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# ***Japanese submarine attack on Sydney Harbour, 31 May 1942***

an address<sup>1</sup> to the Institute on 24 June 2010 by  
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*Three Japanese midget submarines, supported by five large mother submarines and two sea planes, attacked naval shipping in Sydney Harbour on the night of 31 May – 1 June 1942. Here, Bob Treloar outlines the background and build-up to the attack, the operation and its aftermath.*

31 May 1942 was the day World War II came to Sydney. Three Japanese midget submarines attacked naval shipping in the harbour that night. Until then, the war had seemed a long way off.

By May 1942, Sydney had undertaken the transition to a remote war relatively calmly. It was over two years since the first soldiers had left for the Middle East to fight the Italians, Germans and French. Australian forces had departed to fight the Japanese in Malaya and had been captured in Singapore – but even that had seemed a long way off. There had also been a German sea-mining campaign off Sydney Heads in late 1940, but that had claimed its last victim some 14 months earlier.

For Sydney, the first sign of war appeared on 16 May 1942 when a Japanese submarine had surfaced and attacked a merchant ship off Newcastle. However, the approach of the war should not have been a surprise.

## **Background and Build-up to the Attack on Sydney**

At 0750 hours on Sunday 7 December 1941, 430 aircraft launched from six Japanese aircraft carriers attacked military installations on Hawaii. The surprise at Pearl Harbour was complete<sup>3</sup>. In less than two hours, the United States lost eight battleships, three cruisers and three destroyers sunk or damaged; and nearly 24,000 of its personnel were killed. The Japanese employed five midget submarines at Pearl Harbour, but not very successfully<sup>4</sup>. None survived the raid and two have still not been found.

Ninety minutes before the strike on Pearl Harbour, Japanese troops landed in Malaya. They concentrated their forces against widely-dispersed defending troops who were unprepared, poorly equipped and supported

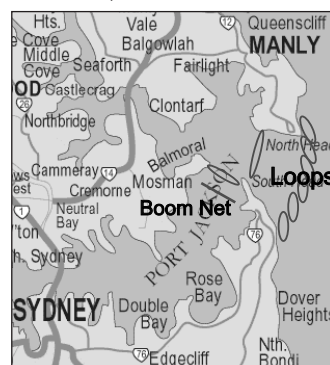
by faulty British intelligence. Four hours later Singapore was bombed. On 12 February 1942, 10 weeks after the first landing on the peninsula, Singapore surrendered.

A week later, on 19 February 1942, Darwin was attacked by aircraft from essentially the same Japanese Carrier Task Force that had attacked Pearl Harbour. War had arrived on Australia's doorstep. Strict censorship, however, left the Australian population unaware of the level of devastation inflicted on Darwin and downplayed the loss of life.

## **Sydney 1942**

In Sydney, people went about their everyday activities and were only slightly inconvenienced by the war. A 'brown out' slowed people making their way home after a night at the pictures or from a dance; and enforcing a 'black out' was considered too difficult. The ferry service continued to operate to and from Manly. Ferry commuters had become used to seeing friendly warships in the harbour and the fortifications that surrounded the harbour to defend it against attack by air and by sea.

An early radar system had been established on the coast and anti-aircraft guns were positioned to defend the city, including gun emplacements on the harbour bridge pylons. There were gun positions and observers with searchlights on the harbour's main headlands. To guard the harbour against a sea-borne attack, electronic loops designed to detect the passage of submarines had been installed on the sea bed – six loops outside the heads and two just inside (see map). There was an anti-submarine boom net, in three sections, across the harbour.



*Left: Sydney Harbour, showing the locations of the electronic loops and the boom net*

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<sup>3</sup>Considering the superpower politics being played out in the Pacific at the time, the attack should not have been a surprise. The oil embargo against Japan by the United States, Britain, Holland and Australia as a consequence of Japan's invasion and continued war in China resulted in Japan having only 18 months' supply of oil available for the homeland.

<sup>4</sup>There has been speculation that torpedoes from one of the midget submarines struck two of the battleships (*West Virginia* and *Oklahoma*) during the air attack.

In May 1942, however, preparations were far from complete, personnel were not fully trained and, to the population at large, the war still seemed a long way off. Prime Minister Curtin was appalled at the lack of concern shown by the Australian people, but was unable to fully convince them to seriously consider working on a war footing<sup>5</sup>. In Sydney, the boom nets were not yet completed – there were still two gaps of about 400 metres at each end; and there had been insufficient training of the forces guarding the sea-borne approach. On the night of the attack, two of the six outer electronic loops were not working. The training of pilots to spot submarines had been hampered by the lack of friendly submarines to support them, despite two old United States submarines having provided limited training opportunities.

### **Japanese preparations for the attack**

The Japanese High Command intended to mount attacks along the south-eastern coast of Australia to cause alarm to the population and to divert Allied forces away from the main arena of battle; and, of course, to inflict damage on major warships<sup>6</sup>. Japanese aircraft had mounted attacks on towns across northern Australia, including Townsville<sup>7</sup>.

On 17 February, a plan was formulated within the Japanese Naval High Command for a possible midget submarine raid on Sydney, based on seaplane<sup>8</sup> reconnaissance of likely targets in February-March. As a prelude to the attack, a reconnaissance flight was conducted over Sydney on 23 May by the seaplane from submarine *I-29*. The flight went unnoticed by the various lookouts around the harbour. The seaplane capsized on return when landing beside the *I-29* and sank. The pilot was rescued and reported a number of large warships in the harbour. The report was encoded and despatched to Japanese Headquarters. In fact, there were over 40 warships of various shapes and sizes in the harbour, including the heavy cruisers, USS *Chicago* and HMAS *Canberra*, the light cruiser, HMAS *Adelaide*, a destroyer – the USS *Perkins*, plus a number of smaller warships, including the corvette, HMAS *Geelong*, and an old Dutch submarine, the *K-9*<sup>9</sup>.

The next day (24 May), the admiral commanding the Japanese 6<sup>th</sup> Fleet ordered the planned attack by five fleet submarines. Three submarines (*I-22*, *I-24*, and

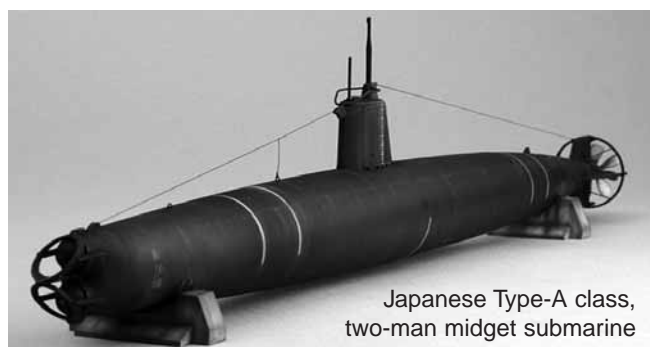
*I-27*), each carrying a midget submarine, had left the island of Truk on 18 May in anticipation that the attack would be on either Sydney or Suva. Two other submarines carrying reconnaissance aircraft (*I-21* and *I-29*) were also assigned to support the attack.

On 29 May, two days before the attack, a final reconnaissance flight was undertaken by the seaplane from the *I-21*. The plane was heard and seen, but was misidentified as one of the four seaplanes from the cruiser, USS *Chicago*, moored near Garden Island. The *Chicago* stated that none of its seaplanes were flying, but no further action is reported to have been taken by the local authorities. The over-flight, however, alarmed the captain of the *Chicago* who placed his crew and ship on high alert against possible attack.

Also on this night, a direction-finding radio station in Wellington, New Zealand, obtained a fix on what was reported to be a Japanese submarine high-frequency radio transmission<sup>10</sup>. The fix placed the submarine 35 miles east of Sydney Harbour. However, the Australian Navy's major anti-submarine ships were deployed on escort duties with a convoy of five troop-ships carrying an Australian force to Port Moresby; so there could be no immediate follow up of the report.

### **Japanese Midget Submarine**

The midget submarines that attacked Sydney were Japanese Type-A class, two-man midget submarines. Each was 78.5 feet (23 metres) in length overall, with a 6.1 foot (1.9 metres) beam, a 6.1-foot (1.9 metres) draft, a height of 10 feet (3 metres) and a displacement of 46 tons submerged. It was propelled by a single-shaft, 600 horsepower electric motor and was powered by acid-cell batteries. It carried no generator and required recharging by a mother submarine or tender. At top speed (23 knots surfaced; 19 knots submerged), the submarine's battery charge would last only 55 minutes, with a range of only some 18 nautical miles (33 kilometres). At a submerged speed of 2 knots, however, the submarine had an effective range of 100 nautical miles (185 kilometres). The armament consisted of two 18-inch torpedo tubes mounted one over the other. The torpedoes contained 1000 pounds (450 kg) of explosive in the warhead and each submarine carried a 300-pound (140 kg) scuttling charge.



Japanese Type-A class, two-man midget submarine

<sup>5</sup>There had been a series of rolling strikes by unionists seeking higher wages and the production of munitions was not as effective as it needed to be.

<sup>6</sup>German armed auxiliary cruisers operated off the south-eastern Australian coastline from 1940 to 1944 sinking 22 ships indirectly with mines or by gunfire.

<sup>7</sup>There has been speculation that, had the invasions at Milne Bay and Port Moresby been successful, Townsville was the next likely point of invasion.

<sup>8</sup>Launched from Japanese submarine *I-25* – the seaplane also looked at Melbourne, Hobart, Wellington, Auckland and Suva. Sydney and Suva were picked as the most profitable targets.

<sup>9</sup>The Dutch submarine, *K-9*, had escaped from its base in Indonesia and had been transferred by the Dutch to the Australian Navy for use as a training vessel for anti-submarine warfare.

<sup>10</sup>The radio message intercepted may have been the report that the *I-21*'s seaplane had confirmed that there were major ships in the harbour and that the attack would go ahead on the night of 31 May.

## Attack on Sydney Harbour

On 31 May 1942, the three mother submarines launched their midget submarines seven miles north of the heads between 1600 and 1640 hours (about 30 minutes before last light) – *HA-14* (off *I-27*), *HA-17* (off *I-24*) and *HA-21* (off *I-22*). This would have been quite a sight for any aircraft or ship in the vicinity. There are records of the ship, *Oranje*, exiting the Heads at 1604 hours, while entering the harbour were the *Cobargo* at 1717 hours, the *Erina* at 1750 hours and the *Mortlake Bank* at 1855 hours. All would have passed close to, if not over, the intruders; however, no sightings were reported.

### HA-14

At 2000 hours, *HA-14* was recorded passing over the electronic detection loop just inside the harbour entrance, but the operator confused the reading with that of a Manly ferry passing over the loop about the same time. Shortly afterwards, due to a navigational error, the *HA-14* became entangled in the boom net off Watson's Bay and attracted the attention of the night-watchman. With his offside, he rowed out to investigate and reported to the Duty Officer at 2130 hours that there was a suspicious object caught in the net. The Duty Officer despatched the patrol boat *Yarroma* to investigate. The *Yarroma* initially stood off from the unknown object in case it was a magnetic mine. It was not until 2227 hours that the object was confirmed as a submarine. Before the patrol boat was given permission to open fire, the two-man crew detonated their scuttling charge, killing themselves and sinking their craft.

### Confusion of events

At 2148 hours, there was a second detection across the electronic loop. This was *HA-17* entering the harbour. Again, because of the electronic clutter and the inexperience of the operator, it was not noted.

This was about the time that the patrol boat, *Yarroma*, was endeavouring to identify the *HA-14* caught in the boom net. The order for all ships in the harbour to take anti-submarine precautions was only given when *HA-14* blew itself up.

By then, *HA-17* was loose in the harbour and was not detected until 2250 hours when its periscope was spotted in a searchlight beam by gun crews on the USS *Chicago*. They opened fire, but without success. The midget submarine was heading towards the Sydney Harbour Bridge and was about 200 metres off Garden Island when it was seen by shore-based staff.

At the same time, the third midget submarine, *HA-21*, partly submerged, was approaching the electronic detection loop just inside the Heads, but had not crossed it. It was spotted by an unarmed auxiliary patrol boat which promptly illuminated the conning tower by searchlight and radioed for help from HMAS *Yandra*, a small freighter that had been pressed into service as an anti-submarine vessel.

Armed with a 4-inch (100 mm) deck gun and depth charges, *Yandra* was about 400 metres away and raced to the scene. Unable to bring her gun to bear, she rammed the *HA-21*. When next seen, the midget submarine was 100 metres distant, slowly turning away, listing to starboard with its bow out of the water and appeared damaged. The *Yandra* subsequently launched a pattern of six depth-charges after which she reported that *HA-21* had disappeared.

Meanwhile, there was some confusion on the harbour. The last passenger ferries were still making their runs across the harbour and irate ferry captains were sounding their sirens. Navy crews were trying to return to their ships, the large warships were getting up steam to leave the harbour and tracer rounds and searchlight beams could be seen beneath the clouded sky.

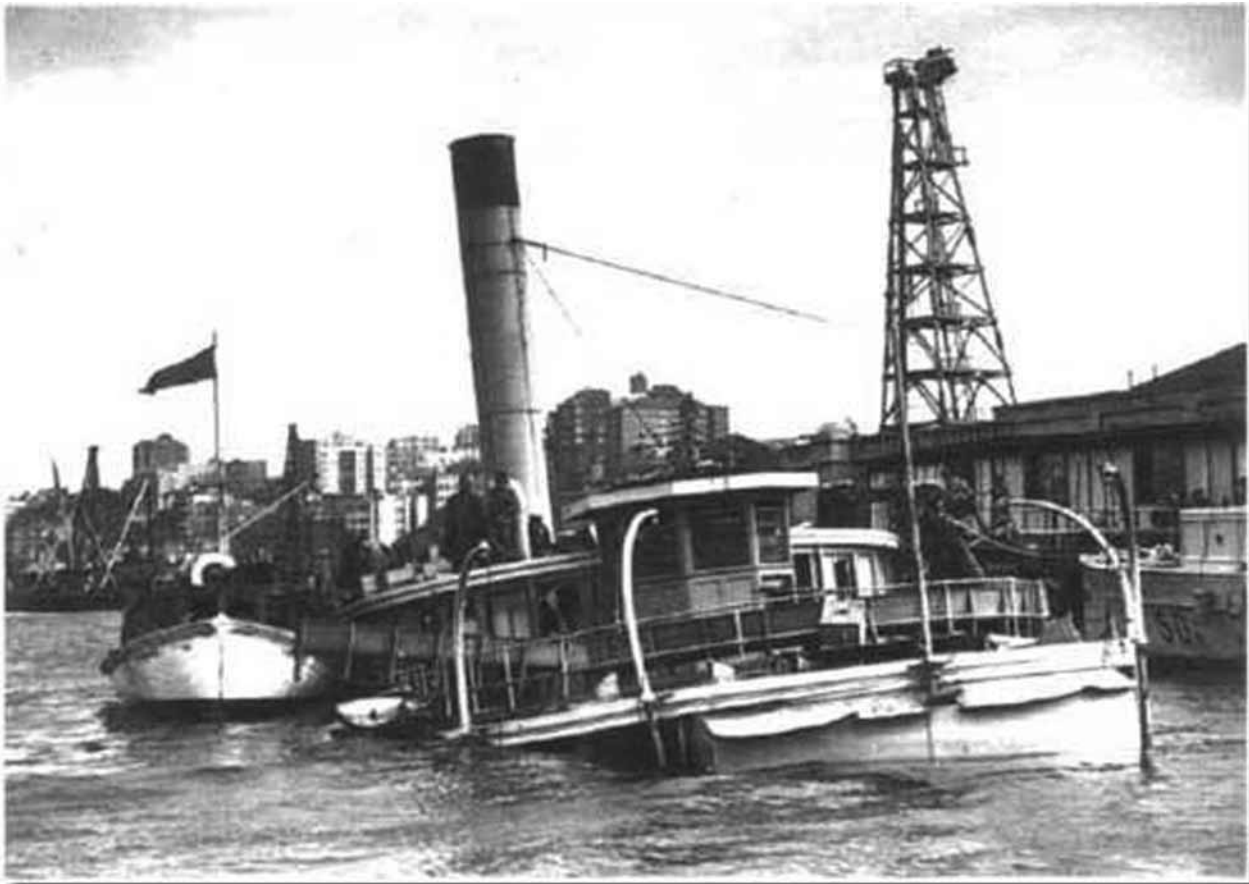
Small patrol boats were checking the boom nets while the electronic loop staff now realized that unidentified craft had passed unnoticed. At the same time, the main dock at Garden Island was fully illuminated with ships being repaired under flood lights. It was not until 2325 hours that the lights were ordered to be turned off.

### HA-17

Amongst all this confusion, *HA-17* had returned from its cruise towards the Sydney Harbour Bridge and was seen moving along the northern side of the harbour by crewmen on the corvette, HMAS *Geelong*. The *Geelong* was at its berth at Garden Island some 1200 metres from the periscope, nevertheless she opened fire on the midget submarine – but, when you consider the difficulty in hitting a piece of metal the size of a house down pipe at night at that distance, you can understand why they failed to register hits.

*HA-17*, now near Taronga Park Zoo, took up a firing position against the USS *Chicago* using the lights of Garden Island dockyard to illuminate the target. It would have been magnificently silhouetted at a range of about 2000 metres. As luck would have it, the dockyard lights were extinguished before *HA-17* could fire its torpedoes, although *Geelong* was still illuminating the scene and shooting at the periscope. When fired, both torpedoes missed, passing in front of *Chicago*. One failed to explode and the other travelled under the Dutch submarine, *K-9*, and detonated just after 2330 hours under the former ferry, *Kuttabal*, which was being used as temporary accommodation for sailors.

With this large explosion there was even greater activity in the harbour. Most of the major ships started to leave. In the midst of this confusion there are two interesting readings on the inner electronic loop. One, at 0158 hours detected movement leaving the harbour, and is now believed to be *HA-17* making good its escape. The other, at 0301 hours going in, corresponds to the time of a visual sighting from the *Chicago*, which was leaving the harbour. In all likelihood, this was *HA-21* making its way into the harbour.



HMAS *Kuttabul* at Garden Island after a torpedo fired by *HA-17* exploded beneath her

### **HA-21**

At 0500 hours on 1 June, there was a report of a suspicious object in Taylor Bay, the next bay around from the zoo<sup>11</sup>. The object was the midget submarine, *HA-21*, last seen just inside the heads and depth-charged by the *Yandra*. The *HA-21* had not only survived the ramming and depth-charging, but the crew had regained their bearings and after four hours had entered the harbour in search of a target. This time, though, they would not be as lucky.

Two residents of Taylor Bay, Mr. Dulhunty and his son, spotted *HA-21* and opened fire on it with a 0.22-inch rifle. The submarine was subsequently attacked with depth-charges by patrol vessels *Sea Mist*, *Yarroma* and *Steady Hour*, and sank to the bottom. Unable to manoeuvre their vessel and with no chance of escape, the two crewmen took their own lives. Investigations by a diver next day found the electric motor still slowly turning the propeller, but with no sign of life inside. Four days later, the submarine was recovered and the bodies of the crewmen removed.

### **Summary of the attacks**

Three midget submarines attacked Sydney Harbour on the night of 31 May – 1 June 1942. Early in the

evening, *HA-14* was entangled in the boom net and the crew detonated their scuttling charge, destroying the midget submarine and killing themselves – it did not fire a torpedo. Almost 12 hours later, *HA-21* was depth-charged into submission and the crew also committed suicide – it, too, did not fire a torpedo<sup>12</sup>. *HA-17* fired its two torpedoes at a major warship, both missed, one failed to explode and the other damaged an old submarine and sank a ferry being used for temporary accommodation, killing 21 Naval ratings.

There had been warning signs which went unheeded but which should have alerted those responsible for the defence of Sydney:

- a brazen submarine attack on a freighter off Newcastle;
- three sea-plane reconnaissance flights over Sydney;
- a radio message from the Japanese submarine after the second flight over Sydney – this message was decoded by the Signals Unit in Melbourne;
- the New Zealand report that a submarine had sent a radio message while off Sydney Heads; and

<sup>11</sup>Taylor Bay has no beach and housing is some distance from the water, an attractive site for a vessel wishing to remain undetected.

<sup>12</sup>There was a report that the submarine's torpedoes were stuck in their tubes. Perhaps the tubes were damaged by the ramming and depth-charge attack by the *Yandra* earlier in the night.

- electronic detection loop information that unidentified objects had passed into Sydney Harbour.

Once the attack was launched, however, the men in the fight did well. Even though one of the outer loops was not working; the midget submarines were not detected as they passed over the inner detection loops; and the anti-submarine boom net was 400 metres short on each end; there were still sufficient defences in place to deal with two of the three midget submarines. Further, despite it taking two hours (from 2030 until 2230 hours) for word of the presence of the submarines to be passed to the ships in the harbour, the defences within the harbour caused the third submarine to miss a large vulnerable target.

The Japanese mission used five major fleet submarines and lost three midget submarines and their crews, and two aircraft for the successful firing of one torpedo. This could hardly be classed a military success.

### The Aftermath

The three Japanese submarines that launched midget submarines waited south of Sydney off Port Hacking for three days for news of their charges, before moving on to other operations.

The two sunken midget submarines were recovered by Australian authorities over the next week. The bodies of the crews were removed and were given a formal naval funeral, complete with firing party, and were honoured under the Japanese flag. The ashes of the four submariners were transported to Japan by the Japanese ambassador.

The two midget submarines were made into a composite, matching the stern from one and the bow of the other. The composite submarine was displayed around the country before being placed in the War Memorial in Canberra.

The 21 Australian, New Zealand and British sailors, who were accommodated on the *Kuttabul* and killed in the torpedo attack, were honoured with a formal military funeral and are buried at Rookwood cemetery in Sydney.

The *K-9*, which was berthed alongside *Kuttabul* during the torpedo attack, was so badly damaged that thereafter it was only good for use as a fuel barge.

Finally, the fate of the *HA-17*, the midget submarine that disappeared after firing its torpedoes at the *Chicago* and hitting the *Kuttabul*, remained a mystery until November 2006 when it was discovered by a group of recreational divers off Sydney's northern beaches. The location suggests the crew were searching for their mother ship, but in the wrong direction<sup>13</sup>. The Australian Government decided to leave the wreck undisturbed

and declared it an historic wreck. Approach within 500 metres of the wreck is now forbidden.

### Conclusion

During the Japanese midget submarine attack on Sydney Harbour on 31 May 1942, a combination of good luck, quick thinking and bravery averted what could have been a major disaster for the Allies. Nevertheless, the attack was one of a series of dramatic events that shook the confidence of the Australian population.

The attack was not an auspicious start for the Japanese midget submarine force. Even so, it did not deter the Japanese Naval High Command from exploiting the concept. The operations of midget submarines captured the imagination of the Japanese Navy and there were many volunteers for these operations.

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### Acknowledgements

"The History Team" kindly allowed me to base this paper on an address which the team prepared. The United States Navy Historical Centre provided details of the five midget submarines launched for the attack on Pearl Harbour. Details of the discovery of *HA-21* in 2006 were obtained from contemporaneous media reports.

**The Author:** Bob Treloar joined the Institute in 2001, was Vice President from 2005 to 2007 and became President in September 2007. He enlisted in the Royal Australian Air Force in 1966, graduating with wings in 1968. He served in South Vietnam with No. 9 Squadron in 1969-70, flying helicopters in support of the Australia Task Force; and twice in Butterworth, Malaysia, with No. 75 and No. 3 Squadrons respectively. He later commanded Australia's first operational F/A-18 squadron, an Air Defence Radar Wing, and the Integrated Air Defence System under the Five Nations Defence Agreement at Butterworth Malaysia. He was Commander Australian Theatre (now Joint Operations Command) from 1999 to 2001, where he was responsible for planning and supporting Australian Defence Force (ADF) operations in East Timor, and provision of ADF support to the Sydney Olympics. He was appointed an Officer in the Military Division of the Order of Australia in 2000. Following retirement from the Permanent Air Force in 2001, he transferred to the Air Force Active Reserve and has since chaired the Air Worthiness Board and participated in several inquiries. [Photo of Air Vice-Marshal Treloar: the author]

<sup>13</sup>The mother submarines were waiting to the south, off Port Hacking, while the *HA-17* was found off the northern beaches.