

**RUSSIAN STATE MILITARY ARCHIVES
THE PROBLEMS OF SECURING PRESERVATION OF
CARTOGRAPHIC DOCUMENTS
IN THE RUSSIAN STATE MILITARY ARCHIVES (RGVIA)**

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Abstract: The report is dedicated to the problems of preservation of cartographic documents in RGVIA.

The practical aspects of preservation of cartographic records are examined in the report, and Russian State Military Archives are taken as example.

The aspects are the following :

- material and technical equipment in Archives, and problems linked with its acquisition and replacement,
- principles of conservation and questions of arrangement of cartographic records, control and ensuring of temperature and humidity conditions,
- rise of an unusual situation (damage of heating system) and the stages of its liquidation,
- description, registration and inspection of the finding aids.

The existing normative and methodical literature that examine the aspects of the description of cartographic documents cannot always be used in archival practice since its scheme of actions is rather cumbersome. We examine in the report the scheme of description of cartographic records and possible perspectives of the development of the finding aids to cartographic documents in RGVIA.

We make the following conclusions :

- the conditions of conservation and archival equipment in Archives, in general, satisfy the essential demands,
- the registration apparatus and the finding aids that exist in our Archives permit to register and to search efficiently the cartographic documents,
- we need a supplementary study of the questions linked with the description of cartographic documents, and we also need to create normative and methodical literature on the activities of archivists in emergency situations.

Introduction

The Russian State Military Historical Archives keep a rare collection of rare cartographic materials numbering about 130 thousands of storage units of 17th -

20th centuries. These are general maps of the Russian Empire, maps of provinces, plans of towns, fortresses, settlements and their neighbourhoods, hydrographic, astronomic, topographic maps, general atlases and world maps, military, historical maps etc. These documents are accumulated mainly in the collections of the Military Scientific Archives which is a component of the RGVIA - RSMHA, in the stock of the « Main Engineer Department », in the collection of military historical maps.

The cartographic materials of the Russian State Military Historical Archives are registered and described. The main scientific reference tool to the maps and plans kept in the Archives are « opisi » (descriptions) and the « Catalogue of the Military Historical Scientific Archives of the General Staff Main Department », vv. I-IV, SnP, 1905-1914.

The Russian State Military Historical Archives pay great attention to securing preservation of the documents, including the complex of cartographic materials.

They check up the presence and state of the stocks and periodically register the documents that require repair and restoration. Annually, the Archives hand over 150 square metres of maps for restoration to the laboratory of the Rosarhiv. More seriously destroyed documents are restored at the I. E. Grabar All-Russian Arts Scientific Restoration Centre.

All maps are stored in card-board cases or envelopes by storage units, which in their turn, are arranged on shelves in large-size card-board cases or boxes depending on the maps formats.

The present report will focus on the practical questions of storing cartographic materials taking into consideration the RGVIA - RSMHA peculiarities.

All cartographic materials kept at the RGVIA - RSMHA may be conditionally divided into three parts :

1. Materials of a general character having no direct relation to the military matters: general atlases and maps of the terrestrial globe, continents, countries and their particular parts, geodetic, hydrographic, geological maps, etc.,
2. Materials of military operational character : maps of billeting of the troops, plans of fortresses, fortifications, positions, layouts of the supposed location of the enemy troops, locality sketches etc.,
3. Materials of a military, historical and educational character : maps, plans, and schemes of campaigns, battles, sieges.

The stocks of cartographic materials may be also divided into three groups:

- The first group comprises the stocks fully or mostly consisting of cartographic documents. There are six such stocks in the Archives : these are the collections « Military Historical Maps, Plans, and Albums », « Maps of the Former Russian Empire », « Astronomical maps », « General Atlases and Maps of the Terrestrial Globe », « Maps of continents », « Military Historical maps, Plans, and Schemes ». About 13 thousands storage items are registered in these stocks.
- The second group includes the stocks with 30 to 80% of cartographic materials of the whole stocks. These are the stock « Main Engineering Department », the collection of the Military Scientific Archives, and the stocks containing materials of the Russian Empire, individual countries, and wars.
- The third group comprises the stocks with a minor and fragmentary quantity of cartographic materials. These are the stocks of military districts, armies, corps, divisions etc.

Further on, we shall examine only the stocks belonging to the first two groups.

The Russian State Military Historical Archives occupy the Lefortovskiy Palace that was transformed into the Archives in the 1860ies. The building hardly meets the today's requirements for storing documents. The larger part of the shelves are made of wood, and the metal shelves are intended for non-standard boxes that are no longer manufactured. When boxes are destroyed, there is nothing to replace them. The storage shelves are double-storied and not all of them have ceilings. Special premises are meant for storing large-format documents.

Yet, there are very few such premises in the Archives. They are equipped with shelves specially intended for maps. And they are made of badly planed and badly fit wooden boards arranged at 10-12 cm distance one from another. To prevent destroying cases by badly planed wood, the archivists cover the boards with cardboard.

All rooms for storing large-format documents are equipped with ceilings. Unfortunately, the height of the upper storey does not permit to work standing erect and the spaces between shelves in some rooms are intended for taking out boxes but not cases.

It should be noted that in 1985, the VNIIDAD proposed to the Archives to design shelves for storing cartographic documents, but the proposed design, though envisaging replacement of the wooden shelves by metal ones, did not meet the safety requirements and easy approach to the stored materials.

The depositories are equipped with thermometers and psychrometers, their showings being taken regularly. Unfortunately, the depositories are not equipped with air conditioners and it is rather difficult to correct the air temperature and humidity.

In general, the temperature in the depositories fluctuates from +10°C in September to 25°C in July. The average monthly temperature gradient is 3 - 4°C, that corresponds to the GOST rules.

As it was mentioned above, most cartographic materials are registered in the stocks together with the textual files. As the latter are kept mainly in boxes and the cartographic documents are kept in cases, they are located in different places. Besides, the unique files are kept in safes. For the operative searching of the particular locations, the depository maintains an auxiliary file that also has marks of an insurance copy availability for a particular document.

The unique character of the files is determined by the heads of depositories and completely depends on their competence. The unique ones are, as a rule, manuscript documents with fine arts materials that are often used, or those that have autographs of famous Russian state figures and generals. Most of the unique cartographic materials are kept in safes specially equipped for storing large-format files, i.e. enlarged in depth by 2 times. But the number of unique documents being so large, some of them are kept in the general depository. To prevent coloured imprints from damaging, the documents are interleaved with tracing-paper of mycolent paper; but the Archives have not enough of this kind of paper.

In order to prevent documents from damaging while in use, the Archives carry on work of making an insurance stock of particularly valuable documents. On the stocks of cartographic materials, such a work was carried out in the period 1981-1989. During this period, a little bit over 4 thousand storage items from four stocks were selected for insurance copying. In 1989, the work on singling out the particularly valuable documents among cartographic materials was stopped for the lack of time and the lack of qualified staff. The laboratory stopped copying on wide film in 1992. By that time, about 2 500 storage items were copied.

Earlier, the laboratory stopped insurance copying of atlases and albums. Maps came back from the laboratory crumpled, wrongly folded, and sometimes even torn. In short, the work on forming the insurance stock only partly justifies itself.

All small size cartographic materials are kept in boxes. The same concerns the maps stuck on cloth and folded. Some such maps are provided with special cases

of cardboard made even in the 19th century. These cases are very handy for storage but they tear when often used, whereas restoration of these cases is not practised. The multi-sheet maps left without cases once were put into files and thus kept unfold. However, this practice was rejected as these maps became deformed on bends. We have to roll the multi-sheet maps into kraft paper, tie them with cord, and thus keep them in boxes. Small-size maps are placed into special covers of « tetra-pack » paper. If, after restoration, it becomes impossible to put the map back into the case, the map is put into a file together with large format files and the case is kept separately from the file. These cases are lately used for packing and storing of suitable-size maps.

Cartographic documents of a large format such as atlases, albums, and non-standard files are stored in cases. First, the Archives used only one type of cases - 80 x 60 cm but then Sanct-Petersburg delivered cases of 75 x 60 cm and 70 x 55 cm. Later on, the cases were manufactured according to these three types. In the 1980ies, the Archives had already small cases for storing atlases 45 x 35 cm, and in the 1990ies, they ordered cases of 40 x 55 cm and 40 x 35 cm. At the same time, they registered the stocks of cartographic materials while changing the cardboard cases. But this work was not completed as in 1991, because of the damage of the heating system, a considerable number of cases and maps became seriously damaged.

On the whole, the quantity of cases and their sizes allow to change the larger part of large-format documents but the Archives has some non-standard files that need cases of special sizes. Such documents are kept either in two cases or in an ordinary case but with a strongly deformed flap. Such files are difficult to store together with other materials. In spite of changing the cardboard cases, in some cases, maps and atlases are kept still together, which leads to damaging maps and the case itself.

On the whole, the problem of manufacturing cases for storing cartographic documents is rather urgent for our Archives because the LMRD refuses to make cases of the necessary format. The Archives has to somehow solve this problem; and taking into consideration all difficulties, we may say that the work is being carried on rather successfully.

When giving maps for use, they are provided with envelopes (starting from the 1980ies from the kraft paper). Earlier, the envelopes were provided in the process of taking inventory, yet it took much time, so later on, they just marked in the inventory journals those maps that needed envelopes. When free, the archival

workers make envelopes for those maps. Yet a considerable part of the maps is stored in cases without envelopes.

In the process of taking inventory, the depository workers also do other work on improving the documents storage conditions:

1. When possible, the maps are smoothed,
2. Multi-sheet maps and atlases are packed into separate cases and are separate from the single-sheet maps,
3. When possible, the cases are broken into smaller units.

Registering and description of cartographic materials is done at the RG VIA - RSMHA in accordance with the « Main Rules of the State Archives Work ».

At the present moment, all cartographic materials are practically described (in « opisi ») and have more or less satisfactory titles. In those cases, when the titles and structure of the old description poorly reflect the stocks content, they remake « opisi » (descriptions). Now only the « opis » (description) of one collection is in the process of remaking, i.e. the cartographic materials « Military, Historical Maps, Plans, Albums ». Most files of this collection were stored in the town Jalutorovsk, and only recently, this collection was delivered into the Archives.

Description of cartographic documents is an important problem in the Archives. The titles of the most « opisi » (descriptions) were made in the 1950ies. The scientific training of archivists in that time left much to be desired. It especially concerned descriptions of foreign and historical maps. Wrongly translated titles, names, mistakes in determining locations of historical events - this is far from the full list of inaccuracies we met when working with the « opisi » (descriptions). When possible, the workers of the depository correct and specify the titles during taking inventory of the stocks.

The workers of the depository did large work on describing cartographic documents while taking inventory of the collection of the Military Scientific Archives. The files of this stock were described before the Revolution and entered in the « Catalogue of the General Staff Main Department Military Scientific Archives » SnP, 1905-1914. This catalogue numbered 30 880 storage items ; however, under the same number, they described files in parts and copies of maps. In the 1950ies, the files in parts were described and registered in the « Description of Multi-Volume Files » to the catalogue. During taking inventory in the 1970ies-1980ies, they divided maps by copies that were registered in the « Description of Multi-Volume Files ».

This work happened to be rather difficult. Many titles of the Catalogue became morally obsolete, descriptions of cartographic materials did not meet the modern requirements, the titles of documents in foreign languages were given without translation. Only in 1987, they started regular work on describing individual copies and parts with translation of the titles in foreign languages. The unsatisfactory state of titles in the Catalogue of the Military Scientific Archives and the « Description of Multi-Volume Files » urgently requires their remaking, yet at the present time, the Archives has neither time nor workers to do this work.

In the Scientific Reference Manual « Cartographic Documents of the State Archives », ed. by O. M. Medushevskaja, M., 1989, the author analyses the problems of describing cartographic sources, but the manual is intended for people with good scientific training. Thus, conversation of the scale of the old foreign maps into the metrical system often is impossible for the lack of the old linear measures in the reference books.

The work on describing maps often needs a large quantity of reference. Meanwhile, there are no norms for describing maps, and the norms for describing text files are too large. This is why the RGVIA - RSMHA uses some simplified scheme when describing maps :

1. Kind of the document, geographical data, and content,
2. Compiler (if available) and the year of compilation,
3. Publisher, place and year of publication (when circulated in many copies),
4. Number of sheets,
5. Method of reproduction,
6. Size of the map,
7. Scale in units accepted by the compiler,
8. Relief,
9. Language (for maps in foreign languages).

Annotation to the title is not included into the description.

In our view, such a scheme of description is sufficiently full and permits to avoid many mistakes in converting the scale to the metrical system, determining the map projection and other geographical data which, as a rule, are not shown on the map, whereas their calculation and definition takes much time and requires special training, and the Archives and depository workers usually do not have such training. The professional, in most cases, just needs the description of the map type, locality shown on the map, scale, and production year. Taking into consideration the fact that most of the cartographic materials of the RGVIA - RSMHA have already been described, the work on improving the scientific

reference tools should go in the direction of compiling an index of geographical names and settlements showing the maps archival code of these places as well as a separate index of the towns plans.

Creation of such alphabetical catalogues would permit to considerably optimise the system of searching the necessary information.

Accident events present a greater problem for archival workers. As a rule, they have to take solutions in the course of such events.

In this connection, we would like to dwell on the accident situation that happened in the RGVIA - RSMHA in October 1991.

On October 15, 1991 between 03 and 04 p.m., an accident happened in the heating system and water from the garret rushed down into the map depository.

Thanks to urgent notification and coordinated actions of the Archives workers, all documents were evacuated from the damaged room within two hours. The total volume of these documents came to 1 159 files (23 968 storage items).

All cases were placed between the shelves in the passages in the neighbour rooms. The documents from the most wet cases were taken out at once and placed on the upper ceilings.

During the next two days, the documents were sorted out into three groups :

1. Wet and humid documents from the wet cases (226 cases),
2. Documents and cases with high humidity that came into contact with the wet cases (322 cases),
3. Dry documents in dry cases (611 cases).

There were total 548 damaged cases or 47% of all cases stored in the depository. From October 16 to 22, all documents in wet cases were taken away and dried at the NITsKD in drying cabinets or naturally at the Archives depository. 711 files with total volume of 12 000 sheets were passed through the drying cabinets of the NITsKD. These were mainly multi-sheet maps and atlases. Certainly, the taken measures did not exclude a possibility of some documents being contaminated with mould. But the visual impression of many files at that time, and the work being done in time and drying of documents permit to say that those documents that were treated are now out of danger.

At the same time with drying, the staff worked on arranging the evacuated documents. All dry cases were taken to the neighbour depository and temporarily placed on shelves ; an index was compiled specially for these cases. The cases

with high humidity were taken to the available free premises and also placed on shelves. They were also provided with an index. The files were taken out from the cases and dried. This work continued till February 1992.

The files taken out of wet cases were dried and placed into new cases and arranged in the passages. By December 1991, the archival depository already had full lists of the evacuated cases location.

The next stage in liquidation of the accident consisted in establishing the working order in the depository rooms that were damage at the accident.

The ceiling, walls, and wooden shelves of the premises were covered with mould because of leakage and high air humidity.

It should be noted that mould distributed everywhere and made the premises practically unfit for storing documents. It was necessary to change the shelves equipment and to repair the rooms. Unfortunately, at this moment, the Archives had not enough means available for carrying out such complex works and for purchasing equipment. So, the Archives management, with the approval of the Preservation Securing Department and the VNIIDAD specialist, took the following decision :

1. To carry out forced drying of the premises, using for this purpose Jupiter lamps and fans with the total output 300 m³ of air per hour,
- 2 To carry out manual disinfection of shelves and walls of the archival depository.

Drying of the premises started only on October 30 as, only by that time, the Archives received the necessary equipment. The work lasted from October 1991 to March 1992.

The drying resulted in ceasing the mould spreading on the depository walls and shelves.

In March 1992, the administrative service of the Archives started disinfection of the premises and carried out the following work :

1. Remove moulder from the depository walls and ceiling, the infected places being treated with a formalin solution,
2. Treat the depository shelves and ceilings with a formalin solution. It should be noted that this treatment was done repeatedly. It resulted in removing mould from the shelves. Later on, growth of the mould was not noticed.

The inspection made in April showed that mould on the shelves ceased to grow, the shelves became dry, growth of mould on the walls was not noticed.

All evacuated documents were taken back to the depository in May - June 1992. After that, they started taking inventory of the documents of the damaged stocks. At the same time, they changed the cardboard cases of the documents. This work is being continued till now.

The permanent control of the sanitary condition of the premise permits to say positively that, at the present time, there is no danger of the cases and documents contamination with moulder from the shelves.

Thus, all work on liquidation of the accident consequences may be conditionally divided into several stages :

1. Evacuation of the documents from the accident area,
2. Sorting out documents by the level of damage,
3. Urgent prophylactic work with the mostly damaged documents,
4. Determination of the degree of the premises damage,
5. Prophylactic work in the damaged premises and with the files partly damaged at the accident,
6. Compilation of a topographical index of the evacuated documents,
7. Repair of the premises,
8. Turning back the documents to their storage places with a subsequent taking of inventory.

The aim of all these measures consisted in the fastest possible liquidation of the accident and its consequences, in the minimum time and with the minimum losses for the Archives function.

Conclusion

Summing up all above said, it is possible to draw the following conclusions concerning securing preservation of cartographic materials at the RGVIA - RSMHA.

1. On the whole and in general, the storage conditions and the available equipment meet the requirements to the documents on paper carriers and permit to perform operative charging of the files and their use. However the problems of the technological provision (shelves, cases, etc.) are rather urgent and need immediate solution.

2. The scientific reference tools available at the Archives, though not optimal, still permit to carry on accurate registering and to perform operative search of the cartographic materials. Further improvement of the STR seems to lie in creating auxiliary reference tools on the cartographic materials.
3. The scientific methodological working out of the questions connected with description and optimisation of the cartographic documents storage should be done on the basis of the real state of affairs at the Archives.
4. It is necessary to create normative methodological literature that would regulate the archivists' actions at the emergency situations.

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