

## Sasquatch Hair Analysis

Dr. Henner Fahrenbach has analyzed alleged sasquatch hair by microscopy. As of December 2004 he had 20 samples from five states that are congruent in their morphology, but differ in length and color. Reference hairs, necessary for the customary A/B comparison mode of identification, were obtained from two individuals who left them on fresh, twisted-off trees, with the two animals being observed at close range in the immediate vicinity by three people. The hair resembles human hair.

A general summary of hair analysis findings provided by Dr. Fahrenbach follows:

Generally, sasquatch hair has the same diameter range as human hair and averages 2 to 3 inches (5 to 8 cm) in length, with the longest collected being 15 inches (38.1 cm). The end is rounded or split, often with embedded dirt. A cut end would indicate human origin. Hair that is exposed for a long time to the elements tends to be degraded by fungi and bacteria, a process readily apparent under the microscope. Such hairs are routinely rejected and none of the photographed hairs shown here suffer from such defects.

Sasquatch hair is distinguished by an absence of a medulla, the central cellular canal. At best, a few short regions of a fragmentary medulla of amorphous composition are found near the base of the hair. Some human hairs also lack a medulla, but the current collection of 20 independent samples with congruent morphology effectively rules out substitution of human hair.

The cross-sectional shape and color of sasquatch hair is uniform from one end to the other, in keeping with the characteristics of primate hair in general. There are no guard hairs or woolly undercoat and the hair cannot be expected to molt with the seasons. Hence, hair collections are invariably sparse in number.

Despite a wide variety of observed hair colors in sasquatch, under the microscope they invariably have fine melanin pigmentation and a reddish cast to the cortex, presumably a function of the pigment phaeomelanin.

Efforts at DNA analysis are continuing, though hampered by the lack of a medulla, a condition that, where it exists in human hair, also impedes such studies. Advances in DNA technology promise eventual success.



Deer



Chimpanzee



Human



Sasq-CA



Sasq-WA#1



Sasq-WA#2

*Hair micrographs (260x): The deer hair has the cross-section almost entirely occupied by the medulla, an unbroken lattice in hair terminology. It has, of course, a thin cortex and cuticle. The chimpanzee hair, pitch black, has a continuous, mostly amorphous medulla. The human hair has the typical amorphous fragmentary medulla. The three sasquatch hairs (one from California; two from Washington) are: (CA) dark brown; (WA#1) very dark (observed as black on the animal); and (WA#2) reddish brown (called buckskin by the observers of the animal). A medulla is uniformly absent in these hairs.*

As can be seen, with hair analysis we have a catch-22 situation. To establish that a hair sample came from a sasquatch, it is necessary to compare the sample with an actual sasquatch hair. If the object of the exercise were to prove the creature exists, it would be redundant because its existence would have already been proven by the actual hair sample. The same thing applies to DNA analysis. The absolute maximum result we can get from an alleged hair sample is to establish that it did not come from any creature for which we have a hair sample. However, even this poses



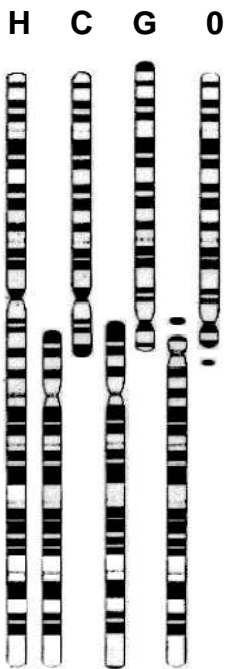
questions. Animals (including humans) have different types of hair on their bodies. With humans, for example, there is head hair, fine body hair, and thick body hair. A particular unidentifiable hair found in the forest could be from a known animal, but we have not yet added that particular hair type to our collection of hairs.

Nevertheless, being able to show that a particular hair came from a primate, and that the primate was not human, definitely indicates something unusual. There are no natural (wild) primates in North America other than humans, so the sasquatch would be a reasonable suspect. Although I have heard of such findings, I don't have any specific, proven cases to cite.

Hairs found on the Skookum cast were sent to Dr. Fahrenbach, and he confirmed that some of them were consistent with the profile he has established for sasquatch hair. The hairs were then sent for DNA analysis and the results were that human contamination or a human source could not be ruled out.

One puzzling aspect of the entire sasquatch issue that may contribute to hair confusion is the apparent differences in descriptions of the creature. They range from "tall, hairy human" to "gorilla-like." Some descriptions are so human-like that what was seen does not appear to be anything to do with a sasquatch. Hair from one of these candidates would probably be indistinguishable from that of regular humans. Nevertheless, in one case hair from what does *not* appear to have been a sasquatch (i.e., tall, hairy human) reasonably matched hair that we believe came from a sasquatch.

Dr. Fahrenbach's plan is to get hairs from a wide geographical area that match what he believes is sasquatch hair (i.e., his "reference" hairs). He will then have a statistic that indicates a distribution of creatures with reasonably identical hair. Although he cannot prove that the reference hairs are sasquatch hairs, when this statistic is included with other data (sightings, footprints, related incidents) it will increase the likelihood that sasquatch are being seen or are leaving evidence of their existence.



DNA comparison of human, chimpanzee, gorilla, and orangutan. Note the high similarity between human and chimpanzee.



What we believe to be sasquatch hair (provided by Dr. Henner Fahrenbach for my sasquatch exhibits).



Hair found on the Skookum cast.