Case Study: Wayne Williams

Investigation of what became known as the "Atlanta Child Murders" began on July 28, 1979 when a woman discovered the bodies of 2 young men concealed in the undergrowth alongside a road. By 1981, nearly 20 young black males had been murdered by strangulation or asphyxiation. At one point, the Ku Klux Klan was under surveillance for their possible involvement. Twenty nine homicides were officially linked to the same killer, but police had little forensic evidence to track down the killer. The only forensic evidence linking the killings were fibers found on the bodies and clothing of the victims. Some of the fibers were an unusual yellow-green nylon; coarse and tri-lobed in cross section the fibers appeared to be those used in rugs or carpets.

In February 1981, following newspaper accounts of the fiber analysis, the killer began dumping bodies in Chattahoochee River. The victims were now also nude, or nearly so. It appeared that the killer was monitoring media coverage of the killings, and modifying his methods to reduce fiber evidence on the victim's bodies. Police began staking out bridges along the river in an effort to catch the killer dumping a body. Early on the morning of May 22, 1981, a police patrol heard a splash. Police stopped a station wagon on the James Jackson Parkway Bridge. The driver was 23 year old Wayne Williams, a music promoter. He was questioned by police, but allowed to leave. Two days later, the body of Nathaniel Cater was recovered from the Chattahoochee River, a mile downstream of the James Jackson Parkway Bridge. A single strand of yellowish- green nylon fiber was found on his body.

Police obtained a search warrant for Williams' house. Throughout his house, carpet similar to the yellow-green fibers found in the early victims. In order for this to be conclusive enough to tie Williams to the murders, police needed to demonstrate that these carpet fibers were not commonly found in houses throughout Atlanta. Working with chemists at DuPont, the world's largest producer of fibers, FBI analysts passed the fibers through a device (spinneret) that stretches fibers giving it optical properties. This device allowed the FBI to eventually trace the fiber to a carpet manufacturer in Georgia. It was determined that over a single 12 month period from 1970 - 1971, the factory had made just 16, 397 square yards of carpet using that fiber in that color, English Olive. Police calculated that the probability of finding a room in a house in metropolitan Atlanta carpeted in that shade of carpet was 1 in 7,792.

Although the murderer was thought to be linked to 28 to 30 killings, police and prosecutors decided to focus on just 2 cases; Nathaniel Cater and Jimmy Ray Payne whose semi-nude body had been recovered from the Chattahoochee River on April 27, 1981. In the latter case, police had also found a fiber on the victim's shorts similar to fibers found in the carpeting in Williams' station wagon. Chevrolet provided details on the number of pre-1973 vehicles fitted with this carpet. Police determined that out of 2 million cars registered in the Atlanta metropolitan area in 1981 that only 680 vehicles with this carpeting were registered. Therefore, the odds of the victim coming into contact with this fiber from any other car than Williams' were 1 in 3,828.

Although these may not seem impressive enough to convict someone of murder, consider that the odds of both events happening (i.e. of Payne picking up the fiber from somewhere other than Williams' car and of Cater picking up the fiber from somewhere other than Williams' house) was 1 in 29,827,776. As a result of mainly the fiber evidence, a jury found Williams guilty of the murder of Nathaniel Cater and Jimmy Ray Payne, and Williams is currently serving 2 life terms in prison.
(NOTE: At the request of the William's defense team, in 2010 DNA testing was performed on 2 hairs found inside the victim's shirt along with dog hairs that were said to belong to his dog. Both tests showed that he & his dog were "included" as possible sources of the 2 sets of DNA).

References

1. Owen, David. (2000) Hidden Evidence: Forty true crimes and how forensic science helped solve them. Quintet Publishing.
2. Evans, Colin. (1996) The Casebook of forensic detection: How science solved 100 of the world's most baffling crimes. John Wiley and Sons.