



# The Strength of Trace Evidence: Two case studies where unusual trace evidence has impacted legal proceedings

*Dr. Kari Pitts\*, David Detata, Rees Powell and Peter Collins,  
Forensic Science Laboratory, ChemCentre, Perth WA, Australia*



# ChemCentre (Perth, West Australia)

- Forensic Science Lab
  - Toxicology, Racing, Illicit Drugs
  - Physical Evidence
    - All trace evidence not drug, biological or radioactive



- The Death of Steven Rowe

# CASE STUDY ONE



# The Trace Evidence

- Submitted for fibre/wood analysis
  - 2 timber lengths located within scene
  - T-shirt worn by S. Rowe
  - T-shirt, jeans worn by *John* (accused)



# 2 Lengths of Wood

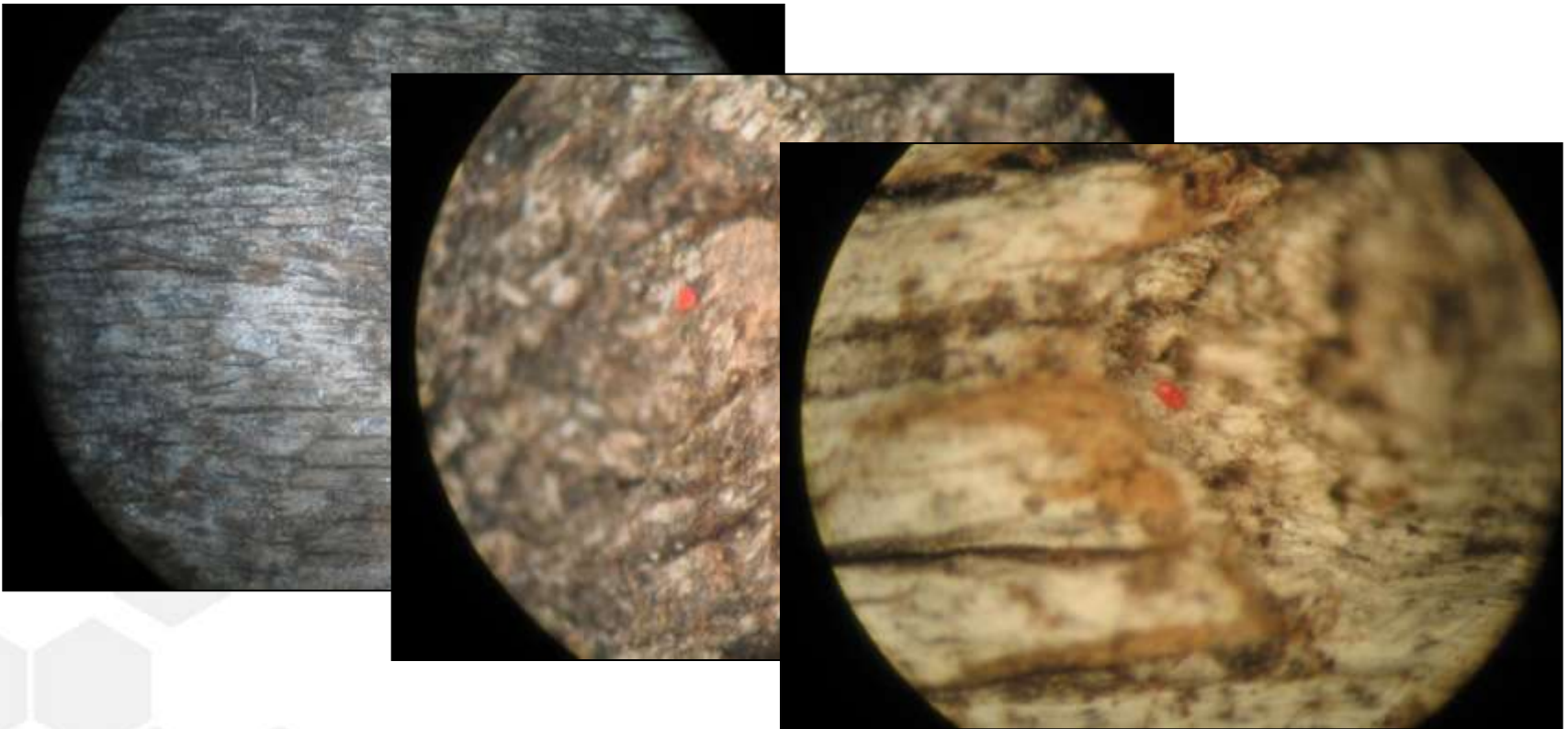
DR5- “timber stake” located  
on edge of footpath



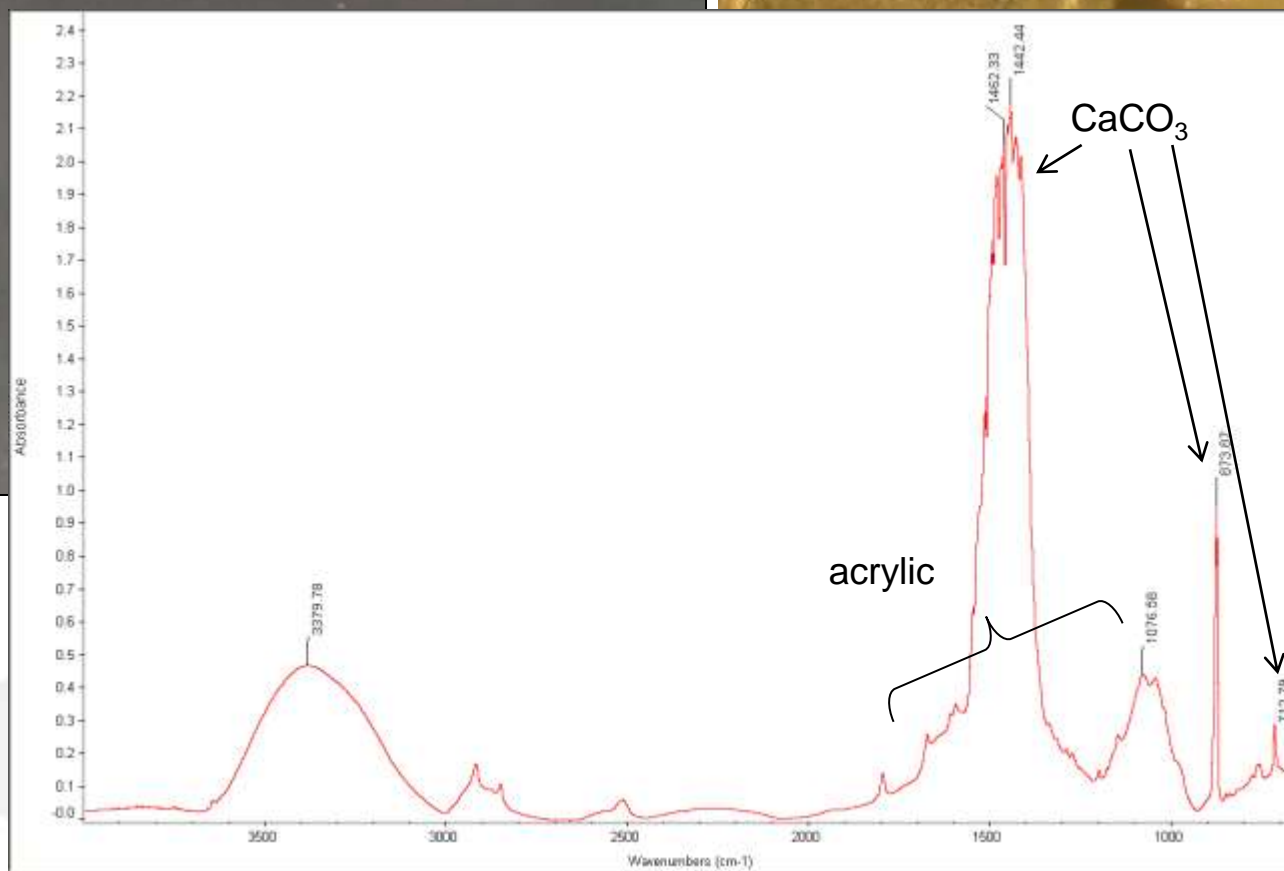
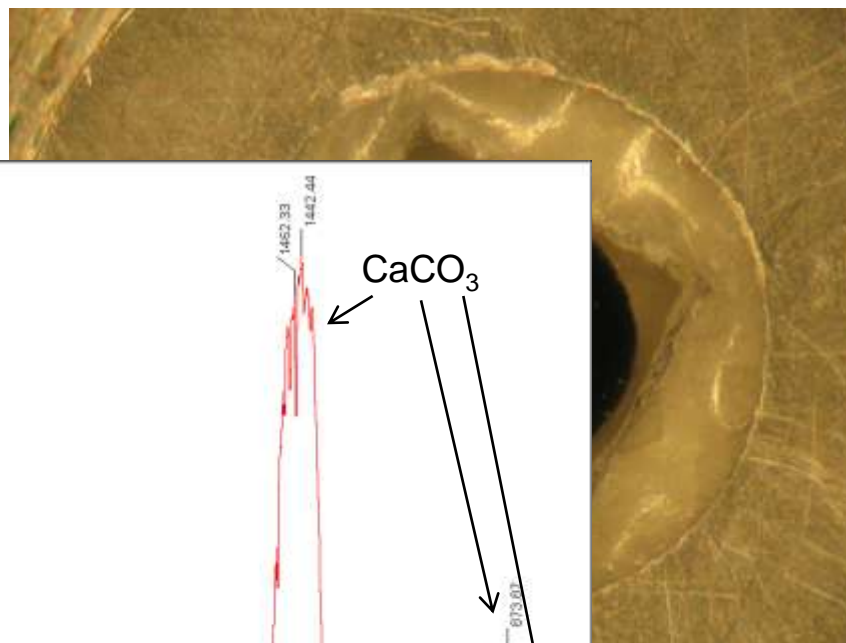
DR6- “timber stake”  
located off footpath



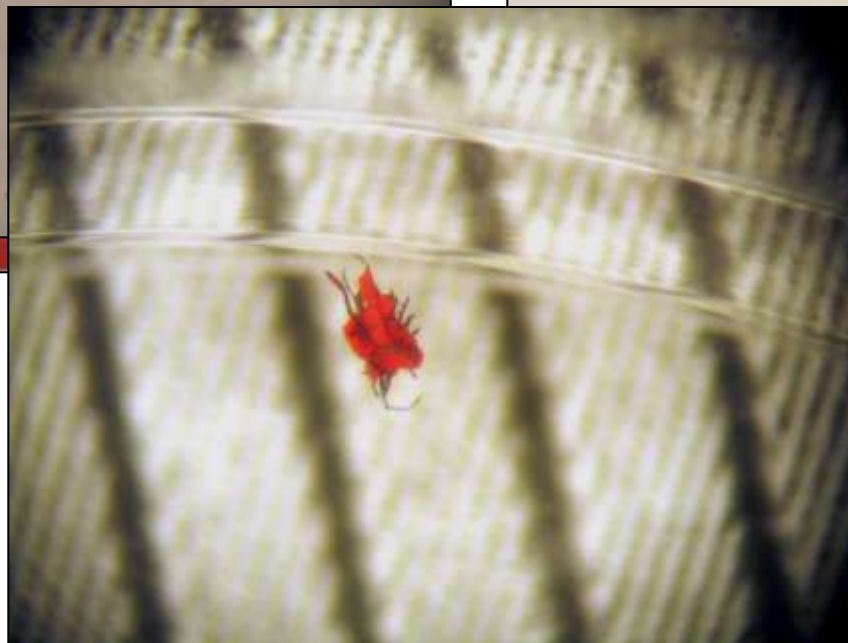
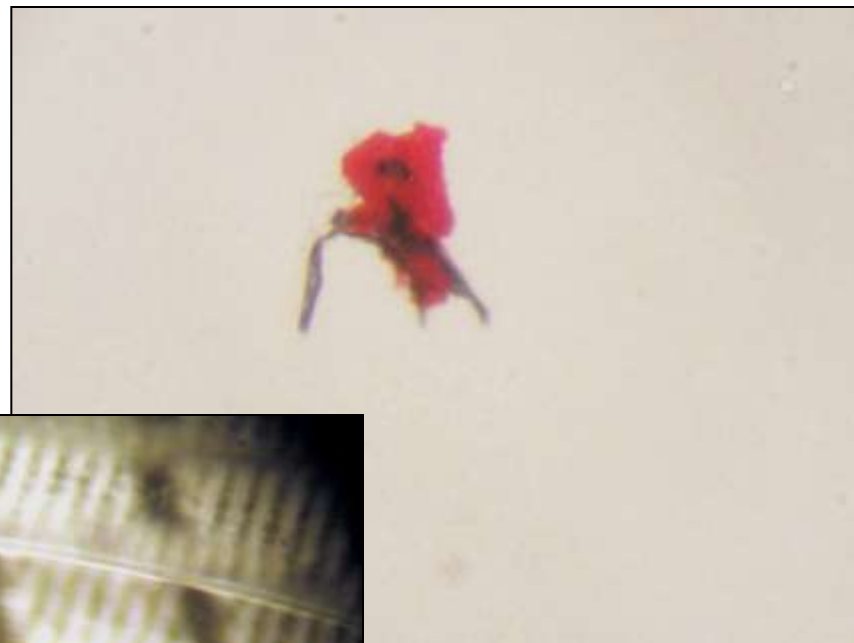
# Microscopic search of Wood- DR5



# Red particles- from DR5



# T-Shirt of S. Rowe





# Event occurred 31<sup>st</sup> October



# Halloween

# From T-shirt of *John* (accused)



# Investigation into “Fake Blood”



**1- Ingredients:** water, kaolin clay, talc, propylene glycol, 'cosmetically approved colours' water-soluble polymer, mineral oil, methyl and propyl parabens, monoethanolamine



**2- Ingredients:** water, acrylates, kaolin, calcium carbonate, propylene glycol, talc, veg. Oil, imidazolidinyl urea, hydroxyethyl cellulose, 2-amino-tmethyl propanol, parabens...



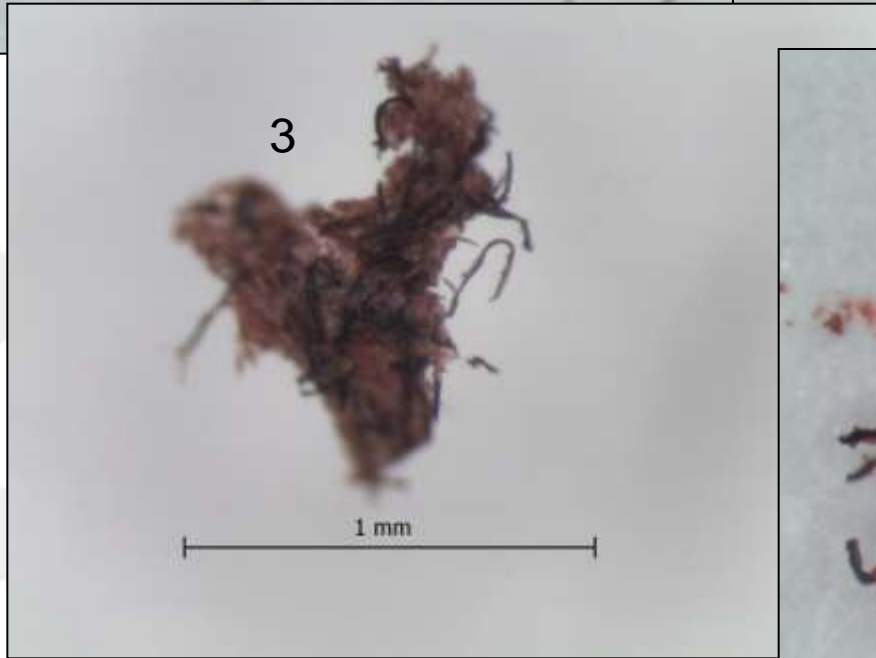
**3- Ingredients:** water, propylene glycol, sodium carboxymethyl cellulose, FD+C red#40, methyl paraben, propyl paraben



**4- Ingredients:** aqua, acrylates co-polymer, kaolin, talc, propylene glycol, PEG-400, bentonite, monoethanol amine, hydroxyethyl cellulose, propyl and methyl paraben, diazolidinyl urea, fragrance

# Entrained cotton fibres?





- *John* was charged on indictment with murdering Steven John Rowe on 5 November 2008.
- ChemCentre PE Report completed September 2009
- The trial was held in October 2009, Supreme Court of WA

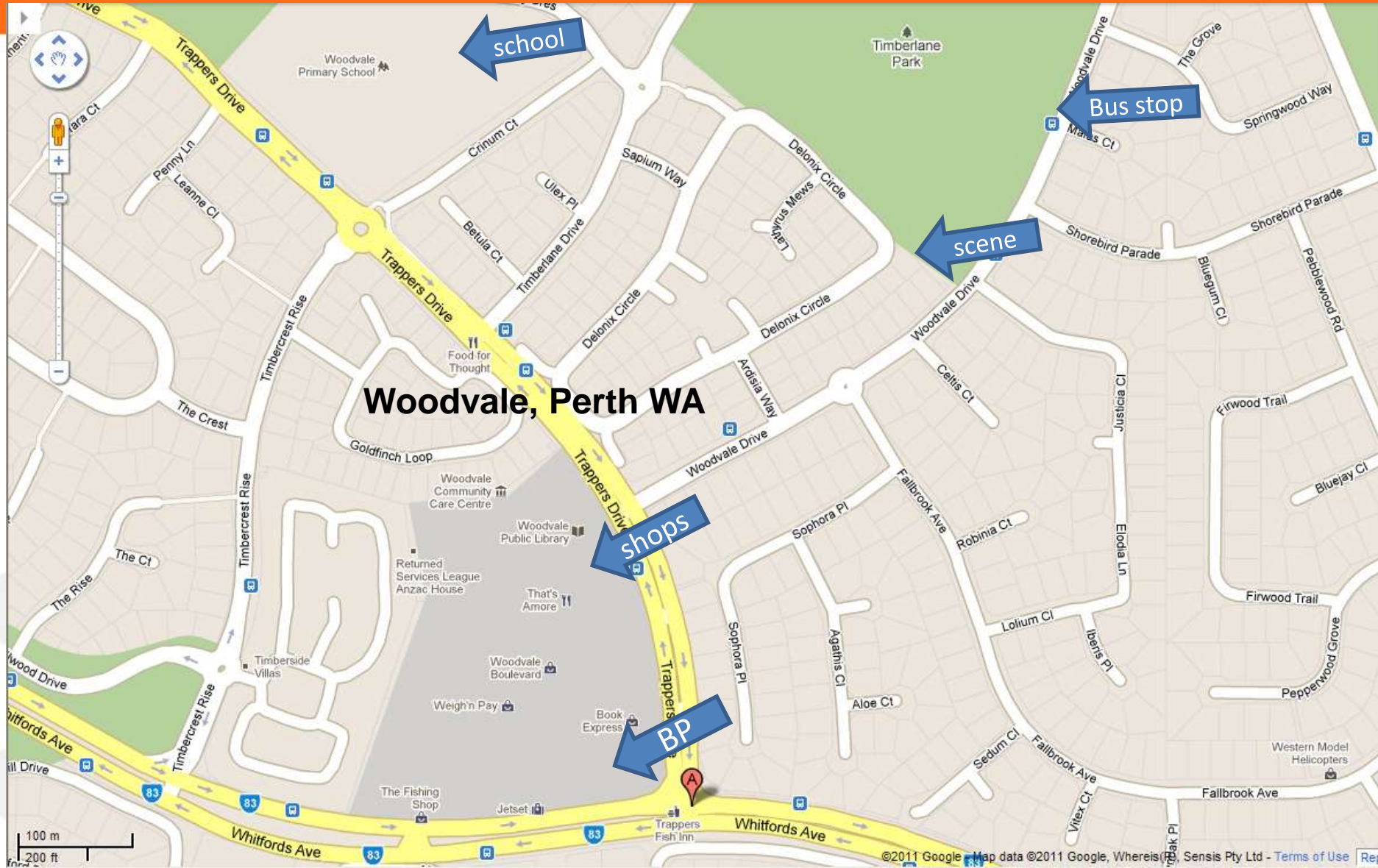


# During the Trial



- *John* admitted to hitting Mr Rowe, claimed self-defence
- *Rick's* reputation as a bully and the history of *John's* experiences with him and others were major focus of trial
- Many witnesses, mostly juveniles appeared
- Testimony from the 3 present at the incident (*Allan, Rick* and *John*) differed in terms of position of *John* relative to Mr Rowe and the direction of swing
- Minimal DNA evidence

# Outline of events (as summarised by Trial Judge)







# Trial Outcome



- After trial by jury, *John* was acquitted of the charge of murder, and of the alternative count of manslaughter.
- Convicted of offence of **unlawful assault causing death** contrary to s 281 of the *Criminal Code (WA)*
- The so-called “*One-Punch Law*” was legislated by the state government in August 2008 and carries max jail term of 10 years
- Unlike manslaughter, offence can occur in an accident with no need to prove death as a “foreseeable consequence”
- Trial judge stated :
  - ‘*John’s* crime resulted from the use of excessive force in what would, otherwise, have been a situation of self-defence’
- *John* sentenced to 2 years imprisonment, suspended for 2 years (had already served 94 days)
- DPP appealed sentence, Appeal dismissed September 2010



Pauline and Anthony Freeman

# CASE STUDY TWO





200 ft



# The Trace Evidence

- Control Glass from vehicle windscreen
- Glass from bin in driveway where car located
- Outer clothing of Victims



# The Glass



- Clothing of Anthony- abundant glass inc. ~26 with black Cr/Zn coating
- Clothing of Pauline- approx 110 fragments

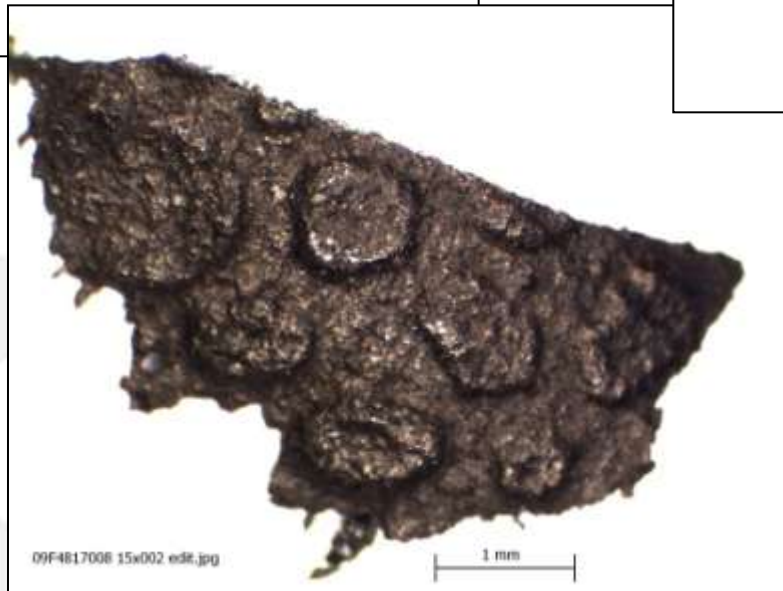
# The black remnants



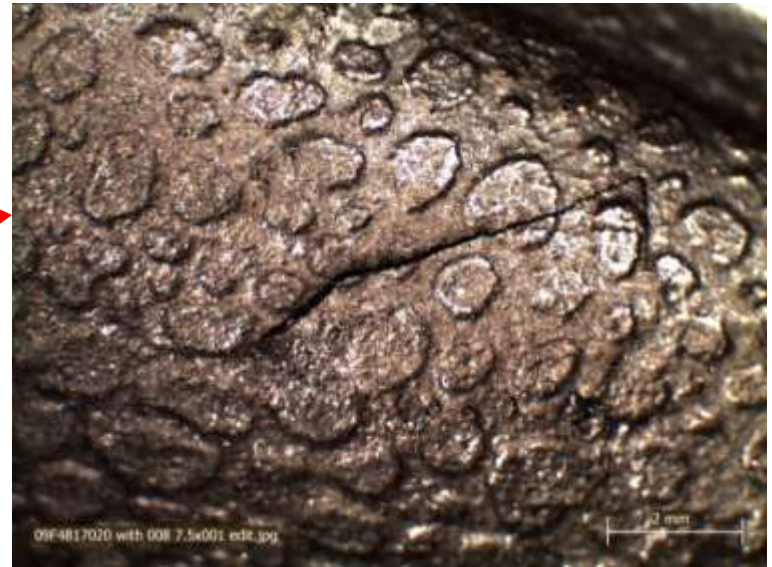
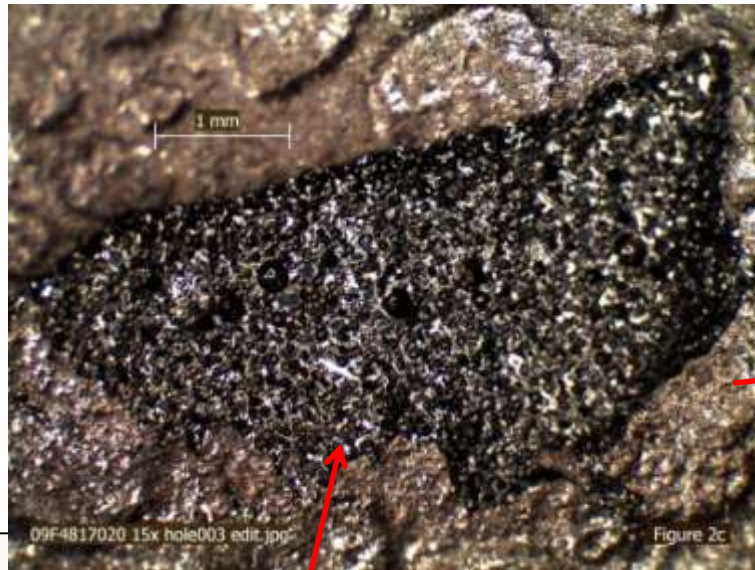


# The black remnants

- Polyurethane with a foam-like appearance and a dotted pattern on one remnant



# Shoe Examination



# Progress To Date

- Louis Marcus Marchei submitted a plea of Not Guilty on April 23<sup>rd</sup>, 2010
- Re-appeared July 2010, with trial scheduled for 25<sup>th</sup> July 2011
- ChemCentre Report completed 4 November 2010
- 4<sup>th</sup> July 2011: Admitted to two counts of dangerous driving, one causing the death of Pauline Freeman and the other causing grievous bodily harm to Anthony Freeman and failing to stop at a fatal traffic crash.
- The District Court was told witnesses said Mr Marchei was also at Ballys Bar drinking with friends and was driving up to 75 km/h in a 50 km/h zone (46mph/31mph).
- Police could not conclusively determine if alcohol was a factor because blood-alcohol testing must be conducted within four hours of the crash, to comply with the Road Traffic Act.
- Judge Ron Birminghamman has released Mr Marchei on bail but has told him to expect a substantial jail term when he is sentenced in August.



# Summary

- In first case, there was minimal DNA evidence, however trace evidence established a strong link between the accused, the weapon and the deceased
- The accused admitted the assault and claimed self-defence during trial
- “Excessive force in situation of self-defence” resulted in conviction
  
- In second case, strong evidence, in the form of a physical fit and abundant glass fragments, established forceful contact between the vehicle and a victims of a hit and run
- The accused plead guilty, yet to be sentenced

- Trace evidence was a valuable resource in the criminal proceedings of these two serious and tragic events



# References

- THE STATE OF WESTERN AUSTRALIA -v- JWRL [No 4] [2009] WASC 392
- THE STATE OF WESTERN AUSTRALIA -v- JWRL (a child) [2010] WASCA 179
- Google.com

# Acknowledgements

- West Australian Police Service, specifically S/C D. Tapper, S/C S. Whincup and Snr Sgt G. Diamond
- D. Detata, R. Powell for prelim. work
- Conference Committee

21<sup>st</sup> International Symposium on the Forensic Sciences  
Convicts to Criminalistics: Past, Present and Future



**Australian and New Zealand  
FORENSIC SCIENCE SOCIETY**

[www.anzfss2012.com.au](http://www.anzfss2012.com.au)

23-27 September 2012

Hotel Grand Chancellor Hobart, Tasmania