



# CREaTE

Canterbury Research and Theses Environment

Canterbury Christ Church University's repository of research outputs

<http://create.canterbury.ac.uk>

Please cite this publication as follows:

Davis, M. and Kent, A. J. (2017) Improving user access to Soviet military mapping: current issues in libraries and collections around the globe. *Journal of Map and Geography Libraries*, 13 (2). pp. 246-260. ISSN 1542-0353.

Link to official URL (if available):

<http://dx.doi.org/10.1080/15420353.2017.1300206>

This version is made available in accordance with publishers' policies. All material made available by CReaTE is protected by intellectual property law, including copyright law. Any use made of the contents should comply with the relevant law.

Contact: [create.library@canterbury.ac.uk](mailto:create.library@canterbury.ac.uk)



# Improving User Access to Soviet Military Mapping: Current Issues in Libraries and Collections around the Globe

MARTIN DAVIS and ALEXANDER J. KENT

*Canterbury Christ Church University, United Kingdom*

[martin.davis@canterbury.ac.uk](mailto:martin.davis@canterbury.ac.uk), [alexander.kent@canterbury.ac.uk](mailto:alexander.kent@canterbury.ac.uk)

*The collapse of the Soviet Union has seen the emergence of its unprecedentedly comprehensive global military mapping programme and the commercial availability of a vast number of detailed topographic maps and city plans at several scales. Many libraries and archives around the world are discovering and acquiring these maps and plans, developing vast potential to provide researchers in a variety of fields with a wealth of previously inaccessible topographic data. However, significant differences exist in the cataloguing, classification, translation and transliteration between and within the major collections, potentially limiting access to this important new resource. This paper presents a survey of how Soviet military city plans are described in the catalogues of 40 libraries and highlights these inconsistencies. It proposes a method for their description that is based on an identification of key sheet characteristics, with a view to facilitating the cataloguing of new acquisitions and improving access to these important sources for current and future users.*

**KEYWORDS** *Soviet, city plan, cataloguing, transliteration*

## INTRODUCTION

Throughout the Cold War, the Soviet Union undertook a vast global mapping programme, producing thousands of topographic sheets that cover the world and city plans of built-up areas in over 130 countries. Although produced in secrecy, after the dissolution of the USSR large quantities of topographic and city plan sheets became available after the *Jāņa sēta* map store in Riga, Latvia (Figure 1), acquired a sizeable sample from an abandoned military-topographic depot in Cēsis, approximately 100 km east of Riga, before advertising the sheets at the 16th International Cartographic Conference in Cologne in 1993 (Davies 2005a). Subsequently, several map dealers purchased their own stocks from this and other sources and continue to sell the maps commercially today, albeit mostly reprints or raster images. Despite their coverage and current availability, the maps have received surprisingly little academic attention, with the exception of some detailed observations (e.g. Collier et al. 1998; Davies 2005a, 2005b; Watt 2005; Kent and Davies 2013; Miller

2015; Davies and Kent 2017) and a very small number of applications of the rich geospatial data they provide (e.g. Lee 2003; Rondelli et al. 2013).

**[FIGURE 1 GOES HERE]**

Numerous public and university libraries around the world have acquired stocks of Soviet city plans since they became commercially available in 1993. Table 1 represents the largest holdings globally, excluding private collections and those within the Russian Federation. For the purposes of this list, no distinction is made between original sheets, facsimiles or digital image files, as this distinction is infrequently made in library catalogues. This information is based on information retrieved from online library catalogues (where available) or personal correspondence with representatives from 71 institutions between September 2014 and June 2015 and may not be exhaustive. Holdings of Soviet city plans could be identified in 40 of these institutions.

**[TABLE 1 GOES HERE]**

Naturally, any systematic study or application of Soviet city plans is dependent upon access to the maps. Despite the institutions listed in Table 1 acquiring variably-sized collections of the maps, a poor understanding of the maps' *raison d'être* and organisational context, in addition to the difficulties inherent in deciphering information given on the sheets due to the language and alphabet barrier for some cataloguers, can hinder access for potential users. The extent of holdings in an institution is often hard to establish via online library catalogues due to inter-institutional differences in approaches and policies regarding transliteration, the use of Cyrillic characters, dating the plans, and the name of the publisher assigned to the maps. Further impeding access to accurate information about holdings is the inconsistent treatment that exists within library catalogues with regard to all of these elements. Such inter- and intra-institutional discrepancies in cataloguing also hamper many union catalogues, which sometimes include several records for the same plan due to their inconsistent cataloguing.

## TYPES OF CATALOGUING INCONSISTENCIES

### Producer or Author Name

Most library catalogue entries include the publisher or organisation responsible for producing the item, sometimes placing this information in the 'author' field. Conducting a search using this field is potentially the most useful for researchers who are aware of the existence of the Soviet city plan series and would like to know the holdings of a given institution. However, deciding which publisher to list for Soviet city plans, and therefore which search term should be used, can be a difficult process given the complex organisation of cartographic production in the USSR. Some catalogues simply name the country responsible for producing the maps as the publisher; a logical approach given that all Soviet maps, regardless of type or series, are state-produced. However, the various ways of expressing this fact mean that a user searching for the maps in the catalogue may need to try several permutations before gaining results. For example, maps listed under the publisher 'Soviet Union', would generally not be found by a search for 'USSR' or 'Union of Soviet Socialist Republics'. Added complications emerge when there is uncertainty regarding the language in which the publisher has been expressed. Although English and Russian are commonly used (or Russian transliterated into the Roman alphabet), catalogues which necessitate the use of search terms in a native language cause issues for researchers who are unfamiliar with that language (Figure 2).

### **[FIGURE 2 GOES HERE]**

Given that the majority of Soviet city plans are military maps produced by the General Staff, some collections opt to use various combinations of the terms 'Soviet Army' and 'General Staff', or more specifically 'Military Topographic Directorate' as the publisher, which can cause problems when there is uncertainty regarding which language has been used. For example, 'Soviet Army General Staff' is 'Советская армия Генеральный штаб' in Russian which approximately transliterates as '*Sovetskaia Armia General'nyi shtab*'. Moreover, 'Military Topographic Directorate' can be listed as 'Военно-топографическое управление' or '*Voенно-topograficheskoe upravlenie*'. Some civil plans are correctly catalogued under 'GUGK' or '*Glavnoe upravlenie geodezii i kartografii*', though often these are treated the same as military plans. GUGK, or the Chief Administration of Geodesy and Cartography, was the civil counterpart of the Military

Topographic Directorate, responsible for producing maps and plans of Soviet territory. The issue is worsened when different publisher names are used for maps from the same series in the same collection.

### Plan Titles and Place Names

The ability to find records for Soviet city plans by searching for their titles (by the name of the city) is crucial for researchers interested in maps of a particular locality, who may or may not be aware of the existence of the Soviet city plan series. However, searching for maps by place name (toponym) is subject to many of the issues associated with searching by publisher. A city name could, for example, be written in its native language (or one of several native languages), in English or in Russian. As the plans themselves use phonetic transliterations of the native toponyms into Cyrillic, this title is often re-transliterated back into another alphabet, typically Roman – even if the original toponym used the Roman alphabet to begin with. For example, Gloucester (UK) becomes ‘Глостер’ on the Soviet city plan and is therefore frequently catalogued as ‘*Gloster*’ (Figure 3). Users unfamiliar with this process, or Cyrillic-Roman transliteration, may find it difficult to find the map in such a catalogue, unless the correct toponym is included elsewhere in the record.

**[FIGURE 3 GOES HERE]**

### Year

Although it is perhaps least likely that researchers would search for maps produced in a given year, there is inconsistent treatment, between and within collections, regarding which year from the plan is included in catalogue entries. Most commonly, the edition date (from below the title of the plan) is used as the principal date of the map. In some catalogues this is preceded by ‘*Изд.*’ – the transliterated Russian abbreviation of ‘edition’. There is sometimes some confusion between this date and revision dates or dates of source materials, printed in the margins of earlier plans. Sometimes, perhaps hindered by an inability to read the accompanying Russian text, some libraries have mistakenly used these dates to refer to the publication of the plan, or occasionally place it alongside the edition date. Although, on a small number of plans, the issue date found in the plan’s print code deviates from the edition date, information from print codes is not included in most library catalogues. A notable exception to this is the Library of Congress, which includes transliterated print codes in a text field in most Soviet city plan records, although these are occasionally mis-transliterated.

Efforts to standardize cataloguing in libraries and archives are well-established. The Anglo-American Cataloguing Rules (AACR), first published in 1967 and revised in 1978 (AACR2), is a widely-adopted standard on both sides of the Atlantic. Naturally, much of the guidance given in the AACR2 is concerned with items which use the Roman alphabet. With regard to titles, cataloguers are to ‘transcribe the title proper exactly as it is found in the chief source of information except that the punctuation and the capitalization found there need not be followed’ (Gorman, 1998). With particular regard to maps which utilize foreign languages, Stibbe’s (1982) application of the AACR2 to Cartographic Materials advocates using as a primary source of information ‘the language or script that occurs first in the following list: English, French, German, Spanish, Latin, any other language using the roman alphabet, Greek, Russian, any other language using the cyrillic alphabet...’. Once this information has been obtained, Stibbe (1982) states that the title should be transliterated with an explanatory note, e.g. ‘Title in Arabic script, transliterated for catalogue record; remainder of map in French’. This explanation, however, does not overcome the fact that transliterated toponyms are frequently unintuitive search terms for users of online catalogues.

The AACR2 also supports the use of edition dates, rather than the date of printing. How to ascertain this information of Soviet maps therefore needs to be clear to cataloguers using this method. The AACR2 additionally highlights that the map itself should be the principal source of information in the catalogue. With regard to the corporate producer of Soviet city plans, this supports the use of the transliterated terms from the top of the map sheet, e.g. ‘General’nyy shtab’, rather than more user-friendly terms, e.g. ‘Soviet Union’.

#### CATALOGUING METHODS IN THE LARGEST COLLECTIONS OF SOVIET CITY PLANS

##### Library of Congress, Washington D.C., USA

Library of Congress holdings are assigned a ‘corporate name’ where appropriate, which is listed separately from the publisher. All but 12 Soviet military city plans at the Library of Congress use the corporate name ‘*Soviet Union. Sovetskaiâ Armiiâ. General’nyi shtab*’ (*sic.*) and a search for this name produces a list of the holdings under this name. The remainder use the corporate name ‘*General’nyi shtab Vooruzhennykh sil Sôiuza SSR*’, and unfortunately do not appear in searches using the term ‘Soviet Union’. Although the publisher is frequently given as ‘*[Moscow?] : General’nyi shtab, [Year]*’, there are some variations to this format, such as

*‘[Moskva : General’nyi shtab Sovetskoiĭ Armii, [Year]]’*, and therefore a search by publisher does not give a comprehensive result. A ‘personal name’ is included in some records, where the name of the presiding officer or editor is given on the sheet. Such records use this in addition to the corporate name given above, but never in place of it.

Titles of individual records are transliterated and include the information given at the top of each sheet regarding the name of the city, the nomenclature of the sheet and the country and region in which the city is located, as given in the top left corner of the sheet, e.g. *‘Aberdin (O-30-104) : Velikobritaniia, oblast’ Grampian’*. Titles are never adapted to provide the correct Latin spelling of toponyms. Where information at the top of the sheet varies, this is reflected in the record title, such the inclusion of *‘Plan g.’* before the main toponym. Scale is given in each record, both as a ratio and a description, e.g. *‘Scale 1:10.000. 1 cm to 100 m’*. This is followed by the extent of each sheet, given in degrees and minutes.

Dates used are edition dates, as given under the title of the sheet. This is presented as it appears on the sheet in transliterated form, e.g. *‘Izd. 1981 g.’* Records include the number of sheets and the dimensions of each sheet in centimetres. Each record also includes a ‘notes’ section, containing a brief description of the plan’s contents and the text from the margins of the plan. Typically, this text is transliterated but occasionally the original Cyrillic text appears alongside this. This text includes the plan’s print code, which is also usually but not always transliterated. However, there are occasional errors in this transliteration. For example, the factory code T6 (Tbilisi) is often correctly transliterated (Tb), but occasionally appears as T6 (six).

Where the Library of Congress’s copy of a plan has been altered or annotated in any way, a brief description of this is typically provided at the end of the notes section, e.g. *‘LC sheets have classification “Sekretno” lined over with marker ink’*.

#### University of Chicago, USA

University of Chicago Library Catalogue records take a very similar form to Library of Congress, with the most notable difference being the repetition of most information in its original Cyrillic form. As at the Library of Congress, the majority of plans use the ‘corporate author’ *‘Soviet Union. Sovetskaiā Armiiā’*.

*General'nyi shtab*'. However, a small number of records use '*Soviet Union. Sovetskaiā Armia. General'nyi shtab. Voenna-topograficheskoe upravlenie*'. Plans of cities within the former USSR produced by GUGK are listed under the author '*Soviet Union. Glavnoe upravlenie geodezii i kartografii*', but one of the military authors above is also listed as a 'contributing author' and therefore appears in searches for these in addition. Although only these transliterated authors are used as clickable tags within records, the original Cyrillic names of the responsible organisation appear beneath these. Likewise, the names of any personal contributors appear in both Latin and Cyrillic form, though only the former are tagged. Nevertheless, it is possible to use Cyrillic script in the search function.

Titles are also given in transliterated and Cyrillic form and searches using either produce identical results. Titles include the main toponym, nomenclature, country and region and the author as stated at the top of the original sheet. All Cyrillic script takes the form of block letters; cursive forms are never used. For example:

*Belgrad (L-34-113, 114) : IŪgoslaviā, Sotsialisticheskaia Respublika Serbiā / General'nyi shtab*'

**'Белград (L-34-113, 114) : Югославия, Социалистическая Республика Сербия / Генеральный штаб'**

Edition dates are used as presented at the top of original sheets, in transliterated and Cyrillic form, e.g. '*Izd. 1988 g.*' followed by '*Изд. 1988 г.*'. Scale, geographic coverage and dimensions appear as on Library of Congress records. A 'notes' section lists transliterated text from the marginalia, the majority of which is repeated in Cyrillic. Some print codes are included in this section, though many are missing. These never appear in Cyrillic script.

#### National Library of Latvia, Riga, Latvia

In the catalogue of the National Library of Latvia, records of Soviet military city plans exclusively use Cyrillic script and no searches for them using Latin characters will yield any results. A search in 'all fields' for '**штаб**', filtered to show only cartographic material in the Russian language is the only method of attaining a complete list of holdings. The list of titles produced by this search function includes the main toponym in Cyrillic, followed by the plan's nomenclature, e.g. '**Сантандер (K-30-170)**'. Another column



list a year adjacent to each title. These correspond to the edition dates of each plan, though this is not stipulated.

The expanded record includes an extended title, which includes the appropriate country and region, as stated on the plan, followed by any statement from the marginalia regarding source material, e.g. 'Сантандер (К-30-170)[kartogrāfiskais materiāls] :Испания АО Кантабрия, провинция Сантандер /сост. по материалам на 1986 г.'. This is followed by '[Москва] : [Генеральный штаб], [Year]. 1 *karte* : *krās.* ; *lp.* [dimensions in centimetres]'. The catalogue is available in both Latvian and English, though the terms '*kartogrāfiskais materiāls*' and '*karte*' appear in Latvian irrespective of which has been selected. No further information is given about the plan, including any information regarding its scale. The appearance of the year of publication of source material could lead to confusion with the edition date without explanation in Latvian or English.

#### Harvard University, Cambridge, USA

Records in the Harvard University library catalogue, HOLLIS, take use a very similar format to those in the Library of Congress catalogue and use edition dates though, in contrast, no Cyrillic text is used. In addition, no sheet dimensions or indications of the geographic extent of the plan are given. The notes section is also considerably briefer; transliterations of marginalia text are not comprehensive and no print codes are provided. There are also no notes regarding the condition of the actual copies at the library.

#### Cornell University Library, Ithaca, USA

Once again, the author used is '*Soviet Union. Sovetskaiā Armīā. General'nyi shtab*'. Although a small number of plans are listed under this author in Cyrillic form, these are also listed in transliterated form which should therefore be used in searches. Titles consist of transliterated toponyms and nomenclature, sometimes accompanied by the transliterated country and region, e.g. '*Panevezhis (N-35-1) : SSSR, Litovskaiā SSR*'. The remainder of records are identical to Library of Congress records, with the exception of print codes, which are not provided. Records are tagged by city and country (English names) which aids identification as well as allowing access when browsing all maps of a particular city.

#### British Library, London, UK

Soviet city plan holdings at the British Library use the author '*Soviet Union. Raboche-Krest'ianskaia Krasnaia Armia. General'nyi shtab*' and a search using this term produces a comprehensive list. The title of each record simply consists of the relevant transliterated toponym. Where this differs from the correct Latin name of the city, the latter is given in square brackets, e.g. '*Blaiť = [Blyth]*'. The remainder of all records is in English and also includes the name of the city and country in its correct Latin form. Also given is the scale as a ratio, the number of sheets and the relevant International Map of the World (IMW) sheet, e.g. '*Covers part of IMW sheet N-42-43*'. The date given is the edition date, though this is not stated.

#### APPRAISING CATALOGUING METHODS: A USER'S PERSPECTIVE

Many of the issues with the cataloguing of these plans perhaps stem from a conflict between the need for libraries to create an accurate documentary record of the information on a plan while also including the often-different terms used by potential users in online keyword searches. Both endeavours are valid, perhaps highlighting the importance of user testing to ensure catalogue usability. For example, the Map Room of the Bodleian Library (University of Oxford, UK) evaluates this by setting test users a series of search tasks, one of which is to find a Soviet town plan (N. Millea, *pers. comm.*, October 15, 2016). Such testing undoubtedly helps to identify the type of search terms users may select to carry out such tasks, although it should be considered that different potential users of the same map may approach the task from different angles. For example, while a student of Soviet politics may be familiar with the names of the relevant mapping organizations, a historian who is unfamiliar with Soviet mapping but interested in a locality will be more dependent on a record of a particular toponym in a language appropriate to the user. Issues surrounding the dating of Soviet city plans in library catalogues are more of a problem in the creation of accurate documentary records, as a year is less likely to be used as a search term than a producer name or toponym.

The diversity in user approaches highlights a need for more exhaustive cataloguing, as the most accessible records are those which include more information, and in multiple languages. The level of detail included in Library of Congress records is helpful to this end as it affords users more flexibility regarding search terms. Organisations which catalogue maps in a single language or alphabet (e.g. National Library of Latvia)

restrict accessibility to users familiar with that language. Most major libraries include a 'Subjects' field in records, allowing local spellings of toponyms to be included, although this is not always the case in smaller or more locally-oriented libraries. Even where toponyms are included as a subject, it may also be helpful to include this in the record title alongside the Cyrillic or transliterated variant, so that it may be more easily recognised in search results by non-Russian speakers. The adoption of this practice in British Library records is useful, but not common elsewhere.

As many of the accessibility issues highlighted in this paper stem from issues of language, libraries need to carefully consider which languages are likely to be used by users of their catalogues. While a library with a focus on local or regional users may deem the use of a single, local language appropriate, libraries hoping to reach a wider, more international audience should consider using a more widely understood language (e.g. English), alongside the Russian and phonetic terms and native toponyms discussed above. Where library catalogues are publically available online, and therefore accessible well beyond the locality of the library, this consideration is particularly necessary.

#### TOWARDS A CONSISTENT METHOD OF CATALOGUING SOVIET CITY PLANS

As the use of Cyrillic text on the plans is virtually identical on each city plan and the placement of this text is consistent, it is not necessary to be a Russian speaker to be able to interpret the information on the plan. Instead, familiarity with the typical sheet layout (as shown in the example in Figure 4) is sufficient to be able to extract the key characteristics of each plan, thus enabling it to be found by potential researchers.

In terms of the publisher name, all Soviet city plans are united by the fact that they were produced by the *Soviet Union*. It may therefore be helpful if this term is included in the publisher name of all Soviet maps, in libraries where English is the native language. This will facilitate even the most unspecific of searches, such as 'Soviet map'. In all cases, in order to facilitate international research, repetition of this name in the original Russian and transliterated Roman form (i.e. 'СОВЕТСКИЙ СОЮЗ' and '*Sovetskij Soyuz*') may be more helpful. Military city plans should also include the term 'General Staff', repeated in Russian forms, as above the title on many plans (i.e. 'Генеральный штаб' and '*General'nyy shtab*').

The most commonly-used indigenous toponym should be used for each city plan title. Although the inclusion of the transliterated, phonetic name from the plan itself may help to provide an accurate documentary record of the plan (and should perhaps be included in addition), researchers seeking maps of a particular locality are unlikely to be using this as a search term where it differs from the toponym in a native language. Where the name of the city has changed since the production of the plan, e.g. Madras, India (1973), renamed Chennai in 1996, it may be useful to include the new name in the record, though not as the main title.

The edition date, as the most prominent date of the plan and located immediately below the title, should be considered the principal date on each plan. This avoids any need to interpret Russian text in the margins of the plans or to have any knowledge of the print code located in the bottom-right corner.

**[FIGURE 4 GOES HERE]**

## CONCLUSION

The Soviet city plans are a valuable source of geographic information that is rich in topographic detail and unprecedented in terms of their coverage of built-up areas around the globe. This paper has presented a survey of 40 libraries and other organizations with holdings of Soviet city plans that has identified the variety of cataloguing methods in use. Consideration of these methods from the perspectives of different potential users leads to the conclusion that catalogues should include more information about the plans and in multiple languages to aid user access. As an increasing number of libraries around the world are adding these plans to their collections, the need to establish an accurate and consistent system of cataloguing them is becoming more important. Our major recommendations are:

- To record author or producer names in more general terms, both in Russian and English forms (e.g. ‘Soviet Union’ and ‘General Staff’ repeated in Russian forms ‘Генеральный штаб’ and ‘General'nyy shtab’), to avoid the need for users and librarians to be familiar with the specific organizations responsible for producing different types of map. These specific terms may be included elsewhere in the record to maintain documentary consistency with plans.
- To record plan titles/toponyms in two forms – transliterated phonetic names (for an accurate documentary record) and original toponyms (for ease of finding). For example, Tanzher [Tangier] or Sooets [Suez].
- To list the edition date as the primary year of production as they are the most prominent and easy-to-interpret date on the plans. Although users are less likely to search for maps by specific years, this approach is more likely to result in an accurate documentary record being maintained as it avoids confusion with source material dates and the coordinate system used.

By considering the search terms that are likely to be used by prospective users of these city plans, it is hoped that library catalogues may successfully facilitate access to, and use of, this valuable resource.

## REFERENCES

- Collier, P., A. Pearson, D. Fontana, and A. Ryder. 1998. The State of Mapping in the European Republics of the Former Soviet Union. *The Cartographic Journal* 35(2), pp. 165-168.
- Davies, J. 2005a. Uncle Joe knew where you lived. The story of Soviet mapping of Britain (part I). *Sheetlines* 72: 26-38.
- Davies, J. 2005b. Uncle Joe knew where you lived. The story of Soviet mapping of Britain (part II). *Sheetlines* 73: 1-15.
- Davies, J. and A.J. Kent. 2017. *The Red Atlas: How the USSR Secretly Mapped the World*. Chicago: The University of Chicago Press. (In press.)
- Kent, A.J. and J.M. Davies. 2013. Hot geospatial intelligence from a Cold War: the Soviet military mapping of towns and cities. *Cartography and Geographic Information Science* 40(3): 248-253.
- Lee, K.D. 2003. *Russian Data Illuminate World Mapping*. Available at: <http://gis-lab.info/docs/russian-topo.pdf> (accessed April 22, 2015).
- Miller, G. 2015. *Inside the Secret World of Russia's Cold War Mapmakers*. Available at: <http://www.wired.com/2015/07/secret-cold-war-maps/> (accessed June 9, 2016).
- Rondelli, B., S. Stride, and J.J. García-Granero. 2013. Soviet military maps and archaeological survey in

the Samarkand region. *Journal of Cultural Heritage* 14: 270-276.  
Watt, D. 2005. Soviet military mapping. *Sheetlines* 74: 1-4.

#### ACKNOWLEDGEMENTS

The authors wish to extend their thanks to representatives of the 71 organizations included in this survey, who kindly responded to requests regarding their holdings of Soviet mapping.