

Forensic Lab Experts Turn Bits of Evidence Into Convictions

By Ed Bruske

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FBI agents Charles Killion and Robert Frazier had reported shortly before midnight to the Secret Service garage in Northwest Washington, where a long black limousine, its interior littered with yellow rose petals and smeared with blood, had just been flown in from Dallas.

Killion and Frazier, then two of the bureau's chief evidence examiners, remember that night clearly, the

night of Nov. 22, 1963. They spent it squeezing the blood of John F. Kennedy through their fingers, looking in the car's upholstery for the bullet that killed the president.

Eighteen years later, Killion and Frazier are still together, still turning shards of evidence into court convictions, now for the Commonwealth of Virginia from a small, state-run laboratory in Fairfax County.

"Their work is absolutely invaluable," says Arlington prosecutor

Henry Hudson. "In a number of cases, we rely almost exclusively on what we get from the lab."

"There are some cases," says Steve Merrill, Fairfax County's deputy Commonwealth attorney, "where you couldn't even get a warrant without the lab work. A lot of these crimes are just not done in front of a score of witnesses. You have to go with the physical evidence you find on the scene."

Killion is the director of the

Northern Regional Forensic Laboratory, which is 10 years old and one of four regional labs in Virginia that assist local police and prosecutors. His old sidekick, Frazier, is the chief firearms authority.

With the eight other FBI veterans who found relocating here convenient after mandatory retirement from the Washington bureau, they collectively bring more than 200 years of police experience to their ef-

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forts to solve the 600 cases that pour in monthly from local law enforcement agencies in the Northern Virginia suburbs and around the state.

The lab routine does not always satisfy the public thirst for high drama popularized by TV's "Quincy." But the reports, charts and photographic displays churned out daily by the lab often tip the scales of justice.

"After 39 years, you've got to have a few interesting cases," Frazier says. Among the more recent:

- Arlington successfully prosecuted two youths for the vicious beating of an elderly woman. The conviction rested principally on lab tests that linked enzymes found on one suspect's jacket with those detected in the victim's blood.

- A burglar who broke into homes by firing through windows with a pellet gun was convicted when Frazier matched microscopic marks on the pellets with the mechanism that lifted the pellets into the automatic pistol's firing chamber.

- Handwriting analyst Frederick Webb cleared a Roanoke-area sheriff of embezzlement charges after discovering under the microscope that the sheriff's signature on an IOU had been traced from an original by somebody else.

- A man was convicted of attempted robbery after the lab matched glass fragments found on his clothes with a whiskey decanter the victim had used to hit the assailant over the head.

- Laboratory analysis linked a downstate man with several church burglaries when tests showed that wax on his clothes was 50 percent beeswax — as are candles used almost exclusively by churches.

- In a hit-and-run case still under investigation, lab experts have found fabric impressions on the bumper of the suspected automobile.

Tucked behind a storefront in an industrial park in Merrifield, the lab at times looks more like the auto-body shops that surround it than a center for criminal forensic research. Automobile fenders and hoods are stacked willy-nilly in the back room, awaiting examination. Cracked safe doors sit on table tops, bleeding insulation.

"A lot of people probably don't



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even know we exist," says blood analyst Susan Ballou. "They probably think all the work is done by the FBI."

In an estimated 90 percent of cases in which forensic experts testify with positive evidence for the prosecution, a conviction results. And tough trials often turn into plea-bargaining sessions when stubborn defendants get their first looks at the lab reports.

"Their work definitely causes many defendants to plead guilty," Merrill says. "What you have is irrefutable physical evidence. You're not talking about the credibility of witnesses. You're talking about cold, hard, physical evidence that's difficult to overcome."

"In three out of four cases," chortles glass-and-soils expert Elmer Miller, "the defense attorney is hoping you won't show up."

Only a small fraction of the lab's investigations require court appearances. Its experts spend most of their time bent over test tubes, cameras and microscopes in the lab, where specimens are turned into evidence and where victims and criminals are faceless. Seldom do the experts even bother to learn the verdicts of cases on which they worked.

Prosecutors complain that jurors educated by television expect too much from police work and lab analysis. Good fingerprints, for instance,

are available in about 1 percent of criminal cases.

In a murder case unsolved for two years, police recently brought Frazier a handgun found in the bushes near the original crime scene. Frazier tested the gun in an attempt to match bullets with those taken from the victim, but oxidation had wiped away the microscopic peculiarities that exist inside a gun barrel.

"There's no possible chance of identifying a rusted barrel," Frazier says.

With regularity, however, criminals demonstrate a carelessness that forensic experts have come to depend on.

"I have a great deal of sympathy for criminals," says Miller. "They are mostly uneducated, stupid and poor. The Bernard Welch and professional safecrackers are rare."

In nearly all the safe-burglary cases in which police locate a suspect, Miller can match insulation materials found on their clothing with the insulation from the safe. Even without the safe itself, he can trace the insulation to the original manufacturer and identify it. Frazier also can match tool marks on the safe door with the crowbars used to make them.

Yet only the smart criminals — the rare professionals — dispose of their clothing and tools at the scene. When they do, shrugs Miller, "you don't catch them."