TOILET PRACTICES AMONG MEMBERS
OF THE DEAD SEA SCROLLS SECT
AT QUMRAN (100 BCE-68 CE)

A significant amount of the religious and cultural heritage of the
Western world was derived from the Essenes, an ancient sect
that established a small monastic community in Qumran on the
western shore of the Dead Sea in the first century BCE. Here, in 1947 a
Bedouin shepherd accidentally discovered a cache of ancient manu-
scripts in a cave and these were to become one of the most important
literary finds of the 20th century. These manuscripts, numbering over
1,000 and known as the Dead Sea Scrolls, have shed light over the last
55 years on the origins of Judaism and Christianity and provided insight
into the lifestyle of the sect, including their unique toilet practices. These
practices, which were designed for reasons of ritual purity were hygienically
perilous and probably lead to the early deaths of the commune's
male population.

Whereas little is known about latrines and personal toilet practices
in antiquity, a considerable amount of information is available regarding
the toilet practices of the Essene community, which were unique in the
ancient world. (1) From the Dead Sea Scrolls and writings of ancient
historians it is known that according to laws regulating their toilet prac-
tices in Jerusalem, it was strictly forbidden for the Essenes to go to the
toilet in the Holy City. It was written: “...You shall make for them
latrines outside the city where they shall go out, north-west of the city.
These shall be roofed houses with holes in them into which the fifth
shall go down. It shall be far enough not to be visible from the city, (at)
three thousand cubits”. (2)

Thus, toilets were constructed specifically for the community as
prescribed by Essene law, which were 3,000 cubits (1.4 km) away from

(1) Y. Yadin, The Scroll of the Sons of Light against the Sons of Darkness (Oxford
(2) G. Vermes, The Complete Dead Sea Scrolls in English, 3rd Edition (Penguin
the walled city of Jerusalem. This law in effect, mandated that on the
Sabbath it was forbidden for the community members to go to the toilet
because they would transgress the Sabbath law, which states that
2,000 cubits (900 meters) is the maximum distance that one can walk on
the holy day. (3) Today, there is a consensus among Biblical scholars
studying these issues that the Essene community simply abstained from
eating or drinking on Friday so as not to go to toilet until after sundown
Saturday evening. (4) In Qumran, where according to their Manual of
Discipline the sectarians went into the desert in order to “separate them-
selves from the congregation of evil men” observance of the Law was
even more severe. (5) The historian Josephus wrote: “... (On the Sab-
bath, they do not) even go to stool. On the other days they dig a trench a
foot deep with a mattock – 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 through this discharge of the excreta is a natural function, they
make it a rule to wash after themselves, as if defiled.” (6)

Following the discovery of the Dead Sea scrolls, French archaeolo-
gists carried out a series of excavations (1951–56) in Qumran. (7)
Unfortunately, like the scrolls themselves, the archaeological and
anthropological material remained unpublished for decades and access
was denied to interested scholars. As a result, important scientific data
was lost or misplaced in the subsequent years. A case in point was locus
51 in which the excavator excavated what he tentatively assumed to be a
latrine within the site itself. (8) Finding such an installation within the
settlement, if the sectarians were obligated to travel by foot 1.4 km to go
to the toilet, would over the years, if correct, prove controversial.

In order to corroborate whether locus 51 may indeed have been a
latrine, soil samples were subsequently collected five decades later from
the locus and examined for the presence of helminth eggs, which are
excreted from the human body during defecation. For this purpose, 10 g
of a soil sample from this locus was rehydrated in 0.5% aqueous tri-
sodium phosphate solution and 5% glycerol was then added. After ultra-

(3) See Yadin, note 1.
(4) J. Magnes, The Archaeology of Qumran and the Dead Sea Scrolls (W. B. Erd-
(5) See Vermes, note 2.
(6) Flavins Josephus. The Jewish War Books I–III, Henry St. John (ed.) (Loeb Clas-
(8) J.B. Humbert & A. Chambon, Fouilles de Khirbet Qumran et de Ain Feshka
(Editions Universitaires, Fréjus, Switzerland 1994).
sonification the solution was filtered through a column of four sieves with decreasing mesh sizes of 315, 160, 50 and 25 μm and the sediment from the two last sieves was examined under a stereo-microscope (magnification x30). (9)

Microscopic examination revealed the eggs and embryophores of three helminthes: the roundworm, *Ascaris* sp. with a manimilated coat and measuring 66.5 x 51 μm (Fig. 1), embryophores of the tapeworm, *Taenia* sp. with a thick, radiating membrane and hexagonal spines (Fig. 2); and the whipworm, *Trichurus* sp. with its lemon-like shape and measuring 57 x 30 μm (Fig. 3).

*Ascaris* sp. has two potential hosts; man is infected with *Ascaris lumbricoides* and swine with *Ascaris suum*. Owing to dietary laws prohibiting the consumption of pork (*Lev* 11:7, *Deut* 14:8) and the fact that pig remains have not been reported from the site, (10) one can rule out the presence of *Ascaris suum*. Therefore, as only ruminants and ungulates were authorized for consumption, the embryophores of *Taenia* found in this sample probably belong to the beef tapeworm, *Taenia saginata* and originated from the consumption of undercooked beef. The skeletal remains of cattle, which frequently appear in the excavated soils, support this assumption. The third helminth, *Trichurus* sp., which is a common parasite of a variety of animals and man, is consequently also of human origin and therefore belongs to *Trichurus trichiura*.

Lime also appeared in the fecal samples possibly used to reduce the odor emanating from the feces and to diminish the attractiveness of this odor to flies as flies are known to passively transfer human pathogenic microorganisms. Identical findings of liming ancient toilets have also been reported from a 7th century BCE latrine in Jerusalem. (11)

The parasitological evidence for the presence of a latrine in Qumran is somewhat problematic as it challenges the long-held consensus among scholars that Qumran, with its unique toilet practices, is the settlement referred to by the historian Josephus. Scholars have earlier argued that if the locus 51 is indeed a toilet, then the archaeological and literary data, which defined the site, are irreconcilable. (12) Josephus specifically pointed out that men in Qumran were defecating in a spot remote from the living quarters. In dealing with this inherent contradiction, Magness (13)

(13) See Magness, note 4.
wrote that if locus 51 inside the settlement was indeed a toilet, that distance regulations only applied to the biblical end of days and in the holy city of Jerusalem. In addition, if the toilet in locus 51, was closed off by a single door and roofed then it is consistent with the toilet practices mentioned in the Essene Temple Scroll, according to which the Essenes did not defecate in full view of others, which was the norm in antiquity.

Alternatively, based on the parasites found in the latrine fecal deposits one could argue that this installation, small in size for the community, which numbered less than 100 males, functioned in times of fecal emergencies in which the sectarians would not be able to traverse the required distance of 3,000 cubits as mandated in their texts. (14) Heavy infection with *Ascaris lumbricoides* and *Trichuris sp.*, can result in chronic anemia, diarrhea, dysenteric syndrome and abdominal distress, (11) making thus it difficult for those infected to walk the proscribed distance and to defecate in isolation. Burying the feces in an area remote from habitations normally would be hygienically sound, however due to canyons and steep cliffs surrounding this settlement, the number of places suitable for toilets was severely limited. Thus, the inhabitants would have been obliged to defecate in soils, which were earlier contaminated with fecal material from the sect, which contained eggs of helminthes. In effect, this meant that there was a constant danger that individuals walking barefoot through soils previously contaminated with feces would transfer helminth eggs back into the small community.

An additional environmental hazard predisposing the community to continual recontamination was the mandatory Essene practice of bathing after defecation: "...There are those who are pure in their own eyes but are not cleansed of their faces" (Prov 30:12). Bathing themselves after defecation was hygienically sound, if there were perennial springs like those of the city of Jericho, 14 km to the north. However, in Qumran no fresh water supplies were readily available, thus the inhabitants were dependent on runoff water collected from the winter floods. After defecating, they were obliged to bathe in communal pools found at the site, which could remain standing for up to 9 months between rains. Furthermore, men were expected to enter these communal baths for ritual purification, which entailed total immersion twice a day before meals. As the portal of entry for both *Ascaris lumbricoides* and *Trichuris sp* is oral, (15) immersion in these pools or simply washing the hands and face was probably enough for contracting these parasites or other pathogens such as enteropathogenic microorganisms responsible for cholera,

(14) See Vermes, note 2.
Fig. 1. — Egg of the roundworm, *Ascaris* sp. with a mammilated coat and measuring 66.5 x 51 m m.

Fig. 2. — Embryophores of the tapeworm, *Taenia* sp., with a thick, radiating membrane and hexagonal spines.

Fig. 3. — Egg of the whipworm, *Trichuris* sp. with its lemon-like shape and measuring 57 x 30 m m.
hepatitis A and shigellosis. In addition, the water, which was used for purification and ritual immersion, could at times be used for drinking. (16)

The harsh environmental conditions of the Dead Sea Region, consuming but two meals a day and fasting on Friday, so as not defecate on the Sabbath, coupled with parasites competing for nutrients made Qumran an environmentally challenging habitat. Although the historian Josephus, who as a young man lived with the Essenes, wrote that due to their austere lifestyle many lived for 120 years, (17) the anthropological evidence emerging from the cemetery showed that the average age at death in Qumran was but 34 years, with only 6% of adult males living past 40. (18) In Jericho, where fresh water supplies were abundant and totally differing attitudes towards hygiene and ritual purity prevailed, 49% of the Jewish males lived past 40. (19)

Analyzing the demographic data and unhealthy hygienic practices of the Essenes, which along with their theological beliefs were unique to the region, could explain why death among the adult males occurred prematurely.

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(15) See Magness, note 4.
(17) J.E. Zias, “The cemeteries of Qumran and celibacy: Confusion laid to rest?”
DSD 7 (2000) 229-233
(18) R. Haghiri & F. Smith, Jericho - The Jewish Cemetery of the Second Temple Period (Israel Antiquities Authority Report, 1999), Appendix H.