SODOM, GOMORRAH AND THE OTHER LOST CITIES OF THE PLAIN – A CLIMATIC PERSPECTIVE

ARIE NISSENBAUM
Weizmann Institute of Science, Rehovot 76100, Israel

Abstract. Certain aspects of the biblical story of the Cities of the Plain have in recent years become widely accepted. Among them is the placing of those cities in the southern basin of the Dead Sea, the assumption that those cities are now covered by Dead Sea water and, in particular, the belief that their destruction was due to catastrophic geological causes, such as an earthquake. The Bible emphasizes the agricultural richness of the Jordan plain prior to the upheaval of Sodom and Gomorrah and its catastrophic transformation into a wasteland. Thus, stripped of ethical and religious overtones, the scenario is that of a rapid climatic change that converted a densely inhabited and richly watered area into an infertile salt playa. The region northeast and southeast of Jericho, which today is quite barren as a result of the upward movement of salty ground water but which contains some of the World’s earliest known agricultural settlements, fits such a picture. Dating the Sodom event to approximately the 23rd–21st centuries B.C. supports the idea that a major climatic change that occurred between the Early and Middle Bronze Ages and which resulted in profound transformations in the Middle East such as the collapse of the Ancient Kingdom of Egypt, the invasion of the Fertile Crescent by the Semitic desert nomads, and the collapse of Early Bronze Age civilization in Palestine – is also responsible for the Sodom story. Although the data are far from complete, desiccation during this period is indicated by palynological evidence pointing to the decimation of forests in Northern Israel, paleobotanical evidence from Southern Israel, the deposition of salt layers in the Dead Sea, the abandonment of almost all settlements in the Negev Desert of Southern Israel, the Jordan valley and Southern Jordan, except those which were associated with perennial springs, and further afield the drastic lowering of the level of Lake Moeris in Lower Egypt. This scenario does not exclude the possibility that a major earthquake – which may have occurred during this period – was considered to be the cause of the final physical destruction of the Cities of the Plain, delivering a coup de grace to a collapsing society, and which became through the mists of time and legend, the only agent of destruction.

Introduction

Several stories from the Book of Genesis – the story of Adam and Eve, the Deluge, the sacrifice of Isaac, the destruction of Sodom, Gomorrah and the other Cities of the Plain, to cite but a few examples – reverberate down the halls of time. Their fundamental significance to the religious, cultural and ethical heritage of the Western world has transcended their importance as part of the biblical narrative per se. These stories address some fundamental components of the human condition as has been so extensively reflected in art and literature over the last two millennia.

Each of those episodes is described in the Bible as a historical event; and over the years, with an enthusiasm that is unabated to this day, people have tried to

decipher the 'real' background for those stories. Each has its unique character and singular significance. In particular, the story of the transformation of Lot's wife into a pillar of salt has captured the imagination of pious people throughout the ages. Why so? It is possible that the story of Sodom and Gomorrah, and of Lot's wife, differ in one important aspect from many other stories of biblical miracles. Most of those stories cannot be substantiated by field evidence, since they are either ephemeral in nature (e.g., the opening of the Red Sea) or are situated in an area whose exact geographical location requires considerable exercise of imagination (e.g., the stories of Adam and Eve, Cain and Abel). Here we have an altogether different situation. This event should have left behind physical evidence. Lot's wife was metamorphosed into a common, tangible, and stable product, and the location of the Cities of Plain was in a well-known area in close proximity to centers of civilization; their destruction should have left behind physical evidence such as ruins. Thus, identification of the pillar of salt and of Sodom and Gomorrah would have served to boost the belief in the literal truth of the Bible (Nissenbaum, 1977). Although on an individual basis, the search continues even today, it is interesting—that as far as is known to the author—the last organized (and probably well funded) expedition to find Sodom and Gomorrah was mounted in 1960 by the preacher Joseph Baney (Baney, 1962).

In the present report, the happenings at Sodom and Gomorrah and the other Cities of the Plain are described from a novel point of view. No attempt is made to discuss the moral or religious significance of this myth. The only point considered is the possible relation of paleoclimatic factors to this event.

The Story

There can be little doubt that the events of Sodom, Gomorrah and the other Cities of the Plain (five in all—the Pentapolis) as written in the Bible represent a mixture of fact, superstition and belief that was telescoped into one happening, and included information relating not to a single period but to several centuries. It has to be remembered that at the time the Bible was canonized, the Sodom story was almost as far back in time—around 20 centuries ago—as the present time is removed from that canonization period.

There are actually two biblical stories relating to Sodom and Gomorrah. The two bear no relation to each other except in involving the patriarch Abraham and his brother Lot. The first event, the raid of the Kings of the North (Genesis 14) is very important in deciphering the location of the Pentapolis but is not relevant to the subject of the present report.

Let us consider briefly the second story. Abraham and Lot, migrating to Palestine from Mesopotamia, settled in the hilly region overlooking the area north of the Dead Sea. There was strife between their herdsmen, and drawing on wisdom that seems to have disappeared from the Middle East in more recent times, they decided to separate amicably. Lot who had the right of first choice 'lifted up his eyes and