



THE

CRISIS

THAT MIGHT HAVE BEEN

Invisible Kamakazies That Stood in the Wings

BY BARRETT TILLMAN

Put your What-If app to work. Imagine a stealthy cruise missile with an extremely sophisticated, highly adaptable guidance system programmed to strike America's most valuable naval targets — aircraft carriers. The anti-ship missile is immune to all deception measures. It's programmed to ignore chaff and flares as well as navigation and communications jamming. Being subsonic, it's more vulnerable in daytime than at night, but its construction renders radar almost irrelevant except at close range. In the terminal homing phase, the awkward-looking attacker is highly percent effective. If it survives the task force's defensive gamut of fighters and antiaircraft guns, it is likely to score a hit.

KI-9 "Spruce" trainers became a low-tech kamikazes with a fuel drum or explosives in the back seat. Hundreds of these, and other trainers with very low radar signatures, were poised and ready to be launched as soon as the invasion fleet was in range. In the dark, neither lookouts nor radar would see them until the last second. (Photo courtesy of Giuseppe Picarella)



THE THEATER OF OPERATIONS: WESTERN PACIFIC. | **THE DATE:** NOVEMBER 1945. | **THE WEAPON:** WOOD AND FABRIC BIPLANES.

A victim of two Kamikazi attackers the *Bunker Hill*, CV-17, is seen awash in burning aviation fuel and ammunition explosions on May 11, 1945 while patrolling off of Okinawa. Salvaged by her defiant damage control parties, but at the loss of 346 crew members, her war service was cut short and she retired back to Bremerton Navy Yard for extensive repairs. (Photo courtesy of Stan Piet)



Kamikaze Debut

Though eerie or even ghoulish to Westerners, aviation suicide tactics made sense to Japan in 1945. The Imperial Navy's elite cache of prewar aviators was largely expended by late 1944, consumed by years of unrelenting combat. Vice Adm. Takijiro Onishi, commanding naval aircraft in the Philippines, recognized the gravity of the situation and reckoned that low-time pilots could achieve dramatic results by driving their planes into American ships rather than employing bombs or torpedoes. By then, U.S. Navy task forces were nearly immune to conventional air attack.

The Kamikaze concept harkened back to Japan's heaven-sent typhoon — the "divine wind" — that scattered a huge

Mongol invasion fleet in 1274. As many as 200 of Kublai Khan's ships were lost with thousands of soldiers — a comparison tailor-made for Imperial Japan in mid-20th century.

Tokyo's army and navy planners had first discussed suicide tactics in 1943, but no joint command was established. Nevertheless, some individual attacks were conducted before Tokko Tai (special attack) units were formed in late 1944.

Onishi's request for volunteers was rewarded when Lt. Yukio Seki, a dive-bomber pilot, accepted the position as leader of the first suicide unit. After several weather and navigation aborts, the first missions were flown over Leyte Gulf at the height of the three-day naval battle on October 25, 1944.

The escort carriers (CVEs) off Samar Island took a beating that morning. The epic “Battle of the Taffys” ended with loss of a CVE and three destroyers in a running gunfight with Japanese battleships and cruisers. Hardly had the imperial warships disengaged when another threat descended literally like a bolt from the blue.

Two of the three “baby flattop” groups were the targets of determined air attack — the most determined anyone had seen. In Taffy One a wave-hopping Zeke popped up to perhaps 6,000 feet and dived into USS *Santee’s* (CVE-29) forward elevator, killing 16 men. Three more Zekes were shot down by ships’ gunners but the fifth stayed airborne long enough to hit Suwannee (CVE-27).

Shortly thereafter, another small formation went for Taffy Three, which had barely escaped Vice Adm. Takeo Kurita’s armada. *Kitkun Bay* (CVE-71) and *Kalinin Bay* (CVE-68) took aircraft or bomb hits, resulting in understandable confusion amid smoke and flames. Another Zeke, reportedly flown by Lt. Seki himself, swept in low and fast, smashing into *St. Lo* (CVE-63), igniting ordnance on the hangar deck. Nearly 100 of her crew perished as she sank.

The Kamikaze had made a spectacular debut: one escort carrier sunk and four damaged in fewer than 30 sorties. Thus encouraged, other missions followed, with the Japanese Army Air Force participating as well. Increasing numbers of fliers were trained in “combat collision tactics” in Korea and on Formosa (now Taiwan).

Growing short of experienced aviators, Japanese air commanders increasingly focused on Tokko Tai tactics. It made military sense. Dive-bombing still produced results, but only under favorable conditions with competent aviators. In the 23 months prior to October 1944, no American fast carrier (30+ knots) had been sunk or even

badly damaged. That record ended when the light carrier *Princeton* (CVL-23) was surprised on the 24th. Her bomb damage proved uncontrollable and she was abandoned.

Five months later, off Japan, the Essex-class carrier *Franklin* (CV-13) was jumped under conditions of maximum vulnerability. She had survived a Kamikaze strike but on March 19, 1945, with her air group ready to launch, she took a 550-pound bomb on a packed flight deck. The secondary explosions ignited voracious fires, setting off bombs and rockets. “Big Ben” lived but 800 men died — the greatest toll of any U.S. carrier.

It only got worse.

Okinawa Meatgrinder

On April 1, 1945, American forces landed on Okinawa, the last major island before Japan itself. Tokyo’s response was predictable: during that month Kamikazes hit six carriers including two British ships with HMS *Illustrious* permanently out of action.

Seven more flattops were stricken in May — three on the fourth. Two were British ships lightly damaged but the escort carrier *Sangamon* (CVE-26) was badly savaged and never returned to service.

That day, beneath clear skies, the radar picket destroyers were swarmed by suiciders. The attackers included front-line combat aircraft and low-end technology represented by biplanes and floatplanes.

The destroyer USS *Morrison* (DD-560) was one of several radar warning ships targeted by Kamikazes. After three unsuccessful attacks by Zekes and Vals, another Zeke got through, diving between the forward stack and the bridge.

The last assailants were mostly Kawanishi E7K (Type 94) Alfs, biplane trainers. Japanese records

The Yokosuka K5Y Willow was a 1933 trainer but many of the 5,700 built became kamikazes. (Photo courtesy of Giuseppe Picarella)



USS *Cabot* (CVL-25) was hit and near-missed by two kamikazes off the Philippines on 25 November 1944 but returned to combat three weeks later. Had the attacks been at night by wood and fabric trainers, the outcome may have been different. (Photo courtesy of Jack Cook)



THE KAMIKAZE CONCEPT HARKENED BACK TO JAPAN'S HEAVEN-SENT TYPHOON—THE “DIVINE WIND”—THAT SCATTERED A HUGE MONGOL INVASION FLEET IN 1274

for departure of aircraft from Ibusuki Air Base on southern Kyushu show 18 floatplanes in two waves, mainly Alfs, which the Americans apparently misidentified as Nakajima E8N Daves. The Type 94's ordnance typically was 120 kg (265 lb.) although the raiders included at least two Aichi E13A Jakes, evidently carrying a 250-kg (550 lb) bomb.

Morrison was defended by Marine Corsairs from Okinawa plus Corsairs and Hellcats from USS *Essex* (CV-9) and *Shangri-La* (CV-38). The fighters did all they could but *Morrison* suffered fatal damage. The ship was lost with 152 men, mainly those stationed below decks.

But carriers remained the prime target. On May 11, the 306th Squadron, 721st Kokutai, nearly destroyed Vice Adm. Marc Mitscher's flagship, USS *Bunker Hill* (CV-17) when two Zekes inflicted some 650 casualties including 389 dead. Mitscher was forced to shift to the veteran *Enterprise* (CV-6), which had been crashed in April.

Three days later the 306th struck again as Lt. (jg) Shunsuke Tomiyasu spectacularly completed a split-S into the Big E's forward elevator, blowing a large section hundreds of feet into the air. Seriously damaged, “The Big E” steamed Stateside, out of the war.

Loss of *Enterprise* meant more than one less flight deck. It also deprived the Pacific Fleet of Night Air Group 90, the Pacific Fleet's only dedicated nocturnal carrier unit. The Big E's team



mate, the older *Saratoga* (CV-3) had been knocked out of the lineup at Iwo Jima in February, wracked by bombs and kamikazes. A new Essex-class ship, *Bon Homme Richard* (CV-31) was slated to arrive in June with Night Air Group 91, but meanwhile the fast carriers had to rely upon four-plane Night Hellcat detachments that lacked the offensive capability of specially trained TBM Avenger crews.

That same day, May 11, USS *Robley D. Evans* (DD-552), “The Fighting Bob,” barely survived an encounter with floatplanes. She occupied Ra-

From the outset Japanese military culture demanded unquestionable loyalty to the Emperor that was entrenched with a tradition of death over defeat or capture. (Photo courtesy of Stan Piet)

dar Picket Station 15 with *Hugh W. Hadley* (DD-774), 40 miles northwest of Okinawa. In a massive attempt to blind American radars, scores of Japanese planes swarmed the area. The sailors splashed 40 or more suiciders but numbers told. After more than an hour, four kamikazes got through, smashing into *Evans* and flooding her engine spaces.

"Fighting Bob" shot down a Jake from the Sakigake Special Attack Unit. Too close for the five-inchers to engage effectively, the floatplane was lacerated by automatic weapons fire as it pressed in from the port quarter. Miraculously, it barely missed the ship's rigging. The nearby USS *Evans* scored a direct hit with five-inch, blowing the Aichi apart. The floats nosed into the water, exploding on impact.

Both destroyers were damaged beyond economical repair.

Although outdated by 1945, the Mitsubishi A6M Zero-sen series stayed in front-line service and found a final role as a Kamikaze bomber. (Photo courtesy of Stan Piet)



Unlikely warriors

Biplanes and floatplanes were unlikely warriors, being slow and vulnerable. But they could be surprisingly effective.

The Yokosuka Naval Arsenal produced the two-seat K4Y floatplane trainer in 1930. Operational since 1933, it featured a welded steel tube fuselage — a first in Japan — with wood wings. With a 130-hp radial engine the K4Y cruised at 50 knots, and a range of less than 200 statute miles. Only 211 were built, leaving few available in 1945 and therefore expendable.

Yokosuka's next trainer was the K5Y biplane of 1933, built in far larger numbers. More than 5,700 were produced by Yokosuka and five civilian contractors, remaining in production until war's end. Dubbed Aka-Tombo (Red Dragonfly) by the Imperial Navy, it became "Willow" to Allied intelligence.

Despite its frail appearance, Willow could be deadly. On the night of July 28, 1945, seven K5Ys took off from Miyako jima, about 200 miles southwest of Okinawa. Shortly past midnight, one of them made two passes at the radar picket destroyer *Callaghan* (DD-792) 50 miles off Okinawa. Apparently the trainer survived the first run because its wood-frame fuselage offered little reflection for U.S. proximity-fuse shells. The orange biplane dived into the ship's hull near the stern, where the small bombs struck an engine room. Taking on water, the 2,000-ton ship also fought fires from exploding ammunition, and she sank two hours after being struck, losing 47 men. *Callaghan* was the last warship sunk by kamikazes though *Prichett* (DD-561) was damaged while assisting her.

The long-legged and easily hidden Aichi E-13A floatplane would have made an ideal suicide attacker against smaller naval vessels. (Photo courtesy of Stan Piet)



Another destroyer, *Cassin Young* (DD-793), had shot down two attackers on the 28th but became a priority target when the biplanes returned the next night. In the predawn darkness of the 30th a wave-skimming suicider smashed into the starboard side midships.

A gunner's mate, Heath Haggerty, recalled, "My battle station was on this forty millimeter, it was about 3:30 am, there was somewhat of a moon ... they picked up a bogey quite a few thousand yards out. You know we weren't too impressed because it was quite a ways out ... We turned everything on and just seconds later, they told us, 'Action starboard, commence firing,' and I thought, 'What the hell happened here?' First they say he was 12,000 yards away, and now he's right here ..."

Apparently the attacker was a biplane that eluded detection until the last moment. The impact ignited a serious fire, rendering *Cassin Young* dead in the water, fearfully vulnerable to follow-up attack. But the sailors restored power to one engine and got the ship underway in about 20 minutes at a cost of 22 dead. She was the last Kamikaze victim of the Okinawa campaign. Today she is maintained by the National Park Service in Boston.

At Okinawa three Marine night Hellcat squadrons claimed 68 victories, including 10 float-planes. The most remarkable kill of the campaign was logged by First Lt. James E. Smurr of VMFN-533. On the night of May 27, he got a head-on vector to a slow bogey north of the island. Instructed to make a 180, Smurr closed to 50 yards for positive ID, following the intruder through two turns. Throttling back, he saw it was a Jake — nothing else had twin floats. Smurr pressed his trigger for less than one second, and apparently every round went home. The Aichi folded up in a fireball 45 seconds after visual contact. It was not only perhaps the Marines' fastest night kill of the war but the most efficient — only 62 rounds of .50 caliber.

Nonetheless, carrier aviators continued encountering biplanes. When *Bon Homme Richard's* Night Fighting Squadron 91 scored in July, its first two victims were Willows.

Floatplane attacks had begun in April 1945, lasting until early July. Though biplanes continued motoring outbound from Honshu and Kyushu, the divine wind abated notably after April, when carrier fighters claimed more than 1,000 shootdowns. Reduced Japanese operations produced 270 splashes in May, falling to merely 20 in June. Clearly Tokyo was hoarding its reserves for the impending invasion.

Nevertheless, the Kamikazes remained a threat to the end. They struck the attack transport *La-grange* (APA-124) at Buckner Bay, Okinawa, on August 13 — two days before Tokyo's surrender announcement.

THE LOW-END KAMIKAZES

| | Aichi E13A | Kawanishi E7K | Nakajima E8N |
|------------|------------|---------------|---------------|
| Code: | Jake | Alf | Dave |
| Type | Float mono | Float biplane | Float biplane |
| Span | 47 ft 7 in | 45 ft 11 in | 36 ft 0 in |
| Empty | 5,825 lbs | 4,630 lbs | 2,900 lbs |
| Loaded | 8,025 lbs | 7,270 lbs | 4,190 lbs |
| Engine | 1,080 hp | 870 hp | 630 hp |
| VMax | 234 mph | 170 mph | 185 mph |
| Cruise | 135 mph | 115 mph | 115 mph |
| Range | 1,300 sm | 195 sm | 555 sm |
| Ordnance | 1 x 550-lb | 2 x 60-lb | 2 x 66-lb |
| 1st flight | 1938 | 1933 | 1934 |
| Number | 1,418 | 533 | 755 |

| | Yokosuka K4Y | Yokosuka K5Y |
|------------|---------------|-----------------|
| Code: | None | Willow |
| Type | Float biplane | Biplane trainer |
| Span | 35 ft 9 in | 36 ft 1 in |
| Empty | 1,630 lbs | 2,200 lbs |
| Loaded | 2,180 lbs | 3,300 lbs |
| Engine | 130 hp | 340 hp |
| VMax | 101 mph | 132 mph |
| Cruise | 57 mph | 85 mph |
| Range | 195 sm | 630 sm |
| Ordnance | 2 x 60-lb | 2 x 66 lb |
| 1st flight | 1930 | 1933 |
| Number | 211 | 5,770 |



The battle that might have been

With the capture of Okinawa in June, the Americans expanded their facilities in the Ryukyu Islands, building bases and infrastructure for the expected invasion of Japan itself. Operation Olympic-Coronet was a two-phase plan to seize the enemy homeland and end the war in the bloodiest campaign in American history.

The first phase, Olympic, called for landings on Kyushu, Japan's southernmost island, in November. The follow-on, Coronet, anticipated a landing on the main island of Honshu in the spring of 1946.

The Nakajima Ki-4 trainer was 1933 design that could carry 110 lbs of bombs.



Midget submarines initiated war with the U.S. and were ultimately intended as a last defensive force to protect the Japanese homeland. Seen here were near 80 Type D Koryu subs found in a drydock in Kure in October, 1945. With a crew of up to five and a radius of 1,000 miles these Special Attack Unit craft could have inflicted catastrophic damage to any Allied landing fleet. (Photo courtesy of Stan Plet)

CAPABLE OF OPERATING FROM ALMOST ANYWHERE ALONG JAPAN'S LENGTHY COASTLINES, JAKES, ALFS, DAVES AND OTHERS WERE MORE DIFFICULT TO FIND.

To counter the kamikaze threat at its origin, the Fast Carrier Task Force devised "The Big Blue Blanket." Teams of carrier fighters and bombers "capped" known or suspected suicide bases, day and night, deterring Tokko units from taking off. To a large extent, the "BBB" was effective, smothering Japanese airpower where it remained, but at the same time Tokyo was preserving its strength for the future.

Despite their lower performance, floatplanes possessed an inherent advantage over land-based aircraft. Capable of operating from almost anywhere along Japan's lengthy coastlines, Jakes, Alfs, Daves and others were more difficult to find. Numerous Willows also were built as floatplanes, adding to the thousands of low-tech kamikazes available to defend against Olympic-Coronet.

As Adm. William Halsey's Third Fleet patrolled homeland waters that summer, both sides took stock of the situation. With loss of Okinawa, the Japanese gained a back-handed benefit. Allied warships steamed closer to the mainland, no longer requiring lengthy over-water flights for marginally-trained Japanese pilots. During Operation Iceberg, Tokyo launched 1,840 suicide aircraft to hit 192 American ships with 15 sunk and others damaged beyond repair. Admiral Chester Nimitz, commanding the Pacific Fleet, was acutely aware

that Okinawa cost the Navy more than 4,000 dead and nearly 900 disabled.

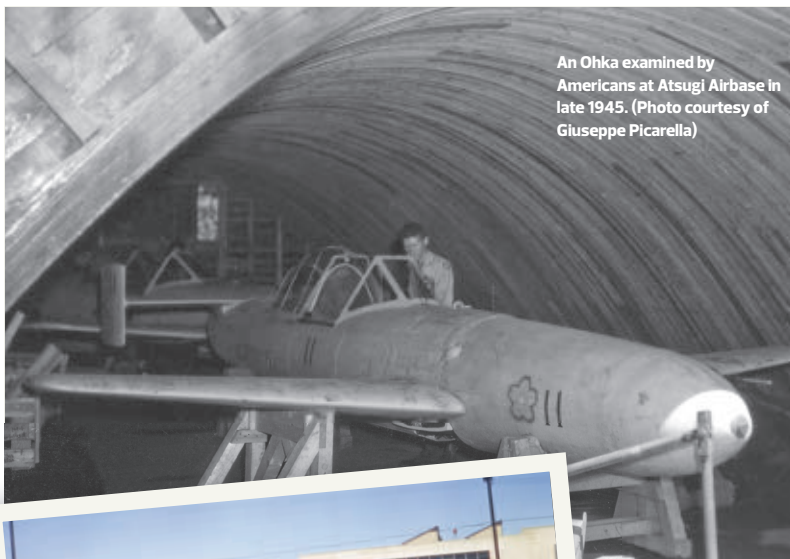
While the success ratio of 10.4% might seem low, it boded ill for the future when more Kamikazes could be launched at much shorter range with better chances of saturating the Allied defenses.

As usual throughout the war, Imperial General Headquarters over-estimated the effectiveness of air attacks on Allied ships. But the warlords in Tokyo calculated that in opposing Olympic, if one Kamikaze in nine hit a ship, the Allies would face a crisis. From nearly 10,000 aircraft on hand, Japan could expect to sink or damage at least 1,000 ships. Considering the far shorter distances involved, simplifying navigation and permitting massive formations, the actual hit rate might have risen to one in six, or 1,600 successful air attacks.

Not counted in the possible Tokko ratio were other Japanese Navy weapons — suicide speedboats and submarines.

Meanwhile, the defenders continued keeping potential Kamikazes under cover. Through the first half of August, carrier squadrons averaged just one shootdown per day.

Kamikaze targeting at Okinawa had focused almost exclusively on radar pickets and aircraft



An Ohka examined by Americans at Atsugi Airbase in late 1945. (Photo courtesy of Giuseppe Picarella)



Seen on post-war display, this Type 11 Ohka was one of many found on Okinawa. (Photo courtesy of Stan Piet)

Efficient Suicide: OHKA/BAKA

Officially it was the Yokosuka MYX7, better known as the Navy Special Attack Ohka. The translation was “Cherry Blossom,” a typically elegant Japanese phrase for an innovative suicide weapon.

Americans knew it better as the Baka Bomb. Presumably “Baka” meant “stupid” or “foolish.” But The Ohka was no joke. Conceived by a junior naval officer in the summer of 1944, the MYX7 was a rocket-powered suicide aircraft to be dropped by a bomber about 20 miles from the target. The concept proceeded from the University of Tokyo’s research department to the Imperial Navy. From there events accelerated. The first ten unpowered prototypes were finished at the end of September for flight testing.

Ohka wings were wood to conserve strategic materials. But the threat was found in the nose and the tail. Up front was a 2,600-lb warhead; in the back were three rocket motors totaling 1,700 lbs thrust, affording eight to ten seconds of powered flight. The first powered version, the Model 11, flew in October 1944, subsequently rated at 288 mph unpowered and 403 mph powered at 11,500 ft.

Three manufacturers produced 755 Model 11 Ohkas through March 1945. Pilot training was necessarily limited with 45 trainers produced. Typically the budding Kamikazes got two unpowered flights with water ballast compensating for the absent warhead.

The follow-on Model 22 was smaller than the 11, intended to be launched from the Yokosuka P1Y Frances, smaller but faster than the Mitsubishi G4M Betty. Propulsion was provided by a gas-generated jet for greater range. Fifty Model 22s were delivered but the only test flight resulted in the pilot’s death from a stall-spin accident.

In what a later generation called the terminal phase, a powered Ohka could hit 600 mph, far faster than any defending fighters. Thus, Ohka came as a nasty surprise during the Okinawa campaign. On April 1, 1945, six were launched against U.S. ships, possibly resulting in slight damage to the battleship West Virginia. Eleven days later Ohkas penetrated the defense, sinking the destroyer Mannert L. Abele. In all, at least 60 Bettys took off with Ohkas but few bombers returned, being vulnerable to fighters. Probably five ships were damaged to some extent, with destroyer Hugh W. Hadley being scrapped.

Subsequent Models 33, 43, and 53 were dead-end turbojet versions.

Today a dozen Ohkas are known surviving including five in the United States.

Barrett Tillman

SPECS:

Length: 19 ft 11 in

Span: 16 ft 10 in

Area: 64.5 sq ft

Empty 970 lbs

Loaded 4,720 lbs

THOUGH JAPAN DEPLOYED SUICIDE MOTORBOATS AND SUBMARINES, THE VERY NAME KAMIKAZE EVOKES IMAGES OF A LONE AIRCRAFT DIVING TO DESTRUCTION THROUGH A RIPPLING, CHURNING SKY OF TRACERS AND FLAK.

carriers. For defense of the home islands, the priorities necessarily changed. Transports went to the top of the list, for obvious reasons — if the assault troops could be destroyed or deterred aboard their ships, the defenders ashore would face more favorable odds.

And those odds were chilling. The Japanese correctly predicted the American landing beaches on southern Kyushu, and reinforced them accordingly. Far removed from Gen. Douglas MacArthur’s “intelligence” reports, the assault troops would face not the expected 3-1 superiority over the defenders, but more often 1-1. In some cases, the Japanese would have outnumbered the Americans.

Among the thousands of potential suicide aircraft was a large percentage of biplanes and floatplanes. Though possessing limited offensive armament, they had shown their effectiveness against 2,000-ton destroyers. However, the effect of one or more biplanes on an 8,000-ton attack transport (APA) probably would not result in a sinking. But destruction of landing craft and damage to handling equipment — aside from personnel casualties — could have exerted an effect.

Among the suicide pilot’s problems was target recognition. There was no doubt about what an aircraft carrier looked like — nothing else had that long, thin, flat deck. Picket destroyers off Okinawa had been apparent by their location and appearance. But how to distinguish an APA from a similar looking supply ship? Nevertheless, forcing an attack transport out of the lineup meant one less infantry battalion ashore. Similarly, a sunken or crippled landing ship tank (LST) took perhaps 20 tanks or 30-plus trucks with it.

Assessment

In 10 months of existence, the Special Attack Corps created an enduring legacy, equal parts fact, myth, and legend. Though Japan deployed suicide motorboats and submarines, the very name Kamikaze evokes images of a lone aircraft diving to destruction through a rippling, churning sky of tracers and flak. Statistics vary, but it appears that in all, nearly 3,000 suicide sorties resulted in 36 U.S. ships sunk and 350 damaged, many never to sail again.

Admiral Marc Mitscher spoke for many Americans when he said that individual Kamikazes scared him frequently, but the concept did not. It was recognized as the desperate last gasp of a proud, warlike nation that believed it was facing extinction. †