

December 7, 1941: The Attack on Pearl Harbor



U.S. Weather Bureau Synoptic Weather Map for 12:30 p.m. GMT (2:00 a.m. Hawaii time) December 7, 1941, 6 hours before the attack on Pearl Harbor began. At the time there was an area of high pressure located in the central Pacific, resulting in gentle northeasterly trade winds and partly cloudy skies on the Hawaiian Islands. Winds at Honolulu were from the northeast at about 9 to 14 mph. The temperature at the time was 71°F, with a dewpoint of 62°F.

hen Japan attacked U.S. naval and air bases at Pearl Harbor, Hawaii, on December 7, 1941—drawing the United States into world war for the second time since the beginning of the twentieth century—several elements came together to ensure a victory for Japan. Japan had begun developing a plan of attack several months before, and virtually every detail and contingency was taken into consideration. The secret nature of the plan guaranteed an element of surprise, while the fact that the attack was scheduled to take place on a Sunday—

when many military personnel would be enjoying a relaxing weekend away from their duties and when naval ships were most likely to be in harbor following training maneuvers—meant that the American forces would not be well prepared for an attack. The one element that the Imperial Japanese forces could not fully prepare for was the weather. But while they could not accurately predict the weather on the day of the attack in the early planning stages, fortuitous conditions ultimately helped secure their victory.

December 7 dawned partly cloudy over the Island of Oahu. At the Federal Building in downtown Honolulu, the U.S. Weather Bureau station reported a 7:30 a.m. temperature of 73° F, with a relative humidity of 64 percent. Winds were out of the northeast at 21 mph. Cloud cover comprised 30 percent of the sky, and light precipitation—accumulating to 0.03 inches—had fallen throughout the morning, ceasing at 5:40 a.m.

Several miles away at Pearl Harbor Naval Air Station, the 8:00 a.m. weather observation indicated low-level cumulus clouds at 3,500 feet covering 60 percent of the sky and moving east. The daily journal portion of the station's Monthly Aerological Record contained the following entry for Sunday, December 7: "Scattered cumulus with ceiling between 1,000 and 5,000 feet. Light northeast winds. Good visibility with average flying conditions. Late afternoon shower."

In oral histories compiled years later, eyewitnesses recalled a more serene start to the day than that reflected in the meteorological records. "It was a beautiful Sunday morning—bright blue skies and hardly any clouds," remembered Theodore Ho, who attended Sunday school that morning with his two older brothers. Brooks Henderson, Jr., a twenty-one-yearold marine guard at Pearl Harbor, recalled, "It was a beautiful, warm, sunny, and clear day. No one could possibly imagine what was to follow."

About 230 miles to the north, the seas were rough as the fleet of Japanese war ships, including 6 aircraft carriers, closed in. At 5:30 a.m., Captain Mitsuo Fuchida, the Imperial Navy air commander who led the first wave of the attack, reported for his final briefing. Commander Shogo Masuda, air officer of the aircraft carrier *Akagi*, on which Fuchida was stationed, asked how he felt about taking off in the dark. Fuchida later recalled that "the sea was rough, and there was a strong wind blowing. The sky was completely dark, and as yet the horizon was not visible."

The role that weather played in the execution of the attack is best described in Fuchida's own words, related years later:

We flew through and over the thick clouds which were at 2,000 meters, up to where day was ready to dawn. And the clouds began gradually to brighten below us after the brilliant sun burst into the eastern sky. I opened the cockpit canopy and looked back at the large formation of planes. The wings glittered in the bright morning sunlight.

The speedometer indicated 125 knots and we were favored by a tail wind. At seven o'clock, I figured that we should reach Oahu in less than an hour. But flying over the clouds we could not see the surface of the water and, consequently, had no check on our drift. I switched on the radio direction finder to tune in the Honolulu radio station and soon picked up some light music. By



The forward superstructure and Number Two 14" gun turret of the USS Arizona ablaze after the attack.

turning the antenna, I found the exact direction from which the broadcast was coming and corrected our course, which had been five degrees off.

Continuing to listen to the program, I was wondering how to get below the clouds after reaching Oahu. If the island was covered by thick clouds like those below us, the level bombing would be difficult; and we had not yet had reports from the reconnaissance planes.

In tuning the radio a little finer, I heard, along with the music, what seemed to be a weather report. Holding my breath, I adjusted the dial and listened intently. Then I heard it come through a second time, slowly and distinctly: "Averaging partly cloudy, with clouds mostly over the mountains. Cloud base at 3,500 feet. Visibility good. Wind north, 10 knots."

What a windfall for us! No matter how careful the planning, a more favorable situation could not have been imagined.

As the first bombs fell at 7:55 a.m., explosions rocked the island of Oahu, catching both military personnel and civilians off-guard. The first attack wave lasted until 9:20 a.m.; the second ended at 9:45. At the Weather Bureau office in Honolulu, the observer on duty made the following entry in the miscellaneous notes section of the daily weather observation form: "Earthquakes at 9:50 a.m., 9:57 a.m., 10:24 a.m." Although it is possible that Oahu experienced earthquakes that morning, the shaking noted by the observer was likely the result of continued explosions following the attack.

When it was over, more than 2,300 Americans lay dead, and another 1,100 were wounded. Japanese casualties numbered fewer than 200.

Weather not only played a direct role in the planning and successful execution of Japan's attack on Pearl Harbor, but it also served as convenient coding for covert messages Japan sent to its overseas officials in the days leading up to the attack. Japan used the code to announce the nations with which it was severing diplomatic relations, indicating that an attack was imminent. In the case where Japanese-Soviet relations were to be broken, the message would read KITA NO KAZE KUMORI, or "North wind, cloudy." If Japanese-British ties were to be cut, the message would read NISHI NO KAZE HARE, or "West wind, clear." If Japan were to sever diplomatic relations with the United States, the message would read HIGASHI NO KAZE AME, or "East wind, rain." Tokyo advised that the coded messages would appear at the middle and end of the weather forecast broadcast over shortwave radio and that each message would be repeated twice. What to many would seem like a simple weather report would serve as a sign to Japanese officials to begin destroying all sensitive documents and prepare for war. w

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