

Lockheed's Twins in Colour



From the polished but hard working 'aluminum' of the original Lockheed 10, via the highly polished executive schemes of the 12, the British Commonwealth camouflage of the Hudson and Ventura, and to the blues of the US Navy's Patrol Bombers, Contributing Editor **James Kightly** has selected a range of period and some modern images, showcasing the Lockheed twins of the thirties and forties.



In colder climes, a beautiful image of an Alaska Star Airlines Lodestar 'Star Anorage'. [Author's collection]

Owner Doug Hamilton brings his Lockheed 12, VH-HID in at the Jamestown Airshow in South Australia. [Rob Fox]



FAR RIGHT: If you asked to your aircraft sales rep in 1935 about the Lockheed 10, this is the cover of the brochure you'd get. [Author's collection]

RIGHT: A very early 'Look to Lockheed...' advert featuring the latest styles in aircraft - with a Lockheed 12- and clothing. [Author's collection]



The deep blue of a wartime colour image featuring a Lockheed Harpoon of the U.S.Navy. [USN]



The only Lockheed Hudson flying anywhere in the world, Temora Aviation Museum's VH-KOY was restored by Malcolm Long, flying again in 1993. [Rob Fox]

Lockheed 12 VH-ABH 'Silver City' kicks up the dust at an outback Queensland fly-in. [John Freedman]



RIGHT: Lockheed had a major advertising campaign throughout W.W.II to keep their company's name in front of the public. In this great poster we can see (clockwise from top left) the P-38 Lightning, Ventura, forthcoming Constellation, Hudson and Lodestar, all girdling the globe, perhaps a dig at competitor Douglas' logo. [Author's collection]

FAR RIGHT: The rare Lockheed 212 in 'Militaire Luchtvaart van het Koninklijk Nederlands-Indisch Leger' (Military Aviation of the Royal Netherlands East Indies Army) colours. The dozen built all went to this air arm. [Author's collection]



Seen in happier days outside at Point Cook is the RAAF Museum's Ventura, now in store after a forced landing. [Barry Maclean]





FAR LEFT: This Hudson poster, based on a real event where a U Boat was captured, was produced with space for regional overprints (in red, here, for Australia). The poster series were also printed in other languages such as French (for Canada) and Spanish (for Latin America). Note how not just the RAAF get a look in, but the WAAAF and ATC as well. [Author's collection]

LEFT: A rare example of a Spanish poster, here for the Lockheed Vega built PV-1. [Author's collection]



A newly-built PV-1 in the tri-tone U.S.Navy scheme cruises up the California coastline in 1943. [Lockheed]



Three preserved Lockheed Electra Juniors at a Fly-in held by Les Whittlesey held at Chino, Ca. in October 2007. [Frank Mormillo]

LEFT: One of the dangerous roles undertaken by civil aircraft in W.W.II was operating around occupied Europe. Here, Lodestar G-AGIH, used to fly into Sweden from Scotland, is seen in British Overseas Airways Corporation colours, at the Forsvarets Flysamling, museum, Gardermoen, Norway [Paaln]





Lockheed's Lodestar

The standards set by the Boeing 247 and Douglas DC-2 airliners in the mid-1930s led to the major North American aircraft manufacturers rushing to develop a successor that would capture a large share of the massively expanding air transport market. Douglas did it with the DC-3. One of its competitors, the Lockheed Model 18 Lodestar, proved to be a very capable aircraft that would become a commercial success for its manufacturer. **Luigino Calario** went air-to-air with one of the very active survivors of the type.

Developed from the Lockheed Super Electra, the Lodestar inherited its predecessor's excellent performance, which was actually better than the DC-3, and was used extensively by several major airlines. Trans Canada Airlines, for example, preferred the aircraft for all of its routes transiting the Rocky Mountains. The Lodestar's seat-mile cost was, despite the improvements made to the basic Super Electra design, slightly more than the DC-3. It came down, as always, to economics, and many of the North American airlines had already committed to buy the great all-rounder that was the Douglas DC-3.

Considering its performance, and the high demand for transport aircraft at the time, the Lodestar was used by the military as a fast light transport. A range of engine and interior equipment configurations were used and each was given a different designation (C-56, C-57, C-59, or C-60). The Lodestar was also used for parachute training and for towing

The West Houston CAF Lockheed C-60A over Houston Bay during an airshow rehearsal. [All image Luigino Calario]



TOP: Carrying the nose art "Goodtime Gal", this C-60A was built in 1943 and today is based at Hangar B-5, West Houston Airport.

ABOVE : The C-60A in formation with another CAF transport the C-47 "Bluebonnet Belle" of the CAF Highland Lakes Squadron based at Burnet, TX.

BELOW: The Lodestar's the two P&W R-1830 Twin Was engines help give the Lodestar its credible flight performance.

the large Waco CG-4A glider. Many of the C-60 variants were based at South Plain Army Airfield in Lubbock, Texas (the largest glider training base in the United States). The C-60A was the most numerous variant with 325, out of a total of 625, built.

Many of the aircraft were sold into private hands after the war, with large numbers serving in South America with small airlines. Today, the Houston Squadron of the Commemorative Air Force operates one of the few remaining airworthy military Lodestars and regularly displays it at major air shows.

The aircraft was built by Lockheed in Burbank, California, in 1943 and assigned to the USAAF with the serial 42-56005, for use as a general transport on the home front. After the war it was sold, on 6 January 1945, to Skyways International Trading & Transport. It was allotted the registration NC45330. The Lodestar was subsequently sold to Nicaragua and modified to carry passengers by



LEFT: Aubie Pearman, who made the C-60's post restoration flight first flights on 26 August 2011, brings the Lodestar in close over Houston Bay.

BELOW: Some of West Houston CAF members. Second from left Ulf Brynjestad, the aircraft coordinator, John Cotter West Houston CAF's Chief of Ops and C-60 pilot, and Aubie Pearman (tallest)

BOTTOM: The C-60A taxiing on the Ellington tarmac during one of the first official air show appearances of the C-60A.



the national airline Lanica, and given the local registration AN-ADI. In the early fifties the aircraft returned to the U.S. to operate as an executive transport. It performed this task with a number of different corporations including General Dynamics and US Steel. The Lodestar was also used by several minor airlines and companies before being employed, in the early seventies, in atmosphere and weather research. After this interesting role it changed hands several times before, while resident in Alaska in 1992, it was converted to a jump aircraft for skydivers.

In mid-2002 the aircraft was acquired by the Commemorative Air Force with the intent to restore it to fly. It was ferried to West Houston Airport which was home to the then West Houston Squadron of the CAF.





The CAF C-60A is configured as a paratroop transport, complete with jump lights and a static line hook-up as it served during military service.

The restoration was relatively straightforward as the Lodestar was in fairly good condition. Work concentrated on confirming the various systems were in working order and repairing some corrosion found in the wings. However, due to higher priority work, the restoration was put on hold in 2004 and only restarted in April 2010 with Ulf Brynjestadt taking on the role as project coordinator.

After more than a year and around 2,500 hours of work, the Lodestar made its first high speed taxi-tests in June 2011, and made its first flight on 26 August 2011 wearing a typical military livery used by the USAAF during the war. Nicknamed 'Goodtime Gal', the aircraft also sports nose art reminiscent of the time.

John Cotter, a Boeing 787 Dreamliner pilot, is an active member of the Houston Squadron and qualified to display the Lodestar. He is certainly a fan of the Lockheed.

"The L-18 was the last twin-engine transport designed by Lockheed and was designed to compete with the Douglas DC-3. It did not experience the widespread use [of] the DC-3 but was a great airplane. It has Wright 1820 engines, producing 1200HP, allowing a high-speed cruise of greater than 210 knots (389 km/h). We typi-

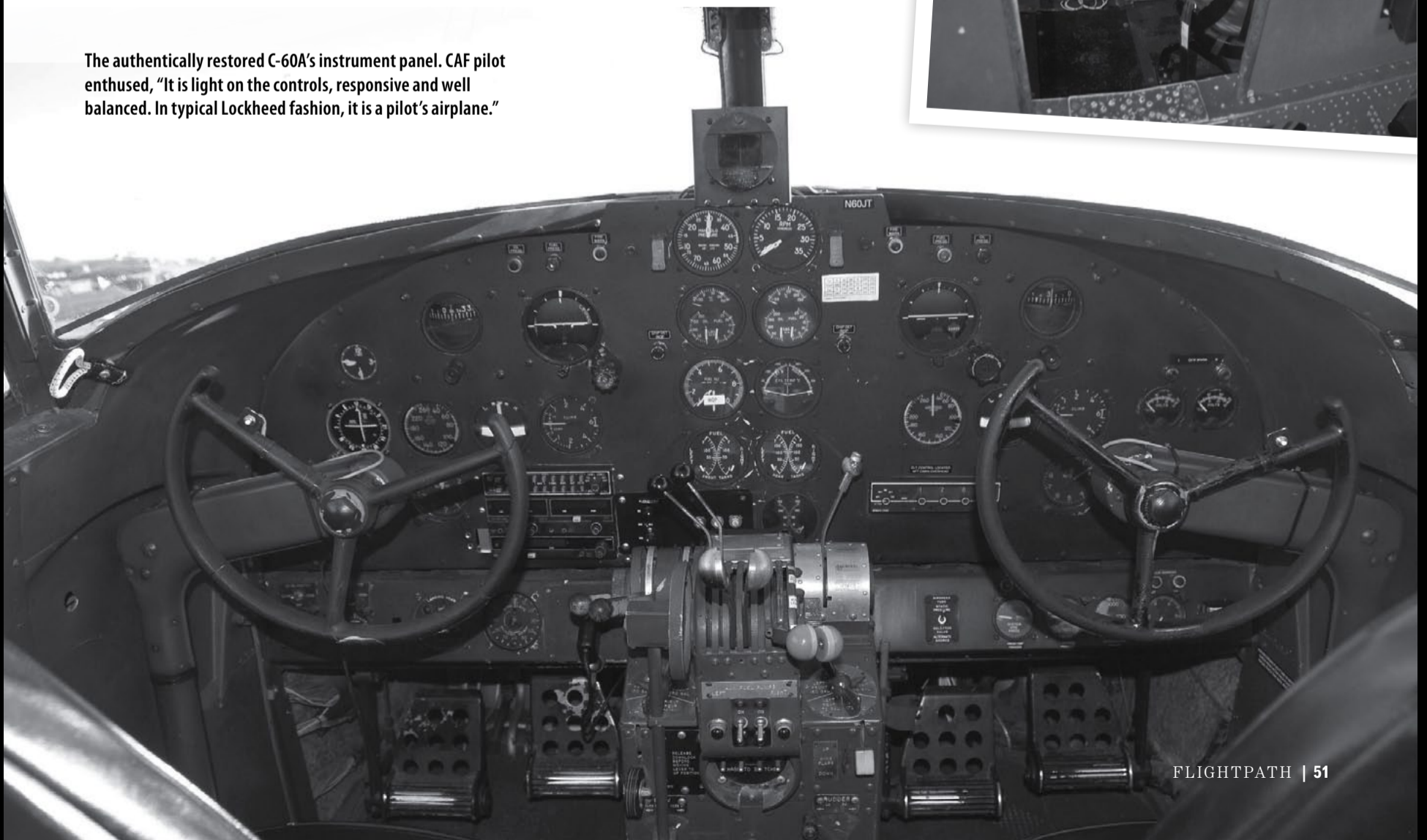
cally cruise our C60 around 160 knots (296 km/h) while using 95 gallons (360 litres) per hour total of 100LL fuel. When flying airshows with the C-47, we normally run about 28 inches of manifold pressure while the DC-3 will be running near climb power (34 inches) for similar airspeeds. So it is very apparent that the C60 can cruise faster on less power than the DC-3 but it is smaller and has a lower payload."

"Though it is capable of a high cruise speed, it is equally capable of landing at very slow speeds. The huge Fowler flaps allow approach speeds as low as 85 knots (157 km/h) with a touch down at 75 knots (139 km/h). Our home airfield is 3,999 feet (1,219 metres) long and is more than suitable for our C60."

"Compared to other aircraft of its era, the Lockheed C60 is a joy to fly. I have flown the B-24 and currently fly the B-17. Both of these large W.W.II bombers are very heavy on the controls and sluggish to respond to aileron inputs. You might say they are truck-like. On the other hand the C60 is like a sports car. It is light on the controls, responsive and well balanced. In typical Lockheed fashion, it is a pilot's airplane."



The authentically restored C-60A's instrument panel. CAF pilot enthused, "It is light on the controls, responsive and well balanced. In typical Lockheed fashion, it is a pilot's airplane."





The Grey Ghosts VMF(N)-531

By Alan C. Carey

The U.S. Marine Corps' First Night Fighter Squadron

The threat of night attacks against Allied forces ashore and at sea by Japanese combat aircraft required the development and deployment of radar-equipped night fighters capable of successfully tracking and engaging enemy aircraft. The Marine Corps Night Fighter Squadron 531 became the first such American unit to be deployed in the Pacific Theatre and claimed twelve enemy aircraft destroyed between November 1943 and May 1944. Japanese military records researched by historian Minoru Kamada, strongly suggest that 531's claims are fairly accurate, with the exception of misidentifying one enemy aircraft on 14 March 1944, and in the confirmation of the last score recorded on 11 May 1944.

Major Frank H. Schwable (later promoted to Lieutenant Colonel) commissioned the service's first dedicated night fighter unit at

Marine Corps Air Station Cherry Point, North Carolina, on 16 November 1942. The Marines selected the Lockheed PV-1 Ventura medium bomber for conversion to a night fighter as it was the only aircraft suitable at the time capable of carrying the large and heavy electronics equipment, although the Navy and Vought Aircraft were running a parallel program to fit the F4U-1 Corsair with such night fighting capability.

Training for 531 was hampered by the lack of trained personnel, shortage of spare parts, radar equipment, while the conversion of the PV-1 to a night fighter required extensive modifications to the aircraft's electrical and oxygen systems. Major Schwable's squadron arrived at Banika in the Russell Islands on 11 September 1943 and began night patrols immediately; however, between 14 September and 27 October, 531's aircraft attempted to

close on seventeen enemy contacts but came up empty primarily due to the inexperience of the ground controllers and enemy aircraft dropping small pieces of aluminium foil (code-named 'window' by the British) to disrupt American radar by creating false radar returns. The first radar-guided kill occurred during the night of 13-14 November when Capt. Duane R. Jenkins conducted a Ground Control Interception (GCI)-vectored kill of a Mitsubishi G4M1 'Betty' bomber belonging to the 702 *Kokutai* based at Vunakanau, Rabaul. Jenkins and his crew were flying Night Combat Air Patrol (NCAP) over Task Force 39, approximately 50 miles (80 kilometres) southwest of Torokina, Bougainville, when GCI vectored him towards a single bogey shadowing the convoy. This time, the air-ground team worked perfectly, with the ground controller providing updated chang-

LEFT: Officers of VMF(N)-531 at MCAS Cherry Point, NC on 12 December 1942 in front of an SNJ training aircraft. L-R are: Capt. Ross Mickey, Capt. Raymond George, Maj. Edward Hodgson, Lt. Col. Frank Schwable, Maj. John Harsberger, Capt. William Kellum, and 1st Lt. Duane Jenkins. Jenkins and his crew would score the squadron's first two aerial victories in the South Pacific. [Emil Buehler Library, NMNA]

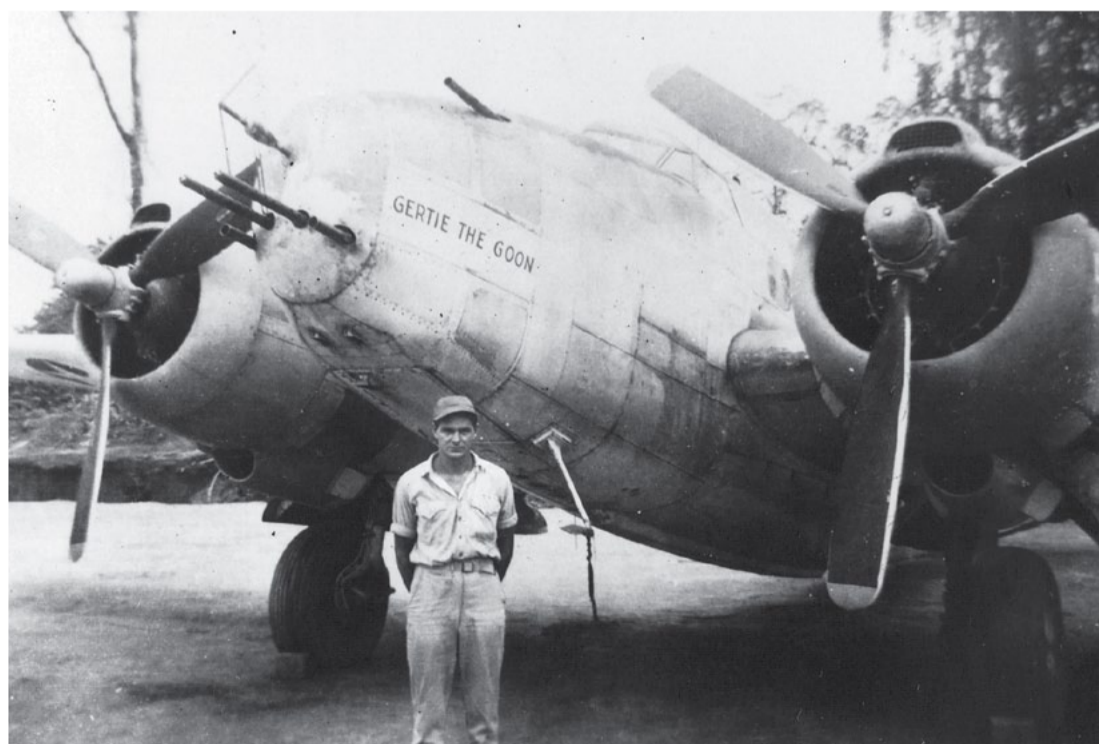
BELOW: The first was the Lockheed PV-1 Ventura modified to carry airborne radar which went into combat in the Pacific with Marine Squadron VMF(N)-531. This early model was camouflaged with Non-Specular Blue Gray upper surfaces and Non-Specular Light Gray lower surfaces. The national insignia was in effect from 20 May 1942 until 29 June 1943. [Author's Collection]



'GERTIE THE GOON' (BuNo 29842) parked at Bougainville during the spring of 1944 was the personal aircraft of the squadron's executive officer Major John D. Harsberger who, with TSgt James S. Kinne and SSgt Walter E. Tiedeman, downed four Japanese aircraft. [National Museum of Naval Aviation Via Thomas E. Doll]

es in the bogey's heading and altitude. Radar Operator (RO) Technical Sergeant Charles H. Stout, monitoring the onboard radar, picked up the contact at a range of a mile-and-a quarter (two kilometres) at the same altitude of 6,000 feet with the night fighter's speed 20 knots (40 km/h) faster than the quarry's 160 knots (300 km/h). Moments later the bogey came into sight and Jenkins recognised it as a Betty. The time was 04:18. The PV-1 closed from behind and from 800 feet, and Jenkins gave the bomber a four-second burst with the nose guns and the enemy aircraft's engine nacelle flamed. The aircraft then went into shallow dive, and Jenkins caught it again with a short burst into the port wing root. He fired a third burst and Sergeant. Thomas J. Glennon in the top turret joined in with a two-second burst into the Betty's fuselage. The Japanese bomber went into a steep dive and exploded upon hitting the water. The entire encounter had taken two minutes.

Jenkins and his crew were lost in action three weeks later on 3 December while providing air cover for friendly transports of TG-31.6 and ships of Destroyer Squadron 23 off Torokina, Bougainville. The PV-1 arrived on station to find the ships under torpedo and bombing attacks by an estimated 15 to 25 aircraft. At 22:11 hours, eyewitnesses saw an aircraft shot down in flames, presumably by the PV-1. A few minutes later GCI followed the night fighter chasing another bogey and watched as the two blips merged. Communication with the PV-1 was lost, presumably either the enemy plane shot down Jenkins' aircraft or the two collided. (Two G4Ms of the 751 Ku, part of a three-plane element, went missing that night.)



Unidentified member of VMF(N)-531 standing beside GERTIE THE GOON displaying the modified nose housing four .50 machine guns and above them the AV IV radar antenna. [National Museum of Naval Aviation via Thomas E. Doll]

RIGHT: Eight Ball (BuNo 29811) parked at Bougainville at the end of January 1944 apparently was flown by Captain Frank Abegg Jr., with radar operator Sgt Paul W. Eagen and gunner TSgt Merritt J. La Point. [Thomas E. Doll]

BELOW: A crewman pushing one of the props on PV-1 'Eight Ball' (BuNo 29811) flown on Vella Lavella in 1944. On the nose is a memorial tribute to Capt. Duane R. Jenkins, TSgt. Charles H. Stout, and Sgt. Thomas J. Glennon who were killed in action on 3 December 1943.

[Eugene S. "Mule" Holmberg via Tailhook Association]



“ The night fighter’s radar operator, Technical Sergeant James S. Kinne Jr., spotted a bogey on his scope at the same time and began giving his pilots a course for interception. ”

A third Japanese plane fell to the guns of a 531 Ventura on 6 December at approximately 04:00 hours five miles west of Mutupina Point. Major Harshberger, second in command, lifted-off his aircraft *Gertie The Goon* (named after a character in the Popeye comic strip) at 21:20 and began orbiting over Empress August Bay. The radar station at Torokina Point alerted the PV-1 at 00:35 of a bogey closing towards him from the west. The night fighter’s radar operator, Technical Sergeant James S. Kinne Jr., spotted a bogey on his scope at the same time and began giving his pilots a course for interception. Harshberger closed too fast, overshooting the target, which took evasive action by making a sharp turn to starboard

which caused it to momentarily disappear from Kinne’s scope. The radar operator quickly told the pilot to make a sharp 180-degree turn and the blip reappeared. Harshberger slowed to 130 knots (240km/h), closed to within 2,500 feet of the contact and identified it silhouetted in the moonlight as an Aichi E13A ‘Jake’. At a distance of 800 feet (250 metres) he, and turret gunner Staff Sergeant Walter E. Tiedeman, fired bursts from slightly below the enemy aircraft. Immediately the Jake fell away to the right in flames and then crashed into the water. (This was possibly an E13A from the 938 Ku that failed to return after departing Buka at 22:00 hours to scout south of Bougainville.)

Lieutenant Colonel Schwable scored the squadron’s fourth kill during the evening of 12 January 1944, taking off from North Piva airfield at 20:05 hours in PV-1 named *Chloe* with Bureau Number 29854. The patrol over Empress Augusta Bay was frustrating at first with the PV-1 losing two unidentified bogies in a cloudbank after RO Staff Sergeant Rob-

ert I. Ward established contact. Ground control alerted Schwable at 21:56 to a second bogey located 40 miles (65 kilometres) from Torokina, heading northwest, approximately 12 miles (20 kilometres) from the Ventura’s location. Schwable made a 180-degree turn towards the bogey at the direction of ground control and headed for the interception. The cooperation between a well-trained ground controller, airborne radar operator, and pilot worked extremely well this time. Two minutes after initial contact the bogey was ten miles (16 kilometres) from the night fighter and the controller gave Schwable another course change to port. A minute later the PV-1 closed the distance to two miles (four kilometres) with the target moving from port to starboard; the controller then gave another course correction to starboard. Five minutes into the chase, Ward picked up the bogey on his scope.

Fletcher sighted a Nakajima B5N Kate-some 3,000 feet away. Closing to 500 feet (150 metres) Schwable and Fletcher fired at it simultaneously, and immediately the target exploded and burst into flames. In order



to avoid the wreckage, the pilot swung hard left and even from the enclosed space of the night fighter, he felt the scorching heat from the burning plane as the Ventura's right wing barely cleared the flaming debris. The Kate exploded again just before it hit the water. (It has since been identified as tail code 2/46D of the 42nd Shotai from the carrier *Zuikaku*.)

On 5 February Schwable and his crew aboard PV-1 *Chloe* was vectored by an Army controller at onto a bogey cruising at an altitude of 15,000 feet. The night fighter above Empress Augusta Bay at 10,000 feet had to climb another 5,000 feet to meet the target; the rated altitude limit of 531's aircraft due to the persistent problems with the oxygen system was 15,000 feet. The Army ground controller on duty continued to feed accurate information to Schwable and his radar operator as the night fighter continued to close in on the unsuspecting Japanese aircraft. Staff Sergeant Ward was able to make radar contact at a range of two miles and the keen eyes of Sergeant Fletcher in the top turret picked up the bogey flying above them 7,000 feet (two kilometres) away and informed the pilot. Schwable picked it up visually but he had to take his attention away from the bogey and focus on the instrument panel to watch the night fighter's airspeed and rate of climb.

It wasn't too difficult to maintain eye contact with the target in the moonlight, and the pilot told Sgt. Ward to leave his scope and watch the bogey through the cockpit windscreen. When the distance closed to 3,000 and Schwable was comfortable with the aircraft's speed and rate of climb, Ward went back to his scope and began reading off the range. The PV-1 closed to within 700 feet before Schwable could identify it as a G4M Betty (one of eight such aircraft of the 751 Ku that departed Rabual at different

hours to search Dampier Straight and bomb Mono Island). The night fighter was slightly below and behind the bomber when Colonel Schwable opened fire with the four nose-mounted .50-calibre guns and Sergeant Fletcher followed suit in the top turret, hitting the bomber's fuselage. The bomber turned to starboard in an attempt to escape, only to be hit by another burst from Fletcher's guns. A third burst sent the Betty into a near vertical spin before crashed with a tremendous explosion as it hit the water.

Four days later the squadron suffered its third loss of a plane and crew when PV-1 *Double Trouble* (BuNo 33253) piloted by 1st Lieutenant Clifford W. Watson took off at 18:15 hours in heavy rain from Barakoma, Vella Lavella for a staging hop to Torokina. Just as the wheels left the ground at the strip's south end, the plane crashed into the water and burst into flames killing Watson and Sergeants Jack H. Shirk and George E. Brogna; a crash boat sent to the scene failed to recover the crew's remains. Four-and-a-half hours after the loss of Watson's plane, Lieutenant Colonel Harshberger lifted *Gertie The Goon* off the same airstrip for another patrol over Empress Augusta Bay.

On 10 February, nearly two hours into a patrol, Torokina radar station directed Lieutenant Colonel Harshberger to climb to 13,000 feet and vectored him towards a bogey flying at 15,000 feet 25 miles (40 kilometres) away. Sixteen minutes later, at 03:45 hours, radar operator Technical Sergeant Kinne made contact with a bogey at a range of two miles. *Gertie The Goon* began climbing to 15,000 feet to match the bogie's altitude. Closing to within 4,000 feet (1,200 metres) Technical Sergeant Kinne realised they were tracking two enemy aircraft when the large blip split in half and turret gunner Technical Sergeant Tiedeman confirmed it when he identified the two bogies as G4M



ABOVE: An unidentified member of VMF(N)-531 standing beside CHLOE which bares three aerial victory markings. A white musical scale is painted under the black lettering and note painted over windows.

[Jeff Millstein via Thomas E. Doll]

TOP: Unlike the Air Force, the Navy and Marine Corps began their night fighter program with existing aircraft in the inventory. First was the Lockheed PV-1 Ventura modified to carry airborne radar which went into combat in the Pacific with Marine Squadron VMF(N)-531. Lockheed PV-1 Ventura (BuNo 29854) CHLOE on Vella Lavella in the Solomon Islands on 13 January 1944. This aircraft with tri-color paint scheme and black aircraft number 53 on the cowling was assigned to Lt. Col. Frank H. Schwable. [Tailhook Association]



ABOVE: Flight line of VMF(N)-531 PV-1s parked alongside a coral runway at Vella Lavella in April of 1944. Each of the aircraft display the standard three-colour scheme used at the time. [Fred Price/'Mule' Holmberg via Thomas E. Doll]

LEFT: First Lieutenant Marvin Notestine (right) and his radar operator Sgt Ed Benintende stand beside 'Little Stud', squadron number white 55 (BuNo 33247). The other crewmen were Sgt Walter Kinn and TSgt Arthur W. Guant. Notestine and crew scored - 531's final victory in May 1944. [Ed Benintende via Thomas E. Doll]



“ Tiedeman swung his turret back in the direction of the bomber to the left, and fired three bursts into it ”

took on the appearance of a brightly lit sieve caused by the holes punched into it from the Ventura's guns. The stricken bomber continued to maintain its course and altitude for a few more seconds before going into a steep nosedive and then crashing into the water. With his fuel nearly gone, and his radio knocked out, Harshberger turned for home and landed safely with only 70 gallons (260 litres) of fuel left.

At Piva on the night of 15 February, Lieutenant Colonel Schwable went on NCAP to cover the amphibious force assigned for the invasion of Green Islands. The primary target for the invasion force, composed of Australian and New Zealand troops, was Nissan, an eight-mile long atoll with a Japanese-built airstrip. The Allies deemed Nissan a worthwhile acquisition due to its strategic location from the major Japanese bases of Kavieng, Rabaul, and Truk.

Fighter director Lieutenant Reginald Dupuy, who was operating from an American destroyer, coached the PV-1 towards a bogey in the process of dropping flares in an apparent effort to locate the invasion force. The bogey's constant changing of direction and altitude made it difficult for Dupuy to get an accurate reading to guide Schwable, so the PV-1's crew had to rely on non-specific information to guide them to the enemy plane. The fighter director was able to obtain a general altitude reading of 7,000 feet on the bogey, with a location of ten miles west of Nissan. Schwable took Chloe up for an interception and, based on Dupuy's information, Sgt. Ward was able to make con-

tact on his scope. Schwable saw the plane when the Ventura closed to 2,000 feet (600 metres) and identified it as an E13A 'Jake' floatplane assigned to the 958 Ku on a scouting mission to locate American transport ships. The night fighter's nose and top turret guns opened fire hitting the Jake's engine compartment causing it to lose air-speed. It then went into a lazy left hand diving turn. The descending floatplane rapidly caught fire and the blazing mass tumbled into the sea.

During the early morning hours of 17 February, the squadron's controller Captain Owen M. Hines located a bogey on a reconnaissance mission of Nissan Island and vectored Schwable in for the kill. Staff Sergeant Ward acquired the target on his screen at a range of 5,000 feet (1,500 metres) and the enemy aircraft was spotted visually as a Jake at 2,000 feet (600 metres). Closing to within 300 feet (100 metres) Schwable fired his nose guns followed by Sergeant Fletcher's top turret guns. The Jake literally disintegrated under the weight of fire, its wings folding up. It was the fourth and last victory credited to Lieutenant Colonel Schwable and his crew, making them the leading night fighter team in the Pacific at that time. The Colonel resumed the patrol until being relieved by 1st Lieutenant Jack M. Plunkett and his crew who went on to score the squadron's second aerial victory of the night.

Vectored by Captain Hines to nearly the same location, ten miles (16 kilometres) west of Nissan, as Lieutenant Colonel Schwable's interception, Lieutenant Plunkett's radar operator Staff Sergeant Floyd M. Pul-

Betty bombers flying in formation (the aircraft belonged to the 751 Ku on a mission to bomb American positions on Mono Island).

As Harshberger closed to within 2000 feet, both Japanese aircraft began firing their 20 mm tail cannon. Harshberger targeted the Betty to the left and opened fire with his six nose guns hitting the bomber's belly. Tiedeman fired a short burst at the same Betty and, thinking his pilot had it under control, swung his guns around and began firing at the enemy plane on the right. At this point the PV-1 was itself hit in the nose, putting five of the six guns out of commission. However, Harshberger continued to fire with the remaining weapon. While the Ventura pilot dealt with one Betty, Tiedeman fired a burst into the tail gun position of the G4M on the right, which then peeled off out of range, leaving his comrade to fend for himself. Tiedeman swung his turret back in the direction of the bomber to the left, and fired three bursts into it. The bomber began to burn internally, the intensity of the glow rapidly increasing, and the Betty's fuselage



ham picked up the bogey dead ahead three-quarters of a mile away and at an altitude of 4,000 feet. Plunkett put the Ventura into a dive from its altitude of 5,000 feet, picking up airspeed as he did so, which would potentially cause the plane to overshoot the target. Pulham told the pilot to slow down and Plunkett put the plane into slowing "S" turns, dropped flaps and reduced throttle, causing airspeed to fall from 160 to 90 knots (300/160km/h). Plunkett saw the Jake from 400 feet (120 metres) away and fired several bursts. The mortally wounded floatplane nosed over into a vertical dive and hit the water exploding on impact. Japanese records show two aircraft losses in the general area – a Jake from the 958 Ku, location of loss unknown, and a Betty from the 751 Ku lost while heading towards Green Island.

Ground control vectored Lieutenant Colonel Harshberger on 19 February onto a Jake, with Tech Sgt. Kinne's expertise with radar guiding the pilot to within 300 feet (90 metres) of the enemy floatplane, whereupon Harshberger unleashed the full power of the Ventura's six nose guns. The .50-caliber machine gun rounds tore into the floatplane's fuselage, causing it to burst into flames and drop away in a steep vertical dive into the water (one from the 958 Ku went missing on this date while on a scouting mission). Landing back at Piva Airfield, Bougainville, Harshberger received the news that the squadron had lost its fourth plane and crew. Lost on a strafing mission in PV-1 33089 were 1st Lieutenant Thaddeus M. Banks and Staff Sergeants Burnell C. Bowers and Gilbert Jones.

Japanese air power in the Solomon Islands, by the end of February 1944, had been reduced to a handful of aircraft primarily based at Rabaul with 531 only encountering a pair of enemy aircraft between 19 February and 11 May 1944. Lieutenant Colonel Harshberger's team on 14 March engaged one of the few surviving Japanese aircraft in the area; their fourth which tied them with Lieutenant Colonel Schwable's crew. Forty-five minutes after take-off, Technical Sergeant Kinne established contact at a range of 8,000 feet over Empress Augusta Bay. Closing to 1,500 feet (500 metres) the pilot identified the aircraft as an E16A1 Paul – which would have been the first such sighting of this new Aichi floatplane. Firing his guns from 300 feet (90 metres), Harshberger quickly sent the aircraft down in flames. However, the crew misidentified the enemy aircraft, as the E16A1 did not operate in the South Western Pacific Area, and the only recorded missing Japanese aircraft for that day was a Jake from the 958Ku.

On 21 March, the squadron lost two aircraft and their crews when PV-1 BuNo 33079 and another named *Gramps* (BuNo 29870) collided in mid-air. 1st Lieutenant Marvin E. Notestine and his crew had taken off at 05:20 and patrolled until 06:30 hours, when the PV-1 headed for home. *Gramps* flown by 2nd Lieutenant Marion M. Pierce and Lieutenant Wilber E. Birdsall in 33079 joined up with Notestine and the trio flew in formation towards Vella Lavella. Twenty minutes later Lt Pierce's wing clipped Lieutenant Birdsall's, causing Pierce's Ventura to burst into flames and Birdsall's PV-1 to enter an unrecovera-

ABOVE: VMF(N)-531 PV-1s parked alongside Vella Lavella's coral runway in April, 1944.

[Fred Price/'Mule' Holmberg via Thomas E. Doll]

ble spin. Notestine barely avoided colliding with *Gramps* as both PV-1s plunged into the sea, killing all on board the two aircraft.

The squadron recorded its final successful aerial victory two months later on 11 May when 1st Lieutenant Notestine and his crew (Sergeant E H Benintende and Corporal W M Kinn) claimed an interception of a Jake while over the St. George Channel. Notestine, according to the after action report, saw the floatplane pass in the opposite direction some 200 feet below him, so he turned his PV-1 around and chased the Jake into the enemy's naval base at Rabaul's Simpson Harbour. The Jake was preparing to land when Notestine fired a burst at a range of 400 feet (120 metres) causing the floatplane to burst into flames and plummet into the harbour. Thus, the squadron recorded the unit's twelfth and final victory.

In all, two crews scored eight of the squadron's twelve victories—those of Lieutenant Colonel Schwable and his executive officer Major Harshberger. *At the conclusion of 531's tour, Commander, Aircraft, Solomon Islands Brigadier General Earl W. Barnes praised the unit's record, noting that the dramatic reduction in enemy night air activity, "...has been largely due to the successful efforts of VMF(N)-531, operating with antiquated equipment and an abundance of personal effort and ability of all members of the organization."*