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During a series of strike missions in June 1953, more than 68 Panther jets from VMFs -115 and -311 destroyed or damaged more than 230 enemy buildings using napalm and incendiary munitions.

and a time on station, coordinated with a flare plane which would sometimes be a wing R4D, at others another Tigercat or Corsair, or at still others an Air Force aircraft. A mission plan would be set up and briefed for all participants, and all intelligence available would be covered. At the agreed upon time, the flare plane would illuminate and the pilot of the attack plane would be in such a position that he could hopefully make maximum use of the light in delivering his ordnance, usually fragmentation bombs, napalm, and strafing. Here, as elsewhere, as the stabilized

phase of the war continued, the Communists improved their use of organized light flak. Many planes were holed with hand-held weapons, indicating a policy of massed fires of all weapons when under air attack. In addition, a steadily increasing number of mobile twin 40mm mounts appeared on the roads, which added weight to the flak problem. The gradual improvement was effective to the point that in 1952, the F7F was taken off road recce because its twin-engine configuration was correlated with excessive losses without the protection of

one big engine directly forward of the cockpit. The Corsair continued to fly road recce, but the Tigercat was used primarily for air-to-air intercepts at night from mid-1952. The F3D Skyknight, when it arrived in -513, was used for deep air-to-air patrolling and for night escort of B-29s, with the F7F for closer range patrols.

Close air support missions were of two types. The first, used the most, appeared in the frag as an assignment of a certain number of aircraft to report to a specific control point at a specific time, for use by that unit as required or speci-

Night MiG Killers

A Marine squadron that had both an unusual complement of aircraft and mission assignments was VMF(N)-513, the "Flying Nightmares." The squadron was on its way to the Pacific war zone when the Japanese surrendered, but it was an early arrival in Korea, operating Grumman's graceful twin-engine F7F Tigercat. Too late to see action in the Pacific, the F7F had languished, and it was not until the war in Korea that it was able to prove its worth.

Actually, a sister squadron, VMF(N)-542 had taken the first Tigercats over—by ship—and flew some of the first land-based Marine missions of the war, relinquishing the Grummans to -513 when it relieved -542.

The Flying Nightmares soon found their specialty in night interdiction, flying against Communist road supply traffic, much as their successors would do more than 10 years later and farther to the south in Vietnam, this time flying F-4 Phantoms.

Operating from several Air Force "K" fields, -513 quickly gained two other aircraft types—the F4U Corsair and the twin-jet F3D Skyknight. Thus, the squadron flew three frontline warplanes for the three years of its rotating assignment to the war zone.

The squadron accounted for hundreds of enemy vehicles and rolling stock during dangerous, sometimes fatal, interdiction strikes. Four Nightmare aviators were shot down and interned as prisoners of war.

Occasionally, Air Force C-47 flareships would illuminate strips of road for the low-flying Corsair pilots, a tricky business, but the high-intensity flares allowed the Marines to get down to within 200 to 500 feet of their targets.

Nightmare aviator First Lieutenant Harold E. Roland recounted how he prepared for a night interdiction flight in his Corsair:

As soon as I was strapped in, I liked to put on my mask, select 100 percent oxygen and take a few deep breaths. It seemed to clear the vision. At the end of 4 1/2 hours at low altitude, 100 percent oxygen could suck the juices from your body, but the improved night vision was well worth it.

We always took off away from the low mountains to the north. Turning slowly back over them, my F4U-5N labored under the napalm, belly tank, and

eight loaded wing stations. I usually leveled off at 6,000 feet or 7,000 feet, using 1,650 rpm, trying to conserve fuel, cruising slowly at about 160 indicated.

The F4U pilots were expected to remain on station, within a quick call to attack another column of enemy trucks. Individual pilots would relieve another squadron mate as he exhausted his ordnance and ammunition.

VMF(N)-513 was also unique in that it scored aerial kills with all three types of the aircraft it operated. The Corsairs shot down one Yakovlev Yak-9 and one Polikarpov PO-2, while the F7Fs accounted for two PO-2s. The jet-powered F3Ds, black and sinister, with red markings, destroyed four MiG-15s, two PO-2s, and one other Communist jet fighter identified as a Yak-15, but sometimes as a later Yak-17.

Today, the squadron flies the AV-8B Harrier II, and although based at Marine Corps Air Station Yuma, Arizona, it is usually forward deployed in Japan. A detachment of VMA-513 Harriers flew combat operations during the 1991 Persian Gulf War.

Returning on the night he shot down a MiG-15, squadron commander LtCol Robert F. Conley greets SSgt Walter R. Connor. There was a second MiG, which was listed as a probable, hence SSgt Connor's two-fingered gesture.

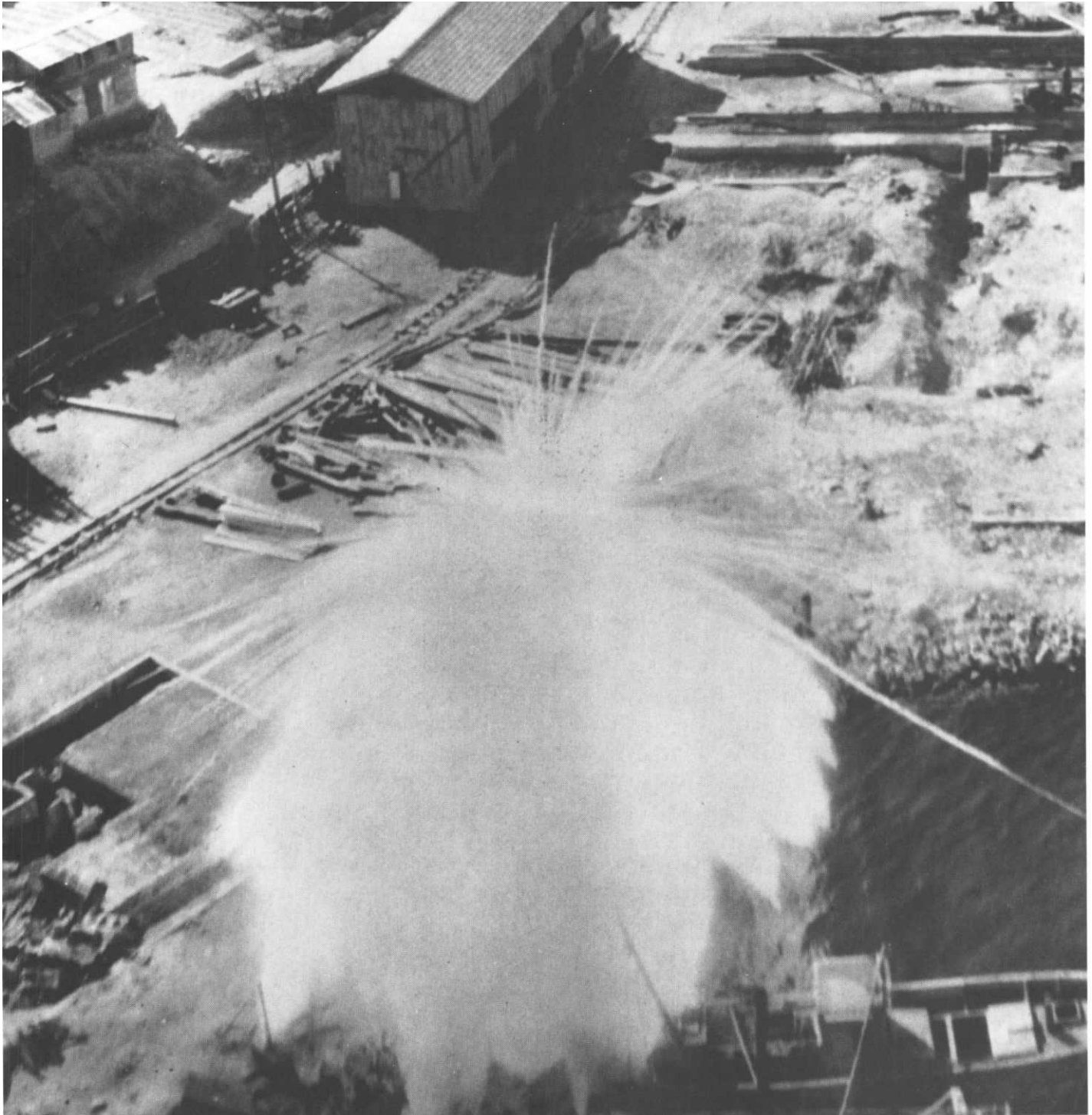
Courtesy of Cdr Peter B. Mersky, USNR (Ret)



fied Applicable intelligence and coordinating information would be included most of the time, and ordnance would either be specified or assigned as a standard load. Depending on the target, if one was specified in the frag, flights of

this type were usually of four aircraft but could often be as many as eight or twelve. The second type of close air support mission was known as strip alert. This concept was adapted usually to those fighter fields which were reasonably

close to the main line of resistance, making it possible for the slower prop aircraft so assigned to reach any sector of the front from which a close support request was received, in minimum time. It was also used from fields farther back,



National Archives Photo (USN) 80-G-429631

Corsairs of Marine Fighter Squadron 312, based on the light carrier Bataan (CVL 29), carry out a raid against several small North Korean boats suspected of being used to lay mines along the Korean coastline.

primarily with jet aircraft, in order to conserve their fuel so that they could remain on station longer, time to reach any sector of the front not being as much of a factor as with prop aircraft. Ordnance loads for strip alert close air support could be specified or standard.

Intelligence matters and coordinating data would usually be given while the aircraft were enroute. Strip alert aircraft were without exception under the "scramble" control of Joint Operations Center.

The same increasing antiaircraft capabilities of the Communists

were found along the main line of resistance as elsewhere. In fact, stabilized warfare brought some weird and different tactics into play, which were somewhat reminiscent of the "Pistol Pete" days at Guadalcanal. Heavy antiaircraft artillery guns were sited close to



Department of Defense Photo (USMC) A168084

An entrenched Marine peers out over the lip of his bunker to observe an air strike against equally entrenched Communist soldiers on the western front in Korea.

the main line of resistance just out of friendly artillery range, and 37 and 40mm twins were a commonly encountered near the frontlines. Once the close air support flight checked in with the Tactical Air Control Party, the usual response was for the controller to bring the flight leader "on target" by having him make coached dummy runs.

When he had the target clearly spotted, he would mark it with a rocket or other weapon on another run, having alerted the orbiting flight to watch his mark. The flight would then make individual runs, in column and well spaced, invariably down the same flight path. While this was essential for accurate target identification, the whole process gradually told the enemy exactly who or what the target was, so that by the second or third run down the same slot, every enemy weapon not in the actual target was zeroed in on the next dive. The heavy antiaircraft artillery and automatic antiaircraft fire complicated the process because the flight, orbiting at 10,000 feet or so, now had other

things to consider while watching the flight leader's dummy run and mark. In close air support, there is usually no way to change the direction of the actual attack run

without subjecting friendly troops to inordinate danger of "shorts" or "overs."

The net effect stimulated more time on target coordinating tactics with the artillery, and also put more emphasis on the detailed briefing given by the forward air controller by radio to the flight. This measure served to reduce the number of dummy runs and marking runs required, while coordination with the artillery put airbursts into the area at precisely the right time to cut down on the massing of enemy weapons on each succeeding dive. These measures were effective counters to the increased antiaircraft capability of the enemy, without the sacrifice of any effectiveness in close air support delivery.

To attempt to fill the lack of Tactical Air Control Parties in the Army and other United Nations divisions, the Fifth Air Force used the North American T-6 training

A bird's-eye-view of Battery B, 1st 90mm Antiaircraft Artillery Gun Battalion's heavily sandbagged position north of Pusan. While the battalion's two 90mm batteries were centered on Pusan, its .50-caliber automatic weapons battery was stationed at K-3 (Pohang), the home base of MAG-33.

1st MAW Historical Diary Photo Supplement, Jul53





Department of Defense Photo (USN) 443503

Among the targets hit by Marine aircraft were the generating stations of hydroelectric plants along the Yalu River, which provided power to Communist-controlled manufacturing centers. The resultant blackout of the surrounding areas halted production of supplies needed by enemy forces.

A Sikorsky HRS-1 helicopter picks up several Marines from a precarious frontline position. The helicopters of Marine Helicopter Transport Squadron 161 revolutionized frontline

operations, bringing men and equipment into the battle zone and evacuating the wounded in minutes.

National Archives Photo (USMC) 127-N-A159962





Department of Defense Photo (USMC) A158624

Developed between 1946 and 1950, the MPQ-14 radar-controlled bombing equipment was employed by Marine Air Support Radar Team 1 to control night fighter sorties flown by day attack aircraft, achieving Marine aviation's primary goal of providing real 24-hour close air support, regardless of weather conditions.

usually be the subject of conferences at Joint Operations Center, to which the wing commanders (including the commanding officers of the Marine aircraft groups) would be summoned. When a non-scheduled wing commanders conference was called, it was a signal that a big one was in the offing. Examples of this type of targeting included the hydroelectric plant complex, long restricted and finally released in June 1952; intelligence indications of a high-level Communist conference in Pyongyang; or an important installation on the Yalu, just across from the MiG fields in Manchuria. These missions broke the routine of stabilized warfare and gave all units a chance to see what massing their aircraft could achieve—it was a good break from the usual flight-of-four routine.

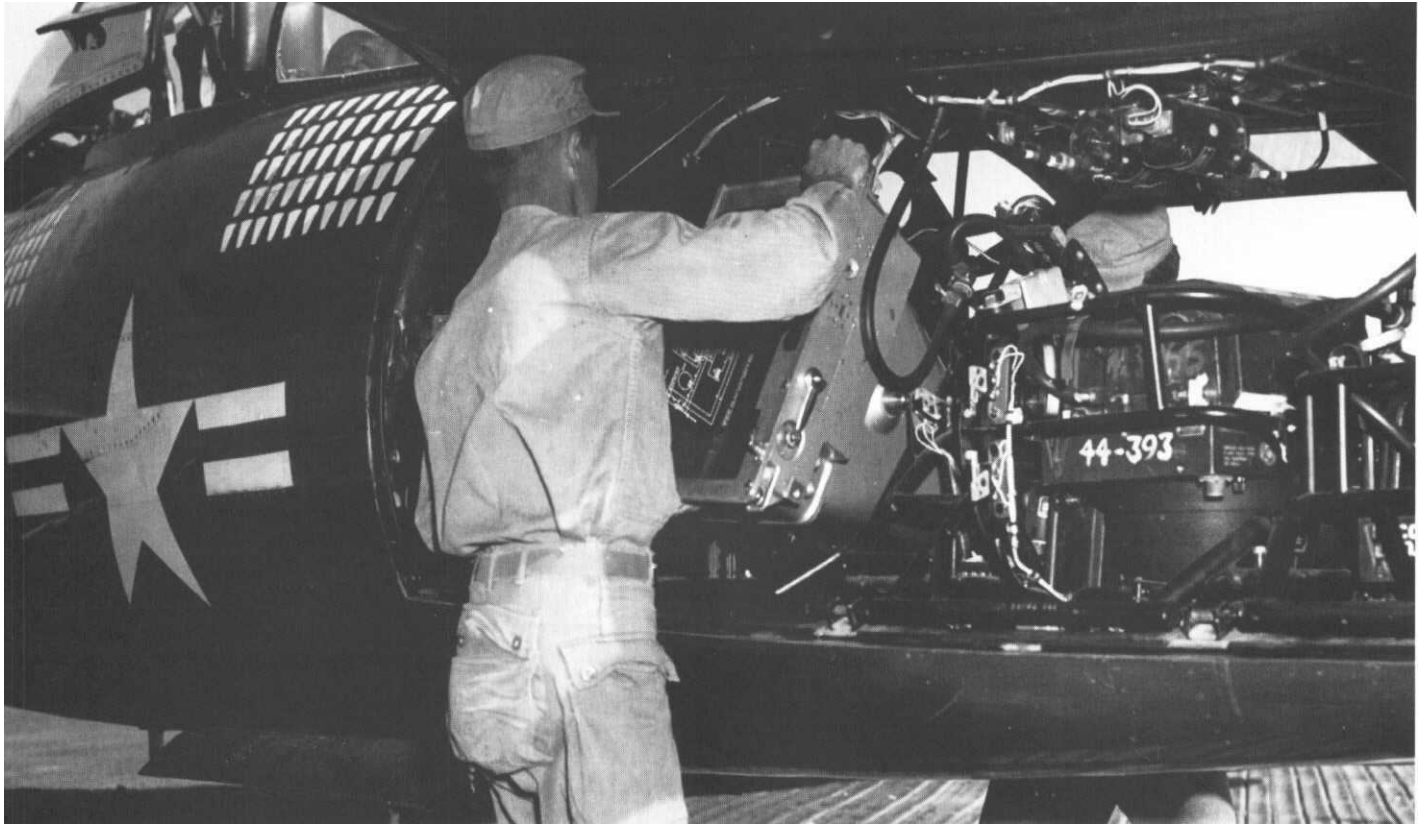
While VMO-6 continued its support of the division through 1951-1953 with its OYs, OEs, and

HO3Ss, the big news in helicopters was the arrival of Marine Transport Helicopter Squadron 161 on 31 August 1951. Commanded by Lieutenant Colonel George W. Herring, the first transport helicopter squadron was attached to the division and administratively supported by the wing in the pattern of VMO-6. Just two weeks later, the squadron executed the first resupply and casualty evacuation lift in just 2.5 hours, moving 19,000 pounds of cargo seven miles to the engaged 2d Battalion, 1st Marines, and evacuating 74 casualties. Called Operation Windmill, it was the first in a long and growing list of Marine Corps combat lifts. HMR-161 set standards on helicopter operations with troops, which are still in active use. The squadron was a leader in night and marginal weather operations, and pioneered many different movements of field equipment in combat for the divi-

sion, quick tactical displacements which were previously impossible. A typical example was the pre-planned emplacement of rocket launchers, which after a ripple discharge attracted immediate counterbattery fire. Lifting the launchers in by “chopper,” and then immediately lifting them to another planned site after firing avoided an enemy response.

Another piece of Marine aviation equipment that was moved into the 1st Marine Division area early in 1951 was a radar bombing system that could direct aircraft to their proper release points at night or in bad weather. It was scaled down from an Air Force version mounted in large vans that was unsuitable for forward battlefield terrain, to a mobile configuration that could be used close to the frontlines. Designated the MPQ-14, the objective of the design was to provide close air support around-the-clock, regardless of the weather. While this ambitious goal was not attained, nevertheless the use of the MPQ-14 radar in Korea was an unqualified success in that it kept an “almost close” capability over the frontlines under conditions that previously had closed the door to air support. MPQ-14 air support was never as close and as positive as the close air support, but it was useful and continued to fill that type of need many years after Korea.

In practice, the MPQ controller would vector the aircraft to the release point and at the proper spot, would direct release by radio, and in later refinements, automatically. The aircraft would be in horizontal flight, and in effect it turned day fighters and day attack aircraft into all-weather horizontal bombers, without any major modification to the aircraft, ordnance, and communications systems. The work that was done



VMJ-1 Historical Diary Photo Supplement, Oct52

Crewmen load reconnaissance cameras on board one of Marine Photographic Squadron 1's MacDonnell F2H-2P Banshees. The squadron's wartime output of more than

793,000 feet of processed prints was equal to a continuous photographic strip six-and-one-half times around the earth at the equator.

Maj Marion B. Bowers, VMJ-1's executive officer, prepares to "light-off" his 550-mph F2H-2P twin-jet Banshee for another unarmed but escorted mission deep into North Korea to

photograph enemy positions, airfields, powers plants, and other potential targets.

VMJ-1 Historical Diary Photo Supplement, Oct52



Who Were the Guys in the MiGs?

For decades, the public perception was the men in the cockpits on the other side were North Korean and Communist Chinese. While there were certainly pilots from these countries flying against allied aircraft, recent disclosures after the collapse of the Soviet Union in 1991 and subsequent release of previously classified files, point to a complete wing of MiG-15s flown exclusively by “volunteered” Soviet aviators, many of whom had considerable combat experience in World War II. Several had sizeable kill scores against the Germans. Indeed, the leader of the wing, although he apparently did not actually fly MiGs in Korean combat, was Colonel, later Air Marshall, Ivan N. Kozhedub, with 62 kills on the Eastern Front, the top-scoring Allied ace of World War II.

The Soviets went to great lengths to disguise the true identities of their MiG drivers. They dressed the much larger Soviet aviators in Chinese flight suits, complete with red-topped boots, and tried (somewhat unsuccessfully) to teach them flying phrases in Chinese to use on the radio. But they could not hide the rapid-fire Russian American monitors and pilots heard once a major engagement had begun. The American Sabre and Panther pilots always suspected that the “honchos,” the leaders of the so-called “bandit trains” that launched from the other side of the Yalu River, were actually Soviets.

While the MiG-15 was a match for the American F-86 Sabre jets, which several Marine Corps aviators flew during exchange tours with the Air Force, its pilots later described their cockpits as rather cramped with much less visibility compared to the Sabre. They flew without G-suits or hard helmets unlike their opposite numbers in the F-86s. MiG-15 pilots used the more traditional leather helmets and goggles—a kit used through the 1970s by North Vietnamese MiG-17 pilots.

The MiG’s ejection seat required activating only one handle, whereas the Sabre pilot had to raise both arms of his seat to eject. While the Soviet arrangement might



Yefim Gordon Archives

Soviet volunteer pilots inspect one of their MiG-15s in Korea. The MiG’s small size shows up well, as does the bifurcated nose intake.

be advantageous if the pilot was hurt in one arm, it could also place him badly out of proper position when ejecting, and could result in major back injuries.

Korean service was hard, and decidedly inglorious for the Soviet crews, who remained largely anonymous for more than 40 years. Yet, it would seem that the top-scoring jet-mounted ace in the world is a Russian, Colonel Yevgeni Pepelyaev with 23 kills over United States Air Force F-86s and F-84 Thunderjets in Korea. He is closely followed by Captain Nikolai Sutyagin with 21 scores. The only other jet aces who approached these scores are two Israelis, with 17 and 15 kills, and American Air Force Captain Joseph “Mac” McConnell with 16 kills in F-86s. When McConnell was ordered home in May 1953, Marine Corps ace Major John F. Bolt, Jr., succeeded him as commander of Dog Flight, 39th Squadron, 51st Fighter Interceptor Wing.

with the MPQ-14 in Korea established confidence in its use and set procedures in its employment, which are still standard practice.

In the spring of 1952, MAG-33 acquired a new and special squadron, VMJ-1. A photo reconnaissance unit, the squadron was equipped with 10 McDonnell F2H-2P Banshees and the latest Navy-Marine camera configuration that made the aircraft by far the most

efficient photo reconnaissance system in the Fifth Air Force. Not only were the side-looking and vertical cameras superior to anything else around, but also the squadron was equipped with its own organic field film processing equipment. The design of the Banshee photo equipment was the work of the photographic development section of the Bureau of Aeronautics of the

Navy, the McDonnell Aircraft Corporation, and the Navy and Marine pilots assigned to the associate activities. Where the percentage of film exposed that after processing was readable had been no more than 30 percent, the comparable figure in VMJ-1 was more than 90 percent. This factor, along with other automated advances in the system, literally made the 10 Banshees, which comprised no



1stMAW Historical Diary Photo Supplement, Jul53

Maj John F. Bolt, Jr., while flying a North American F-86 Sabre jet with the Air Force's 51st Fighter Interceptor Wing shot down his sixth MiG-15 on 12 July 1953, becoming the Marine Corps' first jet ace. Bolt also achieved ace-status during World War II by downing six Japanese aircraft while flying with the Black Sheep of VMF-214.

more than 20 percent of the photo reconnaissance force available, carry upwards of 30 to 40 percent of the daily Air Force photo mission load.

The employment of the reconnaissance aircraft was interesting. Totally unarmed, almost all of its missions were flown unescorted at high altitude, except that often the pilot in the event of cloud obstruction would descend below a cloud deck to acquire his target if the area was not too hot. For the tougher targets, like Sinanju and

Suiho on the Yalu, which were well within MiG range from across the Yalu, the Banshee was escorted by an ample flight of North American F-86 Sabre jets. There was an advantage, strange as it may seem, to the unescorted mission. A single Banshee at high altitude presented a very low profile to enemy antiaircraft radar and radar fighter direction equipment, compared to that of one photo plane with four or more fighter escorts in company. The unescorted missions penetrated all the way

up the east coast to the Soviet border and at the extreme northeast end of the run, Vladivostok was clearly visible. Other missions would take the aircraft the length of the Manchurian border down the Yalu to the point where the range of the MiG dictated escort. If jumped when unescorted, the best defense against the MiG was a steep and very tight spiral to the deck or to the nearest heavy cloudbank.

The last highlight to mention was the system arranged between Fifth Air Force and 1st Marine Aircraft Wing which provided a few Marines, after they had finished their tours in MAG-33 jets, the experience of a few weeks temporary duty with the F-86 squadrons. Being very experienced jet pilots, they checked out quickly and were taken into the regular flights of the Air Force squadrons, some for as many as 50 or more missions against the MiG. From November 1951 to July 1953, these visitors shot down a total of 21 MiG-15s. At any given time, there was usually only one Marine on duty with each of the two F-86 wings. The high score and only Marine jet ace of the group was Major John F. Bolt with six, although Major John H. Glenn, getting three in July 1953, was closing in fast when the ceasefire was announced. It was a valuable program for Marine aviation, which was indebted to the Air Force for the experience; air-to-air experience being essentially denied because the straight-wing F9F was no match for the swept-wing MiG-15. With the Corsair, Tigercat, and Skyknight tolls added in, Marines shot down more than 37 Communist aircraft of all types during the Korean War.

The character of the Korean War for Marine aviation was light on air-to-air, heavy on air-to-ground,

Marine Pilots and Enemy Aircraft Downed

Date: Pilot	Squadron	Aircraft Flown	Aircraft Downed
21 Apr 51: 1stLt Harold D. Daigh	VMF-312	F4U-4	2 Yak-9
21 Apr 51: Capt Phillip C. DeLong	VMF-312	F4U-4	2 Yak-9
30 Jun 51: Capt Edwin B. Long/ WO Robert C. Buckingham	VMF(N)-513	F7F-3N	1 PO-2
12 Jul 51: Capt Donald L. Fenton	VMF(N)-513	F4U-5NL	1 PO-2
23 Sep 51: Maj Eugene A. Van Gundy/ MSgt Thomas H. Ullom	VMF(N)-513	F7F-3N	1 PO-2
4 Nov 51: Capt William F Guss	336 FIS (USAF)	F-86A	1 MiG-15
5 Mar 52: Capt Vincent J. Marzelo	16 FIS (USAF)*	F-86A	1 MiG-15
16 Mar 52: LtCol John S. Payne	336 FIS (USAF)	F-86A	1 MiG-15
7 Jun 52: 1stLt John W. Andre	VMF(N)-513	F4U-4NL	1 Yak-9
10 Sep 52: Capt Jesse G. Folmar	VMF-312	F4U-4	1 MiG-15
15 Sep 52: Maj Alexander J. Gillis	335 FIS (USAF)	F-86E	1 MiG-15
28 Sep 52: Maj Alexander J. Gillis	335 FIS (USAF)	F-86E2	2 MiG-15
3 Nov 52: Maj William T. Stratton, Jr./ MSgt Hans C. Hoglind	VMF(N)-513	F3D-2	1 Yak-15(17?)
8 Nov 52: Capt Oliver R. Davis WO Dramus F. Fessler	VMF(N)-513	F3D-2	1 MiG-15
10 Dec 52: 1stLt Joseph A. Corvi/ MSgt Dan R. George	VMF(N)-513	F3D-2	1 PO-2
12 Jan 53: Maj Elswin P. Dunn/ MSgt Lawrence J. Fortin	VMF(N)-513	F3D-2	1 MiG-15
20 Jan 53: Capt Robert Wade	16 FIS (USAF)	F-86E	1 MiG-15
28 Jan 53: Capt James R. Weaver/ MSgt Robert P. Becker	VMF(N)-513	F3D-2	1 MiG-15
31 Jan 53: LtCol Robert F. Conley/ MSgt James N. Scott	VMF(N)-513	F3D-2	1 MiG-15
7 Apr 53: Maj Robert Reed	39 FIS (USAF)	F-86F	1 MiG-15
12 Apr 53: Maj Robert Reed	39 FIS (USAF)	F-86F	1 MiG-15
16 May 53: Maj John F. Bolt	39 FIS (USAF)	F-86F	1 MiG-15
17 May 53: Capt Dewey F. Durnford	335 FIS (USAF)	F-86F	1/2 MiG-15
18 May 53: Capt Harvey L. Jensen	25 FIS (USAF)	F-86F	1 MiG-15
15 Jun 53: Maj George H. Linnemeier	VMC-1	AD-4	1 PO-2
22 Jun 53: Maj John F. Bolt	39 FIS (USAF)	F-86F	1 MiG-15
24 Jun 53: Maj John F. Bolt	39 FIS (USAF)	F-86F	1 MiG-15
30 Jun 53: Maj John F. Bolt	39 FIS (USAF)	F-86F	1 MiG-15
11 Jul 53: Maj John F. Bolt	39 FIS (USAF)	F-86F	2 MiG-15
12 Jul 53: Maj John H. Glenn	25 FIS (USAF)	F-86F	1 MiG-15
19 Jul 53: Maj John H. Glenn	25 FIS (USAF)	F-86F	1 MiG-15
20 Jul 53: Maj Thomas M. Sellers	336 FIS (USAF)	F-86F	2 MiG-15
22 Jul 53: Maj John H. Glenn	25 FIS (USAF)	F-86F	1 MiG-15

* FIS (Fighter Interceptor Squadron)



Department of Defense Photo (USMC) A348551

Future astronaut and United States Senator, Maj John H. Glenn smiles from the cockpit of his F-86 Sabre jet on his return from a flight over North Korea during which he shot down the first of three MiG-15s he would be credited with during the war.

and often primitive with respect to operating airfields. The part played by the enemy which directly affected Marine aviation, was the gradual and continuous build-up of his antiaircraft capability. The employment of heavy antiaircraft artillery in proximity to the front, the increased use of mobile automatic antiaircraft weapons of higher caliber, both at the front and on access routes, forced tactical changes but did not lessen the effectiveness of either close air support or interdiction missions. In addition, the time spent in advancing up the learning curve as changes occurred, are reflected in a summary of the aviation statistics for the war. These show that Marine aviation lost 258 killed (including 65 missing and presumed dead) and 174 wounded. A total of 436 aircraft were also lost in combat and in operational accidents. Of the 221 Marines captured during the three-year conflict, 31 were aviators.

Armistice and Aftermath

The possibility of a ceasefire and general armistice was a constant element in the Korean War from mid-1951. The peace talks gained more attention in early 1952 after a formal site was established at Panmunjom, with assigned United Nations, North Korean, and Communist Chinese negotiators in attendance at scheduled sessions. Marine aviation provided support for this aspect of the Korean War, and its aftermath. Aviation furnished several general officers, as did the ground Marine Corps, for the negotiating team, a shared assignment between all the United States Armed Services.

The 1st Marine Aircraft Wing post-armistice plan, a part of the Fifth Air Force strategy, was effective on 27 July 1953. Its basic objective was twofold: first, to carry out Fifth Air Force responsibilities as assigned; and second to maintain a high level of combat

readiness in all units. The armistice delineated a "no-fly" barrier along a line just south of the United Nations southern boundary of the Demilitarized Zone, and day and night patrols of that barrier were missions assigned to the wing. The day missions were shared by the MAGs at K-3 and K-6, while the night patrols were flown by the F3Ds of VMF(N)-513 and the radar-configured ADs of Marine Composite Squadron 1.

The armistice agreement created a set of administrative bottlenecks, with the limitation on airports of entry and departure to a total of six for South Korea. This meant that every aircraft entering, regardless of its ultimate destination, had to undergo a detailed inspection upon landing. Numerous forms were required to be filled out and untold reports rendered for each aircraft arriving in country or departing. When the personnel and unit reports were added to the list, it all became a formidable bureaucratic check on cheating with respect to the armistice agreement.

Because of the indeterminate nature and duration of the armistice, it was necessary to deploy additional Fleet Marine Forces to the Far East in order to maintain a posture of amphibious readiness in the area. Late in the summer of 1953, the 3d Marine Division arrived in Japan accompanied by MAGs -11 and -16, the latter a helicopter transport group equipped with Sikorsky HRS-2s. MAG-11, comprised of three F9F squadrons, was based at Atsugi, Japan, as was VMR-253, an additional transport squadron assigned to wing and flying the F4Q Fairchild Packet. MAG-16 was based at Hanshin Air Force Base with its two squadrons and service units.

Both in Korea and Japan, the

Aviator Prisoners of War

The long months of incarceration, torture, deprivation, and uncertainty made the prisoner of war experience a terrible ordeal. It was a harbinger of what the next generation of American prisoners of war would face barely a decade later in another Asian country.

While American treatment toward its prisoners of war in World War II was much more benevolent, it might be said that the stories told by returning prisoners from World War II Japanese and Korean War prison camps changed how we as a country looked at ourselves as warriors, and how we conducted ourselves regarding enemy soldiers we captured in future wars.

Certainly, the greatest change that resulted from the Korean War prisoners' collective experience was the institution of the Code of Conduct, which specifically outlined what an American serviceman would give his captors by way of information and how he would conduct himself.

The Code was at times quite nebulous and in its first test, in Vietnam, each American had to determine his own level of faith and endurance. The boundaries were defined in the Code, but as the years wore on, cut off from any contact with his government, and with only occasional meetings with his compatriots in the camps, each had to determine for himself how he could meet the requirements of his country. It was a trial of strength and courage far more terrible than the short-burst stress of aerial combat. Those who survived their internment in Southeast Asia could—in some measure—perhaps thank their predecessors in the cold mountain camps of Korea for bringing back information that helped them live. Of the 221 Marines captured during the Korean War, 31 were flight crewmen. Three died in captivity; one is presumed dead.

The first Marine aviator prisoner of war in Korea was Captain Jesse V. Booker of Headquarters Squadron 1. He was shot down on 7 August 1950 while flying a reconnaissance mission from carrier *Valley Forge* (CV 45). Captain Booker, who had shot down three Japanese aircraft in World War II, received several briefings on escape and evasion. He could be considered as well prepared as could be at this early stage of the war. After capture, he was beaten and tortured by his North Korean guards and was the only Marine pilot in enemy hands until April 1951.

Captain Paul L. Martelli was shot down on 3 April 1951 while flying Corsairs with VMF-323. As he attacked ground targets, his fighter's oil cooler was hit by small arms fire, and he soon had to bail out. His wingman initially reported that Captain Martelli had fallen from his F4U, and he was carried as killed in action.

Martelli was captured by Chinese troops, who took him to an interrogation center near Pyongyang. He



Department of Defense (USN) 628393

Maj Francis Bernardini, USMC, chats with returning prisoners of war Capt Jesse V. Booker, center, and 1stLt Richard Bell, right, at Freedom Village, Panmunjom, Korea. Booker and Bell were returned on 27 August 1953, the first Marine aviators to be sent back.

endured several painful sessions with a Major Pak, considered by many of the prisoners to be among the enemy's most sadistic "interviewers."

Captain Mercer R. Smith launched for an armed reconnaissance mission from K-3 (Pohang) on 1 May 1951. Flying F9F-2B Panthers with VMF-311, he and his wingman were at 6,000 feet when Captain Smith reported a fire in the cockpit. He climbed to 16,000 feet and ejected. At first, his wingman and the pilot of a rescue helicopter that arrived shortly afterward reported enemy troops standing over the body of the downed pilot, thereby giving rise to the belief that Captain Smith was dead. He initially was carried as killed in action, but was reported on the Communist 18 December 1951 list of prisoners of war.

The following day, Captain Byron H. Beswick, an F4U pilot with VMF-323, was part of a four-plane, close air support mission. It was his third mission of the day and the 135th of his tour. Small arms fire caught him during a strafing run, hitting a napalm tank, which did not ignite. However, his aircraft was hit soon afterward, catching fire, and forcing Captain Beswick to bail out. He suffered painful burns on his face, arms, hands, and right leg.

Communist troops captured him, placing him with a battalion of British prisoners of war, which fortunately included two doctors. Enduring long marches, Captain Beswick and his compatriots tried to escape, but were recaptured.

On 27 May 1951 while on an armed reconnaissance with two other aircraft, Captain Arthur Wagner, the pilot of an F4U-5N with VMF(N)-513 also was interned.

Captain Jack E. Perry of VMF-311 was the squadron-

briefing officer and had to scrounge flights. By mid-June 1951 he had 80 missions. He knew about the danger of enemy flak sites in the Singosan Valley and scheduled himself for a mission against the traps on 18 June. However, the guns quickly found the range and hit his Panther's fuel tank. Captain Perry ejected and was captured by Chinese troops, who showed him bomb craters and their wounded soldiers as a result of American strikes.

Several other Marine aviators were shot down in subsequent months, mainly by anti-aircraft guns. But VMF-311 lost a Panther to MiGs on 21 July 1951. First Lieutenant Richard Bell was part of a 16-plane strike in MiG Alley, the notorious area along the Yalu River in northwestern Korea. His division of three aircraft—a fourth F9F pilot had aborted the mission when his cockpit pressurization failed—flew their mission and were returning to base when no less than 15 MiG-15s appeared. The enemy fighters attacked the small American formation, whose pilots turned into the oncoming MiGs.

Unknown to his two other squadron mates, Lieutenant Bell, low on fuel, engaged the first MiGs, giving his fellow Marines the chance to escape. When his fuel was gone, Bell ejected from his powerless jet and was captured.

Other Marines were interned after leaving their crippled aircraft. On 30 July, Lieutenant Colonel Harry W. Reed, the commanding officer of VMF-312, was hit by another Corsair during an attack and bailed out. The other pilot, First Lieutenant Harold Hintz, was thought to have been killed when he apparently spun in. But subsequent prisoner of war debriefings revealed Hintz had died in captivity. Lieutenant Colonel Reed was captured and apparently hanged by the North Koreans because he had shot and killed four enemy soldiers during his capture.

Marine crews from nearly every squadron flying offensive missions in Korea were captured. VMF(N)-513's executive officer, Major Judson C. Richardson, Jr., was captured when his F4U-5N was shot down on a night armed-reconnaissance mission on 14 December 1951.

Lieutenant Colonel William G. Thrash was flying a TBM-3R as part of a strike with VMA-121. The old Grumman torpedo bombers, normally assigned to 1st Marine Aircraft Wing, flew as hacks—mainly short-range "taxi" and currency trainers, and occasionally carried

observers. With two ground officers as passengers, Lieutenant Colonel Thrash accompanied the strike when his aircraft was hit by enemy flak. Thrash and the junior officer behind him were able to get out of the crippled Avenger, but the ground colonel could not open his canopy and died in the plane crash.

Four Marine aviators were shot down in May 1952: Major Walter R. Harris (VMF-323); First Lieutenant Milton H. Baugh (VMF-311); Captain John P. Flynn, Jr. (VMF[N]-513); and First Lieutenant Duke Williams, Jr. (VMF[N]-513).

Most prisoners of war of all Services and nationalities were subjected to periods of torture, starvation, and political indoctrination. The Chinese, in particular, were furious at the effort by the United Nations and took out their anger and frustration on many prisoners. The degree of interrogation and deprivation varied considerably, depending on requirements and how much inter-camp movement occurred in any particular period. Other prisoners were occasionally put in camps with newly captured forces.

Lieutenant Colonel Thrash became the senior officer in one camp, establishing rules of behavior that listed what tasks prisoners would do and not do. Thrash's policies eventually brought the wrath of the camp commander down on him, resulting in his removal and eight months of solitary confinement with constant interrogation and harassment.

The final Marine prisoner of war was actually captured after the armistice. Lieutenant Colonel (later Colonel) Herbert A. Peters was an experienced aviator with heavy combat experience in the Pacific, where he shot down four Japanese aircraft during service at Guadalcanal. On 5 February 1954, he took off in an OY light aircraft and became lost in a snowstorm among the mountains.

Circling, he saw a small landing strip through the clouds. He landed, but was immediately surrounded by North Korean soldiers, who held onto his small plane's wings so he could not take off. He languished in captivity at the airfield until August. No word of his internment had been sent, and his family and the Marine Corps had thought him missing, if not dead. His family was surprised and gratified to be notified of Peters' return in October 1954.

period was one of intensive training, including landing exercises, joint exercises with the U.S. Army and the U.S. Air Force, and a heavy concentration on bombing and gunnery. The principal bombing target for Korean-based squadrons was on the Naktong, where Marine pilots had done considerable bombing during the defense of the Pusan Perimeter. In addition an

exchange program between Japan-based and Korean-based squadrons was established within the wing. The objective of the program was to familiarize new pilots to the area with flight conditions in Korea, just in case the ceasefire did not work out. There were many programs and competitions in athletics with one of the highlights being the winning of the Fifth Air

Force and Far East Air Force softball championships by MAG-12 of K-6.

In June 1956, the wing moved its headquarters to Naval Air Station, Iwakuni, Japan, and control of the wing passed from Fifth Air Force to Commander in Chief, Pacific Fleet, in Hawaii, thus ending Marine Corps aviation's participation in the Korean War.

About the Authors

The main text of this pamphlet is derived from Major General John P. Condon's original draft of a history of Marine Corps aviation, an edited version of which appeared as *U.S. Marine Corps Aviation*, the fifth pamphlet of the series commemorating 75 years of Naval Aviation, published by the Deputy Chief of Naval Operations (Air Warfare) and Commander, Naval Air Systems Command in 1987.

Major General John Pomery Condon, Naval Academy Class of 1934, earned his wings as a naval aviator in 1937. On active duty from May 1934 to October 1962, he held command positions at the squadron, group, and wing levels. During World War II, he served with the Fighter Command at Guadalcanal and in the Northern Solomons and subsequently played a key role in training Marine Corps pilots for carrier operations. At Okinawa he commanded Marine Aircraft Group 14, and in Korea, Marine Aircraft Groups 33 and 12, the first group to fly jet aircraft in combat and the last to fly the Corsair against the enemy. As a general officer, he served with the U.S. European Command and commanded both the 1st and 3d Marine Aircraft Wings.

General Condon earned a Ph.D. at the University of

California at Irvine and also studied at the U.S. Air Force's Air War College. He is the author of numerous essays and several works on Marine Corps aviation, the last, *Corsairs and Flattops: Marine Carrier Air Warfare, 1944-1945*, was published posthumously in 1998.

Commander Peter B. Mersky, USNR (Ret), provided supplemental materials. A graduate of the Rhode Island School of Design with a baccalaureate degree in illustration, Mersky was commissioned through the Navy's Aviation Officer Candidate School in 1968. Following active duty, he remained in the Naval Reserve and served two tours as an air intelligence officer with Light Photographic Squadron 306.

Before retiring from federal civil service, he was editor of *Approach*, the Navy's aviation safety magazine, published by the Naval Safety Center in Norfolk, Virginia. Commander Mersky has written several books on Navy and Marine Corps aviation, including *U.S. Marine Corps Aviation, 1912-Present* (3d Edition, 1997). He also authored two publications for the History and Museums Division: *A History of Marine Fighter Attack Squadron 321* and *Time of the Aces: Marine Pilots in the Solomons, 1942-1944*, a pamphlet in the World War II Commemorative Series.

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Sources of great use were the oral histories, diaries, and memoirs of many of the participants. The most important of these were those of LtGen Robert P. Keller, LtCol John Perrin, LtCol John E. Barnett, LtCol Emmons S. Maloney, Col Edward S. John, LtCol William T. Witt, Jr., SgtMaj Floyd P. Stocks, LtGen Leslie E. Brown, MSgt James R. Todd, and MSgt Lowell T. Truex.

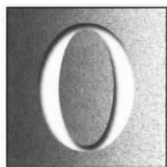
As is the tradition, members of the Marine Corps Historical Center's staff, especially Fred H. Allison, were fully supportive in the production of this pamphlet as were others: William T. Y'Blood and Sheldon A. Goldberg of the U.S. Air Force History Support Office; Hill Goodspeed of the Emil Buehler Naval Aviation Library, National Museum of Naval Aviation; and Warren Thompson, Joseph S. Rychetnik, Steven P. Albright, Steven D. Oltmann, Nicholas Williams, and James Winchester.



WHIRLYBIRDS

U.S. Marine Helicopters in Korea

by Lieutenant Colonel Ronald J. Brown, USMCR (Ret)



On Sunday, 25 June 1950, Communist North Korea unexpectedly invaded its southern neighbor, the American-backed Republic of Korea (ROK). The poorly equipped ROK Army was no match for the well prepared North Korean People's Army (NKPA) whose armored spearheads quickly thrust across the 38th Parallel. The stunned world helplessly looked on as the out-numbered and out-gunned South Koreans were quickly routed. With the fall of the capital city of Seoul imminent, President Harry S. Truman ordered General of the Army Douglas MacArthur, Commander in Chief, Far East, in Tokyo, to immediately pull all American nationals in South Korea out of harm's way. During the course of the resultant noncombatant evacuation operations an unmanned American transport plane was destroyed on the ground and a flight of U.S. Air Force aircraft were buzzed by a North Korean Air Force plane over the Yellow Sea without any shots being fired. On 27 July, an American combat air

AT LEFT: A Sikorsky HRS-1 transport helicopter from HMR-161 sets down behind 1st Marine Division lines to pick up waiting Marines. Department of Defense Photo (USMC) A159970

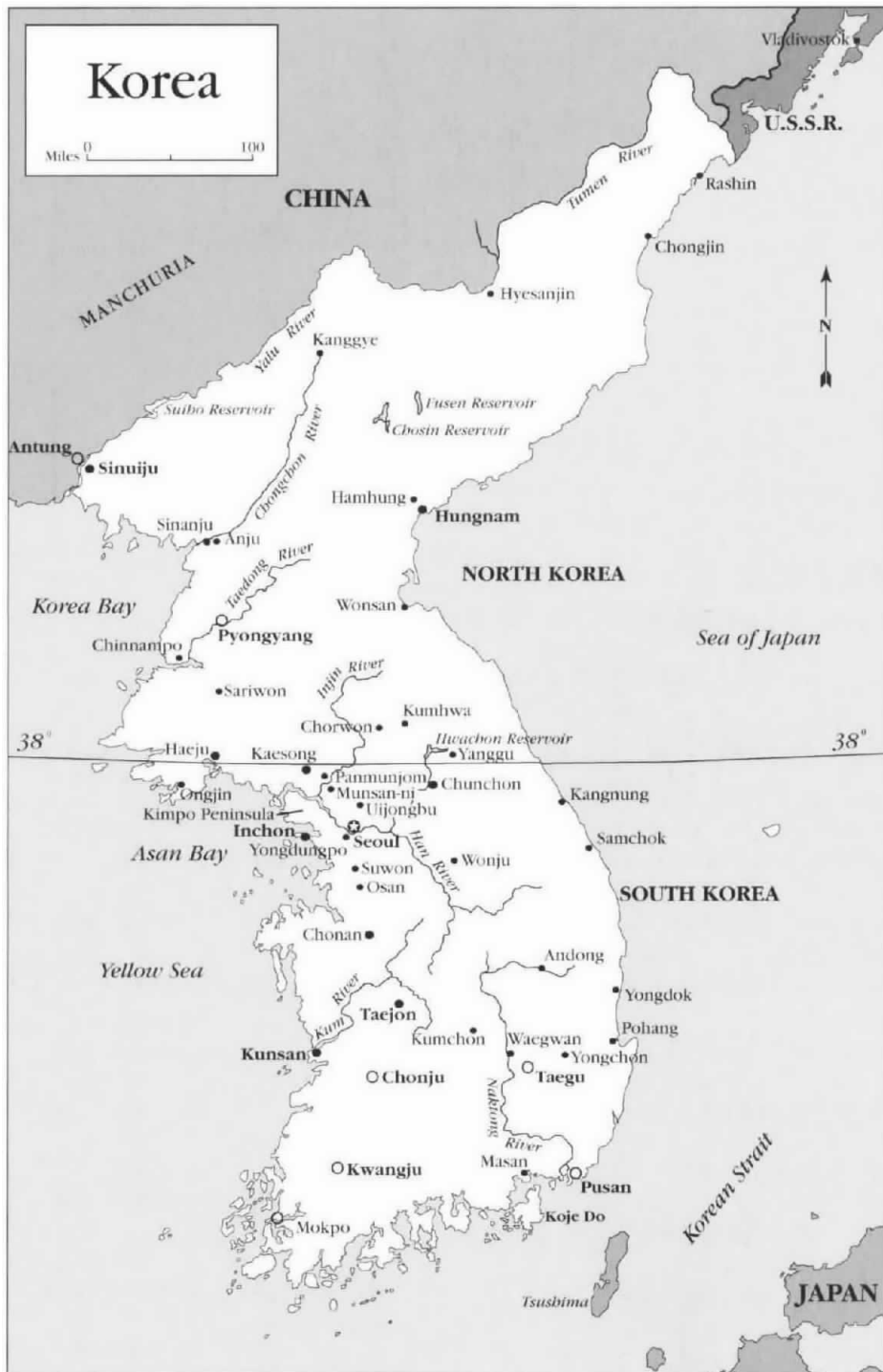
patrol protecting Kimpo Airfield near the South Korean capital actively engaged menacing North Korean planes and promptly downed three of the five Soviet-built Yak fighters. Soon thereafter American military forces operating under the auspices of the United Nations Command (UNC) were committed to thwart a Communist takeover of South Korea. Thus, only four years and nine months after V-J Day marked the end of World War II, the United States was once again involved in a shooting war in Asia.

The United Nations issued a worldwide call to arms to halt Communist aggression in Korea, and America's armed forces began to mobilize. Marines were quick to respond. Within three weeks a hastily formed provisional Marine brigade departed California and headed for the embattled Far East. Among the aviation units on board the U.S. Navy task force steaming west was a helicopter detachment, the first rotary-wing aviation unit specifically formed for combat operations in the history of the Marine Corps. Although few realized it at the time, this small band of dedicated men and their primitive flying machines were about to radically change the face of military aviation. Arguably, the actions of these helicopter pilots in Korea made U.S. Marines the progenitors of vertical envelopment operations, as we know them today.

Helicopters in the Marine Corps

There is great irony in the fact

that the Marine Corps was the last American military Service to receive helicopters, but was the first to formulate, test, and implement a doctrine for the use of rotary-wing aircraft as an integral element in air-ground combat operations. The concept of manned rotary-wing flight can be traced back to Leonardo da Vinci's Renaissance-era sketches, but more than four centuries passed before vertical takeoffs and landings by heavier-than-air craft became a reality. The Marines tested a rotary-wing aircraft in Nicaragua during the Banana Wars, but that experiment revealed the Pitcarin OP-1 autogiro was not ready for military use. Autogiros used rotary wings to remain aloft, but they did not use spinning blades to get airborne or to power the aircraft so autogiros were airplanes not helicopters. Some aviation enthusiasts, however, assert that the flight data accumulated and rotor technology developed for autogiros marked the beginning Marine Corps helicopter development. It was not until 1939 that the first practical American helicopter, aircraft designer Igor I. Sikorsky's VS-300, finally moved off the drawing board and into the air. The U.S. Army, Navy, and Coast Guard each acquired helicopters during World War II. The bulk of them were used for pilot training, but a few American-built helicopters participated in special combat operations in Burma and the Pacific. These early machines conducted noncombatant air-sea



ative).” This 52-page tome was the 31st school publication on amphibious operations, so it took the short title “*Phib-31*.” Concurrently, the Marine Corps formed a developmental helicopter squadron to test the practicality of *Phib-31*’s emerging theories. This formative unit, Colonel Edward C. Dyer’s Marine Helicopter Squadron 1 (HMX-1), stood up in December 1947 and was collocated with Marine Corps Schools. The new squadron’s primary missions were to develop techniques and tactics in conjunction with the ship-to-shore movement of assault troops in amphibious operations, and evaluate a small helicopter as replacement for fixed-wing observation airplanes. Among the officers assigned to HMX-1 was the Marine Corps’ first officially sanctioned helicopter pilot, Major Armond H. DeLalio, who learned to fly helicopters in 1944 and had overseen the training of the first Marine helicopter pilots as the operations officer of Navy Helicopter Squadron VX-3 at Lakehurst Naval Air Station, New Jersey.

In February 1948, the Marine Corps took delivery of its first helicopters when a pair of Sikorsky HO3S-1s arrived at Quantico. These four-seat aircraft featured a narrow “greenhouse” cabin, an overhead three-blade rotor system, and a long-tail housing that mounted a small vertical anti-torque rotor. This basic outline bore such an uncanny resemblance to the Anisoptera subspecies of flying insects that the British dubbed their newly purchased Sikorsky helicopters “dragonflies.” There was no Service or manufacturer’s authorized nickname for the HO3S-1, but the most common unofficial American appellations of the day were “whirlybirds,” “flying windmills,”

rescue, medical evacuation, and humanitarian missions during the war as well.

In 1946, the Marine Corps formed a special board headed by Major General Lemuel C. Shepherd, Jr., to study the impact of nuclear weapons on amphibious operations. In accordance with the recommendations made by the Shepherd Board in early 1947,

Marine Corps Schools at Quantico, Virginia, began to formulate a new doctrine, eventually termed “vertical assault,” which relied upon rotary-wing aircraft as an alternative to ship-to-shore movement by surface craft. The following year, Marine Corps Schools issued a mimeographed pamphlet entitled, “Amphibious Operations—Employment of Helicopters (Tent-

Pitcarin OP-1 Autogiro

The first rotary-winged aircraft used by naval aviation was not a helicopter. It was an autogiro, an airplane propelled by a normal front-mounted aircraft engine but kept aloft by rotating overhead wings, a phenomenon known as "autorotation." Although rather ungainly looking due their stubby upturned wings, large tails, and drooping rotors, autogiros took well to the air. Their ability to "land on a dime" made them favorites at air shows and an aggressive publicity campaign touted them as "flying autos, the transportation of the future." Autogiros, however, turned out to be neither a military nor a commercial success.

The aircraft itself was an odd compilation of a normal front-mounted aircraft engine used to generate thrust and three overhead free-spinning blades attached to a center-mounted tripod to provide lift. The fuselage included a pair of stubby wings that supported the landing gear and had a semi-standard elongated tail assembly. Typical of the day, it had an open cockpit.

Although a rotary-winged aircraft, the OP-1 was not a helicopter. The engine was used to start the rotors moving but was then disengaged and connected to the propeller to deliver thrust. A speed of about 30 miles per hour was needed to generate lift and maintained for controlled flight. The OP-1 could not hover, it required conventional engine power to take off and move forward in the air; the plane could, however, make a vertical landing. This unique feature made the OP-1 attractive to the military.

The specific autogiro model first tested by the Marine Corps was the OP-1 built by Harold F. Pitcarin, who would later found Eastern Airways. His company was a licensed subsidiary of a Spanish firm. All American autogiros were based upon designs formulated by Spanish nobleman Juan de la Cierva. His first successful flight was made near Madrid in 1923. More than 500 autogiros flew worldwide during the next decade. Although his air-

planes never lived up to his high expectations, de la Cierva did develop rotor technology and recorded aerodynamic data later applied by helicopter designers Igor Sikorsky and Frank Piasecki.

The Navy purchased three Pitcarin autogiros for extensive field-testing and evaluation in 1931. The only carrier tests were conducted on 23 September of that year, but the OP-1's performance was virtually identical to that of carrier-borne biplanes then in use. The Marines took one OP-1 to Nicaragua to test it under combat conditions. Again, its performance was disappointing. The pilots of VJ-6M noted it lacked both payload and range. The only practical use they found was evaluation of potential landing areas. This was not enough reason to incorporate the OP-1 into the Marine inventory. Overall, the OP-1 was described as "an exasperating contraption," not fit for military use. Further trials of a wingless autogiro in 1935 revealed no improvement, so director of aviation Major Roy S. Geiger recommended against adoption of that aircraft type.

In the barnstorming days between the World Wars, autogiros proved to be the ultimate novelty attraction. Aviator Charles A. Lindbergh often put on demonstrations, aviatrix Amelia Earhart set an altitude record in one, and Secretary of the Navy Charles Francis Adams flew in an autogiro to join President Herbert C. Hoover at an isolated fishing camp in Virginia. The Royal Air Force actually used autogiros for convoy escort and observation during World War II, and the Soviet Union developed its own autogiro.

Although the OP-1 never became a mainstream Marine aircraft and was not a true helicopter, some aviation enthusiasts assert that the technology and data developed by de la Cierva was crucial for rotary-winged flight. They, therefore, make the case that the OP-1 should be considered the progenitor of today's helicopters.

Department of Defense Photo (USMC) 528139



and “pinwheels.” The HO3S-1 had a cruising speed of less than 100 miles per hour, a range of about 80 miles, could lift about 1,000 pounds, and mounted simple instrumentation that limited the HO3S to clear weather and daylight operations. This very restrict-

ed flight envelope was acceptable because these first machines were to be used primarily for training and testing. They were, however, sometimes called upon for practical missions as well. In fact, the first operational use of a Marine helicopter occurred when a

Quantico-based HO3S led a salvage party to an amphibious jeep mired in a nearby swamp.

The first Marine helicopter operational deployment occurred in May 1948 when five HMX-1 “pinwheels” flying off the escort carrier *Palau* (CVE 122) conducted 35

The Visionaries

The wake of the World War II, with its ominous specter of nuclear weapons, forced the Marine Corps to rethink existing amphibious doctrine. The conclusion was that previous methods of ship-to-shore movement were no longer sufficient to ensure a successful landing so alternative methods had to be developed. Several options looked promising, but the only one that stood the test of time and combat was vertical envelopment—the use of helicopters to move troops and supplies.

In 1946, Commandant Alexander A. Vandegrift—at the urging of Lieutenant General Roy S. Geiger, the “Gray Eagle” of Marine aviation who had just witnessed post-war nuclear tests—formed a special board culled from Marine Corps headquarters to study existing tactics and equipment then make recommendations for restructuring the Fleet Marine Force. Assistant Commandant Lemuel C. Shepherd, Jr., a graduate of Virginia Military Institute, who was arguably the Marines’ most innovative division commander in the Pacific, headed the board. Shepherd was an excellent choice because he was both a traditionalist and a visionary who would later become Commandant. Other members of the board included Major General Field Harris, the director of Marine aviation, and Brigadier General Oliver P. Smith, the head of plans and operations division. All three men would be reunited in Korea in 1950 where they would put into practice the revolutionary doctrines they set in motion; Shepherd as the commanding general of Fleet Marine Force, Pacific, Harris as commanding general of the 1st Marine Aircraft Wing, and Smith as commanding general of the 1st Marine Division. Two colonels assigned to the board secretariat were particularly influential, Edward C. Dyer and Merrill B. Twining. Dyer, a Naval Academy graduate and decorated combat pilot, was master of all things aeronautical while Merrill Twining, a highly regarded staff officer, handled operational theory. Neither a formal member of the board nor its secretariat but keeping close tabs on what transpired was Brigadier General Gerald C. Thomas, Vandegrift’s trusted chief of staff. Dyer eventually commanded the first Marine helicopter squadron and Thomas replaced Smith as 1st Marine Division commander in Korea.

Doctrinal development for vertical assault was done at Marine Corps Schools located at Quantico, Virginia. First, a board headed by Lieutenant Colonel Robert E. Hogaboom laid out what was needed in a document titled “Military Requirements for Ship-to-Shore Movement of Troops and Cargo.” Even though no suitable aircraft were yet available, the thinkers at Quantico came up with new doctrine published as *Amphibious Training Manual 31*, “Amphibious Operations—Employment of Helicopters (Tentative).” One of the drivers of this project was Lieutenant Colonel Victor H. Krulak, a tough former paratrooper who had been wounded in the Pacific but was also known for his high intellect and an unsurpassed ability to get things done. He was a prolific writer and a demanding taskmaster who kept his finger on the pulse of several vital projects including helicopter development.

Despite the nearly unlimited future potential of helicopters for assault and support of landing forces, there was ingrained resistance to such a revolutionary concept. Most young pilots wanted to fly sleek jets and dogfight enemy aces, not manhandle temperamental aircraft to deliver troops and supplies; experienced fliers were comfortable with aircraft they already knew well and were reluctant to give up their trusted planes; and critics claimed helicopters were too slow and vulnerable. Twining took the lead in addressing these problems when he pointed out the Marine Corps had far more pilots than planes and noted that the wishes of the individual were always subservient to the needs of the Marine Corps. He also asserted that the speed and vulnerability of helicopters should not be properly compared to fixed-wing aircraft but to surface landing craft (helicopters were both faster and more agile than boats or amphibious tractors).

All early helicopter advocates were highly motivated and dedicated men. Their achievements and foresight kept the Marine Corps’ reputation for innovation alive despite severe budgetary constraints and concurrent inter-Service unification battles. In fact, many of the men also played key roles in the “Chowder Society,” whose behind-the-scenes work successfully protected Marine Corps interests during the bitter “unification battles” after the World War II.



National Archives Photo (USMC) 127-N-A130996 BGen Edward C. Dyer, here receiving the Legion of Merit for meritorious service as the 1st Marine Aircraft Wing's G-3 during the Inchon-Seoul campaign, was one of the most influential men involved in the adoption of the helicopter by the Marine Corps. A naval aviator, he helped to bring the concept to reality by formulating doctrine and then commanding HMX-1 at Quantico, Virginia.

flights to land 66 men and several hundred pounds of communications equipment at Camp Lejeune, North Carolina's Onslow Beach during amphibious command post exercise Packard II. As the year progressed, HMX-1's aircraft complement increased by six when the Marine Corps took delivery of two new types of helicopters, one Bell HTL-2 and five Piasecki HRP-1s. The Bell HTL, often called the "eggbeater," was a side-by-side two-seat trainer that could fly at about 85 miles per hour. It had two distinctive features, a rounded Plexiglas "fishbowl" cockpit canopy and a single overhead two-bladed rotor. This model had four landing wheels and a fabric-covered tail assembly, although later versions of the HTL mounted skids and left the tail structure bare. The larger Piasecki HRP-1 was a 10-place troop transport whose tandem-mounted rotors could push it along at about 100 miles per hour.

The aircraft's unique bent fuselage (overlapping propeller radii meant the tail rotor had to be mounted higher than the forward rotor) gave it the nickname "Flying Banana." Unfortunately, it was a temperamental machine considered too fragile to be assigned to combat squadrons. The HRP-1 was instead relegated to use as a test bed and demonstration aircraft until a more capable transport helicopter could be procured.

During the next two years HMX-1 conducted numerous experiments, tests, exercises, demonstrations, and public appearances. Helicopters soon became crowd pleasers at air shows and were invariably the center of attention for dignitaries visiting Quantico. As a result of numerous tactical tests and performance evaluations, Colonel Dyer recommended that light helicopters should be added to Marine observation squadrons. Headquarters agreed, and it was

One of five Sikorsky HO3S-1s from HMX-1 prepares to land on the Palau (CVE 122) during Operation Packard II in May 1948. This was the first test to determine the value of

the helicopter in the movement of assault troops in an amphibious operation.

Department of Defense Photo (USMC)





Department of Defense Photo (USMC) A55366

Piasecki HRP-1 "Flying Bananas" in action during a Basic School pre-graduation field problem at Quantico, Virginia. The HRP was the first Marine Corps transport helicopter, but

technical constraints limited it to demonstration and training use and no HRPs saw action in Korea.

decided that an even mix of helicopters and airplanes should be adopted as soon as enough helicopters and trained personnel were available. Unfortunately, teething problems grounded each of the helicopter types at one time or another, and it was apparent more reliable aircraft with much greater lift capacity would be necessary to make vertical assault a true option in the future. Marine helicopter detachments participated in exercises Packard III (1949) and Packard IV (1950). This time period also featured many milestones. Among them were the first overseas deployment of a Marine helicopter pilot when Captain Wallace D. Blatt flew an HO3S-1 borrowed from the U.S. Navy dur-

ing the American withdrawal from China in February 1949; the first unit deployment in support of a fleet exercise occurred in February 1950; and the largest single helicopter formation to that time took place when six HRPs, six HO3Ss, and one HTL flew by Quantico's reviewing stand in June 1950. By that time, Lieutenant Colonel John F. Carey, a Navy Cross holder who a dozen years later would lead the first Marine aviation unit sent to Vietnam, commanded HMX-1. The squadron mustered 23 officers and 89 enlisted men; its equipment list showed nine HRPs, six HO3Ss, and three HTLs. Since its inception the Marine helicopter program had garnered many laurels, but several vital items remained on the agen-

da—notably the creation of helicopter squadrons for service with the Fleet Marine Force and the procurement of a combat-ready transport helicopter. This was the status of the Marine Corps helicopter program when the North Korean unexpectedly burst across the 38th Parallel.

Called to Action

The commitment of American combat troops to Korea on 30 June set off alarm bells throughout the Marine Corps. Although the official "word" had yet to be passed, within a few hours of the North Korean invasion most Marines surmised it would not be long before they would be on their way to war.

Marine Helicopter Squadron 1

Marine Helicopter Squadron 1 (HMX-1) is unique in the Marine Corps because it has several distinct missions and at least three different chains-of-command providing guidance and tasking.

HMX-1 was the first Marine rotary-wing squadron. It “stood up” at Marine Corps Airfield Quantico in Virginia on 1 December 1947 and has been located there ever since. Its activation was the first operational move that started a revolution in Marine aviation and tactical doctrine.

One interesting insight into the Marines’ most unique aircraft squadron is the frequent misunderstanding of its official designation. Although HMX-1 was initially tasked to develop techniques and tactics in connection with the movement of assault troops by helicopter and to evaluate a small helicopter as an observation aircraft, the “X” does not designate “experimental” as is often inferred. The “Nighthawks” of HMX-1 do perform some developmental tasks, but their primary missions are to provide helicopter transportation for the President of the United States and to support Marine Corps Schools.

The squadron, initially manned by seven officers and three enlisted men, quickly grew and mustered 18 pilots and 81 enlisted men when the first helicopters, Sikorsky HO3S-1s, arrived. These first primitive machines carried only the pilot and up to three lightly armed troops, but they formed the basis for testing helicopter doctrine described in Marine Corps Schools operational manual *Phib-31*. Eventually, HMX-1 received a mix of early model helicopters with the addition of Piasecki HRP transports and Bell HTL trainers to test doctrine before the Korean War.

On 8 May 1948, HMX-1 pilots flew from Quantico to Norfolk, Virginia, to board the escort carrier *Palau* (CVE 122). The fly-on operation was described by HMX-1 commanding officer Colonel Edward C. Dyer as a “complete shambles [with] sailors running all over the place in mortal danger of walking into tail rotors, and the Marines were totally disorganized as well. It was complete bedlam, there was no organization and no real system [in place].” By the next day, however, the Navy and Marine Corps were using the same basic ship-board flight operations procedures practiced today—circular lines delineated danger areas as well as personnel staging areas

and approach lanes. Five days later, the HO3S-1s delivered 66 men and several tons of equipment to Camp Lejeune, North Carolina’s Onslow Beach during command post exercise Packard II.

The following year a similar exercise employed eight HRPs, three HO3Ss, and a single HTL. During Exercise Packard III, the HRP “Flying Banana” troop transports were carrier borne, the HTL was loaded on an LST for command and control, and the HO3Ss stayed ashore as rescue aircraft. The HRPs brought 230 troops and 14,000 pounds of cargo ashore even though choppy seas swamped several landing craft and seriously disrupted operational maneuvers. Many consider this superb performance to be the key factor in the acceptance of the helicopter as a viable ship-to-shore method, thus paving the way for the integration of rotary-wing aircraft into Marine aviation.

In 1957, HMX-1 acquired an unexpected mission—transporting the President of the United States. Helicopters were only considered for emergency situations until President Dwight D. Eisenhower used an HMX-1 Sikorsky HUS Sea Horse helicopter for transportation from his summer home on Narragansett Bay. After that, Marine helicopters were routinely used to move the President from the White House lawn to Andrews Air Force Base, the home of presidential plane “Air Force One.” That transport mission became a permanent tasking in 1976 and continues to this day.

Currently mustering more than 700 personnel, HMX-1 is the largest Marine Corps helicopter squadron. It is divided into two sections. The “White” side flies two unique helicopters—both specially configured Sikorsky executive transports, the VH-3D Sea King and the VH-60N Seahawk. The “Green” side provides basic helicopter indoctrination training for ground troops, tests new concepts and equipment, and assists the Marine air weapons and tactics squadron. Unlike any other Marine squadron, HMX-1 answers to three distinct chains-of-command: the Marine Corps deputy chief of staff for air at Headquarters Marine Corps; the White House military office; and the operational test and evaluation force commander at Norfolk. Marine Helicopter Squadron 1 was not only the first such Marine unit, it also currently holds a unique place in naval aviation.

General MacArthur’s formal request for a Marine regimental combat team and supporting aviation finally filtered through official channels on 2 July, and five days later the 1st Provisional Marine Brigade was activated. Brigadier General Edward A. Craig’s 6,534-

man unit included the 5th Marines as its ground combat element and the 1st Marine Aircraft Wing (Forward Echelon) as its aviation combat element.

Brigadier General Thomas J. Cushman, a veteran aviator who had commanded an aircraft wing in

the Pacific during World War II, was “dual-hatted” as both the brigade deputy commander and the commander of the aviation component. The 1st Brigade’s 1,358-man aviation element was built around Marine Aircraft Group 33 (MAG-33), which included three