

Bits & Pieces – Issue No. 40

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Dr. Haskell Hart has provided additional insights on the Zana case reported in B&P No. 36. As you will recall, DNA results from the skull or Khwit (above left) and the skull of a woman (above right), possibly Khwit's mother, were analyzed. The following is Dr. Hart's article.

The Zana Case Continued By Haskell V. Hart

Bits and Pieces No. 36, "The Zana Case" by Igor Burtsev did not present the latest results of Bryan Sykes, clearly explained in his books (Sykes, 2014) and (Sykes, 2016). (Sykes has the habit of republishing his books under another title; these books are otherwise identical.)

The DNA of Zana, whose story is summarized in No. 36, was surmised by Sykes from DNA analysis of her descendants, most notably of her son (Khwit), but also by one great granddaughter, four great great grandchildren, and one great great great granddaughter.

Sykes determined the mitochondrial DNA of Khwit to be haplogroup L2c, a WEST African haplogroup now prevalent in Senegal (Graven et al., 1995), Cape Verde Islands (Brehm et al., 2002), and Guinea-Bissau (Rosa, et al., 2004). However, all non-subsaharan Africans and all other humans descend from haplogroup L3a (van Oven and Kayser, 2009). This presents a dilemma: the Abkhasia region of Georgia was occupied by Ottomans in the 19th Century, who slaved the EAST coast of Africa (e.g. Zanzibar), so Zana is unlikely to be an escaped African slave or a matrilineal descendant of one, although trading of slaves might have occurred.

Although Burtsev gave Sykes samples from both Khwit and a

female skeleton found in an adjacent grave, Sykes only reported the mtDNA results above from Khwit in his book(s). However, Vladimir Yamshchikov (personal communication) sequenced mtDNA from both with the very same result for each: L2c. Burtsev failed to mention this particular result, only saying that they were the same. So, the female could be Zana or one of her two known daughters or one of their daughters or granddaughters. (mtDNA is passed on from mother to children, but only daughters can pass it on further, as males have no mitochondria in their sperm, whereas females have the mitochondria in their eggs.) The earlier conclusion, based on morphology, that Khwit's skull is an Australoid type is thus disproven by the L2c result. Australian aborigines have different haplogroup clades – M, S, P, and rarely N, O, or Q, but never L, which is uniquely sub-Saharan African (Nagle et al., 2017). Neither does Neanderthal mtDNA match Khwit's.

On to the nuclear DNA results: Saliva samples of the six living descendants of Zana mentioned above all showed appropriate fractions of African nDNA, based on the assumption that the African component of their nDNA originated with Zana alone, and that the mates who were nonrelatives of Zana bore no African DNA (Sykes, 2014 and 2016, Appendix). In such a model, her African nDNA would be diluted by approximately 1/2 in each succeeding generation due to chromosomal recombination in mitosis. Great-, great great- and great great great grandchildren would have respectively, 1/8, 1/16, and 1/32 African sequences in their nuDNA, all close to what was found by Sykes. (In his text Sykes misstates these relationships as "One was a grandchild, four were Zana's great-grandchildren, and the sixth was a great-great-grandchild"—all off by one generation from the genealogy in his Appendix). The overall conclusion from the nDNA

results is that Zana is 100% African. This adds to the mtDNA African haplogroup result (L2c), which otherwise might also have been obtained from a more distant African matrilineal ancestor.

As controls, Sykes sequenced nDNA from local Abkhazians and found they contained no African nDNA. Furthermore, both the controls AND Zana's six relatives all contained similar amounts of Neanderthal DNA, within the range of the overall world population (2-4%). Hence, the hypothesis that Zana was a Neanderthal is again disproven.

Sykes admits in his book(s) that the L2c sequence of Khwit did not exactly match that of any in his worldwide databases and that the African nDNA sequences of Zana's relatives are unmatched and "very, very unusual" and worthy of his further study. So, hopefully, more results may be forthcoming.

I must disagree with Burtsev's conclusion:

"MY OWN CONCLUSION is that scientific analysis at this time is HIGHLY subjective; depending on the attitude of the person performing the analysis."

The DNA analyses reviewed above were NOT subjective. Established scientific protocols were used throughout by professionals in the field of genetics. Implications may be speculative, but their results and conclusions are sound.

MY OWN CONCLUSION is that morphological analysis of skeletal remains is only descriptive and not a reliable method of determining phylogeny, especially in the case of hybrids. Examples: Kennewick Man (genetically a First ("Native") American but first thought to be European), the giant panda (genetically a bear, but once thought to be a kind of raccoon), and Khwit (not Australoid, not Neanderthal, but African). Morphology has been largely supplanted by DNA analysis, which is not subjective.

References

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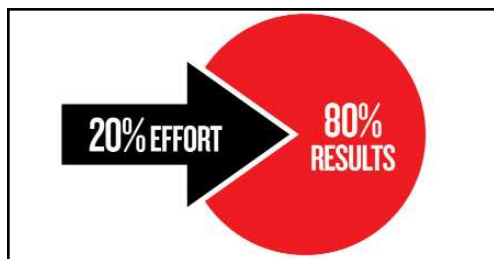
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The Pareto Principle is used worldwide and can be applied to any situation. A simple example is that 20%

of the vehicles in the world consume 80% of the fuel (gasoline). No particular types of vehicles are implied here. A person with an ordinary car could use more fuel than a large truck.

In sasquatch research, I have used Pareto in saying that only 20% of sasquatch-related incidents are reported. The other 80% don't find their way into newspapers, books, magazines, the Internet and so forth.

Looking at British Columbia, we have 605 reported incidents over about 118 years. If this is 20% of a number, then that number is 3,025. So there were 605 reported incidents and 2,420 non-reported incidents.

We have no way of knowing what was involved in the non-reported incidents, so for the sake of argument we can assume for the moment that they were all of "something else." This takes us back down to the 605 incidents, which we can conclude involved something experienced by witnesses.

Again using Pareto, we can say that about 20% of these had definite credibility. This means that 121 incidents were likely sasquatch-related.

That's not very many, so we can dip into the non-reported incidents and say that 20% of them could reasonably be added to the reported incidents. This gives us 1,089 incidents. If 20% of that number were likely sasquatch-related, then we have 218 incidents as our bottom line over the 118 year period.

Now, we can leave it there if you wish, but Pareto would want us to go one step further and take 20% of this final number to establish a reasonably definite sasquatch relationship. This number is 44.

Of course, this is all pessimistic "mumbo jumbo" to most of us; but it comes into play when engineers evaluate a situation. If, for example, a high-profile person with a lot of money was asked to finance BC sasquatch research, he would give the issue to his engineers and say, "What is the likelihood that this thing exists?" They would come back with, "Well boss, in about 118 years there were about 44 cases, maximum, where the likelihood of a sasquatch being observed was high." The boss would say, "How high?" The reply would be, "About 80%" (back to Pareto).

If we take into account all of North America, then the ratio would be about 10:1, so the bottom line would be 440 fully credible incidents in 118 years.

Now, we do have about 200 footprint casts that indicate a natural foot of some sort was involved (unable to get an actual number). The incidents that resulted in these casts would be in the total number for North America.

The casts would help to justify the credibility for 46% of the incidents. British Columbia has just four individual casts of this nature to my knowledge, so not much help here.

In my opinion, "making a case" for any province except BC, or any state except Washington, Oregon, and California would not be practical—the numbers are just not there. This whole region would make the best case.

Naturally, all of this falls by the wayside if a "sasquatch" hair sample (or something else) results in "unrecognized primate" DNA. In this case, all incidents are back on the table.

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A remarkable article in *The Guardian*, "How hunting with wolves helped humans outsmart the Neanderthals," brings up to me a couple of sasquatch-related inferences.

In summary, the article by Professor Pat Shipman offers that "Forty thousand years ago in Europe our [homo sapiens] ancestors formed a crucial and lasting alliance [with wolves] that enabled us to finish off our evolutionary cousins, the Neanderthals." In short, wolves that were "domesticated" were powerful allies in providing food. I don't get the bit about "to finish off our evolutionary cousins." It appears to me they finished off themselves by sticking with old hunting processes (did not use wolves). I suppose there might be an inference here as to using dogs to attack Neanderthals, but it is not mentioned.

Anyway, this is all aside from the points I wish to make. The article goes on to state,

Consider the whites of our eyes, she states. The wolf possesses white sclera as does Homo sapiens though, crucially, it is the only primate that has them.

The connection here is that a continually visible white sclera allows one to see the position of the eyeballs and is thereby able to get a sense of what a person is thinking. Non-primates (even cats) have a white sclera, but it is not continually visible—the eyeball essentially fills the entire eye socket. The sclera cannot be seen unless the eyeball is not centered (up, down, right or left). I don't know why the wolf is mentioned as though it were the only non-Homo sapiens that has such—something seems to be missing here. From what I can see, all non-primates mammals have a white sclera, although highly marginal in some cases.

Anyway, for my first point I am only interested in the last part of the statement, **“...Homo sapiens though, crucially, it is the only primate that has them.”** We believe sasquatch have continually visible white sclera. The “whites of the eyes” are mentioned in one witness report that I can recall and the P/G film indicates this (although not clearly). Peter Byrne was the first to mention this detail, stating “many reports.”

If the sasquatch has a white sclera, then it is not an ordinary non-human primate; only human primates have such as pointed out by Professor Shipman. This means that the sasquatch is either:

1. A new non-human primate species that has a white sclera, or
2. It is human, or a new human species

The only other explanation is that the sasquatch is not a primate, which is not logical.

I need to mention here that a small percentage of gorillas have a light sclera sort of like human sclera, and there is a condition (light pigmentation) that results in a very white sclera. There are many

examples on the Internet that show gorillas with a white or very light sclera; but I am going to take Professor Shipman at her word because I think generally speaking she is right and there is likely a scientific definition as to what is and what is not “white.”

My next point deals with the use of wolves (later dogs) for hunting. For the most part, sasquatch hate dogs, and dogs hate them. I can recall only one report where a dog was seen to be sort of following a sasquatch as though it were a pet. Obviously, like Neanderthals, sasquatch don't use dogs for hunting. One can reason that they don't need to; but it's probably hard (notwithstanding sophisticated weaponry) to be better at hunting alone than having several dogs on your side (as Professor Shipman tells us).

We don't know if Neanderthals had a white sclera (continually visible or not); although artwork shows this to be the case (continually visible). If they did as artwork implies, then it appears they had a couple of things in common with sasquatch.

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In arts and crafts, plastic eyes called “animal eyes” such as shown here are used. They have a screw at the back. They are not really like gorilla eyes because the pupil is far too large, as seen in the following gorilla eye image.



Human eyes are quite different as shown here; note the size of the pupil.

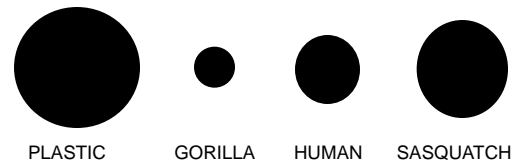


I have registered all images so direct comparison can be made, although keep in mind that the images are not life-size; they are much larger.

Many years ago, I determined that a sasquatch eyeball was about 1.5 times the size of a human eyeball. This is rough and based on “unorthodox” research, but it makes sense. The following image shows the human eye ball illustrated above increased by 50%.



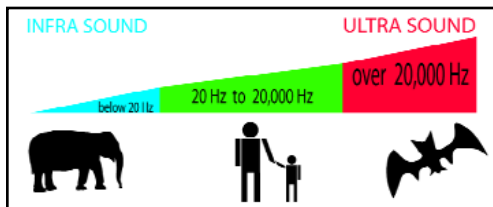
Here are the relative sizes of the pupils in the illustrations.



In doing artwork (paintings, sculptures or models) this RELATIONSHIP must be kept in mind. The exact size one would make the eyes depends on the size of what is being depicted. I have used the plastic eyes shown in sasquatch sculptures (busts) because they are the closest I can find to sasquatch eyes.

In looking at purported real sasquatch “photographs,” perhaps keep all of this in mind.

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The problem that sasquatch appear to know when cameras are around (including camera traps) has haunted us since the 1970s. The only person who got around this problem was Roger Patterson. The big difference between his 16mm movie camera and later cameras is that his camera did not use batteries; You simply wound a spring.

I can't recall when cameras first started using batteries for anything but a flash attachment (1950s), and can't find a reference. The cameras I had in the 1950s as I recall did not use a battery. Flash had been around for some time and was used by news photographers—I dreamed of owning one of those cameras, seen here (I worked for a newspaper syndicate). Flash came into common use in about the mid 1950s; you bought a package of little bulbs (sometimes they did not work and were very hot after they flashed).



A "camera trap" in the early days was very simple—you had a trip wire of some sort to set off the camera. Bob Titmus set camera traps in the 1960s and I believe by that time camera's used a small battery for general operation. Whatever the case, Bob never managed to get a photo of a sasquatch.

Notwithstanding inconclusive possible sasquatch photos obtained by using a modern-day digital camera trap, it appears obvious that sasquatch sense cameras and avoid traps; even people carrying a camera.

The only logical explanation is that batteries emit sound waves, below or above what humans can hear; but sasquatch can hear. I realize this is a bit of a stretch because great apes do not have exceptional hearing ability (not as good as a dog) as far as we know.

Nevertheless, perhaps we need to go back to "no battery" cameras. The images would actually be better than standard digital cameras.



In the early days, René Dahinden and I grappled with the problem of the P/G film subject's weight. We both agreed that Igor Burtsev's sculpture was very accurate, so I reasoned that if we could determine how much water it displaced, the weight could be mathematically determined (the weight of water and the human body are very close). We knew the actual entity was about seven feet tall so could determine a ratio and apply it. We never got around to doing this experiment, but I believe it would work. Of course, the final figure would be for a human of the same size as the film subject; but at least we would know the weight would not be less than that calculated.

As time went on and NASI came up with 1,957 pounds, this became a major issue; it has never been resolved with most researchers. When René passed away the sculpture went to his son, Erik. I had it in museum exhibits for a few years, but did not want to take a chance and use it in this way. I can no longer get access to it.

Most people have a tough time with complicated numbers, so doing something physical like this and taking photos might provide an "agreeable" answer. René had absolutely no confidence in anything to do with involved mathematical calculations; but actually understood and agreed with this suggestion.

I know Igor Burtsev has his own copy of the sculpture, but I have not pursued this idea with him.



I stumbled on this old photo of the infamous 1977 "Mission Hoax" fiasco. It shows René Dahinden (left, kneeling) with RCMP officers and others inspecting tracks of an alleged sasquatch seen to run across the road in front of a bus with many passengers. After wide publicity of the event as a likely authentic sighting, the hoaxers came forward and proved they had hoaxed it (silly fur suit and all).

This photo and others of the same event just ended up in my possession; probably handed to me at a conference or exhibit. They were in an envelope, which remained unopened for months (years?)—just sitting in my brief case I believe. When I finally found and looked at the photos, it took me a little time to sort out what they were about. I cover the event in *Sasquatch in British Columbia* (page 249); but never published the photos so as to minimize credit to the misfits who staged the hoax.

There is absolutely no doubt that anyone can be fooled; even scientists. This event took place over 40 years ago, so you can imagine just what hoaxers can do today with greatly improved "everything," especially regarding photography. The only difference is that in the 1970s we were more gullible because we had higher social standards.

At this time, I would say that 99% of what you see on the Internet "proving sasquatch existence" is hoaxed; the other 1% is doubtful.

As I have stated in previous papers, if and when someone has something truly concrete, we will hear about it from a major scientific organization or university. The chances that some individual will run with his or her own conclusive research on YouTube or in other media are so slim you can put more faith in winning a major lottery.