research in several areas to augment these findings, and in particular will look at the ancient DNA in caribou teeth to see if we can recognize any past population bottlenecks or crashes, when the herd was reduced to a small number. The results will be important for understanding the ancient cultures in the area that relied on caribou, and may also be useful to modern caribou biologists who seek to understand long-term population dynamics

The Thule house at Iqaluktuuq, nearing the end of excavation. At center of photo is the paved main floor of the house; to the right of the excavator is the short, deep entrance tunnel which contained ten separate floors. Photo: Max Friesen.

in herds that are at risk today from global warming.

PRESERVING MONGOLIA'S HERITAGE
By: Paula DePriest and William Fitzhugh

In view of the rapid pace of modernization, the American Center for Mongolian Studies (ACMS) has worked for several years to enhance the documentation and preservation of Mongolia's tangible and intangible cultural heritage. In December 2012 the Smithsonian participated in a cultural heritage conference in Ulaanbaatar sponsored by the Mongolian Ministry of Culture, Sport, and Tourism and was invited to assist in developing plans for cultural heritage preservation. This lead to a May 2014 workshop organized by the ACMS to explore heritage issues with cultural officials and representatives from museums and cultural organizations throughout Mongolia. This meeting led to a second workshop, also organized by ACMS, held at the Ulaanbaatar Municipal Library on 16 September, 2014, titled "Cultural Heritage and Mongolian Capacity-Building". This meeting was organized to acquaint museum and heritage organizations with a Smithsonian data repository system called SIdora that is being used to enhance archaeological research and data management.

The rapid growth of archaeological research and cultural resource management (CRM) activities in Mongolia, combined with the large and diverse group of institutions and organizations involved in these activities, has demonstrated need for more centralized reporting, management, and security of archaeological finds, data, and information. Recognition of the impending 'data crisis' brought together a group of sponsors including the Mongolia National Museum (MNM), the Mongolia Cultural Heritage Center (CHC), and the Smithsonian Institution. As in the May workshop, the September meeting was held under the general auspices of the Mongolian Ministry of Culture, Sport, and Tourism.

The September meeting was opened with supporting statements from MNM's Director, **D. Sukhbaatar**, and the CHC's Director, **Galbadrakh Enkhbat**. The latter reviewed his organization's mandate as the central repository for cultural and archaeological data from Mongolia. An overview of the data crisis was presented by the Smithsonian's **William Fitzhugh**, who noted the yearly crescendo of archaeological projects and the fact that many foreign projects do not currently return archaeological data to Mongolia except in the form of collection agreements and technical reports from which data can be extracted only with great difficulty and expense. **Paula DePriest** discussed how capturing data is critical for the protection of movable and immovable cultural heritage from theft, looting, and trafficking. **Thornton Staples** presented information about SIdora, a system under development at the Smithsonian that can be used to manage the digital output of all kinds of research projects, and how it might offer a practical solution to Mongolia's data crisis. Staples made a special effort to distinguish SIdora, which can be used as a comprehensive system of recording, retrieving, and analyzing archaeological data in its interrelated contexts, with the many existing programs (e.g. "TDar") whose purpose is to archive archaeological information (i.e. data-bank) but are not designed to assist archaeological researchers from the time they gather field data to the completion of a finished report. An afternoon session was devoted to broad discussion of the problems and potential solutions.

Mongolian participants recognized the need for a centralized data repository system and the value of the SIdora program in particular. They recognized this workshop as timely, noting that new data structures are currently being implemented by the CHC. On the other hand, it was clear that the CHC mandate is complicated because the MNM, Mongolian National University (MNU), and Institute of Archaeology (AI) belong to different Ministries, and because MNM, MNU, and AI, while holding extensive archaeological collections and records, currently do not have the manpower resources to extract and code archaeological data that is needed by CHC. Despite these organizational problems, participants recognized that funders (foundations, banks, corporations) of archaeological work are increasingly demanding data preservation plans before making

grants and contracts for research or field mitigation of archaeological sites and materials. Currently, the Institute of Archaeology (Ministry of Science), which holds the most comprehensive GIS-based archaeological data system in Mongolia, is not able to offer more assistance to CHC than by submitting printed copies of their archaeological reports. While this serves as a library of sorts, CHC does not have the capability to extract data from these reports for use in their database.

In addition to providing the Mongolian cultural heritage community with a single, secure, and researchable archaeological management system, establishment of a central repository would stimulate sharing of data among researchers, institutions, and the Ministries. It would improve the research climate by facilitating synthesis of cultural and geographical information in land-based fields like archaeology and paleontology and would replace the current archaic, error-ridden paper system of documentation with a secure, modern digital system accessible to all according to prescribed security codes. Institutions would be credited for their contributions, and individuals could receive compensation as a type of publication. The system

W. Fitzhugh, R. Beaubien, P. DePriest, and J. Bayarsaikhan at December 2012 cultural heritage conference in Ulaanbaatar.

might be implemented by a pilot project documenting Mongolia's 3000 year old Bronze Age deer stones, a highly-visible class of objects widely recognized as one of the nation's most visible archaeological treasures. Currently a plan is being developed to use the Smithsonian's deer stone archives as a pilot project for input into the SIdora data system linked to the Mongolia CHC database.

The workshop produced a number of suggestions to address the data crisis. **(1)** Require Mongolian and international partners to agree on the principles for a secure, shared-access data system. **(2)** Establish a National Standing Committee for Archaeological Data Preservation and Management that would be required to help supervise and guide the process; such a committee would complement the existing Archaeological Permit Committee. **(3)** Review the various Ministrys' support and oversight of data preservation and management, especially as the effectiveness of current CHC systems are compromised by the lack of resources available to its archaeological 'data suppliers'. (The cultural,

science, and educational ministries need to collaborate to provide improved infrastructure and up-grade staff and the hardware to support the program. The 'feeder institutions' (MNM, MNU and others) would need system operators and information specialists or archivists. Once the program was established, CHC would need service specialists to assist researchers in using the system and a pool of funds yearly for archiving data.) **(4)** Host an ongoing series of workshops to keep the data user group energized, provide continuity and technical training, and to develop capacity. Such a function could be assisted by establishing a professional cultural heritage preservation association. Perhaps the most important outcome of the workshop was the enthusiasm shown by participants from many different institutions and agencies, all of whom expressed interest in sharing data with a centralized CHC system, provided that resources are made available to do so and data security is assured.

During the coming year, the ACMS plans to work with Mongolian cultural organizations to develop a practical strategy for advancing heritage programs, particularly in the area of archaeological monuments, sites, and collections. We expect to begin by using SIdora research system to assemble a comprehensive inventory and GIS database of archaeological materials related to the past decade of research on Darkhad religious structures (ovoos), Hovsgol aimag deer stones and khirigsuur burial sites, Mongolian sites of empire periods, Altaian rock art, and radiocarbon dates. These data would be interfaced with the CHC database and made available as part of an open access system to be shared with qualified museums and research institutions.

A FEATHER PILLOW IN A VIKING GRAVE?
By: Carla Dove and Stephen Wickler

In late November 2014, **Carla Dove** (USNM Feather Identification Lab) received an interesting inquiry from a far-away place. Dr. **Stephen Wickler** of Tromsø University Museum in northern Norway contacted Carla for assistance with an interesting object from the Vesterålen islands. The object turned out to be a pillow from a Viking Age boat grave. This pillow was found with the grave in a bog and was covered with a wool textile that was 'stuffed' full of feathers and down.