Podium Presentation (Virtual) Session 5, Friday 14:30-16:10

Linking old and new data to reconstruct and contextualize the earliest dispersal and occupation of Sicily

Ilaria Patania[1], Isaac Ogloblin Ramirez[2], Peyton Carroll[3], Kristen Wroth[4], Iris Querenet Onfroy De Breville[3], Sara Zaia[5], Sebastiano Di Mauro[6], Gianmarco Minniti[7], Agatino Reitano[8], Gianni Insacco[8], and Christian Tryon[3]

1 - Washington University in St. Louis · 2 - University of Haifa · 3 - University of Connecticut · 4 - Earlham College · 5 - Harvard University · 6 - EOS Project · 7 - Universita' di Catania · 8 - Museo di Storia Naturale di Comiso

Despite the long history of research on the Mediterranean, many questions regarding the early human dispersal and occupation of its islands remain unanswered. Because of its size (25,711 km2) and proximity to the mainland, Sicily is considered to potentially be the first Mediterranean island to be colonized by humans [1]. At the moment, the earliest secure dates for human occupation in Sicily are set at ~16 kya [2]. This date appears to be broadly coincident with a period of major faunal turnover as European taxa, including European wild ass (Equus hydruntinus) and red deer (Cervus elaphus), replaced large and middle-sized Pleistocene mammals such as the elephant Elephas mnaidriensis, and cave hyena (Crocuta crocuta spelaea). Bathymetric studies of the Sicily Strait, the short stretch of sea that separates Sicily from Italy, have proven that a land bridge connected the two shores during the Last Glacial Maximum (LGM) (26-19 ka) facilitating animal and human migrations onto Sicily [3]. Simulation of sea-level retreat suggests that the Sicilian landmass was drastically increased during the LGM with the paleo-coast line at several tens of meters distance from the current one and a second land-bridge connecting it to Malta. If true, the late date of human arrival on Sicily suggests that despite the early ability to colonize new areas by boat (as demonstrated by Australia 65-45kya), initial human colonization in Europe was primarily overland, with opportunistic island occupation via land bridges occurring much later. However, there are still large gaps in our understanding of dispersal, occupation, and subsistence patterns on the island as only a handful of sites, mostly concentrated on the northern shore of Sicily, have been systematically analyzed. Most of the island is dotted by sites lacking professional studies, the majority of which are noted only in self-published avocational reports. In addition, the now-submerged palaeocoast remains still largely unexplored. Here, we report on the results of our 2022 and 2023 field surveys, on land and underwater, to identify and assess sites in the provinces of Siracusa and Ragusa. We were able to relocate ~25 sites between caves and rockshelters that were excavated partially or completely between the 1870s and 1960s. Of these, we highlight our re-examination of the cave of Campolato A [4], where we carried out GPR work and one test excavation; and the sampling and analyses of Grotta della Seggia, a partially submerged cave containing a continuous sedimentary palimpsest from the mid-Pleistocene to the medieval times that will allow us to reconstruct paleoenvironments and address questions of site preservation in marine caves. Additionally, we located and sampled the inland river valley of Pedagaggi where the homonymous site, considered typologically Upper Paleolithic [5], contained a complete assemblage re-examined in detail by our team. Finally, we surveyed the southern coastline of the island to locate paleosols that contain environmental and possibly anthropogenic records that can contextualize the Sicily-Malta bridge. The work presented here is the first step in collecting the necessary data to reassess and contextualize minimally studied sites across Sicily and eventually reconstruct the mobility patterns and environmental impact of humans on the island.

We acknowledge the local communities of Augusta, Brucoli, and Pedagaggi that have hosted us and shares with us their knowledge of the landscape and local history. In particular we would like to thank Mr. Russo and Mr. Patania. We thank our local collaborators: the Siracusa Superintendence for Archaeological and Environmental Heritage, the Sicilian Superintendence of the Sea, and the Paleontology Museum of the University of Catania. Funding for this project was provided by the Leakey Foundation, the UConn CLAS Summer Research Initiative, The American Institute of Archaeology, and the Rust Family Foundation.

References:[1] Cherry JF, Leppard TP, 2017. Patterning and Its Causation in the Pre-Neolithic Colonization of the Mediterranean Islands (Late Pleistocene to Early Holocene). [2] Di Maida G., 2022. The earliest human occupation of Sicily: A review. Journal of Island and Coastal Archaeology. [3] Antonioli F, Presti V Lo, Morticelli MG, Bonfiglio L, Mannino MA, Palombo MR, et al., 2016. Timing of the emergence of the Europe-Sicily bridge (40-17 cal ka BP) and its implications for the spread of modern humans. Geol Soc Spec Publ. [4] Guzzardi L., 1993-1994. Richerche archeologiche nel Siracusano. Kokalos 39-40, 1299-1307. [5] Di Geronimo I, Di Mauro E, Di Stefano I, Mangano G., 1981-1992. Riparo sotto roccia a Pedagaggi (Siracusa) con industria dell'Epigravettiano finale. Bullettino di Paleontologia Italiana.