



Official Newsletter of the Michigan Company of Military Historians & Collectors
September 12, 2016

“Under ordinary circumstances the Federal Army should have been destroyed.” General Robert E. Lee, July 4, 1863, Gettysburg, Pennsylvania.

“...to follow them (the enemy people) to their inmost recesses, and make them fear and dread us. ‘Fear is the beginning of Wisdom.’” General William Sherman, November 14, 1864, note to Grant prior to his march through Georgia.

“Surprise is the most vital element for success in war.” Douglas MacArthur

“In case opportunity for destruction of major portion of the enemy fleet is offered or can be created, such destruction becomes the primary task.” Chester W. Nimitz

“The advent of air power, which can go straight to the vital centers and either neutralize or destroy them, has put a completely new complexion on the old system of making war. It is now realized that the hostile main army in the field is a false objective, and the real objectives are the vital centers.” William Mitchell, **Skyways: A Book On Modern Aeronautics**, 1930

Our August speaker will be James Smither, PhD., History professor at GVSU and founder of the Veterans History Project. Dr. Smither will present highlights of WWII veteran John Pahl's exciting and varied service in the China/Burma/India Theater.

MEETINGS take place the second Monday of every month at the **Riverfront Hotel Grand Rapids** 270 Ann St NW, Grand Rapids, MI 49504 (616) 363-9001. Socializing begins at 6:00 (1800 hrs), dinner at 7:00 (1900 hrs), business meeting 7:15 (1915 hrs), and program at 8:00 (2000 hrs).

GENERAL STAFF
OFFICERS OF THE
COMPANY

- Commandant - Bruce Whitman
- Executive Officer - Fern O'Beshaw
- Adjutant - Gregg Metternich
- Judge Advocate - Jay Stone
- Mess Officer - Mike Krushinsky
- Sgt-at-Arms - Richard Foster
- Editor Cannon Report - Kingman Davis
- Editor Emeritus - Jose Amoros
- Open Mess Chairman - Jay Stone
- Membership - Kinman Davis

Military Notes

- ◆ **Three guests have met the requirements for admittance to our Company: Carl Conrad, Alex Decess, and Carl Walters. If there are any objections see me before the next meeting. Approval is by voice acclamation.**
- ◆ **The USS Zumwalt, the new space age destroyer left Bath Iron Works on September 7, the 50th anniversary of *Star Trek*, headed to its commissioning ceremony on October 15 in Baltimore. The ship is command by Captain James Kirk.**

The editorial opinions and articles in *The Cannon Report* do not represent any official position of the Michigan Company of Military Historians and Collectors (MCMH&C) only the opinions of the editor. The MCMH&C is a non-partisan, non-ideological association. All members are welcome to submit material, letters, “For the Good of the Company items”, etc. Direct inquiries or comments to kuziaks@me.com

Humping the Boonies



Courtesy of VVA Chapter 67; Media, PA, sent by George Edward Brown. Served with "A" TROOP, 2/17 CAVALRY, 1 BRIGADE(SEPARATE), 101 AIRBORNE DIVISION, II CORP VIETNAM 6/66 - 1/68

Regardless of your unit, time or location, if you were a Grunt, you humped the bush. Marines and Army—Same Same GI. You Semper Fi me Salem? You were issued a bunch of stuff, you put it together. Now the ammo, chow, water, heat tabs, E Tool, K Bar, pro mask—keep the cover, ditch the mask. C rats in socks, everything else in the ruck.

Some extra stuff because the squad leader said so. Smoke, C4, det cord, mortar ammo, spare batteries, a couple of belts of M60, claymores, flares, trips, pyro, hand-held signal. Whatever—you figured out where to put it. Dry season adds some five quarts.

Five magazines for each pouch with one on the lid. Six grenades-attached with c-rat wire to the pouch. Watch how the old guys do it. Each mag upside down alternating corners. Easier to grab.

Black gloves. I have eight extra magazines at the bottom—just in case. Three LRRP rations. I scrounged—

just in case. Extra old style poncho. Two in the monsoon.

Real toilet paper, extra field dressing, a Hugh Hefner special in a plastic bag. Foot powder. Hot sauce. Slim Jim's. Shaving cream. Spare Drive On rag. OD Towel. Minolta SRT 101, couple of rolls of film, a paperback, Betadyne solution. Pen, paper, smokes. Transistor. Ear piece. Rubber bag with shirt, jungle sweater, poncho liner, socks, Machete.

God it's heavy. No underwear. That lightens it up a bunch. A folded C rat carton on the back covers the hard parts. Some foam on the shoulder strap fixed with 100 mile an hour tape helps. Not much. GI towel around the neck soaks the sweat and keeps the dog tag chain from cutting. A little bit. How fast it gets totally soaked. Hardly noticed.

It hurts... Try not to think. Just move. When I hump sometimes it's vertical. Sometimes horizontal. Open and too open. Tight jungle—can't see shit. Sometimes too much. It's totally shade but still so hot. How is that? It's all open. Rice paddy is way too far from that wood line. Bet that's where they are at... Yes... Shit.

How can dirt be so greasy? I'm walking on my knees. God it hurts. Every time I move, the damn thing bounces off my back. How many more clicks? Don't make a shit. The instant relief when you sit down and rest against the ruck for a moment. The pain and twisting when the ruck slides around to your side as you are fighting to get some foothold up the greasy mountain—one branch pull at a time.

I can see the world from here. How did we make that? Move? Does anyone know what they are doing? This is *Foxtrot Uniform*. The moment of agony when you put it back on. Deep knee bend. Swing one arm under a strap. Swing. Repeat. Rest both arms on your bent knees until move out. My weapon is almost an after thought. It's cutting my shoulders in half.

The momentary relief and feeling of security when you rest behind the ruck with the M16 on top as the perimeter is formed. The five quart banging the back of your helmet as you tilt your head back to glimpse the chopper. The dry season is a bitch. Always running out. The bird overhead with all the spitshines on board. Come here for an hour and then tell us how slow we are.



The ruck sliding over your head as you bend down to catch water in your canteen from the stream. Hurry your ass troop... The momentary relief when you quickly drop your ruck at the beginning of a fire fight. Can't lose it. The damn trees all look the same.

After, the relief in finding it. If it still hurts me to hump it, I'm alive. It's a lot lighter on the fourth day. Squeezes the life out of you when you suddenly hit the deck in an instantaneous fire fight.

The grenades—did they fall off? Oh Shit. Its OK. They are still there. I have the bruise on my belly to prove it.

How cold you get when you rest as the darkness falls. Do we evac the rucks with the WIA's? The dinks may get them. Figured out how to combat load my stuff so all I have to do is reach here and pull out what I want. Always room for fruit. Whatever you are issued, it will be filled.

I'm a turtle. Its my house. No one home will understand.

The Forgotten Veteran (cont.)

This is a continuation of a synopsis derived from **The Wages of War** by Richard Severo and Lewis Milford. The 19th century with its three major conflicts (War of 1812, the Civil War and the Spanish-American War) saw veterans being further disregarded and ignored after their service. Supreme Court Justice Oliver Wendell Holmes summed up the attitudes carried by many civilians that “it was quite beautiful of see a soldier ‘throw away his life’ out of duty to his country, even if he did not understand what it was all about.” At the conclusion of WWI Congress saw the need for the creation of hospitals and rehabilitation camps to care for the more than 200,000 veterans who had survived the war but were left damaged by it. The Federal Bureau for Vocational Rehabilitation was created but it did little to help the former soldiers for they placed enormous burdens upon the veterans to prove that what they suffered was a result of the war. In 1921 President Warren Harding appointed Colonel Charles R. Forbes (a former deserter from the United States Army) to head the now called Veterans' Bureau which soon smacked of corruption. Many books have been written about this man and the Harding Administration, called the most fraudulent government in the history of our country. Over \$450 million was allocated for veterans and the only thing to show for it was a 200 bed hospital built in Memphis, Tennessee that did not even have a kitchen.

After five years in office an investigation was initiated and the Senate found Forbes guilty of fraud, he served 22 months in a Federal Prison and was fined \$10,000. The investigating committee concluded that “no American could read the testimony presented at trial without a feeling of disgust for the manner in which the great work of aiding the disabled was prostituted for self-aggrandizement and greed. The abysmal failure and egregious waste had a devastating effect upon the soldiers who

had fought in that World War. Many concluded that the Veterans' Bureau had probably made wrecks of more men since the war than the war itself took in dead and maimed. Its motives were clearly not to help soldiers heal their wounds, but to limit Government's liability for their part in the war (a belief that would rear its ugly head 50 years later). Servero and Milford write that "public officials and private citizens, who had been among the most vociferous, moist-eyed flag-wavers before the war now succumbed to assiduous silence when evaluating the wounds of the men who had fought the war. There was no national feeling of disgust. The press was not bursting with righteous editorials

demanding justice for the nation's heroes; pulpits were not filled with passionately moral clergymen explaining in quavering tones to their flocks how important a trust this was. Liberals and Democrats, who liked to think of themselves as the caretakers of the human condition, did not emerge as the champion of sick and wounded men. And so, conservative, self-indulgent Republicans who never pretended to care about much of anything except themselves were permitted to dawdle away most of the decade. Some senators and congressmen were concerned but they were not in sufficient numbers to motivate either their colleagues or their constituents."

What occupied the white, Anglo-American conscience was the growing fear of the mongrelization of the American population. And so for the first time in our country's history we denied people from entering the United States based on their country of origin. "The Immigration Act of 1924, or Johnson-Reed Act (enacted May 26, 1924), was a United States federal law that limited the annual number of immigrants who could be admitted from any country to 2% of the number of people from that country who were already living in the United States as of the 1890 census, down from the 3% cap set by the Emergency Quota Act of 1921, which used the Census of 1910. The law was primarily aimed at restricting immigration of Southern and Eastern Europeans who were streaming into the country and marrying Anglo-Saxons who ought to know better, diluting good old American stock. In addition, it severely restricted the immigration of Africans and outright banned the immigration of Arabs and Asians. According to the U.S. Department of State Office of the Historian the purpose of the act was 'to preserve the ideal of American homogeneity.' Though the Act aimed at preserving American racial integrity, it set no limits on immigration from Latin American countries. Congressional opposition was minimal for Southern Democrats sided with their Republican counterparts. They were "more apprehensive about the Italians than they were about the blacks. Blacks could always be identified but there were Italians who did not 'look' Italian. The devils seemed to be everywhere, and many of them even had blue eyes and fair skin. Returning black veterans were insisting upon the rights they had fought for, and whites were clearly not prepared to give in to them."

When the war ended 600,000 men were released from the military into an economy that was gearing down from war production. There were not enough jobs to absorb the veterans into the work force. "It was inevitable that the ex-soldiers, who had earned \$1 a day for the dubious privilege of being shot at and who were now unable to feed themselves and their families, would want *theirs* and



thus share in the real national pastime of acquiring money. They had received \$60 as mustering-out pay on discharge. But they knew that civilians who had carried the banner of patriotism in hometown factories had received much larger bonuses to keep up wartime production. Boxer Jack Dempsey served his country by working in a shipyard and received a bonus of around \$14 a day for his services—and nobody shot at him. The men who had been targets for the Germans wondered why it was patriotic to produce the goods of war and to be rewarded for them with cash bonuses or more fat contracts, but somehow less patriotic to use the goods of war in deadly combat and expect a pinch of indemnification. Workers and the large companies that employed them were more interested in lowering taxes. Secretary of the Treasury, Andrew Mellon, who then was one of the richest men in America, held forth against a bonus for servicemen. He asserted that it would cause ‘renewed inflation, increase in commodity prices and unsettle businessmen.’ But the Harding Administration listened to him, his word was gospel. Even though he estimated there would be a deficit of \$650 million when in fact there was a surplus of \$310 million. How such a financial wizard could make such a miscalculation was never explained.

The squalor of Harding’s Presidency was not yet visible still he had the audacity to appear before the Senate to speak out against the bonus, which the public tended to favor. It would be a ‘disaster to the nation’s finances’ he proclaimed and vetoed a 1921 bill that the House and Senate had agreed upon.” But the idea still remained popular with the veterans. In 1924, with Calvin Coolidge as president, he used the same rhetoric as his predecessors and said that “the nation could not pay soldiers for a sacred duty. The service they rendered was of such a nature that it could not be recompensed to them by the payment of money. Patriotism which is bought and paid for is not patriotism. *The Wall Street Journal*, whose editorial pages were hardly a wellspring of liberalism, went even further, calling bonus advocates ‘panhandlers’ who were after an ‘unearned and indefensible dole.’ Coolidge vetoed the bill but Congress overrode it. It was a treasure trove of promises, not money. It offered veterans a wait of twenty-one years—until 1945—to get anything out of it. Its sponsors thought that the help would be useful then, because the men would be well passed their prime and probably in need of insurance or dead. The veterans needed something more immediate; but as it did after the Revolution, the Government told them only to be patient.

“As the years passed, the patience urged upon veterans by Government was harder for them to maintain. The effects of the 1929 crash were pervasive and devastating, especially for those who had never shared in the fleeting prosperity of the twenties. The Depression had taken from them whatever homes and security they had. The hospitals set aside for them in time of sickness were now becoming sanctuaries against times of economic hardship. As the enormity of the financial crisis became clearer and more frightening, veterans in the worst straits began to renew their demands for something. But the bankers warned that the bonus was a menace that might cause the ‘disorganization’ of the money market, depress stock values and retard business prosperity. How and why this would happen was never made entirely clear. Congress put up a compromise bill to allow veterans to take out loans on 50% of the face value of bonus certificates in 1945. The interest would be 4.5%. President Hoover promptly vetoed the measure saying that it was local communities, not the Federal Government, that had the responsibility of caring for needy men. What happened next culminated in the ugliest, most violent and heart-wrenching confrontation between veterans and Government since the crushing of Shay’s Rebellion, nearly a century and a half before.

In 1932, newspapers were publishing stories of credit extensions to foreign nations, loans to railroads and other large corporations, while veterans had nothing to which to look forward to except the shiny shoulders of the man in front of them in the breadline. This thing that would become the Bonus March started in Portland, Oregon, early May, 1932. At first it was nothing but a local demonstration, but the notion of going to Washington to press their demands upon Congress began to

grow, in part out of desperation. Later critics of the march, including President Hoover and Secretary of War Patrick J. Hurley, would claim, without any documentation, that there were men among the marchers more interested in promoting communism than the cause of the veterans in need. The Portland group reached Washington on May 29, 1932. They were pleased to see other contingents were pouring in, reaching a total of from 25,000 to 40,000 veterans. They were bony, hungry-looking men with sleeves rolled up to reveal hardened arms with no work to do. They protected themselves from the elements by building shelters out of scrap metal, wood, and heavy cardboard. Relations with the police were friendly for the local chief was a West Point graduate who sympathized with the ex-soldiers and showed the compassion that one human being would make to another unlike their elected representatives. Hoover saw such behavior as something that would make it easier for the marchers to stay in D.C., which is precisely what he did not want. The marchers wanted to meet with the President or any high government official but nothing ever was accomplished. Rumors persisted that the marchers were led by communists fueled by the press which lacked either the interest or the ability to verify such stories. President Hoover's press secretary, Theodore Joslin, wrote in his diary that "The marchers (including a number of black veterans) have rapidly turned from bonus seekers to communists or bums." Government authorities also noted the absence of Jim Crow in this Southern event. They chose to interpret this racial camaraderie between former brothers-in-arms as symptomatic of left-wing radicalism.

On July 25 veterans clashed with police as they tried to picket the White House. Secretary of War Hurley then ordered Army Chief of Staff General Douglas MacArthur to drive the marchers out of the city. For several years, as the Great Depression had settled in, the government had been fearful of the possibility of an armed insurrection against Washington. Even before the arrival of the Bonus Army, the army had developed a plan to defend the city with tanks, machine guns, and poison gas. On July 29, 1932 the General decided to implement the practiced plan. He assembled 300 troops carrying rifles with fixed bayonets, 200 mounted cavalry, a special machine-gun unit and five tanks led by Major George S. Patton. Hoover would later claim that he only wanted the marchers out of the city and driven to the other side of the Anacostia River. Hurley twice sent orders to MacArthur indicating that the President, worried that the government reaction might look overly harsh, did not wish the Army to pursue the Bonus Marchers across the bridge into their main encampment on the other side of the Anacostia River. Reaching the river MacArthur paused, he wanted his men to have supper before he moved on. According to his aide Dwight Eisenhower, when MacArthur was told he had a message from the Secretary of War he "said he was too busy," did not want to be "bothered by people coming down and pretending to bring orders," and sent his men across the bridge anyway. At 6:30 PM his troops crossed the bridge behind a tear gas barrage and set fire to the make shift camp housing the veterans and their families. MacArthur claimed that only one out of ten of those evicted was a 'real veteran, the rest were insurrectionists.'" A later survey showed that 94% were veterans, 67% had served overseas, and 20% had suffered some sort of disability. Hoover's actions led to an overwhelming victory for FDR that November.

The marchers came back the next year but smaller in size, and more expertly handled. The newly formed Veterans Administration established a camp for the marchers, using surplus Army tents, 15 miles outside of Washington. No veterans were allowed to loiter in city parks and neither MacArthur nor any other general was given the opportunity to cause mischief. Roosevelt realized that there was little he could do with a reluctant Congress but he could still show empathy till the nation came to its senses. The President's wife even went down to the camp to help serve meals to the veterans and their families. More importantly, FDR realized that the Government had to do something not only for the veterans but also for the country. During his next four terms of office. FDR slowly turned the attitudes of the country around. *To be concluded next month*

The Evolution of Strategy

Prior to the American Revolution 18th century combat was usually between hostile monarchs where the prizes were fortresses or even provinces or parts there of. Taking their cue from the Americans the French began fighting for their own existence in 1789. The people wanted a voice in the control of their own national destiny. As Russell Weigley writes in **The American Way of War** the French people “could mobilize resources beyond the imagination of the monarchs of the old regime: the united manpower of the nation, and all the material goods the nation’s people could bring to bear. ‘From this moment until that in which our enemies shall have been driven from the territory of the Republic,’ in the words of the Convention’s decree of August 23, 1793, ‘all Frenchmen are permanently requisitioned for service in the armies.’” All of France was soon engaged in the cause of the Republic, to drive her enemies from the national territory and then, to assure and complete the triumph, carry the war into the enemies’ countries. The faltering, ancient monarchies could not arouse all the popular emotions generated by the French but some of them could at least enlist nationalism against the threat of French domination. This new concept would serve as a new source of voluntary manpower and create more resources sufficient to compete with the French. As parity was achieved victory became harder to win for all belligerents. Defeat in one or two campaigns would no longer persuade a government to cut its losses, sue for peace, and await some form of negotiated retribution. As the basic object of warfare, to break the enemies will to resist, became more difficult, the means became more abundant.

France was in the vanguard of developing these new means primarily through two men, Napoleon Bonaparte and Jean Baptiste Vaquette de Gribeauval, Inspector General of Artillery. Vaquette created a new, more mobile artillery with greater power in proportion to the weight of the guns by reducing their length and composition. New carriages were designed which ran more smoothly and were built with interchangeable parts which made for quick repairs. The artillerymen who drove the carriages were also trained as soldiers to make them more effective if circumstances were to change on the battlefield. At the same time the development of coke smelting made the production of iron less costly and more efficient so that more iron cannons could be produced. This new artillery could now go into action at a gallop and change positions swiftly. More guns available allowed an overwhelming volume of fire to help smother the enemy infantry. An immense amount of case shot from close range against critical points in the enemy’s position allowed Napoleon to stun them in preparation for the infantry assault. Artillery now was becoming the ‘King of Battle.’

With all of France aroused Napoleon could now greatly expand his use of manpower to impose greater human losses upon the enemy with an immense moral loss as well. In battle, Napoleon compressed a strategy of annihilation into an overwhelming thunderclap of combat, combining the imposition of huge physical casualties with the dramatic seizure of a psychological ascendancy over the enemy. Napoleon said: “There are in Europe many good generals but they see too many things at once. I see only one thing, namely the enemy’s main body. I try to crush it, confident that secondary matters will then settle themselves.” To paralyze the enemy’s will by crushing the main body of his army tended to require exacting from them casualties so large that they could only be obtained with terrible losses of his own. He would make these demands of his troops in order to attain, in one dramatic stroke of war, the almost instantaneous alteration of the balance of power in his favor. His use of manpower was improved by reorganizing his men into divisions, small armies capable of independent maneuver. His favorite tactic for initiating battle and winning was to advance a web of divisions within supporting distance of each other, using some of them to fix in position, hold, and

batter the enemy with cannon fire. Then using the non-engaged forces in independent maneuver to fully envelope the enemy, *la maneuver sur les derrierers*.

This massive army, sustained by nationalistic fervor, was the signal feature of the new Revolutionary mode of war. A strategy of annihilation using using improved weapons and better means of command and control gave us this early 19th century version of 'Shock and Awe.' In combination, these new features produced a rebirth of military thought and literature. In the earlier dynastic wars, rival armies resembled each other so closely, and the accepted limitations upon their conduct were so confining, that strategy had come to signify little more than stratagems. The general who excelled in using ruses to confound his enemy was more likely to win the contest. But Revolutionary and Napoleonic war added so many complexities that military writers became hard pressed to define the ingredients of a successful war. Under the inspiration of Napoleon the rise in Europe of a theoretical literature of war was one of the several developments which made up the beginning of the modern military profession.

The steps which followed the French Revolution toward divorcing officership from the remnants of the feudal aristocracy laid the foundation for schools devoted to the study of command and control. The United States, still a colony of Europe in matters of war, followed these developments closely for they viewed the military powers of Europe as the next potential enemy. Sylvanus Thayer, in 1817, became the new superintendent of the military academy at West Point and tried to stimulate a systematic American study of war. He tried to tie together the diverse strands of activity in maritime defense and land warfare into a coherent strategy for the military protection and advancement of American national interests. West Point could only devote a small proportion of its resources to the development of American strategic thought. The academy had too many other things to do. In an army still lacking enough junior officers competent to instruct the rank and file in elementary tactics, the most basic rudiments of war had to consume most of their instruction time. In a country not immediately threatened by foreign enemies and reluctant to provide for a large standing army, the academy had to justify itself by preparing officers who could do useful work in peacetime. So West Point became largely a school of civil engineering.

Dennis Hart Mahan, USMA '24, became a protege of Thayer and joined the faculty in 1832. His most famous student was Henry Wager Halleck, USMA '39. He is known for describing war "as a science and an art. The art may be divided into four distinct branches, strategy, fortification or engineering, logistics and tactics." Prior to the American Civil War the military was occupied in the building of defensive fortifications to defend vital American ports. Halleck foresaw no aggressive role for the United States but rather a policy of self-preservation and self-protection, with a consistent defensive strategy. The premise was that any attack on America could not be sustained unless a suitable port was available to resupply the invading enemy. Denying an attacking force an American sanctuary would force the enemy to land in an area that they could not satisfactorily defend while awaiting supplies exposed to the tides and surf at an anchorage devoid of piers. Great efforts were expended to build fortresses that ensured any naval attack on any major American harbor would not succeed without the enemy suffering great losses. The major population centers would be protected against wanton bombardment and any invader would be denied quick access to port facilities from which to support their invasion.

Halleck believed that forts would always be superior to attacking navies and wrote extensively of successful defenses by apparently inferior forts against superior attacking navies. The forts would be especially useful for rallying inexperienced troops that would most likely comprise the bulk of an American army early in a conflict. Until the Civil War, the strategy taught at West Point was mainly maritime in nature. No need was seen to instruct future infantry officers in the tactics used in Europe by the massive land armies employed. The placement and construction of coastal defenses was the

primary concern of the army engineers. Halleck differed with Napoleon in his concept of war. The geography experienced by both men differed and caused them to have somewhat opposing strategies. For America, Halleck saw war as a contest for the possession of places and not the Napoleonic principle of complete annihilation of the enemy's army. The tactics used to achieve and sustain these goals could be similar but the driving purposes were different. Halleck's concerns were defensive while Napoleon's was entirely offensive in nature.

Some of their guiding principles were translated and applied to seapower where fleets were the naval equivalent of infantry divisions. Napoleon defined strategy as "the art of bringing the maximum possible force to bear against the decisive point of the enemy." Mahan sought to apply Napoleonic principles to a water environment. He sincerely believed that nothing remained to be learned of the art of war that had not been discovered by Napoleon. "He was given to rhapsodies upon both the emperor's genius and his desire for a climactic battle of annihilation." Mahan further elaborated on this basic tenet and added "or the hostile movement of forces beyond the range of each others cannons. All the military writers agreed that the first and most important rule in an offensive war is to keep your forces as concentrated as possible. This will not only prevent misfortune, but secure victory,—since, by its necessary operation, you possess the power of throwing your whole force upon any exposed point of your enemy's position. Mahan further believed that the fleet should never be separated, ever.

These principles dominated American and foreign military thinkers well into the 20th century. What they did not account for was the evolution of military hardware and the necessary change in thinking to account for these new weapons. The conservative and traditional thinkers were reluctant to deviate from what they believed were warfare concepts that were treated as almost biblical and any deviation was treated as heresy. 19th and 20th century military history is filled with examples of generals and admirals reluctant to acknowledge that new technology requires different approaches to warfare. Future articles will examine how such hubris resulted in the unnecessary loss of life for the sake of believing in concepts that have failed to anticipate and adjust to new weapons.

The USS Zumwalt DDG 1000

Developed under the DD(X) destroyer program, the DDG 1000 Zumwalt Class destroyer is a class of the next-generation multi-mission combat ships designed for land attack and littoral (close-to-shore) dominance. The ships are built by General Dynamics-Bath Iron Works (design, construction, integration, testing and delivery). In July 2008, the U.S. Navy announced its decision to limit the number of ships to be delivered under the DDG 1000 program to just three (32 ships were originally planned) - and restart the construction of Ballistic Missile Defense (BMD) capable for use in the DDG 51 Arleigh Burke Class AEGIS Destroyers. The Zumwalt Class ships will be powered by two Rolls-Royce MT30 twin-spool, high-pressure ratio, marine gas turbine engines and two RR4500 Auxiliary Turbine Generator Sets (ATGs) for a total of more than 78 Megawatts ship power. The MT30s and ATGs each provide 35.4 Megawatts and 3.8 Megawatts respectively.

The DDG 1000 is equipped with two 155mm (6.1 inch) Advanced Gun Systems (AGS) that can pinpoint land targets with GPS precision. The AGS fires the Long-Range Land Attack Projectile (LRLAP), which has an effective range of up to 63 nautical miles, thus tripling fire-support coverage compared to the Mk 45 5-inch (127mm) gun employed by the DDG 51, Arleigh Burke class Destroyers. The AGS holds up to 600 rounds in two magazines and will be capable of a maximum sustained firing rate of 10 rounds per minute. With the AGS, each DDG 1000 can mass 140 to 160 projectiles in the air at once. Also, the DDG 1000 is equipped with two General Dynamics Mk 46



30mm naval gun systems that have range of 2.2 nautical miles and fire at a rate of 200 rounds per minute. The Zumwalt class is also quipped with a total of 80 Mk 57 peripheral Vertical Launching System (VLS) cells for RIM-162 Evolved Sea Sparrow Missiles (ESSM), RUM-139 VL-ASROC missiles, and RGM-109E Tactical Tomahawk cruise missiles.

The ship has not been without its critics. The DDG 1000 has cost \$4.1 billion so far with over \$9 billion spent for

developing weapon and propulsion systems that can be applied to other naval vessels. Manning the new ship has become a critical consideration. DDG51 required 32 officers and 398 sailors with 4 officers and 14 airmen to service the two Seahawks helicopters. The Zumwalt will have a crew of 45 officers and 142 enlisted, including the aircrew for the two Seahawks or one Seahawk and and three MQ-8 Fire Scout UAV helicopters. The reduced manpower for the 600 foot long vessel will require sailors similar in temperament and intelligence to the present day submariners. There will be a great deal of cross-training and actual cross-rate manning of the ship's operational systems.

This Navy program is similar to the Air Force's F-35 fighter project. The emphasis seems to be on developing high cost, low number, highly technical weapon systems that have yet to be proven. The premise in delivery systems appears to be the use of a few, expensive, elephant-like vehicles as opposed to many, small and inexpensive mice. During WWII the Russians and the Americans countered the German Panzer by building many T-34 and M-4 Sherman tanks. Having greater speed and mobility than the German Tiger and Panzer their smaller cannon, 75mm and 76mm, respectively, could not compete very well against the venerable 88mm and 2 cm cannon carried by the Tiger and Panzer. It has been stated that it took three Shermans to destroy a German tank. On the Eastern Front the Russians employed dogs to lay explosives under an advancing German tank in addition to her using her own tanks.

One consideration that seems to have escaped our military planners is that the delivery systems cost significantly more than the weapon they are tasked to deploy. An almost \$1 billion plane and a \$4 billion ship to put maybe 10 missiles or 600 shells on target seems to be like wearing a tux to a hoe-down. Weapon evolution has made many of these systems almost obsolete. Drones, submarines and satellites have reduced the exposure of human operators and the continual improvement of such weapons have further reduced the need for such expensive, and yet untried systems. Once these few and expensive devices are gone there is no fall back position, there will be no reinforcements. Even the nature of warfare has changed, further negating huge expenditures of limited funds to a battlefield that is constantly changing. Our major defense manufacturers are dictating the type of weapons that will be in our arsenal. Enlisted Navy Seals and Army Special Forces choose the weapons they carry into combat. Their experiences have demonstrated what they need and they oversee their production. Too many high ranking military personnel are too far removed from the actual combat theater to make these critical decisions. We have failed to anticipate the future of combat and are still fighting the last war.