Message from the Director

A new newsletter and a new announcement!

It gives me great pleasure to welcome the National Measurement Institute and the ACT Government Analytical Laboratories who are now formally members of ANZPAA NIFS and ANZFEC. Dr Michael Collins and Simon Rockcliff will be representing their respective agencies on ANZFEC at ANZFEC meeting 4 on Thursday 3 November 2016.

Also, welcome to the new look newsletter. The newsletter incorporates the new NIFS logo and branding. The NIFS logo has been updated to reflect the addition of New Zealand on ANZFEC and incorporates the new NIFS colours. The logo has been refreshed to ensure it reflects the known and trusted NIFS identity, but updated to symbolize the new NIFS direction. This newsletter design is an interim stage prior to moving to a web based newsletter in the New Year – so watch out for that change.

The new NIFS logo and branding was prominently displayed at the recent ANZFSS Symposium in Auckland New Zealand. The Symposium was a huge success, with interesting presentations and exhibitor displays and excellent networking opportunities. The Ian Riebeling New Practitioner workshop was held on the weekend before and a special thank you goes to all of our presenters, who did an amazing job, giving up time on the weekend to make the workshop so successful. The NIFS team members all enjoyed the Symposium and were very active, giving five presentations.

The last few months have been very busy, not just with the Symposium, but with all nine Specialist Advisory Groups having been held. NIFS projects are also well underway or being finalised.

We are now getting ready for ANZFEC 4 and the Forensic Science Summit – Forensics 2030, to be hosted by the AFP in Canberra 7-8 December 2016.

The Summit will help inform NIFS future directions and Research and Innovation Roadmap and investment over the next period.

In more exciting news, the first ever NIFS baby has arrived! NIFS Senior Project Officer Eva Bruenisholz and her partner Tim welcomed their son Oskar on 30 July 2016. Oskar is an adorable and happy baby and the team at NIFS is delighted for Eva and Tim.

An exciting time ahead!

Dr Linzi Wilson-Wilde OAM
Director, ANZPAA NIFS

Announcement – Forensic Summit 2030

This 7 and 8 December, the Australian and New Zealand Forensic Executive Committee is convening the Australasian Forensic Science Summit (The Summit) to be hosted by the Australian Federal Police at the AFP Forensics Facility in Canberra.

Not since 1995 has there been such an event that draws together leaders in forensic science, law enforcement, academia, justice system and other key partners to discuss strategic issues facing forensic science.

The theme, ‘Forensics 2030’ will challenge attendees to reflect on Australia and New Zealand’s forensic science capabilities and discuss the impact of the future operating context on critical areas such as technology, capability and capacity.

Participants will develop a united vision for the future of forensic science and put forward clear recommendations to progress forensic science towards 2030.

Attendance at The Summit is by invitation and outcomes will be published in the Australian Journal of Forensic Sciences.
Australia and New Zealand Forensic Executive Committee (ANZFEC) Update

The Australia New Zealand Forensic Executive Committee met on 26 July 2016 in a better, more suitably sized room! Members worked through the active NIFS projects and discussed the amalgamation of the Senior Managers of Australia New Zealand Forensic Laboratories (SMANZFL) and the Specialist Advisory Groups (SAGs) into ANZFEC and the ANZPAA NIFS framework.

An ANZFEC/SMANZFL subcommittee was formed to facilitate the transition. Again the Committee had a positive and engaged atmosphere. The next meeting will be on 3 November 2016 in Melbourne.

Of note is that four ANZFEC members have left the Committee. Karl Kent, representing the Victoria Police Forensic Services Department has moved onwards within Victoria Police and Keith Bedford has retired from the Institute of Environmental Science and Research Ltd. We wish them all well in their future endeavors.

We’d also like to very much thank Dr Mark Reynolds of Western Australia Police and Superintendent Yvette Clark for their contribution to ANZFEC. Superintendent Clark was the deputy chair of ANZFEC and acting chair for the July 2016 meeting.

Image: ANZFEC meeting in progress.
Image: Colin Priddis (SMANZFL Chair) and Dr Linzi Wilson-Wilde (NIFS Director) present Karl Kent with a plaque in recognition of his significant contribution to the forensic science community, with Karl’s wife Ree Kent and John Doherty, Acting Director VPFSD.

Image: Dr Linzi Wilson-Wilde and SMANZFL Chair Colin Priddis present Dr Keith Bedford (Centre) with a plaque in recognition of his substantial contribution to the forensic science community.
Vale Jason Joseph Beckett

Members of the Electronic Evidence Specialist Advisory Group (EESAG) were very saddened to learn that Dr Jason Joseph Beckett, respected colleague and former EESAG member, died in a car accident on 13 August 2016.

Dr Jason Beckett started his career as a police officer with NSW Police. Jason developed a passion for and expertise in digital forensics becoming the Director of the State Electronic Evidence Branch at NSW Police in 2003.

Jason was a strong advocate for establishing standards and promoting accreditation in digital forensics.

Jason was awarded a PhD from the University of South Australia, and along with colleagues published scientific journal articles in the area of validation and verification of computer forensic software tools and the scientific underpinnings for digital forensics.

In 2003, Jason identified that the newly formed EESAG could provide a mechanism for national collaboration to set and promote standards in digital forensics.

He approached the EESAG members about broadening its remit and sometime later the Computer Forensics Scientific Working Group was welcomed to EESAG.

Jason later took on other significant roles in the Commonwealth Government and was employed by the Attorney General’s Department at the time of his death.

Jason was considered a leader in the field of digital forensics and was a mentor to many. His work colleague, both past and present will miss him greatly. Jason is survived by his wife Raylene and children Logan, Jarod and Phoebe.

ANZFSS 2016

Ian Riebeling New Practitioner Workshop

The Ian Riebeling New Practitioner Workshop was facilitated by the NIFS team for the 7th time ahead of the 2016 ANZFSS International Symposium in Auckland.

The workshop comprised of 17 participants including students and new practitioners from across Australia and New Zealand as well as 14 presenters with a broad range of expertise.

Participants engaged in interactive presentations from experts in fingerprints, crime scene investigation, DNA analysis, chemical criminalists, forensic odontology and document examination and were introduced to the latest developments in 3D crime scene reconstruction.

New Zealand Police officers provided a detailed recount of their investigation into the high profile murder of a taxi driver in Auckland in 2010, which eventually saw the offender tried and sentenced in China after he fled New Zealand.

The workshop culminated in a mock court demonstration with local crown solicitors providing an invaluable insight into the requirements of an expert witness presenting forensic evidence in court.

The NIFS team would like to thank all participants for giving up time on their weekend to participate in this workshop dedicated to the memory of Ian Riebeling.
Image: Ian Riebeling Workshop participants analysing fingerprints provided by Tanja Van Peer and Amanda Henman from New Zealand Police.

Image: Report on Operation Edgewater by lead investigator Hywel Jones from New Zealand Police at the Ian Riebeling Workshop.
NIFS Presentations

The NIFS team was able to provide an update on NIFS ongoing and project activities with a total of five presentations at the Symposium.

Dr Linzi Wilson-Wilde presented on the future of the National Institute of Forensic Science, as well as the results of the Rapid DNA and Error Rates projects.

Linzi was joined by Dean Catoggio to present on Women in Leadership in Forensic Science and encouraged discussion on the topic within the forensic science community.

Robert Morgan presented the results of the End to End Phase 2 project on behalf of fellow NIFS team members Eva Bruenisholz and Nicholas Vandenberg. Professor Roberta Julian also presented on the outcomes of the Interfaces Phase 2 project.

NIFS Symposium Sponsorship

NIFS has a proud history of supporting ANZFSS and this year’s symposium provided a great opportunity to reveal the new ANZPAA NIFS branding and logo in line with our broader governance body and strategic direction.

NIFS was the plenary sponsor for Professor Sue Black who presented on the issues facing forensic science and her work reviewing the current state of forensic science in the United Kingdom.

NIFS also sponsored the notepads provided to all delegates at the Symposium, which proved very useful given the high caliber of presenters and interesting information provided.
International Criminal Court – Office of the Prosecutor Scientific Advisory Board Meeting in The Hague - NIFS represents

The International Criminal Court (ICC) Office of the Prosecutor (OTP) Scientific Advisory Board (SAB) meeting was held 16-17 June 2016 at the new ICC premises in The Hague. OTP SAB consists of 14 members from 15 organisations. Chair of the SAB is Prof Dr Duarte Nuno VIEIRA and Vice-Chair is Prof Dr Niamh NIC DAEID. Dr Linzi Wilson-Wilde attended as the nominated International Forensic Strategic Alliance (IFSA) representative on the SAB.

The SAB is tasked with providing advice to the OTP on appropriate Standard Operating Procedures (SOPs) for the collection of forensic evidence for the ICC courts. The utilisation of science in the investigation process is very important to the ICC Prosecutor. Scientific evidence is also seen as very important to the ICC judges and there is an expectation that cases will include an element of scientific evidence. The development of standards and procedures is therefore very important to the OTP.

Eight SOPs have been developed by the SAB to date.

The Forensic Science Section (FSS) of the OTP moved into the new facilities in December within the OTP building and is responsible for the collection of forensic evidence. There are 3 subsections within the FSS: cyber, imaging and forensic operations science.

FSS is involved in the early planning of all investigations and members are required to work in the laboratory and field.

At Meeting 3, the SAB reviewed two SOPs and made numerous amendments to the documents. There was lots of robust discussion which greatly improved the documents. The SOPs reviewed were:

1. Handling of Medical Information
2. Standard Operating Procedures for Satellite Imagery Use (this document was changed to a guideline)

Discussions around occupational safety, particularly of FSS members in the field and how SAB associations could assist the ICC more were discussed. This followed a suggestion that there will be a move from a SAB that reviews SOPs, to a SAB that could be more supportive to the Prosecutor, such as training for the judges that sit on the ICC and guidance on effective implementation of the SOPs within the ICC framework. The FSS is also looking to form partnerships with organisations to assist it in performing its work for the ICC.

The OTP are interested in using partnerships to leverage resources to gain access to a much bigger forensic expert network. They are also looking at how new technology can be used to gain more evidence.
Visiting Chinese delegation

On 14 September 2016, the NIFS team had the pleasure of hosting a Chinese Police Delegation organised through the Australia-China Economic and Cultural Exchange Office. The delegation consisted of 26 directors, senior managers and researchers from agencies across China. The purpose of the visit was to gain an understanding of forensic science in Australia and New Zealand and the role of the National Institute of Forensic Science.

The NIFS team provided the delegation with an overview of all current projects and took part in a general discussion on mechanisms for information sharing across Australia and New Zealand. Connecting with international forensic agencies and groups is important to NIFS and our stakeholders. It is through such engagement that NIFS builds relationships and a foundation for international collaboration.
Forensic Projects Updates

End-to-end Forensic Investigation Process Project, phase 2

The 2011 End-to-End Forensic Investigation Process Project captured baseline throughput and turn-around time data for key steps in the processing of fingerprint and DNA evidence for burglaries. End-to-End, phase 2, is a follow up project which provides forensic agencies with the opportunity to compare current and baseline data to assess the impact of changes made to processes in-between project phases.

The data analysis has been completed. Results of the 2015 project were sent to each jurisdiction to provide them with an opportunity to comment on the variations observed between the results from E2E1 and E2E2.

In terms of top-level findings from the project, the overall success rate was similar between E2E1 and E2E2, but lead times were significantly reduced and arrests per hundred crimes reported has increased. Learnings can be derived from top performers including those relating to different organisational approaches, technology impacts, training of crime scene officers, and the extent to which forensic science is integrated into investigations. Comparing 2011 to 2015 data shows a demonstrated advantage in using forensic evidence from volume crime to build databasing capacity.

Overall the project has enabled the development of a national model for the End-to-End forensic process that enables the capture and comparison of data, which in turn provides valuable information on efficiency and effectiveness.

ANZPAA NIFS is currently providing workshops on the E2E2 results based upon requests from individual jurisdictions and will now develop an End-to-End Implementation Project proposal. This will help to provide further organisational context in support of the project findings.

Interfaces Project, phase 2

The Interfaces Project phase 1 was conducted between 2011 and 2012. The key objectives were to identify communication patterns between medicine, science, law enforcement and law currently applied across jurisdictions in the context of homicide and sexual assault investigations.

A follow-up, Interfaces 2, was approved by NIFS, stemming from the original project recommendations. The Interfaces 2 Project has two aims. Firstly, to develop a number of flowcharts of the range of disciplines and agencies involved in the investigative phase of child and adult sexual assault cases within Western Australia. Secondly, to develop a document to raise awareness of the agencies involved and the expertise they offer.

The final report from the project has been provided and the learnings have the potential to inform a number of forensic areas beyond sexual assault. The project has been extended until 30 June 2017, in order to enable the development of awareness raising materials and a peer reviewed publication.

The Development of International Forensic Standards

ISO TC 272 – Forensic Sciences met in Delft, Netherlands 20-23 June 2016 at the Netherlands Standards Body (NEN). The following P-members (participating members) were present at the TC272 meeting: Australia (SA), Canada (SCC), France (AFNOR), Germany (DIN), Japan (JSC/JCCLS), Netherland (NEN), Spain (AENOR), Sweden (SIS), United Kingdom (BSI) and USA (ANSI).

The Committee worked through the over 600 comments received for the following two standards:

1. ISO WD 20962 – Forensic Science Vocabulary
2. ISO WD 21043-1 – Forensic Analysis

The Committee again split into working groups to work on the two draft standards. TC 272 also addressed work that has recently been transferred from European Committee for Standardisation (CEN) under the Vienna Agreement. These were the standards that CEN had been working on covering the following:

1. ISO WD 21043-1 - Crime scene investigation, exhibit handling and control (to be used for development of current standard in development)
2. ISO 21043-2 Delivery of results through the processes of forensic science examinations and analysis of various types of physical material
3. ISO 21043-3 Evaluation and interpretation of the results of forensic science examinations and analysis in the context of the case
4. ISO 21043-4 Reporting results and conclusions from the forensic science examination and analysis, data exchange and the standardisation of the documentation used for forensic purposes.

The committee agreed to continue drafting ISO 21043- part 1 and amalgamate the CEN and ISO drafts, but put ISO WD 21043- parts 2-4 back to the PWI stage. These standards can be considered at a later stage when resources become available and will re-ballot the NWIPs for 8 weeks prior to commencing any work.

The committee resolved to submit ISO 20962 and ISO 21043-1 for Committee Draft (CD) stage 30:0 and an 8 week member country ballot ending at the end of September. The CD Draft version will need to be ready for submission to ISO as a Draft International Standard by May 2017.

The UK British Standards Institute (BSI) has received approval from the Home Office to transfer IP of the UK PAS 377 to ISO. BSI has provided a Form 4 for the development of the standard under ISO and the PAS will be used as a working draft (ISO/PWI 20964). The new standard will focus on the manufacture of consumables other than DNA. The Committee agreed that the working draft will go committee members for feedback before being submitted to ISO for country member voting.

The Canadian delegation confirmed that they will host the next meeting of ISO/TC 272 21-24 November 2016. Spain has confirmed to host the 8th meeting of ISO/TC 272 in May 2017. Japan and Sweden have kindly offered to host subsequent meetings (November 2017 and May 2018 respectively).
Rapid DNA Project

ANZPAA NIFS has been working with New South Wales Police, Victoria Police, Australian Federal Police and CrimTrac to assess commercially available Rapid DNA instruments. Rapid DNA instruments are instruments that can analyse samples for DNA profile information in a very short space of time (approximately 90 minutes) without human intervention – i.e. sample into results out in one instrument. The testing of the instruments and data analysis from phase 1 and phase 2 is complete and the reports have been distributed to the forensic science community.

There was a large amount of robust discussion and the resulting guideline document is in the final stages of review.

The NIFS team would like to thank all participants for their significant contribution to this project and we are looking forward to using the agreed requirements to perform a gap analysis for the second phase of the project.

This project is stimulating a significant amount of interest in the forensic community with practitioners from multiple disciplines indicating their interest in participating in the gap analysis. The result of this second phase will be instrumental in the development of the ANZPAA NIFS Research and Innovation Roadmap.

Research and Innovation Strategy and Roadmap

ANZPAA NIFS has been active in this space formulating research and development strategies in 2001 and 2013, to assist the forensic science community in Australia and New Zealand. Due to limited funding the outcomes of these initiatives have been restricted; however, with a new funding structure, ANZPAA NIFS is now in the position to help drive future research and innovation in forensic science.

Surveys were disseminated to forensic science service providers, academia and technology providers in July with an overwhelmingly positive response.

This process has identified a number of exciting research and innovation initiatives already underway across Australia and New Zealand and has identified priority areas for future investment. The NIFS team would like to acknowledge those who took the time to complete the survey documents and we look forward to reporting on the current status of R&I in Australia and New Zealand later in the year.

AFFSAB Future Directions

ANZPAA NIFS currently manages the AFFSAB program covering crime scene investigation, fingerprint investigation and firearm examination. AFFSAB is governed by the AFFSAB Board and was created in 2003 as a broader based accreditation body from the previous National Fingerprint Accreditation Board, established in 2001.

A review of the potential future directions for AFFSAB is therefore timely. The review will examine the AFFSAB process, with a view to consolidating and streamlining the processes between the disciplines and investigating the potential to extend AFFSAB to cover further forensic disciplines. The outcomes of the review are due by the end of 2017.

Evaluative Reporting

Evaluative reporting aims to provide a balanced, logically correct and robust framework for expressing opinions in a court of law. The framework facilitates the evaluation of the strength of the scientific observations by looking at the probability of the observations given competing propositions.

Probabilities can be expressed verbally or numerically and can be underpinned by statistical data, based upon specialist knowledge or experiments conducted under controlled conditions.

Forensic Fundamentals

The aim of the Forensic Fundamentals project is to identify the underpinning science and validation requirements for human based forensic disciplines. The Forensic Fundamentals Workshop was held on 18-19 July and included practitioners from multiple forensic disciplines as well as subject matter experts from the areas of method validation and expertise testing.
The objective of this project is to create an Australia and New Zealand introductory guideline for evaluative reporting in forensic science which is intended to be a practical resource to support laboratories who may wish to implement evaluative reporting. An expert group meeting was held on 14-15 July 2016, and in accordance with the approved project plan, an Evaluative Reporting Introductory Guide is being developed that will include practical advice on implementation.

**Expert Testimony Court Requirements**

The objective of this project is to create a general access folder on the ANZPAA NIFS secure server to house information relating to expert testimony court requirements. The folder will provide Australia and New Zealand Forensic Laboratories and the Specialist Advisory Groups with a space where they can share documents covering reliability of evidence, error rates and reporting formats, just to name a few. It is hoped that this central information resource will aid future cross-discipline development of expert testimony court requirement material.

**National Familial Searching policy**

The Australian Criminal Intelligence Commission (ACIC) is currently enhancing the National Criminal Investigation Database (NCIDD) to provide a familial searching capability. It is anticipated that the capability will be available by the end of 2016 and so the supporting policy framework needs to be in place by then. Stakeholder engagement is currently in progress on a draft Policy, with a view to forwarding the final document to the ANZPAA Board for consideration by the end of 2017.

**Other news**

**New Australian Federal Police Forensics Facility**

The Australian Federal Police (AFP) has welcomed the future of forensic science in its purpose built facility within the AFP’s Majura Complex in Canberra. The new facility design itself was a culmination of 12 months’ work, led by the design consultancy team from Hassell with substantial input from Forensics staff.

The facility is built on principles of integration, collaboration, transparency and flexibility which enables the delivery of forensic services under a more consultative and client-centred model.

Integration was considered the key design principle not only for members within the AFP but integration with the AFP’s investigators, partners and stakeholders. Collaboration, knowledge sharing and interaction are created through the centrally located shared office spaces, as well as large breakout areas for informal meetings. The facility achieves transparency of evidence processing, enabled by the introduction of the ‘Search Precinct’ adjacent to the case conferencing areas with visual connection to the laboratories. The openness of the laboratories maximises the extent of generic space and provides views to the surrounding bush landscape to improve the quality of the working environment for scientists.

The new AFP Forensics Facility was officially opened by Prime Minister Malcolm Turnbull on 3 August 2016. Justice Minister Michael Keenan was also present to mark the significant event. A plaque commemorating the occasion was unveiled at the opening ceremony and the official party, led by AFP Acting National Manager Specialist Operations Dr Simon Walsh, received a brief tour of the facility.

The AFP Forensics Facility will provide opportunities for increased engagement and collaboration with ANZPAA NIFS, national forensic laboratories, law enforcement partners and international agencies. This has already been seen from the recent hosting of several ANZPAA NIFS Specialist Advisory Group (SAG) meetings and visits from a range of stakeholders from the law enforcement and forensics community at the new Forensics Facility.
Adrian De Grazia of the AFP has now completed his secondment with ANZPAA NIFS. Adrian completed a key research component of this project, providing a report on the current and emerging issues for forensic science service provision.

Adrian’s research included a review of police strategic documents, crime statistics and other relevant publications. We would like to thank Adrian for his dedication and valuable contribution to the R&I Roadmap project. Keep an eye on our website for the final published report which will be made available later in the year.

The secondment process generated a large amount of interest from practitioners across the country and given the demonstrated success, the NIFS team is keen to offer similar opportunities in the future.

Adrian is a Forensic Intelligence Analyst within the Australian Federal Police (AFP) Forensic Drug Intelligence (FDI) team. Adrian’s primary role for the AFP involves the management and delivery of the Enhanced National Intelligence Picture on Illicit Drugs (ENIPID) project and providing key technical advice on illicit drugs to the AFP and its stakeholders. Adrian graduated from the University of Technology Sydney (UTS) with a BSc (Hons) Applied Chemistry in Forensic Science and has recently submitted his PhD thesis titled “Advanced Spectroscopic Techniques for the Analysis of Illicit Drugs and Explosives”.

R&I Roadmap
Forensic Research Officer

Image: Acting National Manager Specialist Operations Dr Simon Walsh and AFP Commissioner Andrew Colvin with Prime Minister Malcolm Turnbull as he officially opens the Forensics Facility alongside Minister for Justice Michael Keenan.
News from the forensic community

SAG Updates

Fingerprint SAG

The Fingerprint SAG met on 21-22 June at the new AFP facilities in Majura, Canberra. The group worked hard to get through a very busy agenda over the two days and really pulled together to progress the discipline of fingerprint examination.

The Fingerprint SAG discussed plans for the further development of what has already come out of the previously held training consolidation workshop, which was already a significant step forward in the standardising of expert accreditation. Under consideration was the format and content of the examinations and a re-scoping of latents test database, so that it is aligned with training and contemporary workplace practises.

There was also discussion around the mandatory use of eyeglass in AFFSAB latents test with most SAG members being of the opinion that the examinee should do as their jurisdictions do, in order to reflect current workplace practices.

One of many contemporary issues raised through the FP SAG revolved around levels of reporting, the need to approach comparisons in a different manner and how to move forward with intelligence type reporting. There were also presentations from Melynda Bartlett from DIBP and from Joshua Abraham from UTS. Joshua presented on a number of applications of statistical models for fingerprint comparisons that can add value where conventional methods may not.

Future workshop proposals were also discussed and prioritised. On the social side of things, it was good to see the FP SAG members playing as nicely outside of the sandbox as inside it.

Image: 2016 Fingerprint SAG held at the AFP’s Majura Complex in Canberra. From left to right: SAG Chair Bruce Comber (AFP), Scott Osborn (AFP), Tracey Tobin (TAS Police), Robyn Davies (DIBP), Rick Sinclair (NSW Police), Sophie Arulappu (VPFSC), Paul Peacock (QLD Police), Donna Ratley (SA Police), Graham Byard (WA Police), SMANZFL mentor Supt. Brian Huxley (QLD Police), Tanja van Peer (NZ Police).
Chemical Criminalistics SAG

The ChemCrim SAG was held at the new AFP laboratory in Canberra on 4 and 5 August 2016. The laboratory had been officially opened by the Prime Minister the day before the meeting commenced. The meeting was attended by representatives from all Australian States and New Zealand. It is safe to say we were all impressed by the splendid facilities that the AFP scientists enjoy and we thank them for hosting the meeting.

In 2015 a Critical Issues workshop was held to identify and address various issues concerning Chemical Criminalistics and many of the agenda items at the 2016 SAG meeting followed on from that workshop. For instance, a working group was formed to produce a brochure promoting Chemical Criminalistics from material to be uploaded on the NIFS server by SAG reps.

The development of databases to assist in evidence interpretation is seen as another critical issue. Presently the ChemCrim group has access to a database of glass refractive index measurements which is hosted on the NIFS server and was updated late last year. The glass database has contributions from most ChemCrim labs. The international PDQ (paint database query) database of motor vehicle paint compositions is contributed to by many ChemCrim labs and is a valuable resource for identifying vehicles involved in crimes based on transferred paint layers and also for obtaining frequency data of paint types encountered in casework.

A validation set of mounted textile fibres slides was rotated through WA, NSW, Vic and SA as proof of concept for a national database of information relating to textile fibres, including UV-visible absorption spectra and images.

This database has been in use in WA for several years with a planned rollout to other states in 2017.

It is intended that the database will assist labs to better handle data from fibre cases and also provide frequency information for casework interpretation. Modification of the database framework to include other data types such as infra-red absorption spectra and energy dispersive X-ray data for architectural paints was discussed and will be presented as a project proposal to the ANZFEC meeting later this year.

South Australia reported that the Gunshot Residue/Random Man project that involved combining survey data from the NSW, SA and Vic labs has been published. This survey will be a valuable aid to data evaluation and courtroom presentation.

Presentations were received from the AFP and Victorian labs on the use of intelligence in ongoing investigations, an area of increasing importance for Chemical Criminalistics. Forensic intelligence is used in the early stages of criminal investigations, identifying serial crimes, border security operations and in counter terrorism investigations.

An advanced textile damage workshop is scheduled for November 2016 and will be held at the AFP lab in Canberra. This area of expertise overlaps with forensic biology in some jurisdictions and some attendees will be from these laboratories. Other proposed workshops focus on data interpretation and reporting and include a workshop covering both Bayesian and Chemometric Approaches to the Interpretation of Trace Evidence. These proposals are relevant as there has been considerable discussion recently around the various data interpretation and reporting approaches in use within the Chemical Criminalistics method areas. The proposals also align with the NIFS evaluative reporting project.
Medical Sciences SAG

This year is the 10 year anniversary of the formation of the Medical Sciences SAG. Representatives from the disciplines of forensic anthropology, forensic odontology, forensic entomology and mortuary management met once again in Melbourne in July. Summaries of the recent activities of each of the four SWGs were presented at the meeting.

Unfortunately some of our colleagues were not able to physically attend the meeting, but ANZPAA NIFS provided an excellent service facilitating phone conferencing and a video meeting with another colleague in the UK.

In addition to our regular business, the Medical Sciences SAG was fortunate to have presentations from Dr Chris O’Donnell (VIFM) on the development of a forensic radiology/imaging interest group and Professor David Ranson who provided an update on the Interpol DVI Pathology and Anthropology Working Group Meeting which was held in Lyon.

Soren Blau, Denise Donlon and James Wallman presented a summary of research projects currently being undertaken at Australian Facility for Taphonomic Research (AFTER).

In May 2016 practice notes developed by the Forensic Anthropology, Odontology, and Entomology SWGs were sent to Justice Chris Maxwell for consideration in the development of practice notes for Expert Evidence in Criminal Trials. Communication with Justice Chris Maxwell regarding feedback on the practice notes indicated the working group has been focused on developing notes for the psychology direction.

Justice Maxwell indicated that the working group had a number of comments on the scope and content of the documents, but stressed that this is a collaborative enterprise and that the key to success is getting the practitioners and lawyers together – we have a shared interest in how science is conveyed to the court. The group will reconvene in October.

The Entomology SWG has had another productive year. In addition to completing a number of publications (most notably on the context effects in forensic entomology and the use of sequential unmasking in casework), forensic entomology research continues to be undertaken.

A key focus of entomology discussions was on increasing efficiency of work practices, due to increasing demands on entomology services.

Over the last year the Mortuary Management SWG has organised, with the support of NIFS, the second Mortuary Technician Workshop held at VIFM. A total of 42 technicians from around Australia attended, enabling educational and networking opportunities. The workshop culminated with a tour of the mortuary facilities at VIFM. The workshop was very well received and the feedback provided was that they would be very interested in attending future workshops.

Toxicology SAG

On 26-27 August 2016 Toxicology SAG meeting, Mark Stephenson of Queensland Health was presented with a certificate of appreciation recognising his contribution as acting chair of the Toxicology SAG in 2013/2014. As deputy Chair, Mark took on the Chair role for a year while the Chair was on leave.

Chairs play a critical role facilitating annual meetings, and driving development and achievement of the SAG business plans. The NIFS team would like to thank Mark for all his support as the acting Toxicology SAG chair.
Meetings and Workshops

BSAG – STRMix workshop – 1-2 June 2016

The standardisation of DNA profile interpretation across Australia and New Zealand has moved forward considerably due to the development of continuous DNA interpretation systems. STRmix™ is one such program that was created via a collaboration between Forensic Science SA and ESR in New Zealand and grew out of a NIFS standardisation project. STRmix™ is now a commercially viable program that is used around Australia and New Zealand and increasingly across the US.

The implementation and continual development of these systems require scientists to develop detailed knowledge and maintain continuing education. The knowledge each lab gains in using the program is valuable for all other STRmix™ labs and in 2014 an inaugural STRmix™ users workshop was held to facilitate information sharing and to help labs create pathways for communication. This workshop was well received and it was decided it would be beneficial to run another. Delegates from each jurisdiction gathered in Adelaide to discuss the developments in STRmix™, how to expand its use, and consider complex problems each of the delegates had encountered in casework.

Each representative presented challenges for discussion and detailed the operation workflow in which they used the software. As STRmix™ has been operational for a number of years now, the confidence in the program and ability to utilise all aspects of the software has increased since the original workshop. Issues raised by the group for further discourse included; the development of a national STRmix™ curriculum, teaching resources for new scientists learning profile interpretation prior to STRmix™ training proper, and the development of competency assessment tools for laboratories.

This was an excellent opportunity for forensic scientists to gather to workshop operational methods and to not only talk work but also meet other practitioners from around Australia.

Duncan Taylor, PhD | Principal Scientist - Forensic Statistics
Forensic Science South Australia

Ballistics SWG – Shooting Scene Investigation & Reconstruction – 22 August-1 September 2016

It was almost 8.00 a.m. on Monday 22nd August 2016, and twenty nine apprehensive students were gathered in the lecture theatre at the Echunga Training Reserve in South Australia for the commencement of the first national Shooting Scene Reconstruction Workshop in over 10-years.

The students had come from all over Australia and New Zealand, with varying degrees of experience within their respective jurisdiction; some with several years, some with only a few months and the full range in between. They had all gathered for the same purpose - nine days of intense and immersive training.

Also gathered in the lecture theatre were the four key instructors. Over 12 months of planning and preparation had gone into the organisation of the workshop and each instructor felt the responsibility of the task at hand.

For the next nine days the students and instructors spent each morning undertaking lectures, demonstrations, developmental exercises and assessment tasks.

Each afternoon was spent on the range participating in practical shooting activities, reinforcing the concepts and characteristics learnt in the morning’s sessions with real life examples of bullet damage and behaviour on common materials such as plasterboard, glass, sheet metal, rubber, plastic and cement. A Holden Commodore felt the full brunt of the practical exercises, with over 50 shots impacting and penetrating the doors, windscreen, tyres and boot to give life to the theoretical concepts taught.

The course curriculum had been designed to address key knowledge and practical components from the Scene & Ballistics Practice Domains of the ANZPPA Education & Training Guidelines 2013 and encompassed topics including:

- Techniques of trajectory determination
- Bullet damage characteristics in organic and inorganic materials
- Effects of ricochet and deflection from commonly encountered substrates
- Chemical and physical methods for range determinations
• Post mortem examinations and wound characteristics
• Internal, intermediate, external and terminal ballistics
• Chemistry of propellants and primers including by-products of combustion

Each student was required to submit two pre-course assessment tasks, four individual tasks during the workshop, complete three summative practical group activities and undertake two theory exams.

All of the students worked late into the evening to digest the new information delivered and complete the necessary activities within the time frame provided.

In total, the workshop delivered and assessed material that is traditionally the most time and resource intensive for individual jurisdictions, enabling students to complete approximately 15% of the current requirements of the National Training Curriculum for Forensic Firearm Examiners 2015 (Version 2): A huge achievement by any standards.

As one of the instructors on the course and course co-ordinator I’d like to thank and acknowledge all of the students and other instructors for their participation in the workshop, their professionalism and dedication shone through and all of them should be proud of what they achieved.

Darren Watson,
Ballistics Unit, VICPOL
ANZPAA NIFS NEWS

AWARDS
ANZPAA NIFS Best Paper Awards 2015

Image: Dr Kaye Ballantyne at ANZPAA NIFS receives her award from Dr Linzi Wilson-Wilde for Best Paper in a Refereed Journal 2015 - Highly Recommended.

Image: James Curran, Kate Stevenson and Jo-Anne Bright at the ANZFSS symposium in Auckland receiving their awards for for Best Technical Article or Note 2015.
Events Calendar

2016

APCSC 2016
2016 Asian Pacific Coroners Society Conference – Pathways to Prevention
8–11 November 2016
Pan Pacific Perth, WA

FSCR 2016
4th Annual International Conference on Forensic Science – Criminalistics Research
14–15 November 2016
Bangkok, Thailand
http://forensi-conf.org/

AWMS 2016
29th Annual Australasian Wildlife Management Society (AWMS) conference
28 November–1 December 2016
Auckland, New Zealand

ANZSOC 2016
29th Annual Australian and New Zealand Society of Criminology conference
29 November–2 December 2016
Hobart, Tasmania
http://www.anzsoc2016.com/

2017

IALFS 2017
2nd Annual Middle East Congress of the International Association of Law and Forensic Science
17-19 January 2017
Intercontinental City Stars, Cairo, Egypt
http://2016.ialfs.org/

PITTCON Conference and Expo 2017
5–9 March 2017
McCormick Place, Chicago, ILS, USA
http://pittcon.org/

Crime and Justice in Asia and the Global South
10–13 July 2017
Cairns, Australia
http://crimejusticeconference.com.au

ISFG 2017
27th International Congress of the Society for Forensic Genetics
28 August – 1 September 2017
Seoul, South Korea
http://www.isfg2017.org

2018

ANZFSS 24th International Symposium 2018
9-13 September 2018
Perth, Western Australia
http://www.ANZFSS2018.com
More Information
If you would like any further information on ANZPAA NIFS meetings and workshops or would like to add any dates into the next newsletter please forward to Dean Catoggio: dean.catoggio@anzpaa.org.au

Disclaimer
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Newsletter Contributions
Please forward all newsletter contributions to Nicholas Vandenberg: nicholas.vandenberg@anzpaa.org.au