

Calistoga Tribune

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Friday, Dec. 14, 2007

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BELOW

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Congressman Mike Thompson recovering from surgery

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Boys win under-17 soccer Founder's Cup Championship

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No more trips to polls

Voting will now be by mail for most

By Pat Hampton

Tribune Publisher

When the presidential primary election occurs on Feb. 5, most Calistogans will be voting by mail rather than at their traditional polling places.

John Tuteur, Napa County Registrar of Voters, has converted four of Calistoga's five precincts to vote-by-mail under a state law that allows the

See **VOTE** on page 15

City, Caltrans at odds

By Kim Beltran

Tribune Editor

Would Gov. Arnold Schwarzenegger go to bat for Calistoga against the state's powerful Department of Transportation?

Calistogan Dieter Deiss thinks he might if he knew that the plan Caltrans is proposing for the city's northern intersection is less safe and less environmentally friendly than the roundabout the city wants.

Obtaining an audience with the governor over the matter may be a stretch, but mayor Jack Gingles said Tuesday that he's ready to "go over [Caltrans'] head" by contacting state Sen. Pat Wiggins and anyone else who may have some pull with the roads agency. Council members were fuming over the latest word from Caltrans regarding the

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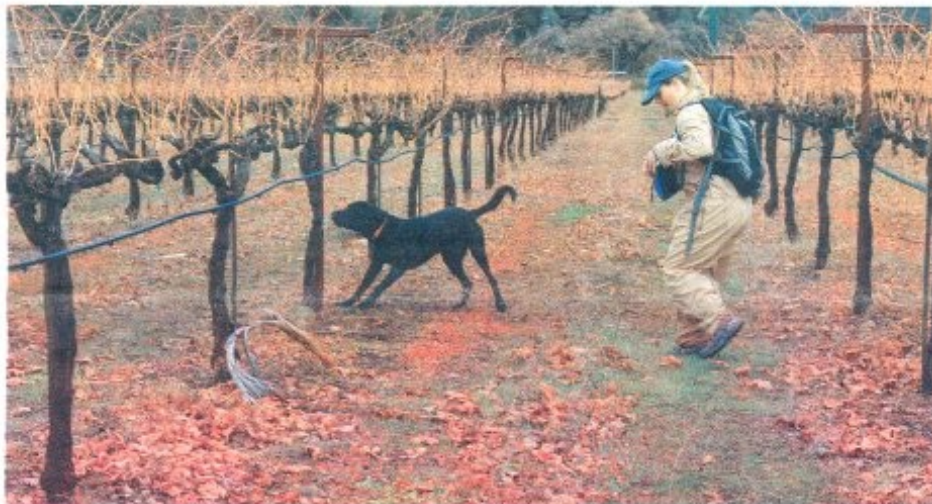


Photo by Kim Beltran

Cyrus, a 4-year-old black lab, points to his discovery of a contained, live vine mealybug as his owner, Caroline Upton, pulls his reward - a red ball - out of her pocket. Upton and a friend, Shay Cook, have started a business which uses trained search and rescue dogs to detect diseases and pests in vineyards.

Man's best friend is now a vineyard pest's worst enemy

Calistogan Caroline Upton joins with friend to create Insect Detection Dogs

By Kim Beltran

Tribune Editor

Cyrus may just be a bug's worst enemy, but that makes him a grape grower's best friend.

The four-year-old black lab, a retired search and rescue dog, is putting his skills to work in the vineyard, sniffing out pests that can destroy crops and cause millions of dollars worth of damage.

Cyrus' owner, Calistoga resident Caroline Upton, and her friend Shay Cook of Concord have teamed up to create Insect Detection Dogs (ID Dogs), a company which specializes in using canines to determine if a vineyard is infested.

These highly-trained dogs can cover more ground in a day than it takes a small crew of field workers to cover in several days or more, especially when they're

searching each vine for an insect that's only a quarter of a centimeter in size - barely visible to the naked eye unless there's a large infestation, and by then, it could be too late. Add to that the fact that the vine mealybug, the latest serious pest threat to grape vines, often hides under the bark of the vine or in the root system and you've got a bug that's difficult to detect in a timely and cost-effective manner.

Although dogs have long been used by authorities to sniff out drugs or bombs, it is only in recent years that scientists have discovered a variety of uses for the incredible power of the canine olfactory system.

Just this fall, the state's Department of Fish and Game began using dogs to detect quagga mussels, an invasive freshwater mollusk that clogs water pumping and irrigation systems. According to a recent report in the Sacramento Bee, the Metropolitan Water District in Southern California has spent \$2.8 million to control

See **DOGS** on page 8

Cell phones may not be best choice in emergency

By Michelle Wing

Tribune Staff Writer

Everybody says cell phones are great for emergencies but the truth is, using a landline might get help to you more quickly - at least for now.

When you call 911 from a landline - such as the phone in your home or office or even from a payphone - your call goes directly to the nearest emergency dispatcher. If you're in Calistoga, your call is routed to the local police station, and the dispatcher there immediately knows where you're calling from.

When you dial 911 from a cell phone, your call is transferred to the California Highway Patrol's Golden Gate Communication

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New leader coming for rec services

By Pat Hampton

Tribune Publisher

With the community pool under construction and expanded recreation services on the council's to-do list, a community services director is being recruited to direct a new city department.

City manager Jim McCann said that out of an initial pool of 50 applicants looking to fill the newly created Community Services Director position, 10 people had been offered interviews. The roster was pared down to a final four after recommendations were made by a five-member screening panel composed of administrative services director David Spilman, superintendent of

See **REC** on page 6



THE NOSE KNOWS...

■ According to animal physiology research done at Davidson College in North Carolina, the olfactory center of a dog is more than 40 times bigger than that of a human, and a dog's sense of smell is estimated to be one million times more efficient than humans. Because of this, dogs can detect a wide range of odors under difficult conditions, and are able to distinguish between the target odor in an environment full of distracting odors.

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DOGS

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the quagga, and recently approved another \$6 million.

In both the U.S. and the United Kingdom, researchers have found success using dogs to detect various forms of cancer by smelling urine, breath or skin. In Asia and the U.S., canines are now used to sniff out termite infestations, and in a Minnesota science class, a teacher uses her trained black lab to find even the tiniest of mercury spills, caused by broken thermometers.

It is only in the last two years that the idea of using dogs to detect vineyard pests has taken root. A company in Sonoma County that trains and provides assistance dogs to the disabled began experimenting in 2006 with pest detection, and this July, Cook and Upton, who met through their work with the California Rescue Dog Association, launched their business.

Cook, who began training dogs in 1985, has two German Shepherds: Bishop, a six-year-old male specially trained in cadaver search, and Rixi, a six-month-old female in training. A fourth dog, a German Shepherd named Crimson — also part of a certified search and rescue team with owner Scott Carlisle — is learning pest detection to work with ID Dogs.

Carlisle, a Benicia resident

who volunteers with the Napa County Search and Rescue squad, first began toying with the idea of using Crimson in his own pest control business to sniff out bed bugs in Bay Area hotels. Before he could make any progress in that direction, however, Cook called him about ID Dogs.

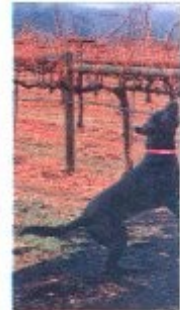
"I decided it would be a lot more fun running around in the vineyards and being outside," he said.

Cyrus, who has the luxury of living amongst the vineyards in Napa Valley, is ahead of the other dogs in his training and "is ready to go right now," said Upton, who uses her father Sloan Upton's Three Palm Vineyards as training ground.

This week, in fact, Upton and Cook did a training run for Dr. Monica Cooper, a staff researcher with UC Berkeley's Department of Environmental Science, Policy and Management. Cooper is hoping to document the work of dogs sniffing out the vine mealybug, lending the practice scientific weight.

"This is very exciting because the whole idea sort of originated with the growers," Cooper said, referring to a group of Carneros vineyard owners who are struggling to combat severe infestations of the vine mealybug. "So if this is something that the growers want and can use, it's great.

"Also, there's other pests out there and diseases that this could be beneficial for," she added.



At left, the crew of Insect are Caroline Upton, 6-month-old Rixi. In the center, Cyrus for a training run mealybug trapped in a trap, and a "lure," the pheromone given off by

One of those diseases, powdery mildew, is also very difficult to find, Cooper said, and she hopes to run field tests to see how well the dogs do at locating this threat.

While it's true the vine mealybug has been targeted for dog trials because of its recent and rapid spread, the pest is also a good candidate for canine trials because scientists have been able to identify and reproduce the scent, or pheromone, that the female insects use to attract males. The synthetically-produced pheromone is currently

used in traps to capture the flying males, but tracking down the hidden females among thousands of vines proves timely, costly and extremely difficult for humans.

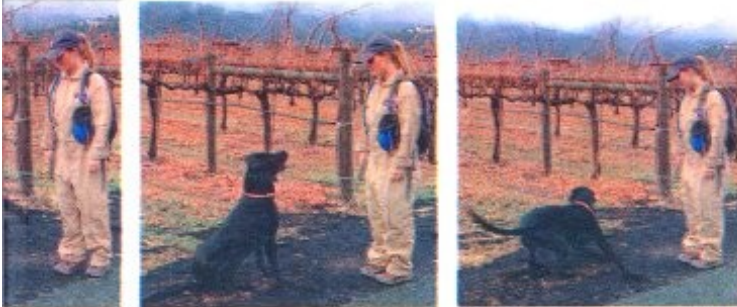
Because the dogs can ferret out the tiny bugs before they've spread and caused severe damage, growers can avoid costly eradication measures, said Napa County Agricultural Commissioner Dave Whitmer. As of now, those measures involve training and special gear for vineyard workers, extra time for cleaning and/or inspecting field equipment and the cost of pesti-

cides, he said.

If a dog locates only one or two pests on a vine, for example, the grower can treat just that vine.

"From a pest management perspective, this is a great hope for the industry and for me and my department," said Whitmer, who noted that about 60 properties in Napa County have some level of vine mealybug infestation. "If you're looking at spending up to \$1,000 an acre to deal with an infestation, it would probably be worth something to you to have a dog come onto your property and do a check.

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PHOTOS BY KIM BERTMAN

ct Detection Dogs, from right to left, Bishop, Shay Cook and six-year-old Upton, prepare to locate two targets – a live vine mealybug and a synthetic-produced sex pheromone. In the first photo, Upton is sitting. In the second photo, Upton is standing. In the third photo, Upton is running to the woman to let her know of his discovery.

the first photo, Cyrus can barely contain his excitement, barking and jumping up to urge Upton to give him direction. She makes him calm down by having him sit and wait for her command. She utters one word, "bug," and he races off to check the vines. He found both targets, each time pointing his nose at the vial and then running to Upton barking to let her know of his discovery.

"And for adjacent property owners who don't think that they have a vine mealybug problem but want to be sure," he continued, "they could bring a dog in to evaluate their property."

The hounds at ID Dogs have a distinct advantage when it comes to learning to detect problems in the vineyard, said Upton. They've all been raised as search and rescue dogs so they already understand the concept of "finding something." All the owners have to do is introduce a new scent and do a few practice runs and they pick it up fairly quickly.

Cyrus got it right on his first try, Upton said.

At the training run on Monday, the bouncing black lab knew it was time to go to work and he couldn't wait to get out of the car.

When Upton gave him the word, he leapt out and began rearing up on his hind legs and barking at his owner for instructions. Upton commanded him to sit, which he did, and then she said one word: "Bug," and he was off.

As Upton walked up and down every other vineyard row, Cyrus ran a chaotic, zig-zag pattern all over the vineyard but never going

more than 50 yards or so before running back to check in with Upton. Then he'd dash off again, nose in the air "looking" for the scent.

According to Upton, Cyrus can cover 16 acres in an hour.

As he ran right next to the vine with the live vine mealybug attached to it, he hit the brakes, touched the tube enclosing the bug with his nose and dashed two rows over to Upton, barking excitedly to let her know he'd found the target.

His reward: a red ball and lots of praise.

Vine mealybug: Nasty little pest

Mealybugs are soft, oval-bodied pests that are pink in color with a white waxy covering that extends into filaments along the margins of their bodies. Adult females lay their eggs – as many as 500 at a time – in a white, cottony ovisac. Eggs hatch into small nymphs that are called crawlers. These young nymphs are highly mobile and move long distances within a vine.

Females have the traditional look of a mealybug. Adult males look like tiny wasps, are active fliers, and are attracted to pheromones emitted by adult females.

As they feed, mealybugs produce a sugary excretion (honeydew) that supports the growth of sooty mold. Infested clusters become contaminated with honeydew, sooty mold, egg sacs, and lots of mealybugs.

In southern California, severe vine mealybug infestations have also reduced vine growth and resulted in defoliation, bunch rots and even spur and cane death. In addition, like other mealybugs, vine mealybugs can spread grapevine virus diseases, such as



This photo shows a female vine mealybug, enlarged many times its actual size, which is about .25 of a centimeter or about the same size as the white dot to the right of the bug.

leafroll and corky bark.

Several factors make vine mealybug much more damaging and difficult to control than other mealybug species, including the fact that it reproduces at a higher rate than other species, enabling small numbers of mealybugs to reach damaging levels in one season. It also is not native to California, so it has fewer natural enemies than the grape or long-tailed mealybug species. Established populations will require repeated insecticide treatments to keep them at manageable levels.