



LOCAL NEWS

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JHU Geneticist Finds Linkage

Neil Rubin



Are Jews on the streets of Northwest Baltimore today the descendants of the Khazars, a legendary central Asian mountain tribe of fierce Jewish warriors who once ruled a vast realm?

It's not only possible but likely, says a Johns Hopkins University population geneticist who is analyzing the DNA of Eurasian Jews.

The Khazars, who presided over numerous tribes, lived from the fifth to the 13th centuries in central Asia. At one point, they converted *en masse* to Judaism. In the 20th century, however, study of their fate was suppressed by the Soviet Union, its longtime leader Josef Stalin rejecting having people in his ethnically diverse communist nation learn of a once mighty Jewish kingdom within their borders.

In recent years, attention has focused anew on a nation whose conversion to Judaism is famed in Jewish circles thanks to Yehuda HaLevi's towering 12th-century philosophical work, "The Kuzari."

Dr. Eran Elhaik, a native Israeli and a postdoctorate fellow at Johns Hopkins University, became interested in the topic in 2000 after reading Arthur Koestler's book "The 11th Tribe." Koestler, not a professional historian, was heavily criticized for his research. But Elhaik was hooked.

"I realized there was a whole history of which I knew nothing about and it was Jewish history," the engaging academic said while sitting in a small conference room on the JHU Hospital campus.

In childhood, he said he and his peers learned that Jewish history began with the Torah's creation story and moved on to ancient Israel's journey and then the destruction of the Second Temple in 70 C.E.

"Then, history pretty much stops until you get to the Holocaust and the formation of the State of Israel," he says. "I was a pretty good student and I never thought, 'What happened in those 1,500 or so years?' I was not taught to think that way."

But by 2010, he was a population geneticist. Two studies were published that year on the "Jewish genome." Neither tested the Khazarian hypothesis — that ancestors of today's Jews roamed the ancient kingdom.

One study, however, found “remarkably high genetic similarities” between Eurasian Jews and the Caucasus people. Yet such features were dismissed as “a bias inherent in calculations as a result of the genetically more diverse non-Jewish people of the Levant.”

But it also found that the Druze — a small Muslim sect in Israel and the region — were more similar to *Ashkenazic* Jews than Middle Eastern populations.

Elhaik looked more closely. The Druze, he learned, also could be traced to the southern Caucasus region. Geographically, Khazaria sat right above them. But identifiable Khazars were no longer alive, so he turned to studies on Palestinian Arabs, owing to their long history in the Middle East and a genetic makeup similar to Jews.

“I tested whether Jews are closer to Palestinians or Caucasus populations like Armenians and Georgians, because I believe the Khazars emerged from the same gene pools and these populations shared common history,” he says. “The answer was that European Jews are closer to the Khazars, but that was only half the story.”

Too Abrupt

Indeed, he next explored the “Judean hypothesis,” which says around 1000 B.C.E. the Judeans (or Jews) adopted, mixed and intermarried with now long-gone biblical populations such as the Edomites.

Ultimately, after the Second Temple’s destruction, the Judeans disappeared as a separate entity.

“We used to have a kingdom. Now, we have Jewish communities all over the world and this is where your grandparents are from. This is too abrupt,” Elhaik said. “The question is what happened to the remaining Judean population in Israel?”

Some were in fact dispersed to Europe’s Greco-Roman Jewish communities while some who stayed converted to Islam to escape the heavy tax burden on non-Muslims.

“Nobody wants to pay taxes,” Elhaik said. “So people converted. Zionist historians have serious problems with this scenario and you can understand why.”

That brought him to the hypothesis of modern Jews descending at least in part to the ancient warrior kingdom. Indeed, he noted, the Khazars are mentioned in the Hebrew Bible’s story of Gog and Magog, and around the Sabatean River. In addition, there are traces of second century C.E. synagogues in the Caucasus region. Around the sixth century, the Khazars emerged as a new Eurasian power.

Along the way, they may have been the unknowing saviors of western civilization.

“They were trapped by Christians on one side and the Muslim caliphates on the other,” Elhaik said. “They blocked the Muslims from Eastern Europe on one side. If it weren’t for them, Europe is all Muslim by now.”

They also stopped the Rus — aka the Vikings — from pushing farther south.

So what type of Jews were these Khazars?

“We can tell they were not Orthodox,” Elhaik said. “They accepted Judaism, but rejected such things as proselytizing by force and circumcision.

“The Khazar king saw himself as the defender of Jews anywhere in the world,” he added. “The only times he provoked his non-Jewish subjects [to convert to Judaism] was to retaliate for similar actions

toward Jews in the neighboring empires.”

By the 12th and 13th centuries, the now extremely wealthy Khazars — thanks to trade in honey and furs and charging taxes to ships along their rivers — were in decline.

“They’re so wealthy they start not paying attention to their borders, and some cults developed messiah aspirations and start thinking about conquering Jerusalem,” Elhaik said. Since the 10th century, the Rus had been attacking the borders. Eventually, by the 13th century’s end, they had burned the Khazari kingdom’s cities.

With delicious historical irony, that’s when Eastern Europe’s Jewish population began rising.

“The Jews were right there because they had had their own empire,” Elhaik said. “So they converged with the existing Jewish communities.”

HOW IT’S DONE

In studying the fate of the Khazars and their link to modern Jews, Dr. Eran Elhaik used “principal component analysis.” It converts high dimensional datasets, such as genomic data, into a smaller dataset with few dimensions.

This separates populations based on their ancestry.

For example, he shows one graph in which the French, Russians, Syrians and Palestinians have clear genetic different results from their different ancestries. Yet, Ashkenazic Jews clearly cluster with the Armenians, Georgians and a little with the Druze — but not with Europeans.

“This is weird because we think of European Jews as Europeans,” he says. In fact, Elhaik found a genetic signature exclusive to Caucasus populations and European Jews.

Jews, however, also have a gen-etic Middle Eastern signature. Indeed, the scholar found that European Jewry’s ancestral composition is about 30 percent Caucasus, 25-30 percent Middle Eastern, 5-10 percent Eastern European and 30 percent Western European.

That means that both the Judean and Khazar theories of Jewish genetic origin are accurate.

But Elhaik’s work is not done. To learn more precisely where the Khazars went, he will search for the “signature” of Jews in other populations — 500, to be exact.

“Obviously, Africa would be less informative, but we can use it as a negative control,” he says. “I expect to find this signature to be over-represented in Jewish populations along the borders of Khazaria, but I also wonder if they ran to the south — the region of modern-day Syria, Iraq and Iran. We also know not all the Jews ran away. We called them ‘mountain Jews,’” such as those from Bukharia.

As Elhaik speaks, he is eagerly showing a visitor detailed maps and historical demographic data on his laptop computer, talking of mitochondria, Y chromosomes and autosomal markers.

Today, he is raising \$5,000-\$6,000 to pay for his paper’s publication by using “crowdfunding,” which seeks small donations from many donors in a focused time frame — which for this project ends on Thursday, May 31.

“I don’t need that much. I’m fortunate,” he says. “The purpose is to address this really fascinating question by using available data while working from home.”

KHAZARIAN FACTS

Origins: Turkic tribes

Conversion To Judaism: 838 C.E., under King Bulan

Official Written Language: Hebrew

Surviving Document: 960 C.E. from Spain's Hasdai ibn Shaprut to the Khazar king

Historical Find: In 2002, the Swedish numismatist Gert Rispling discovered a Khazar Jewish coin.

Source: "An Introduction to the History of Khazaria," by Kevin Alan Brook, courtesy khazaria.com.

- Learn more about the Khazar DNA Project at khazardnaproject.wordpress.com/.
- For more on the Khazars, visit: khazaria.com.

Photo captions:

Dr. Eran Elhaik: "The Khazar king saw himself as the defender of Jews anywhere in the world." (David Stuck)

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