TELL ARBID
SYRIA

GEOPHYSICAL SURVEY, 2004

Tomasz Herbich

Geophysical prospection on settlement sites in northeastern Syria, carried out since the early 1990s, has demonstrated the usefulness of the magnetic method in registering remains of ancient mud-brick architecture invisible on the surface.[1] It has proved especially purposeful in the case of large sites where regular archaeological excavations, slow by nature, take dozens of years to establish a settlement plan. Assuming favorable conditions, a geophysical survey can determine the extent of an endangered site, determining the area in need of protection.

Both aspects were instrumental in planning a prospection of Tell Arbid: the site covers c. 38 ha and lies near a modern village, the inhabitants of which have dug for clay in the ancient ruins in order to manufacture bricks and still use part of the site as a cemetery.

The objective of the prospection carried out on Tell Arbid in 2004[2] was to test the usability of the method in recording archaeological features in different parts of the site. Five areas were chosen: at the foot of the tell on its eastern, western and northern sides, and in selected areas also on the lower slopes of the tell.

METHOD AND EQUIPMENT

The magnetic method was employed, using Geoscan Research FM36 fluxgate gradiometers. The measurement grid was 0.25 m by 0.50 m with measurements taken in parallel mode (gradiometer moving always in one direction) every 0.25 m along lines spaced 0.50 m within rectangular areas 20 by 10 m. The magnetic survey results were processed using Geoplot 3.0 software for preliminary measurement processing and Surfer 8 for map analysis and printing. The results were presented as maps of changing magnetic-field values.

1 H.S. Giese, A. Grubert, Ch. Hubner, "Geomagnetic mapping on the Early and Middle Bronze Age settlement of Mount Tell Mozan (Urkesch), Northeast Syria," *Archaeologia Polona* 41 (2003), 178-180; C. Meyer, B. Ullrich, "Tell prospection: experiences collected in Northern Syria", *Archaeologia Polona* 41 (2003), 233-236.

2 Fieldwork, organized within the framework of a cooperation agreement with the Polish Centre of Mediterranean Archaeology of Warsaw University, was carried out on August 18-28, 2004, by Mr. Tomasz Herbich (Institute of Archaeology and Ethnology, Polish Academy of Sciences), assisted by Mr. Paweł Gan. One of the instruments used in the research was provided by the Programa de Estudios de Egiptología (Consejo Nacional de Investigaciones Científicas y Técnicas) in Buenos Aires, in fulfillment of a cooperation agreement with the Polish Centre.