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### **EDITOR'S NOTE**

his note is one of the few things I never schedule. Unlike almost everything else in my life, for this particular responsibility I have no reminders hurriedly penned into my planner or Post-it notes stuck willy-nilly on my laptop. Instead, I just wait and, sure enough, every quarter a moment comes along worth writing about.

This time that moment arrived during *Ethos*'s third annual Bandest of the Bands competition at Eugene's WOW Hall. A long night soaked with equal parts good music and cold Ninkasi, Bandest of the Bands invites a handful of Eugene's most talented musicians to play the "bandest" set they can in order to win, among other things, recording time and a profile in *Ethos* ("Liquid Jazz," page 42). We were a couple bands into the evening when Hot Milk (this year's winner though

they didn't know it yet) took the stage and I came up with this note.

As Hot Milk started in on one of their classic mellow numbers, I realized how perfect a parallel exists between a band playing a gig and our publishing *Ethos*. Sometimes the beat is steady and things get done; sometimes a note falls flat and people start to boo. But



Editor in chief Elisabeth Kramer joins Hot Milk in an impromptu jam session.

whether it's a new song or a new magazine, what we wait for at the end, with sweaty palms and anxious hearts, is approval from the audience. For Hot Milk, that's the roaring applause and eventual win that greeted them that night. For *Ethos*, that's you reading and hopefully loving this issue.

Elisabeth Kramer
Editor in Chief



Photographer Mason Trinca traveled to the US Fish and Wildlife Service Forensics Lab in Ashland, Oregon, where he saw lions, tigers, bears, and a primate skull carved for ritual purposes.

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Congratulations to the *Ethos* staff, both past and present, for its award-winning work. For its 2010-2011 issues, *Ethos* received multiple awards from the Columbia Scholastic Press Association, including its first College Gold Crown Award, was a Magazine Pacemaker Finalist for Associated Collegiate Press, and received a William Randolph Hearst award for editorial writing.

ETHOS MAGAZINE SPRING 2012

PHOTO WILL KANELLOS



chunk of structure or a ship that can then be picked up out of the water with a crane. It has got a lot of danger that comes with it. You could blow vourself up with the oxygen that comes out of your torch. You could, as you're cutting, have a piece of metal shift and have it crush you; I know a couple of friends who have died that way.

#### MM: What's the worst thing you've ever seen happen?

BJ: We use an [atmospheric diving] suit called the Newt Suit. The suit is cut in half and the top half gets dropped on top of the guy [wearing the bottom half]. Then you connect the two parts and the guy gets lowered down with a crane into the water. What happened was the middle of a guy's suit didn't connect right, so when he was ready to get pulled out of the water, the suit split in half. The bottom half of the suit rocketed down to the bottom of the ocean, taking the guy with it. I was right there watching it. Halfway down the guy was able to get out and pop to the surface, but I thought the dude was dead. And that was at the beginning of my career, so I'm thinking, 'What the fuck did I get into?'

#### MM: Have you ever had a close call on the job?

BJ: Yup. I was at 150 feet of water and I had a bail bottle [an emergency air supply] that was 50 cubic inches. The air gets compressed the deeper you go. A guy who was diving before me was in a decompression chamber [and the vent he was using to decompress] robbed air from me. I went on bail out but I had eight breaths left. I had to shoot to the surface, but I had to do it in a manner where I wouldn't run out of air. I had to kind of perfectly do it. That was the closest I ever came to seriously being injured.

"It has got a lot of danger that comes with it. You could blow yourself up with the oxygen that comes out of your torch."

#### MM: What job requirements are there for a commercial diver?

BJ: You've got to be extremely comfortable with the water. It's not just like snorkeling or putting on scuba gear. With the hats you use, you've only got a little porthole, so you don't have a peripheral [line of sight], and sometimes you don't have any visibility at all. You've got to know north, east, south, and west in an instant. You've also got to be skilled in construction, and you have to be really clever about how to rig yourself up so that you can get the job done without floating away.

#### MM: What's some of the 'crazy' sea life you've seen?

BJ: I saw 15-foot manta rays one time when I was at 400 feet of water diving down on platforms in the Gulf of Mexico. All of them just kept dive-bombing down on this platform, and that was pretty badass. I've seen dolphins, like a mother, father, and a baby, and I've had the baby come up to me. That was a little sketchy, but it was really cool. As far as crazy little things, there are these little creatures; they're just tiny. I've seen ones that live inside other ones, really weird shit. You see the weirdest shit down

#### MM: How long do you stay underwater and do you go back down after the

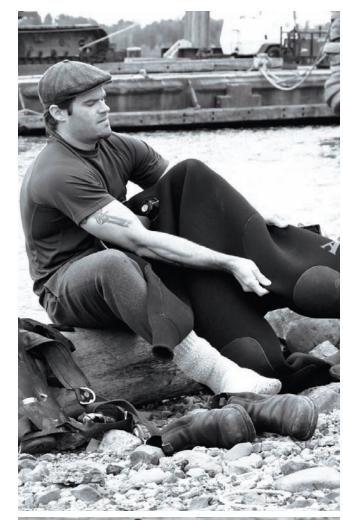
BJ: You don't typically go back down. You can, but usually you don't. You go down for your four hours, you do your job, you come out, and depending on how deep it was you either go into a chamber to decompress for a while or if it's shallow you just come right out. The next guy on your crew then goes down.

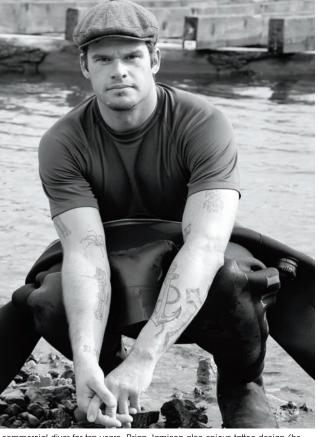
#### MM: When you're underwater, what's going through your mind?

BJ: I'm totally focused on what I'm doing at hand, but I'm also completely aware of what's around me. There are a lot of things that can hurt you real. real fast. You're in the water and if you get hurt someone has to come down and help you, which isn't the fastest turnaround, especially depending on how deep you are. You might be at 100 feet of water, but it takes time for someone to have to come down and get you.

MM: Do you still go diving and swimming for fun, or do you need time away from the water once you're off the clock?

BJ: No, I just got done swimming before this interview. I love the water. -MEAGHAN MORAWSKI





A commercial diver for ten years, Brian Jamison also enjoys tattoo design (he currently has 15). He and wife Dani welcomed their first child earlier this year

FTHOS MAGAZINE SPRING 2012

# GROWING PAINS

#### The paths four cultures take to manhood.

cross the globe, various cultures revere coming of age ceremonies as important markers in an individual's journey from boyhood to manhood. The traditions challenge a participant to overcome fear and accept a new identity as a full member of society. From the hills of Papua New Guinea to the depths of the Amazon, these coming of age ceremonies test a boy's emotional and mental limits, marking the end of childhood and the start of life as an empowered adult.

FALLING WITH GRACE

For the residents of Pentecost Island in the South Pacific nation of Vanuatu, bungee jumping just isn't thrilling enough. Here, men are encouraged to participate in land diving, a tradition that dates back 15 centuries and could easily qualify as an extreme sport. In

the ceremony, a man scales a wooden tower more than 100 feet tall. At the top, vines are tied to his ankles before he propels himself off, hoping to prove his courage and masculinity by braving the jump.

Young men try to stop with their

shoulders close to the ground, but the jumps are incredibly hard to calculate and can result in serious injury or even death. Boys as young as five participate in the tradition, starting out with low jumps before working their way up to daring new heights.

Residents of the island value the tradition of land diving for two main reasons. First, the islanders believe it offers a tribute to gods who will ensure a bountiful harvest if the jumps go well. Second, land diving allows males to leave behind the shackles of boyhood once they finally take the plunge.

HAMDS ON FIRE

The Satere-Mawe tribe shares the dense, dangerous Amazon Rainforest with the bullet ant, which has a sting so painful that the renowned Schmidt Sting Pain Index rates it the most agonizing in the insect world. The ant plays a key role in the Satere-Mawe coming of age ceremony; young men wear woven gloves with insides completely covered by the notorious insect.

In order to prepare the gloves, tribesmen douse bullet ants in an herbal mixture that temporarily knocks the insects out and impairs their powerful stingers. While docile, the ants are stuck into the gloves one-by-one. Young men then place their hands inside and wait.

Once awakened, the vengeful ants are more than ready to retaliate for their earlier incapacitation.

Participants wear the gloves for a total of ten minutes. The furious ants sting the men until their hands are so swollen and tortured that they become temporarily paralyzed. Often, the men convulse from the pain, which intensifies once the gloves are off and lasts for approximately 24 hours.

The ritual, however, doesn't end there. The participants, determined to be recognized as adults, sometimes perform the ceremony as many as 20 more times. "If you live your life without suffering anything or without any kind of effort it won't be worth anything to you," a Satere-Mawe chief told *National Geographic* reporters.

#### THE LONE MAN

UTAUNAV

The Sambia tribe lives in the highlands of Papua New Guinea. When boys turn seven, they leave their mothers to live among the other males of the tribe. The Sambia maintain a gender separation so rigorous that men and women don't even use the same walking paths in the village.

To complete the transition, young men partake in various traditions involving body modification and ritual homosexuality. To begin, the boys participate in a series of cleansing ceremonies intended to decontaminate their bodies from the influence of their mothers, which the Sambia believe to be impure. In a sacred creek, they struggle to maintain composure as elders shove sharp reeds up their nostrils, force several feet of cane down their throats, and stab their tender tongues with razor-sharp arrows until blood freely flows into the water below.

Another significant part of the tradition involves fellatio, which initiates perform on senior tribe members in order to consume what the villagers refer to as a man's "milk," which is believed to enrich masculinity and improve virility.

One initiate explained the significance of the ritual to *National Geographic*: "I am born here to be a man to protect my family, tribe, and my people. The most important thing is to go through the initiation, to realize my role as a man in my community."

#### A SCARRING EXPERIENCE

BRAZIL

Along the Sepik River in Papua New Guinea, men partake in a coming of age tradition that involves scarification intended to mimic their fierce neighbor: the crocodile. First, the participants (no specific age is set for the ritual) spend six weeks in a hut the tribe refers to as the "spirit house." The isolation provides the men time to consider the physical and emotional challenges of the upcoming ceremony.

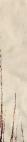
PAPUA NEW GUINEA

During the ritual, uncles hold down their nephews as they're sliced by razors as many as 100 times. The cuts are deep, carving out enough skin to create thick scars. After the slicing stops, the scars are intentionally irritated with smoke so they become raised enough to resemble the scaly skin of the crocodile. For two weeks, the men carefully cleanse their wounds and prepare to be honored by their community.

Sometimes, as one participant told visiting filmmakers, men die during the ritual. Still, he said the resulting scars "tell everyone to recognize us as initiated men." His uncle added, "In order to become a man, he must experience pain for he will remember to later on and he will be able to endure whatever two befaces in the future." •

-BRE CRUICKSHANK







Nano's NEWLEAF

#### Oregon scientists develop eco-friendly nanotechnology.

Three years ago, frenzied consumers lined customer service aisles returning plastic goods ranging from children's sippy cups to SIGG water bottles. The Food and Drug Administration (FDA) had announced that large quantities of the chemical compound Bisphenol A, more commonly known as BPA, could adversely affect the prostrate and mammary glands and, in some cases, cause early-onset puberty. The result was widespread concern on what toxins might be seeping from everyday goods.

In 2002, 2.8 million tons of BPA were produced globally, according to Chemical Market Associates. It's been a common chemical since the 1960s, used in food packaging products ranging from hard plastic bottles to metal food cans. Despite the uproar in 2009, the dangers of BPA still aren't clear, but in the wake of the FDA's announcement many companies recalled items containing the chemical to appease frightened customers.

"Bisphenol A was created out of consumer desire," says Dr. James Hutchison, a University of Oregon chemistry professor and director of the Safer Nanomaterials and Nanomanufacturing Initiative. "BPA was delivered to companies to combine in their products and, after some time, it was discovered to have harmful effects. It's the reality of many substances; we simply don't know their long-term effects."

The buzz around the potentially toxic side of BPA has marred the reputation of many chemically produced items despite their everyday presence in American life.

"Everything around you was made with the help of chemists," Hutchison says, "but nothing around you was made with the intention of being

To reduce the possible damage posed by chemically created products, researchers like Hutchison are exploring a new realm of study: green nanotechnology. Often dubbed "responsible nanotechnology," the science manipulates compounds on the atomic level to increase their environmental stability. Scientists like Hutchison aim to "green" the methods of nanotechnology so that they help rather than hurt the environment.

"We know so little," he says. "There is the potential to make a mistake like they did with BPA, but if you can understand the rules of placing together chemical compounds, we can accelerate our learning process and get it right the first time without having toxic elements arise 20 years after a product is released."

Compounds like BPA are long sequences of chemical combinations that consumers rarely think about when purchasing a product. Hutchison's lab, commonly known as the Hutch Lab, breaks compounds down to the molecular level in order to tinker with various links in the formation. As each strand is created, it's sent to the toxicology department at Oregon State University to be tested for hazardous elements. By changing small components and understanding the effects, scientists in the Hutch Lab hope to produce a set of design rules that will help others understand how to combine chemical compounds without negative consequences. If perfected, the information could prove invaluable to the growth of green

"In almost every imaginable sector and aspect of human existence there is a possibility for nanotechnology to revolutionize a process," Hutchison

TITAN DASHIELL

Professor James Hutchison stands alongside the largest electron transmission microscope currently on the market, appropriately called the Titan. The microscope, which can identify and measure atoms, costs between five and six million dollars.

says. "Much like the computer once changed our lives, nanotechnology, especially green nanotechnology, can do the same.'

Global warming is just one arena where green nanotechnology could prove to be beneficial. In his book *Green Technology: An A to Z Guide*, Dustin Mulvaney, an assistant professor of environmental studies at San Jose State University, explains that implementing green technology could reduce the amount of carbon dioxide the US releases into the air by at least 2.5 percent. The reduction may seem small but could save companies a total of \$240 billion in energy and fuel expenses by 2020. In order to achieve this number, Mulvaney says green nanotechnology would need to be used in fields ranging from transportation to urban planning.

CH<sub>3</sub>

A scientist in the Hutch Lab holds a container

filled with glass slides covered in nanoparticles.



By "greening" the methods of nanotechnology, Hutchison and his team hope to grow the field of nanotechnology by establishing a set of environmentally friendly rules that do

away with toxic chemical by-products and give root to eco-friendly alternatives.

A reduction of gold salts changes the color of the solution to deep purple as the size and properties of the nanoparticles change.



Graduate student Brandi Baldock prepares to test nanoparticles with a light meter. If the particles are not stable, they will reform as a solid.

However, in the quest to create greener material there is the potential for experiments to go haywire. Critics of green nanotechnology and nanotechnology in general argue that chemicals change their properties when broken down to the molecular level. So, the thinking goes, a scientist could falsely judge a product's safety despite testing for toxic elements.

There is also the fear that such small substances could be easily released into the atmosphere. Instead of preventing additional damage to the ozone layer, they might actually aggravate the problem. In an article for industry website NanoWerk, author Michael Berger explains that most of the positive attention paid to green nanotechnology revolves around the end product, but that the consequences of creating greener products need just

One potential consequence cuts into the availability of food. When carbon nanomaterials were used in wheat production, Mulvaney reports

"IN ALMOST EVERY IMAGINABLE SECTOR AND ASPECT OF HUMAN EXISTENCE THERE IS A POSSIBILITY FOR NANOTECHNOLOGY TO REVOLUTIONIZE A PROCESS.

they actually prevented the crop from protecting against pollutants. In another case, using carbon nanomaterials delayed the ripening of rice plants and threw off the harvesting cycle. Both experiments resulted in less food available for consumers.

CIJCI

In another instance, Mulvaney cites the potential harm nanotechnology could cause humans. A 2007 National Institute of Standards and Technology study found that nanotubes less than 200 nanometers long "could easily penetrate human lung cells, posing an increased risk to health." What those specific risks might be, however, has yet to be fully investigated.

> With any new field of research there are unknowns, but for nanotechnology those unknowns needn't hold up progress, Hutchison says. By carefully studying green

nanotechnology and creating a set of industry rules, he hopes to avoid the kind of negative effects of the BPA scare. Many scientists agree with Hutchison and are even now implementing nanotechnology into products available for purchase.

According to the Nanoscience Institute, cosmetics and perfume giant L'Oreal has the sixth highest number of United States nanotechnology patents. In 2008, the company devoted over \$600 million to nano research for application in moisturizers, sunscreen, and hair products. Nanotechnology has also been integrated into fashion, as explained in a 2004 National Public Radio report by Leda Hartman.

"Material treated with nanotechnology can be engineered to do almost anything—repel liquids, resist wrinkles, dry fast, and breath," Hartman explains. "Instead of using topical treatments, which eventually wear off, the chemicals in nanotechnology actually form a molecular bond with the

Similar almost "sci-fi" changes may begin appearing in other products as green nanotechnology develops.

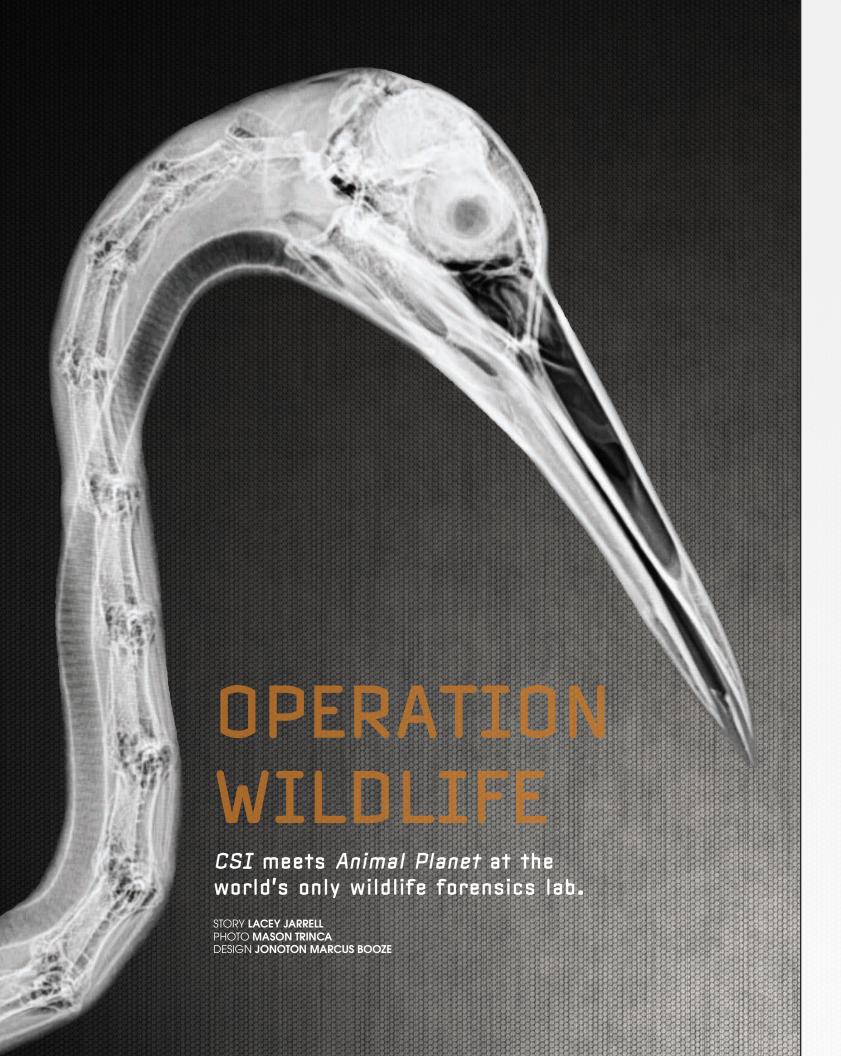
"Imagine if you could program your water bottle so that after a certain number of years consumers would know to return it to the producer and it would begin to degrade or be reconstructed into a new product," Hutchison says. "We're not there yet, but that's where our research is leading us."

With green nanotechnology growing in popularity, more universities have integrated a green chemistry curriculum that Hutchison and his team pioneered back in 1997. Hutchison developed the course along with fellow UO chemistry professor Kenneth Doxsee and a team of graduate students; the group spent nearly a year hunting through chemistry books for experiments to update and make environmentally friendly. Hutchison also teaches other scientists about his research by inviting fellow professors from across the country to visit the Hutch Lab.

"It's amazing to watch the ripple effect," Hutchison says. "With so many minds focused on this technology, we're most definitely moving toward a scientific revolution."

-NEETHU RAMCHANDAR

13



hen Ken Goddard joined the US Fish and Wildlife Service (USFWS) in 1979, he never dreamed that one day he would be wading through an ice-cold Alaskan river with a walrus skin wrapped around his legs. Yet there he was in 1990, investigating a rash of decapitated walrus carcasses that had washed up along the shoreline of Alaska's Kotzebue Sound. Using walrus skin to protect against the water's frigid temperature was only one of many extreme measures Goddard undertook while investigating the hundreds of miles the crime scene spanned. Local Inuit hunters told investigators that before washing ashore and being beheaded, the walruses had been killed by gunfire from Russian planes. Other authorities believed the Inuit hunters had illegally "headhunted" the walruses for their ivory tusks. It was up to Goddard and partner Ed Espinoza to solve the case.

A wildlife detective by trade, Goddard is the director of the Clark R. Bavin National Fish and Wildlife Forensic Laboratory (FWFL) in Ashland, Oregon. The lab bills itself as the only full-service forensics lab in the world dedicated to solving crimes committed against animals. In Ashland, a team of wildlife forensic scientists analyze evidence from animal crime scenes much in the same way human forensic scientists do—using techniques like fingerprint testing and DNA analysis.

Back in Alaska, Goddard and Espinoza (the FWFL's chief scientist and deputy director) used lab-sharpened skills to solve the walrus case. The team let the animal bones dry in the sun so they could analyze bleaching patterns. If the walrus's heads were cut off only after their dead bodies floated ashore, all the bones would bleach the same. What Goddard and Espinoza found was an inner skeleton that bleached one color and neck bones that bleached another, indicating that the neck bones had been exposed to salt water. Each walrus had been beheaded before the rest of the carcass was thrown into the ocean to wash back up on the beach. The conclusion: The Inuits had illegally killed the walruses to harvest their ivory—an extremely profitable, and extremely illegal, black market commodity.

# "The elusive nature of wildlife trafficking has allowed it to become, after drugs and guns, the third largest illegal trade system in the world."

By some estimates, the illegal wildlife trade exceeds profits of \$20 billion a year and affects more than 100,000 animals worldwide. In South America, an increasing demand for the bright, multicolored feathers of scarlet macaws has left their populations decimated. In Asia, male tigers face extinction because of the widespread belief that consuming tiger penis increases sexual prowess and treats erectile dysfunction. In the Virunga Mountains of East Africa, mountain gorillas are illegally hunted for their heads, hands, and meat; fewer than 800 remain on Earth.

An ever-shrinking global market and advances in technology have allowed wildlife trafficking to evolve into a highly sophisticated network that moves products faster and more discreetly than ever before. Connecting with buyers through Internet sites such as *eBay*, which banned the sale of ivory in 2009, traffickers can ship items directly to the buyer and bypass international customs inspections altogether.

When wildlife products are seized at a border inspection, they have often already been processed into commodities like hand-carved idols or wristwatch bands, making it difficult to know what kind of animal the product originally came from. In rare instances when an inspector does discover an entire animal, it is nearly impossible to know where the animal came from because the crime scene, such as a seaport, may be its second or third stop. The elusive nature of wildlife trafficking has allowed it to penetrate even the most regulated countries and become, after drugs and guns, the third largest illegal trade system in the world.

"As in the human world, we're trying to not only figure out how an animal died, but also the manner of its death."

OPPOSITE PAGE (FROM TOP TO BOTTOM): The lab often receives products made from animal materials including crocodile leather bags and figurines carved from bone. But, the FWFL asks, did the animal involved meet its end legally?

Primate hands make for hot items on the black market. They are often used for ritual purposes.

Dermestid beetles clean the flesh off of carcasses that arrive at the lab. Half-an-inch long, a beetle is no threat to a living organism.

Ken Goddard, director of the FWFL, handles an elephant tusk confiscated during a 2008 seizure that included ivory worth an estimated \$100,000 to \$200,000.

#### FROM THE GROUND UP

Before the USFWS hired Goddard in 1979, there were no formal procedures for wildlife criminal cases. Instead, state wildlife officials relied upon small local resources for evidence processing, with few people outside of academia able to analyze what they found. Even fewer could testify in court about wildlife cases; most research centers and museums capable of processing such a case lacked the formal procedure for handling evidence that can stand up in court. But as luck would have it, at the same time the USFWS began looking for someone to develop wildlife crime scene investigation (CSI) procedures, Goddard began looking for a change of professional scenery.

Having spent 11 years as a deputy sheriff and criminalist investigating human crime scenes in California, Goddard had already seen more than his fair share of carnage. In 1978, he was ready to start a new chapter in his life and happened to stumble upon the USFWS's classified advertisement for a forensic scientist. Initially, Goddard was skeptical he had the right skill set. "I don't know anything about wildlife. We only have seagulls around here," he recalls thinking when he saw the ad in the law enforcement trade magazine, *The Police Chief.* After some contemplation, he applied for the position and, despite his initial doubts, got the job. Goddard spent the next year writing the country's first animal forensics CSI manuals. Once finished, he was given a badge, a gun, and a CSI kit and began traveling all over the US to visit crime scenes. This time, however, the victims weren't human.

Those early wildlife investigations raised more questions than could be answered during a routine field inquiry. Where was the animal killed? Was its death during a regular hunting season? Was it a protected species? The answers to Goddard's questions required in-depth scientific research. Although Goddard could send his samples to US forensics labs, their main focus was solving human cases. "It was like, 'Your case will always be lowest priority. It'll never get worked,'" Goddard says. "We needed our own lab. Absolutely."

He and others within the USFWS began garnering support from the US government to build a facility. Tireless lobbying, countless petitions for funding, and a bit of serendipity helped Goddard's vision come to fruition. In 1987, workers broke ground in Ashland for the world's first and only animal forensics research laboratory.

When the lab opened in 1989, Goddard had just ten employees and a limited arsenal of crime-solving technology. Two decades later, he oversees a team of 32 CSI investigators who manage 800 to 900 cases each year. From those cases, the FWFL processes 12,000 to 15,000 pieces of evidence that can be anything from an unidentified powder in a rawhide pouch to a handetched primate skull.

Since its start, the FWFL has worked on dozens of high-profile cases. In 2008 at an airport in Zambia, Interpol discovered four padlocked black metal trunks filled with African elephant ivory tusks. An officer followed the shipment to Singapore where he seized the trunks after deciding local law enforcement was too corrupt to cooperate with his investigation. The cases were sent to the FWFL for criminal analysis and when opened, it was discovered that the ivory inside was worth an estimated \$100,000 to \$200.000.

"The contents of the four metal boxes were 78 tusks of all different sizes, giving us the sense that it was a family of elephants from some young ones to at least one or two very large females, if not a bull," Goddard says.

Going into the investigation the team knew the trunks contained tusks, but Goddard says they had no idea what else they might find. He is grateful the trunks stayed sealed until they reached the lab.

"Opening the boxes could have essentially ruined what we think of as a lovely crime scene—a sealed box where we can find all kinds of interesting things like pollen, insect parts, plant parts, soil, dirt, and mineral trace evidence that can tell us where those tusks came from," says Goddard, who indeed did find pollen and a small red spider in the trunks. Both were significant discoveries that helped investigators pinpoint a narrow strip of land in central Africa as the former home of the elephants. Goddard declined to name the area given the case's political sensitivity.

Although a seizure of this size may seem like a victory for the good guys, Goddard admits an ominous feeling always lingers around the laboratory's work. Just as fast as they can develop identification and evidence procedures, traffickers devise new ways to process and smuggle wildlife.

#### PIECING IT TOGETHER

At the FWFL it's up to each lab division to determine the who, what, where, when, and how of a case. To do this, scientists in the lab's five forensic divisions—morphology, pathology, genetics, chemistry, and criminalistics—analyze data to link the suspect, victim, and crime scene.

"It can be easy to link the victim and the crime scene together if the victim is found at or near the crime scene," Goddard says. "If forensic scientists can use physical evidence to scientifically link the suspect to either the victim or the crime scene, then we've made the full connection."

But connecting the dots isn't always as easy as it sounds. Many times wildlife evidence comes to the lab processed beyond recognition, which makes it difficult to know what species the victim was. When this happens, FWFL scientists in the morphology department use visual characteristics such as fur, teeth, claws, bones, hair, skulls, and shells to identify the species of an animal

"The evidence items we get are those that still retain a part of the original form of the animal," says Bonnie Yates, senior forensic scientist and mammal unit coordinator. To aid Yates and the other morphologists, the department maintains a "comparative collection," made up of over 100,000 animal specimens.

"It's our reference material. It's like a database except it's made up of three-dimensional objects," Yates says. The comparative samples can be anything from a single bear paw to a reconstructed lizard skeleton. An array of man-made wildlife goods such as alligator purses and turtle shell combs are also housed in the collection so scientists can compare genuinely illegal animal goods against their fake "knock-off" counterparts. Sometimes, however, the fake isn't a fashion accessory—it's an actual species.

Years ago, Yates explains, wildlife researchers were scouting Vietnamese street markets for unusual animals when they came across a mouse deer, a small brown rodent with four long deer-like legs. The researchers decided to send it to the FWFL for analysis. When Yates received the animal she discovered this wasn't just any mouse deer. This one had two half-inch-long horns.

"I thought 'Wait a minute, mouse deer don't have horns,'" she says.

"We x-rayed it and sure enough, you could see the little plug and if you looked very closely you could see the glue around the hole." The hoax, Yates says, illustrates the struggle some nations face in moving from a subsistence economy to a cash economy. "The only resources they have to turn in to cash are the items in their own backyards," she says. Not only would the novelty of a mouse with horns be worth more at market, but the discovery of a new species has the potential to draw thousands of dollars from researchers—enough money to support an entire community.

While animals that end up at the lab as parts and pieces have undoubtedly fallen victim to foul play, cases involving whole animals aren't as straightforward. The carcasses of small mammals, birds, and even deer, make their way to Rebecca Kagan's stainless steel examination table in the pathology department. Kagan's division plays a key role in determining how an animal ended up as evidence in a criminal case. "As in the human world, we're trying to not only figure out how an animal died, but also the manner of its death. Was this a malicious act, or was it a natural death by disease, or an accident?" she says.

Kagan begins her inquiry with an x-ray machine to look for obvious signs of trauma like bone fractures. If there are no signs of fatal injury, she performs an animal autopsy called a necropsy. She uses techniques such as "bread loafing," or thinly slicing an organ to look for tumors. Many times, Kagan says, animals are killed illegally, but not always.

"I have to work just as hard to prove a death isn't a malicious act as much as I have to prove it is," she says.

If an agent wants to know if an item is made out of rhinoceros horn, it only needs to be seen by one department. That set up allows the departments to work somewhat independently of one another, Kagan says. But for more complicated cases such as a poisoning, the collective knowledge of the FWFL's forensics team is crucial. "It's essential that we're all here together," she says.

If Kagan believes an animal's death was intentional, sometimes she or other scientists need to examine a wound, such as a bullet hole, more closely to understand the full extent of the injury. When this happens, an animal's remains are sent to lab technician Mike Bates, who oversees the lab's flesh-eating dermestid beetle collection. Much like the fast-acting insects featured on television shows like *Bones* and the *CSI* series, the beetles clean flesh and tissue from bones without compromising the skeleton.







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ETHOS MAGAZINE SPRING 2012

Before the beetles begin their job, Bates cuts away the carcass's excess hair and tissue. "The bugs can eat the hair and skin, but it really just delays the process. The more you cut off, the faster the bugs work," he says. Once cleaned, the bones are soaked in a purifying solution of water and ammonia before being further examined. Bates estimates that the FWFL is home to 300,000 to 400,000 beetles that can strip a carcass of its flesh in a matter of days.

#### **BRANCHING OUT**

Although much of the FWFL's work focuses on mammals, reptiles, amphibians, and birds, the lab receives evidence of all kinds—including that of bottom-dwelling marine animals. In 2009, US Virgin Island-based jewelry company GEM Manufacturing attempted to ship 16 boxes labeled "plastic craft work" to the US. Custom officials, doubtful of the authenticity of the "plastic craft work," intercepted the shipment. They wanted to know: Were the black, branch-like specimens in the boxes really plastic?

FWFL chief scientist and deputy director Espinoza analyzed the evidence and found that, as suspected, the specimens were not plastic at all. In fact, the "craft work" was actually a rare, slow-growing species of coral highly sought after for its rich black luster and used for jewelry and sculptures around the globe.

"In this case we used a microscope to look at spines because all black coral have microscopic spines. Imagine spines from a rosebud, but much, much smaller," Espinoza says. "We were able to conclude the only thing it could be was black coral."

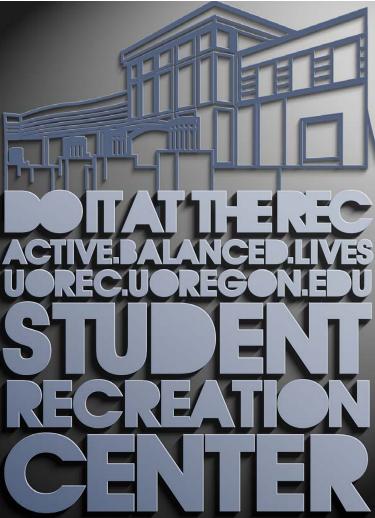
Espinoza's analysis helped prosecutors secure a conviction against GEM that led to a total of \$4.47 million in fines and forfeitures—the largest non-seafood wildlife trafficking financial penalty ever filed.

In addition to supporting international organizations such as Interpol and border protection agencies, the FWFL continues to branch out in hopes of building a global network of wildlife CSI teams. In 2008, Goddard began working with marine biologists and law enforcement officers from six different countries to develop CSI procedures for investigating coral reef crime scenes. A year later he traveled to Botswana to teach 45 wildlife rangers CSI field techniques to help halt the poaching of quickly disappearing elephant and rhinoceros populations. In spite of law enforcement's efforts and a global ban on ivory sales, the wildlife trade monitoring organization TRAFFIC reported an estimated 51,000 pounds of illegal ivory was seized in 2011, the highest recorded amount since the ban went into effect in 1989.

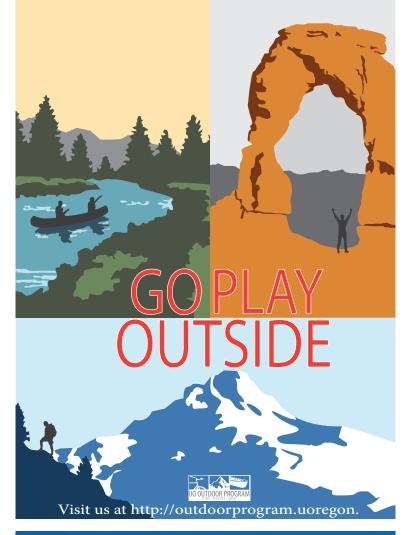
States within the US are also taking measures to prevent wildlife poaching. This year, New York enacted a law preventing the possession and sale of bear gallbladder, which can be sold for as much as \$30,000. Oregon and California also passed bans on the sale, trade, and possession of shark fins that are sometimes sold at \$600 per pound. Despite efforts such as these, however, high profit yields continue to draw wildlife traffickers to the trade

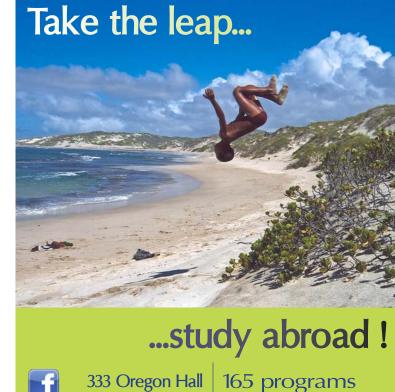
"There is a sense that we are impacting illegal trade, certainly not resolving it, but definitely slowing it down," Goddard says. "Time is always working against us." But as long as crimes against wildlife continue, Goddard and his team at the FWFL will be working to solve them. •











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# APOCALYPSE WHEN?

What to expect at the end of the world.

STORY KEEGAN CLEMENTS-HOUSSER DESIGN AND ILLUSTRATION CHARLOTTE CHENG

Before this year concludes, something will happen to bring the world as we know it to an end. Or at least, that's the case if a bewildering number of tabloids and websites are to be believed. 2012 is the end of the road, they say, and we might as well get ready for it. To get a better idea of what's ahead, three experts offer their takes on end of the world culture. What they share explains the workings of apocalyptic prophecies and reinforces how insatiably fascinated humans are with mass extinction.

### Jerry Walls, PhD Author and Senior Research Fellow at the University of Notre Dame

Jerry Walls has based his career on eschatology, or the way different cultures view the end of the world, and he has found that there are three distinct ways people approach apocalypse.

"There are a lot of people in these survival movements that are expecting some sort of apocalyptic event—nuclear war, economic meltdown, something of the like—that will throw the world into chaos," he says. "These people basically think that they'll weather the storm, the end of the world as they know it, and then they'll rebuild after the apocalyptic events have passed."

Others think the world will have a definite conclusion: Something will happen that wipes out our species and potentially all life. It could be anything from an atmospheric change to a super asteroid.

Both schools of thought have grown more popular in modern times, especially since the eighteenth and nineteenth centuries when scientific advancements provided a baseline by which to gauge the fragility of human life compared to the wider universe. The twentieth century development of nuclear weapons only strengthened the belief that we pose a great threat to ourselves.

Throughout Western history, however, a third view about the end, one guided by theology, has dominated.

"Religious believers tend to think, by and large, that the world has an end, a goal, a purpose," Walls says. "They believe that there's a narrative that is not driven solely by the human actors; there's a bigger director telling the story and He's taking it somewhere."

The three different approaches are like theater, Walls says. The first two resemble a tragedy, in which all or almost all of the actors perish and nothing good results. The third approach more closely mimics a comedy, with an ending that, though perhaps difficult to get to, is ultimately uplifting.

In any case, eschatological thinking seems to be newly popular in Western culture. A higher level of secularism and scientific understanding has given a strong boost to the "weathering the storm" and absolute end beliefs, while the third version continues to draw the most attention as evidenced by the recent rash of Rapture predictions and the smash-hit success of religious fiction series like Jerry Jenkins's *Left Behind*.

Walls believes he knows the reason behind the upswing; his thinking echoes that of many of his contemporaries, both religious and secular.

"Anytime things seem out of control and hope is on the decline, there's a tendency to think, 'OK, we need something outside of ourselves, something to deliver us; we need a source of salvation, a source of being, a source of rescue that no human being will come up with," Walls says. "[Fatalism] is always worst when hopes are high and then are dashed. That's been the case throughout history."

#### Jerry Jenkins

New York Times best-selling Christian fiction author

"I wrote novels based on biblical prophecy, which clearly slaked a thirst people have about the future," Jerry Jenkins says. He's referring to the *Left Behind* series, which Jenkins co-authored with Christian theologian and evangelist Tim LaHaye. "We live in scary times and people are looking for something beyond themselves. Fiction based on biblical prophecy seems to meet that need."

The 16 books of *Left Behind* follow a group of non-believers who remain on Earth after the Rapture. The group eventually accepts Christ and works to save others from the Antichrist before the Second Coming. Since the first book's debut in 1995, the series has sold more than 63 million copies and found a place on the *New York Times Best Sellers* list, one of the few works of religious fiction to do so.

Left Behind has also had a massive impact on the evangelical Christian community. The series spread the idea that the Rapture described in the Bible could be both abrupt and literal. Shortly after the first book's release, author and evangelical commentator Jerry Falwell wrote: "In terms of its impact on Christianity, [this book] is probably greater than that of any other book in modern times, outside the Bible."

"Science isn't lying when it says that humans and Earth are, in the universal scheme of things, easy to destroy."

Despite this praise, Jenkins is quick to point out that "God is not tied to our calendar," and that it would be foolish to try and predict when something as momentous as the Rapture will occur.

"As prophecy does not say when this will happen and even Jesus told His disciples that He Himself didn't know but only His Father, it is folly for us to try to set dates," Jenkins says.

Though he concedes that many of the signs the Bible lists as heralds to the Great Tribulation have already been revealed, Jenkins doesn't think tha the Rapture is necessarily right around the corner.

"The Bible says that in God's economy of time, a day is as a thousand years and a thousand years as a day," he says, "so if in His mercy He waits one more day, that would be a thousand of our years."

Nevertheless, the idea of ascending into Heaven strikes a chord with many evangelicals. For example, Harold Camping, the man who blanketed the US with literature and billboards proclaiming the Rapture would arrive on May 21, 2011.

Even though Camping's Rapture failed to manifest, it likely won't be the last such prediction. After all, Camping wasn't the first to announce the end: The Rapture has been predicted numerous times in American history, starting with William Miller, founder of Adventist Christianity, and his prediction that the Rapture would happen some time between March 21, 1843, and March 21, 1844.

Whenever it comes, Jenkins says the end of the world will arrive quickly and that humanity should prepare.

"I don't think it will be at all subtle. It will be instantaneous and chaotic he says. "We are told to watch and wait for the imminent return, and so I think it behooves people to be ready."

#### Michael Molcher

Freelance journalist and editor in chief of The End is Nigh magazine

According to Michael Molcher, apocalyptic thinking isn't exactly novel. "If you look at the last 350 years of Western civilization, you'll see that the end of the world has been a pretty constant preoccupation and certainly nothing new," he says. "People have been prophesying the imminent end of all things fairly constantly."

What the end will be was, in fact, the focus of *The End is Nigh*. Before going under in 2011, the United Kingdom-based publication investigated how various end-times scenarios would play out. The magazine covered a wide variety of apocalyptic topics, ranging from zombies and biblical judgment to the H1N1 scare and the ticking of the University of Chicago's iconic doomsday clock.

An innate human fear of death was the reason *The End is Nigh* had so much material to work with, Molcher says.

"The idea of an untimely demise is an unsettling one, so it needs to be rationalized and controlled, given a 'purpose' or meaning of its own," he says. "Those giving these predictions can often be seen to be trying to 'control' this fear. By giving a time and date, they are claiming to have arcane knowledge and, in many circumstances, the specific ways to avoid this early demise."

These predictions have, until recently, been uniformly religious or spiritual in nature, he adds. In the Western world they've been almost exclusively Christian in origin, in no small part because Christianity emphasizes a vision of cataclysm.

"As a monotheistic, eschatological religion Christianity is ripe for end of the world ideas," Molcher says. "The whole structure of Christianity as we currently know it is geared toward the linear concept of time which supposes that one day the world will end in a final battle between good and evil"

The prominence of a religion like Christianity leaves a mark on how Western cultures view uncertainty, he points out. However, things changed after the Y2K scare in 1999 that had people stockpiling supplies in case the dawn of the new millennium brought technological mayhem. Since then, Molcher says there's been a shift away from biblical prophecy toward scientific disasters.

Some proposed scientific apocalypses are fringe theories, like radical ideas of spontaneous magnetic pole reversals, extraterrestrial intervention, rogue planets disrupting Earth's orbit, or planetary collisions. There are far more realistic and immediate threats, however; take for example runaway climate change, supervolcanoes, shifts in major weather patterns like the Gulf Stream, or particularly bad solar flares frying communications satellites orbiting Earth.

Molcher thinks there's some credibility to a few such doomsday scenarios. After all, science isn't lying when it says that humans and Earth are, in the universal scheme of things, easy to destroy.

However, Molcher also feels certain that the Mayans didn't have any particular insight when making their now infamous Long Count calendar ("If they were so good at predicting the future, why did they not predict the complete collapse and eradication of their society by the Spanish?"). With the number of supposed Raptures that have come and gone, he also doesn't think the Christian eschatological predictions are likely to come true anytime soon.

"We shall see what the new fixation date is after December, but I 'predict' it will be tied to one of the forthcoming close by-passes of an asteroid or comet," he says.

After all, if history is any guide, people will always have their doomsday theories

The idea that the Mayan calendar marks December 21, 2012, as humanity's last day is only one of many such predictions. Alien contact, catastrophic natural disasters, impending Raptures, prophecies extrapolated from long-dead societies, the rare people who resolutely and only half-jokingly prepare for a coming zombie invasion—all are apocalyptic doctrines. But no matter what form the doomsaying takes, one thing is clear: The mass fixation on 2012 reinforces the fact that we humans are fascinated by our own demise.







**PREVIOUS PAGE:** Fifteen-year-old Santana Alhassan Suidu, also pictured directly right, burns a bundle of cords to expose the precious copper wires inside. Suidu arrived in Agbogbloshie five years ago; since then, he has only been able to visit his family in Northern Ghana once.

**TOP:** Mohamed Suiad, right in photo, waits with fellow Ghanaians for the next delivery of wire. "I know the fire is not good for our health," Suiad told Accra-based newspaper *Daily Guide*, "but because of the money we get, we continue to stay here. We don't like it, but we are working like that."

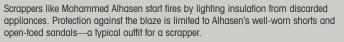
**OPPOSITE PAGE:** A "scrapper" ignites the carcasses of trashed electronics. Much of the refuse reaches Ghana's shores as a result of poorly enforced e-waste laws in Western nations. Regulation began in the late 1980s with the Basel Convention, a United Nations treaty that limits the international transportation of e-waste. Of 178 countries involved in the treaty, only Afghanistan, Haiti, and the US have yet to agree to its terms.

LOWER LEFT: Suidu handles a pile of burned wire scraps. In 2008, Greenpeace took soil samples from the area where the scrappers work and found dangerously high levels of chemicals that could, among other potential side effects, impair sexual reproduction and cause cancer.





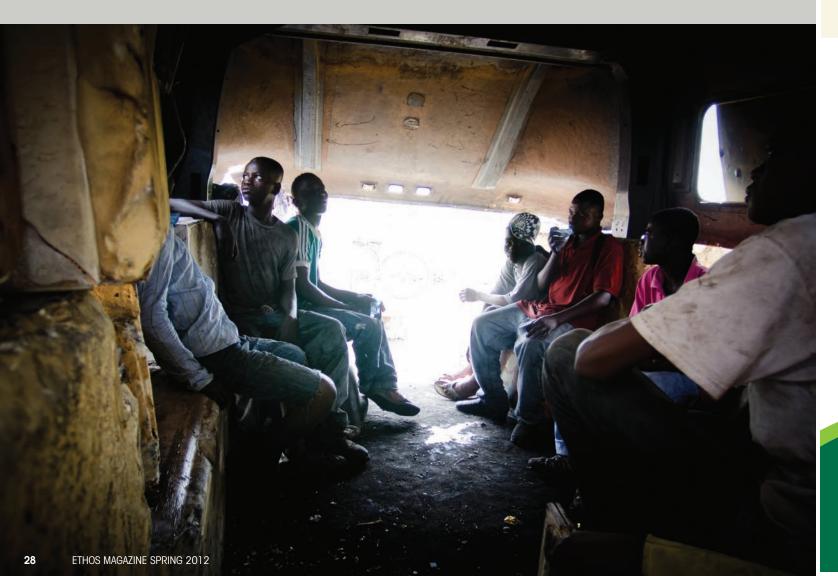






Known as "Masters," the middlemen of Agbogbloshie shuttle new shipments of electronic parts out to the slum's charred fields, which border Korle Lagoon, one of the world's most polluted bodies of water.

In a shelter made of old refrigerators, insulation, and the cab of a truck, a group of scrappers seek refuge from the midday heat to sip water and pass around a joint. It's a daily ritual that will likely continue into the foreseeable future for although e-waste regulation is improving, boatloads of discarded electronics continue to arrive on the shores of Ghana. Eventually, the waste meets its end in the fiery pits of Agbogbloshie, scarring the land and the lives of those that call the slum home. •







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Because of arthritis, Loraine McCarthy can only play the harp for 15 to 20 minutes at a time. She says playing is "a form of healing."

The first time Loraine McCarthy played a harp for a dying person was in a Springfield, Oregon, nursing home. When she arrived the nurses said the patient's death wasn't imminent. He probably had a few weeks left but he had no family, was totally alone and extremely afraid. She walked in with her harp; she could see the fear in his eyes.

McCarthy briefly spoke to the man before asking him to lie back and relax, to let the music take him wherever it wanted. She began to play, he began to relax and, after awhile, when she thought he was asleep, she picked up her harp to leave. "I got to the door and he called me back," McCarthy says. "I took his hand and he thanked me and said he was so grateful for the music and the relaxing half-hour." He died later that day.

For almost a decade, McCarthy played the harp for the dying as a founding member of Strings of Compassion. Along with Sister Vivian Ripp, McCarthy started the Eugene-based organization in 1997 at Sacred Heart Medical Center at Riverbend. In the 15 years since its inception, the program has helped more than 10,000 men and women. Using harp and vocal performances, Strings of Compassion's three paid employees try to offer a space of serenity at a dying patient's bedside.

Their small but important concerts take place five days a week or by appointment. Depending on the individual patient, a vigil (as Strings of Compassion refers to each performance) may be held only once or every week for a year. The service is free of charge; a patient, family member, or friend simply requests a vigil by asking a nurse or by calling the hospital's pastoral and spiritual care services.

"I'm kind of the mother figure," McCarthy says of the program. During her time at Strings of Compassion (McCarthy retired in 2004) she estimates she helped more than 900 people. "I am kind of the oldest living music thanatologist," she adds.

The field of music thanatology uses vocal and instrumental performances as therapy to fulfill the physical, emotional, and spiritual needs of the dving. Using music as medicine relies on the harpist or vocalist's knowledge of what people need as their lives end. Because of this Strings of Compassion's music thanatologists tailor each vigil to the specific patient. They judge the tempo and tone of a performance by observing the patient's vital signs like heart rate and body temperature. By understanding the process of dying, music thanatologists hope to create an atmosphere of tranquility, love, kindness, beauty, and peace that helps the patient pass on more easily.

"Strings of Compassion has affected the many families and loved ones who have been present at a vigil," says Jane Franz, a harpist and the program's coordinator since 2001. "The music ripples out into the community long after the patient has died." Sometimes the positive influence of a vigil even helps do away with long-held family tension, adds McCarthy.

"I have seen the music create a harmony among all of the family members," she says. "Somehow by the end of it they have resolved a lot of issues within themselves. They are ready to work together. It's just obvious in the way you see them move together."

When it started, Strings of Compassion was solely comprised of McCarthy and Ripp. The two harpists would often play vigils together. But as demand for their performances grew so did the program, which is now offered at Eugene's Sacred Heart Hospice and the PeaceHealth Cottage Grove Medical Center. In the future, Franz hopes to introduce Strings of Compassion to all of the PeaceHealth medical centers, as well as to Southwest Medical Center in Vancouver, Washington.

The knowledge needed to be a music thanatologist for Strings of Compassion, however, doesn't come from simply showing up at the hospital. McCarthy and Franz both attended college to study music thanatology; Franz has since started a music thanatology program at Lane Community College. Students looking to be certified by the Music-Thanatology Association International spend two years fine-tuning their musical talents and communication skills. By the end of the program, each student serves 324 hours at various hospitals and hospices working alongside a professional music thanatologist.



music out into community long after the patient has died."

The coordinator for Strings of Compassion since 2001, Jane Franz is also co-director of the music thanatology program at Lane Community College.

Although education is an important aspect of music thanatology, school a necessity, and experience invaluable, there is no way to prepare for death. Typically, Strings of Compassion receives two types of calls, McCarthy says. The first, a processing call, often involves patients who need help accepting their situations. The second, an imminent call, means "you have to go right now—stat, get there, this person is dying." Sometimes, however, a patient thought to be far from death passes on sooner than expected, a lesson illustrated by McCarthy's first vigil.

As the program coordinator for Strings of Compassion, Franz faces the presence of death nearly every day. As a result, Franz says death no longer frightens her. The music vigil is, she adds, "a place where I can give my ego something sacred to do." While playing the harp at a vigil, she has witnessed scenes that reinforce her belief in the power of both music thanatology and Strings of Compassion.

Once Franz played a vigil for a dying mother as the patient's adult son and daughter sat by the bed. Suddenly, blood began spilling from the mother's mouth. The children stood watching while a nurse came in to suction away the blood; she explained that it was a common occurrence for the woman's illness. The nurse then called in an aid to help remove the patient's hospital gown so she could be cleaned.

"These adult children stood watching as their mother's naked body was cleaned and clothed," Franz says. "It was obviously a shock for them."

Once the nurse left, Franz started playing, hoping to offer something beautiful in contrast to the medical scene that had just unfolded. Soon the patient's mouth began to pool with blood again. This time the son, no longer stunned, stepped quickly to the suction tube and moved to his mother's side. His sister took the tube and said, "We can do this."

Throughout it all, music accompanied like a gentle stream of sound. soothing and supporting. During the evening, the daughter told Franz, "Please don't leave us. Please keep playing. It makes this bearable." That night, with a calm countenance, the patient died. "Her children wept," Franz recalls. "They said how glad they were and how thankful they were not to be left alone, to have the music present throughout."

Death seems to come in a sterile environment, with white walls and patients slowly sinking into hospital beds. We imagine the hospital food, green slop on silver trays, nurses in blue uniforms, and the sounds of coughing from the next room. The sheer notion of dying leaves many paralyzed; some consider it their biggest fear. What a lot of us don't realize and what Strings of Compassion musicians try to show is death doesn't have to be like that.

Franz believes that Strings of Compassion gives life to patients long after they've died. "Loved ones often speak of their experiences to others in social circles," Franz says. "It is not unusual for me to be stopped in a public place by someone who says, 'I recognize you. You played for my grandmother.'" Moments like these, Franz says, show her how "blessed I am to be able to serve my fellow humans in this way." •



McCarthy plays the harp as often as her hands will allow. A lifelong musician, she also plays the violin and the organ.



### Borderlands

On the Dominican Republic's western edge, a student learns what it takes to be human.

have always wanted to try mud pie. When I was little, my brother and I would wait for the puddles that a rainy day left behind. We would prepare pie after pie, but we were never allowed to eat our delicious desserts. My mom said we could only take pretend bites. "Mud is yucky," she would add, and then her face would scrunch up tightly.

Fifteen years later, I'm in the *bateyes* (pronounced "bah-tays") of the Dominican Republic, the poverty-stricken section of the country's sugar and banana plantations. Here, cooking mud pies is more than a child's game. When there isn't enough food, the locals bake a mixture of dirt and water over an open fire to make mud cookies. In the *bateyes*, mothers feed their families mud pies simply to stay alive.

It's March 2011 and I've signed up for a community service trip with the University of Oregon, thinking that the experience will satisfy my desire to help save the world. As I board the plane with a group of 15 students and advisors, I already feel proud of what I plan to accomplish during the next six days. I'll be working alongside North American doctors and dentists to provide medical care for those living on the border between Haiti and the Dominican Republic.

Ten hours later we arrive in Monte Cristi, a sleepy Dominican coastal town about an hour away from the *bateyes*. The locals are friendly and chatty. The kids, all dressed in tidy school uniforms, enjoy showing off their broken English. The small town has a few restaurants, a grocery store, a hotel, and an ice cream shop. While this isn't a luxury area, the quality of life in Monte Cristi is drastically different from what we later witness in the *bateyes*.

Each morning our group travels to one of the several poor *batey* communities in the area (there are an estimated 400 such towns along the border). On the first day, I gaze through the window at the line of people waiting for us. Many of the adults have dark skin and prominent cheekbones, but it is their large eyes that I notice first. Despite their vivid beauty, they gaze out emotionlessly.

The people in line stare at us while we set up our makeshift clinics. Most of the women hold smiling babies in their laps. The children's eyes seem different than those of the adults. They glisten with innocence and a blissful unawareness of what they don't have: basic human rights and an identity in their own country.

While both the Dominican Republic and Haiti are independent countries, they share the same island, Hispaniola. Geography plays a primary role in their drastic economic differences. Mountain ranges force the majority of rain to fall on the Dominican Republic, leaving Haiti with an arid climate unable to support much vegetation. The Dominican Republic's fertile land means the residents have greater access to resources while Haiti struggles to feed its rising population.

Eighty-two years ago, these economic differences, aggravated by a history of political conflict, resulted in widespread discrimination against Haitians within the Dominican Republic. It was 1930 when Rafael Leonidas Trujillo took control of the Dominican Republic and began his infamous push to "cleanse" the nation of Haitian blood. In October 1937, he led a campaign to brutally murder any Haitian found outside of the *bateyes*. The Dominican Republic refers to this one-month massacre as *El Corte*, or The Cutting.

Today the mass killings have ended, but the Dominican government continues to support Trujillo's "cleanse" by denying citizenship to Haitian immigrants and residents of Haitian descent. According to the international

organization Human Rights Watch, the Dominican government deports 10,000 to 30,000 Haitians annually. To avoid this fate, many settle in the *bateyes*, providing a steady supply of cheap labor for the wealthy plantations.

Each *batey* community is built around an open dirt field where barefooted children run around snapping whips or playing soccer. Tiny homes made from uneven wooden boards and tin roofs dot the landscape. Most of the homes have a wood stove used to cook meals of rice or beans. That is, if there is any food that day.

As I begin my first day in the *bateyes*, I question the dreams I had of saving the world. While watching a woman sweep outside her hut's crooked front door, I realize my ignorance in thinking that these people belong to a world different from my own. The woman's sweeping may only reveal a layer of caked dirt, but she keeps cleaning the small square in front of her home, taking pride in what she owns.

Each morning we travel to a different *batey* where I am assigned to a registration table to pass out brightly colored bracelets for the day's medical clinic. In Maguaca, a small *batey* on the outskirts of Monte Cristi, a large iron gate surrounds the concrete area where we set up the clinic. The doors stay tightly closed until the clinic is ready, preventing a crowd of antsy children, desperate mothers, and weathered old men from rushing my table. Tiny brown hands grip the iron bars and huge round eyes peer through the gaps. I sit on the other side of the fence and try to avoid their gaze.

When the gates finally open, I give each person a bracelet printed with a registration number and ask them for their name, age, medical complaint, and nationality. Few say Haitian. Those who do don't announce it with pride like those who say Dominican. Once a patient has a bracelet, he or she must wait, sometimes up to four hours.

To pass the time, I do my best to make people smile. I soon learn my digital camera is the best way to connect with people. The kids beg to have their pictures taken, but I'm surprised to find the adults also enjoy being photographed. When I point the lens at an older woman, her smile reveals several gaps where teeth should be. Before I push the button, I notice a glimpse of the same shimmer I see in the children's eyes. She looks at the picture on the tiny digital screen for several minutes before asking me to take another. I wonder how long it has been since she really looked at her own face—there aren't many mirrors hanging up in the *bateyes*. Perhaps this woman can't even recognize herself.

Most of the time, I can't understand the pronunciation of a prospective patient's name so I try to spell it out to the best of my ability. When I'm wrong, most people scoff or laugh and take the sticker with a misspelled name. I wish I could take the time to give them the dignity of wearing a correctly spelled name tag, the only form of written identification the *bateyes* residents typically have.

Throughout the week, I notice how much the people enjoy simply interacting with the volunteers. We acknowledge them as humans through a gentle touch, be it a hand to hold while the dentist completes an examination or an offer to cradle a baby while the mother has a tooth pulled. One four-year-old boy stands by my table for a long time before he decides to sit on my lap. Every time I look down at his face, he grins; this becomes our game. I wish I could remember his name.

I have a name on my passport that reminds me that I am a citizen of the United Kingdom. That piece of paper is not what makes me feel human. I felt human when I shook my principal's hand at my high school graduation and when I gripped my best friend's arm as we sat through our classmate's funeral. I feel human when my dad lets me stand on his toes while we dance around the kitchen, or when my boyfriend rubs his thumb across the top of my hand while we walk. A human touch is a powerful thing.

For the first time it strikes me that the people we are helping are not "others." I cannot give these people a piece of paper with their legal identification on it. Nor can I provide clean toothbrushes for every child or meals for every person in the *bateyes*. However, I can make each person feel accepted as a fellow human being by speaking to an old man in his own language, by taking pictures alongside smiling children, by comforting babies as they wait for their mothers. I can touch their lives and remind them that they are human. And they can do the same for me. •

-KERRI ANDERSON



**ABOVE**: Dressed in the Orphanage Outreach shirt she wore while in the Dominican Republic, Kerri Anderson is a senior in the School of Journalism and Communication with a minor in Spanish.

**BELOW**: A mother and child wait for a dental exam. Photo by Kerri Anderson. **PREVIOUS PAGE (TOP TO BOTTOM)**: Three boys watch as volunteers set up the day's medical and dental clinics. Orphanage Outreach, now known as Outreach360, coordinates medical care in both the Dominican Republic and Nicaragua. Anderson meets the locals. Photos by Kerri Anderson.

As I begin my first day in the *bateyes*, I question the dreams I had of saving the world.



#### It isn't all flowered caps and water angels.

Tt's 7:30 on a Saturday morning at Portland, Oregon's Multnomah Athletic Club (MAC). Through the double doors of the basement you can see a pool divided in half. On one side, people swim laps; on the other, eight girls in caps and goggles bob energetically in the water. A woman with short hair sits in front of the group, leaning forward in a folding chair and speaking hoarsely into a microphone. Welcome to the world of synchronized swimming, where five-hour practices on Saturday mornings are the norm.

Synchronized swimming, referred to as "synchro" by those within the sport, began in the late nineteenth century, but became widely recognized in the mid-twentieth century thanks to actress Esther Williams and her synchro performances in Hollywood musicals. Since then, the activity has evolved into a rigorous yet graceful display of lifts, twists, jumps, and flips, but instead of considering it a serious sport, synchro is often mocked in pop culture (think Martin Short and Harry Shearer's Saturday Night Live skit about being the first male synchronized swimmers). As a result, many can't help but associate synchro with anything but Williams's flowery swim caps

"People don't understand what these girls put into it," says Julie Thaden, the short-haired synchronized swimming coach at MAC. "They have to have the flexibility of a gymnast, the grace of a dancer, and the strength of any kind of athlete. Synchro demands it all, and then they have to be able to hold their breath during it."

"I get so much crap for it, all the time," says Courtney Hall, a member of MAC's junior synchro team. "People ask me if I'm going to try out for the birth control commercials where they lie on their back in the flowery caps. They think it's the stereotypical Esther Williams synchronized swimming where they make snow angels in the water." Hall jokes that far from being an easy activity, synchro's high-endurance training allows her to eat whatever she wants.

Seventeen-vear-old MAC synchronized swimmer and almost-Olympian Katy Wiita says that few people realize how rigorous training can be. Wiita has been involved in the sport since childhood and made the US Senior National Team when she was 16. In January 2011, she moved to Indianapolis, the home of the National Team, where she spent eight hours a day training.

While in Indianapolis (Wiita moved home to Portland in December), the practice regimen was incredibly intense, she says. After waking up at five

or six in the morning. Wiita would do a land warm-up for 30 minutes then swim for four hours. She and her teammates would receive physical therapy and weight train three days a week. "From there we'd go back to practice and swim for another three hours in the afternoon," she adds. "Land drill, where we would practice our routines out of the water, came next for about

Even though she's back in Portland now, Wiita says her training hasn't eased up. "My personal life? I don't really have one at the moment, but that's okay. That's the life of a training athlete, I guess."

Ranell Curl is a private synchronized swimming coach and distance education coordinator. She says all the kids she has trained in the past 20 years are dedicated and driven. Curl lives in Oakridge, Oregon, and every summer for four weeks she holds daily synchronized swimming practices with three different groups, which she classifies as "novices, intermediates, and champions." At the end of the four weeks each group participates in an outdoor performance where locals set up lawn chairs around the 40-footlong pool in Curl's backyard and enjoy the show.

As coaches, Curl and Thaden both believe that synchronized swimmers are exceptionally sharp athletes as well as individuals. "You have to be smart in synchro," Thaden says. "My girls are high-level kids because they're using both sides of their brains. If they're not bright when they come in, they get

A synchro enthusiast and performer from ages 12 to 21, British Columbia native Tara Franks says that synchronized swimming is more than it seems. "It helped so much with my personal development. As a teenager I didn't have a lot of poise, grace, or confidence, but synchronized swimming definitely helped me with that. I know it helped a lot of other girls as well."

Back in the MAC's basement-level pool, patrons begin to crowd the water. The lifeguards expand the lanes to give parents and their young children room to swim. Thaden and her team keep on practicing, with Thaden's calls roughened by a sore throat. "Elli, your leg should be coming up on that lift almost to the point of it touching your head. It's like you're kicking the top of your head from behind," she tells Elli Wiita, Katy's 14-year-old sister.

"Katy started doing synchronized swimming and I loved watching her so I started doing it." Elli says.

The older Wiita says for her synchro is very much a family sport. Not only do both she and her sister love synchro, she's also extremely close with her teammates. The same stereotypes that keep the public from understanding synchronized swimming bring everyone on the team closer

"They're all sisters in every sense of the word," Thaden says. "They can just annoy the heck out of each other sometimes, but when it comes down to it they love each other and they'll do anything for each other. People in synchro become close with each other because nobody outside of the sport understands it like teammates do." •

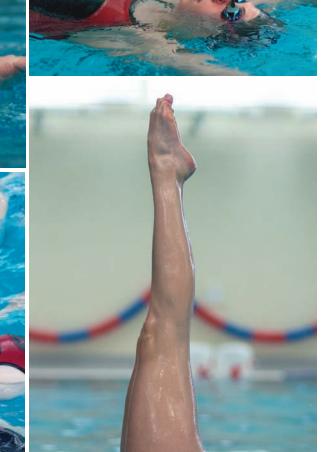
#### -MEAGHAN MORAWSKI











CLOCKWISE FROM TOP: A member of the junior synchro team performs drills at the Multnomah Athletic Club (MAC). Fourteen-year-old Elli Wiita practices at MAC while her older sister Katy launches up her lea. The airls refine various techniques that are important in their performance routines. They cannot touch the bottom of the pool.

1891: The world's first synchro competition is held

in Berlin, Germany, sparking interest in the sport.

rnchronized swimming club at the University of Chicago participate in the United States.

1907: Australian swimmer Annette

Kellerman performs in

York Hippodrome as the

world's first underwater

glass tank at the New

1984: Synchronize he Los Angeles Olympics, making it and rhythmic gymnastics the only

1952: Esther Williams plays Annette Kellerman ir

1939: Katherine Curtis and her the first synchro competition held in

exclusively female Olympic

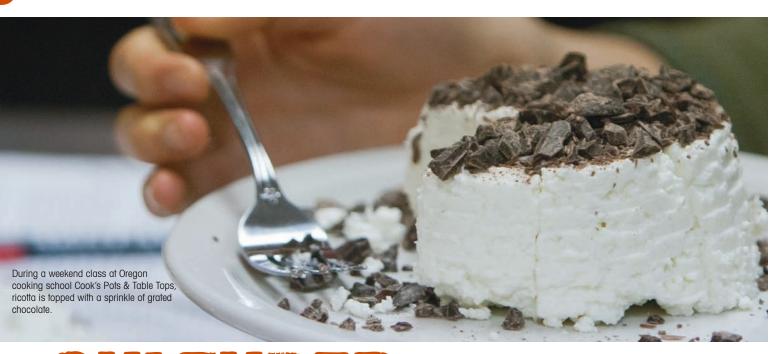
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**DIVE INTO** 

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TEAM FOOTAGE



## GULTUREI

#### Oregon's place on the cutting edge of cheese.

magine the dairy aisle at Safeway. A dozen cheeses sit in neat, clean rows, each strangled by a tight plastic wrapper and specialized logo. Lucerne, Frigo, Philadelphia—all illuminated by vicious fluorescent lights reflected off a cold, pale floor. The chill in the air forces a quick decision on which package to pick. Kraft, Precious, Tillamook: 23.5 cents per ounce, 15.6 cents with a Club Card.

This is cheese for most Americans. White light and plastic more suited for a hospital than a home has been the standard since the push to industrialize food started after World War II. But past the supermarket

aisle, in the far corners of the culinary world, there's a small group of cheese lovers who view making cheese as an art and whose popularity is growing like the mold around a fine Brie.

Typically artisan cheese refers to cheese made with "old world" techniques that use fewer ingredients and more work done by hand. Like all cheese, artisan varieties use three main ingredients: salt, milk, and a coagulant. A natural coagulant such as rennet is a complex set of enzymes that separates milk into solids and liquid, better known as Little Miss Muffet's famous curds and whey. Unlike artisan cheeses, commercial blends often use chemicals.

Four times a year, local cheesemaker Keith Ellis hosts an artisan cheese workshop at Cook's Pots & Table Tops in Eugene, Oregon. The class highlights the differences between artisan and commercial cheeses, which include shelf life.

"The basic process is the same,"

he says, "but [corporations] have to ship the cheese across the country and make it last all the way to people's fridges." The longevity needed for cross-country shipping is achieved by adding large amounts of preservatives that, Ellis says, you would never find in an artisan variety.

Interest in artisan cheese began growing in the late 1970s and early 1980s, but the skills used to make the food date back hundreds of years. Steve Jones, the owner of Cheese Bar in Portland, Oregon, finds it ironic that artisan cheese has become so prestigious of late. "It's funny because it was basically just peasant food," Jones says as his eyes dart from behind brown tortoise shell glasses—employee to customer, customer to bar, bar to employee. His awareness resembles an attentive father watching his children roughhouse in a ball pit.

Jones says cheese was originally created simply to preserve milk longer. Instead of letting it spoil, farmers would use excess milk to make a food that lasted. By the time spring rolled around, the stored cheese would be one of the few items farmers had left to sustain them. "I think there's a lot about cheese that's embedded in the human psyche," Jones says. "It's this kind of cool baseline survival medium."

Cheese went from being a simple, practical food to a mass produced item in the mid-twentieth century when the industrialization of food occurred almost simultaneously with the rise of supermarkets. "That's when cheese became dumbed down into the Kraft Singles culture," Jones says.

Today, commercial cheese still dominates the market, but the artisan cheese movement that began 40 years ago has ripened over the past decade alongside a growing national interest in finer foods. "It's growing by leaps and bounds," says Ellis, although he admits commercial cheeses still vastly outnumber artisan ones.

According to Jones, 15 years ago there were fewer than 20 artisan cheesemakers in the United States. "Now," he says, "every state in the nation has at least one creamery. Many have dozens." Oregon alone has 17 creameries certified by the US Department of Food Safety, making it one of America's cheesiest states.

Along with California, Wisconsin, and Vermont, Oregon is ahead of the cheesemaking curve for several reasons. All four states foster a cheese-friendly environment, Ellis says, because of university support like the Food Science and Technology program offered at Oregon State University (OSU). Courses like those at OSU help, Ellis says, "by making it possible for people to learn the art and the craft."

Another thing that separates Oregon from the rest is the state's Cheese Guild—a network of local cheesemakers that started in 2006. Patricia Morford is the founder and owner of Rivers Edge Chèvre in Newport, Oregon, one of the 17 creameries that belong to the Oregon Cheese Guild. Morford says being a guild member places her among a collective of artisan professionals who discuss their work at gatherings such as the annual Oregon Cheese Festival held in March.

But festivals aren't the only place where cheesemakers mingle. The growing popularity of artisan cheese has spawned a relatively new aspect to cheese culture: competitions. One of the biggest is the United States Championship Cheese Contest held in Madison, Wisconsin

The contest hosts judges from all over the world, including Vermont's own Craig Gile. Last year, Gile and his fellow judges spent three days grading hundreds of different cheeses. Half the entries were sampled the first day, half the second. On the final day the points were tallied and 70 winners—one for each category—were named. From there, the top 70 were tasted again and narrowed down to 18, then, after another round of tasting, down to three. The top picks received either a gold, silver, or bronze medal for the world's best cheeses. Last year's medalists all hailed from Wisconsin.

Even when he's not judging contests, Gile eats plenty of cheese as a professional cheese grader for the Cabot Creamery, a farmer-owned cooperative in Vermont. In the quest to ensure the award-winning standards of Cabot's cheddar, Gile eats between 150 and 200 pieces of cheese a day, six days a week.

Everything about a cheese is taken into consideration when sampling it, Gile says, including its appearance, smell, and, of course, taste. "I love the combination of art, science, and regional flavor cheese offers," he says. "Each piece is always a new adventure."

### "There's a lot about cheese that's embedded in the human psyche."

Not all competitions evaluate the cheese alone, however; some test an individual's personal knowledge about the food. Using his expertise of the more than 200 types of cheese offered at Cheese Bar, Jones placed first at last year's Second Annual Cheesemonger Invitational hosted in Long Island City, New York.

Relying on skills used in his day-to-day trade, Jones competed against more than 40 other contestants through four rounds of elimination, including a timed taste test of six different types of cheese. For each entry, Jones had five minutes to answer six questions about the sample including its age and the type of milk used. Other rounds of competition included cutting and wrapping from a cheese wheel and creating a delectable cheese plate showcasing unique pairings. As the 2011 winner, Jones earned \$1,000 in cash, a prize package for Cheese Bar, and, of course, the glory of being the biggest cheese of them all.

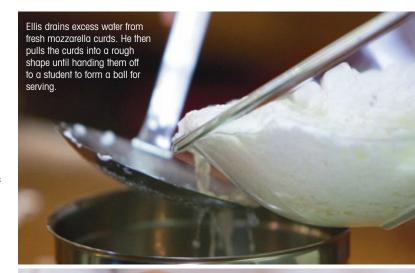
Competitions like the Cheesemonger Invitational have led to a greater interest in unique pairings, which have evolved from the traditional matchup with wine to the arguably better-suited coupling with beer. "More people are becoming aware of beer and cheese as a pairing combination," Ellis says. "Many cheeses actually pair better with beer than they do with wine."

Most of the time beer works better because it's made from grains similar to those milk-producing animals eat. "Beer is far superior than wine in pairing," Jones says. "That cow isn't eating grapes. Ever."

It's hard to say why artisan cheese is just now growing in popularity. Ellis thinks that America's increasing health consciousness has something to do with it. Others in the industry say the world of artisan food attracts consumers looking to support sustainable small businesses. Or perhaps artisan cheeses are popular simply because they're just so damn good.

Whatever the reason, the culinary world will continue to be populated by people who view cheese as something more than just a spread on crackers. "I eat cheese every single day," Jones says. "For me it's essential. I can't live without it."  $\mathbf{Q}$ 

-CODY NEWTON







#### Amount of Cheese the Average American Consumed Per Decade



Keith Ellis, a culinary instructor at Cook's Pots & Table Tops, prepares mascarpone cheese.

Home butchers say goodbye to the supermarket deli aisle and hello to the bone saw.

alf a hog lies across two stainless steel tables in KitchenCru, a community kitchen space in Portland, Oregon. The viscera were removed at the slaughterhouse, revealing an empty cavity of bone and muscle. The flesh is cold and cherry red, surrounded by white fat and sinew. A robust and curving skeleton snakes through the center of the carcass.

Butcher Camas Davis stands above what remains of the animal, holding a sharp, flexible boning knife in her hand. Her fingers trace a vertebra along the spine. Pressing down, she makes her first incision, carving through the flesh of the pig. Around her, women in aprons peer over each other's shoulders and take notes.

Davis is the founder of the Portland Meat Collective (PMC), which offers home butchery courses and connects Portland residents with local ranchers and farmers. Today, Davis is leading a Ladies Home Pig Butchery class with co-instructor Tray Satterfield, a butcher and representative for local food distributor Eat Oregon First. For \$225, Davis and Satterfield teach students how to break down a side of pork, all in four hours.

Across the country, farmers and butchers are capitalizing on the public's growing interest in local food by offering classes on do-it-yourself slaughter and butchery. Programs range from informal demonstrations at butcher shops to multi-week internships alongside professionals in the field. When Davis first advertised the PMC at a butchery event in fall 2009, more than 500 people signed up for the group's newsletter. Promoted mainly by word of mouth, her classes continue to fill up.

Interest in DIY butchery has increased partly due to celebrity support of the movement. Last spring, Facebook founder and CEO Mark Zuckerberg announced that he was attempting to only eat meat he processed himself. Julie Powell, the author whose work inspired the 2009 movie Julie & Julia, chronicled her internship at New York City's Fleischer's Grass-Fed and Organic Meat in a bestselling book. Depending on the focus, location, and length of the training, a DIY butchery class can now cost anywhere from

Back in Portland, Davis and Satterfield demonstrate how to separate half a pig into its primal cuts. Then the students break into two groups to tackle their huge sides of pork still cold from the freezer. The women eagerly grasp their knives and deliberate on where to make their initial scores. Davis and Satterfield weave between the stainless steel tables, observing their students's progress and assisting as needed.

Since establishing the PMC almost three years ago, Davis has taught nearly 800 students. A former food writer, she began her butchery career after being laid off from Portland Monthly magazine in January 2009. "It felt like the right thing to do in terms of really wanting to know where my food came from and having a little more power over the system that brings food

Davis draws on her overseas experience learning about butchery and charcuterie, a term for preserved meats like bacon. The summer after losing

1. There are more than 67 million pigs

in the US; 62 percent live in the Corn Belt

States with Iowa as the top pig

her job Davis headed to southwestern France where she studied with the Chapolards, a third-generation family of butchers and farmers. She was impressed by the amount of control the Chapolards had over their meat production. They owned and oversaw the entire process, from pasture to market. "They made all of those choices on their own without entering into some really complicated distribution chain," she says.

With her new knowledge, Davis returned to Portland and began brainstorming ideas for the PMC. She focused on reducing the distance between farm and table by connecting PMC members directly with local meat suppliers. Davis hopes to foster a "new economy of meat" that centers on ethically and sustainably raised and slaughtered animals. "It changes your relationship to your food when you get that close to the production system that makes it appear on your table," she says.

Since Fleischer's in New York City first popularized the DIY meat movement in 2009 by offering butchery apprenticeships, similar classes have emerged across the US. Lauren Sheard and her husband run the slaughter and butchery business Farmstead Meatsmith out of their home on Vashon Island, Washington.

"Sometimes we don't know where our meat is coming from until we take control of it and we do it ourselves," Sheard says. Farmstead Meatsmith classes focus on how to slaughter animals under the custom-exempt rule, a distinction that allows people to process animals at locations not certified by the US Department of Agriculture (USDA). It's an important lesson for small farmers who often find it difficult to get their animals processed at

#### "If you're going to kill a creature by chopping its head off, it's not the moment to be tentative."

larger USDA-certified facilities that don't see it as profitable to slaughter a farmer's small number of animals. Only the owners of the custom-exempt meat are legally allowed to consume it so many small farmers will pre-sell their live animals to customers.

The Sheards founded Farmstead Meatsmith in 2010. "It's really neat because the course pulls in people from all demographics," Sheard says. Students range from older community members to young professionals interested in getting their hands dirty.

Instead of viewing meat as an abundant selection of vacuum-packed ribs, chops, and roasts, home butchery offers a smorgasbord of new, exciting cuts.

"You're having to look at the animal and at every part of it as an occasion for a meal," Sheard says. "When we go to the grocery store, we think pork tenderloin, pork chops, but we never think a pig's tail, so we



During one of her pig butchery classes, Camas Davis of the Portland Meat Collective cuts

along the ribs of a pig. Her butchery tools include a bone saw, which is used to separate



have to start thinking about our meat a little bit differently."

the pig into its primal cuts.

Much of the public's knowledge of "nose-to-tail" eating was lost with the advent of the supermarket and the consolidation of the meat processing industry, says Tia Harrison, co-founder of San Francisco's Butcher's Guild, a collective of butchers, chefs, and consumers. Beginning in the 1950s, many small slaughterhouses were shut down in favor of larger processing facilities that required less labor. Fewer slaughterhouses meant meat was cheaper but also more uniform with "case-ready" meats already packaged into secondary cuts like pork chops as the new standard. Not only did these cheaper cuts damage artisan butcher shops that could not compete with the "case-ready" prices, but they also altered the American perception of what meat looks and tastes like. Consumers could no longer request a special cut from a butcher and so lost interest in off-cuts and organ meats.

"Animals don't come in cookie-cutter sections." Harrison says. "You don't have a thousand tenderloins sitting next to five short loins. It's not an equation that's realistic."

In Harrison's opinion, part of home butchery's role is to re-educate consumers about the variety of meat available. "You can really see the information click in people's minds when they've gone through the process and they see a cut that they're used to purchasing at a supermarket or in a restaurant," Harrison says. When that happens, she adds, students get a rare glimpse into where their meat comes from both in terms of the physical location and the level of effort that goes into procuring it.

One reason many learn butchery is to come to terms with the ethics of being a carnivore. While meat can be delicious, procuring meat inherently

butchery programs involve live animal slaughter.

"I just feel a whole lot better about being a meat eater when I feel like I can take responsibility for all of the aspects of being a meat eater," says Lauren Bilbao, an adjunct instructor at the University of Oregon's Urban Farm. Bilbao began raising and slaughtering chickens in the early 1990s. She now teaches chicken processing techniques to friends and students at her

Over the years, Bilbao has refined her model for slaughtering chickens. "If you're going to kill a creature by chopping its head off, it's not the moment to be tentative," she says. "There's nothing more painful than watching a person with bad aim make the chicken's beak shorter by an eighth of an inch at a time until they finally actually kill it." Most students, she says, are glad to have experienced a slaughter firsthand.

Back at the Ladies Home Butchery class, the women sit down to a snack of cured meats, bread, and French wine. Satterfield brings in a plate of sliced pork cooked in olive oil, a product of the afternoon's labor. One woman asks how best to freeze the meat she is taking home; another requests Satterfield's home-cured bacon recipe.

Davis believes experiencing the butchery process can change a person. "It makes you value things differently. It makes you think about the world differently. It makes you understand the meaning of sustenance differently, she says. "I think picking up a knife and putting it to bone can actually be a very transformative experience." While students might approach butchery with their own preconceived notions about meat and its value, Davis hopes that they leave class with a new understanding of their food and, of course, with armfuls of all the right cuts. •

-BRENNA HOUCK

2. Most pigs are sold at 265 pounds. It takes them only six months to hit that weight.

3. Despite a reputation as "the other white meat." pork is actually a red meat because it contains more myoglobin (an oxygenbinding protein in muscle) than chicken or fish.

4. Each year the average American eats between 45 and 50 pounds of pork. Now who's the pig?



ETHOS MAGAZINE SPRING 2012

Little Piggy

ETHOS MAGAZINE SPRING 2012

# RANDEST OF THE RANDS WINNER 201



FROM LEFT TO RIGHT: Andy Page, Susan Richardson, Rebecca Conner, and Dusty Carlson play a set at the Lorax cooperative in Eugene, Oregon.

ot Milk isn't your grandmother's jazz quartet, though that statement assumes a lot—about jazz, about music in general, about your grandmother. We have this image of jazz as something old-timey and rarefied, belonging to a lost age (the Jazz Age, in fact) when "today" was spelled "to-day" and the Charleston was considered most obscene. But that image isn't even half true. Jazz is, as Hot Milk would tell it, the only art form original to America; indeed, would it be so overblown to say that jazz created American culture as we know it? The greatest artists in the genre are known as "kings" and "queens" and "gods" for a reason. Atop these giants stand the members of Hot Milk, the 2012 winner of *Ethos*'s Bandest of the Bands competition.

Like any decent, self-respecting jazz crew, the story of Hot Milk begins at a club, at Eugene's own Campbell Club cooperative. "My first weekend of college, I went to the Campbell Club, and they were having a gender bender party," says Andy Page, the band's saxophonist. There he met Rebecca Conner, lead vocalist and guitarist. "She had a mustache, and I said I played saxophone and she gave me a hug."

Conner also met the other two members of the band—Dusty Carlson, bassist, and drummer Susan Richardson—at the Campbell Club during open mic nights hosted by the co-op. The four were drawn together by their mutual adoration of jazz music; in early 2011 they started calling

themselves Hot Milk.

One element of jazz that appeals to each Hot Milk member is the liquid nature of the genre. "It's ever-changing. Even when it was first a thing, jazz was pushing, changing into something new," Richardson says.

Page agrees: "The jazz tradition is to push the boundaries of whatever is comfortable." In other words, the jazz tradition is that there is no tradition at all. Because of this and because of its amorphous quality, jazz is just as strong now as it ever was even as it continues to change.

In Page's estimation, jazz is a distinctly American art form that, because of its roots in blues, a music style born from African-American culture, couldn't have gotten started anywhere else in the world. Despite its US origin, Conner fell in love with the genre while traveling around Europe. She'd listened to Billie Holiday in middle school; at the time, it wasn't really her thing. But in Europe, going to jazz clubs every night and writing in her journal about her experiences, writing about how she was "falling in love with the world through jazz," Conner was completely taken by the music.

"One day I realized I needed to spend the rest of my life learning to play jazz," she says. "I had to explore."

Each member of Hot Milk has a similar story, one that illustrates the magnetism of their chosen genre. Page got into jazz after concluding that the saxophone looked and sounded cooler than the clarinet he'd played

during grade school. Things got serious for Page when playing the sax became more important to him than his two main high school activities: skateboarding and football. After she listened to some jazz drum solos as a child, Richardson didn't stop banging away on kitchen pots and pans until she got a drum set of her own. (Nonetheless, she still occasionally uses cookware as instruments.) Carlson says he was "hooked" as soon as he listened to Miles Davis's quintessential jazz album, *Kind Of Blue*.

Blue is the signature color in the jazz musician's palette. "A lot of people describe jazz as playing colors," Page says. "When you're playing, you might go, 'This needs some blue,' and because you practiced the rudiments and building blocks to a point where it's almost automatic, you instantly know the scales that are blue."

That sort of learned technique in making it up is central to jazz or, as Carlson puts it, the "ultimate form of improvisation." Despite this improvisational core, something that seemingly goes against the idea of teaching, all the members of Hot Milk are jazz students: Richardson and Page at the University of Oregon, Conner at Lane Community College, and Carlson from Western Illinois University with a degree in music performance. The purpose of jazz studies is to learn how to listen to other musicians and build off what they've played, how to have a conversation with musical notes.

"It's really like learning a new language; it's a collaborative making stuff up," Page says. "Eighty percent of what your brain is doing is listening to everyone else."

This ethic of improvisation and conversation extends beyond the music Hot Milk plays. Unlike the RZA of the 1990s rap group Wu-Tang Clan or the infamous Soviet leader Joseph Stalin, both of whom had carefully plotted and meticulously followed five-year plans, Hot Milk doesn't have a set blueprint for the next half-decade.

"We're pretty free-spirited," Richardson says. "I don't think any of us have a plan for that far in advance."

Still, the group has an eye cast toward the future, even if nothing's exactly mapped out. "I like to plant seeds for the future," Page says. "I think, 'By this time a year from now, I want this, whatever it may be, to have happened." He says a year ago, he wanted Hot Milk to be regularly booking shows in Eugene, and today, they play a gig almost every weekend. They're where they want to be.

The opportunity to record their music in a studio (part of their Bandest prize package) presents a new set of prospects and challenges. "Recording is a totally different beast than playing live," Carlson says.

Conner explains: "You feed so much off the audience so you have to internalize that energy in the studio and still sing to the crowd even though there's nobody there." Another concern Conner has about recording is that it tends to make the artist overthink how the music sounds.

That said, Richardson considers recording Hot Milk's music a valuable exercise. "It's good to think about what it sounds like sometimes. It gets you to that point where you're like, 'We have to make everything sound really good right now.""

At the moment though, the members of Hot Milk are more focused on performing in a band with musicians who all enjoy sharing jazz. As Conner says: "I love playing with these people more than anything that I could ever imagine for myself." •

-JACOB O'GARA







**CLOCKWISE FROM TOP LEFT:** Page wails on the sax while Carlson saws on the bass during the third annual Bandest of the Bands competition, hosted at WOW Hall on January 28, 2012.

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Thousands get a second chance at sight thanks to Oregon's only eye bank.



a.m. and by 1 p.m. she was dead," says Dorothy "Dee" Walsh, whose

shopping when she collapsed in a seizure. Paramedics were able to once again at the hospital, but by the time her mother arrived, Benson had passed away.

"It was an incredible loss and the grieving process was slow and painful," Walsh says, "but even in

You have to realize that by giving this gift, a piece of your loved one lives on forever."

> such a hard time we knew that my daughter's death someone else." Benson was an

organ donor.



The tissue from an eye donor like Amy Benson can help up to ten people regain their sight. Photo courtesy of the Walsh family.

Representatives of Oregon's only eye bank, Lions VisionGift, contacted Walsh shortly after her daughter's death. Benson's eyes would be donated, they explained.

"It's hard to put it all into words," Walsh says. "You love someone so much and you never want them to be taken from you. For someone to suggest that they want to take just a part of them is even harder. But you have to realize that by giving this gift, a piece of your loved one lives on

It's the message that organ donation is a gift that the Lions VisionGift team works to share. The group determines the eligibility of every potential donor that becomes available in Oregon and southwest Washington. Once a donor is selected, a VisionGift specialist calls the grieving family and talks them through the donation process while local technicians head to the hospital to collect the tissue.

"We're lucky in Oregon because we tend to have a constant supply of eyes," says Corrina Patzer, Director of Business Development for Lions VisionGift, Each year approximately 600 corneal transplants are performed in Oregon, many of them at the state's two largest care centers: the Casey Eye Institute at Oregon Health and Science University (OHSU) and the Devers Eve Institute at Legacy Good Samaritan Medical Center. In the 37 years since it opened, Lions VisionGift has provided tissues that have helped more than 18,000 people see.

It requires constant gratitude and education to keep a community donating, says Patzer. In order to be successful, Lions VisionGift must be more than just an eye bank.

In 1925, Helen Keller challenged the public service group Lions Club International to be "knights of the blind in the crusade against darkness." In response, the Lions began opening organ banks across the US, and eventually the Lions Eye Bank of Oregon in 1975. Last year the group changed its name to Lions VisionGift to highlight what a life-changing present an organ donation is.

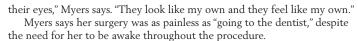
"It's the most unselfish gift you can give," says Lynda Myers, who received a corneal transplant in 2007. "I was in jeopardy of not being able to drive and I was about to lose my job," she says of the time before her

After waiting six months for surgery, Myers had both of her corneas and some surrounding tissue removed, which had been compromised by a genetic disorder called Fuchs' dystrophy. Her right cornea was donated from a 65-year-old man; her left, from a 35-year-old woman.

"Although I think about my donors everyday, my eyes don't feel like



Donated corneas wait for the perfect recipient. More than 1 million Americans currently need a new cornea. Photo courtesy of Lions VisionGift.



"I remember that my doctor was training another doctor so he was explaining each step as he went along," Myers says. "That was fascinating and I kept telling myself that I'd remember the whole thing for the rest of my life. But after all the drugs wore off, I couldn't remember a single step."

After her surgery, "colors seemed vibrant," Myers recalls. "I know that doctors warn patients that it can often take the eyes some

time to adjust after the surgery, but it wasn't like that for me," she says. "I was able to see colors much brighter and shapes appeared more rigid."

Myers's eyesight rapidly improved as her vision transitioned from 20/80 to 20/20 in one eye and 20/25 in the other.

"I was going to be legally blind and now I have nearly perfect vision," she says. "It's like every day is Christmas Day."

After her transplant, Lions VisionGift offered Myers a packet with suggestions for post-surgery recovery and opportunities to contact the families of her donors. Walsh was given a similar packet after her daughter's

Although Lions VisionGift encourages recipients to write thank-you letters, which the organization sends to provide all involved anonymity, it took Myers nearly two years to contact her donors's families.

"I didn't know what to say," Myers explains. "I can't simply write: 'Dear Donor: Thanks a lot for the eye. I'm having a great life now. I'm sorry for your loss. Love, Lynda.' This is the most unselfish gift someone can give. I needed them to know how truly grateful I am."

Myers continues to wait for replies to her letters. Although she knows it is unlikely that she'll hear back, she says she would love to meet each donor's family, if only to express her gratitude.

Although Walsh's family never received a letter from a recipient, she knows her daughter's donation is appreciated.

"Lions VisionGift sent us a medallion to honor Amy," she says. "I still hang it near her picture."

Walsh also received a letter inviting her to join the Lions VisionGift Donor Family Advisory Committee, a support group for donor family

"The recipients get a lot of attention—and they should," Walsh says, "but you can't forget about the family on the other end of that transplant."

In order to express her gratitude, Myers joined several organizations after her surgery. She volunteers and sometimes speaks about her experience



Doctors at Lions VisionGiff use a slit lamp to examine the front of an eve.

at OHSU, Lions VisionGift, and organ donation nonprofit Donate Life Northwest. Myers also communicates online with individuals who have questions about her operation.

"Every morning when I'm brushing my hair and looking in the mirror with such clarity, I say a little prayer for my donors," Myers says. "Because of them I can see color, keep my job, and ride my motorcycle. Because of them, I can live the life I want to live. If I ever meet my donors's families, I'd simply want to say 'thank you.'" -NEETHU RAMCHANDAR

"I was going to be legally blind and now I have nearly perfect vision. It's like every day is

Christmas Day."

Dorothy "Dee" Walsh of Portland, Oregon, worked with Lions VisionGift when her daughter's eyes were donated. In 2007, Lynda Myers received a dual corneal transplant, one of the most commonly performed procedures in the US. More than 46,000 people undergo it each year.

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# From Caux Pas to Friendship An American abroad trips on the language barrier.

othing had gone as planned. For months, I had diligently organized my first study abroad trip. I skipped midnight fast food runs with friends to review subjunctive conjugations. I staved up late to read travel books about the Loire Valley. I even changed the language setting on my iPod to Français so I could pick up a few more vocabulary words. But none of these preparations would matter, as

I discovered soon after departing for France in summer 2009.

My plane landed in Charles de Gaulle Airport 30 minutes behind schedule. Because of the cramped quarters in coach and the overly affectionate passenger who used me as a pillow for most of the trip, my left shoulder had fallen asleep. In the commotion of reinvigorating my appendages and grabbing my luggage, I left behind my Larousse French dictionary. Then while trying to navigate from

the airport to Montparnasse Station, I became so utterly

lost that I missed my train to Angers, the city I would call home for the next month. When I finally boarded the next train, it was delayed on the tracks because of flooding. By the time I arrived at 11:30 that night, all I'd had to eat that day was a king-size bag of peanut M&M's and a bottle of Aquafina. I was exhausted, hungry, and in no mood to struggle with a foreign language.

Too bad.

The minute I stepped onto the platform I was drowning in the sounds of native French. Each conversation was so advanced that it kicked my six years worth of studying right in the derrière.

Newly terrified that I had signed up for the most stressful summer ever, I began searching for my host family. Across the platform, I spotted my host mother waving like an air traffic controller. With her was an American friend of mine who was also studying abroad and had arrived the day before. I was jet lagged and disheveled from my 14-hour nap in coach; my friend, rested and cheery, made me look even worse by comparison. Worn out as I was, the thought crossed my mind to accidentally drop my 40-pound suitcase on her foot just to even the playing field.

But there was no time to linger on my frustration. My host mother enveloped me in a hug and spouted a flood of foreign greetings: "Salut, ma petite fille! Le voyage, c'était bon j'espère? La famille ne peut pas attendre de te rencontre. Donc, allons-y!"

I searched my brain for recognizable words. Je is a proper noun, right? Do I use the *tu* or *vous* form? Did she even speak in full sentences? Everything she said sounded like one long word! I simply smiled, hoping it would pass for comprehension.

The insecurities I felt about my language skills continued at my host family's house. My host father, after welcoming us at the front door in similarly rapid and unintelligible French, led the way to the dining room. Here I saw three young men (my host brothers) standing around a gloriously laden table

I learned that my host mother, an elegant woman who can only be described as a cross between Coco Chanel and Martha Stewart, had spent the day preparing the elaborate meal before me. Cheese platters, warm baguettes, and rich red wine filled every inch of the table and shortly thereafter, every ounce of my stomach. Grateful for my host family's generosity but too stuffed to eat another bite, I told them, "Merci, mais je suis plein." Thank you, but I am

Well, that's what I thought I said.

As soon as the words were out of my mouth, the entire room fell silent. My host father's fork hovered midway between his plate and his open mouth. My host brothers stared at their plates with such intensity I almost expected their eyes to bore holes through the flowered china. My host mother began to slowly remove all of the wine bottles from the table. Only my fellow American made a sound.

"'J'ai mangé bien' means 'I'm full,'" she whispered to me. "What you just said can also mean, 'I'm

Horrified by my mistake, I quickly yelped, "Non! J'ai mangé bien! No! I am full of food!" But they continued to stare. Blushing and flustered, I closed my eyes, buried my head in my hands. and desperately tried to hold back tears of embarrassment.

And then I heard a snort.

I peeped out from between my fingers to see my host father raise his glass of wine and laugh. He chortled. He snickered. He guffawed. The room was bright, almost vibrating, with the sound of his laughter. Then everyone else burst into hysterics, including me.

Yes, I was embarrassed. But I would never redo that moment. It was a verbal boo-boo that taught me to simply laugh at myself. It was a faux pas that broke the ice and began a lasting relationship with my French family. It was an amusing anecdote that encouraged me to return to France two years later on another overseas adventure. Even today, that mortifying incident manages to creep into conversation. A recent Skype call with my host brother ended with, "Talk to you soon and say boniour to the baby for me." •





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