

SPNHC Newsletter

Society for the Preservation of
Natural History Collections

February 1993
Volume 8 Number 1

PRESIDENT'S REPORT

A new year has come and a number of important events have happened since my last report to the membership. The election results are in earlier this year due to a change in procedures and a fine effort by the Elections Committee. I am pleased to announce that Sally Shelton and Greg Brown were elected as Members-at-Large and will be taking office at our meeting in Victoria. An excellent slate of candidates stood for office and I am counting on their continued activity in the hard working committees.

It is now confirmed that we will be holding a joint annual meeting with the Association of Systematic Collections at the Missouri Botanical Garden in 1994. I am very excited about this opportunity. Directors and collections staff often seem to look at the same problem from different ends of the tunnel. This meeting will give us a chance to discuss common issues and to perhaps understand the issues and constraints from each others' perspective. To get things going, Elaine Hoagland (Executive Director, ASC), Carolyn Rose, Cathy Hawks and I met to discuss the programme. It is tentatively planned to have Committee and Council meetings the first day; 1 1/2 days of joint sessions with invited speakers, working group sessions and plenary discussion sessions where we will look at global collections issues and consider how we can follow up the resolutions from Madrid; a 1/2 day for the Annual General Meeting and Special Interest Group sessions (e.g. Herbarium Collection Managers); a day of technical sessions for SPNHC members to present papers; and a Training Workshop. With a shorter time for technical papers we will have a greater emphasis on the poster session. The local committee will look after local arrangements but because of the special nature of this meeting Carolyn Rose will establish a committee to develop the programme in conjunction with ASC, to take care of advertising and to produce the Programme and Abstracts. This committee should be in place and meet in Victoria to prepare a plan of action. Carolyn will be approaching members to work on this committee and it is important that she receive our help.

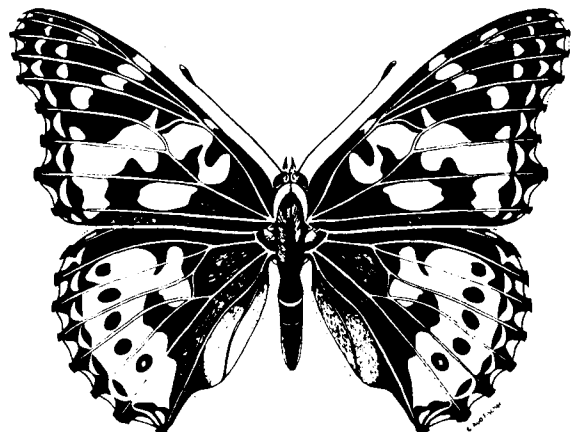
The book *Storage of Natural History Collections - Ideas and Practical Solutions* is now published. It is 364 pages and contains 113 contributions plus a Glossary and a Materials and Supplies List. It was a tremendous effort and special recognition is due to Carolyn Rose, Amparo de Torres, Karen Ackoff and Eileen O'Hara whose efforts over the last two years have been monumental. Thanks are due to the

authors, reviewers and members of the Conservation Committee. This publication will undoubtedly prove to be an important resource for those charged with the care of natural history collections.

I represented the Society at a meeting to review the draft report produced by the National Institute for Conservation Project on the Conservation of Natural History Collections. A final meeting will be held later this spring to review the finished report. While in Washington, I sat in as an observer at a meeting to plan the organizational structure of the World Council of Collections Resources. It is planned to have an office in Paris and it is hoped that the documentation will soon be in place to have Non-Governmental Organization status. I also met with Janet Waddington in Toronto to sort through old SPNHC files before sending Phil Angle a care package for the archives. In true bureaucratic fashion I left Janet with the bulk of the work to complete.

The Society is in a healthy state financially and had 692 Members from 28 countries in 1992. Plans are well under way for this year's meeting in Victoria and I look forward to seeing many of you there. Each meeting is better the last and I am sure 1993 will continue this trend. The professionalism and enthusiasm that members put into their work is heartening and bodes well for the future of collections and the Society.

. Jerry Fitzgerald, SPNHC President,
Canadian Museum of Nature (#1)



SPNHC '93 Deadlines

Early Registration	March 25
Abstracts Due	March 25
Housing Reservations	March 30

SPNHC '93
8 - 13 June 1993
Victoria, B.C., Canada

The Society for the Preservation of Natural History Collections will hold its 8th Annual Meeting at the Royal British Columbia Museum in Victoria, 8-13 June 1993. The meeting will focus on innovative preservation techniques, collections management and archival concerns.

"It is our goal to have SPNHC delegates leave Victoria with valuable collection information that will enhance their study," said Grant Hughes, Chair of the Local Committee. "There will be many new ideas exchanged through workshops and presentations to show how to best preserve collections for study of biodiversity."

In addition to furthering collection knowledge, the Museum will offer a variety of entertaining excursions. Delegates may search for seabird colonies, go whale watching or enjoy a relaxing sail around Victoria's coastal islands.

Victoria is located at the southern tip of Vancouver Island off the West Coast of Canada (153 miles North of Seattle) and is easily accessible through its international airport. Or, delegates can take a short ferry trip from Vancouver or Seattle.

SPNHC '93 will be hosted by the Royal British Columbia Museum in cooperation with the Cultural Resource Management Program at the University of Victoria. To become a SPNHC member, contact Ann Pinzl at (702) 687-4810 (#2). For a complete SPNHC '93 conference package, contact Grant Hughes at (604) 387-3685 (#3). SPNHC members will receive conference packages in February.

WHAT IS THE MATTER WITH POLYSTYRENE?

Polystyrene products are produced in many shapes and forms and have been used to hold all types of natural history specimens, whether wet or dry, invertebrate or vertebrate, animal or plant. I began using polystyrene boxes in 1988 to hold some of our dry mollusc collections with the intention of standardizing these boxes as one type of container for holding our large bivalves and gastropods. There are several advantages to the use of polystyrene boxes: a) they safely enclose and protect the specimens and labels; b) they are transparent thus allowing quick visual access to the specimen or label without actually having to physically open the box or remove the cover of a box to determine what taxa you are examining; c) they are available locally and cost anywhere from \$1 to \$2 less than other similar-sized products made of acid-free paper.

Several questions have arisen, however, in relation to the use of polystyrene boxes to store, in particular, calcium carbonate-based specimens such

Archives in Natural History Collections

A symposium presented by the Education and Training Committee of SPNHC will take place on the last day of the annual meeting, Saturday, 12 June, 1993, in Victoria, British Columbia. Look for the registration form in your conference packet. Topics covered in the morning talks will include archive surveys, disaster planning, and the politics of establishing an archive. The afternoon will contain four sessions (each participant may choose to attend two); a general introduction to setting up an archive; paper records; photographic material; and magnetic media. The instructors will include: Alan Bain, Associate Archivist at the Smithsonian Institution; Kristine Haglund, Archivist, Denver Museum of Natural History; Karen Motylewski, Director of Field Service at the Northeast Document Conservation Center in Andover, Massachusetts; and from the Conservation Department of the British Columbia Archives and Records Service Barry Byers and Betty Walsh. Contact Beth Merritt at (513) 345-8508 (#4) for more information.

Just Published!

**Storage of Natural History Collections -
 Ideas and Practical Solutions**
 364 pages - 113 contributions

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as mollusc shells and bird eggs. The primary concern is whether polystyrene is a safe material for holding these specimens.

Polystyrene, an aromatic hydrocarbon made by polymerization of styrene monomer, is thought to be chemically inert under normal collection room conditions and therefore safe for conservation purposes. There are, however, concerns related to: a) an anecdotal example of mollusc specimens which appear to have developed white crystalline deposits commonly called Byne's Disease (J. Fenn, pers. comm.), and b) a list of degradation products which includes formaldehyde, formic acid and acetic acid, published by Greathouse and Wessel (1954). The purpose of this article is to introduce information about polystyrene in the hopes of progressing towards the resolution of its use in the conservation of natural history collections.

There are two grades of polystyrene: **general purpose** (also called crystal grade) and **high impact**

(toughened grade). General purpose polystyrene is clear, transparent and brittle. Food contact grade polystyrene is a purified general purpose polystyrene specifically for use with food products (e.g. cough drops). High impact polystyrene (HIPS) is polystyrene which has been modified by the addition of a rubber-like compound during polymerization for the purpose of making the polystyrene less brittle. The frequently used modifier rubber is polybutadiene. This grade of polystyrene may appear anywhere from clear to opaque depending on the proportional rubber component.

According to Greathouse and Wessel (1954), the degradation of polystyrene is caused by ultraviolet light, heat and oxygen. Visual evidence of polystyrene degradation due to photooxidation (exposure to ultraviolet light in the presence of oxygen) is yellowing. Crazing, or the formation of minute cracks on the surface of the polystyrene may be due to photooxidation or may be caused by environmental stresses or exposure to certain liquids or gases.

Offgassing of materials from storage containers or cabinets that are holding the specimens can damage polystyrene containers. For example, exposure of polystyrene to high concentrations of pesticides such as paradichlorobenzene (PDB) will cause the polystyrene to soften or plasticize. Low concentrations of PDB may cause polystyrene to craze. PDB is no longer recommended for use in collections due to health and safety reasons though residual concentrations of the pesticides may prohibit the use of polystyrene products for these particular specimens or cabinets. Similarly it is possible that reactive compounds inherent in specimens or artifacts may cause deterioration of polystyrene.

Photooxidation studies by Mailhot and Gardette (1992) have demonstrated the degradation of polystyrene exposed to short wavelength ultraviolet light (254 nm) and long wavelength ultraviolet light (>300 nm). They have shown that the degradation products emitted by polystyrene after photooxidation at room temperature and long wavelength ultraviolet light are benzaldehyde, benzoic acid, acetophenone, formic acid, acetic acid, benzoic anhydride, dibenzoylmethane, and benzene. These products closely resemble those observed by Greathouse and Wessel: benzene, methyl ethyl ketone, dimethylbenzenes, alcohols, formaldehyde, formic acid and acetic acid.

The benzoic, formic and acetic acids are indeed cause for alarm when dealing with carbonate-based specimens. Although the relative amounts of these acids produced by photooxidation is not known, it is projected to be low because these acids are secondary products of the primary polystyrene degradation products. The question that remains

unanswered is whether the concentration of acid produced by photooxidation is great enough to cause concern.

The majority of institutions maintain their natural history collections inside cabinets, away from sources of ultraviolet light. Thus the potential for polystyrene degradation through photooxidation is minimal. Degradation of polystyrene due to thermal oxidation at room temperature occurs at negligible rates (Maecker and Armentrout, 1989). Therefore, given the available evidence it appears as though polystyrene products are safe for use in conservation purposes under what most of us would consider normal collection room conditions.

So what matters at this point is any information that readers may have to offer regarding your experiences with polystyrene products. I would like to hear from anyone who has used polystyrene, particularly boxes, and has noticed the development of any peculiarities to the polystyrene, or has heard or read of any negative effects on specimens. The effort will be greatly appreciated and will go a long way to resolving the safety matter of using polystyrene products to hold natural history specimens.

. . . . Sheila Byers, Invertebrate Zoology,
Royal Ontario Museum

I would like to thank Scott Williams, Canadian Conservation Institute and Julia Fenn, Royal Ontario Museum, for their long discussions and editorial suggestions on this subject.

REFERENCES

- Greathouse, G.A. and C.J. Wessel (eds.), 1954. *Deterioration of materials, Causes and preventive techniques*, p. 565-567, Reinhold Publishing Corp.
- Maecker, N.O. and D.N. Armentrout, 1989. Styrene polymers, Degradation, p. 180-193, *in* The Encyclopedia of polymer science and engineering, v. 16.
- Mailhot, B. and J.-L. Gardette, 1992. Polystyrene photooxidation: a pseudo wavelength effect. *Macromolecules* 25:4127-4133.

IN PROGRESS:

Garden Park Paleontology Society (GPPS) under the auspices of the Bureau of Land Management (BLM) is establishing an on-site paleontology visitor center and scientific research facility. Although the building is not yet in place, they are already receiving collections. The GPPS, BLM and Florissant Fossil Beds National Monument will host the 1994 National Park Service Conference on Fossil Resources and one day will be devoted to the Garden Park Fossil Area.

Alabama Museum of Natural History is showing "Faces of Destiny", an exhibition of nineteenth century photographs taken of Native American leaders who participated in the 1898 Indian Congress held in Omaha, Nebraska. The photographic collection is owned by the Haskell Indian Junior College in Lawrence. The exhibit, originally organized

by the Spencer Museum of Art at the University of Kansas, will be on display until March 24, 1993.

Burpee Museum of Natural History is in the midst of cataloguing and curating the backlog of Native American artifacts collected in northern Illinois by Milton Mahlberg, Richard Reece and Joseph Bauxar in the 1950s. The collection consists of ceramics, lithics and zooarchaeological materials.

Bishop Museum will house the remains of two largely unknown species of Hawaiian birds, a flightless rail and a large flightless goose. The fossil bones were discovered in a lava tube by Jon Giffin, a biologist with the Division of Forestry and Wildlife, Department of Land and Natural Resources. Carla Kishinami, Zoology Collections Manager and SPNHC member, was sent to investigate and collect the specimens.

Natural Sciences Group of UKIC may soon become a reality. A working party meeting is called for February 11 at Yorkshire Museum to discuss a constitution, aims and objectives and rules that will bring together the UK collection care and conservation communities.

Institute of Museum Services, Conservation Project Support Grant Awards for fiscal year 1992 went to some natural history museums and collections, including: Peabody Museum of Natural History, New Haven; Florida Museum of Natural History, Gainesville; Chicago Academy of Sciences; Field Museum of Natural History, Chicago; Illinois State Museum, Springfield; Museum of Natural History, Lawrence; Springfield Science Museum; Museum of the Rockies, Bozeman; University of Nebraska State Museum, Lincoln; Buffalo Museum of Sciences; Schiele Museum of Natural History, Inc., Gastonia; Academy of Natural Sciences, Philadelphia; Mammoth Site of Hot Springs, Inc.; Dallas Museum of Natural History; Texas Memorial Museum of Univ. Texas, Austin; Utah Museum of Natural History, Salt Lake City; Virginia Museum of Natural History, Martinsville.

FROM OUR CORRESPONDENTS:

The Missouri Botanical Garden held its 39th annual Systematics Symposium on October 2-3, 1992. As part of the symposium, an Herbarium Curator's Meeting was held to discuss topics of mutual interest and to serve as a forum for new ideas on management and care of collections. Jim Solomon of the Garden headed the informal session attended by about 30 individuals interested in curatorial matters. Topics discussed: 1) The question of charging for access to collections and their data was raised. Although the "for-profit" users may have been the impetus for discussion, it was soon realized that the non-profit patrons also take their toll on collection resources and that they may

well be substantially funded (e.g. through grants) and thus capable of paying access fees. Examples of some successful and less than successful attempts to charge were given. Concern was also expressed about the appearance and/or actual occurrence of denying use to sister institutions which would be politically difficult. 2) In regard to good rapport with clients, comments were solicited about relations with The Nature Conservancy. 3) Because of the recent *Taxon* article indicating that glued specimens should not be frozen, corroboration was sought and no one in the group had observed any such occurrence. The subject of freezing continued on into our discussion of pest control. Several attendees referred to the SPNHC workshop in regard to what's new and known about pest control. 4) The last subject to be addressed was overseas shipments and permits. Past difficulties were described with Miami being the frequent locale for such problems. 5) Dave Boufford of Harvard informed us that the Gray Cards are being computerized and that hard copy in the form of cards and microfiche will no longer be available.

. Ann Pinzl, Nevada State Museum

Recently I received a product cushioned with a new styrofoam-like packing pellets called *Eco-Foam*. The accompanying flyer describes the pellets as biodegradable and composed of 95% corn starch and 5% water-soluble organic polymer. They dissolve when dropped in water. They may be disposed of by flushing, rinsing or watering with a hose. They can be spread on the ground where rain falls or incorporated into compost piles. At first, this seems like a responsible, environment-friendly new product, however, it raises some serious questions for those of us who save these packing chips for reuse. What happens to the cushioned object if the package gets wet? The pellets feel softer than foam chips. What are the lifetime and cushioning ability of these chips? How can these chips be distinguished from styrofoam if they are mixed together? They look very similar. Will the corn starch pellets attract insects and therefore cause storage problems? My first reaction is to not save these chips for reuse. I would like to hear from any members who have experience with or thoughts on the use of these chips.

. Julia Golden, University of Iowa (#20)

Needed - Back Issues
of *Collection Forum*, vol. 8, no. 1

Because of increased membership, the supply of CF 8(1) is completely exhausted. If any member has received an extra copy, would he/she please return it to Suzanne McLaren (#17)? Your kind return of that copy will help someone else complete their series holdings.

Missing Members

We do not have current addresses for **Jennifer S. Davis**, formerly of Barnet, VT or **Justin Wood**, formerly of Lawrence, KS. If any one knows a forwarding address for either member, please notify Sue McLaren (#17).

HEALTH AND SAFETY NOTES

Through the courtesy of Monona Rossol, SPNHC receives *ACTS FACTS*, a monthly review of Federal regulations and notices which affect the health and safety of artists, theater or crafts people, and is equally applicable to museum staff. It is published by Ms. Rossol and is available to individuals for \$10 per year (#5). Beginning with this issue, Linda Thomas, Pratt Museum, Amherst, MA will summarize the items of interest.

v.6(2):1 Aldehydes. A National Institute for Occupational Safety (NIOSH) bulletin shows that this class of chemicals, which includes formaldehyde and formaldehyde substitutes (e.g. acetaldehyde and glyoxal), causes cancer in 2 species of animals when inhaled. Aldehyde may be used in embalming fluids and white glues. (#6)

v.6(3):2 Pesticide Inert Ingredients. These are non-pesticide chemicals in pesticide products which serve other functions such as solvents or carriers. Some of these are very toxic or sensitizing and may be the responsible agent causing so-called pesticide reactions in people. A copy of the revised listing of these chemicals can be obtained by writing to the EPA. (#7)

v.6(4):2 Erionite. This is a naturally occurring mineral of the fibrous zeolite class found in sedimentary rocks of the SW and the Pacific NW. The National Toxicology Program (NTP) now lists this as a carcinogen (#8).

v.6(6):1 New Formaldehyde Guidelines. OSHA has issued stricter standards for occupational exposures to formaldehyde and has added safety requirements for employers. The new rule lowers the 8 hour time weighted average permissible exposure level (PEL) from 1 ppm to 0.75 ppm, provides for medical removal instead of just medical surveillance of potentially affected individuals, establishes new label requirements, and also provides for annual training of employees exposed to levels of 0.1 ppm or more. More detailed information can be found at local OSHA offices or from #9.

v.6(7):1 Methyl Bromide. The NTP has studied the potential for long-term hazards in this gas which is used as an insecticide fumigant, in fire extinguishers and as a refrigerant. No carcinogenic effect was observed, however, degenerative and persistent changes in the brain, heart and damage to the nose occurred.

v.6(7):5 TLV Updates and Carcinogen Reclassifications from the American Conference of Governmental Industrial Hygienists (ACGIH) -- a partial list: 1) Acetaldehyde (now listed as an animal carcinogen); 2) p-Dichlorobenzene (PDB) (about equally as hazardous as naphthalene); 3) Ethyl Bromide as hazardous as methyl bromide; 4)

Benzene (now listed as a confirmed human carcinogen).

v.6(8):2 Ink Identification. U.S. Secret Service can date and identify over 6000 inks in use since the early 1990s.

v.6(9):3 Methyl Ethyl Ketone Peroxide (MEKP). The NTP accepted a report which notes that this casting polyester resin is highly toxic through skin exposure. Exposure on mice and rats resulted in tissue death, inflammation and skin lesions; those with the latter also showed changes in the spleen and bone marrow.

v.6(9):4 Methylenedianiline (MDA). OSHA has set stricter standards of use for this proven carcinogen which is found in epoxy resin systems, foam polyurethane products and some dyes and pigments. Exposure can occur through ingestion, inhalation and dermal absorption. Alternatives should not include 2-nitropropane an d4-vinyl-1-cyclohexane diepoxide or the glycidyl ethers and glycol ethers.

v.6(10):2 Latex Allergies. The FDA has published another article on allergies to latex. Latex is found in numerous products including molding material, gloves and rubber masks. People with severe allergies may want to carry an emergency epinephrine kit and wear a Medic Alert bracelet.

v.6(11):2 Your Right to Know. The U.S. Supreme Court struck down all state Right-to-Know and other worker protection laws except those which are part of a plan approved by the U.S. Secretary of Labor. Only Federal OSHA-approved state laws will stand. The purpose of this ruling seems to be to make more uniformity in the laws.

v.6(12):2 Plague in Museum Specimens. *Yersinia pestis*, which causes plague, was detected in 2 autopsied bushy-tailed woodrats by a mammalogist at the Royal British Columbia Museum. Safety measures were instituted which included biological safety cabinets; use of gloves; goggles and face masks; daily disinfecting of the laboratory floor; freezing nesting material before handling; and dilution of waste liquids with bleach.

ANNOUNCEMENTS

Museum Studies Stipend Awards. The George Washington University Museum Studies Program has received a major grant from the National Endowment for the Humanities, Division of Preservation and Access, in order to broaden educational opportunities for those interested in collections management and collections care. The purpose of the grant is to encourage the development of collections care administrators - individuals who aspire to policy-making museum positions that require a comprehensive grasp of collections management and collections care principles.

The grant provides a limited number of stipend awards for graduate level study at the George Washington University. For those holding only an undergraduate degree, the study must be part of a program leading to a master's degree in Museum Studies. For individuals with an appropriate M.A., the course of study can be accomplished in one academic year as part of a Certificate Program in Museum Studies.

Stipends are competitive and they cover only a portion of expenses. Stipend applications must be received by February 15. Interested persons are urged to request application information as early as possible because application forms take time to complete. Persons already working in the museum field are especially encouraged to apply. For application forms, please contact: The Director, Museum Studies Program, Academic Ctr., T-215, George Washington University, Washington, D.C. 20052; tel: (202) 994-7030.

Controlled Wildlife I: Federal Permit Procedures, 1992 will soon be published. ASC announces the much awaited Second Edition of this guide, revised and updated since the 1984 edition. It summarizes in common language the statutes that control the use of wildlife, and contains information on general permit procedures, addresses of key federal agencies, and samples of U.S. and foreign permits. Through March 31, 1993, the book may be purchased for the discount price of \$35 (regular price \$40). The original editions of Volume II: *Federally Controlled Species* and Volume III: *State Permit Procedures* are still available for \$40 each. The entire set is available for \$100. (#10)

Museum Assessment Programs (MAP). MAP helps museums review their current status and evaluate how well operations and programs reflect their institutional purpose. Through a time-tested process of self-study and peer review, MAP helps a museum plan for the future and reach its full potential. Application deadlines for MAP for 1993 have been changed from previous practice. There will be only one deadline for MAP II and MAP III. For information and to request an application, contact: Museum Assessment Programs, American Association of Museums, 1225 Eye Street, NW, Washington, D.C. 20005; tel: (202) 289-9118.

MAP programs and deadlines are:

MAP I (Institutional Assessment) - April 30, 1993 and October 29, 1993

MAP II (Collections Management Assessment) - January 29, 1993

MAP III (Public Dimension Assessment) - February 26, 1993

Institute for Museum Services. There are new telephone and FAX numbers for the Institute for Museum Services: Main telephone number: (202)

606-8536 and FAX: (202) 606-8591. Deadline for Conservation Project Support Grants is April 2, 1993.

University Products has installed a new toll-free customer FAX number: 1 (800) 532-9281 which is available in the U.S. and Canada. In addition, the company has also added a toll-free number which puts the customer in touch with the Northeast Document Conservation Center. For more information, call or write to: University Products, Inc., P.O. Box 101, 517 Main St., Holyoke, MA 01041; tel: (800) 762-1165.

Abbey Publications, publishers of *Abbey Newsletter* and *Alkaline Paper Advocate*, has moved. The new address and telephone are: 7105 Geneva Dr., Austin, TX 78723; tel: (512) 929-3992.

Entomation offers *Botanical Clip Art* in an easy-to-use HyperCard format (\$18 + \$1.50 s&h). Illustrations of botanical and horticultural subjects are copyright free. Also available are: *Insect Collections of North America* in FileMaker Pro, listing over 100 entomology research collections (\$10). For information, contact: Entomation, 2742 Beacon Hill, Ann Arbor, MI 48104-6502; tel: (313) 971-6033.

Slide Rule for Calculating Cushioning. The Canadian Conservation Institute circular slide wheel is based on the premise that the greatest hazard an item will face during shipment is a damaging level of shock. With the help of the slide rule, a packer can quickly select a cushioning material that will provide a quantifiable level of shock isolation by dialing the weight of the package, the weight of the object, and the object's surface area. The performance of seven different materials can be compared simultaneously. Available from CCI (#15) for \$20 Canadian.

JOBS

U.S. Department of the Interior Fish and Wildlife Service

The National Fish and Wildlife Forensics Laboratory, Morphology Section, anticipates future openings for Museum Technicians and Collections Manager position(s). Please note that there are no available positions at the moment, but we anticipate additional personnel openings in the future. If you would like to be placed on the computerized mailing list to insure that you are notified of openings in this area, please send an abbreviated C.V. and brief letter of interest to:

Stephen D. Busack
Chief, Morphology Section
USFWS National Forensics Lab
1490 East Main Street
Ashland, OR 97520

JOBS (continued)**American Museum of Natural History****Department of Mammalogy**

Collection Registrar: Under Curator's direction, plan/supervise staff on computer-based information retrieval system; input collection data; and supervise/coordinate the renovation of new storage space and reorganization of specimens for storage. Applicant must have a Bachelor's Degree or higher in the biological sciences or related field, experience with information systems and bibliographic research. Familiarity with systematic zoological collections preferred. Salary to \$30,000 per annum, depending on experience. Excellent benefits. An Equal Opportunity Employer. Submit resume to:

Mr. Lee, Personnel Department (P)
American Museum of Natural History
Central Park West at 79th Street
New York, NY 10024-5192.

MEMBER NEWS: In December, 1992, **Dan Faber**, first President and a founding member of SPNHC, received a lifetime achievement medal. He was presented with the medal, created by Queen Elizabeth to mark the 125th anniversary of the Confederation of Canada, by Beryl Gaffney, Member of Parliament. . . **Jerry Fitzgerald** has a new FAX number: 613 990 8818. . . **James D. Harmon** is the Western States Museum Pest Management Advisor for AgriSense; contact him at Harmon Preservation Pest Management, 1837 S. Olive Avenue, Alhambra, CA 91803, (213) 878-0258. . . **Katherine J. Andrew** is now a Free-Lance Geological Conservator and Collection Care Consultant; reach her at: 136 Hillside Road, Great Barr, Birmingham, B43 6NQ, UK, tel: 021 358 0245. . . **David Hill** has moved to the new post of Conservation Development Officer with Area Museum Council for the South West. . . We were saddened to hear of the death of **Marie Lawrence**, Department of Mammalogy, American Museum of Natural History. In her honor, the Museum Library established the Marie A. Lawrence Memorial Book Fund. Contributions may be made by check payable to: American Museum of Natural History/Lawrence Fund and sent to: AMNH Library, Central Park West at 79th Street, New York, NY 10024.

PUBLICATIONS OF INTEREST

Are you throwing away a valuable asset? Association of Systematic Collections, 1992. 1 p. A flyer on Archives Guidelines, and information about grants and resources. (#10)

Planning for field safety. American Geological Institute, 1992. \$14.95 + \$4 U.S.; \$5 Canada (s&h). Provides practical information on choosing equipment, medical preparations, food, safe camping, weather and wildlife cautions. (#11)

Bibliography on Disaster Preparedness. Intermuseum Laboratory, 1990. Free. (#12)

The ABCs of Collection Care. Gillies, T. and N. Putt, 1992. Manitoba Heritage Conservation Service, 150 p. Revised reference on basic conservation and guide for training new museum workers. (#18)

A guide to handling anthropological museum collections. Odegaard, N., 1992. Western Association for Art Conservation, 40 p. \$8.95 (\$6.60 for 10 or more copies) A manual for people who do not have formal training in handling artifacts. (#19)

Editorials and Guest Editorials in Mineralogical Record examine issues relating to collections and museum exhibition. See: **Farewell to the BM(NH).** Wilson, W.E., 1992, 23(3):206; **What is to be done?** Smith, B., 1992, 23(5):374-375; **What is the future of mineralogical exhibits in museums?** Goldstein, A., 1992, 23(6):454.

Nehemiah Grew's Musaeum Regalis Societalis. Wilson, W.E., 1991. Mineralogical Record 22(5):333-340. An historical account of the first illustrated catalogue of the Royal Society's collection which is now considered lost except for a very few specimens.

The Americans With Disabilities Act of 1990. Theobald, M.M. and H.T. Tucker jr., 1992. AASLH Technical Leaflet bound with History News 47(4):8 p. What the act entails and how it may affect museums as employers and as public accommodations.

The relationship between type of institution and institutional characteristics. Cato, P.S., 1992. Museum Management and Curatorship 11(2):153-170. The way an institution perceives itself affects its purpose and some characteristics such as collections and research.

Museums, museums, museums. Sande, T.A., 1992. Museum Management and Curatorship 11(2):185-192. Personal view of museums and current trends.

Codes of museum ethics and the financial pressures on museums. Schmidt, F., 1992. Museum Management and Curatorship 11(2):257-268. Discusses sections of the ICOM Code.

Functions of museums and The Museum of Science, Boston. Kirdahy, C., 1992. Museum Archivist 6(2):11-14. From a talk given at a meeting of the New England Archivists.

Documenting museums as institutions and as purveyors of culture: Records, papers, and special collections. Bain, A., 1992. Museum Archivist 6(2):14-21. A paper given at the 1991 Society of American Archivists.

Sweden's biological museums. Wonders, K., 1992. Curator 35(3):190-205. The story of Gusthaf Koltoff's four offbeat natural history museums - 1893 to present.

PUBLICATIONS (continued)

- Natural history museums and their role in conservation: A Chinese perspective.** Hua Huilun and Zhou Manzhong, 1992. *Curator* 35(3):206-214. The Shanghai Natural History Museum's contributions to wildlife preserves and public education.
- New life for an old hall.** Dyer, J., 1992. *Curator* 35(4):268-284. A prototype for restoring aging diorama halls at Denver Museum of Natural History.
- Preservation of library and archival materials: A manual.** Northeast Document Conservation Center, 1992. 160 p. \$20 + \$3.50 s&h. Technical leaflets on collection care with emphasis on prevention of deterioration of whole collections. (#13)
- Wood floor management.** Purser, M.W., 1992. AASLH Technical Leaflet bound with *History News* 47(5): 8 p. Guide to analyzing problems, and care and resurfacing of floors in historical structures.
- Archival materials in the history museum.** Eisloeffel, P. and L. Gavin, 1992. AASLH Technical Leaflet bound in *History News* 47(3):8 p. Viewing documents as artifacts helps a museum create and maintain an archives.
- Evaluation of the stability, appearance and performance of resins for the adhesion of flaking paint on ethnographic objects.** Horton-James, D., S. Walston and S. Zounis, 1991. *Studies in Conservation* 36(4):203-221. 19 resins tested; Plextol B500, an acrylic dispersion, was selected for use in the Australian Museum Conservation Laboratory.
- The use of a commercial pheromone trap for monitoring *Lasioderma cerricornis* (F.) infestations in museum collections.** Gilberg, M. and A. Roach, 1991. *Studies in Conservation* 36(4):243-247. Identified presence of adult cigarette beetles; aided in timing fumigation (includes pesticides used) in the Australian Museum anthropology collections.
- Monitoring colour change in textiles on display.** Ford, B.L., 1992. *Studies in Conservation* 37(1):1-11. Portable tristimulus color analyzer was used to monitor Asian textiles over a three-month period.
- Safer solubility.** Thorn, A., 1992. *Studies in Conservation* 37(1):12-21. Reasonably safe (31) and not-as-safe (5) solvents discussed; a table indicates possible substitutions for common solvents.
- Wool and reduced sulphur gases in museum air.** Brimblecombe, P., D. Shooter and A. Kaur, 1992. *Studies in Conservation* 37(1):53-60. Wool releases a number of reduced sulphur gases during storage; release is enhanced by light or heat; cautions are expressed for wool displayed with metal objects.
- Solving museum insect problems: Chemical control.** Dawson, J.E. and T.J. Strang, 1992, Technical Bulletin no. 15, Canadian Conservation Institute, Ottawa, 26 p., English and French. (#15)
- Life after death: The conservation of natural history collections.** 1992, UKIC, London. £6 (US \$12) UKIC members; £8 (US \$16) non-members. Preprints from the Feb. 1992 meeting held in Ipswich; practical conservation techniques. (# 16)
- Environmental monitoring.** Clark, R., 1992. *Museums Journal* 92(3):39. Very brief description of routine established at the National Maritime Museum in Greenwich (UK).
- Museum fumigation and the Montreal protocol.** Cassar, M., 1992. *Museums Journal* 92(6):40. Brief comment on fumigation agents that are being banned and others that are being evaluated.
- Paintings: The (show)case for passive climate control.** Bosshard, E., 1992. *Museum* 173(1):46-50. Using silica gel with a visible paper hygrometer, RH can be controlled with minimal maintenance.
- A storage system for oriental scrolls.** Johnson, J.S., 1992. *Curator* 35(3):219-224. Recommendations from the Museum Support Center.
- Degradation of cellulose nitrate adhesive.** Shashoua, Y., S.M. Bradley and V.D. Daniels, 1992. *Studies in Conservation* 37(2):113-119. Investigation of artificially- and naturally-aged cellulose nitrate adhesives suggest they are stable for at least 30 years and may have a lifetime of 50-100 years under museum conditions in a temperate climate.
- Materials issues in art and archaeology II.** Vandiver, P.B., J. Druzik and G.S. Wheeler (eds.), 1991. *Materials Research Society Symposium Proceedings*, vol. 185, 844 p., Pittsburgh, PA. \$52 (US); \$58 (outside US). Hundreds of papers from the 1990 conference; each of the 14 sections has an overview.
- Handbook of reactive chemical hazards (4th ed.).** Bretherick, L., 1990. 2030 p. Butterworths, London. A valuable reference for the conservation laboratory.
- Attitudes to disposal from museum collections.** Lewis, G., 1992. *Museum Management and Curatorship* 11(1):19-28. Museum professionals must control this issue, not legislators.
- Disposals from museum collections.** Besterman, T., 1992. *Museum Management and Curatorship* 11(1):29-44. Offers ethical imperatives to bear in mind.
- Don't abbreviate Chinese names.** ZhaoRan Xu and D.H. Nicolson, 1992. *Taxon* 41(3):499-504. Romanizing causes loss of information and confusion, and does not save space.

PUBLICATIONS (continued)

- Defining curation.** Murdoch, J., 1992. *Museums Journal* 92(3):18-19. Comments on the nature of a curator's position in light of the workings of the Museum Training Institute (UK).
- How we manage curators.** Wagemakers, S. and T. Wagemakers, 1991. *Museum* 172(4):234-237. Creation of a coordinator for curators at the Museum of Ethnology in Rotterdam.
- Mineral research in museums.** Dunn, P.J. and J.D. Grice, 1991. *Mineralogical Record* 22(1):7-10. Description of what curators do.
- Some aspects of modern mineral specimen curation.** White, J.S., 1991. *Mineralogical Record* 22(4):251-254. Another view of a curator's responsibilities other than research.
- Curatorial identity.** Kavanagh, G., 1992. *Museums Journal* 92(10):27. A view of "what is a curator?".
- Bibliography of catalogues of type specimens in world's zoological and palaeozoological collections.** Wiktor, J. and R. Wladyslaw, 1991. 308 p., Wroclaw University Press. (ISBN 83 229 0541 8).
- What is a specimen?** Molloy, B.P.J., R.K. Brummitt, P.S. Short and F.J. Breteler, 1992. *Taxon* 41(4):505-507. Discussion of what botanists and the International Code of Botanical Nomenclature mean by a "specimen".
- A survey of color charts for biological descriptions.** Tucker, A.O., M.J. Maciarello and S.S. Tucker, 1991. *Taxon* 40(2):201-214. One color chart will not satisfy botanical and zoological needs; Royal Horticultural Society Colour Chart (c. 1986) is preferred for botanical use.
- The Quito Herbarium (QCA): 100,000 important collections from Ecuador.** Jorgensen, P.M., C. Ulloa Ulloa, H. Borgtoft Pedersen and J.L. Luteyn, 1992. *Taxon* 41(1):51-56. Describes development of Ecuador's largest herbarium, growing by 11,500 sheets per year; mentions exchange and loan policies.
- A review of current approaches in the pretreatment of bone for radiocarbon dating by AMS.** Hedges, R.E.M. and G.J. Van Klinken, 1992. *Radiocarbon* 34(3):279-291. An overview of improvements for sample purification.
- Experiments on ¹⁴C dating of contaminated bone using peptides resulting from enzymatic cleavage of collagen.** Van Klinken, G.J. and R.E.M. Hedges, 1992. *Radiocarbon* 34(3):292-295. Description of process to isolate small peptides from collagen.
- Radiocarbon dating of bone osteocalcin: Isolating and characterizing a non-collagen protein.** Ajie, H.O., et al., 1992. *Radiocarbon* 34(3):296-305. Describes process that has promise for fossil bones in which collagen has been depleted.
- Saturated NaCl-CTAB solution as a means of field preservation of leaves for DNA analyses.** Rogstad, S.H., 1992. *Taxon* 41(4):701-708. Method of preservation and storage described.
- Post-collection taphonomy: Shell destruction and the Chevrolet.** Flessa, K.W., M. Kowalewski and S.E. Walker, 1992. *Palaios* 7(5):553-554. Fossil shells can be broken by poor packing and transportation methods.
- The discreditation of mineral species.** Dunn, P.J., 1991. *Mineralogical Record* 22(2):91-94. Guidelines endorsed by the Commission on New Minerals and Mineral Names.
- The light-induced alteration of realgar to pararealgar.** Douglass, D.L., Chichang Shing and Ge Wang, 1992. *American Mineralogist* 77:1266-1274. Transformation of As₂S₃ took place at wavelengths between 500 and 670 nm.
- Results and methods in the radiocarbon dating of pottery.** Hedges, R.E.M., Chen Tiemei and R.A. Housely, 1992. *Radiocarbon* 34(3):906-915. Compares results of several dating projects, some give credible dates, in others no date is possible.
- Radiocarbon results for the British Beakers.** Ambers, J., S. Bowman, A. Gibson and I. Kinnes, 1992. *Radiocarbon* 34(3):916-927. Showed no obvious relationship between pottery style and calendar date of deposition.
- Dating Pre-Columbian museum objects.** Van Strydonck, M.J.Y., K. Van Der Borg and A.F.M. De Jong, 1992. *Radiocarbon* 34(3):928-933. Tested textiles, bamboo from looms, feather carpet and straw from a clay mask; discusses problems with sample pretreatment.
- Taming the beast - guidance for administrators on managing museum computerization.** Stam, D.C., 1992. *Museum Management and Curatorship* 11(1):45-60. Practical advice for a complex issue.
- Integrating herbaria data into a geographic information system: Requirements for spatial analysis.** Rhoads, A.F. and L. Thompson, 1992. *Taxon* 41(1):43-50. Uses Pennsylvania Flora Database as an example; discusses importance of standardizing spatial information for future data collection.
- Multiple uses for computer-stored taxonomic descriptions: Keys for Veracruz.** Ailkin, R., N.P. Moreno, L. Gama Campillo and T. Mejia, 1992. *Taxon* 41(3):413-435. Angiosperm families; Mexico; interactive system used for specimen identification, and project and data management.

MEETINGS, COURSES, WORKSHOPS

- Stain removal for textile conservators: Theory and practice. March 30-April 1, 1993. Washington, D.C.** Sponsored by Conservation Analytical Laboratory, Museum Support Center, Smithsonian Institution, Washington, D.C. Registration deadline: February 15. Registration fee: \$100. Contact: Mary Ballard (301) 238-3792 or Francine Lewis (301) 238-3700.
- Society for American Archaeology. April 14-18, 1993. St. Louis.** Annual Meeting. Contact: (202) 789-8200.
- 4th Annual National Museum Publishing Seminar April 15-17, 1993. Chicago.** Sponsored by The Art Institute of Chicago and The University of Chicago Publishing Program; held at the Midland Hotel. Tuition: \$260. Contact: The University of Chicago, Center for Continuing Study, 5835 S. Kimbark Ave., Chicago, IL 60637; tel: (312) 702-6814.
- BCG/GCG Natural Sciences Curatorial Course, April 18-23, 1993. Sheffield, UK.** Contact: Bob Toynton, Division of Continuing Education, University of Sheffield, 85 Wilkinson Street, Sheffield S10 2GJ, UK; tel: 0742 768555 ext. 4932.
- ASC Annual Meeting, May 7-9, 1993. Pittsburgh.** The Association of Systematic Collections will meet at The Carnegie Museum of Natural History. *Public relations for systematic collections and research*, the theme of the meeting, will explore building local community support for collections and collections-based research, including suggestions for working with trustees and friends' groups. There will also be a discussion of *Systematics Agenda 2000*, the effort to determine research needs and priorities in systematics. Contact: ASC, 730 11th St. NW, 2nd floor, Washington, D.C. 20001; tel: (202) 347-2850.
- Conservation and the Herbarium. May 14, 1993. Liverpool Museum.** Papers and a tour of the herbarium will be presented. Contact: The Institute of Paper Conservation, Leigh Lodge, Leigh, Worcestershire WR6 6LB, UK or Nicola Walker tel: 051 207 0001.
- American Association of Museums. May 16-20, 1993. Fort Worth.** Annual Meeting. Contact: (202) 289-1818.
- Computer technology for conservators - the second wave. May 25-27, 1993. Halifax, N.S.** Annual conference and workshop sponsored by IIC-Canadian Group. Contact: Rob Stevenson, Workshop Coordinator, IIC-CG, Conference '93, 50 Raddall Ave., Unit 1, Dartmouth, N.S., Canada B3B 1T2; tel: (902) 426-3880; FAX: (902) 426-8627.
- American Institute for Conservation of Historic and Artistic Works. June 1-6, 1993. Denver.** 21st Annual Meeting. Contact: (202) 232-6636.
- Canadian Museum Association. June 10-13. Regina.** Annual Meeting. Contact: (613) 233-5653.
- American Association of Botanical Gardens and Arboreta. June 30-July 3, 1993.** Contact: (215) 688-1120.
- Les publics et les musées de sciences et de techniques, stratégies des musées et pratiques des visiteurs. August 25 - September 3, 1993. Dinard, France.** Contact: Monsieur le Directeur, Ecole d'été de Muséologie des Sciences et des Techniques, Ministère de l'Éducation nationale et de La Culture, (D.R.E.D. - Mission Musées), 142 rue du Bac, 75007 Paris, France.
- Society of American Archivists. August 31-September 5. New Orleans.** Annual Meeting. Contact: (312) 922-0140.
- 2nd Symposium for Palaeontological Preparators and Conservators, mid-September 1993. Cambridge.** Contact: Eric Milsom, Lamont Cottage, Norton Green, Freshwater, Isle of Wight PO40 9RY, UK; tel: 0983 753192.
- Museum Computer Network. November 3-6, 1993. Seattle.** Contact: (412) 681-1818.
- GCG Seminar and AGM: True confessions - learning by our mistakes. December 8, 1993. Hunterian Museum.** Talks or poster displays are sought on great curatorial disasters. Contact: John Faithfull, Hunterian Museum, The University, Glasgow G12 8QQ, UK, by August 1, 1993.
- Conservation of photographs (C401): Mid-career training for book and paper conservators. January 31 - February 4, 1994.** Fee: \$500, registration deadline, October 5, 1993. Contact: Conservation Analytical Laboratory, Smithsonian Institution, Dianne van der Reyden (301): 238-3037 or Francine Lewis (301) 238-3700.
- University of Cambridge. Workshops at the Geological Conservation Unit for 1993.** Contact: Chris Collins, Geological Conservation Unit, Dept. Earth Sciences, University of Cambridge, Madingley Rise, Madingley Rd., Cambridge CB3 0EZ UK; tel: (0223) 62522; FAX: (0223) 60779.
- April 15. Cleaning of fossils and minerals.**
- August 5. Microenvironmental control and monitoring for geological collections.**
- October 7. Storage and environmental monitoring for geological materials.**
- November 18. Conservation and care of sub-fossil bone.**
- June 7-July 30. Conservation and care of geological materials.** Fee: £750 (excluding housing and meals).

MEETINGS, COURSES (continued)

Campbell Center for Historic Preservation Studies. Summer 1993 Courses. Contact: Campbell Center, P.O. Box 66, Mount Carroll, IL 61053; tel: (815) 244-1173.

Collection Care Core Curriculum:

Sec.1: Materials and Collections, June 8-18.

Sec. 2: Museum Environment, August 10-14.

Sec.3: Management & Planning, August 16-20.

May 10-11. Earth, air, fire and water: Disaster mitigation.

June 22-24. Care of photographic collections.

July 15-17. Handling and storage of oversize paper materials.

July 21-24. Care of textiles.

August 11-14. Evaluation of materials for storage and exhibit.

July 22-24. Computerization and collections management.

Sept. 7-11. Mycology for conservators.

Sept. 7-11. Microchemical analysis for object conservators.

Summer School 1993, Institute of Archaeology, University College, London. Courses in archaeology, conservation of antiquities and museum studies. Contact: James Black, Coordinator Summer Schools, 31-34 Gordon Square, London WC1H 0PY UK; tel: 071 387 9651; FAX: 071 383 2572; or John Maseman, 3400 Spring St., Pompano Beach, FL 33062; tel: (305) 785 7512; FAX: (305) 941 6690.

Contacts and Suppliers

- 1) Gerald Fitzgerald, Canadian Museum of Nature, P.O. Box 3443, Sta. D, Ottawa, Ontario, Canada K1P 6P4; tel: (613) 954-0358
- 2) Ann Pinzl, Nevada State Museum, Capitol Complex, Carson City, NV 89710-0001; tel: (702) 687-4810
- 3) Grant Hughes, Royal British Columbia Museum, 675 Belleville St., Victoria, British Columbia, Canada V8V 1X4; tel: (604) 387-5706
- 4) Beth Merritt, Cincinnati Museum of Natural History, 1720 Gilbert Avenue, Cincinnati, OH 45202; tel: (513) 621-3890
- 5) Monona Rossol, ACTS, 181 Thompson St. #23, New York, NY 10012-2586; tel: (212) 777-0062
- 6) Publications Dissemination, DSDTT, NIOSH, 4676 Columbia Parkway, Cincinnati, OH 45226; tel: (513) 533-8287
- 7) Freedom of Information Officer (A-101), EPA, 401 M St., SW, Washington, D.C. 20460
- 9) Mr. James Foster, Office of Information and Consumer Affairs, OSHA, U.S. Department of Labor, Room N3647, 200 Constitution Avenue NW, Washington, D.C. 20210; tel: (202) 523-8151
- 8) NTP Central Data Management, NIEHS, P.O. Box 12233, MD AO-01, Research Triangle Park, NC 27709; tel: (919) 541-1371
- 10) Association of Systematic Collections, 730 11th St. NW 2nd floor, Washington, D.C. 20001-4584; tel: (202) 347-2850
- 11) American Geological Institute, Publ. Center, P.O. Box 205, Annapolis Junction, MD 20701; tel: (301) 953-1744
- 12) Intermuseum Library, 83 North Main St., Allen Art Bldg., Oberlin, OH 44074
- 13) Northeast Document Conservation Center, 100 Brickstone Square, Andover, MA 01810-1494; tel: (508) 470-1010
- 14) Princeton University Press, c/o California/Princeton Fulfillment Services, Inc., 1445 Lower Ferry Rd., Ewing, NJ 08618; order line: (800) 777-4726
- 15) Canadian Conservation Institute, 1030 Innes Rd., Ottawa, Ontario, Canada K1A 0M8
- 16) UKIC, 37 Upper Addison Gardens, London, UK W14 8AJ
- 17) Suzanne McLaren, Carnegie Museum of Natural History, 5800 Baum Blvd., Pittsburgh, PA 15206-3706; tel: (412) 665-2615
- 18) Manitoba Heritage Conservation Service, 190 Rupert Ave., Winnipeg, Manitoba, Canada R3B 0N2; tel: (204) 956-2830
- 19) Nancy Odegaard, Conservation Dept., Arizona State Museum, University of Arizona, Tucson, AZ 85721
- 20) Julia Golden, Department of Geology, University of Iowa, Iowa City, IA 52242-1379; tel: (319) 335-1822

Last Minute Items

Have any members noticed deposits inside zippered-closure polyethylene bags storing archaeological objects? Nancy Davis, Object Conservator at Rochester Museum is investigating the occurrence of a yellow-green deposit or hazing on the plastic in close association with the objects. Most susceptible are the lead musket balls but iron and flint artifacts also show deposits. Nancy is analyzing the chemistry of the deposits and is trying to relate them to the composition and purity of the polyethylene bags. She would like to hear from anyone who has seen similar occurrences or has any suggestions. Contact: Nancy Davis, Rochester Museum and Science Center, Box 1480, 657 East Avenue, Rochester, NY 14603; tel: (716) 271-4320; FAX: (716) 271-5935.

**Preventive Conservation: Practice, Theory and Research
Ottawa, 12-16 September 1994**

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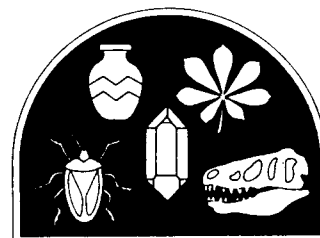
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