

EG:114-L1

**A PILOTED BOMB: THE YOKOSUKA MXY7 OHKA**

The Ohka (Cherry Blossom) piloted suicide bomb was expected to be more destructive than conventional kamikaze airplanes. Conceived during 1944, the Ohka was released by a mother plane up to 100 kilometers (60 miles) from its target. Solid-propellant rockets boosted the bomb's speed to over 800 kilometers (500 miles) per hour during its final dive to the target, making it nearly impossible to shoot down. Its 1,200-kilogram (2,600-pound) warhead was powerful enough to sink or severely damage any ship unlucky enough to be hit.

But the Ohka proved far less formidable than hoped, leading U.S. sailors to nickname it the Baka (foolish) bomb. The lumbering mother planes were often shot down before flying close enough to the U.S. fleet to release their payloads. Over 750 Ohka Model 11s were produced, of which several hundred were used against the U.S. fleet off Okinawa. Only a handful of Ohka pilots managed to hit ships, and they sank only one. Conventional Japanese aircraft proved far more devastating, taking thousands of American lives.

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EG:114-L1a-P1a  
photograph

Ohka Model 11 captured on Okinawa, 1945.

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EG:114-L2-S2

**THE NATIONAL AIR AND SPACE MUSEUM'S OHKA**

The Ohka displayed here is a Model 22, the successor to the Model 11 used at Okinawa. Unlike the rocket-powered Model 11, the Model 22 was powered by an early type of jet engine that was expected to double the bomb's range. Although flight testing had only begun during early 1945, the Japanese hoped to meet the Allied invasion fleet with hundreds of the new craft. Only about 60 were ever produced.

The U.S. Navy captured this Ohka in Japan and shipped it to the United States, where it spent a short time at Alameda, California, during 1946. The Navy transferred it to the Smithsonian Institution in 1948. After years in display storage at the National Air and Space Museum's Paul E. Garber Facility in Suitland, Maryland, the Ohka Model 22 was restored for this exhibition during 1993-94.

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EG:114-L2a  
specifications block

**YOKOSUKA MX7Y OHKA MODEL 22**

Wingspan: 4.1 m (13 ft 6 in)  
Length: 6.9 m (22 ft 7 in)  
Height: 1.2 m (3 ft 9 in)  
Weight, empty: 545 kg (1,202 lb)  
Weight, gross: 1,450 kg (3,197 lb)  
Warhead: 600 kg (1,323 lb)  
Engine: Tsu-11 hybrid  
reciprocating/turbojet, 200 kg  
(551 lb) static thrust  
Manufacturer: Dai-Ichi Kaigun Koku  
Gijitsusho (Naval Air  
Technology Arsenal), Yokosuka,  
Japan, 1945

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EG:115-L1

**PREPARATIONS FOR THE INVASION OF JAPAN**

As the Okinawa battle reached its bloody climax during June, the United States began to gather the forces required to execute the largest amphibious operation in history. The assault was expected to meet formidable opposition, including suicide attacks by aircraft, midget submarines, piloted torpedoes, motor boats, and even explosives-laden swimmers. To those responsible for planning and executing the invasion of Japan, the potential for appalling casualties was clear.

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EG:115-L1a-P1a  
photograph

Tanks intended for the invasion of Japan were stockpiled by the U.S. Army in the Philippines, spring 1945.

Courtesy of the National Archives

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EG:115-L1b-P1b  
photograph

Part of the massive Allied fleet scheduled to support the planned invasion of Japan was anchored at Ulithi Atoll, 1945.

Courtesy of the National Archives

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EG:120-L1  
Main Title

**A TORCH TO THE ENEMY: THE STRATEGIC BOMBING  
OF JAPAN**

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EG:120-L2  
Main Label

In 1943 President Franklin Roosevelt had urged that Japan be bombed "heavily and relentlessly." In early 1945, the U.S. Army Air Forces launched a major incendiary (firebombing) campaign. They had tried high-altitude daylight precision bombing and found it relatively ineffective, due to operational difficulties and the widely dispersed nature of the military and industrial targets in and around Japanese cities.

The only effective way to destroy such targets proved to be incendiary area bombing, a tactic already tried by others in Europe. Such bombing could not discriminate between strategic targets in cities and the cities themselves. By end of the war, the American incendiary campaign severely damaged Japan's ability to wage war, razed almost every major Japanese city, and killed several hundred thousand people.

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EG:121-L1

**FROM THE BLITZ TO THE FIRESTORM**

The precedent for bombing Japanese cities had been set even before the war began. In the 1930s, Japan and Germany had bombed civilians in China and Spain, to the horror of much of the world. After World War II began, Axis air attacks increased, setting off a cycle of escalation. German bombers destroyed large parts of Warsaw, Rotterdam, London and other cities. Having no other means to strike the enemy directly, the British retaliated with "area bombing" of German cities that was ultimately 10 times as destructive.

Between 1940 and 1943, small-scale attacks by the Royal Air Force's Bomber Command expanded into massive "thousand-bomber" raids aimed at destroying entire German cities. By spring 1945 incendiary (fire) bombs and high explosives had reduced much of Berlin, Hamburg, and Dresden to ruins.

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EG:121-L1a-Pl1a  
source: Amer. Heritage

Rotterdam, the Netherlands, after the German air raid of May 1940.

Courtesy of the Netherlands State Institute  
for War Documentation

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EG:121-L1b-P1b

British civilians being rescued from the rubble after a German air raid during the Battle of Britain, 1940-41.

Courtesy of Popperfoto/Archive Photos

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EG:121-L1c-P1c  
famous picture--statute  
over Dresden ruins

The German city of Dresden after the Allied firebombing raids of February 1945.

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EG:121-L2

### THE AMERICAN BOMBING CAMPAIGN IN EUROPE

The leaders of the U.S. Army Air Forces entered World War II determined to prove the value of daylight precision bombing. They intended to destroy Germany's war-making ability by attacking key factories, oil production facilities, transportation networks, and other strategic objectives.

The Army Air Forces persisted in the face of British skepticism, heavy losses, and mixed results. True precision bombing was difficult to achieve. Cloudy weather often resulted in less accurate drops by radar. But by mid-1944 the gradual erosion of German air defenses, combined with a massive buildup of U.S. bomber forces, allowed daylight attacks on industrial targets to continue.

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Total weight of bombs dropped on targets in Germany by U.S. strategic bombers, 1943-44.

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Need a standard USAAF European photo

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EG:121-L2a-P2a  
graphic

EG:121-L2b-P2b



EG:122-L1

### THE LONG ROAD TO TOKYO

In 1941, as Japanese aggression in Asia brought war with the United States ever closer, the Army Air Corps began to formulate contingency plans for bombing Japan. Then came the Pearl Harbor attack and the sudden Japanese advance in the Pacific. Except for the daring April 1942 raid by aircraft-carrier-launched bombers led by Lt. Col. James H. Doolittle, the skies over Japan thus remained free of American aircraft.

Protected by the enormous distances separating it from Allied bases, Japan was not struck again until June 1944, when small numbers of the new B-29 Superfortress began attacks from China. The stage for the final bombing campaign of World War II was not set, however, until the capture of the Marianas Islands, situated 2,100 kilometers (1,300 miles) from Tokyo.

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EG:122-L1a-P1a

"Bomber lanes to Japan," published in United States News, October 31, 1941.

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EG:122-L2

**TOKYO IN FLAMES**

Dismayed with the disappointing effects of early raids on Japanese industry, and under pressure from Washington to launch a more effective firebombing campaign, Maj. Gen. Curtis E. LeMay changed tactics a month after taking command of the Marianas-based bombers in January 1945. Instead of striking individual factories in daylight precision raids with high-explosive bombs, his B-29s would attack urban areas at night with incendiary (fire) bombs.

LeMay ordered the first major test of his new tactics on the night of March 9-10, 1945. Flying in three streams 650 kilometers (400 miles) long, 334 B-29s struck Tokyo for nearly three hours. Within 30 minutes of the first bomb, fires were burning out of control. About 100,000 people perished and a million were made homeless.

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EG:122-L2a-P2a  
photograph

Ordnance crewmen prepare a maximum load of incendiary bombs for an aptly named B-29, 1945.

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EG:122-L2b-P2b

A section of Tokyo immediately after the end of the war, August 1945.

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EG:122-L3

**MASSIVE DESTRUCTION**

The great Tokyo raid marked the beginning of a five-month period during which Japan would suffer widespread devastation. B-29s bombed one city after another, destroying half the total area of 66 urban centers, burning 460 square kilometers (180 square miles) to the ground. Some cities, like the chemical and textile manufacturing center of Toyama, were completely destroyed. The five-month incendiary campaign lowered the overall industrial output of Japan by 60 percent, reduced the production of key materials like oil and aluminum by 90 percent, and took several hundred thousand lives.

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EG:122-L3a

"No matter how you slice it, you're going to kill an awful lot of civilians. Thousands and thousands.... We're at war with Japan. Would you rather have Americans killed?"  
Maj. Gen. Curtis E. LeMay, 1945

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EG:122-L3b-P3b

B-29s of the 73rd Bombardment Wing, XXIst Bomber Command, shower Yokohama with incendiary bombs, May 25, 1945.

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EG:122-L3c-P3c

U.S. Air Force map of cities destroyed during the incendiary campaign, with U.S. cities of similar populations included for comparison.

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EG:122-L3d-S3d

Starting in June 1945, American aircraft dropped millions of leaflets like this one over dozens of Japanese cities, including Hiroshima, warning people to leave cities that were to be bombed. The leaflets were intended to save lives and counter Japanese accusations of "indiscriminate bombing of civilians."

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EG:122-L4

**OPERATION STARVATION**

Besides the all-out air attacks on Japanese cities, additional steps were taken to force Japan to surrender. By spring 1945, U.S. submarines and aircraft had destroyed the Japanese merchant marine. A B-29 campaign aptly code-named "Operation Starvation" completed the process of isolating Japan by mining its harbors and coastal waters. Carrier-based aircraft contributed to the operation by bombing and strafing a wide variety of targets in Japan. By early summer, shipping, manufacturing, transportation, and food distribution had largely ground to a halt.

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EG:122-L4a-P4a

A Japanese freighter starts to burn after being strafed by a U.S. Navy fighter, summer 1945.

Courtesy of the National Archives

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EG:130-L1  
Main title

**TWO NATIONS AT WAR**

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EG:131-L1

**HOME FRONT, U.S.A.**

World War II energized the United States as had few events in our national history, while inflicting many new hardships. With consumer goods in short supply and rationing in force, Americans saved as never before. They invested in war bonds, lending the government the funds needed to finance the war effort. Women and members of minority communities entered the work force in unprecedented numbers. Almost everyone--from children to senior citizens--also participated in community projects to help the war, such as recycling metals and other items in short supply.

But after three years of war and the loss of a quarter of a million servicemen in combat, Americans longed for peace, the return of their sons, brothers, husbands, and fathers, and a return to normal life.

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EG:131-L1a-P1a  
photograph

Members of one of the many local rationing boards instituted to control consumption of fuel, food, and other vital materials.

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EG:131-L1b-S1b  
NMAH loan

Ration stamps.

Lent by the National Museum of American  
History

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EG:131-L1c-P1c

Mrs. Jennie Dobnika of Cleveland became the first U.S. Gold Star Mother after tragically losing three sons in the sinking of a destroyer off Iceland in 1941.

Courtesy of

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EG:131-L1d-S1d

The dreaded telegram: Patrick E. King of Elkins, West Virginia, a U.S. Navy Seabee, was killed when his ship was sunk in the Philippines on Christmas Day 1944.

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EG:131-L1e-S1e

A letter of consolation from Secretary of the Navy James Forrestal to the father of Patrick E. King.

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EG:131-L1f-S1f

The flag used in the reburial of Patrick E. King after the return of his body to the United States in 1947.

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EG:131-L1g

All items from Patrick E. King lent by the  
heirs of P. F. King: Mary Catherine Cole,  
Patricia Cochran, and Frank Florentine

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EG:131-L2

**THE ARSENAL OF DEMOCRACY**

By 1943 the United States had become, as President Franklin Roosevelt had predicted, "the Arsenal of Democracy." The miracles achieved by wartime industry demonstrated the enormous untapped power of the American economy. During World War II, U.S. industry produced 299,000 airplanes, 88,000 ships, 102,000 tanks and self-propelled guns, 372,000 artillery pieces, and 44 billion rounds of small-arms ammunition. At the 1943 Teheran Conference, Soviet leader Joseph Stalin, no admirer of capitalism, toasted: "American production, without which this war would have been lost."

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EG:131-L2a-P2a

Over 3,000 B-24 Liberator bombers were built during the war at Consolidated's Fort Worth, Texas, plant.

Courtesy of Lockheed Fort Worth

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EG:131-L2b-P2b

Welders, Todd Erie Basin dry dock, Pennsylvania, 1943.

Courtesy of the Library of Congress

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EG:131-L3

**A HATED ENEMY**

"Probably in all our history, no foe has been so detested as were the Japanese. The infamy of Pearl Harbor was enough; but to it were soon added circumstantial accounts of Japanese atrocities at Hong Kong, Singapore, and finally and most appallingly, upon American prisoners in the Philippines."  
Allan Nevins, While You Were Gone, 1946

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EG:131-L3a-P3a  
source: Dower

This 1943 British cartoon was published in the New York Times Magazine.

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EG:131-L3b-S4b, etc.  
anti-Japanese propaganda  
posters, buttons, etc.,  
from NMAH

American anti-Japanese propaganda.

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EG:131-L4

**FINISHING THE JOB**

While Americans celebrated the victory in Europe in May 1945, they knew the job was far from over. Looming on the horizon was the prospect of terrible losses in an invasion of Japan.

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EG:131-L4a-S4a  
poster - "Next"

War bond drive poster, 1945.

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EG:132-L1

### THE JAPANESE HOME FRONT AT WAR

By the summer of 1945, American land, air, and naval forces had finally arrived on the doorstep of the home islands. B-29s of the Twentieth Air Force were systematically destroying Japan's ability to wage war. The submarine campaign and aerial mine-laying operations had cut lines of supply and communication.

After the fall of Okinawa, the Japanese people waited in their island fortress, prepared to repulse the enemy on the beaches. Even as their deteriorating situation was increasingly undermining their ability to resist, surrender remained unthinkable, and the war had considerable popular support.

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EG:132-L1a-P1a

Tokyo street scene, 1943. The advertising slogan beneath the Japanese soldiers on the billboard reads, "We won't stop shooting!"

Courtesy of Asahi Shimbun

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EG:132-L2

**HARDSHIP ON THE HOME FRONT**

"Everything goes to the military, the black marketeers, and the big shots. Only fools queue up."

Kiyosawa Kiyoshi, diary entry, April 30, 1943

By fall 1944, the Japanese people could no longer adequately feed or clothe themselves. The demands of the Japanese war machine caused a shortage of farm workers and chemical fertilizers for agriculture. The Allied blockade had cut the supply of vital rice and soy products once imported from Korea and China.

Although silk remained available, cotton and other imported fibers had vanished. Clothes were now manufactured of sufu, a cloth made of small amounts of cotton woven with wood pulp, goat hair, and tree bark.

Dwindling supplies of food and clothing led to rationing, price controls, and long lines outside stores. Despite stiff penalties, prices soared and the black market thrived. As early as spring of 1944, rice sold for 14 times the official price.

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EG:132-L2a-P2a

Civilians queue in Tokyo for their weekly  
food allotment, 1945.

Courtesy of Imperial War Museum

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EG:132-L2b-S2b  
items from Japan to be  
obtained if possible

Food ration stamps, circa 1945.

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EG:132-L3

**LABOR**

"On the night shift, after standing up for hours, we were marched into a dining hall where we had our supper. Supper was a bowl of weak, hot broth, usually with one string of a noodle in it and a few soybeans on the bottom. We would gulp it down, then go back to work in the factory."

Hirako Nakamono, a school girl employed in a Hiroshima aircraft factory, 1945

Because of military conscription, Japanese industry suffered from a severe labor shortage throughout the war years. By 1944 the situation had become critical. Farm workers judged unsuitable for military service were drafted for factory labor. Women went out to work in unprecedented numbers. Junior and senior high schools closed as students were assigned to industry, public transport, and the construction of roads and fire-breaks.

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EG:132-L3a-P3a

Schoolgirls learning to operate machine tools for armaments production, 1944.

Photograph courtesy of UPI

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EG:132-L4

**SLAVE LABORERS AND PRISONERS OF WAR**

The Japanese government turned to slave labor to ease severe manpower shortages and provide prostitutes for its troops. Some 667,000 Koreans and 38,000 Chinese who had labor contracts to work in Japan ultimately became slave laborers or were forced to be "comfort girls." They worked under armed guard by day and were housed behind electrified fences at night. Protests were punished by beatings, floggings, and execution. During the war, an estimated 67,000 Korean and Chinese laborers died in Japanese custody.

By 1945 some 10,000 of almost 26,000 American prisoners of war had died or been executed. Those held in Japan were also treated as slave laborers. Like their compatriots in Japanese camps overseas, they were often starved, beaten, tortured, and executed.

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A blindfolded American flyer in Kobe, Japan, after capture. Beside him is his inflated survival raft.

Courtesy of Mainichi Shimbun

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EG:132-L4a-P4a  
Time/Life, Japan at War,  
p. 162

EG:132-L4b-P4b

Newly liberated American prisoners in the  
Philippines, February 1945.

Courtesy of the National Archives

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EG:132-L5

**THE COMING OF THE "B-SAN"**

The first B-29 raids were directed against industrial targets and took few lives. "We went through those early bombings in a spirit of excitement and suspense," one Japanese journalist recalled. "There was even a spirit of adventure, a sense of exultation in sharing the dangers of war even though bound to a civilian existence." People joked about the "regularly scheduled service" of the "honorable visitors." The B-29s, lovely silver specks glittering in the sun as they flew high overhead, became popularly known as the "B-San," or "Mr. B."

Long insulated from personal experience of war, Japanese civilians were ill-prepared for the firebombing raids of 1945. Since most able-bodied men had been drafted into the military, the burden of civil defense fell on women and the elderly, who were organized into neighborhood associations. But the government gave them only primitive, hand-operated pumps, bucket brigades, and wet mops for fighting fires.

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Air raid drill, 1944.

Photograph courtesy of Mainichi Graphic

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EG:132-L5a-P5a  
photograph

EG:132-L6

**THE DEMONIC OTHER**

"It has gradually become clear that the American enemy, driven by its ambition to conquer the world, is coming to attack us.... The barbaric tribe of Americans are devils in human skin...Western Barbarian Demons."  
From an article published in "Manga Nippon," a popular magazine, October 1944

Japanese propaganda convinced soldiers and civilians alike that American troops were waging a "war of extermination" against Japan. The mass suicides on Saipan and Okinawa demonstrated that Japanese mothers, expecting to be raped and murdered, would kill themselves and their children, rather than allow themselves to fall into the hands of the "devilish" U.S. Marines. They did this despite the best American attempts to convince them to surrender and to assure that they would not be harmed.

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EG:132-L6a,b-P6a,b  
from Dower, War Without Mercy

A Japanese magazine cover, depicting President Roosevelt as a demon, 1943.

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EG:132-L7

**JAPAN PREPARES TO MEET THE INVASION**

On June 12, the Japanese legislature passed laws requiring military service from all males 15 to 60 and all females 17 to 40 years of age. The government declared martial law. Thus the Japanese homeland became a war zone and nearly all its adults became soldiers.

Beginning in the spring of 1945, the Japanese military began to husband aircraft in the home islands. By mid-summer, Japan had over 6,000 planes available as kamikazes. The military had dispersed them to improvised airfields and planned to target not warships, but slow-moving, crowded troop transports and landing craft. On the ground, the Japanese army correctly guessed likely landing sites and prepared heavy defenses.

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EG:132-L7a-P7a

Women training with bamboo spears, 1945.

Photograph courtesy of Shunkichi Kikui

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EG:132-L7b-S7b  
if available

Japanese bamboo spear for home defense, 1945.

Lent by Marine Corps Museum

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