the four blades exactly aligned with the rudder.

The other main attactions of the *Yamagiri Maru* are holds two and three. From appearances, this is where the two torpedoes from the USS *Drum* appear to have hit. Hold two has a strange mixture of steel work, bent back and all over the place. You can also see where steel plates have been used to repair the damage from the *Drum*. Hold three has a huge hole in the bottom and sides of the hull. There is also considerable amount of repair work in this area as well, or at least that is what it looks like. It would take more than one dive to be able to fully appreciate the situation in these two holds.

However the damage here was caused, it obviously caused the sinking of the vessel although it is hard to fathom what exactly occurred. My guess is that the damage from the USS *Drum* torpedeos was repaired with plating and reinforcement and then the *Helldivers* hit the same area (or near misses) and caused the weakened hull to implode with devastating results.

Most people enter the damaged hold by going through the hole. This is very large and could easily accommodate 15 people entering at the one time. Inside this hold appears to have been a refrigerated hold as there are numerous coils of pipes and pumps. The hold looks like it used to be broken up into smaller compartments and a couple of these are still intact. The walls of the "fridges" are constructed of insulation blocks (about 0.5 x 0.5 x 0.1 metres). This is a material of tar-like substance covered with another material. In the second 'tween deck I found one that I entered through a small doorway. If you do this, be very careful as I accidently touched one of the blocks that make up the walls and was covered in tar over my legs and arms. Other than this, the hold appears to be empty.

It is a short swim to the bow past hold two (see comments above) and then hold one which is mostly empty except for some steel girders. There is a nice small gun on the bow.

Behind hold three there is the bridge. This can be entered from the first 'tween deck of hold three or from outside. The entire area here is very interesting and there is a lot to be seen.

The engine room can be entered a number of ways. The easiest is to go through the skylights or by going into the bridge near the sand and then swimming towards the stern and dropping a couple of decks towards the centre of the wreck. You can then ascend through a door into the engine room. This is a very large engine room, open, light and able to hold many divers. You can examine the engine (2 x 3 cylinders, in line), go behind the engine and drop under the main catwalks surrounding the engine. There is much to see. You can exit out any of the aforementioned entrances or there is another door on the starboard side towards the stern.

Hold four can be seen as you exit the superstructure. This is elevated over the level of hold five (the same as hold three). The hold is open at the top level but is covered on the bottom of the second 'tween deck. There is a door into the lower parts of the hold on the port stern corner of the hold. You can go through to hold five via a hole in the second 'tween deck or a door in the first 'tween deck.

The final parts of the dive can be spent on the outisde of the superstructure, especially the starboard (shallower) side. The funnel is still in place and has a very distinctive and prominent huge **Y** symbol of the former owner welded on it. There is also a compass resting on the funnel.

Like most of the wrecks in Chuuk Lagoon, this is a dive that can be done by any diver. The maximum depth is only 34 metres or so but the vast majority of a dive can be done in the 20 to 24 metre range. A dive time of about 38 minutes requires 7 minutes decompression at 3 metres. I have now dived this wreck three times and at least a couple of dives are really required to explore it. This is a must do dive on your trip.

Dives*:*

- 19 February 1994
- 5 November 1997

- 13 November 1997

References:

- *WWII Wrecks of the Kwajalein and Truk Lagoons by* Dan E. Bailey
- *Hailstorm over Truk Lagoon* by Klaus Lindeman
- *Lloyds Register* 1938-39, 1939-40, 1945-46

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Michael McFadyen is an extremely keen (some would say obsessed) Sydney scuba diver. He has dived in most South Pacific countries, mostly on shipwrecks. Countries where he has dived on wrecks include Papua New Guinea, Vanuatu, New Caledonia, the Solomon Islands, Federated States of Micronesia (Chuuk Lagoon), Norway and the Philippines. In Australia he has dived in New South Wales, Queensland, Western Australia, South Australia and the Northern Territory. As you could guess, his interests include shipwrecks but he also enjoys diving reefs, especially off Sydney and New South Wales. As of 16 November 2003 he has more thaan 1,900 logged dives.

As well as been a keen diver, Michael has had more than 300 articles published. These have appeared in *Sportdiving*, *DIVE Log Australasia*, *DIVE Log New Zealand* and *Scuba Diver.* His web site is one of Australia's most popular dive related web sites and attracts tens of thousands of hits a year. He regularly presents talks for dive clubs and other similar organisations.

Michael was the President of St George Scuba Club from 1998 to 2002 and is now a life member. He was the inaugural President of the Scuba Clubs' Association of New South Wales (SCAN).

This book is the product of Michael's research into the shipwrecks and aircraft of the Pacific Ocean that he has dived on over the years.

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