Big-Tailed Be

Frank B Mormillo profiles the Commemorative Air Force's unique dive-bomber

Officially named the Helldiver, after a small, greyish-brown member of the grebe family of birds, the Curtiss SB2C also had some more vivid names. Chief among these was 'The Beast', or 'Big-Tailed Beast' or even 'Son-of-a-Bitch, 2nd Class' – and these nicknames were bestowed by many who flew and maintained the machine early in its combat career.

Designed as a more advanced replacement for the Douglas SDB Dauntless dive-bomber, the SB2C was appreciably faster than its predecessor and could eventually carry a heavier weapons load over slightly greater distances. Unlike the Dauntless, the Helldiver featured folding wings, enabling twice as many of the bigger and heavier aircraft to be fitted in the same space needed for SBDs aboard carriers.

Larger and weightier, this also inevitably meant that the SB2C was much more complex that the Douglas type and Helldivers were initially plagued with difficult handling characteristics and maintenance demands, hence its unofficial titles. Eventually, the 'Beast' was tamed and became a very effective warplane with an enviable combat reputation.

Curtiss seemed fixated with the name Helldiver, after the F8C and SBC biplanes, the SB2C prototype was ordered on May 15, 1939, while the SBC was still in production. Indeed, the SB2C's fuselage and tail surfaces bore a strong family resemblance to those of the SBC biplane.

Powered with a 1,700hp (1,268kW) Wright R-2600-8 Cyclone radial driving a three-bladed propeller, the prototype XSBC-1 took to the air for the first time on December 18, 1940. It was badly damaged the following February, but rebuilt. On December 21, 1941 the first example was lost when the starboard wing and tailplane suffered structural failure on pull out from a dive. Orders had already been placed for production examples and a major programme of modifications was introduced before the first production SB2C-1 appeared in June 1942.

Packing a punch

The crew comprised a pilot and radio operator/gunner seated in tandem; the latter had either a pair of 0.30in or a single 50-cal machine gun in the rear compartment. The Helldiver featured an enclosed bomb bay, with a complex cradle to allow the bomb to clear the propeller arc. Ordnance could also be carried under wing. Initially, the SB2C

Above
Helldiver 83589 on the Air Museum Ramp at Ontario, California, in 1963.

Right
The CAF Dixie Wing's SBD-5 Dauntless flying with the West Texas Wing's Helldiver.

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was fitted with a pair of machine-guns in the engine cowling, but production models featured four 50-cals or two 20mm cannon in the wings.

There had been a plan to fit a power-operated turret in the Helldiver's rear cockpit, but the weight penalty precluded this. Nevertheless, many license-built Helldivers manufactured under the SBW designation by the Canadian Car & Foundry (CCF) had the hydraulic lines for the proposed turret installed, but with the lines capped. Unfortunately, these tended to leak, adding to the 'Beast's' many maintenance difficulties.

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Much-loved Dauntless

Although the 'Beast' never gained the undying affection accorded to the 'slow but deadly' SBD Dauntless that it eventually replaced in service, the Helldiver was built in greater numbers. Douglas manufactured a total of 5,231 SBDs, while 7,140 SB2Cs were built. Once the bugs were ironed out, the Beast certainly did its part to win the war in the Pacific and stayed in service for a longer period of time.

The internal weapons bay could accommodate a variety of ordnance, including a 1,600lb (725kg) bomb or even a 2,000lb torpedo. For the 'tin fish', the Helldiver flew with the bomb doors removed with the doors removed, though apparently the type never did use torpedoes in combat. Underwing ordnance could include bombs, rockets and even pods containing a pair of 30-cal machine-guns each.

Initial production models had a fuselage length of 35ft 5in (10.79m), but that was subsequently extended by 15in to improve directional stability. On the other hand, the wingspan was reduced by 3½in to 49ft 8⅝in. A typical SB2C-4 had an empty weight of 10,547lb and a gross weight of up to 16,616lb.

Giving as good as it gets

After numerous delays because of modifications needed to make the Helldiver less of a 'Beast',

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the SB2C-1C finally went into action with VB-17 aboard the USS *Bunker Hill* on November 11, 1943, during an attack against Japanese shipping in Simpson Harbour, Rabaul. Initially disliked by US Navy dive-bomber crews who favoured the more docile handling qualities and reliability of the older SBD, the Helldiver gradually became more accepted as early problems were resolved. By the time the SB2C-4 and SB2C-5 variants entered service towards the end of World War Two it had become a popular warplane.

Ultimately credited with being responsible for the destruction of more Japanese targets than any other dive-bomber, the Helldiver was no slouch when it came to air-to-air combat. Altogether, they were credited with the destruction of 44 Japanese aircraft in the air, as well as 14 'probables' and 24½ damaged. Of that total, 24½ victories were scored by pilots, 16 by the gunners and 3½ shared by the two-man crews. During 22 months of combat, the Navy listed the loss of 271 Helldivers to anti-aircraft fire and 18 to enemy fighters. (Those figures include SB2Cs that managed to return from combat missions, but ended up being stricken off charge because of damage.)

A grand total of 7,140 Helldivers of all models was produced, including more than 1,100 manufactured under license in Canada as SBFs by Fairchild Canada and SBWs by CCF. This figure included 900 built without arrestor gear and folding wings by Curtiss for the USAAF as A-25As, but never used in combat. Ten Shrikes were given to the RAAF and 410 were transferred to the US Marine Corps as SB2C-1As. CCF production included 28 SBW-1Bs built for Britain as Helldiver Is. Royal Navy 'Beasts' were not used operationally because of appalling handling qualities aboard the smaller British carriers.

Helldivers lingered on in service with the US Navy until June 1949. Post-war US Navy and Naval Air Reserve Helldiver squadrons were primarily equipped with the SB2C-5, which only began to enter service in February 1945 and saw relatively little combat use. After the war, Helldivers were supplied to France, Greece, Italy, Portugal and Thailand, with France and Thailand being the last to use them in combat. During the Indo-China War, French Navy Helldivers operated from the carrier *Arromanches* in defence of Dien Bien Phu during 1954 before being retired from service the following year. Italian Helldivers were operated by both the air force and navy for attack and anti-submarine patrol missions until 1959.

Airworthy 'Beast'

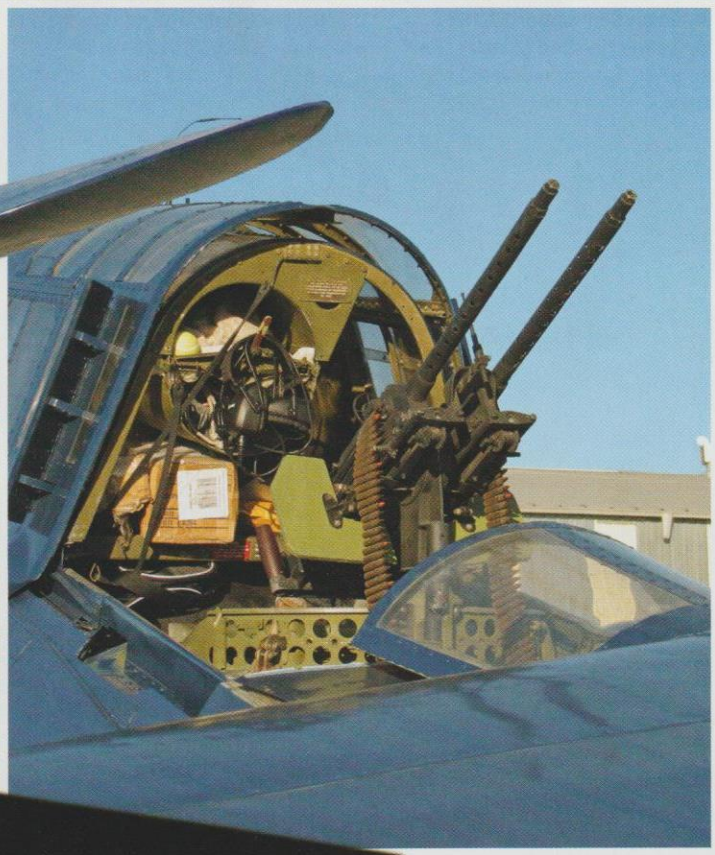
Today, only six SB2Cs survive in fully intact condition, with perhaps another half dozen reportedly existing in poor state (see page 61). Only one 'Beast' is airworthy: SB2C-5 N92879 (US Navy 83589) with the Commemorative Air Force.

It served with the US Navy, primarily as a pool aircraft at various locations in California, from July 5, 1945, until it was removed from the active inventory on August 31, 1948. The Helldiver's last service was at NAS Corpus Christi, Texas, and it was declared surplus on October 14, 1948. It became an instructional airframe at a civilian trade school at Helena in Montana.

Still finished in US Naval Air Reserve colours and markings, 83589 was then obtained by Edward T Maloney in 1962 for his growing air museum collection in Ontario, California, which eventually gained worldwide recognition as Planes of Fame Air Museum in Chino, California. Flown to California in May 1963, the Helldiver wound up primarily as a static display item

Flying the 'Beast'

Although the Helldiver's wartime reputation as a 'Beast' may have been justified, its current CAF pilots report that it is pleasant and enjoyable to fly once it gets up to speed. The controls are actually relatively light, but the rudder trim requires constant adjustment with throttle changes. The systems that plagued wartime maintenance crews tend to keep the pilots busy during take-offs and landings. Tight air display turns call for power and build up the g-forces, but the big dive-bomber can run away from the other World War Two types like the SBD Dauntless and Grumman Avenger.



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before being sold to a member of the Confederate Air Force (now the Commemorative Air force), Colonel Bob Griffin, who in turn donated it to the CAF on December 20, 1971.

Assigned to the West Texas Wing, the Helldiver was proudly operated as the last flying example of its type until suffering extensive damage after an engine failure in 1982. With its back broken in a hard landing, many thought the Helldiver would never fly again.

But, with the expenditure of over $200,000 and a lot of dedicated work by Nelson Ezell's restoration crew, 83589 returned to the sky again on September 27, 1988. Currently finished to represent an SB2C-4 assigned to the USS *Franklin* during 1944, 83589 is still a very active warbird, participating in many airshows across the USA. During the 2007 Experimental Aircraft Association Air Venture Fly-In at Oshkosh, Wisconsin, the Helldiver received both the Judges Appreciation Award and the Judges Choice Award - Most Rare Warbird.

During tours away from home base, the Helldiver's spacious bomb bay serves as storage for the unit's fund-raising merchandise as well as the personal gear for the two-man flight crew. The aircrew often serve as tour guides, letting visitors up on the wing to look into the cockpit and gunner's compartment and answering questions about the rare grebe known as the 'Big-Tailed Beast'.

West Texas Wing CAF

Headquartered at Midland Texas, the West Texas Wing consists of five squadrons and two detachments. Assigned a Cessna UC-94 Airmaster, the Big Country Squadron is based at Elmdale Airport, Abilene, Texas. Operator of the Wing's Curtiss SB2C-5 Helldiver, the Cactus Squadron is located at the Graham Municipal Airport, Graham, Texas.

Assigned a Boeing PT-13 Kaydet and a Fairchild PT-19 Cornell, the Desert Squadron is to be found at Schlemeyer Airport, Odessa, Texas. The West Texas Wing's Beech SNB Kansan and a Stinson L-5 Sentinel are assigned to the DEWLine Squadron at Tradewind Airport, Amarillo, Texas.

At West Houston Airport, Houston, Texas, the West Houston Squadron is assigned a Lockheed C-60A Lodestar, a North American AT-6A Texan, a Vultee BT-13A Valiant, a Naval aircraft Factory N3N-3 and a Stinson S108-1 Voyager.

The West Texas Wing's Blastards Detachment at Midland, Texas, provides spectacular pyrotechnic services for airshow productions, especially the CAF'S annual Airsho (that's how they spell it) at Midland. The Colonels Ladies detachment provides a variety of support services to the Wing.

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