F6F-5

# eduard

## 1/48 Scale Plastic Model Kit





### There were few WW2 aircraft with such a one-sided outcome in terms of kill-to-loss ratio as Hellcat. The performance step compared to its predecessor was enormous.

Representing another step in the "cat" line of the Grumman aircraft, Hellcat was a unique type right from its beginnings. As the war in the Pacific theatre moved on, it was more and more evident the Hellcat's predecessor, Wildcat, which carried the bulk of the strain of the Pacific air war in 1942 on its shoulders, is somehow inferior to the Mitsubishi Zero.

#### With an eye on experience

Grumman designers were working on a successor to F4F Wildcat since 1938 (i.e., just three years after the Wildcat had been developed), so they were not to start from the scratch when designing the XF6F-1. But the original plan to further develop the F4F with more powerful engine was scrapped in order to deliver what Navy and Marine Corps needed. To find their real needs, Grumman team worked closely with experienced F4F pilots and US Navy Bureau of Aeronautics (BuAer). There were many inputs from pilots, like a higher position of the cockpit od sloped forward fuselage for better pilot's view. Finally, the design was completely different compared to the Wildcat, with wing position moved from center of the fuselage to its lower part, although not fully low-wing design. The wing fold mechanism allowed for both hydraulic or manual folding around diagonal axis pivoting system. Folded stowage position of the outer parts of the wing was parallel to the fuselage with the leading edges pointing down. Instead of the Wildcat's fuselage-mounted narrow-track main undercarriage operated manually the new fighter got robust wide track wing-mounted hydraulically operated main gear legs, rotating 90° while retracting backwards into the wing.

#### More power needed

The Wright R-2600 Twin Cyclone 14-cylinder two-row 1,700 hp (1,300 kW) radial engine was originally intended for new carrier-based fighter, but the BuAer directed Grumman to use more powerful 18-cylinder Pratt & Whitney R-2800 Double Wasp 2,000 hp (1,500 kW) engine for second prototype as the engine already proved itself in use with the F4U Corsair.

The change necessitated strengthening the airframe, but the change paid off, as the performance was raised significantly. The first prototype with the Cyclone engine flew for the first time on June 26, 1942, the XF6F-3 powered by the Double Wasp made its maiden flight on July 30, 1942. Two months later the first production F6F-3 powered by R-2800-10 engine made its inaugural flight (October 3, 1942) and the type reached its operational readiness with VF-9 on the deck of USS Essex in February 1943.

The name Hellcat was chosen to continue with the habit of "cat fighters" for Grumman designs. The name not only suggested the place to which the enemies would be sent, it was also a play on words. The term in the old west referred to barroom brawlers, and that was what the Navy wanted: A tough fighter with hard fists, that could also absorb some punishment. The Hellcat was some 60 percent heavier than the Wildcat and was also more heavily armed with its six .50 in (12,7 mm) M2 Browning machine guns in the wing with 400 rounds per gun. It had a more powerful engine, carried more fuel and was generally of a more robust design. It was, after all, over twice as heavy as its main adversary, the A6M Zero. The initial version, F6F-3, was followed by the F6F-5, also night fighter variants were developed.

#### Shooting turkeys

The first combat engagement of the enemy occurred on September 1, 1943, when an H8K Emily was sent down in flames by two Hellcats. The advantage over Japanese fighters was well demonstrated by Hellcat pilots on February 16, 1944, when, in the vicinity of Truk, they sent down over 100 Japanese fighters and destroyed more than 150 of them on the ground for the loss of only four own aircraft. Five days later, in the Marianas, a further 160 enemy aircraft were destroyed in the air and on the ground.

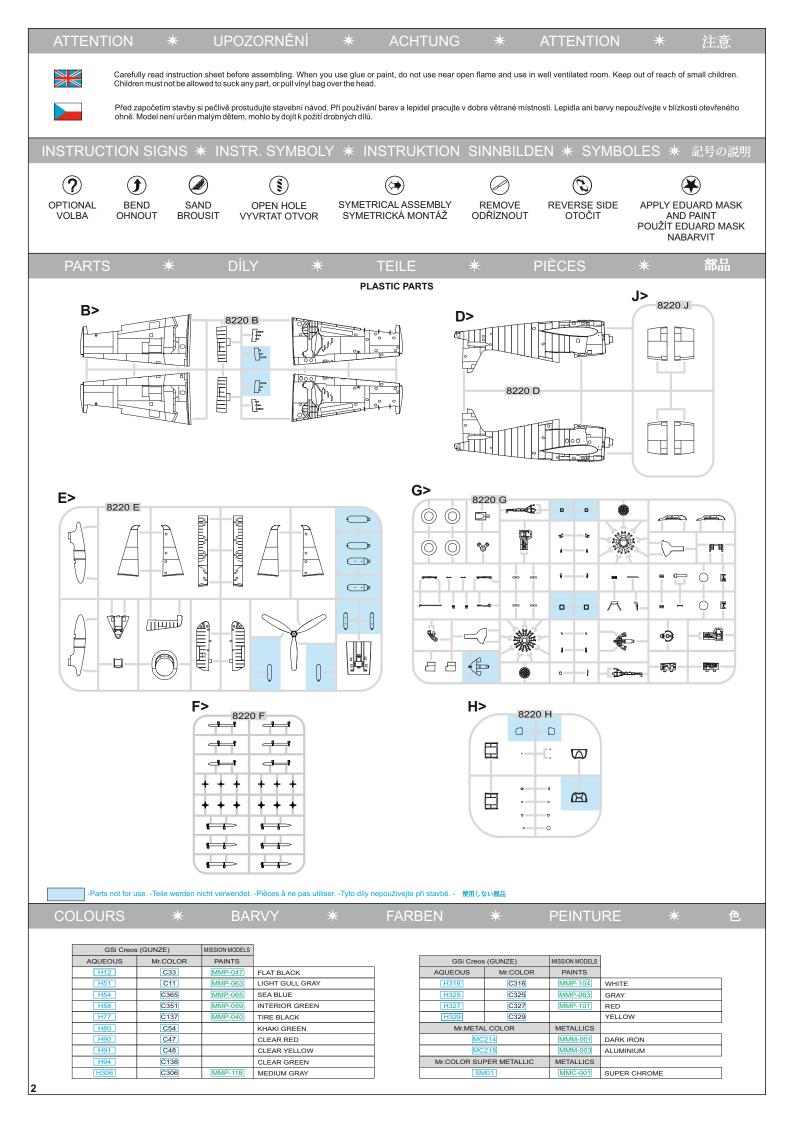
Often one-sided nature of combats was even more evident in the battle for the Philippine Sea that culminated on June 19, 1944, in the legendary "Great Marianas Turkey Shoot". There Hellcat pilots claimed some 350 enemy aircraft destroyed in total. A further "turkey hunt" took place between October 12 and 14, 1944 over Formosa, now with some 300 enemy aircraft destroyed for the loss of 27 Hellcats.

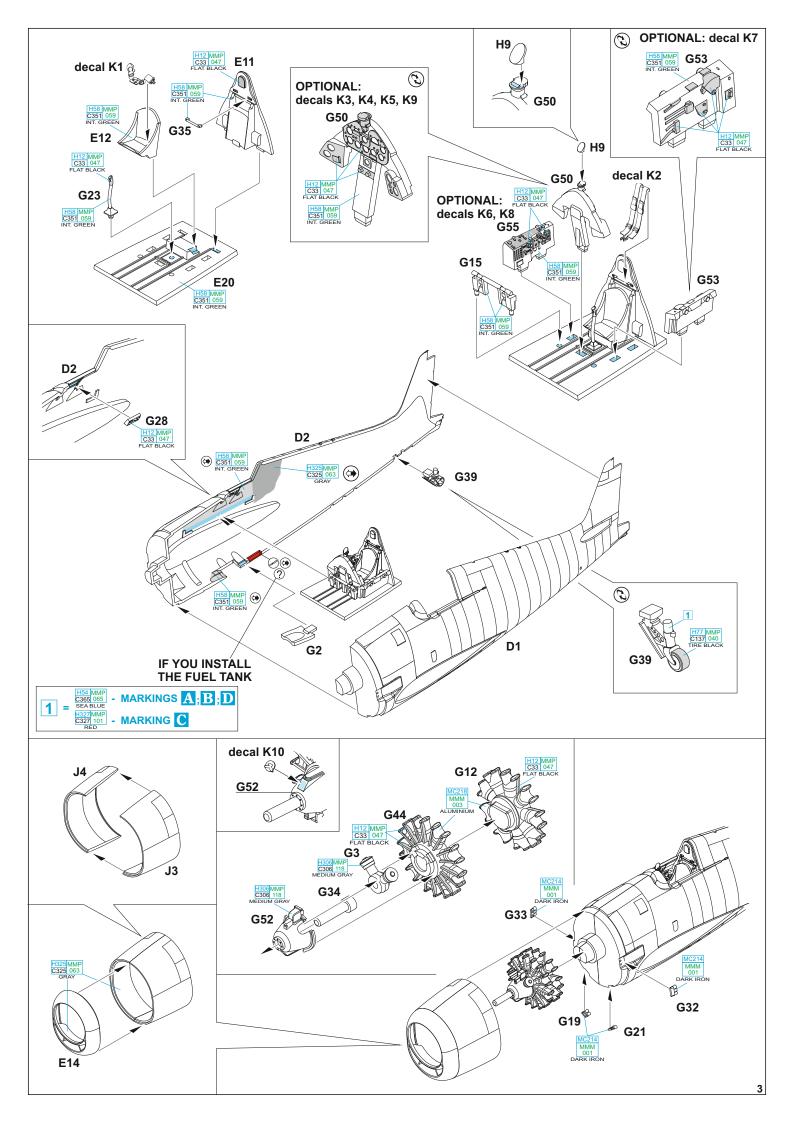
Other major combat was seen over the Japanese islands during the first half of 1945. Although the Hellcats were progressively replaced by their stablemate F4U Corsair, they served in the combat role until the end of the war. Under the designation F. Mk.I and Mk.II, several hundred Hellcats served with the Royal Navy, notably in the Atlantic and also in the Far East.

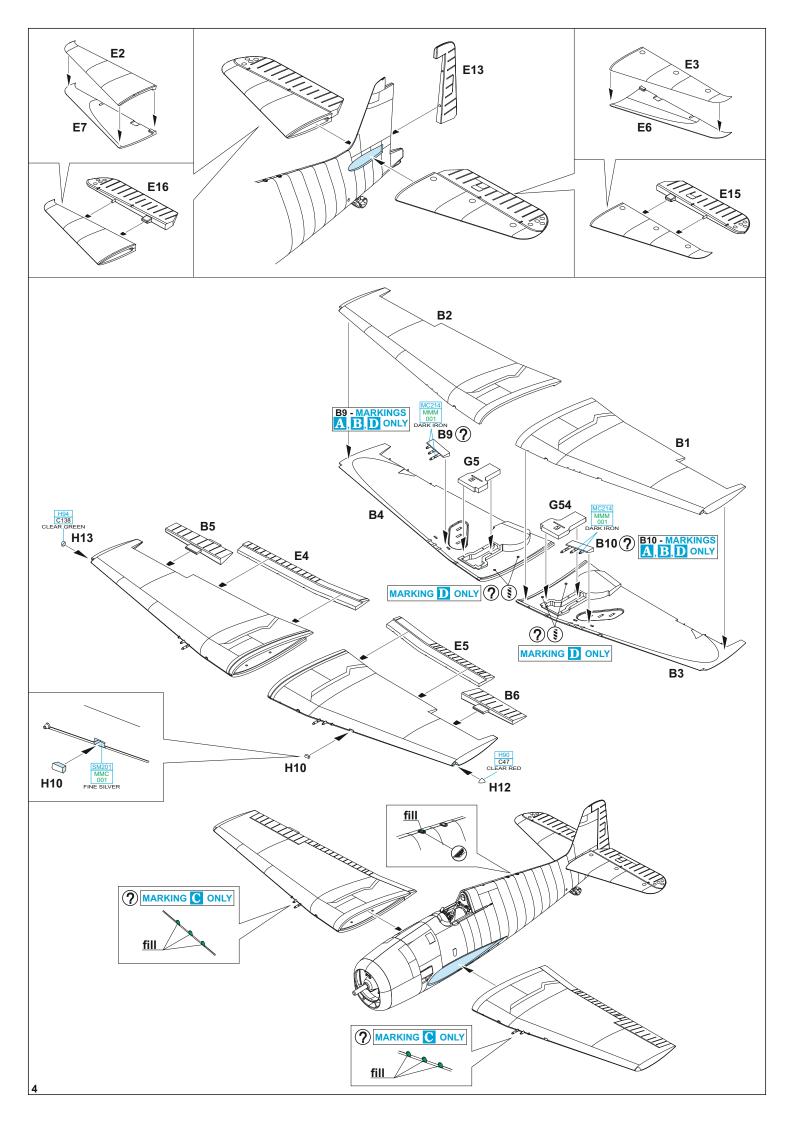
According to statistics, there were 12,275 Hellcats of all versions produced and for the loss of 270 of them, the Hellcat pilots claimed 5,156 kills. That accounts for over half of USN and USMC victories during the war!

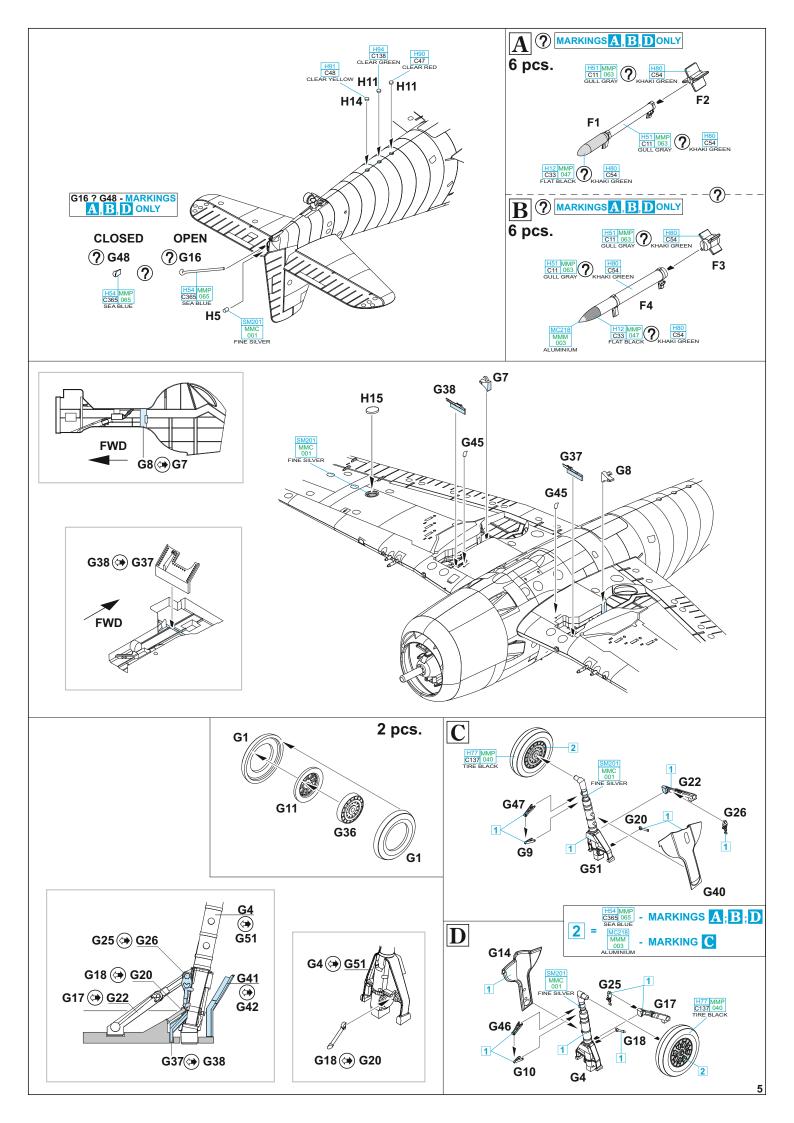
#### The kit: F6F-5

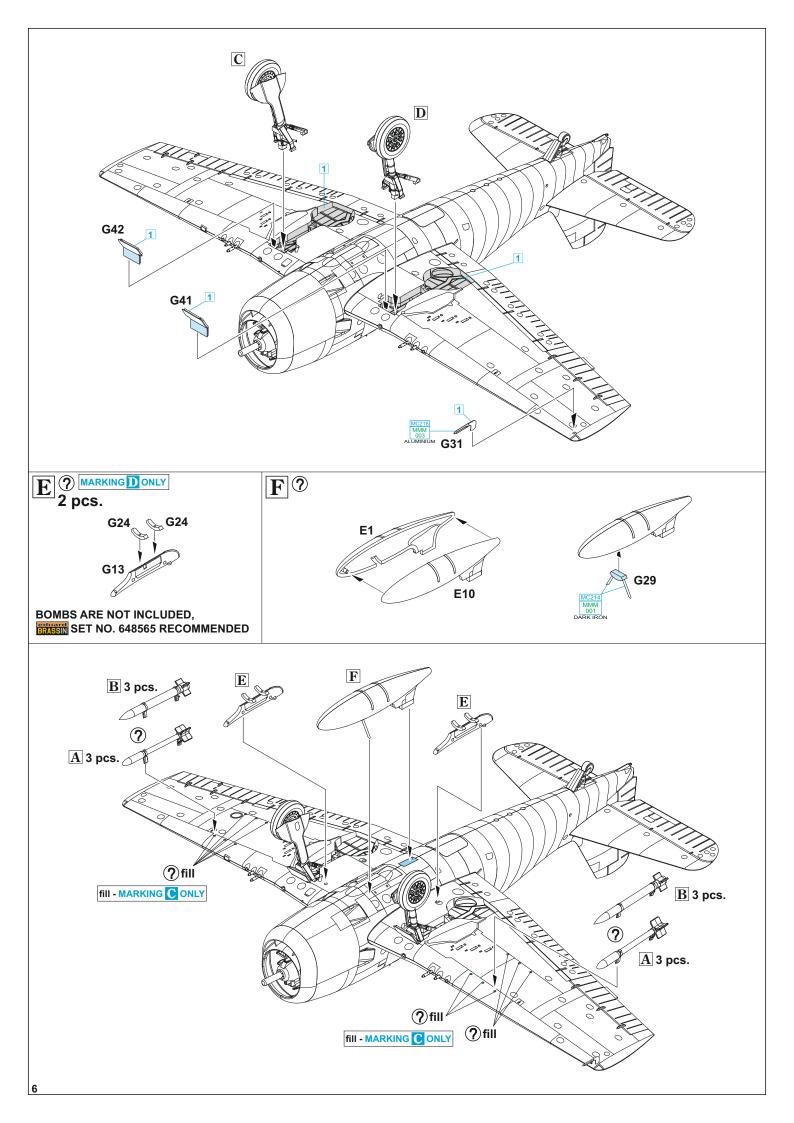
The F6F-5 featured several improvements over the previous F6F-3. The more powerful R-2800-10W engine with water injection system was the main technical change. The engine cover was slightly reshaped, as it had bulged area around the exhausts below the cooling regulation flaps on F6F-3, while the F6F-5 lacked it. Also, the windshield was different, as the F-6F3 had a rounded plexiglass piece with internally mounted armor glass, while the F6F-5 had the armor glass integrated in the windshield, so it was flat. The side windows behind the cabin were deleted. In addition, the rear fuselage and tail units were strengthened. Apart from several early production aircraft, most of the F6F-5s were painted in an overall gloss sea-blue color. All of the F6F-5s were capable of carrying one 20mm M2 cannon in each of the gun bays along with two pairs of standard .50 in (12,7 mm) Browning machine guns. But this configuration was used only on F6F-5N night fighters.

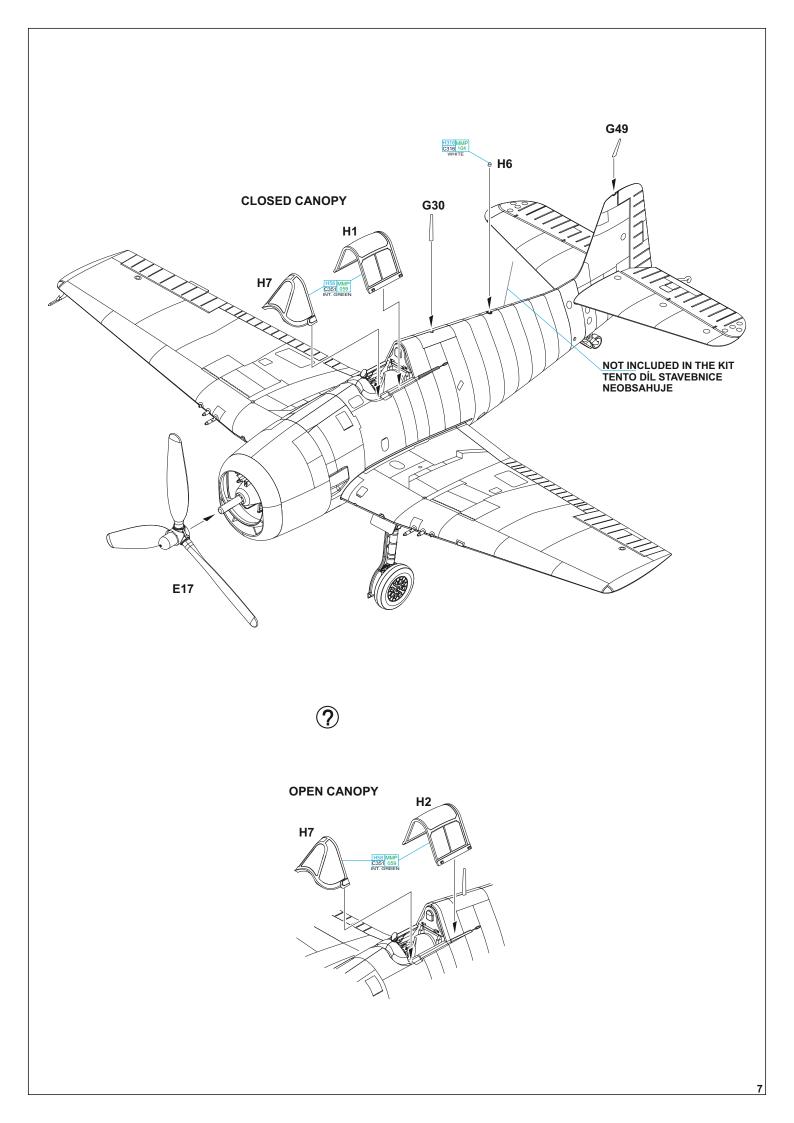






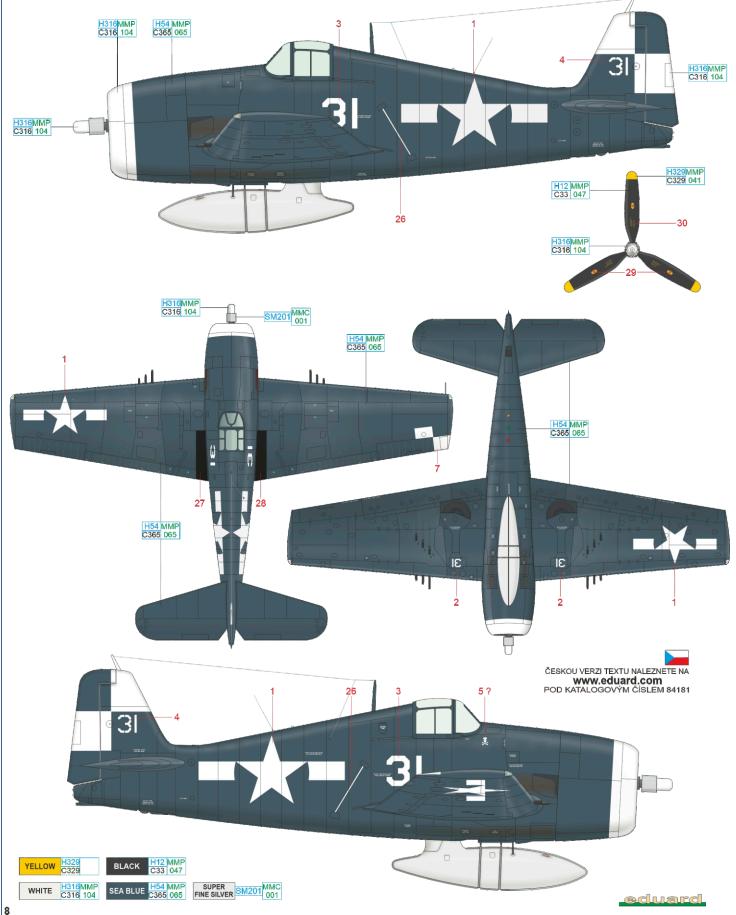






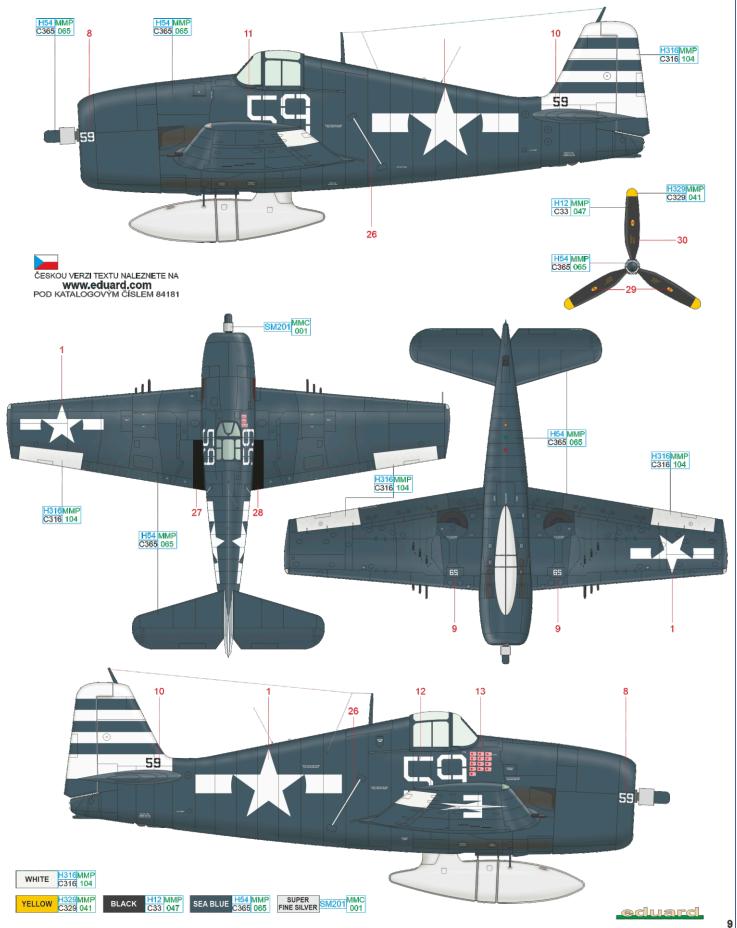
## 🗛 F6F-5, Lt. Fred Prinz, VBF-17, USS Hornet (CV-12), March 1945

Before the planned landing of the American units on Okinawa (Operation Iceberg, April 1, 1945) on March 19, 1945 the USN airplanes attacked the enemy air bases located on the islands of Kyūshū, Shikoku and southern Honshū and the naval bases Kure and Kobe. The mission was to destroy the Japanese ships and aircraft and prevent them from any action against the invasion forces. One of the units that were to participate in this strike was VBF-17 based on the aircraft carrier USS Hornet (CV-12). In the formation of twenty Hellcats, with which VBF-17 was equipped, flew Lt. Prinz and Lt. Karr. Kōkūtai 343 equipped with N1K2-J fighters was launched against the approaching enemy. The dogfight took place over the ocean. During the surprise attack on two American pilots Lt. Karr was shot down while Lt. Prinz's Hellcat was damaged and the unit's commander was destroyed after the collision with one of the attackers, Kiku-ichi Ishikawa. Prinz managed to nurse the damaged aircraft back to Hornet where he landed. Hellcats participating in these missions were marked by white-painted noses for the better recognition of the friendly aircraft.



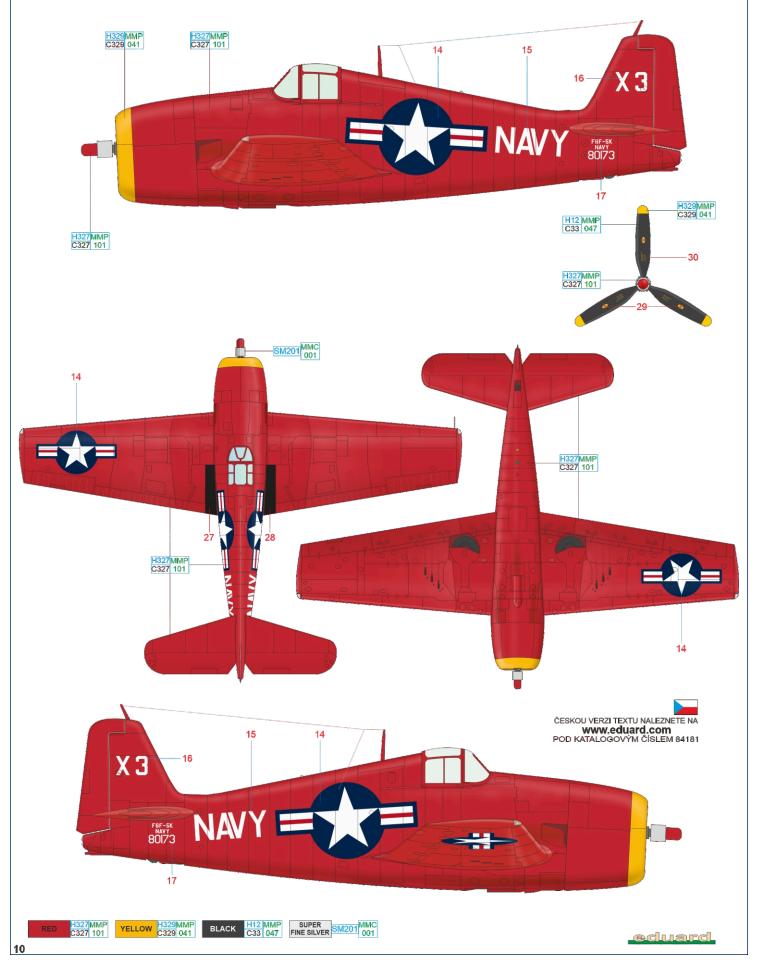
## **B** F6F-5, Lt. Daniel A. Carmichael, VBF-12, USS Randolph (CV-15), April 1945

Washington D.C. native, Daniel Archibald Carmichael finished his Bachelor's studies in the architecture at Princeton University in 1941. He commenced his pilot's training with the US Navy in the spring of the following year finishing it in March 1943. After completing the advanced training he was assigned to VF-2 from June 1943 to October 1944 flying from USS Enterprise (CV-6) and USS Hornet (CV-12). During his VF-2 deployment Lt. Carmichael shot down nine enemy aircraft. His next assignment was the USS Randolph (CV-15) air carrier flight deck from which he flew from January to May 1945 within the ranks of VBF-12 achieving another 4 victories over the Japanese aircraft. During his VBF-12 deployment Lt. Carmichael flew overal blue Hellcat nr.59 which carried the white markings of the aircraft belonging to USS Randolph, on the vertical tail surface, rudder and the ailerons, his scoreboard was marked under the windshield.



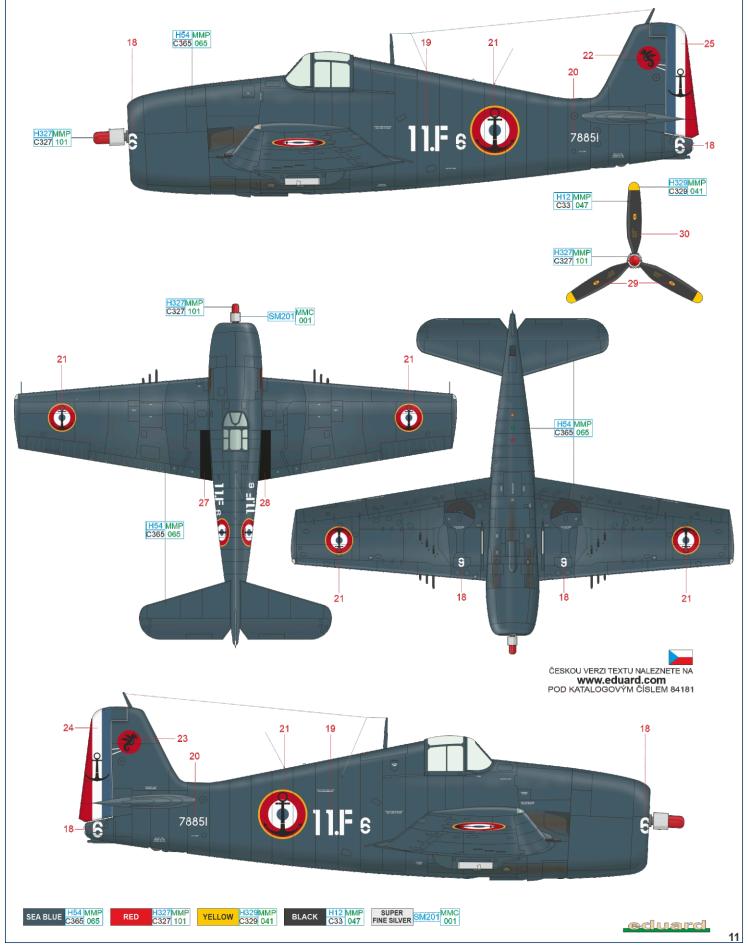
## **C** F6F-5K, BuNo 80173, Detroit Air Races, 1951

After WWII all Hellcats were replaced by the more modern type made by Grumman, F8F Bearcat fighters. Hellcats were gradually transferred to the second line units and reserve squadrons. During 1949-1957 the significant number was converted to radio-controlled drones. The flight instruments were retained for flights between the bases however the aircraft were stripped of the armaments and arrestor hooks for aircraft carrier landings. One of the Hellcats rebuilt to the drone standard was the airframe BuNo 80173 which in 1951 appeared at the Detroit Air Races. It did not participate in the racing however its unusual coloration attracted the interest of the aviation fans.



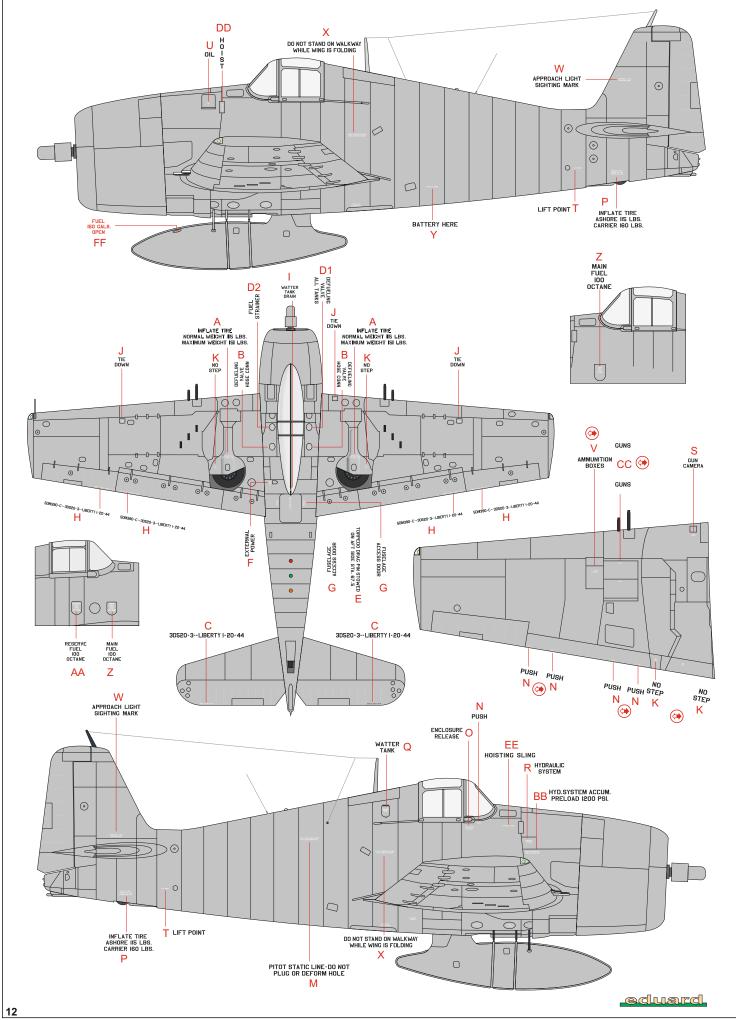
## F6F-5, LV Gérard de Castelbajac, Flottile 11F, Haiphong Cat Bi, Indochina, March 1954

After WWII France attempted to reinstate its pre-war colony in South East Asia. They were opposed by the communists led by Ho Chi Minh. Vietnamese National Army together with the French Army fought Viet Minh (Vietnamese People's Army) until August 1954. The last big clash was the Battle of Dien Bien Phu where the French Naval Air Forces took part, as they did in the prior battles. In this case it was Flottille 3F equipped with the SB2C bombers and Flottille 11F equipped with Hellcats. Hellcats led by LV Castelbajac flew close airs support missions and were armed not only with machine guns but also with unguided missiles and bombs. On March 19, 1954 the unit commander crashed this Hellcat near Cat Bi airport (nowadays the Haiphong International Airport). The aircraft was written off but the pilot survived.



F6F-5

## STENCILING POSITIONS



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