PREAMBLE

In some ways, I hesitated in presenting this paper. Nevertheless, when I received concurrence from Jeff Glickman, a top-notch forensic scientist, I changed my mind. For certain, most of us don't like mathematics, and might even doubt its validity. I would be the first to admit that in some cases (many?) the math says one thing. and in time reality proves the opposite. In the case of the Patterson/Gimlin film, however, there have to be "numbers" that support known facts or proven conclusions.

After Roger Patterson and Bob Gimlin returned from their adventure they were naturally asked questions as to the height of the bigfoot they filmed and Patterson's proximity to it at various times. They provided estimates based simply on what they saw. The most critical "number" is the camera distance for frame 352 of the film. We don't have a firm estimate for this distance provided by the two men.

Work done by René Dahinden provided a distance of about 102 feet, which was used by Dr. Grover Krantz; however, the number is "soft" for several reasons. I struggled with this when I created my film site model, but reasoned that it could be correct. The issue is that in order for it to be correct then the camera lens Patterson used had to be 16.85mm and there does not appear to be such a lens. It should be noted that 1mm in lens size makes a tremendous difference, far too great to rationalize. Nevertheless, it is not impossible that Patterson got something and/or did something resulting in an image that mathematically indicates a 16.85mm lens. We are dealing with a wind-up movie camera created over 50 years ago. Perhaps someone has an answer here?

It needs to be mentioned that Igor Burtsev used the proper formula for determining the bigfoot's height prior to 1997. Igor determined that the camera distance was about 136 feet. This calculation is in Dmitri Bayanov's 1997 book, *America's Bigfoot: Fact, Not Fiction* (pp 51 and 136–shows formula). Obviously Dr. Krantz was not aware of this information as he used the 102 feet measurement in his 1999 book, *Bigfoot/Sasquatch Evidence*. The fact that Krantz was a scientist probably gave him undue credibility, unless he knew something others did not know. In short, we all defaulted to Krantz.

Whatever the case, the "camera mystery" adds to the other "mysteries" we have as to the bigfoot filmed. All technical or coordination questions could have been answered when the film was first viewed by Roger Patterson, John Green, René Dahinden, Jim McClarin, and Al DeAtley on October 22, 1967. I discussed this with John Green and he said that they just didn't think it was important. All were convinced that it would be just a short time before a bigfoot was captured or killed. I am sure they thought, "science" was now going to jump into the issue and get it resolved.

As we all know, science did not "jump in," save a few intrepid scientists, and the film itself got swallowed up in the world of the unexplained and media sensationalism.

As you will see in the following paper, the film site "clearing" could accommodate at much greater "camera to subject" distance than 102 feet, and this being the case, the height of the bigfoot (87.5 inches or 7 feet 3.5 inches) can be mathematically confirmed.

I believe it is beyond doubt that whatever Patterson filmed at Bluff Creek in 1967 was definitely over 7 feet tall. This, of course does not eliminate a tall person, but it moves things out of the range of probability.

Considering the Math – Patty's Height

Christopher L. Murphy

The height of the sasquatch seen in the Patterson/Gimlin film was determined by Jeff Glickman using a photo registration. He established a walking height of 87.5 inches (or 7 feet 3.5 inches) and this was likely very accurate because he did not have to use any known or assumed measurements.

Nevertheless, when the known and assumed measurements were put into the mathematical formula for determining the height of an object in a photograph (or film frame) a totally different height calculation resulted (59 inches or 4 feet, 11 inches).

The formula is very simple:

$$\frac{\text{DISTANCE x IMAGE HEIGHT}}{\text{FOCAL LENGTH}}$$

The **DISTANCE** is that from the cameras to the object to be measured.

The I**MAGE HEIGHT** is that as seen in the original photograph.

The **FOCAL LENGTH** is the camera lens.

The DISTANCE we have is that determined by René Dahinden who used a questionable (moveable) object as a basis (102 feet).

The IMAGE HEIGHT can be measured and is known (.0474 inches).

The FOCAL LENGTH is known because we know within reason what lens was on the camera Patterson used (.9842 inches). This is a 25mm lens.

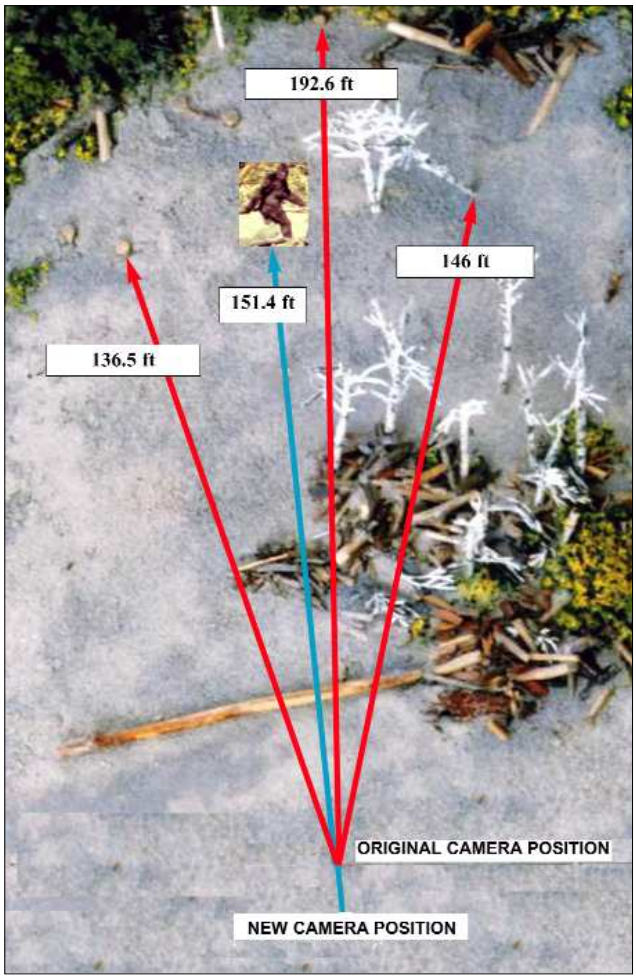
The distance of 102 feet for Frame 352, as mentioned, does not work.

By using the formula to determine what the distance had to be to equal a sasquatch height of 87.5 inches, the result is 151.40 feet.

The question now becomes, is it practical that the camera (Roger Patterson) was 151.4 feet from the bigfoot rather than 102 feet?

In my opinion, he could easily have been at this distance. Bluff Creek was behind him, but it was a long way back as can be seen in the following photograph.

This image shows Martin Dahinden, René's son, standing in the spot René believed was where Patterson filmed Frame 352. I would estimate that the photo was taken at about 40 feet from Martin. Obviously there was plenty of space for Patterson to have been much further back from where we see Martin.



Nevertheless, this does not imply that Patterson had to be 49 feet back from his original assumed position. If he were just 12 feet back (south) and the sasquatch 37.4 feet back (north) the result is 151.4 feet total distance camera to the sasquatch. The adjacent diagram illustrates this.

This scenario actually makes a lot more sense for two reasons. First, the log Bob Gimlin jumped off to compare his footprint is seen in the diagram right behind the sasquatch image. The log was very near the prints. Second, as the sasquatch proceeded, it went very near the leaning tree (shown as 146 feet from the original camera position).

Given what we know, Patterson used a standard Cine-Kodak K-100 Camera. It came with a 25mm lens. I greatly doubt that he would have used a different lens. There was a 15mm lens available for this camera, but it is totally out of the question. It is highly unlikely he obtained any other lens.

I am satisfied that the the "math" supports the subject' s walking height of 7 feet, 3.5 inches.

MATH:(D*IH/FL) = 87.5; IHD/FL = 87.5; .0474D/.9842 =87.5; .0474D = 87.5*.9842; .0474D =86.1175; D = 861175/.0474; D=1816.82 INCHES; 1816.82/12 = 151.40 FEET

REFERENCE FOR FORMULA: Bill Munns, 2014. *When Roger Met Patty*, pp. 318-326.