

returned were on deck being refueled when at 1159 radar picked up a large number of planes, estimated at 30 or 40, on bearing 250° at a distance of 46 miles. There seemed to be 5 groups, apparently climbing as they approached.

Immediately refueling operations were suspended. The 16 VSB planes which had recently returned from attacking the Japanese carriers and were still in the landing circle were ordered to clear the ship. Fuel lines were drained and CO<sub>2</sub> introduced under pressure. An auxiliary gasoline tank on the stern was dropped overboard.

Our fighters were ordered out in two waves to intercept the approaching planes. At 15 or 20 miles they encountered about 18 single-engine Bakugeki type 99 Navy dive bombers and 18 fighters at 8,000-10,000 feet. So effective were our fighters that only 8 bombers broke through to meet the formidable screen of antiaircraft fire thrown up by our ships.

When the attack took place the *Yorktown* was accompanied by two cruisers, the *Astoria* and *Portland*, and five destroyers, the *Hammann*, *Morris*, *Russell*, *Anderson*, and *Hughes*, cruising in disposition "Victor".<sup>23</sup> Radius of the screen was one mile, speed 25 knots. The course and axis of the force were 225°, but as the enemy planes came into sight on bearing 255° course was changed to 110°, then to 145°. When at 1206 fire was opened at a range of 9,000 yards the *Portland* on the *Yorktown's* starboard bow and the *Astoria* on her starboard quarter were near the line of attack and had a clear field of fire.

Since only eight bombers succeeded in evading our fighters, our gunners had to choose individual targets rather than lay a barrage.<sup>24</sup> One plane was shot down soon after coming within range. As the next plane came in and dove to its bomb release point it was cut to pieces by antiaircraft fire, but its bomb tumbled on the *Yorktown's* deck just abaft the number two elevator. The third plane dove and was hit at the instant its pilot released his bomb, which fell so close astern that fragments wounded gunners on the fantail and started small fires, while pieces of the plane fell in the *Yorktown's* wake. Three planes dove from the port beam and released their bombs before our gunners found them. Two bombs were

<sup>23</sup> Disposition "Victor" is a circular formation for meeting air attack. Each screening vessel is on an assigned true bearing from the carrier at the center. As the carrier maneuvers, the screening vessels conform to maintain their distance and true bearing (though not their relative position) from the carrier.

<sup>24</sup> Reports of the action, while agreeing in essentials, vary considerably in detail. This account depicts the bombing as seen from the *Yorktown*.

misses, one wide and one close to starboard, but the third hit the deck on the starboard side and penetrated the uptakes, where it exploded. The plane which dropped it crashed into the sea beside the ship. A seventh plane circled and dove from ahead. The bomb, dropped an instant before the plane was shot down, hit the number one elevator and exploded above the fourth deck, starting a fire. The last plane missed on the starboard beam. Three hits had been made.

It was all over by 1215. Not one of the bombers escaped.<sup>25</sup> The *Yorktown* was smoking heavily and had come to a stop. Her screening vessels circled her at 2,000 yards, zigzagging at high speed. An hour later (1320) they were joined by the *Vincennes*, *Pensacola*, *Benham*, and *Balch* from Task Force SUGAR.

Damage to the *Yorktown* proved not to be serious. The first bomb, mentioned above, blew a hole 10 feet in diameter in the flight deck. It killed and wounded many men on 1.1-inch gun mounts 3 and 4, as well as those on machine guns at the after end of the island and in the hangar. It set fires in planes on the hangar deck, some of which were loaded with torpedoes, but the prompt release of the sprinkler system by Lt. Alberto C. Emerson prevented a serious conflagration.

The second bomb, coming from the port side, went through the flight deck on the starboard side, and, still traveling outward to starboard, penetrated the uptakes, where it exploded just above the third deck level. It was this hit which stopped the *Yorktown*. The concussion extinguished the fires in all boilers except number one. It also wrecked the Executive Officer's office and ignited paint on the stack. It ruptured the uptake from 1, 2, and 3 boilers in the forward fire room and completely disabled boilers 2 and 3. All boiler rooms were filled with smoke, as No. 1 boiler was discharging through the ruptured uptake into the air intake. Steam pressure dropped and the *Yorktown* lost speed. However, the personnel of No. 1 boiler remained at their station despite heavy smoke and gas and kept it going. When the throttle was closed, this single boiler was able to maintain pressure for the auxiliary equipment.

The third bomb, probably an 800-pounder, struck on the starboard side and penetrated to the fourth deck, where it exploded and started a fire in a rag stowage space. This was near a 5-inch magazine, which had to be flooded, and near a gasoline tank, which was protected by CO<sub>2</sub>.

<sup>25</sup> According to some reports, one plane may have got away.

Repairs were made quickly. The hole in the flight deck was covered in less than half an hour. By 1340 repairs to the uptakes permitted the other boilers to be cut in, except for Nos. 2 and 3, which were disabled. By 1350 the ship was in condition to do about 20 knots, and fires were sufficiently under control to permit refueling of fighters on deck.

Fueling of these planes had just begun when at 1427 the *Pensacola*, which had assumed radar guard after the *Yorktown* was damaged, picked up enemy planes bearing  $340^{\circ}$ , distance 33 miles. There was already in the air a combat patrol of six *Yorktown* fighters which had rearmed and refueled on board the *Enterprise*. Four of these were vectored out to intercept the enemy, and in a few seconds the other two followed. The first four, flying at 10,000 to 12,000 feet, overran the enemy planes, which were coming in at 5,000 feet, and had to turn back to find them. The other two met the Japanese 10 to 14 miles out.

Meanwhile on the *Yorktown* fueling of the planes on deck was hastily suspended and CO<sub>2</sub> again introduced into the gasoline system. Of the 10 fighters on deck, 8 had sufficient gasoline to go into action. The fourth of these was being launched when the *Yorktown*'s port battery opened fire, and the vessels to starboard of the *Yorktown* had to hold their fire till our own planes got clear.

When this attack developed the *Yorktown* was screened by the two cruisers and five destroyers of Task Force FOX, and by the *Vincennes*, *Pensacola*, *Balch*, and *Benham*, which had been sent from Task Force SUGAR after the first attack on the carrier. This force was in "Victor" formation on course  $90^{\circ}$ , so that the attack came from port or the port quarter. The *Yorktown*'s speed had been gradually increased to about 20 knots.

The planes which our fighters intercepted at about 12 miles distance proved to be 12 to 16 type 97 Kogekiki (Navy torpedo bombers), escorted by about the same number of fighters. Our fighters shot down 5 to 7 of the torpedo planes before our ships opened fire. About 8 came on, one of which fell soon after coming within range of our anti-aircraft fire.

When fire was opened, the *Pensacola* and *Portland* were on the side of the screen advanced toward the attack. The approaching planes were in two groups. One of five headed to pass astern of the *Pensacola* toward the *Yorktown*, and two or three to pass ahead of her. They had already started their glide when our vessels to port of the *Yorktown*

opened fire at 1441 at a range of 12,000 yards. The curtain of fire thrown up by our ships was so heavy that it seemed impossible for a plane to pass through it and survive. Indeed, according to some reports, a few enemy planes circled outside, not daring to come in. Seven or eight, however, came through. As they passed our screening vessels our gunners followed them even though our own ships lay beyond in the line of fire. It seems that only four or five survived long enough to drop their torpedoes. Two of these the *Yorktown* avoided by skillful maneuvering, so that they passed under her bow. Two others, however, could not be avoided, and they caught her admidships on the port side. The two explosions at 1445 were about 30 seconds apart. The planes which scored these hits were shot down either in passing the *Yorktown* or in attempting to pass through the fire of her escorting vessels. It is believed that not one of the attacking squadron returned to its carrier.<sup>26</sup>

By 1447 firing ceased. The *Yorktown*, listing heavily to port, was losing speed and turning in a small circle to port. She stopped and white smoke poured from her stacks. The screening vessels began to circle.

Inside the *Yorktown* all lights had gone out. The Diesel generators were cut in, but the circuit breakers would not hold and the ship remained in darkness. The list gradually increased to  $26^{\circ}$ . Without power nothing could be done to correct it. The Commanding Officer and the Damage Control Officer thought it probable that the ship would capsize in a few minutes, and at 1455 orders were given to abandon ship. Inside, men clambered over steeply sloping decks in total darkness to remove the wounded. After an inspection on which no living personnel were found, the Commanding Officer left the ship.

Destroyers closed in to pick up survivors.

#### THE FOURTH JAPANESE CARRIER, JUNE 4

- 1130 *Yorktown* launches search group.
- 1430 Position of *Hiryu* reported.
- 1530 *Enterprise* launches 24 VSB.
- 1603 *Hornet* launches 16 VSB.
- 1705 *Enterprise* squadron attacks CV.
- 1730 *Hornet* squadron attacks BB, CA.

<sup>26</sup> According to some reports one or two may have escaped. One was seen leaving with one of our fighters in pursuit.

darkened ship was abandoned, and also picked up a *Yorktown* fighter pilot who appeared in his rubber boat.

At 1135 the mine sweeper *Vireo* arrived. She had been standing by near Pearl Hermes reef awaiting orders when directed by CINCPAC on the afternoon of the 4th to proceed at once to the damaged *Yorktown*.<sup>67</sup> By 1308 she had the carrier in tow and headed for Pearl Harbor at about 3 knots. The load proved too heavy, however. She was unable to maintain this speed and by the next day was barely able to keep the *Yorktown* on her course. During the afternoon of the 5th the group was joined by the *Gwin*<sup>68</sup> and the *Monaghan*. The former had been en route to join Task Force SUGAR when her orders were modified and she was directed to proceed at 25 knots to join the *Yorktown*. The *Monaghan* had been detached from Task Force SUGAR. The *Gwin* put a salvage party aboard, but it could accomplish little before dusk, when it had to be removed.

At about 0200 on the 6th the *Hamman*, *Balch*, and *Benham* joined the screen circling the *Yorktown*. About 0415, as soon as there was sufficient light, the *Hamman* went alongside and transferred to the carrier a salvage party consisting of Captain Buckmaster, 29 officers and 130 men.

Captain Buckmaster had worked out a careful salvage plan. Fires were to be brought under control. The list was to be reduced by pumping and counterflooding and by cutting away all removable weights from the port side including 5-inch guns and aircraft. The remaining guns were to be made fit for action. The rudder was to be brought amidships to facilitate towing.

At 0600 the *Hamman* was directed to lie off the *Yorktown*'s starboard bow to supply foamite and water to fight the fire and power for operating submersible pumps. It was found impossible for the *Hamman* to lie clear and keep her position accurately, so that she was secured alongside forward on the *Yorktown*'s starboard side.

By afternoon considerable progress had been made. The fire in the rag storeroom had been put out. The water level in the engine room had been reduced somewhat, and in the third deck aft it had been lowered 3 feet. Two starboard fuel tanks had been flooded. One 5-inch gun had been cut loose on the port side and a second was almost ready for dropping. As a result, the list had been reduced some 2°.

<sup>67</sup>The *Narajo* and *Seminole* were also dispatched to join the *Yorktown* but did not arrive before she sank.

<sup>68</sup>Under the command of Commander John M. Higgins.

At 1335 four torpedo wakes were sighted to starboard of the *Yorktown*. Two destroyers in the screen gave the emergency signal, while the *Yorktown* fired a gun and passed the word "Torpedo Attack!" In the minute which elapsed between the first sighting of the torpedoes and the explosion, the *Hamman* called to general quarters, Gunnery Officer Lt. (j. g.) Charles C. Hartigan ordered the forward machine gunner to open fire on the torpedoes in the hope of detonating them before they arrived, the rear machine gunner also took up the fire, and Captain True signalled full speed astern on the inboard engine in the hope of pulling clear.

The engines were just responding when the torpedoes struck. "The first torpedo appeared to pass under the *Hamman* in the vicinity of No. 2 gun and exploded against the side of the *Yorktown*. The second torpedo struck the *Hamman* in No. 2 fireroom. This torpedo apparently broke the ship's back, as a pronounced sag was noted in this vicinity. Large quantities of oil, water and debris were blown high into the air, coming down on both the *Hamman* and *Yorktown*."<sup>69</sup> Many, including Captain True, were temporarily stunned either by the force of the explosion or by being thrown violently against some object. The *Hamman* began to settle rapidly by the head, and the order to abandon ship was given at once.

Two torpedoes hit the *Yorktown* at the turn of her bilge below the island structure, while the fourth passed astern. The shock of the explosion was only slightly less severe than on the *Hamman*. The tripod foremast whipped sharply, shearing the rivets in the starboard leg which flew off like bullets. Overhead fixtures in the hangar crashed to the deck. Landing gear of planes collapsed as the decks heaved upward. Men were thrown against bulkheads or into the water. The hole torn in the *Yorktown*'s side apparently flooded the starboard firerooms, for the list was reduced to 17° and she settled a little.

The *Hamman* disappeared within 3 or 4 minutes of the first explosion, but in this time most of the crew managed to get clear. About a minute after the water closed over her stern there was a tremendous underwater explosion which killed many men and seriously injured more. The cause is unknown. Apparently it was caused either by one of the *Hamman*'s torpedoes (one or two survivors saw one running hot in its tube as the ship sank) or by her depth charges. These had all been set on safe when the *Hamman* first went alongside the *Yorktown*, and had

<sup>69</sup>Captain True's description.

again been checked only about half an hour before the attack. Moreover, B. M. Kimbrel, torpedoman first class, rechecked the depth charges after the torpedo struck, and remained to help stunned shipmates into life jackets and into the water. He probably died in the explosion he had tried to prevent.

Some destroyers rescued survivors from the *Hamman* and *Yorktown*, while others hunted the enemy submarine. The hunt lasted all afternoon with many contacts and depth charge attacks, one of which brought up heavy oil. At about 1845 a submarine surfaced on the horizon. The smoke from its Diesels was seen and the *Monaghan* and *Hughes* headed for it at full speed. A little later 5-inch gunfire was heard. The search continued several hours with no result except the discovery of an oil slick. It is believed that the submarine escaped with damage.

The *Yorktown* did not sink at once. Because the destroyers were occupied, it was decided not to attempt further salvage till next day. Before the *Vireo* took off those that remained of the salvage party, all watertight closures possible were secured, but many quick-acting doors had been sprung and warped by the explosions and many bulkheads weakened. Probably the pounding of the water broke through the center-line bulkhead, flooding the remaining third and fourth deck spaces amidship on the port side.

At 0330 on June 7th it was noticed that the list was increasing. At 0501 "she turned over on her port side and sank in about 3,000 fathoms of water with all her battle flags flying."<sup>59</sup>

#### *Summary of enemy losses in the Battle of Midway.<sup>60</sup>*

- A. Four carriers sunk: *Akagi*, *Kaga*, *Soryu*, *Hiryu*, with the loss of all their planes and many of their personnel. Estimated 275 planes, 2,400 men.
- B. Two and probably three battleships damaged, one severely.
- C. Two *Mogami* class heavy cruisers sunk,<sup>61</sup> three or more heavy cruisers damaged, some severely.
- D. One light cruiser damaged.
- E. Three destroyers sunk, a fourth possibly sunk.
- F. Four transport and cargo vessels hit, one or more possibly sunk.
- G. Estimated total number of personnel lost: 4,800.

<sup>58</sup> Captain Buckmaster's description. Her position was lat. 30°46' N., long. 167°24' W.

<sup>59</sup> Taken from the report of Admiral Chester W. Nimitz, Commander in Chief of United States Pacific Fleet.

<sup>60</sup> There is some uncertainty as to whether the second actually sank.

#### *Summary of our losses.*

*Ships: Yorktown and Hamman* sunk.

*Planes: About 150 lost in action or damaged beyond repair.*

*Personnel: 92 officers and 215 men.*

#### **OBSERVATIONS<sup>62</sup>**

Both Admiral Spruance and Admiral Fletcher have pointed out that "in a duel between CV's the side which is able to strike the first blow against enemy CV's whose planes are on board wins." At Midway we won in precisely this manner. We were able to do this because we knew of the enemy's presence, the approximate composition of his force, and because we had calculated correctly his method of approach. The Battle of Midway was essentially a victory of intelligence.

The Japanese, on the other hand, probably did not know of the presence of our forces until shortly before our carrier planes attacked them. In attempting a surprise attack they were themselves surprised. The placing of our fleet to fall upon the enemy's flank was a piece of brilliant tactics, skilfully executed. Our single misfortune was the failure to locate and attack the fourth enemy carrier with sufficient promptness, when its presence was suspected. That failure cost us the *Yorktown*.

Midway was a contest of air power. There was no contacts of surface vessels in the entire action. Both Admiral Fletcher and Admiral Spruance were fully aware of the value of surface attacks had circumstances permitted. The reader of this narrative will understand why such attacks were not considered practicable.

Our pursuit of the enemy's fleeing forces, successful as it was, undoubtedly fell short of what might have been achieved had more complete information been promptly available to our task forces. As Admiral Nimitz says, "Early, accurate and continuous information of the enemy is essential for successful attack by carrier groups." Admiral Fletcher says, "Every effort should be made to *locate* and *maintain* contact with an enemy force by other than carrier aircraft." Admiral Spruance concurs: "Early and accurate information of movements of an enemy force to be attacked is essential for successful carrier operations."

<sup>62</sup> These observations are based largely upon those submitted by officers who took part in the engagement, particularly Admiral Fletcher and Admiral Spruance, and the conclusions drawn by Admiral Nimitz.