

Searching for evidence

The quality and thoroughness of the search for evidence can make or break a criminal investigation, because there are usually no second chances. Once the search has been completed and the crime scene is released from its secure cordon, valuable clues may be destroyed, removed, or rendered worthless as evidence in court.



MARKING OUT KEY EVIDENCE ▲

By placing numbered cards where they find evidence, investigators can record many items' locations in a single photograph. Documentation links the numbers to an evidence inventory and to a plan of the scene.

FINGERTIP SEARCH:

- ① Coveralls prevent a searcher's clothing from contaminating the scene. After use, they are often examined for any residual evidence.
- ② Surgical gloves ensure that genetic material found on evidence does not come from the fingers of the searcher.
- ③ Masks are worn here to protect evidence, but searchers routinely use them for their own safety when handling biological material.
- ④ A shoulder-to-shoulder fingertip search is usually practical only for small crime scenes. In more extensive searches, spacing is often wider and searchers advance on foot.
- ⑤ Notes written at the crime scene while the search is in progress are much more valuable as evidence than information recalled from memory at a later date.
- ⑥ Photographic and video recording of the crime scene is routine.

SHOULDER-TO-SHOULDER

Police search for evidence in Yorkshire, England, where a woman's body was found in a suitcase in 2001.

No crime scene can be secured indefinitely in order to safeguard the evidence it contains. So when an investigation begins, one of the very first tasks is to search for relevant evidence as thoroughly as possible, so that the crime scene can be released. But how do investigators know what is relevant?

Beyond the obvious

The answer is not always clear-cut. For example, when a crime has taken place outdoors, samples of soil and dirt can help to place suspects at the scene, if matching samples are later found on their clothes or shoes. In a rural location, soil may even contain plant material, such as pollen or seeds, that can potentially pinpoint a suspect's presence in time as well as space.

If samples of dirt can provide clues, then almost anything else at the scene may potentially implicate a suspect. Collecting every single item that might possibly be related to a crime would create administrative chaos, and hide vital clues in an avalanche of irrelevant data. But equally, if investigators are too selective, they overlook evidence that could lead to the solution of the crime. Training and experience allow searchers to strike a balance between collecting too much and too little.



By using photography, video, and paper records to document clues on-site, they can control the number of objects that must be removed from the scene.

Search methodology

Crimes and crime scenes are so diverse that every search demands an individual approach. A murder that occurred indoors, for example, may require a very localized search, but an explosion or major accident can scatter evidence over a very wide area. Nevertheless, there are general rules that guide all crime scene managers when planning a search.

The nature of the crime scene often dictates the search order. Outdoor areas are searched first, because weather can damage or destroy evidence. Public areas are a higher priority, because they are more difficult to secure than private spaces. If the removal of a body cannot take place until the area around it is searched, then that search is the priority. Searches of a suspect's entry and exit routes are more likely to produce results than searches of peripheral areas.

Search patterns

In a similar way, search patterns are tailored to the crime scene. Large open areas, such as parks and fields, lend

themselves to a line search, in which investigators stand in a straight line and move forward together. A grid search covers the same area twice, with the searchers crossing first in one direction, and then again at right angles to their original route. However, these methods are usually impractical indoors, where a room-by-room search is more appropriate.

Recording evidence

When artifacts or traces are found that may be linked to the crime, their location and position are crucial. Before they are moved they are photographed, and their position logged relative to fixed points of reference. This helps to reconstruct the crime scene as a sketch, a solid model, or—increasingly—a virtual model on a computer.

Preventing contamination

Finally, investigators methodically pack and record evidence for storage and later analysis. This handling and labeling, and the painstaking isolation of evidence, has taken on a new importance with the

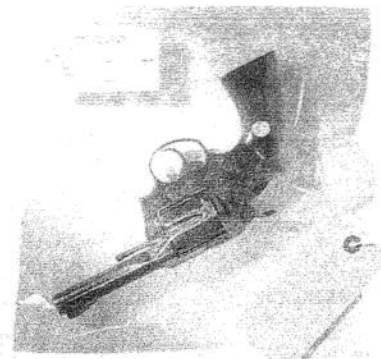
evolution of analytical techniques. The most advanced DNA analysis methods can match a subject's identity from a microscopically small biological sample recovered from the scene. But the match is useless if the sample is contaminated by the DNA of the searcher who found it.



SPECIAL SEARCHES ▲

Poor underwater visibility makes evidence hard to find in ponds, lakes, and rivers. Searches for buried evidence on dry land may require metal detectors, magnetometry, and ground-penetrating radar, as well as sniffer dogs, who also help to find drugs.

REMOVING EVIDENCE



There are two main reasons for packing and recording evidence methodically. Not only do the containers protect the contents from contamination and natural decay, but they also help prove that evidence has not been deliberately removed, added to, or altered. Evidence containers are sealed in such a way that tampering is obvious. Coupled with careful record-keeping, this helps establish the "chain of custody"—a list of everybody who handled the item between crime scene and courtroom.

