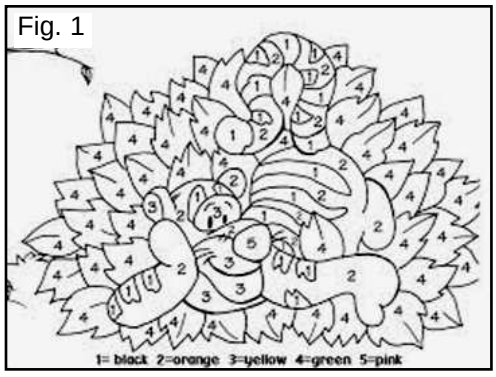
Been There; Done That

Photography is an amazing profession or hobby. I did not really get into it until about 1990 and at that time digital cameras were still in the future. After I had a digital camera, I took a college night school course in digital photography. You are taught to do everything manually, but I cornered the instructor and said, “Do you really think my eyes, your eyes, or anyone’s eyes can match what this camera (SLR) says are the correct settings? He silently said “no, go ahead and use the automatic settings if you wish.” I carried on with the manual settings anyway. Nevertheless, I got the feeling that the course was like teaching someone to drive with a manual transmission and he realized this. Digital cameras essentially eliminate 50% (or more) of what you needed to know with film cameras—it’s a whole new world.

Now, I might be wrong in some of what follows because the questions are difficult. When you took a photograph with a film camera back in the old days, the resulting print was the action of chemicals. There was no “dpi” (dots per inch) because there were no dots. I suppose the equivalent would have been “mpi” (molecules per inch), which would be impossible to measure (in the billions). Generally, digital photography will never match film photos, but once you get past a certain level of “dots per inch” human eyes cannot see a difference.

Basically, digital photography is sort of like a “paint by numbers” scheme. Some of you might remember this process back in the old days. You are given a numbered print with simply instructions (Figure 1) and you proceed to color the numbered sections with crayons or water colors. If you are really neat (seldom) the resulting image is quite impressive (there are prints for adults and I do recall seeing one completed. .

Now, if you take that concept, multiply everything by about 10 million and put it in a little computer (digital camera) that has a specific program you



end up with a digital image. The camera knows what it sees so the “print” is immediately available. All of the colors needed are stored in the camera. Little colored dots (officially pixels, short for “picture elements) are assigned to the “print” (like paint by numbers) and they all blend in together to form a perfect image; the better the camera, the more the dots and the better the image. Everything is automatic at the speed of light (speed of electricity), so you see an image immediately after you take it. This is a gross simplification, but I am sure it’s in the ballpark.

When you take a real film photograph and scan it, the scanner becomes the digital camera and does the same thing. You change all the chemical molecules to little dots at a specified level (dots per inch). I can’t provide a comparison here because I can’t show an actual photograph; only a digitized one. However, you would not be able to tell the difference anyway unless you used magnification. The real photo would just get more blurry as you increased magnification; the digital image would show little dots after a certain magnification level.

Prior to digital photography, what was called lithography was used to print images in books, magazines and so forth. It is still used for large volume printing. It also used the “dot system.” Suffice to say either dots or pixels are used for printed images. We will refer to both as dots.

Now that we have all had a little lesson in photography and printing, I wish to talk “sasquatch.” The first image on the right, Figure 2 (next page) is a direct scan of an image that was printed in a book (Frame 352). Can you see all the little dots? Do you think anyone in their right mind would put a magnifying glass on that image or enlarge it to try and see additional details? Of course not; but that is what some researchers and journalist think I did many years ago.

Now look at the image on the extreme right, Figure 3. and enlarge the page as much as you can. Do you see any pixels in Figure 3? Might you use this image to look for details? Note that at the bottom of this image there is text; that is because both images are exactly the same; but the second image, Figure 3, had an extra step—it was photographed with a 35mm film camera. What apparently happens here is that when you photograph something with a regular camera, and what you are photographing is larger than the camera’s normal print (6 inches by 4 inches) the camera simply jams all the dots together to give you what you want. As a result, you inadvertently end up with an image of seemingly higher resolution. Now, lets say the text on the bottom of Figure 3 had been cropped out. Now you would think that the photograph was a real photograph, not one that came from a book print. In this case, the original book print was 6 inches by 8 inches, and the camera jammed it into 4 inches by 6 inches. (The images seen here have been made to fit for this paper, but this does not make any difference.)

The question is, are any details that emerge from Figure 3 valid? Oddly, in the “sasquatch fraternity” if such details are positive, yes and you are a hero. If they are negative, then you are a villain—a hoaxer. Anyway, the answer is; I am not really sure. Scientists would absolutely scoff at anything like this.

Now let’s look at just the sasquatch head in both images (Figures 4 direct book image; Figure 5, 35mm photo of the book image). Do you see some details in

Figure 5 that are not seen in Figure 4? Perhaps if you enlarge things, you might even see what appears to be an eye-ball in the Figure 5; and study the mouth—might there be a pink tongue and perhaps some teeth?

Scientifically, none of this is valid. What you think you see is just your imagination because the actual film resolution does not mathematically allow such details to be seen.

Shown here in Figure 6, is the sasquatch head from the actual Cibachrome "negative" (technically it's a positive, but that's aside from the point). This is the ABSOLUTE best actual image we have of the head in Frame 352. It was not until about 2003 that I was provided with the film frame "negatives," 11 years after I took the photo of the book print. If you think you see more detail in Figure 5, scientifically, you are imagining things. I have mentioned in another paper "Credit Where Credit is Due" (Virtual Magazine) that I did the same thing with an image of Frame 350 provided by Jeff Glickman, Figure 7. It is proclaimed as the "best" image ever.

Just to satisfy my curiosity, I tried to do the same thing with a digital camera rather than a film camera (i.e., take a photo of a book print with a digital camera); the results were not as good.

Keep in mind, that at the time I did this work I had no idea about film resolution thresholds—point at which a detail in an image lose credibility. Indeed, it was this material that prompted a paper by Dr. Henner Fahrenbach and Jeff Glickman on this subject (image resolution).. As a result, I simply continued experimenting.

I took the image seen in Figure 3 and had it printed on a Minolta Color Copier (state-of-the-art at the time). Figure 8 shows the print, but cropped. It was printed on gloss paper and over time the gloss scratched or cracked, thus the white lines or spots. About three years later a controversy arose; Dr. Grover Krantz said that a right side breast nipple could not be seen in Frame 352 of the actual 16mm film. I recalled seeing what I thought was this detail, and dug out the color copy—I thought it was from the actual Cibachrome print, not the book image. I took a 35mm photograph of the breast

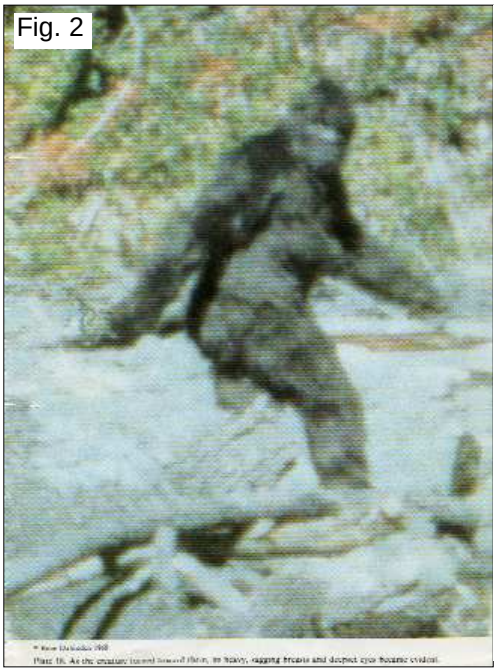


Fig. 2


Fig. 3


Fig. 4


Fig. 5


Fig. 7

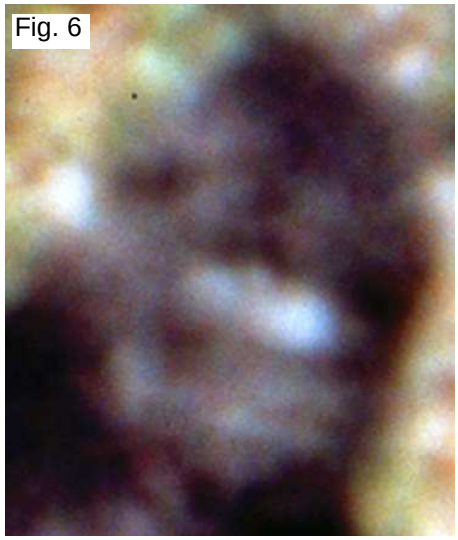


Fig. 6

Actual image from the P/G Cibachrome "negative."

area (Figure 9) and reasoned that the nipple was visible (as circled); although for a sasquatch that size, perhaps it should be larger. Later, when I "processed" Frame 350 provided by Jeff Glickman; the same detail can be reasonably seen (Figure 7).

All the work and images (both this material and actual Cibachrome images) were compiled (with my thoughts and observations) into a report and sent to seven (7) major sasquatch researchers. Subsequently, the report was sent to two additional researchers. I was urged to have Dr. Fahrenbach review everything and he concluded that all such details cannot be justified because they were below the film resolution threshold (eyeball, nipple, teeth, things observed in the fur, and so forth—I took many 35mm photos besides what is provided here).

At the time it was reasoned that you could tell a printed image or photocopy from an original photo by simply enlarging the image revealing dots. This was mentioned in a newspaper article with regard to fake passport photos. Border agents had obviously been given magnifiers of some sort. Under my process, pixels would not have been seen, unless under extreme magnification. Keep in mind that if you have a high-quality image to start with, then the "processed photo" would be much better than what you see here.

.I have been told that simply using Photoshop will get the same results, but I have not found this to be the case. Furthermore, I believe there is a process I call "layering" (several of the same film frame layered) that reinforce the dots for greater clarity of the entire image; transparencies might get the same result. Such was probably used before Photoshop..

I no longer fiddle around with this stuff. You need to have proper equipment (copy stand, special lights, high-end film camera), so I don't recommend trying it; science does not buy it anyway.

By about 1996, I had the actual Cibachrome prints (12 images) so


Fig. 8

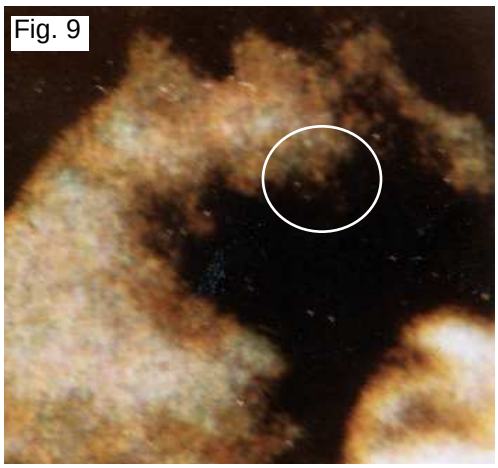


Fig. 9

concentrated on using these for research. There were some "revelations," but nothing was published due to copyright restrictions. I later found that all findings were below what we are given as the resolution threshold, so was relieved that I kept everything to myself, save some researchers.

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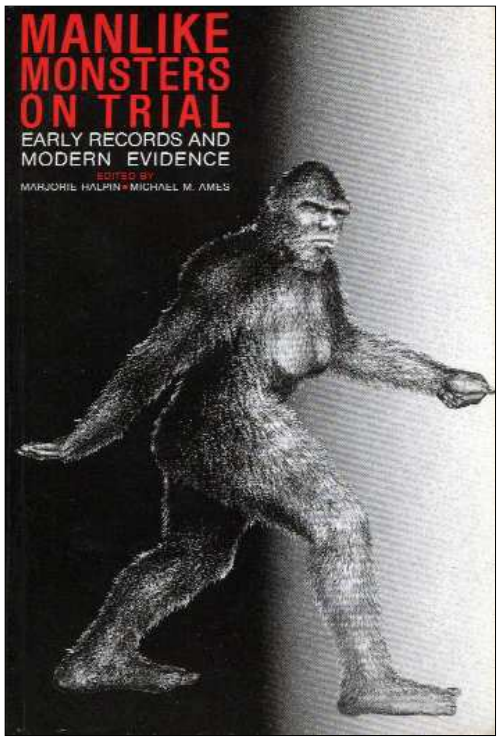

This is the book (published in 1980) from which I obtained the image of frame 352. This was in 1993 and I had hardly heard of sasquatch. I took the photo and had it made into a transparency (for use on an over-head projector) for my youngest son to use on a course he was taking in anthropology, and was required to do a presentation. He gotten permission to present this subject from his instructor. A few days later we went to see René Dahinden to interview him. As I recall, he gave us a nice image of Frame 352, but my son used the transparency I had made—good enough sort of thing.

EPILOGUE

I hold no grudge against those who called me to task on what transpired as a result of this work, but I wish they would have listened to me. Unfortunately, I was told by the Associated Press that my "observations" prompted Bob Heironimus to "come out of the woodwork" and claim he was the "actor" in the P/G film; that I do regret, along with the subsequent book *The Making of Bigfoot* by Greg Long—a docu-fiction with zero (0) scientific content, save one observation.

Christopher L. Murphy