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The year rounded out with a fantastic Annual Dinner at the Aerial function centre at UTS. It was a successful night from the branch perspective, with 90 attendees. All were treated to a memorable presentation and fascinating expose on the truth behind the “Underbelly” investigations, by Detective Inspector Gary Jubelin of the NSW Police Force. A special mention also goes to our branch Vice-President who prepared delicious ANZSFSS cookies for all attendees.

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President’s Message:

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President’s Message (continued):

By now you would have noticed the new policy of going green – we are trying to limit the number of trees we ‘waste’ and harness the many possibilities opened up by electronic media. This has been extended to our new membership cards which, although made of plastic, have been implemented to last for several years as opposed to one. All membership cards have now been posted out. You will note that your new card contains your permanent membership number and a bar code. The bar code will be scanned to record your attendance at our meetings (hoping to eventually replace the traditional sign in sheet). The cards also include a smaller key tag card with the same information; keep either on you and show it at our next branch meeting. If you haven’t received yours yet, please let us know!

Unfortunately, ANZFSS merchandise will no longer be available as we know it. The NSW Branch has secured limited merchandise for purchase and these are available NOW in a final merch sale. Think: future collector’s items!? See page 13. You can also view these specials on the website or enquire via email.

Lastly, it would be remiss of me not to acknowledge the NSW Branch Executive and Committee for all their hard work and constant dedication to making this branch one of the largest, with over 200 members. A branch this size doesn’t run itself, and requires many hours of work behind the scenes – personally I thank our Secretary (Kate Grimwood), Vice-President (Alison Beavis) and outgoing Treasurer (Peter Jamieson) for making my job that much easier. Your branch has thrived because of these people. I thank our outgoing committee members for their contribution, and I welcome Melanie Meredith as a new committee member. Notably I would like to thank our outgoing Treasurer, Peter Jamieson, who is stepping down from his role. Peter has been the Treasurer for NSW Branch for over 10 years and has done an impeccable job, so thank you Peter! Sonia Scott, who has been nurtured by Peter, has recently taken over the Treasurers role. Also, thanks go to Aldo Severino – who I’m sure you all know as your friendly Membership Officer - has also become a regular committee member while the role of Membership Officer is absorbed by our Secretary. Thanks to technology, we aim to update and streamline the membership database, hence this committee adjustment. As always, should you have recently changed your contact details, don’t hesitate to email the Secretary with an update. Thanks again to the other outgoing committee members; Aaron Heaghney (our merch master), Di Reader and Ed Solimon. Your contributions have truly been appreciated over the time you have given so generously. We hope you maintain regular NSW Branch membership and look forward to seeing you at a meeting soon.

Unfortunately, one other and very sad farewell is in order. One of our very treasured members of the ANZFSS family, and a fellow Forensic Biologist at FASS, Petine Carruthers-Qua passed away in February this year after a long battle with lung cancer. On behalf of the Society, I would like to express my deepest sympathies to Petine’s family and colleagues. I know she was well loved in Lidcombe and will be missed. Vale Petine Carruthers-Qua (see also page 12).

In other news, our branch is excited to announce the upcoming Inside the Forensic World seminar. The event will be held at UTS on Saturday 20 July, 2013 and give students and interested public an insight into the “real forensics” between crime scene examination and laboratory analysis. Scientific courses currently offered at NSW institutes will also be promoted at the event. Keep an eye out for registration details soon and let your friends and family know (helping us promote Inside the Forensic World is greatly appreciated). Students & those interested in crime scene processes will really enjoy it (note: attendees under 16yrs must register with an accompanying adult due to the content of some components of the day). Please see our website or email our Secretary if you would like more details.

I leave you with an invite to attend our next branch meeting, just around the corner (19 June 2013). Our ‘night at the museum’ will no doubt be a very special one as the venue will be the Australian Museum (College St, city). Special guest speaker Dr Linzi Wilson-Wilde OAM will intrigue us all with a presentation on Wildlife Forensics – I hope to see you there! In the meantime, please enjoy reading another edition of our branch newsletter ;)

- Alison Sears, President, NSW Branch ANZFSS
Wildlife Crime in Australia and Internationally – the good the bad and the just plain ugly

Wildlife crime is the exploitation of fauna and flora for illegal gain. It is a broad ranging offence that includes animals alive or dead, whole animals or their parts or derivatives. Wildlife crime is thought to cost between US$10 and US$20 billion dollars worldwide annually, which is equivalent to approximately 5% of the international drug trade.

There exists a worldwide network of suppliers, distributors, middlemen and traffickers with contact persons in habitat countries and involvement of customs officers at end destinations that facilitates the wildlife crime trade. Offenders are often associated with other organised crime trafficking such as in drugs, guns and humans. Recently wildlife crime has been the focus of terrorist groups as an easy fundraising mechanism.

Dr Linzi Wilson-Wilde has been working in the area of forensic solutions to wildlife crime for approximately 10 years and will discuss her experiences of the good, the bad and the just plain ugly aspects of what has been happening in recent years. Join us for a special ‘Night At The Museum’ event!

Welcome to Our New Committee Member:

Melanie Meredith is a Forensic Biologist with FASS (previously NSW Police Force). She completed the Postgraduate Diploma in Forensic Science and Masters in Science, majoring in Forensic Science, at the University of Auckland. Ms Meredith completed her Masters research project in conjunction with Environmental Science & Research (ESR). Employed at the ESR in New Zealand, Melanie worked in the Forensic Biology department from 2007 - 2011. During this time, Melanie had experience within the DNA Databank and Reference team and completed training in biological screening and examination.

She also gained experience in the implementation of Laser Microdissection (LMD) in forensic casework and went on to specifically study the application of LMD to DNA profiling of spermatozoa. Melanie created a novel, in-house technique enabling successful LMD yielding results from just 30 single sperm cells.

In 2012, Melanie won a Travel Award from the NSW Branch ANZFSS to attend the 21st International Symposium on the Forensic Sciences in Hobart. Melanie presented on her research into LMD and its forensic application, hoping that it will be used more frequently in sexual assault cases where, typically, a very small amount of cells are present or collected.

She is excited to join the NSW Branch committee and looks forward to the event-filled year ahead. Welcome Melanie!
REVIEW: “Forensic Anthropology Uncovers Pompeii” presented by Dr Estelle Lazer (Branch Meeting 20 March 2013).

Review by Glenn Wilcher.

Dr Estelle Lazer has been working on the human skeletal remains from Pompeii for many years now; it started as her PhD project, she’s since gone on to publish an academic book on her work. Unbelievably, before her research, there had been no modern systematic study on the Pompeian victims of the AD 79 eruption of Mt Vesuvius. Dr Estelle Lazer is a freelance archaeologist who has worked on many sites in the Middle East, Italy, Cyprus, the United Kingdom, Antarctica and Australia. She is an Honorary Research Associate in Ancient History at the University of Sydney and is attached to the Forensic Science courses at the University of Technology, Sydney. Dr Lazer also presents a general education course titled ‘Origins and Human Problems’ which she conducts in the Anatomy Department at UNSW.

After the 2013 AGM in March, members of the NSW Branch of ANZFSS were treated to an interesting presentation by Dr Lazer regarding her most current research involving X-ray and CT scanning of Pompeii victims. Our dedicated committee member and wonderful reviewer, Glenn Wilcher, shares his review on Estelle’s presentation:

Dr Lazer conducted forensic investigation on the victims of the AD 79 eruption of Mt Vesuvius studying skeletal remains from Pompeii in order to learn more about the lives and deaths of the citizens. She challenged conventional interpretations that the people who had been left behind were the very old and young and women and those too weak and sick to escape.

Dr Lazer commenced her presentation by showing pictures of the layout of Pompeii, with it consisting of rectangular blocks separated by streets. Estelle showed how the layout of the city comprised of domestic and public buildings and amenities such as amphitheatres, theatres, The Forum, temples, public baths, water fountains, pubs, brothels, political buildings and markets. Dr Lazer showed numerous photographs of uncovered artefacts comprising of some interesting, aged items including election slogans, wall paintings, sculptures such as life-size bronze statues, mosaics, theatre masks, and silver cups with a skeleton illustrating that life is short. Dr Lazer showed a picture of playing dice and stated that they were rally ‘loaded’ dice.

In AD 62 an eruption damaged and destroyed homes, buildings and statues. Water systems were damaged causing flooding and a rebuilding program was commenced. Pompeii and Herculaneum were discovered by accident.

In the 1500s, Pompeii was discovered by workmen who, while digging a canal in the area, uncovered wall paintings. Herculaneum was discovered by well diggers in 1709. It had been buried under 20 metres of material. Herculaneum, a small seaside town, was 72 hectares with a population of 5000 which had sea walls, storm drains, a sewerage system and bath drainage and domestic structures. This site was excavated after 1738 with nearby Pompeii excavated after 1748.
REVIEW: “Forensic Anthropology Uncovers Pompeii” presented by Dr Estelle Lazer (Branch Meeting 20 March 2013).

The city of Pompeii, covering 66 hectares, was the industrial hub and most famous metropolis of the time with a population of 20,000. Romans, being good at engineering, had established many underground areas such as cellars and sewerage tunnels. It was into these underground spaces that people had fled to escape the explosions related to the eruption of nearby Mt Vesuvius. In 1981 bones belonging to 143 individuals were found in arcades. The excavation turned up some amazing pieces of jewellery. It was the largest discovery of Roman remains in one place. Mt Vesuvius erupted on August 24 AD 79 with super-heated pyroclastic material blanketing the towns of Pompeii, Stabiae and Herculaneum.

Herculaneum was the foremost mortuary archaeology site. Skeletons were huddled together and showed signs of thermal shock with temperatures close to 1000 degrees Fahrenheit. The eruption of Mt Vesuvius resulted in a plug of pressurized lava with fire blowing 20 metres into the sky. The mushroom cloud produced a 24 megaton eruption. Pumice was shot into the sky at a velocity of nearly twice the speed of sound and this lasted nearly 11 hours. Around midnight the volcano’s column collapsed sending the first of four avalanches of super-heated gases, pumice and rock to hit the town of Herculaneum. By the fourth avalanche, it reached Pompeii.

Pompeii was still recovering in AD 79 from earthquakes including a substantial one in AD 62. The type of eruption of Mt Vesuvius is known as a “Plinian” eruption named after the naturalist Pliny. Plinian eruptions are the most explosive and powerful. They occur when magma containing large amounts of gas explodes in the depth of the volcano where the crater pipe functions like a gun barrel shooting gas upward at high speed and forming an enormous ash cloud. The volcano erupted again in 1631 killing 4000 people. During rebuilding, ruins of Pompeii were discovered on March 23, 1748.

Mt Vesuvius is approximately 4300 feet high; the slopes of the volcano ideal for agriculture. It is located near the Bay of Naples in the region of Campania in Italy. It sits in a chain of volcanos along the Italian west coast. Mt Vesuvius had erupted before and continued to erupt once a century until about AD 1037 at which point the volcano was quiet for approximately 600 years. Mt Vesuvius last erupted in 1944.

Dr Lazer explained human skeletal remains were not appreciated as a valuable scientific resource until the latter part of the twentieth century. The material had been collected and stored but not curated, and as a result remains became disarticulated. Bones were stored in unoccupied...
REVIEW: “Forensic Anthropology Uncovers Pompeii” presented by Dr Estelle Lazer (Branch Meeting 20 March 2013).

buildings in Pompeii with other uncatalogued artefacts. These bones had to be studied in situ with no tables, inadequate lighting and laboratory equipment. Dr Lazer described the environment as less than ideal with rats, spiders, birds, snakes and bats common “co-examiners”! Dr Lazer explained the limited access to the area in which she worked and the limited security clearance she was granted, stating she was often locked in the room.

Estelle explained that ecosystems had developed in the skull cavities of the remains. The bones she examined showed that the people of Pompeii were well nourished and healthy with heights averaging 154 cm for females and 167 cm for males. About 10% of the skeletons showed signs of degenerative arthritis usually associated with the ageing process. Many of the skulls examined by Dr Lazer had teeth which showed considerable wear. Some teeth were worn exposing the nerve. Peridontal disease was present, with signs of gum disease and abscesses related to decayed teeth. Cavities were present in teeth and heavy plaque deposits were observed. The wearing of the teeth was due to grit and stone in bread which came from the millstone to ground the wheat into flour. Dr Lazer showed photos of the mill and the millstone.

Dr Lazer stated that the three main causes of death at Pompeii, as a result of her studies of skeletal remains, was asphyxiation being the major cause of death, thermal shock evident from the pugilistic stance of bodies due to heat reacting on muscle, and concussion from falling debris and collapsing buildings due to associated earth tremors. Dr Lazer showed examples of medical instruments recovered from countless artefacts. The instruments were for diagnostic and surgical procedures and dispensing medicines (see image above). Medical tools were found in the House of the Surgeon. After 250 years of excavation approximately 44 hectares of ruins have been uncovered with more than 11,000 painted and incised inscriptions found. Dr Lazer explained how photographs and computer reconstruction of images is playing an important role in the ongoing research and discoveries. Much new work involves re-examining previously excavated material.

Dr Lazer was the first scientist to undertake a modern systematic study of the skeletal remains of the Pompeian victims. Estelle used forensic skeletal identification techniques to learn about the Pompeian victims. She x-rayed and CT scanned one of the casts in Sydney in 1994 when it was part of a travelling exhibition. In 2011, the Pompeian authorities gave Dr Lazer permission to perform non-invasive CT scans and x-rays on the rest of the casts with the caveat that nothing is moved as the casts of the victims are extremely fragile. Dr Lazer aims to provide information about the lives and death of these Pompeian victims.

- Review by Glenn Wilcher.

References
www.sfmoma.org/explore/collection/artwork/118908
Dr Lazer: The Resurrection of Pompeii 2009 Routledge Publications.
Images from open sources or from the presenter Dr Lazer and reproduced here with permission.

Review by Glenn Wilcher and Annalise Wrzeczycki.

Sergeant Jon Cooper joined the Special Investigations Branch of the British Army in 1990 having worked previously in general duties. He was involved in many investigations including homicide, terrorist incidents, drugs and sexual assaults.

In 2001 he qualified as a Crime Scene Investigator with the National Police Improvement Agency, United Kingdom, before joining the West Yorkshire Police as a CSI. Later he returned to Defence where he took over as Head of Faculty of Forensic Training. He is now employed as the inaugural Forensic Manager for the Australian Defence Force Investigative Service (ADFIS), based in Canberra. Having been involved in domestic policing for over 25 years Sgt Cooper has also had the opportunity to work in forensics during incidents in Northern Ireland, Bosnia and Afghanistan.

ADFIS Investigations
The ADFIS was established to increase the professionalism and effectiveness of ADF policing and to address issues identified in the senate Foreign Affairs Defence and Trade Committee Report from 2005. The ADF has Investigators deployed around the world including in Iraq, Afghanistan, Timor and the Solomon Islands. The unit includes investigation personnel deployable at short notice to serious incidents in Australia or overseas. On any given day investigators may be required to respond to new incidents, interview witnesses and process a crime scene (or two!) while maintaining ADF skills, fitness, weapons training and promotion courses. Similar to state police, ADFIS investigators may examine domestic crimes including sexual assault, rape, arson, fatal motor vehicle accidents and volume crime. The difference is the incident, location, victim, suspect or witness will have a connection to the ADF.

The ADFIS has links with the Australian Federal Police and State and Territory Police with training similar to their civilian counterparts, being fully qualified Crime Scene Investigators. The powers of the ADFIS extend internationally within the Defence nexus, with those powers limited as prescribed under the Defence Force Discipline Act (DFDA) 1982.

Becoming an ADFIS CSI
To become an ADFIS CSI, Sergeant Cooper explained you must first join a defence force (army, navy or air force). After a period of general defence duties, personnel can apply to join the investigational unit whereby subsequent training can take up to eight years (often six years before a member is sent on the CSI Course). A Certificate IV in Forensic Science (Crime Scene Examination) is completed through the Canberra Institute of Technology (CIT), with no recognition of prior learning granted.

Sergeant Cooper stated there are currently only 45 ADFIS crime scene investigators for Australia and the rest of the world, with himself being the only Forensic Manager. There are no supervisors or team leaders. He explained how there were no registered forensic science specialists / experts and external agencies or specialists were utilised when required (such as AFP, Department of Health and Police in NSW and laboratories in South Australia). While in-house scientific processing of exhibits does not exist, ADFIS do conduct digital forensics and have access to CrimTrac and local jurisdictions’ databases.

Sergeant Cooper also explained there were no Defence Force databases for DNA but DNA collections and Fingerprints with CrimTrac were utilised during investigations. He also stated there was no legislation to review human samples other than for drug offences using urine and blood for toxicology. It was also mentioned that collection of buccal swabs or FTA cards from personnel was on a voluntary basis only, however, CSI’s are advised to provide elimination samples. Additionally, ‘Isolation Preparation Forms’ including the capture of ADF staff ten prints is typically kept on file.

Inside the wire vs outside the wire
Sergeant Cooper outlined the roles of the ADFIS being Domestic (within Australia), Non – Hostile and Hostile situations. Terms such as “Inside the wire” and “Outside the Wire” investigations were defined, for example with “inside” pertaining to hostile or non-hostile incidents which occurred and were being investigated within the base environment such as mortar or insurgence attacks in Afghanistan with rogue Afghani soldiers shooting Australian / Coalition troops. Typically, outside threats pose a greater threat than those attacks inside the wire.

“Outside the wire” hostile incidents included road side bombs with Improvised Explosive Devices (also known as IED’s). Sergeant Cooper described one latest trend; the use of rice cookers buried under the sand in Afghanistan to act as explosive devices. Bomb makers often use masking tape in the construction of such IEDs; this is a particularly useful type of evidence if it can be collected as the tape may yield fingerprint and DNA evidence. It is the aim to recover as much of the IED or rocket as possible. With a focus on proactive policing, databases help link crime scenes to IED types, allowing intelligence gathering and identification of bomb makers and trend tracking which allows bomb types to be identified to particular provinces. Sergeant Cooper discussed issues with investigations in the battlefield with the priority being to retrieve killed soldiers in order to return them home and to their families.

Challenges to the collection of forensic evidence in hostile environments
Unique issues affecting ADFIS investigations overseas include weather (dust, sandstorms, extreme heat or snow), the likelihood of scene trampling, lack of equipment and limited PPE, lack of nearby services or radio access, language barriers, a soldier’s heavy armoury and helmet, difficulty in defining a crime scene perimeter, the possibility of further hostilities and associated dangers such as secondary devices, the travelling times and distance for investigators (and medical personnel) to get to crime scenes and process them and the challenges of body expatriation from remote locations.

Sergeant Cooper stated that crime scenes that are in darkness for example are unable to be illuminated for risk of attack from the insurgence, also that soldiers often need to leave the crime scene to complete their designated missions which is the priority. This often means collection of only minimal evidence or body parts is possible.

With respect to evidence collection Sergeant Cooper stated it was a matter of ‘worst case packaging’ of evidence, army personnel or ASDFIS investigators may only be given a momentary opportunity to “pick it up and put it in a bag”. Such exhibits may then be carried on an army vehicle until the mission is completed (up to two weeks) and the personnel return to base. He stated that body retrieval was paramount.

Evidence collection involved use of masking tape, taking fingerprints and collection of evidence for DNA (using swabs). With bombings, investigators look at crater damage and photograph explosive device parts or spent shells which help determine the type of explosion. They also obtain DNA and fingerprints to identify suspects and chemical analysis can determine the regional province from which the bomb originated. Sergeant Cooper explained how a CSI will retrieve helmets from shot soldiers and structures from damaged vehicles to examine forensically to ensure equipment worked as it was suppose to and/or to improve equipment for safety and survival.

He showed a number of photographs depicting hostile incidents such as a mortar attack that destroyed an office/domestic complex. An examination of the area provided information on the explosive. Depending on the incident, information will be obtained from weapons used, ballistic examinations and residue, fingerprints, DNA, mobile phone examinations and associated data as well as the deceased victims themselves.

Bringing deceased soldiers home; a two stage process
Sergeant Cooper explained the two stage process regarding the management of deceased personnel. Defence members killed in Afghanistan, for example, are processed in two stages. Stage 1 involves identification of the decedent and this is conducted using Interpol DVI forms and protocols in cases of visually unidentified remains (such as those collected at explosion sites).
Photographs, DNA, Fingerprints and visual identification processes are undertaken as well as other medical and non – medical methods of identification. Equipment, uniform, firearms and belongings are recovered from deceased soldiers. The completion of Stage 1 allows the collection of basic evidence and the body to return home. Stage 2 is concerned with the forensic autopsy examination. This occurs in Australia.

The Unrecovered War Casualties team
Sergeant Cooper mentioned other duties such as those carried out by the three-person Unrecovered War Casualties team whose aim is to “never leave anyone behind”. This team oversees the recovery of Australians killed or lost in action around the world. He stated there are currently 2,500 missing Australians with retrieval efforts concentrated in Papua New Guinea (PNG).

The audience were shown photographs of an area in PNG in which trenches were identified. In such recovery operations, locals are paid for their labour to assist. Hazards associated with these recoveries are unexploded ordinance. A photograph was shown of a hand grenade with the pin still present where the deceased remains were to be recovered at the base of a tree.

Sergeant Cooper discussed identification challenges when ‘mixed evidence’ is recovered from clandestine graves, such as those in PNG. He showed photographs where three conflicting types of evidence; an Australian toothbrush, an American button and a morphine bottle of Japanese origin were found together complicating the identification process and making it difficult to confirm the nationality and identity of the deceased soldier.

Locals in Papua New Guinea usually indicate to recovery teams where soldiers are buried. Culturally, Japanese soldiers have specific burial techniques regarding the direction in which bodies are laid out in graves. Such specialised knowledge and information regarding death and killing rituals assists in identifying the deceased. Australian soldiers are not typically laid in straight lines, while Japanese beheadings were common and skeletal remains therefore revealed a skull near bones in somewhat of a crumpled down position.

Odontologists and Anthropologists assess recovered skulls and jaws to assist with morphological traits helping to determine race. They also examine bridge work and tooth morphology to help identify the origin/nationality of the deceased.

The principle of deceased soldiers remains “staying in theatre” was mentioned with deceased being recovered and buried in the local war cemeteries.

Another issue discussed by Sergeant Cooper was the fact that living relatives are dying off and the collection of DNA is problematic for obtaining ante-mortem data for comparison studies to establish a positive identification. He explained that visiting families to obtain DNA specimens for comparison can be distressful to family members.

The death of 24 year old Combat Engineer Corporal Scott Smith was also mentioned. In October 2012, he was killed “outside the wire” by an insurgent IED (intended for a vehicle) on a mission in Northern Helmand province, Afghanistan. Corporal Smith was part of a small team tasked with clearing a suspected insurgent compound when the incident occurred. Under challenging conditions, the basic evidence collection process of “scoop and run” by fellow soldiers was conducted. Distinctive tattoos and a “by elimination” reasoning were used in the identification process. Corporal Smith’s torso, arm and two fingers were retrieved and fingerprinting was conducted. His fellow soldiers could verify his identification and it was a case of “he went in and didn’t come out”.

Another case mentioned was a “green on blue” incident involving a rogue Afghan soldier turning on Australian soldiers and killing three (in August 2012). Sergeant Cooper works tirelessly within the ADF to ensure investigations occur as thoroughly as possible, deceased soldiers return home and families can obtain closure. The Private Jake Kovco body repatriation mix-up of 2006 will not happen again. Due to the nature of the work, ADFIS personnel and investigators undergo regular debriefings.
Ongoing projects & the future
Sergeant Cooper presented on current projects and the future directions for the ADFIS. He discussed policies and procedures reviews, the aim for better intelligence and forensics, submissions and processes nationally being reviewed and better collection of evidence, particularly to matters involving sex offences. Sergeant Cooper explained that investigations and processes are currently limited by outdated legislation. He is working on new policies to make ADFIS a more sustainable unit. Forensic evidence, he said, is very important and the submission process is being reviewed nationally. Sex offence investigation training has recently been reviewed and medical doctors are being trained in the collection of forensic evidence; this is a positive moving forward.

It is only NSW and QLD who currently collect and process robot-ready DNA samples. For this reason, ADFIS is now immediately implementing this collection process. Sergeant Cooper’s team must constantly consider all seven Australian jurisdictions to implement the most effective and resourceful processes, evidence collection kits and examination methods. He believes in supporting secondments with local police as ADFIS personnel need to have an awareness of generic process in order to successfully meet the needs of seven forces. Albeit a difficult task, he proves to be up for the challenge!

Sergeant Cooper’s interesting presentation illustrated the hazardous task of processing a crime scene in battlefield conditions and the unique factors involved in processing such a scene compared to civilian crime scenes at local jurisdiction level.

- Review by Glenn Wilcher & Annalise Wrzeczycki.

DID YOU KNOW? Growth rings found in trees not only reveals the age of a tree. It can also reveal how fast it grew, which depends on nutrients found in the soil such as dead animals and plants. This means that a decomposing body would also affect the growth rate of a tree over time. Source link: [here](#).
Inside the Forensic World 2013 (please promote to friends & students):

2013 Inside the Forensic World
Saturday 20th July 2013
at the University of Technology, Sydney

Inside the Forensic World features forensic scientists, investigators and lawyers who will discuss their career path, experiences and answer questions from the audience. An extensive practical program will also complement the lecture series. There will be displays featuring work performed by NSW forensic practitioners and career guidance information available to attendees.

This is especially suitable for students in Senior high school and first year university, or even educators involved in teaching science/forensic topics

You will even have a chance to investigate a crime scene!

Places are strictly limited!

WHERE: University of Technology, Sydney
Building 4, Level 2 Foyer for registration
(Corner of Thomas & Harris St, Ultimo)

WHEN: Saturday 20th July, 2013, 9.00 am – 3.00 pm

COST: $60 per person (incl refreshments & lunch)

Registration Enquiries?
Email: nsw.anzfss@gmail.com

DID YOU KNOW? Forensic science is used much more often for purposes other than murder related crimes. Everyday drug related and stealth offences can also require the use of techniques like fingerprinting or chromatography. Source link: here.
Vale Petine Carruthers-Qua (1961 - 2013):

Petine Carruthers-Qua was a treasured member of the ANZFSS family and a most dedicated Forensic Biologist. Sadly, Petine passed away from lung cancer in April this year. As was her wish, she had made it “home” to New Zealand.

With an interesting work history (from medical recruitment to painter), Petine undertook the Bachelor of Science in Biomedical Science – Forensic Biology at the University of Technology, Sydney (UTS) to achieve her goal of pursuing a career in forensic science. As a mature age student, she was determined to excel, and that she did. From taking a tertiary preparation course through TAFE to completing her degree, Petine never gave up.

She was particularly skilled at using her creative talents to undertake scientific assessments (Petine successfully created “Samir” as part of her final UTS project in facial reconstruction – see picture above).

Eventually, Petine landed her dream job as Forensic Biologist at the Division of Analytical Laboratories (now called FASS). Her DAL family meant so very much to her.

Petine was a caring and committed professional and will not be forgotten. She believed in treating all people with respect, being honest and standing up for what is right. Petine fought strongly to establish quality standards in forensic casework and led by example when it came to maintaining integrity and not losing sight of our professional aims and limitations.

With sadness to have lost a respected scientist, a work colleague and friend, we pay tribute to Petine Carruthers-Qua. The NSW Branch of ANZFSS send sincere condolences to her two grown children Catherine and Michael, her partner Greg and her family. May she rest in peace.
Once sold, the ANZFSS merch will be no longer so members are encouraged to make the most of this “CLOSING DOWN SALE” not to be missed! The full order form is available on our website or by request from our Secretary. Simply email: nsw.anzfss@gmail.com

**STOCK IS VERY LIMITED.** Get in quick! Coasters, beach towels, caps and bucket hats, travel mugs, mouse mats, compendiums, t-shirts and polos, tea towels, backpacks, keyrings, sports bottles, CD carry cases, wine carriers, umbrellas and USB wristbands - there is something for everyone and all purchases can be delivered by post or collected in person at a branch meeting.

And don’t forget; all sales help support the events and scholarships of your Branch.

For further details and available sizes, see the [website](https://www.earth KNOW? Vegetable, mineral, animal, and man-made are the only four types of fibers that exist. The analysis of these fibers compares characteristics of the fibers such as colour type, coarseness, diameter, discoloration and cross-sectional shape. The colour of the fiber is by far the most important characteristic. It is analyzed using a microspectrophotometer, and is the equivalent of a fingerprint of the fibers. Using this technique, fibers of the exact same colour can be matched. Source link: here.}
Contact Details - NSW Branch:

If you have any query, comment, suggestion or content idea for this newsletter or any Branch events, please do not hesitate to contact us. All correspondence regarding general enquiries, membership renewal, payment etc, can be addressed to:

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Email: nsw.anzfss@gmail.com

Note - specific recipients (e.g. President, Treasurer, Newsletter Editor) can be reached c/o these details.

Website: anzfss.org.au/nsw

Your Committee

President: Alison Sears
Vice President: Alison Beavis
Treasurer: Sonia Scott
Secretary: Kate Grimwood
Public Officer: Denise Donlon
Website: Philip Maynard
Newsletter: Anna’s Wrzeczycki
Committee Members:
Harry Albani
Jen Raymond
Sonia Scott
Eric Murray
Tania Prolov
Aldo Severino
Glenn Wilcher
Rebecca Johnson
Melanie Meredith

DID YOU KNOW? X-rays were discovered in 1895 by a scientist named Conrad Röntgen. Source link: here.