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*While it may seem unrealistic, perhaps farfetched before the advent of nuclear weapons, to categorize a single warship as strategic, one ship can rightfully be so described: the German battleship Tirpitz, the "Lonesome Queen" of the north during World War II, which by her mere existence influenced the balance of seapower in every ocean.*

## THE GERMAN BATTLESHIP TIRPITZ: A STRATEGIC WARSHIP?

by

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**Introduction.** *Tirpitz* was the sister ship of *Bismarck*, the German battleship whose May 1941 foray into the North Atlantic gained her worldwide notoriety and the Royal Navy's enduring respect. Sailing from Bergen, Norway in company with the cruiser *Prince Eugen*, *Bismarck* encountered and sank *Hood*, pride of the Royal Navy, and damaged *Prince of Wales*. With her great speed *Bismarck* might have made good her escape. But the Royal Navy marshaled a massive pursuit force of 8 battleships and battle cruisers, 2 aircraft carriers, 11 cruisers, 21 destroyers, and 6 submarines in a desperate attempt to locate and destroy *Bismarck* before she could reach safety in the French port of Brest.<sup>1</sup> This mighty armada was successful, and *Bismarck* was sunk on 27 May 1941, fighting to the end, by high-caliber gunfire plus torpedoes launched from aircraft, destroyers, and cruisers. Some

of *Bismarck*'s 110 survivors later reported that no shell or torpedo had penetrated her engine rooms, and that most of her machinery was intact when the engineer officer was ordered to blow up the explosive charges in the sea valves.<sup>2</sup>

*Bismarck*'s epic voyage was an impressive example both of German courage and British determination. In order to locate, track, and destroy her, the British were forced to assemble an unprecedented naval force. To do this they diverted convoys and stripped them of their surface escorts, fortunately for them without subsequent losses. The Royal Navy, however, was uncertain that such an effort could soon be repeated.

After this experience with *Bismarck*, it is understandable that the British observed with extreme interest and anxiety German progress on her sister ship, *Tirpitz*, which had begun sea trials

in the Baltic during March 1941. From the time *Tirpitz* sailed for Trondheim, Norway in January 1942 she became the focal point of constant surveillance and repeated attacks by the British.

The cause of this British concern about *Tirpitz* was aptly summarized by Prime Minister Churchill:

... The destruction or even the crippling of this ship is the greatest event at sea at the present time ... The whole strategy of the war turns at this period on this ship, which is holding four times the number of British capital ships paralysed, to say nothing of the two new American battleships retained in the Atlantic. I regard the matter as of the highest urgency and importance.<sup>3</sup>

**Genesis.** Under the Treaty of Versailles ending World War I, Germany had been restricted to building not more than four battleships of 10,000 tons displacement. Shortly after Hitler's election to power in 1933 as Chancellor, however, keels were laid for two new battle cruisers, *Scharnhorst* and *Gneisenau*. Two years later the British and German Governments signed the Anglo-German Naval Agreement by which Germany was allowed to build up to one-third of the British naval strength of surface vessels and 60 percent of British submarines. While signatories to the Washington Naval Agreement and London Conference were limited to a displacement for battleships of 35,000 tons, Germany faced no such restrictions, having been invited to neither conference.<sup>4</sup>

With this background, the keel of *Tirpitz* was laid on 24 October 1936 at the German naval yard at Wilhelmshaven. She was launched on 1 April 1939 by Frau von Hassel, the granddaughter of Grossadmiral Alfred von Tirpitz, architect of the German High Seas Fleet that had encouraged Kaiser Wilhelm II in his ambitions for

worldwide power to the extent he aspired to challenge the naval might of the British Empire. Tirpitz worked assiduously to give Germany a big ship, blue-water navy. It is ironic, perhaps, that the battleship subsequently named for him spent most of her life lurking in coastal waters. The Commander in Chief of the German Navy, Erich Raeder, was promoted to Grossadmiral on the occasion of *Tirpitz'* launching, which was a major political event attended by Hitler and the National Socialist hierarchy.

*Tirpitz'* displacement was 42,900 tons, although it was announced by the Germans to be 35,000 tons. Main armament was eight 15-inch guns mounted in four twin turrets, two forward and two aft. The ship had a secondary armament of twelve 5.9-inch guns and more than forty 4.1-inch, 40mm and 20mm anti-aircraft guns, all with a high rate of fire. Unlike most battleships, *Tirpitz* was also equipped with two sets of quadruple torpedo tubes. She carried four *Arado* monoplanes with floats, which were launched by catapult for reconnaissance purposes. *Tirpitz* was powered by geared turbines, producing 150,000 shaft horsepower, that drove three propellers and gave the ship a maximum speed of 29 knots, and a cruising radius of about 8,000 miles at 19 knots. She also had excellent compartmentation, heavy armor, accurate optical rangefinders, and precision controls. Designers of *Tirpitz* had intended her to be the world's most powerful battleship. At the time she was launched, they had achieved their goal. No German viewed *Tirpitz* without pride, no neutral or enemy without admiration.

*Tirpitz* was commissioned on 25 January 1941. She spent the next year working up and on trials in the sheltered Baltic. Long before the Germans considered her operational, *Tirpitz'* strategic importance became evident to the British, as evidenced by a 31 August

1941 memorandum from the British First Sea Lord to Prime Minister Churchill:

... As long as *Tirpitz* is in being, it is essential to have two ships of the *King George V* class available to work in company . . . . If the *Tirpitz* did manage to break out she could paralyze our North Atlantic trade to such an extent that it would be essential to bring her to action at the earliest possible moment.

Churchill responded the next day in a prescient manner:

... How foolish they would be to send her out, when by staying where she is she contains the three strongest and newest battleships that we have, and rules the Baltic as well.<sup>5</sup>

Perhaps the British would have been less apprehensive of *Tirpitz* had they known the restrictions placed on movement of capital ships by Hitler, the Commander in Chief of all German Armed Forces. After the loss of *Bismarck*, Hitler issued strict orders that no German capital ship was to risk action against an equal or superior ship, that they were to avoid contact if strong enemy forces were anticipated, and that their movement would require his personal approval.<sup>6</sup> These "no unnecessary risks" orders seriously hindered aggressive employment of the German capital ships for the balance of World War II.

**First Offensive Sortie.** Germany invaded Russia on 22 June 1941, and the first Allied Arctic convoy sailed for Russia 2 months later. These convoys continued during the fall and winter months, during which period they encountered little significant opposition from the Germans. By early 1942, however, the Germans recognized the importance of the Arctic convoys to the Russian war effort and attacks on them by aircraft, U-boats, and finally surface ships commenced.

On 6 March 1942, *Tirpitz*, flying the flag of Vice Admiral Ciliax (Flag Officer Battleships) sortied from Trondheim with three destroyers. Her mission was to intercept and destroy the Russia-bound Allied convoy PQ-12, and homeward bound convoy QP-8. According to Ciliax' instructions, *Tirpitz* was to " . . . avoid becoming embroiled with superior enemy forces."<sup>7</sup> Lone merchantmen were not to be attacked, in order to preserve the element of surprise.

The sortie began inauspiciously. On the first day at sea, *Tirpitz* and her escorts were spotted by the British submarine *Seawolf*, which alerted the Admiralty. This news was immediately sent to Adm. Sir John Tovey, Commander in Chief, Home Fleet, who was already at sea with battleships *King George V* and *Duke of York*, battle cruiser *Renown*, carrier *Victorious*, plus one heavy cruiser and 12 destroyers. In addition, *Tirpitz'* escorting destroyers, despite orders to the contrary, sank a Russian straggler from convoy QP-8, which reported the attack and her position before sinking. Incredible as it may seem, this straggler, the Russian steamer *Ijora*, was the only Allied ship seen by *Tirpitz'* crew during their 4 years of war.<sup>8</sup>

On the following day, bad weather and low visibility prevented aerial reconnaissance by either side. Thus the Home Fleet never realized it approached within 90 miles of *Tirpitz*, nor did the latter know that she approached within a few miles of both the outward and homeward bound convoys.

It was not until the morning of 9 March that *Tirpitz* was sighted by search planes. By this time the weather had begun to clear and Ciliax had been ordered to return to port. He immediately perceived the gravity of the situation for the search planes were British *Albacores*, a clear indication that an Allied aircraft carrier was within striking range. Ciliax ordered *Tirpitz* to

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proceed full speed toward shelter of the Lofoten Islands and catapulted two *Arado* seaplanes to drive off the shadowers.

These defensive measures were too late. *Tirpitz* was soon attacked by a cloud of torpedo-bearing *Albacores*. Twelve of these aircraft, from the nearby *Victorious*, conducted a coordinated torpedo attack. Approaching *Tirpitz* in groups of three from almost every angle, they forced the German battleship to take violent evasive measures. The defensive maneuvers by *Tirpitz* were successful, and she narrowly evaded all the British torpedoes. In only 10 minutes of action, *Tirpitz* fired over 4,500 defensive rounds, including two broadsides by the 15-inch guns. Her only casualties were three gunners in the exposed anti-aircraft batteries, who were injured by machinegun fire from the attacking airplanes.<sup>9</sup>

*Tirpitz* arrived safely back in Vestfjord later the same day. She remained there until 13 March when Ciliax took her back to Trondheim in thick weather, eluding the Allied submarines stationed in wait for his passage.

Although it was inconclusive, both the Allies and Germans were worried by *Tirpitz*' foray. The Germans, recognizing the narrow escape of *Tirpitz*, decided that their heavy ships would not be so exposed again unless the Luftwaffe gave support, and the location and strength of the enemy fleet, particularly the aircraft carriers, were known in advance. These requirements almost certainly hindered future offensive operations. In addition, *Tirpitz*' unsuccessful strike against the Arctic convoys had burned 8,000 tons of precious fuel oil, and the ship was virtually immobilized. German fuel stocks at Tromsø and Trondheim were nearly depleted, and the German naval and merchant services had insufficient large tankers to maintain fuel supplies for the growing number of large warships in Norway. For example, *Tirpitz* alone

consumed nearly 1,200 tons of fuel per month just anchored in a fjord and conducting occasional weapons' practices.<sup>10</sup>

The British, however, did not know this. They became increasingly anxious over the vulnerability of the Arctic convoy routes, which *Tirpitz* appeared to dominate, and the possibility of an Atlantic foray. Both threats necessitated the continued retention in Northern waters of many ships of the British Home Fleet, ships desperately needed elsewhere.

**The Assault on St. Nazaire.** The strategic significance of *Tirpitz* was cogently illustrated by the daring British attack on St. Nazaire in March 1942. British fears of *Tirpitz* breaking free into the Atlantic, and perhaps duplicating the havoc created by *Bismarck*, prompted this raid, one of the most intrepid conducted during the entire Second World War.

The British Admiralty reasoned that if *Tirpitz* broke free into the Atlantic she would probably return to a base on the west coast of France. Further analysis revealed that the only place she could be repaired was the great "Normandie" dock at the heavily defended French port and industrial center of St. Nazaire. If this dock were put out of action, the Admiralty believed that any major damage sustained by *Tirpitz* in an Atlantic sortie could only be repaired in a German port. Consequently, if the Germans were convinced the Royal Navy could prevent *Tirpitz* from returning to home waters, that would deter them from planning and executing such an Atlantic sortie.

The British conceived and executed a brilliant and heroic exploit at St. Nazaire. On 26 March 1942 an expedition of destroyers and light coastal craft sailed from Falmouth carrying about 250 Commando troops. They crossed nearly 400 miles of waters under constant enemy patrol, then 5 more

miles up the estuary of the Loire. Their goal was the destruction of the gates of the great lock.

*Campbelltown*, one of the 50 flush-deck American destroyers traded in September 1940 to Britain by President Roosevelt for naval bases in the Caribbean, carrying three tons of high explosive in her bows, drove into the lock gates through the teeth of a close and murderous fire. Here she was scuttled by her crew, and the fuses of her main demolition charges set to explode later. Actually, the fuses malfunctioned and the explosion was delayed. It was not until the next day, when the ship was being inspected by a large party of German officers and technicians, that the ship exploded, killing hundreds of Germans and shattering the great lock for the rest of the war.<sup>11</sup>

Such a daring raid, or course, was not made without cost to the British. Of the 630 men who sailed on the expedition, 144 were killed and 259 taken prisoner. Five were later awarded the Victoria Cross.

**The Destruction of Convoy PQ-17.** Perhaps the most powerful, and tragic, demonstration of *Tirpitz'* strategic influence came in the summer of 1942, when the mere threat of her being at sea caused the dispersal and subsequent near-annihilation of ill-fated Arctic convoy PQ-17. The Germans had been waiting since June to launch Operation *Rösselsprung* which would be a surface strike led by *Tirpitz* against the convoys. Sufficient fuel had been husbanded by the German Navy to allow such a sortie. Not surprisingly, one of the admonitions of operation *Rösselsprung*, as set forth in the operational directive was, "The taking of prizes, especially tankers, is important."<sup>12</sup> On 2 July 1942 the Germans began to concentrate their forces. *Tirpitz* and *Hipper* got underway from Trondheim, while *Scheer* and *Lützow* left Narvik, all bound for Altenfjord. However, *Lützow*, and

three of *Tirpitz'* escorting destroyers went aground, and thereby eliminated themselves from the operation before it started.

Meanwhile, PQ-17 set sail from Reykjavik, Iceland on 27 June 1942, bound for Archangel. It consisted of 36 merchant ships, 22 of which were American. The escort force included six destroyers, two anti-aircraft vessels, plus eleven corvettes, minesweepers, and armed trawlers, all commanded by Cdr. J.E. Broome, RN, in the destroyer escort leader HMS *Keppel*. No less than twelve British, one French, and several Russian submarines were deployed for the protection of the ill-fated convoy.<sup>13</sup> In addition to the escort force, a close covering force was provided of four cruisers, two American and two British, commanded by Rear Adm. L.H.K. Hamilton, RN. Hamilton was a perceptive naval officer who recognized the strategic significance of *Tirpitz*, and who had written after *Victorious'* unsuccessful torpedo plane attacks on *Tirpitz* in March "... that ship is an infernal nuisance, and the most important business of the war at the present time is to cripple or destroy her."<sup>14</sup> Backing up the close covering force was a standoff covering force of two battleships and an aircraft carrier of the Home Fleet, under the command of Admiral Tovey, Commander in Chief.

The British Admiralty had decided that its capital ships would not operate east of Bear Island, located about 300 miles north of Altenfjord. East of Bear Island protection of the convoy against enemy surface forces would have to be provided by Allied submarines as the Allies would be operating in that area without shore-based air support. Accordingly, Admiral Hamilton was directed not to go east of Bear Island "... unless the convoy was threatened by a surface force which he could fight."<sup>15</sup> On 1 July 1942, PQ-17 was located by the *Luftraffe* and came under air attack for the next 3 days. Although two ships were

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sunk and a Russian tanker damaged, morale in the convoy remained high. Escort commander Broome later wrote, "My impression on seeing the resolution displayed by the convoy and its escort was that, provided the ammunition lasted, PQ-17 could get anywhere."<sup>16</sup>

Broome was sadly mistaken. The British Admiralty had learned that the German heavy ships had sailed from Trondheim and Narvik, although it had lost contact with them thereafter. Actually, *Tirpitz* and the other participants in Operation *Rösselsprung* were at that time in Altenfjord, awaiting Hitler's permission to sail. But the British Admiralty was unaware of this crucial fact. It suspected that *Tirpitz* and her consorts, after refueling at Altenfjord, were about to sail to intercept the convoy. As later explained by Prime Minister Churchill, "The risk of this overwhelming major attack outweighed any from the air or U-boats. Admiral Hamilton's cruisers would be of no avail against the force the Germans could employ, and it seemed that the only hope of saving a proportion of the convoy lay in scattering as widely as possible before the enemy arrived"<sup>17</sup>

Accordingly, the First Sea Lord, Adm. Sir Dudley Pound, sent the following signals to convoy PQ-17 on 4 July 1942:

Most immediate. Cruiser force withdraw westward at high speed. DTG 2111 B/4

Immediate. Owing to threat of surface ships, convoy is to disperse and proceed to Russian ports. DTG 2123 B/4

Most immediate. My 2123/4. Convoy is to scatter. DTG 2136 B/4<sup>18</sup>

Commander Broome passed these signals to the convoy, then took his destroyers to join the cruisers in accordance with the Commander in Chief's standing instructions. Of these signals from the Admiralty Broome

later wrote, "It seems that wireless telegraphy came forty years too soon for PQ-17."<sup>19</sup>

*Tirpitz*, *Scheer* and *Hipper*, with six destroyers, sortied from Altenfjord at 1137 on 5 July 1942, knowing in advance that PQ-17's covering force of cruisers had turned back to the west. At 1700, however, Russian submarine K.21 reported the location of the German ships and boasted two torpedo hits on *Tirpitz*, a claim never substantiated. The ships were later sighted and reported by British submarine P.54 and reconnaissance aircraft. The Germans intercepted these reports and, fearful of an air attack from *Victorious* if the operation against the convoy continued, *Tirpitz* and her consorts were ordered back to Altenfjord at 2132 on 5 July 1942.

Dispersal of convoy PQ-17 proved to be a fatal error. Within hours the German Luftwaffe and U-boats were remorselessly hunting down the scattered merchantmen, many of which were racing north to the pack ice for shelter. During the next 3 days, 21 ships were sunk by bombs or torpedoes. Of the 36 merchant ships that had sailed, two turned back and only 11 reached Russia. Twenty-three were sunk. PQ-17's destruction cost 100,000 tons of supplies, 3,350 vehicles, 430 tanks, and 210 aircraft.<sup>20</sup> The Germans lost five aircraft. After this disaster the Admiralty suspended all Arctic convoy sailings for the summer. Perhaps never before had the strategic effect of one warship been more devastatingly illustrated. Without firing a gun, without even getting within 300 miles of the convoy, *Tirpitz* had achieved one of the outstanding naval successes of the war.

**The Attack on Spitzbergen.** In view of the strategic respect accorded *Tirpitz* by the British it is paradoxical that only once in her 4-year career did she fire her main armament offensively. This occurred on 9 September 1943

when the ship bombarded the Anglo-Norwegian weather station on Spitzbergen.

Spitzbergen lies about 150 miles north of Bear Island and 450 miles north of Altenfjord and North Cape, the most northerly point of Norway. A bleak island that had about 3,000 Norwegian and Russian inhabitants before the war, Spitzbergen was the site of limited coal mining activity. Its inhabitants had been evacuated by the Allies in August 1941, and the coal mines incapacitated. One month later the Germans established a weather reporting station on the island. A rival Anglo-Norwegian station was established in July 1942 and the Germans were forced to evacuate their weathermen by submarine.

On 6 September 1943 the Germans conceived an operational task for *Tirpitz*. Operation *Sizilien/Zitronella*, involving *Tirpitz*, *Scharnhorst*, and a screen of 10 destroyers, was organized to destroy the Anglo-Norwegian weather station at Barentsberg in Spitzbergen. At dawn on 9 September *Tirpitz* and *Scharnhorst* opened fire with their main batteries against the two 3-inch guns that composed the sole defense for Barentsberg. The destroyers put landing parties ashore. Before noon the mission was completed. Some prisoners were taken, the supply dump destroyed, the wireless station demolished after it had sent a distress signal, and the landing parties safely returned on board.

In this engagement, *Tirpitz* expended 52 rounds of 15-inch and 82 rounds of 5.9-inch ammunition, the only time in her existence the ship fired her main armament offensively at a surface target.<sup>21</sup>

Upon receiving on 7 September an aircraft reconnaissance report that *Tirpitz* and *Scharnhorst* had sailed from Altenfjord, the British Home Fleet sortied in a vain attempt to locate them but *Tirpitz*, *Scharnhorst*, and their screen of 10 destroyers returned to

Altenfjord without interference on the night of 9 September. The attack on Spitzbergen, in retrospect, did little but waste Germany's precious fuel stocks, for the Anglo-Norwegian weather station was functioning again by 22 September.

Although unrecognized at the time, *Tirpitz* had carried out her last operation. In the 14 months remaining of her existence, she was to be nothing but a perceived major threat and a repeated target for attacks. Her sole remaining voyage was from Altenfjord to a shallow anchorage at Tromsø in October 1944.

**The Attacks on the *Tirpitz*.** Because of *Tirpitz*' strategic importance, Prime Minister Churchill took a keen personal interest, almost an obsession, in her destruction. As a result, no less than 22 separate attacks were made on this single highly protected and almost inaccessible target. Their success ranged from negligible to total. From a tactical standpoint, the daring attacks on *Tirpitz* are perhaps more interesting than her few aggressive sorties.

British bombing attacks on *Tirpitz* commenced in late 1940 while the ship was still at Wilhelmshaven. They continued to be made by both Bomber Command and Fleet Air Arm without success until September 1943, when more innovative and meticulously planned attacks commenced that resulted in the eventual sinking of *Tirpitz*.

Three of the twenty two attacks on *Tirpitz* are worth a brief review, because of both their relative success and the detailed planning and training involved in each. These three were the X-craft attack in September 1943, the assault by the Fleet Air Arm in April 1944, and the *coup de grace* administered by Bomber Command in November 1944.

The X-craft were British midget submarines, with a length of about 51 feet and a displacement of nearly 40 tons. They were proper submarines, with four-man crews and a wet and dry



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chamber. The X-craft were diesel-electric powered. Instead of torpedoes, they carried two detachable ground mines, each filled with two tons of high explosive fitted with a time switch that could be set from inside the craft and that allowed up to a 36-hour delay.

Development of the X-craft languished for several years until it was accelerated by the personal intervention of Prime Minister Churchill. The pilot X-craft was completed in March 1942 and construction of six more operational craft commenced shortly thereafter. The Royal Navy conceived a plan in which these six X-craft would be towed by conventional submarines to the entrance of Altenfjord, where they would cast off and make their way submerged to the German capital ship targets expected to be there: *Tirpitz*, *Scharnhorst*, and *Lützow*. Four of the X-craft failed to arrive as scheduled, and only X-6 and X-7, both assigned to strike *Tirpitz*, gained attacking position on 22 September 1943.<sup>22</sup> Despite intense opposition and repeated equipment failures, X-6 managed to place both its charges under *Tirpitz*' forward turrets. X-7 also succeeded in dropping one charge under the battleship's forward turrets and the other in a position farther aft under *Tirpitz*' engine rooms. Both X-craft were lost during this attack but most of the crewmembers of X-6 were rescued and brought aboard *Tirpitz*, where great consternation reigned. *Tirpitz*' captain ordered watertight doors closed, shifted the battleship's bow 150 feet to starboard within the nets, began shifting the stern, and called for a tug. Then at 0812 the four X-craft charges exploded nearly simultaneously.

The explosion seriously damaged *Tirpitz*. She was lifted nearly six feet out of the water, throwing the crew about, wrecking the lighting system, jamming doors, and giving the ship a 5° list to port. By far the most serious damage, however, was to the three sets of main

turbines, all of which suffered damage to their mounts. In addition, two turrets were immobilized and fire control, radio, and electrical equipment were smashed. Two aircraft were severely damaged and the port rudder was put out of action. One crewmember was killed and 50 wounded, several with broken legs.<sup>23</sup>

Although it was soon obvious to the Germans that only a refit in a German dockyard could fully repair *Tirpitz*, fear for the safety of the crippled ship en route to Germany militated against such a move. The Germans decided to repair her in place, and nearly 700 shipyard workers and a repair ship were sent from Germany to assist in the task.

Although *Tirpitz* was to remain out of action for 6 months, the extent of her damage was unknown to the British. Hence the ship maintained her strategic importance.

Throughout the winter months of 1943-44, the Germans labored to repair *Tirpitz*. On 15 March 1944 all possible repairs without drydocking had been completed and *Tirpitz* spent a fortnight on trials, reaching a speed of 27 knots.

Although Altenfjord was beyond the range of RAF bombers based in England, *Tirpitz* could be attacked by aircraft launched from carriers. Realizing this, the British decided to attack *Tirpitz* in April, after *Victorious* had completed her post-refit trials. Selected to command the attacking force was Vice Adm. Henry Moore, RN. Fleet carriers *Victorious* and *Furious*, plus escort carriers *Emperor*, *Searcher*, *Pursuer*, and *Fencer* were assembled at Scapa Flow, from which they sortied on 30 March 1944 in a major task force.

The carriers and their escorts rendezvoused off Altenfjord on 3 April 1944 in perfect flying weather and undetected by the Germans. British plans for the air attack called for two strikes of *Barracuda* dive bombers, with *Corsair*, *Hellcats*, and *Wildcats* as fighter escorts. As the first strike approached the target at

0529, *Tirpitz* was weighing anchor before going to sea on more post-repair trials. The attacking aircraft, however, achieved considerable surprise, and the only warning that most of *Tirpitz*' crew received was the sound of numerous aircraft engines breaking the stillness of the early morning. While the *Corsairs* remained at 10,000 feet to cover the *Barracudas* from counterattack, the *Wildcats* and *Hellcats* came in low over the hills, strafing *Tirpitz* with machinegun fire as the *Barracudas* commenced their bombing dives. The bombing attack lasted only about 1 minute. Nine direct bomb hits were achieved and *Tirpitz*, listing slightly to starboard, attempted to return to the shelter of her torpedo nets. She was still trying to get back to her berth when the second wave of attacking aircraft was reported.

Although *Tirpitz*' crew was now at full action stations, and the smoke generators ashore were obscuring visibility, the Fleet Air Arm pressed home its attack. Five more direct bomb hits were scored by the *Barracudas*, while the fighters sprayed the *Tirpitz*' bridge and upper decks with more machinegun fire. There was again no interference from the Luftwaffe. In less than 4 hours after launching the first strike, all British aircraft were back on their carriers except for two *Barracudas* shot down, and one damaged *Hellcat* deliberately ditched. British casualties were nine men killed.<sup>24</sup>

Aboard *Tirpitz*, however, chaos reigned. She had suffered 14 direct hits by bombs. Of her crew, 122 men had been killed and 316 wounded.<sup>25</sup> In just 2 minutes of actual strike time, the Fleet Air Arm had ruined 6 months of repair work and done immeasurable harm to the morale of *Tirpitz*' crew, just recovering from the ignominy of the damage inflicted by the X-craft attack. *Tirpitz* could not recommence sea trials in Altenfjord until 1 July 1944.

The end for *Tirpitz* was approaching, as the tide of World War II changed in

favor of the Allies. It was now the RAF's turn to attack. On 10 September 1944, Bomber Command sent two squadrons of *Lancasters*, carrying 12,000 pound armor-piercing *Tallboy* bombs, to Yagodnik airfield in North Russia, as the round trip from Scotland to Altenfjord was still too long for them to attack *Tirpitz* from home bases. The *Tallboy* had been designed specifically to destroy German secret weapons sites. It had been used with shattering effect on targets in Northern France and Germany. Now it was to be used against *Tirpitz*.

Early on 15 September 1943, 27 of these Russian-based *Lancasters* attacked *Tirpitz* at Altenfjord. Only one hit was achieved but it caused serious damage. A 12,000-pound *Tallboy* burst through *Tirpitz*' forecastle, blowing a large hole in the starboard bow. In addition, many fire control optical instruments were broken by the shock, and *Tirpitz* pumped aboard 1,500 tons of seawater aft to compensate for the flooding forward. The ship was essentially no longer seaworthy, and repairs were estimated to require 9 months. The Germans concluded that *Tirpitz* was no longer fit for action, hence stringers were welded across the damaged bow, and on 15 October she steamed cautiously at seven knots about 200 miles south to Tromsø where a German defensive line was being formed. Here a sandbank was built under *Tirpitz*' keel in a futile effort to prevent her from sinking or capsizing in the event of further damage by the enemy. At Tromsø *Tirpitz* was no longer a major warship. Rather she was a floating battery helping to protect Germany's Norwegian flank.

The *coup de grace* for *Tirpitz* followed swiftly. In her new anchorage, she was within range of British bombers based in Scotland. Special *Lancasters* were prepared for the final attack. All dispensable armorplate was raken off the bombers, their mid-turrets were

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removed, extra fuel tanks were fitted, and new, more powerful engines were installed. The two squadrons that had made the September raid from Russia were selected for this assignment.

In order to succeed, the *Lancasters* needed three favorable conditions: little fighter opposition and anti-aircraft fire; no smokescreen; and clear weather over northern Norway as winter approached. The British were fortunate to receive all three. On 12 November 1944, 29 *Lancasters* took off from Lossiemouth airfield in northern Scotland for the final attack, each armed with one *Tallboy* bomb. They arrived over the target at 0941 and 29 bombs were dropped in the following 8 minutes. Two were immediate direct hits followed by another hit and near miss. The ship gradually listed almost 70° to port. At about 0950 her after magazines exploded, blowing out a turret and causing the ship to capsize. She came to rest on the bottom, having rolled through about 135°. Although the order to abandon ship had already been given, there was little time for the men on the lower decks to escape. Consequently, of the 1,700 crewmembers aboard, about 1,000 were killed or missing, many trapped below decks.<sup>26</sup> Of these, 87 groped their way up to the bottom of the hull. A hole was then cut into the hull from outside, and these fortunate survivors escaped. A second, more tragic, group also reached the inside bottom of the hull. Almost unbelievably, rescuers heard strains of "*Deutschland über Alles*" from them before waters of the fjord filled the compartment and silence settled upon the ship.<sup>27</sup>

*Tirpitz*, which had long haunted enemy strategy on the broad oceans she never sailed, was finally destroyed. Her fate resembled that of the German High Seas Fleet of World War I: both were potent threats contained by the British at great cost.

*Tirpitz*' most valuable contribution to the German war effort was her mere existence. Her presence forced the Allies to maintain a large fleet in Northern waters to guard against her, and marshal scarce assets in repeated attempts to sink her.

Germany's use of *Tirpitz* exemplified the naval concept of a "fleet in being," by which the existence of a naval force, smaller than its adversary and therefore normally unwilling to engage in full fleet combat, remains strong enough to cause serious concern to a superior naval power. In the case of *Tirpitz*, British concerns stemmed from fear of her emerging to disrupt the sea routes or to overwhelm part of the Royal Navy at sea. As previously described, *Tirpitz* gave a fearful demonstration of the "fleet in being" tactic when, simply by poking her bow out her fjord, she drew off the entire heavy naval escort of Arctic convoy PQ-17.

Norway was an ideal position from which a "fleet in being" policy could be pursued. German naval forces based in the many fjords along her coastline could threaten either the Atlantic or the Arctic convoy routes. The advantages, both of position and the choice of when and where to strike, greatly counterbalanced the Royal Navy's superiority in numbers.

The German strategy was perhaps best articulated by Grossadmiral Raeder in 1943:

Only by keeping the fleet in Norwegian waters can we hope to meet danger successfully. Besides, it is especially important in view of whole Axis strategy that the German "fleet in being" tie down the British Home Fleet, especially after the heavy Anglo-American losses in the Mediterranean and the Pacific.<sup>28</sup>

**Conclusion.** Among contemporary theoreticians on naval warfare, it is relatively common to classify ballistic

**Fleet in Being.** In retrospect,

missile submarines and attack aircraft carriers as strategic warships. The potential destructive capacity of their embarked nuclear weapons justifies this categorization. Prior to the advent of nuclear weaponry, however, it was difficult to evaluate objectively any single warship as being strategic. For this reason, *Tirpitz* appears unique.

It can perhaps be argued that *Tirpitz* failed to perform the primary mission for which she had been designed, i.e., engaging the enemy battle fleet at sea. As previously described, the only Allied ship seen by *Tirpitz*' crew during the 4 years of their ship's wartime life was the Russian straggler from Arctic convoy QP-8, and the only time *Tirpitz*' main armament was used offensively occurred during the inconclusive raid on Spitzbergen. Such arguments, however, miss the central issue, as they focus on tactical employment of the ship and fail to address the importance of *Tirpitz* as a strategic weapon.

*Tirpitz* brilliantly achieved the goal of every "fleet in being," that of tying down far greater enemy forces. Intact, *Tirpitz* had presented a fearsome threat to the Atlantic and Arctic convoy routes

of the Allies. She also was a tremendous annoyance to the Royal Navy, which was required to retain invaluable major fleet units in Northern waters when they certainly could have been better used elsewhere.

In retrospect it seems clear that, because of her strategic importance, all the Allied attempts to disable or sink *Tirpitz* were justified. Her significance was such that she earned the epitaph, "She could not be left alone."<sup>29</sup>

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### BIOGRAPHIC SUMMARY



Rear Admiral William Langenberg, U.S. Naval Reserve, graduated from the U.S. Naval Academy in 1951 and earned an M.S. degree from Carnegie-Mellon University. After service at sea, he resigned his regular

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