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TOILETS AT QUMRAN, THE ESSENES, AND THE SCROLLS: NEW ANTHROPOLOGICAL DATA AND OLD THEORIES*

Abstract

Discovered in and around Qumran, the Dead Sea Scrolls have not only shed light on early Judaism and Christian Origins but have also provided vital insight into the lifestyle of the sect responsible for the writings, including an intriguing portrait of its unique toilet practices. While many religious groups in antiquity were concerned with what enters the body, the Qumran sect, known for its strict observance of ritual purity, was especially concerned with what eventually exits. Recent parasitological evidence of these toilet practices at Qumran, as it turns out, supplies an exceptional anthropological indicator for correlating this Jewish sect with the group referred to by Josephus as the Essenes. (1) This important new evidence bolsters the Essene hypothesis by corroborating the descriptions of this distinctive toilet regimen in both the Scrolls and Josephus.

Introduction

ALTHOUGH little is known about latrines and the personal toilet practices of many religious groups in antiquity, such is not the case with the group that wrote the Scrolls and the Essenes. In fact, we are privileged to have detailed descriptions of

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(1) Josephus, *J.W.* 2.119 (Thackeray, LCL).

both. (2) The Scrolls first tell us that the sect was forbidden to go to the toilet within the city walls of Jerusalem. (3) In the *Temple Scroll* (46:13-16) we find the following instructions: "You shall make for them latrines outside the city where they shall go out, northwest of the city. These shall be roofed houses with holes in them into which the filth shall go down. It shall be far enough not to be visible from the city, (at) three thousand cubits." (4) In contrast, the *War Scroll* (7:6-7) specifies that the distance between the latrines (literally, "place of the hand") and the camp should be two thousand cubits. These prescriptions of a distance up to 3000 cubits (1.4 km) between the city or camp and the latrine, however, impinged upon the law concerning Sabbath observance. In order to preserve the sanctity of the Sabbath, Jews were forbidden by Torah to go "outside the camp" (Exodus 16:29). The Qumran group took this law very seriously, for the *Damascus Document* (10:20-21) sets the distance of permissible movement on the Sabbath at 1000 cubits (450 meters) from the settlement. Here an obvious problem arises. If the latrine were placed at a distance of 2,000-3,000 cubits, then on the Sabbath day a community member, in order to reach the latrine, would be required to walk farther than the permissible distance, thereby transgressing Sabbath law. Some scholars have suggested that the Qumran members likely abstained from eating on Friday so as to avoid having to go to the toilet until after sundown Saturday evening. (5) This rather severe requirement, it would seem, was based on a literal interpretation of the Torah, a distinctive characteristic of the Qumran group. Moreover, this literalness is part and parcel of the prophetic calling evinced in the *Community Rule* (8:13-14; 9:19-20) - to "prepare the way of the LORD in the desert," and thus to "separate themselves from the congregation of evil men." This is not the only description of strict Sabbath observance we have from antiquity, for Josephus provides a remarkably similar Sabbath toilet regimen, that of the Essenes. In the *Jewish War* Josephus, who obviously admired such dedication to Torah, describes their toilet practices in some detail:

(2) Yigael Yadin, *The Scroll of the War of the Sons of Light against the Sons of Darkness* (trans. B. and C. Rabin; London: Oxford University Press, 1962), 290.

(3) Hereafter we use the phrase "to go to the toilet" to refer to defecation only, as appears to be the case in both the Scrolls and Josephus.

(4) All English translations of the Dead Sea Scrolls are taken from Géza Vermès, *The Complete Dead Sea Scrolls in English* (4th ed.; New York: Penguin, 1997).

(5) Samuel Kottek, "The Essenes and Medicine," *Clio Medica* 18 (1983): 81-99.



Photo 1.

On the Sabbath, they do not even go to stool. On the other days they dig a trench a foot deep with a mattock (6) (such is the nature of the hatchet which they present to neophytes), and wrapping their mantle around them that they may not offend the rays of the deity, sit above it. They then replace the soil in the trench. For this purpose, they select the more retired spots. And though this discharge of the excrements is a natural function, they make it a rule to wash themselves after, as if defiled. (7)

Since digging a trench as well as carrying a hatchet is forbidden on the Sabbath, there is even more reason to believe that the group must have trained themselves, perhaps through fasting, to deal with these biological necessities. (8) However, our recent confirmation of a toilet in locus 51 at Qumran presents decisive interpretative problems. We argued in a previous article that it is entirely possible that this toilet was used for fecal emergencies and that, since past extensive surveys have failed to discover any permanent facilities

(6) See photo 1.

(7) Josephus, *J.W.* 2.147-49 (Thackeray, LCL). Whereas the *Temple Scroll* and the *War Scroll* speak of permanent roofed toilet facilities, Josephus alone mentions that defecation is to be carried out in a trench dug by the sectarians. Our research focuses on Josephus' reports about the Essenes rather than the variations in practice reported in these Scrolls. On these texts, see especially Albert Baumgarten, "The Temple Scroll, Toilet Practices and the Essenes," *Jewish History* 10 (1996): 9-20, who argues that the practices described in the *Temple Scroll* are at variance with the writings of Josephus, thus casting doubt on the Essene identification. Jodi Magness, *The Archaeology of Qumran and the Dead Sea Scrolls* (Grand Rapids, MI: Eerdmans, 2002), 108-9, disagrees with Baumgarten, pointing out that the *Temple Scroll* is an ideal text that focuses on a coming eschatological battle which has yet to occur and may not reflect actual daily practice at the settlement.

(8) Kottek, "Healing Among the Essenes," *Clio Medica* 18 (1983): 167.

outside the settlement, Josephus' description is supported. (9) In the present article we build on this conclusion, arguing that his practical description of the Essenes fits precisely the current parasitological evidence at Qumran.

Methods

In order to determine whether the above description is historically accurate or simply an idealistic invention of Josephus, we sampled with a similar digging implement the soil surrounding the ancient site. (10) Following the description in Josephus, we sampled the soil northwest of the site, the 'more retired spots' (800-900 cubits from the settlement) at a higher elevation and hidden from public view, down to a depth of 20-30 centimeters. (11) A series of aerial photographs taken from 1954 to the present shows slight variations in soil color in the sampled region, thus indicating signs of human activity. (12) Four soil samples selected at random from Area A,

(9) Stephanie Harter, Françoise Bouchet, Kosta Y. Mumcuoglu, and Joe Zias, "Toilet Practices among the Members of the Dead Scroll Sect at Qumran (100 BC-68 AD)," *Revue de Qumrân* 84 (2004): 579-584.

(10) According to Ronnie Reich, sampling the soil to the northwest of the settlement was originally suggested to him by David Flusser. However, such sampling was never undertaken. In 1995 Dr. James D. Tabor, independently, proposed the same idea, and in the summer of 1996 Dr. Tabor and Joe Zias performed a walking survey of the northwest area, based on the descriptions in both the Scrolls and Josephus. Dr. Tabor pointed out several specific places at which more permanent facilities may have been present, but the random sampling indicated that the entire northwest area, regardless of any remaining facilities, appears to have been used by the community for defecation.

(11) As noted above, latrines for the Scroll community (as prescribed in the *Temple Scroll*) mandate that public toilets be located northwest of the Holy City (Jerusalem) at a distance of 3,000 cubits, so as not to be visible from the city. Yet at Qumran, due to geological constraints such as cliffs and steep ravines, it would be impossible to apply this rule of distance. Since Jerusalem lies in a valley with unrestrained views, it would require certainly a great distance, particularly to the northwest, to fulfill this requirement. At Qumran the minimum distance to the northwest whereby one may remain hidden from the settlement is approximately 400 meters, therefore the requirement that one must choose a 'more retired spot' hidden from public view does not present a problem; and in fact just to the northwest of the site stands a rock bluff formation, behind which the view from the Qumran settlement is naturally blocked.

(12) According to Robin Terry, of Neshor Aerial Photography & GIS Ltd., Herzliya Pituach, evidence for human activity in the desert can be easily be seen from aerial photos simply by looking for telltale color changes in the soil. This was readily apparent from black and white as well as color aerial photos, for the sediments in Area A are a shade lighter than those in the surrounding areas to the north, south, and east. Furthermore, these sediments



Photo 2 : Aerial photograph of the excavated areas.

along with a soil sample from the animal stable (locus 97), were then sent to the CNRS Laboratory for Anthropology, Marseille, France, for parasitological examination. An additional five samples were taken from the area north of the site (Area B) and from the cemetery (Area C) - in plain view of the settlement - for control purposes (see photo 2).

The soil samples were prepared according to the physical, chemical, and micrometric protocols widely used for the extraction of the parasitic forms. (13) For this purpose 10 g of a soil sample from each locus was rehydrated in 0.5% aqueous trisodium phosphate solution, and 5% glycerol was then added. After ultra-sonification the solution was filtered through a column of four sieves with decreasing mesh sizes of 315, 160, 45, and 25 μm , and the sediment from the two last sieves was examined under a stereo-microscope (magnification x30). Any eggs were then measured and photographed.

Results

Microscopic examination of the four randomly selected soil samples from the 'more retired places' revealed the eggs and embryophores of four helminths in three of the four randomly selected samples: the roundworm, *Ascaris* sp., with a mammilated coat and measuring 66.5 x 51 μm ; embryophores of the tapeworm, *Taenia* sp., with a thick, radiating membrane and hexagonal spines; the whipworm, *Trichuris* sp., with its lemon-like shape and measuring 57 x 30 μm ; and the pinworm, *Enterobius vermicularis*, with its characteristic morphology. The fifth soil sample from the stable in locus 97 revealed the presence of *Dicrocoelium*, a parasite common to ungulates. Control samples from Area B (north of the site) and Area C (cemetery), both in full view of the settlement, did not provide evidence of either human or animal parasites. Cross contamination with animal parasites did not occur in the human samples, apparently due to the fact that the ruminants and other species do not bury their fecal matter, hence it is open for dispersal by wind over a wide area.

Since we cannot rely on other archaeological evidence (e.g., ceramic or architectural) from Area A, the question of dating these particular parasites is certainly valid, especially since the Bedouin

are not hard packed like those to the east where one can see clear evidence for ancient paths and habitation; see Hanan Eshel and Magen Broshi, "Residential Caves at Qumran," *DSD* 6 (1999): 328-48.

(13) See K. Reinhard, U. Confalonieri, B. Herrmann, L. Ferreira, and A. Araujo, "Recovery of Parasite Remains from Coprolites and Latrines: Aspects of Paleoparasitological Technique," *Homo* 37 (1998): 217-39.

are known to have periodically inhabited the region. However, according to Araf Abu-Rabia, Professor of Anthropology, Ben-Gurion University, himself a Bedouin, the Bedouin do not bury human waste after going to the toilet. (14) They simply leave the waste on the surface and subject to rapid desiccation in the desert. Thus our sampling method, in light of Josephus' description of human waste being buried in a remote setting, would appear to be correct. As no cross contamination with animal parasites was found in Area A, nor any evidence for human or animal parasites in Area B, our hypothesis that Area A was used for defecation seems to be valid.

Discussion

Whereas three of the above human species-specific parasites have been reported earlier at Qumran and are commonly found in coprolites of the Old and New Worlds, the fourth helminth, *Enterobius vermicularis*, has never been reported in the Ancient Near East. (15) Despite being noted by Hippocrates (*Aphorisms*) in the 5th century BC, it has only been previously reported three times in European archaeological sites and only before in a Chinese mummy. (16) While the parasite is highly contagious in humans, one probable reason for its absence in the archaeological record is that the chances of the ova being passed in fecal material are only 1 in 20, since the egg-laden female explodes after exiting the body, dispersing her embryonated ova in aerosol fashion. (17) This aerosol mode of transmission, unique among human parasites, results in the dispersal of the airborne ova over a wider environmental area (not just in fecal matter), and the ova are then able to enter the human respiratory system via the respiratory tract. Thus the cycle of parasitic replication is completed without leaving behind significant traces in coprolites. Discussion of the unpleasant human illnesses resulting from these particular parasites is beyond the scope of the present paper.

(14) This information was acquired through personal communication with Joe Zias.

(15) Stephanie Harter, "Implications de la Paléoparasitologie dans l'étude des populations de la vallée du Nil et du Proche-orient : étude de cas" (Thèse de Doctorat, Université de Reims Champagne-Ardenne, 2004), 175-76.

(16) Goncalves M et al. Human intestinal parasites in the past: new findings and a review. *Mem Inst Oswaldo Cruz* 97, 2002.

(17) The female also exudes a substance which is a dermatological irritant to humans, hence encouraging individuals to scratch the affected anal area which then transfers the parasite to the hands, increasing the chances of survival in the host. In addition, the female has the ability to reenter the body from which she exited, a state known as retro infection.

Conclusion

Due to the natural topography of the region, the Qumran site can be approached with ease only from the north. Access to the southern side is nearly impossible due to the steep and hazardous wadi. To the west are steep cliffs, and to the east is the cemetery. Therefore, the area to the north is the only possible area wherein humans can reasonably conduct most activities, including of course going to the toilet. So, if this act should be carried out in a secluded place away from public view, then the area to the northwest must have provided this necessity as well. Approximately 300-350 meters from the tower that guards the northern edge of the settlement stands a pronounced geological feature which rises above the plain to the east-southeast and which obscures both the settlement and the public space, depending upon one's position to the site. In conjunction with our parasitological analysis, this topographical evidence only strengthens our hypothesis. Indeed, it seems clear that this quadrant of the Qumran site is the only one that fits closely Josephus' description of Essene toilet practices. It should also be noted that Josephus, when describing Essene toilet practices (which he may have well observed firsthand in the Qumran area), does not specify the precise required distance one must travel to go to the toilet. The emphasis is on the remoteness of the location, which fits well with our findings at Qumran. As noted above, other scholars have correctly suggested that the ideal distances found in texts such as the *Temple Scroll* would not necessarily be accurately reflected in the more practical realities at the Qumran settlement. What Josephus describes may be based on the notion in *Deut* 23:12-14 where God is "walking" or present in the camp, and thus the latrines must be far removed. Despite the doubts of a few revisionist scholars who have sought to cast doubt on the connection between the Scrolls and the site of Qumran or the identity of the sect as the Essenes, the fundamental findings of De Vaux in the 1950s remain valid and are supported by this new anthropological evidence in a way that would be difficult to explain otherwise. Baumgarten has suggested that the "Qumran-Essene identification be jettisoned as an unnecessary burden from which the study of second temple Jewish history should be set free." (18) But Magen Broshi has aptly pointed out that what most characterizes all these dissenting theories is that they have but one or two supporters, one being the theorist himself or

(18) Albert Baumgarten, "Who Cares and Why Does it Matter?" *DSD* 11 (2004): 175-90.

herself. (19) We must now further ask, based on this new parasitological evidence found in Area A, whether it makes any sense to imagine that those female ascetics, (20) potters, (21) soldiers and refugees, (22) well-to-do people growing balsam and dates, (23) or married economists (24) would traverse 400 meters slightly uphill to defecate and then cover it up as our evidence now shows. It is surely not mere chance that this evidence fits so precisely the description of the Essenes found in Josephus and correlates so well with the practices (in terms of the northwest direction) specified in the Scrolls. The legal requirements for ritual purity prescribed by the sect are the only explanations that make sense of the material evidence. Furthermore, it is remarkable that anthropological evidence from the nearly exclusive all-male cemetery (25) and now this new parasitological evidence regarding Qumran toilet practices would so clearly confirm the textual evidence in the Scrolls and Josephus for an Essene identification. It is often the case that new evidence requires new hypotheses, but it is also equally possible that in certain areas of study many of the original insights of the pioneer investigators remain valid. Such is surely the case with Sukenik and De Vaux (and others) who early on suggested that the Essene hypothesis best satisfied the evidence. (26) In the entire region there is

(19) Magen Broshi, "Was Qumran Indeed a Monastery?" in *Caves of Enlightenment* (Proceedings of the American Schools of Oriental Research, Dead Sea Scrolls Jubilee Symposium (1947-1997); ed. J.H. Charlesworth; North Richland Hills, TX: BIBAL Press, 1998), 19-37.

(20) L. Elder, "The Woman Question and Female Ascetics among the Essenes," *BA* 57 (1994): 220-34.

(21) Yizhak Magen and Yuval Peleg, "Back to Qumran: Ten Years of Excavations and Research, 1993-2004," in *Qumran, The Site of the Dead Sea Scrolls: Archaeological Interpretations and Debates* (eds. Katharina Galor, Jean-Baptiste Humbert, and Jürgen Zangenberg; Leiden: Brill, 2006), 55-113.

(22) Norman Golb, *Who Wrote the Dead Sea Scrolls? The Search for the Secret of Qumran* (New York: Scribner, 1995).

(23) Yizhar Hirschfeld, *Qumran in Context: Reassessing the Archaeological Evidence* (Peabody, Mass.: Hendrickson Publishers, 2004).

(24) Olav Röhrer-Ertl and Ludwig Maximilians, "Married Economists: Dates and Results Based on Skeletal Remains from Qumran," lecture at the Brown conference on *Qumran, The Site of the Dead Sea Scrolls: Archaeological Interpretations and Debates*, Brown University, Nov.18, 2002.

(25) J. Zias, "The Cemeteries of Qumran and Celibacy: Confusion Laid to Rest?" *DSD* 7 (2000) 220-53. While there are varying opinions about the gender ratio in the cemetery findings, there is a consensus that at least one woman is buried on the far margins of the cemetery.

(26) E.L. Sukenik, *Hidden Scrolls, First Report* (Jerusalem: Byalik): 1948.

no other archaeological site which conforms to the complex intersection what we read in the Scrolls, what we find in classical sources, and what we find literally in and on the ground.

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