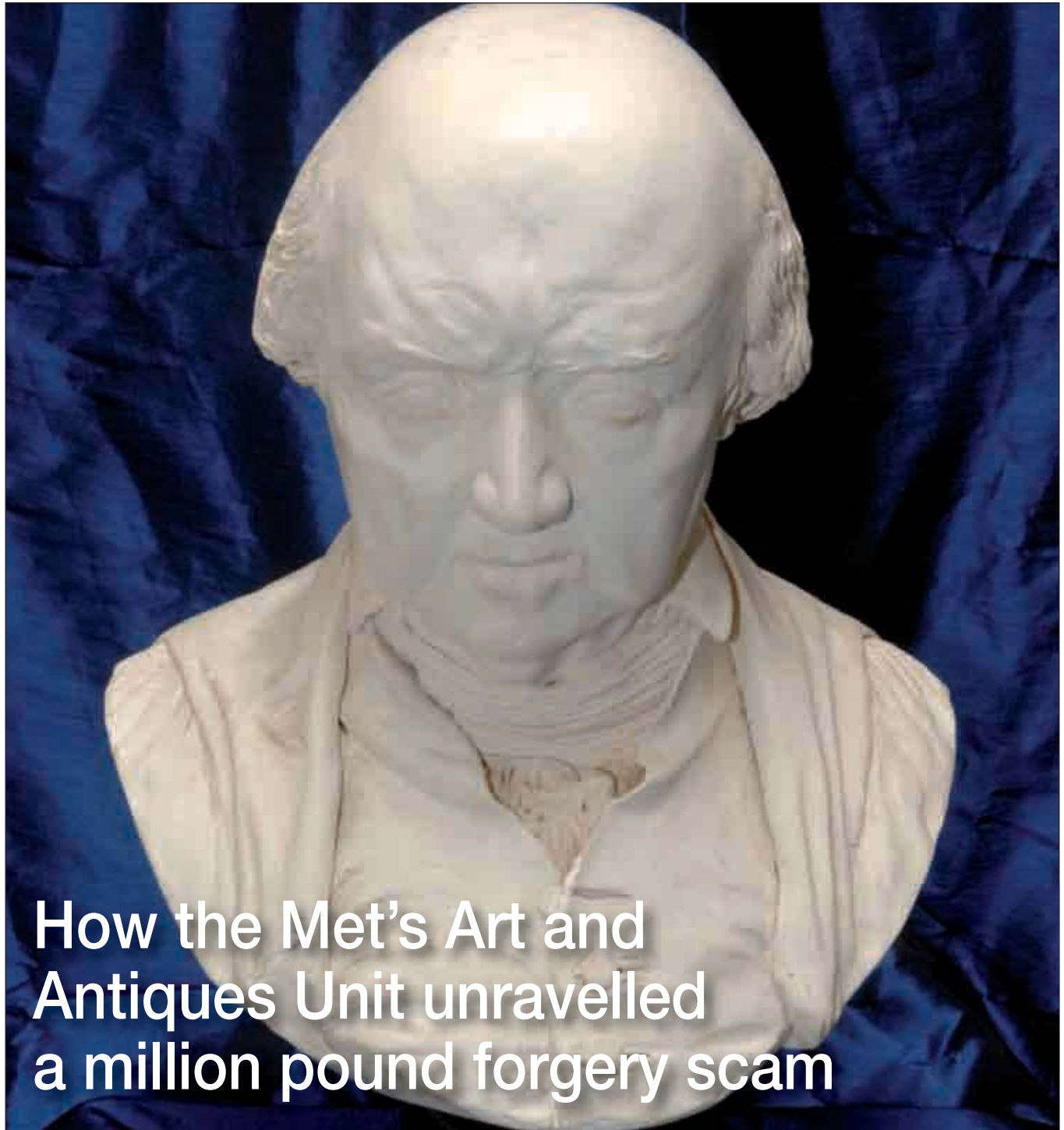


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How the Met's Art and Antiques Unit unravelled a million pound forgery scam



IN OCTOBER 15, GEOFFREY GODFREY, AGED 42, WAS CONVICTED AT BRISTOL CROWN COURT AND BEGAN A SIX YEAR SENTENCE AFTER DNA SCIENCE CONVICTED HIM OF A RAPE 14 YEARS AGO. THE SUCCESS OF THE CASE RESTED ON TRADITIONAL INVESTIGATIVE POLICING AND A RELATIVELY NEW ADVANCE IN FORENSIC SCIENCE, FAMILIAL DNA SEARCHING. **DAMIAN SMALL** REPORTS.

Dangerous relations

An April 25, 1993, a lone 36 year-old female had been walking along a path by the Bridgwater and Taunton Canal when she was attacked by a man in a balaclava mask and subjected to rape and serious assault. DNA was obtained from the victim following the attack in the hope of tacking down the offender; but despite a thorough investigation by officers, the case remained unsolved.

In 2005, Avon and Somerset Constabulary's Cold Case Review Team secured Home Office funding to commence a familial DNA investigation into the case.

Under Operation Advance, a familial search allows detectives to look at any potential relatives of the offender who might be on the national DNA database.

Investigators found that more than 4,000 people shared familial DNA with the offender. A large scale investigation was then launched to prioritise those DNA hits and reduce them in an attempt to find the offender.

This process led to police speaking to a member of Geoffrey Godfrey's family and the production of a Godfrey family tree. In September 2006, police visited Geoffrey Godfrey and

asked him for a voluntary DNA swab to discount him from enquires.

Following analysis from the Forensic Science Service (FSS), within three days, Geoffrey Godfrey was arrested and charged with three offences against the 36 year-old victim on that night in 1993.

Generating the list

"DNA familial searching has the potential to speed up a criminal investigation of this kind," said Doctor Colin Dark, a specialist adviser for major crime at the FSS's Chepstow laboratory.

Using a crime stain – a semen sample – FSS scientists began the process of generating a list of possible relations to the offender.

"There are two searches against the DNA database that can be undertaken: paternal and maternal," said Dr Dark.

It is based on the fact that DNA profiles of those who are related to each other are more likely to contain similarities than those of two unrelated individuals. Familial searches provide two lines of enquiry: the identity of individuals

who could be a parent or child of the offender or the offender's siblings.

"A full DNA profile consists of 20 alials. Familial searching identifies individuals who have between 12 and 19 of the 20 matching alials pertaining to the crime scene stain," explained Dr Dark.

"Research has shown that to be the optimum range of matching alials, which can represent a familial link."

Considering there are 4,000,000 nominals on the national DNA database, intelligence supplied by investigating officers allows scientists to limit the number of listed individuals.

"If a witness described a local accent, for example, we can instantly produce a list of individuals located within, and in the vicinity of, the investigating force's region," said Dr Dark.

"Other information such as a possible age and ethnicity are all factors that can help us prioritise a list of possible relations to the crime stain donor."

The familial hit list is supplied to the force allowing investigating officers to examine the possible matches in line with their enquiry.

"The investigation team is given two familial lists – parents and children, brothers and sisters – and they then decide which individuals to target."

Semen stains are commonly found at a rape scene. Males have the Y chromosome and as a result scientists are able to conduct additional tests to create a list of individuals who share the Y chromosome profile. "If they do, then we have identified an immediate relation of the crime stain donor," said Dr Dark.

Narrowing down the suspects



Geoffrey Godfrey

Straight forward investigative research can only improve the results of DNA familial testing, and the Geoffrey Godfrey case is a good example of science and policing working hand-in-hand.

The better the intelligence that the police contribute, the more manageable a familial search will be, and once a familial list is imparted to a force, further investigative work is carried out.

"Setting parameters can assist the forensic side of the investiga-

tion," said Detective Sergeant Mike Britton, head of Avon and Somerset's Cold Case Team.

The Geoffrey Godfrey case was connected to a series of offences in Bridgwater in 1993: the rape of the 36 year-old that was proven; another two attacks – in a matter of weeks - in the vicinity of the first assault; and another attack six months later in the canal area.

Descriptions of the offender were very similar and featured the suspect wearing a balaclava and glove on the left hand. The latter attacks proved unsuccessful for the offender. He was fought of by the victims, and as result there was less scope and opportunity for forensic retrieval.

"Other than the semen stain, forensic evidence consisted of, for example, the cross transfer of fibres. However, we were convinced the modus operandi of the attacks was linked," said DS Britton.

Victims' statements also concurred that the offender was Caucasian. No definitive age was known but the investigation team set up a parameter of between 16 and 50 years.

"For detection purposes, parents or relatives of that offender would likely be within that age range," said DS Britton.

The majority of the victims were happy that their attacker was a local person due to his dialect, so geographical parameters were set focusing primarily on known offenders in the Avon and Somerset area.

Two more parameters were focused around offenders in neighbouring force areas and, finally, the rest of the country.

"Of the 4,000 names produced by the FSS' familial search, a number of possible relatives were identified in the Bridgwater area. A number of males were forensically eliminated through DNA Y-STR testing – the paternal/male element extracted from the crime scene profile," said DS Britton.

Other male nominals were then eliminated across the Avon and Somerset and surrounding force areas.

"A process of extracting female mitochondrial DNA from the crime scene profile was then undertaken," said DS Britton.

Females living that, the investigation turned its focus to several females living in the Avon and Somerset region.

The investigation team visited the females in person and created family tree histories. DS Britton said it was at this point in the enquiry when the team encountered the sister of Geoffrey Godfrey, seeking swabs of her two brothers.

"The swabs were conclusive that the evidence matched the DNA profile of the crime scene stain."

Once Geoffrey Godfrey was identified, further investigative work was carried out to reinforce the forensic evidence. "We determined the suspect's occupation and location of work at the time of the crime, his place of residence, the vehicle he owned, his friends and his patterns of behaviour.

"A large intelligence package was created to support the arrest and subsequent prosecution."

Unfortunately, there was not sufficient forensic evidence to link Geoffrey Godfrey to the remaining assaults, but DS Britton believes DNA familial searching and Operation Advance were key to resolving the case and securing a conviction for the individual sexual charge.

Dr Dark underlined the importance of conducting in-depth investigations to maximise the impact of DNA familial searching.

"A murder case can yield no additional information other than, potentially, local knowledge. Investigators should consider, for example, if the body has been deposited in a location only a local inhabitant would know of. Such questions are vital in helping scientists generate a valuable DNA familial list."

Dr Dark believes forces are fully utilising DNA familial searching and Home Office funding for Operations Advance and Stealth has brought significant value to over 100 criminal cases.



Other success stories

James Desmond Benjamin Lloyd: caught 20 years after violent assaults

In July 2006, James Desmond Benjamin Lloyd pleaded guilty to six sexual assaults at Sheffield Crown court. The judge ordered another two offences to lie on file.

The offences took place between 1983 and 1986. At the time of the attacks the offender could not be identified. However, advances in DNA allowed scientists to obtain DNA profiles from four of the attacks.

All the attacks took place in South Yorkshire on women walking home from pubs and clubs and the majority were committed in the early hours.

The offender tended to approach the victims from behind, reassuring them that his motive was robbery. But the majority were then restrained and gagged, either with their own clothing or with tights and stockings he brought with him, before being sexually assaulted. In most cases he stole shoes and jewellery from his victims.

In four of the cases DNA profiles were obtained, all of which matched each other. However, there was no match when they were searched against the national DNA database.

Familial searching provided new lines of enquiry for South Yorkshire Police to investigate. The information was passed on to for further investigation and resulted in the arrest of Lloyd.



James Ben Davies: a serial sex offender

September 2005, the first cross-border cold case that was investigated using familial searching resulted in a success.

Serial sex offender James Ben Davies was sentenced to four and a half years in prison after pleading guilty to a string of sexual assaults in 1998 and 2000.

A combination of familial searching and investigations by three police forces led to the identification of the offender. Thirty-two-year-old Davies pleaded guilty before Corby Magistrates.

The first sexual assault took place in Farnborough, Hampshire in February, 1998. A 20-year-old woman was walking along Southwood Road when she was pushed to the ground and subjected to the assault.

Then on August 14, 1998, a 32-year-old woman was sexually assaulted as she walked her dog on waste ground in Eaton Socon in Cambridgeshire.

The third sexual assault took place at on January 12, 2000 in Bozeat, Northamptonshire. A 40-year-old woman was walking her dog when a man jogged towards her, pushed her into a hedgerow and subjected her to serious sexual assault.

All three offences were linked through DNA but at the time an offender could not be identified. The Association of Chief Police Officers (ACPO) agreed to fund a familial search on the three profiles obtained from the crime scenes.

After receiving intelligence generated by the familial search, Northamptonshire Police prioritised individuals for further intelligence research and, along with officers from Hampshire, Cambridgeshire and Surrey, carried out a number of intelligence-led inquiries, leading to the arrest of Davies at his Surrey home in August.

Unlocking a triple murder investigation

The innovative use of the national DNA database enabled scientists to provide new DNA intelligence to police investigating three unsolved murders dating back almost 30 years.

FSS experts checked the database to see if it contained someone who could be related to the man who killed Pauline Floyd, Geraldine Hughes and Sandra Newton in 1973.

This was the first time case involving DNA familial searching.

An initial search for a suspect whose DNA profile matched that recovered from the murders drew a blank. Given the age and seriousness of the offences and the possibility that the killer may have never committed another crime, may have moved abroad or died, the FSS tried this new approach.

Their search produced a list of more than 100 men who could be related to the offender due to similarities in their DNA profiles. When this intelligence was combined with existing evidence held by South Wales Police, one local man was identified as a strong suspect.

As the suspect was deceased, existing family volunteered their DNA to help progress the investigation. The results of these DNA tests led to the exhumation of the man.

Subsequent DNA tests on the remains of the deceased using the ultra-sensitive DNA Low Copy Number (DNA LCN) profile technique showed a match with samples obtained from the bodies of the three dead girls.