

What I Didn't Know About the B-17

A Visit to the National Museum of the Mighty Eighth Air Force

By Eyal Shay Shenkman



The museum's Memorial Rotunda, beneath the emblem of the Eighth Air Force.

For nearly twenty years I served in Israel's 69 Squadron - "The Hammers" - the squadron that once flew the only three B-17 Flying Fortresses ever to serve in the Israeli Air Force. I had met several of the pilots and ground crew who flew and maintained those airplanes, read books about them, watched documentaries, and convinced myself that I knew their story.

Only after walking through a Flying Fortress did I begin to understand what its crews had actually experienced.

In all my sixty-nine years - an amusing coincidence - I had never seen a real B-17. Not on the ground, and certainly not in the air. The closest I had ever come was the upper turret from one of Israel's original aircraft, preserved as a memorial outside the headquarters of 69 Squadron.

About a year ago, my childhood friend Yohay, who lives near Savannah, Georgia, mentioned a museum dedicated to the Mighty Eighth Air Force that displayed a beautifully restored B-17. I filed that little piece of information somewhere in the back of my mind and forgot about it.

Several months later my wife finally convinced me to fulfill a lifelong dream and attend EAA AirVenture Oshkosh for the very first time. Once I knew I was flying to the United States - my first visit in nearly twenty years - it was obvious that I also had to visit Yohay.

And then I remembered that museum he had told me about months earlier. I knew almost nothing about it, but I asked if we could spend a few hours there.

What I didn't know was that Yohay happened to know George Springer, Vice President of the **Eighth Air Force Historical Society – The Birthplace Chapter**. That friendship would turn what I expected to be an ordinary museum visit into something very special.

A few days before arriving in Savannah, while attending AirVenture Oshkosh, I saw a real B-17 for the first time in my life. I stood in front of it. I took photographs. To my surprise, it actually looked rather small.

Only later did I realize why. It was parked beside a C-130 Hercules, while a C-5 Galaxy stood only a short distance away. Next to those giants, even one of the most legendary bombers of World War II suddenly seemed almost modest in size.

Only a few days later, crawling through the museum's Flying Fortress, I realized how little I had actually seen that day at Oshkosh.

Thanks to Yohay's friendship with George, we received an exceptionally warm welcome. The two of them share a passion for large-scale radio-controlled aircraft and have spent countless hours flying together. I suspect that connection - and perhaps my own background in the Israeli Air Force - opened more than a few doors for us.

Our guide was **John Brandewie**, a Board Member of the Birthplace Chapter, an official museum docent, and a member of the team that restored the museum's B-17. For several hours he did far more than open doors that are normally closed to visitors. He opened an entirely new world.

The museum is dedicated to the Eighth Air Force, but it is not really about airplanes.

It is about people.

More than **26,000 Eighth Air Force airmen** became prisoners of war, and over **28,000 never came home**. Every exhibit, every aircraft, and every artifact serves as a reminder of the extraordinary human cost paid by the aircrews and ground personnel who fought one of history's greatest air campaigns.



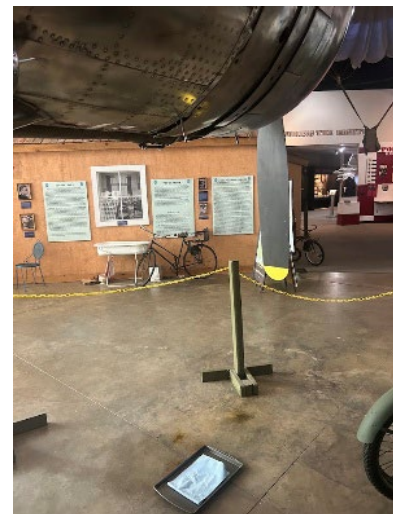
The museum's restored B-17G Flying Fortress, preserved in natural-metal finish.

The centerpiece of the museum is a **B-17G Flying Fortress**, restored to an astonishing level of authenticity. Every gun position has been recreated, the bomb bay is loaded with bombs, the instrument panels are complete, and many of the aircraft's original systems remain fully operational.

The aircraft on display carries twelve .50-caliber Browning machine guns, faithfully restored with their ammunition feeds and equipment.

Once every month, the volunteers connect external electrical and hydraulic power to the airplane, cycle the flight controls and gun turrets, and slowly turn the propellers by hand so that fresh oil circulates throughout the engines. They are not trying to make the airplane fly again. They are preserving it exactly as it was.

This particular aircraft is a **G** model, the final production version of the Flying Fortress. It was completed after the war in Europe had ended and therefore never flew a combat mission.



Dripping oil, marks a living engine.

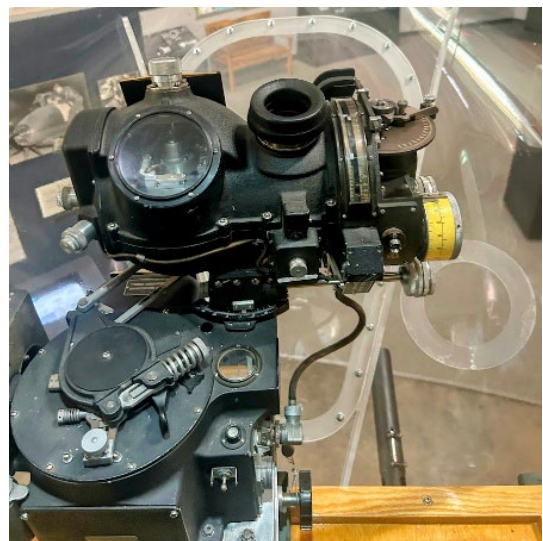
Like many American aircraft built during the final months of World War II, it remains in natural aluminum rather than camouflage paint. The decision saved production time,

reduced costs, and eliminated roughly 150 pounds of unnecessary weight. By that stage of the war, hundreds of bombers were flying together in massive formations, making camouflage largely irrelevant.

One of the biggest surprises for me was discovering how sophisticated the B-17's autopilot actually was.

Bombing missions were flown above 25,000 feet in incredibly tight **Combat Box** formations. The distance between neighboring wingtips was no more than fifty feet. Once established in formation, the pilots made tiny corrections using a small side-mounted control stick connected to the autopilot, allowing them to hold their position with remarkable precision.

The autopilot also played a vital role during the most critical phase of every mission. The famous **Norden bombsight**, one of the most closely guarded secrets of the war, was far more than a simple sight - it was an ingenious mechanical computer. After the bombardier entered the aircraft's speed, altitude, and wind data and acquired the target, the Norden generated steering commands that were sent directly to the autopilot, guiding the aircraft precisely to the bomb release point.



The Norden bombsight - still in full working order.

Another thing that cannot be appreciated from outside the airplane is just how cramped the Flying Fortress really is.

Moving through the aircraft is surprisingly difficult. To get from the tail section to the cockpit, crew members had to cross the bomb bay on a narrow catwalk. The museum has widened it slightly to make it safe for visitors, but I had seen the original-width catwalk at Oshkosh - it is little wider than the sole of a shoe.

Even moving between the cockpit and the navigator's and bombardier's compartment requires crawling through an opening so small that you have to decide in advance which shoulder or leg goes through first.

And I was doing it in jeans and a T-shirt.

Suddenly I found myself imagining nineteen- or twenty-year-old airmen making exactly the same movements at 25,000 feet inside a violently vibrating bomber, wearing heated

flight suits, parachutes, oxygen masks, and all the equipment required for combat - sometimes while under enemy fire.

At that moment, the B-17 stopped being a museum exhibit. For the first time, I stopped thinking about the aircraft itself and started thinking about the boys who had to fight inside it. And suddenly all the statistics I had read over the years acquired an entirely different meaning.

Despite the tremendous defensive firepower of its .50-caliber Browning machine guns, its tight **Combat Box** formations, and the protection of long-range escort fighters, B-17s were still being shot down in staggering numbers.

During the darkest years of the war, a bomber's average life expectancy was measured in only about **eleven combat missions**. Aircrews who completed twenty-five missions were usually rotated home to become instructors. Later in the war that number increased first to thirty and eventually to thirty-five.

Even so, during the most difficult periods of the campaign, the average survival of an Eighth Air Force airman has been estimated at only about **twenty-one missions**.

It is impossible not to think of *Catch-22*. Not because of the number itself, but because of the absurdity behind it. If you fully understood how dangerous the next mission would be, then you were obviously sane - and therefore expected to keep flying.

Since the museum first opened, its B-17 has been its centerpiece. In the coming years it will be joined by the other great heavy bomber of the Eighth Air Force - the **B-24 Liberator**.

Today the museum displays an impressive reconstruction of the Liberator's forward fuselage, assembled from the remains of two different aircraft. But that is only the beginning of a far more ambitious restoration.

The museum has recently begun dismantling a complete B-24 located at **Barksdale Air Force Base** in Louisiana, now home to the headquarters of the Eighth Air Force.

After spending decades exposed to the elements, the aircraft is in very poor condition.



The reconstructed B-24 - the flight deck and navigator's

The restoration team intends to return it to the same extraordinary standard as the museum's existing aircraft, after which it will stand nose-to-nose with the B-17, allowing visitors to compare the two legendary bombers that carried the strategic air offensive over Europe.

Making room for that aircraft requires reshaping the museum itself. The current Prisoner of War exhibit will move into a new and larger building, where part of a German POW camp will be reconstructed from detailed drawings made by one of the prisoners during the war and recently donated by his family. The exhibit will also include a freight railcar discovered in Austria that is believed to have transported Allied prisoners during the forced evacuations westward as the Soviet Army advanced.

Like everything else in this museum, the new exhibition is not really about airplanes.

It is about people.

About the young men who spent hours inside vibrating bombers while flak exploded around them and neighboring aircraft fell from the sky in flames. About those who bailed out over occupied Europe. About those who spent the rest of the war behind barbed wire. And about those fortunate enough to return home, carrying those memories with them for the rest of their lives.

As I crawled through the narrow passages inside the B-17 and realized how little room there really was for a crew of nine or ten men, I began to understand - perhaps only to begin understanding - what those missions truly demanded of them.

When I walked into the museum, I thought I was there to learn a few more details about an airplane that had accompanied me, in one way or another, for most of my life. I walked out realizing that the technical details were never what I had been missing. What I had never truly understood were the people who lived inside that airplane.

If you are an aviation enthusiast - or simply someone who appreciates history - and you ever find yourself near Savannah, Georgia, do not miss the **National Museum of the Mighty Eighth Air Force**.

I came to see an airplane.

I left thinking about the people who flew it.

About the author: Eyal flew for 26 years in the Israeli Air Force, retiring as a lieutenant colonel - as a pilot on the A-4 Skyhawk and F-16, and as a navigator on the F-4 Phantom, F-15D, and F-15I. He holds a commercial pilot license with an instrument rating and serves as Chief Ground Instructor at Shirgal-Wings Aviation Academy Ltd.