For a variety of reasons, collection care in Southeast Asia, especially in the northern regions, is fraught with many difficult challenges. Climates that are unfriendly to paper-based materials, poor economies, war, and civil unrest, are just a few of the reasons that librarians and archivists find it extremely difficult to ensure the survival of cultural property. The rate of deterioration can be slowed and, in some cases, reversed through actions that are relatively low-cost and uncomplicated. This paper discusses some of the strategies employed by the Cornell University (New York) Department of Preservation and Conservation to preserve materials in Burma, Cambodia, Laos, Viet Nam, and Thailand in projects conducted over the last ten years. The need for careful needs assessments and clear articulation of them will be discussed in the context of competing for the necessary resources from international funding agencies, along with descriptions of stabilization operations. (Contains 25 endnotes.)
Collections Care in Southeast Asia: Conservation and the Need for the Creation of Micro-Environments

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Abstract

For a variety of reasons, collection care in Southeast Asian, especially in the northern regions, is fraught with many difficult challenges. Climates that are unfriendly to paper-based materials, poor economies, war, and civil unrest, are just a few of the reasons that librarians and archivists find it extremely difficult ensure the survival of cultural property. The rate of deterioration can be slowed and, in some cases, reversed, through actions that are relatively low-cost and uncomplicated.

The presentation will discuss some of the strategies employed by the Cornell University Department of Preservation and Conservation to preserve materials in Burma, Cambodia, Laos, Viet Nam, and Thailand in projects conducted over the last ten years. The need for careful needs assessments and clear articulation of them will be discussed in the context of competing for the necessary resources from international funding agencies, along with descriptions of stabilization operations.

Paper

Introduction.

The nations of the upper regions of Southeast Asia have great difficulty in ensuring the
survival of their cultural property for reasons that are historic, economic, and climatic. Among the most vulnerable nations are Burma, Cambodia, Laos, and Viet Nam. Of all cultural property, library and archive materials are the most vulnerable to damage and neglect, and it is especially tragic as, national identity and indeed, economic recovery, are often seen to be linked to the survival of documentary materials, as libraries and archives form the heart of the fragile educational systems so necessary to the development of viable and competitive economies.

Since 1987, I have worked in libraries, archives, and art museums in all the nations of the region on behalf of the Cornell University Library's Department of Preservation and Conservation, supported by funding from: the Government of the Netherlands, the Harvard-Yenching Institute, the Henry Luce Foundation, the Christopher Reynolds Foundation, UNESCO, the Swedish International Development Authority (SIDA), Oxfam, the Open Society Institute, and various other non-governmental agencies. The work has been concentrated on attempts to save rapidly deteriorating collections through needs assessments, staff education and training, developing and conducting conservation projects, and microfilming threatened collections to safeguard their textual content.

Burma, Cambodia, Laos, and Viet Nam have all experienced savage war and civil unrest in recent years, and recovery from these disasters is difficult and likely to be exceedingly slow. My work in this region of Southeast Asia began in Cambodia amid the devastation of the national library and national archives following the retreat of the Khmer Rouge, and this experience plus more recent work in Burma over the last four years and continuing work in Viet Nam has demonstrated the vulnerability of both research materials and librarians.

Before describing the challenges of preservation work in the region, it might be useful to explain why a university located in the rural heart of central New York State should be at all interested in Southeast Asia and its libraries and archives. Cornell was founded in 1865 through the generosity and political skills of Ezra Cornell and the scholarly endeavors of its first president, Andrew Dickson White. Both men were determined that the university would provide instruction in every subject, that it would be non-sectarian, and enrollment open to all. Cornell is one of that exclusive group of American universities known as the Ivy League, and it is indeed a large and prestigious research and teaching institution. The nineteen libraries of the university hold a total of approximately 9 million physical volumes, and more than 75 million manuscripts, making it the tenth largest library in the American Association of Research Libraries.

Cornell's interest in Southeast Asia began in 1918 with a donation of 9,000 books and manuscripts from Professor Charles Wason, and the creation of the Far Eastern Studies program in the mid-1940s. The determined collecting of John M. Echols, a professor of modern linguistics, and Giok Po Oey, the first curator of the Echols Collection, resulted in the largest collection of Southeast Asian books and manuscripts in the world, and facilitated the development of extensive area studies programmes at the university, as well as instruction in fourteen Southeast Asian languages.

The Department of Preservation and Conservation was established in 1985, and soon became one of the larger preservation programmes among academic research libraries in the United States, and an early preservation initiative was the large-scale microfilming of rapidly deteriorating Southeast Asian materials from the Echols Collection. Copies of the film were presented to libraries in Southeast Asia to help replace collection losses. Preservation field work in the region grew out of the growing concern of faculty and graduate students and the reports of Helen Jarvis, an Australian scholar and librarian. In 1987, Dr Jarvis reported on conditions at the National Library of Democratic Kampuchea, now Cambodia. Her report resulted in a more detailed assessment by a Cornell graduate student, Judith Ledgerwood, which was reported at an international conference in Washington. Soon afterwards, applications by Cornell to private foundations paid off with a small award by the Christopher Reynold Foundation which permitted John Badgley, curator of the Echols Collection, and me,
to visit Cambodia, Thailand, and Viet Nam, beginning what has become a continuing programme of preservation action in the region. The effects of the strife and political upheavals of the past fifty years in the area, however, make the preservation challenges daunting, with materials disappearing through deterioration, theft, and political expediency almost on a daily basis.

Western scholars have been generally, though somewhat vaguely, aware of these problems for some time, but it is only quite recently that the full breadth and scope of the especially difficult problems facing libraries and archives have become known to a few Western librarians, archivists, and preservation specialists. Over the last decade, international agencies, both public and private, have produced spasmodic reports on conditions, and indeed, several successful projects designed to preserve specific collections in particular places have been conducted. These reports and projects were, not surprisingly, limited in their overall effects, and conditions overall remain little changed with materials still disappearing at an alarming rate. However, limited as these projects have been, they have resulted in the preservation of some vital pieces of scholarly information, and perhaps, more important, these pioneering efforts have created a much greater awareness of the crisis. Virtually every report by foreign observers on libraries and archives resulting from fact-finding missions describes dilapidated facilities, undertrained and under-equipped personnel, minuscule or non-existent funds, and collections that are often bibliographically and physically inaccessible. While a few cultural gems, well known to Western scholars, are better protected and available, the vast majority of library and archive materials are not, and local students and scholars alike struggle painfully but determinedly to try to satisfy their research needs.

Burma (Myanmar).

Library conditions in Burma were described in 1968 by Palle Birkelund, reporting for UNESCO. Birkelund described well-organized libraries, competent personnel, and remarkable recovery from World War II. The premier library in the capital, the Universities' Central Library, had been almost completely destroyed by bombing during the war, along with two of the college libraries, resulting in the loss of research materials and valuable scholarly notes. For example, scholar Gordon Luce lost the fruits of twenty-five years of research when the Japanese looted the collection, and the later monsoons destroyed what remained after Allied bombing. Birkelund commented on the need for better environmental controls, insect fumigation, and trained "book binders and restorers" to begin the conservation of manuscripts and other library materials.

Ten years later, a report to UNESCO on the preservation of manuscripts in Burma, produced by V. Raghavan, described a much more desperate situation, with manuscript collections being rapidly diminished because of humidity, insects, lack of trained personnel, official indifference and neglect. Raghavan recommended a series of actions that would have resulted in substantial improvements and a slowdown in the rate of loss. In particular, he recommended that conservation facilities be established to treat damaged and deteriorated manuscripts, and drafted specific plans for improved environmental conditions. Referring to an unpublished UNESCO survey of Burmese manuscripts in 1956-57, Raghavan urged that a union catalogue of manuscripts be developed to encourage inventory control and to deter theft.

In general, little has been done to implement Raghavan's suggestions, either in preservation or bibliographic control, and there are indications that the situation continues to deteriorate further. Thousands of manuscripts have been stolen from Burmese libraries and temples, and are offered for sale as curios in the tourist antique shops and markets of Thailand. In a June 1994 report, Peter Skilling and H.K. Kuloy described their efforts to rescue a few of these manuscripts by purchase in the markets of Thailand, noting that they had managed to save, "750 palm leaf manuscripts in Pali or mixed Pali-Burmese, 18 bundles of Khun palm leaf manuscripts (each bundle contains from 5 to 15 smaller palm leaf sets), 270 Burmese black paper accordion books (Parabaik), and 12 Shan white paper accordion books." Skilling and
Kuloy are still active in gathering these materials and intend to return the manuscripts to Burma "in better times."

Cornell University's preservation involvement in the libraries of Burma began in 1989 with a three year project to microfilm fragile palm leaf manuscripts at the Universities' Central Library in Rangoon. To date, 5,000 manuscripts have been microfilmed, but another 15,000 manuscripts need to be filmed through future projects. The Henry Luce Foundation and Cornell alumni have funded the work, but continuing support is problematic. A Cornell report of 1988 points out that environmental conditions in the libraries were very bad, and that large portions of the general collections were unprocessed and untreated. Cornell's work of preserving research materials in Burma has been carried out in the face of some political opposition and criticism from those opposed to any interaction with Burma, but as a recent report noted, the "rapid deterioration and loss of these [Burmese] materials should not be allowed to continue because of political isolation, as all humankind will be the poorer for their loss."

More recent work in Burma, reviewed in a report of a survey and training visit I made in March 1995, has revealed a slightly more promising situation despite political difficulties and isolation. The Universities' Central Library has initiated some limited preservation efforts on a regional basis, concentrating initially on the region immediately surrounding Rangoon. Modest space has been allocated in a new building for conservation facilities, and the Cornell-funded microfilming efforts are being carried out in a well appointed space in the library, using equipment donated by an early UNESCO project and a more recent gift through the Australian National Library. In addition, some conservation equipment has been installed through Cornell with the help of the Open Society for Burma Institute. At the Rangoon University's Historical Research Centre, considerable progress is being made in the care of archival materials and the collecting of monument rubbings, and Soe Soe Sein and U Pe Thein, archivists at the Centre, have each recently completed a six months preservation training program at Cornell. Although facilities and resources are very scarce at the University of Mandalay, large numbers of palm leaf manuscripts are stored in a sensible fashion. Unfortunately, the extreme, and unrelieved, heat and voracious insects are hastening the destruction of these and other library materials. The Royal Palace at Mandalay also has a number of palm leaf and parabaik manuscripts along with numerous photographs, and all are poorly housed in facilities that lack the means to regulate the high temperatures and relative humidity, or to keep out insects. The environment at the Bagaya Monastery Library at Amapura is much more encouraging, with the 6,000 palm leaf manuscripts and large numbers of parabaik being carefully handled in a space that may soon be air-conditioned through donations from devout overseas Buddhists. Students from the University of Mandalay's Department of History, less affected by the university closures in Rangoon, are involved in cataloguing and collating the manuscripts at Amapura, with copies of the data sent to the Universities' Central Library at Rangoon for eventual entry into a database, a substantial beginning step towards Raghavan's 1979 inventory recommendations.

Cambodia

The condition of libraries and archives in Cambodia is probably the worst in this region of Southeast Asia. The reports of Helen Jarvis in 1987 and Judy Ledgerwood in 1988 had described appalling conditions, with the libraries of Phnom Penh little more than shells of their pre-Khmer Rouge days. In a report of a preservation/conservation training visit to Cambodia made in April 1989 with a Cornell team, assembled as a direct result of Ledgerwood's report, I identified a number of modest priorities for immediate preservation action. These priorities have largely been addressed by projects stemming from the reports and a subsequent training project that I conducted in February 1991. In 1989, the National Library was without a water supply, and had only eccentric and very dangerous electrical systems. Less than twenty percent of the collection survived the Khmer Rouge, who threw out into the streets and burned many of the books and all of the bibliographic records. The Library was used as a pigsty for
the duration of the Khmer Rouge regime, and of the original National Library staff of forty-three, only three survived. My report further notes that large mounds of books and manuscripts were piled in the storage areas, many rescued from the streets and markets. The National Archives was badly damaged by insects, and Soviet attempts to control them with DDT were not successful, and I saw similar conditions at the Royal Palace and the National Museum. At the Tuol Sleng Museum of Genocide, a former high school used by the Khmer Rouge as an interrogation centre, more than twenty-thousand men, women and children had been tortured to death, and significant numbers of confessions and photographs of victims had survived the Khmer Rouge's attempts to destroy them during their retreat. These materials were in surprisingly good condition, although the real danger to the archives seemed to be from Khmer politicians with an interest in their disappearance.

The situation is now reportedly somewhat changed and significantly improved in Cambodia, and a June 1994 news report indicated that the French Government had provided some aid to the National Library of Cambodia by supplying library and binding equipment, and Australian archivists working with the Overseas Service Bureau have been improving access to materials in the National Archives. A report by Elizabeth Watt of the International Branch, the National Library of Australia indicates growing library aid activity even without full "normalization." Volunteer staff members from Cornell University have regularly worked in Cambodian libraries over the past ten years, and a 1998 report of one Cornell staff member Sari Suprato, indicates improved funding from international agencies is helping shape libraries and turn attention toward preservation.

The first Cornell Library overseas training and conservation project began with training sessions at the National Library to begin the process of stabilizing the palm-leaf manuscript collection. This collection was in very poor condition, with considerable insect damage, extensive soiling, and structural damage. The manuscripts were piled in tottering heaps on the floor of the library, many scattered into loose, unconnected leaves. The staff of the National Library was trained to provide preliminary cleaning of the manuscripts by light dry brushing to remove loose soil and insect parts, and to construct protective enclosures that would protect each individual manuscript, and to box small groups of manuscripts in tight, well-constructed boxes containing an insect repellant. The staff quickly became adept at constructing the boxes, and the appropriate conservation supplies and tools were provided through a variety of funding sources in the United States, including the Christopher Reynolds Foundation and the Henry Luce Foundation. I also provided training to ensure that the general collections of the National Library received some conservation attention, and a book repair operation was established.

It became apparent that the survival of some of these unique materials could best be assured by microfilm, as the traditional method of preservation, copying by hand, was impossible given the small number of monks left alive by the Khmer Rouge. Although the palm-leaf manuscripts seemed a high priority for the Khmer, Cornell also considered that the filming of the Tuol Sleng archives should be accomplished as a matter of urgency. As noted, the archives consist of "confessions" extracted from some of the victims, and some 6,000 photographs and negatives produced as "mug shots" by the Khmer Rouge. The following year, with additional grant funding assured, Judy Ledgerwood, fluent in the Khmer language, began the work of microfilming first the palm-leaf manuscripts and then the archives of Tuol Sleng. Ledgerwood had received intensive training in microfilm camera set-up and operation prior to the project, but the difficulties she encountered were impossible to prepare for, and essentially typical of work in poor countries. Electrical supply at the National Library in Phnom Penh, as noted, was somewhat dangerous and unreliable, and there was no water supply. Ledgerwood purchased a generator to operate a small air conditioning unit and the microfilm camera at the National Library for the filming of the palm-leaf manuscripts. At Tuol Sleng, the old generator was repaired (which proved to be an unwise investment), and a room set aside for filming and new storage for the filmed documents. The factor that proved to be the most difficult to overcome, however, was the refusal of the government to grant formal written permission to film (although there was an informal, oral agreement with the Minister of Culture), and as a result,
there was constant interruption of the work by various governmental officials backed by troops and a consequent defection of Khmer project staff. The work to microfilm the 400,000 pages of the 4,000 confessions, the "Manual of Torture," entry log, and "instructions to guards," took from 1990 to 1993, with four different project directors, beginning with Judy Ledgerwood and ending with Lya Badgley. Work in Tuol Sleng was not only difficult because of mechanical problems and political intrigue, but the oppressive and morbid atmosphere also took its toll. Historian David Chandler observed that people using the archives "confront daunting problems...there is the emotional drain of encountering so much cruelty, so many innocent lives destroyed." Before the archive was microfilmed, access to the confessions was difficult, with little time allowed to scholars to study the materials. Chandler went on to note that, "by the middle of 1991, less than 10 percent of the dossiers had been read and analyzed by scholars, much of which concern major figures in Democratic Kampuchea. The confessions of 3,500 'lesser' victims remain to be studied, and many of these probably contain important historical detail." The archives is the key source of information for the U.S. State Department's Office of Cambodian Genocide Investigations. The film was exposed in difficult circumstances, but initially the processing and inspection was almost equally difficult, with each reel of exposed film taken in the International Red Cross diplomatic bag to Bangkok where it was flown to Ithaca, processed within twenty-four hours, inspected and evaluated by preservation staff, and results faxed back to Bangkok for delivery to Phnom Penh to effect corrections to the shooting procedures. The Tuol Sleng archives project, in particular, has been an extremely valuable contribution to scholars throughout the world and, in the best tradition of preservation reformatting, has ensured the preservation of material in danger of destruction while extending access to scholars.

By January 1991, Cornell had obtained grant funding to continue with phase two of the conservation work in Cambodia, and I was able to return to Cambodia as part of a more extensive survey visit to Vietnam and Thailand. The conservation treatment and training projects conducted during this visit were extremely intensive, addressing the stabilization of the Tuol Sleng archives through the construction of document cases, the stabilization of palm-leaf manuscripts at the Royal Palace and the Buddhist University, and the conservation treatment of the palm-leaf manuscripts already microfilmed and stabilized at the National Library. Treatment of the palm-leaf manuscripts involved taking them out of the individual enclosures and group boxes constructed in the 1989 project, which provided the opportunity to evaluate the effectiveness of the housing strategy. To my great satisfaction and relief, there had been no re-infestation of the manuscripts by insects, and no additional structural damage had occurred. From July to December, 1998, a staff member from the National Archives, Y Dari, completed a six months preservation training program at Cornell, and no doubt some further improvements will be made to the general situation as a result of her influence.

Many of the reports on libraries and archives by Western and Australian librarians seem to imply that the wretched conditions in Southeast Asian libraries are not immediately apparent to native library and archive staff, and must be identified for them by the visiting foreign expert. Recent conferences and meetings in the region, described later, suggest that the local librarians are not only well aware of the deficiencies of their facilities, but have a good general sense of their overall needs.

Laos

The Nordic Institute of Asian Studies (NIAS) report on Laos and Vietnam, produced by Irene Norlund, Jonas Palm, and Stig Rasmussen in the early part of 1991, was designed to provide the Swedish International Development Authority (SIDA) with information on the overall library and archive situation. The team noted that collections in Laos are "insufficiently stored and...unorganized," that the "preservation situation in Laos is virtually non-existent," and the country is in desperate need of basic education and training, materials and equipment to preserve only a small part of its history. The report makes the interesting observation that the traditional method of "preservation" of palm leaf manuscripts was by constant copying to
preserve the contents, and that the concept of physical conservation represents "a new way of thinking." Based on a thorough survey and analysis, the report makes some valuable recommendations, especially in the area of long-term support for Laotian libraries and archives.

The concerns reported by the NIAS team on Laos were repeated a few months later by Donna Reid, for the National Library of Australia 16. Reid noted that palm leaf manuscripts, because of their cultural and symbolic value, were being given top priority for preservation attention by the Lao, and she expressed concern about the lack of attention paid to printed (paper) materials. Training in library science was given by Reid to Vietnamese librarians during this 1991 visit as part of a follow-up to a similar 1990 program. A pragmatic collections maintenance program was recommended to initiate a collection stabilization and needs assessment project.

A report in the International Preservation News of June 1994 indicates that progress has been made in Laos to resolve at least some of the problems noted above 17. With the financial assistance of the French government, substantial renovation has been accomplished at the National Library of Laos, some training in conservation techniques has begun, and another assessment of conservation needs conducted by Jean-Marie Arnoult of the Bibliotheque Nationale de France. The project was relatively modest and short-term, however, and the problems remain massive and seemingly intractable. Cornell's work in Laos has been essentially limited to noting the manifest problems cited above through visits in 1992 and 1993, and working with the Loa government to try to establish cooperative programs that will have a more long-term effect.

Viet Nam

Conditions in Vietnam are similar to those described in Laos: deficient library and archive infrastructure (especially in the north), few resources, rapidly deteriorating collections, and few trained staff, although there has been substantial improvement over the last five years. The National Library in Hanoi now has a competently-run microfilming operation and their new building renovations will further improve the storage environment. The Institute of Sino-Nom Research in Hanoi is equipped with air conditioning, and recently, new metal stack shelves. However, some facilities have no glass or screening on the windows, with collections piled on the floor, or crushed into insect-infested wooden shelves. The NIAS report, cited earlier, pointed to the wholesale evacuation of books and manuscripts from Hanoi during the war with the United States, as a contributing factor to deterioration, as many books were destroyed and others still remain in storage or packed in boxes.

I visited Hanoi and Ho Chi Minh in 1991, and observed conditions in libraries in both cities 18. As might be expected, some of my findings on the state of preservation at that time confirmed other reports, particularly in regard to infrastructure and environmental conditions. In general, conditions were significantly worse in Hanoi than in Ho Chi Minh, not surprising considering the intensive bombing of the North Vietnamese capital and past American support for libraries in the south. The long-term economic embargo imposed on Vietnam by the United States and sustained by her allies, made improvements to the educational infrastructure difficult. The National Library at the time of the 1991 visit was in dilapidated condition, with debris scattered throughout the stacks and books piled seemingly at random. The Social Science Institute Library at Hanoi was stuffed with books, many unprocessed and piled in huge mounds on the floor. Only the Institute for Sino-Nom Research, the archive of the most celebrated manuscript collection in Vietnam, held the promise of a stable environment, as a new air-conditioned building had been constructed and was almost ready for occupancy. In the south, the General Sciences Library is housed in a comparatively modern American-style building constructed in 1974 and, given the lack of resources, very well managed and maintained. This library once had an active microfilming program, and I noted that the Kodak MRD-2E camera had not been in operation for years because of a missing part.
In February and March of 1995, I had the opportunity to work again in these libraries as part of a project organized by Judith Henchy, Southeast Asian Section Head, University of Washington Libraries, and accompanied by Robert Motice, University Microforms International. The project, sponsored in part by the American Association of Research Libraries and partially funded by the Luce Foundation, was designed to help establish microfilming and stabilization programs in a number of institutions at Hue, Hoi An, Hanoi, and Ho Chi Minh. I found at that time, while there has been some small improvement in conditions at the National Library at Hanoi, storage and housing continue to be unsatisfactory, and the only changes at the Hanoi Social Science Institute Library were largely for the worse, with access complicated by enormous cataloguing backlogs and severe lack of space, although the Institute itself has added an American Studies Reading Room with funding from the Christopher Reynolds Foundation. Conditions at the Institute for Sino-Nom Research had actually worsened as the new building, occupied in 1992, has proved to be sadly deficient, and in some respects actually inferior to the old building. The new concrete structure was very poorly constructed to an unfortunate design, the air handling system was inadequate and inconsistent and the old wooden shelves responsible for carrying insects from the old building to the new. In May of this year, I conducted an intensive preservation feasibility study at the Sino-Nom Institute and found significant improvement there following the earlier six months of preservation training of the librarian, Chu Tuyet Lan at Cornell. At the present time, Ms Lan is working to establish a conservation program with funding from the Toyota Foundation.

The University of Hue library also has poor storage facilities, and the collection is over-crowded and very poorly maintained, with insects and mold everywhere in evidence. At Hoi An, the Service of Vestiges Management, responsible for the preservation of regional culture, provided simple but effective storage, and the many stele and Chinese family records are in quite good condition and responsibly managed. At the General Scientific Library at Ho Chi Minh, conditions continue to be quite good, despite over-crowding and heavy atmospheric pollution. The microfilm camera, film processor, and related equipment, inoperative during my 1991 visit, were restored to working order by Robert Motice, and there seem to be some prospects that the original regional newspaper filming role of the Library will be re-established. Other library and archive collections visited in Ho Chi Minh were not as well housed as those at the General Scientific Library, but quite competently organized within the limits of the meager resources.

Cornell's work in Viet Nam has involved mainly education and training, with a number of demonstration projects being conducted in various parts of the country, but the recent award by the Harvard-Yenching Institute will permitted me to work for a three-week period to produce a Five-Year Plan for the Sino-Nom Institute in Hanoi, and the final report is in the process of being implemented.

**Education and Technical Training**

Every Cornell project has included significant training and education components, principally to further the specific objectives of the conservation or preservation aspects of the project, but also to try to establish basic in-house programs. This training has always been intensive and conducted within a short time-frame, with long hours and often continuous work for periods of up to ten days without a break. The trainer/mentor has always worked alongside the trainees, and I am invariably impressed at the degree of skill and knowledge developed by technicians in such a short period of time. The training given in the 1989 and 1991 Cambodia projects, the 1995 Burma project, and the January 1997 Thailand project are examples of training under quite severe time constraints. For example in the 1995 Burma project, I conducted five conservation training workshops and assessed three collections in six days, and in the Thailand project, Anne Kenney (Associate Director, Cornell Department of Preservation and Conservation) and I conducted four workshops at Chiang Mai University in seven days on digital imaging, basic conservation, and the conservation of manuscripts (this latter project is unusual in that it was funded by the Thai government rather than by an outside funding
Over the last few years, several training and education programs have been conducted by a number of different agencies in the region, as well as the offering of internships or overseas training opportunities, and I will summarize a few of them here. Perhaps the oldest, continuing program based in Southeast Asia is that conducted by SPAFA, the SEAMO (Southeast Asian Ministers of Education Organization) Regional Center for Archeology and Fine Arts. SPAFA was first conceived in 1971, originating in the Applied Research Centre for Archeology and Fine Arts (ARCAFA). In 1985, SPAFA was officially named, with member countries, Indonesia, Malaysia, Philippines, Singapore, and Thailand, with Brunei Darussalam becoming the sixth nation in 1988. In addition to programmes which include undersea archeology, ethnography, indigenous fine art, and performing arts. SPAFA has also promoted programs in the conservation of library and archive materials. Held in different countries of the southern region of Southeast Asia, the training sessions deal with bookbinding and repair, micrographic operations, restoration of photographic materials, conservation of paper documents and plans, leaf-casting, map mounting, lamination, encapsulation, and conservation management. The conservation portion of the program is heavily influenced by Western bookbinding and restoration tradition, being conducted by European craftsmen, and does not seem tailored to the special needs of Southeast Asia.

In June 1994, two seminars on preservation management were conducted at Bangkok and Hanoi by Wendy Smith, University of Canberra, Australia, and Ross Harvey of the Monash University at Melbourne, Australia. The seminars followed similar programs at Bangkok in 1992 and at Kuala Lumpur in 1991, and formed part of the National Library of Australia's efforts as regional center for the International Federation of Library Associations Core Program in Preservation and Conservation (IFLA-PAC). The then head of the National Preservation Office, Dr. Jan Lyall, had been very supportive of these, and other efforts, to establish preservation programs in the region, and the seminars are a tangible manifestation of the interest of the National Library of Australia. Funded by the Australian International Development Assistance Bureau (AIDAB), the seminars were intended to engage the delegates in the development of preservation management policies. The workshops conducted in 1992 were thorough and well-planned, with a mixture of theoretical and practical work, and the round of seminars was designed to complement them. Much of the Australian interest in preservation in the region is the result of the pioneering work of Dr Helen Jarvis, who initiated the development of a bibliographic database of Southeast Asian materials. The training program for Southeast Asian librarians that emerged from Jarvis's work, and broadened by AIDAB, has resulted in library school training programs in computers and preservation/conservation at the School of Information, Library and Archives Studies, University of New South Wales.

In the American Association of Research Libraries project in Vietnam in February and March 1995, cited earlier, I conducted conservation training workshops at Hue, Hoi An, Ho Chi Minh, and Hanoi, while Robert Motice provided concentrated training in microfilming operations to help establish the programs at the National Library, Hoi An, and Ho Chi Minh, and he and Judith Henchy conducted two lengthy workshops on the development of microfilming programs. Motice also installed camera and processing equipment at the National Library.

Following the survey and preservation training visits to Cambodia, Vietnam, and Thailand in 1991, I became convinced of the region's need for a major sustained preservation education and conservation training program. The short-term nature of hard-won funding has encouraged past efforts that, while effective in rescuing a few important groups of materials and providing incidental training, do not seem to have had a lasting effect on the establishment of preservation programs. Indeed, it is likely that some of these scattered projects have created a level of expectation among the region's librarians, archivists, and government officials that is unreasonable and unrealistic. There have been attempts, mainly through occasional overseas internships, to train conservators, but thus far they do not seem to have had any lasting effects,
partly because the training orientation seems designed to address mainly Western rare and unique items, partly because the necessary operational infrastructure does not exist in the region, and partly because the training is isolated from other efforts. As many of the reports have noted, the preservation problems involve poor environment, slovenly housekeeping, deteriorating paper, and failure to deal with elementary binding and repair problems. Although rare and unique materials represent an important scholarly and cultural resource, at this point their level of use seems to indicate more the need for stabilization and security than for complex, expensive, and largely unattainable conservation treatment. At the managerial level, the training and education provided by workshops, such as those conducted by Wendy Smith and Ross Harvey, and more recently by Jonathan Rhys Lewis (Senior Conservator at the Greater London Record Office) at the Vietnamese National Archives 24, are extremely valuable and an essential ingredient to continued development in the region, but these need to be reinforced by sustained and integrated efforts if lasting programs are to be established. Lacking operational models and the resources needed to create them, local librarians and archivists find it extremely difficult to compete for attention in bureaucracies struggling with more fundamental problems. Under these circumstances, occasional training sessions seem disembodied and their tenets often hopelessly utopian. It is clear that a great need exists for a more general, broader and pragmatic approach, both in treatment and reformatting with the required corresponding levels of training, and to the education of preservation managers and administrators. It seems logical to establish training programs based on existing operational practice, involving trainees in ongoing model programs in the region. As no acceptable programs currently exist, there is a need to establish one that would fulfill the requirements of trainer, educator, specialized service utility, and continuing mentor.

Regional Preservation Center for Southeast Asia

In March 1991, a plan for the establishment of an international cooperative preservation/conservation center, derived from my 1991 report, was distributed to a number of parties, including Chiang Mai University (Thailand), the Nordic Institute for Asian Studies, and various international funding agencies. The plan describes a full service center located at a host institution in an economically and politically stable country in the region, to permit personnel from neighboring countries to pass freely to and fro. The center would function as a service facility, undertaking the preservation/conservation work of the host institution and specialized work of other institutions on a cost-recovery basis. Trainees from around the region would serve as interns at the center, working at a range of tasks in ascending levels of difficulty according to their needs and levels of expertise. Training would operate on two levels, administrative and technical.

Administrative training would expose potential preservation administrators to some of the practical aspects of preservation through short training sessions in the operational units of the center, but the primary focus would be on program development and managerial skills, needs assessment techniques, strategy planning, and proposal writing. Interns at this level would be librarians and archivists.

Technical training would be designed to develop skills and increase knowledge. Interns would work in the appropriate operational unit at the center, acquiring skills through practical apprenticeships. Because of the realities of local program development and to maintain momentum, interns would be trained on an intermittent basis, and would work at the center in the area most relevant to his/her needs for three months, then would return to the home institution to implement the newly acquired procedures and in turn, to train local staff. After an appropriate period, the intern would return to the center for more advanced training.

The center would be staffed by a skilled and knowledgeable working group, who would assist the establishment of local facilities by site visits, but more important, would act as continuing mentors. In this role, the center staff would advise and encourage former interns, and supply technical back-up and specialized, capital-intensive services. The interaction of center staff and interns from the nations of the region, would inevitably forge formal and informal
cooperative links that would lead to the development of a solid body of knowledge and professional activity.

In 1991 I made an intensive consciousness-raising trip to Denmark, Sweden, the Netherlands, and Germany, and representatives of the Foreign Ministry of the Netherlands expressed their willingness to provide funding for a conference to be held in Southeast Asia to solicit opinion and grassroots support for the center. The resultant three-day "Conference on the Library and Archives Preservation Needs of Southeast Asia" was held at Chiang Mai University in December 1993, and was attended by thirty-seven participants from six countries. The national libraries of Thailand, Burma, Vietnam, and Laos were represented, as well as other important institutions. In all, sixteen papers were delivered by scholars, librarians, and archivists, detailing the vital importance of traditional texts of each nation, and describing their most pressing preservation needs. In the discussion following the papers, there was general agreement that the libraries and archives in the region faced almost identical problems with only a limited number of solutions, that only concerted action could bring about positive change, and there was unanimous support for the establishment of a center. Accordingly, a representative development committee was created to develop a planning strategy, and the resultant meeting at Chiang Mai in September 1994 led to the establishment of a consortium with the following mission:

1. Establish a system for the exchange and sharing of information on preservation strategy and related activities among members.
2. Develop education and training programs in preservation management and conservation practice.
3. Help to facilitate the creation of preservation programs in each member library and archive.
4. Establish a regional cooperative center for the preservation and conservation of library and archive materials.

In November 1994, a document was drafted, "The Preservation and Conservation of Library and Archives Materials in Southeast Asia: Outline of Funding Needs," and distributed to various funding agencies in advance of any proposal. As a preliminary response to the needs articulated in the mission statement, and at the specific request of the consortium members, in July 1997, Cornell initiated a preservation and conservation internshoph program for Southeast Asian librarians and technicians with the funding assistance of the Henry Luce Foundation, the Harvard-Yenching Institute, the Open Society Burma Project, and various Cornell alumni.

The internship is a three-year project to provide managerial and technical education and training through six-month internships within the Department of Preservation and Conservation at the Cornell University Library. The Department has a staff of 30 involved in a comprehensive program of preservation and conservation, and there is a great deal of collective experience in addressing the special problems of Southeast Asian materials and libraries, and in training through internship. Over the last ten years, Cornell has trained twenty-five librarians and technicians from other institutions through formal internship, including nine through an Andrew W. Mellon Foundation program and sixteen through a New York State program. In addition, there have been several internships supported entirely by Cornell, including two Fulbright Fellows from the United Kingdom and a librarian from Burma. In October 1995, another Fulbright Fellow from Guyana began a six-month program in preservation, and in September 1996, a librarian from Chiang Mai (Thailand) completed a three-month internship.

Because Cornell's preservation program is designed to deal realistically with all the preservation problems essentially typical of all libraries and archives, interns are able to develop an understanding of the integrated nature of preservation within the managerial structure of the library, and to apply a range of strategies that stress the setting of priorities and the articulation of needs. Cornell takes two interns at a time, and it is hoped that the program will stimulate local programs and help build some of the infrastructure that will hasten the
establishment of the Center. Thus far, interns from the National Library of Thailand, the Sino-Nom Institute of Hanoi, Burupha University in southern Thailand, the House of Representatives Archives in the Philippines, the National Archives of Cambodia, the Historical Research Centre of Burma, the University of Malaya, and the General Sciences Library of Ho Chi Minh city have been involved in the program. Mentoring visits by Cornell staff to reinforce the training and help further the development of preservation programs are funded from a variety of sources.

**Conservation Strategy**

While the Cornell internship program is designed to expose interns to all aspects of preservation, including complex conservation treatment, digital imaging, microfilming, and various managerial functions, there is no doubt that without resources, training alone will not achieve speedy results. Many of the problems manifest in libraries in Southeast Asia require substantial investment to be fully addressed, but they can be significantly ameliorated by a more systematic approach to environmental control and housing, which can be achieved at modest cost. Wooden shelving can be gradually replaced with metal, windows can be screened to prevent the ingress of insects, a higher standard of cleanliness can be maintained, more responsible handling procedures established, and protective housing can be applied or improved.

It is undeniably very expensive to alter a large environment, such as a large stack space, but a measure of control can be obtained by creating micro-environments. Protective enclosures, such as boxes, portfolios, and map cases, not only add an insulating layer to reduce the effects of varying levels of temperature and humidity, but also can provide other opportunities for control. For example, in a facility with serious insect problems, the large-scale fumigation systems employed by many libraries and archives are harmful to books and readers, and are only temporarily effective. But a well-made box can contain and retain a mild insect repellent that will deter insects, and has the added advantage of being effective even when the material is transported to another location. A steel map cabinet with a base can be treated through placing a dessicant and insect repellent in the base itself to help safeguard the contents of the cabinet from mold and insects. Protective enclosures can be made quite easily from models that are readily available and generally do not require complex and expensive equipment or even extensive skills. While it is extremely risky to entrust a valuable book or manuscript for treatment by an untrained technician, there is little risk in having the same technician construct a protective enclosure.

A systematic survey of library and archive collections will reveal numerous instances where protective enclosures can produce more stable environments as well as protection. The survey can also provide the basic data from which a long-term preservation strategy can be developed, which in turn can help to articulate preservation objectives that can be achieved through sensible funding proposals to international funding agencies.

**Conclusion**

The body of preservation knowledge and practice on which Western systems are built is the result of a long and torturous evolution from the wholly craft/trade-based bookbinding tradition, to the present level of quite sophisticated and highly technical programs. The libraries and archives of Southeast Asia have operated to a very different time-frame, and set of cultural and historical circumstances. The industrialization that revolutionized the West in the nineteenth century was barely known in Southeast Asia until the modern military conflicts of the second half of the twentieth century. Solutions to preservation problems are not entirely the same in the East as the West, and the few attempts to inflict Western standards and practice, unaltered by locale, have been unsuccessful. For example, the stock response to high levels of temperature and relative humidity by Westerners is to call for air conditioning systems to be installed. This can be a costly mistake in tropical regions, especially when books
and manuscripts are taken from the library, or when untrustworthy electrical supplies fail. In
these circumstances, the drastic increase in temperature and relative humidity causes moisture
condensation on the materials and interior walls and consequent rapid development of mold. In
Southeast Asia, it is important to recognize that preservation priorities are probably not the
same as in the West, that short-term teaching and training alone will not result in viable
programs without sustained financial support, preferably secured by librarians in situ, and that
the Western response to deteriorating materials and adverse conditions must be learned from
experience with the advice and support of the people of the region. Preservation projects
should build towards the achievement of some coherent plan, and all projects originating in the
West, whether for training or preservation production, should be seen as merely transitional to
the time when the nations of Southeast Asia are able to mount and support their own
preservation programs to begin to stem the tide of deterioration sweeping over their
collections.

Notes


2. Judy Ledgerwood, "Worldwide Efforts to Preserve the Khmer Language Materials" (Paper
   presented to the Second International Conference on Cambodia, Washington DC, 30th
   September 1988).


   October 1996) 2.

5. V. Raghavan, Preservation of Palm-Leaf and Parabaik Manuscripts and Plan for


8. Badgley, "Exchange and Conservation Programs," Burma Debate 2 (No. 2, April/May

   the Universities' Central Library and the University of Mandalay, 20th to the 28th of March

10. John F. Dean, "Preservation Survey and Conservation Visit to Thailand, Vietnam, and
    Cambodia, 7th January to 8th February 1991," 15.


    International Branch, National Library of Australia.

13. See Dean, "Preservation of Books..." American Archivist for detailed description of the
    forms of enclosure and methods of construction.

14. David P. Chandler, Brother Number One: A Political Biography of Pol Pot. Chiang Mai,


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