

DIVISION OF Forensic Sciences

The Division of Forensic Sciences (DOFS) provides scientific support to criminal justice agencies, enabling them to detect, apprehend and prosecute criminals by utilizing accurate, useful and timely laboratory analysis and testimony. Except for limited services provided by local and federal laboratories, DOFS crime laboratories are the only forensic services available to the criminal justice community of Georgia.

DOFS Personnel

The Division of Forensic Sciences (Georgia State Crime Laboratory) was formed by legislative Act in 1952. The laboratory had five full-time staff members who processed 651 cases that year. In FY'03, DOFS employed had a total staff of 266 scientists technicians, support staff, and administrative personnel. Despite carrying an average of 40 vacancies, principally due to budget shortfalls, DOFS produced more than 105,275 reports.

The individual caseload for scientists remains high, but the overall case production of DOFS has fallen well short of the demand for services. The result is a greatly increased backlog over the previous year.

The laboratory receives and processes about 9,225 service requests per month. This exceeds the capacity of the laboratory to produce cases by approximately 453 services per month. The resulting backlog is growing at a rate which will approach 24,000 services by the end of FY'04.

With additional budget constraints (due to a weak economy) and a growing caseload, DOFS will most likely develop a backlog larger than the one that existed in FY'01 (36,000 cases).

Regional Crime Labs

- Central Regional Lab, Macon
- Coastal Regional Lab, Savannah
- Eastern Regional Lab, Augusta
- Headquarters Lab, Decatur
- Northwest Regional Lab, Summerville
- Southwest Regional Lab, Moultrie
- Western Regional Lab, Columbus

Command Staff



Dan Kirk
Deputy Director

DOFS Operations



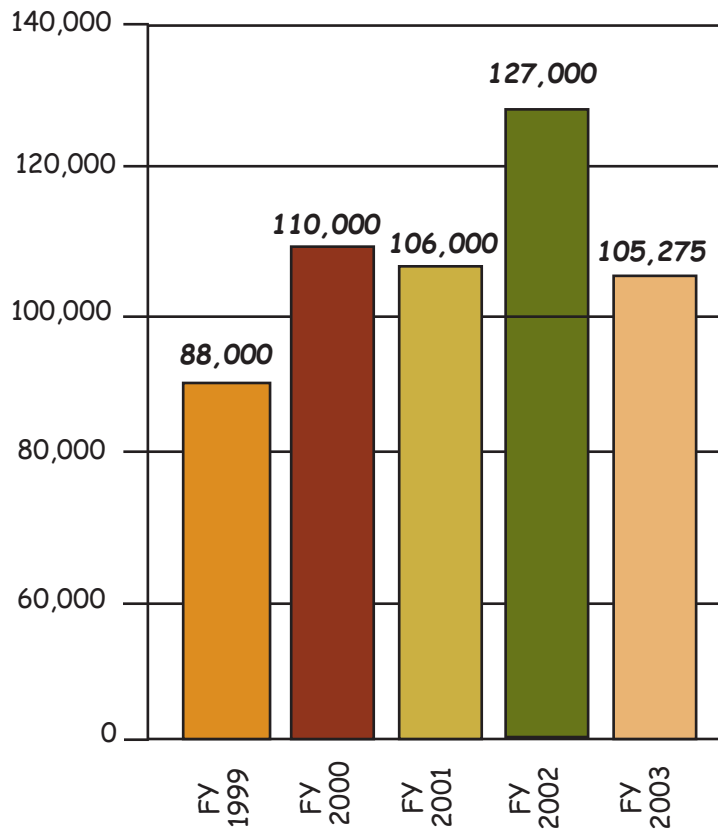
Dr. George Herrin
Assistant Deputy
Director

DOFS Operations



Karen Scott
Assistant Deputy
Director

FY'03: Requests for Services



FY'03: DOFS Cases Worked

Forensic Biology	3,904
CODIS Database	21,866
Chemistry	35,791
Firearms	4,607
Latent Prints	1,844
Questioned Documents	591
Toxicology	33,218
Trace Evidence	520
Medical Examiner.....	2,934
Total.....	105,275

DOFS Operations



Bill Wall
Assistant Deputy
Director

Med. Examiner's Operations



Dr. Kris Sperry
Chief Medical
Examiner

Med. Examiner's Operations



Scott Roberts
Assistant Deputy
Director

LABORATORY Services

DOFS provides scientific support to the criminal justice system in Georgia. Using the most recent technologies and highly sophisticated equipment, lab scientists and technicians in specialized disciplines collect, analyze and interpret all aspects of physical evidence for law enforcement and prosecutors through the state. They also offer expert testimony on their findings.

FIREARMS SECTION

The Firearms Section ended the fiscal year with a backlog of 39 cases. There is a national shortage of trained firearm examiners. Since no individuals graduate college with the necessary skills for firearms examinations, all crime laboratories must train new staff in a program that takes two years to complete. To solve part of this problem, the GBI, the Florida Department of Law

Enforcement (FDLE), and the Royal Bahamas Police Force sponsored a joint firearms training program. Two GBI firearms examiners successfully completed the training during FY'03 and were assigned to regional laboratories. All the labs, with the exception of the Southwestern Regional Crime Lab in Moultrie, perform firearm examinations.

IMPLIED CONSENT

Implied Consent provides training in the operation of the Intoxilyzer 5000 for the detection of drivers suspected of being under the influence of alcohol. The section administers the quality control and assurance programs for Georgia's breath alcohol testing program.

In FY'03, 39 Intoxilyzer basic certification classes were held at the Georgia Public Safety Training

Center (GPSTC), training 1,167 law enforcement personnel. The unit provided training for:

- The Georgia State Patrol
- The Department of Natural Resources
- The federally-funded Police Corp.
- Intoxilyzer 5000 recertification classes were conducted at seven regional training centers.

Georgia has 9,000 certified Intoxilyzer 5000 opera-

Crime Lab Disciplines

Drug Identification

Analyzes and identifies suspected narcotics and other controlled substances as well as paints and accelerants.

Forensic Biology/DNA

Detects, identifies, and individualizes biological fluids. The section also maintains a computerized database called CODIS, (COMbined DNA Index System) that stores the DNA profiles of convicted sexual offenders and felons in Georgia. Evidence from all types of cases can be searched on the database to see if matches can be found and suspects identified.

Pathology

Performs autopsies to determine cause and manner of death in criminal and coroner cases.

Toxicology Section

Isolates and identifies drugs and poisons in human tissues.

tors to administer tests to person arrested for driving under the influence (DUI) of alcohol, operating a boat under the influence of alcohol (BUI), and other alcohol-related offenses.

Georgia police agencies purchased 29 new Intoxilyzer 5000 instruments during FY'03, bringing the number of certified instruments in the state to 550 statewide.

Approximately 590 agencies participate in the GBI Implied Consent breath alcohol testing program.

Crime Lab Disciplines

Firearms Identification

Compares bullets and cartridge cases to the firearms from which they were fired; utilizes the National Integrated Ballistics Identification Network (NIBIN), monitored by the Bureau of Alcohol, Tobacco and Firearms (ATF).

Latent Prints

Collects, preserves, identifies, and compares fingerprints from crime scenes and physical evidence utilizing the Automated Fingerprint Identification System (AFIS).

Trace Evidence

Examines evidence, including fibers, hairs, glass, shoe and tire impressions, and other forms of trace evidence, assisting in determining if a suspect was present at a crime scene.

QUESTIONED DOCUMENTS

In addition to conducting routine examinations and comparisons of handwriting involved in check forgery cases and other financial instruments, Question Documents examines documentary evidence involved in serious violent crimes.

One such matter in DeKalb County involved a triple homicide case that ended in conviction of the shooter. His admission in a letter to a friend claiming responsibility for the killings was crucial to the prosecution's case.

In an Elbert County double murder, the defendant steadfastly denied intentionally shooting a second person at the scene. He claimed the person was struck by a stray bullet and was not a deliberate target. Prosecutors discovered a letter reportedly written by the defendant to a friend, admitting that he shot the second victim so she could not testify against him at trial. Handwriting analysis established that the defendant wrote the incriminating letter.

FORENSIC PHOTOGRAPHY

Forensic Photography continues to enhance its value to Georgia's criminal justice community. This year marked the addition of a state-of-the-art digital video imaging system for surveillance tapes, CDs, and other recorded media submitted for enhancement. Law enforcement agencies throughout the state submit surveillance recordings from robberies and thefts at businesses. The new system is equipped with technology developed by the National Air and Space Administration (NASA) that allows for improved image enhancement of suspects, vehicle tag numbers, and other information helpful in developing investigative leads and key in prosecution.

TOXICOLOGY

During FY'03, the Headquarters Toxicology Section suffered several setbacks in its efforts to meet the DOFS goal of 80 percent of all cases being completed and released in 30 days or less.

The cause for the delay in the completion of test work was due to veteran toxicologists retiring, several employees leaving, and budget shortfalls, including

decreased funding for supplies and the hiring of needed toxicologists.

Approximately, 20,879 requested services were completed at HQ Toxicology during the year with 79.3 percent draft completed on time and 67.3 percent released on time. All performance measures were indicative of strained resources as compared to the previous year's performance.

TRACE EVIDENCE

Trace Evidence provides identifications, comparisons and analysis of hair, fibers, paint, plastic, glass, footwear, tire impressions, fractured materials, and other miscellaneous materials. Forensic analysis, interpretation and courtroom testimony of scientists assigned to this unit play a critical role in the investigation and prosecution of serious/violent crimes such as homicide, sexual assault, armed robbery, kidnapping and burglary. The timely analysis of trace materials is critical to the successful apprehension and prosecution of criminals.

Trace Evidence currently has a backlog of approximately 150 violent criminal cases. The current average turnaround time for requests is approximately six months for cases involving the analysis of hair, fiber, glass, and impressions. There is a nine-month delay for paint, plastic, and fracture matches. This backlog will continue to grow until the lab is able to fill the vacant scientist positions in this section.

Throughout the year, Trace Evidence has provided investigative leads to agencies. Some of these investigative leads included vehicle year/make/model/color as determined from paint left on the clothing of hit-and-run victims; brand/model of tires and footwear as determined from impressions left at crime scene; and race of suspects as determined from hair left at the scene.

LATENT PRINTS

The Latent Prints Section of the Crime Lab collects, preserves, identifies and compares fingerprints from crime scenes and physical evidence. The unit also interfaces with the

Automated Fingerprint Identification System (AFIS), a database that houses fingerprints of persons who have been arrested in Georgia.

In FY'03, the section

processed 1,550 requests with an on-time rate of 99.8 percent (30 days or less). The section consists of three certified latent print examiners.

In April of 2003, the sec-

Crime Lab Disciplines

Questioned Documents

Using a variety of techniques, the service examines and compares documents for possible forgery. It also determines if a suspect is linked to documents key to an investigation.

Forensic Photography

Processes and prints crime scene photographs.

Implied Consent

Administers the state's breath alcohol testing program and provides training on the use of breath alcohol testing instruments.

tion went online with the FBI's Integrated Automated Fingerprint Identification System (IAFIS), which allows the latent print examiners to search the FBI database. However, these searches are limited to only 30 percent of the database. In September of 2002, the section assisted the Alabama Bureau of Investigation (ABI) in the shooting death of two Montgomery police officers. ABI sent some latent prints found at the scene of the shootings to the GBI and asked for an AFIS search. The search resulted in a hit, giving ABI the name of a suspect in the shootings. The suspect later committed suicide to avoid arrest.

CHEMISTRY/DRUG IDENTIFICATION

The Chemistry Section received 44,728 requests for drug identification in FY'03, six percent less than in FY'02. Unfortunately, from July 2002 to June 2003 the backlog grew from 482 to 7,900 cases. Most of the cases are in the Headquarters laboratory, but two regional labs also contributed to the total number. The major reason for this increase is a loss of personnel because of a lack of funding. The Headquarters Chemistry Section has 16 unfilled positions and the regional labs have two vacant positions. Fire debris services performed by the Chemistry staff numbered 400 in comparison with last year's total of 499 – a 25 percent decrease.

The discipline continued though to

improve and advance the testing and services offered by DOFS. This year a new testing technique, Raman spectroscopy, was implemented. This method permits a preliminary identification of a substance through the plastic packaging so that the package does not have to be opened nor a sample taken. The identity of multiple bags of drugs can now be obtained in much less time.

Chemistry has worked to meet the needs of law enforcement agencies by providing additional resources to address the increased number of clandestine methamphetamine laboratories seized in Georgia. The Clandestine Laboratory Response Team (CLRT) continues to respond to

these dangerous sites statewide on a 24-hour/7-day-a-week basis. Efforts to restrict illegal methamphetamine production resulted in new legislation enacted in the 2003 Georgia General Assembly. This legislation, in addition to increasing penalties for methamphetamine production, also made ephedrine and anhydrous ammonia, both used in this process, a felony to possess for drug production. Sampling and testing protocols for use in the field by officers and the CLRT were developed and implemented. New procedures to allow DOFS staff to perform the identifications mandated by this new legislation in the laboratory were also created. Clandestine laboratory responses by

the Clandestine Laboratory Response Team increased 39 percent to 107 in FY'03.

During the fiscal year, the staff members of Chemistry assisted in the training of Georgia law enforcement officers. A complete revision of the existing officer's Marijuana-Certified Examiner Course training program was undertaken. The resulting two-day class provides officers who successfully complete the training with the ability to test leafy material for the presence of marijuana and present their findings in court. New courtroom training, now a part of the course, provides officers with better techniques to convey the results of their testing within the judicial system of Georgia.

FORENSIC BIOLOGY/DNA

In FY'03 the Forensic Biology Section received more than 20,000 requests for services. In casework operations, the majority of these requests were semen identification. These submissions averaged 132 requests per month. A backlog in this service area grew quickly to 375 cases due to staff leaving and training. The service of criminal paternity was expanded to all law enforcement agencies in Georgia, not just GBI cases as was previously practiced. There was an increase in the number of DNA requests overall for attempting identification of remains and "source transfer" on evidence items worn by potential suspects.

In databasing, 22,736 offender profiles were entered into CODIS (Combined DNA Index System). The total database size of CODIS grew to more than 75,000 profiles. An increase in the number of unsolved cases linked to offenders (offender hit) was observed compared to the previous year. In FY'02 there were 89 offender hits and in FY03, 106 offender hits occurred. The

number of offender hits since the Georgia program began now totals 236. An average of seven offender hits are made per month. As observed since the database expansion in 2000, most of the cases solved were rapes linked to offenders incarcerated for non-sex related crimes.

CODIS also links cases to each other that may or may not have a perpetrator identified (forensic hit). Twenty-four forensic hits occurred, identifying several serial crime situations. In terms of national hits, 15 cases were linked to offenders in other states. Eight offenders from Georgia were matched to crimes across the country.

The trend of non-sex offenders being linked to unsolved sexual assault cases continues. At the national level, six forensic hits and seven offender hits were observed. Because of the quality and quantity of casework data at the national level, GBI was awarded a two-year appointment to the National CODIS Board in December 2001.

QUALITY Systems

The Division of Forensic Sciences (DOFS) continues to maintain a comprehensive quality assurance system that allows the laboratory system to meet all of the requirements of two accrediting bodies. DOFS has been accredited by the American Society of Crime Laboratory Directors/Laboratory Accreditation Board (ASCLD/LAB) since 1999 and the ISO 17025 General Requirements for the Competence of Testing and Calibration Laboratories since 2001.

For two years prior to achieving ISO 17025 recognition, the crime laboratory

was accredited to ISO 9002 standards.

DOFS is unique in that it is the first forensic lab in the United States to be granted accreditation by both ISO 17025 and ASCLD/LAB.

DOFS has demonstrated its continuing commitment to the quality system by promoting training for potential auditors. Trainees are selected for ISO 17025 internal auditor training classes as these classes become available. In addition, all managers and assistant managers have attended ASCLD/LAB auditor training.

INFORMATION Management

FY'03 was a year of stabilization in the area of information management. The laboratory Information Management System (LIMS) underwent only one major software upgrade dur-

ing the year. Due to staff suggestions, the upgrade implemented several changes related to data review and retrieval. The Web site used for the dissemination of official reports continued to be a success. New servers were

installed at all seven laboratory sites to improve the storage capacity and speed of LIMS. Several dozen replacement computers were installed for users to enhance their ability to perform their job functions. DOFS continued to be a

leader in the area of information management. Personnel with the FBI laboratory visited the Headquarters lab to gather information to be used in implementing their own systems.

FACILITY Improvements

With increasing workloads at GBI crime laboratories, renovations, upgrades, and construction of new modern laboratory facilities were needed to keep pace with demand.

New laboratories to replace existing obsolete buildings are on schedule:

- The **Eastern Regional Crime Laboratory** in Augusta, Richmond County, was completed and opened in November 2002.

- The **Central Regional Crime Laboratory** in Macon, Bibb County, was completed at the end of July and opened in August of 2003.

- Toxicology and morgue additions to the **Coastal Regional Crime Laboratory** in Savannah, Chatham County, was completed and opened in April 2003.

- Toxicology and morgue addition to the **Southwestern Regional Crime Laboratory** in Moultrie, Colquitt County, are scheduled for completion in 2004.

- The **Northeastern Regional Crime Laboratory** in Cleveland, White County, is the newest laboratory and scheduled for completion in late 2003.

- The **Headquarters Laboratory Annex and Morgue** was completed and occupied in September 2002. The new building is named in honor of the laboratory founder, Dr. Herman Jones. Renovations to the old laboratory building at Headquarters began in February 2003 and is expected to be complete in September of 2003.

The total forensic laboratory system will soon have eight locations strategically located throughout the state, with more than 250,000 square feet of modern scientific space.