



Spotlight

Grumman Hellcat

FlyPast

Scrutinizes the history of...

The Grumman Hellcat

Right
The XF6F-3 was the first Hellcat prototype to be fitted with the Double Wasp engine.



Reliable and robust, the Grumman F6F Hellcat has the distinction of having destroyed more enemy aircraft during World War Two than any other Allied naval fighter.

Designed to replace the F4F Wildcat, which was the US Navy's sole carrier-based fighter until mid-1943, the Hellcat is frequently regarded as the single most significant factor in winning the naval air war against Japan. It began to equip units in the Pacific in 1943 and made an immediate impact. Its predecessor had achieved some outstanding results, but the

Hellcat was significantly faster, could fly further and higher, and was equipped with more potent armament. Nearly three-quarters of all US Navy victories in the Pacific were achieved by Hellcat pilots.

By early 1942, Roy Grumman and his chief designers, Jake Swirbul and Bill Schwendler, were working closely with the navy to create a suitable successor for the F4F. Although outwardly similar, the new machine featured a more elevated cockpit, allowing the pilot greater visibility and – based on reports of Wildcat encounters with Mitsubishi A6M 'Zero' fighters –

the Grumman was eventually fitted with a Pratt & Whitney R-2800 Double Wasp radial, the same unit used in the successful Vought F4U Corsair.

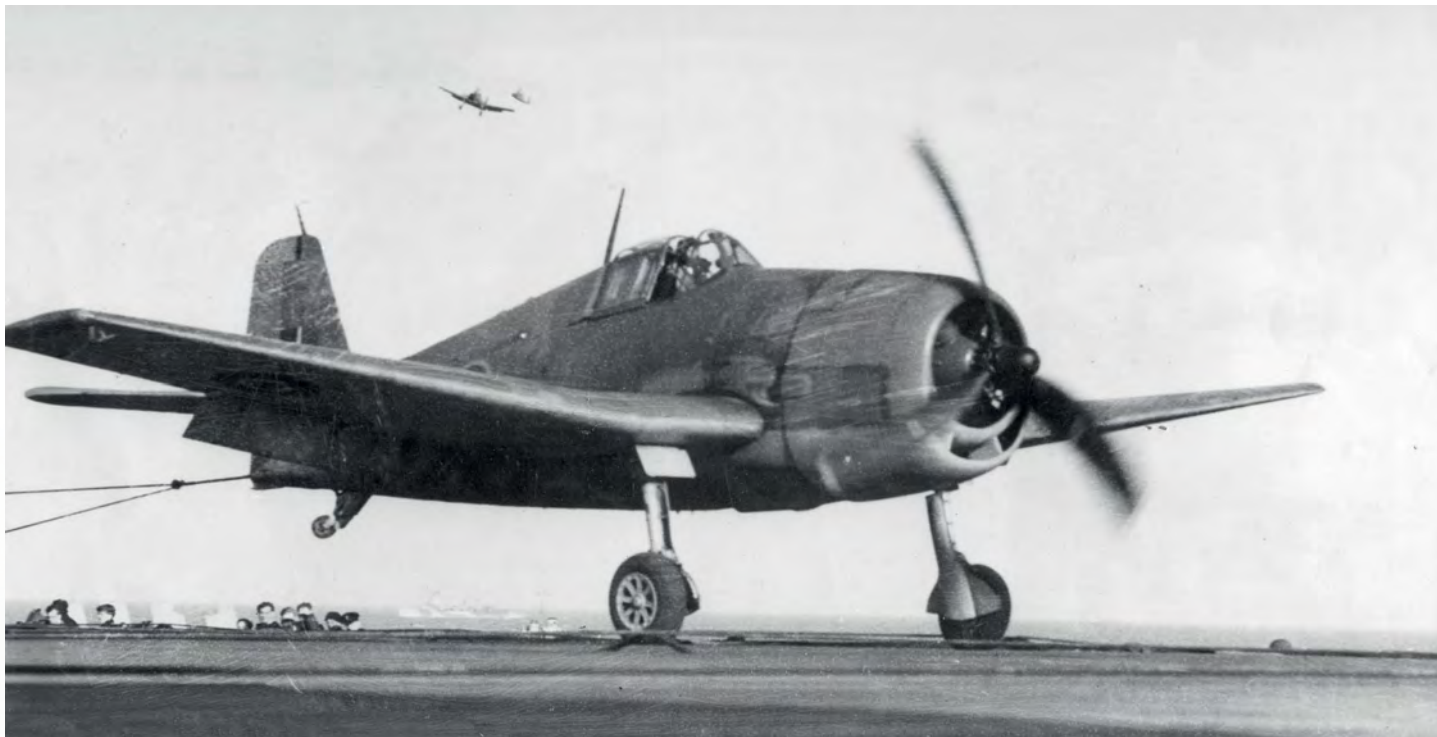
The XF6F-1 prototype first flew on June 26, 1942, powered by a Wright Cyclone engine. The following month, the second aircraft (the XF6F-3) flew with the Double Wasp installed. Versions of the latter were to power the Hellcat throughout its service life.

Turkey Shoot

The new fighter's performance was impressive from the start, and its potential was obvious. It was quickly developed and then mass produced at a rapid rate – over 12,000 were made, the vast majority within just two years. The first production F6F-3 flew in October 1942, just four months after the prototype's debut, and units began to receive them early the following year.

Flying from USS *Yorktown*, Hellcats were used in combat for the first time in August 1943, by which time 15 US Navy units were equipped with the type. The Battle of the Philippine Sea in June 1944 is often regarded as the





aircraft's finest hour. This decisive naval battle, taking place during the US amphibious invasion of the Marianas Islands, effectively eliminated the ability of the Imperial Japanese Navy to continue large-scale operations. So many enemy aircraft were shot down that the aerial part of the conflict was nicknamed 'The Great Marianas Turkey Shoot'. Hellcat pilots accounted for most of the Japanese aircraft destroyed.

Not surprisingly, the Hellcat was popular with those who flew it. Capt David McCampbell, the US Navy's all-time leading ace, was among its

admirers. He described the F6F as: "an outstanding fighter plane. It performed well, was easy to fly and was a stable gun platform. But what I really remember most was that it was rugged and easy to maintain."

Alternative roles

The F6F was also used as a night-fighter, with radar-equipped examples entering service early in 1944. Other than this, very few major variations on the basic design were made. Later versions of the F6F-3 had an upgraded Double Wasp fitted, while the F6F-5 had a slightly modified cowling, plus

provision for rockets and other weaponry. A few experimental variants were built, along with the F6F-5P, a photo-reconnaissance model.

The majority flew in US colours, but over 1,200 operated with the Royal Navy, of which around 175 were converted into NF.II night-fighters. The Hellcat was succeeded in US service by the F8F Bearcat at the end of World War Two, but some were used as drones in the 1950s (see page 76). The Uruguayan Navy used them until the 1960s, and several still fly today in private hands, mostly in the US. ●

Above
Fleet Air Arm Hellcats were operated under the Lend-Lease Act. The type was initially known as the Grumman Gannet Mk.I.
ALL KEY

Below
A line-up of Hellcats in British Royal Navy service.



Grumman Hellcat

We compare the Grumman Hellcat with its predecessor and successor

Cat Family

The Hellcat was the second in a 'family' of three single-engined naval fighters built by Grumman during World War Two, and was also the most significant, both in numbers produced and impact on the enemy. Its older 'sibling', the F4F Wildcat, was a capable and versatile war machine, though it lacked the speed and agility the Hellcat was to show. Before the end of the war, Grumman had developed an even better fighter, the very quick F8F Bearcat – but hostilities had ended by the time it entered service.

The Wildcat is one of several fondly remembered aircraft that performed well for the Allies during difficult periods of the war. Providing

excellent back-up to the US fleet in the Pacific, Wildcats also did much with the Fleet Air Arm to reduce the threat posed by German U-boats in the Atlantic. It was the first US Navy fighter to see combat in Europe, participating in November 1942's Operation Torch. The later FM-2 version was able to carry rockets or bombs in addition to its guns.

The Hellcat was a new design that combined advancing engineering skills with the results of experience in the field. Much more capable than the aircraft it succeeded, it remains – arguably – the most successful shipboard fighter of all time. The Hellcat inflicted immense damage on the Japanese, destroying numerous enemy aircraft both in the air and

on the ground. Its value was clear and it was consequently produced in vast numbers.

Inspired by this success, Grumman was ideally positioned to build the next US naval fighter. The Bearcat was highly manoeuvrable and extremely fast. It would almost certainly have become the leading fighter in the Pacific, had it reached units in time. The post-war US Navy deployed it from carriers and selected it to equip its Blue Angels aerobatic display team. The only F8Fs to see action were used by the French in the First Indochina War in the early 1950s, by which time jet technology was starting to render even the Bearcat obsolete.

Grumman F4F Wildcat

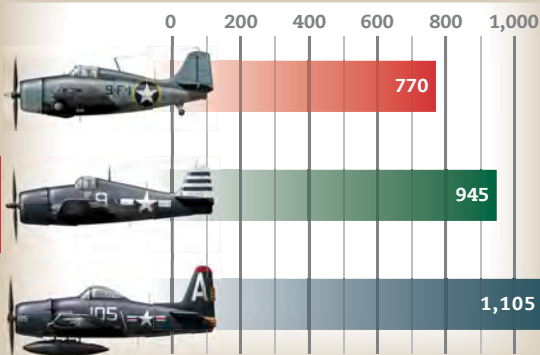


Above right

Grumman F4F-4 Wildcat flown by Lt Cdr John Raby of VF-9.

ANDY HAY-2016

AT A GLANCE: RANGE (miles)



- Construction:** 7,808 of all models were built, including 4,777 FM-2/Wildcat VIs.
- First Flight:** The XF4F-2 prototype first flew on September 2, 1937. The vastly improved XF4F-3 flew in February 1939.
- Powerplant:** One 1,200hp (895kW) Pratt & Whitney R-1830-76/86 Twin Wasp 14-cylinder engine.
- Dimension:** Span 38ft 0in (11.58m). Length 28ft 9in. Height 11ft 10in. Wing area 260sq ft (24.2sq m).
- Weight:** Empty 5,895lb (2,674kg). Loaded 7,952lb.
- Performance:** Max speed 320mph (515km/h) at 18,800ft (5,730m). Range 770 miles (1,239km). Service ceiling 34,900ft. Initial rate of climb 1,950ft/min.
- Armament:** Four 0.50in machine guns in wings. Later models had six 0.50in machine guns, plus provision for two 250lb bombs under wings.
- Crew:** One.

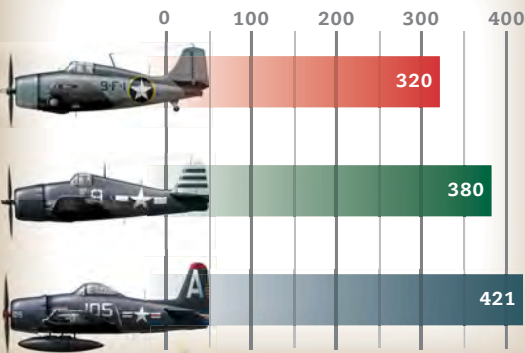
Note: performance and weights varied according to role and configuration.

Grumman F6F-5 Hellcat



Above right
Grumman F6F-5 Hellcat flown by Lt Hamilton McWhorter of VF-12.
ANDY HAY-2016

AT A GLANCE: SPEED (mph)



Construction: 12,275 of all models were made. The most numerous was the F6F-5, with 6,681 produced.

First Flight: The XF6F-1 prototype first flew on June 26, 1942.

Powerplant: One 2,000hp (1,491kW) Pratt & Whitney R-2800-10 Double Wasp two-row 18-cylinder radial engine driving a three-bladed propeller.

Dimension: Span 42ft 10in (13.05m). Length 33ft 7in. Height 13ft 1in. Wing area 334sq ft (31sq m).

Weight: Empty 9,238lb (4,190kg). Loaded 15,413lb.

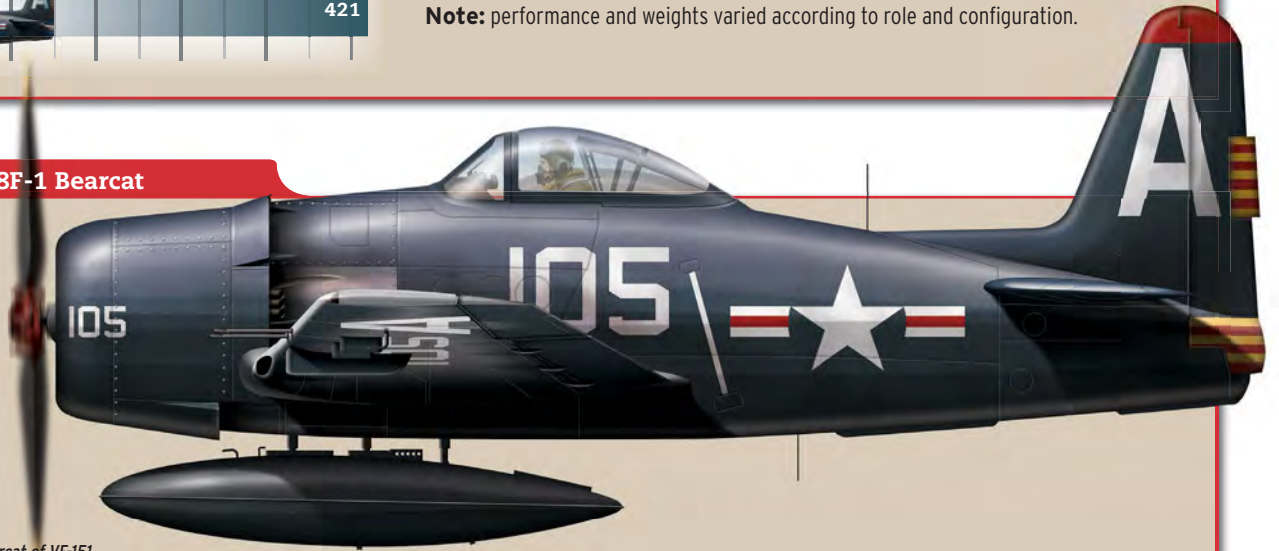
Performance: Max speed 380mph (611km/h) at 23,400ft (7,132m). Range 945 miles (1,520km). Service ceiling 37,300ft. Initial rate of climb 2,980ft/min.

Armament: Six 0.50in machine guns in wings, plus provision for six rockets under wings or 2,000lb bomb load under centre section.

Crew: One.

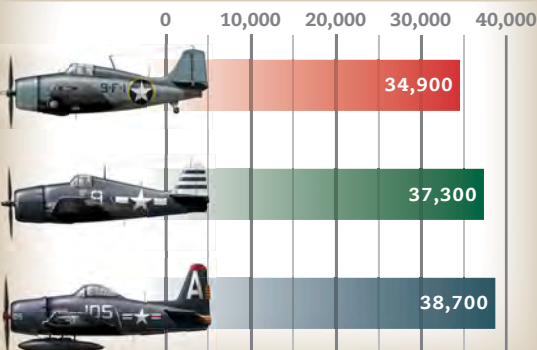
Note: performance and weights varied according to role and configuration.

Grumman F8F-1 Bearcat



Above right
Grumman F8F-2 Bearcat of VF-151.
ANDY HAY-2016

AT A GLANCE: CEILING (ft)



Construction: A total of 1,265 Bearcats were produced.

First Flight: The first prototype flew on August 21, 1944.

Powerplant: One 2,300hp (1,715kW) Pratt & Whitney R-2800-34W Double Wasp two-row 18-cylinder radial engine driving a four-bladed propeller.

Dimension: Span 35ft 10in (10.92m). Length 28ft 3in. Height 13ft 9in. Wing area 244sq ft (22.67sq m).

Weight: Empty 7,070lb (3,207kg). Loaded 9,600lb.

Performance: Max speed 421mph (678km/h). Range 1,105 miles (1,778km). Service ceiling 38,700ft. Rate of climb 4,570ft/min.

Armament: Four 0.50in Browning M2 machine guns and four 20mm cannon, plus various combinations of rockets and bombs.

Crew: One.

Note: performance and weights varied according to role and configuration.



FlyPast

A dramatic view of the Flying Heritage Collection's Grumman F6F-5 Hellcat NX79863. The 1945-built fighter is usually based at Paine Field in Everett, Washington. ©JOHN DIBBS



SPOT FACT In tests, the Hellcat was shown to be faster than the 'Zero' at all altitudes

Men Behind the Hellcat



The Hellcat was loved by both pilots and deck crew, especially after the 'Marianas Turkey Shoot'.

Warren E Thompson explains

& Whitney R-2800-10W Double Wasp]. Both the F6F-3 and F6F-5 had 250-gallon capacity in the internal tanks and a 150-gallon belly drop tank. Six wing-mounted machine guns were carried by both. The

Dash-5 could carry two 1,000lb bombs and/or six 5in HVARs [high velocity aircraft rockets]. ➔

34

victories were scored by leading Hellcat ace Capt David McCampbell

SPOT FACT Eugene A Valencia was US Navy VF-9's top scorer, with 23 victories flying F6Fs



Above
An early model F6F-3 over the mountains of California in 1942. TAILHOOK ASSOCIATION

Right
A Hellcat pilot of VF-4 pulling up to his wingman on a flight from Alameda, California, sometime in 1943. TAILHOOK ASSOCIATION

Below
A brand new F6F-3 at the Grumman plant at Bethpage, New York, in the summer of 1943. DICK STARINCHAK



“We were to improve the Hellcat’s speed by 20 knots and to design better aileron controls so it would compare favourably to the ‘incomparable’ Corsair!”

“All of these figures combined to help the Hellcat carry out a wide range of missions. These improvements helped make the F6F one of the least modified aircraft produced during the war years.

“The F6F flew itself on and off the runway. Grumman was producing more than 600 Hellcats per month. By the end of 1942, the navy had accepted more than 2,540 Hellcats. The unit cost for the F6F, less government supplied equipment – primarily engine, propeller, armament and radio – was about \$50,000. By the end of production runs, it had dropped down to \$35,000 each. This was two-thirds of the cost of the F4U Corsair, which

was a bargain for the tax payers.”

Hellcats contributed considerably to the navy’s dominance in the Pacific, hence the number of ‘aces’ it produced. With the end of the war, F6Fs were quickly relegated to training regiments and the reserves. By contrast the Corsair hung around until after the Korean War ended in 1953.

Stable platform

During the invasion of Okinawa, which started in April 1945, the US Marines’ night-fighter unit, VMF(N)-543, operated the radar-equipped F6F-3N. Staff Sgt T P Bales was one of the original radio technicians with the squadron. Meyer reflects that the nocturnal Hellcat: “...was

preferred over the Corsair at that time in the war, due to its easier landing characteristics and greater stability as a gun platform. There were over 200 F6F-3Ns built by Grumman and we were lucky enough to get a full complement of them.

“They had a much improved radar [the APS-6] that one pilot could operate without any need for a second radar intercept officer. It was installed in a bulbous pod on the starboard





deployed to the Pacific in early 1944, but were difficult to integrate into carrier operations, as they essentially would have required round-the-clock duty by launch and recovery crews.

"I believe that the [later] F6F-5N was the definitive night-fighting version of the Hellcat. We never had any serious problems with the APS-6. The only thing it required was minor maintenance. When the F6F-3N encountered rough weather while on patrol, it might have to have some adjustments on its radar."

Deadly target

Assigned to Hellcats on board the USS *Intrepid*, Captain R L Collins remembers some of the things that made the F6F a favourite among the pilots and maintenance personnel: "Just like the F4E, the wing folded neatly alongside the fuselage and it allowed a lot of Hellcats to be parked close together. This was perfected by Leroy Grumman long before the F6F came into existence.

"Working on the R-2800-10 engines was made easier even though it produced a lot more power than early models.

"The airframe was sleek and to the point just as the Wildcat's had been, but this time it was a lot more powerful and the Japanese learned the hard way. The F6F had more armour and firepower than the Wildcat.

"The Hellcat had great survivability, they came back all riddled with bullet holes and it was as if nothing had happened to them. I think those that were putting in the holes had it far worse than we had it. It was its six 50-calibre machine guns, so it was a pretty deadly target for the Japanese to go after. Each of those guns was loaded with 400 rounds apiece."

Making history

As the US forces prepared for the invasion of Guam and Saipan, in June 1944 the carrier task force headed ➔

Above left
Two F6F-5Ns wait to take off from a carrier deck.
TAILHOOK ASSOCIATION

Above
Hellcats warm up on the flight deck of the USS 'Cowpens' in 1943.
TAILHOOK ASSOCIATION

Below left
An F6F-5 of VF-12 on board the USS 'Randolph'.
DICK STARINCHAK

wing and was simple to operate with only six knobs and had a range of five miles. It only weighed close to 250lb. This made it easier for two- or three-man crews to remove it when repairs required it to be taken from the aircraft.

"The APS-6 featured a double-dot system; this displayed a shadow blip to the right of the true blip; this secondary blip showed the target's altitude relative to the F6F. The -3Ns



SPOT FACT 1844 NAS was the highest scoring Fleet Air Arm Hellcat unit, with 3.25 'kills'

Hellcat drones



A number of F6F drones were used in the Korean War, including this one on the USS 'Boxer' on September 2, 1952. At least one of these was used unsuccessfully against the bridges at Toko-Ri. **DICK STARINCHAK**



Colour schemes varied on target drone F6F-5Ks. A large number of Hellcats were turned into radio-controlled drones from 1950 to 1957. **TAILHOOK ASSOCIATION**

Right
A VF-1 F6F-3 on the USS 'Yorktown'. **DICK STARINCHAK**

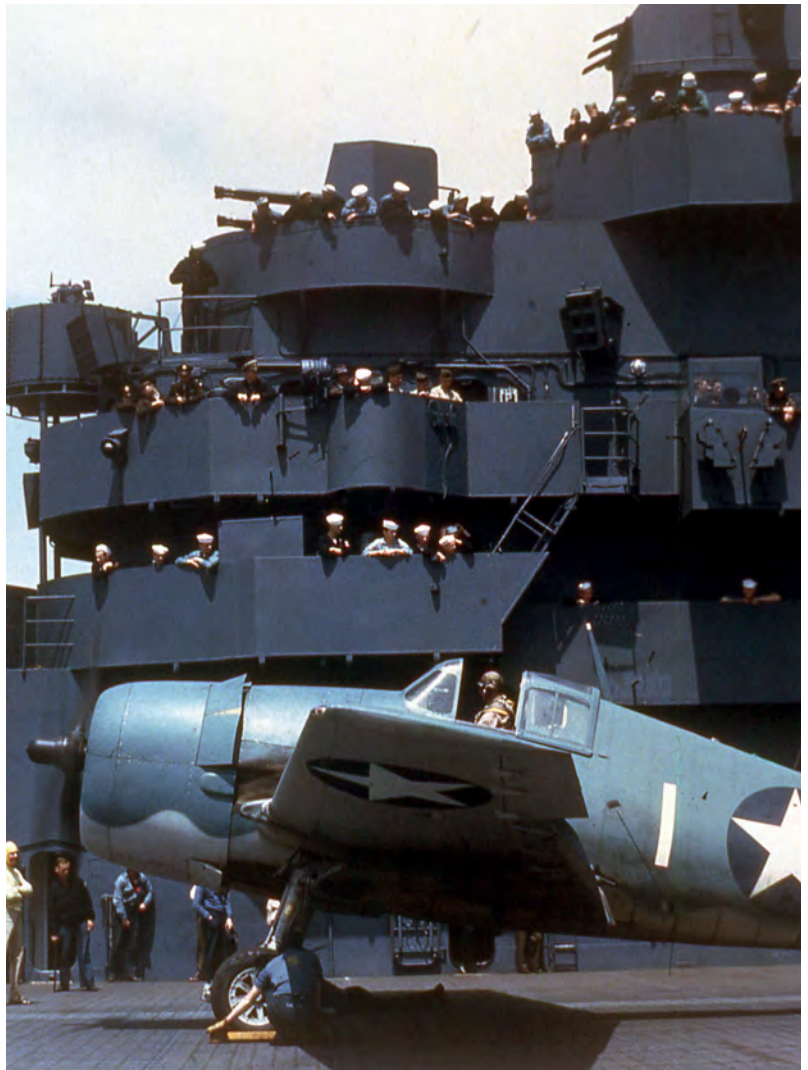
west into the Philippine Sea. The Japanese navy deployed its main battle fleet (six carriers and an assortment of battleships and cruisers) for the first time since the Battle of Midway, two years previously.

On June 19, US navy pilots shot down hundreds of enemy aircraft in what became known as the 'Marianas Turkey Shoot'. Pilots and shipborne anti-aircraft gunners took out 346 aircraft.

Making history on that day was Lt Alexander Vraciu who had already scored at Rabaul and at Truk, so the hunting in the 'Turkey Shoot' was an added bonus. In an interview, Vraciu recalled the day: "We were expecting an attack of over 400 Japanese carrier aircraft. I was part of a standby group of 12 Hellcats launched from the USS *Lexington*.

"Our skipper was leading the formation with three divisions of Hellcats and I was leading the second. With him having a new engine in his F6F, he pulled completely out of sight. His wingman's prop froze up trying to keep up and he had to ditch it in the ocean.

"Suddenly, my wingman started pointing at my wing and I found out later that my wings weren't fully locked. Nevertheless, we were directed to return to the carrier and orbit."



"...a short burst produced astonishing results. He blew up with a sky-shaking explosion right in front of my face. The heat from the blast belched into my cockpit..."

Astonishing results

"We hadn't been there long when the radar co-ordinator people on the carrier told us they had 'bogey's' heading for the carrier that were about 75 miles [away] and we had a chance to meet them halfway. There were two others units of Hellcats converging on the enemy gaggle.

"About 25 miles away, I saw three bogeys and closed on them immediately. As I got closer, I noticed a force of 50 planes flying at 2,000ft below us on the port side and heading about 35 miles toward our ships. The bombers did not have any fighter protection and our

position was perfect for a high side run. I headed for the nearest inboard straggler, which was a [D4Y] 'Judy' dive-bomber. As I closed on him, I caught another Hellcat zeroing on the same 'Judy', so I backed off.

"I picked another 'Judy' out and came in from the stern, giving him a burst, and he caught fire, heading down in a trail of smoke. Pulling up, I spotted two more and sent the first down and manoeuvred in from the rear on the second one, with its rear gunner peppering away. It was on fire and as it spiralled into a death dive, the gunner was still firing at me. That made three down so far.



“The sky was an incredible sight in that it was full of smoke, tracer, debris and large bits of fallen enemy planes. We tried to keep the enemy aircraft bunched up and when one broke out of the formation, I broke in behind it and with my oil-smoked windscreen, I gave it a burst. The rounds must have hit at the sweet spot at his wing root and probably hit the control cables, because the plane twisted out of control crazily.

“Despite our efforts the bombers were lining up their targets. I headed for a group of three 'Judy's in a long column. I approached the tail-ender just as the lead was hit by a 5in anti-aircraft

round from our destroyers. I was in range of No.3 and a second after opening fire, his engine started flying to pieces and he fell off toward the water.

“The next one I latched onto was in his dive against one of our destroyers. He was intent on this as I caught up with him and a short burst produced astonishing results. He blew up with a sky-shaking explosion right in front of my face. The heat from the blast belched into my cockpit and I figured to have hit his bomb. I've had planes blow up before, but never like this!

“Yanking up sharply to avoid the scattered pieces and flying hot stuff, I radioed in: ‘Splash number six; there's one more ahead diving on a battleship, but I don't

think he'll make it!

“Hardly had the words left my mouth when the 'Judy' caught a direct hit that removed it as a factor from the battle. He had flown into a solid curtain of steel roaring up from the battleship below.

“With the 'Judy' gone, I looked around; I could only see a sky full of Hellcats. Glancing backward along our route there was a 35-mile long pattern of flaming oil slicks on the water”.

Ordinance reported that Vraciu had used just 360 rounds of ammunition to make the six kills that morning. Alex Vraciu finished as the fourth all-time US Navy ace with 19 kills and he destroyed another 21 aircraft on the ground. ●

Above left
A fighter is loaded onto a carrier at North Island, San Diego, in mid-1944. TAILHOOK ASSOCIATION

Above
Instrument panel of an F6F-3. WARREN THOMPSON

Below
Lt Alexander Vraciu on the wing of his F6F. TAILHOOK ASSOCIATION





Spotlight

Grumman Hellcat



No Pilot. Required

Andy Hay artwork of a post-war Hellcat drone

Artwork
Grumman F6F-3K Hellcat 'Yellow 11' was based at NAS Atlantic City, New Jersey, in 1946. Seen here with a pilot, it was used later that year as a drone during Operation Crossroads. ANDY HAY-2016

After withdrawal from frontline service, several Grumman F6F Hellcats were converted for use as pilotless drones.

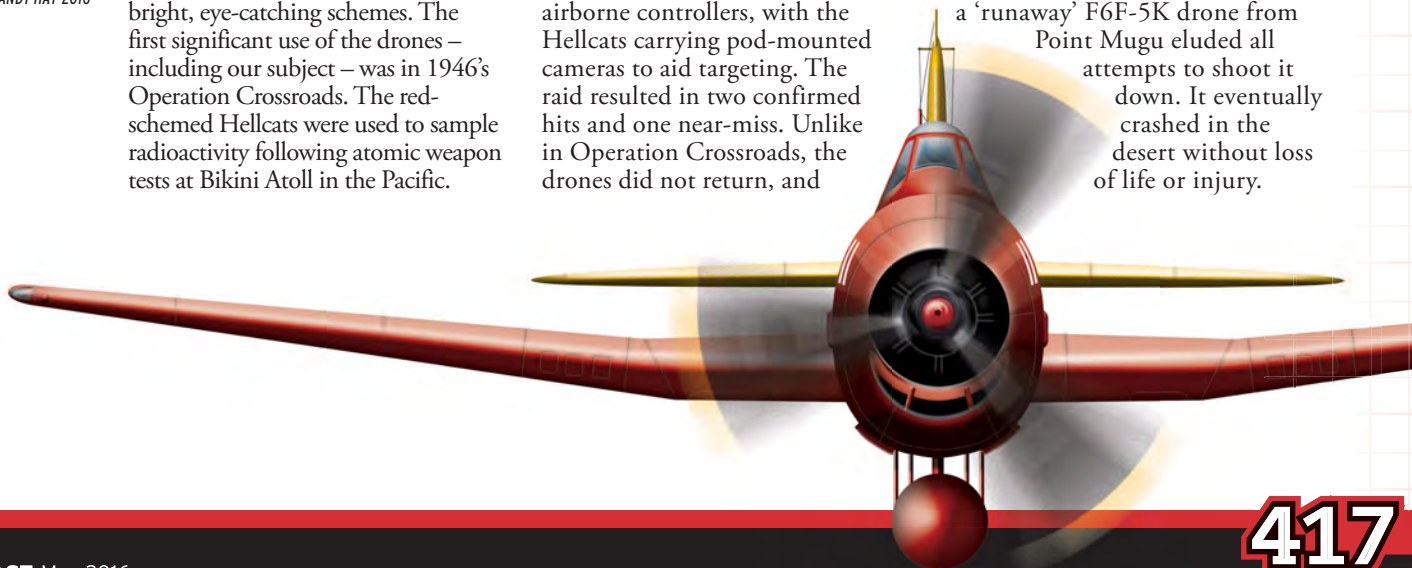
The initial work was carried out at the Naval Air Development Unit in Johnsville, Pennsylvania. To easily distinguish them from 'regular' aircraft they were painted in a succession of bright, eye-catching schemes. The first significant use of the drones – including our subject – was in 1946's Operation Crossroads. The red-schemed Hellcats were used to sample radioactivity following atomic weapon tests at Bikini Atoll in the Pacific.

Drones were also used in the Korean War. In late August 1952, six Hellcats – marked as V1 to V6 and painted blue with standard markings – were launched from USS *Boxer* and guided by radio control to attack bridges, tunnels and buildings. Douglas AD-2Qs (the electronic countermeasures version of the Skyraider) flew as airborne controllers, with the Hellcats carrying pod-mounted cameras to aid targeting. The raid resulted in two confirmed hits and one near-miss. Unlike in Operation Crossroads, the drones did not return, and

went down with their bombs.

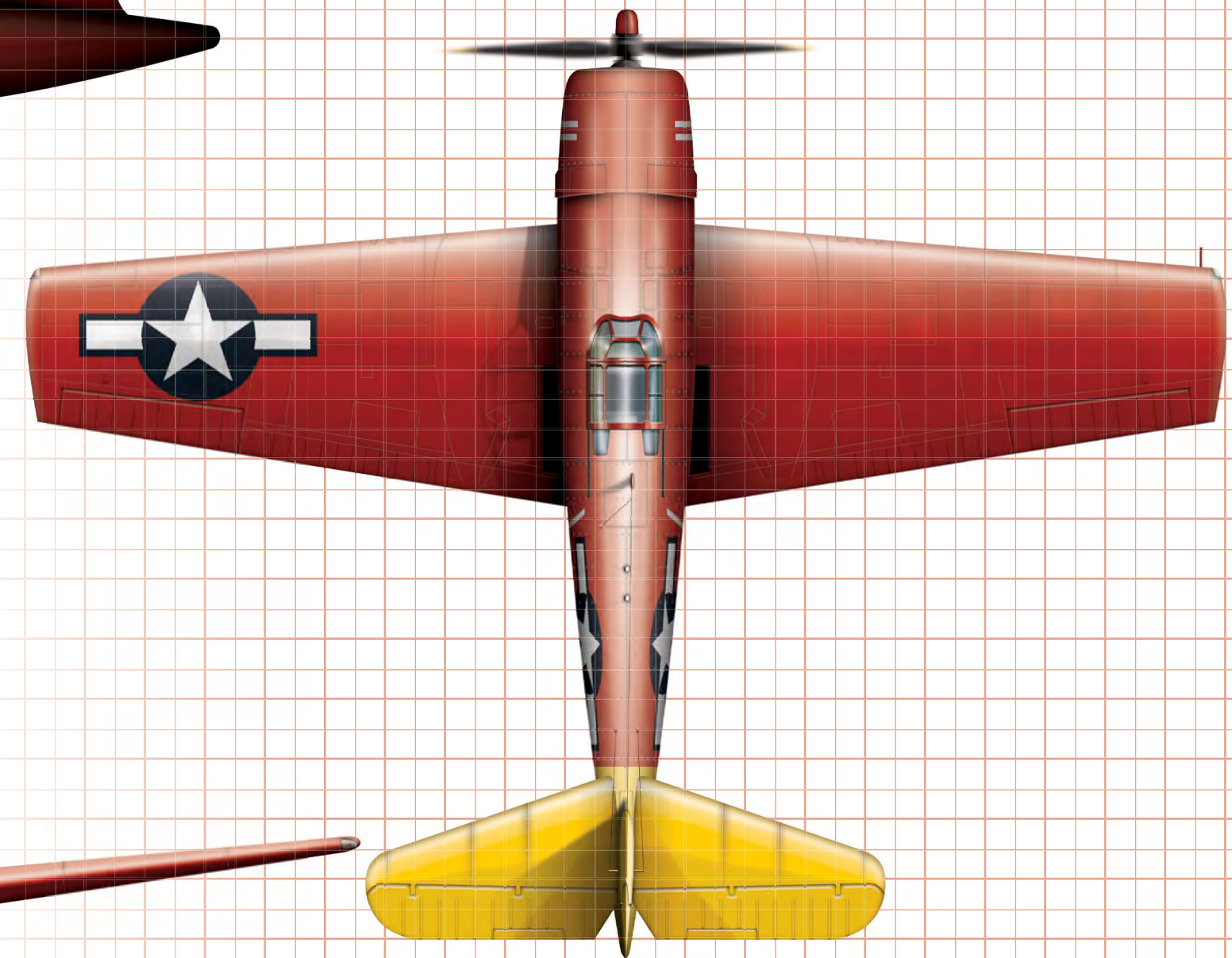
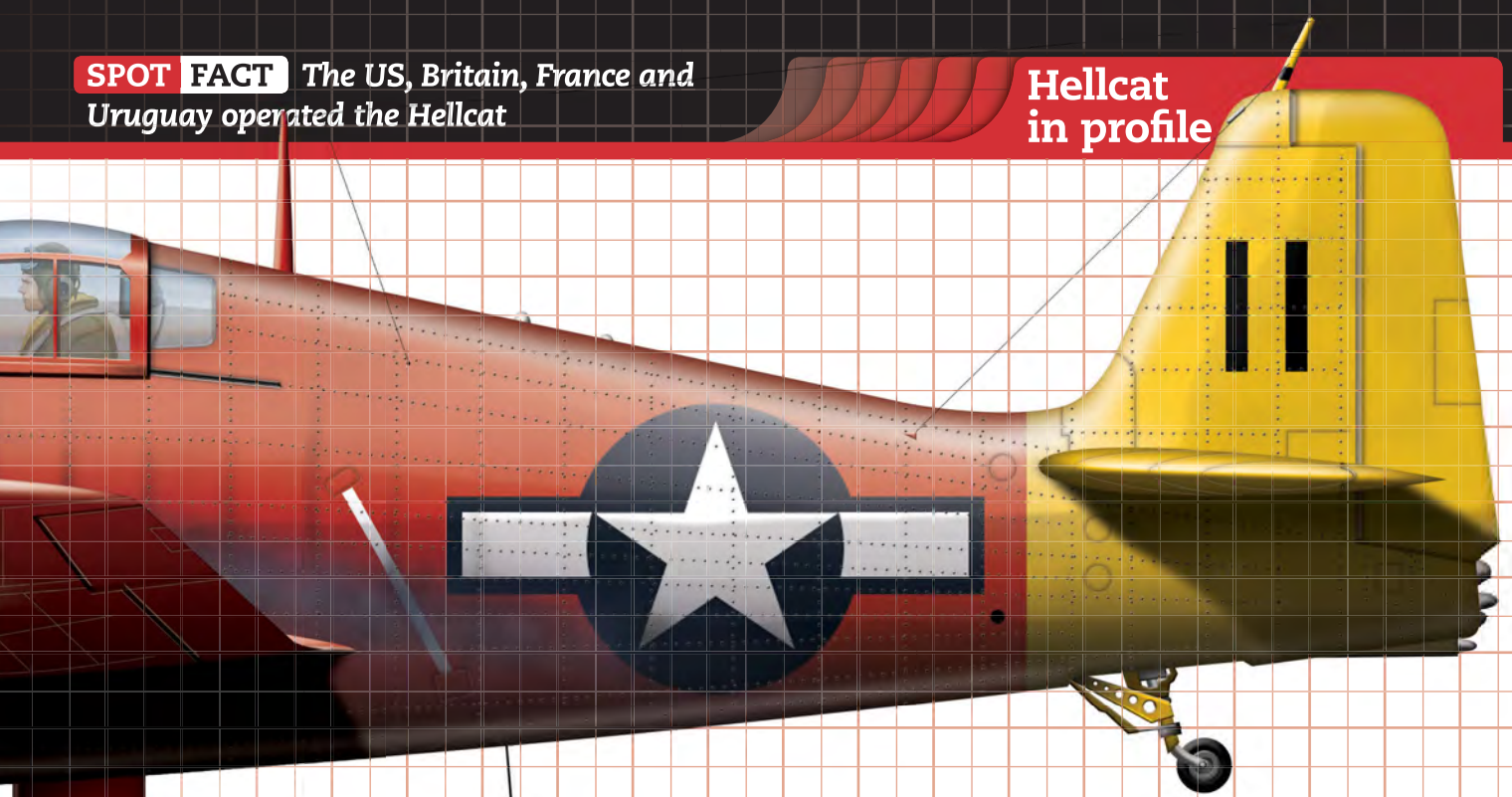
Later Hellcat drones were used at China Lake and Point Mugu in the US as target aircraft. A Sparrow missile was used to destroy one in December 1952, and the following September a Sidewinder made a successful 'kill' at China Lake.

In an unusual 1956 incident, now nicknamed the Battle of Palmdale, a 'runaway' F6F-5K drone from Point Mugu eluded all attempts to shoot it down. It eventually crashed in the desert without loss of life or injury.



SPOT FACT The US, Britain, France and Uruguay operated the Hellcat

Hellcat in profile



mph was the top speed of the XF6F-6 version, which was never mass produced



Spotlight

Grumman Hellcat



Ace Maker

Warren E Thompson describes some of the pilots who helped to make the Hellcat the most successful fighter in the Pacific



Above
Ground crews on the USS
'Lexington' moving the
air group's Hellcats to the
stern of the carrier, 1943.
TAILHOOK ASSOCIATION

By some margin, the F6F Hellcat was the US top scorer in the Pacific. Navy and Marine pilots flew 66,530 combat sorties, resulting in 5,163 aerial victories. Hellcats were not found lacking in the ground attack role either, dropping 6,500 tons of bombs.

The type notched up a 13:1 kill ratio against the A6M 'Zero'; no wonder then that it became the premier 'ace' maker in the American inventory – there were 305 F6F aces. The all-time lead ace for the navy in the Pacific was Captain David McCampbell with 34 victories in the Hellcat.

The first F6F ace was Lt Hamilton 'Mac' McWhorter III. His unit, VF-9, was destined to receive the F4U Corsair in January 1943, but instead, VF-9 took on F6F-3s, becoming the first navy squadron to take on the Hellcat. Previously, McWhorter had flown F4F Wildcats: "Compared with the F4F, the roomy F6F was a big improvement; 60mph faster, a better rate of climb and more ammunition capacity.

"We qualified for combat on the USS *Essex* and deployed to the Pacific on the same carrier. Most of us pilots flew more than 50 hours in the new Hellcats. Many others accumulated another 30 hours before entering

combat. Most of us had 80 hours in it when later on in the war most pilots had about 300 hours before entering combat."

Island hopping

In mid-September 1943 the navy put together a task force of six carriers to strike at Wake Island. This was to be the first significant aerial combat for the F6F. A total of 47 Hellcats launched and 27 Zeros took off to intercept them. A dogfight ensued and when the dust settled, 22 of the Zeros had been downed for the loss of 12 F6Fs – six to Zeros and six to AA gunfire.

The next big raid was planned →

SPOT FACT The last Hellcat rolled off the production line in November 1945



After VF-9 finished its combat tour in March 1944, McWhorter was instrumental in reorganising VF-112 (which had flown Corsairs) as a Hellcat unit on the carrier USS *Randolph*. This enabled him to take part in the first carrier raid against Tokyo, adding another Zero to his total.

“I was flying on May 13 when I lucked up, and downed a [Nakajima] C6N ‘Myrt’ reconnaissance plane – that was my 12th and final victory. I was flying a morning combat air patrol over Task Force 58. He was

Top
Two F6F-3s in early 1943. TAILHOOK ASSOCIATION

Above
With Avengers on the starboard side, F6Fs get ready for a strike from the USS ‘Monterey’ in 1943. TAILHOOK ASSOCIATION

Right
A Hellcat of VF-5 waiting to launch from the USS ‘Yorktown’ in August 1943. DICK STARINCHAK

against ‘Fortress Rabaul’. As the fight got started, McWhorter remembered: “On November 11, we took off from our carrier just after dawn. En route, we were flying at 10,000ft, a dozen Zeros picked us up and tried to lure us away from Rabaul, but it didn’t work.

“I went down and strafed a heavy cruiser. As I was headed back to the rendezvous point, I encountered a huge dogfight that included about 12 Hellcats and 30 Zeros. I dove into the melee and when it was over I had scored two ‘kills’.”

Next step was the Battle of Tarawa Atoll in late November, during which McWhorter claimed a floatplane, which made him an ace. On a raid to Truk (the ‘home’ base for the Imperial Japanese Navy’s Combined Fleet) on February 19, Hellcats were protecting a force of SBD Dauntless dive-bombers, and McWhorter came out of this engagement as a double ace.



“A total of 47 Hellcats launched and 27 Zeros took off to intercept them. An intense dogfight ensued and when the dust settled, 22 of the Zeros had been downed...”

Victory comparison in the Pacific Theatre

Type	Kills	Aces
F6F Hellcat	5,156	307
F4U Corsair	2,140	93
P-38 Lightning	1,700	90
F4F Wildcat	1,006	58
P-40 Warhawk	706	27
P-47 Thunderbolt	697	32
P-51 Mustang	296	5
P-39 Airacobra	243	1
P-61 Black Widow	63	1

Prepared by late Grumman test pilot Corwin 'Corky' Meyer.

at 25,000ft and moving away from the task force. I got so close that when I flamed it, I got oil all over my F6E. Just as the 'Myrt' exploded, two parachutes popped out.

"Later that day, I was flying escort for two Vought OS2U Kingfisher

floatplanes that were tasked with picking up several pilots that had raided the 'Jap' base close by.

"One of the Kingfishers was loaded with downed pilots and because of the extra weight it flew a lot slower than normal, but it made it back to the *Randolph*. I had logged my longest flight of the war at 5.5 hours."

Luck of the Irish

The top Hellcat ace was David McCampbell with 34 kills, and by the end of the war he was in command of Air Group 15 on the USS *Essex*. Admiral Forrest

Sherman had announced that McCampbell was too vital for combat 'ops'.

While the bulk of the air group was out on a mission on October 24, 1944, radar picked up a huge Japanese strike force bound for the *Essex*. McCampbell defied Sherman's order, took off and led the carrier's last Hellcats to head off the enemy force. They faced 40 enemy fighters, including 'Zeros', A6M3 'Hamps', Ki-43 'Oscars' and Ki-61 'Tonys.' McCampbell told five of the US pilots to go after the bombers, while he and Ensign Roy Rushing focused on the fighters.

McCampbell recalled that day: "The most exciting action I had in combat occurred during the Battle of Leyte Gulf. I was launched from the USS *Essex* with a group of seven Hellcats to intercept a force of 100 'Jap' planes, fighters and bombers.

We intercepted the raid at a distance ➔

Below
David McCampbell in the cockpit of his Hellcat. *DICK STARINCHAK*



SPOT FACT In 1952, F6F-5K drones, each carrying a 1,000lb bomb, were used to attack bridges in Korea

Right

A group of Hellcat pilots going over strike plans for an attack on the Gilbert Islands on board the USS 'Lexington' in November 1943. DICK STARINCHAK

Below

On October 30, 1944, a task force was attacked by Japanese suicide pilots off the coast of the Philippines. Beyond the stern of the carrier USS 'Enterprise' the USS 'Belleau Woods' and the 'Bunker Hill' are burning. TAILHOOK ASSOCIATION



of 20 miles from the task force. "Due to my experience in the previous four months of combat, plus the luck of the Irish, I was able to exploit the situation. Without attempting to explain the action in detail, I just did what came naturally to one who had spent many years training for just such an occasion.

"My wingman and I accounted for 15 definitely destroyed. I was credited with nine enemy aircraft shot down and two probables. Not a single enemy plane got through to attack our ships.

"After following the decimated formation nearly all the way to Manila, we returned to the vicinity of the task force – out of ammunition and near fuel-exhaustion – to witness the agonizing manoeuvring of our ships under attack from a second raid which had mortally damaged the USS *Princeton*. I landed aboard the USS *Langley*, since it had the only clear deck in the group that could take me and I had just enough gas to taxi out of the arresting gear.

"When the final tally was in, the seven planes I had led were credited with 27

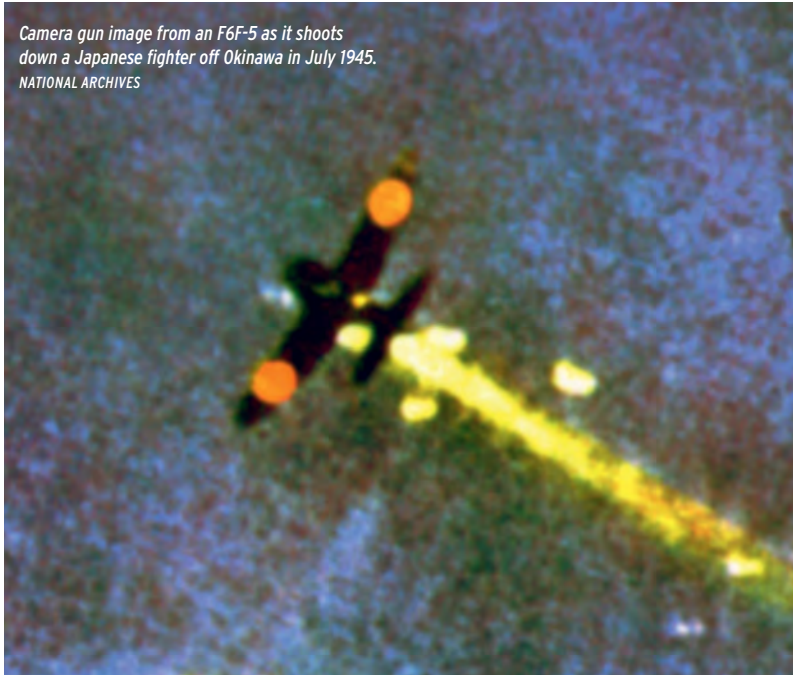
enemy planes as destroyed and an additional eight probably destroyed. We had only superficial damage, largely as a result of flying through the debris of exploding enemy aircraft." In one morning sortie, McCampbell had shot down eight enemy aircraft and Rushing six; an unparalleled achievement in US fighter aviation.

Mowing machine

Lt Eugene Valencia started training in April 1942 and by February 1943 he was serving on the *Essex* as an F6F pilot. He scored his first aerial victories shooting down three enemy aircraft over Rabaul and one over Tarawa in November 1943. After one of his more fruitful engagements



Camera gun image from an F6F-5 as it shoots down a Japanese fighter off Okinawa in July 1945.
NATIONAL ARCHIVES



in the Hellcat he said: "I love this airplane so much that if it could cook, I'd marry it!"

During October 1944, kamikaze attacks damaged 50 ships and this attrition continued until the end of the war in August 1945. On April 16, 1945 – during the Okinawa campaign – over 100 suicide strikes were launched, sinking a destroyer and 11 other ships. Among the badly damaged was the USS *Intrepid* with a holed flight deck, 40 aircraft wrecked and a dozen crewmen dead.

To counter this, Valencia devised tactics referred to as the 'Mowing Machine', designed to engage the kamikazes well before contact with the fleet. During the invasion of Okinawa, Valencia was flying combat air patrol expecting a large Japanese attack on his carrier, the USS *Yorktown*. Known as 'Valencia's Flying Circus', the VF-9 Hellcats received a report that at least 25 or so enemy aircraft were heading their way.

The flight of four split: two going in to engage, two to fly top cover. Valencia flamed two Ki-84 'Franks' but the enemy kept on course for the *Yorktown*. Valencia recalled

the combat: "I spotted three other 'Franks' and was distracted by tracer fire which turned out to be from one of our Hellcats. I knocked one out and two others went down to my wingman. Now, the division's total was 11 and my score 4.

"I went for a straggler and shot it down. It was victory No.5 for me and we weren't through yet. Suddenly, a 'Frank' came by me concentrating on shooting down an F6F – I immediately locked its tail and pulled the trigger. My sixth victory saved the life of a Hellcat pilot. By this time, my division had racked up a total of 14 kills."

Low on fuel, Valencia headed back to the *Yorktown*. He rendezvoused with his wingman and circled, hoping to locate the remainder of his division. As he waited, a stray Japanese fighter came too close; Valencia stood on a wing and headed in its direction. As he got in range, he pressed the trigger – nothing happened, his guns were empty.

With 23 confirmed kills to his credit, Eugene Valencia retired and went on to help found the American Fighter Aces Association. He died in late 1972, aged 51. ●



Hellcats and Avengers on board the USS 'Yorktown', late 1943. DICK STARINCHAK



Captain James H Flatley taxiing his Hellcat into position to lead an attack on Marcus Island in August 1943 from the USS 'Cowpens'. TAILHOOK ASSOCIATION

Not shared, not split

Most of David McCampbell's 'kills' happened during his time with Air Group 15. He was a brilliant leader, superb shot and top tactician.

Many Navy pilots did not split or share credits, but when two shared the same victory, the one with fewer 'kills' usually got full credit. According to McCampbell when there was doubt as to whether he or a wingman scored the hit, he usually gave the full credit to the other guy. Having this attitude may have cost him the accolade of becoming the top-scoring US Navy ace of the war.