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and Niels Pedersen

Companion Animals in Society: A Discussion of Issues Surrounding Animal Cruelty

As we increasingly recognize the important roles that companion animals play in our lives, and as they become members of our families and substantially contribute to our health, the issue of animal cruelty has come to the forefront.

While society has become ever more concerned with issues such as child, spousal and elder abuse, our feelings and attitudes about animal cruelty, and our concept of what constitutes animal cruelty, are also evolving.

The issue has been with us for about as long as humans have brought dogs and cats into our homes. The more our pets become family members, the more we judge animal cruelty by human standards.

As much as we find the topic of cruelty difficult or painful to discuss, we feel it is important to raise questions and examine a range of concerns in order to contribute toward improving animal welfare now and in the future.

Several CCAH disciplines—including nutrition, shelter medicine and forensic veterinary medicine—are contributing to research, education and public service to prevent cruelty and unintentional harm to animals.

So, what is animal cruelty? There are obvious examples, such as dog fighting—which is illegal in all 50 states—or cock fighting—which is illegal in most

“The greatness of a nation and its moral progress can be judged by the way its animals are treated. I hold that, the more helpless a creature, the more entitled it is to protection by man from the cruelty of man.” —Attributed to Mahatma Gandhi (1869–1948)

states—yet many instances are not as clear-cut. Exactly what constitutes cruelty is open to interpretation, depending on any number of factors.

Humane or Cruel?

Is a person cruel who can no longer afford to feed and care for an animal, exhausts all avenues to find it a new home, and places that animal in a shelter—where it may be adopted or, all too often, succumb to a disease or have to be euthanized? What about a person who relinquishes her dog to a shelter because the

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When animals such as Dexter, injured by a burglar, are the victims of cruelty, the Veterinary Genetics Laboratory provides forensic DNA testing services to law enforcement agencies.



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Celebrate the profound effects companion animals have on humans: “Pets—The Spice of Life” is the theme of National Pet Week May 3–9, 2009.

The Center for Companion Animal Health (CAAH) is dedicated to advancing studies in veterinary medicine—including new ways to prevent, diagnose and treat diseases such as cancers, genetic and immune disorders, infectious diseases, kidney and heart diseases, and nutritional disorders in companion animals.

A Turning Point in Cruelty Laws: The Poignant Case of Mary Ellen Wilson

In an interesting twist of history, laws against cruelty were passed for animals before similar laws were passed for children in the United States. In 1874, Mary Ellen Wilson was a New York City child cruelly abused by her adoptive mother. Children at that time were not protected by law from abuse, even though there was a law on the books protecting animals from cruelty. With the help of a concerned neighbor and a mission worker, the founder of the American Society for the Prevention of Cruelty to Animals (ASPCA) and its lawyer took Mary Ellen's case to court, which became the turning point for efforts to protect children from cruelty. Mary Ellen was given a new, loving home and her stepmother was sentenced to one year of hard labor in the penitentiary. The New York Society for the Prevention of Cruelty to Children, the first organization of its kind, was founded in the same year. The complete story can be found on the American Humane Web site (www.americanhumane.org/about-us/who-we-are/history/mary-ellen.html).

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animal has unresolved behavior problems such as excessive barking, aggressive behavior or chewing furniture? Is a person cruel who feeds his cat a well-intended but disastrous feeding regimen—a “fad” diet designed around broccoli—that results in the animal developing severe illness? Shooting a terminally ill dog in the woods would have been standard procedure in another era; today such a case is likely to be prosecuted.

While some human societies consider certain practices cruel and go so far as to ban them by law, what is perceived as cruel varies with time and culture, depending on the prevailing circumstances and beliefs.

Societal Differences

The roles of animals in our culture have changed. While the number of farm dogs has decreased, the number

of urban dogs has increased. Now, at least one-quarter of American homes contains a companion dog that most likely lives inside with the family rather than outside in a barn or kennel.

How we socialize our pets is evolving, too. As we have grown to understand more about canine and feline behavior, it is recognized that reward-based methods of training are more effective than harsh punishment methods, and attitudes have changed.

Working dogs, traditionally used for livestock herding and hunting, now have expanded roles in partnership with humans. Dogs are recruited into service for rescue and as therapy animals; others are important for scent tracking or sniffing out illegal drugs and plant products. Everyone is familiar with K-9 police officers. At the same time, dogs that threaten livestock can be shot in some states, and in some cultures companion animals are acceptable cuisine. Even within a culture or region, attitudes can vary, and local policies can be extremely controversial.

Animal Alternatives

Feelings about the use of animals in scientific research also vary greatly. Most studies at the CCAH involve animals with naturally occurring diseases such as cancer, where little controversy arises. Even so, some people feel that the use of any animal in research is immoral. Others feel that it is okay to use laboratory animals, but not dogs, cats or primates. Still others feel that animal research is acceptable as long as it will benefit both man and animals and is humanely conducted and overseen.

The good news is that, aside from certain rodents, the number of animals being used in scientific research is steadily declining. Research has become more focused on cell culture, animal stem-cell studies and clinical studies.

Alternatives to the use of animals in research have been a focus of the School of Veterinary Medicine for the past 15 years, since the UC Center for Animal Alternatives was established. The center provides investigators with an array of alternative procedures through customized scientific literature searches and retrieval.

For more information, visit the UC Davis Center for Animal Alternatives Web site (www.vetmed.ucdavis.edu/Animal_Alternatives/main.htm).

Criteria?

Is cruelty something that one recognizes on sight, or is it defined by specific criteria? We recognize that deciding what constitutes cruelty has become complex, ranging from differences in care policy to legal statutes.

For instance, is it cruel to feed a canine companion to the point of obesity? In Hertfordshire, U.K., after a tip-off to the Royal Society for the Prevention of Cruelty to Animals (RSPCA), police actually confiscated two obese pet dogs. The owner (as of January 2009) is engaged in a legal battle over the dogs.

Enforcement of regulations against cruelty—in cases such as “hoarding” large numbers of cats or dogs, which can involve serious abuse and neglect—may be difficult to prosecute without a clear definition of the legal criteria.

Who defines the line?

How do society, law enforcement agencies or we, as individuals, determine the line between acceptable and cruel? At what point is the line crossed?

Legal criteria are being more closely defined, but it's a moving target. In this day of changing relationships with our companion animals, and heightened concerns about welfare and potential cruelty, solid information about ways to judge the presence of, or potential for, cruelty is imperative.

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www.vetmed.ucdavis.edu/ccah

In the Spotlight

Recognizing our many Companion Animal Memorial Fund sponsors

Tassajara Veterinary Clinic, Danville, California

In addition to dogs and cats, Elisa Dowd (DVM, UC Davis, 1987), owner of Tassajara Veterinary Clinic in Danville, Ca., and her associate, Dr. Beth Campbell, care for rabbits, rodents and ferrets.

For the past 10 years Tassajara Veterinary Clinic has actively participated in the Companion Animal Memorial Fund program.

“The program is very helpful to clients, who receive a reminder a few weeks after the death of a pet that ‘we haven’t forgotten about them,’” says Dr. Dowd. “The fact that the donation goes to the CCAH for research that benefits ill companion animals strikes a chord, because health advances benefit everyone’s pets. For instance, cancer research is of great importance to many clients. While animals these days have better health care, nutrition and parasite control, as well as better vaccines against infectious diseases, they live longer and are more subject to chronic diseases.”

In memory of one pet cat who died of renal failure, the clinic sent a donation to the CCAH through the Companion Animal Memorial Fund, and the clients, in turn, sent the CCAH a donation honoring Tassajara Veterinary Clinic for the care the cat had received during his life. When they brought a new cat into their family, the clients also included Tassajara in an open house celebration of the kitten’s first birthday.

“That’s one of the nice things about practice,” says Dr. Dowd. “We get to take care of animals from cradle to grave. Handling the end of life with compassion and grace helps owners to understand how much we care about their pets.”



From left: Wendy Graver-Dowd, veterinary assistant; Kathy Schmidt, RVT; Dayna Willis, RVT; and Elisa Dowd, DVM. Their patient is “Boo.”

Many thanks to all the caring and compassionate veterinary professionals who further the CCAH mission by supporting the Companion Animal Memorial Fund!

The Companion Animal Memorial Fund

The loss of a companion animal can be a devastating event in the life of a devoted owner, and the death or euthanasia of a client’s animal is one of the most difficult situations a veterinarian must face.

In response to requests from a number of veterinarians who wanted to show their sympathy to clients who had lost beloved pets and do something positive to benefit all companion animals, a special program was established in 1984 at the UC Davis School of Veterinary Medicine.

More than 300 veterinary clinics in the western United States memorialize each animal with a contribution to the Companion Animal Memorial Fund, which directly funds research at the CCAH to improve the health and well-being of our companion animals—including dogs, cats, birds, small mammals and exotic or “alternative” animals such as reptiles and fish.

During the past 12 months, clinics have contributed more than \$242,000 to the Companion Animal Memorial Fund, and clients have contributed an additional \$5,800 to the CCAH.

Since 1992, more than 318,000 gifts to the memorial fund totalling \$2.41 million have supported studies and advancements such as the following:

- Evaluations of new chemotherapies and radiation therapies for cancer that reduce damage to normal tissues
- Improvements in surgical techniques for canine elbow and hip replacement
- Improvements in surgical techniques to correct congenital heart problems
- Diagnostic tests and epidemiological studies of the infectious disease caused by *Babesia*, a tick-transmitted protozoal parasite
- Assessments of anesthetics for use in companion birds
- Identification of the gene mutation causing polycystic kidney disease in cats

Our Friends and Companions



Conrad
Newport Beach, CA
(1992–2008)

"We miss you so much, my angel. I still can't believe you're gone."
—Sharyl Garza

Maynard
Thousand Oaks, CA
(1998–2008)

"I will miss him always, but Maynard will live in my heart forever."
—Paula Askanas



Mack
Vacaville, CA



Lucy
Santa Rosa, CA
(May–November 2007)

"Lucy was all about love. She may be gone now, but she is forever in our hearts! Lucy, we love you." —Claudia Sanchez



Toby
Glen Ellen, CA
(2007–2008)



Tux
Glen Ellen, CA
(2007–2008)

Timberwoof
Auburn, CA
(1998–2008)

"Timberwoof was a devoted... intelligent, beautiful best friend to a family of four.

He is held in our hearts until we see him in heaven. Thank

you to South Auburn Veterinary Hospital for contributing to the Companion Animal Memorial Fund at UC Davis in memory of Timberwoof."

—Grant and Shauni Williams



Red
Sonoma, CA
(2007–2008)

"Smart, funny, intense, playful, sassy. Tragically lost to FIP at the age of only 8 months. Locked forever deep in my grieving heart."
—Kathleen Lawton

Tuxedo
Sacramento, CA
(1992–2007)

"My very best friend. So handsome, so smart, so loved. In my heart and soul always."
—Michelle Silva



Maxie

San Jose, CA
(1999–2007)

"In February 2007 we lost our beloved yellow Lab, Maxie, to inoperable liver cancer, after eight wonderful years together. The heartbreak was indescribable, but three months later black Lab Faith and yellow Lab Isabelle (Izzy) came into our lives.

These rambunctious girls always make us laugh!" —Judith and Greg Jorgensen



Izzy and Faith
San Jose, CA



R.V.
Lemoore, CA
(1986–2000)

"In memory of our beloved R.V. who found us and brought us unconditional love. Forever in our hearts."

—Scott and Marsha Stanton



Kitty
Colton, CA
(1988–2007)

"I miss her so much, my heart still aches." —Rowena King



Gus
Menlo Park, CA
(2002–2008)

"I miss you so much. I miss our long hikes and daily conversations." —Elyse Dunnahoo



Beau
Pasadena, CA
(1996–2008)

"Like all rescue dogs, he was loving and grateful." —Diana Britt



Piper
Elk Grove, CA

"The fourth in 33 years of our Keeshonds, she came from a downsizing Oklahoma kennel in May 2008. She has become totally socialized, and it's a two-way love affair. Like our two prior Keeshonds, she has received great care at UC Davis." —Al Livingston

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How many animals can someone collect in a small home before we level a charge of hoarding? How much physical punishment for undesirable behavior is allowed? How bad can the diet be? What are the minimal requirements for housing an animal? To what degree can needed veterinary care be denied?

There is also the question of whether the animal is suffering from intentional abuse versus accidental harm, or from lack of information on the part of the human caregiver. What is the threshold of responsibility?

We have no specific answers at the moment, but it is fairly certain that the criteria will change along with our relationship to companion animals and with the advancement of our knowledge about their behavior and biology.

Unintended or Accidental Animal Cruelty

Many examples of accidental neglect or injury exist. Most everyone has inadvertently stepped on their cat's or dog's toes by accident, and there are numerous ways we may fail to recognize a problem with environment, temperature or the early signs of illness. Every year people are reminded not to leave a child or a pet in the car where exposure to the sun can raise temperatures to dangerous or lethal levels very quickly.

What about disaster preparedness? How many households have a plan for safe emergency evacuation for both human and animal members of the family in the event of an earthquake, flood or fire? What happens to pets if disaster strikes when they are home alone?

Even when there is not an emergency, neglected animals are too often left to wander the streets looking for food, or are abandoned to face starvation. But even companion animals with perfectly good homes can be the victims of unintended cruelty.

Malnutrition

We tend to define "malnutrition" as the result of a diet deficient in food or calories, but veterinary nutritionist Andrea Fascetti, who leads the Veterinary Medical Teaching Hospital's nutrition program, notes that the word means "bad nutrition" of any type—"too much" can be as just as detrimental as "not enough." It is estimated that 25 to 50 percent of U.S. cats and dogs are overweight or obese.

Between these extremes is what could be termed inappropriate feeding.

"Too much" can be as just as detrimental as "not enough."

"People want to do what is best for their animals, but some nutritional decisions can do more harm than good, even with the best intentions," says Dr. Fascetti. "It takes a great deal of research just to understand the requirements."

An example of unintended harm is feeding an all-meat diet to a dog or cat, says Dr. Fascetti. "Meat is a very poor source of calcium, and without appropriate supplementation, animals on an all-meat diet can develop nutritional secondary hyperparathyroidism."

Affected animals suffer from calcium deficiency. In order to correct the problem, they reabsorb calcium from their bones, which results in poor bone strength and stability. This problem can present as fractures of the long bones or pelvis, or spinal compression.

"We frequently see this problem in growing puppies or kittens when the nutritional demands of growth accelerate the manifestation of this deficiency," says Dr. Fascetti.

The school's Nutrition Support Service provides nutritional recommendations and feeding plans for hospital patients and consulting veterinarians, and makes appointments with pet owners who wish to meet with a nutritionist. Services include critical-care nutrition, customized weight loss programs, nutritional consultation for metabolic diseases and the evaluation and formulation of computer-generated, home-prepared therapeutic diets.

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Visit the Nutrition Support Service Web site (www.vetmed.ucdavis.edu/vmth/small_animal/nutrition) for more information, including the article “Fueling Fido” by the UC Davis News Service (under “Fact Sheets...”), which talks about homemade and commercially made food, and features short videos about food choices for dogs.

Animal Behavior Problems

Unintentional cruelty can arise from fundamental—and sometimes easily correctable—behavior problems that awareness, realistic expectations and education might prevent.

Among the CCAH “animals in society” programs (such as the UC Davis Koret Shelter Medicine Program, The Pet Loss Support Hotline and Tender Loving Care for Pets) is the Companion Animal Behavior Program (www.vetmed.ucdavis.edu/CCAB/dogcat.htm), which offers resources such as pet-care guidelines, articles and information about human-animal interactions and behavior problems, and a link to the Behavior Service of the William R. Pritchard Veterinary Medical Teaching Hospital.

The Behavior Service (www.vetmed.ucdavis.edu/vmth/small_animal/behavior), with its board-certified specialists and residents in the nation’s largest veterinary behavior program, helps clients to understand pet problems such as aggression, fears and phobias, separation anxiety, house soiling and urine marking, which can become the basis for relinquishment to shelters, or unintentional cruelty by exasperated owners.

Humane behavior modification techniques derived from principles of applied behavior and veterinary medicine help clients to solve their pets’ problem behaviors. A complete history, diagnosis and explanation of the individualized treatment plan helps owners to understand the behaviors and reach their goals. Appointments with the Behavior Service can be arranged by calling (530) 752-1393. Board-certified animal behavior specialists can also be found using the American College of Veterinary Behaviorists Web site (www.dacvb.org).



Inside a traditional 22-by-28-inch cage, a cat crouches in the litter pan, has urinated on his blanket and tipped his food into the litter. The cage had already been cleaned three times that morning. Fifteen minutes after the cat was transferred to a 44-by-28-inch cage with a hiding box, the cat curled up in the box and slept. Shelter staff reported that was the first time the cat was quiet since being admitted two days earlier.

Shelter Medicine: When Animals Are Lost or Abandoned

Kate Hurley, director of the UC Davis Koret Shelter Medicine Program at the CCAH, is working to create a community in which no animal dies simply because it loses its home, and one in which all shelter animals, no matter how long they stay at a facility, receive the best possible care.

If good care includes freedom from hunger and thirst, pain and illness, discomfort, distress or fear, and the freedom to express normal behaviors, then the conditions under which animals are housed in an animal shelter are vastly important.

Dr. Hurley says, “We need to carefully consider some long-held assumptions about how animals are housed, and implement strategies to help us care for shelter animals more effectively and humanely. One way is to reduce crowding.”

She defines “overcrowding” as the stage at which a shelter’s capacity to provide safe, humane care is outstripped by limitations in staffing, facility resources or community resources.

In her article “Sick to Death,” published in the May-June 2008 issue of *Animal Sheltering Magazine*, Dr. Hurley

says, “In multiple cases, a reduction in crowding not only lowered the risk of disease and improved the welfare of every animal in the shelter’s care, but it also resulted—often to everyone’s surprise—in an increased live release rate, a reduction in euthanasia, and a decrease in overall costs.”

“Adequate floor space and hiding places have been shown to reduce stress...”

Dr. Hurley proposes the long-term goal of increasing each shelter’s capacity for humane housing rather than tolerating chronic overcrowding. She also advocates getting more animals out of shelters and keeping them from arriving in the first place, with activities such as spay/neuter programs that are the key to solving the problem of overpopulation in many communities.

Based on numerous observations and studies of the impact of feline housing on stress and welfare, Dr. Hurley believes research is urgently needed to establish the effects of different housing types in shelters.

“Feline upper respiratory infection (URI) is closely linked to stress, and

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represents a leading cause of illness and euthanasia for shelter cats,” says Dr. Hurley. “Adequate floor space and hiding places have been shown to reduce stress, along with compartmentalized housing, which also facilitates safe, efficient cleaning.”

“Providing every cat in a shelter with a space big enough to stretch all the way out does not mean that more cats will have to be euthanized,” says Dr. Hurley. “Rather, by providing a safe haven and protection from illness, animals will have a much higher chance of being adopted, and it may reduce costs over the long run due to savings on medical expenses and more efficient animal care.”

She hopes that new research will lead to development of economically feasible and humane housing systems for the millions of cats that pass through U.S. shelters each year. It may also benefit other cats that must be held in confinement short term, such as in boarding facilities or veterinary hospitals.

Cases of Criminal Neglect or Animal Abuse

Everyone has heard heartbreaking stories of malicious, deliberate injury to animals.

As recently as 1995, only 15 states had felony animal cruelty legislation; that number has now grown to 46 states, says Elizabeth Wictum, director of the Veterinary Forensic Genetics program of the Veterinary Genetics Laboratory (VGL).

It has been well documented that cruelty to animals is a behavior that is frequently associated with other—often violent—criminal activity, she says, so it is imperative for our criminal justice system to identify animal abusers and hold them accountable. In order to prosecute the actions as felonies, law enforcement agencies rely on expertise in various scientific disciplines, including DNA testing.

“People are often surprised to find that we can do the same type of DNA tests on animals that are done on humans,” says Wictum.

As one of the largest animal DNA typing laboratories in the world, and long known as a leader in the genetic analysis of domesticated mammalian species, the VGL began performing veterinary forensic DNA testing in 1996. Demand for the service by law enforcement agencies increased, and a dedicated veterinary forensic DNA laboratory was created in 1999.

During the last 10 years, the laboratory has worked on a variety of animal cruelty cases that include dog fighting, domestic abuse where animals are hurt or killed in an effort to control a domestic partner, animal torture, and even a serial animal killer. In every instance the laboratory used animal biological material such as blood, urine, or hairs to link a suspect with a crime scene or animal victim.

“In our role as forensic scientists, we not only perform the DNA testing vital to prosecuting animal cruelty casework, but we also act as educators to animal control personnel, police, district attorneys and the general public regarding the importance of identifying abusers and how best to utilize the molecular tools we have developed for that purpose,” says Wictum.

“In one of our earliest cases, a man killed his estranged wife and her dog, and set the home on fire. Responders discovered the bodies, and police found the man walking less than a mile away,” Wictum says. “They submitted a knife recovered from his pocket for DNA analysis, and we were able to show that the traces of blood on the knife came from the dog that had been killed, thereby linking the man to the crime scene. He pled guilty to burglary, arson and homicide.”

In another case, during the course of a break-in and burglary of a home, a young man removed a barking dog from its crate and placed it in a lit oven. The dog, “Dexter,” although

small, was strong enough to force the oven door open and escape with burns on his back. When the man was found in possession of items stolen from the home, it was a small drop of Dexter’s blood on his clothing that helped send him to prison.

The laboratory work showed that mitochondrial DNA in the blood not only matched Dexter, but had only been observed in breeds originating in East Asia, and Dexter was Pekingese.

“As a society, we need to develop a consistent philosophy towards animal cruelty and commit to its eradication.”

“Not only do animal cruelty laws vary considerably from state to state, but different jurisdictions vary in how aggressively they investigate and prosecute animal cruelty cases. For instance, shooting a sick dog may be considered humane in some areas and a chargeable offense in others,” says Wictum.

The Veterinary Forensics Web site (www.vgl.ucdavis.edu/forensics) of the Veterinary Genetics Laboratory has more information, including *Animal Cruelty Prosecution—Opportunities for Early Response to Crime and Interpersonal Violence*, (available as a PDF file) to help attorneys learn to effectively prosecute animal cruelty cases.

“As a society, we need to develop a consistent philosophy towards animal cruelty and commit to its eradication,” says Wictum. “Ultimately, our goal is to create a culture where our services are no longer needed.”

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Dexter sustained burns, but was able to escape when he was put into a home oven after barking at an intruder. DNA evidence from the dog helped to convict the perpetrator.



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Acknowledgements

Benjamin Hart, DVM, PhD, diplomate of the American College of Veterinary Behaviorists (ACVB), is distinguished professor emeritus, Department of Anatomy, Physiology and Cell Biology. He was a founding diplomate of the ACVB, and established the first clinical behavior service and first residency program in behavior at UC Davis.

Lynette Hart, PhD, is professor in the Department of Population Health and Reproduction. She established the UC Center for Animal Alternatives and carries out research in human-animal interactions, animal behavior and the role of companion animals in public health.

Niels Pedersen, DVM, PhD, is professor in the Department of Medicine and Epidemiology, director of the Center for Companion Animals and director of the Veterinary Genetics Laboratory. He is an authority on retrovirology and immunological disorders in small animals, and comparative genetics.

Andrea Fascetti, VMD, PhD, diplomate of the American College of Veterinary Internal Medicine, and diplomate of the American College of Veterinary Nutrition, is associate professor in the Department of Molecular Biosciences and chief of the Nutrition Service at the William R. Pritchard Veterinary Medicine Teaching Hospital. She carries out research in feline and canine nutrient requirements and the role of nutrition in the management and prevention of disease.

Kate Hurley, DVM, MPVM, is assistant clinical professor and director of the UC Davis Koret Shelter Medicine Program. She was the world's first resident in shelter medicine, and carries out research in shelter medicine, population health and infectious disease epidemiology

Elizabeth Wictum, BS, is director of the Veterinary Forensic Genetics program of the Veterinary Genetics Laboratory.

What do you think?

What's your reaction to this discussion? Comments regarding this issue, as well as ideas you may have for potential future topics, may be submitted to ccahupdate@ucdavis.edu. Unfortunately, we are not able at this time to respond to e-mail, but greatly appreciate this input!

Visit the UC Davis School of Veterinary Medicine Web site (www.vetmed.ucdavis.edu) to find more programs such as the Veterinary Emergency Rescue Team (www.vmeth.ucdavis.edu/home/VERT/) and International Animal Welfare Training Institute (www.iawti.org/) that aim to improve the welfare and safety of animals.

Visit the CCAH Web site (www.vet-med.ucdavis.edu/ccah) for information about how you can support programs to further animal health and well-being.

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