



Belier Task Force

Long Term Missing Persons (LTMP) & Unidentified Human Remains (UHR)

Why weren't they found?



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Missing Persons Impact

- Great Concern within the Community: Numerous Emotional, Financial and Health Costs
- Death: Details Known
- Disappearance: The “Why” is Denied
 - *“there is 99% of me which thinks she's dead, but until the police can produce a body there is 1% of me that is still hopeful that she is alive” (Anon. 2009)*
 - *“I find as the years pass the not knowingaffords a little relief. It lets me imagine that he is still alive” (Warrington 2012: Big Issue, p. 18).*
 - *“Not knowing is like living in the dark” (Anon. 2009)*



Problems with Missing Persons Investigations in Victoria

- Victorian Police's capability dealing with unidentified human remains investigations: exposed during the mid 2000's
- A number of investigations came under close scrutiny by Coroners and the Office of Police Integrity
- Police action/inaction criticised in all cases
- Police had failed to identify a number of deceased missing persons: significant consequences



Belier Task Force

- Lessons learnt the hard way!
- Major issue uncovered: created a need to act quickly to remediate the damage done over many years
- VicPol solution: Belier Task Force (Police Led - Informal Multi-Agency Response)
- January 2007 – June 2011



How do we Sort the Mess into Order?

Investigated Similar to DVI Incident:

- Phase 1 - Data Acquisition and Recording (AM/PM)
- Phase 2 - Risk Assessment
- Phase 3 – Investigation – (AM/PM)
- Phase 4 – Reconciliation – (JIT Transition to Coroner)
- Phase 5 - Case Completion and Debriefing

(Use of mirror image spread sheets LTMP & UHR)



Data Acquisition and Recording (Phase 1)

Review of Victoria Police Intelligence Holdings for LTMP's
Engagement with SCO, PROV & VIFM re UHR's (12 Months To Complete)

- Coronial Records; -
 - 80,000 Coronial ledger records viewed at PROV & SCO;
 - 800 UHR Records/Inquest Briefs ordered, scanned and reviewed;
 - 220 Records required further investigation (original estimate was 50 based on VicPol LEAP records);
- Police Records; -
 - LEAP Audit;
 - 590 LTMP's (original estimate 400 owing to drowning cases not being included);
 - 50 UHR's;
 - Records consolidated into two mirror image spreadsheets (LTMP & UHR)



Where Do the Problems Begin?

Common Problems Associated with Missing Persons Investigations



Common Problems?

- Definition - 'genuine' fears for safety/welfare
- Reports not taken/taken at earliest opportunity
- Inadequate report detail
- Poor initial risk assessment/initial action/investigation
- Reliance on hope rather than experience
- No Crime in being a Missing Person
- MP's Completed without sighting the MP;
- MP's sit lower in priority
- Poor compliance with relevant policy Poor Oversight/
Monitoring/Review



Common Problems (Cont.)?

- Poor understanding of MP's
- Suspicious & high risk MP's not escalated
- Poor use of technology
- Incomplete data sets For LTMP's
- AM data collection not developed at the national level
- MP's investigation 'completed' post Coroners findings
- Government agencies not nationally linked (BD&M)
- Other records difficult to obtain



Risk Assessment (Phase 2)

Considerations

- Recently deceased - v - skeletal remains - v - single bones?
- Current location?
- Exhumation requirement and cost?
- Can ID be achieved by other means?
- Histology/other biological sample availability for DNA?
- Has AM data been collected?
- Is there sufficient circumstantial evidence available?
- Impact on family/loved ones?



Investigation (Phase 3)

- Existing techniques
- Specialist guidelines developed by BTF for UHR's
- Coroners oversighted BTF team and made themselves available to consult directly for advice
- VIFM experts actively involved throughout
- Leading edge offshore DNA technology (US)
- Radiocarbon dating (NZ)
- News Media articles
- Exhumation required in some cases
- Development of Databases and AM process



Reconciliation (Phase 4)

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Missing Persons vs. Unknown Remains



Missing Persons

- Reported by relatives, friends, community
- Single reports
- Compilation of lists



Image: <http://www.missingpersons.gov.au/missing-persons/profiles/vic.aspx>

Photo: S. Blau



Unidentified Human Remains

- Unidentified skeletal remains
 - Complete
 - Isolated skeletal elements
 - Non-human remains (collected mistakenly)
 - Archaeological
- Located accidentally (building construction, washed up, etc.)
- Recovered through planned investigation based on eyewitness information, etc



Photo: S. Blau



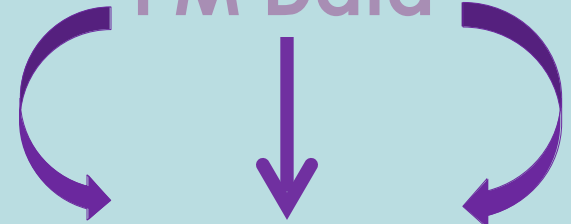
Missing Persons

Unknown Remains



AM Data

PM Data



Police

Civil Society
Organisations:
Family Assistance
groups etc.

Institute of
Forensic
Medicine

Hospital/
mortuary

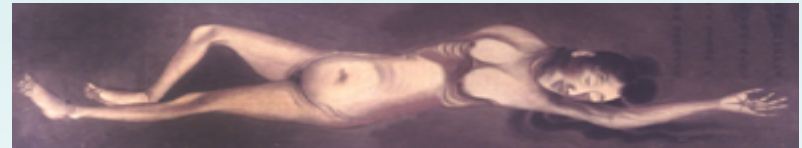
NGO's

Coroners



How is Human Identification Achieved? A Review

- Long term missing: skeletonised
- Preservation/condition: impacts on methods which can be used for identification



A study in decomposition: Kobayashi Eitaku, c.1870



Visual Identification

- Not possible



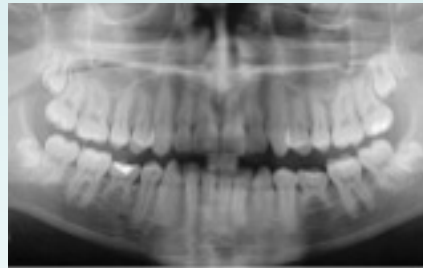
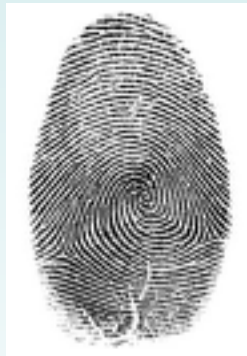
Image: <http://www.celebritymorgue.com/marilyn-monroe/>



Photo: VIFM



Scientific Identification





Fingerprints

- Not possible



Photos: VIFM





Dental Identification

- Possible?
 - Does population regularly attend a dentist?
 - Are records kept?
 - State of the records?

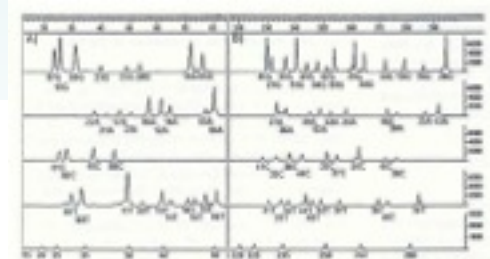


Image: T. Hill



DNA Identification

- Possible?
 - Can DNA be retrieved from the bone?
 - Contamination?
 - Any living relatives?
 - Appropriate family relationships?





Circumstantial

- Possible?
- Importance of secure contextual information: how is recovery undertaken?
- Quality and quantity of AM data?



Photo: S. Blau



Photo: S. Blau



Photo: S. Blau



Missing Persons in Australia

Case Studies





Case 1: 1022

- March 2006: Park ranger is clearing and marking a path for fuel reduction burn in the Dandenong ranges
- Observes a rope with a noose hanging from a tree and a human skull nearby
- Skeletal remains collected and admitted to VIFM (1022)



Forensic Anthropology

- Majority of remains recovered
- Biological profile:
 - Ancestry: Caucasian
 - Sex: Male
 - Age: 23-27 years
 - Stature: 167-180 cm

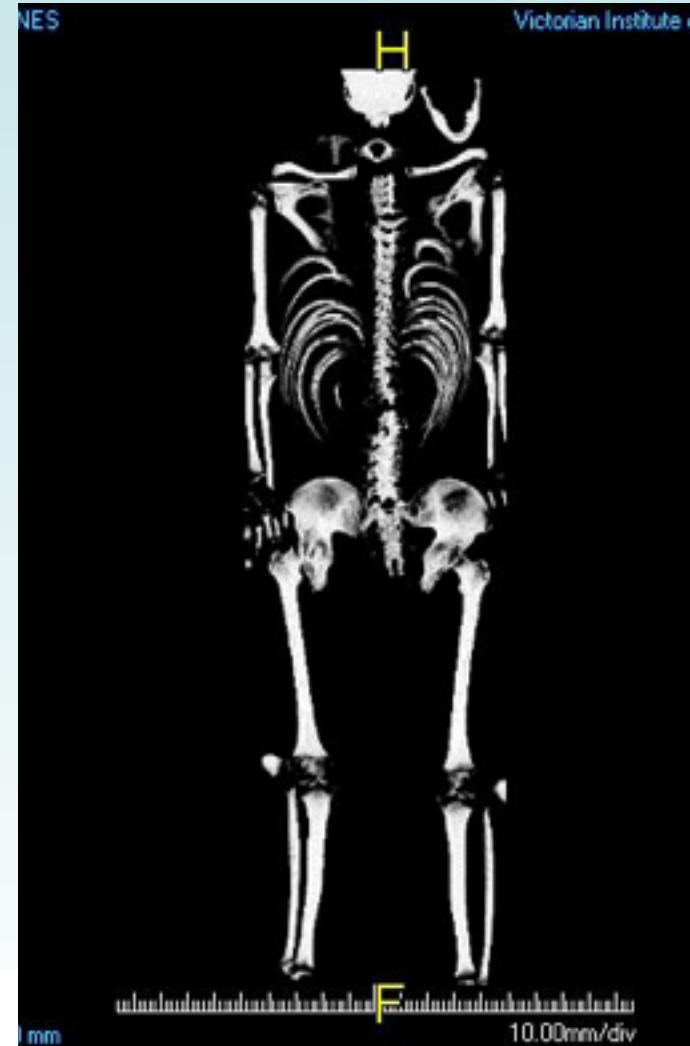


Image: VIFM



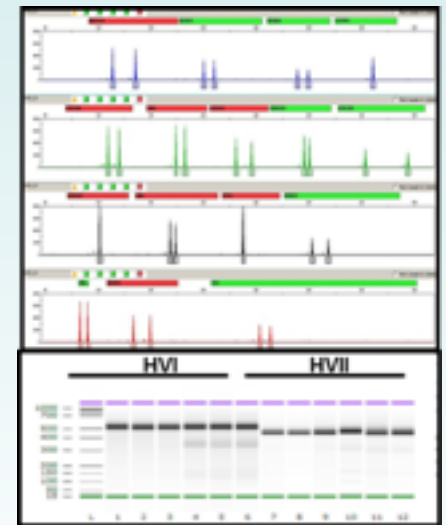
Other Analyses

- **Entomology:** Remnants of summer active carrion flies
 - Decomposing between Nov.-March; most likely Dec.-Feb.
- **Odontology:** Missing persons compared



DNA Analysis

- June 2006: mtDNA profile (old analysis); exc. 1 MP
- **Feb 2008**: new mtDNA profile (new analysis);
- Feb-Nov 2008: exc. 4 MPs
- **Dec 2009**: nDNA profile (9 loci); exc 2 MPs; entered into CODIS





Missing Person

- January 2001: BM reported missing
- June 2002: Coronial Inquest held
- No body



DNA Analysis

- Sept. 2010: buccal swab for HM (mother of MP)
- March 2011: completed nDNA and mtDNA analysis for HM
- CODIS search: match to unidentified remains 1022 (nDNA)
- No exclusions at the 9 loci; LR of 307
- BUT - mtDNA profile for 1022 \neq HM



Review of the Evidence

	BM	1022	Match
Ancestry	<i>Caucasoid</i>	<i>Caucasoid</i>	✓
Sex	<i>Male</i>	<i>Male</i>	✓
Age (yrs)	<i>29</i>	<i>19-34</i>	✓
Time	<i>Jan 2001</i>	<i>Dec-Feb</i>	✓
Location	<i>Tanjil Bren (near Mt Baw Baw)</i>	<i>Dandenong Ranges</i>	? (130 km between)
Odontology	<i>Dental records</i>	<i>Excluded</i>	X



Further DNA Analysis

- Additional nDNA analysis: 13 loci - No exclusions with the mother; LR of 5,478
- Repeated mtDNA analysis: HM \neq mtDNA profile of 1022



Further DNA Analysis

- April 2011: buccal swab for CM (father of MP) – analysed and added to CODIS
- HM and CM: ≠ not the biological parents of 1022
- Supported by:
 - mtDNA results
 - Odontology
 - Location

8 years since discovery
1022: Remains unidentified



Case 2: 1398

- Clearing of fire track: cranium discovered in thick bushland





Forensic Analyses

- **Forensic anthropology:** Biological profile
 - Ancestry: Caucasian
 - Sex: Male
 - Age: Adult
 - Stature: N/A
- Evidence of peri-mortem trauma
- **DNA:** nuclear profile obtained



Identification Process

- Forensic Pathologist remembered a 2002 case: body found in the same area but skull never recovered
- 2002 case: 50 year old Caucasian male
- Comparison of DNA: 2002 with 2014 case
- NO match!



DNA Database

- 2014 case profile loaded into CODIS
- Match with MJ: 31 year old Caucasoid male
- Reported missing: 13th Nov. 1994



Review of the Evidence

	MJ	1398	Match
Ancestry	<i>Caucasian</i>	Caucasian	✓
Sex	<i>Male</i>	Male	✓
Age (yrs)	<i>31</i>	Adult (>25 years)	✓
Time	<i>Nov. 1994</i>	March 2014	?
Location	<i>Dandenong</i>	Big River State Forest	X
Odontology	<i>No AM records located</i>	Dental work	Inconclusive
DNA	<i>N and MtDNA</i>	N and MtDNA	✓

**20 years between death and
location of remains:
1398 positively identified as MJ**



Case Completion and Debriefing (Phase 5)

What can we Learn from these Cases?



A lot!

- Multidisciplinary and multi-agency approach to MP and UHR Investigations: vital
- DNA evidence: can be powerful many years after death
- Use of database provides hits that can direct investigations
- Ensure all “matches” are real: evaluate all scientific evidence



Lessons

- Victoria leads the way:
 - Only established MP database able to do kinship matching
 - Using both nDNA and mtDNA profiles
- Use of PlassData 'DVI System International' as LTMP & UHR database for dental and biometric matching



Preventing Cold MP/UHR Cases?

- Dedicated & structured MPU to guide investigations, supported by systems
- Policy & governance
- Positive intervention in suspicious/high risk cases
- Training re: child/adult abduction (Amber Alert)
- Data systems to mitigate risk (DNA/dental/ante-mortem databases)



Conclusion

- Not rocket science! BUT:
- *Unfortunately: “No votes in a dead person”*
- Issues of scale:
 - Individual families: ongoing need to know the fate of their missing relative
 - Varying political will to see through a coordinated effort
- Therefore timely identification of missing persons remains a problem
- Individual responsibility:
 - Communication: all relevant organisations
 - Education: difficulties and deficiencies in LTMP/UHR investigations

Acknowledgements

Dr Dadna Hartmann
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Dedicated to the Memory of
Doctor Anthony HILL,
Forensic Odontologist (1945-2013)



Photos: S. Blau