

11 Pre - Active Tectonics, Earthquake Geology, Paleoenvironment and Quaternary sequences: A transverse along the Corinth Gulf Rift to Zakynthos island

Excursion Leaders: I. Papanikolaou (Agricultural University of Athens), M. Triantaphyllou (National and Kapodistrian University of Athens)

Proposed Excursion Dates: 7-11 July 2023

Draft Itinerary: Athens – Corinth – Zakynthos island (Boat)- Athens.

Definitive cost per head: 620€ (include all travel and accommodation expenses, coach, boat, 4 lunches and 2 dinners)

Accommodation arrangements: Hotel ✓

Proposer Contact Details:

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Description

The Corinth Gulf is one of the fastest extending regions worldwide (~15mm/yr), forming a spectacular setting for studying active faults and Quaternary sedimentary sequences. The fieldtrip will initiate from the eastern part of the Gulf focusing towards the South Alkyonides Fault system that was activated during the 1981 earthquake sequence. Fault scarps, surface ruptures, trenches, wind-gaps, marine terraces and Holocene notches deformed by active faults will be visited along the Perachora Peninsula. We will cross the Corinth Canal by boat, focusing on the interaction between the tectonic movements and the paleoenvironmental changes based on outcrop and borehole data and visit the ancient Kechriaie submerged harbour (famous due to Apostle Paul visits and texts). We will examine the relationships between active faults, marine terraces, present-day fan deltas and paleodeltas along the southern central and western part of the Gulf. We will observe how climatic cycles are imprinted on the sedimentary processes and the geomorphology. The fieldtrip will end up in Zakynthos island, where due to tectonic uplift, a spectacular Early-Middle Pleistocene (2.6 - 0.6 Ma) marine sedimentary sequence outcrops. The sequence includes unconformities that relate to sea level lowstands, whereas biostratigraphy and magnetostratigraphy document major boundaries such as the Jaramillo, the Cobb Mountain, the Olduvai and Brunhes.

