

## A Water Tunnel At Muqibleh

By  
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In August, 1972, the Lutheran World Federation began a project at Muqibleh, west of Jerash. (1) The village water supply is a spring on the southern slope of the ridge. The water runs through an open ditch 9 m long and from there into an olive orchard. The lower sides of the ditch show a number of dressed stones «in situ» as part of a wall, presumably ancient.

The water came out of the hillside from a dirt filled tunnel with an arched roof (Plate II, Fig. 1). In discussing the needs of the village, the LWF found that people wanted a better water supply. It seemed reasonable that if the tunnel were cleared of debris, the water would flow faster. Shortly after the clearing began, it was apparent that the tunnel was more extensive than initial estimates. Thompson (2) was notified along with the Department of Antiquities. A visit was made to the site in late August when cleaning had proceeded for 16 m. The digging had reached Section D-D (Plate I), just beyond the small «well» to the surface. The villagers had already lined the well to the surface with fresh stone so the exact condition of this well at the time of discovery, is unknown.

Work stopped at the point of Sec. D-D because the corbelled arching seemed on

the point of collapse. In line with the tunnel, 13 m to the north, was a huge olive tree. Immediately to the north of the tree, was the wall (a dam ??) shown in the drawing (Pl. I) and photographs (Pl. II, Figs. 2 & 3). The people assumed this was some kind of dam, so they cut down the tree and dug out the roots. Eventually they found the larger well shown in Pls. I and II Fig. 3. The dam forms the northern side of well. The western & southern side walls had disappeared. At the bottom, the workmen found water and the continuing line of the tunnel. They dug south to Sec. D-D to open the main tunnel (Pl. V).

A much reduced tunnel continues to the north. This has been cleaned out for 4m (Pl. VI). Since the water appears to come from both sides of this tunnel, the villagers stopped at this point, especially since the tunnel is just big enough for a man to crawl into and the water by this time was coming fairly strongly. The final phase of the village project was to cap both the large and the small walls to protect the purity of the water and to dig a reservoir at the open end of the tunnel. The system at stopping point is almost 41 m long, counting the open ditch and the wells. How much further the small north tunnel goes, remains speculative. In early October, De

1. It is a pleasure to thank Dr. Joseph O. Thompson and the LWF staff for their courtesy in information, visits and follow up on the archaeological importance of the discovery.

H. O. Thompson was Director of the ACOR (1971-2) and Visiting Professor of ACOR (1972-3).

Vries (3) and Thompson visited the site, measuring and photographing the exposed portions. A further visit in late October noted a portion of a wall near the reservoir excavations

It appears that this type of water tunnel is unique in East Jordan (4). Only one other example is known and that is the tunnel for Ain Balata, the main water supply for the village of Balata, now part of the municipality of Nablus in the West Bank of Jordan. This tunnel was examined in 1960 and '62 by Dr. Robert J. Bull and colleagues. (5) Rock cut tunnels are not uncommon, with well known examples at Jerusalem, Megiddo, Gezer and Hazor. While it is probably not a water channel, a rock cut tunnel is known on the Citadel in Amman. But the constructed tunnels of Balata and Muqibleh seem to be unique.

The date of the Balata tunnel remains problematic. It was probably Roman, built for the use of the city of Neapolis which underlies the modern city of Nablus. The Muqibleh tunnel was in all probability originally Roman as well. The dirt removed by the Muqibleh workers, contained quantities of Mameluke sherds. The vaulted portion of the

tunnel still contained small sections of plaster on the side and ceiling. Two pieces of Byzantine ribbed ware remain plastered into the ceiling. It is of course quite possible that the plastering was done by the Mamelukes but the stone construction here is of more careful work than the outer mouth of the tunnel. In addition, quantities of early Byzantine (400-450 A.D.) sherds were found in the fill outside the tunnel, especially where village excavation for a reservoir has uncovered a large wall of semi-dressed stone (c. 0.35 m long). The lower portions of the vaulted portion of the tunnel show well-dressed, almost ashlar, block construction. This is the primary evidence for the Roman date, along with the corbelling of the main section of the tunnel, and the presumed Roman date for the Balata tunnel. However, this remains problematic since the corbelling could be Byzantine and the date of the Balata tunnel is also problematic. Roman sherds were found in the fill outside the tunnel, so these add to the evidence of a possible Roman date, but the sherds were not found «in situ» in stratified fill. An unusual tomb was examined further up the north slope. Iron Age sherds were found here but at present, these do not seem to be indicative of the age of the tunnel.

3. Dr. Bert De Vries is Professor of History, Calvin College (Grand Rapids, Mich) and Albright Fellow of the ASOR.
4. The writer visited Wadi Sir village with Mr. Mussa Mahmoud, Asst. Director of the Dept of Antiquities. Mr. Mahmoud recalled a water tunnel with a spring feeding into the Wadi. Unfortunately the lower end is now closed with

concrete blocks so it could not be examined at this time. A check with local residents indicates that the tunnel is rock - cut rather than constructed. Several smaller rock cut tunnels were examined nearby.

5. Robert Bull, «Water Sources in the Vicinity», in G. Ernest Wright, *Shechem*, (London, Duckworth, 1965), appendix 4, pp. 214-28.