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**INTERNATIONAL COUNCIL FOR ARCHAEOZOOLOGY (ICAZ)
PROFESSIONAL PROTOCOLS FOR ARCHAEOZOOLOGY**

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I. Preamble:

In 2005, then-president Melinda Zeder charged the International Council for Archaeozoology (ICAZ) Task Force on Professional Protocols to consider whether the archaeozoological community should support general protocols for professional conduct and, if so, prepare a draft of such protocols for consideration. The Task Force agreed that the membership of ICAZ should support clearly-defined professional protocols, in keeping with its long tradition of advocating for high professional standards.

The Task Force believed it was not appropriate to advocate for imposing protocols for professional conduct on the membership because of the diverse arenas in which archaeozoologists work. These, in many cases, determine the extent to which members are free to implement professional standards advocated by ICAZ. Nor is ICAZ in a position to require that colleagues or governmental agencies comply with recommendations for best practices, especially when these may be impossible to meet with a limited or non-existent budget.

Members often find themselves in a position where they have to justify their work or the value of archaeozoological collections to skeptical administrators. This statement of professional standards and best practices could be used as evidence that a broad consensus exists in the field about standards of performance and care.

These broadly-stated principles or best practices may be of particular value in negotiating with institutions that ultimately should be the permanent repositories of archaeozoological materials and associated documentation by linking the care of collections with professional responsibilities. A statement of best practices could be used by archaeozoologists in discussions with the managers of repositories, administrators, and others under whose care archaeozoological remains and associated documentation fall.

For these reasons, the Task Force recommended adoption of general policies and protocols to serve as broad, general statements of standards and best practices in professional conduct rather than as mandates. In September, 2008 the Task Force proposed to the Executive Committee and International Committee of ICAZ a statement of professional standards and best practices that takes the form of an ethical statement and guidelines to support the members rather than as mandates for members or for governing or supervisory agencies. These recommendations are actions that most of archaeozoologists can implement in their own conduct, regardless of

working conditions. After an open comment period, these professional protocols were adopted by ICAZ on August 29, 2009.

II. Statement of Intent

Broadly defined, archaeozoology (also known as zooarchaeology) is the study of animal remains and related materials recovered from archaeological sites, including hard tissues of vertebrates and invertebrates, soft tissues, as well as the biochemical constituents of these remains (e.g., histology, isotopes, genetics, and trace elements). Because archaeozoological remains are used to study a broad range of questions, the goals of archaeozoology are equally wide-ranging, from increasing our understanding of the relationship between people and their environment to refining our knowledge of animal histories. There are multiple pathways to becoming an archaeozoologist, some of which have no social science foundation (e.g., veterinary medicine and paleontology), and others of which emphasize the humanities and history. Training beyond the normal requirements of an entry-level degree in the biological and social sciences, especially in the archaeological sciences, is an important basis for the professional practice of archaeozoology. Archaeozoologists work in diverse settings, ranging from governmental agencies, to private consulting firms, to museums and academic settings. Each of these requires a different suite of skills and each has a different set of work parameters, expectations, and final products. In each case, however, archaeozoologists should be accorded the rank and privileges of other professionals in similar positions.

The intent of this statement is to recommend professional protocols in archaeozoology with regards to the following general areas: professional responsibilities, publication of archaeozoological data, collection care, data archiving, and access to archaeozoological collections and data. The statement does not mandate specific practices or analytical approaches, nor does it attempt to define standards for archaeozoological research. Instead it summarizes standards and best practices in the professional conduct of archaeozoologists endorsed by ICAZ. This statement is intended for use by archaeozoologists, archaeologists and others seeking the services of archaeozoologists, and the institutions that serve as permanent repositories of archaeozoological remains and all associated documentation (e.g., notes, photographs, and data sheets).

Although many of these guidelines are based on professional and ethical treatment of our natural and cultural heritage, increasingly these areas are governed by legal requirements as well. Most countries have rules, regulations, and laws governing the excavation of antiquities as well as their removal from the country of origin, importation into a second country, and final disposition. Within a country, many levels of administrative responsibility may exist. Clearly both the letter and the intent of all requirements pertaining to antiquities should be obeyed. Archaeozoologists must respect the laws of the countries in which they work, as well as respect general ethical principles of scholarship and research, both with regards to archaeozoological materials and to modern reference materials.

III. Professional Protocols

A. Professional Responsibilities:

Archaeozoologists typically work as members of larger projects involving interdisciplinary teams of researchers responsible for different types of finds and aspects of excavation, analysis,

and reporting directed by a principal or primary investigator. All parties in these projects share professional responsibilities. Archaeologists should ensure that the archaeozoologist is informed of the overall research objectives of the project, and the specific objectives of the archaeozoological study. It is especially important that archaeologists provide archaeozoologists with accurate, comprehensive, and timely stratigraphic and other excavation information in a way that can be used to direct the archaeozoologist's analysis and assure the timely publication of results of the analysis. Likewise, archaeozoologists should ensure that the principal investigator is informed of the results of the archaeozoological study in a timely fashion and should endeavor to meet the overall research goals of the project.

It is the responsibility of the principal investigator managing an archaeological project to anticipate an archaeozoological component of the project and to assure that a qualified archaeozoologist is included in the project from its outset. Like all aspects of the archaeological record, archaeozoological remains constitute an irreplaceable scientific and cultural resource. It is imperative that these remains be recovered and analyzed using the best possible methods by scholars trained to maximize the interpretive potential of each assemblage. An archaeozoological study draws upon years of training and experience and involves multiple small and large decisions as the archaeological samples are collected, identified, recorded, interpreted, and reported. Thus an archaeozoologist should be included in planning and implementing preliminary surveys, site evaluations, excavation strategies, collecting faunal materials in the field, as well as in all subsequent stages of analysis and publication. These scholars should be provided adequate time, funds, and resources to perform at a professional level.

Archaeozoologists, in turn, have the professional responsibility of assuring that they bring the highest caliber training and expertise to bear on the collection and analysis of archaeozoological remains. They should be committed to collaborating in a positive and responsive way with other members of an archaeological team, as well as to completing and publishing the results of their analysis in a timely way that meets the project goals and the highest professional standards.

Many archaeozoologists serve as principal investigators for excavations. A focus on archaeozoology does not preclude having the training and experience to design and implement field research.

B. Publication of Archaeozoological Data:

Working in an interdisciplinary field, archaeozoologists often contribute to the research of other scholars and require input from these scholars in their own research. The collaborative nature of this work should be reflected in archaeozoological and archaeological publications. This includes active consultation with collaborators while publications are being written and proper acknowledgment of collaborators' input through appropriate acknowledgment or co-authorship. Unattributed quotations or extensive paraphrasing of material without attribution is unacceptable.

Archaeozoologists should make every effort to publish the results of their research within a reasonable amount of time. They should also strive to assure that published data are presented in a way that maximizes their utility to future scholars. Although it is usually impossible to publish archaeozoological data in full, publications should contain enough basic information on analytical procedures and results to enable future scholars to evaluate the soundness of

conclusions drawn and to replicate, to the extent possible, results presented, as is characteristic of any competent scientific report. Thus, methods used to calculate various indices (e.g., Minimum Number of Individuals, Minimum Number of Elements, and age profiles) should be explained, sample sizes used to compute these indices should be indicated, and the location of the materials and all unreported data and documentation should be provided. All agencies and/or authorities that supported the research should be supplied with copies of publications resulting from the project. All reports and publications should, either in the text or in the acknowledgments, identify the permanent repository where the materials and associated documentation are curated.

The question of authorship and co-authorship should be arranged by mutual consent within the research team early in the project. Specific agreements should define the role of the principal investigator, the archaeozoologist, and other specialists in one another's publications. Sometimes the publication source itself has policies about authorship and attribution. Every person listed as a co-author should have ample time to read the manuscript and agree to be included as an author. Members of the research team who contributed to the work but who are not included among the co-authors, as well as the funding sources, should be recognized in the acknowledgments. Copies of presentations, reports, and publications should be provided to principal investigators, who are responsible for reporting the results of the research to the funding source.

C. Collections Care:

Prior to excavation, a principal investigator should enter into a formal agreement with an official repository whose mission is to care for materials and associated documentation as a public trust for the benefit of society. This might be either a public or a private institution, but the institution should have formal collection management documents addressing acquisition, removal, deaccession, loan, and access policies such as those recommended by the International Council of Museums (<http://icom.museum>) and the American Association of Museums (www.aam-us.org), among others. Such management policies should stipulate standards of care regarding physical resources, financial resources, personnel, rights to research materials, conservation, and other activities typically associated with collection stewardship. Although limited space and the costs of curation sometimes are used as arguments to discard unstudied remains or those considered "unidentifiable" during the initial study, this destructive practice should be avoided. All attempts should be made to preserve all of the archaeozoological collection for future research.

Archaeozoological remains and associated documentation are irreplaceable archaeological resources and should receive the same high-quality care provided to all vouchers for original research. It is essential they be available for restudy when new questions arise or for examination using new methods. They should be housed in public repositories or similar facilities that have as their mission the care of collections, dissemination of knowledge derived from collections-based research, and facilitating access to collections by scholars as described above. Every attempt should be made to keep all components of a collection together in a single repository. Formal documentation should be kept of loans sent to other specialists for analysis, and loaned material should be returned to the permanent repository upon the completion of the analysis. The repository should receive copies of reports and publications.

Destructive analysis (e.g., AMS dating, genetic analysis, and isotope analysis) may provide information that is not otherwise available; however, decisions about destructive analysis should be taken carefully with the likely benefits balanced against the loss of the material, and consideration as to whether the information might be obtained without destruction or at a future time. The process should be carefully documented.

D. Archiving Archaeozoological Data:

Archaeozoologists should expect that their results will be re-analyzed by future researchers. Courtesy requires that original researchers should be consulted before re-analysis, whenever possible, but the original scholar may be unable to assist with the re-analysis. Therefore, records should be understandable on their own merits, without needing the original researcher to explain them. Abbreviations, codes, and private notations should be either fully explained in publications, referenced to a readily available, reliable source, or avoided.

Data should be recorded on the highest-quality medium available, preferably of archival-quality. If archival-quality media are not available, the materials and the records should be stored in a form that will minimize damage by environmental hazards and human error. Special thought should be given to the medium on which data are archived because many digital formats are unlikely to remain accessible without regular updates. Records on high quality or archival paper are recommended as a backup to digital formats.

Copies of the raw data and associated documentation should be archived with the archaeozoological collection (see below) along with information about which samples were and were not included in each study. Documentation of all samples taken for destructive analysis should be stored with the collection. Similar documentation should be kept of materials loaned from the collection for study or display. Hard and electronic copies of reports and publications should be curated by the permanent repository.

E. Access to Collections and Data:

In many cases, archaeozoologists do not own either the materials they study or the data they produce. As scholars, archaeozoologists not only have an intellectual responsibility to the material they study, but they should know their legal rights and responsibilities as well. These vary depending upon the country, state/province, and institution. Data should, in principle, circulate freely, although this goal may be modified in accordance with requirements of employers, funding sources, governmental regulations, agreements with indigenous communities, and similar restrictions. Although archaeozoological collections and the data recovered from them may be treated as proprietary while actively being studied, an unlimited proprietary attitude toward collections or analytical data is inappropriate. The formal policies of the final repository will often stipulate the conditions of access, thereby avoiding conflicts over this issue.

In most cases, archaeozoological data are developed with public funds and thus are part of the public record. As a general rule, data should be available to anyone who asks for them. Nonetheless, scholars wishing to restudy material should recognize the professional association that exists between researchers and the materials they study. Once the work on a particular sample has been completed, however, the individual or individuals who conducted and published

that work should support others who wish to work with the materials. Care should be taken to maintain a professional, collegial, and courteous association.

The burden of the costs of access, however, should be supported by the requestor: which may mean that the requestor must travel to the data and be prepared to use them *in situ*. The original researcher does not have an unlimited obligation to generate reports, special tabulations, or spend large amounts of time or money providing access to data.

Unpublished data are more problematic because the original researcher may have plans to publish them eventually. The period of restricted access of unpublished data should not be open ended. As a general rule, researchers should strive to prepare a basic report for every faunal collection within a year or two of completing the project, or at similar intervals for long-term projects. This interim report could be available upon request. After some period of time, sometimes understood to be approximately 10 years after the end of the project, if the primary publication remains unpublished, the original researcher should make the archaeological materials and data available to others. Some funding sources require that primary data be available at the end of the funded period. When unpublished data, documentation, or archived databases are used, citations should acknowledge the original analyst, if there was one, clarify when the original work was done, and provide information on the location of the documentation.

IV. Professional Ethics

All parties are charged with making the best possible use of this fragile part of the world's heritage. It is irresponsible to treat the archaeozoological materials recovered from archaeological sites with anything other than the best possible methods employed by scholars trained to maximize the interpretive potential of each assemblage.