

The Flying Coffins of World War II

ASME

Michael MacRae



America's first military stealth aircraft – the Waco CG-4A combat glider – silently soared into World War II history 70 years ago, powered only by the prevailing winds and the guts of the men who flew them.

Under veil of darkness on D-Day and other major Allied airborne assaults, the Waco glider carried troops and materiel behind enemy lines to take out key enemy defenses and transportation links. These humble gliders – engineless and unarmed – overcame perilous odds to make the first cracks in Hitler's Fortress Europe. Yet their story is an obscure chapter in the Allied victory saga.

Their moment in the spotlight of military aviation was fleeting. But in the pre-helicopter age, combat gliders represented the state-of-the-art in stealth, landing precision, and hauling capacity.

Inside the Flying Coffins

"Flying coffins." "Tow targets." Pilots and glider-borne infantry had colorful and well-earned nicknames for their ungainly planes. But according to at least one veteran flight officer, the most common moniker for the combat glider was way off base: "Silent Wings."



Inside the cockpit of the Waco GC-4A combat glider.

"For us it was louder than hell," said pilot Donald MacRae, who flew troops into battle on D-Day and in the invasion of The Netherlands. The glider's spartan construction provided no insulation from the roar of the C-47 tow plane's engines, the pounding of the natural elements, and the din of enemy anti-aircraft fire, he said.

MacRae, who flew with the 37th Troop Carrier Squadron of the 316th Troop Carrier Group, said the glider had few provisions for passengers' safety and none for their comfort. There were four basic instruments on the control panel, which the pilots mistrusted. Air pockets and 40-mph winds created violent turbulence. Enemy fire on descent was constant, and many pilots were taken out before they could land.

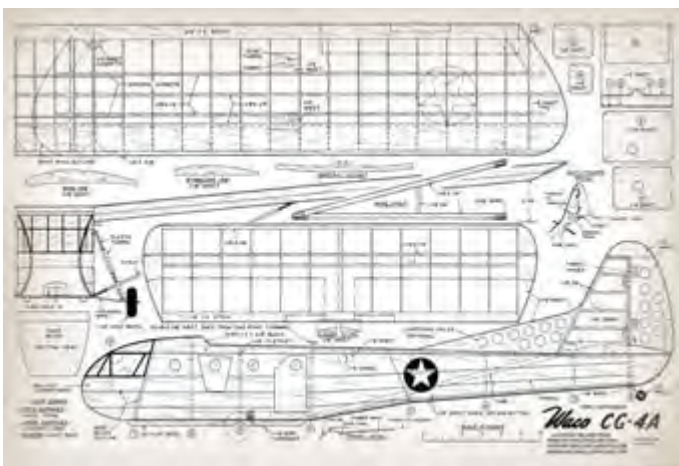


Diagram of the Waco GC-4A combat glider.

With no parachutes onboard, glidermen took pains to protect their pilots. According to MacRae, "Some of the guys found an extra flak jacket for me – not to wear but to sit on. They didn't want anything coming up from underneath the plane to hit anything vital."

Expendable by Design

The CG-4A fuselage was 48 feet long and constructed of steel tubing and canvas skin. Its honeycombed plywood floor could support more than 4,000 pounds, approximately the glider's own empty weight. It could carry two pilots and up to 13 troops, or a combination of heavy equipment and small crews to operate it. The nose section could swing up to create a 5 x 6-foot cargo door of Jeeps, 75-mm howitzers, or similarly sized vehicles.



A restored WACO GC-4A.

With a wingspan of 83.5 feet, the Waco maxed out at 150 mph when connected to its tow plane. Once the 300-ft length of 1-inch nylon rope was cut, typical gliding speed was 72 mph. The Waco Aircraft Company of Troy, OH, a niche manufacturer of civilian airplanes, won the contract to design and build America's first combat glider. Big names like Ford, along with a dozen or so smaller firms, also won glider contracts, but only if they weren't already producing powered aircraft for the war effort. With more than 70,000 parts to assemble and with little or no standardization, some manufacturers produced a few duds, with sometimes tragic results. The wide range of expertise among these contractors, as well as an early lack of standardization of the 70,000-plus individual parts, caused pilots and mechanics no shortage of headaches and more than a few tragedies.

MacRae recalls an incident that nearly scrapped the glider program less than a year before its D-Day triumph. In August 1943, a Saint Louis-based contractor invited the city's mayor and other dignitaries to experience the excitement of a glider flight before an airshow audience of 5,000. Aghast spectators watched as a glider abruptly lost a wing at 2,000 feet and crashed in front of the grandstand, killing all onboard. After ruling out sabotage, investigators traced the cause of the crash to a faulty bolt provided by a subcontractor in the coffin business.

"It Is a Chastening Experience"

Of the 6,000 men trained as glider pilots, some had washed out of conventional pilot training and were given a second chance to fly. Others, like MacRae, had a civilian pilot license but were passed over for powered flight training. The possibility of officer's pay and the chance to fly attracted a particular breed of risk-tolerant trainees, and the glider pilots' maverick reputation quickly spread. Gen. James Gavin, commander of the 82nd Airborne Division, lamented the pilots' demeanor. But he also recognized the audacity of landing a glider in combat. "It is a chastening experience. It gives a man religion," he said.

Germany was well prepared for a glider invasion of Normandy. Beachheads were guarded by anti-aircraft guns. Likely landing zones were saturated with "Rommel's asparagus" – a glider-smashing network of 10-foot poles wired together with explosives.

For MacRae, his tow plane lost an engine and threatened to cut the troop-laden glider loose over the English Channel. After tense negotiations, the C-47 pilot agreed to wait until land was in sight. MacRae landed safely, but about 25 miles shy of the intended landing zone. His troops went off to find a fighting unit, and he eventually found his way back to his base in England. "I never found out what happened to my squad or the tow plane crew," he said.

Every glider pilot had at least one story of that long trip back to safety. After delivering his troops 90 miles behind enemy lines in the famous "A Bridge Too Far" invasion of The Netherlands, MacRae hit the road through no-man's land with limited rations and no plan. A ramshackle bicycle eased his journey initially, but with his rations gone and his strength ebbing, he readily traded it to a passing soldier for extra K-rations. Refortified, he happily hiked another 35 miles to Brussels.

G Is for "Guts"

The Waco CG-4A glider was the first and last of its kind. Mothballed at war's end, fewer than a dozen restored gliders exist today. The ranks of the pilots are thinning too. MacRae, who died at age 92 as this article was in preparation, was one of only a few hundred living pilots.

Glider pilots who participated in the Normandy landings were awarded the Air Medal for their role in the Allies' early successes on D-Day. Their role in Operation Market Garden was lauded, even though it was overshadowed by the mission's overall failure to take the key bridge at Arnhem. Gliders were also central to Allied invasions of Sicily, Burma, Southern France, Bastogne, and the crossing of the Rhine into Germany in March 1945.

Like all Army Air Corps pilots, the glidermen wore wings on their chests. Theirs were special, with a capital "G" stamped in the center. Technically it stood for "glider," but they were quick to tell anyone who asked that it really stood for "Guts."