ANNUAL REPORT: ARCHAEOLOGICAL SHORELINE RESEARCH PROJECT, ISLAND OF KEPHALLENIA, GREECE 2014

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Identifying fossils and features on a palaeo-shore discovered in 2014

The Project: Archaeological Shore Line Research (A.Sho.Re.) is a complex project integrating Archaeology and the Earth Sciences in order to explore the historical significance of the coastal zone. The National Centre for Scientific Research "Demokritos" and the Hellenic Centre of Marine Research provide the geological and oceanographic research infrastructure respectively. A four-week IFR Field School took place on the island of Kephallenia between June 29th and July 26th 2014. During the first week students attended an intensive series of taught and practical courses on archaeology, geology, oceanography, maritime archaeology, cartography, zooarchaeology. The IFR students were joined by a group of students from the University of the Peloponnese. Despite students coming from different academic backgrounds, they all succeeded in understanding what coastal research design and survey entails. All students were instructed by a team of experts headed by the Project Director:

- Dr. Areti Chalkioti, Maritime Archaeology, Digitization and GIS Mapping
- Dr. Eftychia Yannouli, Zooarchaeology, Landscape and Marine Fauna, Palaeoenvironment
- Vasiliki Ivrou, Maritime Archaeology, Underwater Survey
- Petros Bitsikokos (The Hellenic Navy), Marine Science, Oceanography, Geology

During weeks 2-4 students were divided into research teams engaging in the intensive maritime survey of the coastal zone (swimming and terrestrial) or in specific, project related tasks, such as digitizing geological faults and the survey tracts of the zone under investigation. Work started at 8:00 am, followed by lunch and break during the hottest part of the day (14:00 - 17:30 pm), then resumed in the Lab until dinner time at 20:30 pm. Students took part in educational activities scheduled to sites with special archaeological and geological interest, including sites of the Mycenaean, the Classical and the Byzantine periods, or caves, dolines and sink-holes.

Students' Achievements

Students acquired solid background knowledge of Greek archaeology from the Palaeolithic to the late Byzantine and the Modern eras. They also learned to identify the major processes affecting coastal formation, such as land-born and sea-born sedimentation, tectonism, eustatism, sea-level rise, alluviation and erosion. Students learned to document these processes with reference to our coastal system of transects, using GPS recordings and standard Geographical Information System (GIS) applications in Archaeology. They participated in snorkeling and free diving tasks, during which they recognized submerged architectural remains, cemented pottery, an ancient anchor and a succession of palaeoshores. They photographed and measured underwater and coastal finds. This year proved to be particularly rich in lithic finds that students learned to identify, collect and sort according to major diagnostic features, i.e. proximal and distal end, flake ridge, striking platform, notches and bulb of percussion. As a result, particularly rare types of tools have now been located in the survey area south of Poros. Students had the opportunity to receive individualized instruction on the drawing of these lithics. During lab work students acquired basic cartographic skills, learned the difference between Ellipsoid, Geoid and Datum, and produced geo-referenced maps. In the end they realized the closed connection between geology, palaeoenvironment and fauna, with particular reference to acquatic zoology and maritime archaeology of Kephallenia through lecturing and practicals.

Survey Finds

This year's survey was conducted concurrently on land and underwater covering a shore of ca 4.000 m south of Poros. Terrestrial finds included typical carstic formations with Stone Age lithics of different types, remnants of stone quarries of the historical period and open-air Stone Age sites. Underwater finds included remains of buildings and individual building blocks, some of which on a submerged shore, and a stone anchor. We also resumed work on finds located in previous years, including the recording of blocks of ancient docks. A similar block was discovered by a student research team in the closing days of the 2014 program. As a result of our ongoing cooperation with the National Centre For Scientific Research "Demokritos" and our zoo-archaeology/palaeo-environment experts, this year's students had the chance to take part in the discovery of Pliocene / Pleistocene shores, containing fossils of marine life (fauna and flora, ca >1million – 10.000 BC).

Dissemination of Results

The achievements of IFR-A.Sho.Re. 2014 have been presented on two separate occasions in the local amphitheater at Poros, Kephallenia. We were glad to introduce our project and primary results to a specialized audience of forty students from Australia and the USA plus staff, who traveled to Poros specifically for this event. A presentation in Greek followed at the same spot upon conclusion of the program. In recognition of this project's innovative approach and intellectual challenges, we were invited to participate as expertly end-users in the End-Users Conference of the FP-7 ITACA Project (Innovation Technologies and Applications for Coastal Archaeological Sites) held in Palermo, Italy, earlier this year.

In all, our four-week maritime geo-archaeology project was a constructive and dynamic experience for all involved with gains on the intellectual front as well as personal development and expansion.