

ZPRÁVA ZE SLUŽEBNÍ CESTY DO ITÁLIE
VE DNECH 8. 11. – 11. 11. 2006



Účel cesty:

Účast a přednesení přednášky na konferenci **Zatopené archivy** konané ve Statním archivu ve Florencii ve dnech 9. - 10. listopadu 2006

Termín:

8. 11. – 11. 11. 2006

Účastníci:

Dr. ing. Michal Ďurovič – Oddělení péče o fyzický stav fondů

Zprávu předkládá:

Dr. ing. Michal Ďurovič
Národní archiv, Archivní 4, 149 01 Praha 4

Datum vyhotovení : 27.12. 2006

Podpis ředitelky Národního archivu: PhDr. Eva Drašarová, CSc.

Časový průběh zahraniční cesty

8. 11.

Odlet z Prahy do Říma – 13:10

Odlet z Říma do Florencie – 15:00

Přílet do Florencie – 18:30

Ubytování v hotelu Vivahotel Capitol Santa Croce

9. 11.

09:30 Slavnostní zahájení konference

09:30 – 14:00 Dopolední blok přednášek

14:00 – 15:00 Oběd

15:00 – 16:30 Návštěva restaurátorského pracoviště Státního archivu ve Florencii

16:30 – 18:30 Odpolední blok přednášek

10. 11.

09:30 – 14:00 Dopolední blok přednášek

14:00 – 15:00 Oběd

15:00 Kulatý stůl

11. 11.

Odlet z Florencie do Milána – 12:15

Odlet z Milána do Prahy – 15:20

Přílet do Prahy – 16:55

Zpráva:

Ve dnech 9. až 10. listopadu 2006 jsem se na základě pozvání Státního archivu ve Florencii zúčastnil mezinárodního semináře "Zatopené archivy", který se konal u příležitosti 40. výročí záplavy Florencie v roce 1966 a byl zaměřen na výměnu informací a zkušeností konzervátorů a restaurátorů archivních památek při řízení krizových situací a zabezpečení rizik způsobených přírodními katastrofami, zvláště pak škodami způsobenými vodou.

Italská strana požádala o přednesení příspěvku, ve kterém by byly shrnuty naše zkušenosti z povodně v České republice v roce 2002 (text přednášky v anglickém jazyce je uveden v Příloze 1).

Program konference byl následující:

9. 11. 2006

9:30 hod.

Slavnostní zahájení konference

Andrea Marucci (Státní podsekretář pro kulturu a kulturní aktivity)

Rosa Maria Di Giorgi (místopředsedkyně rady městského zastupitelstva ve Florencii)

Maurizio Fallace (Generalní ředitel italských archivů)

Paolo Del Bianco (Prezident Nadace Del Bianco)

Zahájení semináře:

Gigliola Fioravanti (Ředitelka Centra státních archivů pro fotoreprodukce, knihařství a restaurování)

Rosalía Manno Tolu (Ředitelka Státního archivu ve Florencii)

Řídí: Rosalía Manno Tolu

Ignazio Becchi (Univerzita ve Florencii): *Přírodní katastrofy: výběr strategie ve světle poučení z minulosti*

Barbara Bertini (Ředitelka Státního archivu v Milánu): *Zhodnocení rizik a osvěta v prevenci*

Maria Teresa Jaquinta (ICCROM): *Akce UNESCO v situacích ohrožení*

Diskuse

15:00 hod

Návštěva restaurátorského pracoviště ve Státním archivu ve Florencii a prohlídka výstavy „1966 - 2006: 40 let restaurování archivních památek“

16:00 hod.

Řídí: Antonia Ida Fontana (Ředitelka Národní ústřední knihovny ve Florencii)

Caria Guiducci Bonanni (Prezidentka Nadace sv. Kříž): *Čtyřicet let po povodni ve Florencii*

Marco Carassi (Vrchní archivní inspektor pro oblast Piemontu): *Zatopený Piemont (1994)*

Michal Ďurovič (Národní archiv, Praha): *Povodeň v Praze 2002 – čtyři roky poté*

Diskuse

10.11.2006

9:30 hod.

Řídí: Gigliola Fioravanti

Konfrontace metodologie a postupů – studie případů

Cecilia Prosperi (Ředitelka restaurátorské a fotografické laboratoře Centra státních archivů pro fotoreprodukování, knihařství a restaurování)

Piero Marchi (vedoucí pracovník konzervátorského oddělení ve Státním archivu ve Florencii)

Ornelia Signorini Paolini (bývala vedoucí pracovnice konzervátorského oddělení ve Státním archivu ve Florencii)

Gisella Guasti (odpovědná pracovnice restaurátorského pracoviště Národní ústřední knihovny ve Florencii)

Carlo Federici (bývalý ředitel Ústředního institutu pro patologii knihy)

Diskuse

15:00 hod.

Kulatý stůl - Jak a komu předávat nabyté znalosti a zkušenosti

Cristina Acidini (Inspektorka Střediska muzeí ve Florencii)

Armida Batori (Ředitelka Ústředního institutu pro patologii knihy)

Caterina Bon Valsassina (Ředitelka Ústředního restaurátorského institutu)

Gigliola Fioravanti, Rosalia Manno Tolu, Isabella Massabo Ricci (Vědecký výbor pro archivní památky)

Řídí: Gian Bruno Ravenni (Generální ředitel Toskánského regionu)

Zkončení semináře

I když italští kolegové seminář nazvali jako mezinárodní, nakonec se ukázalo, že zahraniční přednášející byli pouze dva kolega Michael John ze Státních uměleckých sbírek Drážďany a já. Pravděpodobně z tohoto důvodu nebyla konference tlumočena do anglického jazyka a probíhala pouze v italštině! Nicméně jednotlivá témata přednášek byla nesmírně zajímavá a zkušenosti italských kolegů s odstraňováním následků ničivé povodně v roce 1966 pro nás natolik poučné, že jsem požádal o zaslání jednotlivých příspěvků nebo sborníku přednášek, které bychom následně přeložili. Ředitelka Státního archivu ve Florencii Rosalia Manno Tolu požádala o moji přednášku a proto jsem ji předal celou presentaci, kterou jsem přednesl na konferenci. Dále o zaslání presentace (především výsledky mikrobiologických testů) projevila zájem Dr. Maria Carla Scocchi z mikrobiologické laboratoře Centra státních archivů pro fotoreprodukování, knihařství a restaurování a jeden soukromý restaurátor ze Sienny.

Samotné pozvání na tento seminář, ale i zájem o přednesenou přednášku jen potvrdilo, že Národní archiv se díky získaným zkušenostem z odstraňování následků povodně v roce 2002 stal uznávaným a respektovaným odborníkem v této oblasti.

Flood in Prague 2002 – Four Years After

National Archives, Prague

Michal Ďurovič MSc., PhD.

Head of Preservation Department

Ladies and gentlemen, firstly I would like thank to organisers of this conference for the invitation. In my contribution I would like briefly inform you about flood in Czech Republic in 2002 (mainly in Prague) and describe solution of this situation up to present days.

Four years ago the greatest floods in history of our country damaged great part of the Czech Republic and unfortunately affected also archives, libraries, museums, galleries, and other cultural and scientific facilities and institutions.

The conditions were extremely bad in Prague where level of water was 4 metres above ground at many locations. Archive of Architecture and Construction Industry of the National Museum of Technology (unique plans drawn on tracing paper and paper-made models), the Central Military Archive (documents from the Second World War, documents of courts material), the records office of the Municipal Court in Prague (court records), the records office of the Ministry of Agriculture of the Czech Republic, Municipal Library in Prague (manuscripts and rare editions), Archives of the Academy of Sciences of the Czech Republic (librarian items, diplomas, photographs), and the National Library in Prague (editions from 19th century) were among the institutions, which suffered most in August 2002.

Once the water fell it was impossible to begin rescue works immediately at many places around Prague because numerous areas were closed and guarded by police for safety reasons (disturbed statics of buildings, fears of thefts and plundering). This way the time necessary for an immediate beginning of rescue works was wasted. Exactly as it was expected moulds and fungi appeared on backs of books in that warm weather within 24 – 48 hours, on the contrary, finding, completely surprising, was that archive boxes as well as separately laid volumes of records, if their storage rooms were intensively ventilated, did not get moulded even after a week being in environment that had relative humidity 100%. In the case that moulds and fungi appeared disinfection was recommended with 2 - 5 % quaternary ammonium base solution in 80 % ethyl alcohol and this solution was applied by spray or brush.

After the water fell respective documents were cleaned from mud by water jet. A small portion of archival documents, books, and mostly photographs and glass negatives was dried laid freely in the air.

This method advantage is it is gentle to the material dried, its disadvantage is it is laborious, demands large area, and there are troubles with moulds and fungi growth.

Therefore it was decided, in accordance with international recommendations, that the rest of materials should be, after being cleaned, loaded into polyethylene bags, labelled, and fast frozen to temperature approximately -20 to -25°C . At present majority of materials of archival nature, books, manuscripts, incunabula, maps, charts, and plans, having total volume of about 2000 m^3 , was kept frozen.

Because we hadn't any experiences with drying of frozen documents the National Archives and the National Library in Prague decided to develop a study, in which a more detailed comparison of known and available drying methods would be carried out and potential hazards of these methods would be evaluated. This way the paper „*Study of effects of drying methods on physical and chemical properties and microbiological properties of various paper grades*“ was developed. This study is, in the English version published at the [www](http://www.na.gov.cz) pages of the National Archives.

In this study drying methods were tested as follows:

- hot air drying;
- vacuum freeze drying – lyophilisation;
- drying by humid heat;
- drying freely in the air;
- vacuum drying;
- vacuum packaging; and
- microwave drying.

Certain important conclusions were derived from the study, professional literature, and practical experience acquired as follows:

- 1 All the methods tested require subsequent disinfection after the material drying is completed;
- 2 Hot-air drying may be applied merely to materials, which are not dedicated to a long-term storage;
- 3 The method of lyophilisation (freeze drying) is suitable for materials tested, except for highly absorbent paper grades;

- 4 The method of vacuum packing is suitable for all types of materials tested. Its drawback is its substantial laboriousness (because of high compression there is hazard of sheet sticking during the drying process, which can however be prevented by browsing through the dried documents from time to time). Its advantage is the drying method is very gentle, books are not distorted as it happens in the case of the other drying methods;
- 5 Vacuum drying can generally be applied for every type of materials tested;
- 6 Drying by means of humid heat is suitable for mass drying of materials where a slight worsening of mechanical properties may be tolerated and which are not dedicated for a long-term storage;
- 7 Drying laid freely in the air is the gentlest method, its drawback consists in demands for labour force and room. It also poses significant health hazard to persons who manipulate with the material dried;
- 8 Microwave drying may, similarly to the hot-air drying, solely be used for materials, which are not dedicated for a long-term storage.
- 9 The method of lyophilisation (freeze drying) is suitable for materials containing water-based inks and stamps, which must be preserved, or their damage shall not be further increased;
- 10 Thermal methods are not suitable for the drying of vellum papers;
- 11 Binding leathers and parchments may be safely dried only as freely laid in the air;
- 12 Thermal methods of drying cause electrographic copies and plastic packages or wraps are molten together; and
- 13 Microwave drying poses hazard to materials, in which there are metallic particles or particles of other materials absorbing microwave radiation. Drying of such materials requires object specific approach (shielding of irradiation, reduced output of the dryer).

In autumn 2002 the Government of the Czech Republic authorised its Deputy Prime Minister for Science and Research to create a commission of representatives of respective institutions affected and experts, which should make a proposal for a solution of the situation incurred. The commission work resulted in the Decision of Government of the Czech Republic No. 216 of March 2003 “*on the proposal for further solution of the situation of documents affected by the floods of government organisations and organisations administering cultural heritage*”, which was amended in July 2003 and

2004. The fundamental idea of the Decision is to subdivide the rescue works on the documents affected by the floods into two separately organised processes. Rescue works on documents of organisations reporting to the Ministry of Culture of the Czech Republic (libraries, museums, and galleries) shall be coordinated by the Ministry and organisations reporting to other ministries of the Czech Republic (archives, records offices of ministries, courts, etc.) shall be coordinated by the Office of the Government of the Czech Republic.

Ministry of Culture of the Czech Republic has built the Methodological Centre for Conservation at the Museum of Technology in Brno, Moravia.

Such prospects were too far for many institutions and therefore they began to dry their documents on their own. These are, first of all, the National Library and Municipal Library in Prague and the National Museum of Technology in Prague (Archive of Architecture and Construction Industry), which suffered severe damage. These institutions have been expanding their conservation workplaces and facilities.

The rescue of documents of institutions reporting to other ministries has been coordinated by the Office of the Government of the Czech Republic (the National Archives in Prague were authorised as the expert body responsible for). These artefacts comprise of approximately 1100 m³ archival documents and records. These works concept is as follows:

1. *drying of the documents frozen;*
2. *disinfection of microbiologically contaminated documents; and*
3. *conservation and preservation of selected archival documents and artefacts .*

On the basis of the aforementioned „*Study of effects of drying methods on physical and chemical properties and microbiological properties of various paper grades*“ mostly methods of **vacuum drying** (vacuum drying and vacuum sublimation) were recommended to archival artefacts and important records, for documents of lower importance then **thermal methods** (hot-air methods) received the recommendation. The drying works of frozen documents were ordered as a result of a tender and the winner of this tender is company BELFOR AUSTRIA GmbH.

The National Archives in Prague has provided for technology supervision over the drying activities. Because virtually all frozen documents are contaminated with bacteria, moulds, and fungi their disinfection will be necessary following the drying up. Based on long-term experience and experimental studies of the National Archives in Prague the disinfection method using gas ETOXEN (a mixture of 10 % ethylene oxide and 90 % carbon dioxide) was recommended. In the National Archives there are two

disinfection's chambers 4 m³ in volume, made by the Spanish company of MATACHANA, having a special tunnel for residual ethylene oxide removal and equipped with a catalytic incineration of residual ethylene oxide from the company of DONALDSON. Ethylene oxide is monitored by gas chromatograph. Daily capacity of the chambers is 10 to 12 linear metres of archival documents.

Once disinfected documents shall be returned to their respective administrators who shall decide on their further treatment – conservation, microfilming, digitisation, or disposal by shredding. Documents, which are dedicated to conservation and preservation, should be gradually transferred to the conservation studios of National Archives.

At the end of contribution it is a must to mention international help, which we received immediately after the floods, and express our thanks for. Perhaps the largest help arrived from the Dutch archivists who gave a disinfecting chamber to the National Museum of Technology in Prague and organized and mainly paid lending a chamber for vacuum-freeze drying to the National Archives. Hungarian colleagues, who were interested in the conditions in the Czech Republic since the very beginning of the floods, granted the National Archives in Prague archive boxes, which are going to be gradually distributed to every archival facility affected as they need may be.

Great Britain granted vacuum packers to the National Library. The Government of Switzerland gave several tens of dehumidifier. Denmark organised for the drying of documents of the Institute of Archaeology of the Academy of Sciences of the Czech Republic, Germany financed the rescue of archival documents of the Archive of the Academy of Sciences of the Czech Republic

During autumn 2002 many experts arrived from Switzerland, the Netherlands, France, Great Britain, Poland, USA, the Russian Federation, and also Italy, who possessed practical experience with the rectification of consequences of floods. These visits were of enormous importance to us. On one hand, discussions with experts helped us to get oriented in the issues, meant we acquired new experience and brushed up our opinions, on the other hand, they also meant mental support incredibly needed those days.

Thank you very much for your kind attention