The Napoleon Series

Getting Lost and Finding the Way: the Use, Misuse and Non-use of Maps and Reconnaissance for Route Planning in the Peninsular War (1807 – 1814)

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This article is an adapted version of a talk given by the author in May 2015 at the Warburg Institute of London University for the “Maps and Society” series of lectures. For the purposes of reproduction in this format it is unfortunately only possible to illustrate maps with selected details.

Introduction

The subject to be addressed in this paper is how Peninsular War commanders and their staff planned enormous movements of armies across hundreds of miles of often difficult unknown territory and the role played by maps and reconnaissance in this activity.

After describing the general considerations concerning the information needed for the preparation of movement plans and the corresponding Orders of March the article goes on to study two British and two French movements and shows how maps and other documentation were used - or otherwise - with their implication on military outcomes. A modern map of Spain in Fig. 1 shows the location of places and the maps referred to in the text.

![Map of Spain and Portugal showing the location of places referred to in the text and the illustrated maps.](Fig.1)
Planning Orders of March

The Orders of March used in the Peninsula to implement plans of movement came in a variety of layout and their neatness depended on the urgency of the moment but essentially they all said the same thing, namely where each army unit would march to and encamp the next day. Sometimes they were prepared on a daily basis and on other occasions looking up to a week ahead. Their planning was the responsibility of senior staff officers according to the dictates of the commander-in-chief.

To prepare successful Orders of March required information not only on starting locations, destinations, and distances but much other important intelligence. Paved roads as such were few and far between and many movements were made using only simple country paths and bridleways for which it was essential to know if their widths and incline were suitable for artillery trains and supply wagons. Crossing the often wide and fast flowing larger rivers of the Iberian Peninsula was a problem: on the wider stretches of river only a limited number of bridges existed and in any case easily blown up by a retreating enemy. These and the alternative fords and ferries had to be identified along with their capacity for troops and seasonal river flow. Finding sufficient billeting or suitable bivouac sites was a daily problem for staff officers while food supplies had to be provided not only for men but also cavalry horses and draught animals. Locating ovens for baking bread and forges for shoeing horses was extremely useful. Not least it was necessary to know the enemy’s dispositions.

The essentially rural nature of early nineteenth century Spain and Portugal meant that sufficient accommodation and food supplies even for a small division were rarely found in one single location and this frequently led to an Army marching either along parallel routes or staggering its movement over several days. An important difference between the British and French armies was the extent to which the latter tended to use a requisition system, i.e. living off the land, while the former used forward depots or took substantial food supplies with them: ox drawn wagons were a supply of meat as well as transport.

The term “getting lost” in the title of the paper implies failure to acquire adequate information about all these aspects and not only an incorrect direction. How then were staff officers to find out this vital information? Maps seem one obvious answer but we must reflect on the ability or otherwise of early nineteenth century cartographic content, even the best, to answer all these requirements. Maps alone, without adequate reconnaissance reporting were very blunt instruments if not misleading and in this respect the British, operating as allies of the Spanish and Portuguese clearly enjoyed a freedom denied to the French whose small patrols were constantly attacked by guerilleros.

The sources of maps and geographical information relevant to route planning include the following:

- National maps based on triangulation.
- Commercial topographical maps
- Commercial Post Road maps
- Geographies and travel guides
Military topography
Military map itineraries
Reconnaissance maps
Reconnaissance reports and itineraries (without maps)
Cantonment plans
Military histories / cartography of previous wars

National maps based on triangulation similar to the Cassini map of France or the Ordnance Survey in England had been planned but not started in Spain, while in Portugal only a few manuscript sheets of the Lisbon Peninsula had been produced by the start of the war. The only national survey of the Iberian Peninsula undertaken scientifically and completed by this date was the detailed charting of the Iberian coast by Brigadier Vicente Tofiño of the Spanish Navy and published as the *Atlas Marítimo* in 1789. This was a highly important piece of accurate cartography used by the Royal Navy for sailing instructions and finding suitable harbours for transporting British troops and supplies.

The most important commercial maps of Spain and Portugal were the national and provincial maps by Tomás López (Madrid 1730 – 1802) and copies of them published by the London and Paris map trades. Lopez’s maps were produced and re-edited between 1760 and the end of the war. They were based on office compilation through correspondence with a variety of civil officials, the occasional engineer, and very often local priests – obviously the quality of the final map depend on the very variable quality of input and varied from one part of it to another. Relief was represented by simple “molehill” profile designs and the variable scales used for each map made it impossible to join sheets together. We must recognise that Lopez’s maps weren’t meant for military applications but despite much criticism they were widely used by all the armies. An example of Lopez’s work is examined and illustrated below. There also existed various commercial post road maps sold to the public as well as government manuscript maps for the construction of new communications.

Military movement cartography was undertaken by the regular engineer corps in the armies of Spain and Portugal and by a specialist corps of Ingénieurs Geographiques in the case of France. In the British army the Royal Engineers (RE) concentrated mainly on fortifications and siege work while most topography and reconnaissance was undertaken by the Quartermaster General’s Department (QMG) and the Royal Staff Corps, both under the command of General Sir George Murray (1772 – 1864). Although Murray produced many maps the training of his officers, with one or two notable exceptions, was less professional than that of the engineers in the other armies and the RE. Pre-war Spanish and Portuguese military cartography had concentrated on fortifications as demanded by 17th and 18th century warfare.

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1 Four generations of the Cassini family had worked between 1673 and 1793 to produce a 182 sheet map of France at a scale of 1: 86,400. The Portuguese National Map was started in the last decade of the 18th century. By 1807 only several manuscript sheets of the Lisbon peninsula had been completed but when the French invaded were taken to Brazil by the fleeing royal family.

but their engineers had also produced various itineraries and topographical maps, especially of the frontier areas which could be applicable to route planning.

**Junot’s Invasion of Portugal 1807**

Portugal was a continuous thorn in Napoleon’s side regarding the implementation of his “Continental System” against British trade interests in Europe. Enraged by continuous stalling in diplomatic negotiations he finally decided to occupy this small European periphery nation and had no problem in obtaining Spanish collaboration both for the passage of his troops led by General Jean-Androche Junot (1771 – 1813) and additional manpower.

Junot’s leading staff officer General Baron Paul Charles François Thiérbault was responsible for quartermaster operations but he makes not a single reference to maps in his 360 page account of the campaign. His references to route planning refer solely to the advice of local authorities and guides and his recriminations regarding their ignorance and inabilities. Indeed the route they followed had been dictated by Napoleon urging Junot that “the march of the army should not be delayed for a single day under pretence of securing subsistence...20,000 men can live anywhere, even in the desert”.³

Believing implicitly in this fallacy he ordered Junot to deviate from the usual roads connecting the Spanish northern meseta to Lisbon through Almeida and Coimbra and instead follow what seems to be the shortest route from Salamanca by turning south over the difficult Sierra de Gata to Alcântara and then following the River Tajo [Tagus] down to the Portuguese capital. This plan ignores what every post road map of Iberia made quite clear. These maps had been printed and sold widely by various authors since the last decades of the 18th century and it would be highly improbable that the Paris Dépôt de la Guerre did not have one available. As can be seen in the detail shown in Fig. 2 the Madrid – Lisbon post road avoids the Portuguese section of the Tajo by continuing south at Almaraz onto Truxillo and the Guadiana valley which it joins at Merida. After passing the border at Badajoz the road crosses the Portuguese Alemtejo on to Lisbon. (Today’s modern Madrid – Lisbon motorway follows exactly the same route). The barren southern part of Salamanca had no post roads and the secondary post road (blue line) to Alcântara doesn’t follow the short distance down the Tagus from Almaraz but the much longer loop from Truxillo.

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Fig. 2: Detail from the Spanish post road map by Francisco de Ita, a post road official, drawn in 1789. (Reproduced with permission of the Centro Geográfico del Ejército, Madrid, Mapas Generales de España, 23)

After a wet and hungry march from Salamanca Junot arrived at Alcántara on the 18th of November 1807 where a Spanish division under the command of Juan Carrafa, the Captain General of the Province of Extremadura was awaiting his arrival. In his report Carrafa says that a joint French and Spanish patrol was sent out to reconnoitre inside Portugal and also that Spanish engineer officers presented Junot with both a copy of López’s map of Portugal (see below) and a descriptive route from Alcántara to Lisbon via Castelo Branco and Abrantes.⁴ A similar route had been used during previous Spanish army invasions of Portugal as Cafalla points out but what the engineers failed to bring with them is an excellent map of this area produced forty years earlier during the Seven Years War. The detail shows quite clearly the alternative roads, river crossings and relief between Alcântara and Castelo Branco and would have at least warned Junot of what to expect.

⁴ Cafalla, General Juan “Diario de los Exercitos Frances y Español dentro del Reyno de Portugal” Part 1 MS dated “Tomar 4,5, y 6 de diciembre” [1807] Archive of the Instituto Histórico Militar Madrid document 5-3-5-13 p.4

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Fig. 3: Detail from a Spanish military map “Mapa de la Frontera de Portugal entre los Ríos Duero y Tajo…” showing the area along the River Tajo produced during the Seven Years War (1754-1763). The red bars indicate the locations occupied by Spanish troops. (Reproduced with permission of the Centro Geográfico del Ejército, Madrid Ar. I-T.6-C.1-10).

This route led Junot’s army through ravines and barren upland making a requisition system impossible. Worse still, being November the numerous bridgeless Tajo tributary crossings along Junot’s route (no less than ten rivers are clearly located on the above map) were full of autumn rains and almost impassable. In his 14 day march between Salamanca, Alcántara and Abrantes Junot lost nearly ten percent of his force through starvation, sickness and drowning plus most of his artillery. Any semblance of an organised army became reduced to a straggling line which trickled into Abrantes over four days. Military opinion is unanimous in predicting that if the Portuguese, despite their deplorable state, had put up any resistance they would have annihilated the French invasion. Instead the Portuguese had issued their surrender even before Junot arrived at Abrantes and the annihilation had to be left to Wellington at Vimeiro nine months later. Ignoring the road map and blind faith in the requisition system plus the Spanish failure to bring existing military cartography plus cost Napoleon and Junot dearly and could have put paid to their campaign even before reaching Lisbon.
Moore’s Campaign 1808-09

When General Sir John Moore (1761 – 1809) took command of the British Army at Lisbon in October 1808 his main concern was to give assistance to the Spanish resistance of the French invasion by making a junction with General Sir David Baird’s division recently landed at La Coruña [Corunna] and joining the Spanish army under General Pedro Caro y Sureda, the Marques de la Romana based in Old Castile. By Christmas Moore and the Spanish army were on the point of attacking the much smaller forces of General Soult on the River Carrión near Saghún with good chances of success. But on the eve of battle Moore received news from Romana which informed him that an army of reinforcements under Napoleon was fast approaching. Moore immediately retreated through the snow covered mountains of Galicia to Vigo and La Coruña where the army was successfully embarked for England though the General was killed in the covering action.

In a letter dated 9th October 1808 to War Minister Lord Castlereagh Moore had stated that “....when the troops will be able to move forward or enter Spain it is impossible, at this moment, for me to say; it depends on the knowledge of a country which I am still without.”

This statement about his lack of geographic information clearly underlines the frustrations he suffered in planning his initial Orders of March. Complaining about the Portuguese army lack of knowledge of their own country he finally decided to split his army into four columns and believing – incorrectly - that the roads of the first three columns were unsuitable sent his artillery and some of the cavalry under General Sir John Hope on a long and unnecessary circuitous trail almost to Madrid before ordering them to join him in Salamanca. Without the resulting delay in the arrival of this column Moore would almost certainly have had time to defeat Soult before Napoleon’s reinforcements arrived on the scene: an excellent example of failure in route planning leading to failure in military objectives.

There has been much debate among military historians about the reasons for this mistake. Oman’s comments about the lack of geographical knowledge of their own countries by the Portuguese and Spanish military and governments is repeated time and again by many historians giving the impression that the Portuguese and Spanish military hardly had any maps at all but this is manifestly incorrect. In Portugal, itineraries and frontier maps were an established military engineer exercise and many maps still exist though with variable accuracy.

For example, the following Portuguese frontier map was drawn by military engineer Luis Furtado in 1797 and covers the approximately 100 kilometre frontier with Spain between the Rivers Tejo [Tagus] and Guadiana. The detail shows the town of Arronches with its approach roads, rivers and relief as well as atalayas or watch towers. The map has an average error of about 6% in distance accuracy and the scale of approximately 1: 62 000 allows great detail

5 Quoted in Moore, James “A Narrative of the British Army in Spain commanded by his Excellency Lt.-General Sir John Moore KCB” London, Johnstone 1809. [James Moore was brother to Sir John and wrote this book in response to criticism about his brother’s command]
of the surrounding country. Arronches and other nearby towns were
cantonments for Hope’s army before entering Spain and the map would
certainly have been of use to him but there is no evidence that he had
possession of it.6

Fig. 4: Detail from the frontier map “Reconhecimento Militar feito na Frontera do
Alemtejo feito em 1797” by Luis Furtado. (Reproduced with permission of the Direcção
de Infra-Estructuras do Exercito, Lisbon, 498-1-4-7).

If this map and others like them had been produced before the war why
shouldn’t they have been available to the British ally? One possibility is that
many were included with the manuscript sheets of the National Map that had
been taken to Brazil by the fleeing Bourbon monarchy just before the arrival of
the invading French army in November 1807. In the case of those left behind
many were probably sequestered by the French when they sacked the
Portuguese Engineer’s headquarters.7 More maps and itineraries were made by
the Portuguese under supervision of the French during 1808 and early 1809 but
as the terms of the Cintra agreement after Wellington’s victory at Vimeiro
allowed Junot’s army to return to France with all their belongings much of this
cartographic treasure probably finished up in the Paris Dépôt de la Guerre. Sir
John Moore’s “vain search for maps” as Oman puts it was not due therefore to
lack of previous Portuguese military cartographic productions but their
disappearance. Still, even if the maps weren’t physically available, many of the

6 Arronches was occupied by the 60th regiment. See “Table of the movement of the troops
under Lieutenant General Sir John Moore” National Library of Scotland, Murray Archives 46.1.22
folio 156
7 Dias, Prof. Mª Helena “Portugal em Vésperas das Invasões Francesas. Conhecimento
Geográfico & Configurações” Lisbon Exhibition organised by the Centro de Estudos Geográficos
da Universidade de Lisboa, the Direcção de Infra-estructuras do Exercito and the Instituto
Geográfico do Exército, 2007

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officers who had produced them were still on active service and surely they should have been able to draw suitable simple route maps and give advice to Moore based on memory. Possibly Moore’s contacts with the Portuguese military were limited to the aristocratic and largely unprofessional generals rather than with the practical and useful engineers. This raises, not for the first time in this paper the question of relations between commanders and engineers within armies.

Could Moore and Murray hope for more fruitful cartographic collaboration from their Spanish ally? The Spanish government had appointed a Col. López (not a known relation to Tomás López) as liaison officer for Moore but the only proof of assistance in route planning found by the author is an itinerary listing of locations and distances for the planned march of Hope’s division.8

Spain too had a long history of military cartography but little if any seems to have arrived at Moore’s headquarters. For example a magnificent road map between Madrid and the Portuguese frontier town of Elvas was produced by Spanish military engineers in the 1770s and measures 190 x 56 cm. with a scale of just over 3 miles to 1 inch. Its main purpose is to show the Spanish section of the new post road linking Madrid and Lisbon.

Fig. 5: Detail from the “Mapa General…de la Carretera de Estremadura….” showing the new post Road from Madrid to Badajoz constructed c.1770. (Reproduced with permission of the Centro Geográfico del Ejercito, Madrid, Ar.E.-T.10-C-13)

The detail shows the bridge at Almaraz together with its toll house where the road swings SW away from the River Tajo as already described above. Besides

8 “Itinerario desde Badajoz a Burgos pasando por Talavera de la Reyna, Guadarrama y Valadolid [sic]” National Library of Scotland, Edinburgh, Murray Archive MS 46.1.22 p. 295

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the road and rivers the map locates towns and villages, distinguishes bridges from fords and illustrates both hills and wooded areas. Distances between towns are given as a side panel. Despite its civil purpose the map would have been ideal for facilitating army movements and clearly much better than the small scale commercial post road maps and obviously much more useful to Murray and Hope than the simple listing provided by Col. López.

It has proved impossible to locate the whereabouts of this map in 1808 but Spain did not have a centralised military depot until 1810. Like the map of the Tajo route which Cafalla failed to bring with him, military maps would normally have been held in the corresponding provincial engineer’s depot where they were drawn, but to quote Miquel Alonso Baquer, one of Spain’s leading historians of military cartography “....the generals for infantry, cavalry and artillery didn’t usually count on the military engineer for the planning of operations though they could use his services for their execution.” ⁹

Once again we seem to be faced with a vacuum between engineers and army commanders which probably left Col. López as equally poorly provided with maps as General Cafalla.

There is little evidence in the archives that Sir George Murray spent much time on map making during the early period of the war. To some extent the army’s lack of maps was improved when Moore reached Salamanca in November 1808 where a new map of Spain and Portugal published by John Stockdale of London on 30th September 1808 finally caught up with him. The full map measured 96 x 123 cm and was issued both as a single sheet and in atlas format with nine partial maps. The map is a direct copy of that produced in Paris by the geographer Edme Mentelle published by Chanlaire in 1799 in Paris and which in its turn was largely copied from López. The small scale and very incorrect representation of relief make the map a poor document for route planning but the urgency of movement and the atrocious weather conditions would have rendered reconnaissance all but impossible. Moore probably also received around the same time a rare example of early QMG mapping in the Peninsular War: an exceptionally good reconnaissance map of the rivers Coa and Agueda which had been drawn by Captains Charles Pierrepoint and Benjamin D’Urban, the latter to become the Quartermaster General for the Portuguese Army, but completed only after Moore’s columns had passed through the territory and thus too late to be of use. ¹⁰

The QMG Department however did make good use of the British freedom of movement to undertake numerous reconnaissance reports. Here are some extracts from typical reconnaissance reports sent to Lt. Colonel James Bathurst, the QMG officer appointed to General Baird after landing at La Coruña

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⁹ Alonso Baquer, Miguel “Aportación Militar a la Cartografía Española en la Historia Contemporánea” Madrid, Instituto de Geografía Aplicada, 1972 p.17. [Author’s translation]
¹⁰ In his memoirs D’Urban says that General Robert Anstruther who had been sent ahead of the columns issued the orders for the survey intended to show areas for cantonment on 18th November and the completed map was presented on 3rd December 1808.
Extracts from Reconnaissance Reports

Capt. Algernon Langton of the QMG Department: report on the road from Santiago to Orense, 3rd November 1808

“At the foot of the hill there is a road paved with large stones, very rough; at half a mile the road to Puente Ledesma turns to the left, becomes very narrow with steep hills composed of rock or badly paved with very large stones.…

…the road turns to the right…. and crosses a bridge composed of stone piers with timber laid across, and in bad repair and of the same width as the road, of course impassible but for the cars of the country.

…Indian corn, rye, and a small quantity of wheat are their general crops, a small quantity of each may be procured in every village, but at the fair held at La Chapa the fourteenth of every month, every sort of produce is exposed to sale, and a considerable supply may be procured at this place…

At the several stages of Puente Ledesma, Jose de Deza, Getta, and Cea one thousand men may be lodged on the march, there being many villages in the vicinity of each which together could contain a greater number.”

Capt. Henry D’Oyly, 1st Guards: from Mombuey, 26th & 27th Nov. 1808

“….Amongst many contradictory accounts it is difficult to arrive at the exact truth but it appears certain that the French have not advanced farther this way than Mayoga…

…there is a ferry over the river Tera: over this cavalry might pass but not artillery; close to it there is a ford [suitable for] artillery as it is not above a foot and a half in depth, but sometimes in rainy weather is not passable.

From muleteers arrived from Zamora I learn that an English officer was there making arrangements for quarters and rations…. I am going to send a messenger there to inform Sir John Moore of my being here, and that I have dragoons ready to carry dispatches from him to Sir David Baird……“

Although purely descriptive reporting fails to transmit a good sense of spatial relationships, it can be readily appreciated that this type of information inflow was far more detailed than anything that could be obtained from a map. The archives reveal that Bathurst was receiving a substantial inflow of reconnaissance reports in this period, but as Oman remarks it is a mystery why similar dispatches either weren’t sent by General Anstruther to Moore and Murray from his forward position at Almeida or if they were, why they were ignored.

12 D’Oyly, Capt. Henry Reports from Outpost at Monbuey MS dated 26th November 1808 National Library of Scotland, Edinburgh, Murray Archive MS 46.1.23 p. 225

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Massena's Invasion of Portugal 1810

In spring 1810 another French army at Ciudad Rodrigo was about to enter Portugal this time led by Napoleon’s highly trusted, but now aging Marshal André Masséna (1758 – 1817).

Following the near disaster of Junot’s earlier invasion and perhaps because of it, Napoleon created a Bureau Topographique for Spain in February 1808 staffed by a highly trained corps of surveyors known as the Ingénieurs Géographiques. Their first task had been to survey the great post road between Irun on the French frontier and Madrid so as to maintain control of communications with Paris. One of the major difficulties on this route, used by Masséna, was the 4 kilometre long defile at Pancorbo which when travelling south led from the Basque country to the Castilian meseta. The collapsed caverns of subterranean rivers in limestone country are similar geologically to Cheddar Gorge in England and Pancorbo presented an excellent site for guerrilla raids on French detachments so a careful survey was made of the area. With a scale of 1: 10 000 and very accurate measurements, we can appreciate just how much detail it showed, especially those parts of the road which ran directly under the well-illustrated steep sided cliffs. The chemin pour artilerie for the guns to be placed at the protecting fort above the town is clearly distinguished from the chemin de mullets (path for mules).

Fig. 6: Detail from the “Plan topographique du défilé de Pancorbo” surveyed and drawn by the French Ingenieurs Géographiques in 1808 (Reproduced with permission of the Centro Geográfico del Ejército Madrid Ar.M-T.1-C.4-47(2))
During their time in Spain and Portugal the Ingénieurs Géographiques completed over 600 maps and plans of the highest quality though they seem to have been remitted directly to the Depôt de la Guerre in Paris rather than to the field commanders.13

We should therefore expect Masséna to have been well equipped with maps, especially as his first aide-de-camp Jean Jacques Pelet was a mathematician and a trained surveyor. Amazing as it may seem however the only cartography this army had available was King Joseph’s personal copy of López’s 1804 Atlas and some notes from Thiérbault. The reason given by Pelet contrasts again with the usually good impression of Napoleonic cartographic organisation and usage when he claims that the all important French map depositary “withheld” these maps.14 Rauben has suggested in his 1989 conference paper that the Paris Depôt didn’t have time to get them copied and feared the capture of the originals.15 In any event yet again there is an apparent lack of cooperation between engineers and an army commander.

So, by studying his López map Masséna decided to take the conventional route down the Mondego valley and reach Lisbon via Coimbra. Lopez’s distance errors usually average around 10% compared to modern maps but with a very wide range. His maps of Portugal are, perhaps understandably, less reliable than those of his native Spain and in this particular case his location of the Buçaco [Bussaco] ridge is totally misplaced being shown as a separate sierra from that of the Alcoba rather than as a central part of the latter thus adding further confusion to Massena’s planning.

Lacking the ability to make much forward reconnaissance compounded by the errors on Lopez’s map and contradictory information from the local population he was unaware of the real nature of the country in front of him as well as Wellington’s unassailable position on the ridge of Buçaco where he lost heavily in the ensuing battle (27th September 1810).

The illustration is taken from the very same López Atlas which Masséna used and in which he traced his routes in red pencil – this is a rare and very welcome proof of military use of maps. The Atlas was captured by the British at the battle of Vitoria in 1813 and is now in the McClay Library of Belfast University.

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13 De Villéle, Marie-Anne “Acerca del trabajo cartográfico de los oficiales franceses en España 1808 -14” in “Madrid 1808 Guerra y Territorio” Madrid, Museo de la Historia, Exhibition catalogue with the same title, 2008 p.28
14 Pelet, Jean Jacques “The French Campaign in Portugal 1810 -11”. Translated by Donald Horward University of Minnisota, 1973 p. 135
We can appreciate on this map Masséna’s choice to follow a route north of the river Mondego although the roads to the south leading directly to Coimbra were definitely better. By 1810 Murray and his team were dedicating more and more time to reconnaissance and mapping and their knowledge of the geography of the Mondego valley and Buçaco was far superior to that of the French as demonstrated by Wellington’s well known comment that “...there are certainly many bad roads in Portugal, but the enemy has decidedly taken the worst in the whole kingdom.”

Interestingly Massena’s red line stops at Montagoa (shown on Lopez’s map as Martigao) where he established his headquarters before the battle but fails to show the route the French followed on the night of 28-29th September after the battle. However López indicates correctly the path they finally followed via Avelans de Cima and Avelans de Caminho (near to the Boialvo frequently referred to in French accounts but not shown on this map) while Massena’s red pencil only starts again at Pedrera which he reached on the 30th. This lack of continuity can only confirm the confusion that is reported to have existed about the choice of route for their retreat.
Massena’s invasion of Portugal is an excellent example of poor route planning due to insufficient and inaccurate maps and the inability (due to enemy presence) to be able to undertake adequate reconnaissance, deficiencies which did not occur in the British army and clearly contributed to their victory.

Wellington’s 1813 Route to Victory at Vitoria.

Reporting to a military commission referring to his 1813 campaign the Duke of Wellington stated that “I have always thought that I could have gone anywhere and done anything with this army. It was impossible to have a machine more highly mounted and in better order”.16

That “he could have taken his army anywhere” contrasts strongly with Moore’s desperation at his lack of “knowledge about the country I am about to enter” four years earlier. This positive change in British route planning capability was never better evidenced than in Murray’s Orders of March for Wellington’s audacious flanking movement against the French army in 1813 which culminated in the great victory at Vitoria. After criticism of poor quartermaster administration in Moore’s campaign Murray had steadily grown to become Wellington’s most trusted staff officer.17 Although the British cartographic training and technical standards of RSC and QMG officers were not as high as those of the French engineers – or those of their Spanish and Portuguese allies - they had the advantage that topography and reconnaissance were directly under the same person responsible for route planning and consequently better advantage was taken of the work done than appears to have been the case in the other armies. It is obvious that the rough sketches of the British were put to good use than the magnificent French maps that laid idle in the Paris depot.

Leaving their winter cantonments in May, the movement was so organised that one division with Wellington at its head followed the usual northern route from Portugal into Spain via Salamanca. The French, reduced by troop transfers following Napoleon’s defeat in Russia the previous year were alarmed and retreating but initially totally unaware that the main allied army had already crossed the Duero River after marching through the little known and difficult country of north east Portugal and concentrating at Carvajales. Subsequently the allied army including a Spanish Division marched north of the Duero and even crossed the upper Ebro River bringing King Joseph to battle at Vitoria in June.

Murray had done his homework well by organising numerous reconnaissance reports and sketch maps during the early spring of the route through Tras-os-Montes as far as the River Esla.

In Fig. 8 we see an excellent example of a three page reconnaissance report including a sketch map by a QMG officer which also clearly suggests the urgency in its commission. The map shows the roads from the Douro [Duero]
River crossing at Peso da Regua to just south west of Braganza which later became the route that was followed by Wellington’s 1st and 5th divisions. Included are statistics on distances in leagues along alternative routes and billeting capacity in each village. The report analyses the suitability of roads and bridges for artillery, the forms of river crossing and comments on food and forage availability as well as indicating a pine forest bivouac area near Vila Nova for 5,000 troops. The map can’t be said to be particularly elegant or even very accurate but together with the report it displays all the essential information that Murray needed.

In 1813 Wellington was not only commander of the Anglo-Portuguese army but had been appointed commander of the Spanish armies as well. A Spanish Division under General Girón therefore participated in this campaign and it is possible that the March 1813 date and the subject of a Spanish engineer’s map of the approximately 100 kilometre course of the river Duero between its junctions with the rivers Esla and Pisuerga was produced at the request of Murray. It is a natural continuation of Murray’s maps and the engineer who produced it was based in Zamora.

Fig. 9: Detail from a Spanish military engineer’s “Mapa geográfico en que se manifiesta el curso del Rio Duero desde la confluencia del Rio Esla hasta Valladolid” (Reproduced with permission of the Centro Geográfico del Ejército, Madrid Ar.E-T-C2-332 bis)

The map with a scale of 1: 220,000 gives vital information about river crossings, distinguishing maintained from broken bridges, ferries and fords. In the detail we can see the ford at Almendra where Wellington decided to construct his pontoon bridge after several men had been drowned in the swollen river. Like
all the Spanish military maps, and unlike many of the British, it makes a clear
statement of the title, exact date (18th of March, 1813) and cartographer
(Manuel Sipos, Master in Fortifications).

It is a good example of the high standard of the multitude of Spanish military
maps produced during the war, but the author must repeat that although highly
appropriate to Wellington’s plans he has found no evidence that it, or a copy
was ever in the possession of the British Army. Indeed there is little evidence of
cartographic collaboration between the Spanish and British Armies at any time
during the war in contrast to collaboration in naval hydrography, but that is
another story.

Conclusions

Manoeuvres were a key element in the Peninsular War campaign successes
and failures but despite the popular picture of generals intently studying maps,
cartography appears to have played a limited role in route planning.
Reconnaissance was a far better tool for making available correct and detailed
information for movement plans though obviously better still if accompanied by
a sketch map.

Pre-war commercial maps though widely used were of limited content for the
job in hand and their variable reliability could lead to disastrous decisions.
Military maps, both pre-war and war-time on the other hand could offer useful
and some accurate detail but many appear to have remained captive in military
depots or otherwise “lost” rather than being made available to commanders,
especially in the case of France, Spain and Portugal. In the case of Britain
reconnaissance mapping only appears to have become a regular exercise from
about 1810 onwards with the advantage that it was the responsibility of the
Quartermaster General and hence used to great advantage in route planning.
These maps did not need to be a work of great cartographic technicality or
draughtsmanship which could result in time consuming spurious quality when
urgency and approximation were the order of the day.