

**SPNHC - 92
7TH ANNUAL MEETING
UNIVERSITY OF NEBRASKA STATE MUSEUM
LINCOLN, JUNE 2 - 6**

By now, members should have received the "Second Circular and Call for Papers" which outlines the program and fees for the Seventh Annual Meeting. Plans for the meeting are coming together quite handily but suggestions are heartily welcomed! As mentioned in the circular, arrangements for mini-workshops, discussion groups, and tours -- perhaps even a softball game -- can be made upon request if proffered within the next week or two. Also, please encourage your colleagues to present papers or posters during the sessions. Consider the possibility of working collaboratively on a paper. The more institutions, experiences, and perspectives which are represented, the better! To relay your suggestions or obtain further information, please contact Charles Messenger or Greg Brown. (#13)

KEYNOTE SPEAKER

Lawrence L. Reger, President of NIC, will deliver the keynote address entitled, "Charting a National Agenda for the Preservation of Natural Science Collections." Mr. Reger will discuss the National Institute for the Conservation's involvement to assist in coordinating efforts to improve the care of our natural and cultural heritage. A study is underway to assess the challenges we face in preserving natural science collections so they will be available for research. The project is a cooperative effort with SPNHC and the Association of Systematic Collections, among others. Mr. Reger will discuss how this effort relates to the overall mission of NIC and review its progress to date.

GETTING THE BUGS OUT

Getting the bugs out: musuem pests from bacteria to beetles is the title of the 1992 Workshop to be held in conjunction with the Annual Meeting. The Workshop will take place Friday afternoon, June 5 and continue through Saturday afternoon (4 pm), June 6. Registration is \$20 US (\$25 after March 16). You may register using the same form for the Annual Meeting. A certificate granting project will be available to those who wish to participate. Topics in integrated pest management will be presented in a workshop format. Look for a brochure describing instructors and topics to be mailed to SPNHC members in mid to late March.

REGISTER FOR THE MADRID MEETING

The International Symposium and World Congress for the Preservation and Conservation of Natural History Collections will be an exciting opportunity for individuals to be a part of a massive effort to express to the world the critical issues facing the preservation of natural history materials. SPNHC members, who would like to support the goals of the Symposium but can not travel to Madrid, may register *in absentia*. For only 5,000 Pesetas (approximately \$50 US), individuals will receive a copy of the abstracts, be included in the list of participants, and be able to take advantage of special benefits, such as Symposium publication discounts. Because of institutional and governmental support for the Symposium, these benefits will surpass the actual costs of registering *in absentia*.

Stephen Williams (SPNHC President, #1) and Jerry Fitzgerald (SPNHC President-Elect, #2) have volunteered to collect registration applications and fees for their respective countries to assist SPNHC members with registration and currency conversion. Members wishing to use this service should send their applications with a check made out to Stephen Williams for \$50 US or Gerald Fitzgerald for \$60 CAN no later than 25 March. ✓

RESOURCES CENTER FUNDED!

The International Scientific Program Committee for the Madrid Symposium has received \$10,000 from the Bay Foundation to support the Resources Center. Additional contributions of computer and photo-reproduction equipment from organizations in Spain will cover completely the costs of running the Center. The SPNHC Resources Committee is coordinating the services planned for the Resources Center. These include: a display of archival material for use in collections, the supplies and equipment database, the Resource Directory in a database, a searchable bibliography and a file of reprints on collection care and management topics, and information on new publications. Participants will be able to receive specialized bibliographies or photocopies of any reprint on file for a nominal fee. The Resource Committee is soliciting reprints for the file. If you would like to contribute, send one copy of each article to the Secretariat (#3), Attn: Resources Center.

MADRID CONFERENCE FUNDING

Canadian members of SPNHC who need funding for the International Symposium in Madrid are urged to apply to the Bursary Programme of the Canadian Museums Association, 280 Metcalfe Street, Suite 400, Ottawa, Ontario K2P 1R7. Grants cover approximately 50% of expenses. Applications are available from the CMA at the above address; tel: (613) 233-5653.

COMPUTER APPLICATIONS

Production of a Collection Gazetteer

Many collections have large numbers of specimens that have been collected from the same locality. When faced with the task of automating a collection, it is common for collection and database managers to try to associate co-ordinates with locality data. Co-ordinates not only serve as a means of data retrieval but facilitate the generation of distribution maps by hand and by use of computer software. Depending on the how automation is achieved, a problem may arise when assigning co-ordinates to individual specimens. The ROM Mammalogy department is automating historical records using a card file that documents all specimens in the collection. A card for each specimen is filed at least to the level of taxon and country. When looking up co-ordinates for these records, specimens are no longer grouped in the order in which they were originally collected and documented. Because some co-ordinates are obtained after considerable gazetteer and possibly map searches it makes sense to have that ability to generate a collection gazetteer. The collection gazetteer serves to minimize the searching required to obtain co-ordinates for obscure localities from which there is more than one specimen.

In our collection database there are two main locality fields. The Locality Name field contains the locality name for which the Latitude and Longitude co-ordinates apply. The Locality Description field contains any additional locality data, including distance and directional descriptions, and other descriptive data. For example:

Catalogue information = 1 km W of Innesville,
Highway 7, near Perth
Locality Name = INNESVILLE

Locality Description = 1 KM W OF INNESVILLE, HWY 7, NR PERTH

The use of a Location Accuracy code permits the user to identify how accurate the co-ordinates are and how they were obtained (Woodward, 1991). If the Location Accuracy code indicates that the co-ordinates were obtained from a map, they are very accurate since the co-ordinates are for the spot on Highway 7, 1 km west of Innesville where the specimen was found or captured. If the Location Accuracy code indicates the co-ordinates were obtained from a gazetteer, the co-ordinates were listed under the town of Innesville. Co-ordinates originating from a gazetteer are less accurate than co-ordinates obtained from a map of the exact collecting site; this may not be useful if you wish to revisit the exact locality, but may be perfectly adequate for generating a distribution map for the specimen's taxon.

... Susan Woodward, Royal Ontario Museum

Literature Cited

Woodward, S.M. 1991. Computer Applications: Location accuracy code. SPNHC Newsletter 5(1):2.

TRAINING OPPORTUNITY

The Museum Studies Program at the University of Nebraska State Museum is actively recruiting students with interests in all aspects of natural history museums, including collection management, exhibits, and educational programs. This is an opportunity for students to gain the training necessary to enter the profession, or for those in the profession already to validate their experience and to further their career opportunities.

The Museum Studies Program offers a 36-hour master of science degree. Students may select a non-thesis internship option or a thesis option. Students take 12 hours of museum studies core courses, 9 hours in a formal minor, and 6 hours of electives in addition to the required internship/thesis hours. Natural science students are able to minor in biological sciences, geology, anthropology, wildlife management, and horticulture. The University of Nebraska-Lincoln has strong academic programs in all of these fields. Members of SPNHC will have an opportunity to visit the training laboratories and research collections of the University of Nebraska State Museum during the annual meeting in June.

For additional information and application materials, contact Hugh H. Genoways, Museum Studies Program, 307 Morrill Hall, University of Nebraska-Lincoln, Lincoln, NE 68588-0338; tel: (402) 472-8899.

WORKSHOP ON COMPUTERIZATION OF NATURAL HISTORY COLLECTIONS

A workshop on the computerization of natural history collections is being sponsored by the MUSE Project of Cornell University, the Association of Systematic Collections and the Museum Informatics Project of the University of California at Berkeley - with funding provided by the National Science Foundation. The workshop is intended to introduce museum personnel to various aspects of the computerization process.

Applicants are encouraged from all parties interested in or participating in computerization of collections. Curators, collection managers and data managers are all welcome. Likewise, participants will be selected from all taxonomic disciplines and from both small and large institutions.

Participants will be expected to have a working knowledge of computers, however, expertise in database systems or particular museum applications is not necessary. Each application (2 page maximum) should include: a brief description of his computer experience; status of ongoing computerization projects or plans for future computerization; and other relevant facts such as membership on standards setting committees, software authorship, or related workshop participation.

The workshop will be held at the University of California at Berkeley on May 26-31, 1992. Applications

will be accepted through March 15, and applicants will be notified of their acceptance by March 31. Successful applicants will have travel, room and meal expenses covered by NSF funding. For further information, contact Julian Humphries, The MUSE Project, Building 3, Research Park, 83 Brown Road, Ithaca, NY 14850; FAX: (607) 257-8109; voice (607) 247-8143; E-mail: lqyy@vax5.cit.cornell.edu.

FROM OUR CORRESPONDENTS

Entomological Collections Network Meeting (ECN) held its 2nd annual meeting December 7-8, 1991 at the University of Nevada, Reno. The meeting was well attended with over 80 representatives of Entomology collections, mostly from the U.S. and Canada, participating. ECN is an informal body dedicated to the advancement of entomological collections and the sharing of information on collections and their operations. This year's meeting was chaired by Scott Miller of Bishop Museum, and the program emphasized databases and computerization of collections. Featured speakers demonstrated database systems and how they assist in managing many different aspects of collections management and collections-related research. Other speakers described projects to improve specimen distribution and processing. Dan Janzen demonstrated a bar-coding system used by INBio in Costa Rica that gives each specimen placed in the collections a unique number and label thereby associating the specimen with its unique record in a database. Catharine Hawks of the National Institute for the Conservation of Cultural Properties (NIC) was one of the highlights of the meeting as she spoke on "Materials conservation needs of entomological collections." Cathy raised the conservation awareness of those attending to another plane as she covered some of the problems encountered in entomological collections, and patiently and informatively answered a host of questions after her presentation.

The Chair of the ECN Steering Committee for 1992 is Richard Brown, Mississippi Entomological Museum, P.O. Drawer EM, Mississippi State, MS 39762. Local arrangements for the next meeting (December 1992) will be handled by Mike Schauff, Systematics Entomology Laboratory, USDA, Washington, D.C. The ECN communicates via Insect Collection News (Editor: Ron McGinley, Smithsonian Institution), and the computer bulletin board ENT-LIST (coordinated by Mark O'Brien, University of Michigan, userhcfb@umichum.bitnet).

. . . . Gordon Nishida, Bishop Museum

Two-piece flexible plastic lids for fluid collections are no longer available through the Smithsonian Oceanographic Sorting Center. Joe Collins, University of Kansas Museum of Natural History, has located a one-piece flexible plastic lid which does seal tightly. It is available in white polypropylene, fine-ribbed, screw-

top, in 120mm (gallon) and 132mm (five gallon) sizes from Chelsea Bottle Company, Inc., 10 Wesley Street, Chelsea, MA 02150, (617) 884-2323.

. . . . Remains to be Seen 4(2):2

The Winter 1992 issue of **Fumigants and Pheromones Newsletter**, contains several items of interest: New pheromone traps for Black Carpet Beetle (*Attagenus unicolor*) and Varied Carpet Beetle (*Anthrenus verbasci*) are being offered by Insects, Ltd., of Indianapolis (1 (800) 992-1991). . . . Dichlorvos, a proposed carcinogen, has mutagenic (changes cell structure) properties as reported in an article by A. Tungul, et al., 1991, *Mutagenesis* 6(5):405-408. This Australian study suggests that you should avoid skin contact since dichlorvos is rapidly absorbed. . . . Muscovy Ducks are 30 times more efficient than fly-paper for fly control. The ducks were allowed to roam in and around a dairy barn where they each ingested a mean of 25 flies per 15 minute observation. A new weapon in the arsenal of integrated pest management!

. . . . Beth Merritt, Cincinnati Mus. Nat. Hist.

IN PROGRESS

Insect Database. The North American Insect Collection (NAIC) HyperCard stack is now available. The NAIC Stack is a database in Apple's HyperCard format designed to run on Macintosh computers. This easy to use program will be useful to anyone needing to access data about insect collections in North America. Data on over 100 collections in Canada, the United States and Mexico are presented in an easy to access format, with information pertaining to addresses, contact persons, groups of expertise, standard collection acronyms, strengths of collections, phone and fax numbers, e-mail addresses, and a user-filled notes field. Searches for any item in the database can be made quickly and the results printed out in a 3 x 5 card format for later use.

The NAIC stack requires Claris' HyperCard 2.0 or later to run. Any older version of HyperCard (pre-2.0) will not open the stack. Users can easily update information and add to the stack to suit their own interests.

A copy of this database will be posted in the public Macintosh archives at the University of Michigan and will therefore be available for downloading to your computer via FTP transfer over Internet. The address is: mac.archive.umich.edu. Any updated versions will be available there as well.

For those wanting the program on disk, we are charging \$7.50 to cover our costs of the project and disk duplication, packaging and mailing. To order a copy of the program on disk, please make your payment to the University of Michigan, and send to: Mark O'Brien, Insect Division, Museum of Zoology, University of Michigan, Ann Arbor, MI 48109-1079.

A Systematics Priorities Initiative. The American Society of Plant Taxonomists, the Society of Systematic Biologists, and the Willi Hennig Society have formed a steering committee to organize an initiative to document research trends and priorities within systematics, to be called, *Systematics Agenda 2000: Integrating Biological Diversity and Societal Needs*. Systematics Agenda 2000 will have as its major themes the role of systematics in the analysis of biodiversity, the integrative role of systematics in comparative biology, and the importance of systematics in human affairs. The initiative is charged with (1) identifying important research trends and questions, and with establishing priorities among them, (2) assessing the status of current infrastructures supporting systematics research and evaluating future needs, (3) documenting the broad role that systematics plays in human affairs, and evaluating its future contributions and needs in those endeavors. Systematics Agenda 2000 has established 28 committees to undertake this initiative. A detailed description of Systematics Agenda 2000 including a list of the members of the Steering Committee and the co-chairs of all Standing Committees, can be found in ASC Newsletter (19)4:57, Oct. 1991. All systematists, and nonsystematists interested in the role that systematics plays in their discipline, are invited to contact the appropriate committee co-chairs to discuss how each might contribute to this effort.

Alabama Museum of Natural History announces the recent purchase for the Museum of an internationally known fossil site in Dallas County near Selma. Situated in the Harrell Station area, the 130 acres of forest and eroded chalky sediments are rich in the remains of marine animals that lived some 80 million years ago during the Age of Dinosaurs. The site will be used as a field station for scientific work and for the Museum's popular series of natural science programs. Paleontologists have been collecting in the area since the turn of the century. An important series of papers entitled *The Vertebrate Fauna of the Selma Formation of Alabama*, published by the Chicago Field Museum of Natural History between 1948 and 1970, was based on fossil material collected in a single month at this site.

MEMBER NEWS

Mary-Lou Florian (formerly Chief, Conservation Services Section, Royal British Columbia Museum) retired at the end of Sept. 1991. Mary-Lou established a Conservation Internship Fund, "The Mary-Lou Florian Endowment", to assist conservation interns at the Royal British Columbia Museum with expenses which are not covered by their parent institutes. Donations may be sent to the Fannin Foundation, Mary-Lou Florian Endowment, Royal British Columbia Museum, 675 Belleville Street, Victoria, B. C. V8V 1X4 Canada. . . . **Fred Collier** retired from the National Museum of Natural History, Smithsonian Institution, and has taken the position of collection manager at Harvard University in the Division of Invertebrate Paleontology. . . . Congratulations to **Chris Collins** and his wife on the birth of their son, David Jordan and on Chris's new position as Conservator at Sedgwick Museum.

HEALTH AND SAFETY NOTES

A brief list of some regulations and announcements extracted from recent issues of ACTS FACTS. Through the courtesy of Monona Rossol, editor, SPNHC exchanges newsletters with ACTS. Information about subscriptions to ACTS FACTS may be obtained from Ms. Rossol. (#4)

- [v.5(8):3] National Toxicology Program reviewed a number of cancer and toxicity studies in a two-day meeting. Of interest to museum workers are: **Formic Acid**, which occurs naturally and is used to acidize paleontologic specimens - 2 week and 13 week inhalation studies in rats and mice showed it causes chemical irritant effects at concentrations above 32 parts per million, but causes no significant systemic toxicity. **Ethylene Glycol**, used to lubricate and cool rock saws - 2 year feeding study of mice showed no evidence of carcinogenic activity. It is very toxic at high doses, however.
- [v.5(9):2] St. Johns University in Jamaica, New York is contesting a serious citation and a \$2,625 penalty for failure to develop and implement a written Chemical Hygiene Plan for hazardous chemicals used in the school. The violated code is 29 CFR 1910.1450 (e) (1), also known as the Laboratory Right-to-Know Standard.
- [v.5(10):4] So you don't hold fire drills? Law suits are being filed against Imperial Food Products Co., Hamlet, NC, in response to the fire which killed 25 employees. The complaints allege that the company was negligent because they had no written fire safety and evacuation plan, no instructions on exits, no fire drills, and no general safety training. Museums and schools with these same flaws in their safety programs risk similar disasters.

CONTACTS

1. Stephen Williams, Museum, Texas Tech University, P.O.Box 4999, Lubbock, TX 79409-3191
2. Gerald Fitzgerald, Canadian Museum of Nature, P.O.Box 3443, Sta. D, Ottawa, Ontario, Canada K1P 6P4
3. Symposium '92 Local Organizing Committee, Museo Nacional de Ciencias Naturales, Jose Gutierrez Abascal 2, 28006 Madrid, Spain, tel: 4111328, ext. 1145 FAX: 5645078
4. Monona Rossol, ACTS, 181 Thompson St. #23, New York, NY 10012
5. U.S. Department of the Interior, National Park Service, Archeological Assistance Division, P.O. Box 37127, Washington, DC. 20013, tel: 202-343-4101
6. Elizabeth Wing, Florida Museum of Natural History, Museum Road, University of Florida, Gainesville, FL 32611. (Check payable to Florida Museum of Natural History)
7. PD Dr. J. Schibler, Seminar für Ur- und Frühgeschichte, Petersgraben 9-11, CH-4051 Basel, Switzerland
8. Allworth Press, 10 East 23rd Str., New York, NY 10010. (For shipping and handling, add \$3 USA, \$7 Canada, \$12.50 other)
9. Suzanne Bessette, BCMA, #514 Government St., Victoria, BC V8V 4X4, tel: 604-387-3315
10. The Shipping & Receiving Seminar; Keye Productivity Center, P.O. Box 27-480, Kansas City, MO 64180, tel: 1-800-821-3919
11. Mary Wood Lee, Center for Historic Preservation Studies; 203 E. Seminary, P.O. Box 66, Mt. Carroll, IL 61053, tel: 815-244-1173
12. Getty Conservation Institute, 4503 Glencoe Ave., Marina del Rey, CA 90292, tel: 213-822-2299
13. Charles Messenger and Greg Brown, University of Nebraska State Museum, University of Nebraska, Lincoln, NE 68588-0338; tel: 402-472-2657

ANNOUNCEMENTS

**PROJECT SUCCESS THROUGH
PROBLEM SOLVING
Chicago, March 22-24**

Project Success Through Problem Solving teaches powerful concepts and practical tools to: solve tough organizational problems, improve implementation, manage complex change, and increase team effectiveness. This workshop is designed specifically to clarify management problems associated with museum collections.

For more information, write or call: Mary Case, Director, Office of the Registrar, Smithsonian Institution, A&I 1410, Washington, D.C. 20560; tel: (202) 357-3125.

**IIC-CANADIAN GROUP
18th Annual Conference
Ottawa, May 29-31**

Papers are invited on all aspects of conservation, including case histories, research, analytical studies, field work, etc. Abstracts were due December 31, 1991. Contact: Louise Fox, Programme Chair, IIC-CG Conference 92, P.O. Box 9195, Ottawa, Ontario, Canada K1G 3T9, or send them via ENVOY. 100 to PARKS.HQ or tel: (613) 993-2125, FAX: (613) 993-9796.

**HERE, THERE AND EVERYWHERE
Oberlin, Ohio, June 24-26**

The Intermuseum Laboratory will host a three-day workshop on the care and conservation of historic photographs; the instructor will be Debbie Hess Norris. The course will address the structure and deterioration of a variety of photographic processes. Discussions of proper housing of 'difficult' formats, and guidelines for handling, exhibition and duplication, will accompany examination of actual objects. The course is most suitable for conservators and museum professionals whose responsibility includes the care of photographic collections. For applications and additional information contact: Jeannine Love, Intermuseum Laboratory, Allen Art Building, Oberlin, OH 44074, USA; tel: (216) 775-7331, FAX: (216) 774-3431.

**TREATMENT AND EXAMINATION OF LEATHER
AND TEXTILES AND RELATED OBJECTS
London, June 24-25**

The ICOM Committee for Conservation Working Group: 'Conservation of Leathercraft and Related Objects' is planning to hold a third international interim-meeting in collaboration with the Victoria and Albert Museum in London. People who are interested in attending this meeting, either as participants or as lecturers, are requested to write to: Mrs. M. Kite, Department of Textile Conservation, Victoria and Albert Museum, South Kensington, London SW7 2RL, UK; tel: (071) 938-8592, FAX: (071) 938 8661.

ECOLE NATIONALE DU PATRIMOINE

Created in Paris in 1990, the new *Ecole nationale du patrimoine* provides two kinds of training: professional training for future curators of the cultural heritage; lifelong training for practising curators. The school also welcomes foreign interns in such specialized fields as archaeology, archives, inventories, historic monuments and museums, etc.

Field work is alternated with classes; basic training ends with a three-month internship. The Ecole nationale du patrimoine accepts foreign students on the condition that they speak fluent French.

For information, contact: Mme Claude Roux, Deputy Director of Studies and Internship Co-ordinator, Ecole nationale du patrimoine, 266 bd Rapail, 75014 Paris; tel:(33 1) 43 21 93 11; Fax: (33 1) 45 38 97 49.

ICOM '92

Quebec, September 19-27

Museums: Rethinking the boundaries? is the theme for the 16th General Conference of the International Council of Museums. In addition to technical and committee sessions, activities include a trade fair and pre- and post- meeting tours to museums around Canada. The Natural History Committee, Conservation Committee Working Group on Natural History Collections and the Committee on Documentation will hold special sessions. For information, contact: ICOM '92, 60 rue Marche Champlain, Quebec, Canada G1K 8R1; tel: (418) 694-1992.

**MIDWEST MUSEUMS CONFERENCE
Annual Meeting**

Milwaukee, Sept. 30-Oct. 3

The 1992 Program Theme is "MUSEUMS AS METAPHORS". Museums have been likened to: businesses, schools, entertainment, social activities, shopping centers, and warehouses.

If you have a session idea, please contact Mary Korenic, Milwaukee Public Museum, 800 West Wells Street, Milwaukee, WI 53233. Proposals were due January 13, 1992. The program committee will be meeting in late February to discuss and select session proposals. For more information, call (414) 278-2716.

**ASC ANNUAL MEETING
Honolulu, August 9-11**

The Association of Systematics Collections will hold its 1992 Annual Meeting in conjunction with the American Institute of Biological Sciences. Featured events will be a workshop on *Data Sharing and Database Ethics*, an informational session on *Systematics Agenda 2000*, and a discussion of the role of vice presidents for research at natural history

. . . . continued on page 9

PUBLICATIONS OF INTEREST

- Museum accountability: laws, rules, ethics, and accreditation.** Boyd, W.L., 1991. *Curator* 34(3):165-177. Survey of regulations - self-imposed and otherwise- that are ensuring museums' accountability as public institutions.
- Developing a code of ethics for museums.** Macdonald, R.R., 1991. *Curator* 34(3):178-186. From George B. Goode to the present - an overview of museums' roles and responsibilities.
- Archives and museums.** Fleckner, J.A., 1990. *Midwestern Archivist* 15:67-76. Emphasis is history museums but footnotes may be useful; revised version of address to Midwest Archives Conference, 1989.
- Conservation source book, 1991 edition.** Conservation Unit, Museums and Galleries Commission, HMSO, London, 122 p.
- Long-term storage of wheat starch paste.** Miller, B.F. and W. Root, 1991. *Stud. Conservation* 36(2):85-92. Two methods described - sterile syringe and ultraviolet exposure. Microwave preparation also described.
- The effects of low oxygen atmospheres on museum pests.** Gilberg, M., 1991. *Stud. Conservation* 36(2):93-98. Observed complete mortality for several common pests when exposed to 0.4% oxygen.
- Evaluation of earthquake damage mitigation methods for museum objects.** Agbabian, M.S., W.S. Ginell, S.F. Masri and R.L. Nigbor, 1991. *Stud. Conservation* 36(2):111-120. Getty Museum study to determine categories of objects and their susceptibilities to types of damage, and mechanical methods to reduce transmitted forces.
- Removal of air pollutant mixtures from museum display cases.** Grosjean, D. and S.S. Parmar, 1991. *Stud. Conservation* 36(3):129-141. Laboratory studies of active and passive modes; a bed of activated carbon in display cases may reduce pollutants.
- Effet de la desacidification sur l'encre ferro-gallique.** Lienardy, A. and P. Van Damme, 1991. *Stud. Conservation* 36(3):155-160. Five solutions tested on iron-gall inks; borax was least damaging on the ink.
- Hydrogen plasma reactions in a d.c. mode for the conservation of iron meteorites and antiquities.** Sjogren, A. and V.F. Buchwald, 1991. *Stud. Conservation* 36(3):161-171. Method described; for meteorites, iron oxides and chlorine in fissures were removed to 5mm below surface.
- Mounting two Plains Indian hide paintings.** Caldararo, N., 1991. *Curator* 34(3):187-198. Restoring and exhibiting two 1901 paintings on rawhide.
- Overexposure: health hazards in photography.** Shaw, S.D. and M. Rossol, 1991. Allworth Press, New York. \$18.95 New version, all you need to know to make your darkroom comply with Right-to-Know laws. (#8)
- Promoting deeper interest in science.** Connor, J.L., 1991. *Curator* 34(4):245-260. Exploring underwater habitats via live video at Monterey Bay Aquarium.
- Legal background of archeological resources protection.** Carnett, C., 1991. U.S. National Park Service Technical Brief, n. 11. (#5)
- Guidelines and standards for fossil vertebrate databases.** Blum, S.D. (ed.), 1991. Results of the Society of Vertebrate Paleontology Workshop on Computerization, 1989. 129 p. Single copies may be obtained gratis from Dr. Michael Novacek, Dept. Vert. Paleo., American Museum of Natural History, CPW at 79th St., New York, NY 10024.
- Bibliography of archaeozoology.** Stampfli, H.R. and J. Schibler, 1991. Bellach and Basel, Switzerland, 39 p. & 6 microfiche. [Covers literature through 1988. Copies on microfiche, \$20 US; diskette, \$25; 1992 update (1989-1990), \$10] (#7)
- Archaeological seasonality: using incremental structures in teeth. An annotated bibliography.** Gordon, B.C., 1991. *Zooarchaeological Research News*, Special Publication, New York, 151 p.
- Cuello: resolving the chronology through direct dating of conserved and low collagen bone by AMS.** Law, I.A., R.A. Housley, N. Hammond and R.E.M. Hodges, 1991. *Radiocarbon* 33(3):303-315. Describes purification of PVA/PV-OH impregnated human bone samples and infra-red spectra to assess sample purity; assesses dates obtained for Mayan site.
- 1991 survey: state regulations of geological, paleontological, and archaeological collecting.** West, R.M., 1991. *Curator* 34(3):199-209. An overview based on current reports from state agencies.
- Guide to the curation of archaeozoological collections.** Wing, E.S., M. Zeder and E. Henry (eds.), 1991. Florida Museum of Natural History, Gainesville, 105 p. \$9. Proceedings of the Curation Workshop held in conjunction with 6th International Council of Archaeozoology. (#6)
- "Mammoth" task.** Lindsay, W., 1991. *Curator* 34(4):261-272. Describes preparation involved in moving a 19th century specimen from one hall to another.
- A catalogue of type specimens of fossil vertebrates in the Field Museum of Natural History. Classes Amphibia, Reptilia, Aves, and Ichneutes.** Bruner, J.C., 1991. *Fieldiana:Geology*, n.s. n. 22, 51 p., 2 pg. errata.
- Buying time.** Breining, G., 1991. *Audubon*, Nov-Dec 1991:60-69. Discussion of fossils as a commercial commodity.
- The geologic column.** Rossbacher, L.A., 1991. *Geotimes*, Dec 1991:44. Example of cooperation between fossil collector, museum, and commercial dealer to have specimen donated to museum.

WORKSHOPS, TRAINING AND CONFERENCES

Compiled by the Education and Training Committee

SPRING

?????. Preservation and Protection of Museum Collections; Kentucky; (#5)

MARCH

- ?????. Navajo Studies Conference, 6th Annual; Arizona; Alexa Roberts, P.O. Box 2898, Window Rock, AZ, tel: 602-871-6437
- 2-4. Training Scheme for Archive Conservators; Society of Archivists, J. Hodson, Corporation of London Records Office, P.O. Box 270, Guildhall, London EC2P 2EJ, tel: 071-260 1085
3. Building Beyond Collections; Pittsburgh, PA; Symposium Registrar, Greater Pittsburgh Museum Council, 4338 Bigelow Blvd., Pittsburgh, PA 15213, tel: 412-681-4262
5. Stain Removal; Fabric Care Research Association Ltd., Forest House Labs, Knaresborough Road, Harrogate, UK HG2 7LZ
- 6-7. Pacific Northwest History Conference 92; Seattle, WA; Jane Sanders, Pacific Northwest Historian's Guild, 3242 15th Ave. South, Seattle, WA 98144, tel: 206-323-8952
- 12-13. Museum Gift Shop Management; Victoria, BC; (#9)
- 12-14. Dynamics of Museum Exhibition: An Introductory Workshop; Washington, DC; Judith Landau, Museum Education Program, George Washington University, 2201 G St. NW, Washington, DC 20052, tel: 202-994-6682
16. The Shipping & Receiving Seminar; Phoenix, AZ; (#10)
17. Designing for Preservation: Choosing Archival Storage Modules and Fire Protection, National Archives 7th Annual Preservation Conference; Washington, DC; tel: 202-501-5540, FAX: 202-501-5533
17. Shipping and Receiving Seminar; Albuquerque, NM; (#10)
18. Shipping and Receiving Seminar; Dallas, TX; (#10)
19. Shipping and Receiving Seminar; Austin, TX; (#10)
- 19-21. Virginia Association of Museums Annual Conference; Williamsburg, VA; Judy M. Harris, VA Assoc. Mus., 301-A N. Sheppard St., Richmond, VA 23221, tel: 804-367-1079
20. Shipping and Receiving Seminar; New Orleans, LA; (#10)
- 21-22. Museum and Gallery Leadership: An Approach to Board Evolution; Okanagan, BC; (#9)
- 22-24. Project Success through Problem Solving; Chicago, IL; Mary Case, Office of the Registrar, Smithsonian Institution, 900 Jefferson Drive SW, Room 1410, Washington, DC 20560, tel: 202-357-3125
23. Shipping and Receiving Seminar; Houston, TX; (#10)
24. Shipping and Receiving Seminar; Chicago, IL; (#10)
- 24-27. International Conference on Cultural Heritage: Context and Conservation; Havana, Cuba; Centro Nacional de Conservacion, Restauracion y Museologia, Convento de Santo Clara, Calle Cuba No. 610 entre Sol y Luz, Habana Vieja, C.P. 10100, Cuba
25. Shipping and Receiving Seminar; Milwaukee, WI; (#10)
- 25-27. Legal Problems of Museum Administration; Chicago, IL; Alexander Hart, ALI-ABA, 4025 Chestnut St., Philadelphia, PA 19104-3099, tel: 215-243-1630
- 25-27. Society of Ethnobiology, 15th Annual Conference; Washington, DC; Bruce Smith, Dept. Anthropology, Museum Nat. Hist., Smithsonian Institution, Washington, DC 20560
26. Shipping and Receiving Seminar; Madison, WI; (#10)
- 27-29. Computer Applications and Quantitative Methods in Archeology; Denmark; Torsten Madsen, Institute of Prehistoric Archeology, Moesgard, Dk-8270, Hojbjerg, Denmark, tel: 45-86272433, ext. 2225, FAX: 45-86272378
- 28 Mar-4 Apr. Surface Cleaning Seminar; Dominican Republic; American Conservation Consortium Ltd., 85 North End Road, Fremont, New Hampshire USA 03044

30-31. Preparing Agreement Documents Under the National Historic Preservation Act; Texas; (#5)

30 Mar-3 Apr. Identifying and Evaluating Historical Resources; Nevada; (#5)

30 Mar-10 Apr. Paper Conservation Practice and Paper Science; Amsterdam; Amsterdam Academy for Restoration, 8 Gabriel Metsustraat, 1071 EA Amsterdam, The Netherlands, FAX: 31-20/755191

APRIL

?????. Mission and Governance: How to Plan for a Tribal Cultural Facility; (#5)

?????. Archeological Site Stabilization Workshop; Oregon; (#5)

?????. Archeology: Key to the Past; Florida; (#5)

?????. Geomorphology in Archeological Analysis; Nevada; (#5)

1-4. Institute of Paper Conservation, Third Conference; Manchester, UK; Millstream Europe Ltd., South Harting, Petersfield, Hampshire, UK GU31 5LF, tel: 0730-825711

3. CCI Care of Works of Art on Paper; Burnaby, BC; (#9)

4. Improving Interpretation through Improved Documentation in Historical Collections; Illinois; (#5)

6-7. Archives: An Introduction; Pennsylvania; (#5)

6-8. Training in Practical Conservation; Museum of Mankind, London; Dominic O'Shea, Dept. Conservation, The British Museum, Great Russell Street, London WC1B 3DG

7-9. Leather for Conservators; Suitland, Maryland; Mary Ballard, Conservation Analytical Lab, Smithsonian Institution, Washington, DC, tel: 301-238-37929

10. Toward Philosophies of Museums and Education Conference; New York; Andrew Jay Svedlow, Museum of the City of New York, Fifth Avenue at 103rd Street, New York, NY 10028

10-11. New England Museum Association and Old Sturbridge Village Museum Archives Institute; Sturbridge, MA; Theresa Percy, Old Sturbridge Village, 1 Old Sturbridge Village Rd., Sturbridge, MA 01566, tel: 508-347-3362

13. The Shipping & Receiving Seminar; Allentown, PA; (#10)

13-18. Recent Restorations on the American Continent; Comite Dominicano del ICOMOS, Calle Luperon, 54 Santo Domingo, Rep. Dominicana

14. Shipping and Receiving Seminar; Philadelphia, PA; (#10)

14-16. International Stone Cleaning Conference; Edinburgh, UK; K. Sage, Scott Sutherland School of Architecture, RGIT, Garthdee Rd., Aberdeen, UK AB9 2BQ, tel: 0224-313247

15. Shipping and Receiving Seminar; Harrisburg, PA; (#10)

16. Shipping and Receiving Seminar; Pittsburgh, PA; (#10)

20-24. Using dBasell+ and ANCS: An Interdisciplinary Approach to Using NPS Museum Collections; West Virginia; (#5)

21-25. Museum Publishing Conference; Calgary, Alberta; Donna Livingstone, Glenbow Museum, 130 Ninth Ave. SE, Calgary, Alberta T2G 0P3, tel: 403-268-4163

22. Electronic Environmental Monitoring; Welsh Folk Museum, Cardiff; R. Child, National Museum of Wales, UK, tel: 0222-569441

22-26. Integrated Pest Management, 4th International Conference; Tegucigalpa, Honduras; Panamerican School of Agriculture, Dept. de Proteccion Vegetal, Apt. Postal #93, Tegucigalpa, Honduras, tel: 504/76-6140

25. Getting Started with Computers in Your Museum; Burnaby, BC; (#9)

25-29. AAM Annual Meeting; Baltimore, Maryland; Meetings & Continuing Education Department, AAM, 1225 Eye St. NW, Suite 200, Washington, DC 20005, tel: 202-289-9113

WORKSHOPS, TRAINING AND CONFERENCES (continued)

APRIL (cont'd)

- 26 Apr-1 May. Museum Store Association Meeting; Indianapolis, IN; Beverly Barsook, Executive Director, Museum Store Association Inc., 501 Cherry St., Suite 460, Denver, CO 80222, tel: 303-329-6968
27. Shipping and Receiving Seminar; Princeton, NJ; (#10)
- 27 Apr-1 May. Material Issues in Art & Archaeology; San Francisco; GCI; (#12)
- 27 Apr-2 May. Materials Research Society Spring Meeting; San Francisco; Materials Research Society, 9800 McKnight Road, Pittsburgh, PA 15237, tel: 412-367-3003 (may be same as above)
28. Shipping and Receiving Seminar; Newark, NJ; (#10)
29. Shipping and Receiving Seminar; Paramus, NJ; (#10)
- 29 Apr-1 May. The New York Natural History Conference II; Albany, NY; Robert A. Daniels, The New York Natural History Conference, Rm. 3132 C.E.C., Biological Survey, New York State Museum, Albany, NY 12230
30. Shipping and Receiving Seminar; Hartford, CT; (#10)
- 30 Apr-3 May. The California American Studies Association Conference; Fullerton, CA; Dr. Jane Buikstra, President, CAA, Box 366, Kampsville, IL 62053
- Apr-May. Interpreting Native American Cultures; Montana; (#5)

MAY

- ?????. Facilities Planning: Construction of Tribal Museums and Cultural Centers; Maricopa, AZ; (#5)
- ?????. Rural Historic Landscape Workshop; California; (#5)
- ?????. Lithics; California; (#5)
- ?????. Presenting the Past to the Public; Colorado; (#5)
- ?????. Massachusetts-Annual Statewide Preservation Workshop; (#5)
- 1-2. Island Nations of the Caribbean: History, Historic Architecture, Archeological Resources; Washington, DC; (#5)
- 1 May-31 Jul. Chemistry for Conservators (correspondance course); John Maseman, South Florida Conservation Center, 3400 Spring St., Pompano Beach, FL 33062, tel: 302-785-7512
4. Shipping & Receiving Seminar; Louisville, KY; (#10)
- 4-8. Department of Defense Cultural Resources Workshop; Wyoming; (#5)
- 4-20. Preventative Conservation: Museum Collections and Their Environment; GCI; (#12)
5. Shipping and Receiving Seminar; Indianapolis, IN; (#10)
6. Shipping and Receiving Seminar; St. Louis, MO; (#10)
6. Housekeeping in Historic Houses; Victoria, BC; (#9)
- 6-10. Canadian Archaeological Association 25th Annual Meeting; London, Ontario
7. Shipping and Receiving Seminar; Kansas City, MO; (#10)
- 10-15. International Symposium on the Preservation and Conservation of Natural History Collections; Madrid, Spain; J. Gisbert, (#3)
11. Shipping and Receiving Seminar; Minneapolis, MN; (#10)
12. Shipping and Receiving Seminar; Cleveland, OH; (#10)
13. Shipping and Receiving Seminar; Columbus, OH; (#10)
14. Shipping and Receiving Seminar; Cincinnati, OH; (#10)
- 15-17. Filling, Moulding and Modelling; UKIC
16. The Conservation of Sandstone; UKIC
18. Shipping and Receiving Seminar; Memphis, TN; (#10)
19. Shipping and Receiving Seminar; Nashville, TN; (#10)
20. Shipping and Receiving Seminar; Atlanta, GA; (#10)
21. Shipping and Receiving Seminar; Charlotte, NC; (#10)
22. Shipping and Receiving Seminar; Raleigh, NC; (#10)
- 25-27. Industrial and Materials Technology; Seville, Spain; Brite/Euram Programme, CEC, DG XII-C, Rue de la Loi 200, B-1040, Brussels, tel: 32 2 511 7290

- 26-28. Standard Threads: Industrial Collections Preservation Workshop; Ottawa, Ontario; Carl Schlichting, CCI, 1030 Innes Rd., Ottawa, Canada K1Y 0C8, tel: 613-998-3721
- 26-31. Workshop on Computerization of Natural History Collections; Berkeley, CA; The MUSE Project; (see page 2)
- 28-29. Preparing Agreement Documents Under the National Historic Preservation Act; Colorado; (#5)
29. Towards Teaching Adults (An Introduction to the new Basic Museum Studies Training Resource Package); BC; (#9)
- 29-31. IIC-CG 18th Annual Conference; Ottawa, Ontario; (see page 5)
- May-Jun. Preservation of Historic Buildings in Wilderness; Idaho; (#5)
- May-Jun. Geophysics in Archeology; Colorado; (#5)
- May-Jun. Professional Workshop in the Use of Computers for Historic Preservation; Washington, DC; (#5)

JUNE

- ?????. Exhibit Production for Tribal Cultural Facilities; Washington, DC; Smithsonian Institution; (#5)
- ?????. Preservation of Log Structures; Idaho; (#5)
- 1-7. AIC 20th Annual Meeting; Buffalo, NY; Sarah Wolf Green, The Textile Museum, 2320 S. St., NW, Washington, DC 20008, tel: 202-667-0441
- 2-6. SPNHC 7th Annual Meeting and Integrated Pest Management Workshop, Lincoln NE; (#13)
- 2-3. Outdoor Sculpture Symposium; Buffalo, NY; AIC, 1400 16th St., NW, Suite 340, Washington, DC 20036, tel: 202-232-6636
- 6-10. Virginia Museum Institute for Senior Museum Professionals; Wintergreen, VA; Judy Harris, Director, VA Assoc. Mus., 301-A North Sheppard St., Richmond, VA 23221, tel: 804-367-1079
- 7-19. Western Archives Institute, 6th Annual Meeting; Berkeley, CA; Nancy Zimmelman, Western Archives Institute, 1020 O St., Rm 130, Sacramento, CA 95814, tel: 916-653-0126
- 12-19. Conservation; London; School of Library Archive & Information Studies, University College of London, Gower St., London WC1E 6BT, FAX: 44 71 387 8057
- 14-18. American Society of Mammalogists Annual Meeting; Salt Lake City, Utah; Eric Rickart, Utah Museum of Natural History, University of Utah, Salt Lake City, Utah 84112, tel: 801-581-6927
- 15-18. Deterioration and Conservation of Stone; Lisbon, Portugal; J. Delgado Rodrigues, Laboratorio, Nacional de Engenharia Civil, Av, Brasil 101, 1799 Lisbon, FAX: 3511-897660
- 17-19. Systematics & Conservation Evaluation; London; Dr. Peter L. Forey, Department of Palaeontology, The Natural History Museum, Cromwell Road, London, UK SW7 5BD
- 18-19. Managing Archives in a Small Museum; BC; (#9)
- 24-25. Treatment and Examination of Leather and Textiles and Related Objects; London; (see page 5)
- 24-26. Here, There, and Everywhere: Addressing Issues Surrounding the Preservation of Historic Photographic Materials; Oberlin, Ohio; (see page 5)
- 24-27. American Ornithologists' Union Annual Meeting; Ames, Iowa; Erwin E. Klaas, Iowa Coop. Wildlife Research Unit, Science Hall 2, Iowa State University, Ames, Iowa 50011
- 28 Jun-3 Jul. Innovations in Museum Management; Boulder, CO; Dr. Victor J. Danilov, Director, Museum Management Program, 50 Bristlecone, Boulder, CO 80304, tel: 303-443-2946
- 28 Jun-25 Jul. Pacific Preservation Field School; Hawaii; (#5)
- Jun-Aug. Conserving the Countryside; Vermont; (#5)
- Jun-Aug. Environmental Simulation Workshop; Vermont; (#5)
- Jun-Sep. Care of Collections Courses; Mt. Carroll, IL; (#11)
- Jun-Sep. Collection Care Core Curriculum; Mt. Carroll, IL; (#11)

WORKSHOPS, TRAINING AND CONFERENCES (continued)

JULY

- ???? The New Basic Museum Studies; Penticton, BC; (#9)
 ???? Archeology for Managers; (#5)
 5-19. Restoration Field School; Virginia; (#5)
 5-31. Museum Management Institute; Berkeley, CA; Ricki Lederman,
 2510 Channing Way, Suite #4, Berkeley, CA 94704, tel:
 510-843-0624
 10 Jul-15 Aug. Historic Parks Planning and Development; Arkansas;
 (#5)
 19-23. Monocotyledons: Classification & Evolution; London; Dr. Paula
 Rudall, Jodrell Lab., Royal Botanic Gardens, Kew, Richmond,
 Surrey, UK TW9 3DS

SUMMER

- American Indian Internship Program; Smithsonian Institution,
 Washington, DC; Bruce C. Craig, Office of Museum Programs,
 Smithsonian Institution, 900 Jefferson Drive SW, Room
 2235-Stop 427, Washington, DC 20560, tel: 202-357-3101

AUGUST

- 1-21. Tropical Diversity; Costa Rica; Dr. Lucinda McDade,
 Organization for Tropical Studies, P.O. Box DM, Duke Station,
 Durham, NC 27706, tel: 919-684-5774, FAX: 919-684-5661
 9-11. Association of Systematic Collections, Annual Meeting;
 Honolulu; (see page 5)
 10-11. Preparing Agreement Documents Under the National Historic
 Preservation Act; Washington; (#5)
 30 Aug-4 Sep. The Australian Rock Art Research Association/
 International Federation of Rock Art Organizations; North
 Queensland, Australia; AURA, P.O. Box 216, Caulfield South,
 Victoria 3162, Australia

FALL

- ???? Workshops on Conservation Environments; New York; Dr.
 William P. Lull, Garrison/Lull, Box 337, Princeton Junction, New
 Jersey 08550, tel: 609-259-805
 ???? American Chemical Society Annual Meeting Symposium (with
 museum materials and collections as major theme); Washington,
 DC; Mary Baker, MSC/CAL, Smithsonian Institution, Washington,
 DC 20560, tel: 301-238-3714, FAX: 301-238-3709
 ???? Archeological Curation and Collections Management; (#5)

SEPTEMBER

- ???? Fire, Safety and Occupational Health Workshop for Museums
 and Other Cultural Institutions; (#5)
 1 Sep-30 Nov. Chemistry for Conservators (correspondance course);
 (see 1 May)
 8-13. Conservation of the Iberian and Latin American Cultural
 Heritage, IIC Congress 92; Madrid, Spain; Perry Smith, IIC, 6
 Buckingham Street, London WC2N 6BA, tel: 071-839-5975, FAX:
 071-976-1564
 10-12. International Conference on Molluscan Conservation; Glasgow,
 UK; Fred Woodward, Kelvingrove Museum & Art Gallery, Kelvin
 Grove, Glasgow, UK G3 8AG, tel: 041-357-3929, FAX:
 041-357-4537
 19-27. ICOM General 92 Conference; Quebec (see page 5)
 21-23. AICCM 92 Conference; Cairns, Queensland; Benita Johnson,
 AICCM, tel: 06-252 2369
 23-25. ASTM D-6 Committee Meeting/TAPPI Paper Permanence
 Committee Meeting; Minneapolis, MN; ASTM
 24-27. The Artist and the Missionary: A Native-American and
 Euro-American Cultural Exchange, 16th Annual Plains Indian
 Seminar; Cody, WY; Lillian Turner, Buffalo Bill Historical Center,
 P.O. Box 1000, Cody, WY 82414, tel: 307-587-4771, ext. 248
 29. Marketing Your Museum or Gallery; Burnaby, BC; (#9)

OCTOBER

- ???? Architectural Ceramics and Terracottas; UKIC, Shan Tomlin
 ???? Issues in Public Interpretation of Archeological Materials and
 Sites; Colorado; (#5)
 5-8. Biodeterioration of Cultural Property, 2nd International
 Conference; Yokohama, Japan; The Secretariat of ICBCP-2, C/O
 Kasho Building, 2-14-9 Nihonbashi, Chouku, Tokyo, 103 Japan,
 FAX: 08 38 28 2434
 8-10. Preventive Conservation, 3rd AARAFU Meeting; Paris, France;
 P. Nyeberg, 2 Rue Guenot, Paris, France
 18-22. Nondestructive Testing Conference; Siena, Italy; Organisational
 Secretariat, AlPnD, Mrs. Bazzani, Via Foresti, 5-25126, Brescia,
 Italy
 20-22. Restoration 92 Conference; Amsterdam; Restoration 92, RAI,
 Europaplein 12, 1078 GZ Amsterdam, tel: 20-540-1212, FAX:
 20-464-469
 22-23. Ancient Lives-Managing BC's Fossil Heritage; BC; (#9)
 24-26. Disaster prevention, response, and recovery: Principles and
 procedures for protecting and preserving historical/cultural
 properties and collections; Cambridge, MA; Technolog and
 Conservation, 1 Emerson Place, 16M, Boston, MA 02114; tel:
 617-227-8581
 26 Oct-6 Nov. Curatorial Methods; West Virginia; (#5)
 28-31. Museum Computer Network 92/ American Society for
 Information Science; Pittsburgh, PA; 1992 Program Chair, Gail
 Eagen, CHIN, 365 Laurier Ave. W, 12th Floor, Ottawa, Ontario
 K1A 0C8, tel: 613-992-3333, FAX: 613-952-2318
 Oct-Dec. Interpretive Program Management; West Virginia; (#5)
 Oct-Dec. Technology in Education and Interpretation; Virginia; (#5)

NOVEMBER

- ???? Advanced Principles of Collections Management; BC; (#9)
 ???? Leadership Workshop; (#5)
 5. Conservation Information Network, Introductory Training Course;
 Santa Monica, CA; GCI; (#12)
 12-13. Harpers Ferry Textile Group: Silk, 11th Conference; Katherine
 Dirks, Smithsonian Institution, Washington DC, tel: 202-357-1889
 12-14. Spanish Social, Political and Economic Empire; Texas; (#5)

DECEMBER

- ???? Cooperative Paper Conservation: The Conservation of Complex
 Mixed Media Objects; London; Johan Hermans/Sheila Fairbrass,
 Paper Conservation Section, The Museum of London, London
 Wall, London WC2Y 5HN
 15-16. Fumigants: Phermones Technical Seminar; Indianapolis, IN;
 Fumigation Service & Supply, tel: 317-846-5444

continued from page 5. . . .

institutions. A business meeting and discussion of NSF
 programs will be held August 9th. For program
 information, contact: ASC, 730 11th St. NW, 2nd Fl.,
 Washington, DC 20001; (202) 347-2850; for hotel
 information, contact AIBS, (202) 628-1500.

SPNHC COUNCIL

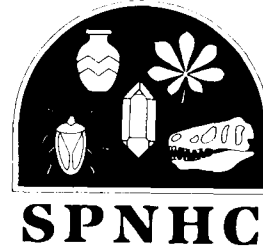
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SPNHC Newsletter

Editor - Julia Golden



SPNHC NEWSLETTER is a benefit of membership in the SPNHC and is published biannually, summer and winter. Address all inquiries concerning membership to the SPNHC Treasurer. Inquiries concerning newsletter content should be addressed to the editor. Deadlines for submitting information for inclusion in the SPNHC Newsletter are January 15 and July 15.

SPNHC Newsletter
 Julia Golden
 Department of Geology
 University of Iowa
 Iowa City, IA 52242-1379

FIRST CLASS MAIL



SPNHC COMPUTER SURVEY

The Computers and Computer Use Subcommittee of the Resources Committee compiled this list of computer systems currently being used by SPNHC members. The entries are arranged by Operating System (DOS, MAC, etc.) followed by the database management system (Clipper, dBase, etc.). The type of collection is listed under Discipline, where MIX implies multiple types of collections. Size refers to the number of specimens (or specimen lots) in the entire collection. Size and % Automated are listed, when applicable, for each discipline and the numbers are set apart by semi-colons. Finally, a contact person, institution, and in most cases telephone numbers are included. If you would like your collection to be included in the database, please contact Susan Woodward, (416) 586-5768; FAX: (416) 586-5863. If you would like a copy of the database, send a 5.25 diskette and mailer to Susan, Royal Ontario Museum, Mammals, 100 Queen's Park, Toronto, ON, Canada M5S 2C6.

DOS ... ?

DISCIPLINE(S): MIX;MAMMALS;BIRDS;FISH;INVERTS;MINERALS
 SIZE: ?; ?; 16,000; 40,000; 10,000
 % AUTOMATED: 0%; >0%; 69%; 0%; 30%
 LA RICCA, MARIE, REDPATH MUSEUM, MONTREAL
 (514) 398-4086 FAX: (514) 398-3594

DOS ... ADVANCED REVELATIONS

DISCIPLINE(S): MIX
 SIZE: DATA ON COLLECTIONS' RESOURCES
 % AUTOMATED: -
 HOAGLAND, K. ELAINE, ASSOCIATION OF SYSTEMATICS
 COLLECTIONS (ASC), WASHINGTON, DC
 (202) 347-2850 FAX: (202) 347-0072

DOS ... CLIPPER

DISCIPLINE(S): MIX; MAMMALS; BIRDS; HERPS; PALEO
 SIZE: ?; ?; ?; ?;
 % AUTOMATED: >0%; >0%; >0%; >0%
 VALDECASAS, ANTONIA + ELISA BELLO + J. M. BECERRA,
 MUSEO NACIONAL CIENCIAS NATURALES, MADRID, SPAIN
 FAX: (341) 564-5078

DOS ... DBASE III+

DISCIPLINE(S): FISH
 SIZE: 12,000
 % AUTOMATED: 100% ?
 SNYDER, ALEXANDRA M., UNIVERSITY OF WASHINGTON
 (206) 543-3816

DOS ... DBASE III+

DISCIPLINE(S): FISH
 SIZE: 1100 ?
 % AUTOMATED: ?
 LARICCA, MARIE + SUSAN GABE, REDPATH MUSEUM, MONTREAL
 (514) 398-4086

DOS ... DBASE III+

DISCIPLINE(S): INVERT ZOOLOGY
 SIZE: 16,992
 % AUTOMATED: <1%
 BYERS, SHEILA C., ROYAL ONTARIO MUSEUM, TORONTO
 (416) 586-8041 FAX: (416) 586-5863

DOS ... DBASE III+

DISCIPLINE(S): MAMMALS
 SIZE: 118,600
 % AUTOMATED: 6%
 JONES, CHERI, MISSISSIPPI MUSEUM OF NATURAL SCIENCES
 (601) 354-7303 FAX: (601) 354-7227

DOS ... DBASE III+

DISCIPLINE(S): MIX
 SIZE: 50,000
 % AUTOMATED: ?
 MCCONACHIE, JACKIE, NEW MEXICO MUSEUM OF NATURAL
 HISTORY, ALBUQUERQUE
 (505) 841-8837 FAX: (505) 841-8866

DOS ... DBASE III+

DISCIPLINE(S): MIX; MAMMALS; BIRDS; HERPS
 SIZE: ~ 12000; ~ 13500; ~ 15000
 % AUTOMATED: 0%; 0%; 0%
 KISHINAMI, CARLA, BISHOP MUSEUM, HONOLULU
 (808) 848-4198 FAX: (808) 841-8968

DOS ... DBASE III+

DISCIPLINE(S): MIX; MAMMALS; BIRDS; HERPS; MOLLUSKS
 SIZE: 15,000; 6,300+; 550; 187,000
 % AUTOMATED: 27%; 0%; 0%; 30%
 HESS, GENE K., DELAWARE MUSEUM OF NATURAL HISTORY,

DOS ... DBASE III+

DISCIPLINE(S): MIX; NATURAL HISTORY; CULTURE; LOCAL
 SIZE: 20,000 TOTAL
 % AUTOMATED: ?
 RICHARD, CAROLYN, GRAND CANYON NATIONAL PARK
 (602) 638-7769

DOS ... DBASE III+

DISCIPLINE(S): MIX; VERTEBRATE PALEONTOLOGY
 SIZE: 6500
 % AUTOMATED: 100% ?
 SHEEHAN, PETER, MILWAUKEE PUBLIC MUSEUM

DOS ... DBASE III+; "CURATOR"; CONVERTING TO ARGUS

DISCIPLINE(S): MIX; VERT ZOOLOGY; EARTH SCIENCES
 SIZE: 1000; 6000
 % AUTOMATED: ?; ?
 BARNOSKY, TONY, DENVER MUSEUM OF NATURAL HISTORY,
 FAX: (303) 331-6492

DOS ... DBASE IV

DISCIPLINE(S): MIX; MAMMALS; BIRDS; HERPS; ENTOMOLOGY;
 BOTANY
 SIZE: MAMMALS + BIRDS + EGGS + HERPS = 52,000; OTHERS
 % AUTOMATED: 100%; >0%
 HENNEN, MARY, THE CHICAGO ACADEMY OF SCIENCES
 (312) 549-0607 FAX: (312) 549-5199

DOS ... DBASE IV

DISCIPLINE(S): ORNITHOLOGY
 SIZE: 235,000
 % AUTOMATED: 21%
 KIFF, LLOYD + JON FISHER + CLARK SUMIDA, WESTERN
 FOUNDATION OF VERTEBRATE ZOOLOGY, LOS ANGELES
 (213) 208-8003

DOS ... DBASE IV 1.1

DISCIPLINE(S): MAMMALS
 SIZE: 35,000
 % AUTOMATED: 88%
 WINGATE, LLOYD R., KAFFRARIAN MUSEUM,
 KING WILLIAM'S TOWN, SOUTH AFRICA
 (043) 324-506 FAX: (043) 333-655

DOS ... DBASE IV 1.1
DISCIPLINE(S): MIX
SIZE: 35,000 TOTAL
% AUTOMATED: 60%
DEISLER-SENO, JANE E., CORPUS CHRISTI MUSEUM OF
SCIENCE AND HISTORY, TEXAS
(512) 883-2862

DOS ... DBASE IV 1.1; NOT ALL DATA IN NEW VERSION
DISCIPLINE(S): MIX; PALEONTOLOGY-INVERT, VERT, PLANT
SIZE: ~1,000,000
% AUTOMATED: 3%
GOLDEN, JULIA, UNIVERSITY OF IOWA
(319) 335-1822 FAX: (319) 335-1821

DOS ... DBASE IV; CONVERTING TO ARGUS
DISCIPLINE(S): MIX; VERT ZOOLOGY
SIZE: 35,000
% AUTOMATED: 2%
JANNETT, JR., FREDERICK J., SCIENCE MUSEUM OF MINNESOTA,
ST. PAUL; (612) 221-9429

DOS ... FOXPRO
DISCIPLINE(S): BOTANY-HERBARIUM
SIZE: >1,000
% AUTOMATED: ?
PEIRSON, DAVID, WILFRED LAURIER UNIVERSITY, CANADA
(519) 884-1970 FAX: (519) 886-9354

DOS ... FOXPRO; DBASE IV; LOTUS 123
DISCIPLINE(S): MIX; MAMMALS; BIRDS; HERPS; FISH;
ENTOMOLOGY; INVERT ZOOLOGY; EARTH HISTORY;
COMPARATIVE FAUNAL; BOTANY
SIZE: 19,000; 24,000; 2,000; 11,000; ?; ?; ?; 200,000
% AUTOMATED: 84%; 92%; 100%; 100%; >0%; >0%; >0%; >0%; 20%
TAYLOR, M. ELIZABETH, ROYAL BRITISH COLUMBIA MUSEUM
(604) 356-8791 FAX: (604) 356-8197

DOS ... INFO; CONVERTING TO PARADOX
DISCIPLINE(S): MIX; ZOOLOGY; BOTANY; MARINE
SIZE: 27,393; 5,331
% AUTOMATED: 76%; 6%
MIKKELSEN, PAULA M., HARBOR BRANCH OCEANOGRAPHIC
MUSEUM, FORT PIERCE, FL, USA 34946
(407) 465-2400, EXT. 428 FAX: (407) 465-2446

DOS ... INMAGIC 7.
DISCIPLINE(S): GEOLOGY
SIZE: 4,000
% AUTOMATED: ?
MILLER, RANDY, NEW BRUNSWICK MUSEUM
(506) 658-1842 FAX: (506) 658-1842

DOS ... KNOWLEDGE MAN/2
DISCIPLINE(S): MIX; PALEONTOLOGY-BIRDS;
ZOOARCHAEOLOGY;
SIZE: ~50,000
% AUTOMATED: 100%
MATTHIESEN, DIANA, UNIVERSITY OF FLORIDA
(904) 392-1107 FAX: (904) 392-3704

DOS ... MODES; HEADFAST (VARIANT OF INMAGIC)
DISCIPLINE(S): GEOLOGY
SIZE: 35,000
% AUTOMATED: 3%
MONAGHAN, NIGEL T., NATIONAL MUSEUM OF IRELAND
DUBLIN 2, IRELAND; (353) 161-8811 FAX: (353) 176-6116

DOS ... MUSE WITH BTRIEVE AND XTRIEVE PLUS
DISCIPLINE(S): ARCHAEOLOGY
SIZE: 62,000
% AUTOMATED: >0%
HUMPHRIES, JULIAN + DAVID BIOLSI, MUSEUM, UNIVERSITY OF
ARKANSAS; (607) 257-8109 FAX: (501) 575-3846

DOS ... PARADOX
DISCIPLINE(S): MIX; BIRDS; MINERALS; OTHER
SIZE: 2,500 TOTAL
% AUTOMATED: ?; ?; ?
BOLT, JR., EUGENE A., WAGNER FREE INSTITUTE OF SCIENCE,
PHILADELPHIA

DOS ... PCFILE+
DISCIPLINE(S): BOTANY-HERBARIUM
SIZE: 140,000
% AUTOMATED: 9%
TOPPING, JOHN C., QUEEN'S UNIVERSITY, CANADA
(613) 545-6137 FAX: (613) 545-6617

DOS ... PROGRESS
DISCIPLINE(S): MIX; GEOLOGY; PALEONTOLOGY
SIZE: 10000; 500
% AUTOMATED: 100% ?; 100% ?
GOSS, ARTHUR F., DAYTON MUSEUM OF NATURAL HISTORY

DOS ... Q & A 3.0
DISCIPLINE(S): MIX; VERT ZOOLOGY
SIZE: 8,000 TOTAL
% AUTOMATED: 55%
KONECNY, ANN, MUSEUM OF ZOOLOGY, UNIVERSITY OF
CALGARY; (403) 220-5269 FAX: (403) 289-9311

DOS ... RBASE
DISCIPLINE(S): BOTANY-HERBARIUM
SIZE: ~150,000
% AUTOMATED: 11%
DOEBLEY, JOHN, UNIVERSITY OF MINNESOTA, ST. PAUL
(612) 625-3702 FAX: (612) 625-5754

DOS ... RBASE
DISCIPLINE(S): HERPS
SIZE: 233,064
% AUTOMATED: 100%
VINDUM, JENS V., CALIFORNIA ACADEMY OF SCIENCES, SAN
FRANCISCO; (415) 750-7037 FAX: (415) 750-7346

DOS ... RBASE
DISCIPLINE(S): MIX; INVERT PALEO; MINERALS; PETROLOGY
SIZE: 10,000+ TOTAL
% AUTOMATED: >0%
GREGGS, JONATHON, UNIVERSITY OF CALGARY
(403) 220-5609 FAX: (403) 284-0074

DOS ... RBASE
DISCIPLINE(S): MIX; MAMMALS; HERPS; BIRDS; FISH; MOLLUSKS
SIZE: 10,000; 10,000; 10,000; 6,000; ?
% AUTOMATED: 100% ?; 100% ?; 100% ?; 100 ?; STARTING
LABEDZ, THOMAS E., UNIVERSITY OF NEBRASKA STATE
MUSEUM, LINCOLN; (402) 472-6606

DOS ... REFLEX 2.0
DISCIPLINE(S): ARCHAEOLOGY
SIZE: 4000
% AUTOMATED: 65%
BARTON, ANDREW J., SIMON FRASER UNIVERSITY, CANADA
(604) 291-3769 FAX: (604) 291-4727

DOS ... REVELATION; R-BASE 3.1
DISCIPLINE(S): MIX; MINERALOGY; PALEONTOLOGY
SIZE: 1,000 PALEO TYPES; 3,000 DIATOM
% AUTOMATED: ?; ?
FOSS, JACK, CALIFORNIA ACADEMY OF SCIENCES, SAN FRANCISCO; (415) 750-7287 FAX: (415) 750-7090

DOS ... SAS
DISCIPLINE(S): BOTANY-HERBARIUM
SIZE: 70000
% AUTOMATED: 100% ?
LEUBKE, NEIL, MILWAUKEE PUBLIC MUSEUM

DOS ... SAS
DISCIPLINE(S): FISH
SIZE: 17500
% AUTOMATED: 100% ?
SUMPTER, PAULA, MILWAUKEE PUBLIC MUSEUM
(414) 278-2740

DOS ... SAS
DISCIPLINE(S): HERPS
SIZE: 26000
% AUTOMATED: 100% ?
HENDERSON, BOB, MILWAUKEE PUBLIC MUSEUM

DOS ... SAS
DISCIPLINE(S): INVERT PALEONTOLOGY
SIZE: 30,000
% AUTOMATED: 100%
SUMPTER, PAULA, MILWAUKEE PUBLIC MUSEUM
(414) 278-2740 FAX: (414) 223-1396

DOS ... SAS
DISCIPLINE(S): MIX; ARCHAEOLOGY; HISTORY
SIZE: 7000; 18973
% AUTOMATED: 100% ?; 100% ?
SUMPTER, PAULA, MILWAUKEE PUBLIC MUSEUM
(414) 278-2740

DOS ... SAS
DISCIPLINE(S): MIX; MAMMALS; BIRDS
SIZE: 4000; 20000
% AUTOMATED: 100% ?; 100% ?
KRAUCUNAS, NATHAN, MILWAUKEE PUBLIC MUSEUM

DOS ... SAS; CONVERTING TO DBASE III+
DISCIPLINE(S): MIX; MAMMALS; BIRDS; HERPS; FROZEN TISSUES
SIZE: 50,000-100,000 TOTAL
% AUTOMATED: ?
WILLIAMS, STEPHEN, MUSEUM, TEXAS TECH UNIVERSITY, LUBBOCK; (806) 742-2486 FAX: (806) 742-1136

DOS ... SAS; CONVERTING TO PARADOX
DISCIPLINE(S): MIX; MAMMALS; BIRDS
SIZE: 4500 ?; 85000 ?
% AUTOMATED: 22% ?; 0% ?
SCHRINER, KEN, MUSEUM, UNIVERSITY OF ARKANSAS, FAYETTEVILLE; (501) 575-2905 FAX: (501) 575-3846

DOS; HONEYWELL SYSTEM ... DBASE; SELGEM
DISCIPLINE(S): PALEONTOLOGY
SIZE: 500,000
% AUTOMATED: ?
BRETT-SURMAN, MICHAEL K., SMITHSONIAN INSTITUTION
(202) 357-2083 FAX: (202) 786-2832

DOS; OTHER-NOS/VE ... DBASE III+; PARIS
DISCIPLINE(S): MAMMALS
SIZE: 100,000
% AUTOMATED: 65%
WOODWARD, SUSAN M., ROYAL ONTARIO MUSEUM, TORONTO
(416) 586-5768 FAX: (416) 586-5863

DOS; OTHER-VM ... ENABLE; NOTIS
DISCIPLINE(S): -
SIZE: ?
% AUTOMATED:
HANLAN, TIM, QUEEN'S UNIVERSITY, CANADA
(613) 545-2156 FAX: (613) 545-6300

MAC ... 4TH DIMENSION
DISCIPLINE(S): BIRDS
SIZE: 11,000
% AUTOMATED: 100%
PAULSON, DENNIS R., SLATER MUSEUM OF NATURAL HISTORY, TACOMA, WA, USA 98416

MAC ... HYPERCARD
DISCIPLINE(S): MIX
SIZE: 10,000
% AUTOMATED: 23%
PRATT MUSEUM OF NATURAL HISTORY, AMHERST, MA 01002

MAC ... QUIXIS
DISCIPLINE(S): MIX; ANTHROPOLOGY; ARCHAEOLOGY
SIZE: ?; ?
% AUTOMATED: 0%; 0%
REDDING, RICHARD W., CRANBROOK INSTITUTE OF SCIENCE, BLOOMFIELD HILLS, MI 48303; (313) 645-3214

MAC-SYSTEM 6.0.7 ... FILEMAKER PRO
DISCIPLINE(S): MIX; MAMMALS; HERPS; FISH; MOLLUSKS; CRUSTACEA
SIZE: 629; 9,884; 50,943; 11,750; 3,550
% AUTOMATED: 100% ?; 100% ?; 100% ?; 100% ?; 100% ?
CUMMINGS, KEVIN S., ILLINOIS NATURAL HISTORY SURVEY
(217) 333-1623 FAX: (217) 333-4949

OTHER-CMS ... TAXIR; TO BE CONVERTED
DISCIPLINE(S): MIX; MAMMALS; BIRDS; HERPS
SIZE: 600,000 TOTAL
% AUTOMATED: 100%
STEIN, BARBARA R., MUSEUM OF VERTEBRATE ZOOLOGY UNIVERSITY OF CALIFORNIA, BERKELEY
(415) 642-3567 FAX: (415) 643-8238

OTHER-CPM ... CONDOR DBMS 3
DISCIPLINE(S): MIX; FISH; INVERTS; MACROPHYTES; MARINE
SIZE: 11,749 TOTAL ?
% AUTOMATED: ?
FOSTER, NORA R., UNIVERSITY OF ALASKA MUSEUM, FAIRBANKS
(907) 474-7505

OTHER-CPM ... DBASE II
DISCIPLINE(S): GEOLOGY
SIZE: ~10,000
% AUTOMATED: ~40%
CRAWFORD, MARIA LENSE, BRYN MAWR COLLEGE
BRYN MAWR, PA 19010; (215) 526-5115 FAX: (215) 526-5086

OTHER-EP/IX (CDC EQUIVALENT OF UNIX) ... BASIS +
DISCIPLINE(S): PALAEOLOGY
SIZE: 100,000
% AUTOMATED: 100%; NOT ALL COMPLETE RECORDS
WILKE, JACKIE, ROYAL TYRRELL MUSEUM OF PALAEOLOGY,
CANADA; (403) 823-7707 FAX: (403) 823-7131

OTHER-NOS/VE ... BASIS
DISCIPLINE(S): MIX
SIZE: HOUSES DATA FOR ALL COLLECTIONS BELONGING
TO C.H.I.N.
% AUTOMATED: -
RASK, ERIK + GAIL EAGEN, CANADIAN HERITAGE INFORMATION
NETWORK (CHIN), OTTAWA (613) 992-3333 FAX: (613) 952-2318

OTHER-NOS/VE; DOS ... BASIS/PARIS
DISCIPLINE(S): INVERT ZOOLOGY
SIZE: 32,000
% AUTOMATED: 24%
FRANK, PETER, CANADIAN MUSEUM OF NATURE, OTTAWA
(613) 954-2583 FAX: (613) 954-6439

OTHER-NOS/VE; DOS ... BASIS; DBASE III +
DISCIPLINE(S): FISH
SIZE: ~800,000
% AUTOMATED: 8%
HOLM, ERLING, ROYAL ONTARIO MUSEUM, TORONTO
(416) 586-5760 FAX: (416) 586-5863

OTHER-UNIX ... ARGUS
DISCIPLINE(S): MIX
SIZE: ~100,000
% AUTOMATED: 20%
PRLAIN, GENEVIEVE + CAROLYN RISSANEN, OAKLAND MUSEUM,
OAKLAND, CA 94607; FAX: (415) 273-2258

OTHER-UNIX ... ARGUS; SITES
DISCIPLINE(S): MIX; PALEONTOLOGY; GEOLOGY; OTHER
SIZE: 30,000 TOTAL
% AUTOMATED: >0%
FINKEL, SUSAN (QUESTOR), NEW JERSEY STATE MUSEUM
TRENTON; (609) 292-5421 FAX: (609) 292-7665

OTHER-UNIX ... C/B 3.0 (CONETICS) DATABASE MANAGEMENT
SYSTEM
DISCIPLINE(S): HERPS
SIZE: 245524
% AUTOMATED: ?
LOWTHER, PETER, FIELD MUSEUM OF NATURAL HISTORY
(312) 922-9410

OTHER-UNKNOWN ... ?
DISCIPLINE(S): BOTANY-HERBARIUM + LIVING PLANT; LIBRARY
SIZE: 20,000 + 25,000
% AUTOMATED: ?
HODGSON, WENDY + LIZ ECKER (BOTANY) + JANE COLE,
DESERT BOTANICAL GARDEN, PHOENIX; FAX: (602) 947-2800

OTHER-UNKNOWN ... NOMAD2
DISCIPLINE(S): ANTHROPOLOGY
SIZE: 45,000
% AUTOMATED: 40%
WINNANS, MELISA, TEXAS MEMORIAL MUSEUM, UNIVERSITY OF
TEXAS, AUSTIN; (512) 471-6087

OTHER-UNKNOWN ... SELGEM; ?
DISCIPLINE(S): FISH
SIZE: 40,000
% AUTOMATED: ?
JEWETT, SUSAN, SMITHSONIAN INSTITUTION
(202) 357-3300 FAX: (202) 357-1896

OTHER-UNKNOWN; CHANGING TO DOS ... APPLICATION FACTORY;
CONVERTING TO PARADOX
DISCIPLINE(S): BIRDS
SIZE: 200,000
% AUTOMATED: 100%
WOOD, D. SCOTT, CARNEGIE MUSEUM OF NATURAL HISTORY,
PITTSBURGH; (412) 622-3255 FAX: (412) 622-8837

OTHER-VAX; CHANGING TO DOS ... CORTEX-CORVISION;
CONVERTING TO PARADOX
DISCIPLINE(S): MAMMALS
SIZE: 106,143
% AUTOMATED: 100%
LINDSTRAND, TIM + SUZANNE MC CLAREN, CARNEGIE MUSEUM
OF NATURAL HISTORY, PITTSBURGH; (412) 622-8754

OTHER-VM/CMS ... INQUIRE
DISCIPLINE(S): MIX; MAMMALS; BIRDS
SIZE: 570,000; 610,000
% AUTOMATED: 62%; 44%
LUDWIG, CRAIG, SMITHSONIAN INSTITUTION
(202) 357-2172 FAX: (202) 357-4121

OTHER-VM/CMS ... SAS
DISCIPLINE(S): MIX; FISH; INVERTS; MARINE
SIZE: 100,000+ TOTAL LOTS
% AUTOMATED: 16%
CAMP, DAVID K., FLORIDA MARINE RESEARCH INSTITUTE
ST. PETERSBURG, (813) 896-8626 FAX: (813) 823-0166

OTHER-VMS ... CORVISION
DISCIPLINE(S): HERPS
SIZE: 133,965
% AUTOMATED: 100%
CENSKY, ELLEN J., CARNEGIE MUSEUM OF NATURAL HISTORY,
PITTSBURGH; (412) 622-3258 FAX: (412) 622-8837

OTHER-XENIX ... INFORMIX
DISCIPLINE(S): PALEONTOLOGY
SIZE: 145,000
% AUTOMATED: 90%
TURLET, DOUG, FLORIDA MUSEUM OF NATURAL HISTORY
UNIVERSITY OF FLORIDA, GAINESVILLE, FL, USA 32611

OTHER-XENIX ... TITAN
DISCIPLINE(S): MIX; BIRDS; HERPS; FISH; OTHER
SIZE: 85,000; 100,000; 105,000; ?
% AUTOMATED: ?; ?; ?; ?
DOOHAN, J., AUSTRALIAN MUSEUM, SYDNEY,
(03) 347-8844 FAX: (02) 360-4350