Introduction

Interest in the annually organized Transylvanian Hungarian restorers' conference, organized every October, has not decreased over the years. In the year 2002 we had the honor of welcoming not only Hungarian and Transylvanian speakers but also Aurel Moldoveanu, the "doyen" of Romanian conservation who has trained nearly all Transylvanian restorers the theoretical basics of artifact conservation.

In honor of this year's conference an exhibition containing the diploma works of students attending the Department of Restoration of the Hungarian Academy of Fine Arts was opened in the Rezső Haáz Museum, which also served as the conference venue.

The study tour connected with this extended education program usually encompassed Csík, Gyergyó and the Moldavian monasteries in 2001, and also included the picturesque landscapes of Máramaros in 2002. During the course of the three day study trip, the Romanian and Armenian monuments and museums of Régen, Herina, Beszterce, Bethlen, Dés, Koltó, Nagybánya, Dióshalom, Krácsfalva, Máramarossziget, Desze, Szaplonca, Barcánfalva, Sajómező, Jód and Szamosújvár were visited.

It is to our great satisfaction that besides the habitual participants, young colleagues eager to acquaint themselves with the intrigues of the field as well as restorer students of the Nagyszeben University are also showing interest in the extended education program. It is their eagerness that further strengthens our conviction to pass on our knowledge acquired from our predecessors and through experience.

Petronella Kovács Wood and furniture restorer MA Head of the faculty for object conservation Hungarian Academy of Fine Arts Hungarian National Museum

András MORGÓS - Levente DOMOKOS The emergence of Hungarian museum restoration work in Transylvania. Famous Hungarian restorers in Transylvania

Museum restoration work in Hungary as well as Transylvania began during the last quarter of the 19th century. Viktor Molnár, a laboratory assistant (restorer) in the Hungarian National Museum was employed in 1864. József Kemény, a technician worked in the

museum since 1876, restoring iron objects and weapons. Both of them were active in this institution for half a century. In comparison, the British Museum established in 1753 as the first museum in the world, employed its first restorer, J. Doubleday since the 1840s. Prior to that time, excavating archaeologists curated and restored their own find materials and collections themselves.

As for the employment of chemists, the establishment of chemical restoration laboratories, and the analysis of components in works of art, Hungary has reached the highest international standards by the late 19th-early 20th centuries. Material investigations by the chemist, Dr. József Loczka deserve special mention here. His first article discussing this topic was published in 1885. Internationally, similar analyses were first published by E. Bibra in 1873.

The restoration laboratory of the Royal Prussian Museum in Berlin is regarded exemplary all over the world. It was established by the chemist Dr. F. Rathgen in 1888. The restoration laboratory of the British Museum, founded by the chemists Dr. A. Scott and Dr. H. Plenderleith has existed only since 1924.

As regards Hungary, the only eight years long museum career before the untimely death of dr. Géza Elemér Gasparetz, chemist and restorer at the beginning of the 20th century, deserves mention in particular. During his short working life, he studied the layer structures of paintings and carried out microscopic chemical analyses of paint pigments and binding media, using pioneering techniques at the time. He also restored significant archaeological artifacts in several proivincial museums. In addition, Gasparetz introduced new restoration techniques, such as the electrolytic cleansing of metals and the use of synthetic cellon (nitrocellulose) instead of paraffin in impregnating and solidifying artifacts.

In terms of museum facilities, the restorers' laboratory established in Kolozsvár in 1900 by Béla Pósta, and the Debrecen restorers' laboratory designed and arranged by Zoltán Hegyi, a chemistry teacher in (1937-1940) must be mentioned here. The latter facility included X-ray equipment and fumigation chambers for desinfection of the objects. Hegyi was also the editor of the first restorers' handbook published in Hungarian.

The first article written in Hungarian, discussing the restoration of museum objects was published in 1891 by Sámuel Fenichel, who had studied in Transylvania and worked in the [Romanian] National Museum in Bucharest.

At the end of the 19th and beginning of the 20th

centuries, usually external experts were commissioned by the Kolozsvár Museum, to carry out complex restoration work on problematic works of art (e. g. paintings, textiles). Meanwhile, archaeological artifacts in Kolozsvár were restored by the talented restorer, András Lehoczky, who had no formal degree. His name first appeared in 1908. By 1921, he taught the restoration of iron objects and of china ware, glass and pottery on an archaeological course organized in Kolozsvár. After 1921, he was employed as the restorer of the Hungarian National Museum in Budapest.

Of those who worked for the Kolozsvár Museum, important personalities include the painter, Rezső Moretti, the Budapest artist/restorer József Konstantin Beer, the Kolzsvár painter Gyula Merész and the Kolozsvár sculptor Ferenc Szeszák as well as the painting restorer Kálmán J. Najmányi.

This study also includes biographies of prominent personalities of Hungarian museum restoration in Transylvania who passed away. They include Sámuel Fenichel, József Koródi, János Erőss, Mária Antal (Szabó), Kálmán Széles and István Ferenczi who tragically died at a young age in 2002

András Morgós Chemical Engineer, Wood and furniture restorer MA Head of Conservation Department Hungarian National Museum 1088 Budapest, Múzeum krt. 14-16.

Levente Domokos Artwork Protection Assistant "Molnár István" Muzeum Cristuru-Secuiesc, P-þa Libertãþii nr. 45.

Aurel MOLDOVEANU

Is the deterioration of the material heritage of our culture inevitable?

The answer is yes. The goods that form our material heritage cannot be considered constant from a chemical point of view. Their decay, therefore, follows in the form of chemical processes, determined by the interaction between the artifacts and their environment. Decay is irreversible, thus, not even the most perfect restoration can re-create the original object.

What can be done then? The author has come up with the following answers:

- Collections of artifacts at risk should be stored separately at a relative humidity of 30-40%, not exceeding

45% and 4-5°C. Such storage places must be isolated and equipped with humidity and temperature controls.

- In the absence of special storage facilities, a room should be built that meets the aforementioned requirements, to safeguard the most precious pieces in the collection.
- Objects deposited under such circumstances can be removed for exhibition or research only following an incubation period during which they are exposed gradually to increasing temperatures. The same holds true for re-deposition within the special storage place.
- The recommended relative humidity of exhibits should be 40% with temperatures varying between 15-17°C. Although this may not be too comfortable for the visitors, it is a price one must pay in the interest of the artifacts. The conditions in exhibits which are not climatized may be improved as follows:
- 1. Improvement of insulation on doors and windows.
- 2 Creating a constant temperature (during the cold season) by keeping the heating constantly at only 15-17°C.
- 3 Installation of air driers/humidifiers in order to stabilize relative humidity.
- 4 The most vulnerable artifacts, prone to damage, should be exhibited for no longer than two to three weeks annually.
- 5 Constant supervision of this protective system in order to guarantee rapid (within 30 minutes) reaction in the case of a breakdown.
- Lighting in the proximity of artifacts made of organic materials should be ensured using traditional light bulbs.

All these arrangements are urgent. Their execution requires three factors: an appreciation of the importance of this action, indispensable knowledge to install the equipment and adequate financial resources. Greatest damage is usually caused by the lack of understanding as to why these actions would be crucial. Although museum directors tend to be respected specialists in various areas of research (art history, history, ethnography etc.), some of them are unable to comprehend the importance of protecting the artwork stored in the museum.

In some cases, as in many other areas in our everyday life, narrow-mindedness has achieved epidemic proportions. However, if the core of the problem is not recognized, how can anybody act?

Aurel Moldoveanu Historian Bukarest

András MORGÓS - Levente DOMOKOS Restoring the "Petőfi pear tree" in Székelykeresztúr

Tradition has it that Sándor Petőfi, the Hungarian revolutionary poet, spent his last evening before the 1849 Segesvár-Fehéregyház battle under a pear tree at Székelykeresztúr. This tree has become an extremely popular historical monument and a place of pilgrimage in the city. Although the tree had died, what was left of its trunk was vandalized by youths in 2002. This sad event made the restoration of the tree necessary, before it could be returned to its original location.

Restoration work was carried out in a cooperative work the Molnár István Múzeum Székelykeresztúr and the Hungarian National Museum in Budapest. Owing to earlier damage caused by insects and fungi, the wood first had to be stabilized in several stages. Stabilization work in the finely structured parts with thin capillaries, damaged by fungi, was achieved using Araldite BY 158® epoxi rezin, characterized by its small molecule size. Its solutions with nitro-thinner were used in increasing concentrations to stabilize insect borings, cracks and fracture lines. Separation layers in the wood structure were treated using solutions of Paraloid B72 with nitro-diluent used in various concentrations.

Uverapid, and Eporezit FM 20 epoxi synthetic resin were used for gluing broken pieces of wood. Cracks within the wood that extended to the outer surface were filled with a mix of pulverized hard wood, earth dye and epoxi resin. Biological agents were deterred by a treatment with a water solution of Biokomplex-Koncentrátum[®].

Auxiliary metal parts (the supporting structure, a decorative wreath of laurel) were cleaned in the rust solvent and passivator RO-55 and treated with tannic acid diluted in alcohol. Finally, a solution of Paraloid B72 was applied. Finally, metal parts were greased using KK-18, developed for weaponry.

A support structure was partially hidden within the tree trunk which was of help in erecting the pear tree in its original location.

András Morgós Chemical Engineer Wood and Furniture Restorer MA Head of Conservation Department Hungarian National Museum 1088 Budapest, Múzeum krt. 14-16. Levente Domokos Artwork Protection Assistant Molnár István Museum Cristuru-Secuiesc, P-þa Libertãþii nr. 45.

Judit BAKAY-PERJÉS Restoration of leather artifacts

Leather objects are very rarely found in the archaeological collections of museums. It is exactly for this reason that special effort must be put into the conservation of even the smallest fragments of leather objects recovered during excavations.

Why are the numbers of leather finds so scant in the Carpathian basin? The answer lies in the disintegration of the leather and in the various factors influencing it. Damage done to the material of a leather object depends on its quality, environmental influences, time spent in the ground, and the various traits of the soil. Changes to the buried object depend on the type of terrain, soil compounds, pH, ground moisture, the chemical reaction between oxygen and the objects' material and the extent of physical and chemical harm done by microorganisms found in the soil. All these factors are so intertwined that it is nearly impossible to tell prior to excavation what condition possible leather finds will be in.

Metal compounds, of which there are numerous kinds present in the soil, usually weaken leather fibers. The proximity of metal can either hasten- as in the case of iron- or delay- as seen in the presence of silver or copper- the disintegration of a leather artifact.

In areas and sites constantly covered by water the decomposition rate of perishable materials is greatly reduced. Due to their position in the soil and their weakened structure, it is often impossible to simply remove most finds directly from the ground. Use of incorrect procedures to extract an object from the ground can result in irreparable damage such as tearing or crumbling which render the restoration of the artifact near impossible. The safest method used for object removal is the so called in situ technique that this study describes in detail.

If the leather has been weakened to a great extent and has also been structurally damaged, it is an imperative to consolidate it first by way of saturation. The substance used in this procedure must at least be partially reversible, thus permitting additional cleaningconservation in the laboratory.

Finds from waterlogged deposits must be kept wet

until conservation. The study offers information on packaging, means of shipment and the various stages of the restoration of leather artifacts. It emphasizes the importance of documentation, photographs, drawings and detailed descriptions of the site. The study acquaints us with mechanical and chemical cleaning procedures as well as conservation techniques involving water solutions of multiple alcohols.

It discusses in detail the various options used for desiccation, these being: controlled drying at room temperature, use of solvents and freeze drying. The author provides practical information on gluing, completition and the reconstruction of leather finds unearthed in several pieces.

In the case of archaeological leather finds the completition and reconstruction of artifacts is often impossible without inflicting damage upon the original pieces. In such cases the author finds that creating a reconstruction of the original find is the most suitable option.

Judit Bakay-Perjés
Archeological and applied art restorer MA
Budapest History Museum
1250 Budapest Pf. 4.
Lecturer at the
Hungarian Academy of Fine Arts

Márta KISS-BENDEFY Restoration of an 18th century guilt leather chasuble

The material of the chasuble under discussion here is one that is referred to as guilt leather in several languages (gilt leather, corami d'oro, cuir d'oré, goudleer), although it actually had nothing to do with real gold. Without the use of gold leaf a large, decorated surface with a golden glow was created exclusively by way of imitation. The study elaborates on this exceptional method of leather ornamentation, its history, the reasons behind the disintegration of guilt leather and the restoration of a guilt chasuble made with this technique.

Several descriptions of the preparation of guilt leather exist from the period under discussion here. The authenticity of these recipes was tested by the analysis of artifacts from the same period. The leather used for the technique was most often vegetable tanned sheep or calf skin. The surface of the thus prepared leather was then covered with thin silver leaves,

usually glued to the surface of the leather with parchment glue or egg white. The silver was then polished and a layer of egg white was then added to prevent the tarnishing of the silver due to corrosion.

The main outlines thereafter were pressed onto the leather using wooden molds. Surfaces designated for the gilded look were covered with a yellowish-brown varnish that contained linseed oil and natural resins. The thus varnished surface as well as the silver covered parts were further decorated with pressing, pounching of the background and painting.

Leather prepared in this way was primarily used for luxurious wall hangings, but furniture and folding screen coverings, coatings for boxes and trunks, as well as for altar fronts and cashubles.

According to catalogues from the 18th and 19th centuries guilt leather objects were very popular in Hungary as well. An exceptionally great number of guilt leather vestments can be found in museums and church collections (Hungarian National Museum, The Christian Museum of Esztergom, etc.) The Treasury of the Gyor Church District is further enriched by a rare, bell shaped cape (pluviale).

Leather objects are threatened by numerous factors. Their condition depends on the raw material used, use wear, the circumstances of storage and earlier restoration attempts. The study describes the effect of these in detail.

The restored cashuble is the property of the Treasury and Library of the Gyor Church District. It was made in the 18th century but the place of production is unknown. Its material, most probably sheep skin tanned with vegetable tanning materials, sustained substantial damages probably due to moisture. Its material was greatly weakened, warped, torn and incomplete.

The grain layer of the leather, together with the silver leafs glued to its surface, the "gold" varnish and the paint layer were cracked and weakened in some places. The whole surface of the object was dusty. Due to the extensive damage to the leather the front and back part of the vestment had to be separated as well as the lining removed in order to gain access to the back side of the garment and patch the tears.

Because the surface of the leather is sensitive to moisture its cleaning had to be done mechanically, with the use of soft brushes, vinyl eraser on the complete sections and vacuum cleaning through textile. The deformities of the object were corrected following its humidifying and mounting on a board. This was followed by the completition of missing pieces and supporting the torn and weakened portions using veg-

etable tanned, dyed leather. Gluing was carried out using wheat starch. In areas that were hard to treat and on the shoulder parts of the vestment, a 2 to 1 mixture of wheat starch and poly(vinyl-acetate) dispersion (Planatol BB Superior) was used. Restoration was finished by sewing back the cleaned and completed linen lining and fastening the front and back parts of the mass cashuble.

Kissné Bendefy Márta Chemist-restorer Hungarian National Museum 1450 Budapest Pf. 124

Éva Mária BENEDEK

Restoring a copy of the first Hungarian Catholic Holy Bible using paper molding

The copy of the Holy Bible under discussion here was published in Vienna in 1626. The translation work was started in 1605 by György Káldi under the instruction of Archbishop Péter Pázmány. The influence of this work on the development of the Hungarian language is similar to that of the Lutheran Bible, translated by Gáspár Károli.

The individual history of this book is unknown, recently it was privately owned.

The original book was bound entirely in leather with a relief imprint on its cover plate. The first and last gatherings are missing from the volume. At one point in its history, the book was probably kept in a humid environment. The proliferation of microorganism has lead to decay in the high quality, textile-cellulose paper. The detached pages were crumbling, and in a very bad state of preservation. In several places, the book's body, displayed a purple discoloration owing to the enzymes emitted by fungi. Foxing stains also occurred on the pages.

The restoration of the book began following the analysis of materials, photographic documentation and drafting of a restoration schedule. The numerous and large discontinuities in the paper were completed using mechanized molding. With the help of András Szabó, a small paper molding machine was constructed in the Csíki Székely Múzeum. Kind help by Gábor Barkó, a restorer from Budapest, must be acknowledged here since he released the plan for this special equipment for our purposes.

Paper molding is the phase of restoration during which missing parts are replaced with paper pulp using a vacuum. The paper molding machine consists of a lower and an upper part. These are supported above each other by an iron frame. The upper tank is divided into two sections. This is where the actual process takes place. The lower tank serves for the storage of water pumped through a perforated inox sheet and a plastic sheet onto the page to be restored. The pages are fastened down when under treatment, in order to avoid displacement during restoration, thereafter the pulp is poured onto it. With the help of a valve, excess water is drained back into the lower tank. The vacuum thus produced creates a stronger suction force in the damaged, missing parts of the paper. Cellulose fiber from the pulp is trapped on the screen selectively and the page is completed. Additional restoration work included drying, gluing, the fitting of pages as well as the formation of the book's body and cover.

Éva Mária Benedek Paper and leather restorer MA Csíki Székely Múzeum 530110 Miercurea-Ciuc, str. Cetății nr. 2.

József ORMOS Photographic techniques

Photographs have increasingly been accepted as independent works of art both in Hungary and abroad. Special institutions have been devoted to the collection, filing and research of photographs. It is for this reason that it is especially important to recognize pictures taken using different techniques that also require different ways of handling. The author therefore reviews the main characteristics of both carrying and fixing materials for a variety of photographic techniques including daguerreotype, cyanotype, albumin paper, talbotype, aristo paper, celloidin paper, developing paper, gas-glosspaper, ambrotype, ferrotype, pannotype, pigment and carbon prints as well as nitrate and acetate films.

Conserving and restoring photographs is a relatively new field, especially as regards various forms of chemical treatment. One of the chief reasons behind this situation is that photographs belong to the most complex objects in any collection. This complexity raises serious problems of curation, although creating proper circumstances for storage and handling, the life-span of photographs can be significantly extended.

•One should never handle photographs with

bardfingers. Thread gloves should be worn to avoid leaving fingerprints and other stains on the picture.

- The working surfaces must always be kept clean.
- Photographs should be held by both hands and supported by a solid piece of cardboard, especially when one is dealing with damaged, torn or cracked specimens. Touching the emulsion covered surfaces must be avoided.
- If the photograph is stored in an envelope, it should be pulled off the picture, rather than the picture being pulled out to fit. Should the photographic substance be stuck to the envelope, no force shall be used.
- Paper prints and negative glass plates should not be stacked upon each other, nothing should be put on top of the photographs.
- Eating or drinking should not be permitted in the proximity of our valuable pictures. Smoking should be forbidden as well. Even short term exposure to cigarette smoke may cause damage, discoloration.
- The use of ink or felt-tip pens should be avoided. Under the influence of humidity, these materials penetrate the paper. They may thus damage the front of the picture, meanwhile becoming illegible on the back. Soft pencils should be used.
- No tapes (Scotchtape), tacks and paper- or other pins shall be used in fastening pictures.
- Co-workers dealing with photographs, especially newly recruited staff, should be supervised.
- During the treatment of photographs, lamps with UV filters should be used.
- If at all possible, copies should be made for the purposes of research and exhibition, thereby reducing the chances of damage to the original.
- Storage and research facilities must be kept clean. Dust may leave scratch marks on the photographs' surface.
- Humidity and temperature must be continuously monitored.
- Photographs should be stored at a distance from freshly painted surfaces, copying machines and sources of heat.
- Appropriate storage environments must be created: fired enamel cabinets, folded paper boxes without gluing, and appropriate storage paper ("Silversafe") that contains no buffer materials, optical whiteners or lignin.

The study also directs attention to the extreme sensitivity of cellulose-nitrate films to heat. It discusses the damage caused by heat, humidity, air pollution and exposure to light as well.

József Ormos Photo restorer Hungarian National Museum 1088 Budapest, Múzeum krt. 14-16.

Sándor SZILÁGYI "Let us take a picture!" Basic practices in artefact photography

Museum photography makes use of almost all known photographic techniques in the field. Consequently it is also one of the most complex types of photography. Due to the wide variety of materials found in artifacts, it encompasses a number of different fields.

This study presents object photography from a practical angle that is accessible to all. Photographs used for documentation of the restoration process must be focused and must show the color, authentic sides and undistorted form of the object. One other important criterion is the accurate delineation of the objects' material. While choosing photographic supplies it is imperative to note that to date black and white photographs are the only accepted form of documentation in archives. For this reason black and white pictures of the object prior to restoration, after cleaning and in its final shape should always accompany the colored photographs of the restoration process.

The author also lists all the necessary photographic equipment such as display tables, cameras, object lenses, filters and reminds readers that often older, manual cameras are better suited for object photography than their modern automated counterparts. Also mentioned in the article is the lighting, its direction and intensity. While choosing the correct lighting for artifacts it is essential to create harmony between the main and the disperse background lighting. Scanning light is used to accentuate material and the extent of damage to objects. The study briefly introduces the basic artifact types, such as metal items, coins, glass-, porcelainand wooden objects, textiles and paintings, while offering useful practical advice on photography to restorers.

Sándor Szilágyi Photograph Wood and furniture restorer MA Museum of Fine Arts Budapest 1068 Budapest Szondi u. 77.

Katalin T. BRUDER The re-restoration of the kantharos from Szob

Between 1910 to 1911, while developing the gravel mill plant by the banks of the river Ipoly, several Celtic graves, rich in finds, were unearthed. One of them contained not only a middle Latin fibula but also a double handled bronze cup, the material of which is

remarkably rich in zinc. The handles consist of two parallel strips that form an ogive at the end and stand away from the mouth of the cup.

This *kantharos* was inventoried by the Hungarian National Museum in 1939 as follows: Location: Szob, Period: end of 4th century B.C. Inventory number: 16/939.2.

The first restorer of the *kantharos* was probably Gyozo Baky, leader of the Department of Restoration in the Hungarian National Museum. At the time of the first restoration the only work done on the vessel was the reassembly and completion of the handles. The second time Gyozo Baky chose a unique technique for further restoration of the *kantharos*. He applied a so-called galvanoplastic procedure to restore the incomplete and warped body of the vessel.

The *kantharos* was last restored in the year 2002, in preparation for the latest permanent exhibition in the Hungarian National Museum.

The already existing galvanoplastic additions were preserved not only because of their esthetic qualities, but also because their removal would have most likely damaged the original material of the object.

Because of the scarcity of time before the opening of the exhibition, "Diamant Kupfer Plastic", a plastic compound containing metal, was used for the completition of missing pieces. The optimal solution would have been the casting of these additional parts using metal. They would have been applied by way of gluing, since the earlier technique of welding is no longer used for several reasons.

Although relatively little of the original metal was found, the reconstruction of the *kantharos*' base still wouldn't require much audacity due to the abundance of existing ceramic analogies.

All the finest traits of metal work are represented on the bronze *kantharos*, the peak of perfection in form: the slender, almost ethereal arched handles and the unlabored quality of the guilt metal object.

The value of the bronze *kantharos* from Szob is further augmented by the fact that it is the only known Greek find from the La Tène period in Hungary. For this reason it is most likely that the kantharos was part of Celtic loot and wasn't brought to Hungary by way of trade.

Katalin T. Bruder Archeological and applied art restorer Deputy head of department of conservation Hungarian National Museum 1088 Budapest, Múzeum krt. 14-16.

Éva MESTER

Glass painting in the Carpathian Basin I. Iconography, techniques, use of materials

The fate and development of historical glass painting have been determined by the framework provided by architecture as well as the political, economic, and cultural potential of the area in question. Works of art created by glass painters in the Middle Ages in the Carpathian Basin have been destroyed by the storms of history. New European trends in the 19th century, on the other hand, stimulated architectural and artistic development in our region. Following lengthy preparations, on the basis of foreign examples, the foreign minister Ágost Trefort decided to establish the National Glass Painting Institute in Budapest in 1878. From that time onwards, Hungarian glass painting began to develop spectacularly. Several significant workshops were established, especially in the capital, Budapest. However, activity by the Neumann brothers in Nagyvárad also deserves mention.

The most special artistic glass painting work with a national character was hallmarked by the half a century long work by Miksa Róth. Following in the footsteps of his father, Zsigmond Róth, a decorative glass expert, he cooperated with the most outstanding architects and artists of his time, elevating Hungarian glass painting to international standards. He combined the most notable aspects of medieval traditions (composition, techniques, choice of materials) with his own ideas.

Glass paintings during the 2nd half of the 19th century, commissioned on a large scale by clerical authorities, display historical influences. Plastic design, understated color harmony, colored enamel painting as well as black shading indicate that these works were influenced by coeval German masters. The atmosphere of the Hungarian Millennium had a beneficial effect on artists.

The iconography and techniques of glass painting became clearer and more standardized. Large-scale construction work at the turn of the 19th and 20th century stimulated the full development of a special style of glass painting in the Carpathian Basin. In this study, the most important glass painting techniques - tonepainting (Schwarzlot, Überzug), outline-painting, lazurite or stain-painting (Silbergelb), grisaille painting, color erosion and enamel (email) painting - as well as materials will also be briefly reviewed.

Éva Mester Glass designer MA Budapest

Zita KÁROLYI

Transylvanian restorers in the Szentendre Open-air Ethnographic Museum

In 2003, the Ministry of National Cultural Heritage financed the construction of an over 3800 m² large building complex in the Szentendre Open-air Ethnographic Museum. It houses a visual storage facility equipped with the most up-to-date equipment, office space, a gallery and a conference center.

In this compound, the Visual Storage Facility is of special significance. It is built with the strict consideration of the latest regulations in heritage preservation, and will be open not only for professionals but the broader public as well. Within this 2000 m² air-conditioned space, a Dexion-Salgo type shelf system (with adjustable, 10 cm vertical slots) has been installed, protected by security glass. Objects arranged in this system of shelves in a thematic order are available for direct autopsy. The associated computerized data base offers photographic detail as well as textual information to those interested. Objects placed on the shelves are lit with lamps placed outside the storage space, having a capacity less than 300 lux. Lamps is switched on and off automatically by movement sensors. Lighting from the ceiling and side windows are regulated with special shading. This building was opened in August 2003, by which time the partially filled storage facility will also be visible.

In order to restore the over 2000 exhibition objects, the museum will organize 10 day long Restorers' Creative Camps in three consecutive years. In addition to the museum's own staff, participants will include students in restoration techniques as well as ethnography and guest restorers. These colleagues will restore major groups of objects within the collection. Plans include the restoration of glass and ceramics objects in 2003, painted wood in 2004 and carpentry furniture in 2005.

Restorers and curators from various museums in Transylvania were invited to the Restorers' Creative Camp organized in July 2003. They included Éva Magyari and István Nagy (Székely Múzeum, Csíkszereda), Mária Lukács (Tarisznyás Márton Múzeum Gyergyószentmiklós), Zoltán Orosz (Céhtörténeti Múzeum, Kézdivásárhely), István Demeter and Zita Károlyi (Haáz Rezső Múzeum, Székelyudvarhely), in addition to colleagues from Szentendre. In addition to Hungarian invitees Mária Áipli-Faragó, Zsuzsanna Horváth and Veronika Harasztovics, ethnography students also joined the project.

Participating in this year's Restorers' Creative Camp contributed to the extended training of restorers in Transylvania by offering an opportunity to study new restoration methods, storage techniques and conservation.

Zita Károlyi Restorer Haáz Rezső Museum 53560 Odorheiu Secuiesc str. Kossuth Lajos, 29.