



## When Intelligence Made a Difference

— WWII —

### The Doolittle Raid

by Peter C. Oleson

#### The Raid

**F**our months after the devastating air attack on Pearl Harbor the US struck back at Imperial Japan. On April 18, 1942 sixteen B-25 Army Air Corps B-25 medium bombers, in the “first air operation to strike the Japanese archipelago,” bombed targets in five cities – Tokyo, Yokohama, Yokosuka, Nagoya, and Kobe.<sup>1</sup> The raid caught the Japanese by surprise and killed about 50 people and injured some 400.<sup>2</sup>

#### The Plan

“President Franklin D. Roosevelt expressed to the Joint Chiefs of Staff in a meeting at the White House on 21 December 1941 that Japan be bombed as soon as possible...”<sup>3</sup> The man put in charge was Lieutenant Colonel Jimmy Doolittle, a renowned aviator. His concept was to use Army Air Corps Mitchell B-25 medium bombers, launched from the aircraft carrier USS *Hornet*, to strike at the heart of the Japanese Empire. The B-25s were modified to carry twice the normal fuel load in order to fly westward to China and later form the nucleus of a bomber capability for Claire Chennault’s Flying Tigers.

“Doolittle ordered target maps of the area’s iron, steel, and aluminum industries as well as aircraft plants, shipyards, and oil refineries...”<sup>4</sup> Knowledge of the planned raid rapidly spread. The Nationalist Chinese were informed so as to prepare landing sites

in China but were not told that the aircraft would bomb Japan beforehand. “Negotiations with the Soviet Union for permission to land were fruitless because it had signed a neutrality pact with Japan in April 1941... [and] Stalin was not in a position to provoke Japan...”<sup>5</sup>

A significant source of intelligence came from Navy Lieutenant Stephen Jurika, Jr. Schooled in Kobe and Shanghai, he spoke Filipino, Spanish, Japanese, and Chinese as well as English. As the intelligence officer onboard USS *Hornet* he briefed the crews what to expect and how to request help if forced down in China. He had arrived as assistant Naval Attaché in Japan in 1939 and soon realized that the US had no target maps of Japan. He collected detailed land maps. He befriended the assistant Soviet naval attaché, Ivan Egoricheff, who already had much of the information Jurika sought and provided it.<sup>6</sup>

The plan was to approach to 400 miles off the Japanese coast, take off just before dark, bomb at night, and proceed to China by early morning. However, as Doolittle reported later the “first enemy patrol vessel was detected<sup>7</sup> and avoided at 3:10 a.m. on the morning of April 18. The Navy task force was endeavoring to avoid a second one sometime after daylight when they were picked up by a third. Although this patrol was sunk it [was] understood that it got at least one radio message off to shore”<sup>8</sup> This was detected by the Navy’s radio intercept operators onboard USS *Enterprise*, which accompanied USS *Hornet*.

As a result, Admiral Halsey, the Task Force 16 commander, decided to launch the strike immediately, some 250 miles further away than planned. Doolittle’s aircraft (No. 40-2344) took off at 08:20; the last (No. 40-2268) at 09:19. This put all planes over their targets in daylight.

See Figure 1 on next page.

#### Targets

Specific targets were assigned each of the sixteen B-25 crews once at sea. They were provided target folders and maps.<sup>9</sup> Ten aircraft were destined for Tokyo, two each to Yokohama and Nagoya, and a

1. “Eighty Brave Men” ([http://www.doolittle Raider.com/80\\_brave\\_men.htm](http://www.doolittle Raider.com/80_brave_men.htm)).

2. Carroll V. Glines. *The Doolittle Raid: America’s Daring First Strike Against Japan*. Afton, PA: Schiffer Publishing. 2000 (First published in 1988).

3. Glines, p 166-68.

4. James M. Scott. *Target Tokyo: Jimmy Doolittle and the Raid that Avenged Pearl Harbor*. New York: W.W. Norton & Company, 2015. p 62.

5. General Doolittle’s “Report on Japanese Raid to the War Department, 9 July 1942” <http://www.ibiblio.org/hyperwar/AAF/rep/Doolittle/Report.html>.

6. Scott, p 141.

7. The craft were detected by the USS *Enterprise*’s radar. At the time few US Navy ships had radar, which was a new technology.

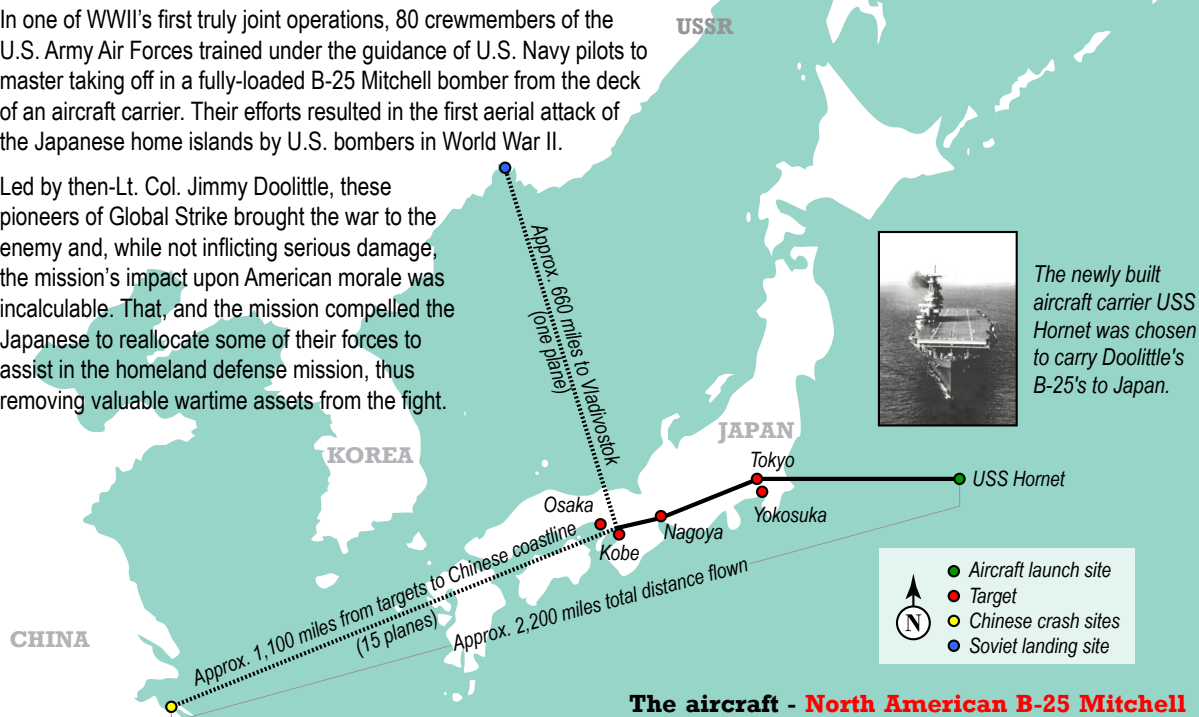
8. Doolittle Report. In his book Scott states the *Nitto Maru* No. 23 sent the radio message: “Three enemy carriers sighted. Position 600 nautical miles east of Inubosaki.” p 172-3. It continued radio transmissions for 27 minutes after USS *Nashville*’s first shots. It was finally sunk at 0821. p 175.

9. Doolittle Report.

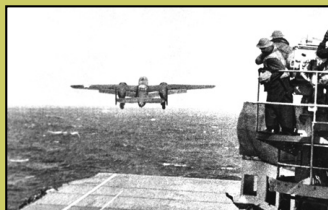
# The Doolittle Raiders - April 18, 1942

In one of WWII's first truly joint operations, 80 crewmembers of the U.S. Army Air Forces trained under the guidance of U.S. Navy pilots to master taking off in a fully-loaded B-25 Mitchell bomber from the deck of an aircraft carrier. Their efforts resulted in the first aerial attack of the Japanese home islands by U.S. bombers in World War II.

Led by then-Lt. Col. Jimmy Doolittle, these pioneers of Global Strike brought the war to the enemy and, while not inflicting serious damage, the mission's impact upon American morale was incalculable. That, and the mission compelled the Japanese to reallocate some of their forces to assist in the homeland defense mission, thus removing valuable wartime assets from the fight.



## The mission - Attack Japan's home islands



A B-25 Mitchell bomber leaves the deck of the USS Hornet on its way to attack Japan.

National Archives and Records Administration

The original plan called for the launch to take place about 250 miles from the coast of Japan. However, the armada was spotted by a Japanese patrol boat, Nittō Maru, which ruined the element of surprise. While the boat was quickly sunk by the task force ship USS Nashville, Japanese forces were alerted and Doolittle decided to launch much earlier than originally intended.

The crews flew an average of 2,250 miles, and were in the skies about 13 hours, which at the time was the longest B-25 mission ever.

15 of the 16 planes crash landed on or near the Chinese coast, while one flew north to the USSR, landing near Vladivostok.

## The crews

14 of the 16 crews survived the mission, but two crewmen drowned after bailing out at sea. One crewman successfully bailed out, but fell off a cliff in the dark and was killed. Two crews (eight flyers) were captured by the Japanese (three were executed, one died in captivity) and the remainder were prisoners until their liberation in August 1945.

## The aircraft - North American B-25 Mitchell

More than 9,800 B-25's were built. The aircraft, loved by its crews, served in every combat theater of WWII.



- Length: 52 ft, 11 in
- Height: 15 ft, 9 in
- Max. speed: 300 mph
- Range: 2,400 miles
- Wingspan: 67 ft, 7 in
- Engines: 2 × Wright 1,700 h.p.
- Cruising speed: 230 mph
- Service ceiling: 24,200 ft

## Team Doolittle

The crews manned 16 aircraft which attacked five Japanese cities, then made their escape to the west in what became a legendary mission which continues to inspire Airmen to this day.

Training at Eglin Field, Fla., the crews mastered short takeoffs and proceeded to meet the aircraft carrier USS Hornet at Alameda Naval Station, Calif.

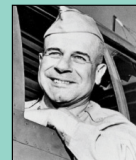
The 16 B-25s were craned aboard and fastened to the deck for the journey across the Pacific.



LOWE

## A joint operation

The concept for the mission was proposed by Capt. Francis Low, USN, a member of the Chief of Naval Operations staff, who worked closely with the Army Air Forces to turn his idea into reality.



DOOLITTLE



SOURCES: U.S. Navy, USAF, NARA / Graphic by Senior Master Sgt. Raymond Sarracino

[Figure 1. Source: Doolittle Raid Infographic, National Museum of the US Air Force.]

single plane to Yokosuka and Kobe. Planning for the raid was accomplished in three months. In many ways the US military was unprepared. As Doolittle reported afterwards "... navigators had had good training but very little practical experience." "Celestial navigation practice for our navigators [was] supervised by the Hornet navigation officer" when already at sea. But it was successful as "... through the use of the airplane compass and directional gyro [which] permitted the establishment of one accurate navigational course and enabled us to swing off on to the proper course for Tokyo."<sup>10</sup> Geographical intelligence was described as deficient. "The maps which we used were misleading because the contour interval was too great."<sup>11</sup> "Our charts were found to be unreliable as to details"<sup>12</sup> and "... inaccuracies in representation of topography by Japanese Naval Air Charts made pilotage extremely difficult."<sup>13</sup>

10. Ibid.

11. Report of Airplane No. 40-2297 to Doolittle by pilot – Major John A. Hilger.

12. 1st Lt James H. Macia, navigator. Appended to Doolittle Report.

13. 2nd Lt. Eugene F. McGurl. Appended to Doolittle Report.

"The best information available from Army and Navy intelligence sources indicates that there were some 500 combat planes in Japan and that most of them were concentrated in the Tokyo Bay area."<sup>14</sup>

Despite largely anemic attacks by Japanese fighters and inaccurate anti-aircraft artillery fire over the target cities, most of the primary targets were struck.<sup>15</sup> See Table 1 below.

Doolittle's immediate assessment was a "high degree of damage"<sup>16</sup> Historians note that despite pilot reports of major damage to selected targets, "the raid caused negligible damage... but had major psychological effects."<sup>17</sup>

### What the Japanese Knew Beforehand

It is unknown whether the Japanese, who had broken several Chinese and Russian codes, as well as US diplomatic codes, gained any foresight through

14. Doolittle Report.

15. Each plane carried four 500-pound bombs usually a combination of high explosive demolition bombs and incendiary cluster munitions.

16. Doolittle Report.

17. <http://www.historynet.com/aftermath-doolittle-raid-reexamined.htm>. Scott in his book writes that many of the crews missed their intended targets.

AIRCRAFT SERIAL NO.	TARGET CITY	BOMB DAMAGE REPORTED BY AIRCREW
40-2344 (LTC Doolittle)	Tokyo	Bombed north-central industrial area with 4 incendiary clusters.
40-2292	Tokyo	Bombed powder factories and magazines. Explosions over 1,000 feet.
40-2270	Tokyo	Bombed steel works, gas company and chemical works with demolition bombs and factory district with incendiary cluster.
40-2282	Tokyo	Attacked by fighters. Dropped bombs in the sea.
40-2283	Tokyo	Hit power stations, oil tanks, manufacturing plant and congested area with 3 demolition bombs and 1 incendiary.
40-2298	Tokyo	No report. Crew captured by Japanese in China.
40-2261	Tokyo	Bombed the industrial section with 3 demolition and 1 incendiary bomb.
40-2242	Tokyo	Bombed Tokyo (NFI) with 3 demolition and 1 incendiary bomb. Interned in Soviet Union.
40-2303	Tokyo	Bombed Kawasaki truck and tank plant and congested industrial district with 3 demolition and 1 incendiary bomb.
40-2250	Tokyo	Bombed Special Steel Co. plant and warehouses in South Tokyo with 3 demolition and 1 incendiary bomb.
40-2249	Yokohama	Bombed oil refineries, docks, warehouses and industrial area with 4 incendiary clusters. Could see column of smoke from 50 miles away.
40-2278	Yokohama	Bombed oil refineries, tank farms and warehouses with 3 demolition and 1 incendiary bomb.
40-2247	Yokosuka	Bombed dock area and light carrier Ryūhō undergoing conversion with 3 demolition and 1 incendiary bomb "destroying everything."
40-2297	Nagoya	Bombed military barracks, oil storage, military arsenal and Mitsubishi aircraft factory with 4 incendiary clusters. Tall column of smoke visible at 20 miles.
40-2267	Kobe	Bombed main industrial area, aircraft factory, dock yards with 4 incendiary clusters.
40-2268	Nagoya	No report on BDA.

Table 1 (Source: Doolittle Report to the War Department and crew report attachments.)

intercepting communications before the raid. Apparently, Admiral Yamamoto, based on Japanese signals intelligence, was apprehensive of an American air raid on Tokyo.<sup>18</sup> The raid was shrouded in secrecy, however, the Japanese were alerted to Task Force 16.<sup>19</sup> “Japanese submarines detected its presence northwest of Hawaii on 10 April and Japanese radio intelligence reported its probable intentions on the 14th...”<sup>20</sup> “The Japanese, through a small amount of intercepted radio traffic between [Admiral] Halsey [on USS *Hornet*] and [Captain] Mitscher [on USS *Enterprise*], were aware that an American carrier force was at large in the Western Pacific Ocean and could possibly attack Japan.”<sup>21</sup> Then at “07:38 on the morning of 18 April, while the task force was still about 650 nautical miles (1,200 km; 750 mi) from Japan (around 35°N, 154°E), it was sighted by the Japanese picket boat No. 23 Nittō Maru, a 70-ton patrol craft, which radioed an attack warning to Japan. The boat was sunk by gunfire from USS *Nashville*.”<sup>22</sup> As Doolittle noted “... even at this distance from Japan the ocean was apparently studded with Japanese craft.”<sup>23</sup>

“The Japanese... deduced that a carrier raid on the homeland was a possibility after 14 April 1942 and prepared accordingly.” But “[l]acking radar, the Japanese ‘early warning’ capability lay in parallel lines of picket boats—radio equipped converted fishing trawlers—operating at prescribed intervals offshore.” “The Japanese 26th Air Flotilla, expecting the Americans to approach within 200 miles of Japan as they had done in the raids in February in the Marshalls and Gilberts, and Wake and [in March] at Marcus, launched 29 medium bombers equipped with torpedoes from Kisarazu, escorted by 24 carrier fighters equipped with long-range tanks, to find TF-16.” “Search efforts continued, without success, until 24 April.”<sup>24</sup> “[K]nowing the short range of American carrier aircraft, the Japanese assumed that the US task force would not be within range of Japan until the following day, April 19, which would allow ample time for interception.<sup>25</sup> The use of long range Army bombers was unanticipated.

American carriers were too few and too precious to risk in waters close to Japan. Task Force 16 had a radio intelligence unit embarked on the USS *Enterprise*, which escorted the USS *Hornet* with Doolittle’s B-25s to provide air cover as the B-25s arrayed on the deck prevented the launching of *Hornet*’s own fighters. As reported by the unit “our primary mission was to inform the Task Force Commander when we were spotted by the enemy. After the planes had left, we watched the Empire search planes’ frequencies, mostly concerned with the Kisaratsu Air as he controlled the search planes. The enemy knew the general area we were in, but fog and overcast prevented them from finding us even though they were all around the task force.”<sup>26</sup> This intercept team was a critical intelligence support element.

It is not apparent that Task Force 16 received direct support from Station Hypo, the Navy’s cryptologic unit in Hawaii. At this time most of its focus was on the southwest Pacific and the Japanese offensives against New Guinea and other islands near the Coral Sea.<sup>27</sup> US Navy intercept operators in Hawaii “weren’t able to intercept everything. Many messages were missed... Hypo was limited in the volume of signals it could intercept by technology and manpower... [and] lacked sufficient men and machines to listen to every relevant frequency used by the Imperial Navy.”<sup>28</sup>

### Aftermath

Despite the Japanese having early warning the “task force enjoyed the element of complete surprise.”<sup>29</sup> However, all of the B-25s involved were lost when out of gas the crews bailed out along the China coast. Three crewmembers died. Eight were captured; three of which were executed as war criminals by the Japanese and another died in captivity. One aircrew, which recovered in the Soviet Union, was interned for a year before “escaping” to Iran.

And while the physical bomb damage was inconsequential to Japan’s war effort, the psychological impact was great. “Several false alarms followed”<sup>30</sup>

18. Scott, p 189.

19. TF 16 was a large operation. It consisted of 2 carriers – *Hornet* (CV-8) and *Enterprise* (CV-6); 3 heavy cruisers – Salt Lake City, Northampton, Vincennes; 1 light cruiser – *Nashville*; 8 destroyers – Balch, Fanning, Benham, Ellet, Gwin, Meredith, Grayson, Monssen; and 2 oilers – *Cimarron*, *Sabine*.

20. Parker, p 36.

21. Wikipedia, The Doolittle Raid, footnote #69, citing Glines, p 60-2.

22. Glines, p 70.

23. *Turning Point: The Doolittle Raid*. The National WW II Museum.

24. Naval Historical and Heritage Command, Doolittle Raid, 18 April 1942. Published May 10, 2019.

<https://www.history.navy.mil/browse-by-topic/wars-conflicts-and-operations/world-war-ii/1942/halsey-doolittle-raid.html>.

25. Michael Peck. “30 Seconds Over Tokyo: How the Doolittle Raid

Doomed the Japanese Empire,” *The National Interest*, 2019.

26. Memorandum for Commander P.P. Leich, USNR, Subj: Task Force Sixteen (USS *Enterprise* – Flag), from H. A. Cain, CRE, USN. S E C R E T (Declassified), 10 September 1945. Reprinted by Station Hypo as “How Radio Intelligence Supported the Doolittle Raid, 18 April 2019. <https://stationhypo.com/2019/04/18/how-radio-intelligence-supported-the-doolittle-raid/#more-11421>.

27. The Battle of the Coral Sea was to take place less than a month after Doolittle’s raid on 4-8 May 1942.

28. Elliot Carlson. *Joe Rochefort’s War: The Odyssey of the Codebreaker Who Outwitted Yamamoto at Midway*. Annapolis, MD: Naval Institute Press. 2011. p 273.

29. Parker, p 36.

30. Robert Craigie. *Behind the Japanese Mask*. London: Hutchinson &



“The raid shook staff at Japanese Imperial General Headquarters.”<sup>31</sup> “It caused the Japanese to question their warlords” was Doolittle’s judgment.<sup>32</sup>

The Japanese high command withdrew a substantial number of aircraft from supporting offensive operations in the southwestern Pacific, Indochina, Indonesia, and China in order to defend the home islands. Japan retaliated against China as it “felt compelled to... save face and prevent future attacks on the homeland by ruthlessly eradicating any threat of future raids emanating from Chinese airfields.”<sup>33</sup> “Japanese reprisals caused the deaths of 250,000 civilians and 70,000 soldiers...” including an estimated 10,000 Chinese civilians during their initial search for Doolittle’s aircrews.<sup>34</sup> The Japanese campaign lasted three months.

The Japanese had decided on April 16 – two days before Doolittle’s raid – to seize Midway Island.<sup>35</sup> The IJN’s “... preparations [for Midway] were interrupted momentarily by the Doolittle raid and the subsequent attempts to find the American carriers.”<sup>36</sup> Some

believed that Doolittle’s bombers had originated from Midway or from the Aleutians. It likely strengthened Admiral Yamamoto’s determination to capture Midway.<sup>37</sup> He had set his sights on Midway and its airfield as early as February 1942.<sup>38</sup>

In the dark days of early 1942, Doolittle’s Tokyo raid was the first victory America had achieved in the war. It dominated the front pages of American newspapers and boosted morale in the US and with American allies. He was awarded the Medal of Honor. All of the seventy-nine others received the Distinguished Flying Cross.

The raid had a little-known strategic impact. “Before the Doolittle mission, the [IJN] was observing near radio silence, frustrating the efforts of American cryptographers, who had deciphered only about 10 percent of the Imperial Navy’s code book. The stunning airstrike at the heart of Japan unleashed a torrent of coded messages, so that within a few weeks American codebreakers had cracked nearly 90 percent of the Japanese naval code.”<sup>39</sup> The impact of that was felt in less than two months at the Battle of Midway.

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Co., 1945. pp 146-7.

31. Wikipedia citing “War in the Pacific: View from Japan,” Bungei-shunju, 1994. Author unknown.

32. Interview with Gen. James H. Doolittle. Published July 16, 2015. <https://www.nationalmuseum.af.mil/Visit/Museum-Exhibits/FactSheets/Display/Article/196771/interview-with-gen-james-h-doolittle/>.

33. Chris Byrd. “Bombers over Tokyo: The Strategic Importance of Doolittle’s Raid,” *The Bridge*

[https://www.realcleardefense.com/articles/2018/04/18/bombers\\_over\\_tokyo\\_the\\_strategic\\_importance\\_of\\_doolittles\\_raid\\_113340.html](https://www.realcleardefense.com/articles/2018/04/18/bombers_over_tokyo_the_strategic_importance_of_doolittles_raid_113340.html).

34. <http://www.historynet.com/aftermath-doolittle-raid-reexamined.htm>.

35. Parker, p 36.

36. Parker, p 37

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37. Glines emphasizes this theory. Admiral Nagumo, who led the Pearl Harbor attack, called Midway “the sentry for Hawaii.” (Scott, p 136)

38. *Turning Point: The Doolittle Raid*. The National WW II Museum.

39. Winston Groom. *Trained in Secret, these Fearless Pilots Retaliated for Pearl Harbor*, National Geographic. <https://news.nationalgeographic.com/2017/04/doolittle-raiders-anniversary-world-war-two-history/>.