

THE MUNNS REPORT

Release Number 1H - Two Year Review
Part One

The Physical Film and Issues
about Copies

This Report reflects an ongoing
analysis by Bill Munns
of the 1967
Patterson-Gimlin Film.

www.themunnsreport.com

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PG Film copyright: Patricia Patterson

Report Release 1H Part One of a Two Year Review of PGF

The Munns Report, as a research document and a website, has been online since May of 2009, but I have been actively researching this film now for two years. In my personal evaluation of this effort, I took a look back at the time spent and made a form of inventory of what was accomplished, what needs to be done, where this research is going, what issues need further study, what issues can be retired as of no consequence, etc. And I felt that putting this personal evaluation into the form of a Report Update was an appropriate step to share with the research/analysis community.

Part One focuses on the issues related to the Physical Film itself. Part Two focuses on the authenticity of the Subject seen in the Film.

Standardizing Terminology

I found myself and others using a variety of terms to refer to the subject or entity seen walking through the Bluff Creek setting in the PGF, and I tried to settle in with "The Subject" as being a non-judgmental term. But I found that in some sentences, I needed to use the word "subject" in another context, and that caused some ambiguity in the notes. So I have finally settled on one term that I will try to use throughout this document and from this time on, as a standardized reference term. I will be calling the entity seen in the PGF "Patterson's Filmed Subject" and abbreviated as PFS.

I believe the term is sufficiently distinctive, and non-judgmental, to be a fair standardized term for the filmed entity in the PG Film.

So in my Report Documents, I will use this single term for my notes, and will only reference other terms to acknowledge the writings of other people. Examples of other terms are:

"Patty" - is both too informal, not useful in more academic discussions, and confusing with Patricia Patterson (Patty being a common nickname for a woman named Patricia)

"Patterson's Creature" - implies a non-human solution, a presumption moreso than a proven fact.

"Pattycakes" - is a frivolous derivative of Patty intended to imply a childish status, as if taking this matter seriously is unwarranted.

Like the PGF designating the Patterson Gimlin Film, the designation PFS for Patterson's Filmed Subject serves as a unique designation and a non-judgmental one as well.

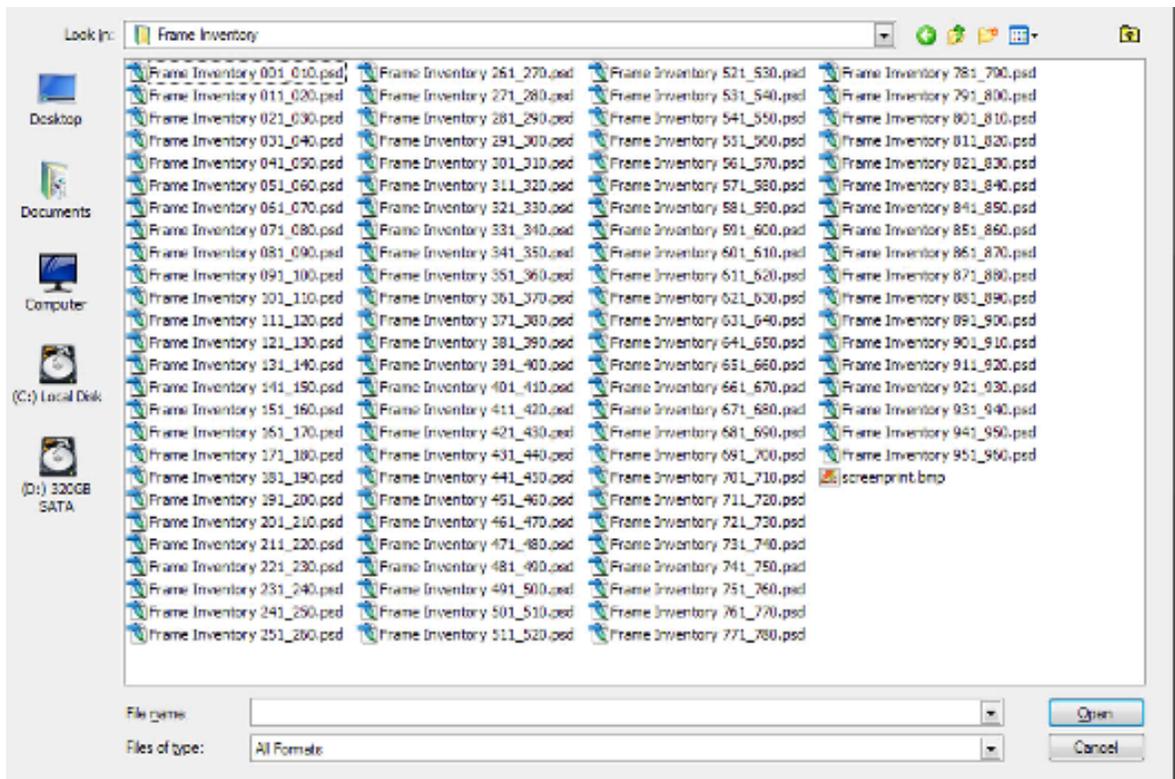
A second standardizing term I am using, and is explained below, will be VFC from "Verified Frame Count", the frame numbering I have documented from my scan efforts and the inventory of these frames after the scan.

Frame Count Issues

When I set out to scan a copy of the film, my original intention was simply to acquire true full frames for a possible Photogrammetry analysis, and nothing more. But the first copy I scanned, last February from John Green's archives, was not quite full frame, being an optically printed copy (which crops a bit of the sides and bottom of the true full frame). And having assembled the portable scanning system, I had it available for subsequent use. That put me on a path of being able to go to people who held other copies and do scans of those copies as well. The result was my being able to accumulate a library of scanned copies and frames that may be unique in the research community.

With this data, I decided to put together a frame by frame inventory reference, to simply enable me to better identify individual frames for study. And in doing so, I came to realize the current traditional frame count system is incorrect. So while this goal of a full frame inventory was not my original intention, once I appreciated there is a problem, and realized I has the resources to offer a solution, it became one of my research goals, to establish a reliable and systematic frame number verification system.

The Inventory system has frames in groups of 10 each in a Photoshop file 750w x 5000H, with each frame reduced to 750x500 as an inventory thumbnail version of the high resolution scans. This frame inventory folder has 1.98GB of data. There are 96 such files as shown below:



It might be noted that the last inventory file shown above (called "Frame inventory 951_960.psd") has only three (3) frames in it (frames 951, 952, and 953).

This system also cross-references the scanning numbers of frames from various scans to make it easy to reference a specific frame from the various scan inventories (which are numbered automatically by the scanning process, and not necessarily in correct frame numbers, because I start a scan of leader markings before scanning the actual film frames, and that skews the numbering of the scan system). So for continuity, I leave all original scan numbers intact, and use the inventory list to bridge the scanning number variations.

Having found an error in the traditional frame count system, I realized a new frame count system was necessary, and to distinguish the old traditional one with the new and more correct one, I have selected the term "Verified Frame Count" and VFC as the abbreviation, for this new system. I will continue to refer to the older system as the "Traditional Frame Count"

I have currently verified that there are 953 frames in the film known and documented, as traditionally reported, but curiously, none of the film copies I have inspected so far have a complete set. In the A&E Documentary series "Ancient Mysteries - Bigfoot", the narration claims there are 952 frames, and for quite awhile, I could only verify that number. It wasn't until I scanned some beginning and end frames from another copy privately held (in November, 2009) that I found frame 953 itself, and added it to the inventory.

But more curious is that the traditional frame count reportedly comes from the effort by Bruce Bonney and Rene Dahinden to make the Cibachrome copies, and Mr. Bonney's often described report on analyzing every frame of the film. But the traditional frame count was made from a version of the film which apparently started at frame #003 instead of #001, to get the number F352 for the famous "Look Back" frame, because it is actually F354 in the Verified Frame Count. I have not yet seen Bonney's report so I do not know what exact frame count he reports within it. I look forward to the prospect of one day seeing his report to hopefully clear up this discrepancy.

These discrepancies do not have any real weight or merit in debating the issues of whether the Patterson Filmed Subject (PFS) is real or a hoax. Rather, these discrepancies simply add to the confusion about the film itself, it's handling and copying, and fuel suspicions of "red flags" for the skeptical community ever eager to find any discrepancy to hang the hoax claims on.

Examples of copy version frame counts (numbers below are VFC)

Copy 1:	starts at 001,	ends at 939
Copy 2 :	starts at 003,	ends at 952
Copy 3:	starts at 003	ends at 951
Copy 4 :	starts at 003,	ends at 953
Copy 5:	consecutive frames from 355 to 364	
Copy 6	starts 001	ends 949
Copy 7:	starts 003	ends 895

FRAME VERIFICATION SERVICE - as an assistance to other researchers, if anyone has a frame image and wants to know what number it is, they can e-mail me a copy of that frame, and I will identify it for them. I can also look for any image anomalies or other curious things, like evidence of splicing, if they have a sample of something suspicious, because I can first verify the actual frame number, and then compare several scanned copies of the same frame to see if the curious anomaly is on all frame versions (a good indication something was on the camera original) or on some copies only (a more or less definitive proof that the curious anomaly is a copy artifact and not on the camera original).

For anyone interested in doing so, an e-mail inquiry first may be appropriate, unless I have had prior correspondence with you.

My e-mail is: wmunns@gte.net

If for any reason that one should be changed, I use the following as a backup:

2billmunns@gmail.com

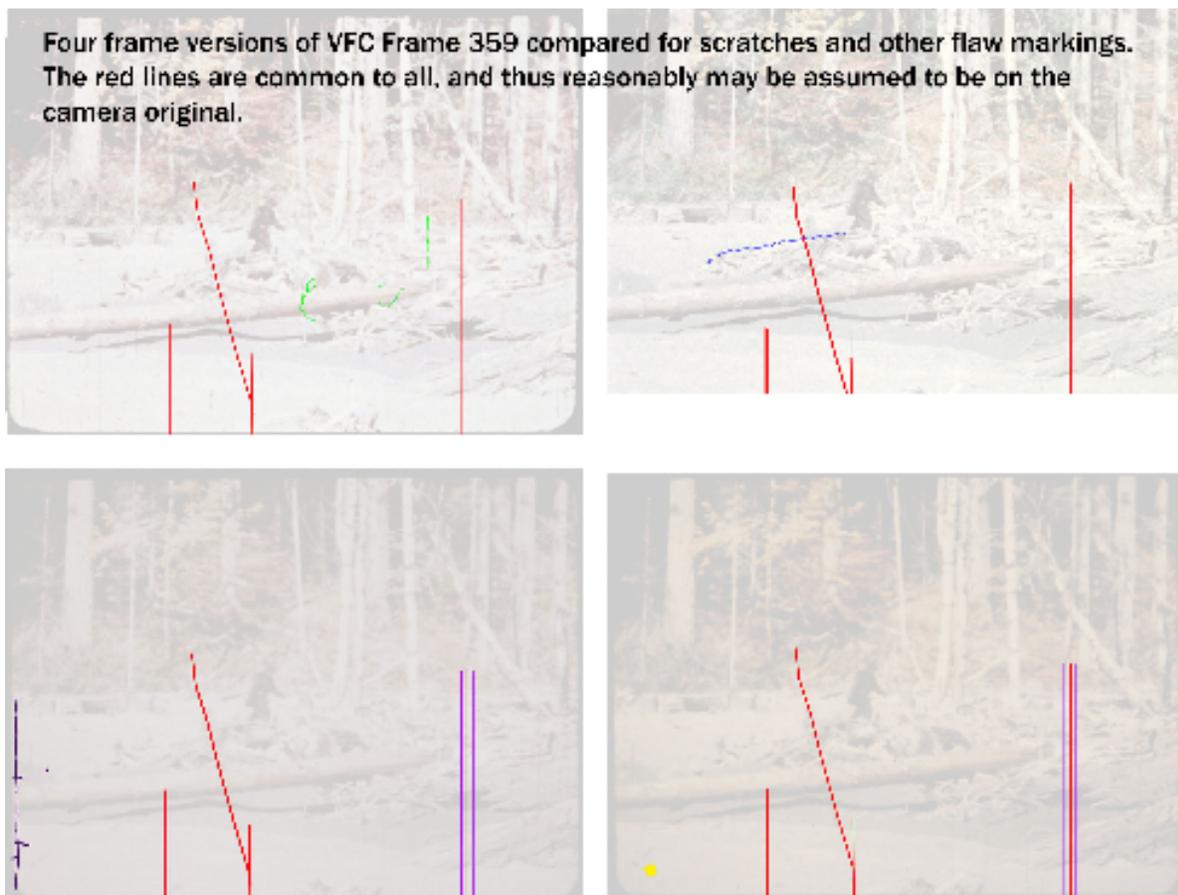
As long as the first one is operative (I've had it for 10 years now, and hope to keep it), I don't check the second on a daily basis.

Copy Genealogy Analysis

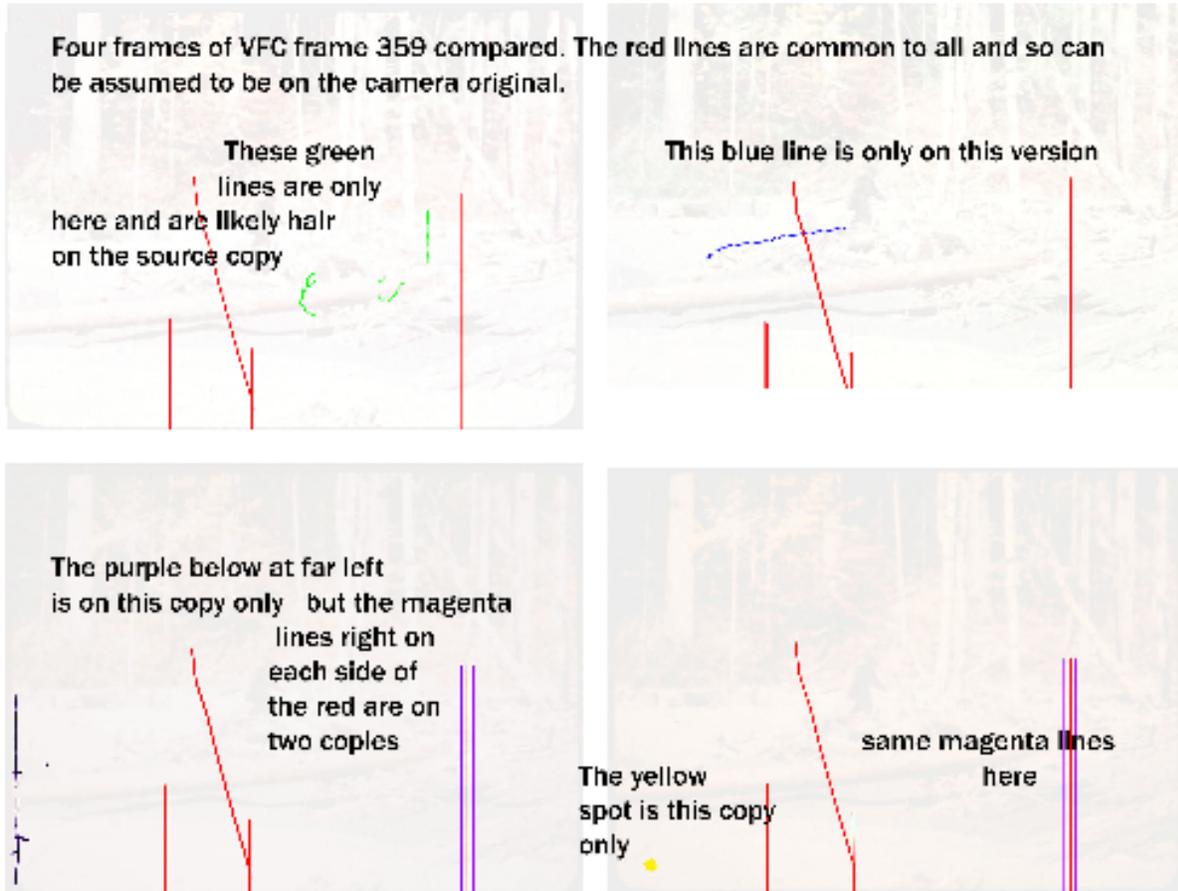
Copy Genealogy Analysis - This is still in progress, with the ultimate goal of establishing a method for grading generational quality of any copy based on standardized criteria. An excellent foundation of material has been gathered so far, but I have not yet scanned copies of the Zoomed in versions and they must factor into the genealogy because they actually are the more common copies. And some of the copy quality indicators I have selected are in the outer areas of the full frame, and would be cropped out of the zoomed in versions, so landscape quality markers within the zoomed in region need to be identified as secondary elements for grading quality.

A second genealogy goal is connecting copies in a "family tree" by evaluating scratches and other image flaws, and finding which copies possess these common flaws. Two copies with a common flaw generally indicates they have a common copy parent. Copies without the same flaw are more removed in the copy schematic. So I am currently reviewing which frames and what image flaws will best serve this goal.

Examples of this are a scratch on a copy (or camera master) that will consistently print to all subsequent copies, even if the source scratched version is copied multiple times on different occasions.



But a copy with a hair-like imperfection, dust, etc. (suggesting something was temporarily on the copy source version), if then found on two copies, means at least one of those is two generations removed from that printing source, because a temporary flaw (like a hair on the film or gate) will only print that exact way once, so a copy of that one print is necessary to get more than one film with the same thing. So at least one of the prints with a hair-like imperfection must be at least two generations from the source (of course both copies having it could be second gen removed, too).



So this study process of analyzing image flaws can also help establish guidelines for generational issues and further help refine the precision of the final genealogy system. As an example from the image above, the two bottom images, which share the two magenta lines on each side of a red scratch line, these two copies have a close copy relationship, coming from a parent copy which has those scratches in a group of three parallel lines.

Ideally, 10 frames will be selected from throughout the film, and used as the standard reference frames. The one above, VFC 359, will likely be one of them, because that curious "Y" scratch is so distinctive to all and distinct from the usual vertical line scratches we see more often.

Having ten standardized reference frames will allow any new copies to be compared for these specific frames, and as more copies are scanned into the database, the genealogy will become increasingly clear.

This system will also help future researchers to know which copies may be relied upon for the best research potential.

The eventual goal is to establish a truly standardized process for grading any copy, because we are seeing researchers pass away and their copies pass on to heirs who have no research ambitions, and thus the copies inherited may likely be sold to other researchers. A standardized copy grading quality system will help determine the value of such copies, by grading their copy quality and frame completeness.

Until this is complete, I won't be grading any copies as to generational level.

A second benefit of this inventory of copies I am accumulating is that it allows me to easily reference any specific frame across several copies, to look for evidence of image artifacts and false evidence material. In the copy process, dust, hair fibers, or other small particles on the film of the copying equipment can introduce image artifacts to a copy and are, on occasion, mistaken for true image data.

Some are specifically addressed below (the "muzzle flash" claim being one), and when such an image issue is brought up, the solution is to examine the same frame across multiple copies. If the image issue is consistent across all copies, there is a greater reliance on the idea the image element was on the camera original, and thus is valid image data. But if the image element is found to be inconsistent across multiple copies, that is generally conclusive evidence the image element is merely a copy artifact, something introduced to some copies during a copy printing process. Such copy image artifacts have no evidentiary value in studying the actual film because they are not in the original film if they are not on all copies.

The Physical Film Itself

In the two years I have been reading skeptical arguments about the film, there has been a recurring suspicion that the filming did not occur as described. Challenges have been made as to:

A. was the filming at Bluff Creek really a case of Patterson running the camera until the film ran out?

B. what kind of camera was used and was there more than one?

C. what is on the "missing footage" (The PG Film we usually see is only about 23' long, and a standard roll of film used by Patterson's camera is 100' long, so about 77 feet of that roll are not usually seen. This is what people like to call the "missing footage", although the actual explanation isn't as mysterious as the term implies)?

(Note: 953 frames at 0.3" high each calculates to a film length of 23.825 feet, but the incorrectly rounded estimate of 23 feet is commonly quoted, even though it should be rounded to 24 feet. So I use the term "about 23 feet" to indicate an approximation of film length)

D. were there more reels of film taken but hidden?

E. what day it was filmed on?

It seems that the skeptical strategy is to raise as many questions as possible, to challenge as many descriptive issues as possible, and then claim these "questions" raise red flags of suspicion, and then claim this suspicion as a basis for the classic "where there's smoke, there must be fire" claim of proof. But of course, smoke is in fact a simple particulate suspended in the air, and fog is one variation of smoke. And when there is morning fog, there's no fire.

But the tactic persists, to claim things suspicious about the physical film itself, and try to leverage these suspicions into proof of hoax. Several of these "suspicions" are addressed in the following analysis segments.

A. Camera Runout

The description that Patterson had only about 23 feet of film left on his 100' roll when he encountered the Filmed Subject (PFS) at Bluff Creek, and that he filmed continuously until the full roll of film was exposed (generally called a camera runout), is not an unusual claim in any respect, but still it is challenged.

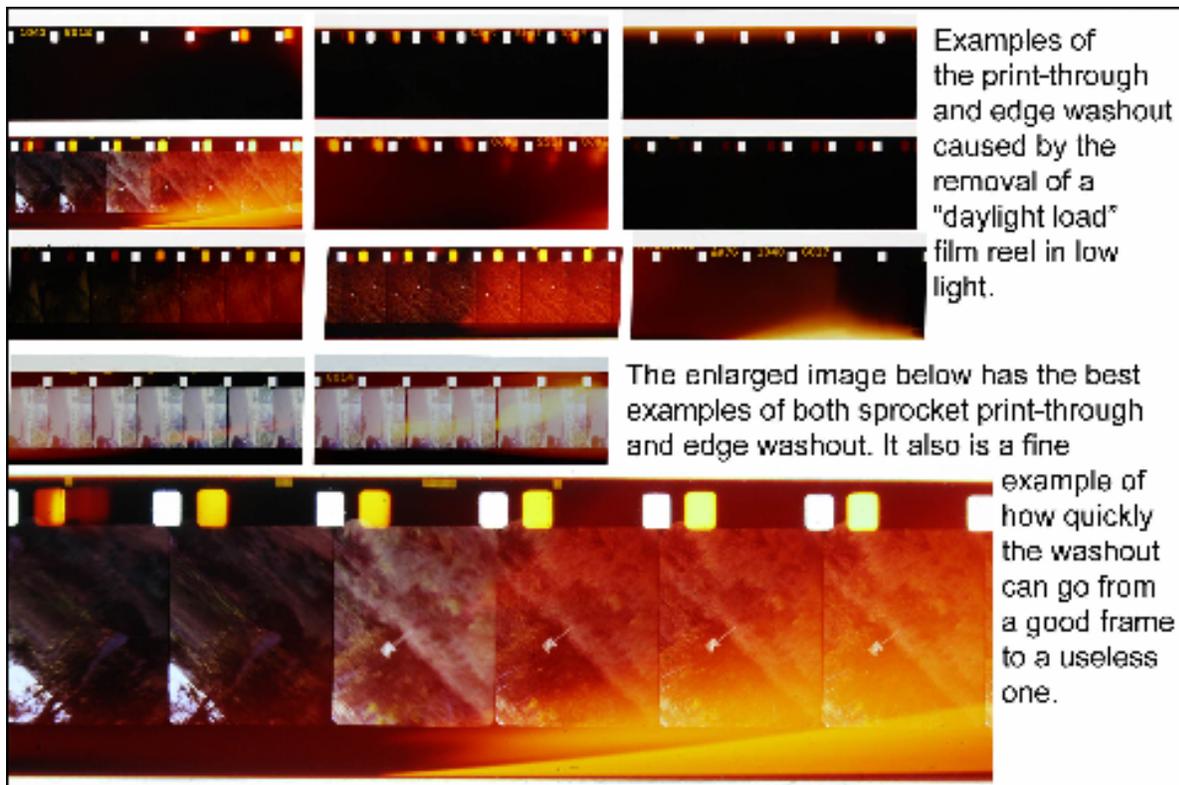
(Note: He had at least 23.825 feet left because that's the exact calculated length of 953 frames. However, the phrase "about 23 feet" is commonly reported in various books, and is an approximation of footage)

The Kodak K-100 camera holds a 100 foot "daylight reel", a film reel which has solid phlange sides and allows the roll to be loaded and unloaded without the need for a pure dark chamber, darkroom or changing bag. When loaded or unloading in subdued lighting, like open shade outdoors (or under a poncho, as Patterson reported), generally only the outermost layer or two of the film will get any exposure to ambient light and be washed out. If that outer layer of film is not tight against the reel, some light may spill onto the next layer under, often on one side of the film moreso than another, because one side is "up" (toward to camera door, and thus toward to light source).

So a common result of changing reels (to remove a roll that has run out of footage after filming), is to cause a washing out of the outer layer of film, and sometimes a washing out of one side of the film the next layer under.

A second result of changing rolls in a low light (non-darkroom) condition is that light passes through the sprocket holes of one layer and exposes patterns of light similar in shape and spacing to the sprocket holes on the film layers beneath. If the outer layer of film is a bit loose, allowing light to spill onto the edge of the next layer under, that looseness also likely shifts the position of the sprocket holes from one layer to the next under, and so light shining through the sprocket holes of one layer may likely expose spots of the next layer shifted to a space between the sprocket holes. So if a film has the washout spill effect from unloading in dim light, some trace print through of sprocket hole-shaped light flares should also be evident.

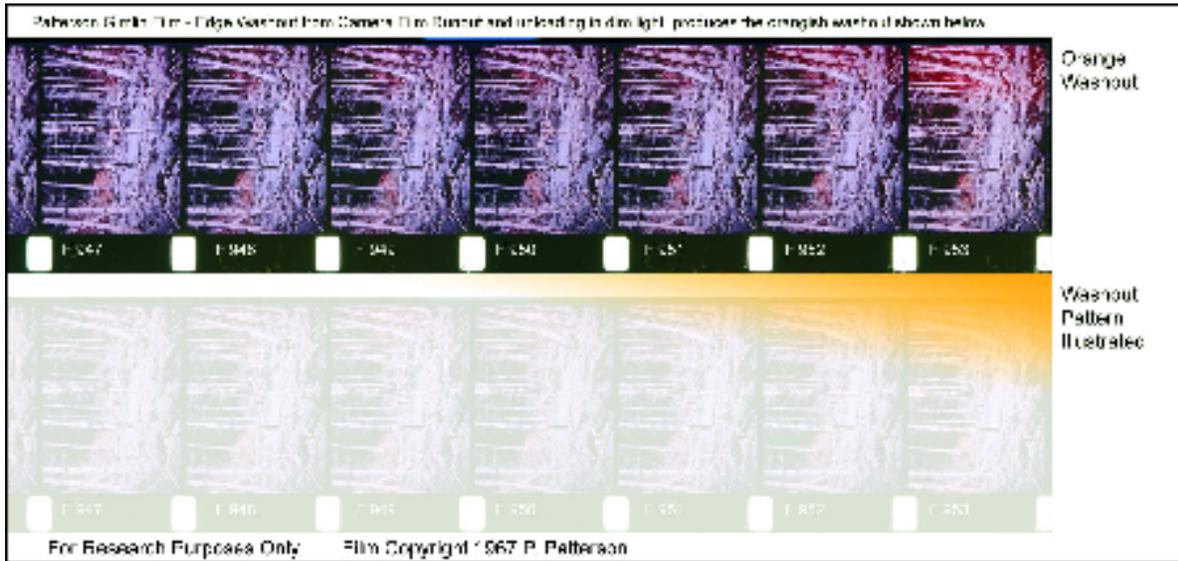
Examples of both are shown on the below sampling of various runout and unloading effects from other rolls of film used on various filming tests related to this PGF study.



The presence of both indicators after the scene with those washout exposures was taken, the film was unloaded from the camera, and thus substantiates a claim of a film runout during that last scene filmed.

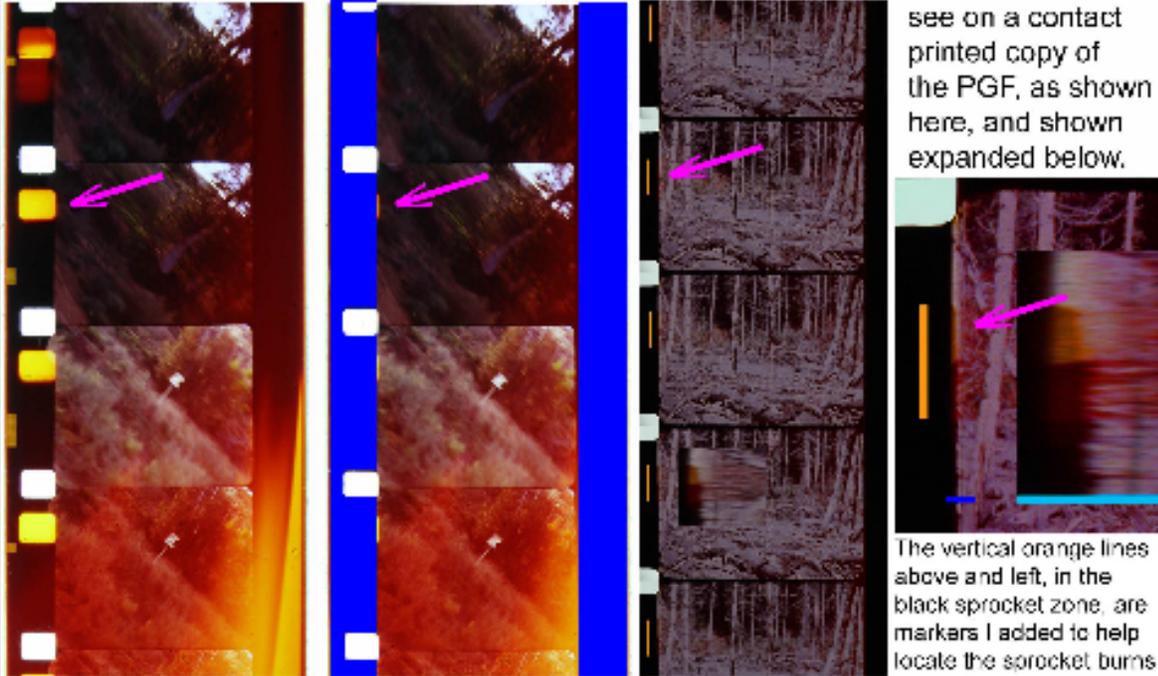
The PGF has both indications of a typical camera film runoff, and subsequent unloading of the reel in a low light situation.

For the PGF, the following image sequence from the frames ending in Frame 953 show the washout progressively increasing in orangish tone on the top side of the film.



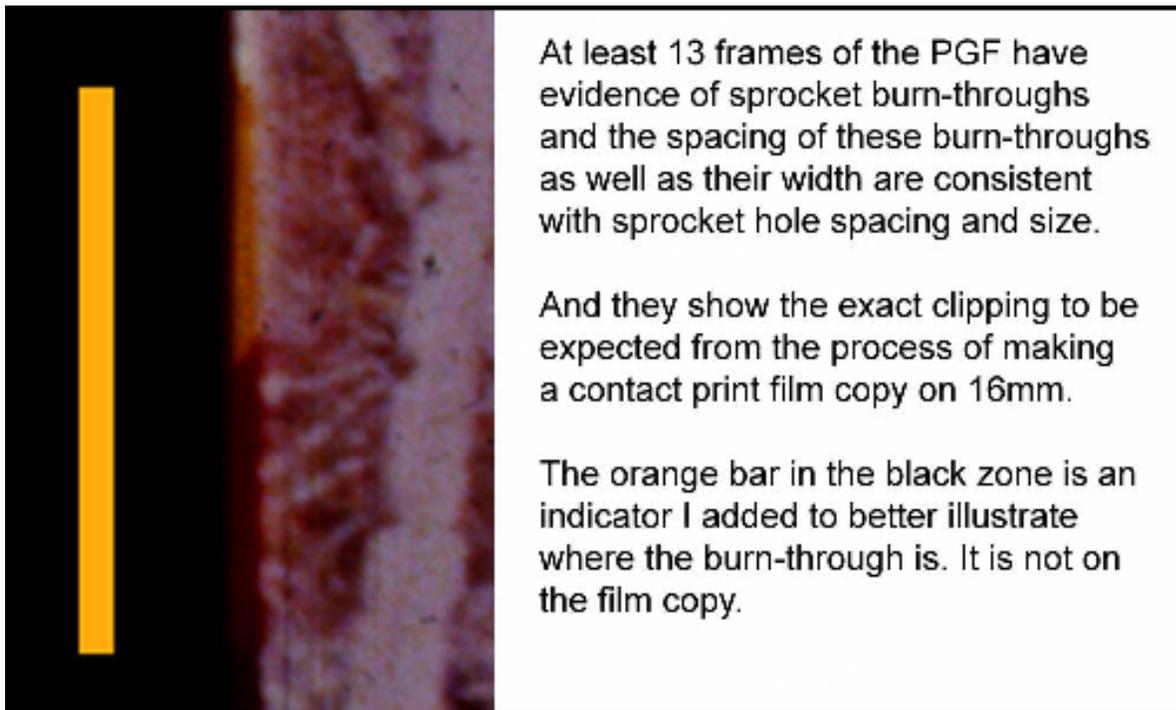
On the one contact print I have scanned, the remnants of the sprocket hole burn-through are seen as well. The chart below shows the general indications of such.

On a camera original film version, the sprocket burn through effect is like what you see below LEFT, If a contact print copy is made, the blue margins (below, second left) are masked off. But a thin remnant of the sprocket burn-through remains. That is what we see on a contact printed copy of the PGF, as shown here, and shown expanded below.

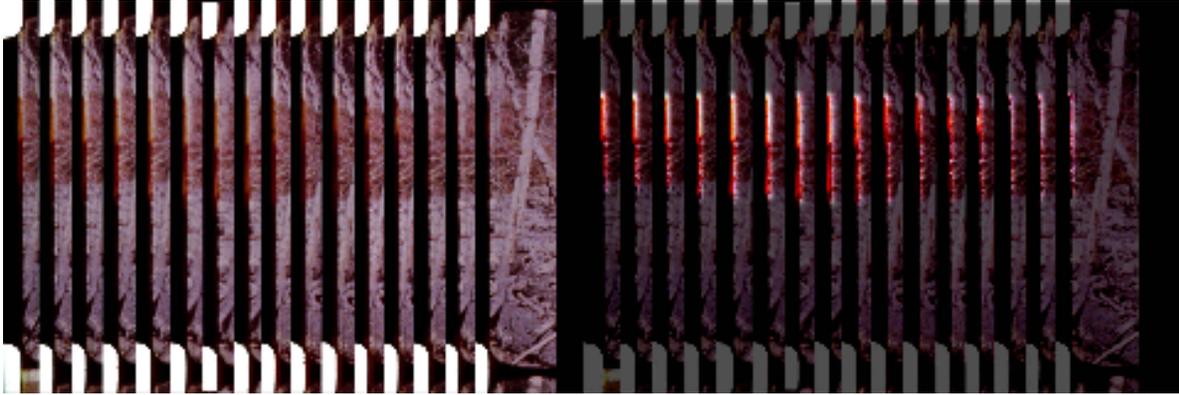


PG Film for Research Purposes Only Copyright. 1967 P. Patterson

Now enlarging the portion of the PGF where one sample sprocket burn is evident, the enlargement below shows it in greater detail.



Finally, 13 frames were put in sequence with the small remnant of the sprocket flare visible, and you can see the flare is in the same place even as the image content shifts somewhat from the hand held camera motions. At left, below are the actual frames, and at right, the color has been adjusted to highlight the orangish burn effect.



The combination of the washout edge effect, and the remnants of several sprocket hole burn through effects on the very end of the PGF show reasonable evidence that after the PGF Bluff Creek sequence was filmed, the camera was opened and the film roll was removed, the presumption being to change to a new fresh roll of film for more filming.

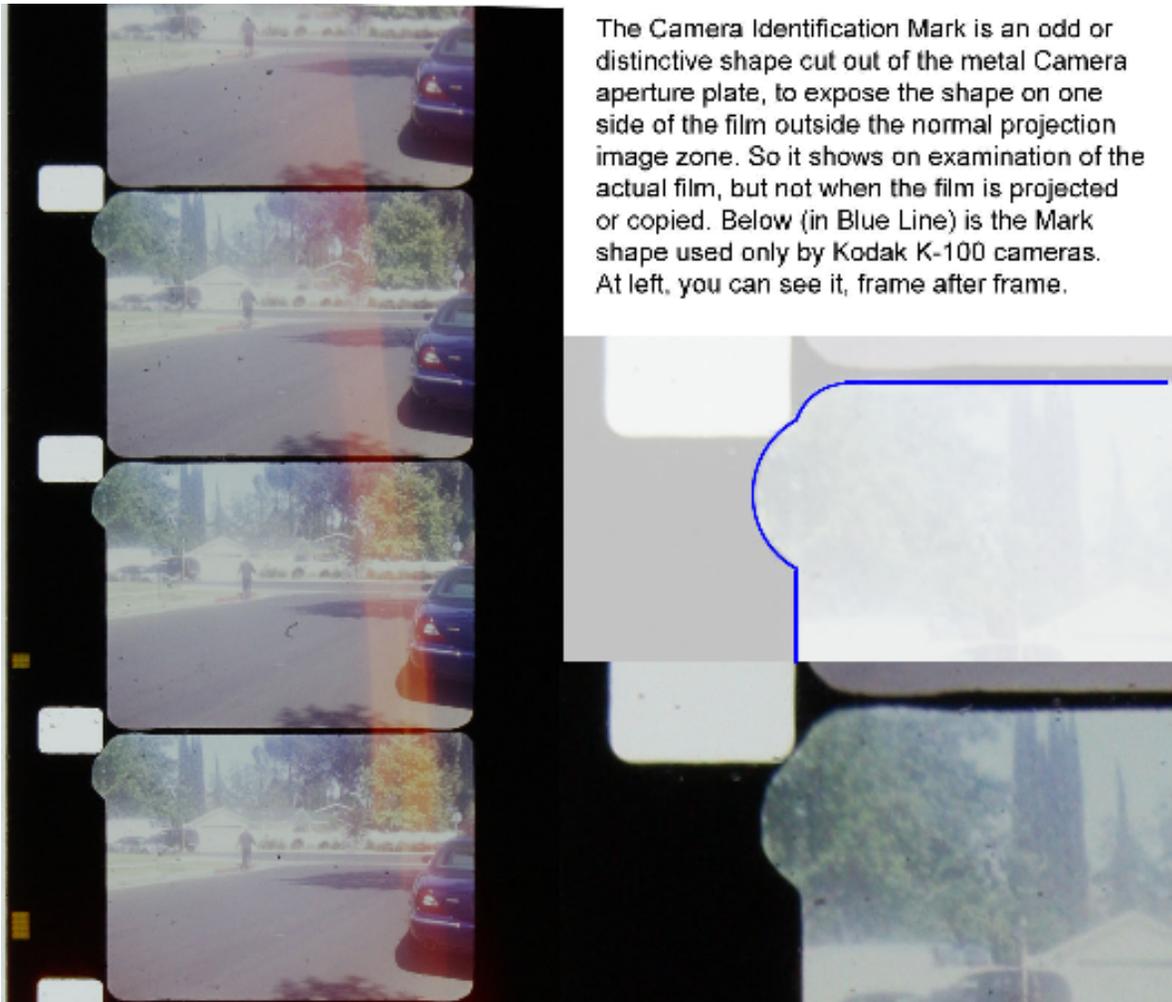
The washout pattern also shows a progression of increasing washout that makes it reasonable to presume the next frame after F953 was even more washed out, and the decision to cut the film off at that point was a reasonable and arbitrary decision to remove any ending footage that was simply too washed out to have any research or illustrative value. So any suspicion that there might be additional footage after frame F 953 showing things of any analytical value is a baseless suspicion.

B. Camera Type

There have been occasional claims or theories that more than one camera was used, or that the camera was not a Kodak K-100 camera as generally described. But back at that time, companies making 16mm film cameras put distinctive shaped cutouts on the metal aperture plate of their cameras, with an agreed code that each company's shape was used only by them, so that a person could look at exposed and developed camera original film and determine what make and model of camera took that film. This Camera Identification Mark is on one side of the picture in the sprocket zone and does not show when a film is projected. Also, it is usually masked off and lost in film copies.

The Kodak K-100 camera have a semi-circular shape in the upper left margin of the film frame, right below the sprocket hole, as their distinctive shape. I filmed some tests with this camera, and so I have some original film showing the mark clearly.

The faint orange streak in the film example I am showing is part of the end runout washout effect, because this scan is one of those I used above to illustrate camera runouts and the frame light washout effect (above, in this report). But it clearly shows the Camera ID Mark, so it serves as a good example of this.



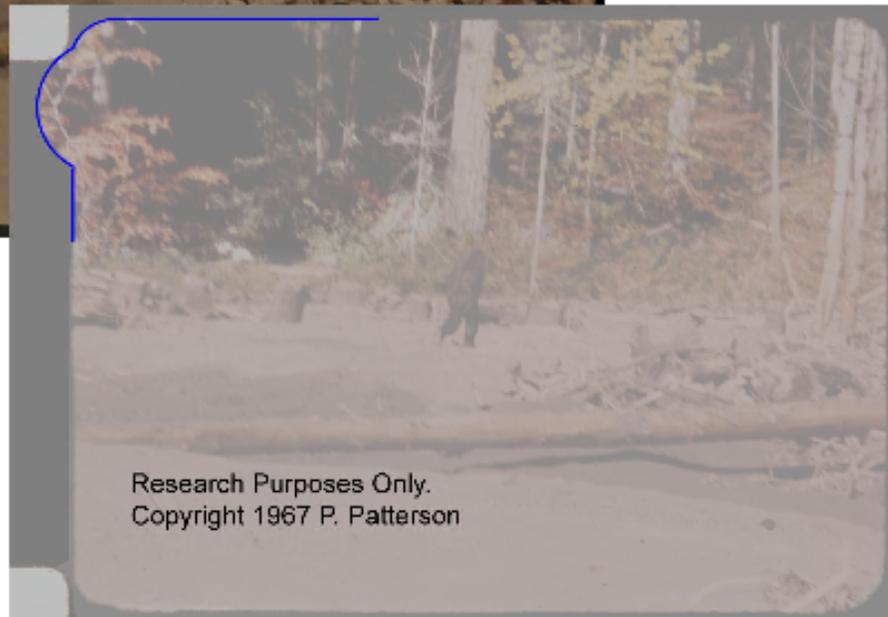
The Camera Identification Mark is an odd or distinctive shape cut out of the metal Camera aperture plate, to expose the shape on one side of the film outside the normal projection image zone. So it shows on examination of the actual film, but not when the film is projected or copied. Below (in Blue Line) is the Mark shape used only by Kodak K-100 cameras. At left, you can see it, frame after frame.

On the PG Film, everything we watch today is a copy, and no copies have the mark intact. Even a true contact printed copy will only have a faint remnant of the notch and an optically printed copy has none of the notch remaining. See my Report Release 1A document for a more thorough explanation of this, why a contact print copy is different from an optical printer copy.

Thankfully, Mrs. Patricia Patterson does possess some 4x5" transparencies taken from the true camera original, and the way they were made, they show the camera identification mark complete and intact. So these transparencies do confirm beyond any doubt that the camera used for filming the PG Film was indeed a Kodak K-100 camera. The diagram below illustrates this.

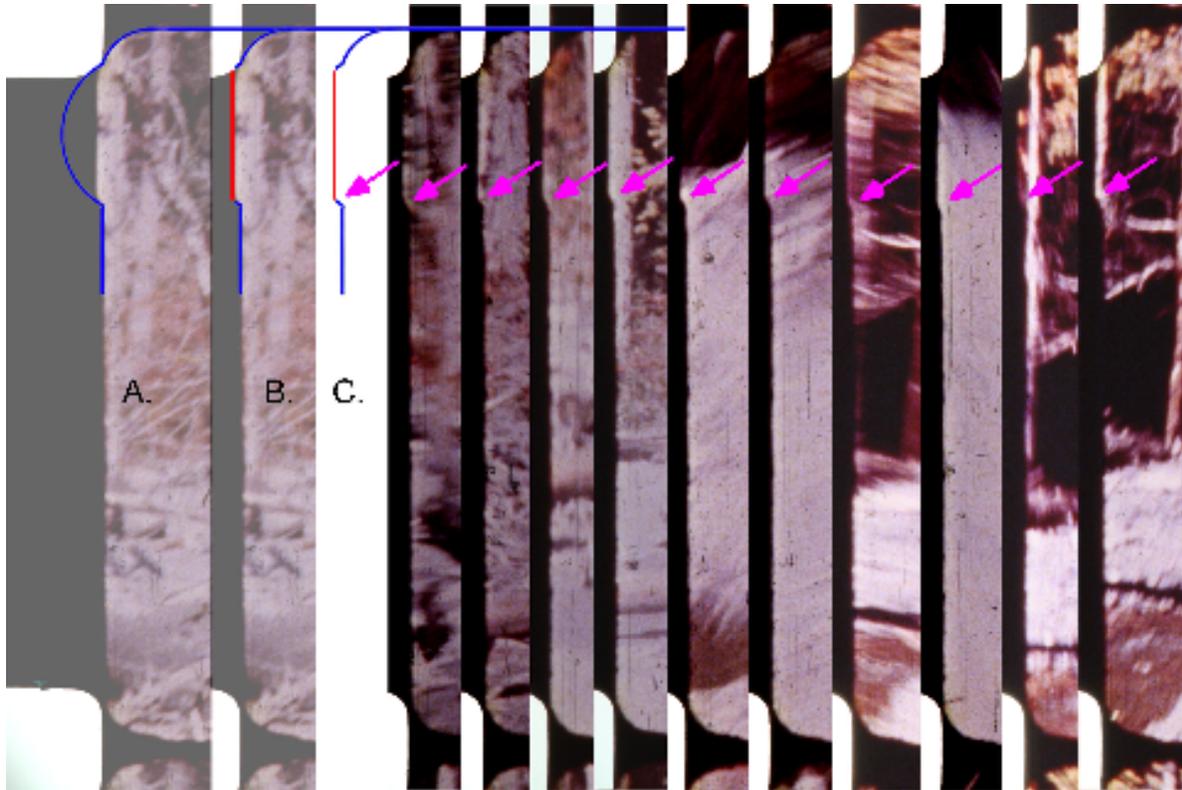


This is one of only a few images taken from the true camera original and copied in a way to verify the Kodak K-100 camera identification mark. Left is the film frame, and below, in Blue, is an outline of the mark shape for reference.



As noted, copying the film tends to obscure this mark, but it does leave a faint remnant of the notch. On the Patterson Archive Copy I scanned in June 2009, I was able to verify this copy was a true contact print and only a contact print will have the remnant of the camera ID notch still visible.

Sampling various frames throughout the film, I pulled samples from 11 frames which show the remnants of the camera ID notch consistently, as shown below.



Section A (above) shows in a blue line what the original camera mark notch should have been, on the camera master.

Section B (above) shows in a red line what part of the notch area is masked off in the copy process of a contact print (note - an optical print masks off even this remnant).

Section C (above) shows with a magenta arrow the remnant notch, the small deviation in the frame line that angles outward at that point.

The other frames sampled have the magenta arrow pointing to the same notch remnant on their frame lines. These frame samples were taken from segments throughout the film.

This remnant of the notch is seen throughout the copy scanned, and thus confirms that ONLY a Kodak K-100 camera was used to film the PGF. No other type of camera was used. We can say this with a certainty.

C. Missing Footage Concerns

Missing first reel footage - This is a subject still under investigation, but some researchers do have film archives that include footage generally regarded as "First Reel Footage". I can personally verify that John Green has some of this footage because I have scanned select frames

from one of his copies. So if a full inventory of film material from all the major researchers can ever be done, we may find that all the reported missing first reel footage is in fact existent, just disorganized.

So this issue is still an effort in progress.

Second reel footage - The same challenge faces us in the matter of what was on the second reel. The trackway footage is generally regarded as part of the second reel, and I have scanned 202 frames of that. Rene Dahinden' was reported to have a longer segment of the same sequence. So, in the matter of second reel footage, some is known, and copy inventories need to be studied to see how much second reel is still around.

Claims there is anything suspicious about the reel footage being chopped up, with segments on various copies, this is an imagined suspicion moreso than one with merit. In all likelihood, the footage was simply not deemed to be as important as the PGF Bluff Creek segment, so only that segment was copied for most presentation copies. People back then, making copies, could not have anticipated, 40 years later, who would want to see the intact camera original, or claim it suspicious if they could not see it intact. So there is no basis for suspicion about this issue.

D. Claims of other rolls or footage

Claims that something is missing (when such never were proven to exist in the first place) is a common argumentative tactic to simply cloud the issue and muddy the water, figuratively speaking. First, there's no proof such extra footage or rolls exist. Second, given we don't know if such exists, we cannot make any assumption of what they might contain or show if they were proven to exist.

So this topic is a non-issue for me personally. I leave it to others to argue.

There is a corollary issue, where some researchers apparently have confused footage from an investigation at Blue Creek Mountain, not far from Bluff Creek, in August, 1967 (two months before the PGF was taken). This was investigated by John Green and Rene Dahinden.

The claim being made tries to say this footage is actually from Bluff Creek and is somehow connected to the PGF Filming, as additional footage.

I personally have not seen any evidence to give credibility to this claim, and so I do not endorse it in any way. But other researchers are giving this issue far more time than I can, and if you have interest in this discussion, you can find some fine analysis work on why the idea had no merit.

E. Claims the filming was on another day

Claims that the filming was not on October 20, 1967, but instead was on an earlier day, generally stem from what is called "the Timeline Controversy", the question of how the film was processed on a Saturday to be viewed on Sunday, Oct. 22, 1967, two days after filming was reported on Friday, Oct. 20.

I've looked into the matter and for me, personally, the discussion is a non-issue. I have no expectation it will ever be resolved, because some potential explanations require a process which is inherently undocumented, and thus essentially unprovable. But there simply are ways the processing timeline could be accomplished, even if not exactly as described (and critics seem to hang on the narrowest definition of words and recollections struggling to find discrepancies they can inflate into "red flags").

But regardless of how it stands or may be resolved, even if the filming occurred on another day, nothing about that changes the actual film image or the data we can extract from the film images. Nothing about a claim of filming day errors changes what I see in the film, and so any such claims simply have no empirical weight in the analysis I am doing.

The film was taken on a day in the Autumn of 1967, and the film was processed. Which day, and how the processing was done, these are truthfully details of no impact to the actual image data. They are just fodder for claims of "suspicion" and wishful thinking about "red flags" to hang claims of hoax on. It is simply unfortunate these claims of "suspicion" do muddy the water, so to speak, and make noise which interferes with the factual analysis of image data.

I personally have ceased to investigate this issue, and consider it a non-issue as it stands. If something substantial is revealed in the future, I may reconsider it, but for now, I don't see a solution or any impact on the film analysis worthy of further discussion. Others will continue to argue this, no doubt. I don't plan to be one of them.

Photogrammetry Analysis

In essence, a photogrammetry analysis takes multiple photos (or still frames scanned from the filmstrip) ideally representing various camera positions and angles but containing common landscape elements. With several camera angles on common objects (like trees with distinctive markings), it is technically possible to calculate the proportional or positional relationship between those objects and the various camera positions, effectively reconstructing the physical site in a digital model. This reconstructed digital site model has the potential to locate all the landscape objects, locate any subjects seen in the images, locate the camera positions, and determine the camera lens focal lengths.

Then, some real world measurements need to be introduced into the model, to scale it in terms of actual physical measurement. If this can be done, then the model can be used to measure distances from any two specified points or objects.

This will potentially allow for a reliable location of Patterson's camera, a reliable location for Patterson's Filmed Subject (PFS) and a reliable measurement of distance from camera to subject. That distance, plus a confirmation of the lens focal length used to film the PGF, can then be used to calculate subject height, and thus we can reliably determine how tall Patterson's Filmed Subject (PFS) is.

Reason for analysis: Currently, when analyzing both the PGF and Green's filming of McClarin re-enacting the PGF walk, the filming facts about the cameras lenses, measured distances, and size of the Patterson Filmed Subject (PFS) as compared to the trackway footprints, when considered as a whole, create an impossible contradiction where one of the elements must be in error, but finding the error requires a solution using the technology of Photogrammetry. To help you understand the problem, let's start with the factual matters generally assumed to be true and correct.

If we assume from the start (and I have bold emphasized the essential phrase in each):

A. - that when Roger Patterson (by all known camera rental documentation) filmed at Bluff Creek in October 1967 and John Green (by his recollected testimony) filmed Jim McClarin at Bluff Creek in the summer of 1968, **that both men had a 25mm lens on their cameras,**

B. - **that Roger is a few feet in front of John's position** (as evidenced by the comparison of various near and far objects common to both films and the analysis of these objects' proportions),

C. - **that John is where his measurements say he is** (with the tree designated as TC-2 being 115 feet away from him),

D. - **That McClarin is 6' 5" tall, in shoes, and he is 438 pixels high**, in a scan frame scaled 3000 pixels high, for a scale of 1 pixel equals 0.0001" and 438 pixels equals 0.0438", McClarin's image height at TC-2, based on a true frame height of 0.300"

E. - that the Patterson Filmed Subject (PFS) **did indeed make the trackway** found at the site and leave footprints measuring 14.5" long,

and

F. That in McClarin's re-enactment, **he walked the same path as Patterson's filmed subject** and thus was the same distance from camera (within a few feet, because the two camera were a few feet different in position)

then the combination of all these conditions **creates an impossible solution** (resulting in a determination that one or more of the above assumed facts must be wrong). The impossible solution is determined by the following method:

The applied optical lens formula (to solve for subject distance from camera, explained in detail in my original Report Release material) determines the following: McClarin's known height of 77" (6' 5") tall multiplied by 1" (focal length) divided by his size in frame (0.0438") equals 1757.99 inches, or 146.49 feet, his calculated distance from John's camera. Margin of error is mainly in the size estimate of McClarin in the film, and an estimated 4 pixel error would be a 1% margin of error. There is also a 1.6% margin of error in the ambiguity of a 1" lens also being referred to as a 25mm lens, because 1" equals 25.4mm.

Thus, by the above calculations, McClarin is about 146 feet from John's camera passing tree TC-2, but that tree is 115' from John (by his measurements), making McClarin about 31' back from

that tree (based on his known height, size in frame, and the assumed 1 inch/25mm lens spec). But Patterson's filmed subject (PFS) is brushing up against tree TC-2 because of the shadow on her back, placing her about 115' from Roger's camera (which is a few feet closer than John's to that tree), or about 30 feet closer than McClarin to the filming camera. This discrepancy of distance is 20% of McClarin's calculated distance, far more than the above margins of error even combined, to account for this. So the process must yield a conclusion the Patterson Filmed Subject is substantially closer to camera than McClarin. This then calculates the Patterson Filmed Subject (PFS) to be about 5' tall (approximately 20% shorter than McClarin)

But something is wrong with the above assumptions and calculations, once the trackway data is integrated with it. A subject of that height cannot make strides with 41" steps, using the walk postures shown in the film, and having a height of 5' or less. To determine that, we take the segments of the walk in profile, and measure the image distance the subject's body travels through one full stride, as compared to the subject's height in frame. If we have a calculated height, we can then calculate the forward travel proportionately, and that is the stride or two step distance. Doing so tells us how long a step the subject takes, based on a specified height.

An Estimation of height as compared to Stride. The subject's height as posed, was estimated by comparing an earlier frame showing the full leg and foot. The magenta horizontal bars represent an approximation of height as posed. The green vertical bars represent the forward motion the subject moves in 24 frames, an approximation of one stride, two steps.



A two step stride from frames VFC 341 to 365 moves the body forward less than one full body height, determined by cropping the above image of the PFS at left so the magenta lines are top and bottom, and the green lines are left and right borders. That crop resulted in an image 644 pixels wide, and 794 pixels high. This suggests the subject moved forward only 81% of its body height as posed taking two full steps forward. Based on this, if the body is only 5' tall, the full two step stride is no more than 48.6 inches, and a single step is only 24.3 inches, a far cry from the claimed 41" the trackway shows.

And there are no frames of the film which reliably show a foot as being 25% of body height, as a 14.5" foot would be compared to a body less than 5' tall.

So, potentially the PFS (Patterson filmed subject) as calculated above in height, cannot be reconciled with the trackway data and the McClarin footage. This essentially contradicts some aspect of all reports and current conclusions, and would null out the prospect of the subject making the footprints found at the scene. Finally, it is John Green's testimony that when he filmed McClarin, some evidence of the trackway was still intact and that McClarin walked the same path. This contradicts the calculation herein that Patterson's Filmed Subject (PFS) is about 30 or more feet closer to camera than McClarin's path. So this too is a contradiction which must somehow be reconciled.

In summation, something about the above six base assumptions is substantially wrong, and the goal is to determine where the error is.

But at this point, all we can do is restate the basic assumptions, and face the fact that at least one (or more) of the following MUST be wrong:

- A. - The reported 25mm focal length of the lenses on Green's and Patterson's cameras
- B. - The calculation that Roger is a few feet in front of John's camera position.
- C. - The site measurements of John Green which calculate his camera position as being 115' from the tree designated as TC-2
- D. - The height of Jim McClarin
- E. - The assumption the Patterson filmed subject (PFS) made the trackway with 14.5" footprints
- F. The report that McClarin walked the same path as Patterson's filmed subject.

The question is, which one or one's are wrong? A Photogrammetry Solution is the best plan of action to answer this question. So the goal of a photogrammetry solution is to determine what is wrong, and to do so, we must re-examine all options and reconsider all facts related to the filming, as well as solve the photogrammetry solution of the site.

The current challenge is that the Photogrammetry Solution requires funding, because of equipment rentals or purchases, film stock purchasing and processing, and software purchasing and possibly retaining skillful software users to perform the analysis procedures with full documentation of process and result. There is also a substantial expenditure of time and effort, and issues of compensation for the persons involved.

Other people may undertake this effort. There is certainly no necessity that I personally do it. Indeed, I would welcome the effort by another person who would make an effort to resolve this for the betterment of the film's final analysis. In the absence of such a person, I will continue to make the effort, but the funding support currently is lacking and progress is limited by that circumstance. I will continue to explore options to resolve this and achieve a Photogrammetry Solution to this problem and the film's analysis.

Splicing Controversies

Claims have often been made that the PGF is spliced, but no verifiable splicing consistent across all copies has been shown to justify claim of splicing of original, except on start or end, where a few frames might have been trimmed. Claims are often made, but no evidence has been offered that can be studied formally.

Splices do exist on copies, but some people confuse this with splices on the original. They simply say "The Film has been spliced", but by failing to make a distinction between copy and original, they create confusion rather than enlighten us.

As an example, another researcher sent me a frame clearly showing the mark of a splice. I went through my inventory and verified it was VFC frame 490. I then pulled this frame from one of the scan sets I have, and compared them. As you see below, the inventory frame (on the right, below) doesn't have the splice mark on it (seen on the left, below).

To examine evidence of splicing, we must compare various copies of the film, in the same frame. Another researcher sent me the frame below left, with a splice mark. I identified the exact frame and verified other copies have no such splice marks (shown right), indicating the splice was done to a copy, but not to the original.



We can conclude that this splice was to a copy only, and not on the original, and thus has no research value as evidence of anything about the original film or filming.

I have not seen any splice claim or evidence so far, in two years of research, which would give merit to a claim the camera original was spliced at all, other than the usual process of connecting leader to film or editing a PGF copy into other footage for some kind of presentation purpose, TV programming or such. I welcome anyone with such claims to send me a copy of any suspicious frames for analysis through this system.

Specific Image Anomalies

One Example of an Image Anomaly - claimed gunshot "Muzzle Flash" -

The inventory system I have endeavored to put together has special research value in sorting out image artifacts and anomalies so that we may better know if we can rely upon them for our research analysis. Many claims are made by various people about what they see in the film, some of these claims being valid, others frivolous or erroneous. So a system of sorting out which claims have merit is vital to the ongoing research effort.

One specific claim that recently has gathered a fair amount of attention is a claim of finding a flare of light in the film that could be attributed to a gunshot "muzzle flash", supposedly evidence of a gun being fired as the PGF was being filmed.

In the chart below, the top line of three frame images is what has been offered as evidence of the muzzle flash, with white arrows pointing to the flash location. The text "Damaged Film" was on the image as I received it.

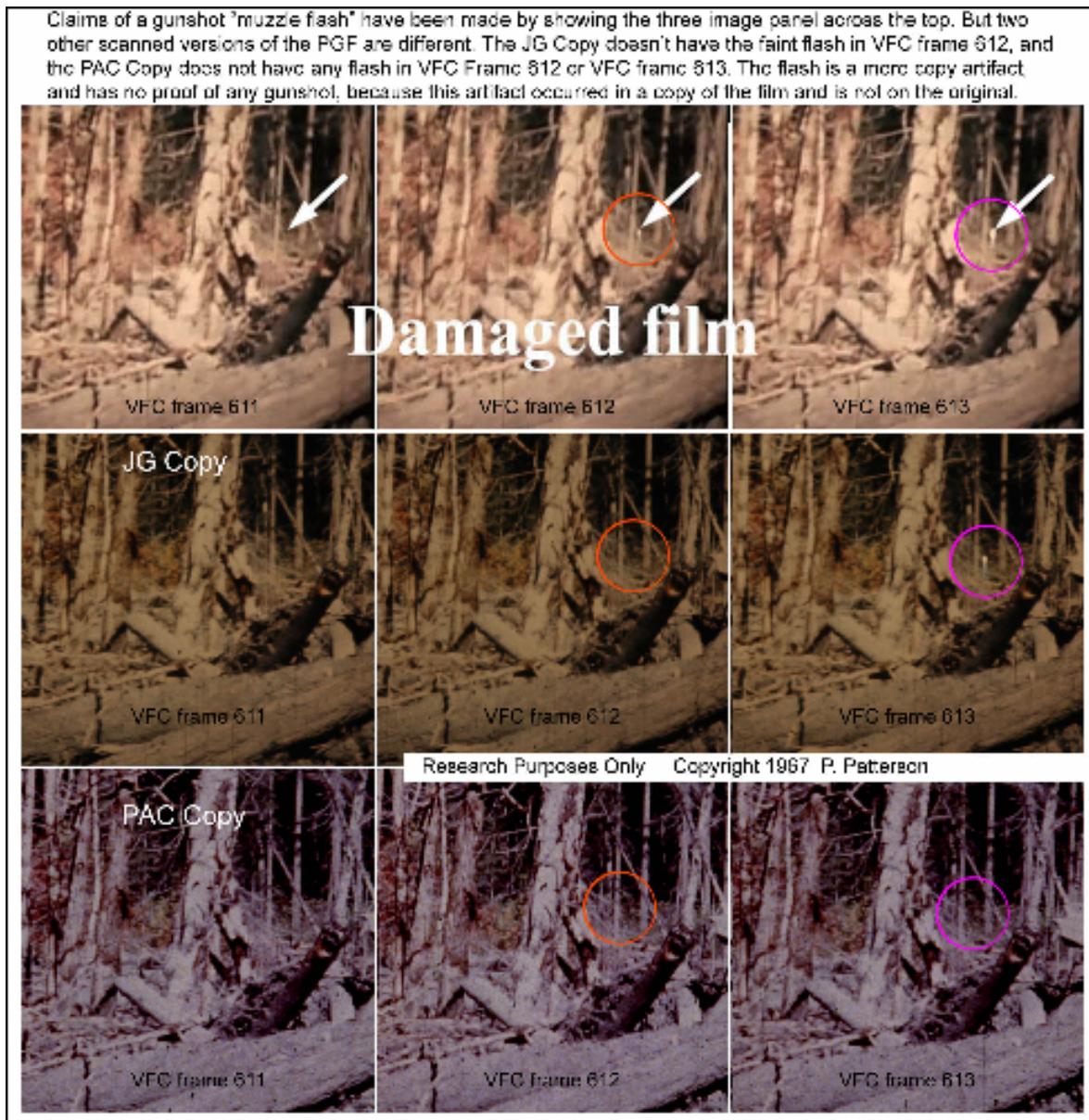
Below that are two more panels of the same three frames, from two copies of the film I personally have scanned. The Verified Frame Count "VFC" of these three frames are 611, 612, and 613.

In the JG copy (second row) the strong flash in VFC 613 is there, but the weak flash in VFC 612 is not.

In the PAC copy, there is no flash in either 612 or 613.

If an image element is not on all copies, we can reasonably deduce that it was not on the camera original, and thus did not occur at Bluff Creek the day the filming was done. Such anomalies which occur on only some copies are simply a flaw introduced in the copy process, and thus have no merit as a research issue.

The chart showing the "Muzzle flash" claim, and the reasons why the claim has no merit.



So this new system of being able to verify actual frame numbers for any given frame, and compare copies to determine if an image element is consistent across all copies, is a valuable research tool to assist in our effort to separate fact from fiction.

PFS Issues for Authenticity

Part Two of this Report Segment will discuss the Filmed Subject specifically, and my analysis of why I feel the subject we see walking through the Bluff Creek location is something real, and not a human in a fur costume performing a hoax.

This Part Two is on a separate PFD file available from the Report Website.

Compiled by Bill Munns December 13, 2009