

# The History of the Twentieth Century

## Episode 363

### “Midway”

#### Transcript

[music: Fanfare]

“Get to the other fellow with everything you have, and dump it on him.”

US Navy Admiral William Halsey, articulating his aircraft carrier tactical doctrine.

Welcome to *The History of the Twentieth Century*.

[music: Opening War Theme]

Episode 363. Midway.

Last week, I told you about the Japanese campaign in the Southwest Pacific. That episode covered events that took place before the Battle of Midway and then the decisions that were made on both sides in the aftermath of Midway. Today we’re going to circle back and look at the Battle of Midway itself.

I want to set the stage for today’s episode by taking a look at the Hawaiian Islands. Hawaii was first discovered by Polynesian sailors in the 13<sup>th</sup> century. The British explorer James Cook is generally credited as the first European to discover the islands in 1778, although the Spanish say that a Spanish ship plying the route between the Philippines and Mexico came across them more than 200 years earlier.

Cook named them the Sandwich Islands, and they were known by that name in English for many years. English speakers now refer to them by the name of the largest island in the archipelago and call them the Hawaiian Islands. Hawaii began to trade with the British, and gunpowder weapons provided by the British enabled King Kamehameha I to enforce his rule over the archipelago in the form of a united Kingdom of Hawaii by 1810. The flag of the kingdom incorporated the British Union Jack as an expression of Hawaii’s close relationship with Britain.

The Kingdom of Hawaii sought and received diplomatic recognition from a number of Great Powers, including the UK, France, and the United States. Large numbers of white Europeans and

especially Americans settled in Hawaii over the course of the 19<sup>th</sup> century, beginning with Protestant missionaries, then traders and business people.

These newcomers brought with them a series of diseases that were previously unknown in Hawaii, beginning with Captain Cook's sailors, who introduced gonorrhea and syphilis into a society that had a remarkably relaxed and permissive attitude toward sex and welcomed the British sailors with open arms, so to speak. By the time Captain Cook made his second voyage to the islands, the Hawaiians were a lot less welcoming, having experienced venereal disease for the first time. Anger at this may have played a role in the murder of Captain Cook.

VD was just the beginning. In 1803, yellow fever reached the islands. In 1845, influenza. In 1848, measles. In 1865, leprosy, and then cholera, mumps, tuberculosis, even bubonic plague. The Hawaiians had no experience of or immunity to any of these diseases. In fact, it is not clear that the Hawaiians experienced any infectious diseases at all before Westerners found them.

The Hawaiians became notorious in Western countries for their casual attitude toward sex, beginning with that warm welcome they gave to Captain Cook's crew the first time around. Hawaiians never wore more than a loincloth for men or a grass skirt for women; it is pretty warm there, you know. Children went naked until they reached puberty, and even among adults, nudity in the home was typical. Nudity in public, even public intercourse, were less common, but not unheard of. To the Hawaiians, marriages were casual partnerships, to be entered into or abandoned at will, sex was for pleasure and everyone encouraged to participate, and sexual relations outside of marriage or with a partner other than one's spouse were regarded as no big deal; neither were homosexual relations, and children were encouraged to experiment with sex from an early age.

The Protestant missionaries were naturally horrified by this state of affairs and expended great effort to convince the Hawaiians to be ashamed of their sexuality, like normal people. They pointed to the diseases that were ravaging the islands and told the Hawaiians that it was their acceptance of nudity and promiscuity that had made them vulnerable to these epidemics. Famously, the missionaries created a leper colony and forced thousands of Hawaiians suffering from this disease to leave their families and friends and community to live apart, ostensibly for the good of everyone else. Leprosy is not a particularly infectious disease, but it is one easy to stigmatize.

The population of Hawaii is estimated to have been around 300,000 when Captain Cook arrived. By the end of the 19<sup>th</sup> century, after these many epidemics, the native population had shrunk to less than 40,000, and native Hawaiians had become a minority within their own country. This made it possible for Americans living there to overthrow the monarchy, establish a Republic of Hawaii, and then petition the United States government for annexation, which was formalized in 1898. I told you about that in episode 4. Hawaii was incorporated as the Territory of Hawaii, and so it was in 1941, when the Japanese attacked Pearl Harbor.

By the way, only in the 21<sup>st</sup> century did the population of native Hawaiians recover to where it was in 1778. In our time, a majority of these native Hawaiians live in the mainland United States. Native Hawaiians in Hawaii constitute only about 10% of the population of the islands.

That's the history of Hawaii; now let's look at the geology of Hawaii. The Hawaiian Islands sit on the Pacific tectonic plate, which is moving northwest at a rate of about 75 millimeters, or three inches, per year. The islands are volcanic in origin; the volcanoes emerge because under the Pacific Plate sits a hot spot in the Earth's mantle. This hot spot drives a column of magma up through the Pacific Plate, forming an underwater volcano. As the volcano grows, it emerges from the sea and forms an island.

But remember that the plate is moving. That means the volcanic island rides the plate north and west, until it is no longer sitting over the hot spot and is no longer volcanic. Afterward, the ocean erodes the no-longer-volcanic island until it disappears.

If you think about it, you'll realize this means that from that hot spot, you would expect to find a chain of islands stretched out to the northwest. The largest island would be the one closest to the hot spot, while the other islands would gradually grow smaller and smaller as you proceed farther and farther northwest along the chain.

This is exactly what you see when you look at the Hawaiian Islands.

There's another twist to this story. Coral reefs grow around tropical islands. Ocean erosion gradually wears away the rock of the island, but the coral keep building their reef. This means that even after the island itself disappears under the sea, a ring of coral persists where the shore of the island used to be. What you get is a semicircular barrier reef, all or some of which is above water, leaving one or more small islands arranged in a circle that persist even after the volcanic island itself is underwater. This is called an atoll. There are over 400 atolls in the Pacific Ocean.

This is what happened to the northwesternmost of the Hawaiian Islands; they have disappeared, leaving behind atolls. The Hawaiian island farthest to the northwest is Kure Atoll. The next farthest is Midway Atoll, so named because it is approximately midway between North America and Japan. It is of Midway I wish to speak today.

Midway was sighted by an American sealing ship in 1859. The captain claimed the atoll on behalf of the United States, making Midway the first Pacific island claimed by an American.

For this reason, although Midway is geographically part of the Hawaiian Islands, administratively, it is not. It has been governed directly by the US Federal government since 1859.

Finding a use for Midway was another matter. One finally emerged in 1903, when a station was built on the island as part of a trans-Pacific telegraph cable. The staff of the station noticed Japanese poachers hunting birds on Midway and complained to the US government, which was

then under the administration of Theodore Roosevelt. President Roosevelt dispatched a unit of 21 Marines to Midway, to guard the island and the cable station.

In 1935, Pan American Airlines began offering air travel between the United States and various destinations in Asia by flying boat. These flights included stopovers at Midway; for a while there was a small hotel on the island that catered to air travelers on layover.

In 1941, as tensions rose between the United States and Japan, the US built an airstrip and gun emplacements on Midway. These installations were shelled by two Japanese destroyers on the day of the Pearl Harbor attack and were subjected to the occasional nuisance attack in the months that followed.

Two weeks ago, I told you how Japanese Admiral Yamamoto Isoroku devised a plan to ambush the US Navy. With the loss of USS *Lexington*, the Americans now had just three fleet carriers operating in the Pacific; the Japanese had six, plus a few smaller light carriers. These three American carriers, USS *Yorktown*, *Hornet*, and *Enterprise*, were America's most powerful weapons in the naval war against Japan. Yamamoto proposed drawing those three American carriers into an ambush, where they could be struck by the elite air units of Japan's six carriers, the same carriers and air units that had proved so devastating at Pearl Harbor.

Yamamoto suggested laying the trap at Midway. A Japanese-occupied Midway could serve as an air and naval base that would put Japanese forces within striking distance of Pearl Harbor, not for merely one attack, but for repeated bombing runs, possibly even leading to a ground invasion of Oahu. Therefore, the Americans would have no choice but to oppose any attempt to seize Midway with all the force at their disposal. That meant the three carriers. Yamamoto's plan called for keeping Japan's six carriers hidden well to the rear of the Midway invasion force. When the Americans closed to attack, their three carriers would be pummeled by Japan's six.

The Japanese naval command was not sold on Yamamoto's plan. They were focused on the Southwest Pacific. To the Japanese Admiralty, taking New Caledonia and severing the link between Australia and the United States was the highest priority. They would have rejected the plan, except that Yamamoto threatened to resign. So they reluctantly approved it, but with no set date for its execution.

Then came the Doolittle raid. American bombers attacked Tokyo, sowing fear and doubt among the Japanese public and causing the Navy no small embarrassment. Something had to be done, and suddenly Yamamoto's plan looked a lot more appealing. If Japan had air and naval assets at Midway, it would become impossible for the Americans to sneak up on Japan as they had during the Doolittle Raid. The Home Islands would no longer be vulnerable.

Now the Admiralty was enthusiastic over Yamamoto's plan, and they wanted it carried out as soon as possible. "As soon as possible" meant the first week in June. Oh, and by the way, Admiral Yamamoto, your superiors have two minor adjustments to your plan.

First, the Navy wanted to launch an amphibious invasion of the Aleutian Islands. This was all part of the plan for preventing any further American bomber attacks on the Home Islands. The admirals worried that the US might build a bomber base in the Aleutians within range of Japan, or a naval base that could send raiders to attack Japanese shipping.

The United States already had a naval base in the Aleutian Islands, at Dutch Harbor on the island of Amaknak. There was an Army post as well, and air units stationed in mainland Alaska responsible for the air defense of the islands. The Japanese plan was to send a force of two light carriers, five cruisers, twelve destroyers, and six submarines, escorting four troop transports. This force would first attack Dutch Harbor by air, to distract the Americans, then land ground forces on the western Aleutian islands of Adak, Attu, and Kiska, which would be used to base air and possibly naval units as a forward defense against any attack from Alaska.

Yamamoto would have preferred these ships be assigned to his Midway ambush instead, but they represented only a small portion of the Navy. Most important for his plan was to have the six big carriers, the same six that had launched the planes that attacked Pearl Harbor, available for the Midway operation, along with as many other ships as possible.

Well, about that, Admiral? Recall that Japan's two largest and newest fleet carriers, *Shokaku* and *Zuikaku*, were assigned to provide air cover for the Japanese advance in the Southwest Pacific.

The Aleutians to Midway to the Gilbert Islands to Fiji: these islands lie roughly along a north-south line that divides the Pacific Ocean into two almost halves, more or less along the International Date Line. Once these positions were all in Japanese hands, they could be used to base naval and air units that would patrol the ocean. No American task force would ever be able to sneak up on the Home Islands again. Indeed, any American ship that dared cross that line would be detected and probably bombed, after which a Japanese task force would meet it and finish it off.

Once this defensive line was achieved, the Americans actually, truly would have no choice but to negotiate. For real, this time.

Naturally, Admiral Yamamoto was less than thrilled by these changes to his plan. For him, the purpose of the attack on Midway was not to take control of Midway—though admittedly that would be nice—but to draw the American carriers out to the middle of the Pacific, where they could be ambushed and sunk. Not sunk like at Pearl Harbor, where most of the battleships were eventually refloated and repaired, but sunk as in way down at the bottom of the Pacific where they would never be seen again.

Yamamoto's original plan envisioned three American carriers ambushed by six Japanese carriers, a two-to-one advantage which would mean the Japanese side would have a much larger air force piloted by the best pilots in the Japanese Navy, which meant the best pilots in the world. But if *Shokaku* and *Zuikaku* were to be elsewhere, that would reduce the ratio to four to three.

Granted, after you factored in the Japanese Navy's better and more experienced pilots and the element of surprise, Japan should still have a substantial advantage, but Yamamoto wanted more than a substantial advantage; he wanted an overwhelming advantage.

Now you may be thinking, don't the Americans actually have four aircraft carriers in the Pacific now? I told you last week how *Lexington* was sunk just after the Battle of the Coral Sea, but that would still leave *Saratoga* and *Enterprise*, which were already part of the Pacific Fleet when the Japanese attacked Pearl Harbor, along with *Enterprise's* sister ships, *Yorktown* and *Hornet*, which began the war in the Atlantic Fleet, but were transferred to the Pacific Fleet in 1942.

*Saratoga* was damaged by a torpedo launched from a Japanese submarine, and was in Bremerton, undergoing repairs. As you know from last week's episode, *Hornet* and *Enterprise* were in the task force that launched the Doolittle raid, after which they returned to Pearl Harbor. The Japanese believed *Yorktown* had been sunk along with *Lexington*, but in fact it survived to return to Pearl Harbor for repairs. Even so, those repairs were estimated to require three months.

So in sum, as the Japanese prepare for their Midway assault and ambush, the Americans have only two operating carriers in the Pacific, *Enterprise* and *Hornet*. *Lexington* is sunk, and *Saratoga* and *Yorktown* are undergoing repairs. Against these two carriers, Yamamoto will send Japan's other four fleet carriers, *Agaki*, *Kaga*, *Soryu* and *Hiryu*, along with seven battleships, fifteen cruisers, 42 destroyers, and 22 submarines. These numbers include ships escorting the landing force that was assigned to take Midway.

Those are pretty good odds.

[music: MacLeod, *With the Sea*.]

The odds may have looked good in Tokyo, but the Americans had one huge advantage the Japanese were unaware of: they had broken the Japanese Navy's code.

Unlike the German Enigma, which required a machine, the Japanese Navy code required only codebooks and a paper and pencil. At the heart of the system was a set of five-digit numbers. Each of these numbers corresponded to a word or phrase. The Navy only used numbers divisible by three, because that allowed for a checksum, which is an easy way to detect miscalculations; if you decoded a number and it wasn't divisible by three, that meant go back and check your work.

Whether or not a number, even a large one, is divisible by three is simple to determine. You add up the digits, and if that number is divisible by three, then the big number is, too.

This system allowed for 33,333 possible five-digit numbers. The Japanese actually used about 28,000 of them, which were assigned to represent words, phrases, numbers, Roman letters, and whatever else the Navy thought useful. You could look up the numbers in a code book. A second book contained 300 pages of tables of random five-digit numbers. The system worked like this: you wrote out your message in numbers, using the first book, then turned to the second book and,

beginning at an certain point on a certain page, you would begin adding each random number in sequence to the numbers in your message, creating a string of numbers that would be meaningless to anyone who didn't have the code books. You would include in the message the information on where you began in the second book, and the recipient would use their code book to look up those numbers and subtract them out to recover the original message. The second book, the one with the tables of random numbers, would be changed every so often.

The Japanese Navy believed their code was unbreakable. Where have we heard that one before? As you already know from past episodes, the Americans and the British both had broken the Japanese diplomatic code. They both knew about Operation Barbarossa before it began and tried to warn Stalin, to no avail. The day before the Pearl Harbor attack, the Americans actually decoded the messages from the Japanese foreign ministry to their embassy in Washington faster than the embassy staff could.

But the Navy code, introduced in 1939, was far more difficult. The American cryptanalysis project, codenamed "Magic," designated this code JN-25. In early 1941, the Americans and the British pooled their research into JN-25. Together they had only deduced the meanings of about 2,000 of the 28,000 code numbers. In August 1941, the Japanese changed the second book, meaning the codebreakers would essentially have to start over. The second book was changed again just days before the attack on Pearl Harbor, leaving Magic in the dark at a critical moment.

After Pearl Harbor, the Americans greatly expanded their efforts to break JN-25. Most of these efforts came from analysts at Pearl Harbor, using techniques similar to the ones Bletchley Park used to decode Enigma messages; for example, many Japanese naval communications began with the phrase, "I have the honor to inform Your Excellency..." And with the outbreak of war, the number of Japanese messages available to analyze grew tremendously.

Magic had some advantages over Ultra. The British Ultra project was monitoring German communications mostly from fixed radio stations. In the Pacific, individual ships were sending messages in JN-25. The Americans used the British huff-duff technology to pinpoint where these ships were, and since their messages presumably related to operations they were involved in, that offered useful clues. When codebreakers had interpreted a message, or thought they had, the US Navy sometimes sent a submarine to investigate and confirm the message had been correctly understood.

By May 1942, Magic had enough staff to analyze about 40% of Japanese Navy messages and were able to interpret 10-15% of the code numbers.

One important breakthrough came when the American analysts discovered the Japanese were using Roman letters as codenames for their operations. In January, a message referenced landing force R. The Americans guessed that R stood for Rabaul and the message meant that the Japanese were going to seize that port, which proved to be correct.

After the Doolittle Raid, Japanese radio traffic spiked again, providing the Americans with a clearer picture of Japanese fleet assignments. At the end of April, decrypted intercepts began to reference an objective designated MO. The Americans correctly guessed that stood for Port Moresby, as I told you last time.

By then, the Americans were also picking up messages referring to an objective designated AF. The intelligence analysts at Pearl Harbor had previously seen code designations beginning with “A” used to refer to locations in the Hawaiian Islands, and they made the educated guess that AF stood for Midway, which seemed to them a logical choice for a Japanese attack. But Admiral Chester Nimitz, commander of the Pacific Fleet, wanted more than an educated guess.

Naval intelligence headquarters in Washington dismissed the idea that the Japanese would strike at Midway. To them, it was clear the Japanese were committed to their advance in the Southwest Pacific. But at Pearl Harbor, as more intercepts were decrypted, the picture was getting clearer and clearer. There would be a strike toward Midway, and sooner rather than later. By early May, they were also picking up indications of an attack on the Aleutian Islands, which they concluded would be a feint, intended to draw the US Navy away from Midway.

Later in May, the cryptanalysts at Pearl Harbor worked out the system the Japanese used to encode dates in their JN-25 cipher and now they had not only indications of the attack, but an actual timetable. The strike on the Aleutians would come on June 3, and the first air strikes on Midway June 4, with the goal of invading and occupying Midway by June 7.

Now Admiral Nimitz was beginning to get interested in these decrypts, but headquarters continued to insist that a strike on Midway was unlikely, verging on impossible. So Pearl Harbor decided to prove it. They sent a message to Midway via undersea cable, which the Japanese would not be able to intercept, and told Midway to send Pearl Harbor a radio message in the clear saying that their water desalination plant was not working and they were short on fresh water.

Midway sent the message as instructed on May 20. Two days later, Pearl Harbor decrypted a Japanese message reporting that “AF” was running out of fresh water. The Japanese had taken the bait; apparently no one thought to ask why Midway was sending this vital information over the air and in the clear. This was enough to convince Washington that the attack on Midway was real and that it was coming in less than three weeks.

Ironically, the Japanese Navy had planned to change the second code book, the one with the random numbers, on May 1, which would have cut off the Americans’ source of intelligence until the analysts at Pearl Harbor could work out the new code, and deprived Nimitz of this crucial information, but the Japanese Navy’s preparations for the Midway operation were complex, and it was thought simpler to defer introducing the new code book until everybody was ready. The new code was introduced on May 27, but by then Nimitz knew what he needed to know.



Nimitz knew the attack was coming, on what day it would arrive, and the composition of the enemy force, led by four aircraft carriers. Now he had to decide how he would respond. He had three carriers at his disposal at Pearl Harbor, *Enterprise*, *Hornet*, and *Yorktown*. He calculated that the aircraft from those three carriers, plus air units stationed on Midway, would be slightly more than what the Japanese were bringing. He boosted the garrison on Midway to 2,000 and decided to engage the Japanese fleet.

Nimitz also knew that part of the Japanese plan was to deploy a line of submarines west of Hawaii to provide an early warning of any American ships approaching from Pearl Harbor, as well as to scout Pearl Harbor by seaplane to see which ships were in port. In order to accomplish this, a seaplane would fly from the Japanese-controlled Marshall Islands to the French Frigate Shoals, an uninhabited atoll in the Hawaiian Islands. There it would land, be refueled by a Japanese submarine, then take off, fly over Pearl Harbor, and return to base. Nimitz stationed a couple of small ships at the French Frigate Shoals to scare off the submarine and make this operation impossible.

The stage was set, but before Midway came the attack on the Aleutians, which proved to be much more than a diversionary raid. The Japanese task force for this operation included two light carriers. Planes from these carriers bombed the American naval base at Dutch Harbor on June 3 and again on June 4, killing 43 Americans, destroying 14 American planes and setting the base's oil tanks on fire.

On June 6, the Japanese landed on the Aleutian island of Kiska, near the western end of the archipelago, capturing the ten occupants of the US Navy weather station on the island. The following day, Japanese troops landed on the island of Attu, the westernmost of the Aleutian Islands, with a civilian population of 47, 45 of whom were Native Alaskans. Five of these people were killed during or after the invasion; the remaining 42 were taken to a prison camp on the Japanese island of Hokkaido. Half of them, 21, died in Japanese captivity.

The Japanese set up a radar station and based aircraft at the two islands. These were meant to protect the Home Islands from attack, but it came as quite a shock to the Canadians and Americans both that the Japanese had actually landed on US territory in North America. They saw these islands as a potential base for Japanese air or sea raids on the west coasts of Canada or the United States.

But for the moment, Japanese operations in the Aleutians were overshadowed by the dramatic events to the south, at Midway. The Japanese changed their code book on May 27. Pearl Harbor could no longer read Japanese radio messages, but they could and did take note of the fact that a number of Japanese ships, including four carriers, stopped broadcasting, which meant they were underway and under radio silence.

Yamamoto ordered his fleet divided into four groups, with the carriers together in one of them. He had them spread out. This was done to increase the chances that a Japanese ship would sight

any Americans in the vicinity—the Japanese did not have radar on their ships—and if one of the Japanese groups was spotted by the Americans, they would not know the full strength of Yamamoto's force and would be lured into making an attack. Yamamoto himself was in another of these four groups, in the rear, aboard the Japanese battleship *Yamato*, the largest and most powerfully armed battleship in the world, which served as his flagship.

The next day, May 28, Task Force 16, with *Enterprise*, *Hornet*, two cruisers, and six destroyers, left Pearl Harbor. Admiral Halsey should have been in command, but he was in the hospital with a skin condition brought on by stress. He'd been under a lot of stress these past six months. In his place, Admiral Raymond Spruance was in command.

That same day, the carrier *Yorktown*, having limped its way home from the Coral Sea, entered Pearl Harbor. Repair estimates were that it would take three months to put *Yorktown* back into action, but Nimitz didn't have three months, so they did it in two days. On May 30, *Yorktown* went underway as part of Task Force 17, also escorted by two cruisers and six destroyers, commanded by Admiral Frank Fletcher, who would assume overall command of the Midway operation. Task Force 17 passed the line of Japanese reconnaissance submarines just hours before those submarines were in position.

On June 3, a PBY Catalina reconnaissance seaplane operating out of Midway spotted the Japanese invasion force, mistakenly reporting it as the main force. Nine B-17 bombers took off from Midway to attack this force, but scored no hits. On the Japanese side, Admiral Yamamoto was disturbed that the Americans seemed to be on alert and had detected the invasion force so quickly, but he drew solace from the fact that the Americans had only found the invasion force. They would not know of the four carriers coming up behind it, or so he thought, which were perfect conditions for the ambush.

At dawn the following morning, June 4, another US reconnaissance plane spotted the Japanese carrier fleet and reported its location just as the Japanese carriers launched an air strike against Midway. The Americans detected the incoming strike by radar and were prepared with heavy antiaircraft fire. The Japanese succeeded in bombing Midway, but the airstrip was left intact and American planes were still taking off.

The attacking planes reported back to their commanders that a second strike on Midway would be required. As if to underscore the point, ten American bombers attacked the Japanese soon after, though again they failed to damage any of the Japanese ships.

The Japanese commander on the scene, Admiral Nagumo Chuchi, faced a difficult decision. His orders from Admiral Yamamoto specified that he should keep half of his bombers prepared to attack the American carriers the instant they were spotted. In accordance with those orders, the carriers *Akagi* and *Kaga* already had torpedo bombers armed and on deck, ready to strike. But at just this moment, the ground-based planes on Midway seemed the greater threat. Japanese reconnaissance planes had found no American ships, and if the Americans only found out about

the Japanese Midway operation yesterday, it would likely be tomorrow at the earliest before any carriers would arrive on the scene.

Nagumo ordered that the torpedo bombers be re-armed with general-purpose bombs to attack Midway. It was 7:15 AM.

Re-arming the bombers would require lowering them one by one by elevator to the hangar below, where their torpedoes could be swapped out, then raising them up to the flight deck afterward. This would take some time.

At 7:45, a Japanese reconnaissance plane reported sighting a number of American ships, but did not specify what kind of ships. Two minutes later, a force of sixteen Marine Corps dive bombers based on Midway, under the command of Major Lofton Henderson, appeared. The American pilots were inexperienced and Japanese fighters shot down half of them. The surviving bombers attacked *Hiryu*, but scored no hits. Moments later, a squadron of B-17s based on Midway appeared and also bombed the Japanese fleet, but again the Americans failed to score any hits.

Even so, the Americans were far better prepared than the Japanese had expected. And then at 8:00 came the bad news: the scout plane reported sighting an American carrier. Some of the Japanese officers found this report hard to believe. If one or more American carriers were in the vicinity, why had they not already struck? The three attacks so far had all come from Midway, and notably had not scored a single hit, which tells you something about the quality of American planes and pilots, does it not?

Nagumo reversed his earlier order, and instructed that the bombers be re-re-armed with torpedoes. But the Japanese planes that had attacked Midway earlier in the morning would soon return, low on fuel and unable to wait. The carriers would have to recover those planes before launching an attack on the American ships. So the decks were cleared to make room for the returning aircraft.

It was 9:20 before the last of them landed.

Meanwhile, Task Force 16 was closing on the Japanese. The cautious Spruance wanted to get closer and confirm the location of the Japanese ships before launching a strike, but his staff pointed out that a strike force launched now might catch the Japanese carriers while they were refueling the planes returning from Midway, and in that state they would be particularly vulnerable.

Spruance ordered the strike and sent everything *Enterprise* and *Hornet* were carrying. The planes began taking off at 7:00. Behind them, *Yorktown* waited until 9:00.

Nagumo ordered his ships to turn away from Midway, in order to avoid another ground-based attack, but this had the effect of making it more difficult for the American strike force to find them. The American fighter escorts ran low on fuel and had to turn back.

The American torpedo bombers found the Japanese first. Unfortunately for them, their slow, aging Devastator bombers were sitting ducks for the nimble Japanese Zeroes. All fifteen of *Enterprise*'s bombers were shot down, as were ten out of fourteen from *Hornet* and ten out of twelve from *Yorktown*.

Collectively, these bombers managed to release just nine torpedoes, and not a single one of them struck their target. American torpedoes had serious design flaws that the Navy had not yet addressed. These torpedoes tended to run ten feet deeper than they were set for, and many passed harmlessly under their targets. Their magnetic detonators repeatedly detonated their torpedoes too soon, while their contact detonators failed to detonate even on a direct hit.

On the flight decks of the Japanese carriers, the crews cheered on their fighter pilots. But the fighters were by now low on fuel and ammunition. The ones still in the air were chasing the surviving American bombers southeast. On the carriers, torpedo bombers were being armed and fueled for a strike on the American fleet. It was 10:20.

Then the American dive bombers appeared, attacking from the southwest. The Japanese fighters were not in position, and the Japanese fleet had dispersed during earlier attacks, meaning their antiaircraft fire was dispersed, too.

The Americans spotted two carriers preparing to launch—*Akagi* and *Kaga*—and split up to attack both. *Kaga* was hit by four bombs on the flight deck, which burst into flames. One of the bombs landed next to the bridge, killing *Kaga*'s captain and most of the ship's senior officers.

A few minutes later, it was *Akagi*'s turn. Only one American bomb landed on *Akagi*, but it went down the elevator shaft and exploded in the upper hangar deck among dozens of airplanes fully fueled and armed. Burning fuel ran down to the lower hangar deck and detonated torpedoes stored there.

The huge columns of black smoke rising from the two wounded carriers guided the rest of the dive bombers to the fleet. Planes from *Yorktown* attacked *Soryu*, scoring multiple hits and once again igniting fuel and detonating bombs that were sitting on deck.

The three burning carriers remained afloat, as none had suffered any hull damage, and some thought was given to whether they could be towed back to Japan and repaired, but in the end the order was given to scuttle all three.

*Hiryu*, the only surviving carrier, quickly launched its own strike planes, which followed the American planes back to their ships and attacked the first carrier they came across, which was *Yorktown*. Three Japanese dive bombers landed bombs on the American carrier, damaging its flight deck and its boilers, bringing the ship to a dead stop in the water shortly after noon. The Japanese pilots reported they had seriously damaged, possibly sunk, an American carrier.

Damage control teams aboard *Yorktown* doused the fires and got the ship moving again, albeit slowly. An hour or so later, a second wave of torpedo bombers from *Hiryu* came across *Yorktown*. They didn't see any flames, so they assumed this was a different American carrier and attacked. Two torpedoes struck *Yorktown* and the ship began to list. A half hour later, *Yorktown*'s captain gave the order to abandon ship.

The pilots of this second wave reported that they had sunk a different carrier. Back aboard *Hiryu*, morale soared in spite of the day's losses. They had taken out two of the three American carriers. Plans were made to launch another strike, after the planes returned and were refueled and rearmed, in the hope of finding and sinking more American ships.

They never got the chance. *Enterprise* launched an attack force of unescorted dive bombers, its own and planes and pilots formerly stationed on *Yorktown*. They reached *Hiryu* at 5:00 PM. Four bombs struck the carrier, disabling it.

Darkness fell. Admiral Nagumo still had hopes that the powerful surface ships in the Japanese fleet could deal with the Americans. The Japanese ships began moving east.

On the American side, the commanders recognized the danger of the Japanese surface ships finding them at night. The Japanese were experts at night combat at sea. The Americans chose the better part of valor and withdrew eastward. The Japanese searched through the darkness in vain.

Aboard *Yamato*, the suggestion was made that the Japanese surface fleet bombard Midway in the hope this would force the Americans to return. But that would also expose the fleet to further air attacks when they no longer had air cover. Reluctantly, Admiral Yamamoto ordered the Japanese to scuttle *Akagi* and *Hiryu*—the other two carriers had already sunk—and withdraw. Yamamoto wept; *Akagi* had once been his ship.

Two of the Japanese heavy cruisers, *Mogami* and *Mikuma*, collided in the dark and were not able to keep up with the rest of the fleet during their withdrawal. On June 6, American planes sank *Mikuma* and damaged *Mogami*, though it was able to limp back to Japan.

The Americans did not escape unscathed. That same day, June 6, as *Yorktown* was being towed back to Pearl Harbor, a Japanese submarine struck the carrier with two torpedoes. A third struck the destroyer *Hammann*, which sank immediately. *Yorktown* was abandoned. The damaged carrier lasted through the night, but sank at 7:00 AM the following morning, June 7.

The rest of the US fleet pursued the retreating Japanese, but could not reach them. On June 8, the carrier *Saratoga*, now fully repaired and armed, joined the American fleet, which spent two more days launching search planes to hunt for Japanese ships, in vain. On the tenth, they headed home.

Prime Minister Tōjō Hideki was attending a party thrown for the diplomats of the German and Italian embassies when he received the news from Midway. He could not resist noting that the

Army had opposed the Midway operation before ordering that the news of the defeat be kept strictly secret. Upon their return to Japan, the wounded sailors and air crews were kept in isolation. The Japanese task force in the Aleutians was ordered to complete the landings at Kiska and Attu, and the Japanese government would cover up the disaster at Midway by trumpeting the capture of those two islands.

In the United States, there was jubilation. As Admiral Nimitz put it, “Pearl Harbor has now been partially avenged.”

Midway was a decisive American victory; the most important naval battle of the Second World War and the most important of the twentieth century. It has to be included on the short list of the most important battles in all of naval history.

Before Midway, the Japanese had six fleet carriers in the Pacific to the Americans’ three. After Midway, they had two: *Shokaku* and *Zuikaku*, and neither of them was in very good shape. Japan had one further carrier under construction. The US had three carriers in the Pacific before the war; now, with the return of *Saratoga*, they still had three, with three more under construction. If you measure naval strength by number of carriers, the US has now pulled into the lead, and given America’s much larger industrial base, Japan has no hope of catching up.

The tide was beginning to turn in the Pacific. Admiral Yamamoto had predicted he could run wild in the Pacific for no more than six to twelve months; in fact, he barely got his six.

It was not just the loss of the carriers. Japan lost nearly 250 of its best aircraft, and more than three thousand Japanese sailors and air crew died in the battle. Japan would be hard pressed to replace the planes, but these lost pilots were the cream of the Japanese Navy and some of the best pilots in the world. Japan would be forced to replace them with raw recruits rushed into service and not nearly so skillful. The same was true of the mechanics and deck crews aboard those four carriers. It took an American carrier about an hour to launch all its planes. These Japanese carriers could do it in fifteen minutes. Now many of those skilled and experienced crews were gone.

The Americans won the battle because they had broken the Japanese naval code, and perhaps because the crews aboard the Japanese carriers had been on combat duty ever since Pearl Harbor and were tired and losing their edge. Even so, there was no small amount of luck involved. It is easy to imagine an alternative Battle of Midway, one in which the Japanese spotted the American carriers sooner and launched strikes against them sooner, and we would today be talking about this battle as Pearl Harbor, phase two. Midway would have been occupied and even Hawaii put at risk.

I’ll give the last word to Admiral Nimitz: “Had we lacked early information of the Japanese movement, and had we been caught with carrier task forces dispersed...the Battle of Midway would have ended far differently.”

We'll have to stop there for today. I thank you for listening, and I'd especially like to thank Clinton for his kind donation, and thank you to Gabrielle for becoming a patron of the podcast. Donors and patrons like Clinton and Gabrielle help cover the costs of making this show, which in turn keeps the podcast available free for everyone, so my thanks to them and to all of you who have pitched in and helped out. If you'd like to become a patron or make a donation, you are most welcome; just visit the website, [historyofthetwentiethcentury.com](http://historyofthetwentiethcentury.com) and click on the PayPal or Patreon buttons.

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And I hope you'll join me next week, here on the *History of the Twentieth Century*, as we go back to Europe and look at the deeds of one of the most notorious of the Nazis. The Man with the Iron Heart, next week, here, on *The History of the Twentieth Century*.

Oh, and one more thing. The June 7 edition of the *Chicago Tribune* reported that the US Navy had advance knowledge both of the size of the Japanese fleet and that its target was Midway. While it did not specifically say this was because the US had broken Japanese naval codes, that was the clear implication.

The US Justice Department investigated the matter and contemplated prosecuting the newspaper under the Espionage Act, but it was unclear whether the Act applied. A grand jury refused to indict anyone at the newspaper. There were also concerns that a prosecution would only call further attention to the leaked information.

In fact, the Japanese Navy did not pick up on the story and continued to believe their code was unbreakable.

[music: Closing War Theme]