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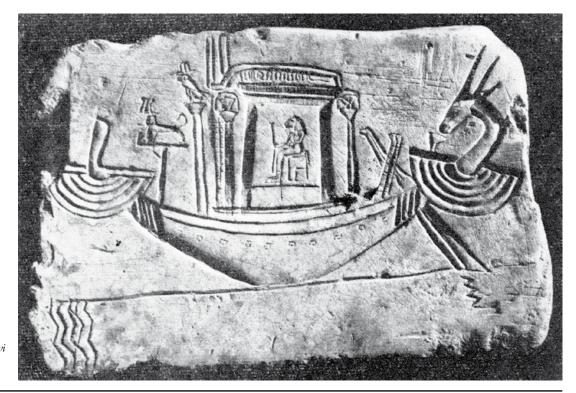
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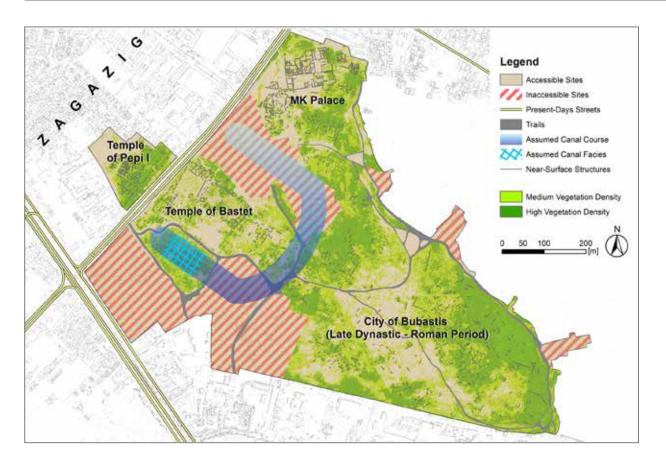
Goddess on the water: the sacred landscape of Bubastis

Combining archaeological evidence with written records, **Eva Lange** and **Tobias Ullmann**, working at Tell Basta (Bubastis), show how geophysical methods can be used to reconstruct the sacred canals once surrounding the famous temple of the cat goddess.

The famous temple of Bastet at Bubastis was described in the fifth century BC by the Greek historian Herodotus in quite some detail. He especially mentioned two canals about 30 m wide, sourcing from the Pelusiac Nile branch and surrounding the temple in a way that gave the ancient observer the impression the whole building was set 'on an island'. The reliability of Herodotus' descriptions of ancient Egypt is controversial and there may be no overall agreement on how much of his writings is based on fact and how much on fiction. In the case of Bubastis, new archaeological and geophysical research shows that his accounts of the town have to be considered as corresponding closely to the ancient reality. Descriptions of the temple of Bastet enclosed by two canals, the sacred 'Isheru', can be found in the older Egyptian tradition as well, which tells how the statue of Bastet would travel on the sacred canals surrounding her temple in a kind of cultic drama based on a local myth: the triumph of the goddess as a daughter of Osiris in a battle against Seth, who had stolen the eye of Horus. This myth, interweaving real landscape features with a mythological narrative in a typical Egyptian way, can be found in a compendium of local traditions of the Nile Delta in papyrus Brooklyn 47.218.84. While this manuscript dates back to the reign of Psamtek I in the second half of the seventh century BC, it is very probable



Stela from the cat cemetery at Bubastis / Tell Basta, discovered by Ahmed el-Sawi in 1970. (Photo: Ahmed el-Sawi) EGYPTIAN ARCHAEOLOGY



that the myth itself is considerably older.

'And she was rowed within the Oryx-Antelope on the Isheru in the very moment as she rescued the Udjat Eye from him; as Seth created his appearance, stealing the Udjat Eye in Mehet. He came to Bubastis, carrying the things he swallowed, but Horit (i.e. Bastet) rescued the Udjat Eye of her father.'

In an amazing and very rare transfer, we can see the mythical text become image on a stela of the Late Dynastic Period, discovered by Ahmed el-Sawi in the cat cemeteries at Bubastis, depicting Bastet enthroned on her sacred barque at the moment of her victorious return. The head of an oryx antelope, believed by the Egyptians to be a creature of the god Seth, forms the stern of the boat and in this way the defeated enemy itself. The waters of the sacred Isheru of Bubastis are clearly indicated under the barque by zigzag lines

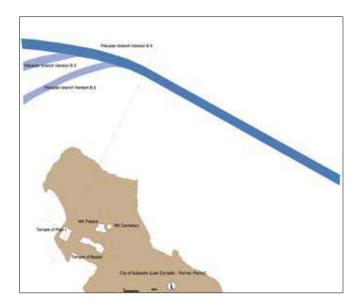
Another paragraph in this compendium from the Brooklyn papyrus gives a more detailed description of the statue of the goddess and the appearance of her temple, showing very intriguing parallels to Herodotus' words:

'It is a statue of a woman with the face of a lioness. She is kneeling, with her lower legs beneath her. She sits on the dais of the slaughtering of enemies. A falcon protects her, two hippopotami surround her, and a replica of the lake completely encloses her, measuring 7 ... by 2 ...'

A later text but also very likely composed of older sources appears on the eastern walls of the enclosure of the temple of Edfu. Here, inscriptions accompanying a depiction of Bastet give her epithet as 'Bastet, the Above: map of Tell Basta (2015). Below: possible traces of the canal south of the temple of Bastet revealed by magnetometer in 2008. (Images: Tell Basta Project) Opposite page: theoretical course of the Pelusiac Nile branch near the city of Bubastis (after M. Bietak, 1975).



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Great One, the Lady of Bubastis, the Eye of Ra, who is in Behedet, [who sits on the] throne, who smites the enemies, who is protected by [the gods], in whose entourage Ipi is, under [whose temple] the Nile flows'. On the columns in the *pronaos* of the temple of Edfu she is further described as 'this goddess, the noble one, under whom the Nile flows'.

Recently, the Tell Basta Project has begun to test these textual sources using archaeological and geophysical methods in order to reconstruct the ancient sacred landscape of Bubastis, created by human efforts around the temple of its main goddess over many centuries.

In 2008 we started a geophysical survey, conducted by scientists of the University of Potsdam, which is now being continued by geographers of the University of Würzburg. Already during a first test run with the fluxgate gradiometer, the results showed possible traces of a canal in the area south of the temple. Rescue excavation by a team of Egyptian colleagues from the Ministry of Antiquities (then SCA) in the same area one year later revealed what we interpreted as remains of canal fill: thick layers of solid dark mud, virtually devoid of small finds or pottery. In the last season (spring 2015), characteristics of these sediments were analysed in order to identify the depositional system and history. The preliminary results indicate that the facies (rock unit) is characterized by a high content of organic matter, very fine particle sizes (silt to clay), absence of coarse material (sand) and medium content of carbonate. About 2 m of sediment are exposed today and reveal a uniform and solid morphology without visible layering. These findings suggest that the sedimentary environment was probably characterized by the presence of standing or very slow-flowing water. Further, the observed high content of organic matter and carbonate make the presence of adjacent gardens or agricultural fields likely. These considerations fit Herodotus' description of the canals as unconnected and without an outlet:

'Save for the entrance, it stands on an island; two separate channels approach it from the Nile, and after coming up to the entry of the temple, one of them runs round it – each of them a hundred feet wide – and the other is shadowed by trees.'

Following the description of Herodotus, there must have been an area close to the entrance of the temple district where the canals converged, without actually meeting. Based on the location of the assumed canal facies and the location of the temple district, we can hypothetically reconstruct a turn in the course of the canals here. The 2015 survey therefore focused on the identification of this ancient course. First hints of the possible location of the eastern part of the canal were found close to the entrance of the temple district by studying the topographic situation and vegetation patterns: today a road separates the northern district from the south-eastern area, following a topographic depression. This course presumably follows ancient tracks that developed after the canal silted up.

Additionally, the surroundings of the road show a high density of intact green vegetation, which may be due to the higher water storage capacity of the fine-grained canal fill. Magnetic measurements with a caesium magnetometer were conducted in this area for clarification. Compared to the sites analysed in 2008, this area shows only a few noticeable magnetic anomalies and in general an absence of clearly identifiable ancient structures. This might indicate the front end of the temple district and the area where the canals converged. However, no observations were made that would allow an indisputable identification of the ancient courses of the canals.

Further investigations will be undertaken over the next seasons: first of all we will continue the magnetic surveying and conduct core drilling to securely identify the buried canals. Also, we aim to identify the ancient course of the Pelusiac branch of the Nile. Up to now, the most likely hypothesis is that the Pelusiac branch feeding both canals was located north of Bubastis and from there turned south-east along the ancient city. The identification of the Pelusiac course will hopefully help to locate the Hermes temple and the harbour – two structures also mentioned by Herodotus, but so far undiscovered.

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