The 2001 season at Kadero was the sixteenth at this site. It should be noted that the excavations have proceeded bi-annually since the 1980s in an effort to maximize staff resources and logistics, and to be able to carry on different kinds of field research. The project this season was conducted by the Polish Center of Archaeology of Warsaw University, in association with the Poznań Archaeological Museum.¹)

Campaign objectives at Kadero included continued excavations of the Neolithic burial ground with emphasis on recovering macrobotanical remains from grave pits and studying the Neolithic human remains, as well as an investigation of the geomorphology and geology of the Kadero mound and its neighborhood. The season started on November 5 and terminated on December 7, 2001.²)

1) The field party comprised Prof. Prof. Lech Krzyżaniak, director and archaeologist, Michał Kobusiewicz, archaeologist, Maria Kaczmarek, physical anthropologist, and Wojciech Stankowski, geomorphologist; Dr. Karla Kroeper, archaeologist; Messrs. Przemysław Bobrowski and Maciej Jóźdeczka, archaeologists; Abdel Hai Abdel Sawi, geomorphologist; Ms Paulina Lis and Ms Alena Iwanowska, students of archaeology. The National Corporation of Antiquities and Museums was represented at the site by Ms Khalda Abdel Rahman Hamid.
The University of Poznań and Poznań Archaeological Museum have contributed significantly to the funding of the project this year.
2) L. Krzyżaniak, PAM XI, Reports 1999 (2000), 223-226 (also earlier references).
Fig. 1. Progress of excavations. Roman numbers indicate the season. Neolithic midden – area marked with dashed lines
(Drawing J. Kedelska)
NEOLITHIC BURIAL GROUND

The large pit excavated in the Neolithic cemetery, traced N NW-S SE across the mound, was considerably enlarged by a series of 60 squares (each 2 by 2 m) situated in two different locations and extending this pit to the north and east (Fig. 1). The total excavated area has thus reached 240 sq. m. All the pits were excavated to a depth of 1.2 m.

Ten Neolithic graves (nos. 237-246) were found in effect, two (nos. 243 and 246) in squares excavated north of the pit, clearly indicating the extent of the distribution of these graves in the northern part of the site. These two graves contained no furnishings, but their position and various characteristics of the skeletal remains were typical of the Neolithic inhumations at Kadero.

The eight remaining graves (nos. 237-242, 244-245) were excavated in the eastern extension of the large pit. Two of them deserve a brief description here. Grave No. 242, containing the remains of a young woman, was marked by the discovery of an elaborate decoration made of some 300 perforated marine shells found below the waist of the skeleton (Fig. 2). It seems that the shells were originally mounted as bands, each one composed of three rows of these mollusks, perhaps decorating a loincloth. By the face of the

Fig. 2. Rows of perforated marine shells in grave no. 242
(Photo L. Krzyżaniak)
Fig. 3. Grave no. 244.

(Photo L. Krzyżaniak)
deceased, there were two long studs made of a white stone, possibly nose-studs. The bottom part of the deep grave pit had an intensive red discoloration, which seems to be the remains of red ochre used to decorate the container for the human body.

A second burial, grave no. 244 (Fig. 3), seems to hold particular importance not only for the Kadero site, but also for the Khartoum Neolithic. At the bottom of a deep pit, a skeleton of a young adult individual, probably a man, was found in contracted position, resting on its left side. The furnishing of this burial included three pots (Fig. 5), two armlets made of ivory, a cluster of c. 50 perforated marine shells and an impressive necklace of carnelian beads. However, the most important component of this furnishing is surely a set of bone implements. These objects are interpreted tentatively as a musical instrument – a rasp (French râcleur, râde). It is composed of parts of a long and flat implement decorated on one side and a short, perforated “handle” (Fig. 4). The set is now under restoration. It constitutes a unique find for the Khartoum Neolithic; indeed, it may be the oldest known musical instrument from Africa. The bottom part of the grave pit, where the human remains and the grave furnishings were found, featured a heavy presence of red ochre.

Large samples of soil from all the recorded grave pits were collected and shipped to a botanist for macrobotanical analysis. Hopefully, the samples will shed more light on the flora of Neolithic Kadero.

Fig. 4. Decorated bone implements interpreted as musical instruments, from grave no. 244 (Photo L. Krzyżaniak)
Fig. 5. Pots from grave no. 244
(Drawing J. Kedelska)
GEOLOGY AND GEOMORPHOLOGY
OF THE KADERO MOUND

Investigations of the geology and geomorphology of the Kadero mound and its neighborhood were continued this season. Samples of soil were taken from the mound itself and from the vicinity of the site and shipped to a laboratory. The analysis of samples taken at Kadero in the 1999 season have already dated the mound to c. 19,000 BP, i.e., to Late Pleistocene times (Wojciech Stankowski, pers. comm.).

SITE PROTECTION

At the end of the season, the system introduced earlier to protect the Kadero site was checked. The shallow rampart that had been excavated around the mound was deepened and concrete posts along it were re-painted this season. Acting on instructions from the National Corporation of Antiquities and Museums, the team carried out similar work around the nearby site of Kadero 2.