

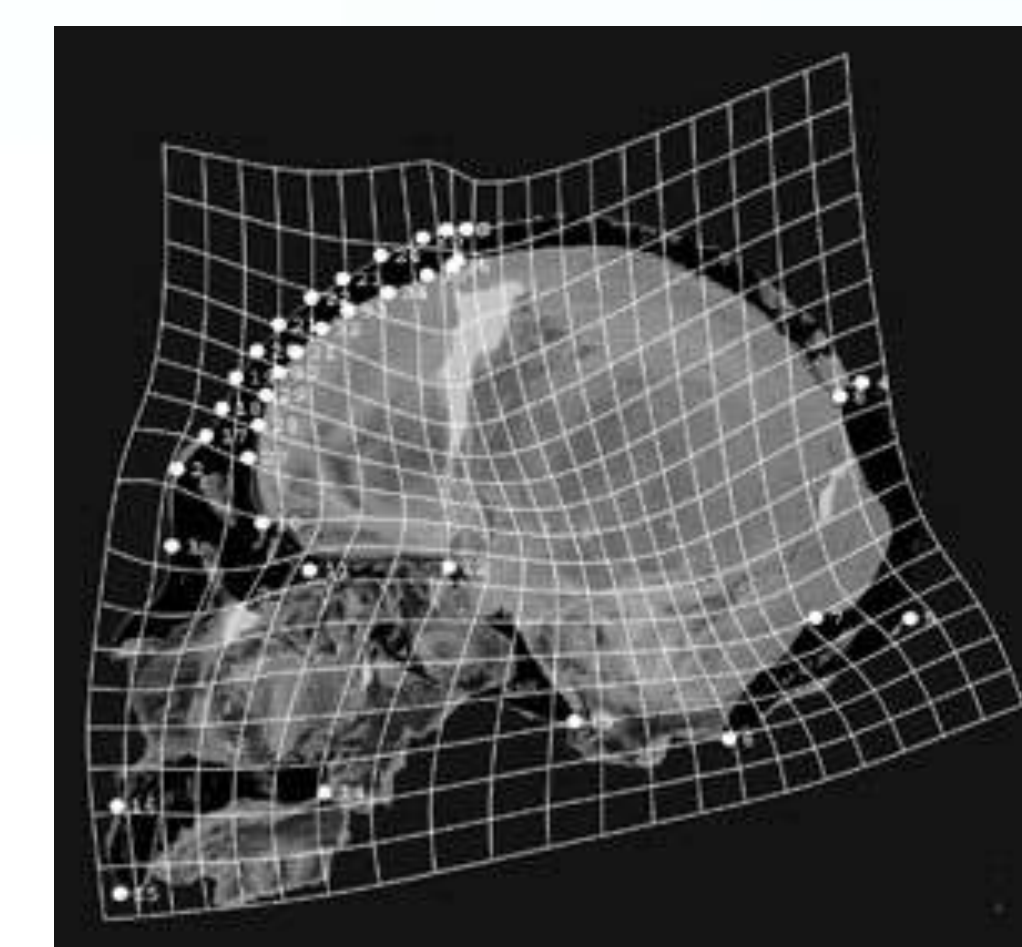
# Human Origins Laboratory, Department of Anthropology

**Director:** Dr. Mica Glantz, General Services Building 342A

**Current students:** Rickey Kadlac, Andy Kruse, Lauren Denton, Katie Horton, Tyler Beeton, Anna Trainer, and Chris Davis



The mission of the Human Origins lab is to provide a research space dedicated to the study of human origins. Students and professional colleagues working in the space are able to examine and collect data from currently held archaeological collections from Central Asia (lithics, fauna, sediments, and soils), use our microscope to collect and analyze geometric morphometric landmark data from hominin skeletal remains or artifacts, and investigate the biogeographical variables that dictate hominin dispersal patterns using GIS and the geographic distribution of Central Asian Paleolithic sites.



Dr. Glantz is a paleoanthropologist who specializes in Neandertal paleobiology and paleobiogeography. Her research has focused on hominin dental and craniofacial morphology as well as Paleolithic archaeology in Uzbekistan and Kazakhstan. Currently, she is collaborating on a multi-disciplinary project the goals of which are to establish a chronological framework for Central Asian Paleolithic sites, survey for new sites, and test models concerned with the interaction between Neandertals and modern humans in the heart of Asia.



Dr. Zhaken Taimagembetov from Kazakh State University, Dr. Mica Glantz, and Dr. Rustam Suleimanov from the National University of Uzbekistan

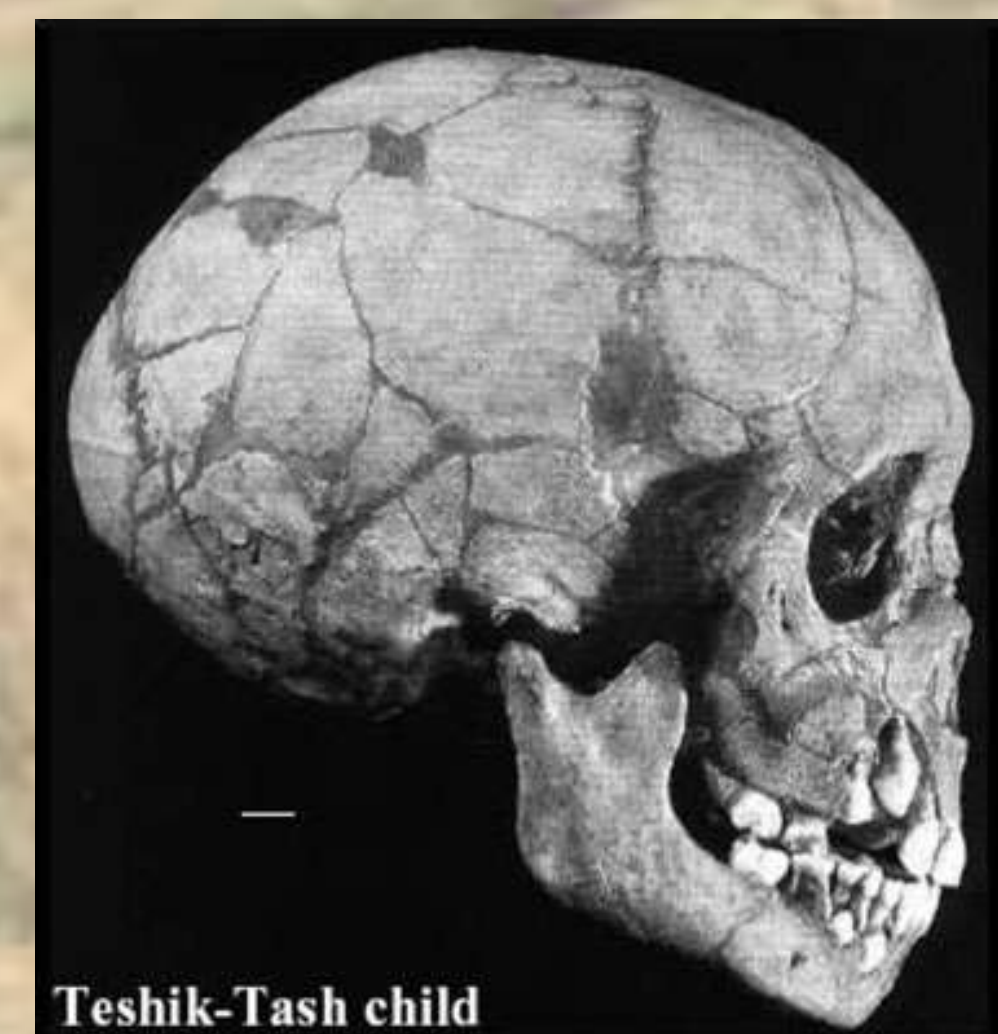
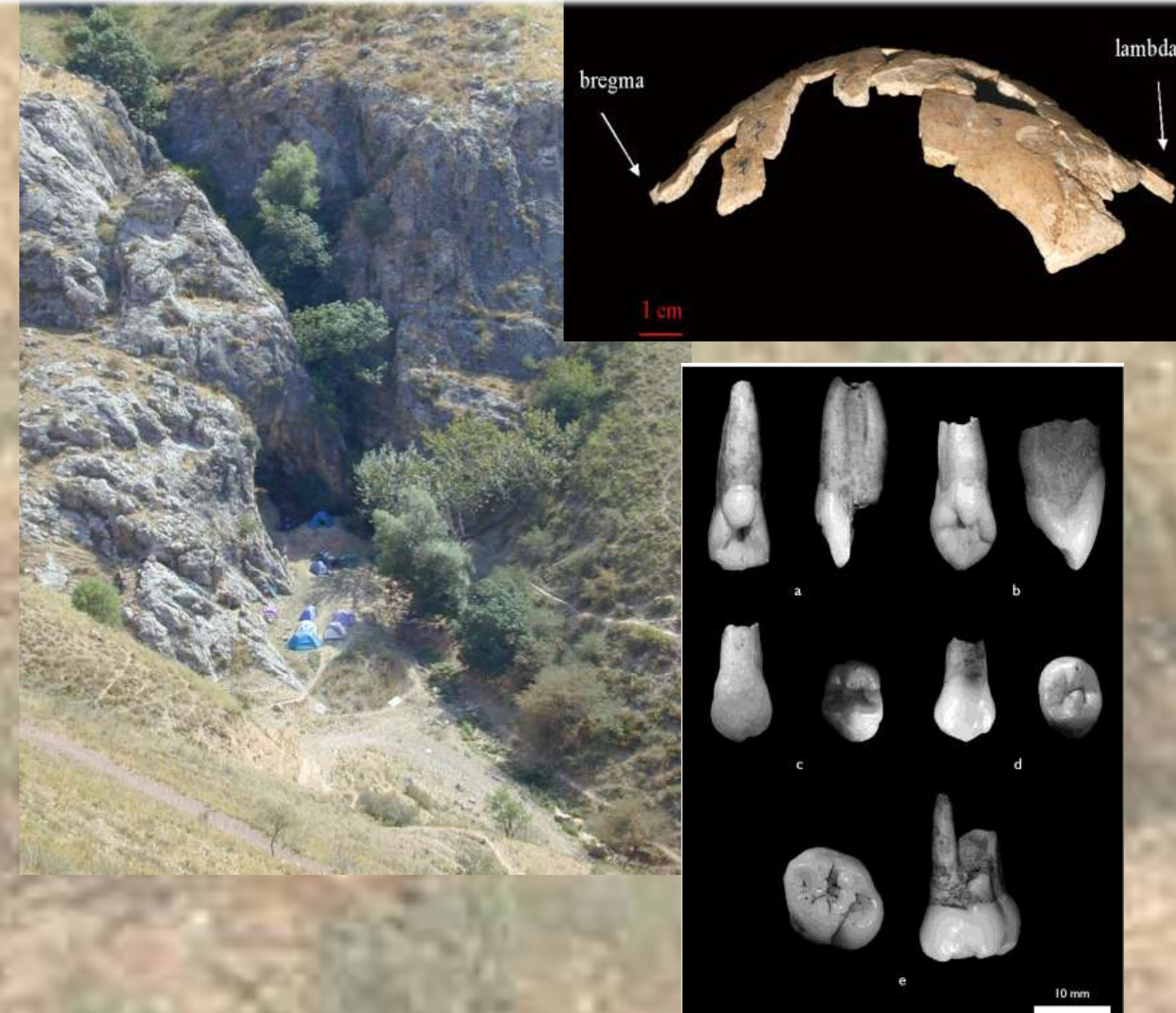
## Past Research

1. Discovery and excavations of Anghilak Cave, Uzbekistan, 2001-04 Middle Paleolithic site with hominin material



Former CSU grad students Jeff Adams, Kelly Derr, and Terry Ritzman and our Uzbek colleagues Amirjon, Nilufar, and Rustam Suleimanov

2. Analysis of hominin fossil, OR-1, from Obi-Rakhmat Cave, Uzbekistan Juvenile that shows mixed affinities with Neandertals and modern humans. ~ 65 kyr old assemblages



REASSESSMENT OF TESHIK-TASH 53

TABLE 7. Highest posterior and typicality probability values of group allocation for Teshik-Tash

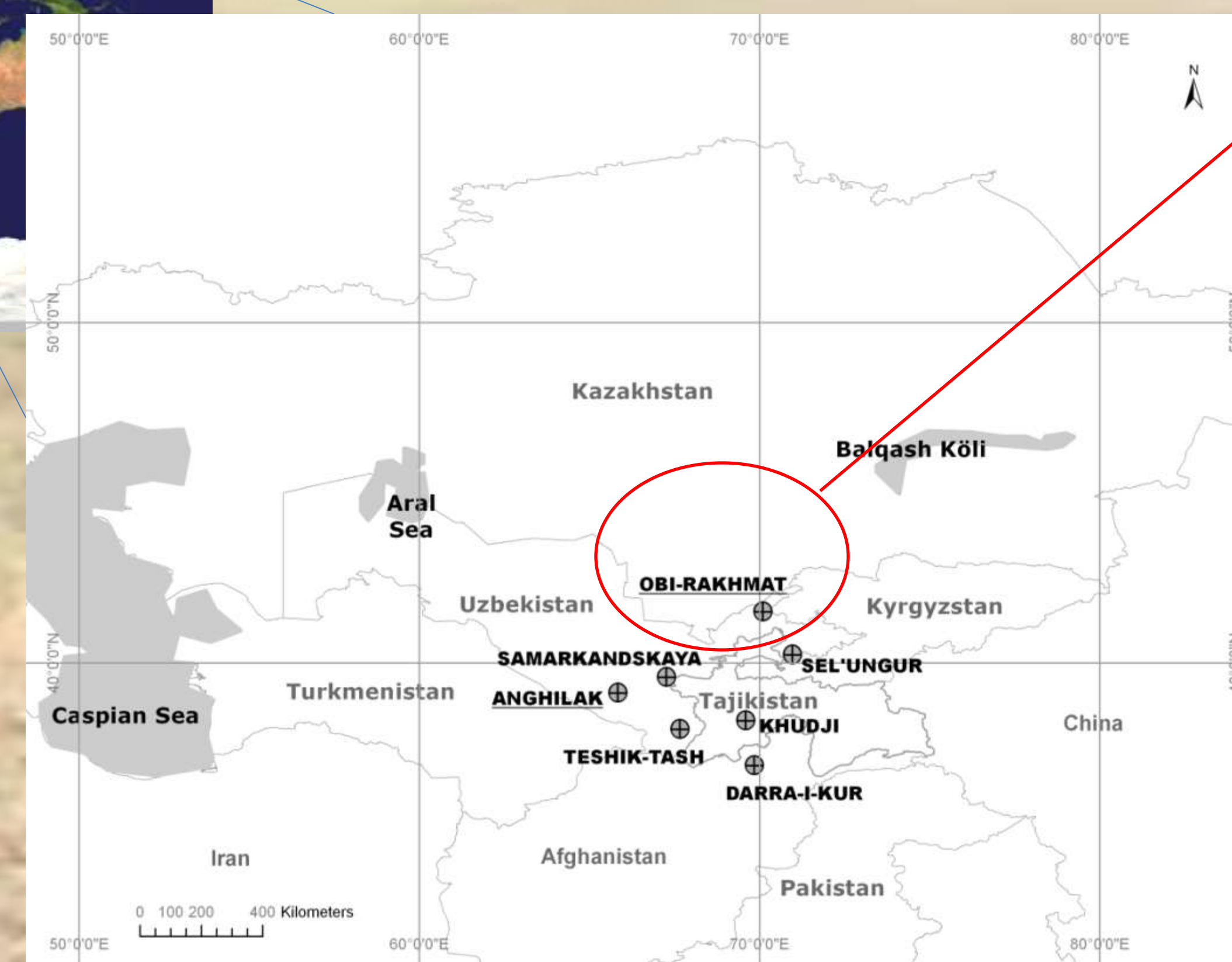
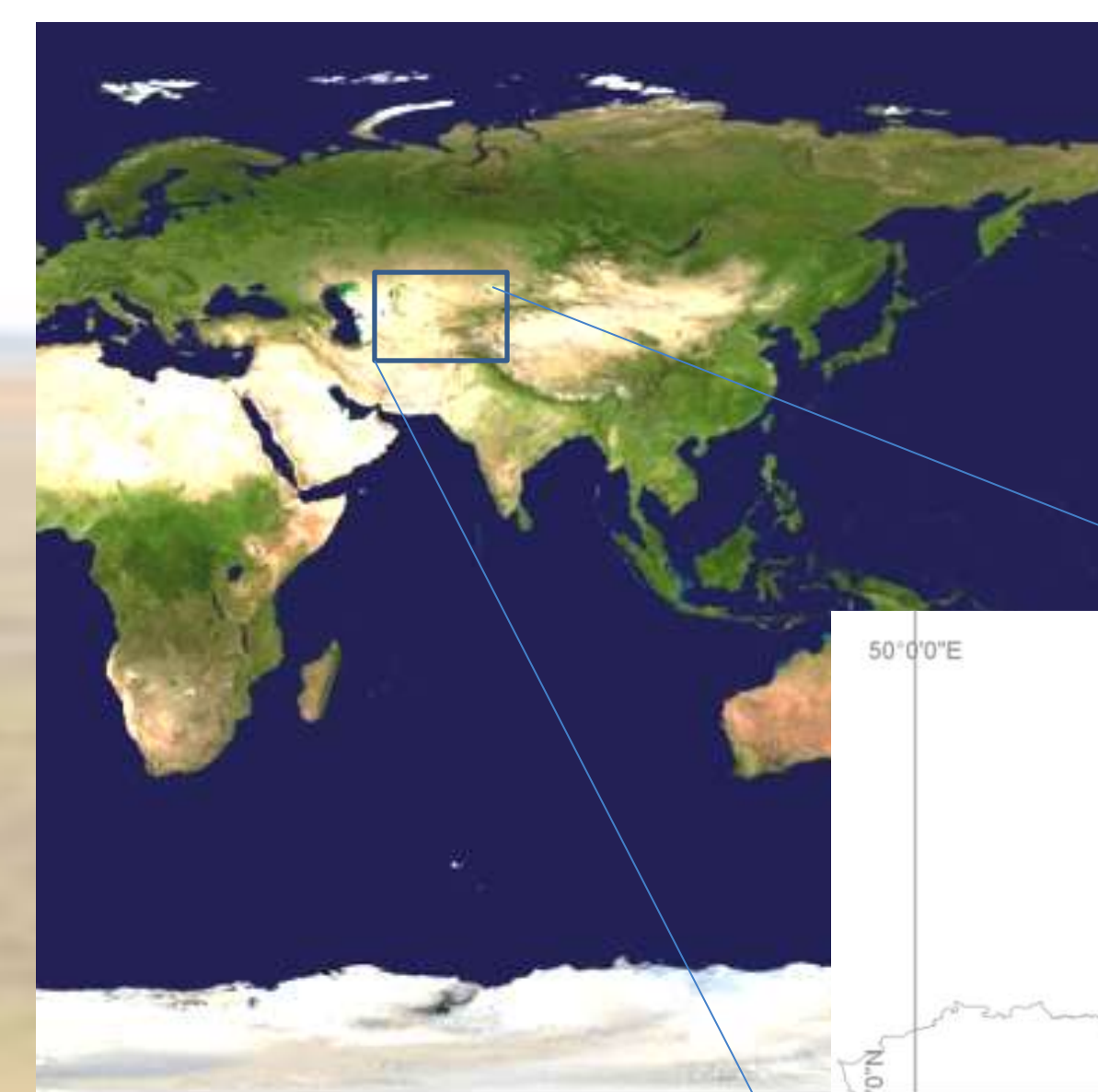
	MLR highest group <sup>a</sup>	Posterior probability	DFA highest group <sup>b</sup>	Typicality probability	MLR posterior probability of being Neandertal
Cranial analysis raw data	UPmh <sup>c</sup>	76.6%	UPmh	72.2%	17.1%
Cranial analysis size-standardized data	Neandertal	61.8%	Neandertal	40.9%	
Mandibular analysis raw data	Recent modern human	54.2%	Recent modern human	21.2%	18.7%
Mandibular analysis size-standardized data	Recent modern human	87.2%	Recent modern human	48.4%	0.002%

<sup>a</sup> MLR, multinomial logistic regression analysis.  
<sup>b</sup> DFA, discriminant function analysis.  
<sup>c</sup> UPmh, Upper Paleolithic modern human.

3. A reanalysis of the taxonomic affinities of the Teshik-Tash Neandertal child from Uzbekistan. Results indicate, contradicting dogma, that the specimen is more like modern humans than other Neandertals.

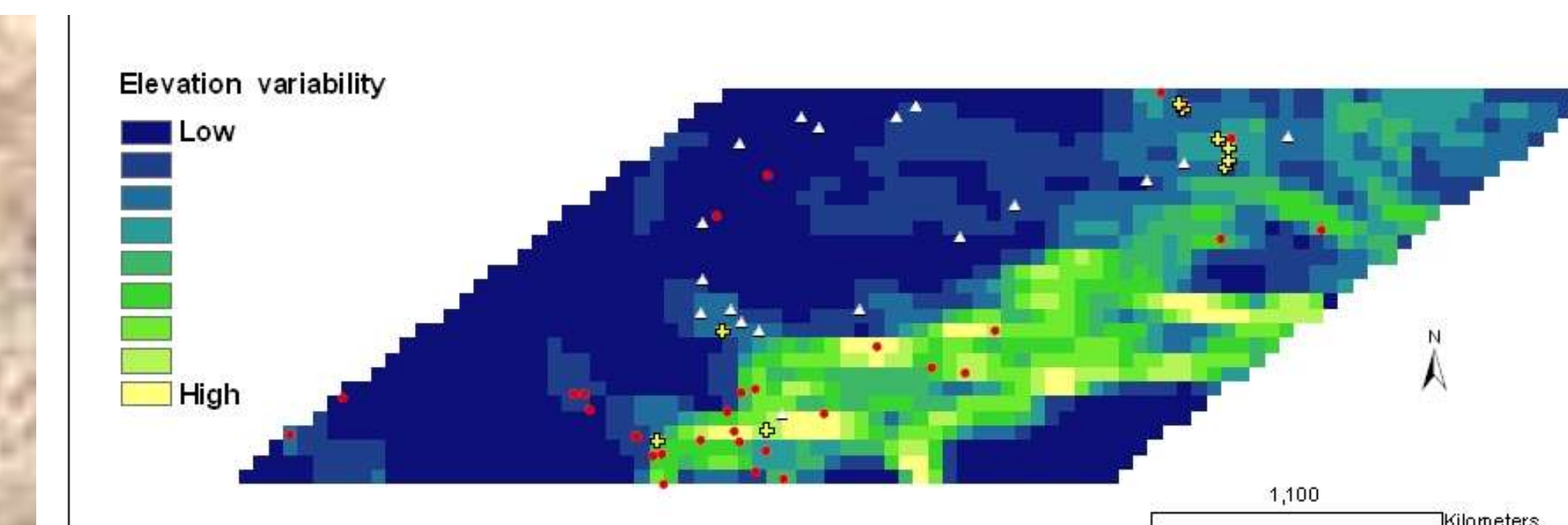
## Present Research Trajectories

1. Archaeological surveys for new stratified Paleolithic sites in the Karatau mountains of southern Kazakhstan.



Sasyk Cave, Kazakhstan; Glantz with former CSU grad student Erin Parks, Jerry Galm, Kazakh students, and Sayat Temirbekov

3. Exploring the validity of the Neandertal range.



Elevation variability and Lower and Middle Paleolithic site distribution at and across the eastern boundary of the Neandertal range.



2010 Kazakh-Uzbek-American field team



2010 field season in Kazakhstan. Graduate students Rickey Kadlac, Lauren Denton and Katie Horton (right to left).



Valkhanov open air site, KZ



Shoktas II, travertine/spring site, KZ

2. Assessment of previously excavated Paleolithic sites in south Kazakhstan for intact materials critical to reconstructing Pleistocene ecosystems and their chronology.