

Air and Space this Week

Item of the Week

D-DAY AVIATION

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I hope that pretty much every media outlet will at least mention the D-Day invasion on its 80th anniversary Monday. A lot of attention will be paid to the seaborne assault at Omaha Beach and its neighbors, using some Saving Private Ryan imagery, but the aerial support component will likely be overlooked. That would be a shame, because to mount an operation the size of D-Day required a LOT of planning, logistics, secrecy, deception, and other aspects. And aviation played a very key role in supporting the invasion, and is the subject of the Item below.

PREPARATION

A look at the map shows clearly that any successful prosecution of the War against Germany would have to involve an invasion across the English Channel.

The office of the Assistant Chief of Air Staff, Intelligence produced a monthly information magazine called "Impact" during the latter half of WWII. Impact was delivered to AAF squadrons as a kind of "corporate newsletter" to keep airmen up to date on aviation doings in all WWII Allied Theaters. The issue for November, 1943, on page 1, had a piece entitled, "Air's Part in an Invasion," in which air's part was explained to the readers in the context of football. There is a small cartoon-like set of illustrations showing how air power would be used to support an invasion by attacking strategic communications (transportation and communications pathways and facilities so that distant support to the invasion site would be limited/eliminated), countering opposition air power (bombing planes and facilities on the ground and shooting down their planes in the air), isolating the battlefield (so that forces present cannot coordinate), and provide tactical air support to our forces on the ground.

Eight months later, air power's part in the Operation Overlord D-Day invasion would comprise those four components, on steroids! But before that could happen, there were a LOT of logistical moves that needed to be made, as secretly as possible, to assemble the men and material needed for a huge invasion force.

Another aspect of invasion preparation was to mislead German intelligence as to the site of the invasion. Pre-invasion bombing attacks had hit Normandy no more often than other targets. The area around Calais, the closest point to England, was hit harder, since it would be seen by the Germans as the "logical" point of attack. There was some famous cloak-and-dagger deception, too.

PROTECTING THE INVASION FLEET

The morning of the start of Operation Overlord would see a very large number of ships and men crowded into a rather small area, a most inviting and important target once the Germans fully realized the details of our force's disposition. Other than the few units that were based near Normandy, the only defensive move that could be made quickly was aerial attack, an idea well-considered by General Eisenhower and his planners.

D-Day was part of an overall, unified strategy for the defeat of Germany. The earliest steps were to attrit the forces that might be used to counter the invasion, using strategic bombing of the infrastructure those forces needed. The "Big Week" bombing campaign of February, 1944, was designed to damage/destroy Germany's key war industries, particularly those relating to enemy air, and to shoot down as many already-constructed German aircraft as possible. The attacks against aircraft plants slowed, but did not stop, production, but the Luftwaffe did have to pull many planes out of France and other fronts to counter the U.S. attacks. This raised pilot losses to unsustainable levels. Germany's oil industry and movement of fuels were also a prime target, resulting in unsustainable losses. An attempt was made to find production and supply "bottlenecks" that could be exploited (where relative minor damage would produce major long-term results). The bombing of ball bearing plants at Schweinfurt and elsewhere were undertaken with that in mind, and in this case, were not particularly effective because the plants were difficult to knock out for good, and the Germans had a large inventory of bearings already on hand.

The Americans were well-suited for the kinds of precise bombing needed to take out specific factories and other infrastructure elements. They had the very tough B-17, the Norden bombsight, and as time went on, the P-51 Mustang to provide excellent escort to distant targets. But they needed to be able to see to make this all work, hence, they wanted to bomb by day.

A dispute arose between the Allies on this phase of preparing for D-Day. The British had had a very bad experience the few times they had tried to bomb by daylight, unescorted and with planes much less capable of self-defense than the B-17. Air Marshall Harris felt that the only way to bring Germany to its knees was to obliterate its cities and its entire industrial capabilities. His view was that the cities and their inhabitants should be bombed continuously, created in part because the British fighter aircraft were too short-legged for long-range bomber support, requiring their bombers to fly only at night, when they could not hit precise targets, only area-bomb, and in part because he wanted revenge for the German's bombing of London and other British cities. The Brits began attacking larger targets, like Berlin, at night, but the Germans developed some excellent night fighters that made bomber losses very high.

Churchill became somewhat enamored with having both sides fight they way they wanted to, subjecting Germany to "bombing around the clock," a phrase later altered by one Bill Haley and his Comets.

Neither Harris nor the Americans wanted to divert their aircraft to any sort of joint effort. That was fine a year before D-Day, but was not acceptable for the run-up to D-Day. Ike took direct charge, and his Supreme Headquarters Allied Expeditionary Force (SHAEF) would manage the

D-Day aviation needs. His deputy, Air Chief Marshall Sir Arthur Tedder, would play a key role in the planning – Ike’s guy, but he was well-respected by Harris, so things went smoothly.

SHAEF decreed in April that heavy bombers should target rail transport and aviation facilities across northern France, along with other targets in the general area, but not to focus on Normandy. Harris had come up with a Transportation Plan that would focus on the railroad system. Bombing precision was continually increasing, but Churchill’s concern over excessive French/Belgian civilian casualties caused some targets to be excluded. SHAEF carried out bombing attacks on a total of 72 rail centers, depots, repair facilities, and marshalling yards. Losses were high; the RAF lost 198 bombers, but losses of locomotives, cars, and facilities was extensive, really hindering the German response to the invasion to come soon.

Other targets were hit during the two months prior to D-Day, requiring precision bombing. The famed “Dambusters” of 617 Squadron again displayed their skills with a assisting attack on an aircraft factory at Toulouse on April 5/6, by flying in at very low altitude and marking key targets with smoke to guide the bombers following (for more on the famous Dambusters, see [here](#)). Another RAF attack at an important equipment depot at Mailly-le-Camp on the night of May 3 was very successful, but cost 42 RAF bombers.

DEKE LEFT, SHOOT RIGHT

Four days before D-Day, the Allied plans called for a series of diversionary aerial attacks of targets well east of Normandy, to fool the defenders into thinking that the invasion, which Germany knew was coming soon, would be near Calais, the shortest distance across the Channel from England. Pas de Calais was bombed heavily for those four days, but the Normandy area was hit, too, lest the Germans think we were actually faking them out.

SHAEF’s four-pronged strategy was then applied, and immediately was successful.

Attack Strategic Communications: Railroad facilities, bridges, roads, and communications facilities of all types were hit hard, hindering the Germans from bringing up re-enforcements and heavy weapons when they realized the point of attack.

Counter Aerial Defenses: The Luftwaffe had taken heavy losses across the Western Front in the weeks and months preceding D-Day, and airfields were hit hard in the week prior to D-Day. Of particular interest were the V-1 cruise missile installations near Calais, which could reach the planned invasion sites, making the diversion bombing there actually even more important. They were hit hard, too.

The actual invasion beaches and their environs were hit hard on the June 5, but the Calais targets were hit hard, too. Window was used in abundance over northern France on June 5 to further confuse German defenses (“Window” was the code-name of thin strips of conducting foil, designed to jam German defensive radar systems. It was invented by a team that included Fred Whipple, who would later be known for his “Dirty Snowball” model of comets!). A few dummy parachutists were dropped, too, in the hopes that their being sighted coming down would divert defensive attention.

Isolate the Battlefield: In addition to bombing railroads, bridges, and other transportation/communications infrastructure, D-Day planners acted to take out radar installations and other lookout positions on the coast of France. There would be a lot of metal ships coming Normandy's way on the 6th, and they would be very easy to detect in advance by radar.

Ground Support: The Allies would fly many ground-support sorties in support of Overlord, starting on D-Day. But aviation wasn't the only way to get at German preparations. And Allied Air was not the only force helping with direct support of the invasion on June 6.

For example, the Germans had fortified La Pointe du Hoc, a promontory jutting out into the English Channel from the Normandy coast. Photo reconnaissance showed numerous pillboxes, light weapons emplacements, other fortifications, and worst, six large coastal defense cannons, capable of hitting ships in the invasion force. Army Rangers assaulted the promontory from the sea side early on D-Day morning, scaling the cliffs to find the guns had already been dismantled. They ruined the gun barrels, caused some damage, but faced a fierce counter-attack. They prevailed, but suffered heavy casualties. Not quite like it was portrayed in *The Guns of Navarone!*

PARATROOPS AND GROUND SUPPORT ON JUNE 6

Allied air forces would fly a total of over 14,000 sorties on June 6. Again, the Allies' four-pronged approach was used, and worked well.

Attack Strategic Communications: Allied bombers and fighters continued their assault on road and rail transport, preventing or delaying the arrival of distant re-enforcements.

Isolate the Battlefield: Units closer to the invasion zone were taken out of action by bombs and bullets from the air. One unit sent in to defend the invasion lost hundreds of armored and support vehicles.

Counter Aerial Defenses: Numerous RAF fighter squadrons had covered the assembling invasion fleet in the night prior to the invasion, then shifted to patrolling the waters adjacent to the invasion beaches that had been mined heavily. U.S. fighters took over the beachhead air cover and conducted sweeps inland after sunrise. The air cover and sweeps prevented any aerial interference during the morning of the invasion.

The Germans were able to mount a small aerial counter-attack in the afternoon as the Germans brought up fighters from deeper within France. They were only able to mount a total of 172 sorties that day (Allied fighters flew 14,674, a combination of Typhoons, Thunderbolts (P-47s), and Mustangs (P-51s)). Allied losses were slight, and the Luftwaffe had no effect on the D-Day invasion.

The Luftwaffe didn't do much better on June 7; Allied fighters did well against them but still only claimed 41 victories. There just weren't that many defending aircraft there to be shot down!

Ground Support: Aircraft supported the sea-borne troops with the parachute and glider drop of troops and supplies behind German beach defenses. Two U.S. divisions (82nd and 101st Airborne) were emplaced behind Utah beach, and greatly helped the invasion forces break out. The British invasion forces were on the eastern side of the attack zone; their 6th Airborne Division was dropped near Caen to support their flank.

The invasion forces on the beaches were supported by Ninth Air Force B-26s and A-20s, which destroyed most of the heavy gun emplacements overlooking the beachhead.

[NOTE: The aircraft that would be anywhere near the D-Day beachheads received distinctive markings, three white stripes on their wings, right before they flew. There would be a lot of aerial-defense guns on the beach, and nobody wanted any “blue-on-blue” errors! The paint didn’t have to be the best, it only had to protect the invasion-supporting planes a few days, and it was thought for some time that there were no surviving planes anywhere with their original invasion paint jobs.

The National Air and Space Museum has a B-26 Marauder in its collection. Its fighting name was “[Flak Bait](#)” and it flew more confirmed missions than any other American bomber. Its fuselage had been on display for years (NASM had the other pieces, too). A few years back, the decision was made to make *Flak Bait* whole again, for prominent display. The idea was not to fully restore it, but rather get it into the condition it was when it was in combat, bullet-holes and all.

When the assembly process started, somebody noticed something odd about the wings when they came out of storage. Faintly, but unmistakably, there were three white lines present! Flak Bait is not only flew more bombing raids than any other U.S. bomber, it is the only D-Day veteran around, as proved by its invasion paint!]

AFTER THE SIXTH OF JUNE

Bombers and fighters continued to support the invasion forces as our troops began to fan out from the beachheads. Fighters continued with close air cover and sweeps; bombers struck at supply lines and places from which defensive forces gathered and/or could be launched. Two or many examples follow.

A key railroad tunnel was attacked by the Dambusters (RAF Squadron 617) on the night of June 8/9. Their very-heavy “Tall Boy” bombs actually penetrated deeply, into the tunnel itself, collapsing the tunnel and blocking a German armored division from supporting the defenders.

A bombing raid was conducted against harbor facilities at Le Havre on June 14, to prevent German E-boat gunships from harassing the invasion fleet and its supply lines.

Hard fighting beneath air cover allowed invasion forces advance successfully inland, especially on the west side of the invasion zone. The invasion support fleet was relatively unmolested.

Strategic bombing attacks continued on oil and industrial targets, providing distant and future support as the invasion moved across western France.

REFERENCES

U.S. Air Force: <https://www.af.mil/News/Article-Display/Article/485137/allied-air-forces-paved-way-for-d-day>

Imperial War Museum: <https://www.iwm.org.uk/history/d-day-and-the-aerial-battle-for-normandy> and <https://www.iwm.org.uk/history/how-d-day-was-fought-from-the-air>

IMPACT: The Army Air Forces' "Confidential" Picture History of WWII, part of an 8-volume set, Volume 4, pp. 2-23, facsimile of original publication by James Patron & Co., 1980, ASIN: B000KKAX98. The football analogy cited above is in Volume 2, p. 1; the invasion is covered in Volume 4, pp. 2-23.

Military.com: <https://www.military.com/daily-news/2019/06/05/bodyguard-lies-how-allies-deceived-germany-about-d-day.html>

Fooling Hitler: <https://www.history.com/news/fooling-hitler-the-elaborate-ruse-behind-d-day>

Historyonthenet: <https://www.historyonthenet.com/d-day-airpower>

From the German side: <http://luftwaffeinprofile.se/Fw%20190%20A%20vs%20Mustang%20D-Day.html>

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