3rd International Mountmakers Forum
April 26 & 27, 2012
The Field Museum, Chicago, IL

Preliminary Abstracts for both speakers and poster presentations

(organized by presentation schedule)

Thursday April 26 – Preliminary Abstracts for Speakers

Mountmaking at the Field Museum - **Pam Gaible,** Mountmaker & Shop Supervisor, Field Museum, Chicago, IL

This presentation discusses the mount design/ build process used to fabricate mounts at the Field Museum.

It outlines when mountmakers start on projects and all the steps that are taken to resolve how the mount design for objects are developed. It discusses the shared database. Choosing materials to fit the object. And the talk covers how mount information is used for case layout design.

There will be examples of object documentation for mount design purposes, mnt drawings, finished mounts, mount and artifact installation and mount installation notes for traveling exhibits.

All of this will be well illustrated with images from past exhibits.

Being a Natural History Museum the Field has a diverse collection of objects that the mount shop has to become well versed in handling. We have mounted 2500lb. stone statues, mammoth heads, tiny gemstones, insects fish fossils, meteorites, anthropology objects from around the world, paper items, books, mummies and 20 ft totem poles just to name a few.

Display and Storage Material Testing at the Field Museum, **Ruth Norton,** Chief Conservator, Field Museum, Chicago, IL

The Field Museum Exhibits and Anthropology Departments have worked closely together in exhibit design and production to, as much as feasibly possible, ensure that objects and specimens are in a safe environment.

Guidelines were developed to identify types of materials that can definitely not be used in the object chamber, and some materials that can reliably be used. Exhibits production staff and conservators also developed reliable construction technique and materials that allow isolation of the object chamber and ability to establish microclimates.

Materials are evaluated by various means, but mostly by their response to the Oddy test. Some materials are excluded based on their composition (e.g. natural rubber or latex, polyvinyl chloride) if a component is known to be unstable. Other materials may be tested for pH, chlorine, etc using microchemical tests. Most materials are Oddy tested. Recommendations are made as to whether a material is approved for: unrestricted use, temporary exhibit use (6 mo max), or qualified use (e.g. not with carbonate materials like egg shell). Because commercial formulations change, recommendations are considered valid for 5 years, after which the product must be retested. Occasionally a material is accepted for use if it has passed testing by a known party (e.g. another museum lab, Baumann textiles)

All materials tested are recorded and a database accessible for use by exhibition and conservation staff. The presentation will go into more details about the following subjects.

- The Oddy test
- Brief history of need and development
- Description of current procedure
- Discussion of strengths and limitations of test method

Solutions and Challenges in Complex Design & Fabrication for 2 Large Sculptures,
Keith Conway, Exhibit Specialist/Mountmaker, National Museum of African Art, Smithsonian, Washington, DC

This presentation will address solutions and challenges in complex mount making design and fabrication for 2 large museum sculptures, (94-20-1 & 94-20-3). The objects were selected from 4 similar sculptures created by the famous Nigerian artist Adebisi I. Akanji, and were selected from the Smithsonian National Museum of African Art collection. Both sculptures are similar in size and are comprised of concrete and are heavy and unbalanced, yet fragile. The sculptures had been displayed outside in a garden in New York City for approximately 20 years and required months of intensive conservation work. These objects required several different stages of mounts & support devices to elevate them while on exhibition, currently in the Smithsonian Castle. This discussion will include an overview of a 3 stage deck mount system with an emphasis on the first and second stage, that remain permanently with these sculptures during exhibition, travel and storage.

1.) The first stage includes stainless steel mounts which are in contact with the sculptures and simultaneously stabilized the object while presenting the desired curatorial position, for backlighting aesthetics while on exhibition. The mounts conform to aesthetic design and conservation standards.
2.) The second stage involves 2 stainless frames, which were attached to the stainless object support (the first stage mount) and objects during independent movement and handling. These frames provided protection to the object while on exhibition or during transport.
3.) The third stage consists of an assembled steel easel that is bolted to a steel track. The track had support from steel beams between the casework that went to the Castle floor. The mount maintained stability during any possible seismic mitigation concerns when either traveling throughout Europe by rail or while on display. In 2011, these 2 objects were subjected to a 5.9 earthquake in the Washington area, and remained unharmed and completely stable.

This presentation will attempt to inform and educate the listener to the value in understanding different mount torches (TIG & Plasma cutting), when facing solutions requiring their use during development of the mount. Each mount needed is made of stainless steel with steel framework for support. The mounting task required working knowledge of and mastery of the stainless mount material used in mounting. This talk will attempt to explain & explore, through these examples, why the knowledge of various steel materials, can be crucial in complex mount and armature solutions for objects with these characteristics and similarities. The practical use of templates for mount measurement and object location will be explored as well.

Quotes will include NMAFA conservator Dana Moffett who conducted conservation on both sculptures.

Mountmaking for the Fossil called "SUE", **Phil Fraley,** Mountmaker and Owner, Phil Fraley Productions, NJ

This presentation is a case study of creating the full skeletal mount for the largest and most complete *Tyrannosaurus rex* specimen ever discovered. It will focus on the work of the mountmaking team and their collaboration with the Field Museum. Considerations and limitations in working with fossil material will be discussed as well as the uniqueness of this specimen. The story of "Sue's" mount includes how the pose was selected, the armature design, engineering and the mechanics of the mount fabrication. The mount design is modular to facilitate transport and permits each fossil element to be removed for further study. The mountmaking team fully articulated “Sue” in New Jersey then dismantled, shipped to Chicago, and installed the specimen in Stanley Field Hall for her grand opening.

Exploring Computer Modeling Analysis for Seismic Mount Designs, **BJ Farrar,** Mountmaker, Getty Villa, LA. He is a co-founder of the Mountmaking Forum.

Designing mounting systems for large or fragile objects are always a challenge, especially when addressing seismic issues. While common sense and the basic methodology for seismic mount design will usually direct the safe supporting and restraining of an artwork in a specific orientation, understanding how the mounting system and artwork will react to the forces of an earthquake can be difficult without careful analysis. Even more challenging is predicting what stresses may be imparted to the artwork.
Rarely are there opportunities to create a physical, representative model of an artwork and to test a mounting system design with actual applied forces. This limitation leaves many complex mount designs up to intuitive decisions.

Until recently, the only options available to conduct virtual testing were expensive scanning and finite element analysis programs. As technology has continued to advance, a number of low-cost software options have become available that allow for scanning or 3-D modeling of an object and for running basic stress analyses.

Over the past few years, the mountmakers in the Antiquities Conservation Department at the Getty Museum have had the opportunity to research various low cost programs and assist in the development of software that can analyze objects for basic stresses and displacements under specific loads with various supports and restraints. The ultimate goal of this on-going research is to develop accessible methods with affordable software that can simulate the dynamic forces of an earthquake and provide basic, reliable analysis to aid in the design of seismic mounts.

A Mount For Lyuba (40,000-year-old baby mammoth) for the Mammoth and Mastodon Exhibit at the Field Museum, Earl Lock, Mountmaker, Earl Lock Inc., Chicago, IL

This proposal is to discuss how we mounted “Lyuba” the 40,000-year-old preserved baby mammoth for the “Mammoth and Mastodon Exhibition” at the Field Museum.

- Starting with a brief description of Lyuba, the presentation will show why she was such a complicated object to make a mount for.
- I will discuss special challenges presented while handling Lyuba, while wearing a respirator and getting my instructions from a person who was only speaking Russian, who was also wearing a respirator, and speaking to a translator who was also wearing a respirator.
- I will discuss the pipe support system we made to suspend Lyuba in front of a vent hood while we constructed the mount on an adjustable table below her.
- I will discuss the challenges of designing the mount so that it supports Lyuba in the best places while also fitting between her front legs, which were very close together.
- I will discuss the various parts of the mount, and how they were assembled as Lyuba is installed.
- I will show photos and discuss the installation of Lyuba in the exhibit case.
- I’ll finish with a brief discussion of the many problems of mounting an unusual artifact.

Using Vivak for a Garment Mount, **Paul Singdahlsen,** Museum Exhibit Specialist & Private Freelance Mountmaker, Dept. of Cultural Affairs, State of New Mexico, Sante Fe, NM

This presentation will focus on the use of Vivak, or PETG, in fabricating garment mounts. Vivak is a transparent, thermoplastic PETG sheet. Vivak, a neutral polyethylene heat-formable clear polymer, has wide-ranging applications and possibilities for artifact mounts.

The presentation will cover how Vivak can be used in a variety of supports for garments, and will focus on the construction of one mount for a 19th century beaded Sioux vest, as well as examples of other garment mounts using Vivak.

Vivak is manufactured in an extruded sheet similar to plexiglass, in thicknesses from .020" to .500". I most often use .040" and .060", as a weight that is thin enough to be easily heat-formable and easily cut, yet rigid enough to provide adequate support for most garments.

With most garments, one starts with making a paper pattern. This is only a starting point, as many adjustments are required before a final fit. After cutting the stock to the pattern, I sand the edges, to allow safer fitting. After every subsequent cut, the edges should be sanded to protect the garment during multiple test fittings.

Vivak is ideally suited for bending using a form to shape the heated material to. However, few garments accommodate regular shaped supports, so forming the stock to the right shape is usually a matter of finding a form that approximates what is needed for specific areas, combined with a lot of forming by hand.

The optimum goal is to be able to design a support comprising as few pieces as possible, but some joints will be inevitable. In some instances I have been able to join two pieces of Vivak to each other with heat, but I have found the most positive means of joining to be with mechanical fasteners.

The Vivak component of the mount is attached to a painted steel armature.

Safeguarding Art Work – Mount Solutions for Unusual Objects Made from Experimental Materials, **Mark Mitton,** Mountmaker, J. Paul Getty Art Museum, Los Angeles, CA

This presentation will document some of the mounting techniques used to display artwork in an exhibition entitled "Pacific Standard Time: Crosscurrents in LA Painting and Sculpture 1950-1970." The exhibition, which opened in October 2011, was part of a regional initiative to document the significance of artistic innovation in Los Angeles after World War II. The works on view range from assemblages composed of a variety of found objects to the simplified forms of minimalist works from the "finish fetish" genre. Also included were optical objects representing the Light and Space movement. The materials employed by the artists covered the spectrum from ephemera, to ceramic and cast resin sculptures. Many of the works were the result of experiments with new materials borrowed from the aircraft, automotive and surf industries.

The range of objects and materials presented challenges in terms of mounting and installation, in some instances material research needed to be carried out ahead of time to determine compatibility. The range of media to be displayed made it impossible to have a single approach to mounting objects, as might be possible in a monographic exhibition of bronze sculpture. Another point of contrast with an exhibition of historic works of art was the opportunity to work with living artists as their work was being reexamined.

Different methods of mounting would have to be employed as dictated by the forms and media of individual objects. The materials used for mounting the exhibition ranged from metal, to wood, silicone, wax and tape. As is often the case the first choice was not always the final option. In the course of preparing for the installation of cast polyester resin sculptures adhesives were

tested to determine suitability. The options considered included museum wax, museum gel, double stick tape and a brush-able acrylic adhesive. In addition to the issues of holding power and reversibility of these products, visibility had to be taken into consideration.

The techniques used to display the varied artworks in the exhibition, ranging from metal armatures, to cast acrylic supports and adhesives used to secure sculptures made of polyester resin will be featured in this talk.

Canyon Wall Case at the Natural History Museum of Utah, **Bill Thomas,** Exhibit Preparator, Natural History Museum of Utah, Salt Lake City, UT

The iconic 3-story high glass case at Salt Lake City's new Natural History Museum of Utah was a mountmaking challenge. The case armature, designed by Maltbie, consists of vertical steel beams supporting a series of removable, repositionable bracket arms. Some arms grip brass mounts, while others hold 54 inch wide by 60-inch high sheets of ¾ inch thick acrylic in place. With over 600 individual objects, ranging from delicate butterflies to large dinosaur fossils and even a totem pole, it took a team of five people 2 1/2 months to make the mounts and install the objects. With such a wide range of objects, our mounting methods were quite varied. Some of the techniques we would like to share are:

- **The pinned butterflies:** First the acrylic sheets were drilled to pressure fit pre-bored 1/16 and 1/8 inch acrylic rods filled with wax. Installing objects from the top down, the sheets were then fitted into the case in sequence. The acrylic rods were placed into the holes in the sheet and the butterflies' pins were inserted into the wax in the rod.
- **The moccasins:** the design called for 6 pairs of moccasins to "dance" along the 2nd floor. Since there was no way to know the position of the shoes before installation, the mount was designed to move and then screw into position. Also, since the shoes were visible from the first floor, the bottom of the mount was made of acrylic.
- **The minerals**: A curved steel rod secures eight valuable, fragile, heavy minerals 20 feet in the case. The rod "floats" in front of two acrylic panels, but still attaches to the bracket system in three places. This was one of the hardest pieces to fit and install.
- **The Stone Balls:** With their mount stems side-drilled into round cutout holes in the acrylic sheets, 8 polished stone balls hover over the second floor.
- **The projectile points, pot sherds and shells:** Because of the height of the case, the damage that one object could cause if it fell, and the fact that the building straddles an earthquake fault, every object had to be secured with clip and screw into its mount, no matter how small the object was.

Friday April 27 – Preliminary Abstracts for Poster Presentations

Instrumentation Applications for Seismic Mountmaking, **McKenzie Lowry**, Mountmaker, J. Paul Getty Villa, Los Angeles, CA. Co-Founder of the Mountmakers Forum.

The proliferation of digital devises throughout the modern workplace has provided numerous opportunities for the average professional to apply advanced technology to their specific fields, using instrumentation that not too long ago would have had to be out-sourced to highly trained specialists. As x-ray and ultraviolet examination of objects in conservation has aided that profession significantly over the past number of decades, a moderate investment in instrumentation, research and experimentation can benefit the design and evaluation of mounting systems, from rigid fixtures to base isolation.
This paper will illustrate the use and application of modern instrumentation to the field of mountmaking, with specific attention focused on:

- Seismic switches
- Accelerometers
- Displacement Transducers
- Load cells

Case studies of practical applications will be augmented with documentation illustrating the reduction of digital data, and video clips of testing using these instruments to evaluate specific mounting systems.

Rib Form for Maori Cloaks, **Penny Angrick,** Mountmaker, Tepapa Museum, Wellington, NZ, presented by **Shelly Ulhir,** Mountmaker, National Museum of American Indian, Smithsonian, Washington, DC

INTRODUCTION

For our Exhibition *Kahu Ora – Living Cloaks* we had a large number of Kākahu (Cloaks) proposed for display. A lot of them were chosen to be put on forms - rather than flat - so we could show the natural shape of the Kākahu, as they are traditionally worn.

The number of Kākahu in the exhibition to go on forms, and the difficulties in sourcing the Ethafoam that we had been using for making cloak forms, were factors in developing a cost-effective, resourceful way of making cloak forms for exhibition.

Our rib form is based on a mount seen at the Bishop Museum in Honolulu. We have further developed it to suit our requirements—for example Māori Kākahu are typically rectangular whereas Hawai'ian cloaks are semicircular and fuller at the bottom. Our rib form is used for display of cloaks that are in good condition and not exceptionally large or heavy. We continue to use cylindrical Ethafoam forms for cloaks which are more fragile, exceptionally heavy, or very large. Extremely fragile Kākahu are always displayed lying flat.

The rib form is an Exhibition Mount rather than a storage mount. It was developed for short and long term exhibitions, but length of display also depends on light exposure requirements and fragility of the garment.

ADVANTAGES

Unlike the Ethafoam form, which has to be customized to each object, the rib form can be reused for a variety of cloaks of a similar size. By changing the size top, the mount can be reused for a different cloak.

Because the form is adjustable, it can be made using only the dimensions of the cloak, thereby reducing the handling of the cloaks. The width of the cloak at the top edge is equal to the circumference for the oval shoulder part at the top, the length is the length of the ribs minus the oval disc. We also work with object templates for trying out the right settings on the form. Usually it only takes one fitting, and final adjustment of the ribs is carried out with the cloak on the form, through the cloak's opening.

Visitors can see the details of the weave and construction of the garment on the underside when the object is displayed on this mount. This is especially useful if the outer surface is embellished with feathers or other decoration.

MATERIALS AND CONSTRUCTION

The HDPE (high density polyethylene) ribs have low moisture absorption, a good impact resistance, are flexible, passed the Oddy test (January 2012 – though we recommend testing a sample from your supplier, as manufacturing processes and ingredients can vary). HDPE is easy to work with on woodworking machines, can be cut, drilled, planed, stapled and screwed into, and has a high resistance to cracking and breaking.

It is possible to add padding, fabric and foam in different parts of the form if needed, to create bigger areas for pinning the cloaks or to stabilize the Mount when travelling.

The rib form consists of a central steel tube which is inserted over metal pins at top and bottom. Three oval moveable discs are fitted to the pole with a sleeve which slides over the tube and fitted with machine screws at the desired height.

Each of the discs is fitted with series of holes, into which metal rods are inserted. The rods are attached to each rib and enable the distance between the rib and the central pole to be adjusted. Depending on the shape of the cloak the ribs can bow out, stay straight or pull in by changing the position of the pin to a different hole.

At the top of the mount, there is an oval disc made of 18mm thick MDF and 100mm Ethafoam which are covered by a brushed Nylon Velcro receptive fabric. The ten HDPE ribs are hinged at the top to the MDF.

The Kākahu are either attached with pins or Velcro to the fabric-covered Ethafoam.

Building Conservation Grade Support Systems for Long-Term Fossil Vertebrate Storage, **Arianna Bernucci,** Conservator, Palaeontology Dept., Natural History Museum, London, UK. In collaboration with Team Allington (Jones, McKibbin, Graham, & Collins)

This poster presents the fabrication of support systems for long-term storage of vertebrate palaeontological specimens. The conservation unit in the Palaeontology Department at the Natural History Museum, London, UK, is regularly presented with opportunities to develop mounts for heavy, complex-shaped and often fragile specimens.

- The mounts have to be both strong and light-weight.
- They must fully support the specimen without applying pressure to weak points and allow maximum access with minimal handling.
- Using the laminating epoxy paste Epopast 400 as a primary material, the poster presents various support solutions that meet the above criteria and combines user-friendly, space-efficient and functional design features.
- The use of Hexlite (aluminium honeycomb board) and Plastazote (polyethylene foam) in combination with the use of Epopast 400 is discussed and practical information for the construction of the mounts is given.
- The long-term stability of the materials presented in this poster is established through the application of modified Oddy testing carried out by the conservation unit of the Palaeontology Department.

The project concludes that these materials are suitable for long-term storage solutions, and Epopast 400 is a versatile support medium, especially suited to fossil vertebrates.

Vanishing Act: Mount Solutions for Jewelry and Fashion Accessories at the Cincinnati Art Museum, **Kim Flora,** Preparator, Cincinnati Art Museum, Cincinnati, OH

Problem: To construct minimally obtrusive mounts for jewelry that simultaneously secure and project the object out from a backboard, while allowing for flexibility in curatorial positioning.

Introduction: This presentation will address solutions to constructing and concealing museum exhibition mounts in a variety of display options rendering them virtually invisible to the public's eye. Illustrated in the presentation are mount solutions for a selection of accessories and jewelry that are currently installed for temporary exhibition at the Cincinnati Art Museum. Depicted are brass mounting solutions for 1930's Art Deco jewelry including a diamond ring, platinum wristwatch, and silver and glass jewelry set. Combination acrylic and brass mounts are also showcased and used to exhibit a 1930's Diamond Bracelet and a rapidly disintegrating 1920's cellulose nitrate and silver hair comb.

Methods: Techniques discussed include multiple component brazed locking support mounts, tube mounts and combination bent acrylic and brass mounts. These solutions result in mounts that simultaneously stabilize and present the object with minimal or no obstruction to the object and its desired presentation. The poster will illustrate the various steps in constructing these mounts, their final presentation and materials used.

Conclusion: Combining materials in new ways and utilizing micro hardware can be an effective way to create flexible, inconspicuous and secure mounts for exhibition.

Developing a Strategy for Mounting a Large Quantity of Unframed 2-D Artwork,
Denise Fordam, Chief Mountmaker, Fordam & Associates, San Francisco, CA,
& **Ben Peters,** Chief Preparator, The Walt Disney Family Museum, San Francisco, CA

Objective of the Presentation: To present a case study on the design and fabrication of ta large quantity of mounts for 2-D artwork that would not be matted and framed.

Fordham & Associates was hired to design and fabricate mounts and install the collection of The Walt Disney Family Foundation in its new museum in San Francisco, CA.

Of the 1500 artifacts to be installed approximately 750 were 2-dimensional, largely drawings on paper and other artwork directly used in the production of animated movies. Since these pieces were originally created for a utilitarian purpose the edges often included important production information that might be lost with the use of traditional matting and framing techniques. To preserve this information the museum mandated that the whole of the artwork must stay visible.

The pieces were to be shown floating in display cases without a mat and frame. Thus it was required to design a mounting system that would not obscure any portion of the piece and was virtually invisible. These design specifications, combined with the large quantity of artifacts required a non-traditional approach to mounting.

The final design strategy for this mounting system addressed multiple issues:

- Created cost effective mounts both for the short term (initial fabrication and installation) and for the client in the long term (mounts that are reusable, durable and replicable)
- Created a design that achieves scalability in quantity (to achieve economies of scale) and that can easily accommodate changes to address artwork of varying dimensions and display parameters.
- Used materials that are locally available and require simple and straightforward methods of fabrication.
- Developed a design that can be easily installed by a museum with minimal staff and resources, and that can be modified for use on multiple objects without a lot of fuss.

This presentation will describe the approach that was used in more detail and discuss how it has been applied in other situations.

Cutting Character: Research into Innovative Mannequin Costume Supports in Collaboration with the Royal College of Art Rapid Form Department,
Sam Gatley, Textile Display Specialist, Victory & Albert Museum, London, UK

Autumn 2012 will see the opening of *Hollywood Costume*: *The Good the Bad and the Beautiful.* It will feature over 100 iconic Hollywood costumes and examine the role of the costume designer as an integral collaborator to creating character in film. As the exhibition will focus solely on costume it was decided early on in the design process that the display mannequins needed to convey the life and character that inhabited each costume without a **'**Madame Tussauds' style celebrity likeness dominating the exhibition or its garments. There was a need for more verve in the mannequin dress supports than ever before.

In 2010 the Rapid Form Department at the Royal College of Art (RCA) produced two figures for the Science Museum's 'Who Am I?' exhibition. The figures were of an average sized man and woman and had been made from laser cut layers of fluted corrugated card produced from body-scanned data of the subjects.

The V&A Textile conservation team began to collaborate with the RCA to try and produce a prototype figure of Renee Zellweger as 'Roxie Hart' in the movie 'Chicago' to ascertain whether this technique could be adapted to produce museum standard display figures for our exhibition of Hollywood costume.

This paper presents the many challenges encountered by the V&A Textile Conservation studio throughout this process and evaluates our findings to date. Possibilities for further application of this display solution will also be discussed.

***Pitching a 19th Century Persian Pleasure Tent for Photographic Purposes*,**
Deanna Hovey, Mountmaker, St. Louis Art Museum, St. Louis, MO. In collaboration with Zoe Annis Perkins, Conservator.

In 2009 two 19th century Persian pleasure tents were pitched for exhibition catalog photography at the Saint Louis Art Museum, one rectangular tent and one octagonal tent.

The proposed poster presentation will outline the steps taken by the textiles conservator Zoe Annis Perkins and the mountmaker Deanna Hovey to install the tents.

I. Construction and use of model tents for photography and mountmaking, tent models will be presented with the poster.

II. Drawing and description of mounting system

III. Descriptions and images of the installation process

IV. Images of the finished installation

***Creating a Dissection Mount and Bone Jig,* Tyler Keilor,** Fossil Preparator & Paleo Artist, University of Chicago, Fossil Laboratory, Chicago, IL

Discovery of a diminutive forelimb on an articulated skeleton of a theropod dinosaur presented an opportunity to study its range of motion. In order to better understand whether or not the in situ joint spacing on the fossil was an artifact of preservation, comparative dissections were conducted to study joint spacing in extant taxa.

Using an alligator as an example, the construction of a dissection mount and bone jig is illustrated.

- A fresh, intact specimen is posed with the limb in a neutral position.
- The muscle is cut away to expose the mid shafts of the limb bones and girdle elements, while the connective tissues of the joints remain untouched.
- Holes are drilled through the exposed bones, and stainless steel pins are inserted through them.
- A wire and epoxy putty brace connects to all of the pins, forming the dissection mount. After the mount has hardened, it is removed from the limb, and dissection continues.
- The limb bones are individually cleaned while preserving the cartilage caps, and then silicone molds are made of these bones.
- After the molding is completed, the bones are further cleaned by removing the cartilage, degreasing, drying and sealing. Removable cartilage caps are made by placing the bones back into their respective molds, and filling the spaces left by the cartilage with silicone.
- Using the dissection mount to reassemble the limb bones, a more refined bone jig can be made to better display the anatomy.
- The bone jig uses the same holes in the long bones and the spacing that was preserved during dissection to mount the bones from below, again using steel pins and epoxy putty and wire.

- The bones are easily placed onto the jig or removed for inspection, and the silicone cartilage caps can be removed to show the joint spacing of bony elements, or added to show the fit of articulating surfaces.

The resulting mount was created with commonly used tools and materials in a fossil prep lab, and provides excellent comparative reference for the fossil specimen.

***Using Argentium Silver to Fabricate Small Mounts*, Ann Prazer,** Mountmaker, Field Museum, Chicago, IL

My poster will address the use of Argentium Silver as a newer material for mount fabrication, especially for small objects. I'll compare the expense of the material as opposed to traditional materials like brass or steel, but show the advantages of Argentium's easy workability and minimal clean up. The ductility of the Argentium Silver is very important and very beneficial to mountmaking because of the ease of shaping to contours of very small objects, and the ability to make very tight bends without scoring and re-soldering.
I will explain the properties of Argentium, such as its resistance to ordinary tarnishing, although it is not completely immune to tarnishing, especially in a high-sulphur environment. I will address the possible tarnish levels and how to control them, and recount our experiences and solutions for the tarnishing in the Gems Hall. Although Argentium is ductile, I will explain how it can be work hardened through heat treatments, sandblasting, and repeated working of the material. I'll show that the Argentium Silver has a different soldering method and different solder to go with it as well. Along with my poster, I will show various examples of Argentium silver, such as its state before and after soldering, a variety of mounts, and demonstrate how ductile and malleable it is.

***The Process of Changing a Mount on a 2,000lb. Marble Statue,* Bill Skodji,** Exhibit Designer/Senior Preparator, & **Brian Stieler,** Senior Preparator, Minneapolis Institute for the Arts, Minneapolis, MN

The poster illustrates the process of changing the mount on a 2,000 lb. marble statue.

Our curator of decorative arts wanted to change the orientation of the sculpture of "St Paul the Hermit" from its current position to one that he determined to be more accurate with the original artist's intent.

Since the sculpture is not yet attached to the new mount, my proposal only depicts the stages that have occurred thus far. The completed poster will show the full process.

I have attached 5 images that show the sculpture in various states:

1. On the original mount
2. Removing the old mount
3. Building a maquette out of wood
4. The new steel welded mount
5. Details for mount attachments

***Dancing Pants! Articulated Mannequins (Legs only) for Katharine Hepburn Costumes*, Jim Williams,** Exhibit Designer/Preparator, Kent State University Museum, Kent, OH

Displaying the clothing of a well-known figure often involves trying to capture and show some of their character. In the case of *Katharine Hepburn: Dressed for Stage and Screen,* we felt that we needed to show her energetic personality along with her garments. To do this, we decided to create an articulated form for mounting her ubiquitous khaki trousers – a clothing choice that was

groundbreaking at its time for women, and for which Miss Hepburn was a style leader. We called them “The Dancing Pants.”

The goals we set were to make legs which would mimic human range of motion to the extent possible, were reasonably inexpensive to build, posable when dressed, and, of course, archival. The first hurdle was finding a lockable rotating hinge for the knees and ankles, which we located through extensive experimentation and searching. The second was to create a hip joint that could be posed and locked into place in two planes, which we achieved through off-the shelf hardware and lots of play. Lastly we had to ensure that the resulting mount was archival, so we developed techniques to easily cover the armature with polyethylene foam and batting.

In the end we came up with a fully articulated lower body that we could dress, mount to the stand and finally pose into nearly any position humanly possible. There are still some bugs to work out, but the results met all our goals, and we are now working on the upper body. This technique will be useful to any museum wishing to mount figures/garments in action – dancing, fighting, running, etc. – allowing the designer to bring their characters to life . . . without breaking the bank doing so!

***Display of Chavin Culture Painted Textile with Pictorial Infill of Deterioration*,**
Joyce Hulbert, Conservator, Berkeley, CA
In collaboration with Collections and Conservation staff at San Jose Museum of Quilts & Textiles, San Jose, CA

A completely *reversible display mount* is made for a thangka that has significant inscriptions on the back. A *transparent rigid support* is called for - to allow both primary and secondary information on the thangka to be viewed, and to protect the thangka while being housed in a conventional display frame. The mount features an aluminum panel, with a rectangular opening corresponding to the sight and sewing lines of the original thangka mount. This aluminum frame provides the support for a transparent scrim; to which the thangka is affixed by sewing through existing sew holes. Decorative elements are added to complete the display for conventional framing, yet remain isolated and reversible. A fully supported and protected thangka mount results, with all original information and aesthetics entirely visible.

Method/ Body of Paper:
A support mount for a thangka is made by creating a mount structure consisting of three main elements.
1) A 3/16th inch thick powder-coated aluminum panel, with interior rectangular cut-out dimension to correspond to the original sewing line of the thangka.
2) For more dimensional stability, a 1/2” x 1.2” wood stretcher is attached to the aluminum panel.

This stretcher is sealed and sanded before use, and screwed to the back of the aluminum panel with counter-sunk, flat-head stainless steel screws. In addition to increasing dimensional stability, this wood stretcher provides a medium to which the support scrim can be attached.
The third element is hand-dyed transparent silk, toned light brown to blend with the color of the back of thangka. This is stretched and attached to the mount structure with stainless steel staples. Polyester Stabiltex could also be used. Silk was used in this instance because of its ease in hand dyeing. To enhance transparency, and thus readability, a particular color was required.

Once the support scrim is attached to the frame, the thangka is placed into position upon the transparent support scrim, and sewn into position through existing sew holes. The two side verticals and the top horizontal edge are sewn. The bottom horizontal edge is allowed to remain free and unstitched to the support. A fine polyester sewing thread, Skala by Guterman was used for this purpose.

As per client specifications, decorative details of conventional art framing are now added to the display mount without impacting the thangka. These elements are secured to the support scrim or stretcher.

Inscriptions on back of the thangka now show through the scrim on the reverse of the mount. A line of sewing, where thangka is attached to scrim, appears along the interior edge of the aluminum panel.

A decorative band of gold silk is laid down, following the outside line of painted thangka surface, covering the fine stitch line that attaches the thangka to the scrim. Completely separate from thangka, it is positioned and hand-sewn to scrim on all four sides.

An acid-free museum board mat is covered with a complimentary silk chosen by client, and applied over the gold silk edging to frame the thangka for display.

This fabric-covered mat floats over the top of the face of the mount, and additional material along all exterior edges is brought around to the back of the mount, and also secured with stainless steel staples to the supporting stretcher frame.

The mount is complete, and ready to be glazed and framed, per client specifications. The thangka can be easily removed from this non-traditional mount by simply removing the sew lines, clearly visible on the back of mount.

A completely reversible display mount is now accomplished for a thangka that has significant inscriptions on the back. A transparent rigid support was created - to allow both primary and secondary information on the thangka to be viewed, and to protect the thangka while being housed in a conventional display frame. The mount features an aluminum panel, with a rectangular opening corresponding to the sight and sewing lines of the original thangka mount. This aluminum frame provides the support for a transparent scrim, to which the thangka is affixed by sewing through existing sew holes. Decorative elements are added to complete the display for conventional framing, yet remain isolated and reversible. A fully supported and protected thangka mount results, with all original information and aesthetics entirely visible.