

The First Jew in America

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A neighbor once showed me a very rare certificate – perhaps the only one in Israel – called "Daughters of the Mayflower". She was a direct descendant of people who in 1620 sailed away from the religious persecution of Holland to the New World. A year later, having survived the trials of wild America, the Pilgrims instituted the holiday of Thanksgiving that was celebrated in the US this past week. In fact, there were a number of Jewish families that came over on the Mayflower and perhaps many others who hid their Jewish identity as Marranos. But they were not the first Jews to set foot in North America.

Of course, there are many conspiracy theorists who believe that Columbus was really Jewish – but there is no real evidence supporting that. When the North America was discovered and explored in the 16th century, rumors spread through Europe that the language of the wild Indians was Hebrew, and that they were descendants of the Ten Lost Tribes. This, of course, was wonderful news for the downtrodden Jews and it was widely believed that the Messianic era was just around the corner, with people like Solomon Molcho ready and eager to accept that title. But this proved to be just wishful thinking.

The first documented case of a Jew to reach the shores of America is that of Joachim (Chaim) Gans who arrived on Roanoke Island, North Carolina in 1585 as part of Sir Walter Raleigh's expedition commissioned by Queen Elizabeth. (The most complete account of Gans' life is found in "*The Search for the First English Settlement in America*" by Gary Grassl). Gans' story is a fascinating tale that starts in his birthplace of Prague. Joachim was related to the famous historian, astronomer and talmid chacham, David Gans, who was a student of the Rama and the Maharal, worked in the laboratory of the greatest astronomer of his time, Tycho Brahe, and authored "Tzemach David" which chronicles Jewish history up to his time.

Joachim was a chemist specializing in metals. He most probably learned his trade in the Ore Mountains of Bohemia which had the most advanced copper mining techniques of the time. In 1581, Gans was offered a position at Queen Elizabeth's Mines Royal and within a short time was able to show the English miners how to produce copper by heating it only four times instead of eighteen. Gans' improvement was based on pounding the ore into a powder and then roasting it and passing water through it. In addition to purifying the copper, instead of throwing away the waste products – namely copper sulfate – Gans used that for dyeing textiles. (It could be that Gans got some of his ideas regarding this from the fact that the dyo – ink used by soferei stam – uses copper sulfate or what the poskim call kuper vasser).

The Queen's Secretary of State, Sir Francis Walsingham was governor of the Mines Royal and also substantial investor in ventures to explore and exploit the New World. So when Sir Walter Raleigh set out to establish a permanent colony in North America, Joachim Gans, whose mining achievements were well known to Walsingham, was the natural choice for the expedition's metal expert. The Queen was set to receive a fifth of any minerals, gold or silver that was found, and Gans would be called upon to determine if there was any ore in America of value. And so in 1585, Gans found

himself on Roanoke Island, surveying the area and testing the trinkets of the Indians to see if they contained any gold or silver. Archeologists have found bricks from Gans' furnace and chunks of copper, indicating that Gans had the capability of smelting ore at a temperature of over 2,000 degrees – enough to melt copper.

One can only wonder what Gans must have felt like so far from home, the first and only Jew in the Western Hemisphere. I imagine him waking up to the crisp Carolina dawn putting on his tallit, while the wild turkeys pecked at his tsitsit hoping they were some new exotic kind of worm. What did his fellow colonists, a band of English Christians, think when they saw him in his tefillin? And what must the Indians have thought? In March 1586, Gans participated in an expedition inland to look for minerals and in typical European fashion, the group burst in to an Indian village, captured the chief and interrogated him for two days, while taking his son prisoner. The chief told them about marvelous and strange minerals up river. They set out to reach the deposits but after five days of rowing the expedition had to turn back, having made enemies of the Indians who could have supplied them with food. The band made it back to Roanoke Island, but things were not much better there. When the supply ship from England did not arrive and given the state of war with the local Indians, the leaders decided to pack up and abandon the settlement. In June 1586, the colonists hitched a ride with the great English explorer, Sir Francis Drake, on his way back to England fresh off his spectacular successes fighting the Spanish in Florida. Drake's financier was none other than Walsingham, who must have gotten the message to the admiral to pick up the stranded colonists and salvage what he could from his investment.

Though the colony did not succeed in its main goal, Gans was able to report on a land rich with resources of great economic value. This information provided the initiative for England to continue its objective to colonize America with the next major expedition founding the first permanent settlement of Jamestown, Virginia in 1607.

Back in England, Joachim moved to London where he continued his work as a scientist. But on a trip to the mines, his quick wit and sharp tongue got him into trouble. While stopped at an inn, Gans got into a theological discussion about the Old and New Testament. When someone challenged Gans and asked him if he believed in Jesus Christ, Gans answered that there was no such person, that there was only one God, and he had neither a wife nor a child. The local minister got into the argument and explained to Joachim in Hebrew that Jesus was the king of the Jews and son of God. Gans answered him back, also in Hebrew, that Jesus was not the son of God. In English, the preacher asked if Gans denied that Jesus was the son of God. Gans answered, "What need has Almighty God for a son? Is He not almighty?"

This heresy was too much to forgive. If Gans had been a Christian, his sin would be punishable by death, but as a Jew, no one was quite sure what to do with him. Jews had been expelled from England in 1290, and were not officially to be allowed back until Menasheh ben Israel convinced Oliver Cromwell in 1655 to permit them to return. Gans was taken back to London and incarcerated. While in jail, Gans composed a treatise describing a unique method of producing saltpeter, a major ingredient in gunpowder. He dedicated his work to none other than the Secretary of State, Sir Walsingham. This ransom seems to have done the trick as there is no record

of Gans being punished in any way. Most probably, he was allowed to return to Bohemia and spent the rest of his life there.

Saltpeter is the most important component in gunpowder, as it supplies the other ingredients (charcoal and sulfur) with the rapid release of oxygen required for explosive ignition. It is formed in warm climates when animal and vegetable refuse which decomposes into ammonia undergoes bacterial action. So the key to large deposits of saltpeter is a lot of animal dung. One of the key sources of saltpeter in the ancient world was Petra, which was a very popular resting station on the spice route. The aqueducts of Petra provided the dung heaps of thousands of caravan camels with the just the right conditions for production of the highly valuable commodity. Some have suggested that the very name "saltpeter" comes from the phrase "salt of Petra". Saltpeter was also produced at En Bokek on the Dead Sea as early as the 2nd century C.E., and at Avdat as well. In later years, the best raw material for saltpeter was to be found in the guano (bat and bird droppings) on the islands off the coast of South America. The lack of saltpeter in England meant most gunpowder was imported. However, as British naval power expanded beyond Europe during the reign of Elizabeth it became possible to bring saltpeter back to England and manufacture gunpowder at home and a number of factories were set up during the 16th century. Gans' more efficient process must have been very well received and put to use immediately.

Gans' recipe for saltpeter was a translation and explanation of the work of Lazarus Erker, chief of the Emperor's mines in Bohemia. In fact, Ganz was part of a long tradition of Jews who were involved in the gunpowder industry. In 1515 the Jews of Rome came up with a new recipe for saltpeter, in the late 16th century, Al-Mansur ruler of Morocco gave the Jews the concession for running the state monopolies on sugar and saltpeter, one Jew named Salitrariul (maker of saltpeter) provided the Prince of Romania with gunpowder in the 17th century, and an Austrian law of 1804 bans Jews from dealing in gunpowder which shows that they were active in this industry. Ultimately, the German-Jewish scientist, Fritz Haber, developed a process to produce ammonia synthetically and that put an end to the dependence on bats and birds for the world's gunpowder and fertilizer. Haber went on to develop the poison gas used by Germany in World War I and eventually won the Nobel prize for Chemistry in 1918. When the Nazi government came to power, Haber, as director of the Kaiser Wilhelm Institute for Physical Chemistry and Electrochemistry, was ordered, in 1933, to dismiss all the Jewish scientists working there. Instead, he resigned and left for England, where he met Chaim Weizman who offered him a position at a new research institute in Rehovot. In 1934, on his way there, he died of a heart attack in Switzerland.

(While I was working on my doctorate at the Hebrew University, we built a radio powered CO laser. After a few hours the laser stopped working and when we opened it up we saw a brown powder had collected on the electrodes. We sent the powder for chemical analysis and found it to contain ammonia. For a while we thought that we had discovered a vital new process that could change the world – but it ended up that Haber beat us by about 100 years!).

All this raises the moral and halachik question of whether Jews are permitted to sell arms to non Jews. The Gemara in Avoda Zarah (15b) states:

אין מוכרין להם לא זיין ולא כלי זיין,

But the Gemara on the next page qualifies that prohibition noting that Jews in those days did indeed deal in arms:

האידינא דקא מזבנינן, א"ר אשי: לפרסאי דמגנו עילוון

Rav Ashi's position is that since the Persians protect the Jews, it is permitted to sell them arms. The Rambam paskens accordingly in Hilchot Rotzeach (12:13)

ומותר למכור הזיין לחיל של בני המדינה מפני שהן מגינין על ישראל

Since the times of the Gemara through to Joachim Gans and Fritz Haber, Jews hoped that by providing guns and gunpowder they could find favor in the eyes of the local governments and that they could be trusted offer their protection. How many times were those knives, guns, and poison gas used against the very Jews who developed and sold them?