

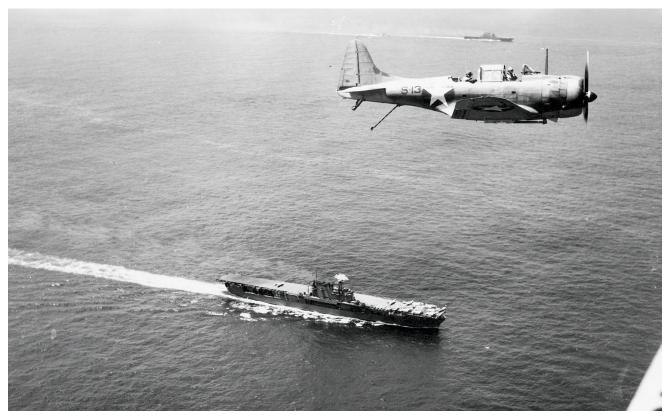
A U.S. Marine guards Hill 80 on Edson's Ridge (also known as Bloody Ridge), Guadalcanal, in 1942. The view is toward the south, the direction from which the Japanese attacked during the "Battle of Bloody Ridge" in September 1942. (Photo courtesy of Wikimedia Commons)

Guadalcanal A Case Study for Multi-Domain Battle

Chris Rein, PhD

Editor's note: The following is a chapter of the recently published monograph by Christopher M. Rein, "Multi-Domain Battle in the Southwest Pacific Theater of World War II," detailing precedents to multi-domain battle employed by allied forces against the Imperial Japanese armed forces in the Southwest Pacific Theater during World War II. The chapter has been slightly edited from the original to bring it into to conformity with Military Review style.

he battle for the Pacific island of Guadalcanal from August 1942 until January 1943 provides a clear historical example of the concept and benefits of fighting a battle simultaneously in multiple domains. While new domains, such as space and cyber, have emerged since the end of World War II, the capabilities and force-multipliers enabled by these domains, including information superiority, secure communications,



wide-area surveillance and economic and popular support for a fully-mobilized wartime economy all impacted the struggle for control of the island in 1942. Ground forces, including elements of the Marines and Army, eventually secured the island in early 1943, but their success depended heavily on direct air and naval support that ensured essential logistical support and effectively interdicted Japanese efforts to build combat power and sustain their forces. Farther afield, seaplane tenders conducted constant reconnaissance patrols to provide vital intelligence of Japanese fleet movements and intentions, heavy bombers raided Japanese bases such as Rabaul on the island of New Britain, and submarines interdicted the flow of raw materials into the Japanese economy, enabling the Allies to prevail in the contest for logistics and sustainment. While only one step in the long march to the liberation of the Philippines and the defeat of Imperial Japan, Guadalcanal was the pivotal attritional struggle that turned the tide and established the pattern of multi-domain cooperation that eventually led to Allied victory in World War II.

In the late spring of 1942, Japanese forces were ascendant across the Pacific. With the surrender of the American and Filipino forces on Bataan and Corregidor in April and May, Japan had largely completed the conquest

A U.S. Navy Douglas SBD-3 Dauntless flies over the aircraft carriers USS *Enterprise* (CV-6) (*foreground*) and USS *Saratoga* (CV-3) 19 December 1942 near Guadalcanal. The aircraft is likely on antisubmarine patrol. *Saratoga* is trailed by her plane guard destroyer. The radar array on the *Enterprise* has been obscured by a wartime censor. (Photo courtesy of U.S. Navy)

of the "Southern Resources Area." They had pushed British naval forces back to the eastern coast of Africa after a successful carrier raid on Royal Navy bases on the island of Ceylon (Sri Lanka), just south of India, and American and Australian forces absorbed heavy air raids while clinging to New Guinea, the last barrier between the expanding Japanese empire and Australia itself. Only the naval battle in the Coral Sea in May, a tactical draw but a strategic victory in that it repelled an amphibious force destined for the Allied supply hub of Port Moresby, upset the unbroken string of Japanese successes thus far.

An event in late April would put the Japanese on a far more dangerous course. On 18 April, Lieutenant Colonel James H. "Jimmy" Doolittle led a force of sixteen AAF B-25 medium bombers off the deck of the USS *Hornet* and over the Japanese home islands before traveling on to Nationalist-held areas of China. The raid, an embarrassment to the Japanese military, convinced them that their

defensive barrier had to be expanded further, primarily by the capture of the Aleutian Islands off Alaska and Midway in the Central Pacific. The U.S. Navy, alerted by skilled cryptographers in the Pacific Fleet headquarters, accurately divined the Japanese intentions, enabling the Navy's carriers to effectively oppose the planned invasion of Midway. The resulting victory further demonstrated the value of accurate intelligence to military operations, no matter what technology enables its collection.

On 4 June 1942, flying from the besieged island of Midway, Major Lofton R. Henderson, commanding officer of VMSB-241, led sixteen Marine SBD dive bombers in an attack on the Japanese carrier force escorting the invasion force. The carrier's combat air patrol destroyed Henderson's plane and he posthumously received the Navy Cross for his efforts to disable the Japanese carriers. Though his squadron scored no hits, they did force the carriers to maneuver and contributed to a delay in the recovery, refueling, and rearming of their own aircraft. This and other attacks facilitated the destruction of all four Japanese carriers by a strike that arrived just over an hour later, when dive bombers from the U.S. carriers Enterprise and Yorktown found the decks of the Japanese flat-tops loaded with fuel- and bomb-laden planes. The battle provided the U.S. Navy some freedom of action, as it leveled the carrier disparity in the Pacific, and enabled the Allies to assume the initiative in the theater. Without control of the skies over Midway, or the seas around it, the Japanese invasion force had to turn back, sparing the island's beleaguered defenders from an amphibious assault and preserving the airfield as a sentinel for the base at Pearl Harbor.1

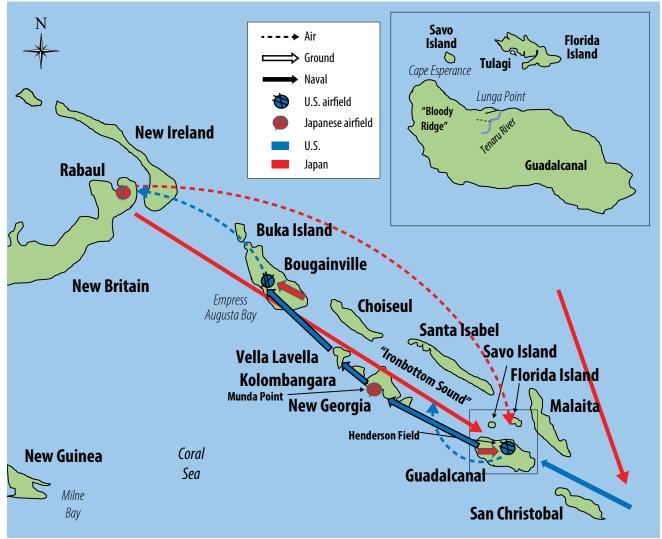
Guadalcanal, near the southern end of the Solomon Island chain, measures roughly ninety miles by thirty miles. Samuel Eliot Morison, who both visited the island and later wrote the Navy's official history, described it as "fecaloid," which is an apt description of both its oblong shape and its composition. Lying just sixty miles south of the equator, its coastline features dense jungles and mangrove swamps which provided a number of obstacles to human habitation, not least the malaria-carrying mosquito. Inland, coral ridges pushed up from the ocean floor hosted dense stands of towering hardwoods that shielded the tangled jungle floor from observation, with the only clearings filled with patches of six-foot tall, razor-edged kunai grass. Habitation was densest along the coast where the few native villages and the colonizers' coconut plantations dotted the shoreline.

In April 1942, Japanese troops landed on Guadalcanal, and began construction on an airfield on the flat coastal plain near Lunga Point. Without heavy equipment, the work proceeded slowly, and was not unnoticed by the Allied reconnaissance aircraft based in the New Hebrides, now the island nation of Vanuatu, On 23 July, and again on 25 July, Army Air Forces B-17s conducted a photo reconnaissance of Guadalcanal, using Navy cameras operated by Marine photographers, and learned that Japanese troops had nearly completed the airfield.² The threat posed by Japanese land-based bombers based at Guadalcanal to shipping as far south as New Caledonia, and the new base's ability to deny access into the Solomons, spurred planners to begin preparations to retake the island and complete the unfinished airfield. The 1st Marine Division left San Francisco in June for New Zealand with two regiments, the First and Fifth Marines, but neither was combat-loaded. The division's third regiment, the Seventh Marines, was then garrisoning Samoa.

Initial plans called for a preparatory landing on Tulagi Island, twenty miles north of Lunga Point, to provide a secure anchorage, followed by the main assault on Guadalcanal itself. Planners did not expect the Japanese engineer, garrison, and communications troops to offer much resistance, but the threat of a strong naval and air response, followed by counter-land-

ings from troops farther up the Solomons, meant that the airfield would have to be secured quickly in order to prepare for an all-around defense against air, ground, and naval attacks. Despite the rushed planning, the initial landings succeeded with little difficulty, as the Marines secured both Tulagi and the airfield, which they rechristened Henderson Field, in honor of Major Henderson's efforts at Midway. However, the landings triggered an aggressive response by Japanese air and naval forces, which threatened

Christopher M. Rein, PhD, is a historian with the Combat Studies Institute, Army University Press, Fort Leavenworth, Kansas. He earned his doctorate in history in 2011 from the University of Kansas and is the author of one book, The North African Air Campaign, published by the University Press of Kansas in 2012, and several articles. He is a retired Air Force lieutenant colonel and served as a navigator aboard the E-8C Joint STARS during Operations Enduring Freedom and Iraqi Freedom.



(Figure by Army University Press)

Operations on Guadalcanal and the Solomons

the vulnerable transports still unloading the Marines' supplies of ammunition, food, and heavy equipment.

Vice Admiral Frank "Jack" Fletcher, commanding the carrier covering force was nervous about risking his three remaining fleet carriers within the range of Japanese land-based aircraft and elected to withdraw on the evening of 7 August, leaving a small surface force of heavy cruisers to protect the transports still littering the beachhead. On the night of 8 August, the Japanese Navy sent the first of what would become regular runs down the "Slot" between the parallel chains of islands that make up the Solomons, which became known as "Ironbottom Sound" due to the number of ships sunk there. In the night battle off Savo Island, the U.S. Navy suffered one of the worst defeats

in its history, as seven Japanese heavy cruisers sank five Allied cruisers, leaving the transports virtually unprotected. Only Admiral Mikawa's early retirement, to clear the area before dawn when aircraft would surely be searching for him, saved the transports from destruction. The American submarine *S-44* exacted the Allies' only revenge by sinking a single cruiser. Without air or naval protection, the transports retired with almost half of the Marines' supplies still aboard, including valuable radar and radio equipment. As the Army's official history noted, "The departure of the Air Support and Amphibious Forces left the 1st Marine Division alone in the Guadalcanal-Tulagi area exposed to Japanese attacks, without air cover or naval surface support."³

Without air or naval support, the Marines were indeed on their own until resupply and reinforcement convoys could break through to the island. In the meantime, the garrison supplemented their rations with captured Japanese rice, and Navy Construction Battalions (Seabees) labored to complete Henderson Field in order to help defend the island by interdicting the flow of Japanese reinforcements and supplies. At the same time, the Japanese unsuccessfully attempted to cut the flow of supplies and reinforcements to the beleaguered garrison. The Americans, with control of the air, could operate safely during the day and brought up convoys from Noumea, New Caledonia, surprisingly unopposed by Japanese submarines, which doctrinally preferred to focus their efforts against combatant ships. But at night, when darkness grounded the aircraft, the Japanese, with their penchant for night fighting, owned the waters off Guadalcanal and rushed through convoys from their base at Rabaul on New Britain to land troops on Guadalcanal. This back and forth contest continued for months, as neither side could fully secure its lines of communication, leading to a lengthy, attritional campaign fought around the airfield's perimeter.

The Japanese struck the first blow when over 1,000 men of the 28th Infantry Regiment landed just east of the Marines' perimeter on 19 August. In what became known as the "Battle of the Tenaru," Marines entrenched behind the river easily contained what was to become the first of many counterattacks against the perimeter and virtually annihilated the entire attacking force. To this point, the underwhelming Japanese effort represented a flawed understanding of just how many American troops were on the island, and the hazards of imperfect intelligence. Japanese commanders initially thought the operation was simply a raid to destroy the airfield and did not really expect the Americans to try to hold it in strength. Now fully aware of the garrison's strength, the Japanese resolved to send in a much larger force in mid-September.

The next day, 20 August, Henderson Field opened for business by welcoming nineteen F4F Wildcats of VMF-223 and twelve SBD Dauntlesses of VMSB-232 flown in off the escort carrier *Long Island*. Unwilling to risk the slow, heavily-loaded transports in contested waters, the Navy pressed its fast destroyers into service to bring in aviation fuel, bombs, and the Marine squadrons' ground crews. Aerial resupply supplemented the effort, as twin-engined R4Ds (C-47s) of Marine Air

Group 25 brought in critical commodities and evacuated the most serious medical cases. "These planes made daily flights from Espiritu Santo to Guadalcanal, usually bringing in 3,000-pound cargo loads, and evacuating sixteen litter patients per trip."

On 22 August, ships brought in the remainder of a third regiment for the 1st Marine Division, the Second Marines, to reinforce the battalion that had captured Tulagi. That same day the Army Air Forces made their first contribution when five P-400s (the export version of the P-39 Airacobra) of the 67th Fighter Squadron arrived, augmented by nine more on 27 August. The Navy's effort was not entirely planned, as dive bombers from the USS Enterprise arrived on 24 August after their carrier suffered heavy damage in the naval Battle of the Eastern Solomons. On 31 August they were joined by the Saratoga's complement after that carrier suffered torpedo damage while patrolling south of the islands. This tri-service conglomeration operated as the "CACTUS Air Force" (CACTUS was the code name for Guadalcanal), all under the direction of Marine Air Wing One, commanded by the indomitable Marine BG Roy Geiger. As one historian put it, "Marine, Navy, and Army fliers flew on missions together, lived through bombing raids together, and many died together aloft or in foxholes."5 The CACTUS Air Force provided a model for the modern employment of air power in a theater.

But heavy attrition threatened the survival of the CACTUS Air Force. After just four days, only three of the original P-400s remained. In addition, the aircraft lacked an oxygen system, limiting the fighters to operations at lower altitudes. As a result, their mission changed from air superiority to ground attack, thanks in part to the installed 37 mm cannon and six .50-caliber machine guns. Ironically, only the Marine Wildcats could reach the high altitudes where the Japanese twin-engined "Betty" bombers operated, with the result that, in a conflation of contemporary roles, Marine air performed the air superiority mission, while the Army Air Forces executed Close Air Support. The ubiquitous Marine and Navy dive bombers, which had sunk all four Japanese carriers at Midway, eclipsed the efforts of both. As the AAF's official history noted, "the dive bomber, despite its vulnerability, proved to be a deadly weapon against all types of ships within 200 miles of Henderson."6

The CACTUS Air Force came into operation at a critical time, as Japanese destroyers and transports

attempted to run in a reinforced regiment to wipe out the beachhead. These efforts precipitated the naval Battle of the Eastern Solomons on 24 August, which demonstrated that neither side yet controlled the seas around the islands. Air attacks that day prevented 1,500 Japanese troops from landing, and two days later dive bombers sank another transport with over 1,000 troops on board, and duplicated this effort by repelling another landing force embarked on destroyers two days later. Finally, on 1 September, the Japanese managed to sneak in a force of over 1,000 troops past a CACTUS Air Force weakened by daily air raids and attrition. Additional reinforcements ran down nightly in the fast destroyers of the "Tokyo Express," increasing this force to near 6,000 by mid-month, including the remainder of the Japanese 28th Infantry Regiment and the 124th Infantry of the 18th Division, all of which now posed an immediate threat to operations from Henderson Field. Fortunately, the hasty unloading had prevented the Japanese troops from bringing in any heavy weapons, and the Marines' advantage in artillery played a decisive role in the 12 to 14 September "Battle of Bloody Ridge," later renamed Edson's Ridge, for the commander of the Marines' raider battalion that held the ground during the fight. Despite being pushed back almost to the edge of the airfield, the outnumbered raiders held the perimeter and destroyed the attacking formation. The heavy fighting, combined with the high disease rates on the swampy, malarial island, depleted the Marines' ground strength, necessitating reinforcement (really replacement) on 18 September with arrival of the Seventh Marines. In addition to the combat losses, over 1,000 men had been evacuated due to debilitating disease. The reinforcement cost the Navy heavily, as on 15 September, the Japanese submarine I-19 torpedoed and sank the carrier USS Wasp while it covered the Seventh Marines' troop convoy.

The most serious threat to control of Guadalcanal came in late October, when the Japanese sent most of two divisions, the 2nd and 38th, supported by heavy 150 mm guns to the islands. Daily bombing raids flown down from Rabaul contributed to increasing cases of combat fatigue among the island's flyers. The pilots flew multiple sorties each day in aircraft that mechanics were barely able to keep in flying condition, followed by restless nights interrupted by both mosquitoes and "Washing Machine Charley," a night-raiding Japanese biplane that circled the airfield and dropped anti-personnel bombs at random

intervals. Combat losses resulted in high attrition in the CACTUS Air Force. Most of both Japanese divisions broke through the cordon in late September and early October, but the troops had to haul their heavy equipment and supplies across miles of trackless jungle before they reached the perimeter around Henderson Field.

At the same time, the 1st Marine Division was gradually reaching the limits of its endurance, as the reinforcements had barely been able to replace steady losses, most from disease, among the regiments defending the perimeter. As a result, Major General Millard Harmon, commanding all the Army forces in the theater, ordered the commitment of elements of the "Americal Division" to reinforce the Marines. Formed from three "orphaned" infantry regiments left over from the triangularization of all infantry divisions just prior to the war and shipped as reinforcements to New Caledonia, the division took its name as an abbreviation for the "American-Caledonian Division," after the island where it had been officially formed. Its three regiments were the 132nd Infantry, formerly of the Illinois National Guard's 33rd Infantry Division, the 164th Infantry from North Dakota, formerly of the 34th ID, and the 182nd Infantry from Massachusetts, formerly attached to the 26th ID. Harmon sent the 164th first, raising Guadalcanal's troop strength to roughly 23,000 men, arriving just in time to help the Marines repel a major Japanese assault.

The convoy bringing the first Americal regiment to Guadalcanal triggered another naval battle, the 11 October Battle of Cape Esperance, when the covering force engaged a substantial Japanese flotilla attempting to bring in their own ground forces. The Allies outnumbered the Japanese in cruisers by a 4-3 margin and benefitted from increased use of radar to counter the Japanese advantage in night operations, fighting them to a draw. However, both forces achieved their primary objectives, which was to escort transports carrying ground forces to the island. Over 1,000 Japanese troops landed as the naval battle raged while the men of the 164th arrived safely two days later. An inability to resolve affairs on the water meant the attritional land battle continued.

Japanese warships welcomed the 164th to Guadalcanal with what become known simply as "The Bombardment." On the night of 13 October, two Japanese battleships escorted the nightly "Tokyo Express" but, to provide some measure of safety for future runs, broke off and bombarded Henderson Field with almost 1,000 14-inch

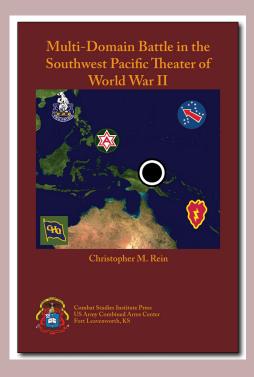
shells, knocking roughly half of the planes on the field out of commission and destroying virtually all of the CACTUS Air Force's fuel reserves, necessitating another emergency airlift by the C-47s loaded with twelve fuel drums each. For the next two nights, unopposed Japanese cruisers repeated the feat, preventing Allied aircraft from interfering with the landings. The shore bombardment of land-based aircraft was yet another creative use of cross-domain fires, whereby weapons systems designed to operate in one domain decisively influenced another. Throughout the campaign, the fortunes of the ground forces ebbed and flowed with the success or failures of supporting naval forces bringing in supplies and reinforcements. These convoys depended heavily on air protection, supplied by either carrier or ground-based aircraft. The Japanese use of heavy naval forces against land-based aircraft was an attempt to counter the Allied advantage of using their aircraft to control the maritime domain. The Marines' lack of shore-based coast artillery capable of reaching the Japanese warships prevented them from interfering with the shore bombardment or interdicting the Japanese transports, which subjected the air forces at Henderson Field to bombardment by land-based artillery as well. Each domain depended vitally on the other in order to achieve victory, as the Navy's official historian observed, "The Guadalcanal campaign is unique for variety and multiplicity of weapons employed and for coordination between sea power, ground power and air power."7

The Japanese 2nd Division finally launched their attack on the night of 24 October, again down the land feature known as Bloody Ridge, where it ran into LTC "Chesty" Puller's depleted First Battalion, Seventh Marines, supported by two battalions of the 164th Infantry. During the battle, riflemen of the Third Battalion of the 164th and the Marines of Puller's battalion of the Seventh fought intermingled, with men of both units often sharing the same fighting position. The Marines' experience in the previous attacks, bolstered by the 164th's manpower, all supported by artillery and ammunition run through the gauntlet of Japanese air and naval attacks on the island, proved decisive, as the attackers again suffered heavy casualties in unsophisticated frontal assaults.

While the land battle raged, the Imperial fleet again sortied in support and engaged a U.S. carrier force from 25 to 27 October in the air and sea "Battle of the Santa Cruz Islands." U.S. naval units included two new fast battleships, supporting two aircraft carriers with over 170 aircraft embarked, with another sixty available ashore. The Japanese sent four battleships and four carriers (including two smaller escort carriers),

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n 2016, Gen. David Perkins, then commander of U.S. Army Training and Doctrine Command, outlined a concept of future warfare that he termed multi-domain battle. The concept emphasized an expansion of the number of dimensions in which a conflict would be waged, adding the dimensions of space and cyberspace to the air, land, and sea dimensions of the prevailing model of warfare. It also emphasized that success in future conflict would very much depend on the ability of a force to closely synchronize offensive and defensive activities among those dimensions in a complementary manner that would optimize the effects of the combined efforts against an enemy. The multi-domain battle concept stimulated historical research into the roots and precedents upon which the multi-domain battle concept was built. In the monograph "Multi-Domain Battle in the Southwest Pacific Theater of World War II," scholar Christopher M. Rein illuminates historical precedents for increasingly synchronized employment of air, land, and sea capabilities during World War II in the evolution of Allied campaigns waged against Imperial Japanese forces in the Pacific. To view this monograph, please visit http://www.armyupress.army.mil/ Portals/7/combat-studies-institute/csi-books/multi-domain-battle-in-the-southwest-pacific-theater-of-world-war-II.pdf.

with over 200 aircraft augmented by another 200 at the various land bases in the theater. In what became the U.S. Navy's costliest naval battle until Okinawa, the service lost the carrier Hornet, which, fortunately, was the last fleet carrier sunk in the war, and sustained heavy damage to the Enterprise, which made another carrier air wing available for the CACTUS Air Force. The 1st Marine Division still held the airfield on Guadalcanal, but it was exhausting itself in the process. As the Army's official history summed things up: "Thus far in the campaign, Allied air and naval forces had fought valiantly, but had not yet achieved the result which is a requisite to a successful landing on a hostile island — the destruction or effective interdiction of the enemy's sea and air potential to prevent him from reinforcing his troops on the island, and to prevent him from cutting the attacker's line of communication."8

The three months of fighting, including the major assault in October, threatened to sap the four Marine regiments of their offensive strength. In November, the Americal Division's remaining two regiments arrived on the island, as well the 147th Infantry Regiment of the 37th Division (Ohio National Guard). The Marines began sending the 2nd Marine Division, whose Eighth Marines arrived with the 147th Infantry on 4 November. These reinforcements permitted limited counterattacks from the perimeter which inflicted heavy casualties on the emaciated Japanese suffering in the jungle and provided greater security. With Hawaii now safe from attack, on 3 November Harmon formally requested that the islands' garrison, the 25th Infantry Division, move to Guadalcanal as well. The 25th had been alerted for movement on 14 October but did not receive formal orders from the Joint Chiefs until 30 November. The 25th augmented the Americal Division, which was already weakened from the grinding, attritional battles and filled sickbays with North Dakotans who succumbed rapidly to the tropical environment's enervating heat and deadly diseases. Constant reinforcement became necessary just to maintain strength: "Between 19 and 25 November 117 of the 164th had been killed, and 208 had been wounded, 325 had been evacuated from the island because of wounds or illness, and 300 more men, rendered ineffective by wounds, malaria, dysentery, or neuroses, were kept in the rear areas."9

After the unsuccessful October assault on Bloody Ridge, the Japanese began to doubt their ability to wrest control of the airfield from the Americans, and realized that they were now locked in a brutal attritional battle that was draining away air and naval strength in the Solomons. Unable to disengage, they continued to harass Guadalcanal with new attacks from the jungle, air raids, and sorties of the "Tokyo Express" down "Ironbottom Sound." The increasing U.S. naval strength in the Solomons made these nightly reinforcement and harassment runs even more hazardous. On the night of 12 November, two Japanese battleships again sortied down "The Slot" hoping to damage Henderson Field sufficiently to permit eleven large transports to bring over 7,000 troops into Guadalcanal. Alerted by ever-present aerial and submarine reconnaissance, ADM Halsey dispatched a strong cruiser force to halt the Japanese and escort American ground reinforcements. The resulting engagement demonstrated that the Americans had still not won control of the seas, as the five American cruisers all suffered heavy damage, with the Atlanta sunk and the damaged Juneau later torpedoed and lost. In exchange, the cruisers heavily damaged the Japanese battleship Hiei, which aircraft from CACTUS finished off the next morning. The battle prevented the Japanese transports from reaching the island, necessitating another attempt two nights later.

This time Halsey, tired of bringing "knives to a gun fight," sent in his two modern, fast battleships, the Washington and South Dakota to oppose the Japanese battlecruisers. South Dakota contributed little and suffered heavy damage, but Washington, in one of only two battleship actions in the war, sank the battleship Kirishima, sparing Henderson another bombardment like the one it received in October. By sinking a second Japanese battleship, the force had evened the score for the two U.S. battleships lost permanently as a result of the attack on Pearl Harbor. The next day, CACTUS Air Force planes found and sank all eleven transports, but several had already beached and began unloading, allowing 4,000 troops to reach shore, minus their heavy equipment. With the Navy now committed to protecting the airfield, Japanese hopes for another assault like the one in October were dashed, and the Battle of Guadalcanal had turned a corner. The inability to safely shepherd the eleven fully-loaded transports into Guadalcanal signaled the end of Japanese efforts to overrun Henderson Field or to neutralize it from the air or sea. Cutting their losses, they began construction on a new airfield at Munda Point on the island of New Georgia, to provide an additional obstacle between the Americans and Rabaul.



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Two weeks later at the Battle of Tassafaronga, the Imperial Japanese Navy showed they still had some teeth, as destroyers equipped with the lethal "Long Lance" torpedoes savaged an American cruiser force, sinking one and damaging three more. American intelligence had remained woefully unaware of this weapon's capabilities, which far exceeded that of the faulty American torpedoes. With the ground reinforcements, the CACTUS Air Force also received additional support. By the time of the November battles, air reinforcements had arrived from Espiritu Santu, including the first long-range P-38s of the 339th Fighter Squadron, as well as three other full squadrons. The new aircraft, and the ability to produce them, highlighted the ability of industries protected from cyber espionage attack to develop new weapons, and for a public whose morale remained unaffected by intrusive information operations to support it. CACTUS now boasted a total of forty-one F4F Wildcats, thirty SBD Dauntlesses, nineteen TBF-1 Avengers, two remaining P-400s, plus the survivors of Enterprise's air wing, as well as the first coalition support when twelve Lockheed Hudsons from the Royal New Zealand Air Force's No. 3 Squadron arrived on 24 November. The force gained a longer range bombardment capability in late December with the AAF's first B-26s.10

The following month, lead elements of the 25th Division relieved the weary Marines. As Vandegrift's divisional headquarters now controlled two full divisions' worth of troops, the Army sent LTG Alexander Patch's new XIV Corps to direct the battle. When activated on 22 January 1943 with three full divisions, the corps controlled over 50,000 troops, a testament to the American ability to build up combat strength in theater, due largely to control of the air and the sea lines of communication. Patch's corps had the full Americal Division and benefitted from almost weekly arrivals along his now unhindered supply line. The 25th Division's 35th RCT arrived on 17 December, followed by the 27th on 1 January 1943 and the 2nd Marine Division's Sixth Marines on 4 January to augment the Second and Eighth Marines

already on the island. The same convoys bringing in the fresh soldiers evacuated the spent marines, with the Fifth Marines leaving on 9 December, the First Marines on 22 December, and the Seventh Marines on 5 January 1943.

Japanese planners realized they could no longer sustain their forces on Guadalcanal and began planning an evacuation. However, they would sell the real estate they held as dearly as they could, particularly the high ground around Mount Austen, which provided observation of Henderson Field and the new airstrips being carved out of the growing perimeter. Assigning the Americal Division to hold the perimeter itself, Patch launched a two-division assault against the Japanese forces to the west, with the 2nd Marine Division advancing along the coast and the 25th clearing Mount Austen and a hill complex, known as the "Galloping Horse" from its appearance on aerial photos, further inland. XIV Corps' assault received support from the CACTUS Air Force, now known as AirSols (Air Force, Solomons), under the direction of the 2nd Marine Air Wing. In mid-January, the AAF established 13th Air Force at Noumea, New Caledonia, to coordinate its growing commitment. The ad hoc formations thrown together during the crisis of the initial battle were finally being formalized, sorted out, and reinforced.

In an attack that began on 10 January, the 27th RCT cleared the Japanese defenders from the slopes, including a stubborn pocket known as the "Gifu" after the defenders' home prefecture in Japan. Moving on to the "Galloping Horse," the 25th found logistics, rather than the Japanese, to be their biggest obstacle. At one point, a water shortage, in the words of a platoon leader in the 27th Regiment, "led directly to the disintegration of the attack on 11 January," in part because, "the water which did start forward was usually consumed before it reached the front line companies."11 As a student in the Infantry School in 1947, Captain Winston Olson recalled, "the intense tropical heat was taking a heavy toll. Canteens were empty and heat exhaustion was sweeping the battalion ... the men lay prostrate due to the lack of water."12 As late

as 2008, water shortages continued to hinder operations in places as far away as Wanat in Afghanistan.¹³ Airdrops attempted to remedy the deficiency, even pressing the Air Force's heavy bombers into duty. "On 13 January one B-17 dropped 7,000 pounds in four flights, and two days later another dropped four tons. Rations stood the rough treatment fairly well; 85 percent of the food was usable, but only 15 percent of the ammunition could be used, and nearly all the 5-gallon water cans were ruined."¹⁴

Ground forces suffered fearfully throughout the campaign. Combat, disease, malnutrition, war neurosis, fungal infections, dysentery, and a host of other maladies crippled fighting strength. Again, the American ability to sustain and replace losses, and deny the same to the enemy, provided the margin of victory, giving the 25th ID an advantage it was able to exploit in the battle's final month. "The Japanese troops lacked food because air and naval power had almost completely isolated them from their bases."15 As General Miyazaki declared: "The superiority and continuous activity of the American air force was responsible for our inability to carry out our plans. The superiority of American Army [sic] planes made the seas safe for American movement in any direction and at the same time immobilized the Japanese Army as if it were bound hand and foot."16

With the terrain features secured, the 25th ID and 2nd Marine Division pressed forward towards Cape Esperance on the island's western tip. Using small craft that snuck in under the cover of darkness, the Japanese evacuated their entire garrison of 11,000 troops on the nights of 1, 4, and 7 February. Operating on a logistical shoestring, the defenders could offer only token resistance, and the 25th's rapid advance earned the division

the radio call-sign "Lightning," which would be later immortalized both on the division's patch flash and as the division commander's nickname, "Lightning Joe" Collins.

The Japanese experience on Guadalcanal demonstrates that an anti-access, area denial strategy can lead to attritional battles, and the side that can best sustain itself and replace its losses will ultimately prevail. The campaign cost the U.S. Navy two fleet carriers, the same number lost in the battles of Midway and Coral Sea combined. Both navies contributed heavily to the wrecks lining "Ironbottom Sound," with the U.S. Navy contributing over twenty major warships to the ghost fleet on the seafloor, alongside over a dozen from the Imperial Japanese Navy. Neither side could maintain more than a few hundred aircraft in theater. New arrivals quickly became casualties, either in air-to-air action, through mishaps, or by being destroyed on the ground. While the Marine infantryman became the iconic figure of the Battle for Guadalcanal, immortalized in works such as Eugene Sledge's With the Old Breed and Richard Tresgaskis' Guadalcanal Diary, his fate, and that of the soldiers of the Americal and 25th Divisions, often rested in the hands of the aviators, who suffered many of the same trials and tribulations on the ground, but faced additional perils in the air. Marine fighter and dive bomber squadrons formed the bulk of the "CACTUS Air Force" throughout its existence, and their efforts determined if the ground forces faced an overwhelming number of well-supplied attackers or the sick and diseased survivors of a harrowing trek through the tropical jungles and swamps. Control of each domain: land, sea, and air, coupled with information superiority, economic strength, and the ability to deploy and sustain it all provided the final margin of victory on Guadalcanal.

Notes

^{1.} For a full accounting of the battle, including a detailed timeline, see Jonathan Parshall and Anthony Tully, *Shattered Sword: The Untold Story of the Battle of Midway* (Washington, DC: Potomac, 2005).

^{2.} Wesley Craven and James Cate, The Army Air Forces in World War II, vol. 4, The Pacific: Guadalcanal to Saipan: August 1942 to July 1944 (Chicago: University of Chicago Press, 1950), 29.

^{3.} John Miller Jr., Guadalcanal: The First Offensive, United States Army in World War II: The War I the Pacific (Washington, DC: Office of the Chief of Military History, 1949), 81.

⁴ Ibid 87

^{5.} Samuel Eliot Morison, History of United States Naval Operations in World War II, vol. 5, The Struggle for Guadalcanal, August 1942-February 1943 (Chicago: Little Brown, 1949), 75.

^{6.} Craven and Cate, The Army Air Forces in World War II, 91.

^{7.} Morison, History of United States Naval Operations in World War II, vol. 5, ix. 8. Miller, Guadalcanal, 169.

^{9.} Ibid., 209

^{10.} Craven and Cate, The Army Air Forces in World War II, 59.

^{11.} Captain Winston L. Olson, "The Operations of the 27th Infantry (25th Infantry Division) on Guadalcanal, Solomon Islands 10 January 1943 – 13 January 1943: Personal Experience of a Rifle Platoon Leader" (unpublished manuscript, Donovan Research Library, Fort Benning, Georgia, 1947–1948), 16, 19, 25, accessed 23 May 2017, https://www.benning.army.mil/library/content/Virtual/Donovanpapers/wwii/STUP2/OlsonWinstonL%20%20CPT.pdf.

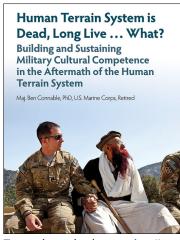
^{12.} Olson, "The Operations of the 27th Infantry," 16, 19, 25.

^{13.} U.S. Army, Combat Studies Institute, Wanat: Combat Action in Afghanistan, 2008 (Fort Leavenworth, KS: Combat Studies Institute, 2010), 91, 108–10, accessed 23 May 2017, http://usacac.army.mil/cac2/cgsc/carl/download/csipubs/Wanat.pdf.

^{14.} Miller, Guadalcanal, 289.

^{15.} Ibid., 230.

^{16.} lbid., 337.



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LETTER TO THE EDITOR

Response to Maj. Ben Connable's "Human Terrain System is Dead, Long Live ... What"

(Military Review, January-February 2018)

s a veteran of both the Human Terrain System (Forward Operating Base Salerno, AF 2008) and the Army's now also defunct Culture and Foreign Language Program (Maneuver Center of Excellence, Fort Benning 2010–12), I was glad to see Dr. Connable's conclusions concerning the need for organic cultural competence within the Army.

Current serving officers and enlisted men have a wealth of cultural knowledge, but the Army lacks a coherent structure and strategy to build cultural competence in new soldiers and a structure in which culturally competent operators can enhance our efforts around the world.

Culture is not only useful at the asymmetric warfare level and the conventional level but throughout the range of military operations and at the national strategic level also. To quote the demigod Clausewitz,

The first, the supreme, the most far-reaching act of judgment that the statesman and Commander have to make is to establish ... the kind of war on which they are embarking: neither mistaking it for, nor trying to turn it into, something that is alien to its nature. This is the first of all strategic questions and the most comprehensive.

Without a serious holistic understanding of a particular situation including cultural considerations, decision-makers will commit disastrous errors on a strategic

scale, just as a squad leader can make everyone's situation worse by insulting indigenous peoples. I would suggest that had we understood the cultural dynamics between the Shia and Sunni, we would never have invaded Iraq, and Iran would never have been as influential as it is today.

Fine, but what do we do now? We should not try to rebuild another program "in flight" or managed by a private company like BAE. The Army War College, along with a small cadre of experts, should be tasked with conducting a series of workshops starting with Maj. Connable's dyads, with the goal of creating an organic Army Cultural Team, probably with a cadre of military and civilian experts and housed in Army Special Operations. This series of workshops might be modeled on the "Human Elements of Military Operations" workshop held in January 2015 at the War College. These workshops would be limited to fifteen participants including a representative of the Marine Corps. This effort will need to have a sponsor at the highest levels of the Army.

Ultimately, a model for a new socio-cultural-political-intelligence entity that can truly influence the military decision-making process at all levels could emerge, and the Army's culture gap problem be mitigated.

Dr. Ronald L. Holt · Anthropology Weber State University · Ogden, Utah