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SIGNAL EXPLOITS OF THE CIVIL WAR

The wonders wrought by flagging in the seacoast campaigns

There was no Signal Corps when the Civil War began, but there were half a dozen signalmen, and by the midsummer of 1861 there may have been as many as half a hundred. Officers and flagmen alike, they had all been trained, more or less personally, by Major Albert J. Myer, who on 21 June 1860 had become the Army's first Signal Officer.

Nor was there in the summer of 1861 such a thing as signal doctrine- for the experience that breeds doctrine had yet to been countered in combat. Accordingly, those early signalmen sallied forth very much as did the knights- errant of old. In general, every signal officer was a free lance,

out to make his mark, out to show what he could do. Myer had told them again and again, dinning the admonition in to their ears, that they "must let no opportunity pass" to demonstrate to the combat commanders the value of a professional signal service; and history records that they did, in fact, make the most of all such opportunities- some of which they had taken the trouble to invent.

There had been that first crude impression, enraging to Myer, that signaling could be dismissed as so much "contemptible flag-waving"; and there was now an answering surge of defiance, and pride, among the signalmen, whose first thought, understandably, was to earn the respect of the Army by delivering a greater service than the combat commanders had been led to expect or had even thought possible.

But almost at once there was a pause- and a thrilling realization that nobody, not even Myer, had the faintest idea how great that service could really be. It was a rousing thought. And it led them, no doubt a little vaguely at times, to explore the unsuspected possibilities of the signal service. That effort comes to light especially in the work of the signalmen who took part in the seacoast campaigns. It was a memorable work, rich with new discoveries; and one is inclined to rank their achievement high in the history of U. S. Army signals. But let's not sing their praises here. As fellow signalmen, let's turn a page or two of the history book and see—

1

The blockade of all Confederate seaports had been declared in April, a few days after the firing on Fort Sumter. In June the *Army and Navy* staffs agreed that, to make the blockade effective, it would first be necessary to establish naval bases and coaling stations at points along the Southern coast below Cape Hatteras. And in the August of 1861, a few weeks after Bull Run, the first of several joint Army-Navy expeditions was organized and made ready to sail, under the command of General Benjamin F. Butler.

But it was Butler who on 12 June had sent the first signalmen to the aid of the gunners at Fort Wool; and he had been impressed, on that occasion, by the practical results of their work under fire. Signalmen, accordingly, stood high in Butler's esteem, and signalmen were assigned to accompany the first expedition and all the expeditions that would follow-dozens of signalmen, as fast as they could be trained.

First of the expeditions was to Hatteras Inlet, a deep-water passageway to Pamlico Sound and to a regular system of island harbors off the coast of North Carolina. Fort Clark and Fort Hatteras defended the inlet, and General Butler led against them a force of seven fighting ships and 900 troops aboard three transports. All ten vessels sailed from Fort Monroe

on 26 August. Lieutenant John H. Quackenbush was in charge of the signal party, and Lieutenant William S. Andrews, another member of Myer's original class at Fort Monroe, was second in command.

The naval commander, Flag Officer Silas Stringham, began the bombardment at 1000 hours on 28 August, and just before noon Fort Clark was silenced. Immediately, then, a few men were landed in heavy seas, amid a rising storm; and among the first ashore were Quackenbush and his flagmen. They established touch with Andrews and his flagmen, who remained afloat; and thereafter the troop landings were directed by flag telegraphy till the increasing power of the storm made further landings impossible.

At nightfall the fleet, now battling the storm, withdrew to sea. At daybreak of 29 August, however, the gunboats were again close in to shore. Andrews relayed new orders to the force of 300 troops already on the beachhead. Presently the naval gunners reopened fire on Fort Hatteras, and Quackenbush and his men became, in effect, the first joint fire direction party in the history of modern warfare. By noon this fort also had been battered into submission, and the Union forces had not only established a foothold in the South, they had captured control of the best sea entrance to the inland waterways of North Carolina.

2

The success achieved at Hatteras Inlet inspired the more ambitious attack on Port Royal Bay, South Carolina, by a joint expedition under the command of Brigadier General Thomas W. Sherman. For this operation a fleet of 16 naval vessels and nearly 40 transports was assembled in October under the guns of Fort Monroe -and therefore under the eyes of a never sleeping force of Confederate signalmen; for Monroe, at the tip of the Yorktown peninsula, was closed in completely, on the landward side, by Confederate soil. The transports, when all is said, were a grotesque lot of paddle-wheelers and freighters, river steamboats, converted ferryboats, and sailing vessels. Irreverent observers on the Confederate side dismissed them as "Abe Lincoln's soap-box navy," but for all that, they carried 12,000 troops.

They sailed from Fort Monroe in heavy weather on 29 October; and not even Sherman knew the objective till he broke the seals and read the orders after passing beyond the sight of land. Off Cape Hatteras on 1 November they were driven and battered by a violent storm. Three of the vessels sank. A fourth was driven ashore, where the few survivors were taken prisoner. Three other vessels -a warship and two transports-found the going too hard and, disabled, made their way back to Fort Monroe. And the fleet as a whole was scattered over a great expanse of ocean.

On seven of the vessels, however, were seven Army signal officers and 14 Army flagmen, all 21 of them graduates of Myer's training courses. Their primary mission afloat was to maintain Communication between the transport Atlantic, General Sherman's headquarters, and the U.S.S. Wabash, flagship of the naval commander, Captain S. F. Dupont. But in the end these Army signalmen also kept the scattered elements of the fleet together. To prevent their being washed overboard as mountainous seas crashed over the decks, Army flagmen were lashed to the wheelhouses of the ships; and their work under such conditions impressed the naval officers in particular.

The expedition -or what was left of it -arrived off Port Royal Bay on 6 November, badly shaken and with most of its provisions lost. Three Confederate gunboats came boldly to the attack, but ten or twelve of the Union warships stood between them and the transports, and the Confederate ships, so far outnumbered, were driven back to the waters beyond Parris Island.

In addition to various earthworks and shore batteries, two heavily constructed forts commanded the entrance to the bay, facing each other across the intervening two-and-one-half miles of water and facing also toward the sea. At the northern point of Hilton Head Island was Fort Walker. At the southern tip of Saint Philip's Island was Fort Beauregard. Both forts were garrisoned by nearly 3,000 men, and between them they mounted 42 heavy guns. Positioned and armed as they were, they were capable of bringing the attackers under a very long and heavy cross-fire.

In blazing defiance of the Confederate capability, Dupont -with Army signalmen aboard his warships -began the attack at 0900 hours on 7 November by leading a column of ships, flanked by a column of gunboats, in slow procession between the forts and two miles up the bay. There he detached the gunboats and posted them to intercept attack by the Confederate vessels and, meanwhile, to concentrate a continuous fire upon Fort Beauregard from its undefended landward side. Then he led his heavy ships downstream again, between the forts a second time - again receiving a heavy fire from two sides and again replying, in smooth succession, with rapid broadsides. And all through this maneuver, penetrating the harbor and passing out to sea again, the Army signalmen relayed the orders from ship to ship -while others, aboard the offshore transports, kept watch for a fourth Confederate gunboat which had been reported slipping out to sea.



Disaster enroute to Port Royal Bay

Dupont led his column of ships in and out of the harbor a second time, and was entering a third time, for his fifth pass between the forts, when it was discovered, at 1400 hours, that the Confederates were abandoning Fort Walker. At 1700 hours, the Confederates on the opposite shore abandoned Fort Beauregard, after lighting a fuse that minutes later blew up the powder magazine and shattered what was left of the fort.

Then the transports came into the safety of the harbor, and before dark the first landing had been made on the southerly island of Hilton Head. Again the signalmen, officers and flagmen, were among the first to hit the beach; and this was true once more when, early the next day, troops were landed on the northerly island of Saint Philip's. One after another, then, the other islands were taken over: Pritchard's Island, Fripp's Island, Helena Island, Wilkins Island, Ladies' Island, Parris Island, Port Royal Island, and all the rest. Port Royal Bay lay at the heart of a regular spider's web of inland waterways that separated a considerable cluster of islands from the mainland and from one another.

When the town of Beaufort was occupied on Port Royal Island on 11 December, the signalmen set up a chain of relay stations between that point and the Army landing force headquarters on Hilton Head; and before the close of December they also had a line of relay stations operating along the landward edges of the islands. Orders and messages of every kind were passed along that line, and the signal stations served also as lookout posts. The signalmen on duty there kept the islands in almost instant touch with Army headquarters, and at the same time they kept watch against the possibility of a Confederate counterattack from the mainland.

As the campaign to close the Southern seaports was kept moving forward, the signalmen at Fort Monroe had continued training other signalmen, and ever more signalmen assigned to the Army-Navy joint expeditions had been discovering ever more ways of contributing, through sheer push and self-assertiveness no less than skill, to the effectiveness of combat operations.

Since Bull Run, there had been no major battles on land; and one of the most important results of the seacoast campaign had been to alleviate the deep spiritual depression, the sense of final defeat, to which the Bull Run disaster had given rise throughout the North. In particular, the seizure of Port Royal Bay and its surrounding islands had had a marked effect in raising Northern morale.

From the military point of view, the victory at Port Royal Bay gave the Union Army, as another base for future joint operation, one of the finest harbors along the Atlantic coast. What was more, this new beachhead lay 56 miles below Charleston and only 25 miles north of Savannah.

The Confederates were less than complacent about the fall of Port Royal Bay, and presently the signalmen atop their watch towers reported the build-up of a stronghold at Port Royal Ferry, on the mainland across the Coosaw river from Port Royal Island. This was a field-work defended by a force of considerable strength; and to reduce it, a joint land and naval expedition was set on foot. Gunboats, moving through the network of rivers and sounds, entered the Coosaw above Port Royal Ferry, and early on the New Year's Day of 1862, at a point below the town, a landing force of 3,000 men was ferried across the river.

In this latter operation, the first man ashore was a signal officer, Lieutenant Henry S. Tafft, who at once established communication with Lieutenant William S. Cogswell aboard the several-miles-distant U.S.S. Ottawa. And what the result of this would be the Confederate commander was quick to realize; for he set a whole battery of his artillery gunning for Tafft and his two flagmen. All three of the signalmen came through unharmed, however, and -thanks to their services -the commanding general ashore was able to lay the fire from the gunboats upon the targets with a previously unheard of precision and accuracy. Some of the targets the gunners could not even see.

Nor was the point and value of all this lost upon the commanding officers. Immediately after these exploit the commander of the flagship wrote: "Lieutenant Cogswell ...furnished me with the means of constantly communicating with General Stevens, with a facility and rapidity unknown to the naval services. I take this opportunity of recommending

that the code of signals invented by Major Myer be at once introduced into the Navy." That was a very high tribute to Army signaling; and presently -as a result, perhaps, of this recommendation -training in the use of Army signals was introduced in the United States Naval Academy.

A more important result of the battle was that it gave the Union forces one more success in the war that had begun so badly for the Union cause. It gave the Union forces their first foothold on the mainland of a Confederate State.

4

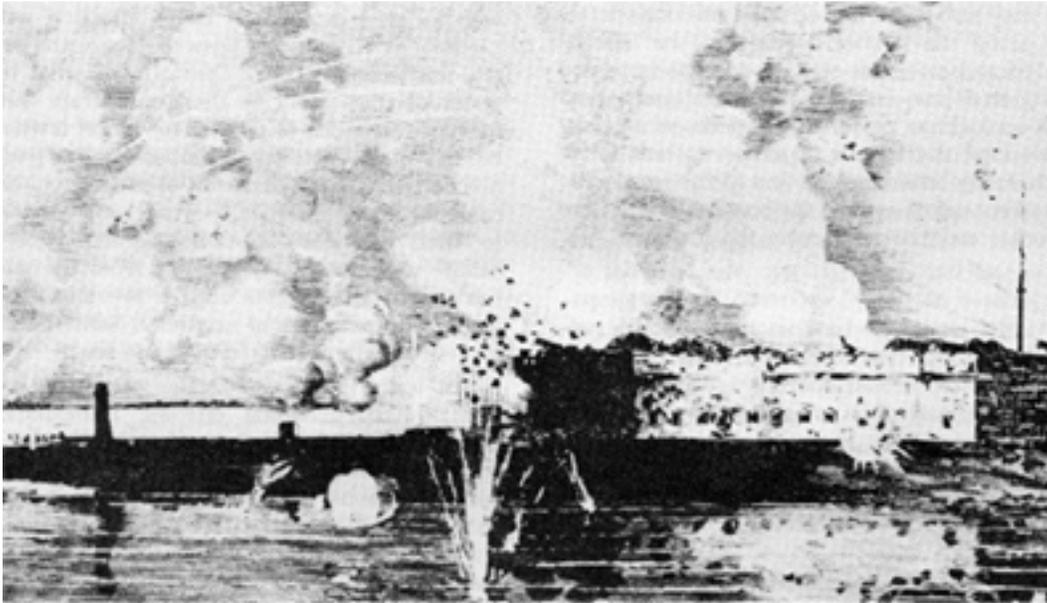
Meanwhile, on 29 November 1861, Captain Quincy A. Gillmore of the Corps of Engineers was ordered to reconnoiter Fort Pulaski, which commanded the mouth of the Savannah river, defending the greatest cotton port in the world and sheltering a huge fleet of blockade-runners and Confederate corsairs. On 1 December Gillmore reported that the fort -mounting 48 heavy guns-could be reduced by land batteries firing at a range of 1,700 yards, just a few feet short of a mile; and this was an astounding claim, since all the military authorities of Europe were agreed that artillery fire at a range exceeding 1,300 yards could not be effective against a permanent work. The brick walls of Fort Pulaski rose 25 feet above the high-water line and at the top were seven-and-one-half feet thick.

But though he promised so much more than prudence might have dictated, Gillmore was taken at his word; and under cover of darkness on different nights in February, 1862, troops were slipped ashore a little to the southeast of the fort on Tybee Island, a mud-marsh overgrown with swamp grasses towering eight or nine feet high. For the next several weeks the troops lay low by day, concealed from view by the high grasses. By night they built gun platforms in the mud and constructed causeways to get the heavy rifled guns and the eight-and-one half-ton mortars to their prearranged positions. Before the close of March, as all this work was nearing completion, Colonel A. H. Terry took command of the operation, and the Confederate commander of the fort was obviously still unaware the landings had taken place.

By 9 April eleven batteries of artillery were in position and ready to fire. The three main breaching batteries were, as Gillmore had estimated, 1,700 yards from the fort, and the eight supporting batteries were at distances varying from 1,650 yards to 3,400.

At sunrise on 10 April, Terry revealed his presence and called for a surrender. He got a good American reply: The Confederate commander was there "to defend the fort, not to surrender it." At 0800 hours Terry gave the word, his main batteries began the bombardment, within the next hour thirty-six siege guns were pounding at the fort, and nine

signalmen were directing their fire and at the same time maintaining communication between the batteries and Colonel Terry's headquarters.



The bombardment of Fort Pulaski

Three of the signalmen were lieutenants -Edward J. Keenan, George H. Hill, and O. H. Howard. They and their six flagmen carried on from first to last under a heavy answering fire from the fort, and they laid the Union guns upon a single point of the wall with such precision that, within twenty-four hours, in spite of all the authorities, the wall collapsed.

At 1400 hours on 11 April the fort surrendered; and presently the Union forces, closing the breach and generally reinforcing the walls, were in a position to bottle up in the harbor the principal merchant fleet of the Confederacy. That fleet represented the Confederacy's chief link with Europe, her chief supply line and -to an extent that no Southerner dared to think of at the time -her life line.

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Meanwhile, as the Fort Pulaski operations were developing, the beachheads farther north were being expanded. Out of the victory at Hatteras Inlet, for example, came the creation of the Department of North Carolina, which, for the first seven months of 1862, was commanded by Brigadier General Ambrose Everett Burnside. Burnside established his headquarters on Hatteras, and from that island base he mounted campaigns that resulted in the capture of Roanoke Island, the occupation of New Bern on the mainland, and the reduction of Fort Beaufort, also on the mainland of North Carolina.

All of these campaigns were made notable by General Burnside's respect for signaling. For example, in December of 1861, prior to his departure for Roanoke Island, he requisitioned 25 signal officers and 50 flagmen. No such numbers of signalmen were available at the time, and Major Myer's office in Washington had too little money even to equip so many. The office had, in fact, less than \$209, the bulk of which had already been committed for other purposes. Myer made the most of things, however, by shipping to Burnside's temporary headquarters at Annapolis all the new and second-hand flags and torches he could lay hands on, and by sending to Annapolis three signal officers and six flagmen with orders to train all the signalmen Burnside wanted.

At Annapolis, then, the required 25 officers and 50 flagmen, selected from Burnside's own command, were placed under three weeks' intensive training -and the experiment succeeded. The newly qualified signalmen were then crowded onto a tiny schooner, which kept a rendezvous with Burnside's task force at Fort Monroe.

Burnside's task force -again the Army man was the over all commander of a joint Army -Navy expedition -consisted of 20 naval vessels carrying 60 or more guns and a "soapbox" fleet of 80 supply ships and transports carrying 12,000 troops. They sailed on the night of 11 January 1862, and like General Sherman's expedition, they were battered by furious storms. They were driven far out to sea, several of the ships were sunk with heavy losses of life, and the expedition was three weeks in reaching its objective. Then, out of the 100 ships that sailed, only 65 were present for the attack.

The bombardment of the Confederate positions on the west coast of Roanoke Island began at the dawn of 7 February. By nightfall of that same day the naval gunners had silenced the batteries defending Ashby's Harbor; and early next morning, just before daybreak, the schooner arrived with her 75 signalmen. They were rushed into action without breakfast, without even time for "a dish of tea." Burnside was landing 8,000 troops under cover of a naval curtain-fire -what later generations would come to know as a barrage -and it was not by accident that the first man to hit the beach was a signal officer. By this time it was standard practice to get the signal flags waving at the earliest possible moment.

At Roanoke Island, however, Lieutenant W. F. Draper landed without flags or flagmen. He was able, though, to improvise a flag, and from a high point where he stood exposed to the fire of Confederate sharpshooters, he made contact with Army signalmen afloat. He reported to the transports the arrival of their boats, and a few hours later he stopped the firing of a gunboat whose shells were falling among the

Union troops on the beachhead. This was the first occasion on which Army signaling saved the lives of men caught in their own gunfire.

6

The victory at Roanoke Island was followed by the capture of New Bern and Moorehead City on the mainland. In these operations the work of the signalmen had been reduced almost to a routine -expert, remarkably effective, and almost commonplace. For a moment it seemed as if the flagmen, as they became more and more efficient, were moving steadily out of the limelight.

But after New Bern and Moorehead City came the capture of Beaufort, also in North Carolina, and the fall of Beaufort was followed by the attack on Fort Macon, which commanded Beaufort Harbor. This operation was in the hands of Brigadier General John G. Parke, who proceeded to surround the fort, cutting off its communications and placing eleven siege-guns in position around the landward sides. In the harbor, four Union gunboats completed the ring, and the plan of action called for joint assault.

The fort would not be taken easily. It was heavily constructed of brick and stone, and it mounted nearly 50 heavy guns.

The attack began at 0540 hours on 25 April; and before the operation had progressed far, an Army signal officer, Lieutenant Andrews -the same William S. Andrews who had taken part in the attack on Fort Hatteras seven months earlier -took a position whence he and his flagmen commanded the attention of all four ships and all the Army gunners. On his own responsibility, then, he undertook the task of directing their fire. He corrected the range of guns by as much as 100 yards, and by 1200 hours he had every shell, without exception, falling in or on the fort. The bombardment continued for four-hours after that. The fort surrendered at 1600 hours. And the damage inflicted in those four hours was equal to the damage wrought normally by a continuous bombardment lasting 24 hours. The histories of war were ransacked in vain for a parallel; it was concluded that never before had guns been laid so accurately upon a target.

A formula was suggested: in the right conditions, signaling can multiply by six the effectiveness of artillery fire.

So far the history book -and yet there's a bit, from later sources, that may properly be added to it.

In no other campaigns of the Civil War, apparently, did the signalmen learn quite so much about the art of signaling and about the variety of services to which it could be put. In no other campaigns was the immense value of signaling so clearly vindicated. And the story, filtering through the Washington office of Major Myer, found its way slowly to the ears of signalmen throughout the Union armies.

To this it may be added, as a kind of footnote, that the Confederate forces drew from the experience what for a time appeared to be the handsomer profit; for Confederate signalmen, equipped with field glasses, lay concealed in the tall grasses of the swampy mainland opposite that chain of relay stations that stretched from Beaufort to Hilton Head. In brief order they broke the code the Union signalmen were using. They set up a system of relay stations of their own -but kept it secret. They intercepted all the messages of the Union commander at Hilton Head, and flagged them back, with admirable promptness and dispatch, to the headquarters of their own combat commander.

It was so that signaling produced its first great effect upon Confederate tactics. In every situation, the reading of Union army signals became an ever-present source of combat intelligence -till the day when Fighting Joe Hooker in an outburst of anger announced his own private suspicion that the Confederates could read his combat orders better than his own people could. That was at Fredericksburg in the closing weeks of 1862.

In the end, however, all these are details. The broad historic truth is that the story of the coastal campaigns was enriched by the initiative and daring of signalmen who never knew, till they tried, what a signalman could really do in support of the combat arms.

