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SESSION NO. 48, 9:00 AM
Sunday, 18 October 2009
T131. Ancient Coastal and Subsiding Sites: New Finding and Problems (Posters) (GSA Archaeological Geology Division, Smithsonian Institution)
Oregon Convention Center, Hall A

48-1 BTH 444 Marino, Domenico

ANCIENT HARBORS AND SUBMERGED ISLANDS: NEW EVIDENCE FOR CORSO, ITALY

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Pliny the Elder, in his Natural History, described a small archipelago of five islands which were visible in the sea of Crotone in the first century A.D. He even transcribed their names: "the island of the Disconsolate, Calypso, Titys, Eriuana, and Melipessa." (H.N III 19.95-96). Two of them were still visible in the detailed nautical charts that seafarer and geographer Piri Reis, often referred to this area, drew at the court of Suleiman the Magnificent in A.D. 1521-1526. Currently, not only these islands have disappeared, but also the ancient coastal line of Crotone appears to have undergone dramatic changes since the Greek and Roman age.

In the summer of 2009 a joint American expedition has begun a systematic project of research in the shallow waters of the Tyrrhenian basin to study all the submerged archaeological evidence present in the coastal area. The recent discovery in the search area of submerged boulders that are believed to be part of the Greek Archaea and Classical Age (sixth centuries B.C.), can be used to precisely date and quantify the amount of coastline changes that have taken place in the area since antiquity.

Inserting the new data into a GIS, the shape of the ancient coastline of Crotone is being reconstructed, and the archaeological material is still in situ, whenever present, used to date the inhabitation phases. The possible location of the Graeco-Roman harbor of the city is also being proposed.

48-2 BTH 445 Garrison, Ervan

38,000 YEAR-OLD SUB-FOSILS, EVIDENCE FOR THE ATLANTIC GRAY WHALE, ESCHRICHNIUS ROBUSTUS, SOUTH ATLANTIC RIGHT, GEORGETOWN (USA)

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38,000 year-old sub-fossil evidence, including a nearly complete dentary (mandible) and two vertebrae, of the extinct Atlantic Gray Whale, Eschrichtius robustus, have been excavated from a Pleistocene-aged fluvial deposit in South Atlantic Right, 30 kilometers offshore St. Catherine's Island, Georgia. The discovery of the tooth row was initially made in 2006 but sub-fossil recovery was not completed until the summer of 2008. The two vertebrae were found nearly the jaw section and had been eroded from the bed by bottom currents. Direct dating of the sub-fossils, with the Accelerator Mass Spectrometer radiocarbon technique (AMS), using bioparticle, suggests a common age for the skeletal materials but it speculative to assume these are from one animal. The ages determined for the sub-fossils are in good agreement with the age of the bed itself previously determined by AMS dating of inclinations and by direct dating of the sediments using Optical Stimulated Luminescence (OSL). Surviving architectural features of the mandible and vertebrae, Bristyl sketch evidence that the discovery is of that a Pleistocene aged member of the monospecific Eschrichtidae clade. As such it is the oldest known evidence of this extinct taxon in the Atlantic Basin.

48-3 BTH 446 Belknap, Daniel F.

DROWNED ARCHEOLOGICAL SITE POTENTIAL IN THE WESTERN GULF OF MAINE: AN EXAMPLE FROM FARMER'S HARBOR, ME

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Due to relatively late deglaciation and spatial and temporal adjustments, the Gulf of Maine was earlier believed to have had limited subaerial exposure and potential for sub- accompanying the same time they were zoned and ancient sediments. The Gulf of Maine has great potential to host drowned sites. In fact, the site of Farmer's Harbor, ME is located on a Pleistocene-aged shelf that was eroded to supply strata. The moraine- scavengers dragged mid-archaic artifacts from a ridge which were corse to deposit a paleo-transported. Numerous in situ Croustosa and Mya shells and Zostera stems date the

estuary to between 7-8-9-2 (cal) ka. Several factors led to excellent preservation of drowned landscapes and artifacts here and elsewhere in the Gulf of Maine: 1) irregular bedrock and glacial outcrops create many basins capable of supporting lakes and wetlands at certain lower sea levels; 2) the bedrock shelters many locations from exposure to erosion; woods; 3) local relative sea-level excursions occur and enable optimal preservation of some situations. The Gulf of Maine was already filled at around 10,000 years ago. During the late Pleistocene, the bedrock was being eroded by glacial waters and streams. As the sea level rose, it flooded the glacial valleys and created a series of lakes and wetlands. As the sea level continued to rise, these lakes and wetlands were eventually drowned, creating a series of estuaries and coastal plains. Some of these estuaries are still present today, such as the Casco Bay and Penobscot Bay regions. The coastal plains are characterized by a mix of sandy beaches, mudflats, and salt marshes. The presence of these features suggests that the coast was relatively stable during the late Pleistocene and Holocene, allowing for the development of diverse and complex coastal ecosystems.