

A Qualitative Bio mechanical Analysis of the Locomotive Movement of the Subject of the 1967 Film Footage

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Recently Roger Knights searched for Donskoy's very positive analysis of the Patterson film, as he wished to quote it in a discussion. He searched Google, but found only one version, on the www.cryptozology.com site. But that version omitted 50% of the text (in the middle). They may not be aware of this, as the text breaks and resumes in the middle of sentences that don't fit together. Someone may have inadvertently deleted a block of text at some point. Anyway, Roger Knights went to the two books that have Donskoy's piece (Byrne's & Hunter/Dahinden's) and scanned them in. He then took the best from both versions, and added some improvements of his own. (Fixing some awkward-sounding translations.) The results of Roger's work follows. This document is also published in Peter Byrne's book, "The Search for Bigfoot, Monster, Myth or Man." Published in 1975 and 1976 on pg 152. ...Bobbie Short, January 5, 2004

"As a result of repeated viewings of the walk of the two-footed creature in the Patterson film and detailed examination of the successive stills from it, one is left with the impression of a fully spontaneous and highly efficient pattern of locomotion, with all the particular movements combined in an integral whole that presents a smoothly operating and coherent system.

In all the strides the movement of the arms and of the legs are well coordinated. A forward swing of the right arm, for example, is accompanied by that of the left leg. This is called cross-limb coordination and is a must for man, and is natural in many patterns of locomotion in quadrupeds (in walking and trotting, for instance).

The strides are energetic and big, with the leg swung far forward. When man extends the leg that far he walks very fast and thus overcomes by momentum the "braking effect" of the virtual prop that is provided by the forward leg. Momentum is proportional to mass and speed, so the more massive the biped the less speed (and vice versa) is needed to overcome the braking effect of the leading leg in striding.

The arms move in swinging motions, which means the muscles are exerted at the beginning of each cycle, after which they relax and the movement continues by momentum. The character of the arm movements indicates that the arms are massive and the muscles strong.

After each heel strike the creature's leg bends, taking on the full weight of the body and smoothing over the impact of the step, acting as a shock-absorber. During this phase certain muscles of the leg are extended and become tense in preparation for the subsequent toe-off.

In a normal human walk such considerable knee flexion as is exhibited by the film creature is not observed; it is practiced only in cross-country skiing. This characteristic makes one think that the creature is very heavy and its toe-off is powerful, which would contribute to rapid progression.

In the swinging of the leg, considerable flexion is observed in the joints, with different parts of the limb lagging behind each other: the foot's movement is behind the shank's, which is behind the hip's. This kind of movement

is peculiar to massive limbs with well-relaxed muscles. In such a case the movements of the limbs look fluid and easy, with no breaks or jerks in the extreme points of each cycle. The creature uses to great advantage the effect of muscle resilience, which is hardly used by modern man in the usual conditions of life.

The gait of the creature is confident, the strides are regular, and with no signs of loss of balance, of wavering or any redundant movements. In the two strides during which the creature makes a turn to the right, in the direction of the camera, the movement is accomplished with the turn of the torso. This reveals alertness and, possibly, a somewhat limited mobility of the head. (True, in some critical situations man also turns his whole torso and not just head alone.) During the turn the creature spreads its arms widely to increase stability.

In the toe-off phase the sole of the creature's foot is visible. By human standards it is large for the height of the creature. No longitudinal arch typical of the human foot is in view. The hind part of the foot formed by the heel bone protrudes considerably back. Such proportions and anatomy facilitate the work of the muscles, which make standing postures possible and increase the force of propulsion in walking. ***Lack of an arch may be caused by the great weight of the creature.*** **

*****The above emphasis was Rene Dahinden's...compare this statement with the findings of anthropologists Grover Krantz and of the two Russians, Dmitri Bayanov and Igor Bourtsev in Chapter 9 of Dahinden's book, "Sasquatch" in the 1993 revised edition. Each of these three sources arrived at the same conclusion totally independent of the others.***

The movements are harmonious and repeated uniformly from step to step; harmony is provided by synergy (the combined operation of a whole group of muscles).

Since the creature is man-like and bipedal, its walk resembles in principle the gait of modern man. But all its movements indicate that its weight is much greater, its muscles especially much stronger, and the walk swifter than that of man.

Lastly, we can note a characteristic of the creature's walk that defies exact description: expressiveness of movement. In man this quality is sometimes manifest in goal-oriented sporting or labor activities, and leaves the impression of the economy and accuracy of movement. An experienced observer can note this characteristic, even if he does not know the specifics of given activity. "What need be done is neatly done" is another way of describing expressiveness of movement, which indicates that the motor system characterized by this quality is well adapted to the task it is called upon to perform. In other words, neat perfection is typical of those movements, which through regular use have become habitual and automatic.

On the whole the most important thing is the consistency of all the above-mentioned characteristics. They not only simply occur, but interact in many ways. And all these factors taken together allow us to evaluate the walk of the creature as a natural movement, without any signs of artfulness that would appear in intentional imitations.

At the same time, despite the diversity of human gaits, such a walk as is demonstrated by the creature in the film is absolutely non-typical of man."

It is important to remember that Dr. Donskoy is neither a Sasquatch hunter nor an anthropologist. He was

an "expert" in biomechanics and his analysis of the Patterson film was made purely from the principles of that discipline.

The above text was taken from the book titled: "*Sasquatch*" by Don Hunter & Rene Dahinden, revised edition published in 1993 on pages 201 - 204.