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National Authority File of the Russian Geographic Names

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Abstract

The development of the National Authority File of Geographic Names has been carried out by the Russian State Library (RSL) since 2003 in the framework of the Federal program called "Russian culture (2001-2005)".

The file will be a part of the complex of the authority files for the network of Russian libraries (LIBNET). Its aim is to provide usage of standardized Russian geographic names in the library practice (cataloguing of the documents and information retrieval), established officially on the federal level. The Russian National Authority File for Geographical Names is identified by the code "rugeo" in the MARC 21 format for use in subfield $2 for subject/index term sources.

1. General statements

The National Authority File of Geographic Names is initiated and carried out by the Russian State Library for the first time in Russia for the whole library community.

The Authority File consists of the authority records for names of geographical objects in Russia (*Moscow, Urals, Volga*),

of the continental shelf (*Magadan –1, the plot of the shelf by Magadan in the Sea of Okhotsk*; *Odoptu, the oil-gas-field on the north-east shelf of Sakhalin island*), and

of the exceptional economical area of the Russian Federation (*the Chuckchee Sea exceptional economical area*),

as well as of geographical objects discovered or picked out by Russian explorers within the open sea and the Antarctic (*the Peter 1 island within the Antarctic*),

if it is not contradicted with the federal law of the Russian Federation (Russian Federation, Federal Law of December, 18, 1997, № 152-FZ "Concerning geographic names", art.3, p.1).

This law establishes legal rules for the activity in the sphere of geographical objects:

names appropriation and geographic objects renaming, as well as
normalization,
using,
registration,
calculation
and preservation of the historical and cultural heritage of the nations living in the Russian Federation.

According to this federal law "Concerning geographic names" (art. 8, p.1): "Standardized geographical names are used in documents, cartographical or any other editions in Russian or in other speaking languages in Russian Federation".

In this law it's pointed out that it's necessary to establish and to use united standardized geographic names in official documents and cartographical and other publications. In this connection the following basic demand to the authority file is accepted: established headings of the authority records must be appropriated to standardized geographic names established on a federal level and indicated in the "State Catalogue of Geographic Names in Russia".

It is chosen to use the following general definitions indicated in the federal law:

geographical objects – existing or existed before, relatively stable, integral formations of the Earth defined by the definite location: continents, oceans, seas, gulfs, straits, islands, mountains, rivers, lakes, glaciers, deserts and other natural objects; republics, lands, regions, cities of federal importance, autonomous regions, autonomous districts, towns and other settlements, districts, railway stations, seaports, airports and such other objects;

names of geographical objects - geographic names conferred to geographical objects and used for their distinction and recognition;

geographic names establishment – exposure of existing geographic names, conferment and renaming of geographic names;

normalization of a geographic name – choice of a geographic name mostly used and definition of this name's spelling in the language it is used in (Federal law, art.1)

2. Functions of geographic names authority file

Geographic names file must serve the following functions:

- to provide usage of the established Russian geographic names in cataloguing and data retrieval;

- to build all necessary conditions for the centralized geographic names data preservation and receiving reliable data in remote access possibility;
- to fix synonymous relations, hierarchical and associative connections between geographic names;
- to ensure the possibility of data exchange with Russian and foreign libraries, as well as other organizations and library networks.

3. Data sources

The following data sources for the forming of the geographic names authority file are chosen:

- Electronic State Catalogue of Geographic Names in Russia– **computer** files;
- State Catalogue of Russian Geographic Names as a card index – references in a traditional form;
- All-Russian Classifier of Administrative-Territorial Formations (ARCATF);
- bibliographic records formed within the documents cataloguing in RSL and in other libraries;
- authority records from the electronic catalogues (OPAC's) of RSL, the National Library of Russia, and other libraries;
- Library Bibliographic Classification (LBC) tables (territorial divisions);
- reference editions.

The Electronic State Catalogue of Geographic Names in Russia (carried on by the Central Institute of Geodesy, Air Photography and Cartography) is chosen as the main data source because of its originality and reliability. To clarify the situation, here is more information about that Catalogue. Each Russian geographic name must be registered in the Central Institute of Geodesy, Air Photography and Cartography and must receive permanent registration number, which cannot be changed with geographic name modification. Because the data base of the State Catalog is only being established now, we will use for our Authority file machine-readable data and references from traditional card index of Russian geographic names as well.

The State Catalogue of Geographic Names has more than 200 types of objects. Thirty characteristics are registered with a name divided into mandatory characteristics and additional (optional) characteristics. Thus, RSL acquires all necessary data required for the authority file, such as:

established name;
the source of establishing the name;
date of establishing the name;
object type;
object existence indication;
the source of establishing geographical object type;
settlement administrative status;
information concerning administrative-territorial location (subject name, administrative region name) of the object (for example, information concerning rivers includes administrative districts, which they flow through);
object geographical coordinates (longitude, latitude, connection with other geographical objects);
name variants;
sources of name variant establishing;
date of establishing the name variant;
date of changing the name variant, etc.

All data is presented in the State Catalogue of Geographic Names data base in the form of special system tables. We convert the data directly from these tables into MARC21 (see examples #1 and #2 bellow).

The State Catalogue data structure reflects the current name of the geographical object, the earlier name for the object, and an element reserved for a future name. Only the established form of geographic name received from the official source is registered

The State Catalogue of Geographic Names, created in 2000, now is in the state of database accumulation. This catalogue is supposed to be available on the Internet in 5-7 years when the database for maps in the scale of 1×500000, divided into the regions, will be completed. Then the next step will be to compile data on maps in the scale of 1×100000; this means that the database will contain information about all settlements including villages. In the whole, Russian topographic maps in the scale of 1×100000 have about 2,5 m. geographic names.

On the grounds of the agreements with RSL, the Central Institute of Geodesy, Air Photography and Cartography fulfills informational service of the project based on its Electronic Catalogue of Geographic Names. All data is transferred from the State Catalogue format into MARC 21 for Authority Data. Information about 36000 geographical objects of 16 subjects of the Russian Federation (northern and central regions) has been received already and loaded into the RSL OPAC. 35000 records are supposed to be loaded in the near future. With complete data about some regions, it's planned to establish the management of permanent notice about current geographic name changes.

Examples.
All data in the fields 001, 043b, 1XX, 4XX, 5XX, 6XX of MARC21 records here was converted from the State Catalogue of Geographic Names. The authority records in the file are fully established. All examples are transliterated in Latin by ISO 9-95.

(1)
001 agkgn0006893
003 RuMoRGB
005 20050412191824.0
008 031010| | | azznnaabn| | | | | | | | | |n|ana| | | | # d
035## \a(CNIIGAiK)9347
040## \aRuMoRGB \brus \erpk \frugeo
043## \ae-ru \b78 \2AGKGN
065## \a(2-2SPb)\2rubbk \5RuMoRGB
151## \aSankt-Peterburg, gorod (Rossiya)
451## \wa \aLeningrad, gorod
451## \wa \aPetrograd, gorod
451## \wa \aSankt'‘-Peterburg'‘, gorod
551## \wg \aRossiya
665## \aDanny'e v AGKGN: Leningrad (26.1.1924) \aDanny'e v AGKGN: Petrograd (31.8.1914) \aDanny'e v AGKGN: Sankt'‘-Peterburg'‘ (31.12.1804) \aDanny'e v AGKGN: Sankt-Peterburg (6.9.1991) \a Osnovan 16[29]/05/1703.
670## \aAGKGN (CZNIIGAiK)
670## \aUkaz Prezidiuma Verxovnogo Soveta RSFSR № 1643/1, 06/09/1991
670## \aPostanovlenie II s'‘ezda Sovetov SSSR, 26/01/1924
670## \aCZarskij ukaz, 18 [31]/08/1914
670## \aAtlas Rossijskoj Imperii, 1804

670## \a10-verstnaya karta
670## \aSpravochnik administrativno-territorial'nogo deleniya Leningradskoj oblasti, 1997.
680## \igorod \iczentr oblasti \iczentr Leningradskoj oblasti, gorod federal'nogo znacheniya, sub''ekt RF.
680## \i59 grad. 55 min. S.SH., 30 grad. 20 min. V.D.
751#0 \a Saint Petersburg (Russia)

(2)
00100 agkgn0002163
00300 RuMoRGB
00500 20050412191657.0
008 031010| | | azznnaabn| | | | | | | | | |n|ana| | | | # d
035## \a(CNIIGAiK)2507
040## \aRuMoRGB \brus \erpk \frugeo
043## \ae-ru \b57 \2AGKGN
151## \aOka, reka (pravy'j pritok r. Volga)
551## \wg \aOrlovskaya, oblast' (Rossiya). Prirodny'e ob''ekty'
551## \wg \aTul'skaya, oblast' (Rossiya). Prirodny'e ob''ekty'
551## \wg \aKaluzhskaya, oblast' (Rossiya). Prirodny'e ob''ekty'
551## \wg \aMoskovskaya, oblast' (Rossiya). Prirodny'e ob''ekty'
551## \wg \aRyazanskaya, oblast' (Rossiya). Prirodny'e ob''ekty'
551## \wg \aVladimirskaya, oblast' (Rossiya). Prirodny'e ob''ekty'
551## \wg \aNizhegorodskaya, oblast' (Rossiya). Prirodny'e ob''ekty'
670## \aAGKGN (CZNIIGAiK)
670## \aKarty' poverxnostny'x vod Evropejskoj chasti SSSR, 1936
670## \aAtlas Rossijskoj Imperii, 1804
670## \aVodny'e resursy' Rossii, 1907,1934, 10-verstnaya karta
670## \aAdministrativnaya karta Tul'skoj oblasti, 1939
670## \aAdministrativnaya karta Ryazanskoj oblasti, 1979
670## \aAdministrativnaya karta Orlovskoj oblasti, 1987
670## \aSlovar' geograficheskix nazvanij SSSR, 1987
670## \aSlovar' nazvanij gidrograficheskix ob''ektov Rossii i drugix stran-chlenov SNG, 1999
670## \aAtlas mira, 1999.
680## \ireka
680## \ipravy'j pritok r. Volga
680## \i56 grad. 20 min. S.SH., 43 grad. 59 min. V.D.
751#0 \a Oka River (Kurskaia oblastr-Nizhegorodskaia oblastr, Russia)

(3)
001 agkgn0013380
003 RuMoRGB
005 20050412192037.0
008 031010| | | azznnaabn| | | | | | | | | |n|ana| | | | # d
035## \a(CNIIGAiK)25941
040## \aRuMoRGB \brus \erpk
043## \ae-ru \b47 \2AGKGN
151## \aMurmozero (yugo-zapadnee oz.Larinskoe)
451## \wa \aMurmozero (Korval'skoe)
451## \wa \aNurmozero
451## \wa \aMuromozero
451## \wa \aNurm-ozero
551## \wg \aLeningradskaya, oblast' (Rossiya). Prirodny'e ob''ekty'

665## \aDanny'e v AGKGN: Murmozero (Korval'skoe) (31.12.2000) \aDanny'e v AGKGN: Nurmozero (31.12.1936) \aDanny'e v AGKGN: Muromozero (31.12.1988) \aDanny'e v AGKGN: Nurm-ozero (31.12.1941) \aDanny'e v AGKGN: Murmozero (31.12.1967)
670## \aAGKGN (CZNIIGAiK)
670## \aR-36-143,144/1967
670## \aR-36-143,144/1980,2000
670## \a10-verstnaya karta
670## \aKarty' poverxnostny'x vod Evropejskoj chasti SSSR, 1936
670## \aR-36-V,G/1988
670## \aR-36-143,144/1941
670## \aR-35,36/1943
670## \aAdministrativnaya karta Leningradskoj oblasti, 1945
670## \aAdministrativnaya karta Leningradskoj oblasti, 1986
670## \aOtvet Boksitogorskogo rajonnogo otdela narodnogo obrazovaniya, 1991
670## \aOtvet nachal'nika pochtovogo otdeleniya svyazi n.p. Krasny'j Bor ot 25/10/ 1991
670## \aSlovar' nazvanij gidrograficheskix ob''ektov Rossii i drugix stran-chleno v SNG, 1999.
680## \iozero
680## \iyugo-zapadnee oz.Larinskoe
680## \i60 grad. 6 min. S.SH., 35 grad. 1 min. V.D.

We also would inquire about some separate date being absent in the State Catalogue of Geographic Names data base of the State Catalogue card index in the form of traditional references.

Another data source in machine-readable form is **All-Russian Classifier of Administrative-Territorial Formations (ARCATF),** which is published in printed form for the support of the state statistics. This classifier exists also as a database containing information about Russian administrative structure. In the framework of the project, the following data elements are converted into the geographic names file:

geographic object name,
geographic object type,
administrative subordination, and
geographic object code (ARCATF code).

All information in this classifier is presented as a text or coded in the geographical object code structure. There's not enough information for the authority file but the ARCATF database contains about 300 000 administrative-territorial formations. These data are converted also into MARC 21 format directly from the system tables. All authority records converted from ARCATF are provisional at first (*c* in the field 008, position #33).

Examples.
All data in the in the fields 1XX, 4XX, 5XX, 6XX of MARC21 records here was converted from the All-Russian Classifier of Administrative-Territorial Formations.
(4) This geographic name is absent in the file from the State Catalogue of Geographic Names now.
001 okato0079526
003 RuMoRGB
005 20050412125605.0
008 031010| | | azznnaabn| | | | | | | | | |n|anc| | | | # d
040## \aRuMoRGB \brus \erpk \frugeo

043## \ae-ru \b40 \2OKATO
065## \a(2-2SPb)\2rubbk \5RuMoRGB
151## \aSankt-Peterburg, gorod (Rossiya)
551## \wg \aRossiya
551## \wg \aSevero-Zapadny'j federal'ny'j okrug
670## \aOKATO
680## \igorod \isub''ekt federaczii

(5) This geographic name exists in the file converted from the State Catalogue of Geographic Names too. A new data is only in the field: *551## \wg \aSevero-Zapadny'j federal'ny'j okrug.*
001 okato0000001
003 RuMoRGB
005 20050412125209.0
008 031010| | | azznnaabn| | | | | | | | | |n|anc| | | | # d
040## \aRuMoRGB \brus \erpk
043## \ae-ru \b01 \2OKATO
065## \a(2Ros-4Alt) \2rubbk \5RuMoRGB
151## \aAltajskij, kraj (Rossiya) \y(1937 -)
551## \wg \aSibirskij federal'ny'j okrug
670## \aOKATO
680## \ikraj \isub''ekt federaczii \iczentr - gorod Barnaul
751#0 \a Altaiskii krai (Russia)

We have also created some additional authority records for the purpose to form the hierarchical structure (see examples ##6-7).

Examples.
(6)
001 feder0000003
003 RuMoRGB
005 20050408175430.0
008 031010| | | azznnaabn| | | | | | | | | |n|ana| | | | # d
040## \aRuMoRGB \brus \erpk
043## \ae-ru
065 ##\a(2Ros-16)\2rubbk \5RuMoRGB
151## \aFederal'ny'e okruga Rossijskoj Federaczii
551## \wg \aRossiya
(7)
001 feder0000002
003 RuMoRGB
005 20050408175430.0
008 031010| | | azznnaabn| | | | | | | | | |n|ana| | | | # d
040## \aRuMoRGB \brus \erpk
#043## \ae-ru
065 ## \a(2) \2rubbk \5RuMoRGB
#151## \wg \aRossiya. Prirodny'e ob''ekty'
#551## \wg \aRossiya

The data from described sources is not quite enough for cataloguing. Therefore the data from bibliographic records formed within the documents cataloguing in RSL and in other libraries, as well as from authority files in the OPAC's of the RSL, the NLR and other libraries would be used (see the section #6 below). Besides, specialists in the RSL edit unhappy fields in converted records.

There is important information concerning geographic names in the Library Bibliographic Classification (LBC) tables (territorial divisions). Therefore the ensuring interaction of the Authority file for geographic names and File for Territorial Divisions is very important (see the section #5 below).

As usually developers of the authority file will edit it on the base of different reference books like dictionaries, geographic maps, railway guides etc.

The data checked by ALEPH System (in the RSL OPAC) are converted then into RUSMARC Format for the authority data with the purpose of their later loading into the LIBNET OPAC.

4. The structure of the geographic names authority file

If the proper data is available, the authority record consists of the following elements (see examples ##1-7 above):

- the established form of geographic name;
- unestablished form of geographic name (abridged or other name variants);
- geographical coordinates;
- geographic name permanent registration number in the State Catalogue;
- sources of the established form of geographic name;
- date (year) of establishing the form of geographic name;
- geographic object type;
- administrative status of the subject;
- information concerning administrative-territorial location of the object (Russian Federation subject name, administrative region name);
- notes;
- territorial division index (from LBC classification).

The examples ##1-5 demonstrate well that 2 main sources give a chance to form the main part of the authority record elements during a converting process. It is rather difficult to find out data coincidences and combine records for the same geographic objects.

The Authority File for Geographic Names is intended to be multilingual; it will contain geographic names in other national languages of the Russian subjects and in other foreign languages. Also, all names are presented in original scripts. The most difficult problem is as fellows: geographic names in different languages can be transliteration forms in accordance with different standards, transcription forms in accordance with unknown rules, translation forms, mixed forms, and variants turned out in language history, special forms in Latin graphic established for the maps by cartographic agency as well.

Examples:
(8) *Rossiya* (the transliteration form by ISO) - *Russland* (a variant in German), *Russia* (a variant in Italian), *Russia* (a variant in English), *Rossija* (special forms in Latin graphic established for the maps by cartographic agency in Russia).

(9) *Rossijskaya Federaciya* (the transliteration form by ISO) – *the Russian Federation* (a mixed form in English).

(10) *Sovetskij Soyuz* (the transliteration form by ISO) – *Sowjetunion* and *Soviet Union* (a translation forms in German and English).

(11) *Shupashkar* (Chuvash name of the city - the transliteration form by ISO) - *Cheboksary'*(the transliteration form by ISO of the Russian variant).
See also fields 751 in the examples ##1, 2, 5 above.

If the established form of geographic name is changed, a new authority record is made with a new authority heading. Records are linked with "see also" references.

Example
(12)
If the Library staff decide to create a separate authority record for *Leningrad* it would be an example of such situation. We delete the field "*451## \wa \aLeningrad, gorod"* from the record "*001 agkgn0006893" (example #1*) and include the field "*551## \wa \aLeningrad, gorod (RSFSR, SSSR)* ".
A new record would be looking like this:
003 RuMoRGB
008 031010| | | azznnaabn| | | | | | | | | |n|ana| | | | # d
040## \aRuMoRGB \brus \erpk \frugeo
043## \ae-ru \b78 \2AGKGN
065## \a(2-2SPb)\2rubbk \5RuMoRGB
151## \aLeningrad, gorod (RSFSR, SSSR)
451## \wa \aPetrograd, gorod
451## \wa \aSankt''-Peterburg'', gorod
551## \wg \aRSFSR (SSSR)
551## \wb \aSankt-Peterburg, gorod (Rossiya)

The RSL sub-department responsible for the Authority file support will confer a national registration number to each authority record. The structure of the registration number is being developed.

5. Ensuring interaction of the Authority file for geographic names and File for Territorial Divisions in machine-readable classification LBC.

With data converting from the State Catalogue of Geographic Names and All-Russian Classifier of Administrative-Territorial Formations into the MARC 21 format, geographic names are checked on their addition to the base of the Territorial Divisions File of machine-readable classification BBK (or LBC – Library Bibliographic Classification). If a name exists in the LBC record heading, the LBC index is copied automatically in the proper field of the authority record in the Geographic Names Authority File or will be installed in the record by hand.

You can see the LBC indices in the examples ##1, 5-7 in the fields 065.

Records in the Authority File for Geographic Names will be corrected promptly as data from the Central Institute of Geodesy, Air Photography and Cartography is received by the RSL department responsible for the file support (Department of Cartographic Editions). Information relating to changes in geographic names or their data will be transferred then in LBC for territorial divisions' actualization. After the editorial board takes proper decisions, the File for Territorial Divisions in machine-readable classification will be modified.

6. Next steps of the project development.

The Authority File for Geographic Names is located on the RSL website as a generally available electronic source and as an information retrieval source in the RSL OPAC. In the future this file will be transferred into the union OPAC of the Russian libraries network LIBNET. It is planned to establish cooperation between the RSL and the National Informational Bibliographic Center (LIBNET) in the transferring of the initial files in RUSMARC Format and the constant data actualization. There are some problems to decide concerning the choice of data presentation means in RUSMARC format. This file will be transferred in parts into the union OPAC as that parts will be ready. At the same time, the RSL will support the file in the own OPAC generally available in Internet.

Project decisions have been widely discussed at different conferences. Files of geographic names are studied additionally in other Russian libraries, as it's necessary to organize cooperation with them. Collaboration with national libraries of the Russian Federation regions using their national languages on maps would be organized also.

In 2005 it's planned to enrich the file and to transform it into a multilingual one. It's necessary to consider all details concerning the Authority File of Geographic Names exchange with foreign cataloguing agencies, to study ways to present the names in other languages. In this way it's essentially important to establish the cooperation with national libraries interested in collaboration on this project. We invite other libraries to join in our work **(contact e-mail: lavr@rsl.ru).**

The National Library of Russia (Saint-Petersburg) would be responsible for the work with historical names of geographic objects. The task of completing the file with data concerning all those existing geographic names that are not fixed in the State Catalogue of Geographic Names and those names of disappeared geographic objects still used in documents cataloguing in libraries is a great challenge of our project.

The URL for the RSL authority files:
http://aleph.rsl.ru/F/PVHBDH92JN7FKPXKY11163HQ4VR54AC7UDRHY2N76UM7GY9YXM-02794?func=file&file_name=find-b&local_base=tst11 (ENG/RUS).

Examples of search results on the screens for end users - see fig. 1 and 2.

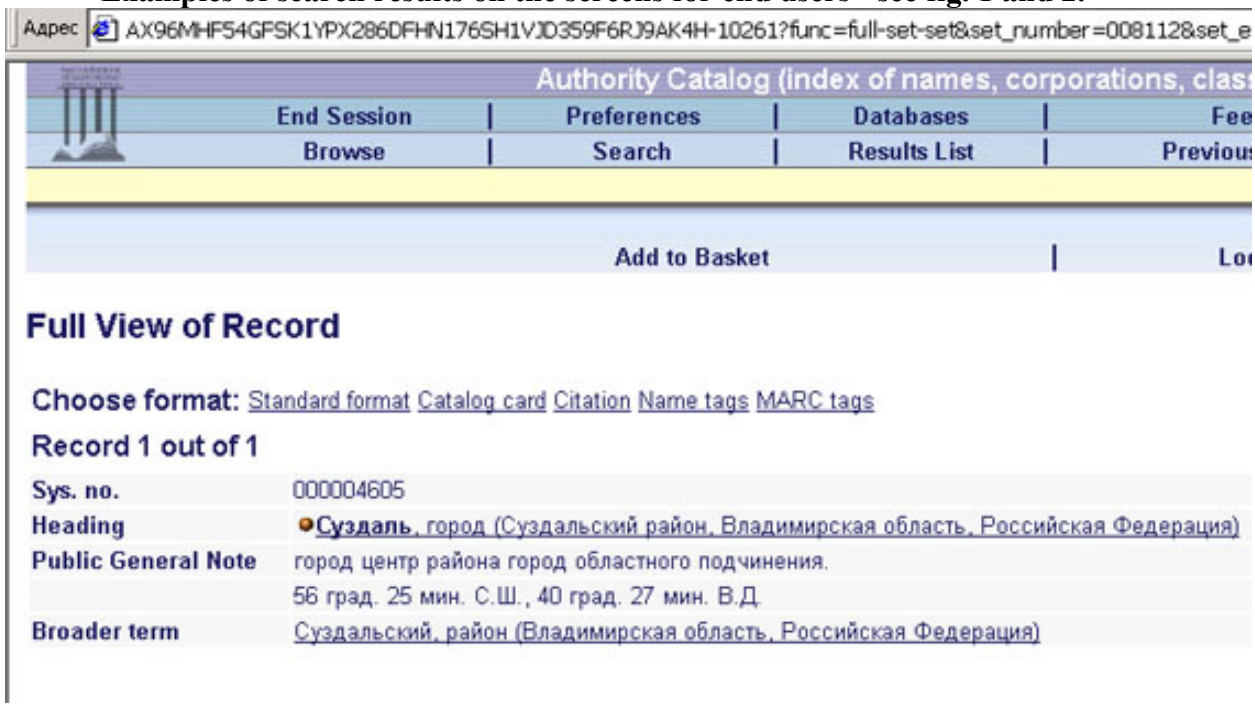

Fig.1. Authority record for the geographic name "Suzdal`, gorod"

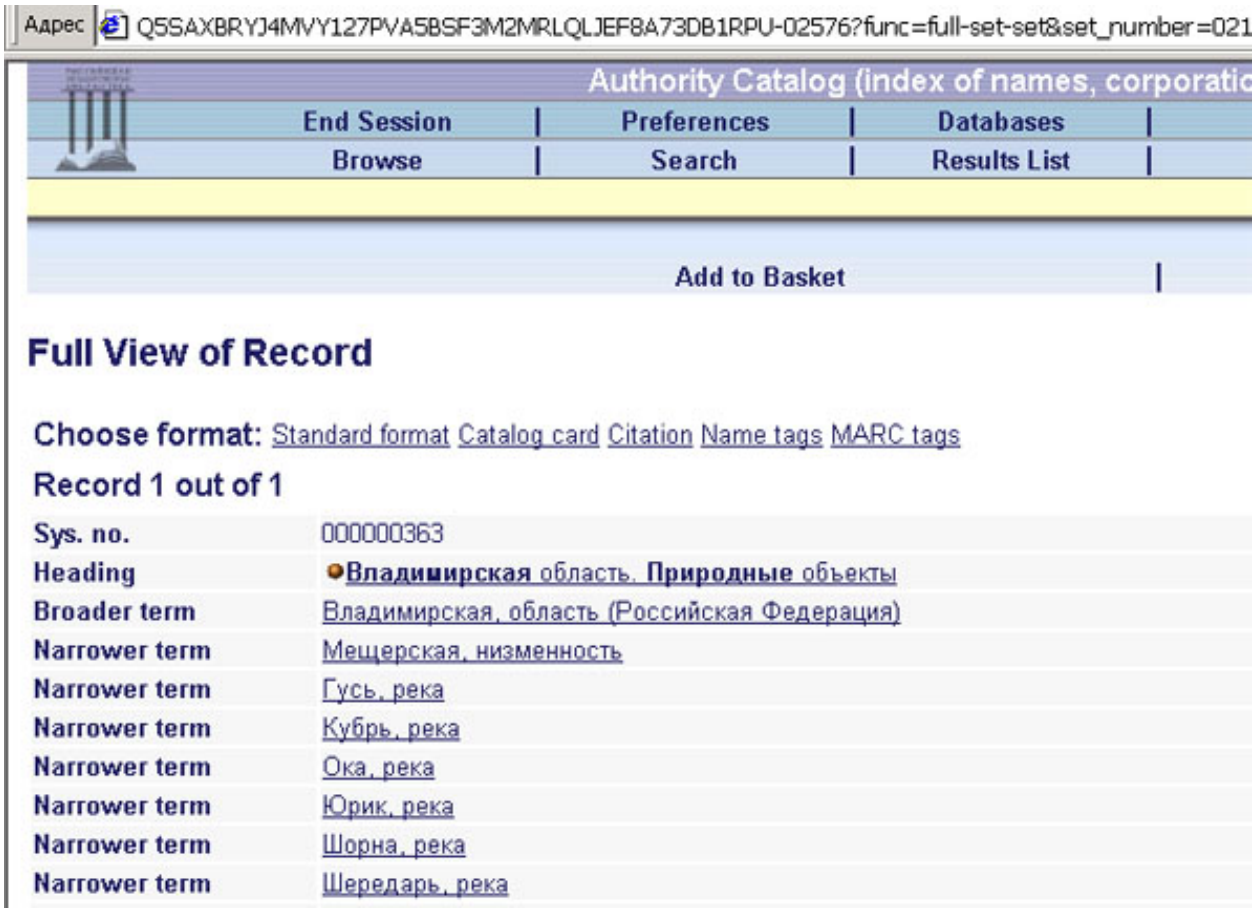

Fig. 2. Authority record (a part) for the geographic name " Vladimirskaya oblast`. Natural objects"