



ERIC LUSE /The Chronicle

**A flywheel** showing the life cycle of a fly captivates Alyssa Norlin (left), 8, and Taylor Bristol, 8, both of Concord, at the "Crime Scene Insects" exhibition.

# Exhibit considers benefits of insects

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use of the exhibition anyone out, but to interest in the nuanc- exities of science, as them the array of rensic entomology. ground in maggots scientists can work aminer and coroner e scene investiga- tories or FBI and tigation.

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**Exhibit information**  
 "Crime Scene Insects," a Lawrence Hall of Science exhibition detailing how insects help solve crime, runs through May 29. The exhibition features graphic images that may not be suitable for young children or the squeamish.  
 Lawrence Hall of Science is open daily 10 a.m.-5 p.m. \$9.50, \$5.50 for children ages 3-4. The Hall is on Centennial Drive in Berkeley, just above the UC Berkeley campus and below Grizzly Peak Road.

factor, it's pretty interesting," said Alex DeYoung, 14, a student at Marin Horizon School in Mill Valley who was at the exhibition last week studying a life-size poster of a body sprawled across a desert floor. "It's definitely standable."

Goff did not hold anything back in the exhibition, which is replete with parental warnings — the Hall's Web site warns, "This exhibit contains graphic images which may be disturbing to some people. Viewer discretion advised." — and very subdued publicity by those at the Hall, who placed it in an out-of-the-way room far from the ever-popular

of bugs gnawing on pink flesh, posters of bodies in various stages of decomposition and a crowd favorite — an animated re-enactment of the life cycle of a blowfly. "It's totally different," said Nicole Arbelo, a teacher at Concord High School who brought her students to the show last week. "It's intriguing to find out what happens to us after we pass on. I guess some people would be freaked out by it, but I'm not."

The story of the maggots often reveals the secrets of the crime. Typically, flies will start laying their eggs on a dead body within a few minutes of its death. A dead body is "irresistible" to mother flies because of the nutrients it offers, Goff said. A mother fly will smell a dead body from several miles away, even one that's wrapped in burlap sacks and half-buried in dense vegetation.

The flies don't get the corpse all to themselves, though. Mites, spiders, beetles and about 300 other insects also feast on the rotting flesh. In hot, damp climates, bugs can finish off a body in 18

days. At a crime scene, scientists collect maggots and other bugs from the body and examine them in a lab to determine their age, down to the hour or even minute. That helps pinpoint the time of death because flies begin laying eggs on a corpse within minutes of death.

They can also tell a lot about a homicide by the variety of bugs they find — some flies only live in cities, or in grasslands or other specific locales. If numerous species of flies are found, it's a good indication the body was moved. By studying the ages of the different bugs, scientists can estimate where and when it was relocated.

Bugs reveal a lot about wounds, as well. Insects won't feast on live tissue, so by looking at the ages of the bugs on different wounds, scientists can make a good guess as to which wound was the fatal one.

The body in Goff's slideshow is of a woman in her 20s who was strangled by her husband, wrapped in blankets and dumped

near the north shore of Oahu, Hawaii. She was missing for 13 days before her body was found on New Year's Eve near her husband's favorite fishing spot.

Goff's job was to help determine the time and place of death, which he could tell by the types of flies that had nested, the age of the maggots and the extent of the decomposition.

Goff found his calling while studying marine biology at University of Hawaii and Cal State Long Beach, paying his way by singing and playing guitar. He got a side job working in pathology at Fort Ord, conducting autopsies on soldiers.

"At first they had to coax me down from the ceiling," he said. "But after a while, the bugs started to seem kind of interesting — the relationship between bugs and public health. They're actually beautiful. I've been doing this 30 years, and I still have a sense of wonder."

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## faulted in plutonium accidents