

Wadi Nadiya 2: Another Neolithic Barrage System in the Northern Jafr Basin

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1. Research Background and Objective

The Jafr Basin Prehistoric Project started in 1997 with a view to tracing the process of pastoral nomadization in southern Jordan on the basis of archaeological evidence. For this objective, we have continuously excavated more than a dozen archaeological sites varying in date and nature from Neolithic agro-pastoral outposts to Early Bronze Age cairn fields during the first two phases. Phase 3 of the long-term project has addressed the Neolithic water-use history in the basin (Fujii 2007a, 2007b, 2010a, 2010b; Fujii et al. 2011). This field season focused on the excavation of the barrage system at Wadi Nadiya 2, and the last two weeks were devoted to a reassessment of Neolithic water catchment facilities that we previously investigated in the basin.

2. Investigations at Wadi Nadiya 2

As with the neighboring barrage site of Wadi Nadiya 1 (Fujii et al. n.d.), Wadi Nadiya 2 is also located in the middle of a flint pavement desert that extends behind the escarpment fringing the northern edge of the al-Jafr Basin (Fig. 1). The site consists of four stone-built barrages of various scales. We partly excavated three of the four.

The investigations have shown that: 1) all of the three excavated barrages had an extensive open-cut limestone/flint quarry ca. 0.3-1 m deep in front of the barrage walls; 2) unlike Barrage 1 of Wadi Nadiya 1 (yet as with Barrage 2 of the same site), the three barrages were not equipped with a subterranean masonry retaining wall for protecting the barrage walls against strong sideways water pressure; 3) instead, they were protected by a soil and rubble bank ca. 0.3-0.5 m high (Figs. 2-4).

The Nadiya 2 barrage complex was combined with the upstream complex to form a water-use system consisting of a total of six barrages. The research outcome suggests that the system began with the large-scale basin-irrigation barrage in the uppermost course (i.e. Barrage 1 of Wadi Nadiya 1) and ended with the small-scale reservoir type

barrage in the lowermost course (i.e. Barrage 3 of Wadi Nadiya 2). There is a possibility that this techno-typological shift was related to the transition in lifestyle from the PPNB pastoral transhumance to the subsequent pastoral nomadism.

As is usual with extramural barrage sites, small finds from Wadi Nadiya 2 were scarce and, if any, rarely found *in situ*. The only exception to this is a large pillar base, a chronological indicator of the Jafr Pastoral PPNB, which was incorporated into the central wall of Barrage 2. The others were stray finds, which included a few naviform cores, several heavy-duty digging tools, and a flint bowlet. The occurrence of the last artifact is suggestive of the nearby existence of an outpost as an operating body of the barrage system.

3. Reexamination of Neolithic Water-use Facilities in the Jafr Basin

The investigations at Wadi Nadiya 2 necessitated a reexamination of the Neolithic water-use facilities previously investigated in the Jafr Basin. For this reason, we conducted limited re-excavations at Wadi Nadiya 1 and Wadi Ghuwayr 106, and confirmed anew that both of the two barrage systems were associated with an open-cut limestone quarry in front of the barrage walls. In addition, a brief survey in the eastern Jafr Basin plotted a few dozen water harvesting facilities resembling Barrage 3 of Wadi Nadiya 2. In connection with these operations, a PPNB outpost of Wadi Ghuwayr 17 and a LN open sanctuary of ‘Awja 1 were also briefly reexamined for a better understanding of the cultural background of the Jafr Neolithic water-use history. The latter site produced representations of feline animals (Fig. 5), which remind us of similar examples in the contemporary Negev and Sinai.

4. Summary

The investigations at Wadi Nadiya 2 have provided valuable insights into the techno-typological sequence of the Jafr Neolithic barrage system. It is our tentative perspective that the shift from the large-scale basin irrigation barrage to the small-scale reservoir type barrage was linked with the transition from the PPNB pastoral transhumance to the subsequent pastoral nomadism. Given this, we may argue that in addition to the sequence of burial custom (Fujii n.d.), we have obtained another key to tracing the process of pastoral nomadization in southern Jordan.

6. References

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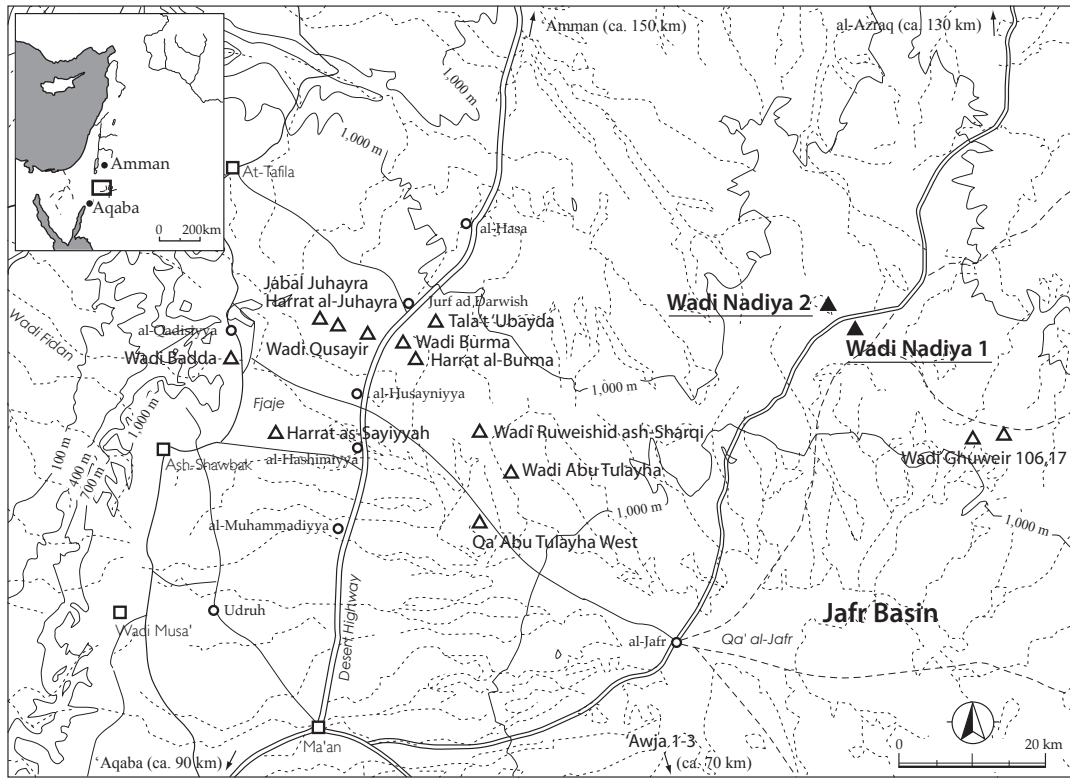


Fig. 1 Site Map of the Jafr Basin and its Surrounding Areas.

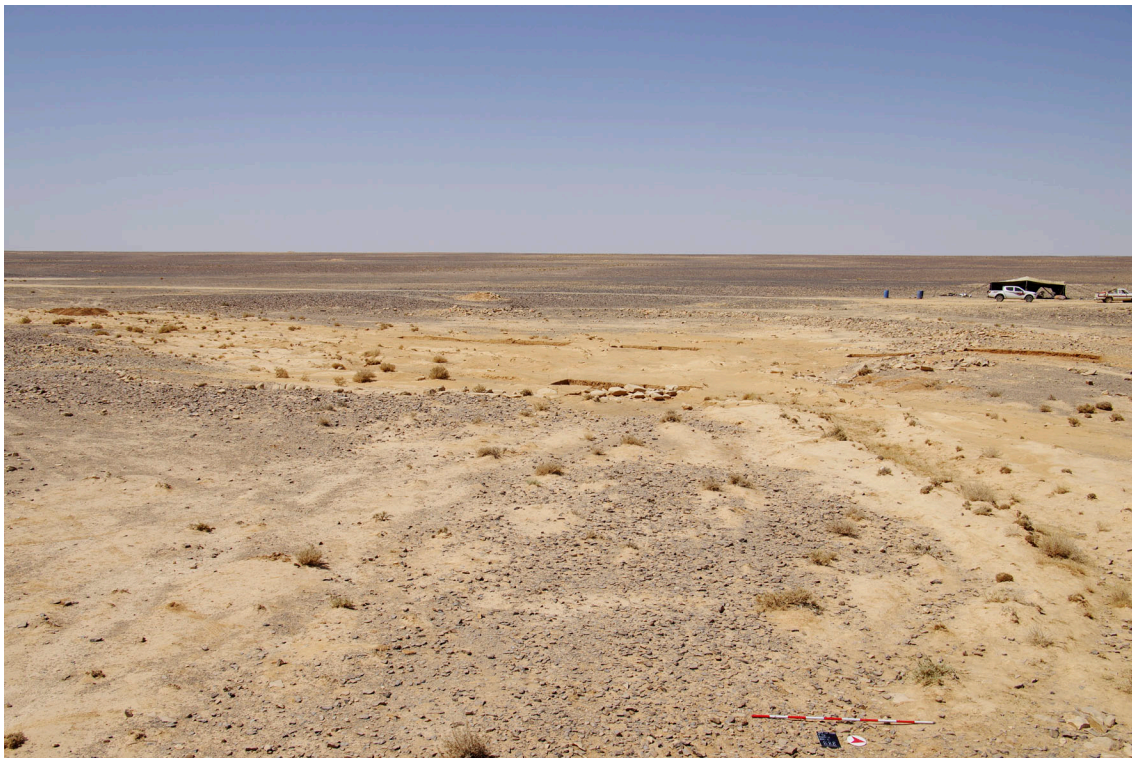


Fig. 2 Wadi Nadiya 2: general view of Barrage 2 (looking W).



Fig. 3 Wadi Nadiya 2: close-up view of Area 4, Barrage 2 (looking E).



Fig. 4 Wadi Nadiya 2: general view of Barrage 3 (looking N).



Fig. 5 Small features representing feline animals at 'Awja 1 (looking W).