



G36 Of Leaves and Men: Botanical Evidence Leads Investigators to a Missing Girl's Body

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The goal of this presentation is to demonstrate the importance of botanical evidence in the location and recovery of human remains.

On 29 May 2002, a sheriff's deputy in Butte County, CA, responded to a report of an apparent suicide victim in a pickup truck parked alongside a mountain road. Inspection of the vehicle revealed a 35-year-old male decedent with a single self-inflicted gunshot wound to the head. A significant amount of blood spatter and pooling on the passenger seat indicated to the investigators that a second victim might be involved, although a thorough search of the area surrounding the vehicle revealed no additional evidence.

Identification of the male decedent quickly led deputies to a missing persons report that was filed in Los Angeles County 2 days prior to discovery of the body. The decedent had reportedly picked up his 11-year-old daughter from school on 20 May 2002, with a probable destination of Lake Havasu, Arizona. When the daughter did not return home after the trip, her mother reported her missing.

Detailed examination of the decedent's pickup truck produced several pieces of evidence, including a receipt from a Las Vegas hotel and a bloodstained girl's jacket with a significant amount of plant debris inside one of the sleeves. Investigators conjectured that the girl was likely deceased or seriously injured; however, they were somewhat daunted by the size of the search area. Based on witness accounts and evidence collected from the truck, the girl could be in Arizona, Nevada, or California.

In an effort to narrow the search area, investigators took the plant material recovered from inside the girl's jacket to California State University, Chico, for examination by a botanist. Analysis of the sample, which ranged in composition from whole to partially decomposed leaves, revealed that it had been taken from the top few centimeters of leaf litter. The species present (in order of abundance) were canyon live oak (*Quercus chrysolepis*) or interior live oak (*Q. wislizenii* var. *wislizenii*), white fir (*Abies concolor*), greenleaf manzanita (*Arctostaphylos patula*), ponderosa pine (*Pinus ponderosa*), and black oak (*Quercus kelloggii*). Additionally, the sample also contained a whole leaf of greenleaf manzanita torn from a living shrub.

Possible sites were eliminated based on known species distributions and ecological site requirements. The species identified do not occur together in Arizona, Nevada, or the eastern Sierra Nevada. The live oak, in particular, indicated that the sample was most likely from the western exposure of the Sierra Nevada. Overlapping species distributions indicated that the sample was removed from an elevation of 762 to 1,372 m. The relative abundance of the species present was a bit unusual in that the dominants were live oak and white fir, indicating that the site had to have both slightly mesic (white fir) and slightly xeric (live oak) characteristics. It was unlikely that the site was a north or east-facing slope due to the presence of the live oak, and a south-facing slope was equally unlikely based on the presence of the white fir. The sample must have been from a west-facing slope with some available moisture. Further, the composition and dark color of the leaf litter sample indicated a high organic content, which placed the site under a fairly dense forest canopy. The notable occurrence of the greenleaf manzanita indicated that there must be some available light at the site, despite the dense canopy.

A survey of possible sites within northern California that satisfied the botanical criteria led to the discovery of the girl's body in less than two hours. Surprisingly, she was found only 0.3 km from her father's truck, an area that had been searched thoroughly following discovery of his body 8 days earlier. The girl was wrapped in a blanket and partially buried under tree limbs and litter. The site proved to be a 30 percent west-facing slope with a close canopy of coniferous vegetation, where canyon live oak and white fir were the dominant species, and was located at an elevation of approximately 1160 m. The body was in close proximity to a small patch of exposed chaparral with greenleaf manzanita as the dominant species.

This case is an illustration of the potential significance of Forensic Botany in crime scene investigation. Botanical evidence is often overlooked or underutilized by investigators, but it has the potential to provide critical and detailed information about the circumstances surrounding death, or in this case, the actual location of the remains.

Forensic Botany, Missing Persons, Scene Investigation