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Recently in my History of Pseudoscience class we discussed the hubbub over Bigfoot and DNA. Part of my approach to the course is to stress to students the importance of original source documents such as correspondence, texts, empirical data, diaries and other similar written materials. The scholarly historical enterprise centers on the analysis of original texts. What quickly became apparent to the students in this case is the quirky nature of the written record available. Despite the apparently scientific nature of the debate over DNA evidence and scholarly paper at the heart of it, there is yet, as of this writing, no scholarly paper, no official release of data. This incident is based on social media posts which themselves are for the most part innuendo, unsubstantiated accusations, petulance, bravado, claims and counter claims (including references to Angels and Blueberry bagels), and little else. In other words, they are the sort goldmine of human foibles historians love, and which tell us so much about human behavior and how knowledge is generated as well as the importance of skeptical thinking.

It began in November when news broke that Dr. Melba Ketchum, a veterinarian and head of the Texas based company called DNA Diagnostics, had isolated the DNA of a Sasquatch. Dr. Ketchum's work was known to Bigfoot enthusiasts for years and was looked forward to with some excited anticipation. North America's most famous anomalous primate, Sasquatch or Bigfoot, has inhabited the lore of the region for centuries. There is a long tradition of both amateur naturalist and professional scientist interest in the creature with many attempts to find it. Over the years many footprints have been found, video and still images taken, but no real proof acquired. If Dr. Ketchum's work stands up to scrutiny it could help prove the creature's reality and herald a new era of legitimacy for cryptozoology.

Ketchum's company put up announcements on its web site saying it had sequenced a number of genomes and that a peer-reviewed paper would be appearing in the not too distant future. Even more startling than having sequenced Sasquatch DNA was the claim that the evidence supported the notion that rather than being related to the human line of evolutionary development, Bigfoot was in fact a product of unions between humans and an undisclosed earlier large bipedal primate that had taken place around fifteen thousand years ago. In other words, Bigfoot is human. Dr. Ketchum then went on to explain that this makes the population of Sasquatch's not monsters, but "indigenous people."

Ketchum's results were leaked prematurely by Igor Burtsev, a well known, long time Bigfoot researcher from Russia. Burtsev is of the opinion that Sasquatches have speech ability and have learned, in a few cases, to communicate in English. This, he says, makes them more human than ape. He is a champion of the infamous 'Carter Farm' case from Tennessee. There a family claimed that they had lived in close quarters with a population of Bigfoots for decades. They exchanged visits, food, and a laugh or two, and learned to speak with each other. There is a sub-genre of Bigfoot believers who claim to be amongst Bigfoots for extended periods under friendly circumstances—as opposed to the usual Sasquatch encounter which is accidental and usually ends with the witness running in the opposite direction. The Bigfoot friends, like the

Carter family, never seem to have a camera around to take a few pictures that would easily clear up the entire controversy.

These considerations aside, leaking someone else's research before it is published, as Burtsev did, is considered very bad form and quite unprofessional in the world of scholarship. Accusations have flow as to why Burtsev perpetrated this scientific equivalent of shouting out the ending of a movie as it is just beginning. He says he did it because he "knew" the "scientific establishment" would quash such a major breakthrough—for a number of appropriately nefarious reasons—and he didn't want to see that happen again. Others claim that most of Ketchum's work had already been leaked.

Incidents like the Ketchum DNA discovery are useful to those of us who teach the history of fringe belief systems. They help show students the differences between science and pseudoscience, how both are done, and what their nature's are. As an historian rather than a debunker I have the advantage of watching and analyzing both sides of these issues (I do not care if Bigfoot is real or not). I have yet to see any evidence proving unambiguously that these creatures are real. Having said that, however, I think there is at least a certain evolutionary plausibility to these creatures, and I think cryptozoologists have something to add to our knowledge of the way the world works, though they have yet to figure it out. Watching the various parties inside cryptozoology in North America battle it out and argue over who said what and the meaning of the leaked results is especially fascinating. With some notable exceptions, few in the realm of cryptozoology have any training in genetics, evolutionary biology, population studies, environmental science or even history and thus have little qualification to analyze the technical material, whether published or not.

One of the telling aspects of this case is how many in the world of Bigfootery have been skeptical of Ketchum's pronouncements if not outright hostile towards them. As if for true believers the news of a human/Sasquatch hybrid, or the way the news was made public, was too much for even them. I think this reaction is a healthy sign of a growing skepticism within the ranks of monster studies.

Science is not done through press releases and rumor-mongering. It is also not done by the simple collecting of data. It is about building intellectual legitimacy both within the community of practitioners and amongst the general public. Science gets its authority first from doing its work to a high standard of intellectual rigor and unbiased analysis, and peer-review, and second by convincing the general public that its findings are respectable and accurate. Cryptozoology has worked for decades to acquire that sort of legitimacy but has yet to achieve it. Part of that failure has been from a lack of acceptable evidence for their claims, but also in the way their evidence

has been put forward. As I have said many times in my writing, there are cryptozoologists who work with diligence at performing their work in as professional a way as possible. They deserve respect, but usually get ridicule and often because of what others in the field do rather than that of skeptics or debunkers. The Ketchum DNA Bigfoot story is yet another example of cryptozoology shooting itself in the foot pushing legitimacy even further off. This is not over its evidence, but over how it puts that evidence forward. My students came to the conclusion that we will learn more about this case from Twitter feeds and Facebook posts than from any peer-review article. While social media generates interest it does not establish legitimacy. All these shenanigans are bad news for cryptozoology, but great as teaching aids.

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