CHAPTER FIFTEEN

THE DEAD SEA, THE NEAREST NEIGHBOR OF QUMRAN
AND THE DEAD SEA MANUSCRIPTS
WHAT SEM, XRD AND INSTRUMENTAL NEUTRON
ACTIVATION MAY SHOW CONCERNING DEAD SEA MUD

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Abstract. Dead Sea mud, famous for its therapeutic properties to the human skin is also an important ingredient in the understanding of the Dead Sea make-up and its ecological system. Some questions will be answered concerning the possibility to make the mud into a ceramic and what the Dead Sea may contribute to the degradation of the Dead Sea scrolls found in its proximity.

Keywords. XRF, XRD, SEM, Dead Sea mud

Introduction

One of the questions that have intrigued me for years concerns the possibility of making pottery from Dead Sea mud. The latter is a substance of various tinted layers that vary in color from black to gray and white that has been deposited on the floor of the Dead Sea for millennia. The material consists of rain flood-matter, organic as well as inorganic, that rushes from the Judean Hills, primarily a Dolomite-laden desert, into the lowest natural lake on earth, presently 418 meter below sea level.

The scope of this paper is twofold: 1) to study the question whether Dead Sea mud is suitable to make ceramic and 2) since the environment of the Dead Sea area is imperative to be studied because of its impact on the conservation of the Dead Sea scrolls that depends among others also on what the scrolls went through the past 2000 years. It will have also its impact in case Dead Sea water was used to prepare parchment locally.
Because of the proximity of the Dead Sea to the Qumran settlement where sectarian Jews once lived, I argued that if they were such a pure society as depicted in the writings of Flavius Josephus, Pliny the Elder and Philo of Alexandria and also described in the cache of Jewish manuscripts that have been found on and near the Qumran spur, it would have taken care to obtain pure materials to produce their daily household ware, mainly ceramic containers of all shape and size. The Dead Sea mud, being covered by salt water could have been a good candidate as prime material for potter’s clay.

At present, this mud is smeared on tourist’s faces and remaining parts of their body, whereas entrepreneurs use the stuff in a cleaned form as prime material for the fabrication of soap, gel, crèmes and bath salt, rich in minerals that are excellent for the skin.

The Dead Sea area is rich in oxygen because it is so low (at present minus 418 meters below sea level) and the air is clean because the minerals in the Dead Sea are not contaminated. Sun heat evaporates Dead Sea water and together with the high-pressure oxygen keeps the sun’s ultraviolet rays out that are dangerous for one’s skin. A haze hangs over the sea, whereas this sea water as well as its mud is laden with minerals and sulphur that are extremely beneficial for one’s skin, blood circulation, arthritis and nervous system, to get rid of youth acnes and wrinkles, and of course it is the only real remedy against psoriasis. Combine all this with the “wonder” of being able to float on the Dead Sea without to drown, and one has THE source of health and wonder.

The primary constituents of Dead Sea water and mud are the chlorides of magnesium (Mg), potassium (potash, K), sodium (Na), and ions of bromine (Br). Also the amount of calcium is high that derived from calcareous rock of the surrounding deserts, in Israel and Jordan.

Dead Sea mud obtains its black color from natural bitumen that derives from degenerated organic material that arrives at the Dead Sea together with various forms of silicates.

Although various firms of soaps and cleanser and creams have studied the products from the Dead Sea, such as its water and Dead Sea mud, most data have remained in the drawers of the companies’ laboratories that deal with the Dead Sea.

My idea was to open the Dead Sea research to a broader audience. First, I intended to make a ceramic of the Dead Sea mud because for me it was possible that the Qumranites used it to have pure clay from the sea. In spite of the fact that serious scholars told me that it was