



## **A possible bradyseismic event in Roman times near Ardea (Tyrrhenian sea coast of Latium, central Italy)**

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The Tyrrhenian sea coast of Latium and Campania regions of Central Italy is characterized by sectors whose late Quaternary evolution has been strongly influenced by volcanic activity. This is particularly evident along the Neapolitan Gulf, where active volcanism is still ongoing, determining, in addition to the volcanic hazard *stricto sensu*, hazards connected to slope instabilities of the volcanic cover and to ground periodic movements (the world renown bradyseism at Pozzuoli in the Campi Flegrei). Evidence of the latter phenomenon has been documented also in other zones of northern Campania, but not outside the Campania region. Recent archaeological excavations of civil and port facilities are being carried out by the Sovrintendenza Archeologica del Lazio near the ancient town of Ardea, the mythical site of the Aenea's landing, at the south-western outskirts of the Late Quaternary Colli Albani volcanic centre, in a site located on the historical marine dune, now ca 400 m. far from the present-day seashore. These diggings have uncovered markers of possible positive and negative fluctuations of the sea level amounting at several meters, occurred in Republican (290-230 B.C., calibrated AMS age) and late Imperial times. The markers are represented by erosive notches on tuffs walls (4.4-5.3 m a.s.l.) and cirripeds at an elevation of ca. 3.5 m (AMS calibrated age 120-220 A.D.). The distribution of markers also suggests a slight tilt to the east, possibly connected to differential compaction of the retro-dune marsh environment, reclaimed at the beginning of the XX century. The interpretation of these markers as sea level fluctuation is not yet unequivocal. More studies are ongoing to test the hypothesis of a volcanic-driven bradyseism, connected to the still alive Colli Albani volcanic district.