

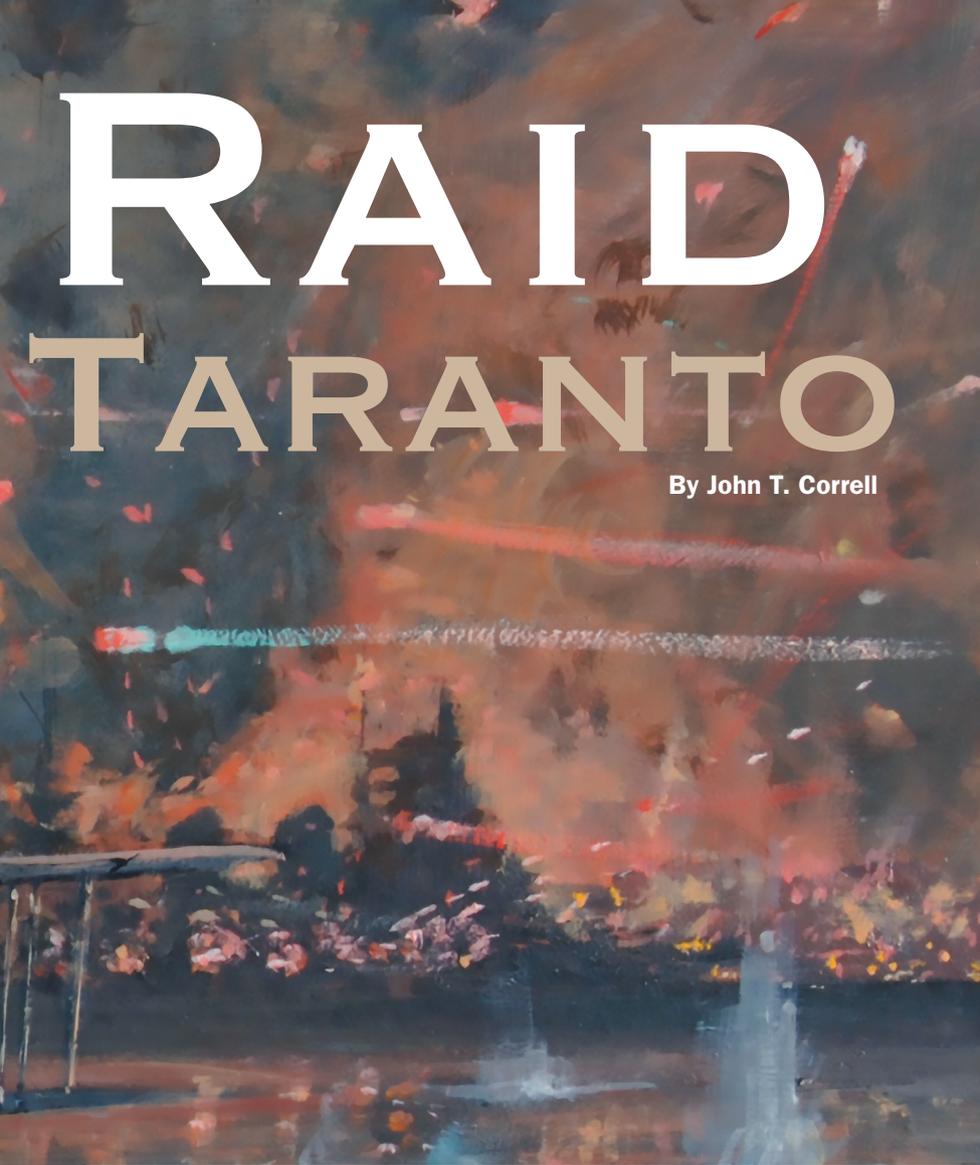
THE AIR AT



A painting hanging in Britain's National Museum of the Royal Navy shows a torpedo plane from HMS *Illustrious* attacking the ships at Taranto harbor on Nov. 11, 1940.

Painting by Charles David Cobb, The National Museum of the Royal Navy

The British torpedo bombers left three battleships sunk or sinking in the main harbor of the Italian battle fleet.



RAID TARANTO

By John T. Correll

On the night of Nov. 11, 1940, most of the capital ships of the Italian navy—including all six of its battleships—lay at anchor in the harbor at Taranto, which the Italian admirals believed to be secure. They were not overly concerned about the risk from concentrating the fleet.

Taranto, located inside the heel of the Italian boot, had strong defenses that included sound-detection devices to pick up airplanes 30 miles away, submerged breakwaters, jetties, anti-torpedo nets, barrage balloons, and hundreds of anti-aircraft guns.

The admirals recognized the theoretical danger of air attack. Taranto was within operational range for British carriers in the Mediterranean, but never in history had carrier-launched aircraft been used to strike a heavily defended naval base.

Previous assumptions about such an attack were about to be blown away.

Just before midnight, the first of two waves of open-cockpit Fairey Swordfish biplanes, launched from the British carrier HMS *Illustrious*, swept down on the anchorage at Taranto. The first two aircraft dropped flares to illuminate and backlight the Italian ships in the harbor. Close behind them came more Swordfish dropping torpedoes and bombs.

In 65 minutes, the attackers sank or severely damaged three of the battleships, two cruisers, two destroyers, and assorted other targets. Two of the Swordfish were shot down by anti-aircraft fire. In the House of Commons, Prime Minister Winston Churchill proclaimed that the loss to Italy of half its battleships “affects decisively the balance of naval power in the Mediterranean.”

Some nations were paying closer attention than others. Japan was especially interested and dispatched its naval attaché from Berlin to investigate. A group of Japanese naval officers visited Taranto for a further look, bringing a long list

of questions and interviewing as many eyewitnesses as they could.

Taranto is often described as the precursor or blueprint for the Japanese attack on Pearl Harbor 13 months later, but that is something of an exaggeration. Adm. Isoroku Yamamoto was already thinking about a strike on Pearl Harbor, possibly with aerial torpedoes.

There is little doubt, though, that Taranto confirmed the feasibility of Yamamoto’s idea. Serious planning of the attack and experiments to modify aerial torpedoes for use in the shallow waters of Pearl Harbor—about the same depth as at Taranto—began in early 1941.

CHALLENGE IN THE MED

Adm. Andrew B. Cunningham, commanding the British Mediterranean Fleet, was caught short-handed when Italian dictator Benito Mussolini declared war on Britain June 10, 1940.

Some of Cunningham’s assets had been transferred to the Home Fleet for the impending Battle of Britain. Other British forces were tied down in North Africa, where an Italian army was massed on the frontier between Egypt and Libya.

Cunningham had to keep the sea lanes open to the Suez Canal, the critical passage to India, Australia, and British possessions in Asia, but he had only a squadron of surface combatants and the aging carrier HMS *Eagle*, a converted battleship with an improvised flight deck.

The day after Mussolini declared war, Italian bombers from Sicily pounded British bases on Malta. Several clashes at sea ensued in July and August.

The Italians held a substantial numerical advantage in both ships and aircraft and a position of strategic advantage from their base at Taranto. Nevertheless, they had several weaknesses.

The fighting potential of the Regia Marina, the Italian navy, depended on its battleships. There were no aircraft carriers, Mussolini having decided that the entire peninsula of Italy functioned as a carrier. The defense of Taranto included Italian air force interceptors, but their bases were some distance away. None of the aircraft in southern Italy had a night-fighting capability.



Royal Navy photo by Lt. S. I. Bedell via Imperial War Museums

IWM

Fairey Swordfish torpedo bombers on a training flight from Scotland in 1940. Two waves of the open-cockpit bombers launched from *Illustrious* to wreak havoc on Taranto.

Italy's resources were strung out and strained by Mussolini's military adventures from the invasion of Ethiopia in 1935 and participation in the Spanish civil war to the invasions of Albania in 1939 and Greece in 1940 and the current challenge to the British in North Africa.

Mussolini's advisors warned him that the Italian industrial base could not readily replace ships lost in war and the admirals were reluctant to take risks. After Cunningham received reinforcements—including the newly commissioned carrier *Illustrious*—in September, he believed he could beat the Italians in an all-out naval battle.

STRING BAGS AND TORPEDOES

If the Italians, following their cautious strategy, would not come out to fight a major engagement, Cunningham would go into Taranto to get them. The notion of a carrier-launched attack on Taranto dated back to the Ethiopian invasion.

The plan was updated in 1939 and the man who had updated it, Lumley Lyster, arrived in September aboard *Illustrious* as the new rear admiral for carriers of the Mediterranean Fleet. He presented a plan for attack to Cunningham, who laid it on with the designation of Operation Judgment.

The strike was set for Oct. 21, the anniversary of Lord Nelson's celebrated

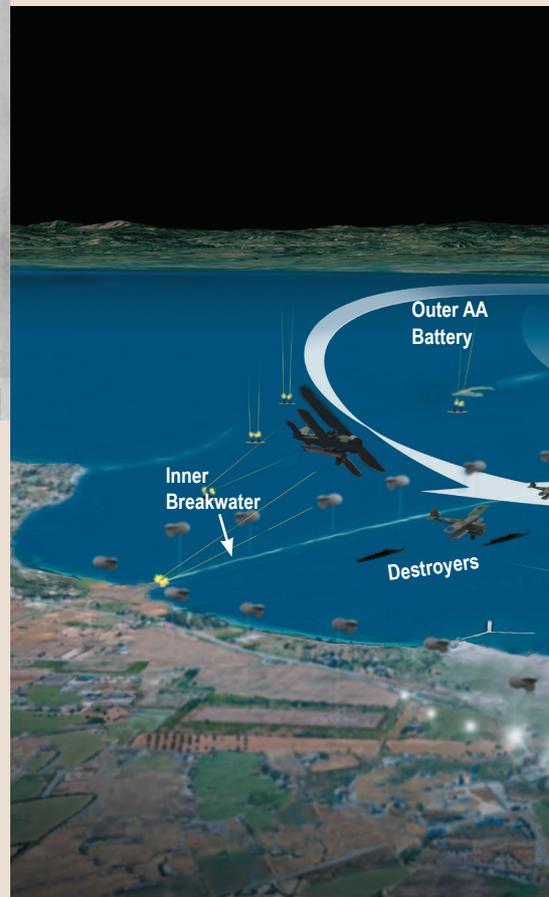
victory at Trafalgar in 1805. The two carriers, *Eagle* and *Illustrious*, were to launch a total of 30 Fairey Swordfish aircraft, carrying a combination of torpedoes and bombs.

The Swordfish entered service in 1936 and was outmoded even then. Its biplane configuration was old-fashioned and it was painfully slow. The top speed was officially rated at 143 mph when carrying weapons, but according to fleet air arm crews, it seldom went faster than 100. The aircrews in the open cockpits wore heavy insulated flying suits for protection against the cold.

For all of that, the Swordfish was sturdy and reliable. It was popular with the crews who affectionately called it the "String bag," named supposedly for the knotted string bags used by shoppers in England and referring to the Swordfish's versatility in carrying things. By an alternate explanation, "String bag" derived from the web of rods and struts between the upper and lower wings.

The Swordfish normally had a crew of three: a pilot, an observer, and a gunner. The observer, more important than suggested by his title, handled navigation, reconnaissance, and target recognition. The pilot sat in the front cockpit and the gunner and the observer shared the larger second cockpit.

The Taranto mission required supplementary long-range fuel tanks, which were usually slung under the Swordfish fuselage. That was not possible when carrying torpedoes, which had to be mounted centerline between the wheels. Thus the fuel tank was put into the observer's space. The observer moved



to the smaller seat previously occupied by the gunner, who was scrubbed from the crew.

The base at Taranto was divided into inner and outer harbors, connected by a small canal. The battleships were in the larger outer harbor, protected by a breakwater and anti-torpedo nets. Several of the cruisers and some of the destroyers were in the inner harbor.

The battleships with their heavy armor plating were too tough to knock out with bombs so half the Swordfish carried torpedoes. The other half would use bombs against the cruisers and destroyers.

The conventional wisdom was that air-dropped torpedoes could not be used in water less than 75 feet deep. If the water was too shallow, the torpedo would not be able to recover from its steep plunge and begin tracking

toward the target. Taranto harbor was 40 feet deep.

What the Italians did not know was that the British had found a solution. The nose of the torpedo was hooked to a wire wound on a drum beneath the aircraft. Upon launch, the wire pulled the nose of the torpedo up so

the carriers in the dark. The operation was rescheduled for Nov. 11, with fewer aircraft.

The next glitch came in early November with the discovery that *Eagle* needed emergency repairs. The hull had been shaken by near misses during the summer battles, damaging the pipes

Swordfish plenty of room to maneuver between them.

On Nov. 11, the day of the attack, the Italians had scheduled a gunnery exercise at sea and spent much of the morning in the extensive task of removing the torpedo nets around the ships. The exercise was canceled but the torpedo nets had not been rerigged.

The movements of *Illustrious* were concealed within the broader context of Operation MB8, an elaborate series of British actions in early November timed to provide additional cover for the air strike. Among other distractions, a group of cruisers and destroyers would run slightly ahead of *Illustrious*, between the carrier and Taranto.

The delay from the fire had put the attack on Taranto after Italy's invasion of Greece Oct. 28, which further obscured the activity of the British fleet.

THE SWORDFISH LAUNCH

A few hours before the attack on Nov. 11, an RAF reconnaissance airplane from Malta overflew Taranto and confirmed that the Italian fleet was still in place. Packed into the inner and outer harbors were six battleships, nine cruisers, 28 destroyers, and other vessels.

Royal Navy photo by Lt. C. H. Parnall, via Imperial War Museums



The first wave of Swordfish aircraft (white arrow) struck the ships in the harbor at 11:35 p.m., the second (orange arrow) at 12:11 a.m. The entire raid lasted a little more than an hour.

that after falling from low level, it hit the water in a belly flop instead of a dive. Attack was possible in water as shallow as 22 feet.

BAD LUCK AND GOOD LUCK

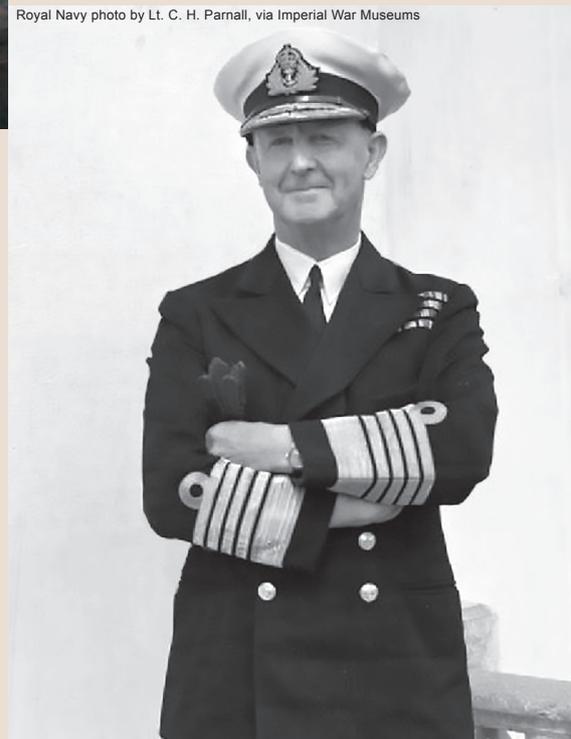
Both the makeup of the air strike and the timing were changed by intervening surprise events. On Oct. 18, three days before the scheduled mission, a mechanic fitting an auxiliary fuel tank on one of the Swordfish dropped a tool, setting off a spark and causing a fire that destroyed two airplanes and badly damaged three others.

The attack had to be postponed. The moon would not be full again until the middle of November, which would give the aircrews greater visibility over Taranto and when returning to

that carried aviation fuel within the ship. The danger of fire or explosion was so great that *Eagle* was withdrawn from action.

Illustrious would be the lone carrier for the strike. Several more aircraft were lost in accidents Nov. 9-10, leaving 21 Swordfish as the attack force aboard *Illustrious*.

These misfortunes were offset by several pieces of good luck for the British. Initially, the Taranto harbor was protected by 90 barrage balloons, tethered on steel cables that could tear the wings off low-flying airplanes. Sixty balloons were lost in a storm Nov. 6 and had not yet been replaced. With only 30 balloons remaining, the cables were 900 feet apart—three times the previous spacing—allowing the



Adm. Andrew Cunningham, commander of the British Mediterranean Fleet, was elated by the success of the daring torpedo and bombing raid.

The Swordfish were divided into two waves because *Illustrious* could launch only 12 of them at a time. The first wave, led by Lt. Cmdr. Kenneth Williamson, was off at 8:30 p.m. Six of the airplanes had torpedoes; four had bombs, and two had flares and bombs.

En route, they encountered thick fog. Most of the squadron, following standing orders, climbed to higher altitude to get above it, but Lt. Ian Swayne did not. Separated from the others, he assumed he had fallen behind and proceeded to Taranto at lower altitude to make up time. In fact, he was well ahead, arriving 15 minutes before his colleagues, alerting the air defenses and setting off flak from the shore batteries.

The sound-detection equipment had picked up Swayne's approach some distance out but the Italian air force had no night-fighter interceptors nearby. The Italians would not put up a single fighter that night, which was critical to the survival and success of the slow-moving Swordfish.

As soon as the last of Williamson's airplanes were away, the ship's crew brought the nine aircraft for the second wave up to the deck—five with torpedoes, two with bombs, and two with flares and bombs. Launch began at 9:20 p.m., with Lt. Cmdr. J. W. Hale leading.

The last two Swordfish bumped wings on the deck. Lt. W. D. Morford was able to take off, but Lt. Edward W. Clifford was held back until the repair crews fixed the damage to his aircraft, which took about 15 minutes. He launched anyway, hoping to catch up.

Meanwhile, Morford was having problems. The bump had caused more damage than was apparent. The straps holding the extra fuel tank gave way and the tank fell into the sea. He had to abort and return to the carrier.

The mission was now down to 20 Swordfish, one of them arriving early at Taranto and another one getting there late.

OVER TARANTO

The first wave reached Taranto at 11:12 p.m. The first two airplanes circled around at high altitude and dropped a string of flares along the eastern rim of the harbor, backlighting the targets for the strike aircraft approaching from the west. The ground gunners banged away at the flare droppers, but it did no good. The flares fell 1,000 feet before igniting and the airplanes had moved on.

Close on the heels of the flare droppers came flight leader Williamson with Lt. Norman Scarlett as his observer. They swept in very low, between the barrage balloons, and released their torpedo 20 or 30 feet above the water. It tracked unerringly to the battleship *Conte di Cavour* and blew a 40-foot hole in the hull.

Moments later, Williamson and Scarlett were shot down. Their airplane crashed into the harbor but the Italians

fished them out. They spent the rest of the war as POWs.

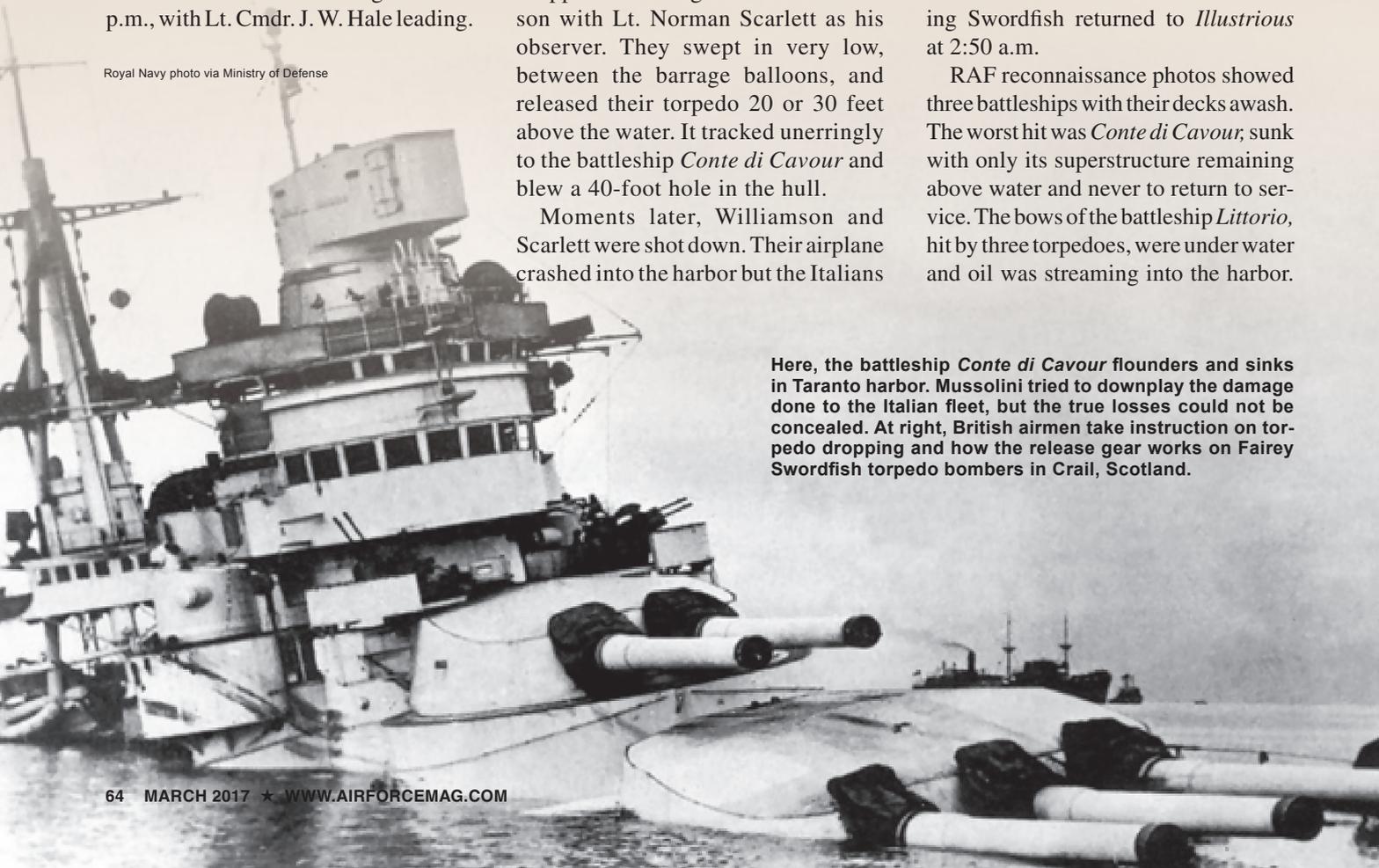
Other Swordfish were scoring hits, too, but it was difficult to tell which weapons were causing what damage. The attackers were flying so low the Italians could not shoot at them effectively at depressed trajectory for fear of hitting their own ships. Nor could they make good use of their searchlights, which would mostly have blinded their own gunners.

The first wave completed its strike at 11:35 p.m. and there was a lull before the second wave attacked at 12:11 a.m. Again, the flare droppers came first and the strikers continued the toll on the Italian fleet. A second Swordfish was lost to a direct hit by the anti-aircraft guns. Neither of the airmen, pilot Lt. G. W. Bayley or observer Lt. H. J. Slaughter, survived as their airplane burst into flames and fell into the water.

About 12:30 a.m., shortly after the last of his colleagues had departed, Clifford reached Taranto, his wing repairs holding up just fine. He attacked a cruiser in the inner harbor, but his bomb was defective. It punched a hole in the deck but failed to explode. Clifford was clear of the harbor defenses by 12:35 a.m. and the air raid was over. The last surviving Swordfish returned to *Illustrious* at 2:50 a.m.

RAF reconnaissance photos showed three battleships with their decks awash. The worst hit was *Conte di Cavour*, sunk with only its superstructure remaining above water and never to return to service. The bows of the battleship *Littorio*, hit by three torpedoes, were under water and oil was streaming into the harbor.

Here, the battleship *Conte di Cavour* flounders and sinks in Taranto harbor. Mussolini tried to downplay the damage done to the Italian fleet, but the true losses could not be concealed. At right, British airmen take instruction on torpedo dropping and how the release gear works on Fairey Swordfish torpedo bombers in Crail, Scotland.



Royal Navy photo via Ministry of Defense

A third battleship, *Caio Duilio*, was beached in shallow water to prevent its sinking completely. The torpedo had blown a hole between two magazines. Had it struck a few yards either way, *Caio Duilio* would have been done for.

The raid had also sunk or damaged two cruisers and two destroyers as well as causing fires and losses to other ships, the oil storage depot, and the dockyard. Two of the battleships were refloated, repaired, and eventually returned to service.

IN THE WAKE OF TARANTO

The Italians tried to minimize the bad news, announcing that one ship was “gravely damaged” and that they had shot down six British airplanes, but the actual losses could not be concealed. In *The New York Times*, Hanson W. Baldwin noted that the British “achieved their greatest results with the torpedo rather than the bomb” and that the raid marked an “increasing accuracy of attacks from the air against ships on the sea.”

Cunningham was jubilant, declaring, “In a total flying time of six and a half hours—carrier to carrier—twenty aircraft had inflicted more damage upon the Italian fleet than was inflicted upon the German High Seas Fleet in the daylight action at the Battle of Jutland.”

The Italians, rattled by the attack, pulled their major warships out of Taranto for a safer harbor at Naples, far to the north and no threat to the British convoys. They never again used Taranto as a major base for their battle fleet.

The strategic gain in the Mediterranean was diminished somewhat in 1941 when the Germans, no longer trusting the Italians, moved Luftwaffe bombers and

fighters into the area in large numbers to block and harry the British.

Seldom in the history of warfare had a handful of old airplanes inflicted so much damage on an enemy, but Taranto never received the acclaim of other noteworthy battles. Little more was said after Churchill’s statement to the House of Commons about the balance of power in the Mediterranean. Later, ruminating on the war on the southern flank and the 1942 Battle of El Alamein, Churchill said, “Before Alamein we never had a victory. After Alamein, we never had a defeat.”

The Swordfish remained in service until 1945 and figured in one more major engagement. In May 1941, it was Swordfish torpedo bombers flying from the carrier *Ark Royal* that disabled the German battleship *Bismarck*, enabling British battleships and destroyers to finish the job and sink it.

Cunningham returned to Britain in 1943 as First Sea Lord, holding that position until his retirement in 1946 in the five-star grade of admiral of the fleet. Vice Adm. Inigo Campioni, commander of the Italian battle fleet, was relieved of duty and became governor of the Dodecanese islands in the Aegean.

Illustrious, attacked by more than 70 German bombers and fighters in the Mediterranean in January 1942, sustained major damage, was repaired in the United States, and returned to duty. After the war, *Illustrious* served as a training carrier and troop transport until decommissioning in 1955.

The United States was slow to catch on to the significance of Taranto. In a letter in February 1941 to Adm. Husband E. Kimmel, commander of the

US Pacific Fleet, the Chief of Naval Operations, Adm. Harold R. Stark, expressed the opinion that “a minimum depth of water of 75 feet may be assumed necessary to successfully drop torpedoes from planes.” Pearl Harbor, where Kimmel’s fleet was anchored, was 40 feet deep, about the same as Taranto.

That assessment was modified by a round-robin message dispatched in June 1941 by Rear Adm. Royal E. Ingersoll, assistant CNO, who said that in view of “recent developments”—specifically citing Taranto—the Navy could “no longer assume a requirement of depth of 75 feet for aerial torpedo operations.” Incredibly, he added erroneously that the torpedoes at Taranto had been at depths between 11 and 15 fathoms, meaning 66 to 90 feet.

PREVIEW OF PEARL HARBOR

The Japanese naval attaché discussed what he had learned at Taranto with Cmdr. Minoru Genda, who planned the Pearl Harbor operation, and with Cmdr. Mitsuo Fuchida, who led the attack. The report from the Japanese navy officers who visited Taranto was studied carefully.

Early on, Yamamoto’s proposal for an attack on Pearl Harbor met with great resistance in military and naval circles in Japan, but Taranto lent strong support to his case. His decision to strike Pearl Harbor was made in December 1940. In January 1941, he assigned serious planning for the use of aerial torpedoes.

The Japanese did not use the spooled wire technique developed by the British for delivery of aerial torpedoes in shallow water. Their own experiments produced a torpedo with wooden fins which worked in 36 feet of water in tests between January and September 1941.

Forty of the Nakajima B5N bombers that Fuchida led over Pearl Harbor on Dec. 7, 1941, carried aerial torpedoes. They were very effective along Battleship Row. ★

John T. Correll was editor in chief of *Air Force Magazine* for 18 years and is now a contributor. His most recent article, “Jack Northrop and the Flying Wing,” appeared in the February issue.



Royal Navy photo by Lt. L. Peilman via Imperial War Museums