ARTICLES FROM THE SASQUATCH AND OTHER UNKNOWN HOMINOIDS

Edited by Vladimir Markotic; Grover Krantz, Associated Editor

Two Soviet authors, and one Canadian author, recount here the highlights of their own and other scientists' analyses of purported Sasquatch footprints. There is less than total agreement as to the detailed anatomy of the foot, but the broad outline is clear: all find the footprints to be real. This analysis stresses the design of foot needed to support and propel a massive body in a wild environment. The foot anatomy suggested by the many footprints is consistent with this design, and could not have been systematically faked over many years and over vast areas.

A point stressed by the Russian authors is the similarities found in the foot bones of Neanderthals. The same kind of adaptations would be expected in each case where a relatively heavy-set body walks on two legs. Whether there is any closer relationship between Neanderthals and the Sasquatch, or similar creatures, remains a point of controversy. While the Russians see in these beings a living and surviving Neanderthal, most Americans see a surviving, more ape-like *Gigantopithecus*. Another possibility is two different species.

This article should be read in conjunction with the authors' other article, "Analysis of the Patterson-Gimlin Film, Why we find it Authentic."

The two were submitted as a single item, but were separated by the editor for this book.

EYEWITNESS REPORTS AND FOOTPRINTS: AN ANALYSIS OF SASQUATCH DATA

by
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To be scientific, an analysis must be profound, comprehensive and systematic. The specifics of our material suggest that we match it with the evidence of paleoanthropology. Both the sighting reports and the Bigfoot film present a creature which, judging by its appearance, occupies an intermediary position between ape and man, and since science is in possession of fossils of such creatures whose outward features and movements have been surmised or reconstructed, it stands to reason that we compare our evidence with these data. Logic demands that we undertake a comparative analysis of our material to see if it satisfies, both in parts and as a whole, the following three criteria:

1. Distinctiveness
2. Consistency
3. Naturalness

Distinctiveness implies uniqueness, originality, difference from everything else. Consistency means coherence, absence of contradictions. Naturalness stands for things natural as opposed to artificial or man-made.

We agree with those who say that the hominoid problem can finally be solved only through the presentation of physical evidence, be it a live or dead specimen, or its skeletal parts. What needs to be stressed, however, is that science can only solve those problems which it is prepared to solve. In their day, luminaries of anthropology rejected or doubted the real nature of Neanderthal and *Pithecanthropus* fossils because they were not conceptually prepared for those discoveries. The Piltdown case, on the other hand, shows that even "hard evidence," i.e. skeletal material, can be falsified.

Thus, an eventual delivery of traditional zoological material in hominology will resolve the hominoid problem not just by virtue of that fact alone, but also because science will have been prepared to accept the discovery by the entire course of the research, including hopefully, this paper.

Eyewitness Evidence

The role of the witness is often overlooked because it is taken for granted. To prove that this kind of evidence "works" not only in court, we can refer to such disciplines as history (much written history originates from eyewitness accounts), geography (take such witnesses as Columbus or Cook, for example), astronomy (observations in the past centuries of such phenomena as solar eclipses, comets, supernovae), physics (observations of such a rare natural phenomenon as ball-lightning).

Closer home, in zoology, discoveries of a number of species of animals were preceded by eyewitness reports, as was the case, for example, of the giant lizard of Komodo island, or of the mountain gorilla.

Thus noting the legitimacy of using eyewitness accounts in hominology we point out that the credibility of sighting reports is supported by the following considerations: First, the coincidence of descriptions of the creature in question in different places and at different times in the main traits of their anatomy and behavior, coupled with many differences in details occasioned by the particulars of this or that encounter, the differences of age, sex, or local populations of the hominoid.

Second, the coincidence of the creature's descriptions both by the indigenous peoples of this or that region and by the newcomers or new settlers. In North America it is the coincidence of descriptions by the Indians and by the whites.

Third, the stories of encounters with the hominoid by hunters, fishermen, loggers, prospectors and other outdoorsmen, unacquainted as they are with the niceties of human evolution, contain such details of the creature's anatomy which only make sense to a student of paleoanthropology.

Portrait of Sasquatch From Eyewitness Evidence

Physical anthropologist, Grover Krantz, draws the following sketch of Sasquatch from a file of sighting reports he has analyzed:

> Presently available descriptions are a mixture of ape and human characteristics, like a gorilla that walks comfortably on two well developed legs. . . .The adult animal in these reports stand about 2.5 meters tall and probably weighs from 350 to 400 kilograms. . . .The body is covered with hair of 5 to 10 centimeters in length except on the palms of the hands, soles of the

feet, and most of the face. Its legs are the same proportion of the stature as in a man, about half of the total, but the arms are often described as being relatively longer than a man's and especially more massive. The shoulders, over a meter wide, are so well muscled to the base of the head that there is no visual constriction at the neck. The face is flat in a human-like manner, but there the resemblance ends. The nose has little projection and the eyes are deep set under prominent brow ridges. The teeth are sometimes seen and noted as being of human appearance. . . .The color is generally dark brown or black.

Probably no single observer of one of these animals has testified to all of the above characteristics, but some are included in all descriptions, and most of them have been repeated hundreds of times (Krantz 1983:in this volume).

Appraisal of Eyewitness Evidence

Distinctiveness. Sasquatch, as described by eyewitnesses, is an original figure, not to be confused with any other creature. It is not a human being, that is, at least no modern man, *Homo sapiens*, for it is too ape-like for that. Nor is Sasquatch an ape, for it is too man-like for that. Nor is there need to argue that it is not a bear or any other well known animal.

Consistency. Hundreds of reports by observers of North American hominoids, collected over a period of more than a hundred years, "hang together" to form a coherent and impressive picture.

Naturalness. We can put forward the following arguments for the naturalness of Sasquatches.

1) There is nothing unnatural about their physique from the naturalist's point of view. If the hominoid, such as the Sasquatch, had a tail, or horns, or hoofs, that would be unnatural.

2) They appear in two sexes and in different sizes, corresponding apparently to different age groups, which is as it should be in a natural population.

3) The reaction of domestic animals, such as dogs and horses, to the Sasquatch is very special and characteristic, the like of which is never displayed in front of humans in disguise.

4) They leave various traces and signs of their presence in nature as one would expect of natural creatures: odors, hairs,

leavings, droppings, lairs, and above all tracks which we will discuss later on.

5) The contrast between the "dramatic" appearance of a Sasquatch and his so frequently undramatic or simply modest behavior in the presence of humans betrays a natural being eager to keep out of trouble.

6) There is good reason to believe Sasquatches to be natural beings because the existence of similar "ape-men" is well known to science from the fossil record.

Thus on all counts, the eyewitness evidence has every right to be included in the Sasquatch case.

The Evidence of the Footprints

In a detective story like this one, witnesses are fine, but footprints are even better. Indeed, it is hard to imagine what would happen to all that fine testimony by the winesses if Sasquatch did not stand on feet big enough to leave giant footprints. The point is simple enough: if the purported witnesses were not day-dreaming or spinning tales, if they really happened to see something peculiar, big and material, standing or walking on the ground, then sometime, somewhere this something is bound to leave tracks for anybody to see and photograph. And this has been going on for a long time in North America. The Sasquatch investigators have assembled an excellent collection of footprint evidence.

Assessment of the Footprints from the Functional and Adaptive Points of View

The toes. These are five in number, from big to small, as in man. But the length of the toes is a matter of controversy. Don Abbot mentions "unduly short toes"; according to Grover Krantz "toes are relatively short", while John Napier says that "the Sasquatch's toes. . .are much longer, more ape-like, than in man" (Napier 1973:121).

In most tracks the toes show a very distinct and characteristic stance: pressed together, their tips pointing downward, they form a perfect arch which leaves in footprints a ridge, sometimes of untouched earth, under all the five toes, of the kind that is never observed in human tracks.

It is this position of the toes that is responsible for the wrong idea that they are short and equal-sized. This is easy to demonstrate with prints made by human hands and fingers.

As for the functional and adaptive explanation of this stance we have to think of the following: the feet must have enough friction on and resistance from the ground to prevent slipping and sliding. The quadrupeds, whose life, by dint of their four legs, is less precarious in this respect, all have either hoofs or claws for the purpose. As for man, making it for the hills he changes his footwear and puts on boots outfitted with spikes. The Sasquatch has only one pair of soles all his life and thus had to adapt his bare feet for the task of successfully negotiating slippery surfaces at different angles which is the everyday terrain of his habitat.

It stands to reason that the most adaptable and most suitable parts of the foot for this purpose are the toes: the Sasquatch walks as if grasping the earth with his feet, and to make the grasp firm and the push-off strong he has to press the toes together, bend them up in an arch, forming a veritable scoop whose forward edge is thrust into the ground. Such adroitness of the toes seems to be as natural and necessary for the creature's survival as the hair on his body.

One logical result of this use of the toes should be the wear of the toe nails and, indeed, we don't detect marks of the nails even in the clearest of Sasquatch footprints showing imprints of the toe tips.

Lastly, we would like to mention that an increased mobility of the toes, especially in the upward direction, is noted in the Kiik-Koba Neanderthal foot in Crimea (Bonch-Osmolovsky 1954:171).

The metatarsal region. This part of the Sasquatch footprint is distinguished from that of a human imprint on an unyielding surface by two characteristic features: 1. It is relatively wider than in man and bulges out both on the inner and outer sides of the foot (whereas in man only on the inner side). 2. It shows the so-called double ball (Green 1968:30; 1973:31). The latter feature will be discussed a little later and as for the former, to understand its function we have to look at a set of tracks showing the peculiarity of the creature's striding (Green 1968:1; 1973:50, 52, 53).

A man normally walks with his feet pointing outward, while a Sasquatch walks with his feet pointing straight ahead or even turned in a little. It means the creature's enormous feet find no trouble walking paths which will be to narrow for the feet of his tiny civilized brother.

Placing his feet in a line while striding, the Sasquatch needs some device to prevent swaying sideways. Hence the unusual

widening of the feet, especially in the metatarsal region, as an anatomical means of coping with the problem (plus swinging and balancing with his long and heavy arms as a biomechanical auxiliary to the same). Human feet being not as wide as in the Sasquatch, humans cope with the problem by turning their feet out.

The metatarsal area of the Kiik-Koba Neanderthal foot is also much wider than in modern man, with the fifth metatarsal, and especially its proximal end jutting out in quite an inhuman manner. As for the length-to-width ratio of the Kiik-Koba fossil foot, there are closely matching examples among Sasquatch footprints.

The double-ball feature. In our opinion, this feature is caused by a flexion furrow on the sole homologous to human *plica transversa flexeria hallucis*. This furrow in the human foot leaves no sign of its presence in the footprints. Why is it so pronounced in the Sasquatch that it leaves a noticeable mark in some tracks? It is because the Sasquatch foot has much more mobility in the toes and much more flexion in the metatarsophalangeal joints than the human foot. Besides the function of preventing sliding and providing a reliable push-off in locomotion, the great mobility of the toes in Sasquatch is caused by the apparent necessity for Sasquatch to raise his heels unusually high when taking long strides on bent knees.

This is clear from a comparison with the dynamics of a human foot in cross-country skiing: the skier can only make long steps on bent knees by raising his heels high and bending his toes up sharply in the metatarsophalangeal joints.

Something similar must happen in Sasquatch locomotion, resulting in greater than human stretch of the tissues of the sole in the area of these joints. When, during the heel strike, the toes assume the "grasping" stance, their tips brought closer to the sole, the tissues contract and form a furrow which leaves a mark in the footprint.

The "dynamics theory" of the double ball is supported by the fact that the said furrow is revealed only in footprints with bent toes, whereas if the "statics theory," suggested by Krantz, were correct the double-ball feature would be present in footprints irrespective of toe position, which is not the case.

Finally, it can be remarked that the double-ball feature seems to be doubly correlated with the surmised locomotor habits of the Sasquatch: first with high "activism" of his toes, and second, with

the necessity of highly raising the heels in striding which in its turn correlates with his bent knees and turned-in feet.

The instep region. In a normal human foot this is where the arch of the foot is highest, so it is appropriate at this juncture to mention the question of flat feet in Sasquatch.

We want to stress the flat feet in Sasquatch are quite different from flat feet in man. In tracks on an unyielding surface the difference appears in that a human foot with a flattened arch leaves "waistless" footprints, whereas Sasquatch tracks, despite flat feet have a waist, due to the widening of the metatarsal area. But the main difference concerns locomotion.

In man, flat feet are a pathological condition usually resulting in various discomforts and awkward gait. Anatomists point out that a normally arched foot plays the role of a spring, absorbing or softening shocks in locomotion. People with flat feet have difficulty in running and jumping and, what is especially interesting, tend to turn their feet out in walking more than is usual for people with normal feet.

The Sasquatch, as it follows from available evidence, is a superb walker and jumper, and strides with his feet turned in. Hence flat feet are his natural condition and cause him no complaint. How does he manage to keep his brain, and liver, and kidneys from receiving nasty shocks in his bumpy strolls? Very simple: by always bending his knees.

Apes are flat-footed, and it is agreed in anthropology that the normally arched human foot appeared in anthropogenesis as late as *Homo sapiens*. All human infants have flat arches at birth. The Kiik-Koba Neanderthal foot, which we use for comparison, has a flattened arch, which correlates with the specimen's surmised walking on bent knees.

A supposition can be made that the Sasquatch foot is less rigid than the human foot and that a lifted Sasquatch foot may not be as flat as it looks from some tracks impressed with the whole weight of the body.

The heel. Krantz (1972), using some theoretical considerations and a cast of a track made by the deformed foot of the Bossburg Sasquatch, has reached the conclusion that the heel bone in Sasquatch must not only be relatively wider but also longer than in man.

Krantz's prediction that the heel is lengthened and the forefoot is shortened, which "means the ankle joint must be set relatively farther forward along the length of the foot" (Krantz 1972:96)

seems to us to be theoretically valid and practically confirmed by the Patterson-Gimlin film.

As for comparison with paleoanthropological material, the Kiik-Koba fossil foot graphically illustrates the points made by Krantz, namely, a larger heel bone and the ankle joint set relatively farther forward in comparison with the norm in modern man. The characteristics of this foot are explained as "adaptations caused by the need to support great body weight (Bonch-Osmolovsky 1954:178). The same reason is offered by Krantz to account for the peculiarities of the Sasquatch foot. Since body weight in Sasquatch must be even greater than in fossil Neanderthals, the Sasquatch foot can be supposed to have developed the said characteristics even farther.

Assessment of the Footprint Evidence

Distinctiveness. Even a casual observer of clear Sasquatch tracks *in situ* (and there are plenty of those investigated on the spot by researchers and documented by photographs) cannot confuse them with the tracks of any other animal. Superficially they resemble outsized human footprints, but closer examination and careful analysis show a number of overt and subtle differences from the normal human anatomy and an excellent agreement with certain characteristics of fossil material.

Of special significance is that the footprints not only differ from those of *Homo sapiens*, but indicate a different manner of walking from that of modern man.

Consistency. The footprints indicate a foot which is perfectly adequate and consistent from functional and adaptive points of view.

Naturalness. Objective observers of Sasquatch footprints, such as Don Abbott, for example, have noted "the apparent naturalness" of the tracks (Hunter and Dahinden 1973:42). Their conclusion is based on such arguments as the depth of impressions, their location and range of distribution in space and time. When we add to this the arguments of anatomical, biomechanical and paleoanthropological nature, cited above, the naturalness of the Sasquatch footprints turns from "apparent" to absolute.

Hence our verdict: the photographs and casts of those prints in the North American collection which reveal a number of typical characteristics, such as the bent-up toes with a ridge of untouched soil under them, or, conversely, fully extended toes; the double

ball; the flattened arch coupled with a "waist"—all those represent genuine Sasquatch footprints.

Conclusion from Eyewitness and Footprint Evidence Combined

We find the eyewitness and footprint evidence to be in complete agreement and testifying jointly to the existence of creatures which are:

1. Habitually bipedal.
2. Man-like, i.e., hominoid in anatomy.
3. Larger than man in size.
4. Heavier than man in weight.
5. Met in the wild and adapted to wilderness conditions, such as the cold (hair on the body) or difficult terrain for barefoot locomotion (special adaptations in the anatomy and mechanics of the foot).
6. Characterized by a different walk from man.
7. Both kinds of evidence point out a creature which has many characteristics of primate forms which, in evolution, preceded modern man, *Homo sapiens*.

Hence our general conclusion: North America or, to be exact, its North-West, is the habitat of a species of higher primates distinct from modern man, *Homo sapiens*, and known by the name of Sasquatch or Bigfoot.

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