Supposedly, the pine broke when falling eastwards from the west, in the direction of coast. Roots are covered with sand, the layer of which is about 40 cm. Under lies gravel. A section of the stump is dated by 7612±66 BC and the date is calibrated. Most probably, this submerged „forest“ is stretching towards the coast. In 19th century close to this site, in Kopgalis, waves washed ashore stumps of once growing there trees.

In the neighbourhood of to Sventoji, which is close to Latvian border, bathymetric measurements were made in 2009. Seabed images in the area of 52 km^2 were also received by side scan sonar. Research in the depth of 8 - 20 m disclosed interesting elements of destroyed relict coasts. Remains of trees were not traced.

All stumps of relict woods were traced incidentally. Attempts were made to find a supposed wreck in RF-I site (a quasi-wreck). A side scan sonar traced a dim object and after diving a trail-net, caught on a stump alongside other stumps, was discovered. At RF-III the sonar traced a dim contour. A few days later a stump was discovered there. Most probably, the sonar sensed remains of net, caught on a stump. Due to storm they were later taken away to another place. A stump for RF-II-1 site was traced, visually exploring the surroundings of huge underwater stones.

When analysing records of the sonar in RF-I site, in about 20-25 m from discovered stumps some small dim spots were traced on a sandy bottom. Perhaps, more stumps are resting there. The side scan sonar sensed similar trails in other site too, sometimes even in an area of a few hundred sq. metres. Yet relict forests had not been looked for systematically. In the summer of 2010 search for ancient coasts and relict forests in a territory of 20 km^2 is planned, which also includes RF-I area. Water area of about 45 m in depth will be explored, employing Multibeam Echosounder Sea Beam 1185. It will be followed by a diver inspection, and the sites will be filmed with underwater video. Samples of soil will be taken and analysed. Development of methodology for search of relict stumps on a sandy bottom is one of research aims. Search for submerged stumps is aggravated by the fact that most of them are rising above bottom for less than 1 m. Besides, according to available data, their density on the seabed is small. Yet no trunks are discovered. Only those broken close to the soil had survived. Another aim of the research is development of detailed picture of seabed relief. Hopefully, interpretation of data will enable to restore palaeo-geographical environment of this site in 9th – 8th millennium BC and discover probable inhabited locations of Mesolithic period.

The role of paleoseismology in studying an emerging or blind Fault: the case of Nisi fault, NW – Peloponnese, Greece

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Geologic data at epicentral areas regarding surface slip following large earthquakes are occasionally contradicting in the exact locations of fault traces. In addition, this task is more difficult when a blind fault or previously unknown fault ruptures as is the case for the M_w: 6.4 June 8th 2008 Movri Mountain earthquake that struck NW – Peloponnesus, Greece is involved. This earthquake caused widespread deformation and damages in buildings, as well as extensive hazards especially in terms of ground surface ruptures. Three surface ruptures were triggered by the Movri Mountain earthquake showing the following geological characteristics. Vertical displacements, up to 30 cm have been identified along a major high angle NNW-striking, 6 km long segment of the co-seismic rupture around the Nisi village area (8 km SE of Varda). Along this rupture zone we also observed several secondary on fault coseismic features, such as landslides and liquefaction phenomena. NNE-trending ruptures in the Petrochori area (18 km ENE of Varda) were mainly observed along a ~500 m wide zone of diffused deformation, accompanied by many landslide phenomena. This rupture zone has a length of ~4km and aligns with the up to now aftershock distribution. The third set of WNW-

striking surface ruptures has been identified throughout the broader epicentral area. However, a major 3 km long WNW-trending zone was mapped west of Michoi village. This orientation displays significant left-lateral component of horizontal motion. The most promising rupture, lying near the epicenter of the event, attains a maximum offset of 30 cm. In this surface rupture a paleoseismological trench was excavated in order to investigate if it was of tectonic origin or just a gravitational effect. Based on seven ^{14}C samples, we identify two surface – rupturing earthquakes in the last 1Ka prior the recent event. Thus, observations from paleoseismology suggest that the Nisi fault earthquake appear not to be random over the last centuries. Our ^{14}C data support the view that this fault resembles other known faults lying along the south coast of the Gulf of Corinth, in terms of slip rate and recurrence interval such as Helike and Schinos faults. Therefore, we infer that the Nisi fault displays a slip rate on the order of 1.5 mm/yr.