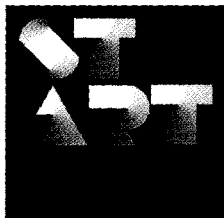




## Sweating Bullets How to fingerprint a shell casing better than those *CSI* losers.



Most criminals aren't known for their smarts. They're certainly no match for Bond, John Bond. The head of forensics at the Northamptonshire Police in the UK has found a new way to reveal fingerprints on shells left behind after a shooting. His work builds on the recent discovery that the extreme heat released when firing a gun causes salt from finger sweat to slightly corrode the casing. As we've learned from *CSI*, fingerprint experts typically coat casings in vaporized superglue to turn the prints white, but that works only if the sweat hasn't dissipated. Bond realized that by applying electricity instead of glue, prints can be detected years after a bullet is fired. He has already helped the police in Kingsland, Georgia, identify prints on four shells from a 1999 crime scene, and he's working on others. Here's how it's done. —ERIN BIBA



**1 // Collect casings at the crime scene.** Bullet casings are usually brass, the perfect metal (soft, but not too soft) to react with sweat, instantaneously corroding when a gun is fired.



**2 // Apply electrical charge.** Zap the casing with 2,500 volts of electricity. The area where it's corroded—the fingerprint—won't hold as much energy as the rest of the metal.



**3 // Sprinkle on conductive powder.** Superfine flakes of carbon (Bond used toner from his photocopier) will stick to areas of low energy on the brass casing, revealing the print.



**4 // Take a picture.** Just as with any ordinary fingerprint, a digital image can be run against law enforcement databases. Find a match and you've got your shooter (or at least your loader).

## JARGON WATCH

### × Sound Blast

*n.* A supersize sound bite, blasted over the Internet by a tech-savvy politician. Barack Obama's campaign speeches, uploaded onto YouTube and viewed by millions, have defined the form. The average sound bite is 10.3 seconds; a typical sound blast is 10 minutes or more.

### × Frolleague

*n.* A work colleague friended on a social networking site and thus granted access to personal information, from blog entries to stag party pics, that may be perceived as less than professional—or even (if the frolleague happens to be a frupervisor) grounds for dismissal.

### × Ocean Deserts

*n. pl.* Desolate zones in the world's seas. These regions are expanding with global warming, which has dampened the circulation of marine nutrients and lowered the concentration of oxygen to such an extent that some 20 percent of Earth's oceans are now moribund.

### × Twiller

*n.* A thriller composed and published entirely on Twitter. At 140 characters per installment, these works of serial fiction are the micro-blogger's answer to the cell phone novel, a popular genre in text-happy Japan. —Jonathon Keats ([jargon@wired.com](mailto:jargon@wired.com))