Evaluating Purported Sasquatch Photographic Evidence

By Alton Higgins

Yeti. Sasquatch. Bigfoot. The names instantly conjure images of enigmatic apelike creatures existing at the thresholds of human experience. We imagine them as huge, hairy, and walking on two legs, a perception developed throughout generations of sightings and crystallized in 1967 by Roger Patterson and Bob Gimlin in their brief but historic film. An image of what appeared to be a female sasquatch (now known as "Patty") fixed itself in the public consciousness and became an instant icon, helping generate expectations that comparable images and scientific proof were forthcoming.

It was not to be.

While various sorts of evidence slowly accumulated as the twentieth century wound down, no one managed to capture images of a quality comparable to those obtained decades earlier. However, that is not to say that video and photos of lesser quality have not been offered as potential evidence for the existence of the sasquatch. The question is, do any of these images qualify as legitimate evidence?

The <u>Bigfoot Field Researchers Organization</u> (BFRO) receives and collects evidence pertaining to the existence of the sasquatch, a process involving preliminary assessments of various forms of evidence. Occasionally, photographs are submitted. This paper summarizes elementary standards employed to aid in the systematic analysis of photos supposedly showing a sasquatch. The concepts developed, in part, out of a personal understanding of circumstances pertaining to the events at Bluff Creek, site of the film obtained by Patterson and Gimlin. However, none of the ideas are unique or original.



Figure 1. The figure in this image was digitally rendered. (Courtesy of James Walker, BFRO)

As an initial introduction to the analysis process, it is useful to consider the nature of evidence. A dictionary check for "evidence" definitions reveals a couple of predominant meanings. One pertains to the idea of testimony. In the context of sasquatch research, testimony relates to anecdotal evidence, that is, verbal accounts of sightings, experiences, observations, etc. A second primary meaning pertains to "signs" or "indications," terms that relate to physical evidence such as scat, hair, and casts of footprints.

Photographs fall into a sort of evidentiary gray area. (Video or film, in my mind, represents a much more powerful form of evidence than still photos.) Pictures present something more than anecdotal evidence, although important anecdotal accounts from photographers and/or witnesses typically accompany photographs. On the other hand, photos do not exactly constitute physical evidence; they are images of physical evidence. Unfortunately, we live in a day when photographs cannot be accepted at face value as constituting proof; the potential for fraud is too great.

Photos said to show one or more sasquatches fall into several categories. Hoaxed photos include those that are jokes and those meant to deceive.

Generally speaking, one type is obvious, the other isn't (at least, not intentionally). Hoaxed photos typically feature a clearly visible bigfoot-like creature.



Figure 2. This photo shows a model, not a living animal. (Courtesy of Rick Noll, BFRO)

Computer programs such as Adobe Photoshop provide powerful tools enabling would-be hoaxers to readily develop compelling digital images. The apelike being shown in Figure 1 was created in a matter of minutes and sent to the BFRO as an illustration of how easy it is to render a fake photograph purportedly showing a sasquatch.

Other hoaxers use three-dimensional models to create phony images. Photographs of the model can then be altered using Photoshop filters and other tools to fine-tune the image's color and details (see Fig. 2).

In cases such as those described above, careful investigation usually brings out the truth. Figure 2, for example, turned out to be a picture derived from a museum diorama.

A second category of images includes photographs that were not

necessarily faked, but in which purported bigfoot details are unclear or undetectable. Admittedly, this sometimes involves subjectivity on the part of those assessing the photographs. Indeed, opinions may vary regarding even the most compelling images, such as those in the Patterson/Gimlin film (which some critics continue to describe as "grainy" or "blurry"). Nevertheless, I believe that most unbiased observers, including those within the bigfoot research community, would have little difficulty agreeing that any photo requiring equal parts interpretation and imagination (photos sometimes characterized as "blobsquatches") should be discounted.

Figures 3, 4, and 5 present photographs obtained from the Internet that supposedly include sasquatch images.

On the other hand, some photos make you go "hmm" and appear to indicate something more than a blob of color or controversial shadows. Figure 5 might be more appropriately placed in this "unclear, but possible" category; the borderline between one category and another, admittedly, is not always cut and dried. The dark figure visible in Figure 6, for example, was reportedly photographed inadvertently a few minutes prior to a nearby sighting. BFRO investigators visited the site and were able to confirm that whatever was photographed was no longer there.

Examples such as Figure 6 and others that contain more detail might be described as "equivocal" images, that is, images of uncertain nature or classification. Such photographs are (evidently) not hoaxed, something can be seen, details provide a basis for comparative evaluation, and so on. In other words, the pictures and settings can be studied.

An important caveat to keep in mind when working with equivocal images is that one should always question, always doubt, and always seek alternate explanations and possibilities. It may not prove possible to dismiss some images, despite the most rigorous and protracted investigations, but failure to disprove does not constitute a demonstration of proof. I use what I refer to as a "sieve" to help me evaluate images. This sieve is simply a tool based on

several aspects of investigation and comparison that I consider to be important.

"Context" is the first component of the sieve. Photos do not emerge from a void. A sasquatch photograph represents, theoretically, but one manifestation of the presence of this large mammal. Ideally, one should expect (or hope for) parallel forms of complementary evidence such as sighting reports from independent sources, corroborating interviews from area residents, and investigator observations that result in the discovery of supportive evidence. Such evidence could include things like hair, footprints, handprints, scat, and so on.

"Character" is the second component of the sieve. This concerns the photographer and others involved with the photo. What kind of reputation does the photographer have in the community? Is it possible to discern the presence of ulterior motives, such as financial gain or publicity? Does the account of the events surrounding the photograph remain consistent, or are there reasons to question the truthfulness of the photographer? These are not always easy issues to resolve in a short period of time, and the process of objectively assessing someone's character is complicated by the fact that investigators and witnesses often develop friendships during the course of an investigation.

Some observers will undoubtedly object to the inclusion of this component. It appears to introduce opinion into what should be a fact-based analysis. Others may protest that questioning or rejecting evidence on grounds of negative character assessment smacks of an *ad hominem* argument, a logical fallacy that focuses on the merits of a person rather than the merits of that which is offered by the person (e.g., photographic evidence). While such may appear to be the case, nevertheless, character is an important criterion in everyday evaluations of worth or trustworthiness. The testimony of a convicted thief, liar, murderer, and so on, does not carry the weight of a citizen who has never crossed the law. A scientist caught fabricating or

manipulating data is ostracized for life.

There are no professional scientific organizations with the authority to blacklist, ban, censure, reject or otherwise identify would-be sasquatch researchers suspected of or even caught hoaxing, or otherwise behaving unprofessionally. However, in a field such as this, which, unfortunately, already suffers from widespread perceptions of incompetence and evidence falsification, it behooves those of us involved with documentation efforts to assume the greater responsibility in proactively policing our own ranks and responding in a prejudicial manner to evidence submitted by those whose character we have reason to doubt. Others will step in if we fail in this task, and sasquatch research efforts will look all the worse for it.

The third component of the sieve has to do with "Clues" that can be evaluated from within the photograph itself. The first two components build confidence in the possibility of a photo's legitimacy (if the context of the situation provides supportive forms of evidence and if the character of the photographer appears to be solid), but the picture itself needs to be of such a quality that it too can be investigated. Under ideal circumstances, the photographer takes investigators to the exact spot where the picture was obtained. Every effort should then be made to compare the photo against the environment so as to determine the dimensions of the purported sasquatch as accurately as possible. Investigator documentation photos should include clearly (boldly) marked measuring devices; standard rulers and tapes are often used with poor results (as I have learned from experience).

As mentioned earlier, the described steps were derived from the Patterson/Gimlin experience. After the film was obtained in 1967, follow-up examinations of the setting or context of the film resulted in supplementary evidence corroborating the men's contentions. As years turned into decades, no compelling evidence or testimony surfaced to cast doubts on the truthfulness of Patterson or Gimlin (at least as far as I am concerned).

Their accounts remained consistent in spite of intense efforts to generate doubt by means of questioning the smallest aspects surrounding the film. Finally, comparative photographs produced important supportive documentation, and the images themselves have been carefully scrutinized and evaluated (e.g., Glickman 1998).

Because of all these facts, in addition to the clarity of the film images, I'm convinced that "Patty" represents the gold standard against which other pictures must be compared, at least until a holotype becomes available. Accordingly, "Comparison" comprises the fourth and final component of the evaluative sieve. I question the validity of images in which the purported bigfoot-like creature varies in biologically significant ways from the documented morphology. This does not mean, of course, that only pictures depicting females should be considered valid, but it does mean that an image portraying prognathism, for example, would be discounted, since the animal encountered by Patterson and Gimlin featured a flat face.

Some may cite the "Comparison" criterion as an example of circular reasoning. Accepting or presuming the validity of that which remains unsubstantiated inappropriately elevates the significance of, in this case, the "Patty" images as a means of corroboration. Thus, a critic might argue that putative bigfoot images cannot be dismissed on the basis of failure to satisfy the comparison criterion because the standard for comparison, the Patterson/Gimlin sasquatch, has not been established as genuine.

Circular reasoning comprises a logical fallacy on the basis of the acceptance of a single premise, logical or illogical. In syllogistic reasoning, however, two or more acceptable premises enable the derivation of a valid conclusion.

For example, I accept the following premises:

- A bipedal being was filmed at Bluff Creek.
- Large humanlike tracks were found at Bluff Creek.
- The tracks coincided with the observed being's path.

• Plaster casts were made of the 14.5" tracks.

Conclusion: The film subject left 14.5" footprints.

Nevertheless, even granting the possibility that "Patty" had huge feet, critics still maintain that the apelike being seen in the Patterson/Gimlin film must have been human. However, in my view, an elementary probability analysis precludes the man in a suit hypothesis. Remember that the odds of a series of observations occurring can be computed by finding the product of the probabilities associated with each event. For example, the chance of flipping a coin and getting a tail is 0.5, or fifty percent. The probability of getting three tails in a row is $0.5 \times 0.5 \times 0.5 = 0.125$, or twelve and a half percent. Similarly, probabilities can be assigned to the anthropometric data derived from an analysis of the Patterson/Gimlin film subject.

According to the Glickman analysis (and others), "Patty" stood over seven feet tall. The odds of an American man growing to 6' 8" are less than one in ten thousand (<0.0001); it is probably safe to assume that the odds of a man growing to 7'3" are less than one in a million. If "Patty" was a man in a suit, the hoaxers must have gone to great lengths to locate a man of that stature and to customize a costume for such a huge individual, but that is beside the point being developed here.

A skit repeated several times on Conan O'Brien's late night television program illustrates with an absurd example the consequences of multiplying low probabilities. A black seven-foot-tall Groucho impersonator comes on stage declaring, "That's the craziest thing I ever hoid!" Apparently, few viewers understood the joke, but, as O'Brien pointed out, the number of exceedingly tall black men who impersonate Groucho Marx is very small. Calculating the number of members in the black seven-foot-tall Groucho impersonating fraternity would require some obscure probabilities, to say the least. However, for the sake of argument, let's say that black males comprise 0.06 (six percent) of the American population and that 0.0001 of them are seven feet tall. If 0.01 estimates the percentage of Groucho fans among

African American men, and 0.1 of them sometimes impersonate Groucho, then we should expect that, from an overall population of 300,000,000 in the U.S., approximately two individuals meet the criteria.

Fortunately, examining body proportions does not require the use of esoteric percentages or abstract speculation.

Humans exhibit characteristic ratios of body segment lengths as compared with height (H). For example, for the North American population, 0.285H is the average ground to knee distance, 0.152H estimates foot length, and so on (Perissinotti 2000). Multiplying my height of sixty-eight inches times 0.152 produces a foot length estimate of about ten and one third inches, which is right on target for my feet. It is important to note that these physical characteristics are not necessarily correlated. For example, a man who is taller than 95 percent of the population is not necessarily at the 95 percentile in arm length and other characteristics (Perissinotti 2000). Of course, as with nearly all body measures (weight being an exception), data collected from a population present a normal, or bell-shaped, distribution. Most measures fall around the average; the odds of measures falling significantly above or below the average can be predicted, as in the example of a man growing to be 6' 8" tall.

Incidentally, according to the scale for North Americans, one would predict a height of approximately 7' 11" for "Patty" based on the size of her feet. If the 7' 3" estimate is close to the actual height, a conversion factor of 0.167H (instead of 0.152H) would predict sasquatch foot length. Conversely, dividing foot length (or print/cast length) by 0.167 would predict height in inches. This compares with a value of 0.165 computed by Fahrenbach from a much larger sample size, although he argued that the data supported a non-linear interpretation (Fahrenbach 1997-1998).

In addition to height, other "Patty" parameters appear to be well outside the norm. For example, Glickman compared arm length with height. Since this produced a ratio, the value was independent of actual height. In other words, the same ratio would have resulted if "Patty" stood 6'3" or 7'3" because the comparison involved relative measures. The arm/height ratio of the Patterson/Gimlin subject (long arms compared to height) was far outside the human norm and would be expected in only one out of every 52,500,000 people. (As has been noted by Glickman and others, the fact that hand flexion is documented in the Patterson/Gimlin film precludes the possibility that prosthetics were used to hoax a long arm effect.) The leg length/height ratio (short legs compared to height) was also unusual and would be expected in only one out of 1000 people (Glickman 1998). This set of ratios is more typical of the great apes, which possess longer arms than legs, rather than humans, where the reverse is the norm.

Multiplying the three probabilities presented above provides a way of estimating the odds of a human displaying the set of body measures observed in the Bluff Creek subject. For the sake of producing a conservative estimate, I will use 0.0001 for the height probability, 0.0000001 (less than one fifth the value published by Glickman) for the arm/height probability, and 0.001 for the leg/height probability. The product of those probabilities is 0.00000000000001, or one in one hundred trillion. A thousand galaxies comparable to the Milky Way would contain one hundred trillion stars. The most logical explanation for why "Patty" displayed such an apparently radical set of human morphological characteristics is that she was not human.

Again, a deductive process, free of circular reasoning, produced a conclusion supporting the validity and significance of the Patterson/Gimlin film and justifying the "Patty" images as the basis for the "Comparison" criterion.

The best-case scenario, naturally, funnels support through all four components of the sieve. Who knows what impact just a few pictures meeting the "Patty Standard" would have on the scientific community? Of the components (Context, Character, Clues, Comparison), the first is

probably the least critical (and possibly the most difficult to implement, at least in terms of locating compelling physical evidence), followed in order of significance or importance by the other components as discussed.

For example, imagine a scenario where a photograph depicts what appears to be a sasquatch. The photographer, an individual of unimpeachable character, showed investigators the exact spot where the photo was taken. Unfortunately, no supportive evidence was found, but the team was able to determine the height of a tree limb next to the creature's head. In this case, three of the four "C's" are satisfied, including the most significant three.

On the other hand, imagine that a known hoaxer supplies (or is somehow involved with) a photograph depicting a generally sasquatch-like animal, and some corroborative support, such as a sighting report from the same area, is obtained by an on site investigative team. Again, three "C's" are satisfied (albeit weakly), but the significance of the "Character" component is such that I would question the validity of the photograph.

Next, let's suppose that a citizen with an unblemished reputation submits a photo of a sasquatch-like animal taken in an area where several sightings have been reported. He claims he took the picture when he pulled over to check out an odd sound his car was making, but he couldn't remember exactly where he took the picture. The weak link in this case is "Clues." Without the ability to recreate the photograph, confirm details of the picture, or make any kind of comparisons, the value of the photo is diminished and, in all likelihood, precluded from serious consideration as evidence supporting the existence of the sasquatch.

Another possible "three C scenario" involves a context that produces supportive evidence, such as sightings and tracks, a solid citizen, and a known photo location. However, the creature portrayed in the image doesn't seem to bear a close resemblance to the classic sasquatch standard. The failure of the photographic evidence to meet this essential requirement means that it does not, at least in my mind, constitute valid evidence and is

likely the result or product of a hoax.

A three-legged stool can stand, but four legs are more stable. The quartet of circumstances described above, loosely based on actual situations, produced only one combination of the components resulting in tentative acceptance of a photo's legitimacy. Supposition aside, I think the sieve provides a helpful approach to assessing real world photos. For example, with regard to the images presented thus far, Figure 1 fails to meet the criteria of any component, Figure 2 fails on three of four criteria, Figures 3 and 4 go one for four (at best), Figure 5 may meet two of the four components, and Figure 6 meets three of the four. None merit thoughtful prolonged attention.

Photos presented at the September 2003 Willow Creek International Bigfoot Symposium were assessed by means of the four criteria. These photos, obtained in Oklahoma and available for viewing on the Symposium DVD (available from the BFRO), emerged from a rich supportive context, including independent sightings submitted over a period of many months, physical evidence, corroborating interviews, and so on. The photographer passed repeated assessments of character, consistency, reputation, and honesty. The photos contained adequate internal clues enabling investigators to verify the location and evaluate the size of the purported sasquatch. Finally, the images, while falling short of the "Patty standard" itself, contained sufficient detail to warrant favorable comparison with the animal recorded by Patterson and Gimlin (which, as discussed, is presumed to present typical sasquatch anatomical characteristics).

Perhaps the best-known pictures seen in recent years that appear to show an undocumented American primate came from Florida. The so-called "Myakka Ape" photos were interpreted by some enthusiasts as showing a skunk ape, a large bipedal creature often thought to represent part of a southern population of the sasquatch. The photos are quite clear, and they caused quite a sensation when first presented to the public in 2001 (Figures

7, 8).

In spite of the fact that some researchers offer the Myakka images as strong evidence supporting the existence of an unknown ape, assessing the photos by means of the four sieve elements produces an unconvincing result.

The "Context" component of the Myakka photos is, as far as I know, completely lacking. For example, no investigators were able to conduct any kind of search of the anonymous photographer's property to determine if corroborating evidence existed.

Since the witness reportedly requested anonymity, the "Character" component of the sieve cannot be implemented. Did the photographer state the truth in the affidavit describing the circumstances and observations related to the photos? It's impossible to tell.

Only a few environmental "Clues" are contained within the Myakka photographs: the saw palmetto leaves. However, access to the property would have allowed investigators the opportunity to compare the leaves (which should have been fairly easy to locate since they were supposedly in the photographer's back yard) with the leaves shown in front of the "Myakka Ape." Obviously, anything that cannot be properly or meaningfully observed is impossible to assess.

Comparing the creature images presented in the Myakka photos with the Patterson/Gimlin sasquatch, the final sieve component, results in a rather conclusive negative evaluation. The "Myakka Ape" looks to be an orangutan. Whatever it is, it does not appear to be comparable to a sasquatch. Since I do not subscribe to any hypotheses proposing the existence of multiple unknown primate species in North America, the fact that the creature is clearly (in my view) not a sasquatch casts fatal doubt on the possibility that either photo documents a species unknown to science.

Additional questions and/or doubts certainly exist regarding the authenticity

of the Myakka photographs. However, because the photos have, in terms of the process described in this paper, no leg to stand on, I see no real purpose or advantage in pursuing further analyses or investigations.

In conclusion, I hope the ideas presented here prove helpful to others involved in this fascinating pursuit. If nothing else, perhaps a general acceptance of minimal criteria will enable those in the bigfoot research community to employ common sense strategies for objectively analyzing, rather than subjectively debating, the merits of photographs containing purported sasquatch images.



Acknowledgments

This paper developed directly and indirectly from the contributions of many members of the BFRO over the past several years. However, I feel I would be remiss if I failed to express particular gratitude for the support of Oklahoma investigators Roger Roberts and Brett Elliott. Matt Moneymaker and Rick Noll, along with others, provided encouragement and opportunity for the cultivation of the ideas presented; the paper benefitted from the critiques of Brad Mortensen, Dr. Chris Whittier, and Thomas Rodriguez. I would also like to thank my boss, Dr. Ron Roddy, the Vice President for Academic Affairs at Mid-America Christian University, for approving my participation in the 2003 Willow Creek International Bigfoot Symposium. The present paper is an expansion of part of the talk given at that symposium.

Revision History

This article was originally published on the Bigfoot Information Project website (bigfootproject.org), March 15, 2004. It was revised and somewhat expanded March 21, 2004.