1990

Forensic Laboratory Services annual review

Royal Canadian Mounted Police

Canada

FORENSIC LABORATORY SERVICES
ROYAL CANADIAN MOUNTED POLICE

ANNUAL REVIEW
1990

Ottawa, Ontario

acknowledgements

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Cover image:

Produced from the award-winning electron micrograph of red blood cells adhering to a syringe needle by Reg Poole, Forensic Laboratory Vancouver. Originally taken at a magnification of 500X on negative film, the image powerfully shows the dangers of "dirty" needles.

Published by the Royal Canadian Mounted Police

Public Affairs Directorate for Forensic Laboratory Services.

CMR.355

Cat. No. JS61-4/1990

ISBN 0-662-58592-5

ISSN 0840-5514

Director's message

Forensic Laboratory Services is a directorate within the Royal Canadian Mounted Police which provides forensic services to support criminal investigations by the RCMP and other accredited Canadian police forces and government agencies.

Nineteen hundred and ninety was a pivotal year in the evolution of the range of services provided by the Directorate. After being systematically developed and implemented into four laboratories, responsibility for the Crime Scene Bloodstain Pattern Analysis program was returned to Identification Services Directorate. The Crime Scene Bloodstain Pattern Analysts will continue operating out of the forensic laboratories and will be an integral part of the linkage between the two directorates dealing with forensic evidence gathering and processing.

A national DNA typing service was established at the Central Forensic Laboratory in Ottawa. During the year, 50 cases were accepted resulting in both suspect exclusions and in court testimony. As one of the initial steps in the realignment of the Serology, Hair and Fibre and Molecular Genetics disciplines into a Biology Section, a number of Serology and Hair and Fibre specialists from the Central Forensic Laboratory were trained in DNA typing technology in 1990.

After monitoring demand and determining resource requirements, the Explosive Residue program has been centred in the Vancouver and Ottawa Laboratories. Chemistry personnel at the two laboratories have begun training in explosive residue methodology.

Approval was given in 1990 for Canada to host the 8th International Conference on Currency Counterfeiting and the 1st International Conference on Fraudulent Travel Documents in April 1992. These Interpol conferences are expected to attract an estimated 700 delegates. Canada's hosting of these conferences is due in large part to the ongoing leadership exhibited by the Central Bureau for Counterfeits in the disciplines of currency counterfeiting and fraudulent travel documents.

The Canadian Police Research Centre (CPRC), formerly the Canadian Program of Science and Technology in Support of Law Enforcement, was formally opened in May 1990. The RCMP continues to be the lead agency in this program with the Officer in Charge, Science and Technology Branch being the Manager of the CPRC. The Centre's role is to promote and support the research and development of police equipment and to develop standards for law enforcement products and equipment.

In 1990 the Directorate's Management Information System project, directed by the Scientific Information Officer, proceeded from the planning to the development stage. The first stage in the program was the undertaking of a study to establish valid performance measurement indicators and standards.

In preparation for the construction of a new laboratory at Regina, a consulting firm was engaged to provide conceptual drawings, plans and specifications. The consultant's report is now in our hands and we are planning the next steps in the building program with construction to commence in late 1992.

One factor impacting on the final building plans is the continued viability of full-service regional laboratories. Just as some highly specialized services (e.g. DNA typing, gunshot residue analysis, explosive residue analysis) have had to be centralized or regionalized, at least in their formative stages, regionalization of traditional forensic laboratory services (e.g. Document Examination) may have to be undertaken. A comprehensive benefit/cost study on the regionalization of Document Examinations within the Prairie provinces at one laboratory is currently underway.

In 1990 the **Report of the Auditor General of Canada to the House of Commons,** *including the chapter "Royal Canadian Mounted Police-Support Services to Canadian Law Enforcement Agencies", was tabled. While suggesting some improvements in administrative areas, the auditors found general overall client satisfaction with Forensic Laboratory Services. The enhancement of quality assurance undertakings, including proficiency testing and scientific and technical quality reviews, will continue to contribute to primary Directorate goals including service quality and client satisfaction.*

In recent years, economic, political, judicial and technological factors have had profound effects on forensic science. Although the pace of change has introduced some uncertainty to daily operations, careers and scientific programs, the dynamic results have also made forensic science a very exciting vocation. The pace of change will, no doubt, increase in the years to come.

I am heartened to see that many of my staff are attempting to stay at the forefront of their professional fields by becoming members of associations and attending conferences at their own expense. Their efforts are commendable, especially in these times of restraint.

R.A. Bergman,
Assistant Commissioner,
Director,
Forensic Laboratory Services

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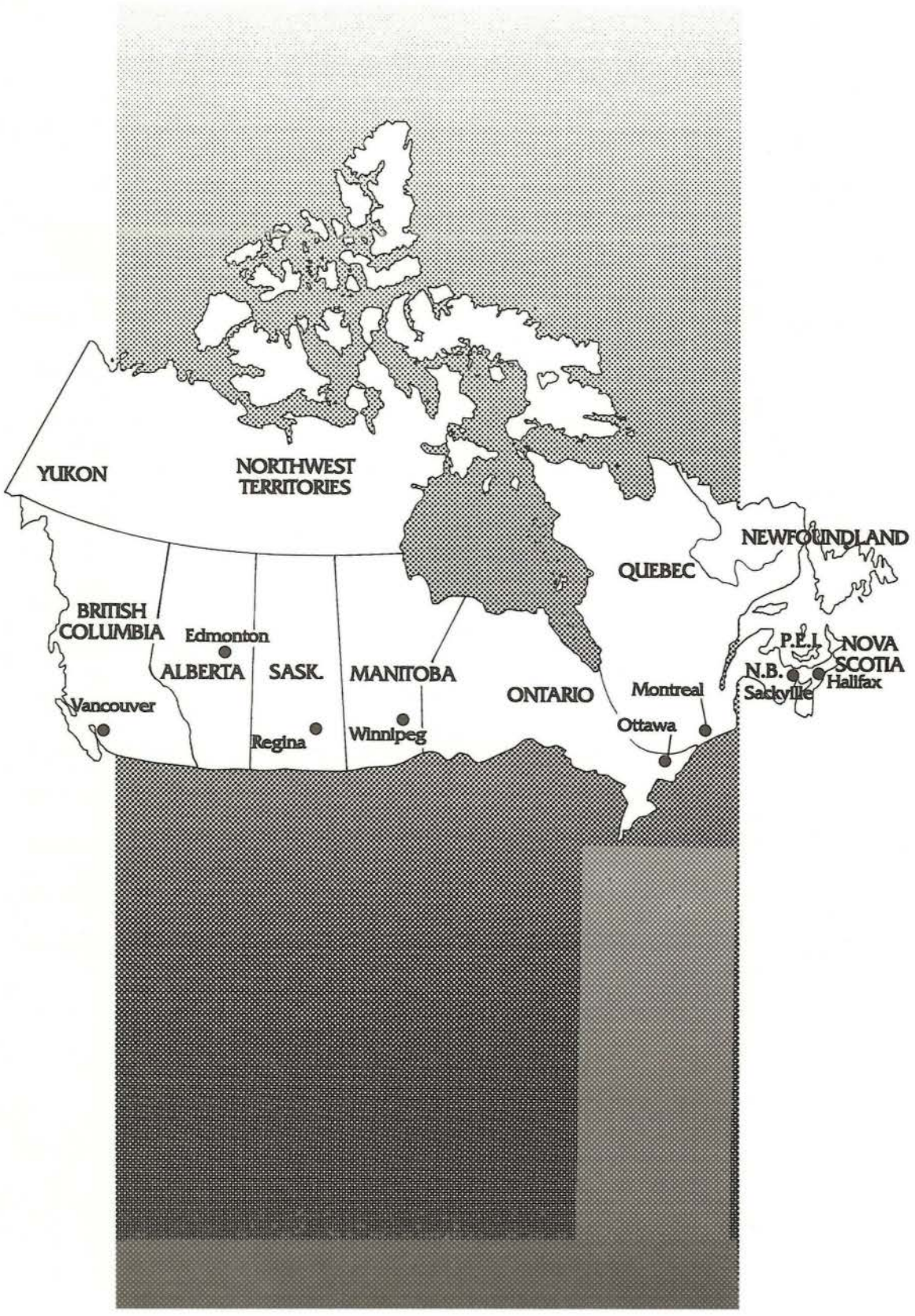
RCMP
FORENSIC LABORATORIES



LABORATORY STATISTICS

FORENSIC LABORATORY SERVICES - CLIENTS
(OPERATIONAL POLICE PERSONNEL) [1]

PROVINCE	FEDERAL POLICE RCMP	PROVINCIAL POLICE RCMP-CONTRACT	MUNICIPAL POLICE RCMP-CONTRACT	MUNICIPAL POLICE INDEPENDENT
NEWFOUNDLAND	86	412		368 [2]
PRINCE EDWARD ISLAND	17	81	13	66
NOVA SCOTIA	139	514	64	744
NEW BRUNSWICK	72	388	78	663
QUEBEC	912			379 [3]
ONTARIO	1571			1296 [3]
MANITOBA	173	525	165	1227
SASKATCHEWAN	124	684	215	879
ALBERTA	307	909	587	2539
BRITISH COLUMBIA	613	1228	1913	1822
YUKON	8	83		
NORTHWEST TERRITORIES	8	188		
TOTAL	4030	5012	3035	9973
TOTAL ALL CATEGORIES	22050			

*1 LATEST DATA AVAILABLE FROM STATISTICS CANADA
*2 ROYAL NEWFOUNDLAND CONSTABULARY
*3 IN THE VICINITY OF THE NATIONAL CAPITAL REGION ONLY

LAB CASES

OFFENCE	VANCOUVER	EDMONTON	REGINA	WINNIPEG	OTTAWA	MONTREAL	SACKVILLE	HALIFAX	TOTAL
CRIMES AGAINST THE PERSON (CRIMINAL CODE)									
HOMICIDE	121	99	45	55	23		18	29	390
ROBBERY	26	29	8	22	16	3	9	17	130
ASSAULTS (Incl. sexual)	351	309	116	202	10		86	162	1236
OTHER SEX OFFENCES	2			40				1	43
PROPERTY CRIMES (CRIMINAL CODE)									
BREAK AND ENTER	133	164	100	62	33	1	68	110	671
THEFT MOTOR VEHICLE	14	13	5	5			9	13	59
THEFT OVER $1000	18	17	10	19	1	1	9	24	99
THEFT UNDER $1000	15	31	30	24	1		20	20	141
FRAUDS	399	284	194	91	137	324	132	181	1742
CRIMINAL CODE OTHER									
OFFENSIVE WEAPONS	197	82	41	46	105	1	10	47	529
ARSON	154	107	71	54	40		99	101	626
COUNTERFEITING	1	1	2	1	1240	1435			2680
PROPERTY DAMAGE OVER $1000	16	21	21	14	3		7	17	99
PROPERTY DAMAGE UNDER $1000	38	28	28	18	6		31	24	173
OTHER	386	87	86	43	316	403	25	55	1401
FEDERAL STATUTES									
DRUGS	36	22	4	10	15	4	8	7	106
EXPLOSIVES ACT					1				1
OTHER FEDERAL	20	6	13	17	229	41	6	11	343
TRAFFIC									
COLLISIONS	448	92	56	107	46		168	155	1072
PROVINCIAL TRAFFIC	17	149	6	13	8		16	103	312
CRIMINAL CODE TRAFFIC	659	558	295	338	104		260	286	2500
ALL OTHER	124	172	329	516	259	1	145	434	1980
TOTAL CASES	3175	2271	1460	1697	2593	2214	1126	1797	16333

REPORTS ISSUED TO

	RCMP	NON RCMP
FLV	2907	586
FLE	1829	1165
FLR	963	907
FLW	1040	1084
CFL	538	1849
FLM	1511	687
FLS	1086	642
FLH	1537	766

Casework Activities

Forensic Laboratory Services provides scientific and technical assistance to the Canadian criminal justice system. Physical evidence acquired during the course of investigations is examined to supply information of evidentiary significance. Expert opinions are provided based on scientific examination to aid in investigations and as court evidence. In 1990, 16,333 cases[1] were completed resulting in over 17,900 hours of court-related duties.

	Personnel	Cases Completed	Reports Issued	Court (hours)
FLV	61	3175	3493	4363
FLE	54	2271	2994	3763
FLR	35	1460	1870	1281
FLW	34	1697	2124	2370
*CFL	70	2593	2387	1040
FLM	8	2214	2198	457
FLS	29	1126	1728	1886
FLH	34	1797	2303	2799
TOTAL	325	16333	19097	17,957

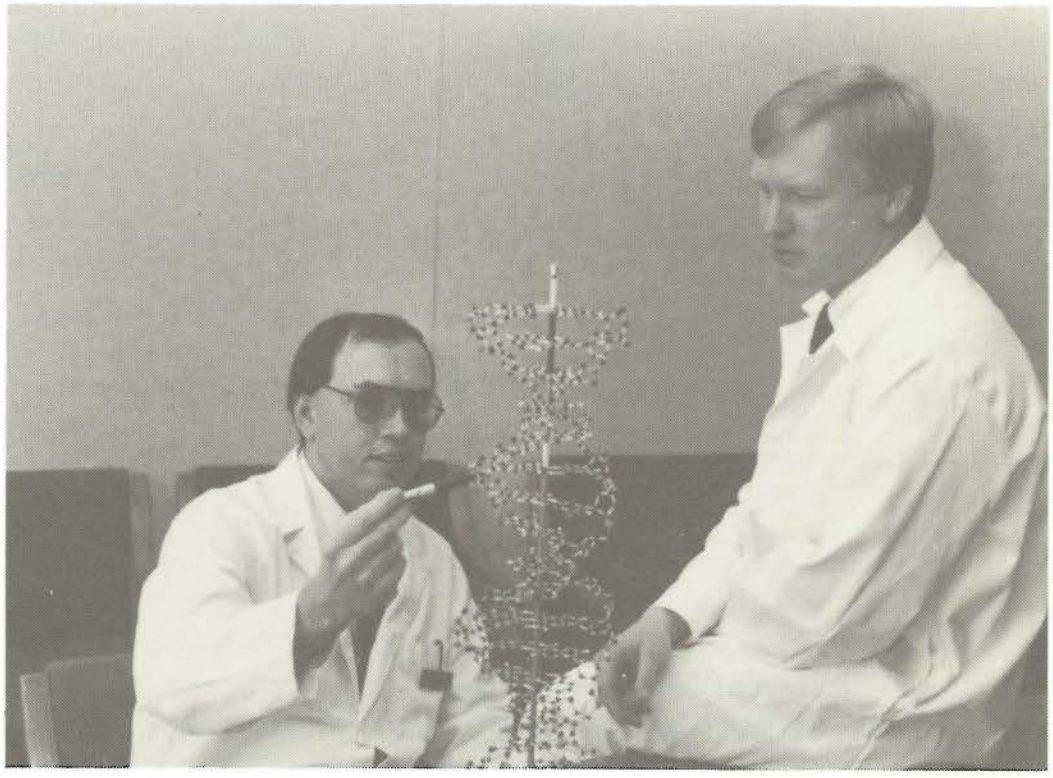
* including Ops. Support (personnel 32, court hours 144)

[1] Cases statistics have been compiled differently in 1990 than in previous years. The RCMP Operational Statistics Reporting System (OSR) is the source of case data. In past years, cases were counted more than once when handled by more than one Section. In 1990 exhibits submitted in one occurrence count as one case regardless of the number of Sections that conduct examinations.

The Central Forensic Laboratory completed 23 cases involving DNA analysis during 1990. Shown to be a powerful tool for the criminal justice system, DNA typing methodology is gaining acceptance in the Canadian courts.

In August of 1988, a 44-year-old woman was raped at knifepoint by an unknown assailant in her 6th-floor apartment in Lethbridge, Alberta. The only evidence retrieved from the crime scene was a sample of the rapist's blood. Since there was not enough evidence to achieve conviction by classical serological techniques, DNA analysis was performed. At trial in March 1990, Dr. J. Bowen (CFL) testified that, based on analytical results, "frequency of occurrence in the Caucasian population is less than one in 175 million." A guilty plea was entered and the rapist was sentenced to eight years.

In a different case, 2 suspects were charged with the rape of a woman in Woodstock, Ontario. Witness identification and evidence implicated one of the two suspects, however, very little evidence existed in relation to the other. DNA analysis linked the second suspect to the victim. Both men were convicted of the crime.



R. Fourney and J. Bowen, Central Forensic Laboratory

❐

A major western Canadian bank was forced into receivership. Subsequent investigation by the Commercial Crime Branch of the R.C.M.P. disclosed major frauds in respect to group premium contracts, and assignment and security documents, totalling over 20 million dollars and involving 3 banks. Charges were laid against high-level corporate executives. During the trial, evidence was disclosed that office staff had walked in on members of the bank's Board of Directors while they were in the process of forging signatures with the aid of an overhead projector. However, the defence lawyers drew into question the validity of their clients' authorizing signatures on the forged documents, suggesting that the signatures had been forged and that their clients had been victims themselves.

The Crown requested an urgent examination of these documents while the trial continued.

R. Dolman of Forensic Laboratory Edmonton conducted the examinations and verified these signatures as having been written by the defendants, thereby negating any suggestion that they were also victims. Further, the presence of their "genuine" signatures on documents bearing fraudulent and forged signatures was also of significance.

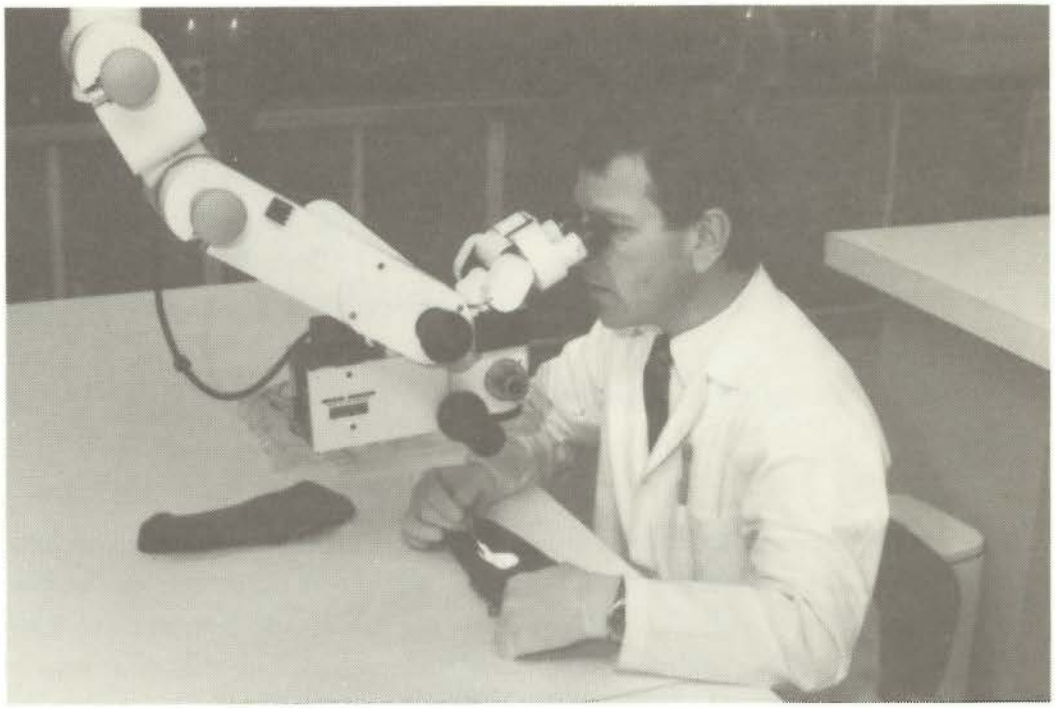
A conviction was registered by a jury in Court of Queen's Bench, Alberta.

❐

A fatal motor vehicle accident occurred near Claresholm, Alberta in October of 1990. A woman was walking on a secondary highway at night. She was walking east in the westbound lane and her husband, with whom she had had a dispute, was driving east in the eastbound lane, attempting to talk her back into the car. A westbound vehicle struck the woman and fled the scene. The deceased woman's clothing was submitted to the Chemistry Section at Forensic Laboratory Edmonton to determine the presence and origin of automotive paint. Initial findings at the scene indicated a dark green vehicle. Although the woman's husband described the vehicle as a light green to light blue full-size North American vehicle, laboratory analysis by F. Gregory revealed that the paint particles on the woman's clothing were consistent with paint originating from General Motors commercial vehicles manufactured after 1970. The classification of commercial vehicles includes trucks and fleet vehicles. Acting on this information, police located a damaged truck in a rural community 300 kilometres away.

Paint samples from the suspect vehicle were examined microscopically and analyzed by infrared spectroscopy. The four-layer paint samples - dark green over light green over dark green over red-brown, had the same physical characteristics and chemical composition as those taken from the victim's clothing.

The truck was positively identified as the one involved in the accident. The suspect pled guilty to Hit and Run and Driving While Suspended.



F. Gregory, Forensic Laboratory Edmonton

A large car dealership in Saskatoon, Saskatchewan received an inoperative bomb and 3-page extortion letter demanding $500,000 and vehicles from numerous dealerships in the city. The extortion note was delivered to the Document Section of Forensic Laboratory Regina and analyzed by T. Stimpson. The note was identified as having been typed on a Brother typewriter.

During this time, the extortionist called a local radio station and repeated his demands. The conversation was taped and played over the air, in the hope that the voice could be identified. Several listeners called in, three of whom named the same suspect.

The police arrested the man and seized a Brother typewriter from his home.

The accused pled guilty when the case went to trial.

❒

In 1988, four members of a family were viciously axed to death. Three juveniles were subsequently arrested and the two eldest were charged with the murders. Three bloodied axes were found at the scene. One axe carried the fingerprint of the oldest accused.

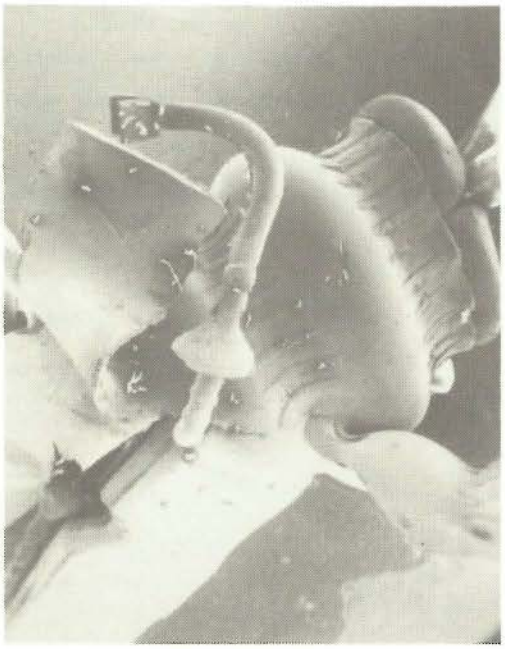
Firearms examiner Y.J. Tuira of Forensic Laboratory Vancouver was able to identify which axes had been used to strike the blows based on tool marks left in the skull bones of the victims. S/Sgt. Tuira was also able to determine the direction from which the blows to the head of the mother had been struck. The evidence was important in linking the major participant to the commission of the crime and in discrediting the assertion of the co-accused who claimed that he had only stuck a light blow to the head of his mother and had run off when his mother screamed.

Both accused, who had been raised to adult court, were convicted and sentenced to life imprisonment.

❒

GSR single particle on cotton fibre

GSR agglomeration on cotton fibre



fragment of detonated blasting cap

GSR – powder flake particle

Non-casework Activities

The work of members of Forensic Laboratory Services Directorate falls into two categories – casework (Operations) and non-casework. The former occupies by far the greater proportion of employee time. Non-casework activities are, however, more varied. One component of those activities is referred to as Operational Support and consists of tasks – quality assurance, training, methodology development – which support casework. Most of the remaining non-casework activities are in support of national and international organizations, to which the expertise of members of the Directorate is very valuable.

The following synopses detail some of the non-casework activities undertaken by Directorate members in 1990.

In 1989 the President of the Council of the International Civil Aviation Organization (ICAO) established an Ad Hoc Group of Specialists on the Detection of Explosives as a result of the bombing of PAN AM Flight 103 over Lockerbie, Scotland. The mission of the Group was "to consider how to achieve an international regime for the marking of explosives for the purposes of detection". Nick Cartwright, Chief Scientist-Analytical Services, was a member of Canada's two-person delegation to the Ad Hoc Group.

A meeting of the Ad Hoc Group was held in Montreal in June 1990. Continuing progress in identifying the most suitable agents from an initial list of 30 compounds was reported. Because disparate methodologies had caused discrepancies in data generated by represented countries, a working group met in Fort Halstead, U.K. in September and successfully layed-out a standard methodology. Data was generated on the detectability of a short list of four marking agents.

A subsequent meeting of the Ad Hoc Group in Montreal in November 1990 reviewed all submitted data and recommended a list of four compounds as marking agents. The Group recommended to ICAO that a proposed diplomatic conference (The International Conference On Air Law) proceed as scheduled in February/March 1991. The purpose of this conference is to adopt a Convention on the Marking of Plastic Explosives for Detection.

In addition to his work as a member of the Ad Hoc Group, Mr. Cartwright was also a member of a G-7 Nations task force investigating a similar initiative at a meeting held in London in January 1990. Mr. Cartwright also served as

a technical advisor to the ICAO Legal Committee at its meeting in Montreal in March/April 1990 at which a draft convention was completed. He continues to serve on the interdepartmental legal committee (ICALA) which has planned Canada's strategy leading up to the diplomatic conference scheduled to adopt the proposed convention.

N. Cartwright - Chief Scientist, Analytical Services

Chemistry specialists occasionally participate in approved research projects in which fires are set in abandoned buildings and vehicles in order to collect data and sample debris. Other project participants from time-to-time include members of Provincial Fire Commissioner's or Fire Marshall's Offices, arson investigators, members of the National Research Council and personnel from the Insurance Crime Prevention Bureau. Information gathered from these projects is of value to numerous technical and regulatory organizations.

In October 1990, R. Hrynchuk and A. Cassista, chemists at Forensic Laboratory Winnipeg, participated in five vehicle fire tests as part of a research project with Manitoba Public Insurance Corporation. The tests were undertaken to train vehicle fire investigators and to produce technical data on late-model vehicles.

A. Cassista and R. Hrynchuk, Forensic Laboratory Winnipeg

In 1990 the first step in the design of a Directorate Management Information System was taken by completing a study of performance measurement in forensic science laboratories.

Following a study of the scope of the project and an identification of requirements by the Scientific Information Officer, T. Lukaszewski, an international management consulting firm was engaged to devise a performance measurement system.

After being versed in the daily operation of a forensic laboratory, including inputs (cases, exhibits), throughputs (examinations and analyses) and outputs (results and conclusions), and after interviewing personnel at the Ottawa and Halifax laboratories, the consultants submitted a report outlining a conceptual model for performance measurement.

After receipt of the report, the Scientific Information Officer compiled a list of required system inputs, including tests that could be undertaken, devised a system for categorizing conclusions, and identified desirable system outputs. System development within RCMP Information Systems architecture is continuing. When operational, the system will provide measures of workload, efficiency and effectiveness. In addition, it will improve the current work measurement system, develop directorate-wide work standards and will allow more accurate resource requirement prediction.

❐

In late 1990, Claude Doré, Chief Scientist - Counterfeits was seconded to a task force to organize an Interpol conference on currency counterfeiting and travel documents to be held in Ottawa in May 1992. The Interpol '92 Conference will deal with technical and law enforcement aspects of currency and travel document counterfeiting.

One hundred and fifty Interpol member countries will be invited. Police delegates and observers (banknote printers, central bank officials) will be invited to attend the currency counterfeiting topics. The travel document meetings will be convened for foreign service departments, paper manufacturers and printers. Although seven currency counterfeiting conferences have been held by Interpol, the 1992 meeting will be the first international meeting on fraudulent travel documents. A four-member task force has been assembled to organize a conference of such magnitude.

❐

In addition to providing expert testimony in courts of law, members of Forensic Laboratory Services are, from time-to-time, called upon to provide technical advice to enquiries and legislative committees. The expertise of Murray Smith, Chief Scientist - Firearms, was called upon by a House of Commons Special Committee on the Subject of Bill C-80 (Firearms) in December 1990.

Bill C-80 proposes a number of amendments to Part III of the ***Criminal Code*** (Firearms and Other Offensive Weapons) which, if enacted, would affect the acquisition, possession and use of firearms (i.e. the "gun control" laws).

Mr. Smith's evidence to the Committee in part dealt with the ease and permanence of conversion of automatic firearms to a semi-automatic mode, the feasibility of drafting conversion standards and the traceability and characteristics of magazines. Additional appearances before the Committee are expected in 1991.

Mr. Smith's testimony was the culmination of a number of meetings of the RCMP – Department of Justice Working Group on Firearms Legislation. As a member of this Group, Mr. Smith provided technical advice and recommendations during the process of drafting the legislation.

In the late 1960s, the Canadian Society of Forensic Science established a "Special Committee on Breath Testing" to study scientific, technical and law enforcement aspects of breath tests for alcohol. The Committee developed recommended procedures for the performance of breath tests and minimum standards for training police officers in the use of breath test instruments and associated materials and equipment. Subsequently, the Department of Justice invited the Committee to be its principle scientific advisor on matters related to breath testing.

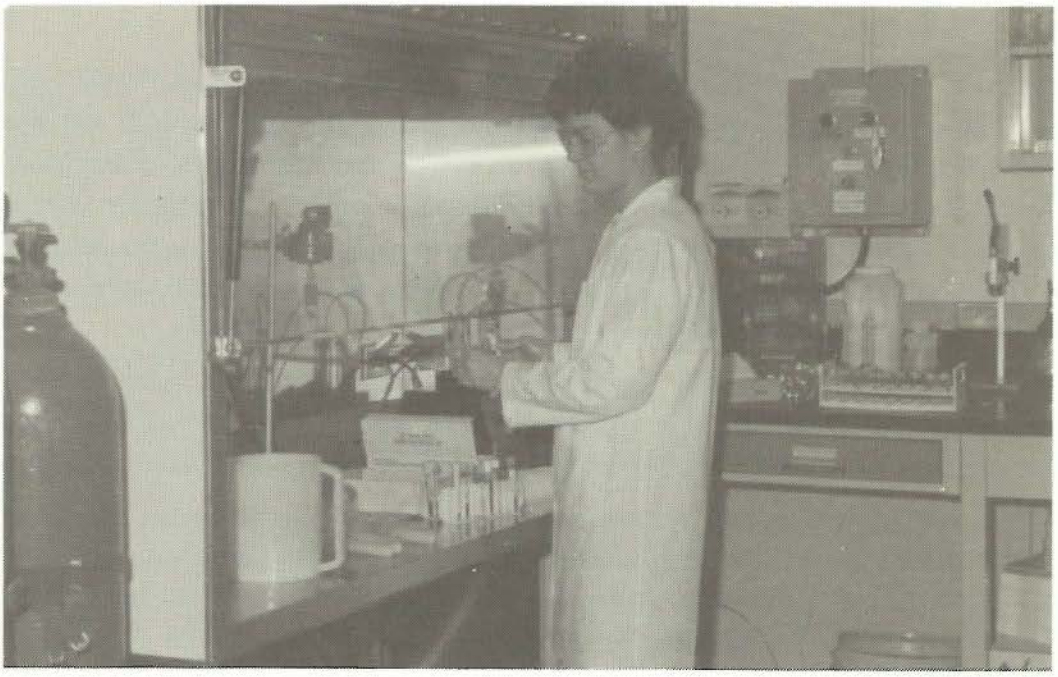
Amendments to the ***Criminal Code*** in 1985 altered the significance of blood samples for the purpose of testing for alcohol. Because of this broadening of interests of the Committee, its name was changed to the Alcohol Test Committee.

In 1990, the Committee was chaired by Brian Hodgson, the Chief Scientist-Alcohol. W. Bowthorpe (Forensic Laboratory Edmonton) was appointed Vice-Chairperson. K. Okamura (Forensic Laboratory Regina) and A. Wells (Forensic Laboratory Halifax) were designated members.

Since its inception, the Committee has developed performance standards, and operational and evaluation procedures for "approved instruments", breath containers

and "road-side screening devices". Training standards for users of the devices have been developed.

In 1990, W. Bowthorpe and E. Purdon of Forensic Laboratory Edmonton evaluated a new breath testing instrument, the Intoximeter 3000 FC/IR, for the Alcohol Test Committee. The purpose of the evaluation was to determine if the instrument meets the required standards to be designated an "approved instrument" pursuant to the ***Criminal Code*** of Canada.



E. Purdon, Forensic Laboratory Edmonton

Training

Newly-engaged scientists are required to complete an understudy training program prior to doing casework. At the end of training, the understudy completes an examination, a practical test and a final mock trial. After consideration of all the results, a recommendation is made on suitability of the incumbent to commence casework.

The following understudies completed training in 1990:

A. Jakus	Toxicology	Forensic Laboratory Vancouver
P. Bilous	Molecular Genetics	Central Forensic Laboratory
J. Modler	Molecular Genetics	Central Forensic Laboratory

The following understudies commenced or continued training in 1990:

S. Smith	Serology	Forensic Laboratory Winnipeg
N. Thibeault	Documents	SSC-CRCB *
N. Ceelen	Counterfeits	Forensic Laboratory Montreal
J. Quevillon	Firearms	Forensic Laboratory Halifax
S. Pyke	Serology	Forensic Laboratory Halifax
C. Kilburn	Documents	Forensic Laboratory Halifax
D. Dupuis	Alcohol	Forensic Laboratory Halifax
T. Walker	Firearms	Forensic Laboratory Sackville
N. McCullough	Hair & Fibre	Forensic Laboratory Sackville
P. Savoie	Documents	Forensic Laboratory Sackville
C. Duhamel	Serology	Forensic Laboratory Sackville
S. Wheaton	Serology	Forensic Laboratory Sackville
A. Voth	Firearms	Forensic Laboratory Edmonton
K. Rainbow	Documents	Forensic Laboratory Vancouver
C. MacMillan	Serology	Forensic Laboratory Regina
G. Smith	Documents	Forensic Laboratory Vancouver

* Supply and Services Canada – Cheque Redemption Control Branch

N. Szakacs	Serology	Forensic Laboratory Regina
J. Racok	Chemistry	Forensic Laboratory Edmonton
S. Pitts	Chemistry	Forensic Laboratory Edmonton
M. Siewertsen	Hair & Fibre	Forensic Laboratory Edmonton
M. Burrington	Serology	Forensic Laboratory Edmonton
B. Alexander	Firearms	Forensic Laboratory Vancouver
S. Gignac	Documents	Central Forensic Laboratory
E. Schell	Counterfeits	Central Forensic Laboratory
M. Mitchell	Counterfeits	Central Forensic Laboratory
R. Officer	Counterfeits	Central Forensic Laboratory
C. Dagenais	Chemistry	Central Forensic Laboratory
H. Shalley	Firearms	Forensic Laboratory Winnipeg
A. Cassista	Chemistry	Forensic Laboratory Winnipeg
I. Trudel	Serology	Forensic Laboratory Winnipeg

Training Received

Apart from the Understudy Training Program, Forensic Laboratory Services Directorate ensures that personnel employed in each of the forensic disciplines and support sections are kept up-to-date in their respective fields. During 1990, our personnel attended numerous courses, conferences, work planning meetings, plant tours and seminars.

- Three Work Planning Meetings were held during 1990. Section Heads from all labs, in the Serology, Firearms and Hair and Fibre Sections met in Ottawa for a week-long session to discuss operational and other aspects of their respective disciplines.

Personnel from the laboratories undertook the following training:

- Fibre Microscopy Course, McCrone Research Institute
- GC-MS Seminar (Saturn), Varian Instruments
- Biosafety Course, Health and Welfare Canada, Ottawa, Ontario
- Infrared Spectroscopy, Queen's University, Kingston, Ontario
- Advanced Infrared Interpretation, Queen's University, Kingston, Ontario
- Forensic Laboratory Applications of DNA Typing Methods, U.S. Federal Bureau of Investigation, Washington, D.C.
- Post Blast Scene Technician's Course, Canadian Police College, Ottawa, Ontario
- Explosives Plant Tours - CIL, EXPRO, Canadian Arsenals
- Fundamental Maintenance and Troubleshooting for the Ion Chromatograph, Dionex Inc., Toronto, Ontario
- Plant Tours-Pritchard Andrews, British American Banknote, Domtar Fine Papers
- Waters Liquid Chromatography Course, Waters Chromatography Division, Toronto, Ontario
- Trace Analysis by Mass Spectrometry Workshop, Canadian Society of Mass Spectometry, Toronto, Ontario
- Molecular Biology, University of Waterloo, Waterloo, Ontario
- Cocaine Expert Witness Workshop, RCMP, Winnipeg, Manitoba
- GC Sample Inlets, Hewlett Packard
- Computer Resource Management Course, Red River Community College, Winnipeg, Manitoba
- Introduction to HPLC, Association of Official Analytical Chemists and Waters Scientific, Winnipeg, Manitoba
- Microbiology, Dalhousie University, Halifax, Nova Scotia
- Virology, Dalhousie University, Halifax, Nova Scotia
- Immunology, Dalhousie University, Halifax, Nova Scotia
- Basic Chromatography, Hewlett-Packard, Montreal, Quebec

Training given

During 1990, laboratory personnel conducted training in virtually all areas of forensic science to an audience across Canada and in other parts of the world.

Courses, seminars, workshops, lectures and speeches were presented to representatives of police agencies, federal and provincial government departments, the court system and colleges and universities.

Some of the training provided during the year included:

- ALERT Instructor's Course
- Arson Investigation
- Automobile Theft
- Counterfeiting
- DNA Analyses
- Detection of Altered Travel Documents
- Document Examination
- Evidentiary Breath Testing
- Firearms Safety
- Forensic Identification
- Forensic Toxicology
- Fraud Investigation
- Gambling Investigation
- Gunshot Residue Detection
- Handwriting Identification
- Hit and Run Investigation
- Major Crime Course
- Passport Course
- Police Explosives Technician
- Post-Blast Investigation
- Alco-sûr Courses
- Serial Number Restoration
- Robbery
- Sexual Assault
- Child abuse

Personnel

Engagements:

J. Elliott	(CFL)	Molecular Genetics
J. Modler	(CFL)	Molecular Genetics
P. Bilous	(CFL)	Molecular Genetics
J. Racok	(FLE)	Chemistry
S. Pitts	(FLE)	Chemistry
C. Kilburn	(FLH)	Documents
P. Savoie	(FLS)	Documents
A. Cassista	(FLW)	Chemistry
H. Shalley	(FLW)	Firearms
I. Trudel	(FLW)	Serology
S. Smith	(FLW)	Serology
S. Towse	(FLW)	Serology
N. Szakacs	(FLR)	Serology
M. Malcolm	(FLR)	Toxicology
M. Siewertsen	(FLE)	Hair & Fibre
M. Burrington	(FLE)	Serology
K. Rainbow	(FLV)	Documents
G. Smith	(FLV)	Documents
S. Gignac	(CFL)	Documents
I. Nixon	(CFL)	Firearms
E. Schell	(CFL)	Central Bureau for Counterfeits
M. Mitchell	(CFL)	Central Bureau for Counterfeits
C. Dagenais	(CFL)	Chemistry

Transfers:

D. Dupuis	from CFL to FLH (Alcohol)
A. Voth	to FLE (Firearms)
R. Grant	from FLE (Toxicology) to CFL (EDP)
R. Seguss	(CFL) transferred to the newly created position: Manager, Operational Support Section, Central Bureau for Counterfeits
C. MacMillan	from CFL to FLR (Serology)
C. Duhamel	from CFL to FLS (Serology)
G. Verret	from FLS (Hair & Fibre) to CFL (Molecular Genetics)
K. Bowen	from CFL (Serology) to CFL (Molecular Genetics)
A.-E. Charland	from CFL (Hair & Fibre) to CFL (Molecular Genetics)
I. Trudel	from FLW (Serology) to CFL (Molecular Genetics)
S. Smith	from FLW (Serology) to CFL (Molecular Genetics)

Promotions:

A. Wells	promoted to Laboratory Manager, FLH
G. McLeod	promoted to Laboratory Manager, FLR
V. Mason-Daniel	promoted to Section Head, FLW, (Toxicology)
R. Beesley	promoted to Section Head, FLW, (EDP)
J. Proulx	promoted to FSLT 3, FLR, (Chemistry)
J. Lapierre	promoted to Section Head, FLE, (Firearms)
T. Folkman	transferred from FLH (Chemistry) and promoted to Assistant Lab Manager, FLE

Retirements:

D. Grugan	(FLH)	Laboratory Manager
B. Paynter	(FLR)	Laboratory Manager
C. Hasler	(FLH)	(Administration)
J. Dickinson	(FLE)	(Firearms)

Resignations:

W. Mah	(FLE)	Serology
K. Blake	(FLE)	Alcohol
J. Waye	(CFL)	Molecular Genetics
N. Monteith	(CFL)	Molecular Genetics
L. Osetsky	(FLE)	Hair & Fibre
D. Clark	(FLE)	Hair & Fibre

Deceased:

R. Percy	E.D.P. Manager, FLE
A. Lambertus	Assistant Laboratory Manager, FLE

Awards:

On August 30, 1990, the Mid-Canada Region of the Association of Official Analytical Chemists presented an award to Forensic Laboratory Winnipeg in recognition of high achievement in analytical fields. The award was initiated to recognize service to the community, contribution of expertise to professional associations and quality of analytical work.

The award was presented to Mr. Benno Friesen, Parliamentary Secretary to the Honorable Pierre Cadieux, Solicitor General for Canada, by Dr. E.A. Ibrahim, president of the Mid-Canada Region of the AOAC. In accepting the award, Mr. Friesen complimented the staff of F.L. Winnipeg for the professionalism and dedication to the provision of a forensic science service.

Left to right: Mr. Friesen, Dr. Ibrahim, Mrs. C.A. Purchase, Laboratory Manager, and Mr. J.R. Keenan, Assistant Laboratory Manager.

Membership in Professional Associations

- ALBERTA LAW ENFORCEMENT ASSOCIATION
- ALBERTA PHARMACEUTICAL ASSOCIATION
- ALBERTA SAFETY COUNCIL
- ALBERTA SOCIETY OF CLINICAL AND FORENSIC TOXICOLOGISTS
- AMERICAN ACADEMY OF FORENSIC SCIENCES
- AMERICAN ASSOCIATION OF ARTIFICIAL INTELLIGENCE
- AMERICAN BOARD OF CRIMINALISTICS
- AMERICAN BOARD OF QUESTIONED DOCUMENT EXAMINERS
- AMERICAN SOCIETY OF QUESTIONED DOCUMENT EXAMINERS
- AMERICAN CHEMICAL SOCIETY
- AMERICAN HUMAN GENETICS SOCIETY
- AMERICAN SOCIETY FOR TESTING AND MATERIALS
- AMERICAN SOCIETY OF CRIME LABORATORY DIRECTORS
- AMERICAN SOCIETY OF MASS SPECTROMETRY
- ASSOCIATION DES DIPLOMES DE L'ECOLE NATIONALE D'ADMINISTRATION PUBLIQUE
- ASSOCIATION OF FIREARM AND TOOLMARK EXAMINERS
- ASSOCIATION OF OFFICIAL ANALYTICAL CHEMISTS (Mid-Canada Regional Section)
- CANADIAN ASSOCIATION OF CHIEFS OF POLICE
- CALIFORNIA ASSOCIATION OF TOXICOLOGISTS
- CANADIAN ASSOCIATION FOR FIRE INVESTIGATORS
- CANADIAN INSTITUTE FOR CHEMISTRY (Formerly Chemical Institute of Canada)
- CANADIAN LIBRARY ASSOCIATION
- CANADIAN MICROSCOPICAL ASSOCIATION
- CANADIAN PHARMACEUTICAL ASSOCIATION

- CANADIAN SOCIETY FOR MASS SPECTOMETRY
- CANADIAN SOCIETY OF FORENSIC SCIENCE
- CANADIAN SOCIETY OF LABORATORY TECHNOLOGISTS
- COLLEGE OF PHARMACISTS OF BRITISH COLUMBIA
- FORENSIC SCIENCE SOCIETY
- INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE) COMPUTING SOCIETY
- INSTITUTE OF TEXTILE SCIENCE
- INTERNATIONAL ASSOCIATION OF ARSON INVESTIGATORS
- INTERNATIONAL ASSOCIATION OF BOMB TECHNICIANS AND INVESTIGATORS
- INTERNATIONAL ASSOCIATION OF FORENSIC TOXICOLOGISTS
- INTERNATIONAL NEURAL NETWORK SOCIETY
- MANITOBA PHARMACEUTICAL ASSOCIATION
- MANITOBA SOCIETY OF CLINICAL CHEMISTS
- MICROSCOPICAL SOCIETY OF CANADA
- NORTHWEST ASSOCIATION OF FORENSIC SCIENCES
- NOVA SCOTIA MEDICAL LEGAL SOCIETY
- ONTARIO POLICE FORCES PLANNING ASSOCIATION
- SASKATCHEWAN APPLIED SCIENCE TECHNOLOGISTS AND TECHNICIANS
- SASKATCHEWAN PHARMACEUTICAL ASSOCIATION
- SOCIETY OF FORENSIC TOXICOLOGISTS
- SOCIETY OF PHOTOGRAPHIC SCIENTISTS AND ENGINEERS
- SOCIETY OF TOXICOLOGY OF CANADA
- SOCIETY OF WESTERN METABOLIC DISEASE INVESTIGATORS
- TECHNICAL ASSOCIATION OF THE PULP AND PAPER INDUSTRY

Conference Attendance / Presentations

Canadian Society of Forensic Sciences, Ottawa, Ontario, OCT 90

POLYMERS: A FRAMEWORK, Workshop, coordinated by M. Skirda (CFL)

IMAGE PROCESSING, Workshop, coordinated by N. Cartwright (CFL)

DNA MINI-SYMPOSIUM, coordinated by R. Fourney (CFL)

NONDESTRUCTIVE TECHNIQUES IN THE EXAMINATION OF QUESTIONED DOCUMENTS, Workshop, coordinated by J. Harris (CFL)

FORENSICS 90: BUILDING FORENSIC SCIENCE IN CANADA, presented by R. Bergman, Director, Forensic Laboratory Services

FORUM: CERTIFICATION OF FORENSIC SCIENTISTS, moderator, R. Hrynchuk (FLW)

STABILIZATION OF CHARRED DOCUMENTS BY PARYLENE DEPOSITION, presented by D. Purdy (CFL)

A HANDWRITING CASE INVOLVING A SUSPECT SUFFERING FROM A MULTIPLE PERSONALITY DISORDER, presented by C. Osler (CFL)

THE SEQUENCE OF STROKES WRITTEN BY SOFT TIP PENS HAVING THE SAME COLOUR OF INKS: A NEW METHOD, presented by G. Poulin (FLM)

THE DETECTION OF ALTERATIONS TO "NEVADA" STYLE BREAK-OPEN LOTTERY TICKETS, presented by R. Ostrum (FLR)

AN INTERESTING CASE INVOLVING FRAUDULENT UNIVERSITY TRANSCRIPTS, presented by J. Harris (CFL)

THE R.C.M.P. QUESTIONED DOCUMENT BIBLIOGRAPHY, (2nd ed): THE AFTERMATH, by G. Poulin (FLM) and M. Ghirotto*

A STATISTICAL APPROACH TO HANDWRITING COMPARISON: SEARCH FOR CHARACTERISTICS THAT ARE USABLE IN A GENERAL LINEAR MODEL, by G. Poulin (FLM), G. Chamberland* and M. Ghirotto

DEVELOPMENTS IN THE ANALYSIS OF WRITING INKS ON QUESTIONED DOCUMENTS, presented by J. Harris (CFL)

A RAPID AND SIMPLE COLOUR TEST FOR DETECTION OF SALICYLATE IN WHOLE HEMOLYZED BLOOD, by W. Asselin (FLV) and J. Caughlin* (FLV)

THE INCIDENCE OF DRUGS AND DRIVING IN CANADA: AN UPDATE, by W. Jeffery* (FLV) and H. Peel (CFL)

VARIATION OF RATES OF ELIMINATION OF ALCOHOL WITHIN AN INDIVIDUAL, by B. Gerlitz* (FLE) and E. Purdon (FLE)

BREATH TESTING FOR ALCOHOL: EVALUATION OF NEW EVIDENTIARY INSTRUMENTS FOR CANADIAN POLICE USE - AN OVERVIEW, by B. Hodgson* (CFL) and D. Taylor (CFL)

THE EFFECT OF ASTHMA INHALERS ON THE A.L.E.R.T. J3A, BREATHALYSER 900A AND MARK IV G.C. INTOXIMETER, by W. Westenbrink* (FLH) and L. Sauve

SIMULTANEOUS LEFT AND RIGHT ARM VENOUS BLOOD SAMPLING FOR BLOOD ALCOHOL ANALYSIS, by B. Image* (FLV) and N. Shajani (FLV)

INVESTIGATING POTENTIAL APPLICATIONS OF NEURAL NETWORKS IN FORENSIC SCIENCE. PART 1 - AN INTRODUCTION, by T. Christianson (FLW)

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*presenter

THE ANALYSIS OF BACKGROUND VOLATILES AND CREATION OF A LIBRARY OF RETENTION INDICES, by G. Silva, and G. Verrett* (FLR)

DETERMINATION OF THE TEMPERATURE OF THE FILAMENT ADJACENT TO THE INCANDESCENT FILAMENT IN A DOUBLE BEAM HEADLIGHT, by K. Murphy*, J. Rioux, H. Stone, and A. Stuart (all FLS)

A CLOTHING SEARCHER FOR TRACE EVIDENCE, by E. Norman (CFL)

CERTIFICATION AND THE PRACTICE OF FORENSIC CHEMISTRY IN CANADA, by R. Hrynchuk (FLW)

CASE EXPERIENCE AT THE R.C.M.P. LABORATORIES, by J. Bowen (CFL)

NEW DEVELOPMENTS IN DNA ANALYSIS AT THE RCMP LABORATORIES, by R. Fourney (CFL)

CHARACTERIZATION OF POTENTIAL CONTROL CELL LINES FOR FORENSIC DNA ANALYSIS, by, J. Elliott, F. Lee, R. Pilon, R. Aubin and R. Fourney (CFL) (poster)

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*presenter

Also in attendance:

G. Carroll	(CFL)	C. Doré	(CFL)
P. Alain	(CFL)	B. Perrigo	(CFL)
G. Verret	(CFL)	M. DeGouffe	(CFL)
D. Tompkins	(CFL)	D. Ballantyne	(CFL)
C. Gilmour	(CFL)	J. Sutherland	(FLE)
F. Bouchard	(CFL)	W. Greenlay	(FLW)
B. Richardson	(CFL)	J. Buckle	(FLH)
P. Laurin	(FLM)	S. Michaud	(FLM)
R. Seguss	(CFL)	R. Bergman	(DFLS)
R. Moyes	(CFL)	T. Lukaszewski	(FLSD)
B. Joynt	(CFL)	A.E. Charland	(CFL)
D. Garbutt	(CFL)	K. Bowen	(CFL)
D. MacDougall	(CFL)	J. Modler	CFL)
J. Nuth	(FLE)	R. MacAlpine	(CFL)
S. MacInnis	(FLR)	E. Norman	(CFL)
N. Knight	(FLW)	J. Deak	(CFL)
T. Fabbro	(FLM)	D. Taylor	(CFL)
P. Roussy	(CFL)	N. Ceelen	(FLM)
L. Macey	(CFL)	R. Officer	(CFL)
P. Bilous	(CFL)	E. Schell	(CFL)
P. Gagnon	(CFL)	M. Dalpé-Scott	(CFL)
M. Drost	CFL)	D. McClure	(CFL)
C. Dagenais	(CFL)	N. Cartwright	(CFL)
M. Skirda	(CFL)	S. Wickett	(FLE)
M. Brosseau	(FLM)	B. Hutsel	FLW)
S. Elias	(CFL)	H. MacDonald	(FLH)

International Association of Forensic Sciences, Adelaide, Australia, OCT 90

MANAGING CHANGE IN A NATIONAL FORENSIC LABORATORY SYSTEM by R.A. Bergman, Director, Forensic Laboratory Services.

SENSITIVE AND SPECIFIC ASSESSMENT OF HUMAN GENOMIC DNA CONCENTRATION IN FORENSIC SPECIMENS, by R. Fourney*, J. Bowen, D. Michaud and J. Waye (CFL) (poster)

FORENSIC ANALYSIS OF RESTRICTION FRAGMENT LENGTH POLYMORPHISMS USING A FIXED BIN APPROACH: VARIATIONS IN ALLELE FREQUENCIES FOR CANADIAN CAUCASIAN AND NATIVE POPULATIONS, by R. Fourney* (CFL), L. Bishop (CFL), J. Bowen (CFL), L. Kirby, N. Monteith (CFL), H. Wilgrove, G. Shutler (CFL) and J. Waye (CFL) (poster)

BLOOD/BREATH RATIO APPARENT VARIATIONS: FORENSICALLY SIGNIFICANT OR A NUMBERS GAME?, by N. Shajani* (FLV) and F. Sumner (FLV)

STABILIZATION OF CHARRED DOCUMENTS BY PARYLENE DEPOSITION, by D. Purdy (CFL), presented by C. Gilmour (CFL)

New York State Police, Henry F. Williams Homicide Seminar, Albany, NY, 90

G. Carroll (CFL)

American Academy of Forensic Sciences, Cincinnati, Ohio, FEB 90

J. Bowen (CFL), H. Peel (CFL), D. Purdy (CFL)

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*Presenter

13th Working Committee on Counterfeits, Lyon, France, SEP 90

THE FORENSIC APPLICATIONS OF THE PHOTOPHONE, presented by R. Moyes (CFL)

Alberta Society of Clinical and Forensic Toxicologists (ASCFT) Kannanaskis, Alberta, MAR 90

CLANDESTINE METHAMPHETAMINE LABORATORIES, presented by L. Walter (FLE)

Also in attendance: T. Cody (FLE) and B. Gerlitz (FLE)

International Conference on Forensic Statistics, University of Edinburgh, Edinburgh, Scotland, APR 90

R. Hrynchuk (FLW)

European Forensic Science Symposium on DNA Analysis, London England, APR 90

DNA TYPING IN THE ROYAL CANADIAN MOUNTED POLICE, presented by B. Gaudette (CFL)

International Association of Bomb Technologists and Investigators, Edmonton, Alberta, JUL 90

C. Dagenais (CFL)

Microscopical Society of Canada, Dalhousie University, Halifax, Nova Scotia, JUN 90

C. Lyons (FLH) co-chairman Technologists Forum Session

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*presenter

Canadian Library Association Annual Convention, Ottawa, Ontario, JUN 90

Paulette St-Amour (FLSD) and Nerine Waldron (FLSD)

Society of Forensic Toxicologists Annual Meeting, Melville, NY, OCT 90

B. Joynt (CFL)

Pittsburgh Conference, New York, NY, MAR 90

N. Cartwright (CFL)

B. Richardson (CFL)

International Congress on Drinking and Driving, Edmonton, Alberta, MAR 90

W. Bowthorpe (FLE) and B. Gerlitz (FLE)

Chemical Institute of Canada, Montreal Section, Montreal, Quebec, APR 90

CHEMISTRY AND CRIME, presented by N. Cartwright (CFL)

6th Conference on Explosive Detection, FBI Academy, Quantico, Virginia, OCT 90

CANADIAN ACTIVITIES IN EXPLOSIVE DETECTION, presented by N. Cartwright (CFL)

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* presenter

Working Meetings

Fourth Meeting ICAO Ad Hoc Group of Experts on the Detection of Explosives, Montreal, Quebec, NOV 90

N. Cartwright (CFL)

Chief Provincial/Territorial Firearms Officers Subcommittee Meeting, Mont Ste. Marie, Quebec, OCT 90

M. Smith (CFL)

Chief Provincial/Territorial Firearms Officers Annual Conference Ottawa, Ontario, DEC 90

M. Smith (CFL)

Third Meeting G7 Countries' Experts on Explosive Detection, London, England, JAN 90

N. Cartwright (CFL)

International Civil Aviation Organization (ICAO) Legal Committee Meeting, Montreal, Quebec, MAR/APR 90

N. Cartwright (CFL)

Third meeting, ICAO Ad Hoc Group of Experts on the Detection of Explosives, Montreal, Quebec, JUN 90

N. Cartwright (CFL)

ICAO Working Group on the Marketing of Plastic Explosives, Meeting, Fort Halstead, England, SEP 90

N. Cartwright (CFL)

Federal Aviation Authority Technology Assessment Program for the Evaluation of Aviation Security Equipment, Atlantic City, New Jersey, NOV 90

N. Cartwright (CFL) attended as one of two test coordinators

Positions Held in Professional Organizations

1. ALBERTA SAFETY COUNCIL, TRAFFIC SAFETY COMMITTEE

   W. Bowthorpe (FLE)

2. ALBERTA SOCIETY OF CLINICAL AND FORENSIC TOXICOLOGISTS, BOARD OF DIRECTORS

   B. Gerlitz (FLE)

   L. Walter (FLE)

3. ALGONQUIN COLLEGE. ADVISORY COMMITTEE FOR BIOCHEMICAL TECHNOLOGY, BIOENGINEERING TECHNOLOGY AND CHEMICAL ENGINEERING TECHNOLOGY

   B. Richardson (CFL)

4. AMERICAN ACADEMY OF FORENSIC SCIENCES TOXICOLOGY SECTION, DRUGS AND DRIVING COMMITTEE

   H. Peel (CFL)

5. AMERICAN BOARD OF CRIMINALISTICS. BOARD OF DIRECTORS

   R. Hrynchuk (FLW)

6. AMERICAN BOARD OF FORENSIC DOCUMENT EXAMINERS, RECERTIFICATION COMMITTEE AND BOARD OF DIRECTORS

   D. Purdy (CFL)

7. AMERICAN SOCIETY OF CRIME LABORATORY DIRECTORS.

   R. Bergman (DFLS), Board of Directors; Chairperson
   INTERNATIONAL LIAISON COMMITTEE

8. BRITISH COLUMBIA SUBSTANCE ABUSE COORDINATING COMMITTEE

   W. Jeffery (FLV)

9. CANADIAN ASSOCIATION OF CHIEFS OF POLICE, OPERATIONAL RESEARCH COMMITTEE

   R. Bergman, (DFLS), Vice-Chairman

   R. Shaddick (FLSD)

10. CANADIAN ASSOCIATION OF CHIEFS OF POLICE, IDENTIFICATION COMMITTEE

    R. Bergman (DFLS)

11. CANADIAN GENERAL STANDARDS BOARD, CERTIFYING COMMITTEE ON RADIOGRAPHY AND NEUTRON RADIOGRAPHY

    J. Harris (CFL)

12. CANADIAN GENERAL STANDARDS BOARD, TEXTILE TEST METHODS COMMITTEE

    J. Cadieux (FLW)

13. CANADIAN GOVERNMENT INTERAGENCY TECHNICAL COMMITTEE ON SECURITY EQUIPMENT

    N. Cartwright (CFL)

14. CANADIAN GOVERNMENT INTERAGENCY, PROJECT REVIEW COMMITTEES, EXPLOSIVES DETECTION PROJECTS

    N. Cartwright (CFL)

15. CANADIAN SOCIETY OF FORENSIC SCIENCE

Board of Directors

P. Alain	(CFL)
J. Buckle	(FLH)
G. Carroll	(CFL)
J. Caughlin	(FLV)
C. Gilmour	(CFL)
R. Hrynchuk	(FLW)
B. Joynt	(CFL)
R. MacAlpine	(CFL)
H. Peel	(CFL)

Executive Committee

H. Peel	(CFL),	President
P. Alain	(CFL),	Past President
G. Carroll	(CFL),	Treasurer

Alcohol Test Committee

B. Hodgson	(CFL),	Chairperson
W. Bowthorpe	(FLE)	
K. Okamura	(FLR)	
A. Wells	(FLH)	

Archivist

R. MacAlpine	(CFL)

Awards Committee

R. Hrynchuk	(FLW)
R. MacAlpine	(CFL)

DNA Committee

B. Gaudette	(CFL),	Chairperson
R. Fourney	CFL)	
H. MacDonald	(FLH)	

Drugs and Driving Committee

W. Jeffery (FLV)

H. Peel (CFL)

Membership Committee

J. Caughlin (FLV), Chairperson

J. Buckle (FLH)

M. Drost (CFL)

R. Prokopanko (FLW)

M. Sharp (FLR)

Proficiency Testing Committee

R. Hrynchuk (FLW), Chairperson

Publications Committee

B. Joynt (CFL), Chairperson

M. Dalpé-Scott (CFL)

1990 C.S.F.S. Conference Planning Committee

C. Gilmour (CFL), Co-chairperson

M. Drost (CFL), Co-chairperson

P. Alain (CFL)

M. Dalpé-Scott (CFL)

M. DeGouffe (CFL)

L. Macey (CFL)

E. Norman (CFL)

C. Osler (CFL)

H. Peel (CFL)

B. Richardson (CFL)

16. CHEMICAL INSTITUTE OF CANADA, SOUTH SASKATCHEWAN CHAPTER

T. Jones (FLR), Chairperson

17. INTERNATIONAL CIVIL AVIATION ORGANIZATION. AD HOC GROUP OF EXPERTS ON THE DETECTION OF EXPLOSIVES

N. Cartwright (CFL)

18. NATIONAL SAFETY COUNCIL (U.S.), COMMITTEE ON ALCOHOL AND OTHER DRUGS

H. Peel (CFL)

19. NOVA SCOTIA DEPARTMENT OF THE ATTORNEY GENERAL, ALCOHOL AND DRIVING COUNTERMEASURES LAW ENFORCEMENT COMMITTEE

F. Fromm (FLH)

A. Wells (FLH)

20. RCM POLICE/DEPARTMENT OF JUSTICE WORKING GROUP ON FIREARMS LEGISLATION

M. Smith (CFL)

21. TECHNICAL WORKING GROUP ON DNA ANALYSIS METHODOLOGY

J. Bowen (CFL)

R. Fourney (CFL)

Published Papers
1990

W.M. Asselin et J.D. Caughlin. «A Rapid and Simple Color Test for Detection of Salicylate in Whole Hemolyzed Blood.» J. Anal. Tox., Vol. 14, No. 4, pp. 254-255 (1990).

J. Harris. Radiography and Passport Examinations. Can. Soc. For. Sci. J., Vol. 23, No. 1, pp. 25-38 (1990).

W.M. Asselin and J.M. Leslie. Use of the $EMIT_{tox}$ Serum Tricyclic Antidepressant Assay for the Analysis of Urine Samples. J. Anal. Tox., Vol. 14, No. 3, pp. 168-171 (1990).

J.S. Waye, G.G. Shutler, B. Budowle, F.S. Baechtel. Hae III - A Suitable Restriction Endonuclease for Restriction Fragment Length Polymorphism Analysis of Biological Evidence Samples. J. Forensic Sci., Vol. 35, No. 3, pp. 530-536 (1990).

R.B. Ostrum. Indented Writing: Invisible Evidence and the Police Investigator. RCMP Gazette, Vol. 52, No. 5, pp. 20-22 (1990).

J.S. Waye and R.M. Fourney. Agarose Gel Electrophoresis of Linear Genomic DNA in the Presence of Ethidium Bromide: Band Shifting and Implications for Forensic Identity Testing. Applied and Theoretical Electrophoresis, Vol.1, No. 4, pp. 193-196 (1990).

B. Gaudette. DNA Typing/Typage de l'ADN. Cdn. Police Chief Newsletter, Vol. 9, No. 2, pp. 2-5 (1990).

J.S. Waye and R.M. Fourney. Identification of Complex DNA Polymorphisms Based on Variable Number of Tandem Repeats (VNTR) and Restriction Site Polymorphism. Human Genetics, Vol. 84, No. 3, pp. 223-227 (1990).

W.M. Asselin. Cocaine, "Crack," "Ice" and Cannabis: Pharmacological Effects, Dosage Forms and Recent Trends in Abuse. The Advocate, Vol. 48, Part 4, pp. 533-535 (1990).

G.W. Deobald. Cyanoacrylate Fuming and its Effect on Firearms Identification. AFTE J., Vol. 22, No. 4, pp. 408-413 (1990).

R.A. Wickenheiser and D.G. Hepworth. Further Evaluation of Probabilities in Human Scalp Hair Comparisons. J. Forensic Sci., Vol. 35, No. 6, pp. 1323-1329 (1990).

R. Fourney. Letter to the Editor. Fingerprint News, Vol. 2, No. 4, pp. 4-5 (1990).

T.E. Folkman, A.M. Kuehl, R.J. Groves, A.D. Beveridge. Evaporation Rate of Gasoline from Shoes, Clothing, Wood and Carpet Materials and Kerosene from Shoes and Clothing. Can. Soc. For. Sci. J., Vol. 23, Nos. 2 & 3, pp. 49-59 (1990).

H.W. Peel and W.K. Jeffrey. A Report on the Incidence of Drugs and Driving in Canada. Can. Soc. For. Sci. J., Vol. 23, Nos. 2 & 3, pp. 75-79 (1990).

C.H. Osler. The PTS II Electronic Chequewriter. Can. Soc. For. Sci. J., Vol. 23, Nos. 2 & 3, pp. 81-90 (1990).

M. Brosseau. Production of Counterfeit Foreign Currency in Canada. RCMP Gazette, Vol. 52, No. 9, pp. 18-21 (1990).

B.D. Gaudette. DNA Typing: A New Service to Canadian Police. RCMP Gazette, Vol. 52, No. 4, pp. 1-7 (1990).

A. G. Laughlin. Modern Breath Test Instruments. RCMP Gazette, Vol. 52, No. 2, pp. 1-4 (1990).

J.S. Waye. Letter to the Editor: Discussion of "Recent Application of DNA Analysis to Issues of Paternity". J. Forensic Sci., Vol. 35, No. 1, pp. 5-6 (1990).

J.S. Waye, R.M. Fourney, J. H. Bowen. Forensic Analysis of Restriction Fragment Length Polymorphism: Theoretical and Practical Considerations for Design and Implementation. In: Proc. Int'l Symp. on Human Identification 1989. Promega Corp., pp. 117-152 (1990).

J.S. Waye. Cloning and Recombinant DNA Technologies for the Development of Hybridization Probes. In: Proc. Int'l Symp. on the Forensic Aspects of DNA Analysis. FBI Academy, pp. 47-56 (1990).

R.M. Fourney, G.G. Shutler, N. Monteith, L. Bishop, B. Gaudette, J.S. Waye. DNA Typing in the Royal Canadian Mounted Police. In: Proc. Int'l Symp. on the Forensic Aspects of DNA Analysis. FBI Academy, pp. 137-146 (1990).

J.S. Waye, G.G. Shutler, N. Monteith, L. Bishop, R.M. Fourney. DNA Typing Using a Panel of VNTR Probes. In: Proc. Int'l Symp. on the Forensic Aspects of DNA Analysis. FBI Academy, p. 241 (1990).

General Employment Conditions

The Royal Canadian Mounted Police Forensic Laboratories employ both uniform and civilian members as specialists and technologists in positions requiring various levels of post-secondary academic training and experience.

Duties include examining a wide variety of exhibit material involved in criminal or suspected criminal offences. Prospective candidates are required to have an aptitude for written and verbal expression as well as a high degree of interest, self-reliance and analytic ability. Specialists must be prepared to travel frequently and to testify in criminal proceedings and other hearings. Specialists must also be willing to work at any of the RCMP Forensic Laboratories and are subject to transfer between laboratories during the course of their career to meet operational needs. New employees are given extensive understudy training within the laboratory in order that they may qualify as specialists and testify in court. Opportunities are also made available to attend and participate in scientific conferences and training courses.

For engagement as a RCMP civilian member an applicant must:

- Be a Canadian citizen.
- Be 19 years of age or older (applicants may apply at 18 years of age).
- Be of good character.
- Be proficient in either official language.

Civilian member applicants must undergo a medical examination but the standards are not as rigid as those required for uniform personnel.

There is a generous leave package which includes annual, sick, compassionate and maternity leave. Annual or vacation leave entitlements are based on length of service and eligibility for the first year's leave begins upon the completion of six months employment.

Leave entitlements	0-5 years service - 15 days
(Working days)	5-10 years service - 20 days
	10 years and over - 25 days

The pension plan is similar to the Federal Government plan and a group life insurance program is available at a very reasonable cost.

Salaries are determined by the classification of positions based on occupational or professional categories at levels related to the duties to be performed. Employees receive annual increments until the maximum rate of pay for their position has been reached. As salary levels are determined by position, and since pay scales change frequently, current pay rates are not quoted here but may be obtained from any RCMP Forensic Laboratory, recruiting, or detachment office.

Specialist Academic Requirements

Discipline	Minimum University Degree	Understudy-in-service Training Required (months) (1)
Alcohol	Honours degree or applicable four-year degree in biochemistry or pharmacy	9-12
Central Bureau for Counterfeits	Bachelor degree (2)	20-24
Chemistry	Honours degree or applicable four-year degree in chemistry	14-20
Document Examination	Bachelor degree (2)	24-30
Firearms and Tool Mark Examination	Bachelor degree (2)	24-30
Hair and Fibre	Honours degree or applicable four-year degree in biology, biochemistry or chemistry	14-17
Serology	Honours degree or applicable four-year degree in biology, biochemistry or microbiology	15-18
Toxicology	Honours degree or applicable four-year degree in biochemistry or pharmacy	10-15

(1) UNDERSTUDY PERIODS MAY VARY DEPENDING ON PREVIOUS EXPERIENCE, AVAILABILITY OF TRAINERS, FACILITIES, ETC.

(2) UNDER REVIEW

Technologist Academic Requirements

Discipline	Academic Qualifications	Understudy-in-service Training Required (months)
Chemistry	Three-year diploma in chemical technology or equivalent	6
Firearms and Tool Mark Examination	Work-related experience	4-6
Hair and Fibre	Community college diploma in laboratory technology	4-6
Serology	Diploma in medical laboratory technology or biochemical technology from a recognized community college	4-6
Toxicology	Three-year diploma in biochemical technology or equivalent	4-6

Vacancies for full-time employment periodically occur in the various areas of specialization. While summer employment is very limited, enquiries are invited from interested persons. Forward applications and enquiries together with details of experience and academic qualifications – preferably a transcript – to:

Royal Canadian Mounted Police
Recruiting Task Force
National Capital Region
Room 164, Pickering Bldg.
250 Tremblay Road
Ottawa, Ontario, K1A 0R2

Information may also be obtained by contacting the Officer In Charge of any of the RCMP Laboratories. RCMP Forensic Laboratories serve Canada from the following locations:

Halifax, Nova Scotia
(3151 Oxford Street,
Halifax, N.S., B3K 5L9)

Winnipeg, Manitoba
(621 Academy Road,
Winnipeg, Manitoba, R3N 0E7)

Sackville, New Brunswick
(Box 1320,
Sackville, N.B., E0A 3C0)

Regina, Saskatchewan
(Box 6500,
Regina, Saskatchewan, S4P 3J7)

Montreal, Quebec
Document and Counterfeit Section
(4225 Dorchester Street, West,
Montreal, P.Q., H3Z 2T4)

Edmonton, Alberta
(15707 - 118 Avenue,
Edmonton. Alberta, T5J 1B7)

Ottawa, Ontario
(1200 Vanier Parkway,
Ottawa, Ontario, K1A 0R2)

Vancouver, British Columbia
(5201 Heather Street,
Vancouver, B.C., V5Z 3L7)