

## Geology, genetics, and forensic science come together for criminal justice

On a Saturday night in October 1977, Lorna Dawson was studying in her dormitory at the University of Edinburgh, UK, when two 17-year-old girls disappeared off a nearby street. The teenagers had been on a pub crawl with friends, stopping at an old Scottish tavern called The World's End before vanishing. Police officers remembered seeing two men with them. The next day, the girls turned up dead eight kilometres apart — one on a beach and another in a remote wheat field. They had both been raped, beaten and strangled. Despite a nationwide manhunt, police could not find the assailants.

Dawson was a country girl, new to the city, and was working towards a geology degree at the time of the crime, later dubbed the World's End murders. "It was my first time away from home," she says, and the case left her "terrified to go out".

It also left her with a passion for justice. Now at the James Hutton Institute in Aberdeen, UK, Dawson runs one of the world's only labs dedicated to forensic soil science, where in the past decade she has worked on more than 70 cases from around the globe. At the time of the murders, soil was rarely used as evidence, and techniques were "elementary", she says. But today, soil evidence regularly leads to bodies, overturns alibis and reveals the origins of artefacts. That is in no small part due to Dawson, who has advanced methods in soil forensics and worked to disseminate the techniques to others. She is now part of an international collaboration developing a method to profile microbial communities using DNA.

**The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion and analysis. Read full original post: [Forensic science: The soil sleuth](#)**