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## The Pyramid Complexes and the Ancient Landscape of Dahshur/Egypt

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# The Pyramid Complexes and the Ancient Landscape of Dahshur/Egypt

Memphis; Old Kingdom; landscape evolution; pyramids; quarries.

The construction of a pyramid complex was the main building project of a king in the Old Kingdom (about 2650–2150 BCE). All pyramids were erected at the Western Desert escarpment within a maximum distance of about 25km opposite the former capital of Memphis.<sup>1</sup> Due to their size and their location on the Egyptian Limestone Plateau, these monuments could be seen over vast distances. By means of their monuments, the socially distant god-kings of Ancient Egypt were always visually present. Thus, the political structure was translated into architectural forms and mapped onto the landscape.<sup>2</sup>



Fig. 1 | The Pyramids of Dahshur are visible from a great distance (here 2.5km). (Photo: N. Alexanian).

The vast necropolis of Dahshur is one of the large pyramid cemeteries of the Old and Middle Kingdom (2600–1700 BCE). The most prominent monuments are the Red Pyramid and the Bent Pyramid, which were erected by King Snofru, and three pyramids of the 12th Dynasty. The German Archaeological Institute (DAI) has been working at Dahshur since 1975. Since 2009, palaeoenvironmental research has been conducted by the Institute of Geographical Sciences of the Free University of Berlin in cooperation with the DAI.

Geomorphological and sedimentological investigations have made clear that the landscape changed its shape fundamentally in historic times. Altogether about 80 sondages were conducted using an Eijkelkamp hand auger. Several excavation trenches were

1 Lehner 1997.

2 Alexanian and Seidlmayer 2000, 295–296.

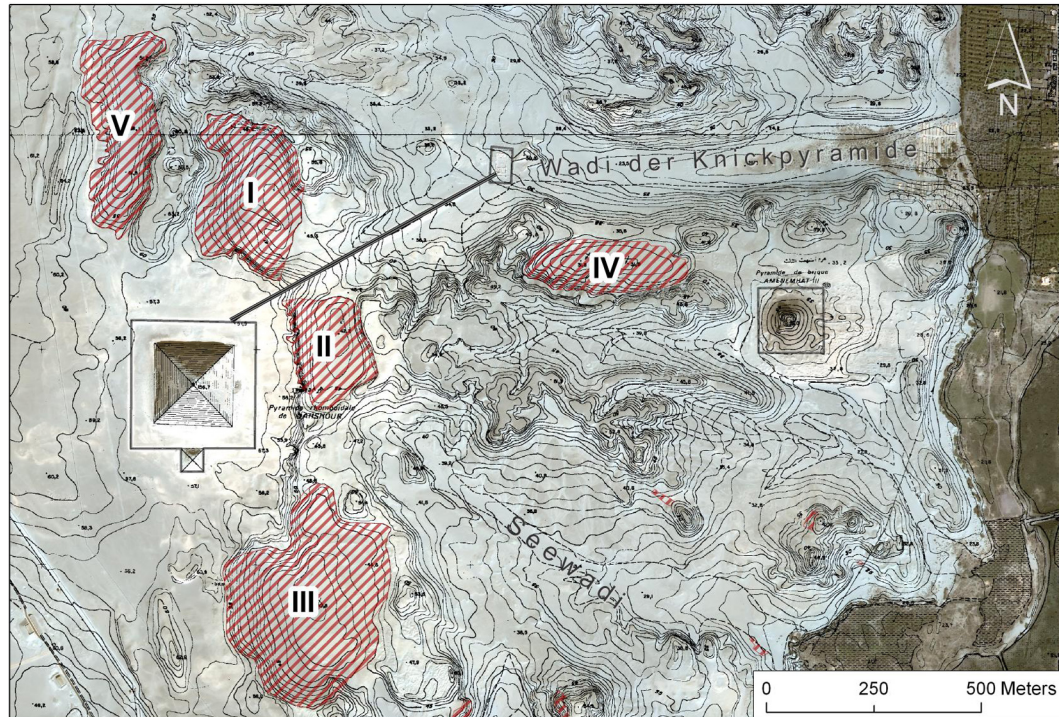


Fig. 2 | Pyramid field of Dahshur-South. Location of Quarries in the Vicinity of the Bent Pyramid (4th Dynasty, 2600 BCE) and of the Pyramid of Amenemhat III (12th Dynasty, 1900 BCE) (map source: topographical map Le Caire 1:5,000, sheet H 26, Quickbird Image 21/02/2008). Graphic: W. Bebermeier.

constructed around and in the wadi to the northeast of the Bent Pyramid. The geomorphology and channel geometry of the wadis were also analysed using a DGPS.

The results made it clear that from the late Old Kingdom onwards, as much as 7m of alluvial and aeolian deposits covered the cultivated area and the settlements of the so-called Pyramid Towns.<sup>3</sup> Aeolian dynamics levelled the landscape mainly in the channel beds and in the desert margin to the east of the escarpment scarp. For the dating of these events, we have until now relied on archaeological evidence provided by the dating of pottery. The pottery revealed during the excavation of the lower causeway of the Bent Pyramid showed that the sand had come into the wadi to the east of the Bent Pyramid during the Old Kingdom (2600–2150 BCE) already. In the middle of the 12th Dynasty (about 1900 BCE), more than 3m of sand accumulated and the causeway was completely covered. At the beginning of the Ramesside Period (about 1300 BCE), 2 additional meters accumulated and the present level was almost achieved.<sup>4</sup>

The appearance of the natural landscape at Dahshur was intensely altered by human impact, especially through mining. The quarries of the pyramids appear today as scarps and depressions.<sup>5</sup> The channel beds in the wadis leading to the Bent Pyramid were also altered by use as transport paths for building material and by fluvial erosion.<sup>6</sup>

3 Alexanian and Seidlmayer 2002, 19–27.

4 Alexanian, Bebermeier, and Blaschta (in press).

5 Bebermeier et al. 2011.

6 Ramisch et al. (in press).

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