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## **METROPOLITAN TORONTO POLICE FORENSIC IDENTIFICATION SERVICES**

### **A Case Study**

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This article deals with a crime we dread being called upon to investigate; the rape and murder of a young child.

If you are from the identification community, compare our actions to what you might have done. Let us or MOIA know if you could suggest an alternative technique, some thing to make a difficult case a little easier.

If you are from the Uniform or Detective community, see how the scene was protected from unauthorized persons (including police), and also how an intensive identification search can help to build your case.

### **BACKGROUND**

Young Miss X was six years old. She was last seen by her mother at about 9:00 a.m. and was eventually reported missing in the early afternoon.

The building was canvassed by uniform officers. Each tenant was interviewed. With the assistance of volunteer civilians, the surrounding blocks were searched.

The building consisted of five floors of apartments, and sixth floor that was closed off by a padlocked door.

The sixth floor is divided into two rooms. One large room, which is unfurnished, has a stairway leading to a locked door and the elevator mechanisms. There is also a padlocked door exiting to the roof. At the far end of the room, is a padlocked door leading into a smaller boiler room.

Access to this section of the building was by key, and they were controlled by maintenance staff. Sadly, not one of the searchers obtained a key for this area.

On the tenth day, a maintenance worker opened the door to the boiler room and found the girl's body. He immediately closed the door and notified police who were in the building doing interviews. Within minutes, the area was closed off.

### **THE RESPONSE**

The two man ident team arrived about noon and met with the lead Homicide investigators. No one had entered the smaller boiler room since the discovery of the body.

To avoid contaminating any evidence, they immediately established a line of travel from the entrance of the area to the boiler room. A length of police barrier tape was laid close to a wall, and all traffic followed along that line. No one was allowed entry to the boiler room. This included the coroner who pronounced death by looking in from the doorway.

As demonstrated by film clips from the trial of the century on CNN last spring, this is an absolute necessity.

The ident team took their time, studied the scene, and developed a course of action.

The team put on one piece disposable suits covering themselves completely to avoid leaving behind their own traces.

First, overall color photographs of the larger area were taken, using standard flash illumination. Video was also done of the whole floor. The importance of these photographs will be touched on later.

Prior to removal of the body, the entire floor area of the small boiler room had to be examined for footwear and trace evidence. The floor was marked into grid sections. A bright white light, and a Luma Lite source were used for visual examinations. Following this, an electrically charged film was placed over the grid sections in an attempt to collect trace evidence and any footwear impressions.

At this stage, the homicide team and the pathologist were allowed in to the boiler room. No person got closer than six feet to the body. Then they left, following the line of tape.

When the body removal service arrived, they were not allowed to enter the large room and stayed back at the start of the barrier tape line. The identification team, who had donned biohazard body suits, placed the victim in a body bag and sealed it. The body bag was then carried to the removal personnel who then transported it to the morgue. She was accompanied by a police officer for continuity purposes. It was not about twelve hours since the arrival of the team at the scene.

The area was closed down under police guard while the identification team went to the morgue.

There, the body was examined before removal from the body bag. Her clothing appeared as it had been pulled up after the attack by the assailant. The body was examined with three different light sources - white, ultra-violet, and Luma Lite

Under these lights, fibers were collected from her back, stray hairs from her front, and a luminescent stain was noticed on her panties. These were all photographed and would be collected in individual packaging.

The post mortem examination was done that morning. The procedure was photographed under direction of the pathologist. All clothing and trace evidence was photographed, carefully removed, and separately bagged with appropriate exhibit numbers.

The cause of death was suffocation with indications of sexual assault.

It was later found that samples taken from the deceased for DNA typing, were unsuitable due to decomposition of the body. The victim's DNA make-up was determined by using samples from her biological parents. At the conclusion of the autopsy, the identification team secured all exhibits for continuity and reported off after working thirty straight hours.

On their return to duty, the officers had the opportunity to examine the photographs from the first day. The camera flash had a more oblique angle than the overhead ambient lighting in the room. This showed a contrast that was not visible to the naked eye at the scene. It showed an area near the base of the stairs that appeared to be free of dust that the rest of the room.

When the team returned to the scene and looked at this same area, the cleanliness as compared to the rest of the room was very hard to distinguish. Inside this cleaner area, one could observe a faint blood smear about five feet long, scuff marks on the floor, and an orange plastic bracelet closer to the stairs. (later identified by the victim's mother)

As a result, this area became the center of attention, and the smaller boiler room was left for future examination.

The larger room, measuring about thirty by twelve feet, did not contain any furniture. The floor was a gray painted concrete with the walls being of painted concrete block construction. A number of footprints in dust could be observed throughout the room. That would be normal during routine building maintenance.

A decision was made that the cleaner area should be protected for a detailed examination, including fingerprint search, at a later time.

Starting at the line tape and moving out, the room was marked into a grid pattern of about two feet by one foot sections. Examination of each section was first done with lighting and any footprints were photographed. Then, using two inch wide 3M tape, any hairs/fibers were picked from the floor. The tape was then stuck on small pieces of clear acetate and sealed in an envelope, marked for location. The whole floor except for the cleaner area and the area of scuff marks was done this way.

The scuff marked area was done by covering the whole area with this wide tape. After the whole area was covered, the tape was carefully lifted as one piece and transferred to a single large piece of acetate to preserve the markings and their direction.

After five days, the team was now ready to examine the cleaner area, about seven feet square. Before it could be examined for fingerprints, it first had to be searched for other physical evidence. Using a ladder placed over the area, supported by boxes, the officers could crawl over the top of the section without touching the floor.

The area was examined under the different light sources and hairs/fibers were collected with tweezers and individually numbered and packaged. Also, while standing on the ladder, footprints in this area were photographed. This was done until the entire cleaner area had been checked. A number of swabs were taken

from several locations of the blood smear, instead of just one swab. This turned out to be of great importance. A hair was also collected from within the smear of blood.

The fingerprint examination was done by using cyanoacrylate fuming. A tent was constructed, using clear plastic drop sheets and wood, over this whole area including the lower wall.

Four "LocTite Hard Evidence" pouches were placed inside. A plastic pipe with one end plugged and holed drilled along its top surface was also placed inside. Hot water was poured into the pipe and at the open end, a hair dryer was connected. Then the tent was sealed shut using tape and the hair dryer allowed to run for a period of time, circulating the fumes through the tent.

When the fuming process was stopped, the doors to the outside were opened. The tent was quickly dismantled and the fumes allowed to dissipate.

The floor was then examined using black magna powder. This examination of the area resulted in two significant findings.

One, it clearly showed up areas of dragging along the floor and secondly, a single partial fingerprint was discovered in an area near the bottom of the stairs.

This partial fingerprint did not contain enough characteristics to make a positive identification, but it did contain enough to give us something which will be covered in a moment. Efforts to enhance the fingerprint were made but to no avail.

After fourteen days, the scene was released to building management. Note, that during the entire two weeks, the scene had been protected by uniformed police officers to preserve the integrity of the area. No one was allowed access without prior knowledge and consent of the identification team.

The identification work was done, and the officers cleared up the room. But some equipment was left behind to be picked up the following day.

As luck would have it, that night there was a heavy rainstorm, the first rainfall since the girl was missing. In the morning the officers discovered that walls had leaked enough water to cover most of the cleaner area and some areas around it, where most of the evidence had been collected. There is no way of knowing how much of this evidence might have been destroyed if the rains had come a few days earlier.

While the identification team was scouring the scene, the homicide investigators had collected the following items from all personnel who had access to these two rooms: head hairs, pubic hairs, blood, fingerprints, and boots they had worn. As the investigation started to center on one individual it led to a search warrant being executed. A blue track suit was seized by the identification officers from the suspect's home.

This suspect was a maintenance worker at the building and was working the day the girl was missing. He did admit during one of his statements to the Homicide team that he did see the young girl in the boiler room a couple of days before she was found but didn't tell anyone because he thought he would be accused of the crime if he did.

## HIGHLIGHT FINDINGS

Blue fibers found on her clothes were similar to the accused's blue track suit.

The toes of accused's boots had traces of paint similar to floor paint, on the top surfaces of his boots.

One of the shoe impressions located in the cleaner area was similar in size and pattern to the accused's boots.

A hair located on the victim's shirt front was similar to the accused's head hair.

Found in the grid taping of the floor near the clean area were blue fibers, head hairs, pubic hairs all similar to the accused, and also head hair similar to the victim.

A hair embedded in the blood stain was similar to the accused's head hair.

Most conclusive were the swabs from the blood smear. They showed a DNA match that was a mixture of the accused's semen and the victim's blood.

The partial fingerprint was insufficient for a positive identification. However, all the maintenance staff were eliminated as a possible source of this fingerprint except one person, the accused. Possible identification evidence is not permitted in Ontario and this evidence was not introduced.

The accused was found guilty of first degree murder.

Unfortunately, many jurisdictions do not have the manpower or budget to spend fourteen days on a crime scene. When one considers the nature of this crime, I'm just happy that our force could, and did.