OHIO ARCHAEOLOGICAL COUNCIL
NEWSLETTER

Volume 4, Number 1 **April, 1992**

Editor's Comments

The OAC Board of Directors is seeking an editor for the *Newsletter* to replace Don Bier, who has resigned. A new editor will be required in time to complete the Fall, 1992 issue.

A written notice or phone message will remind members who agreed to make annual contributions to the Newsletter, beginning with the Fall, 1992 issue. Of course, all of you are welcome to send or arrange for articles for any upcoming issue. Along these lines, the editors thank Annette Ericksen for soliciting the article written by Dr. Kathryn Jakes.

Donald R, Bier, Jr.

President's Message

The Board of Directors met on January 17th. We agreed to a request from the Council for West Virginia Archaeology for another $500 (total $1000) for costs incurred in their suit against the State of West Virginia in regard to the Cotiga Mound investigation. The Cotiga litigation, the suit against the Federal Office of Surface Mining, and the likelihood of the OAC being involved in future legal actions led the Board of Directors to conclude that the OAC needs to develop a policy concerning such actions. The Board of Trustees is responsible for administering the funds of the OAC, and the Trustees will work with the Executive Board in developing guidelines concerning legal actions, particularly with respect to the OAC's financial involvement. A draft of this policy will be presented at the May 8th membership meeting.

We approved the Education Committee's proposal for a two day conference, November 20-21 at the Ohio Historical Center, focusing on Paleoindian and Archaic studies in Ohio. The Board of Directors hopes that this will be the first of annual conferences on Ohio archaeology sponsored by the OAC. The OAC's business meeting also will be held during this conference. In addition to presenting scholarly papers in the plenary session, the conference is intended to provide a 1/2 day primary and secondary teacher workshop on Ohio archaeology. Papers presented during the plenary session will be published. There also will be time for papers on archaeology other than Paleoindian and Archaic studies. Planning for the conference continues. This a major undertaking for the OAC and we look forward to its success. The OAC membership will have a big part in making it such by attending and providing feedback. More information about the conference will be coming soon. If you have any questions at this time please contact Education Committee chair Bob Genheimer or Conference Coordinator Bill Dancey.

Vice President Brad Lepper has been appointed Program Chair for membership meetings. The Board also voted to make the Program Chair a duty of the Vice President. The Board also approved the OAC *Newsletter* questionnaire (enclosed) and reappointed Don Bier as Newsletter Editor and the President and Vice President as editorial advisors. However, Don Bier has since resigned as editor.

The Native American Concerns Committee met recently to discuss, among other things, approaching the Governor about the need for state legislation creating a process to deal with the discovery, study and disposition of interred human remains from antiquity. Efforts in the General Assembly have met with little success. The President, a member of the Committee, and Committee member Brad Baker, Attorney at Law, will initiate contact.

Al Tonetti

Ohio Historic Preservation Office

STATE LEGISLATION

House Bill 264, the Ohio Submerged Resources Protection Act, was signed into law by Governor Voinovich on December 2, 1991. The law takes effect March 2, 1992. The law brings Ohio into compliance with the "Federal Abandoned Shipwreck Act of 1987," whereby Congress conferred ownership to historic shipwrecks to the state in whose water they were abandoned. The Ohio law also provides for the establishment of underwater preserves to protect historic

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shipwrecks, aircraft, and other types of archaeological sites in Lake Erie. A permit is required to recover historic property in state-controlled waters. The Ohio Department of Natural Resources will issue permits and control access to preserves and significant historic properties. The OHPO will evaluate historic properties for their significance. For more information contact Franco Ruffini, Deputy SHPO, Ohio Historic Preservation Office, 1982 Velma Avenue, Columbus, OH 43211-2-497 (614) 297-2470.

House Bill 274, the Ohio Historic Preservation Act, remains in a subcommittee of the State Government Committee. For more information contact Franco Ruffini, Deputy SHPO.

Hopeton Earthworks

Pursuant to Section 9(a) of the Mining in the National Parks Act of 1976, last year the National Park Service requested the Advisory Council on Historic Preservation's advice on the threat of surface mining to Hopeton Earthworks National Historic Landmark in Ross County. The Council's report was recently completed and sent to the Secretary of the Interior, Senator Howard Metzenbaum, Representative Robert McEwen, and to the Senate Committee on Energy and Natural Resources and the House Committee on Interior and Insular Affairs, which are considering bills (S. 749 and H.R. 2328, respectively) to, among other things, purchase that portion of Hopeton Earthworks not owned by the Federal Government. The ACHP's report reaffirms their support for these bills, recommends that the NPS seek permission from the Chillicothe Sand and Gravel Company to undertake archaeological investigations in areas where topsoil stripping might take place, and that the NPS undertake a boundary study for Hopeton Earthworks. A Subcommittee of the House Committee on Interior and Insular Affairs met on November 19, 1991 and favorably sent to the full Committee H.R. 2328. The Subcommittee heard testimony from Bill Gibson, Superintendent of Mound City Group National Monument, Mark Michael, President of the Archaeological Conservancy, and National Park Service Director James Ridenour, former State Historic Preservation Officer in Indiana. No opposition to the bill was made. It is hoped that the full Committee will take action on the bill in February. For more information contact Bill Gibson, Superintendent, Mound City Group National Monument, 16062 SR 104, Chillicothe, OH 45601; (614) 774-1126.

Federal Funds Received

The OHPO received notice from the Department of the Interior that our portion of the Historic Preservation Fund for Fiscal Year 1992 (October, 1991 - September, 1992) will be $755,525, fourth highest in the nation. Only New York, California, and Pennsylvania, in descending order, received more funds. This represents a 3% increase ($21,757) from FY 1991. The states received $28,843,000 for FY 1992, also a 3% increase from FY 1991. For more information contact Mary Beth Hirsch, Education and Support Services Department Head.

Archaeology Guidelines

The Ohio Historic Preservation Office continues to review the Archaeology Guidelines. They will be distributed to the full Archaeology Guidelines Committee for review. For more information contact Franco Ruffini, Deputy State Historic Preservation Officer.

OAI Microfilming Project

Microfilming of Ohio Archaeological Inventory and Preliminary Documentation forms continues. Completion of this project has been moved from the Spring of 1992 to the Winter of 1992-1993. For further information contact Al Tonetti, Archaeology Manager.

Archaeology Lab and Site Files

The Archaeology Lab and archaeological/ethnographic collections in the Education Division of the Ohio Historical Society have been moved off-site. The Ohio Archaeological Inventory, 7.5 minute quadrangle maps, and contract report files will indefinitely remain where they have been, but may move to the third floor of the Ohio Historical Center, under control of the OHPO. Fifteen minute Lithic Laboratory quadrangle maps, as collections documents, will remain in the OHS Education Division. Beginning immediately, contact Terry Skiba in the Technical and Review Services Department at OHPO to arrange for appointments to consult these files for compliance (Section 106,etc.) purposes (call 614-297-2470). We cannot guarantee access to the files unless you call ahead for an appointment. Your cooperation is greatly appreciated. For more information contact Al Tonetti, Archaeology Manager.

National Archaeological Data Base

The OHPO has entered into an agreement with the National Park Service to recode approximately 1100 archaeological documents previously coded under a NADB project with the NPS. Two thousand dollars has been provided by NPS to undertake this project. The OHPO will soon send out a request for proposals to recode these records. In addition, the agreement calls for OHPO to provide records of (contract archaeology) reports in NADB on a yearly basis. Other states have entered into similar agreements with the NPS. The on-line version of NADB Reports contains over 90,000 records of reports nationally. Federal agencies, state agencies, institutions, or individuals can access the on-line system by contacting Veletta Canouts, NADB Coordinator, Departmental Consulting Archeologist/ Archeological Assistance, National Park Service, P.O. Box 37127, Washington, DC 20013-7127; telephone (202/FTS)-343-4101; FAX (202/FTS)-523-1547. For more information contact Tom Cinadr, Computer Systems Manager.

Computer Applications Newsletter

Archaeologists interested in following the literature on new and developing computer applications in cultural heritage programs and archaeological research can subscribe to the Archaeological Computing Newsletter, published for the past six years in England. Subscriptions cost $12 (U.S.) for four issues/year. To subscribe, send payment to the Institute of Archaeology, University of Oxford, 36 Beaumont St., Oxford OX1 2PG, United Kingdom; telephone 0865-278252; FAX 0865-278254. [Adapted from the Federal Archaeology Report, December, 1991, 4(4):23]

Archaeology Training Courses

The December, 1991 issue of Federal Archaeology Report contains a description of cultural resource training opportunities in 1992 available to those concerned about improving historic preservation programs and activities. The training directory incorporates excerpts from the directory produced for CRM Bulletin, the National Park Service journal on cultural resource management information for parks, Federal agencies, Indian Tribes, States, local governments, and the private sector. These opportunities are organized by Federal agency, State agency, universities, and other organizations. Many of these courses are archaeological in nature. The CRM Bulletin training directory is updated yearly. Entries for the updated directory for 1992-1993 should be submitted before June 30, 1992. To submit entries for the updated directory or for further information contact Emogene Bevitt, National Park Service (424/413), P.O. Box 37127, Washington, DC 20013-7127; telephone (202)343-9561. For a copy of the Federal Archaeology Report cultural resource training opportunities or for more information contact Al Tonetti, Archaeology Manager.

Boy Scouts and Archaeology

A proposal for an archaeology merit badge has been held up by the Boy Scouts of America because of insufficient interest in archaeology by Boy Scouts. In order to demonstrate that sufficient interest exists a search is on for cases where Boy Scout groups or individual Scouts have worked with professional or avocational archaeologists. The work can involve survey, excavation, analysis, research, or any facet of a professional quality investigation. Information also is requested about Eagle Scout service projects that involved archaeology. Letters of support for such a merit badge are being solicited from Boy Scouts, Scouters, professional and avocation archaeologists. To send responses or for more information contact S. Alan Skinner, AR Consultants, P.O. Box 820727, Dallas, TX 75382. [Adapted from Federal Archaeology Report, December, 1991, 4(4):27]

Preservation Technology Publications

The U.S. Army Corps of Engineers (COE) Waterways Experiment Station (WES) has produced two publications about preservation programs, technology, and operational strategies of interest to the archaeological community. The first is a large format, 34-page promotional booklet titled "Support to Cultural Resources Management/Historic Preservation: Expertise, Facilities, Equipment." This publication describes WES organization, capabilities, and accomplishments. It also discusses how various applications of appropriate preservation technology can provide solutions to relevant preservation technology questions, including site detection, paleoenvironmental reconstruction, materials identification, impact assessment, monitoring, site protection, and data management. The second publication is "Historic Property Protection and Preservation at U.S. Army Corps of Engineers Projects," the result of a study conducted to assist COE historic property managers to identify site impacts and select appropriate protection and preservation strategies. This document provides the basis for undertaking comprehensive preservation efforts at appropriate, efficient COE project levels. The chapter on impact mitigation addresses public awareness, avoidance, intentional burial, interpretation, site protection, and stabilization. These two publications are the latest in an extensive and significant effort by the COE to provide technical information and guidance needed to improve archaeological preservation efforts. For more information contact Paul Nickens, U.S. Army Corps of Engineers, Waterways Experiment Station, CEWES-EE-R, 3909 Halls Ferry Road, Vicksburg, MS 39180-6199; telephone (601) 634-2380.

Technical report EL-91-6, "Perspective on Archeological Site Protection and Preservation" edited by Paul Nickens, consists of papers from two symposia sponsored by the U.S. Army Corps of Engineers Environmental Impact research Program. Topics discussed include planning and implementation, Federal and State agency regulations and policies, project monitoring, research, and case studies. Copies are available from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161. [Adapted from Federal Archeology Report, December, 1991, 4(4):30]

Other Publications

The University of California, Los Angeles, Institute for Archaeology, has published "A Conservation Manual for the Field Archeologist," by Catherine Sease. This book addresses conservation of excavated objects before they are taken to a trained conservator off site. It costs $16 plus $2.50 shipping. To order or to receive a publication list write the University of California, Los Angeles, Institute of Archaeology Publications, 405 Highland Ave., Los Angeles, CA 90024-1510. "Preservation on the Reservation: Native Americans, Native American Lands and Archaeology," edited by Anthony Klesert and Alan S. Downer, concerns Native American

and Federal cultural resource management law and the interaction of Native Americans, archaeologists, and industry. The publication is the result of a conference at the Heard Museum, Phoenix, AZ, sponsored in part by the Arizona Humanities Council. Copies are available for $10 from the Publications Editor, Navajo Nation Archaeology Department, P.O. Box 689, Window Rock, AZ 86515. "Illinois Archaeological Resource Materials With Annotated Bibliography for Teachers," written by Joyce A. Williams, staff archaeologist with the Illinois Historic Preservation Agency, includes teaching articles, museum addresses, craft suppliers, replicators, and a bibliography organized by grade level. Copies are $3 from the Archaeology Section, Illinois Historic Preservation Agency, Old State Capitol, Springfield, IL 62701. The Virginia Department of Historic Resources offers several series of publications containing archaeological titles. For a list of titles contact the State Archeologist, Virginia Department of Historic Resources, 221 Governor St., Richmond, VA 23219. The Jefferson Patterson Park and Museum in Maryland offers publications ranging from research papers and manuscripts to a series on Studies in Archeology. For a list of titles contact Editor Millie Riley, Maryland Historical and Cultural Publications, DHCH, 45 Calvert St., Annapolis, MD21401-1907; (301) 974-5585. [Adapted from the Federal Archeology Report, December 1991, 4(4):30-31]

Research and Other Notes

The Chris Conner Site: Ninth Archaeological Conservancy Site in Ohio

Last October the Archaeological Conservancy signed the contract to purchase a rare Fort Ancient site in Adams County. The Chris Conner site (33 Ad 142) is on Brush Creek, about two miles north of the Ohio River. The land containing the site was being divided up into small cabin lots to be sold to fishermen and vacationers. This threatened to destroy a well-preserved Fort Ancient village dating to around A.D. 1100 to 1250. As the developer was putting in roads, his equipment operator let some men dig on the site. They disturbed several burials, and word of this reached Christine Conner of Bellbrook. She called Jay Heilman of the Dayton Museum of Natural History. They immediately visited the site and had the digging stopped. Because of her intervention which saved the site from severe damage, it has been named the Chris Conner site. Jay Heilman called the Conservancy because he thought the site had the potential to be a worthwhile preservation project. Wes Cowan and Bob Genheimer of the Cincinnati Museum of Natural History did some shovel testing and contour mapping to define the limits of the site. They agreed that it would be an important acquisition because of its potential for future research. In order to acquire the entire site the Conservancy is purchasing four cabin lots for a price of $27,500 plus interest and other costs associated with the purchase. Dwight Hilgeford of Dayton, who is Chris Conner's father, has pledged to raise half the money need. The Conservancy must raise approximately $15,000 to complete the acquisition. The efforts of Jay Heilman, Wes Cowan and Bob Genheimer were crucial to the acquisition of this site. We are grateful to them! It is the ninth site in Ohio to be protected by the Conservancy, and we are working on others. We look forward to continuing our preservation efforts in Ohio, with its wealth of archaeological resources. The Conservancy would greatly appreciate your tax-deductible contribution for the protection of the Chris Conner site, to help meet our goal of $15,000. It can be sent to The Archaeological Conservancy, Eastern Regional Office, 7402 Charrington Court, Indianapolis, IN 46254; telephone (317) 291-9857.

Sylvia Ball,
Eastern Regional Director,
The Archaeological Conservancy

[Editor's note: The Archaeological Conservancy is constantly seeking to acquire important, endangered archaeological sites. If you know of such sites please contact the Conservancy or the Ohio Historic Preservation Office. A future issue of the OAC *Newsletter* will contain more information about the Conservancy's Advisory Board in Ohio and the criteria used in examining archaeological sites for acquisition]

The Bosman Site: Muskingum County, Ohio

The Muskingum Valley Archaeological Survey, under the direction of Jeff Carskadden, Larry Edmister and James Morton, completed a season of excavations at the Bosman site, a recently discovered 16th-century stockaded village along the Muskingum River 15 miles south of Zanesville. The Bosman site, located along the river bank, had been buried under more than five feet of flood-lain silt and sand. The site was discovered in April, 1991 when a bulldozer operator removing top soils accidentally cut a buried powerline. Additional deep bulldozing around this cut to repair the line exposed a midden. From April through the end of September, ninety-five 10 x 10 foot squares were excavated to the buried midden in the area of the initial disturbance. These excavations were in what turned out to be the rear of the village, that is, the part of the village farthest from the river. About a fourth of the total area of the site was excavated; the remaining portion lies under residential lots. Enough of the site was excavated to indicate that the village consisted of a ring of houses surrounding a central plaza. All or portions of four of these houses were exposed. Surrounding this ring of houses was a stockade and stockade ditch. The curvature of the stockade suggests that the village may have been somewhat oval, measuring about 215 feet by 275 feet in diameter, with the longest axis parallel to the river. The four houses were roughly circular pole structures ("wigwams"), measuring 16.5

feet, 18 feet, 18 x 20 feet, and 18 feet in diameter, with wall posts spaced about two feet apart. The back walls of the houses were about 15 feet from the stockade, and the houses were spaced from 30 to 50 feet apart. Such spacing would have allowed from eight to ten houses around the plaza. The stockade consisted of small diameter upright posts spaced about 9 to 10 inches apart. On the exterior side of the stockade, and anywhere from 2 to 5 feet from it, was a ditch. Dirt had been taken from this ditch and piled up against the outer side of the stockade. The ditch ranged from 4 inches to 1 foot in depth, and from 2 to 6 1/2 feet wide. The embankment between the ditch and the stockade reached a maximum height of 9 inches. A 20 foot, 75 foot, and 105 foot section of the stockade/stockade ditch system was excavated. A total of 81 pit features were excavated. With the exception of several shallow cooking/heating features which occurred inside the houses, all other pit features occurred outside these structures. The largest pit features, cylindrical in shape and measuring 4 feet in diameter and 3 to 4 feet deep, occurred behind the houses along the stockade. Most of these were probably abandoned storage pits that were later filled with garbage. Smaller abandoned "earth ovens" nearer the houses were also used for refuse disposal. Refuse was also simply dumped on the ground between the houses and the stockade, as well as thrown over the stockade and into the stockade ditch. In fact, the pattern of refuse disposal at Bosman was such that most of this discarded material can be linked directly to particular households and can be analyzed accordingly. A preliminary examination of the ceramics indicates that two basic types are present, representing over 95% of the sherds/vessels recovered. These two types are represented in about equal proportions and include Wellsburg Simple Stamped and Madisonville Cordmarked. All of these vessels are shell tempered. Two varieties of Wellsburg rim treatment occur; either a notched rim strip or a series of discrete lugs or nodes on the rim. All of the Madisonville ware is Z-twist. Minority vessel types might be represented by several S-twist cordmarked sherds, possibly from Wellsburg Cordmarked pottery, and three collared vessels that could be related to the Tuttle Hill Notched type. Another northern Ohio type, Indian Hills stamped, is represented by several vessels from at least ten pit features. Remnants of a net impressed vessel, a few bowl sherds, and parts of possible "salt pans" were also recovered. A few simple stamped vessels lacked rim strips and could be related to the type Neale's Landing Grooved Paddle. No Riker series pottery has been identified. Three radiocarbon dates are available from Bosman. The uncorrected dates are A.D. 1610±80 (I-16589), A.D. 1590±80 (I-16593), and A.D. 1550±80 (I-16604). Although the Washington University corrected average of these dates is A.D. 1482±46 (one standard deviation = A.D. 1450-1630), the artifactual evidence, and comparisons with such late sites as Neale's Landing, indicates that the actual occupation at Bosman was probably closer to the uncorrected dates. The presence of the Indian Hills Stamped vessels, for example, suggests a post ca. A.D. 1550 occupation. The Indian Hills Phase has been firmly dated to around A.D. 1550-1650 in northern Ohio. The presence of copper or brass beads and tinklers at Bosman also suggests a post-A.D. 1550 occupation. The lack of glass trade beads, however, suggests that the site was abandoned by A.D. 1600. The lack of "hybrid" pottery types at Bosman (vessels combining Wellsburg and Madisonville traits), such as those seen at Neale's Landing, the Orchard site, and other late proto-historic upper Ohio Valley sites, also suggests a pre-A.D. 1600 occupation for Bosman. Complete analysis of the ceramics, lithics, and floral and faunal material recovered at Bosman is in progress and detailed reports on these and other aspects of the site will be forthcoming later this year.

Jeff Carskadden

A Comparative Collection of Fibrous Plants and the Fibers They Yield

Introduction

A comparative collection of plants and the fibers they yield through different methods of processing is being established at the Department of Textiles and Clothing, The Ohio State University. This collection will serve as a resource to those who wish to identify the plant source of fibers employed in textiles produced by prehistoric Native Americans of Eastern North America, or to characterize the history which those fibers have undergone.

Scope of the Collection

The collection is limited, at present, to those plant materials which yield fine fibers typical of those used by prehistoric Native Americans of Eastern North America in the production of textiles. Examples of plants which yield fine fibers are milkweeds, dogbanes, nettles, and mulberry. Fibers yielded by red cedar, black walnut, canebrake and cattail are coarse and stiff and would not be pliable enough to produce the finely twined textiles noted in Mississippian and Hopewell textiles. Some efforts are being made to address difference in plant materials and their processing between Ohio and Georgia, and between Mississippian and Hopewell societies. In the future, the collection will be expanded to include dyeplants typical of those used by prehistoric peoples, as well as plants which yield coarser fibers such as those used in baskets or mats.

Contents of the Collection

The collection of plant materials includes:

1. herbaria specimens of each plant collected;
2. longitudinal and cross sections of plant stems as well as photomicrographs of those sections;
3. samples of fibers processed from both fresh and dry plants by each of four methods: a) hammering and

peeling, b) soaking in water for two weeks in simulation of the retting process, c) boiling in water, and d) boiling in water with potassium carbonate added in simulation of wood ash;

4. samples of each of the fiber products from item 2 subsequently carbonized in muffle furnace;

5. samples of each of the fiber products from item 2 subsequently "mineralized" to some extent with copper compounds;

6. microscope slides of the fiber products of items 2, 3, and 4;

7. photomicrographs of the fiber products of items 2, 3, and 4 using multiple techniques of optical microscopy including brightfield, darkfield, phase contrast, polarized light, differential interference contrast. Both longitudinal and cross sectional views are included;

8. scanning electron micrographs of particular fibers chosen from the fiber products of items 2, 3, and 4;

9. x-ray microanalysis of particular fibers chosen from the fiber products of items 2, 3, and 4;

10. infrared spectra of particular fibers chosen from the fiber products of items 2, 3, and 4; and,

11. a database which allows searching and identification of plant sources of fibers based on group characteristics such as surface markings, dislocations, crystals, lumen/fiber size ratio and spectral features. The database also allows the identification of processing information resulting from treatments such as boiling in water, retting, carbonizing or alteration by copper minerals.

Also available is an accumulation of the citations in the literature of plants used in textile production in prehistoric Eastern North America and of the methods for processing their fibers.

Use of the Collection

The plant materials and fibers can be used for many purposes. As an example application, textile fibers obtained from Seip textiles (200 B.C.-A.D. 500) and from Etowah textiles (A.D. 1000-1400) are being examined and characterized. A report of this work will be published. In using the collection, the researcher can examine examples of a particular plant and the fibers it yields through different processing methods, or the researcher can examine all examples of fibers which display the characteristics evident in the fibers of unknown identity obtained from an archaeological material. Inferences can be made thereby concerning fiber identity and fiber history. At present, group characteristics will allow identification of genera but not individual species. Multiple features of the fibers are noted; from these the most likely possibilities for plant identity can be chosen.

Plant Materials Needed for the Collection

In the first year of work, a number of plant materials were located and collected, processed and preserved. A few materials which have been cited by ethnographers as ones which prehistoric Native Americans used have not been located in the state. If you know where any of the following plants can be found, please contact Dr. Kathryn Jakes at the address below. The plants needed are:

eryngium aquaticum or *yuccifolium* rattlsnake master, beargrass
dirca palustris moosewood
epilobium angustifolium fireweed
urtica gracilis slender nettle
urtica urens, chamaedryoides, dioica nettle
apocynum androsaemifolium a dogbane

A preliminary dyeplant collection is also being initiated. The location of the following dyeplants is also being sought.

lithospermum caroliniense puccoon
galium tinctorium pilosum, other *galium sp.*
cuscuta paradoxa Raf. dodder, love vine
lecanora tartarea Ach. a lichen
roccella tinctoria archil
coptis trifolia goldthread
evernia vulpina a lichen

Acknowledgements

The National Science Foundation, Anthropology Program has provided support for this work. In addition, salaries and research were supported in part by state and federal funds appropriated to the Ohio Agricultural Research and Development Center, The Ohio State University.

Kathryn A. Jakes
Department of Textiles and Clothing
245 Campbell Hall
1787 Neil Avenue
Columbus, OH 43210

Disk Utility Programs

Nearly all computer users have learned that disks (either floppy or fixed disks) should be considered as **impermanent storage media.** All disks are considered impermanent since they respond to mechanical wear and have a known and short life expectancy. The average life expectancy of 5 1/4 floppy disks is 1,000 hours, the life expectancy of 3 1/2 inch floppy disks is 2,000 hours, while the life expectancy of fixed disks ranges from 5,000 to 10,000 hours.

Although mechanical wear limits disk life, human error is perhaps the most frequent cause of file loss and disk failure. Even the most careful user is known to accidently erase a needed file or format a disk that contained needed materials. Disks may also be exposed to stray magnetic fields, which can corrupt the Directory or File Allocation Table and render the disk useless.

Many experienced PC or Macintosh users have discovered Disk Utility Programs, which allow the

recovery of accidently deleted files, recovery of information from re-formatted disks, and repair of corrupted directories and the File Allocation Table. The leading Disk Utilities for the IBM PC and compatible computers are *Peter Norton Utilities* (Symantic) and *PC Tools*. The leading Disk Utility for the Macintosh is *Norton Utilities Macintosh*.

All three utilities allow users to **Undelete** a file that has been accidently erased or deleted. It is important to understand that **Undelete** must be used as soon as the accident is discovered, before additional files are saved to disk. Deleting a file only removes or alters reference to that file from the Directory and File Allocation Table. The information still remains on disk. However, saving a new file to disk will probably write-over the deleted file, resulting in permanent information loss. [Note: The **Undelete** function of *Norton Utilities* was used to recover information that Col. Oliver North thought that he had deleted from his computer in the White House! Too bad he did not know about the Wipe File and Wipe Disk functions.].

Norton Utilities and *PC Tools* also provide a Format Recover utility. The utility should be run for each disk and/or fixed disk drive as soon as the software is purchased, since it created a "Read-Only" copy of both the Directory and File Allocation Table in the highest storage location on the disk. If the disk is accidently re-formatted, **Format Recover** uses the duplicate copy of the Directory and Field Allocation Table to reconstruct the entire disk. It is possible to use the Format Recovery utility in the absence of a "Read-Only" copy of both the Directory and FAT, however, the probability of a successful recovery is significantly reduced.

In spite of having the ability to Undelete erased files or Format Recover disks that have been accidently formatted, the best insurance for your important files are **Back-Up Copies**. Back-Up copies are copies that are made on different floppy disks or on different fixed disk drives. Users are typically lax about maintaining Back-Up Copies until they are seriously *burned* once or twice. I was burned in 1987 by having a secretary accidently delete the file that contained a proposal, and then starting to re-type the material that she had accidently erased, which precluded using Undelete. I was forced to spend 20 hours over a weekend reentering the proposal and flying it to Washington, D.C. on Monday to meet an NSF deadline.

I strongly recommend and urge the use of back-up copies. I maintain one Back-Up Copy of my casual files including correspondence, course syllabi and exams, etc. I maintain two Back-Up Copies of research reports, submitted manuscripts, etc., and I keep one of the Back-up Copies off-site (i.e. in a different location). For extremely large projects, such as the Skeletal Explore Video Disk Table of Contents which contains more than 26,000 records, I maintain three Back-Up copies, one in the office, one at home, and one in a safety deposit box. I realize that three copies sounds paranoid, however, it would require over 600 ours to reconstruct the Table of Contents.

Both *Norton Utilities* and *PC Tools* provide **Wipe File** and **Wipe Disk** functions. **Wipe File** removes reference to the file from both the directory and FAT and overwrites the file with **0's**. **Wipe Disk** removes reference to all files from both the Directory and FAT and overwrites the entire disk with **0's**. These functions should be used only when you are absolutely, positively certain that you wish to destroy the electronic copy of the material from the disk.

Norton Utilities for both the IBM and Macintosh provides a function un-available in other utilities: **Norton Disk Doctor**. **Norton Disk Doctor** permits automated diagnostics and repair of corrupted a Directory and File Allocation Table; both of which are superbly explained in *The Norton Disk Companion* and *The Norton Trouble Shooter* volumes which accompany the *Norton Utilities*.

Both *Norton Utilities* and *PC Tools* offer a variety of functions which have not been considered in this review. Perhaps the most useful functions are **Speed Disk** (unfragments disk files and compresses un-used space), **Directory Sort** (allows the sorting of files by name, extension, date, etc.), and **Disk Test** (testing disks you suspect to be failing).

Various versions of *Norton Utilities* and *PC Tools* are currently being marketed. I recommend purchasing a version 4.5 or higher of *Norton Utilities* and version 5.0 or higher of *PC Tools*.

A user recently asked me if he should purchase a Disk Utility Program, saying that he had used his PC for nearly a year and had never encountered a problem. I asked the individual if he would drive from Cleveland to Washington D.C. without a spare-tire in his car. The user answered that "You never known when you will need a spare-tire, having one is important!" I responded, "Your never know when you will need a Disk Utility Program, having one is important!"

John E. Blank, Professor
Department of Anthropology
Cleveland State University

Geological Society of America Archaeology Division Field Trip

The Geological Society of America (GSA) annual meeting will be held in Cincinnati, October 26-29, 1992. In conjunction with this meeting the GSA is sponsering a field trip titled "Geological Aspects of Key Archaeological Sites in Northern Kentucky and Southern Ohio." The field trip will depart 0700 on October 24 and return at 1900 on October 25, 1992. The 1st day of this trip includes the sites of Big Bone Lick (KY), Shawnee Lookout, Miamisburg Mound, SunWatch, the Ohio Historical Center (L), Newark Earthworks, Flint Ridge, Dillon State

Park (ON, NO Food, fully equipped cabins). The 2nd day will cover Hocking Hills Gorge, Mound City, Adena, Seip Mound, Serpent Mound and Fort Hill, and travel through the Wisconsinan Cuba end moraine to Fort Ancient. For further information contact Timothy S. Dalby, Dept. of Anthropology, Southern Methodist Univestiy, Dallas, TX 75275, or CESWF-PL-RC, Corps of Engineers, P.O. Box 17300, Ft. Worth, TX 76102-0300) (817-334-2625) [FAX 817-885-7539). Cost is $130 with a limit of 42 persons.

1992 Calendar Of Events

May 8: *Ohio Archaeological Council.* Ohio Historical Center, Columbus, Ohio. Contact Martha Otto, (614) 297-2641.

October 21-24: *Southeastern Archaeological Conference,* Little Rock, AR. Deadline for paper and symposia proposals, August 1. See SAA bulletins for more information.

November 5-8: *Eastern States Archaeological Federation,* 59th Annual Meeting, Allegheny Valley Holliday Inn, Pittsburgh, PA. Contact Richard L. George, Carnegie Museum Annex, 5800 Baum Blvd., Pittsburgh, PA 15206-3076. (412) 665-2600 or FAX (412) 665-2751.

OAC OFFICERS, TRUSTEES, AND COMMITTEE CHAIRS

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Schedule For Submission:

Deadline	*Issue*
January 1st	February
April 1st	May
July 1st	August
October 1st	November

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Send information you wish to have considered for inclusion in the *Newsletter* to the editor.

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