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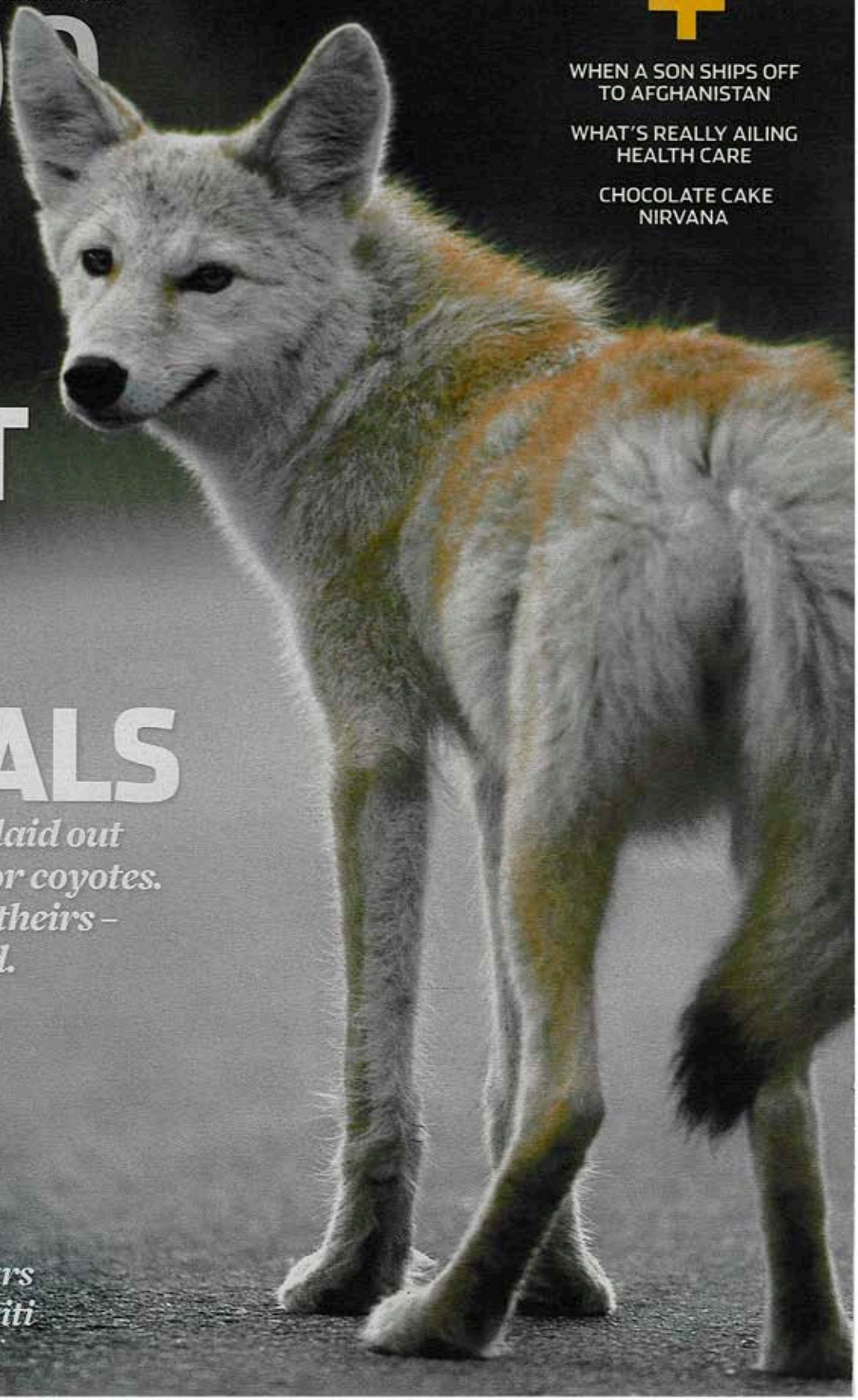


WHEN A SON SHIPS OFF TO AFGHANISTAN

WHAT'S REALLY AILING HEALTH CARE

CHOCOLATE CAKE NIRVANA

PLEASE DON'T FEED THE ANIMALS

We've unwittingly laid out the welcome mat for coyotes. For our sake – and theirs – it's time we stopped.

BY TOM HORTON

RUSTED HEAPS OF HOPE

Why Boston's junk cars are winding up in Haiti

HOW WE CAN COEXIST PEACEFULLY WITH COYOTES

A Rhode Island biologist has spent the last five years outfitting coyotes with GPS collars and then following them. What she's learned tells us much about how humans have contributed to, and can stop, the invasion of the wild animals.

BY TOM HORTON

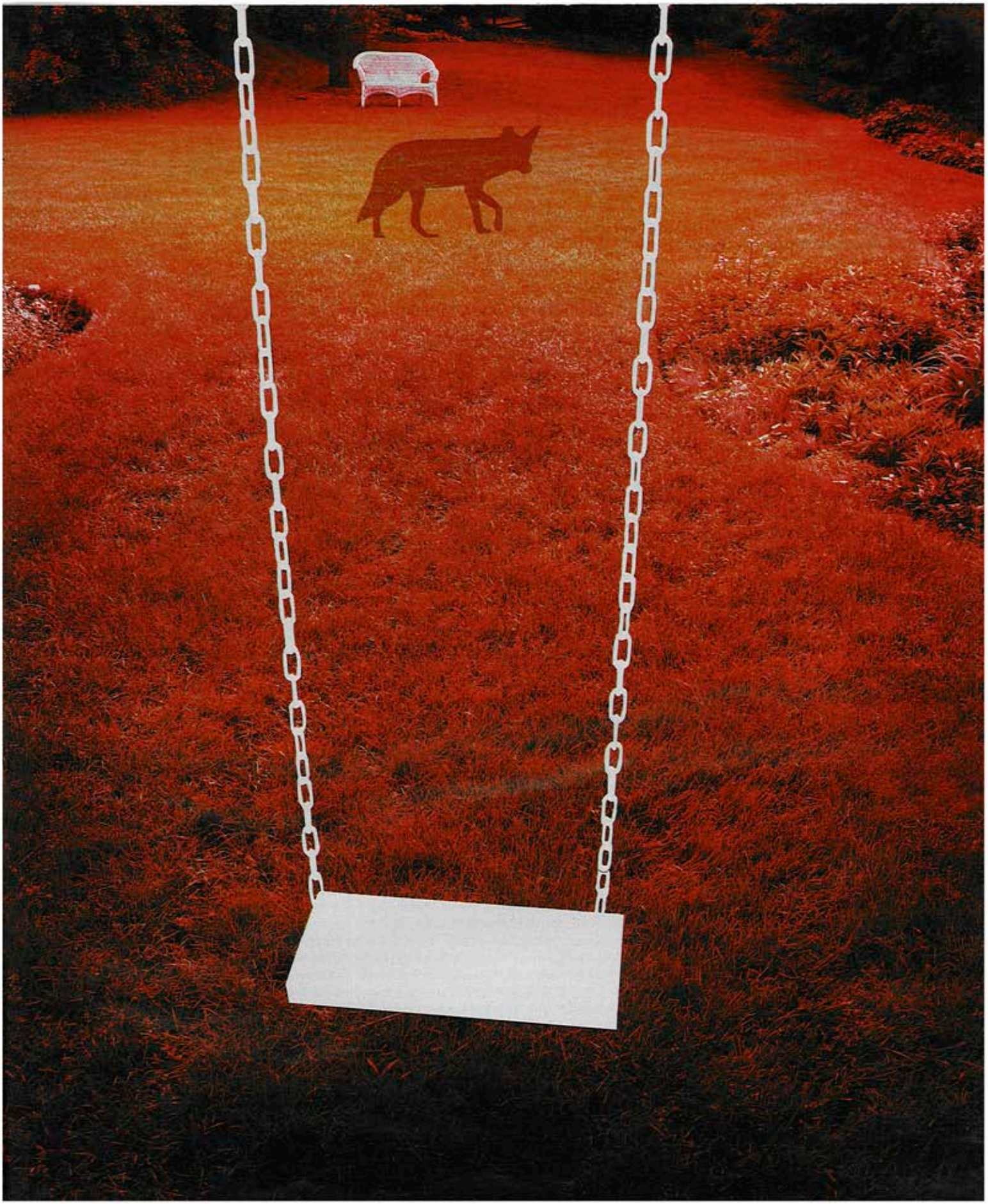
ON THE PATIO OF HER NEWPORT, RHODE ISLAND, ESTATE, over iced tea with fresh-picked mint, Diana Prince recalls the night in 2004 when "the life just went out of our home. It was about 10 p.m. I had returned from a party, and it was my habit to walk Gus, our little Jack Russell, before turning in.

"Gus dashed ahead through the lilacs, and I heard the most awful dog fight. I was in heels, and by the time I put on my gardening shoes to investigate, it was silent. The last thing I heard was three little yips off in the distance.

"I know now that was probably the coyote calling its young. . . . It was early summer, the time they are teaching the pups to hunt." Only a tuft of fur was ever found of Gus.

In hindsight, the Princes and all of Newport, located on Aquidneck Island in Narragansett Bay, were becoming the latest front in what Canadian biologist Gerry Parker, in his book *Eastern Coyote: The Story of Its Success*, calls an expansion "unparalleled by any other species of terrestrial mammal in recent history." Massive forest clearing and thorough

PHOTOGRAPH FROM ISTOCKPHOTO.COM/GLOBE STAFF ILLUSTRATION



persecution of wolves and cougars left the Eastern United States without a top predator by the early 20th century. Coyotes, the native wild dog of the Western states, have been pushing east ever since, filling nature's vacuum. Superbly adaptable and resourceful, coyotes continue to expand, inhabiting islands off Cape Cod, such as the Elizabeth Islands, and urban heartlands, like the perimeter of Boston's TD Garden. In Massachusetts, there are an estimated several thousand coyotes.

What Parker deems "an outrageous success" ecologically gets more mixed reviews from a human standpoint. "I was planning to do free-range chickens, but I'm no longer sure I'd be the main beneficiary of that," says Stuart MacDonald, a farmer on Narragansett Bay. Sheep and poultry farmers and owners of cats and small dogs began to notice losses in the 1990s as coyotes swam from Rhode Island's mainland, crossed on the ice, or simply trotted across the bridges to Aquidneck and neighboring Conanicut Island (home to Jamestown). On the naval base in Newport, coyotes began howling in concert with taps some evenings. At Campbell Soup heiress Dorrance "Dodo" Hamilton's 46-acre farm in Newport, the depredation was uniquely tragic. In connection with Tufts University's veterinary school, Hamilton's SVF Foundation preserves embryos, semen, and genetic material of rare and endangered livestock breeds. Coyotes took three of the world's last 200 Santa Cruz sheep and two so-called Tennessee Fainting goats, a heavily muscled meat breed with a genetic defect that causes it to fall over at any fright, aware but temporarily paralyzed. "That was a coyote's fondest dream," recalls Sarah Bowley, manager of SVF's livestock program. Coyotes shadowed people walking small dogs in the heart of Newport's mansion district and appeared at area schoolyards. A wave of public concern led to the shooting by Newport police of a mother coyote in 2007. Her pups were euthanized.

Diana Prince initially shared many Newport residents' urge to eradicate the invaders, "but from what I could find out, that's not a long-term solution." Indeed, says Eric Strauss, a coyote expert at Boston College, "we trap, shoot, and poison 90,000 coyotes a year in this country. In 150 years, this has not worked." Instead, beginning in 2004, the charitable trust run by the Prince family has put $110,000 into an extraordinary research project that has produced one of the most intimate and revealing portraits of human-coyote interactions in the history of both species.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THE PRINCE FAMILY engaged veteran Jamestown biologist Numi Mitchell, a kinetic redhead whose affinity for wildlife goes beyond anything her PhD conferred. Mitchell was still a high schooler in Cambridge, Massachusetts, when she discovered a new mammal species, the silver rice rat, on a field trip to a Florida salt marsh, defying scientific wisdom that it couldn't exist there. "You know how a trout fisherman sees a bend in the creek and just *knows* there's a good fish down there? Well, that's how it was," she says. Four decades later, Mitchell retains a teen's exuberance, scrambling over rocks and mucking through swamps on the track of coyotes, slipping between research lingo like "probabilistic versus polygon estimates of home range" to proclaiming, "This place is heavy juju," where multiple coyote trails intersect.

Using money from the Prince trust (which covers about one-third of the cost) and other sources, Mitchell formed the Narragansett Bay Coyote Study with a team of volunteers and six partners, ranging from Brown University to the West Greenwich Animal Hospital. Fieldwork began in 2005. The study is built around a state-of-the-art GPS collar that lets her pinpoint, hour by hour, the activities of coyotes in 10 packs operating throughout Aquidneck and Conanicut islands. Hers was the first study to use these collars on coyotes. The high-tech devices must be attached to coyotes the old-fashioned way, and many mornings Mitchell's Volvo station wagon, loaded with electronics, also smells of thawing woodchucks in the back seat – "coyote crack," she says. With Spencer Tripp, a professional trapper, she sets baited, rubber-padded devices that catch the animals by the foot, a method approved by the state of Rhode Island and three animal welfare experts. The trip weight of the traps can be set to exclude smaller wildlife, and locations are chosen that pet dogs won't likely frequent.

It can take weeks and test all the trappers' creativity to catch a coyote. Traps are checked daily, and veterinarian Ralph Pratt is on call to anesthetize a snared animal with a drug that wears off after about 20 minutes, long enough to attach the collar and gather vital statistics. Mitchell and her team of volunteers use radio direction finders to

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ALL PHOTOGRAPHS FROM THE CONSERVATION AGENCY EXCEPT (2), BY KATY WOLFE/THE CONSERVATION AGENCY

These photos, taken in Rhode Island and on Massachusetts's Elizabeth Islands, show the work of the Narragansett Bay Coyote Study. [1] A coyote is trapped on Diana Prince's Newport, Rhode Island, property and about to be anesthetized and outfitted with a GPS collar; his pack probably ate Prince's dog. [2] The alpha male of the "Peckham" pack, also in a trap, barks at his captors as they approach. [3] Biologist Numi Mitchell keeps a netted coyote still as veterinarian Ralph Pratt anesthetizes him. [4] Pratt and Mitchell weigh a coyote. [5] Mitchell (from left), Pratt, vet technician Tracy Johnson, and student volunteer Meagan Griffin move a collared coyote in preparation for reviving and releasing him. [6] Outfitted with a GPS collar, a coyote is about to come to. [7] As her horse waits, Mitchell examines coyote droppings to learn more about their diet.

locate and download data from collared coyotes several times a week. The lightweight collars are programmed to fall off after about a year and are located and reused. Mitchell figures, including time and the cost of collars, she has about $5,000 invested in each of the 21 animals caught and collared to date.

She can manipulate the torrents of GPS-supplied data in almost infinite ways on her computer, each pack of two to six adult coyotes appearing on her maps in different, vivid colors. When she started the study, an aspect that quickly leapt out was "the mountains" – three-dimensional peaks representing areas of heaviest coyote traffic.

In 2005, soon after the Prince trust began funding Mitchell's work, "a regular Matterhorn" popped up just a few driveways down from the Prince family's home. Mitchell knew immediately the likely reason for Gus's demise. Soon, she was pulling up at the neighbors', who asked not to be identified in this story. "Seen any coyotes?" Mitchell remembers coyly asking the elderly couple who answered the door. "Oh no, no. . . . No coyotes here," they recall saying. Then, after some chitchat, Mitchell confronted them: "I know you're feeding coyotes here." She says: "They were terribly embarrassed. They had heard about Gus, and they promised to stop. . . . Like so many people who love to see wildlife come to their back door, they didn't realize the consequences."

"Mount Holstein" was another visit on Mitchell's early list. A dairy farmer in southeastern Rhode Island had been unable to bury several winter-killed cows because the ground was frozen. "That was thousands of pounds of coyote food, a huge human subsidy that takes wild animals out of their natural feeding habits," Mitchell says. Coyotes left to their own devices are superb mousers, ratters, and voracious consumers of other small mammals – woodchucks, rabbits, squirrels, voles – as well as wild grapes and other fruit, she explains. One coyote Mitchell tracked broke its leg and holed up under a pear tree, eating fruit until it healed enough to resume hunting. "But once they make the humans-and-food connection, bad things happen." They become used to the easy pickings and shrink their hunting territories, allowing more coyotes to establish packs, increasing overall populations.

Other computer "peaks" of coyote activity showing up across the islands could be attributed to a variety of possible reasons: run-over deer left by the roadside, feral cat colonies where the coyotes ate food put out for the cats – and sometimes the cats themselves, unfenced compost piles, open dumpsters, piles of deer guts left in the woods by hunters, and a quarry where the nearby sheep farmer disposed of so many dead from his flock, "he gave a whole pack a taste for lamb chops," Mitchell observes.

"Why were we seeing more coyotes? People were the reason," she says.

BY FAR THE MOST TROUBLING pattern of coyote activity to emerge from Mitchell's computer was around a low stone wall that separated Miantonomi Park in Newport from a public housing complex in the city's Park Holm neighborhood. She dubbed the pack of nine animals the "Seabees" because they defended a territory centered near Newport's Navy base. GPS readouts and field observation showed the Seabees' alpha male and female (the breeding pair in a pack) beginning to reconnoiter outside their home range into Park Holm, a place full of young children. Visits by Mitchell and Middletown's Potter League for Animals, a nonprofit animal welfare organization that is one of the coyote study's partners, confirmed the worst: Some kids and parents living at the public housing complex were hand-feeding the Seabees. "They are my coyotes, and I can take care of them," a boy defiantly told Mitchell after a lecture warning that someone was going to get bitten. Coyote attacks on humans are rare, with 142 reported nationwide during the last 40 years, the bulk in the Western United States (two in Massachusetts). But they are almost always associated with animals that have been fed.

"They were so beautiful, and we never got to see wildlife up close like that," says Park Holm resident Lisa Davis. "I would cook for them. I even set out turkey dinner on the stone wall one Thanksgiving."

Meanwhile, another ominous turn: The fuch-

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sia-colored dots of the Seabees on Mitchell's computer screen showed they had virtually abandoned their once-expansive hunting territory, seduced by easier living at the public housing complex and by picking off cat food and cats from a feral colony near the park.

And now yellow dots, representing the "South Portsmouth" pack, were beginning to flow into lands the Seabees once aggressively guarded. They were led by "DeCastro," an aging 44-pound male, GPS-collared and named for Stephen DeCastro, a Portsmouth-area farmer who does his best to keep his area's pack honest, according to Mitchell. "Steve shoots at them regularly, but his aim is lousy, which is the best of all worlds," she says. "Keeping the fear of humans in coyotes is the way to ensure they stay in their own space." But Mitchell says that once a coyote becomes habituated to humans, "I'm no bunny hugger.... Shooting may be necessary." She often ends her neighborhood educational talks with: "A fed coyote is a dead coyote."

And that would be the fate of several of the Seabees. Their human subsidizers lost interest as winter came on, and the pack, the computer shows, tried in vain to regain their old territory from DeCastro's gang. Some ended up as road kill, others began hanging around schoolyards, looking for handouts. The alpha female, pregnant, alone, and desperate, wandered from place to place, begging handouts from Salve Regina University students, raiding dumpsters, finally denning up to give birth amid Newport's mansions at Ochre Court and Narragansett Avenue.

She constantly moved her pups and searched for food, following dog walkers and raising panic among parents who feared for their children and realtors who feared for property values. Finally, in May of 2007, the Newport Police Department shot her and euthanized her surviving pups. "It was a case of human intervention from start to finish," says Charlie Brown, a wildlife biologist with the Rhode Island Department of Environmental Management. Indeed, it turned out that the Seabees' downfall had begun before they moved into Park Holm, with gate guards at the Navy base feeding them.

Only one Seabee survived. A young female became a drifter, living on mice around Middletown's airport. She joined other pack-less coyotes that sometimes spend their whole lives roaming the narrow margins between established pack territories, hoping to gain acceptance or take over if an alpha animal dies or weakens. This ample reservoir of transients, "living in the mortar between the tiles," as Mitchell puts it, is one reason killing coyotes doesn't reduce numbers in the long term. After months of sleeping on the territorial margins of six different packs and being rejected, the lone Seabee finally gained acceptance to a new pack.

STAKING THEIR CLAIMS

Since 2005, the Narragansett Bay Coyote Study has outfitted 21 animals with GPS collars and monitored them. This map of southeastern Rhode Island shows how far 10 coyote packs roamed looking for food from 2005 to 2009, each pack largely keeping to its own territory.

- Beavertail Pack
- Blackpoint Pack
- Center Island Pack
- Navy Pack
- Newport Neck Pack
- North Portsmouth Pack
- Peckham Pack
- Phantom Pack
- Seabees Pack
- South Portsmouth Pack

MITCHELL AND THE POTTER LEAGUE for the last several years have reached a broad audience with their "Don't feed coyotes" message, delivered in schools, town meetings, and wherever else opportunity arises. As in previous years, tomorrow's Memorial Day Parade in Jamestown will feature Mitchell with a borrowed corgi wearing a blanket that says "Snack Size," a warning to owners of small pets to keep them safe.

They say they are making progress, with fewer "coyote incidents" reported in the last couple of years. Not everyone is convinced. "They say leave 'em alone and everything will be fine, and I don't buy it," says Newport councilwoman Kathryn E. Leonard, once referred to by Mitchell as "Shoot-'em-up Kate." Leonard concedes that the problems of a couple years ago have receded, however: "I'll deny saying this, but I think it's because people here have been taking matters into their own hands.... I know they have."

The toughest nut to crack has been cat feeders, says Christie Smith, executive director of the Potter League. "It's one of the most complex animal ethics issues we deal with," she says. "They feel [feral cats] are a part of nature, and they just aren't. Many subscribe to a program of trap, neuter, and release, thinking that solves the problem, but it doesn't make a dent."

Mitchell is more blunt: "Do they want to see their cats turned inside out?" She refers to a coyote's "signature" kill, flaying skin from muscle almost like taking off a sweater.

"In theory I agree with Numi," says Liz Skrobisch, head of PawsWatch, a statewide network of volunteers who practice trap, neuter, and release. "But she would dictate what we do in our backyards, and that is not acceptable." Skrobisch says there are an estimated 100,000 to 200,000 feral cats in Rhode Island, and about 70 million nationwide. "We're managing, not eliminating cats," she says.

Cats are on Mitchell's mind on a recent April morning as she jounces her station wagon across a field by the Sakonnet River into the territory of the "Phantom" pack. "I call them the Phantoms because their territory was so small, I only fig-

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ured out a pack was here by the absence of surrounding packs." She would subsequently GPS-collar a male of the pack, also dubbed "Phantom." On Mitchell's computer screen, his feeding patterns were worrisome: nightly trips back to the same place by the river, cutting through a new, upscale subdivision whose yards have lots of children's playground equipment, presumably with his pack in tow.

On the edge of the manicured subdivision, Mitchell pulls up by a rambling old cottage tucked into several acres of forest sloping down to the Sakonnet. The mailbox is painted with a large tabby lounging amid flowers. Cat food spills from small feeding stations set all around the fringes of the place, and cats by the dozens lounge on shed roofs and wander in and out of rose thickets, eyeing you warily. The owner, Joan DeMello, isn't home, but later she calls. "I've been here 60 years, and I do have quite a few cats, I'm not going to say how many. I see coyotes, and they are beautiful, not a problem. All the animals here live in harmony and peace."

Mitchell later encounters Hillary Olinger, a young mother in the subdivision who wonders how concerned she should be about coyote sightings. "When the feeding stops, you'd better batten down the hatches here until the coyotes sort it out; I would worry about your kids," Mitchell says. She agrees to return and talk at a neighborhood association meeting.

Good things are also evident in coyote-land today, as Mitchell drives distractedly past a wooded ravine on the outskirts of Newport, fiddling with a bulky radio antenna protruding through the open sunroof. She's picking up broadcasts from the collar of the alpha male of the "Peckham" pack. "This is great. . . . This ravine was core territory for the 'Blackpoint' pack," she exclaims. It means the Peckham pack, a group largely unsubsidized by human food sources, has expanded its own territory.

And that means a breeding pair (the alpha male and female of the Blackpoints) has been eliminated, and that's the goal, she says – fewer coyotes per square mile. And the Blackpoints? Her computer shows that "Rhody," a young collared male of the pack who was coming into breeding prime, has been pushed by the Peckhams off the northern end of Aquidneck, across the Sakonnet River bridge, halfway to Cape Cod. Once there, a hunter legally shot him (hunters take some 450 coyotes a year in Massachusetts).

LAST YEAR, MITCHELL TRIED unsuccessfully to persuade the four city or town councils on Aquidneck and Conanicut islands to adopt enforceable measures to end human food subsidies to coyotes. Cat feeders rallied against it, as did many others who said it was too intrusive. This year, she's having better luck with a similar series of policies that won't have the force of law. She notes that the public is more receptive to these measures when a "coyote crisis breaks out"; last month, for example, a Cranston, Rhode Island, man was bitten in his yard, and two dogs were attacked while being walked in Amherst, Massachusetts.

Portsmouth and Jamestown have adopted the so-called best management practices, and Middletown and Newport seem likely to follow. Mitchell believes they'd be the first in New England to do so. Her organization has secured grants to develop composting or chemical methods of disposing of livestock and wildlife carcasses in the city and towns. The plan recommends feeding feral cats on 6-foot ledges, too high for coyotes to reach, and in the daytime only (coyotes are nocturnal). The Potter League already is reaching more than a thousand schoolchildren and adults each year about the perils of leaving small pets out or feeding coyotes in any way. The plan cites Vancouver, British Columbia, as a model. Its decade-old Co-Existing With Coyotes program tells residents who encounter the animals to act "big, mean and loud," waving arms, making noise, and repeating as needed.

How will it all settle out? "I don't think we have a good handle yet on the roles coyotes will eventually play in our Eastern suburban landscapes," says Boston College's Strauss. For example, there's evidence to suggest coyotes could consume enough mice, carriers of deer ticks, to reduce the near epidemic of Lyme disease. They might make serious inroads on the hordes of resident geese, themselves a new phenomenon in recent decades.

Mitchell knows things are evolving. She has begun calling one pack she tracks the "Deer-slayers." Coyotes, which lack the crushing jaws and pack-hunting tactics of wolves, kill deer infrequently. Yet this pack, which acquired a taste for deer meat after being baited with carcasses by photographers and others, has begun to bring down the deer population, she says.

Then there was the extremely un-coyote-like incident last fall in Nova Scotia, where a pair of the animals attacked and killed a 19-year-old female hiker in a Cape Breton Highlands park. It was the second fatal attack in North American history. The animals probably had been fed by humans.

There is no doubt Eastern coyotes are bigger than their Western counterparts – 45 to 50 pounds for a large one, versus around 35 pounds. They also have gained genes from breeding with wolves on their eastward march. Researchers are still debating whether they constitute a new animal on the landscape, with yet undiscovered behaviors.

Meanwhile, each June, Diana Prince sprinkles vials of mountain-lion urine around her grounds, hoping to deter coyotes. She hired an archer for a while "who shot nothing." She put up "an ugly fence" to protect Pickle, the Jack Russell who replaced Gus, and acquired a large German shepherd as bodyguard. Even so, Pickle was attacked and nearly killed by a coyote a few years ago.

"It's so interesting," she says, "how these creatures are changing the way we live." ■

KEEPING COYOTES AWAY

Biologist Numi Mitchell recommends the following measures to deter the wild animals from your yard:

- Never feed coyotes or leave out food or unsecured trash.
- Never feed pets outside.
- Keep cats indoors at all times. Bring small dogs inside at night, and accompany them in areas with coyote sightings.
- If a coyote is staring at or following you, he probably has had previous contact with humans and thinks you are going to feed him. To scare away the animal, yell or clap your hands loudly or throw something.