

Alterations to Alma

A Solo Wargamer Tailors History to Suit His Style

By Chris Hahn

In late February of 2012, I was perusing the history section of my local Barnes & Noble store when I happened to stumble across "The Crimean War: A History." Not being very familiar with the conflict (to be sure, I knew about the Light Brigade and Ms. Nightingale, but other than that ...), I thought it might prove an interesting and educational read. I was not disappointed. The well-written narrative of Mr. Orlando Figes was devoured by mid-March. I was especially interested by Chapter 7, wherein he offered -- at least in my humble opinion -- a gripping, sometimes humorous, and well-researched account of the engagement at Alma.

In late April of the same year, the May issue of *Wargames Illustrated* arrived in my P.O. Box. The theme of this colorful issue (aren't they all though?) was the Crimean War. To my delight, a miniature treatment of Alma was provided on pages 38 to 45. Evidently, Paul Delaney III and his club staged Alma as a participation game at Cold Wars 2011. The tabletop measured 24 feet by 6 feet and supported over 1,000 figures. The wargame was played with the "Black Powder" rules, lasted 12 turns, and was finished in 4 hours. Everyone involved in the battle enjoyed the experience, and, according to Mr. Delaney's summary, history was essentially repeated.

Then, in late November, the December issue of *Miniature Wargames* arrived. Mr. Stuart Asquith provided his "two cents" (or pence or quid -- he is from England) with "Agony on the Alma," a report of how he went about setting up the largest pitched battle of this particular conflict. Though not as colorful as Mr. Delaney's treatment, and while it did not mention the text by Orlando Figes in the Further Reading section, I still found it an interesting read.

So inspired by the accidental reading of a really good book and recent coverage of Alma in the wargaming press, I decided to try and stage my own refight. At the risk of earning a well-deserved groan from readers, I had what I thought was the perfect title: "Alma By Myself: A Solo Wargamer 'Vacations' in the Crimea." However, much to my disappointment and frustration, I was unable to figure out how to reconstruct a satisfactory version of the historic engagement on my 6-by-4-foot table. At one point, I considered using a ground scale of 1 inch equals 125 meters, but the accuracy of this ratio quickly led to more than several problems with unit representation, weapon ranges, and movement rates. Resigning myself to the fact that I would not -- at least at present -- be able to set up and play a historical version of Alma, I decided to use the engagement as a foundation for my first foray into the Crimean War.

Rules

For this pseudo-historical exercise, I made use of my already-cracking-along-the-spine copy of "Black Powder." The "tool kit" approach of these popular rules was supplemented by the numerous house rules offered by the gentlemen and scholars of The Contemptible Little Wargames Club (a look at their web site is strongly recommended), and a few more ideas adopted from a fellow wargamer named William. I added my own two cents as well. Specifically, I revised the rules governing disordered units. For the purposes of this scenario, these unfortunate units *could* be given orders and *could* move, but there would be a fairly substantial modifier applied to the command die roll. The inspiration for this particular revision came from reading pages 211-12 of the Figes narrative. Evidently, the British troops were completely disordered by crossing the Alma as well as from the attention paid by Russian muskets and cannons. Even so, an advance and attack was made against the Russian breastworks. It did not succeed, at least at first, but the idea I took away from this was that disordered troops can perform on a field of battle. I stipulate that this is relatively weak

evidence on which to base a fairly significant rule amendment, but the “tool kit” format allows, if not encourages, such experimentation. Further, as a solo wargamer, I was safely immune from the disagreement and or displeasure of other players.

Troops

The allied army for this fictional battle would number five divisions. Three would be British, one would be French, and the last division would be composed of Turkish troops. These various formations would have attached artillery and would be supported by the now famous Light Brigade under the command of Lord Cardigan.

For the British contingent, I selected the Light, 2nd, and 1st Divisions. According to the various sources consulted, these formations contained high quality troops (especially the Guards and Highland brigades). Therefore, each battalion was armed with rifled muskets, and given the first fire and steady “specials.” The Highlanders were all rated as tough fighters. The Guards were given an extra stamina point and were rated as Elite 4+. In complete contrast, divisional and higher-level officers of the British contingent were rated as average or poor. Figs is quite critical of Lord Raglan’s performance at Alma. This assessment is reinforced in Nick Dorrell’s “ ‘Fire and Fiasco’: The Crimean War 1853-55,” which appeared in the December 1998 issue of *Wargames Illustrated*.

The French were represented by the 1st Division under General Canrobert. These troops were also armed with rifle muskets. The Zouave regiments of this formation were rated as crack troops in addition to being classed as tough fighters. The “division” of Turks, in contrast, was armed with smoothbore muskets (these had half the range of rifled muskets), and all eight battalions of this formation were categorized as freshly raised. Their performance would be determined when the first volleys were fired or first charges into melee were made.

In terms of cavalry, the British contingent enjoyed the support of four regiments of cavalry. The 17th Lancers, 11th and 8th Hussars, and the 13th Light Dragoons formed the Light Brigade. Each regiment was fielded as a small unit (lower melee and stamina values than standard size units), but was classed as marauders and given the ferocious charge characteristic.

In summary, the Allied army for this fictional battle numbered 37 battalions of infantry, 5 regiments of cavalry, and 11 batteries or troops of artillery.

Picking and choosing from the various orders of battle for the Russians at Alma secured during my “research,” I decided to field representations of the 13th, 16th, and 17th Infantry Divisions. These poorly led troops would be supported by some light cavalry and Cossack regiments, as well as numerous batteries of position artillery.

The eight battalions of the 13th Reserve Division were classed as Levy/Militia. Consequently, their melee and shooting values were reduced. In addition, each battalion was rated as unreliable and wavering. These “specials” meant that they would be harder to command/control and that each battalion would have to take a break test when it took casualties. These units, like all of the Russian foot, were outclassed in terms of weaponry. Where the British and French carried the rifled musket, the Russians carried the smoothbore musket.

The majority of the Russian foot were categorized as regular units. In order to reflect the stoic and/or stubborn nature of the Russian soldier, the stamina of each battalion was increased from 3 to 4 points. In order to reflect the lack of training or emphasis on melee instead of musketry, the number of shooting dice for each battalion was reduced from 3 to 2. Eight of the battalions in the

16th and 17th Divisions were Jaeger battalions. These formations were allowed to deploy into skirmish formation when and if it was required.

In addition to the 2nd Hussar Brigade, the Russian force enjoyed the support of an attached brigade of Cossack cavalry. Like the Levy/Militia of the 13th Division, these irregular formations were classed as unreliable.

Twenty-eight infantry battalions would defend their motherland from the allied advance. These foot formations would be reinforced by 5 cavalry regiments. In addition to the advantage of position, the Russian force would be supported by 17 batteries of artillery.

Terrain

The battlefield for this fictional engagement was based on the tabletop diagram provided on page 172 of Charles Grant's excellent book, "Wargame Tactics." Given that his narrative was for an American Civil War contest and my interest was the Crimea, there were several changes made to the landscape. Perhaps the most significant modification was the elimination of the railroad tracks on the Confederate (now Russian) side of the field. The Black Warrior River was renamed, and was classed as fordable along its entire length. Even so, there were four easier crossing points. Two of these were wooden bridges and two were very shallow (only up to the knees) fords. The ridge north of the river was elongated and also renamed. The high ground on the Russian side of the river was given a new name as well.



Photo 1 shows the nature of the ground on the right of Lord Raglan's multi-national force. The eastern third of Troia Ridge can be seen, as can the bridge and ford. A small farm complex sits on the Russian side of the River Lubganak. Other than a few fields and a "corner" of heavy woods, this portion of the field is fairly open.



Photo 2 offers an aerial view of the center of the tabletop. The three hills of Troia Ridge are evident, as are the two bridges across the Lubganak. Sitting directly in front of the allied axis of advance is the small village of Khanlarmack. At the very top of the picture, the first slope of Chernaya Heights can be seen.



Photo 3 shows the left sector of the miniaturized battlefield. In addition to another farm complex, several fields, and a larger ford, there are a couple of wooded areas on this flank. The heavy wood “protects” the allied left flank. The light wood (the pale green shape at the top of the picture) sits firmly on the Russian side of the Lubganak.



Photo 4 offers a right flank-to-left flank view (again, from an allied field glass) of the tabletop. The overall size and three tiers of Chernaya Heights is apparent, as is the fairly open nature of the ground.

Solo Mechanics, Game Length, and Objectives

In the historic engagement, the British were on the left and the French were on the right. The Turks were also on the right of the Allied line, but sources differ as to their overall contribution to the contest. In addition to changing up the composition of each formation, I thought it might prove interesting as well as entertaining to change up the initial deployment of each formation. With this in mind, two tables were drafted. The first would determine the deployment of the allied divisions; the second would determine the placement of the Russian divisions, batteries, and breastworks.

Table 1:

Die Roll (British French Turks)

- 1 Left Center Right
- 2 Center Right Left
- 3 Right Left Center
- 4 Left Center Right
- 5 Center Right Left
- 6 Right Left Center

Table 2:

Die Roll (Description of General Russian Deployment)

- 1 17th Division, Cossacks, 4 position batteries, and 3 light breastworks on north bank of river; all other units and works on the south bank

2 1st Brigade of 16th Division, Hussars, 3 position batteries, and 2 breastworks (1 light and 1 medium) on the north bank of the river; all other units and works on the south bank
3 16th Division, 4 position batteries, and 3 light breastworks on the north bank of river; all other units and works on the south bank
4 13th and 17th Divisions, 5 position batteries, 3 light breastworks, and 1 medium breastworks on north bank; all other units on the south bank
5 2nd Brigade of 16th Division, 13th Division, all cavalry, 3 position batteries, and 3 light breastworks on the north bank; all other units on the south bank
6 16th and 17th Divisions, 5 position batteries, and 4 breastworks (3 light and 1 medium) on the north bank of river; all other units on the south bank

The gentlemen of The Contemptible Little Wargames Club suggest a time scale of one complete game turn represents the passage of 15 minutes. If I increase this suggestion to 20 minutes and establish a maximum limit of 15 turns for the scenario, then my battle might last 5 hours. If one takes the mid-morning deployment of the allied formations into account, this is comparable to the length of the historic engagement. As to objectives, I think the burden is on the shoulders of Lord Raglan. Simply stated, the allies need to break the Russian defenders. The margin of victory -- or of defeat -- will be determined by the condition of the armies after the shooting has, for all intents and purposes, stopped.

Photo Summary of the 'Miniature' Contest



The general deployment of opposing forces is shown in **Photo 5**, above. The pre-battle die rolls determined that the Allies would arrange their divisions in a fairly historical manner. The British would take the left of the line. The French contingent would occupy the center or right-center, while the Turks would advance on the right. The British battalions were in line; the majority of the French

and Turk units started in attack column formation. The 16th Infantry Division was deployed north of the Lubganak. The village of Khanlarmack was not occupied. The river defense was bolstered by three barricades (one on each gentle hill of the ridge) and four position batteries of artillery. The ford on the far left of the Russian line was guarded by a brigade of Cossack cavalry. These irregular troopers were supported by the 13th Reserve Infantry Division and a small brigade of Hussars. The heights were held by a brigade from the 17th Division. On the first slope of this major terrain feature, the Russians built two sets of works. These were proper redoubts (as compared to the hasty digging done on the ridge line) and were garrisoned by four batteries of guns. The far right of the line was held by a brigade of Jaegers from the 17th Infantry Division.

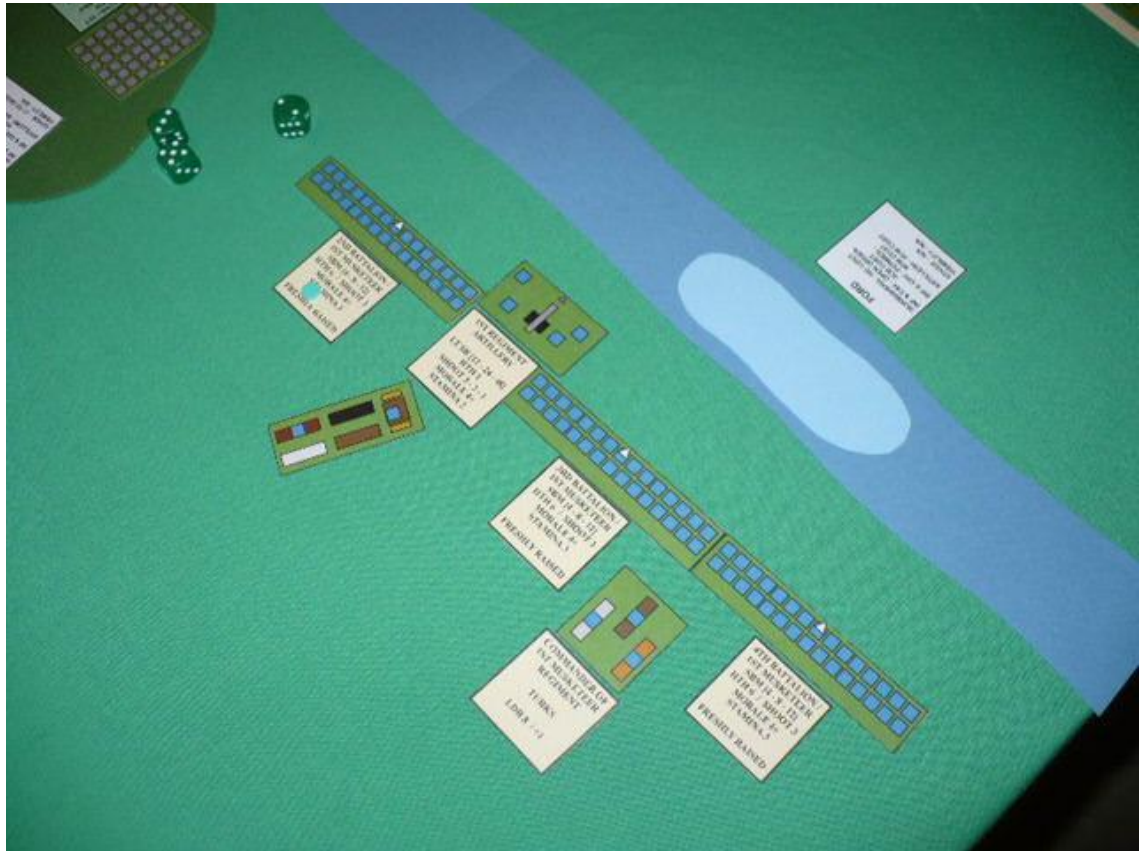
Turns 1-3: There was no shortage of targets for the Russian cannon deployed on the ridge line. There was, however, an initial lack of effective shooting. As the distance between the allied formations and the Russian guns closed, the casualties to the Turks, French, and British line units increased. One regiment of Zouaves suffered severely from this attention, and was broken due to losses. Surprisingly, the Turks performed well when they were challenged by a brigade of Cossacks. The musketeers of the 1st Brigade deployed three of their four battalions into line and brought up a battery of guns in support. The Cossacks did not like the order to charge, and were caught in the open at maximum range of the Turkish muskets. One regiment of Cossacks was obliterated by successive volleys and the other was shaken and disordered. Having broken the enemy blocking their route of advance, the Turks reloaded their muskets, limbered their guns, and resumed their march to the ford.





Over on the allied left (as shown in **Photos 6 and 7**, above), the British were not having a “good time” of it. Fire from the Russian batteries disordered a couple of battalions in both the Light and 2nd Divisions. Units in Adams’ Brigade did use the dead ground to their advantage, however, advancing against the left of the artillery in the works on the one hill. Volleys from their rifled-muskets succeeded in disordering the crews of the enemy artillery, as well as inflicting some casualties on a supporting battalion of Russian infantry. An artillery duel developed on the right of the 2nd Division as the British guns moved up and deployed to fire on the Russian pieces protected by the barricade. Being in the open, the British battery suffered from effective enemy fire. Long-range fire from both British and French infantry managed to knock a few Russian artillerymen out of action in addition to disordering their comrades.

Turns 4-6: Free from the “threat” of Cossack attention, the Turks of the 1st Musketeer Regiment advanced to the river bank.



Once there (**Photo 8**, above), they unlimbered their attached artillery and proceeded to engage the cannons of the 13th Reserve Division in a long-range duel. To paraphrase Shakespeare: this was a lot of smoke and shot, resulting in not a single casualty. To their left and rear, the 2nd Regiment finally started forward. Its objective was the Russian-held hill to its left front. These four battalions were joined by a wayward unit from the 1st Regiment. The Pasha ordered them forward along with their brothers, and this unit marched straight into the teeth of some very effective Russian artillery fire. Though shaken and forced to check morale with a minus three modifier, the decimated unit stood its ground.

The Frenchmen of Vinpasse's 1st Brigade tried to force the gap between the hills to their front but were pushed back by Russian stubbornness.



(See **Photo 9** above.) The Zouaves attempted to work their way around the right end of some hasty works but were discouraged by a larger number of Russians. The 1st Battalion of the 7th Ligne Regiment tried to push a unit of Russians off the forward slope of a gentle hill but they couldn't quite get a purchase. By sheer weight of numbers and greater depth of their formation, the Russians prevented any French success. The battery of the 2nd Brigade was deployed to the left and rear of this local engagement. These guns were supposed to assist the counter-battery duel going on between the Russian and British batteries.

Scores of redcoated soldiers littered the ground on the Russian right flank. The 23rd Royal Welch Fusiliers and 7th Royal Fusiliers suffered greatly in the face of canister fire from protected Russian guns and from the volleys/sniping from the infantry deployed in the farm complex. The British were able to disorder the garrison of the farm, however, and they were finally able to send the artillery crew running for cover on the southern banks of the river. It was too little too late, though. Leading units of the 2nd Division were exchanging close-range volleys with stubborn Russian defenders.



(See **Photo 10**, above.) Though large holes were produced in the densely-packed Russian formations, they stood their ground against the thin and blazing red line of her Majesty's troops.

Turns 7-9: The arrival of another division of troops on the allied left flank did little to improve the overall position of the British command. Codrington's battalions were withdrawing to rally and reorganize their ranks, and Buller's men were waiting their turn. The Highlander Brigade formed the third line.



Photo 11 shows the “traffic jam” in the British sector. Lord Raglan followed the Guards Brigade onto the field but did not join them as these three battalions veered to the right against the Russian defenses in the center of the natural ridge. Russian artillery welcomed the Coldstream Guards to the battle by sending several cannonballs through the ordered ranks of this elite unit. The single Russian battalion remained in place as an impromptu garrison of the small farm complex. Though a remnant of a broken brigade, these men proved an effective roadblock to British progress. The only formations to make it anywhere near the river were two battalions of Pennefather’s command. These redcoats had marched through or around the immobile units under Brigadier Adams.

Better progress was made in the center, as units from Canrobert’s Division engaged Russian infantry in the “gap.” The advance was made at a price, however. The French lost a battery of guns (much to their collective chagrin, of course) when a large unit of Russians was able to advance on the flank of the deployed guns. Reserves from both sides were poured into the sector; the French volleys cut down rank after rank of Russian infantry, but could make no greater impression on these stubborn columns.



(See **Photo 12**, above.) Two battalions of Vinoy's command advanced up the gentle slope and engaged another large unit of Russians. The melee went back and forth; neither side was willing to give ground.

Once again, limited success was gained and enjoyed by troops of the Turkish contingent. Two units of the 2nd Musketeer Regiment advanced against a defending Russian unit. The Turks survived the closing fire (the Russian volley missed completely!) and made short work of the enemy. The defeated battalion withdrew in disorder, but was slowed down by the river. A supporting battalion of Turkish infantry found the target irresistible and delivered a powerful volley into the mass of struggling troops. In the space of just a few minutes, there was one less Russian battalion in the Turkish sector. To the right of this local victory, the artillery exchange continued. The Turkish cannon finally scored a hit on one of the standing columns of Russian troops. Three times as many Russian guns replied and caused more casualties in the battalions standing on the north bank of the Lubganak. (See **Photo 13**, just below.)



Turn 10 (Lord Raglan calls it a day.): On the right of the British sector, only the Coldstream Guards advanced to engage the enemy. This brave battalion suffered terribly from the closing fire issued by the Russian battery, but the Guards were successful in routing the crews and capturing the cannons. The other two battalions in General Bentinck's Brigade refused to follow orders to support this attack. To the left of this costly and very local victory, the men in the commands of Adams and Pennefather's Brigades were sorting themselves out. A few British battalions managed to march to the bank of the Lubganak. These units made no effort to cross, however.

Over on the left of the British line, Codrington's Brigade fell back through the static line of Buller's Brigade. Buller's three battalions refused (again!) to follow orders to advance. Campbell's Brigade of killed Scotsmen advanced through the "mess" of redcoats on this flank. One of its battalions was disordered as it pushed its way through two friendly lines. Another battalion was disordered by an effective volley from the Russian infantry still holding the farm complex on this flank.

The French continued to increase the pressure on the center of the Russian line. Two battalions, one from the 20th Ligne and one from the 27th Ligne, engaged and defeated two enemy formations. These successes, along with indirect pressure from the 2nd Musketeer Regiment of the Turkish contingent, resulted in the capture of the Russian breastworks. In fact, the collapse of an organized infantry defense led directly to the Russian crews abandoning their precious cannon. To the right of this belated development, the artillery of the 1st Musketeer Regiment continued its long-range exchange with three Russian batteries.

Surveying the condition and position of his brigades, having received messages from the French and Turk commands, and observing that daylight was beginning to fade, Lord Raglan made the decision to halt the attack. The north side of the Lubganak was won, but the battle was a draw. Sixteen

battalions of Russian infantry, two regiments of cavalry, and 11 batteries of guns sat on the south side of the river, just waiting for (or daring) the allies to continue their advance.

Remarks

As I did not set out with the intention of refighting the battle of Alma, I guess I should be neither surprised nor disappointed that there was no clear winner in my adaptation of the historic engagement. I confess to being a little disappointed with the outcome, however. I did set out with the intention of playing 15 turns. As just reported, only 10 turns were completed. I rather doubt that a satisfying conclusion would have been reached with 5 more turns, so I'm of the opinion that the blame for the drawn wargame rests on scenario design as opposed to any other factor.

On reflection, it appears quite evident that a number of things contributed to the "failure" of this solo project. First, the forces involved were too large. Secondly, the stated objective was too difficult for the allies. In conjunction with this level of difficulty, the command rolls for the British brigades were a little worse than abysmal. If memory serves, Buller's three battalions made a couple of moves toward the Russian infantry, and then refused to follow any other orders sent or delivered in person. The first two problem areas are relatively easy fixes: I simply need to revise the orders of battle and change the objective from black or white to a sliding scale of gray.

It's more challenging to control the result produced by rolling 2d6. It is evident, now that the "smoke has cleared," that I should have given the British infantry the "superbly drilled" characteristic. This would have allowed them to make one free move on a failed command roll.

With regard to the troops and terrain, as evidenced by the accompanying photos, these were functional and, by no stretch of the imagination, fantastic-looking. Though I use rules written for miniature wargaming, I guess that my approach is closer to being a kind of "red-headed stepchild" of board gaming. The numerous house rules adopted from the gentlemen at TCLWC worked well enough, I think. I especially liked their ideas about graduated ranges for the various types of muskets and artillery. The modified game move sequence made each turn flow more smoothly (compared to the RAW [rules as written]), so that was noted and appreciated. My experiment with allowing disordered units to receive orders and to move was inconclusive. There were a few occasions when it was used (primarily on the British flank), but as I recall, the impact was not significant. Based on what happened -- or did not happen -- on the left of the allied line, I am thinking about making a few modifications to the rules governing close combat in built-up-areas. Recalling my experience with Ligny (and the research that went into that project), it occurs to me that troops occupying a farm complex, village sector, or town sector, *should* be able to be "pushed out" or forced to retire, as opposed to having to be broken/routed.

As has sometimes been the case with my quasi-historical solo projects, I found that my level of enjoyment (the level of fun) seemed to decrease as the wargame (battle) wore on. Perhaps this could be addressed by doing more front-end thinking? That way, I could better identify problems with respect to the size of forces, objectives, rule revisions, etc. In looking back over my notes and photographs of this "cruise" to the Crimea, I cannot help but be reminded of Mike Crane's remark concerning preparation and play. (See *Lone Warrior Blog*: "Professional football compared to solo wargaming," Dec. 7, 2012.

Source 'Notes'

If, at some future date, I decide to revisit Alma, and perhaps even stage a refight of the historic battle, I have a fairly decent "library" of reference material and sources. At the "urging" of Messieurs Delaney and Asquith, I ordered a copy of "The Battle of the Alma: First Blood to the Allies in the Crimea." This comprehensive study of the engagement is filled with maps, lithographs, photographs,

and extensive quotes from the letters and diaries of men who fought in the battle. The appendices provide a history of the Russian formations involved, a fairly comprehensive order of battle, and an interesting section detailing the casualty returns for the British regiments.

Even though Mr. Figs provides only a single photograph in his 27-page examination of Alma, I find that I prefer his treatment to the one published by the team of Fletcher and Ishchenko. (The photograph is of returned-to-civilian-life Hugh Annesley, a 23-year-old ensign in the Scots Fusiliers on the day of the battle, who was shot in the face. He lost twenty-three teeth and part of his tongue, but survived.)

Searching the shelves of a few local libraries, I discovered "Crimea: The Great Crimean War, 1854-1856," written by Trevor Royle. Chapter 2 of Part II is titled "The Alma: The Infantry Will Advance." Though the date of copyright is 2000, I found these 14 pages to be quite informative. In point of fact, it was interesting to track the estimation of Lord Raglan's leadership through these three different works. It was also educational to see how the chronology of the battle was handled by each author.

Orders of battle are easily obtained via the Internet. The articles written by Messieurs Delaney and Asquith not only offer more detailed information than what was found in the referenced texts, but caution the interested wargamer about the difficulty inherent in making sense of the provided returns. (On reflection, I see that I mistakenly referred to the Vladimir Regiment in my battle report, when it should have been called the Vladimirsy Regiment. Additionally, in at least one source, the Russian Jaeger regiments were called "Chasseur regiments." A light infantry formation by any other name can still deploy into skirmish order.)

Mr. Dorrell's "Fire and Fiasco" article in the December 1998 issue of *Wargames Illustrated* provides a "Fire & Fury" adaptation for the fight along/across the Alma. His orders of battle and suggestions for creating a manageable scenario merit further study. As previously stated, his estimation of Lord Raglan's ability as a commander matches the assessment and anecdotes provided by Mr. Figs. Using the larger scale proposed in "Fire and Furia Francese" (August 1997 issue of *Wargames Illustrated*), a tabletop 111 inches long would be needed to represent the ground from the Tartar Fort on the French right to approximately 500 yards east of the Lesser Redoubt on Kourgane Hill. My six-foot table falls well short of this requirement. This is not to suggest that Alma cannot be tackled as a wargame. Again, the Delaney and Asquith reports prove otherwise. In the course of my "research" for this alternative to Alma, I stumbled across a few sites which I believe will appeal to the reader. The Crawley Wargames Club put on a 6mm version of Alma several years ago. They used "Principles of War" rules. I am not familiar with this set. Their web address is:

<http://www.crawleywargamesclub.org.uk/index.php/events/32-events/2008-09/7-alma>

Pictures and reports of a massive 28mm game were found on two sites. For this refight, staged in mid-2011, I believe, Mr. Barry Hilton (well known English wargamer and author of many articles, as well as rule books) was present and "Republic to Empire" rules -- amended, of course -- were used. I recommend . . . no, I strongly recommend . . . no, I urge the reader to check out:

<http://davestoybox.blogspot.com/2012/03/battle-of-alma.html> and

<http://www.edinburghwargames.com/Journal%2059.htm>.

Finally, as this report was undergoing another proofread and edit, the January 2013 issue of *Wargames Illustrated* arrived in the mail. Pages 52 to 59 are filled with photographs of a demo table lovingly landscaped and populated with excellently painted miniatures of a portion of the engagement at Alma. In a word, the pictures are spectacular.