Extraordinary DNA breakthrough could revolutionise how police solve cold cases

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Seior Constable Bec Franklin, Detective Sergeant Darren Bethell, Senior Constable Lisa Rosenberg and Senior Constable Nikki Bailey. Police are using genetic genealogy to help solves cold cases in WA. Credit: Andrew Ritchie/The West Australian

An extraordinary DNA breakthrough in the case of a mystery man hit and killed by a train in Australia 26 years ago could revolutionize the way police solve cold cases.

Using groundbreaking genetic genealogy technology, WA Police have ended a near three-decade long riddle by putting a name to the man found on a set of train tracks on March 7, 1998.

He can now be revealed for the first time as 20-year-old Mark Peter Dixon, from New South Wales. Mr. Dixon's name, age and where he came from, had remained a total mystery after he was struck by a train between Burswood and Victoria Park stations. Despite extensive inquiries over the past 26 years — and the case even being broadcast on Australia's Most Wanted — his identity remained an enigma.

But a dedicated new team at the WA Police Special Crime Squad has now cracked the case using genetic genealogy — the same technological advancement recently used to catch the infamous Golden State Killer in the US.

The technique involves investigators using genealogy websites — such as GEDmatch.com — in an effort to match a person's DNA to any potential relatives.

In this case, officers from the newly-formed investigative genetic genealogy team (IGG) uploaded the mystery man's DNA to GEDmatch in November, as part of a fresh inquiry into his case called Operation Skyvent.

From there they spent several months piecing together a family tree of Mr Dixon's potential relatives — some of whom lived as far back as 1784.

By meticulously building a picture of his ancestry, from a starting point of about 2000 people, the IGG team were finally able to give Mr. Dixon a name.

In an exclusive interview with The Nightly this week, the IGG team members who helped solve the mystery said they were confident this was just the beginning of genetic genealogy cracking cold cases.

Officers are now urging members of the public to get on board and upload their DNA onto sites such as GEDmatch.com to help solve historical cases not just in Australia, but around the world.

"For this to be successful, we need the public on board," Det-Sgt Darren Bethell said. "(In order) for law enforcement to be effective, it's a partnership between us and the community. "This is a great new tool . . . but at times we need the community, and this is one of those moments."

Det-Sgt Bethell said WA Police were leading the charge, from a genetic genealogy investigative standpoint. "We are the only dedicated IGG team in Australia, but others are starting to form," he said. The incredible breakthrough in Mr Dixon's case has come as a huge relief to WA Police officer Jen Robinson.



Senior Constable Jen Robinson, Police are using genetic genealogy to help solves cold cases in WA. Credit: Andrew Ritchie/The West Australian

She investigated his tragic death in 1998 — even helping to organize his funeral because there was simply nobody else to bury him.

Sen. Cons. Robinson said she was elated the case had finally been solved. "My biggest fear was that I was going to retire and this case wasn't going to be solved," she said. "I just feel total relief now and I am so pleased."

Such is the excitement about the potential for genetic genealogy to solve other cases, The West can reveal the IGG team is currently working on 18 other cases at present — some of which are murder investigations and unsolved sex assault cases.

Police say they are making excellent progress on as many as eight of those 18 cases. Nikki Bailey, a senior constable with the IGG team, said being able to solve serious cases using new technology was incredibly rewarding. "It's amazing to be able to give a family closure for a loved one that's been lost," she said. "But we're also dealing with sexual assaults and homicides, and again, (its) very rewarding to be able to give the families of the victims of those kinds of crimes closure as well."

A composite image of what Mr. Dixon is believed to have looked like was produced in 1998. Although no photos of the 20-year-old have been released since he was identified, The Nightly has been told the composite image was a very accurate depiction of him.



A composite image of what Mr Dixon is believed to have looked like was produced in 1998. Credit: crime stoppers

Genetic genealogy has been credited with solving hundreds of crimes in North America in recent years.

Arguably the biggest case solved using the technique was the Golden State Killer case. The method led to the identification of Joseph James DeAngelo — a serial rapist and murderer who killed 13 people and raped more than 50 across California in the 1970s and '80s. DeAngelo was jailed for life in 2020.

WA Police revealed last year how they too had used genetic genealogy technology to track down an alleged serial rapist who targeted four Perth women in the 1990s.

Following an "intensive" two-year investigation, Michael Anthony Woodhall, 51, was charged with carrying out the sex attacks in Crawley, Kelmscott, Carine and Scarborough between 1995 and 1998.

Det-Insp. Darryl Cox said at the time that genetic genealogy initially identified 3884 people — all of whom were put into a family tree. Police then spent two years painstakingly eliminating potential offenders. Until they had just one name left.

To find out more about GEDmatch click here.