



## **The coast lines of the Harmanite Bay south of Sozopol, Bulgarian Black Sea, during the last 3000 years**

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In the last years a necropolis dating to the 4<sup>th</sup> - 3<sup>rd</sup> century BC was excavated on the beach 60 - 80 m from the present coast line of the Bay of Harmanite south of Sozopol (Panayotova, 1998). The sedimentological description (Gergov, 2001) indicates the occurrence of climatic changes after the 3<sup>rd</sup> century BC, which agrees with the climate changes (warm/cold) of the Black Sea during the Holocene (Preisinger and Aslanian, 2003). Owing to the increase of the Black Sea level by about 20 m during the last 7500 years, geomorphological and bathymetric measurements could show the changes in the coastline in the Bay of Sozopol (Preisinger et al., 2004).

We studied the Bay of Harmanite south of Sozopol by satellite photos under different weather conditions. Under the influence of NE - winds sea bottom structures became visible. The results were compared with measurements of the sediment structure by means of a GPS-Garmin 168 Sounder in combination with a film camera. The combination of these results shows the distribution of volcanic rock material from the land and that of sand from the sea by NE - winds. We constructed the change of the coast line from the bathymetric map of the Bay of Harmanite south of Sozopol and the increase of the water level since the foundation of Apollonia Pontica (modern Sozopol) at the end of the 7<sup>th</sup> century BC. The under water distribution of different materials indicates the former existence of a necropolis older than the one on the beach.

### References

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