

CRIME LABS

THE SCIENCE OF FORENSIC MEDICINE



John F. Waters

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FORENSIC MEDICINE
by John F. Waters

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AN !MPACT BOOK

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CONTENTS



THE CRIME

1

THE ROLE OF THE DOCTOR

5

EARLY LEGAL MEDICINE

15

FBI LABORATORY

19

THE CRIME LAB

27

ARSON

39

THE FORENSIC DENTIST

47

NAPOLEON TEST
53

THE EXPERTS
57

THE CORONER AND THE AUTOPSY
63

THE TOXICOLOGIST
67

COMPUTERS IN THE CRIME LAB
71

BIBLIOGRAPHY
76-78

INDEX
79

THE CRIME



When the police stepped through the door of the bedroom, they saw a gruesome scene. One policeman stated that he'd never seen anything like it before, and he had been on the force for almost thirty years. On the floor of the bedroom they found a prominent heart specialist, shot through the head. A gun lay nearby, next to his outstretched right hand. His wife was on the bed. She too had been shot, once in the chest and twice in the head. On a first impression one might have labeled the case as murder and then suicide. It appeared that the doctor had shot his wife and then had turned the gun to his head and taken his own life.

However, there was police work to be done. A medical investigator, Dr. Paul Fisk, arrived to view the crime scene. Teams of men and women began collecting evidence. They took photographs of the entire room and everything in it. They found what they thought were human hairs on the rug and bed. They found smudge marks and blood on the carpet, so they cut out that part of the carpet and took it to their laboratory. When all available evidence was gathered, the bodies were released to the morgue to be examined by a coroner, a physician trained in the examination of deceased victims of crimes.

The police were very interested in the case because they were not sure if it was a murder-suicide, as it appeared, and therefore an open-and-shut case, or if it was a double murder. Insurance companies were very interested because of the high amount of life insurance the dead doctor carried. If, indeed, he was a suicide, then the insurance companies would not have to pay out a half-million dollars to the younger sister of the doctor. There were no children. If it was a double murder, then the insurance companies would have to pay.

Police Detective Frank Rogers, who was forty-five years old with seventeen years as a detective of the city of DePault (population 1,440,000), was assigned to the case. He was to investigate the deaths of Dr. Theodore Morgan, semiretired heart specialist, and his wife Ruth, who was active in many civic affairs throughout DePault. Both were well known in the city, respected and liked, and their deaths made the front page of the *DePault Daily Enterprise*.

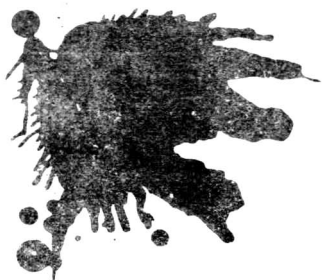
Detective Rogers had three immediate suspects who had access to the family and who had possible motives for committing the murders. There was Amanda Hale, the maid, who had been at home and asleep, so she said, at the time of the shootings. There was Dr. Morgan's younger sister, Beatrice. She was married to an unemployed salesman, had five children, and was in financial trouble. She had a motive: the insurance policies. A third immediate suspect was George, the gardener who had occasionally mowed lawns and raked leaves for the Morgans. He had worked for the Morgans for five years before quitting after an argument, about a month before the shootings. George had stated many times that he was going to get even with the Morgans because, he said, they owed him a week's salary.

When Detective Rogers arrived, he found the bedroom fairly neat, with nothing out of place except for a small drawer open on the night table that belonged to Mrs. Morgan. The contents of the drawer—gloves, handkerchiefs, hair nets, stockings—were in disarray, as though someone had been hurriedly searching through them for something. There was no sign of a struggle.

Rogers made notes of what he saw. He still didn't know if he was dealing with a suicide or a double mur-

der. He hesitated to approach any of the suspects until he had a full lab report from the medical examiner. An extensive investigation would not be necessary if it was determined that the doctor had killed himself, so Rogers decided to have the room sealed off, pending the examination. He then went back to the police station to work on another case until he was called by the coroner to be present during the autopsy.

THE ROLE OF THE DOCTOR



Shortly after the bodies were discovered, the police called in a doctor known as a medical investigator to examine the bodies at the scene. The medical investigator determined that both were indeed dead and that death probably could be attributed to gunshot wounds. An approximate time of death was established, and the medical investigator made notes about the position of the bodies and bloodstains around the room. When he was finished, crime lab personnel went to work, and when they were done, the medical investigator supervised the two police officers who placed the bodies in rubberized bags for delivery to the laboratory of the medical examiner.

Dr. Fearing Schultz, a pathologist who also served as the city coroner, was called in. He waited in the city laboratory to do a complete autopsy as soon as the bodies were delivered. With the help of lab assistants, he examined the outside of the body before he cut open Mrs. Morgan to look for any evidence of other injury or disease. He examined the heart, brain, kidneys, and other organs. He also took blood samples and urine samples and examined the stomach contents.

Dr. Schultz then performed an autopsy on Dr. Morgan as he had with Mrs. Morgan. He made a careful study of the gunshot wound to the head. He noted the point of entry of the bullet and examined the wound for any evidence of powder burns. He knew that burns to the skin are evident when a gun is fired at close range. Dr. Morgan was also dissected and his vital organs examined. Samples of his body fluids were taken. After more than three hours of examination, Dr. Schultz formed his opinion of what had happened. He was then ready to make his report to the police, and to Detective Rogers in particular.

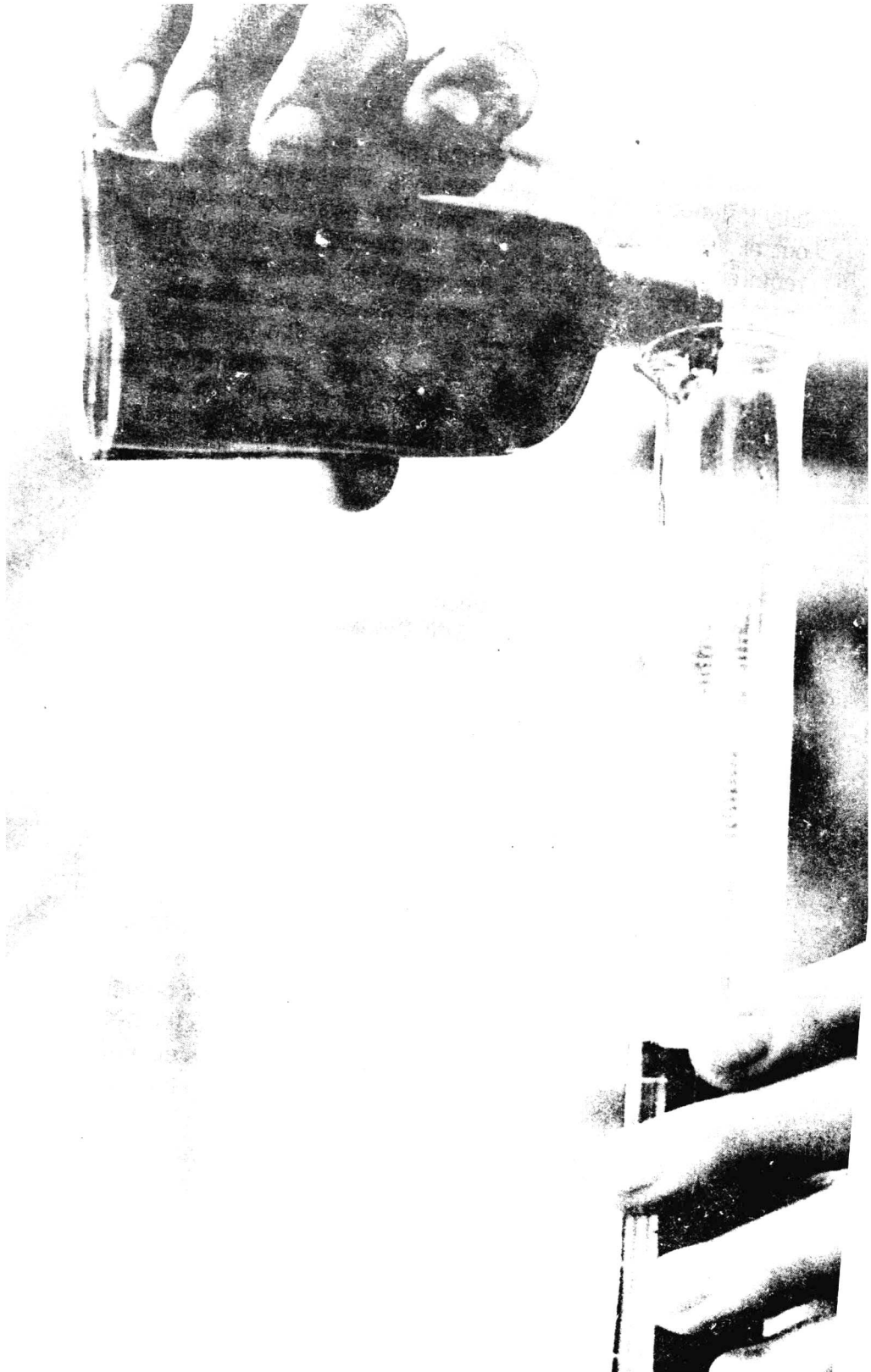
Not all doctors work with the results of a crime as much as Dr. Schultz does, of course. Family doctors are

occasionally called upon to treat patients with accidentally inflicted knife or gunshot wounds, but such cases are out of the ordinary for most family doctors. (Doctors are required to report such cases to the police.) However, many doctors, especially in the beginning of their careers, are asked to take shifts in the emergency room of a hospital. In the emergency room they may see the results of crime more often. Many people brought to hospital emergency rooms are victims of stabbings or shootings, or people with injuries from hit-and-run traffic accidents.

But, for doctors who choose to work as medical examiners, as Dr. Schultz did, the exposure to crime is almost constant. As a pathologist, Dr. Schultz is a specialist who concentrates on discovering the nature and function of disease. His job is to open the body and examine all internal organs, as he did with the bodies of Dr. Morgan and his wife. During the examination, the pathologist looks for any signs that will indicate what the cause of death might have been. For instance, death might have been caused by disease, accidental injury, or injury deliberately inflicted by another human being.

If a pathologist cannot find any cause of death—even after examination of the kidneys, brain, liver, heart, and the body fluids—then a toxicologist may be called in. The toxicologist is not a medical doctor, but a scientist familiar with the chemical makeup of poisons and their effects on the human body.

When a victim of a suspected poisoning is brought in, the toxicologist tries to isolate the poison from the body tissue. Once the poison is extracted, the next step is to identify the substance. Following identification, the toxicologist attempts to estimate how much poison is in the body and tries to determine whether this amount would be considered a lethal dose.



Going back to the case of Dr. Morgan and his wife: no poisons were found in either body. They did not die of natural causes. It was established that Mrs. Morgan died of gunshots, fired from some distance. Dr. Morgan died as a result of a gunshot to the head. Because no traces of powder burns were found at the wound, Dr. Schultz determined that the shot which killed Dr. Morgan was also fired from a distance. In addition to checking for powder burns, Dr. Schultz also examined the angle of the wound, which showed the way the bullet entered the head. This, too, indicated that Dr. Morgan had not shot himself, because the angle at which the bullet entered the skull was not what it would have been if he had fired the gun himself. Dr. Schultz decided that the gunshot was inflicted by a third party.

Now Detective Rogers had a case to work on. Someone else had definitely been in the room and fired the gun. But who? Frank Rogers turned to the medical investigator, Dr. Fisk, for help.

When Dr. Fisk had arrived on the scene of the Morgan murders, he was careful to bring nothing into the bedroom except his medical bag. This was to avoid bringing any foreign matter, such as the ash from a lighted cigarette, into the room, where it might be mistakenly gathered as evidence to be processed at the crime laboratory. Dr. Fisk took out his pencil and notebook and made notes describing how the bodies were arranged, what clothing was worn, and how the clothing was arranged. He felt the

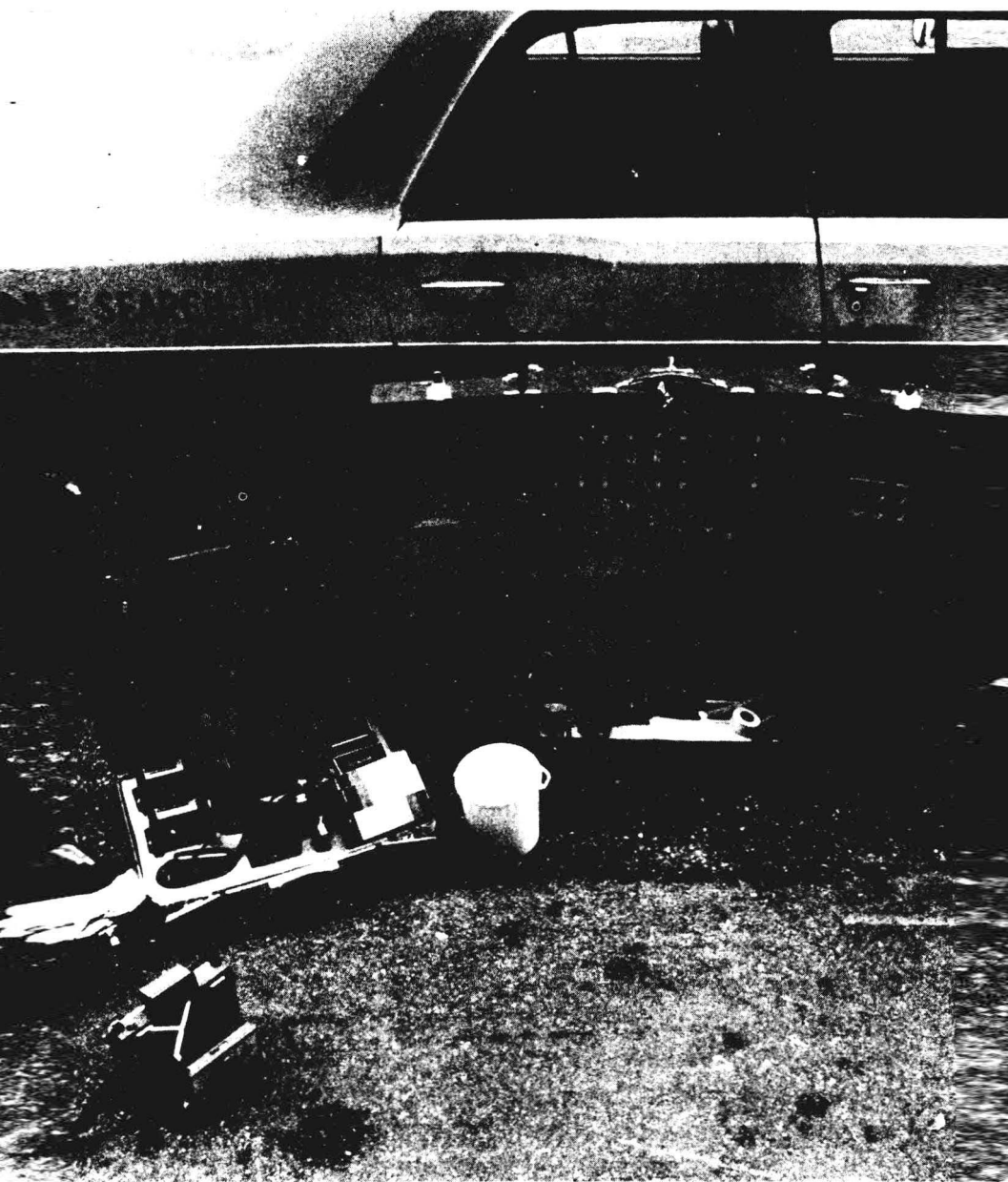
TOXICOLOGY IS AN
ESSENTIAL BRANCH OF
FORENSIC MEDICINE.

foreheads of both victims to check their body temperature and then estimated that the time of death had been 7:30 A.M. When he was finished determining time of death, he allowed the crime laboratory people to come into the room and begin their work.

Determining time of death is one of the medical investigator's most important functions. In the case of the double murder of the Morgans, the time of death ruled out two of the suspects immediately—Beatrice, the younger sister, and George, the fired gardener. Both, it was later learned, had ironclad excuses and were far from the scene of the crime when the two were shot. That left only the maid, who claimed to have been asleep down the hall. Rogers did not consider her as a logical suspect, however, since she had been with the Morgans for years and was considered to be a part of the family.

Once the crime lab people were finished collecting evidence, the medical investigator returned and took charge of removing the bodies to the mortuary for examination. At the mortuary, crime lab scientists went over both bodies before Dr. Schultz began his autopsy. Dr. Schultz removed all clothing from the bodies, piece by piece, and wrapped and labeled everything. All loose hairs, fibers, and bits of foreign material were collected, sealed in plastic, and labeled. Scrapings were taken from the lips and skin, as well as from the fingernails, for later examination at the crime lab. Full sets of photographs were taken of both bodies.

A PORTABLE CRIME LAB IS TAKEN TO THE SCENE.



It is important to note that every item of evidence is sealed, wrapped, and identified for a reason. This material is turned over to the police and locked up for safe-keeping. In this case, Detective Rogers handled the evidence. No one can see the evidence without proper authority and without signing for it. This practice is called the chain of custody, and is designed to prevent any tampering with the evidence. A courtroom lawyer could have evidence thrown out of court if it was shown that any evidence had been carelessly handled, making tampering possible.

Dr. Schultz removed the vital organs for further examination. In many cases, vital organs are removed for additional study because in court the pathologist may be asked if someone died of natural causes or poisoning before being shot as charged by the district attorney. It is important that the pathologist make a thorough examination and know as much as possible about the deceased. In the Morgan case, a smart lawyer could try to discredit the findings of the pathologist in court in order to raise the possibility that the victims were dead before they were shot. The pathologist must be able to state that there was no question that both victims died of gunshot wounds and nothing else.

When Dr. Schultz was satisfied with his examination, he released the bodies for burial and recorded all his findings on paper, with photographs, and on a tape recording. His records included written reports, photographs, and the tape-recorded observations. All this would be held on file and would be available if the case came to trial. The report was also available to Detective Rogers. If Rogers does find a suspect and gathers enough evidence to warrant an arrest, then the district attorney will hold a hearing. The pathologist is required to attend that hearing. Dr. Schultz will