

# GERMAN ARMY MAP OF SPAIN 1: 50 000: 1940-1944

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## ABSTRACT

During the Second World War the German Armed Forces produced a huge quantity of topographic map series covering real or possible combat areas in Europe, Africa and Asia by copying respective national map series. At the beginning these map series were named "Special edition" (*Sonderausgabe*), however, since summer 1943 "German Army Map" (*Deutsche Heereskarte*). The research on this giant map corpus is at its very start.

A special historic and regional field concerns the German Army Map of Spain 1 : 50 000 - produced between 1940 and 1944 - which must be seen as a part of the German plan to capture Gibraltar and to bring Spain as a German ally into the Second World War. Via intelligence service connections between the German Armed Forces and the respective Spanish map authorities, which had survived the Spanish Civil War (1936-1939/*Legion Condor*), published maps as well as map proofs of the *Mapa Nacional de España en escala de 1 : 50 000* were sent to the "Department of Wartime Map and Survey Service" (*Abteilung für Kriegskarten-Karten- und -Vermessungswesen*) - a department of the German General Staff of the Army. This department organized to copy the sheets and to add German labelling together with complete legends by map specialists of the "Army Map House" (*Heeresplankammer*). The first edition of this map series (895 sheets) contained the respective regional topography, only, whereas the second edition (612 sheets) was edited additionally with the Spanish Lambert Grid as the geodetic base for middle and long range artillery activities.

In 1943 by pure chance Spanish army units removed copies of the German Army Map of Spain 1 : 50 000 from irregular Spanish soldiers which had robbed the maps in Southern France from a German Army Map store house. A Spanish diplomatic request concerning this German Army Map affair undertaken later on at Berlin was not successful.

This paper has to be regarded as the final result of international cartographic research cooperation between Prof. Francesc Nadal, Prof. Luis Urteaga (both members of the Universitat de Barcelona), the undersigned and the retired Colonel Theo Mueller (1963-1971 head of the German Military Geographical Service).

About three years ago Francesc Nadal and Luis Urteaga (Universidad de Barcelona, Divisó de Ciències Humanes i Socials, Departament de Geografia Humana) asked me to join their project about the German Army Map of Spain (*Deutsche Heereskarte von Spanien*) within the frame of their comprehensive activities and many years of research on the history of the Spanish cartography of the 19th and 20th centuries [1]. My main task was to look for German language sources, to analyze, to evaluate and to utilize them, especially to find the answers to several questions which were sent to me from Barcelona concerning the German Army Map of Spain, answers that should complete the research of Francesc Nadal and Luis Urteaga.

When I agreed to participate in this project I was very happy in winning the retired Colonel Theo Müller (born in 1911) for cooperation. During World War II Colonel Müller had been a military officer in active wartime map and survey service, in the end of the war as "IaMess" (high ranked survey specialist) at the Supreme Commander Southwest/Army Group C in Italy. Between 1956 and 1971 he was an active military officer at the Military Geographic Service (*Mil-Geo-Dienst*) of the German Federal Army (*Deutsche Bundeswehr*) and since 1963 the Head of the German Military Geographic Service. His scientific activities focus on the History of the Military Geographic Service and the History of Cartography.

## 1. MAPS

### 1.1 German Army Map of Spain 1 : 50 000 (1940-1944)

Between 1940 and 1944 the German Armed Forces (*Deutsche Wehrmacht*) produced about 1.500 sheets of the *Mapa Topográfico de España en escala de 1 : 50 000*. Quantitatively as well as qualitatively this map series was the most important for the German military purposes concerning Spain at this time.

These sheets were named “Special edition” (*Sonderausgabe*) to demonstrate that the sheets were not the original versions of the official map series of the respective countries. The term “Sonderausgabe” was used for all cartographic products of the German Armed Forces concerning non-German territories throughout Europa and parts of Africa and Asia from the beginning of World War II in September 1939 up to March/June 1943. At that time the term changed to “German Army Map” (*Deutsche Heereskarte*).

### 1.1.1 First Edition

The first edition (Fig. 1) was produced by copying the original paper sheets of the *Mapa Topográfico de España en escala de 1 : 50 000* according to the last Spanish edition and by printing them in German. The main objective was the topography. This edition consists of 895 sheets. More than 90% of the first edition had been produced in 1940 (260 sheets = 29,1%) and 1941 (559 sheets = 62,5%). In 1942 and 1943 only single sheets were added, whereas in 1944 a total of 50 sheets (= 5,5%) - mostly concerning the southern part of León, Western Andalucía and the region between Almería and Cartagena - finished the production of this series.

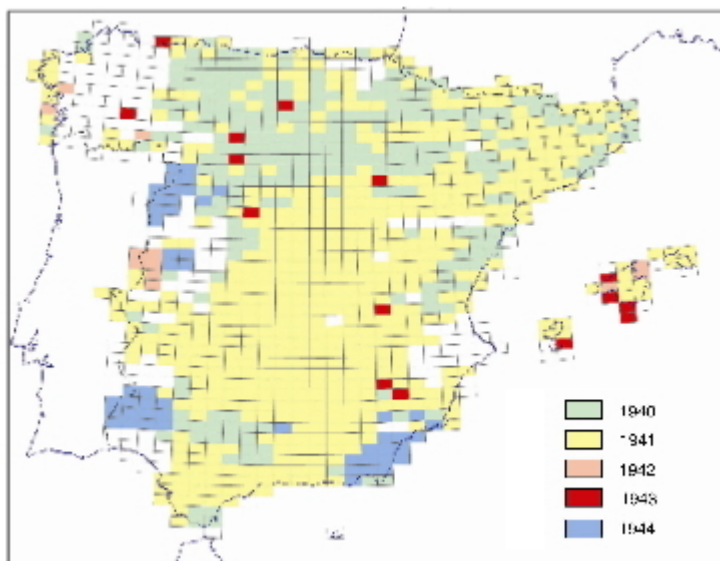


Figure 1. Sonderausgabe: Deutsche Heereskarte von Spanien 1 : 50 000. (1. Edition - topography)

There are some formal differences and some differences concerning the contents between the Spanish sheets and those of the German Army Map of Spain. Information about the sheet name, its number, the position of the sheet within the tableau of the series 1 : 50 000, the map making institutions respectively the map sources, and the legend can be found as well on the Spanish sheets as on the German ones.

In general, the Spanish legends (*Signos convencionales*) decode only some 8 to 12 signs, symbols and patterns if they had been printed after about 1925 (Fig. 2).



Figure 2. Signos convencionales.

In contrast to this fact the Spanish sheets dating before about 1925 - which I could analyze - did not contain any legend. Most of the sheets of the German Army Map of Spain at the right margin show a huge legend with two columns comprising 178 signs, symbols and patterns, followed by explanations of 13 different types (Figs. 3-1/3-2). All explanations are given in German and Spanish. These measures were absolutely necessary because the signs, symbols and patterns of the German topographic maps used by the German Armed Forces at this time were in most cases clearly different to those used in the Spanish maps. I suppose that this huge legend belonged to a general guide for the *Mapa Topográfico de España en escala de 1 : 50 000* which could not be found in Berlin map collections, until now.

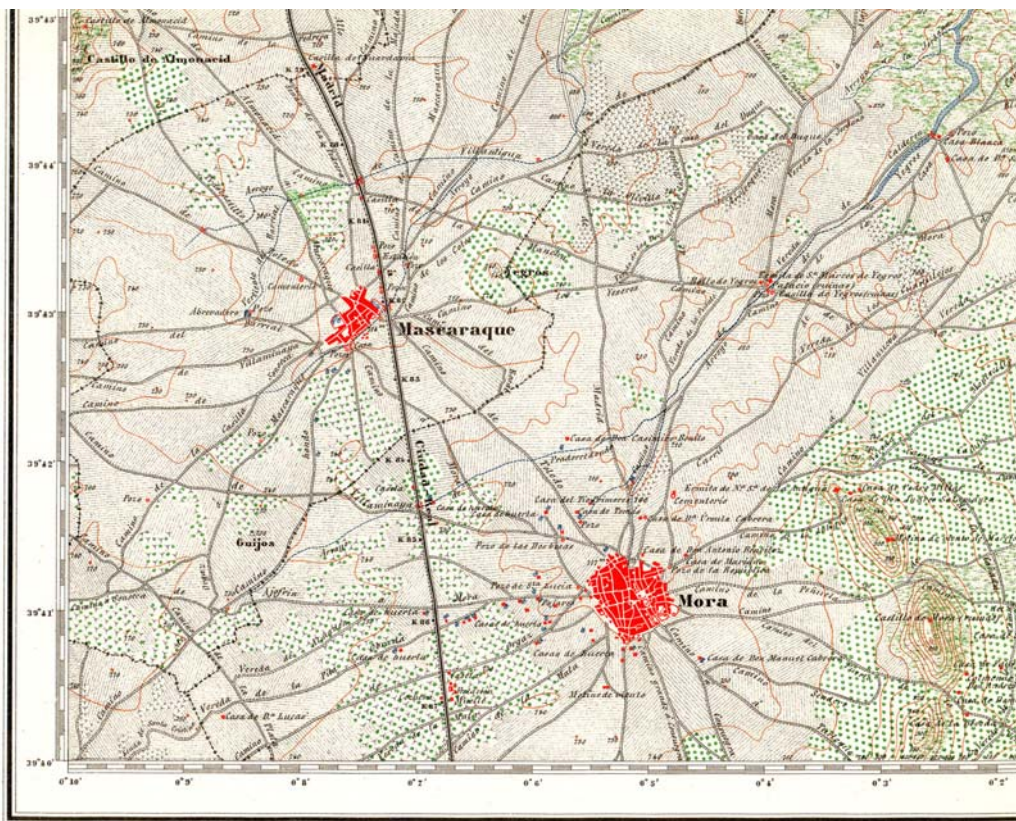


Figure 3-1.



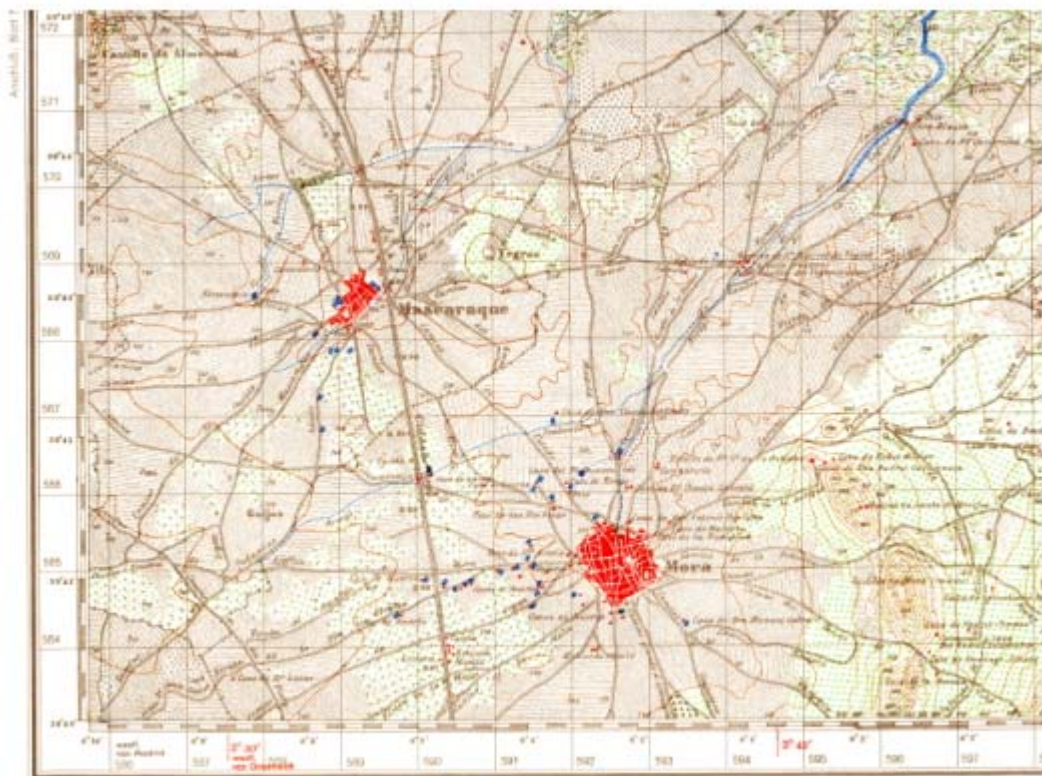
Figure 3-2.

The general grid of geographic coordinates in this series refer to the Prime Meridian of Madrid (Fig. 4-1); the German sheets additionally contain the longitude referring to the Prime Meridian Greenwich in red (Fig. 4-2).



*La red geodésica de 12' orden por Jefes y Oficiales de Artillería, Ingenieros y Estado Mayor.  
Las cotas geodésicas de 32' orden y de 32' y la topografía, por el Cuerpo de Topógrafos.*

Figure 4-1.



*Angaben über das Grundnetzwerk.  
Karte von Spanien 1:200,000, Blatt Nr. 49 (1952).*

Figure 4-2.

However, there is a considerable quantity of Spanish sheets which contain contour lines and oblique hill shading (Fig. 5-1) - relatively unusual in the German topographic maps at that time - whereas in several respective German sheets the hill shading is omitted (Fig. 5-2).

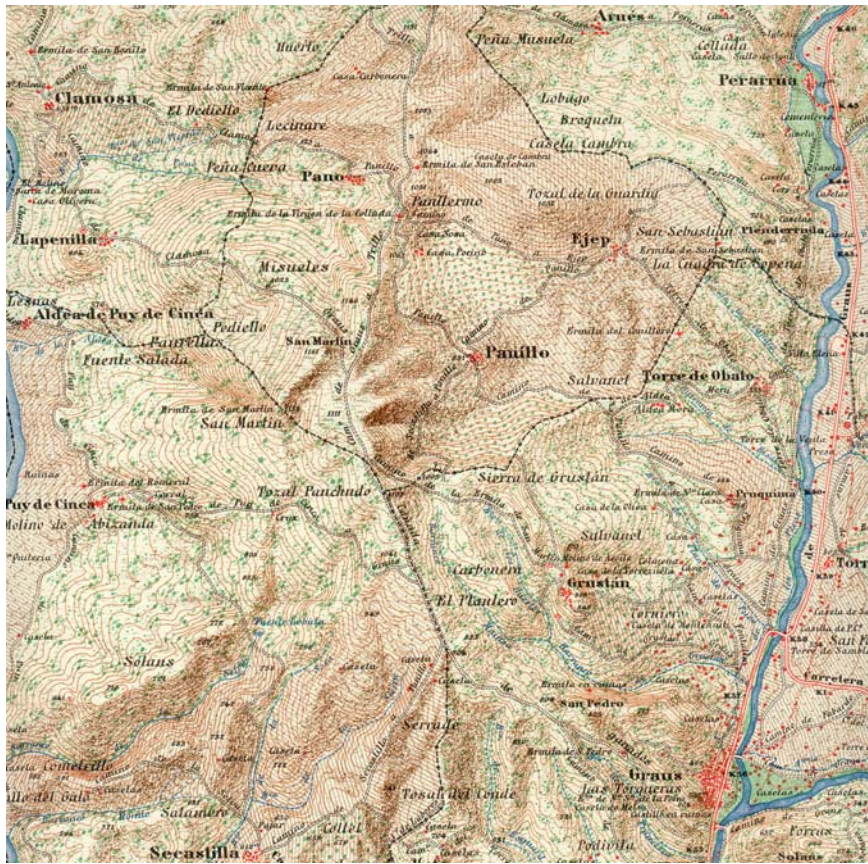


Figure 5-1.

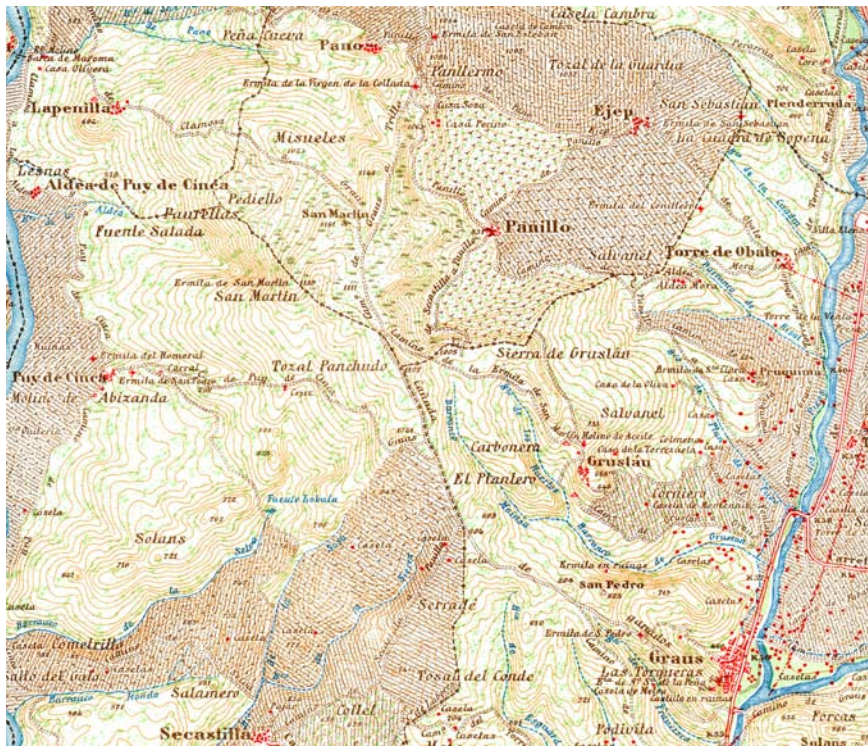


Figure 5-2.

The process of copying the Spanish original sheets was carried out very consequently: Among the sheets of the German Army Map of Spain we can find apart from sheets with 5 colors and map content throughout the respective sheets:

- other sheets - showing the border of Spain and Portugal - with the complete map content on the Spanish territory, only (Fig. 6) (at the French border enlarged French topographic maps were used to complete the Spanish sheets)
- among those polychromatic sheets in different regions of Spain monochrome sheets with an incomplete map content (Fig. 7).

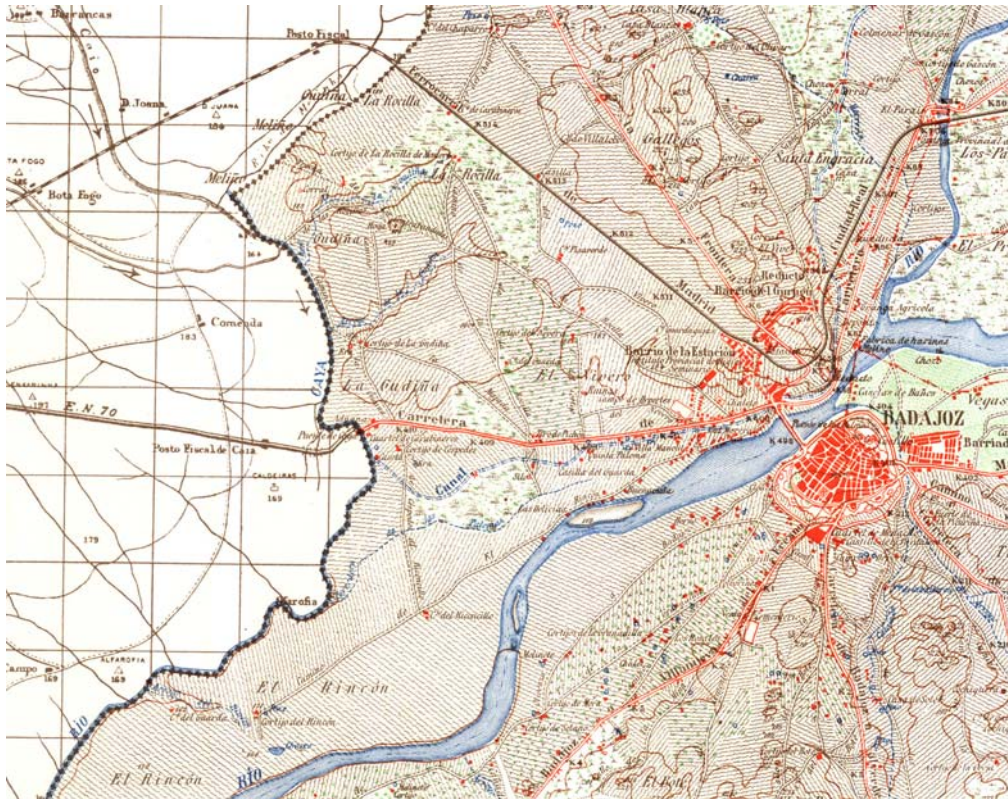


Figure 6.

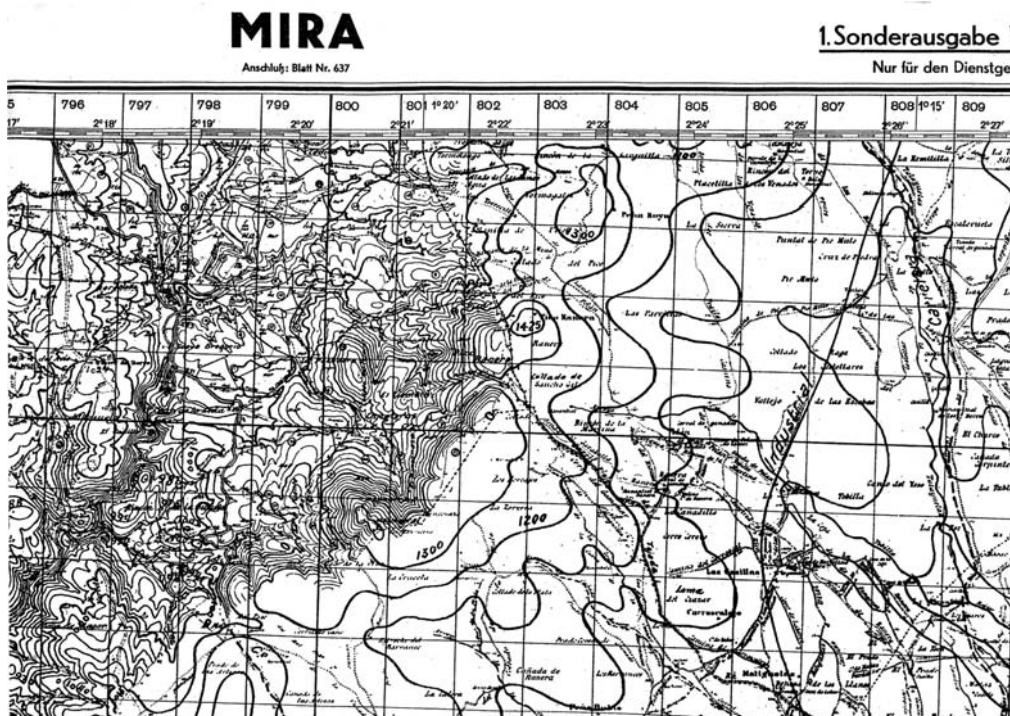


Figure 7.

### 1.1.2 Second Edition

The second edition (Fig. 8) had been produced almost exclusively in 1941 when more than 96% of the total of 612 sheets of this edition were printed. In general the sheets of this second edition comprise the topography of the first edition which now was completed using the "Spanish Lambert grid" (Fig. 9). This grid was the geodetic basis for measurements to be undertaken by survey specialists in favor of the effectiveness of middle and long range heavy artillery fire.

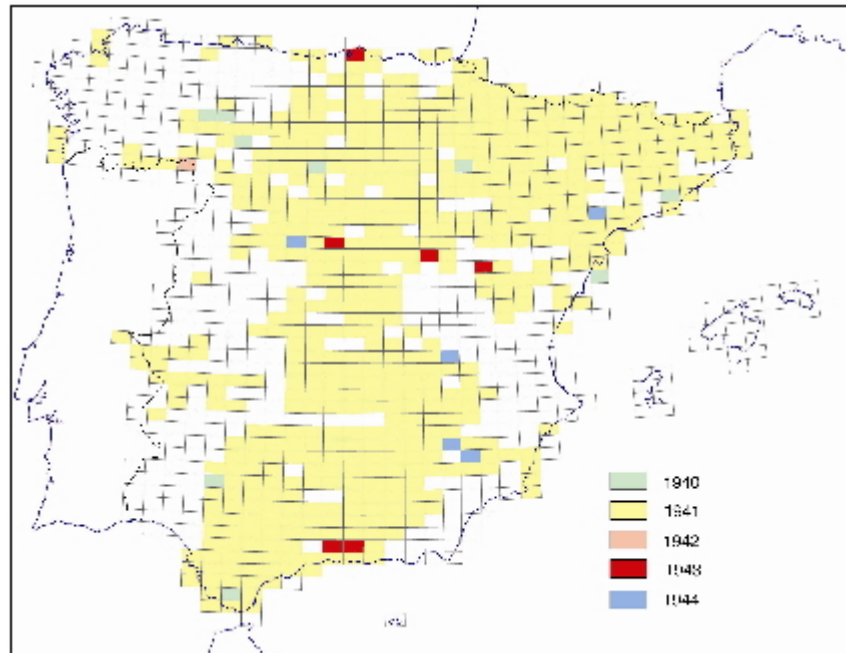


Figure 8. Sonderausgabe: Deutsche Heereskarte von Spanien 1 : 50 000. (2. Edition – Lambert Grid)

If one considers the regions covered by the first (Fig. 1) and the second edition (Fig. 8) of the German Army Map of Spain it becomes very clear that they both form a broad strip from the Pyrenees in the north across the center of Spain down to Gibraltar.

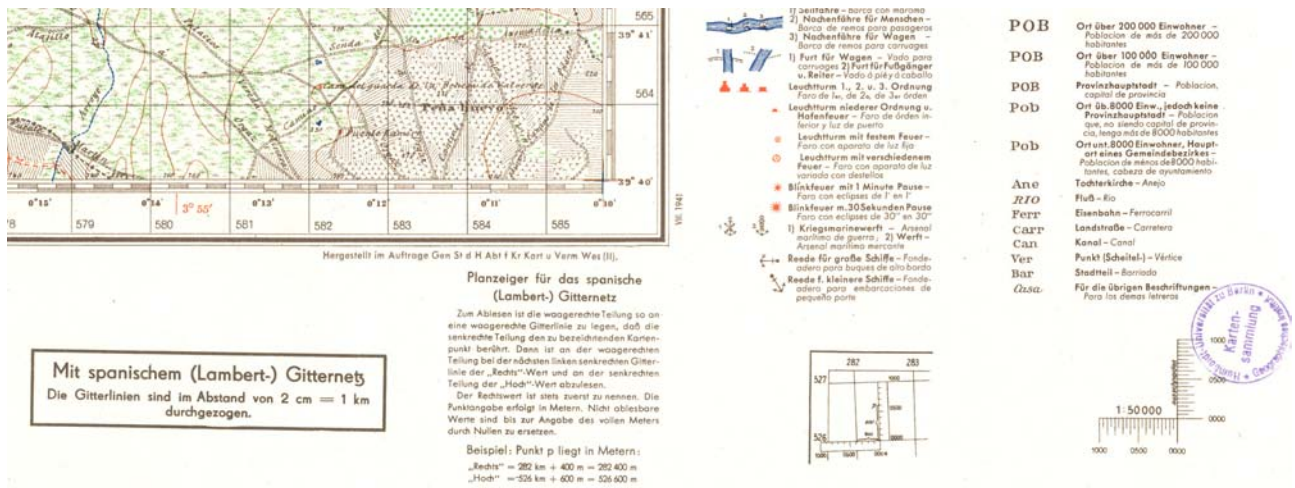


Figure 9.

One of the Barcelona questions had been: When - with maximum precision - did the Department of Wartime Map and Survey Service/General Staff of the Army (*Abteilung für Kriegs-Karten und -Vermessungswesen*) began to work on the maps of Spain? In the Berlin map collections which I could analyze, the earliest printing date for a sheet of the first edition was December 1940. Most sheets of the first edition which had been in my hands are dated between May and July 1941. Almost at the same time (between May and August 1941) I could identify to have been the most busy period of producing the sheets of the second edition. However, these results might be not representative.



## 1.2 Geographic Information produced by the German Armed Forces concerning Spain

### 1.2.1 Trafficability Maps

Apart from the German Army Map of Spain 1 : 50 000 and similar maps - topographic as well as general maps - in scales between 1 : 10 000 and 1 : 1 million I would like to focus on a map type that was produced for several regions where German military units fought during the World War II. This type of maps belongs to the huge corpus of maps which had been produced by the group "IV. Mil-Geo" of the Department of Wartime Map and Survey Service/General Staff of the Army (*Abteilung für Kriegs-Karten und -Vermessungswesen GenStdH*) and was based on military aerial photos and the military interpretation of maps and aerial photos by German geographers. According to the legend of this map type - special information concerning the trafficability of the respective region - this map type should be called "trafficability map".

One series of those maps with 8 sheets and the scale 1 : 200 000 shows the Spanish-French border region of the Pyrenees (*Übersicht zur Mil-Geo-Bearbeitung Durchgängigkeit der Pyrenäen 1 : 200 000*; Fig. 10) and is mentioned in a catalogue published in July 1943 [2] by the Department of Wartime Map and Survey Service/General Staff of the Army. The map is dated "April 1943" with the notice "2. edition will be prepared and will be available probably September 1943". According to my current knowledge neither the research activities of the Spanish colleagues nor my own investigations to German archives can prove that sheets of this map have survived.

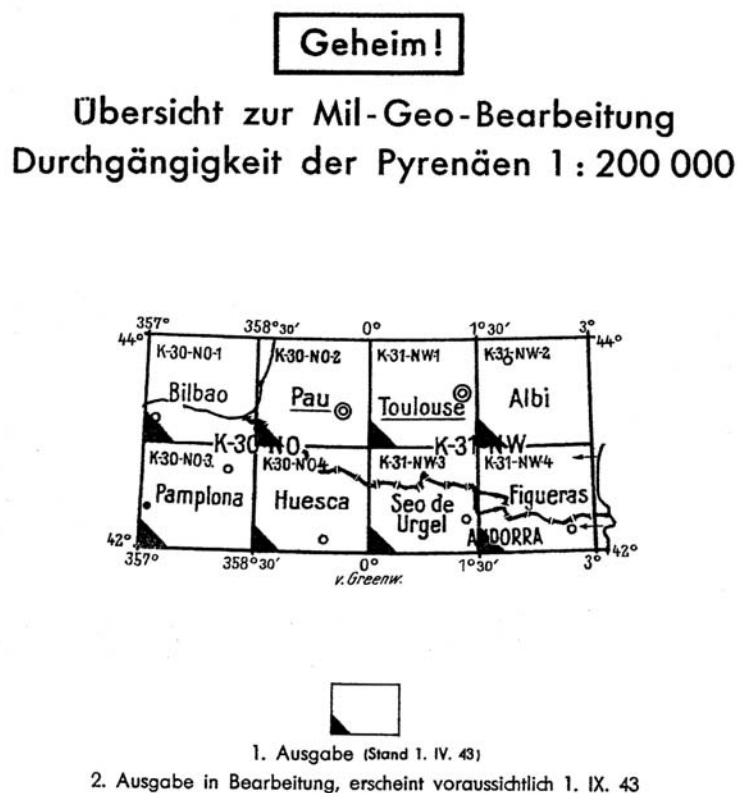


Figure 10.

This map type changed its name into "map of field assessment" when the "Special Research Squadron" (*Forschungsstaffel zur besonderen Verwendung/zbV*) took over these activities. Apart from the group "IV. Mil-Geo" of the Department of Wartime Map and Survey Service/General Staff of the Army this Squadron was active between 1943 and the end of the war as an institution of the Supreme Command of the Armed Forces (*Oberkommando der Wehrmacht - OKW*). It seems unlikely that the Squadron was involved in producing the trafficability map of the Pyrenees mentioned above which should be published in September 1, 1943. The reports and papers about the Special Research Squadron mention several regions of activities like Northern Finland, Central Europe, Hungary, Northern Italy and the Balkan Peninsula, but neither France nor Spain.

By pure chance I found in the map collection of our institute perhaps one of the earliest trafficability maps - dated March 1941 and showing the Western border region of the Soviet Union in the scale 1 : 500 000. The map is part of a "Mil-Geo-Information on European Russia" and entitled "Pripet-Polessje Military Geographic Operation Map" (*Pripet-Polessje Militärgeographische Operationskarte*) (Figs. 11-1/11-2/11-3). The map comprises general geographic information as well as information of special military relevance, and the detailed content of this map can be seen as the

prototype core of the trafficability map type. This map gives evidence that apart from the Special Research Squadron and even earlier than 1943 German Geographers produced thematic maps to facilitate military activities during World War II [3].

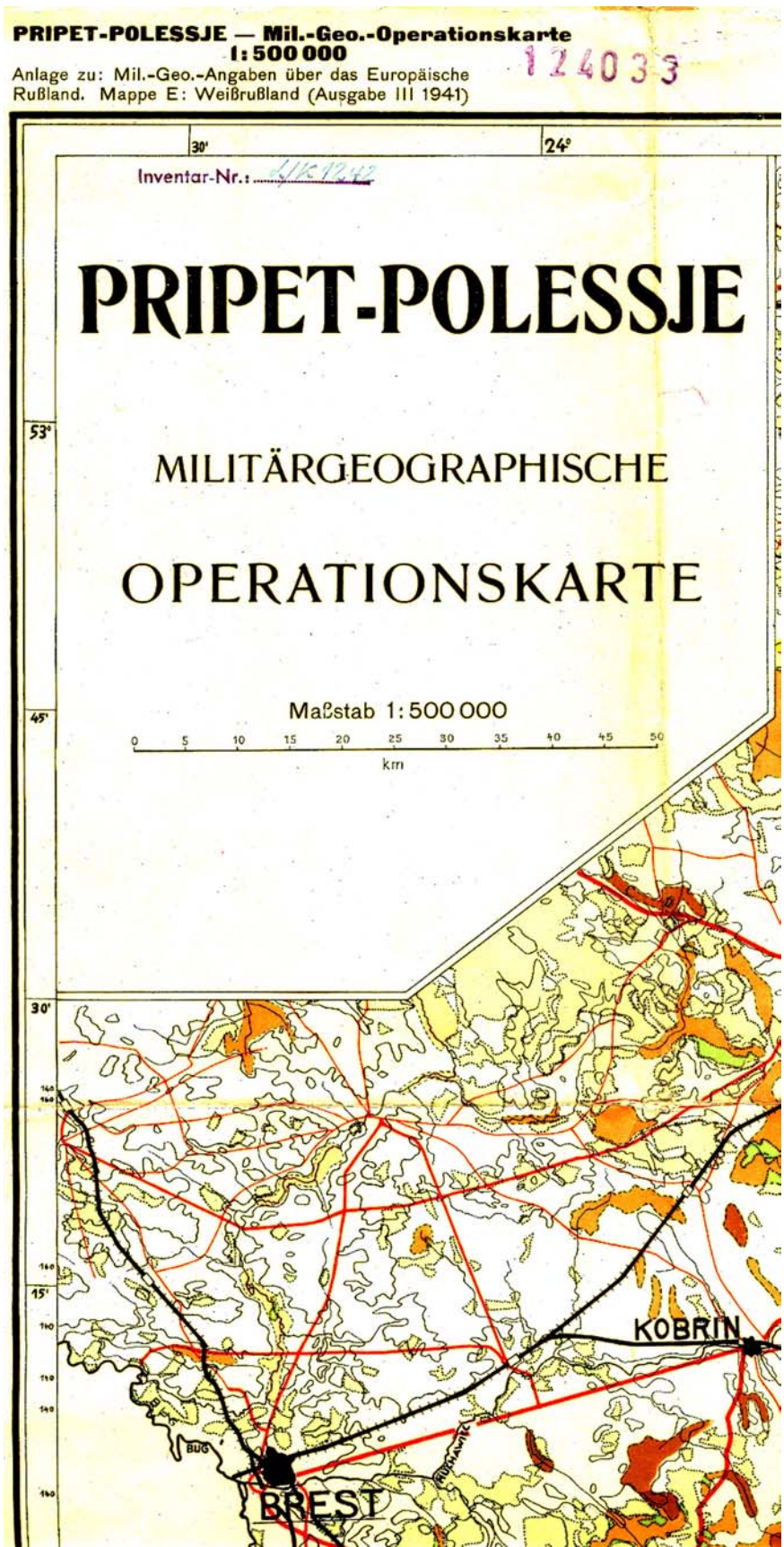


Figure 11-1.

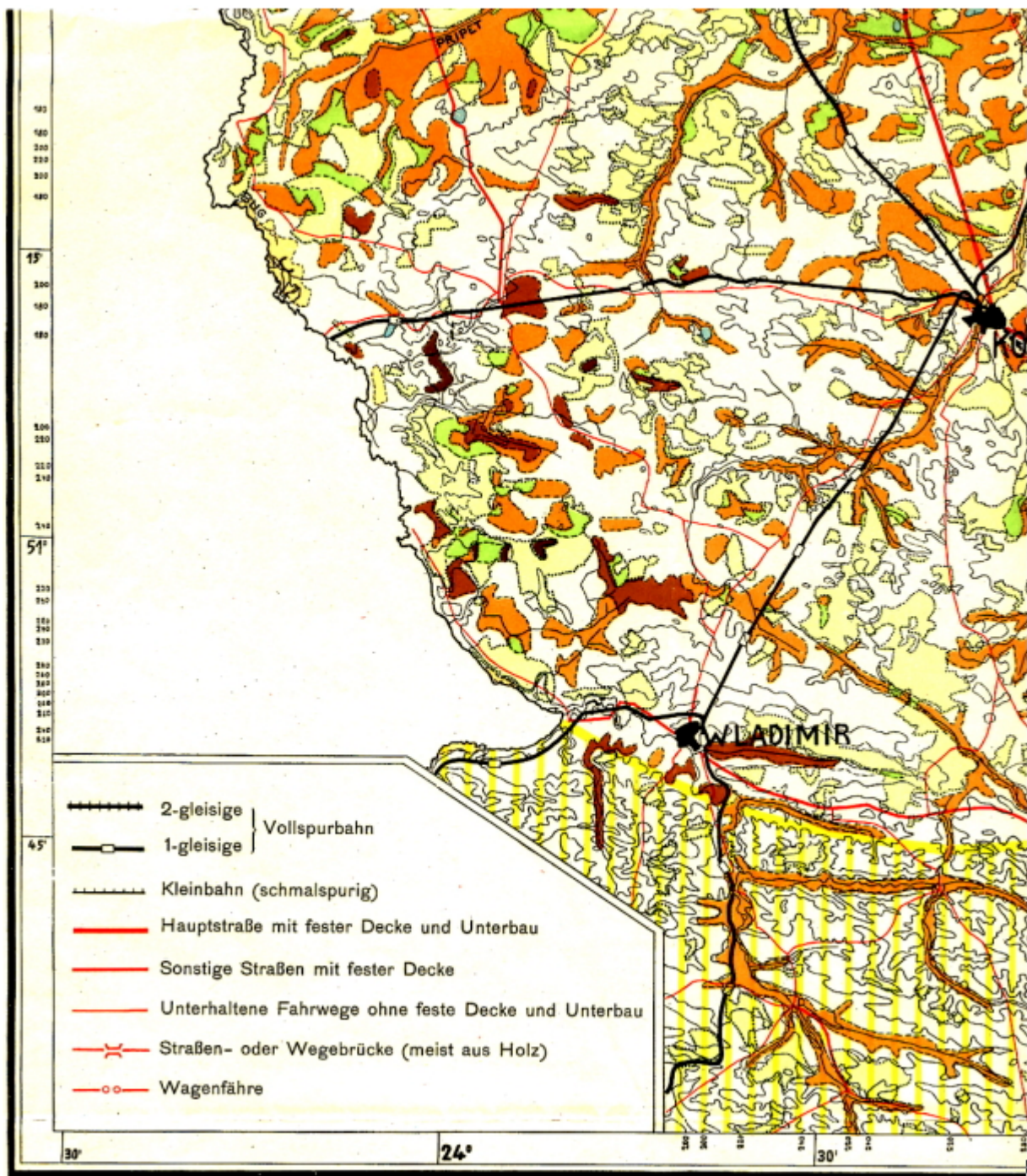


Figure 11-2.

### 1.2.2 Mil-Geo-Informationen/Planhefte

Apart from the German Army Maps and the trafficability maps the Department of Wartime Map and Survey Service/General Staff of the Army and its Mil-Geo-section produced a huge quantity of regionally focussed information packages which contained geographic data, essays and descriptions, tables, catalogues, maps and pictures.

Within the frame of this paper I may present three of those packages concerning Spain:

- Military Geographic Essay on Spain and Portugal. Finished December 15, 1940 (*Militärgeographische Studie über Spanien und Portugal. Abgeschlossen am 15. Dezember 1940*) (Fig. 12). Part A: text booklet, register of settlements, photo booklet Spain, photo booklet Portugal, General map 1 : 2 Mio., General Maps of Spain and Portugal presenting Agriculture, Forestry and Fishery/Industry and Deposits/Electric Power Stations/Railways, Register of Spanish Railway Stations and Lines, Railway Map of Portugal with Register of Stations, Map of the Conditions of Portuguese Roads, 10 town plans. Part B: Road Map 1 : 400 000 (14 sheets) and town plan Booklet [4].

- Military Geographic Data concerning the Street of Gibraltar. Finished December 12, 1940 (*Militärgeographische Angaben über Die Straße von Gibraltar. Abgeschlossen am 12. Dezember 1940*) (Fig. 13). Content: Booklet with text and photos, Map of the Street of Gibraltar 1 : 200 000, Map of the Gibraltar Peninsula 1 : 10 000, Map of the field observable from Gibraltar 1 : 50 000 [5].
- Map Booklet Spain and Portugal (*Planheft Spanien und Portugal. 28. September 1943/1. Ausgabe 1941*). This publication gives a summary about the state of mapping and surveying in Spain and Portugal including Spanish Morocco and the respective islands and should be used by the Map and Survey units [6].

In connection with the German Army Map of Spain these packages are documents how German military planning and preparing of campaigns was carried out 1940-1944.



Figure 12.

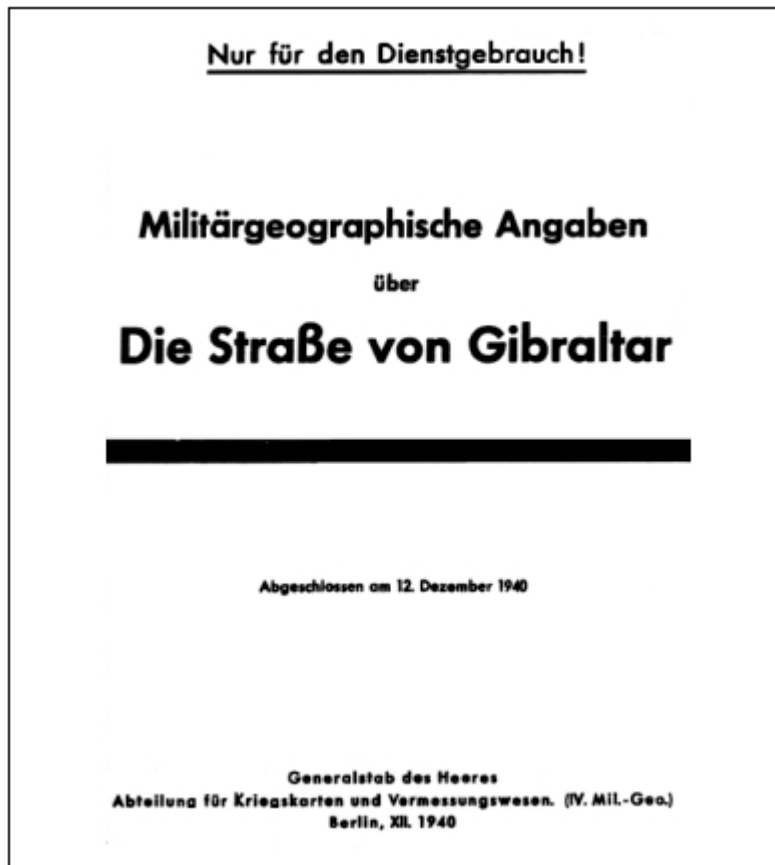


Figure 13.

## 2. ORGANIZATION OF GERMAN MILITARY CARTOGRAPHY 1919-1945

### 2.1 General [7]

#### 2.1.1 1919-1935 Imperial Armed Forces (*Reichswehr*)

By the treaty of Versailles the Imperial German army, navy, air force and the Great General Staff had to be disbanded which included not to maintain any military cartographic, geodetic and intelligence units. The Imperial Armed Forces (*Reichswehr*) were limited to 100 000 army soldiers and 15 000 men naval staff. The militarily steered Royal Prussian General Survey (*Kgl. Preußische Landesaufnahme*) was changed into the civil "Imperial Survey Office" (*Reichsamt für*

#### 2.1.2 *Landesaufnahme, being subordinated to the Ministry of the Interior*

In 1919 the tasks of military mapping and surveying were carried out within the "Truppenamt" of the Imperial Armed Forces by a group of specialists, since 1921 called "Army Survey Unit" (*Heeresvermessungsstelle*). The first head of the Army Survey Unit became Major G. Hemmerich who had got a special survey formation during his training for general staff officers within the Royal Prussian General Survey and was busy in this field up to 1914 as a "Captain in the General Staff" (*Hauptmann i.G.*). Within the Truppenamt he elaborated Military Geographic State Descriptions (*Militärgeographische Landesbeschreibungen*).

#### 2.1.3 1935-1939 German Armed Forces (*Deutsche Wehrmacht*)

In 1935 the German Nazi government - active since 1933 - decided not to follow the treaty of Versailles anymore and restored among other prewar military institutions: Imperial Armed Forces (*Reichswehr*) changed into German Armed Forces (*Deutsche Wehrmacht*) comprising Army, Navy and Air Force and - of course - a War Ministry, a Supreme Command of the Armed Forces (*Oberkommando der Wehrmacht - OKW*), a Supreme Command of the Army (*Oberkommando des Heeres - OKH*) and a General Staff of the Army (*Generalstab des Heeres - GenStdH*).

In October 1936 the General Staff of the Army was enlarged by the 9th Department (*9. Abteilung*) responsible for Military Survey comprising Mapping and Military Geography (Mil-Geo). Lt. Colonel Hemmerich was appointed to become the head of the 9th Department (Fig. 14; photo taken in November 1941 when Hemmerich was promoted Lieutenant General).



Figure 14.

#### 2.1.4 1939-1945 German Armed Forces (*Deutsche Wehrmacht*) World War II

Since the beginning of World War II the 9th Department was renamed "Department of Wartime Map and Survey Service/General Staff of the Army" (*Abteilung für Kriegs-Karten und -Vermessungswesen GenStdH*) and Hemmerich - since 1941 "Head of the Department of Wartime Map and Survey Service" - was put under the direct control of the Head of the General Staff of the Army [8]. From 1938 up to the end of the war the Department consisted of the sections Z (Administration, Staff), I (Deployment, Organization), II (Cartography), III (Geodesy), IV (Military Geography - Mil.-Geo.) and Army Map House (attached).

The “Army Map House” (*Heeresplankammer*) had been founded in 1938 and put under the control of the 9th Department/Department of Wartime Map and Survey Service. The orders were executed by the Army Map House itself or assigned to special civil authorities or companies. The Army Map House comprised 3 Departments: Central (Administration, Mobilization, Counter-intelligence), Survey (Triangulation, Stereometry), Map Production (Cartography, Reproduction and Printing). In 1944 the Army Map House was renamed “Central Wartime Map Service” (*Kriegskarten-Hauptamt*).

Within the frame of the mobilization in August 1939 motorized survey, map and printing units were founded and attached to different commanding authorities. In the first weeks of World War II about 170 German geodetic, cartographic and print units with special operative field tasks were active: to survey relevant areas, to correct and to print maps and to serve combat units with survey data and maps. According to the extension of the theatre of war the quantity of units and of staff grew immensely. In early 1942 more than 300 map producing service units were in the field, comprising about 1.500 special military officers. During World War II about 15 000 soldiers, civil servants, employees and workers had been active within the “Department of Wartime Map and Survey Service/General Staff of the Army” (*Abteilung für Kriegs-Karten und -Vermessungswesen GenStdH*) and produced about 1.3 billions (= 1.300 millions) of maps.

## 2.2 German Army Map of Spain 1 : 50 000

### 2.2.1 General

The information given in the first part of this chapter primarily refers to the activities of the map and survey units between Northern Russia and North Africa during World War II. Now we should focus on the mapping activities in Germany at this time, especially the production of maps of foreign countries for use in the higher staffs and in the field.

The process of map production consisted of 4 phases:

- decisions concerning mapping area, map series, scale, coloring, grid, number of copies - responsible: Supreme Command of the Army/Army Map House.
- providing sources, correction sheets, preparation of work flow instructions, choice of the reproduction/printing company, request for printing paper - responsible: Army Map House.
- reproduction, assembly of filmlayers, trial print, proof-reading and -correction - responsible: reproduction/printing company/Army Map House.
- final print, packing, transport - responsible: reproduction/printing company, truck/ railway/air/transport units.

The sheets of the “German Army Map” (*Deutsche Heereskarte*) had been produced in three categories: 1. reprint with low revision; 2. revision based on original edition (mostly maps of minor scales); 3. totally new edition (for instance Western Central Europe 1 : 300 000, parts of Africa 1 : 200 000). According to this categorization the German Army Map of Spain 1 : 50 000 belonged to the first group. The revision of most sheets was restricted to extend the legend, to print a bilingual legend and to add references to the Prime Meridian of Greenwich. The comparison between the sheets of the *Mapa Topográfico de España en escala de 1 : 50 000* and the respective sheets of the German Army Map does not show any supplement to the map content of the Spanish original sheets.

One of the Barcelona key questions to me was: How did the German military cartographers manage to collect the Spanish map sources? Was there an agreement between the Department of Wartime Map and Survey Service/General Staff of the Army (*Abteilung für Kriegs-Karten- und Vermessungswesen GenStdH*) and the Spanish cartographic agencies?

First of all: German military authorities officially regarded Spain and Portugal as “neutral countries” - comparable to Switzerland and Ireland - whatever “neutral” meant at that time [9].

Secondly: According to Eggers [10] I may answer to this question with the words of W. Eggers [translation by W. Scharfe]:

“I never could imagine why we produced maps of Spanish and Portuguese territories. In Lisbon as well as in Madrid German undercover agents were active in the respective civil and military institutions and cared for sending all trial prints to Germany. After having checked the map content and the coincidences with adjoining sheets the map was printed.”

The Spanish Secret Service became aware of the fact that Spanish maps were printed by the German military service - sometimes earlier than by the respective Spanish services - by chance, only. When regular Spanish troops fought against Spanish guerillas in the Pyrenees they found those maps with the guerillas; the maps had come into the hands of the guerillas by plundering a German military map store in France. [These events took place before November 1943. WS]

After November 1943 a member of the Spanish Embassy in Berlin was sent officially to the Army Map House - where Eggers had his military business - to shed light upon this affair. Eggers - to whom this visit was announced in advance - did not leave his quarters that day, and the Spanish diplomat was told that the responsible officer was sent to a sudden business trip. A report should be given to the Spanish Embassy which would contain the answers to all possible questions concerning this affair. However, neither a report was given nor the Spanish Embassy made a second attempt to get more information about the background of this affair.

By this reason it was shrouded in mystery why the German Armed Forces sometimes had printed sheets of the Spanish map series 1 : 50 000 earlier in their hands than the Spanish Army.

I would like to add some details which seem to be of some importance. 1. A comparison between the years of publication of the Spanish original sheets and of the German reproductions very clearly shows that there are sheets with time differences of more than 60 years without any supplement to the map content of the originals. 2. Obviously the close relations between the Franco regime and the *Deutsches Reich* (*Legion Condor*) were not finished with the end of the civil war in Spain. During World War II Spanish units fought together with the German Armed Forces, and up to April 1945 one of the regular destinations of the *Lufthansa* was Madrid. 3. Two cartographers who should obtain a high reputation in postwar Germany were members of the Army Map House and involved in the Spanish affair. The respective sources are only one part of several contributions which I owe to the collection of Colonel Theo Müller.

The first of them was Dr. Theodor Siewke (1890-1986; Fig. 15), since 1936 as a military servant (*Heeresbeamter*) a cartographic member of the Department of Wartime Map and Survey Service/General Staff of the Army, firstly with the rank of a captain, later on with the rank of a colonel and up to 1944 active in the Army Map House to steer the map production. Between 1957 and 1963 Dr. Siewke was the President of the German Cartographic Society (DGfK).



Figure 15.

The second was Fritz Beblo [11] - with the civil rank of "Inspektor/Oberinspektor" (= militarily Second Lt/Ltn.) (Fig. 16). Beblo was a specialist in reproduction and printing techniques and member of the reproduction and printing sector headed by Dr. Siewke. Based on the sources of Colonel Müller I may present to you Inspector Beblo as a messenger of maps between Irun and Berlin on behalf of the Department of Wartime Map and Survey Service/General Staff of the Army. Beblo got a travel order (Fig. 17) to go from Berlin via Paris to Irun on January 28th, 1941 and to return on February 20th, 1941; the French return observation - 23. Fev. (*vingttrois février*) - tells us that he had a delay of three days on his return. Why did he travel ? Let's have a look upon a second document: the hand-drawn congratulations' card to Beblo's birthday on December 29th, 1941 - dedicated by the members of the reproduction/printing sector II and signed by Dr. Siewke (Fig. 18-1). If we enlarge the drawing at the top of this card we find Fritz Beblo depicted hurrying across the earth with his wings (Fig. 18-2) - comparable to the Greek god Mercury - to bring the Spanish map originals to Germany.



Figure 16.

**Gültig nur bei Dienstreisen!**

# D Sonderausweis D

Der Techn Jnsp. Friedrich B e b l o  
 von OKH GenStdH Abteilung für Kriegskarten u. Vermessungswesen  
 reift am 28. Januar 1941  
 nach I r u n über P a r i s  
 Grund: Sonderkurier

Rückreise\*\* am 20. Februar 1941

Ausgefertigt am 28. Januar 1941  
 Oberkommando Heer  
 Oberfeldant (Ing.)

\*) bzw. Tarnbezeichnung — z. B. Feldpostnummer — nach den jeweils gegebenen Bestimmungen.  
 \*\*) streichen, falls nicht zutreffend.

Stwa erforderliche Angaben über Abfindungen mit Verpflegung usw. — nur mit Dienkstempel und Unterschrift des Kompanie- usw. Führers gültig — siehe Rückseite.

21 FEB 1941

Figure 17.





·IHREM LIEBEN MITARBEITER·  
**Herrn Techn. Oberinspektor Fritz Beblo**  
DIE HERZLICHSTEN · GLÜCKWÜNSCHE  
ZUM  
**Geburtstag**

\*

*Berlin 29.12.47*

VON GRUPPE II

*Dr. Glawke  
A. A. I.*

Figure 18-1.



Figure 18-2.

Later on the original maps of the non-German territories having been selected for becoming parts of the German Army Map were copied by reproduction techniques, equipped with German type and printed for use in fighting units or to be kept in Army Map Stores near the border of the respective regions.

The German Army Map of Spain 1 : 50 000 - most probably - was copied at the reproduction and printing company Ullmann at Zwickau (Saxonia). This company had specialized in color filter processing of graphics and maps to obtain within a 4-8 hour period preprint films based on paper maps.

The number of copies of the sheets of the German Army Map of Spain 1 : 50 000 was about 4 000 to 4.500. The sheets of the German Army Map of Spain 1 : 50 000 were stored in Berlin, in Paris and in Southern France.

### 3. POLITICAL AND MILITARY ASPECTS

Let us have a look on a very rough chronicle about what happened in and around Spain since the late 1930ies [12]:

- 1936 - Franco changed with troops from Spanish Morocco to Spain to take over the power (= start of the Spanish Civil War 1936-1939) and Francos regime was recognized and supported by Germany (*Legion Condor*) and Italy. The Soviet Union supported the Republican side.
- 1939 - III/IV End of the Civil War and recognition of the fascist regime by Great Britain, France and the USA. - IX Start of World War II - Poland campaign
- 1940 - IV Denmark-Norway campaign (Narvik) - V/VI France campaign/22. VI Armistice agreement - VIII Battle of Britain / 08. VIII First draft for "Operation Felix" (= capture of Gibraltar) - 23. X Meeting Hitler-Franco at Hendaye; negotiations concerning the entry of Spain into war against the Western allies and the capture of Gibraltar had no results - XI Meeting Hitler-Suner (Spanish Foreign Minister) at the Obersalzberg - At the end of 1940 the plan of the campaign against Gibraltar was finished on the level of the General Staffs of Army, Air Force and Navy, Airborne Units and Special Heavy Artillery included. - 04. XII Admiral Canaris visited Madrid for negotiations concerning Operation Felix - 05. XII Report to Hitler by Brauchitsch (Supreme Commander of the Army) and Halder (Chief of the General Staff of the Army): Plan of the attack against Greece and draft of the campaign against the Soviet Union finished. - 07. XII Franco rejected the German plan of "Operation Felix" and the entry of Spain into the war, because Spain was not prepared for activities like this in any way. - 11. XII "Operation Felix" officially cancelled, however, since early 1941 continued using the code name "Isabella". Hitler feared that Great Britain could start an invasion to the Iberic Peninsula which would mean to open a second front after the German attack against the Soviet Union (22. VI. 1941) [13].

At that time when the direct German attack against Britain had failed (Battle of Britain) a really global military scenario was developed by Hitler and a part of the German Supreme Command of the Armed Forces (OKW):

- a western wing of armed forces should proceed via Gibraltar to Northwestern Africa and Egypt, when
- a giant campaign against the Soviet Union should open the door to the Near and the Middle East - up to Afghanistan - and
- Japan should attack Singapore to endanger India from the East.

By these means Hitler felt sure to overcome Great Britain and to force back the United States to the American continent. And it did not matter that the German publications by the Mil-Geo-section in late 1940 opened a wide window to the disastrous reality of Spain at that time and the missing preparations for a global war on the German side - the dreams of Hitler to rule the world were not infected by realistic ideas, images or facts.

Within this phantastic and unrealistic frame it seemed to be absolutely necessary to give the strict order for the production of the German Army Map of Spain 1 : 50 000 in summer 1940. Obviously a lot of connections between military and cartographic institutions - based on the common interests and activities during the Civil War - were still alive and continued somewhere between official and unofficial contacts. This could be a realistic answer to the question of Eggers: "I never could imagine why we produced maps of Spanish and Portuguese territories".

The answer to the Barcelona question why the production of the German Army Map of Spain 1 : 50 000 was continued up to 1944 cannot be answered so easily and will need more research in German sources.

Please do not consider this paper to be a contribution to glorify war or inhuman societies. Maps and cartography have been attachments of power for about 5 000 years in our history and it remains the objective and the task of historians devoted to maps and cartography to analyze if this field of communication is changing or not. Until now I cannot see any evidence that 5 000 years of experience can be replaced by the experiences of the activities concerning the German Army Map of Spain 1 : 50 000.

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## APPENDIX

### Figures

MTE = Mapa Topográfico de España 1 : 50.000

GAM = Special Edition/German Army Map 1 : 50.000

Fig.

- 1 GAM year of printing - 1st edition: Topography
- 2 MTE - legend/sheet no. 250 GRAUS (1932)
- 3-1 GAM - legend - upper part/sheet no. 250 GRAUS (1941)
- 3-2 GAM - legend - lower part/sheet no. 250 GRAUS (1941)
- 4-1 MTE - geographic longitude referring to the Prime Meridien of Madrid/sheet no. 658 MORA (1883)
- 4-2 GAM - geographic longitude referring to the Prime Meridien of Greenwich added in red/sheet no. 658 MORA (1941)
- 5-1 MTE - relief representation: contour lines and oblique hill shading/sheet no. 250 GRAUS (1932)
- 5-2 GAM - relief representation: contour lines without oblique hill shading/sheet no. 250 GRAUS (1941)
- 6 GAM - Spanish-Portuguese border/sheet no. 775 BADAJOZ (1941)
- 7 GAM monochrome sheet with incomplete map content/sheet no. 665 MIRA (1941)
- 8 GAM year of printing - 2nd edition: Spanish Lambert grid
- 9 GAM 2nd edition with the Spanish Lambert grid/sheet no. 657 SONSECA [1882] (1941)
- 10 Trafficability map of the Pyrenees 1 : 200.000 1943 - table (*Übersicht zur Mil.-Geo.-Bearbeitung Durchgängigkeit Pyrenäen 1 : 200.000*)
- 11-1 Pripet-Polessje Military Geographic Operation Map (*Militärgeographische Operationskarte*) III 1941 - title
- 11-2 Pripet-Polessje Military Geographic Operation Map III 1941 - part of the map and part of the legend (railways, streets)
- 11-3 Pripet-Polessje Military Geographic Operation Map III 1941 - part of the legend (differentiated areas/terrain features, soil types, plant cover, water table)
- 12 Mil-Geo-Essay about Spain and Portugal 1940 (*Militärgeographische Studie über Spanien und Portugal 1940*) - photo booklet Spain
- 13 Mil-Geo-Data about the Street of Gibraltar 1940 (*Militärgeographische Angaben über Die Straße von Gibraltar 1940*) - title page
- 14 Lieutenant General Gerlach Hemmerich (1879-1969 - photo taken in November 1941)
- 15 Dr. Theodor Siewke (1890-1986)
- 16 Friedrich Beblo (1898-1977 or later)
- 17 Special order of Friedrich Beblo (*Sonderausweis*) to go via Paris to Irun and back in January/February
- 18-1 Hand-drawn congratulations' card to Beblo's birthday on December 29th, 1941, signed by Dr. Siewke
- 18-2 Congratulations' card to Beblo's birthday on December 29th, 1941 - detail

# GERMAN ARMY MAP OF SPAIN 1: 50 000: 1940-1944

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## Biography

Name: Wolfgang Scharfe

- 1942 born in Berlin
- 1961 take school-leaving exam/high-school graduation certification
- 1961-1967 studies at Freie Universitaet Berlin (subjects geography, mathematics, philosophy and education)
- 1967 state examination first degree, subjects geography, mathematics  
Assistant, 1973-1977 Consultant "Historical Atlas of Brandenburg and Berlin"
- 1969/70 Lecturer in Cartography at Freie Universitaet Berlin
- 1970 Dr. rer. nat. at Freie Universitaet Berlin (Prof. Jensch, Prof. Schultze, Prof. Weischedel) - doctoral thesis  
"History of Cartography of Brandenburg 1771-1821"
- 1971-1977 Lecturer at College of Education Berlin
- 1972-2002 Chairman of the Working Group/Commission "History of Cartography" German Cartographical Society (DGfK)
- 1973-1996 Founding member and representative of the German Federal Republic Working Group/Commission/  
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- 1973/74 some months of study visits at Paris, preparing translation of Jacques Bertin: Sémiologie graphique
- 1975 Visiting Professor at College of Education Berlin
- 1977 Full Professor at College of Education Berlin (subjects geography, cartography, statistics)
- 1979 Head of the 8th International Conference on History of Cartography Berlin (West)
- 1980 Full Professor at Freie Universitaet Berlin, Subject Area Cartography
- 1980ff Expert in Cartography/History of Cartography Deutsche Forschungsgemeinschaft, Stiftung  
Volkswagenwerk, Stiftung Preußische Seehandlung, Stiftung zur Förderung der Wissenschaftlichen  
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- 1981-1993 Member of the Executive Committee DGfK
- 1982 Biannual "Colloquia on the History of Cartography" organized by the Working Group "History of  
Cartography" DGfK
- 1985 Chairman of the 34th German Cartographical Congress at Berlin (1.300 participants)
- 1986/87 Head of the Exhibition "Berlin-Brandenburg in Maps" on the occasion of the 750th anniversary of Berlin
- 1987-1989 Vice-President German Cartographical Society (DGfK)
- 1988-1994 Research project on "Journalistic Maps" (Deutsche Forschungsgemeinschaft)
- 1992-1998 Senator/Member of the Academic Senate of the Freie Universitaet Berlin
- 1995 Lectures on "History of Cartography in German-speaking Countries" together with Prof. Kretschmer  
(Vienna) and Mr. Feldmann (Wabern) at Barcelona
- 1996-2001 Visiting Lecturer at the National Journalistic Institute at Hagen teaching "Infographics"
- 1997 Chairman "International Conference on Mass Media Maps" at Berlin (Deutsche Forschungsgemeinschaft)
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- 2000/01 Curator of the Exhibition "Brandenburg in Maps" in cooperation with the German National Library at  
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