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The California Association of Criminalists

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THE CALIFORNIA ASSOCIATION OF CRIMINALISTS

LOWELL W. BRADFORD

The author in 1948 organized and has served as Director of the Laboratory of Criminalistics, Department of District Attorney, County of Santa Clara, California, after having served a year as State Criminalist for the California State Department of Justice. He is a former Chairman of the Criminalistics Section, American Academy of Forensic Sciences; Assistant Professor of Police, San Jose State College; and is a co-founder of the California Association of Criminalists and served for the first four years of its existence as Executive-Secretary.—EDITOR

Criminalistics is a profession that found its beginning in the first years of the 20th century when firearms evidence became a subject of investigational interest in the form of fired bullets, cartridge cases, and gunshot wounds. Under the impetus of great police leaders like August Vollmer, the scientific potentialities of police investigation gained recognition, support and application. Through the efforts of Vollmer, the first regularly constituted criminalistics laboratory to be established in the U.S.A. was created in 1923 in the Los Angeles Police Department.

Later, the first curriculum in criminalistics in the world was formulated at the University of California at Berkeley and put into effect. This led to the now criminalistics major in the School of Criminology. This center of activity and interest at U.C., attracted students to the facets of scientific application to identity problems found in the synthesis of law and science called criminalistics. The wheels of research began to turn. New methods were involved, ingenuities heretofore known in biochemistry, chemistry, physics, microscopy and mechanics were suddenly applied to the problems of physical evidence investigation. From this educational institution there began a steady flow of research papers, knowledge, and graduates ready to practice professionally.

The various law enforcement agencies in California have happily taken advantage of this new weapon against crime, and there has been a steady progression in number of laboratory operations and qualified criminalists in California during the past decade.

It became apparent that a requirement had developed for the association of criminalists for mutual benefit in an effort to provide the utmost strength to the newly developing profession. It was thus that the spawn of the mother university came to the threshold of a new experience in

professional development. In February, 1953, a group of criminalists began to plan an organization of physical evidence examiners which eventually led to the formation of the California Association of Criminalists. On April 11, 1953, sixteen physical evidence examiners from the leading law enforcement laboratories in California met in a first seminar session to consider current technical developments as well as matters of professional activity.

Two classes of membership were established, Regular and Associate, with the following requirements.

Regular Members:

1. Principal employment must be in the field of "general criminalistics."
2. Demonstrated ability to do work of college level in appropriate physico-chemical sciences.
3. Five years of full-time experience in the field of general criminalistics.
4. Resident of the State of California.
5. Except charter members, must be an associate member in good standing for at least one year.

Associate Members:

1. Principal employment must be in the field of "general criminalistics".
2. Demonstrated ability to do work of college level in appropriate physico-chemical sciences.
3. Resident of the State of California.

or

A person whose principal employment is in one of the specialized fields of criminalistics, who has demonstrated his competence in his specialty and who has at least two years of full-time experience in this specialty, and resides in California.

Included among the causes for termination of membership are unethical conduct, failure of

regular members to participate in seminars, or a change in principal occupation.

The practice of "general criminalistics" is based upon the broad aspect of treatment of the physical evidence problems of law enforcement. General practice includes a laboratory operation, but extends also to the scope of staff assistance to the Chiefs of Law Enforcement and District Attorneys in matters concerning overall problems. It includes a physical evidence consulting service, police training, coordination of drinking driver programs, liaison with the medico-legal operations, progressive planning and recommendations for solutions to various law enforcement physical evidence problems.

General criminalistics involves an understanding of the capabilities and limitations of testing in relation to the requirements of the law. The general practitioner is concerned with the best approach to the solution of a forensic problem that may involve an evaluation or choice of various methods. He is sufficiently grounded in chemistry, physics, biochemistry, and legal requirements to make applications to a broad variety of tests, evaluations and studies in the general scope of physical evidence problems. In this concept he differs from one who is limited to a specialty such as firearms examination, blood testing, chemical toxicology, document examination, technical photography, microscopy, etc.¹

Subsequent semi-annual seminars followed with the ultimate establishment of a formal organization in 1954 having a constitution, a code of ethics, and an executive-secretary. One of the basic concepts of the organization has been a determination to achieve and maintain intensive participation by all members in the affairs of the association. Membership, therefore, has been limited to state residents who meet a high standard of qualification requirements and who maintain specified standards of seminar attendance and participation.

Objectives of the association include the following:

1. Foster an exchange of ideas and information within the field of criminalistics.
2. Foster friendship and cooperation among the various laboratory personnel.
3. Stimulate research and the development of new technics within the field.
4. Encourage financial support for worthy research projects.
5. Encourage the compilation of statistical data of value in the field.
6. Promote wider recognition of the science of criminalistics as a important phase of jurisprudence.
7. Maintain a high level of professional competence among the criminalists in the State.
8. Encourage standard qualifications and requirements for criminalists and other related specialists.
9. Disseminate information to the legal profession concerning minimum qualifications for physical evidence consultants.
10. Provide a board of arbitration or review in certain cases involving differences of technical opinions when indicated.
11. Encourage the use of improved testing procedures and methods of presentation of conclusions.
12. When appropriate, to review and act upon any pending legislation which appears to be related to the field of criminalists.
13. Encourage the recognition of this Association and its purposes among other appropriate groups and societies.
14. Lend assistance, whenever possible, in the formation of college curricula and law enforcement training programs.
15. Establish a Code of Ethics for criminalists.²

Technical topics presented and discussed in the fifteen technical seminars since 1954 are as follows:

BLOOD ALCOHOL ANALYSIS

Internal Alcohol Diffusion in Death Cases	11-55
Critical Evaluation Tests on the Breathalyzer	11-56
Gas Chromatography Applied to Alcohol Determination	6-57
Occurrence of Methanol in Coroner Blood Samples	6-57
Blood Alcohol Analysis Study on Association Circulated Samples	9-57
	6-57
	11-56
	11-55

¹ A more detailed description will be found in the Encyclopedia of Chemical Technology, Vol. 6, page 848, Interscience, New York, 1951.

² Copies of the Code of Ethics may be obtained from the author upon written request.

Chemical Changes of Glucose to Alcohol in Blood Samples	9-57
Evaluation of Suction Air Draft Modification of Kozelka-Hine Blood Alcohol Method	9-57
Blood Alcohol Enzyme Method	9-57
Critical Evaluation of the Intoximeter	9-57
Determination of Ethanol and Other Volatiles from Blood Using Gas Chromatography	4-58
Present Status of Chemical Tests for Intoxication-Analytical Approaches	4-58
Report of National Safety Council Committee on Alcohol and Drugs, Discussed	11-60
Portable Breath Alcohol Gas Chromatograph	3-61

BLOOD TESTS

Survey of Blood Stain Identification Methods	11-56
Blood Group Tests with Lectins	6-57
Blood Paternity Methods, Nomenclature, Supplies, Pitfalls and Interpretations	4-58
pH Effect in Benzidine Blood Test	6-60
Identification of H Factor in Dried Blood	11-60
Survey of Presumptive Tests for Blood	11-60

BODY FLUIDS

Reliability of the Acid Phosphatase Test for Seminal Stains	11-55
	12-54
Critical Evaluation of Acid Phosphatase Reactions Employing Molybdenum Blue	8-56
Reagent Impurities in Phosphatase Tests	11-56
Ultraviolet Absorption Spectra of Physiological Fluids	11-60
Identification of Saliva	11-60

FIREARMS IDENTIFICATION

Shortcomings of Dermal Nitrate Tests	11-55
	12-54
Bullet Comparison Problems of Identity	8-56
Manufacturing Processes of Smith & Wesson Revolver	8-56
Bullet Coatings for Storage	6-57
Odd and Unusual Methods of Identification in Firearms Cases	4-58
Systematized Handling of Handguns, Case Materials and Reference Collections	6-60
Replica Firearms Evidence	11-60
Class Characteristics of .32 caliber Auto Pistols	10-61
Class Characteristics of 9 MM Auto Pistols	10-61
Rifling Data of Rifles	10-61

MISCELLANEOUS

Volatile Flammable Recovery in Fire Investigation	12-54
Christiansen Effect in Refractive Index Measurements	8-56
Fingernails as Evidence	11-56
Dust for Shoeprint Lifting Technique	6-57
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Micro Electronic Chromatographic Apparatus	9-57
Fiberfax and Its Identification	6-60
Lamp Filament Examinations in Traffic Accident Investigation	11-60
Statistical Study of Heel Marks	11-60
Infra-red Viewer in Crime Detection	3-61
Magnabrush Kit for Latent Fingerprint Development	3-61
Some Effects Produced by the Impact Fracturing of Glass	3-61
An Automatic Attenuator for Vapor Phase Chromatography Strip Chart Recorders	10-61
Pyrolysis of Plastics	10-61

NECROSCOPY

Restoration of Decomposed Fingers for Fingerprints	8-56
Skull Identification from Portrait Overlays	12-54

Surface Replicas of Stab Wounds	6-57
Epoxy Resins for Death Masks	6-60

PROFESSIONAL MATTERS

Internship in Criminalistics as Necessary Part of Professional Training	6-60
Avoiding Physician Liability in Taking Blood Samples	6-57
Examinations for the Selection of Criminalists	6-60
Demonstrative Exhibits, Visual Education Devices and Techniques for Court Presentation	11-55
Standards of Ethical Conduct in Defense and Civil Consulting	8-56
Police Laboratories of Europe	11-60
Oral Interviews of Prospective Criminalists	3-61
Where is Criminalistics Going	3-61
Concepts of Organization and Administration of Criminalistic Programs	10-61

QUESTIONED DOCUMENTS

Problems in Typewriting Identification	12-54
Electrophoresis of Inks	8-56
Questioned Document Problems	8-56
Forged Punch Marks on Agricultural Piece Work Cards	10-61
Notes on Typit—Correction Typing	10-61
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SOIL ANALYSIS

Soil Analysis and Interpretations	11-55
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Differentiating Barbiturates with Partition Coefficients	4-58
Dye Salt Method of Alkaloid Assay Using Picric Acid	4-58
Legal Implications of Heroin Synthesis in Research	4-58
Tranquilizer Incidence in Drinking Driver Arrests	4-58
Paper Chromatography Identification of Benzedrene and its Homologues	8-56
Barbiturate Individualization by Paper Chromatography	11-56
	6-60
Mosquito Fish (<i>Gambusia affinis</i>) in Toxicological Screening	11-56
New Extraction Process for Toxicology Samples	9-57
Dye Salt Method of Alkaloid Assay Using Picric Acid	9-58
Chemical Identification of Marijuana	11-60
Determination of Drugs in Urine	11-60
Differentiation of Barbiturates by Crystal Tests	11-60
Gas Chromatographic Separation of Alkaloids	11-60
Ion Exchange Separation of Poisons From Liver Tissue	11-60

Pyrolysis in Gas Chromatography	11-60
Identification of Amphetamines	3-61
Identification of Lophophora	3-61
Determination of Chloral Hydrate in Body Fluids Using Gas Chromatography	10-61
Gas Chromatography of Marijuana Resins	10-61
Analysis of Blood for Sympathomimetic Amines	10-61
Summary of Papers on Gas Chromatography of Drugs	10-61
Paper Chromatography of Various Tranquilizing Drugs	10-61

The association has grown substantially during the decade of its infancy. From a charter member group of sixteen, the roster now includes forty-five members.

The only officer of the association was an executive-secretary until October, 1961, at which time the growth of the activities of the association in implementing its objectives led to a reorganization of its management. The officer staff now consists of a president, president-elect, recording secretary, editorial secretary, treasurer, executive committee member-at large, and the immediate-past-president. This new organization will facilitate the disposition of business matters by delegation of responsibility.

There is no official medium at the present time for publication of technical matter presented at Seminar. However, the association in the near future expects either to adopt or initiate a journal for publication and dissemination of technical information.

The stature of criminalistics has otherwise grown as a profession largely because of the

activities of the association. Members of the Bar and Jurists now more fully appreciate the skill, the objectiveness, the technical training, the breadth of consideration, the depth of perception and the maturity of concept which are involved in criminalistics operations.

Although the employment of physical evidence facilities is predominantly in municipalities in support of law enforcement, (hence the word, "criminalistics"), the function of physical evidence application to noncriminal problems is present; however, it is a function which is latent, and largely unexploited in civil work. It has become evident that the criminalist under the association concept is a champion of the truth whether it be in a criminal matter or civil matter. A criminalist examining evidence in a criminal case does so as much on behalf of the defendant or suspect as he does on behalf of the peace officer.

The association is actively considering eventual licensing, registration, or certification in order to protect the public through ensuring professional standing and competency.