The ancient city of Konane (Roman Conana) is located in the area around the modern village of Gönen, which lies 24 km north of Isparta in southwest Turkey. In antiquity this area was known as Pisidia. The high peaks of the Barla and Tınaz Mountains frame the valley to the north and gently descend through alluvial fans into the plain of Gönen. While many travelers have visited this area in search of ancient material, none has ever undertaken a systematic survey using the most advanced methods.

In this study in particular aims to combine an archaeological survey and the study of inscriptions with modern methods such as geophysical measurements and topographical mapping. The aim of the geophysical research at the site in Gönen (Isparta/Turkey) was to recognize the shallow soil layers and to determine and outline the existence of possible archaeological objects.

Preliminary finds suggest that the city center of Konane in the Hellenistic period may have actually been located at Kale Tepe, and only in the later Roman phase did the city move southeast, which is now under the modern town of Gonen. The preliminary archaeological data also present distinctsigns of expansion in Konane's settlement during Late Antiquity. The occupation and possibly later fortification of the Akyokuş Tepe, in conjunction with the growth of rural settlement in the western sector of the valley, invite hypotheses over the new economic outlook and demographic expansion in the region.

A landslide research at Northeastern Turkey using 2D electrical resistivity method

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Landslides are an earthflow that may occur in areas with heavy rainfall, on the banks of rivers and on mountain slopes. They may be defined as a sudden or gradual rupture of rocks or soils and their following movements down slope by power of gravity. Landslides endanger engineering structures, properties and human lives. The most important causes of landslides in northeastern Turkey are generally morphology of slopes, heavy rainfall, excavation, decomposed rocks and existence of underground water in soil material. In the study area, structurally complex volcanic and sedimentary sequences, occurred limestone, marl, claystone and tuffite, were observed. The geological units are weathered due to heavy rainfall, surface and underground waters. The weathered units as a result of increase in water movements in landslide area caused the reduction in slope stability, and hence the earthflow by power of gravity occurred. The landslide located in 7 km south from the province of Trabzon in northeastern Turkey is investigated using the two dimensional dipole dipole electrical resistivity method. The resistivity imaging produces significant results to characterize the landslides. The resistivity survey is the definition lateral extension and thickness of landslide body, the determination of a potential sliding surface, and the detection of the movement of groundwater flow and its distribution within the slip mass. The landslide having about 17° slope is approximately 120 m long, about 100 m wide, and in an environment with an altitude ranging from 150 m to 200 m. The highway and buildings in the landslide area have been largely damaged due to the landslide. The resistivity pseudosections with a dipole spacing varying from 5 to 30 m over eight profiles with the length of 100 m, five of which were oriented transversely to the landslide body, carried out during the field study. The field apparent resistivity pseudosections were inverted to obtain a true resistivity structure using an algorithm based on the finite element forward and the least-squares inversion methods. The subsurface is divided in to rectangular blocks, the number of which is less than the number of resistivity data. The inversion method adjusts the resistivity model trying to iteratively reduce the difference between the calculated and observed apparent resistivity values. A parameter mesh for the case of 21 electrodes and n-separation of 6 for the used array is used. The number of parameter layers is set equal to the maximum n-separation of the measured data set and the thickness of each layer is set as 0.5 of the inter electrode spacing for array used. The number of parameters in every layer is eleven. Note also that the

side and bottom parameters were set to be large to simulate infinite boundaries. The inverted resistivity sections show that the landslide body has different degrees of an altered material and a high degree of saturation. The sliding surface is at a depth of about 10 m, with 2.5 m of soil material overlying 7.5 m of landslide material. The landslide body has different degrees of an altered material and a high degree of saturation, and the sliding surface is at a depth of about 10 m. The relatively high resistivity values at the bottom of the sliding surface correspond to the marl layer.

Petrogenesis and SHRIMP zircon U-Pb dating of some granitoids within the Western Pontides, Southeastern Balkans, NW Turkey

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The Pontides is one of the main tectonic units of Turkey which have been defined western, central and eastern Pontides. The Western part of the Pontides is separated tectonic subunits such as the İstanbul and Strandja zones. The Strandja zone reveals part of the large crystalline terrane in the southern Balkans, which also includes Rhodope and Serbo-Mecedonian massifs. The Istanbul Zone is a continental terrane and includes sedimentary succession ranging from Ordovician-Carboniferous deposited metamorphic basement and ıt is settled at the east of the Strandja Zone.

According to the our new zircon U-Pb age data, the basement rocks of Strandja zone form Late Proterozoic and Early Paleozoic metagranitic rocks. At these zones granitoids are determined with different age, geotectonic setting and magma genesis. In the Çatalca region, tip of the southeastern part of the Strandja Zone, two units are determined as the Precambrian Çatalca metagranite and Permian Tepecik cataclastic granite. In the eastern part of the studied area, within the Istanbul Zone, the Permian Sancaktepe granite (Gebze) and the Upper Cretaceous Çavuşbaşı granodiorite intruded into the Paleozoic sedimentary rocks. According to the mineralogical-petrographical-geochemical and geochronological properties of granitoids, the Çatalca region granitoids are similar to the Sancaktepe granite.

In terms of the geochemical features, the granitoids in the Çatalca region and the Sancaktepe granite have subalkaline, high-K calkalkaline and peraluminous characters, while the Çavuşbaşı granodiorite display subalkaline, middle-K calcalkaline and metaluminous characters. All three units display I-type magma character and arc- type geotectonic events, but some samples are between I-type and S-type according to the geochemical results. According to isotope geochemistry the Çatalca granitoids have low values of initial $^{87}Sr/^{86}Sr$ and $^{143}Nd/^{144}Nd$ isotopes (0.6941 and 0.5120), while Sancaktepe granite has similar values (0.6989 and 0.5122). The Çavuşbaşı granodiorite display the highest values of isotopic ratios (0.7035 and0.5127).

Çatalca metagranite gives the Latest Precambrian-Early Cambrian (534.5+4.7 MY) SHRIMP zircon U-Pb crystallization ages. Tepecik cataclastic granite and Sancaktepe granite crystallized during the Permian with age determinations of 249.4+1.5 MY and 253.7+1.75 MY, respectively. The youngest unit of this region is the Çavuşbaşı granodiorite which yields an Upper Cretaceous age (67.75+0.59 MY). The presence of the Late Precambrian-Early Cambrian granitoids in the Strandja Zone is newly data for the region. Gondwana or Pan-African origin similar ages basement rocks there are in some localities such as Menderes and Bitlis Massives and İstanbul zone in Turkey. Thus, these rocks may be correlated with the same ages rocks in the other localities along the Rhodope-Pontide belt that related to the evolution of Tethyan ocean.