



"A WOMAN WEAVING A BLANKET" (1850-1856) BY PAUL KANE, COURTESY OF THE ROYAL ONTARIO MUSEUM; NMNH (INSET)

Fido fleece. A painting from the 1840s or '50s shows a Salish woolly dog, bred by the Coast Salish tribes for its fleece, and a Salish woman weaving a dog-fur textile. New analysis shows that this Coast Salish blanket (*inset*) is made partly of dog hair.

Native American Blankets Made With Dog Hair

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By Traci Watson 23 November 2011 5:00 pm 4 Comments

To Native Americans known as the Coast Salish, the hair of the dog isn't a dubious hangover cure—it's a key ingredient in the large, beautiful blankets woven by their ancestors more than a century ago. A molecular analysis of some of these venerable textiles now confirms they are made partly of yarn spun from the fur of an unusual canine, verifying oral accounts handed down through the Pacific Northwest tribe over generations.

The Coast Salish live in northern Washington and southern British Columbia, and according to tribal lore, their ancestors raised a strange breed of canine. The Salish woolly dog was bred, the story goes, specifically for its fleecy undercoat and long outer hairs, which were woven into the famous Salish blankets. Salish oral tradition about the canine is corroborated by historical accounts, such as the journal of 18th century explorer George Vancouver, who wrote that the Salish dogs had coats that were "a mixture of a coarse kind of wool, with very fine, long hair, capable of being spun into yarn."

Recent research shows the woolly dog probably resembled a current breed called the Spitz, a thick-coated, curly-tailed dog native to Finland. By 1900, however, the Salish woolly dog had vanished. Today the only known physical evidence of it is a single pelt—rediscovered in 2004 in a drawer at the National Museum of Natural History in Washington, D.C.—of a woolly dog named "Mutton," the pet of a 19th century ethnographer who studied the tribes of the Pacific Northwest.

Despite the tribal lore and other ample evidence, some have dismissed the claim that Salish blankets contain canine hair as just a shaggy-dog story. A survey of more than 100 items

woven by the Salish found no dog hair, according to a seminal 1980 book on Salish textiles. And a 2006 DNA analysis that analyzed a small sample of textiles was inconclusive.

The new work, published in the December issue of *Antiquity*, sheds light on why past studies could have missed dog hair. Using mass spectrometry, a molecular technique for revealing the components of complex mixtures, biochemist Caroline Solazzo of the University of York in the United Kingdom and colleagues analyzed nine blankets woven in the 19th or early 20th centuries by the Coast Salish. They found protein fragments, or peptides, matching peptides from the hair of sheep and mountain goats, as expected. But some of the peptides in five of the nine blankets matched ones from the pelt of Mutton, indicating that the blanket peptides comes from dog hair. Only the older blankets—those woven in the first half of the 19th century—contained dog yarn, and none of them was pure dog. (The earlier DNA analysis had looked at only more recent blankets, which the new analysis showed did not have dog hair.) In most cases, the weavers had combined dog fiber with the highly prized fiber from mountain goats to make a mixed yarn.

Canine hair was easier to come by than mountain goat hair, which could be obtained only by trading with nearby tribes with access to goats, the researchers say. "Dog hair was probably used for less important blankets, blankets with less value, and for common usage, [not] ceremonial usage," Solazzo says. She and her colleagues found, for example, two very plain ceremonial blankets that contained only goat hair. The weaver might have avoided dog hair because the blankets' stark design shows off all their fibers rather than concealing some of them.

Klaus Hollemeyer, a researcher at Saarland University in Saarbrücken, Germany, who developed the mass

spectrometry technique used by Solazzo's team, believes the new work is definitive. The protein analysis is "well done and documented," he writes via e-mail.

The new study also helps erase doubts about the accuracy of the Salish oral tradition, says textile conservator Susan Heald of the National Museum of the American Indian's Cultural Resources Center in Suitland, Maryland, and a co-author of the new study. "It's been close to 10 years since Coast Salish community curator Marilyn Jones asked me if I could find out if dog hair was used in any of the Coast Salish blankets" displayed in a particular museum exhibit, Heald writes via e-mail. "I'm pleased that we can finally tell Marilyn that we did find dog hair in the older blankets, corroborating the oral history."