discussion of heirloom beads among 15 groups in Southeast Asia, based largely on Mr. Francis' own research. Here, the author presents a framework filled in by observed detail, and discussed in terms of suggested hypotheses of how heirloomed beads can help us learn about cultural history.

In Chapter 18, Conclusions, Mr. Francis reviews his ideas on both the beads and the people involved in beadmaking and bead trading. This excellent summary combines the author's earlier work with some of the current theoretical background to the study of South and Southeast Asia. As such, it suggests many areas for further study, along with an overview of the author's current concept of the contribution of bead study to the larger issue of Asian maritime trade.

The seven major parts of *AMBT* are followed by two appendices, 33 pages of notes, an excellent references section, and a quite helpful index. Appendix A reviews the collection of beads in the National Museum of the Philippines, while Appendix B includes a very useful summary of chemical and spectrographic analyses done on Indo-Pacific beads. Mr. Francis' interpretations of the often confusing analyses appear to be sound, although it is unfortunate that he was unable to include the many analyses of Indo-Pacific beads published by Brill in 1999. This section ends with the always apt suggestion that "unquestionably, there is more work to be done." The notes section is a welcome enlargement of the text, and not to be missed.

In addition, there are two groups of plates, with 16 pages in black and white, and an equal number in color, as well as numerous well-done line drawings and maps throughout the text. The series of black and white photographs of beadmaking in India is excellent, and supplements the textual description of these processes. The photographs of individual beads are generally adequate, although poor focus and lighting limit the visual appeal of several of the shots, which appear to have been taken under difficult circumstances.

Asia's Maritime Bead Trade is a very important contribution to both bead study and the story of trade within Asia and from Asia to the West. Mr. Francis' work in these areas has set a standard for serious bead research. In much the same way, *AMBT* sets a standard for future investigation of beads and the people who made, traded, and used them. Subsequent scholars may not always agree with Mr. Francis' identifications and interpretations, but will owe a great debt to his ability to summarize and synthesize sometimes fragmented information. One test of a book's success may be its ability to stimulate further work, and I would guess that *AMBT* will be very successful in this regard. While setting a stage and telling a story, Mr. Francis makes clear the need for additional work, both careful and rigorous, to revise and refine his vision of beads, people, and history. I strongly recommend *AMBT* to any student of the development of trade between the West and Asia, as well as to those whose work involves beads and their relation to history. In addition, bead enthusiasts and collectors will find much of interest in *AMBT*, which well deserves a place on the bookshelf.

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Ethnographic Beadwork: Aspects of Manufacture, Use and Conservation.

Margot M. Wright (ed.). Archetype Publications Ltd., 6 Fitzroy Square, London W1T 5HJ, U.K. 2001. ix + 140 pp., 76 b&w figs. $30.00 (paper cover).

On July 22, 1999, the Conservators of Ethnographic Artefacts (CEA) organized a seminar on "Ethnographic Beadwork: Aspects of Manufacture, Use and Conservation" which was held at the National Museums and Galleries on Merseyside, The Conservation Centre, in Liverpool, England. This seminar was followed by a three-day workshop on ethnographic beadwork, led by Sherry Doyal and Julia Fenn. *Ethnographic Beadwork* brings together various papers and poster sessions from the conference and incorporates additional papers by Annie Lord and Moyra Keatings.

As many bead and beadwork researchers and conservators know, it can be difficult and sometimes downright impossible to find published information regarding the care and conservation of beads and beadwork. Luckily, the CEA has brought this material together for those of us who were unable to attend the seminar and workshops. Most of the papers include notes and references as well as pertinent

bibliographies for the benefit of those wishing more information on specific topics. Some authors include lists of supplies and suppliers. And while most of us would like to see a 140-page book devoted solely to our area of interest, it is interesting, nonetheless, to read about the care of objects and materials outside our usual realms. I generally steer clear of plastic materials, for instance, yet some of the most interesting papers were on just that substance. Glass and pearl disease also are described, as well as beadmaking methods. A synopsis of each paper follows.

Traditional Glass Bead-Making in India, by Torben Sode and Jan Kock. Torben is well known among American glass beadmakers and bead societies for his enthusiastic talks over the last several years on Viking-era, Egyptian, and East Indian glass beadmaking communities. Jan Kock is an assistant professor in the Department of Medieval Archaeology at Aarhus University in Moesgaard, Denmark.

This paper explores the glass beadmaking tradition in small villages in India, specifically Papanaidupet, Purdalpur, and in and around Varanasi. Their aim was to record this beadmaking culture before it is swept away by the advances of our computerized electronic age. They note that when Peter Francis originally visited Papanaidupet in the early 1980s, there were 20 furnaces still producing all kinds of seed beads. When Sode and Kock visited in 1992, this number had been halved, and reduced again to two at their most recent assessment. They note that competition from modern factories plush with Japanese bead-manufacturing equipment in the glass city of Firozabad and in Varanasi has proven to be difficult competition.

There are more than 400 glass factories in and around Firozabad, and they note that the "sandy and infertile plain contains a high content of natural soda as well as a natural content of lime," which contributes tremendously to the ability of this area to be an important glass producer (over 70% of all the glass produced in India). The making of glass bangles is also discussed, as well as the glass beadmaking industry in the town of Purdalpur where there are about 45 small glass shops, each with its own furnace.

Around Varanasi, there is an increasing industry in lamp-worked glass beads, a technique introduced there in 1938, by a Czech couple named Henrick. They established a class in glass beadmaking at Benares Hindu University, which was conducted for 25 years.

Differential Decay of Buried Iron Age Thai Glass in a Uniform Environment, by Ian C. Glover. Ian Glover is an Emeritus Reader in Southeast Asian Archaeology at the University College London, Institute of Archaeology.

Glover focuses on the abundant material available from the middle of the first millennium B.C. His specific focus in this paper is glass beads and ornaments from an early 4th-century B.C. Iron Age cemetery at Ban Don Ta Phet in Kanchanaburi Province of west-central Thailand "which has yielded one of the largest (about 3,000) and best provenanced and dated samples of glass beads of any prehistoric site in Southeast Asia."

The author describes the color and diaphaneity of the beads, as well as their locations within the graves and general conditions. He notes that, although most beads found in Thailand are generally thought to have been imported in antiquity from India, some of the finds seem to be peculiarly Thai and support the notion that there may have been a fledgling glass-producing industry there. The beads were found in a variety of conditions, with the more colorful ones having suffered less degradation than the colorless or translucent beads.

Material Characterization of Glass Disease on Beaded Ethnographic Artefacts from the Collection of the National Museum of the American Indian, by Scott Carroll and Kelly McHugh. Scott Carroll is a conservator with the Alaska State Museum in Juneau, and Kelly McHugh an assistant conservator at the National Museum of the American Indian in Suitland, Maryland.

While glass disease sounds like something contagious, it is actually due to "a constitutional defect in the glass which renders it susceptible to the slow destructive action of water vapour and carbon dioxide, and can eventually cause extensive damage to the entire body of the glass." Carroll and McHugh survey the literature available on this puzzling conservation problem and discuss testing for pH, instrumental analysis, and the results of examining

specific pieces in the National Museum of the American Indian (NMAI). A survey taken at the time of the move of the NMAI from New York to the D.C. area identified 187 pieces suffering from glass disease. The pieces were categorized by the type of symptom they exhibited and by whether or not the beads had come into contact with leather, hide, or sinew. From there, a variety of tests and solutions were explored. One caution raised was that although beads may appear to have glass disease, the substance coating some beads may have been introduced by the culture from which the beadwork came. An example is a Sioux dress intentionally coated with kaolin.

Mother-of-Pearl and Byne's Disease, by Judith Doré. Judith Doré runs Textile Cleaning and Conservation in Kent, England.

Doré discusses the wide use of mother-of-pearl for ornamentation, its history, the types of shells used, and, to some degree, the technology employed in making mother-of-pearl objects. She surveys historical descriptions of deteriorating mother-of-pearl pieces and the conclusions reached by early curators. There is an extensive description of the steps taken to clean and preserve a piece which suffered from Byne's disease.

Plastic Beads and Buttons in Social History Collections: A Dilemma, by Julia Fenn. Julia Fenn is an ethnographic artefact conservator for the Royal Ontario Museum in Toronto, Canada.

Anyone who has plastic beads and buttons in their collection must read this paper. Fenn points out the incompatibility between plastic and many of the other materials with which they are often coupled: amber and other natural resins are attacked by camphor, a plasticizer used in cellulose nitrate; real pearls, bone, coral, and ivory are all damaged by acidic products from various polymers; and threads (whether of vegetable or animal origins, or metal) are subject to damage from ebonite and cellulose nitrate. Plastic products themselves are damaged by many of the things we use to protect collections, such as mothballs, ammonia, cleaning agents, etc. Fenn points out that in order to properly conserve plastic objects, it is important to first identify them in one's collection. She gives considerable information on tests to identify various plastics which, for instance, help to tell real from fake amber. After helping the reader through the thicket of possibilities, the author recommends various preferred methods for storing plastic objects. An appendix provides a lengthy description of the various kinds of plastics used in art making, including their history, suggested conservation practices, and what material is most threatened by each type of plastic.

The Conservation of a 26th Dynasty Egyptian Faience Net, by Jenny Potter. Jenny Potter is a conservator in the organic artefacts section of the British Museum in London.

Potter's subject is a netted mummy covering, dating to the 26th dynasty (664-525 B.C.). She gives a colorful impression of what the mummy must have looked like at the beginning, before it became the drab brownish pod-people form we're all so familiar with.

Potter describes the basic composition of the net, including the size and types of beads (bugles and round), the construction techniques, and the method of attaching the net to the mummy. She also talks about earlier attempts at conservation, including photomicrographs of the original thread and more recent conservation thread. In addition to the network was an amulet called a scarabeous, positioned at the neck and made using what appears to be a one- and two-bead peyote stitch, worked in disc-shaped beads (what I would call a heishi-shaped bead). Extensive text is devoted to analyzing the condition of the net, followed by a description of the actual process of conservation and restoration.

Examination and Conservation of a Beaded Throne from Cameroon, by Tracey Seddon and Siobhan Watts. Tracey Seddon is a senior organics conservator and Siobhan Watts a conservation scientist at the Conservation Centre in Liverpool, England.

"In 1916, the Head Chief of Bali in Cameroon, West Africa, presented to King George V a beaded stool or throne." From that time forward, the stool lived the sort of life often lived by objects given to powerful, famous people: it traveled from pillar to post, moved from one storage site to another, growing dirtier and more dilapidated as the years progressed. In 1998, its fortunes finally changed for the better and it

was identified as a prime candidate for display as a star item in the Liverpool Museum's new Heritage-Lottery-Funded galleries. Time for a facelift.

As with the netted mummy cover in the previous paper, the authors spend considerable time and detail describing what the stool is composed of, including both existing and missing materials. Damage was catagorized as either needing to be fixed (loose beads and threads) or not (a strange greasy residue on parts of the throne that might be of cultural origin), and various methods of conservation were considered and developed. An in-house scanning electron microscope aided in the process of determining, to some extent, the composition of the glass beads to aid in conservation. Several individual beads are described at length, noting that of the red, white, and blue beads that adorn the piece, the red were by far in the worst condition, as was the fabric under these beads.

Potential Hazards in Caring for Ethnographic Beadwork, by Margret Carey. Margret Carey was an Assistant Keeper in the Department of Ethnography of the British Museum from 1953 to 1961, and is now an Honorary Curator.

Carey tells the sad, though dramatic, story of a beautiful Somali necklace shown in all its glory sometime in the 1950s, followed by a photograph of the piece after it had been disassembled several decades later. This deconstruction was necessary because beads that were presumed to be amber or copal were, in fact, composed of "an early nitro-cellulose (Celluloid) which is inflammable and potentially explosive." In the early 1970s, the necklace (which had previously been stored in relatively open conditions) was packed away in the usual acid-free tissue, a plastic bag, or both, where offgassing from the "amber" beads commenced to eat away at the silver beads. Of course, this wasn't discovered for years. Only by separating the silver from the plastic beads was it possible to stop the destruction of the necklace. It's quite an exciting story and will likely cause many of us to look at our collections and our storage methods a little more closely.

This paper also includes general descriptions of the sorts of problems encountered by those who curate beads and beadwork, such as insect infestations and the various methods of dealing with them, and the problems inherent in freezing. Leather and sinew are often paired with beadwork and there is some discussion of the issues relevant to those materials as well. There is also a list of threading materials that can cause difficulties.

Whodunnit? Imitation Jewellery Made from Early Plastics, by Margrit Reuss. Margrit Reuss is an object conservator at the National Museum of Ethnology Leiden, in Leiden, the Netherlands.

A survey of the collections of the Linden-Museum in Stuttgart, Germany, revealed 33 objects made entirely or partially of synthetic resins which had been collected in various locations in the eastern hemisphere between 1903 and 1990. It appears that a majority of the objects may have been made in Gablonz and the author briefly describes the trade in beads and other objects by traveling salesmen from Czechoslovakia.

Cleaning Historic Beadwork, by Sherry Doyal. Sherry Doyal is an ethnographic artefact and textile conservator in Cullompton, England.

Doyal carefully describes necessary steps which should be taken before and during the cleaning and conservation of beadwork, with many specific notes on what to look for in the way of glass disease, damage, and thread deterioration. Cleaning methods, including the use of compressed air and solvents, are described with suggested caveats and best practices.

Upgrading the Storage of the African Beadwork Collection at the Royal Albert Memorial Museum, Exeter, by Morwena Stephens and Karla Graham.

While but interns at the Royal Albert Memorial Museum and Art Gallery in the late 1990s, Stephens (ethnographic artefact and textile conservator, Exeter, England) and Graham (archaeological artefact conservator, Centre for Archaeology, Portsmouth, England) were assigned a project to undertake storage improvement and survey a collection of African beadwork. The material included approximately 180 pieces, mostly from South Africa. Photographs show the new storage cases and the authors discuss some of the problems with the previous storage methods.

Deterioration of Glass Beads on an Edwardian Evening Bodice, by Annie Lord. Annie Lord is senior textile conservator at the National Museums and Galleries on Merseyside, The Conservation Centre, in Liverpool, England.

The Merseyside Decorative Art Department has among its holdings a collection of beaded costumes and accessories. White crystalline deposits on the beads of an Edwardian bodice raised concerns about glass disease and the bodice was brought to the Conservation Centre for examination and remedial treatment. Lord discusses at length the state of the various beads and illustrates examples in macro photographs. Analysis of the beads was performed to determine the chemical makeup of the glass and to determine a plan of attack for conservation and long-term storage. As an adjunct to this work, an intern surveyed all the costumes in the storage area to determine the state of those decorated with beads. Of the 130 costumes surveyed, 49 required conservation; eight of them urgently. Lord details the work performed on these pieces and the arrangements that were made for long-term storage.

An Introduction to Stone Beads, by Morya Keatings. Morya Keatings is a volunteer and jeweller at the Royal Albert Memorial Museum in Exeter, England.

Keatings introduces the reader to the Mohs scale of gemstone hardness, and discusses various methods for identifying different kinds of stone, including amber (which, of course, is not a stone, but why quibble?). She lists the kinds of gemstones typically used in different countries, including prehistoric Europe and the Middle East, and pre-Columbian South America. Recommendations are made for the care of the different stones.

With information about conservation practices for beads and beadwork difficult to find, the best two words to describe *Ethnographic Beadwork* are "gratefully received." Publication of these papers grants collectors and curators a bountiful starting point for their own research, and gives those of us who would like such conservation practices summed up a volume that will answer most of our questions. Beyond its usefulness, it is frequently fascinating and gives a pleasurable glimpse into the working lives of the people responsible for maintaining the artifacts of our various cultures.

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