Gray wolf seen in Minnesota (AP Photos)

Gray Wolf Comeback Success! Now What?

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Isak Heartstone sits comfortably among the trees on the rural Trollstigen trail in the woods near Breckenridge, Colorado. He smiles charmingly at passersby. The large wooden troll is the work of Danish artist Thomas Dambo. It was originally constructed last summer for a Breckenridge town festival, but his location at that time drew too many tourists into a residential area. So the townspeople voted to relocate the gentle giant. Dismantling began in November, and reconstruction took place this spring. In May, the artist arrived with the finishing detail for Isak—a stone heart. Once affixed, the wooden sculpture was complete in its new home and ready for the public to visit again. (AP Photos)
Rabbits, snakes, and alligators are the only visitors to the abandoned Six Flags amusement park in New Orleans these days. But the motionless Zydeco Scream roller coaster and Big Easy Ferris Wheel still stand—grim reminders of the city’s darkest moment. In 2005, levees failed and the low-lying city flooded as Hurricane Katrina made a direct hit on Louisiana’s biggest city. The theme park closed and never reopened. A cracked sign outside still reads, “Closed for Storm.” New Orleans Mayor LaToya Cantrell says the city is evaluating the cost to completely demolish the rides and other infrastructure in the once-vibrant 65-acre park. No investors currently have plans to build again there. Brian Coppolino and his Ohio church group came to New Orleans to help rebuild homes. They stopped at the park site out of curiosity. Coppolino called the ghostly park sad, saying, “We’re seeing firsthand how long it takes to recover.”

High in Haiti’s rural hills, men load bales of beige, stringy vetiver plant roots onto each other’s backs. An essential oil extracted from these roots is used in famous fine perfumes such as Chanel. Haiti is the poorest country in the Western Hemisphere. But it’s a significant contributor to a multimillion-dollar industry. Haitian agronomist Hilaire James called vetiver harvesting “our biggest income right now.” Haiti produces more than 70 tons of vetiver oil annually. That’s more than Indonesia, China, India, Brazil, and its neighbor, the Dominican Republic. But impoverished farmers may be damaging options for long-term profits. Vetiver takes at least a year to produce mature roots needed for the best oil. Some farmers are too poor to wait the full year or more to get paid. But harvesting too early affects oil quality—which could reduce demand for Haitian vetiver by fine perfumers and cosmetic companies.

Crews in Southern California were assessing damages in early July. On Friday the 5th, the area was hit by the largest earthquake in nearly 20 years. First reports called it a 7.1-magnitude quake. It was later revised to 6.9. The quake jolted an area from Sacramento to Las Vegas to Mexico. No fatalities or major injuries were reported, but seismologists warned, accurately, to expect aftershocks for days. Several road segments crumbled, water and gas lines broke, and buildings cracked and burned. Another somewhat smaller quake preceded this one just the day before. The activity was a wake-up call to many Californians who had lived on relatively stable ground for the past two decades. California is situated over several fault lines—where plates beneath the Earth’s surface meet. The most well-known is the great San Andreas Fault.
As trash bins in the streets of Italy’s capital city overflow, doctors warn of possible health hazards. The heat last summer only compounded the problem. Trash disposal is a decades-long problem in Rome. The city produces about 1.7 million metric tons every year. But a major landfill was closed in 2013—with no adequate alternative established. Dogs, cats, rats, and birds rummage through the rubbish, leaving bacteria-infested waste behind. Officials in Rome are at odds over solutions for dealing with the contaminated refuse. But they agree that the problem needs a total system overhaul—not just a short-term fix. Marco Cacciatore is president of the local commission for environmental and city politics in Rome. He says, “No waste plan can solve a problem aggravated by 60 years of mismanagement in one year.”

It was the longest trek ever recorded by an arctic fox, say researchers at the Norwegian Polar Institute. A less-than-one-year-old female walked more than 2,737 miles. She traveled from northern Norway to Canada’s far north in four months. The young fox was born on Norway’s Svalbard archipelago. She traveled across sea ice to Greenland and then on to North America. Scientists monitored her movements with a satellite tracking device. She had been fitted with it as a young pup. The researchers say she left to seek a place to call home—to settle, breed, and raise her own pups. It’s not known why arctic foxes leave their birth places to resettle in different areas.
Tonight, Annekathrin Fiesinger probably won’t cook. Instead, she’ll use her smartphone to check nearby restaurants, hotels, and bakeries in Berlin, Germany, for discounted food—meals that otherwise might get thrown away. She’s part of a growing movement: using technology to reduce food waste.

Studies show that about one third of all food ends up in the garbage. Add that to the energy and resources required to cook meals that end up in the trash, and you have a big problem. “We cannot go on,” Fiesinger says, “with all this wastefulness.”

Jesus was concerned about food waste too. Remember the feeding of the 5,000? He told His disciples, “Gather the pieces that are left over. Let nothing be wasted.” (John 6:12 NIV) Of course, His purpose was displaying His power to provide perfectly and abundantly. But managing resources well is always an outworking of wisdom.

Reducing food waste is a big deal in Germany. It’s catching on in other European countries too, where consumers and business owners use leftovers before buying or making something else.

Waste-not concepts include online forums encouraging food-sharing with neighbors and store alerts about marked-down, nearly expired groceries. Another trendy option is an app that directs people to purchase food that might otherwise get tossed.

Fiesinger uses “Too Good To Go,” Europe’s most popular app for finding discounted unsold food. The app accesses a phone’s GPS to signal the user about locations and types of extra food for sale. “It’s super easy: just download the app and, on your way home, pick up what you like best,” Fiesinger explains while scrolling through photos of veggies, pastries, and unsold specials.

About 10 million people currently use “Too Good To Go”—with more than 5,000 daily downloads in Germany alone. It’s popular in Denmark, France, Britain, and Poland too. One estimate suggests the app has saved over 14 million meals from the trash heap.

Similar food-sharing apps include FoodCloud, Karma, and Olio. Of those, only Olio is available in the United States.

A growing number of German businesses participate in app-based plans. Most charge about half the original price for a meal. Some donate their unsold food to charities that distribute it to the homeless or those in need.

For dinner, Fiesinger selects pasta from a nearby restaurant. She completes the entire transaction on her phone. In Berlin, “there’s something waiting for you on every corner,” she says.

Restaurant owner Armin Doetsch happily participates. “We often have leftovers,” he says. “Rather than tossing it, we prefer to give it away, even if it’s only for little money.”
In a world where many go hungry, most Americans can be thankful that food quantity isn’t our biggest problem. But food quality may be a major concern. Obesity is rising around the world as inexpensive and convenient packaged food options increase. We know that junk food—chips, soda, cookies, frozen pizza, and so on—tend to be full of salt, sugar, and fat. That combo can pack on the pounds. But now scientists are trying to understand if there’s more about processed foods that might be bad for us.

Three recent studies offer clues on how the industrialized food supply affects health. But they also underscore how difficult changing habits can be.

WHAT DOES “PROCESSED” MEAN?

Nearly all foods undergo some processing. Much of it isn’t harmful. But even though processing (milling, freezing, pasteurizing) doesn’t automatically make food unhealthy, “processed foods” is generally a negative term.

Scientists define highly processed foods as those that offer little to no intact food. They contain mostly industrialized ingredients and additives. Sodas, packaged cookies, instant noodles, and chicken nuggets are examples. But some wholesome-sounding products, such as breakfast cereals, energy bars, and some yogurts, also fall into this category.

WHAT’S WRONG WITH PROCESSED?

Researchers at the National Institutes of Health conducted a study with 20 participants. The test subjects ate as much or as little as they wanted—first from a diet of highly processed foods. Next, they were offered minimally processed foods.

The researchers matched the meals for nutrients and appeal. But still, the same people averaged 500 extra calories a day when choosing among the processed foods.

Elsewhere, researchers in France found people who ate more processed foods were more likely to have heart disease. A study in Spain linked eating more processed foods to a higher risk of death in general.

Why is it so hard to stop eating cheese puffs and ice cream? Two possible factors were identified.

First, when fed minimally processed foods, people in the trial produced more of a hormone that suppresses appetite. They produced less of a hormone that prompts hunger. The reason for the biological reaction isn’t clear.

Second, people ate processed foods faster. “Those foods tend to be softer and easier to chew and swallow,” says study leader Kevin Hall. Eating faster usually means eating more.

IS IT EASY TO CHANGE HOW WE EAT?

Limiting processed foods for a healthful diet makes sense to most people. More natural foods tend to have more nutrients, which our bodies need. They’re often harder to overeat, because they require more chewing time—and usually a little planning and some work. It takes longer to peel an orange than to unwrap a Twinkie or to munch a cup of cucumber slices than a comparable amount of potato chips.

Still, following that advice can be hard for people with limited time and money. Sarah Bowen studies food and inequality at North Carolina State University. She says it’s not enough to simply say, “Change the way you eat.” She says advisors should first understand “why people eat the way they eat.” Then practical suggestions for change can help improve health in sustainable ways.
Mooooove over. A herd of cows invaded Chicago this summer. The fiberglass bovines marked the 20th anniversary of a popular art installation—one that inspired additional sculptures from hearts to lobsters in other cities. But the exhibit’s lasting effect goes beyond quirky statues.

Peter Hanig owns a store on Chicago’s famed Michigan Avenue. Over 20 years ago, Hanig saw decorated cows dotting the city of Zürich, Switzerland. He found the cow concept “interesting.” But what really impressed him was “that people were stopping and looking and sort of communicating with each other.” For Hanig, the point wasn’t the art. It was the human interaction that it prompted.

Hanig approached Chicago’s Department of Cultural Affairs with an idea: Get local businesses and artists to sponsor and create cow art. “Cows on Parade” was born. The summer of 1999, 334 life-sized cows showed up on city sidewalks and in public gathering places. The cows sported flowers, baseball caps, Hawaiian shirts, sunglasses, ladybug wings, and more. One clever brown bovine featured the word “HOW” on one side and “NOW” on the other.

Even in that pre-selfie era, folks took pictures with the cows. Tours sprang up. People voted for favorites. Chicago officials estimate the cows earned the city about 150 million in tourism dollars. Income from selling the sculptures exceeded $3 million. Chicago Tribune writer Louise Kiernan noted that the cows were probably “the most popular use of fiberglass since the invention of the hot tub.”

Why were the decorated cows so popular? Some credit the do-it-yourself and crafting movement. Others say city pride. Still more praise the allure of everyone’s favorite farm animal. Then-Mayor Richard Daley’s take was simple. “People sometimes, in public art, are afraid to admit they don’t know what it is. Here they know what it is.”

Other cities began copying Chicago. There were buffalos in (you guessed it) Buffalo and cats in Catskill—both in New York. Juneau, Alaska, had whales, and Jacksonville, Florida, had manatees. There were roosters, angels, guitars, horses, peanuts, corn cobs, penguins, tulips, and oh, so many bears.

This summer, Chicago commemorated those first cows with a month-long exhibit called “Cows Come Home.” Some 20 original cows were on display in a park on Michigan Avenue. Chicagoans welcomed the return of the cows. Hanig, who owns some of the original statues, isn’t surprised about the cow craze he started. “I saw something happening,” he says. “It was changing the dynamic of people of the street, the aloneness.” And that goes beyond art or animals.
Few typewriter repair shops remain open in the United States. But for those few, business is booming. A younger generation has discovered the joyful sound and feel afforded by the manual typewriter.

First word processors and then computers replaced the clackety-clacking keyboards that pumped out printed pages right on the spot. But what’s old is new once again.

Paul Schweitzer, age 80, owns the Gramercy Typewriter Company. His father founded it in 1932. He now works alongside his son Jay and grandson Jake. Schweitzer never fell out of love with the typewriter—no matter what advanced technology offered. But despite his affection for the mechanical contraption, he pleasantly wonders about the renewed interest: “What’s surprising to me is that the younger generation is taking a liking to typewriters again.”

Schweitzer sells dozens of old typewriters over the holidays, and he still makes “house calls” to repair sticky keys and shredded ribbons in homes and offices around New York City. But he won’t trust all his income to the resurging trend. He also services HP laser printers and other modern office products. Diversifying promises financial stability in case people’s preferences change again.

Two documentaries in the last decade helped boost Millennials’ interest in vintage typewriters. But young adults also have a soft spot for other hands-on, non-digital tech, like vinyl records and fountain pens.

Ellen Lupton is a curator at the Cooper Hewitt, Smithsonian Design Museum. The museum displays an array of typewriters from over the years. “There’s an irresistible tactility to typing on a typewriter, a satisfying sound, a feeling of authentic authorship. No one can spy on you, and there are no distractions,” she says of the renewed popularity. That’s distinctly different from the computer, where viruses threaten and myriad internet sites lure writers from work.

Even smartphone keyboards owe their design to the old typewriter key so that a capital letter struck the paper. The letter arrangement on the manual keyboard put the most-used keys into easiest range of dominant fingers for the average typist—but also spread letters out so that striking the common ones quickly wouldn’t tangle the tiny hammers carrying raised letters to the paper’s surface. That same “QWERTY” arrangement carried over to today’s electronic keyboards. The return key is based on the typewriter’s lever. It moved the carriage into position for the next line—preceded by a warning “ding!”

Students visiting Chicago’s American Writers Museum started their own typewriter club after a field trip. One fifth-grader, upon discovering his first typewriter, exclaimed, “Wow, this is great! It’s an instant printer!”

SEPTEMBER/OCTOBER 2019

WORLD TEEN 9
As the world watched in sadness, Paris’ famed Notre Dame Cathedral was engulfed in flames last April. Grief flooded the hearts of many more than just French citizens. Almost simultaneously, donation promises flooded in as well.

But what has become of those promised funds since the tragic fire? As of mid-June, the billionaire French donors who publicly pledged huge, flashy donations totaling hundreds of millions of dollars to rebuild had not given a penny. Church officials reported that instead, it was mainly American citizens footing the bills.

Donations received through the charitable foundation Friends of Notre Dame de Paris (FNDP) paid salaries for up to 150 workers employed by the cathedral after the fire. In June, FNDP handed over the first payment for the reconstruction. It amounted to about $4.1 million. "The big donors haven’t paid. Not a cent," says Andre Finot, senior press official at Notre Dame. He noted that those donors were unwilling to hand off control of the end result. Nor were they interested in supporting cathedral employees during the cleanup. "They want to know what exactly their money is being spent on and if they agree to it before they hand it over, and not just to pay employees' salaries," Finot says.

Almost $1 billion was promised by some of France’s richest and most powerful families and companies. Some tried outbidding others in the days after the inferno. Critics claimed the wealthy wanted only to be immortalized in the edifice’s fabled stones. But individuals—such as those donating through the Friends foundation—sought no such recognition. Thousands dropped modest contributions into the fundraising coffers. They simply want to preserve the church’s heritage.

Owners of companies and brands including Gucci, Saint Laurent, Louis Vuitton, Dior, and L’Oréal made pledges. But while the day-to-day work at Notre Dame continues, those financial powerhouses debate contracts and haggle over reconstruction plans. FNDP president, Michel Picaud, estimates that 90% of its donations have come from American individuals and smaller businesses.

Picaud testifies that Americans donate out of love for the cathedral and its history. Of the big donors who are withholding their contributions, several reasoned in official statements that their delays were to ensure plans were consistent with their companies’ particular vision.

Jesus once sat observing donors to His temple’s work. Some put in big sums. But He praised a woman who gave only a pittance—two copper coins. It wasn’t the amount that mattered to Him. God values cheerful giving that comes from trusting Him and not a desire to control the results for personal gain. (Luke 21:1-4; 2 Corinthians 9:7)
Cows don’t get seasick according to Peter van Wingerden. He should know. Van Wingerden is the designer and owner of the world’s first floating dairy farm. His Rotterdam, the Netherlands, boat-turned-milking station is charting a way to produce dairy foods within a busy modern city.

Moored in Merwe Harbor, the ultra-modern three-story structure smells of manure, grass, and sweaty cows like any other dairy. The boat’s roof collects rainwater, and a raft of solar panels bobbing alongside produces nearly half the electricity the farm needs. Onboard robots milk cows and scoop manure. The boat-housed bovines enjoy a medley of local produce. Grass comes from a nearby golf course and the field used by Rotterdam’s top soccer team. It is mixed with grain and potato peelings from a local brewer and transported to food troughs via conveyor belts.

Van Wingerden’s design makes life as easy as possible for the cows—floors and poles are rubber instead of metal. A small meadow dotted with wildflowers grows on land next to the pontoon. Once fencing goes up, cows will be free to walk down a ramp and graze in more ordinary surroundings. When the herd reaches its capacity of 40 cows, it should produce 211 gallons of milk each day. Machines will pasteurize the milk and turn some of it into yogurt right on the boat.

What resourceful ideas! As the first Creator, God delights in the creativity of the human mind.

Jan Willem van der Schans specializes in urban farming and circular economies (systems that try to reduce waste and use and reuse resources wisely). He believes floating farms could be the future for some foodstuffs in certain parts of the world. But he sees one problem: People may oppose the project because it seems “unnatural.” He cautions, “These are animals that we all like and then we like to see them in a meadow,” not on a high-tech boat.

Van Wingerden understands the objection. Still, he says, “We have to find a different model.” Instead of exporting food, Van Wingerden says, “We should start exporting knowledge and technology.”

The pontoon rises and falls gently in the wakes of nearby ships. The movement doesn’t seem to affect the animals. “The cows are on four feet, so that helps,” Van Wingerden says. “They don’t get seasick at all.”

Van Wingerden believes his farm demonstrates an important new way of producing food—one that is sustainable and close to where most of it is consumed: in cities.
Inside an Indiana aquafarming complex, thousands of salmon eggs grow—faster than normal. The eggs have been genetically modified. They will hatch into tiny fish and then mature more quickly than other farmed or wild salmon. “Genetically modified” means scientists have altered a gene in the organism’s DNA. In this case, the gene affects growth rate.

Once these fish reach about 10 pounds, they will be marketed to restaurants. That could happen as early as 2020.

The salmon are produced by a company called AquaBounty. They are the first genetically modified animals approved for human consumption in the United States. AquaBounty hasn’t yet sold any fish in the United States. But the company is targeting restaurants and university cafeterias for sales soon.

Some consumer advocacy groups call for caution regarding GMOs, or genetically modified organisms. They express concern that changing plant or animal DNA could have health consequences for people who consume them. Biologists working in genetic modification believe those concerns are unfounded. They say GMOs are necessary to feed the world’s growing population. The Genetic Literacy Project states that the world’s population will reach 10 billion by the year 2050. To meet corresponding food needs, agricultural production will need to double worldwide.

Currently, only a few GMO plant food products are sold in the United States, according to the U.S. Department of Agriculture. Corn is the most common. But more than three-quarters of the GMO corn produced is used for livestock feed and ethanol for fuel. Soybeans follow closely after. Sugar beets, papaya, and Canadian-grown canola oil come next. The plants have been modified for various reasons: corn and sugar beets to grow larger and faster with a higher sugar content; soybeans to increase edible yield per plant; papaya to fight off a natural virus that kills the plant; and canola to resist chemical pesticide absorption.

AquaBounty’s salmon are modified with the intention of producing more food more quickly. To create the fast-growing salmon, AquaBounty techs injected Atlantic salmon with DNA from other fish species. They chose fish that naturally grow to full size in about 18 months. That’s twice the rate of regular salmon. The company says the process makes fish farming more efficient. Less feed is required as well as less time to produce more food.

The Canadian company worked for years to gain approval to grow and offer its fish in the United States. As AquaBounty acquired that clearance, several grocers including Kroger and Whole Foods vowed never to sell what some are calling “Frankenfish.”

The Center for Food Safety is suing the U.S. Food and Drug administration for approving distribution of AquaBounty salmon. Meanwhile, Greg Jaffe of the Center for Science in the Public Interest defends the decision. He believes grocers and restaurants should disclose when food products are genetically modified. But he doubts consumers, for the most part, will be concerned.
Consider an individual’s life aspirations. What comes to mind as most valuable? Obviously, saving souls for eternal life with God would top the list. But after that, where would you rank saving people from starvation?

One man from the previous century is remembered for increasing food production. In 1970, Norman Borlaug received the Nobel Peace Prize. Borlaug studied plant diseases at the University of Minnesota during the Great Depression. At that time, many Americans were so poor they could not afford enough food to thrive.

World War II closely followed the Depression. It brought farm labor shortages and food rations. World population was still growing, and poor nations faced famine at alarming rates. America, though still recovering from its lean years, took a lead position in finding food solutions for more desperate nations.

It was out of that setting that Norman Borlaug’s ideas for improving farming methods took root. Borlaug proposed enhancing soils using chemical fertilizer. He claimed the same nutrients could be produced far more quickly in a lab than obtained through compost and manure. He explored breeding plant varieties to develop strains that resist diseases and yield greater volume. Modified seeds and modern techniques were shared in countries like Mexico, India, and Pakistan, where famine was averted.

His supporters say that Borlaug’s work saved millions upon millions of lives. For that, they call him a hero. But his critics say the gains were short-sighted. They claim Borlaug’s farming techniques depleted soil over the long term. High-yield plants use more water, which used up supply in drought-prone areas. His methods didn’t predict soil erosion and chemical run-off into essential waterways.

God’s word tells us to “multiply and fill the Earth,” (Genesis 1:28) “take dominion over the Earth,” (Genesis 1:26) and “love one’s neighbor as oneself.” (Matthew 22:39) Accomplishing all of those at once can be challenging. As it turns out, feeding a hungry world will take more than one man’s good ideas.

### Agricultural Pioneer

**NORMAN BORLAUG**

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An honesty experiment study yielded unexpected results. Researchers planted “lost” wallets in cities around the world. But instead of keeping the wallets, most people returned them—especially when the contents were valuable.

Researchers for a report called “Civic Honesty Around the Globe” call honest behavior “central” to a society’s social and economic health. Without it, crime, danger, and financial ruin arise. The Bible has much to say about honesty and righteous dealings. “The integrity of the upright guides them, but the crookedness of the treacherous destroys them.” (Proverbs 11:3)

For the study, research assistants “turned in” more than 17,000 wallets across 355 cities in 40 countries. The wallets were actually transparent business card cases, so people could see money inside without opening them. Each contained contact information; some contained money. After taking the wallets to front desks at places like banks, movie theaters, and police stations, researchers tracked how often the wallet “owners” received a call. They wanted to know how honest people are—even when being dishonest would mean keeping the cash.

The results surprised them. In wallets with no money, the return rate was about 40%. But with money inside—the equivalent of about $13 in local currency—the return rate jumped to about 51%. In the United States, the United Kingdom, and Poland, researchers increased the amount of money involved. Wallets containing about $94 were turned in about 72% of the time; wallets with the usual $13, only 61% of the time. With no money inside, the rate dropped to 46%.

Study author Christian Zuend says, “It suddenly feels like stealing” when there’s money in the wallet, “and it feels even more like stealing when the money in the wallet increases.”

National results varied widely in how often the wallet’s “owner” was contacted. In Switzerland, the rate was 74% for wallets without money and 79% with it, while in China, the rates were 7% and 22%. The U.S. figures were 39% and 57%.

Some wallets also contained a key. Those wallets generated more calls than cases without a key. That led researchers to conclude that concern for others plays a role in honesty behavior, since—unlike money—a key is valuable to its owner but not a stranger.

Researchers conclude that most people care about the wellbeing of others and dislike thinking of themselves as thieves... especially in Switzerland.

Let the thief no longer steal, but rather let him labor, doing honest work with his own hands. — Ephesians 4:28
Scampering across the green grass of Wimbledon or the red clay of the French Open, scooping up balls, handing out towels: The young people standing at the corners of the court or squatting near the net help keep matches moving. Their gig may look glamorous, but the life of a tennis ball boy or ball girl is hard work.

Each tennis match requires six ball kids: one in each corner of the court and one on either side of the net. “You’re constantly running for the whole hour,” says Michal Saladziak, a 15-year-old ball boy from London. He worked Wimbledon this summer for the second year in a row. “It can get quite difficult.” During this year’s tournament, two ball kids fainted due to heat.

Of all tennis tournaments worldwide, Wimbledon is king. Tournament officials receive about 700 applications from would-be ball boys and ball girls, known as BBGs. Hopefuls must take a written rules test, a skills test, and a standing-still test. (No kidding.) Only 250 make the cut. After that, they train to make sure they’re fit enough for one-hour stints of ball snagging, rolling, and bouncing.

Becoming a ball boy or girl at the U.S. Open involves similar training. Last year, about 400 boys and girls tried out in New York City. The aim, of course, is zero mistakes. Sarah Goldson, director of the BBGs at Wimbledon, says, “We hope that people don’t notice us.” Diligence without recognition seems similar to a Christian’s goal of “work[ing] heartily, as for the Lord and not for men.” (Colossians 3:23)

Of course, people do notice the ball boys and ball girls. Almost every flub sends one of them scurrying. Almost every change of service involves them rolling those fuzzy orbs from one end of the court to the other. And almost every break sees one reaching for a towel to hand to a sweaty player.

Ball kids also need to know what to do when things go awry. “We’ve been told to take initiative,” Saladziak says. “If something unexpected happens, you just have to react to it.”

Ryuichi Nitta was first in line to try out for last year’s U.S. Open. He waited for hours for his turn to show what he could do—and made the cut. The biggest perk for ball boys and girls everywhere? Ryuichi says, “There is no better seat than right in front of the players.” After all, BBGs are tennis fans too.

Above: BBGs snag balls during day five of the Wimbledon Tennis Championships in London.
Are you allowed to raise vegetables in your front yard? It may seem reasonable, but in one Florida community, it was against the law. A six-year legal battle over the issue has finally concluded. A Florida appeals court first backed a ban that Miami Shores Village had placed restricting front yard vegetable gardens. But eventually the Florida legislature got involved. The lawmakers overruled the ban. They also legalized such gardens statewide.

Floridians can thank Hermine Ricketts and her husband Tom Carroll for that! They stood up against their city’s front yard garden ban. The couple was cited in 2013 for growing edible plants in their front yard. So the green thumbs sought legal counsel. After all, how could growing vegetables on one’s own property be illegal? During the legal battle, Ricketts said, “This law crushes our freedom to grow our own healthy food.”

Before their rights to garden were curtailed, Ricketts and Carroll harvested up to 80% of their meals from their front yard. When the ordinance was enforced, they were slapped with a fine. At $50 per day, the cost forced them to pull up their veggies.

The Miami Shores ordinance was intended to protect neighborhood aesthetics. Some people believe vegetable gardens threaten curb appeal. That means homes might sell for lower prices than homeowners would like. (Local governments like high home values too because property taxes are collected based on those numbers.) Ornamental and fruit trees, pink flamingoes, and garden gnomes were acceptable in front yards—just not veggies! Knowing how garden plots can grow out of control with unsightly weeds, the Miami Shores powers-that-be decided vegetables were just too risky for the tidy appearance the community hopes to uphold.

The Institute for Justice (IJ) represented Ricketts and Carroll in their court battle. It was a tricky case. Technically, the defendants were guilty. They knew the law and chose not to obey it at first. Even when they did comply, they didn’t agree with the ordinance or its purpose. So they chose to fight it. To win, the IJ sought to prove that the ban went against the constitutional right of owners to decide how to use their own property.

The lengthy lawsuit ended with legalizing front yard vegetable gardens statewide. “The Garden Act” took effect on July 1, 2019. Ricketts and Carroll celebrated by (legally) replanting veggies in their front yard.

Romans 13:1-7 tells us to submit to those in authority. That doesn’t mean we can’t exercise personal freedom or seek to change laws. But it does mean we must do so peacefully and respectfully.
Inside a Washington, D.C., laboratory, rows of oddly labeled bottles and jars line the shelves. To the untrained eye, the samples are just colored liquids with strange names. But to U.S. Secret Service agents, they’re crime-busting tools.

In 1865, counterfeit currency flooded the United States. President Abraham Lincoln asked his administration to solve the crisis. It created the “Secret Service Division” within the Department of the Treasury. The Service hunted down forged bills. Sadly, President Lincoln died before the agency officially began operations. It wasn’t until 1902 that protecting the U.S. president and other high-profile officials became part of the Secret Service’s duties.

Today, the Secret Service uses the International Ink Library to investigate threat and ransom letters, phony documents, and fake memorabilia. The library contains more than 15,000 samples of pen, marker, and printer inks dating back more than 85 years.

Christians have a test for establishing true and genuine statements and claims that dates back even farther. They are to “Test everything” against God’s word, the Bible, and then “hold fast what is good.” (1 Thessalonians 5:21) The purpose of the ink library was to address that need in a very practical, hands-on way.

Renowned investigator and former Secret Service chief chemist Antonio Cantu began collecting ink samples in the 1960s. He pioneered a method of analyzing ink to determine its age. He also developed ways to determine when an ink was put onto a paper. Even forgers using old ink didn’t pass Cantu’s tests.

Ink studies have helped foil murder plots, bust counterfeit rings, and identify criminals. For example, a query once came in about a baseball signed by Babe Ruth. Analysis showed the ink on the leather orb wasn’t even available when Ruth was alive.

In another case, a former assistant to artist Jasper Johns presented papers showing that certain of Johns’ art pieces had been given to the assistant. The assistant wanted to sell the paintings and make lots of money. However, ink studies proved the papers were forgeries.

The Secret Service dedicated the ink lab in Cantu’s honor after his death in 2018. Director Kelli Lewis says the lab continues adding new inks to Cantu’s collection. “We’ve had to evolve with the library,” she says, “so we’re looking at inkjet as well as writing samples from pens and markers.”

Scott Walters is a forensic analyst who studied with Cantu. “About 15 years ago we started hearing, ‘Oh, this is going to die out, everyone is using computers,’” he says. “But that’s not true. Handwriting, written documents, it’s still such a large part of an investigation.”
Gray Wolf Comeback Triggers Debate

Gray wolves now number in the thousands after being almost exterminated in the contiguous United States. The species’ growing numbers prompted the Trump administration to propose taking it off the endangered list. Conservationists estimate there were once about a half million gray wolves (also called timber wolves) in North America. But as human populations grew and spread west, the predatory pack animals threatened ranchers’ livestock. Cows, sheep, and chickens made easy prey, so ranchers and hunters targeted the wolves. Over time, wolf numbers dropped so low that the creature was almost wiped out in the North American wild.

President Theodore Roosevelt was an outdoorsman who loved the wilderness. But even he saw wolves as a threat. He referred in 1902 to the wolf as “the beast of waste and desolation.”

Today, Roosevelt might temper his condemnation. Predators are needed in a balanced ecosystem. Without some wolves in the wild, deer and elk populations can explode. Those herbivores devour too much plant life, leaving land barren. This leads to starvation and soil and water problems. Insect habitat is lost, so fish and birds suffer. God gave the wolf a role, but managing the human and ecological balance is challenging.

Washington state agrees with the proposal to remove the wolf from the endangered species list and lift hunting restrictions. California opposes delisting. Lawmakers in Oregon are divided.

At the center of the debate is the question: Do wolves need more help? Though numbers aren’t large, they may be adequate to sustain the species. Currently, an estimated 6,500 wolves roam Minnesota, Wisconsin, Michigan, the Rocky Mountains, and the Pacific Northwest. Additional wolves inhabit Indiana, Kentucky, Massachusetts, Maine, Missouri, Ohio, Utah, and Vermont. Oregon had 137 documented wolves at the end of 2018—up 10% over the previous year.

Preserved Ice Age Wolf Head

Scientists in Russia reported in June that they had found the perfectly preserved head of an Ice Age wolf. It was discovered in the Siberian permafrost in the Russian Arctic region of Yakutia. The deep-freeze there kept the head from decaying for thousands of years.

Valery Plotnikov is a researcher at the Russian Academy of Sciences. He says the animal lived at the same time as the mammoths. The subspecies, which was about 25% bigger than today’s wolves, became extinct alongside the mammoths.

In the past, scientists had found only Ice Age wolf skulls without tissues or fur remaining. But this head has ears, a tongue, and a perfectly preserved brain.
The Apostle Paul long ago warned the Ephesian church, “Fierce wolves will come in among you, not sparing the flock.” (Acts 20:29) Paul wasn’t talking about canine wolves. He was talking about humans working for the evil one. Real wolves were part of almost everyone’s experience then, since they once inhabited most of the northern hemisphere. That’s not the case today, but still—you don’t have to go far to find a wolf. You’ll likely find one on your bookshelf or in your movie collection.

Wolves use wolves as characters that help tell stories or illustrate points. Sometimes in stories, wolves are just wolves. But other times, they represent something larger than themselves.

Wolves in the Word

Throughout scripture, wolves are used symbolically. They help us better understand important Bible themes.

In Matthew 7:15 Christ calls false prophets “wolves in sheep’s clothing.” That’s a vivid picture! Wolves eat sheep. So pretending to be one is a deception—with an evil intent.

Most often, wolves suggest danger. In the Old Testament, enemies described as wolves are fierce and devouring. (Ezekiel 22:27, Zephaniah 3:3) In the New Testament, wolves represent spiritual danger. Christians are lambs “in the midst of wolves” (Matthew 10:16, Luke 10:3) and are warned to be wise as serpents and innocent as doves.

But after Christ’s return, the world will be sinless. All harm and evil will end. In that day of completed redemption, the wolf will no longer hunt the lamb; the two will graze side by side and even lie down together. (Isaiah 11:6, Isaiah 65:25)

Fictional Wolves in Tales Old and New

In a myth used to explain the founding of Rome, twin brothers Romulus and Remus are royal heirs in a kingdom. They are left to die in the woods by their uncle. He then becomes king. A mother wolf saves the twins who eventually grow up to kill the evil uncle.

In an 1883 illustration, the wolf circles Little Red Riding Hood.

This myth shows a positive side of wolves—the careful rearing they give their pups and their loyalty to their pack. That same trait is shown in The Jungle Book. A pack of wolves raises the boy Mowgli. Rather than being depicted as merely bloodthirsty, the wolves’ aggression comes out only when the pack is threatened.

Run into a fairy tale wolf and you know you’re in (continued on page 20)
SCIENTISTS have an urgent request prompted by the putrid carcasses of gray whales washing up on the U.S. West Coast: Lend us your private beaches so ocean giants can rot in peace! In Washington, most isolated public beaches have a rotting whale carcass. More than 160 dead whales had washed ashore, stinking up beaches in Mexico, Canada, and the western U.S. coastal states, since January 1.

It’s a massive carcass crisis that has authorities asking proprietors to share their beaches. The caveat? Owners must suffer the decomposing creature that’s bigger than a school bus and has a reek to equal its size.

A Washington state couple received their carcass in early June. It was wrangled by motorboat three miles to the beach just 150 yards from their house. Due to the stench, the owners kindly asked their neighbor’s permission first. The smell lasts about a month. “It’s decomposing nicely. There’ve been a couple of days this week when I was out there mowing and I was like, ‘Oooph,’” Mario Rivera said.

For decades, no one’s known what to do with stranded baleen carcasses. They have been necropsied, buried, lugged to landfills—even sunk at sea. Others were allowed to decompose naturally on beaches—an unpleasant event for tourists. In 1970, a disintegrating whale became a debacle when officials attempted to hasten the decay process. They chose to blow up the cetacean with dynamite. The blast spread the whale in the form of chunks of burning, rotting blubber, raining down on spectators. Some large segments even crushed nearby cars. Lesson learned.

For each marooned carcass, approximately nine others sink into the sea unnoticed. Although a “whale fall” marks the end of the creature’s life, it is the beginning of a life-line for tens of thousands of deep-sea organisms. After human-kind fell into sin, death brought stench and decay to all of the creation. But God in His goodness made provision—even for whale rot. He assigns bacteria, birds, beetles, worms, fish, shrimp, and more—the work of turning dead matter into invigorating nourishment for new organisms.

C.S. Lewis’ book-turned-movie, The Lion, the Witch, and the Wardrobe, features wolves that side clearly with the White Witch. She represents deep evil in the story. Maugrim the wolf is captain of her secret police. His death at the end of Peter’s sword represents good overcoming evil.

Wolf—the Musical!

The children’s symphony Peter and the Wolf features a bloodthirsty wolf seeking prey. A narrator tells how brave young Peter catches the wolf before it can eat his friends. Each character is represented by a different musical instrument. French horns sound out the wolf parts. You can listen to Peter and the Wolf online at http://www.archive.org/details/PeterAndTheWolf_753.

Why do you think the composer chose French horns to represent the wolf?
Zip. Nada. Not one. Officials at a large African wildlife preserve are celebrating... nothing: Not a single elephant found killed by poachers, that is.

Niassa Reserve in northern Mozambique is one of Africa’s biggest wildlife preserves. It is larger than the entire country of Switzerland! Years of aggressive elephant poaching at Niassa had cut the reserve’s elephant population from about 12,000 to just over 3,600 animals. Previous anti-poaching strategies had reduced the number of God’s largest land beasts killed. But officials believed the rate was still far too high.

(For related information, see Elephant Poaching in Botswana at https://teen.wng.org/node/4810.)

But there’s good news. According to data released this summer, Niassa Reserve hasn’t recorded an elephant killed by a poacher since May 17, 2018. Experts call that extraordinary.

The turnaround at Niassa is the result of a new rapid intervention police force at the reserve. Mozambique’s President Filipe Nyusi personally authorized the law enforcement group. He is eager to see poaching reduced in his country.

The new police agency conducts aerial surveys from planes and patrols the old-fashioned way—on foot. The team beats the bushes looking for signs of illegal poaching. Plus, the force uses better weapons than the reserve’s normal rangers.

Response to suspected poaching is also strong and swift, according to the Wildlife Conservation Society (WCS), which helps manage the reserve. Suspected poachers are arrested quickly in efforts to bring them to justice.

James Bampton of WCS says the force has “a bit of a reputation of being quite hard.” He says, “Just being caught with a firearm is considered intent to illegal hunting.” It comes with a maximum prison sentence of 16 years.

Bampton acknowledges that the low number of remaining elephants at Niassa is a factor in poaching’s decline.

Fewer elephants equals fewer deaths.

Wildlife experts have seen gains against elephant poaching elsewhere in Africa. Tanzania’s Selous Game Reserve is a poaching hotspot. It is linked to the Niassa reserve by a wildlife corridor. That reserve has also noted a recent decline in poaching.

It could be many years before Niassa’s elephant population can rebuild to its former levels—even if poaching is kept under control. But the zero-poaching record has brought hope. The elephant population could someday recover at Niassa.
When you think of “classical music,” do you think of grandparents sitting in concert halls in American cities? In Iran, the Tehran Symphony Orchestra performs music by classical composers—and draws attentive crowds of 20- to 30-year-olds.

“Classical music is growing,” says Iranian-American conductor Shahrdad Rohani. “And as you see, the audience: They are really supporting the arts.” Rohani has led orchestras in the United States and Europe. But he says he is proud of his homegrown crop of young Iranian musicians. He’s leading a movement of interest in Western classical music in his conservative Islamic country.

His work has helped carve out a space there for artistic expression. It sends a message too: Both men and women can make great music.

Iran’s Islamic government has put restrictions on artistic expression since 1979. That year marked the Islamic Revolution. The nation’s leader at the time (who held the title of Shah) embraced much of Western culture, but he was overthrown by a strict Islamic religious movement. Pop music disappeared in Iran for 10 years—but began to make a comeback. Even today, however, the government has a religious ban (called “haram”) on female singers performing for mixed (male and female) audiences.

In February, a female guitarist sang a solo during a concert by a pop singer. The authorities cut her microphone and took away her permission to perform. In cafés in Tehran, people listen to women sing, but only in recordings—never live performances.

“Authorities rarely challenge the playing of recorded music in the café, and mainly argue about the hijab issue,” says waitress Nillofar Dailami. A hijab (hih-JOB) is the headscarf all Iranian women are required to wear.

But in the Tehran symphony orchestra, women in burgundy headscarves play cello, harp, and horn. The crowd listens closely, not even coughing. At the end, listeners give Rohani a big round of applause. “I love the work of Rohani,” says concert-goer Ali Reza, 26.

The musicians are Iranian but many have lived overseas. Ed Nekoo is a violinst in Rohani’s orchestra. He spent 10 years in the Los Angeles area but returned to Iran to care for his mother. He says he misses the free cultural exchange between peers. He complains of the lack of foreign music teachers.

“We have to learn the music by ourselves,” says Nekoo. Still, he’s optimistic for music’s future in Iran. “Our audience is so young,” he says. “That’s what I like about classical music.”
“Don’t panic” say government officials in Zimbabwe. But with the economy failing and political tensions rising, the opposite is happening. Nowhere is panic more obvious than at the passport office.

In Zimbabwe, the local currency is weak. Basic items such as cooking oil change prices several times a day. Unemployment is widespread, and jobs are few. Many believe leaving Zimbabwe for work is their best option. But doing so legally means getting a passport.

At the passport office, people are desperate. Zimbabweans sometimes sleep in line just to submit an application. The approval process takes at least a year, and the application backlog is huge.

People must stand in multiple lines, often remaining outside the office for a week. After waiting to apply for an ordinary passport, some then wait again for a chance to upgrade to an emergency passport. One woman says the date she can upgrade her passport application to an emergency one is May 2020.

The root of the problem is so simple . . . and shocking: The government cannot afford to import the proper paper, ink, and other materials to make the passports. Frequent machine breakdowns don’t speed things up either.

Zimbabwe’s Home Affairs Minister, Cain Mathema, insists the government is resolving the crisis. “The backlog will be cleared soon. We have to bring dignity to our people,” he says.

But for those in need of legal international travel, such statements ring untrue. Teenager Brian Ndlovu says coming to the office makes him “feel like there is really no way out of this country. We are trapped.”

Outside the passport office, the line snakes for over half a mile. Dozens of people, including women with toddlers, sleep on cardboard boxes or in the dust, holding their places. Some young men hold places in line for a fee. A preacher delivers sermons about hope. For many, hope is slipping.

Humanly speaking, the loss of hope in such conditions is understandable. But Christians remind themselves that real hope is not dependent on earthly conditions. The Apostle Paul said, “In any and every circumstance, I have learned the secret of facing plenty and hunger, abundance and need.” (Philippians 4:12)

The Zimbabwe Human Rights Commission has launched an investigation into the passport disaster. Government officials like Mathema are promising change. “Passports are being done, the paper is now there, and the machinery is there. Our people should not panic.” He insists, “We are working on it.” But after months of problems, some people don’t believe him.
The 4,300-year-old city of Babylon has been named a World Heritage Site by the UNESCO committee. The ancient city in modern-day Iraq is now mainly an archaeological ruin. But since the earliest days of settled human civilization, dynasties have risen and fallen in the city on the Euphrates River.

King Hammurabi wrote his famous code of laws in Babylon. In fulfillment of God’s prophecy, Babylon’s Nebuchadnezzar sent his vast army to Jerusalem to bring the Jews back as slaves.

Some say Alexander the Great, who conquered most of the known world, died in Babylon in 332 B.C.

Dozens of Iraqis gathered at the Ishtar Gate to celebrate their city’s new status. The blue-enameled brick structure was the main entrance into Babylon. It was dedicated to Ishtar, the region’s pagan goddess of fertility and war.

The UNESCO World Heritage Committee is organized by the United Nations. It exists to preserve examples of human culture that have made significant contributions in education, science, art, and the advancement of civilization. The vote to include Babylon in the World Heritage Site list came years after the Islamic State group damaged numerous historical sites in Iraq. Those included the cities of Hatra, Nimrud, and Mosul—which stood near Ninevah of the biblical book of Jonah.

Iraqi Prime Minister Adel Abdul-Mahdi described the vote as a victory for Iraq’s historical impact. He referred to his nation’s ancient civilizations as “a lighthouse to the world.” It is true that Babylon was renowned for its cultural contributions—especially in art and architecture. But in the Bible, Babylon is remembered both literally and symbolically as the seat of God’s enemies.

The same culture that produced the Hanging Gardens—one of the seven wonders of the ancient world—also violently pursued the Israelites. The Assyrians intended to wipe God’s people from the face of the Earth. The Babylonians took them into captivity. The same culture worshiped many false gods. It built structures to appease those gods and to glorify mankind.

UNESCO stated that Babylon’s “outer and inner-city walls, gates, palaces, and temples are a unique testimony to one of the most influential empires of the ancient world.” That is worth remembering. But the most influential empire the world has known is one of a suffering servant-king, who puts His enemies under His feet. He calls His faithful from every nation using Babylon as an example of the unholy life believers must reject.

“Come out of her, my people, lest you take part in her sins, lest you share in her plagues; for her sins are heaped high as heaven, and God has remembered her iniquities.” (Revelation 18:4-5)
The Bible tells us only that magi came “from the east.” (Matthew 2:1) It’s certainly possible that they came from the area that now makes up Iraq. If they came from somewhere farther east, such as Persia, they might have traveled through what is now Iraq on their way.

The Garden of Eden was perfect for the world’s first people, Adam and Eve. Scriptures tell of the garden in Genesis 2:8-14. Some scholars think the Garden of Eden was located in what is now Iraq. A possible location is based on the rivers named in the Bible which flowed from Eden. It is at the southeastern tip near the Persian Gulf.

The Tower of Babel glorified man, not God. Genesis 11:1-8 says that the tower was made of bricks and tar on the Plain of Shinar. That was between the Tigris and Euphrates, below the modern city of Baghdad. The site of the tower has never been found. But digs have uncovered other towers built of brick and tar. Some were temples dedicated to false gods.

The northern kingdom of Israel was conquered by the Assyrian Empire as a punishment for breaking its covenant with the Lord. (2 Kings 18:11-12) The conquests happened over a 20-year period, beginning in 740 B.C. At that time, the Assyrian Empire was centered in what is now Iraq. It dominated what we know today as the Middle East. Israel’s northern tribes were taken into captivity and never returned to Israel.

God sent Jonah to preach to Nineveh in about 785 B.C. It was in today’s northern Iraq. Most of the events in the book of Jonah took place there. Since the mid-1800s, archaeologists have been digging in its ruins. Nineveh was on the east side of the Tigris River near modern-day Mosul. In Jonah’s time, Nineveh was the most important city in Assyria.

The prophet Ezekiel was taken captive in Babylon in 597 B.C. While in Babylon, he told of God’s judgment on Israel. He also offered hope, saying that the exiles would someday return to Judah. This prophecy came true in 539 B.C. when Babylon was conquered by Persia. Exiles began returning to Judah the following year.

In 605 B.C., the king of Babylon, Nebuchadnezzar, captured Jehoiakim, king of Judah. Judah was the southern kingdom of Israel. The king was taken to Babylon. So were others, including Daniel, Shadrach, Meshach, and Abednego. The stories found in the book of Daniel—the lions’ den, the fiery furnace, and the handwriting on the wall—all took place in Babylon. The remains of Babylon are in Al Hillah, Iraq, about 55 miles south of Baghdad.

Rebekah, wife of Isaac, was from Nahor. In Genesis 24, Abraham sends his chief servant to go to his home country, Ur, to find a wife for his son. While there’s no way of knowing for certain, it is likely that Rebekah came from what is now Iraq.

Genesis 11:27-32 tells us that Abraham was born in Ur around 2166 B.C. The ancient city of Ur was located on the Euphrates River in what is now southern Iraq. Its ruins can be found near the modern-day city of Nasiriyah. Ur was an important city in Sumerian civilization.

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What’s it like to feel the powerful thrust of lift-off, the sensation of floating, and the weightlessness of soaring across the sky? Humans have long yearned to fly. Psalm 104 describes God as riding the wind. In ancient Greek mythology, Icarus made wings and took to the sky—but flew too close to the Sun. We’re fascinated by the prospect of navigating the clouds, pushing our bodies higher and higher, faster and faster. Richard Browning dreamed of an invention that would propel his body up into the sky—and then he built it.

Browning holds the patent for the world’s first Jet Suit. He took on the ultimate flight challenge inhibited only by gravity—and he wasn’t afraid to fail. He tested his big ideas over years of trial and error, a plethora of adjustments, and some truly daredevil experiments. Many of his good intentions fell from the sky (quite literally) before he nailed down a Jet Suit design that actually worked.

Some people liken the Jet Suit to a real-life Iron Man suit. It has three jet engines, two of which are arm jet packs. The third, larger engine—which is flanked by fuel tanks—straps to the pilot’s back. That engine has power equivalent to both arm engines combined. Fueled up, the Jet Suit weighs 65 pounds. Even with all that heft, it can launch a pilot 80 feet into the air and reach speeds up to 60 miles per hour. Spectators at London’s Tech Week 2019 witnessed Jet Suits in action as three pilots soared through an airspace obstacle course over the Royal Victoria Docks waterway.

When people use their God-given creativity and intelligence well, it brings Him glory. By exploring the scientific laws that the Creator set in place, we can put them to work in unexpected ways. That’s exactly what Browning did. He studied the laws of science, trying out new ideas within the context of real physical boundaries. He harnessed the forces of propulsion, gravity, thrust, and balance and crafted his Jet Suit to use them. The human brain operates as the suit’s flight computer and the human body as the flight structure.

Browning’s invention may be the closest thing yet to achieving individual flight. At the very least, it’s an attention-getting, breathtaking, adrenaline-pumping, gravity-defying, and admirable effort!
Detect, decode, hack. Sound like the plans of a spy network or rival government? In this case, they’re the actions of an artificial intelligence program. The program is being developed to keep people safe. Soon these covert tactics could help hijack dangerous drones.

Every month, the Federal Aviation Administration handles more than 100 illegal drone sightings. These so-called rogue (unauthorized) drones sometimes delay—or even ruin—outdoor public events. Officials have stopped football games and tennis tournaments because drones flew over or crashed into stadiums. Last Christmas, drones grounded hundreds of flights at London’s Gatwick Airport during the busy holiday.

But rogue drones can be more than pesky. They actually can be dangerous. Criminals use drones for terrorism, assassinations, and other evil deeds—a reminder that such struggles are against more than human foes. (Ephesians 6:11-13)

Current methods of dealing with rogue drones have limits. For example, some simply cause drones to crash. That can pose a risk to people or objects below. Anti-drone systems are expensive too. Some cost upwards of $12 million! That kind of price tag makes them too expensive for smaller airports or private companies.

“Dronejacker” is the brainchild of Embry-Riddle Aeronautical University (ERAU) assistant professor Houbing Song. He and Drone Defense Systems Founder Sotirios George Kaminis are collaborating with ERAU to market the Dronejacker software.

Song has degrees in computing, communications, and transportation. He says his varied background equipped him well for this task. It allows him to “develop novel ideas at the intersection” of computer science, communications, networks, and cybersecurity. (What combination of gifts has God given you, and what will you do with them?)

Dronejacker has advanced microphones that “hear” approaching drones. Then its computer software analyzes the sound. If Dronejacker spots a rogue drone, it decodes the drone’s video channel and interrupts it with a warning message. If the drone (or drone pilot!) ignores the message, Dronejacker can hijack the drone.

Kaminis explains what that hijacking is like. “[Dronejacker] disrupts communication between the pilot and the drone. It detects the drone, finds out what language the drone speaks, . . . mimics the drone’s language, and snatches control away from the pilot.” Boom. Threat neutralized.

Because Song’s system takes control of the drone, it doesn’t crash. And Dronejacker costs much less than other systems on the market. Song and Kaminis are continuing to test their system. Hopefully, manufacturing it will begin soon. Then for the drone-busting Dronejacker, it’s all systems go.

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Cookies in Space

Ever wonder why some cake mix boxes offer different instructions for baking at high altitudes? Altitude affects the fluffiness of cakes, breads, and even cookies. Now imagine taking that recipe to space—where there’s no atmosphere or gravity. A typical oven won’t work the same way there. So DoubleTree hotels teamed up with Zero G Kitchen to solve the futuristic problem of cookie-baking in space! Later this year, a batch of DoubleTree’s cookie dough is heading to the International Space Station along with a prototype microgravity oven created by Zero G. As people dream of settlements on the Moon and Mars, they’ll need their comfort foods eventually too. The oven’s creators say that’s just what they envisioned.

Lobster Fishing Changes To Aid Whales

The North Atlantic right whale is critically endangered. Help for the species, now numbering only about 411, might arrive in 2021. Vertical lobster trap lines pose a threat to right whales. The great marine beasts can get tangled in that fishing gear. The Maine Department of Marine Resources has been meeting with lobstermen around the state. Together, they have begun a process to remove half the vertical trap lines from the Gulf of Maine. Patrice McCarron is executive director of the Maine Lobsterman’s Association. She says the group is grappling with the task of removing so much gear from the water. But all involved seem willing to work through the challenges. “There’s definitely concern among lobstermen because they will be changing how they fish,” she says. “It’s not a simple task, but once guys are thinking it through and making changes, there seems to be viable strategies for each person.”

Restoring Lost Art with 3-D Printing

Art and architecture are often casualties of war and other acts of aggression in this fallen world. Now 3-D printing technology is peacefully fighting back. A figure of a roaring lion—about the size of a loaf of bread—is the latest attempt at trying to restore lost cultural artifacts. This particular figure is a replica of a colossal 3,000-year-old statue from the Temple of Ishtar in Nimrud, Iraq. The original stone statue was destroyed at the Mosul Museum by the Islamic State group. The replica was modelled from crowd-sourced photos taken at the museum before ISIS overran the city in 2014. Data from those photos was compiled, processed by a computer program, and reproduced with a 3-D printer. The replica is going on display at London’s Imperial War Museum. It will become part of an exhibition that examines how war devastates societies’ cultural fabric—and the ingenious steps taken to preserve it.
NY Declawing Ban

“Cats of New York: Show me your claws,” said Manhattan Assemblywoman Linda Rosenthal, D-Manhattan. She pushed for years for a state ban on cat declawing. Now despite opposition from the state’s largest veterinary society, New York could become the first U.S. state to make it illegal to remove a cat’s claws. The bill passed in the state senate. It awaits Governor Andrew Cuomo’s signature to become law. Supporters say the procedure, which amputates the animal’s toes back to the first knuckle, is cruel and needless. But the New York State Veterinary Medical Society argues that “medical decisions should be left to the sound discretion of fully trained, licensed, and state supervised professionals”—and not to legislators.

The Ocean Cleanup Tries Again

If at first you don’t succeed, try, try again. Innovator and creator of The Ocean Cleanup project Boyan Slat is taking that advice to heart. Slat hopes to trap and recycle much of the plastic trash that is swirling in the Pacific Ocean between Hawaii and California. (See Innovator Takes on Ocean Cleanup at https://teen.wng.org/node/4930.) At first, the giant 2,000-foot boom and net apparatus failed to scoop up the plastics it was intended to retrieve. Next, it actually broke apart and took months to repair. But this summer, it was dispatched again to the Great Pacific Garbage Patch to give it another go. “Hopefully nature doesn’t have too many surprises in store for us this time,” Slat tweeted. Slat has said he hopes one day to deploy 60 of the devices to skim plastic debris off the ocean’s surface.

Mortimer’s Pacifier Habit

Poor Mortimer just couldn’t help himself. The bulldog from Boston sucked down so many silicone pacifiers that he lost his appetite for real food. Emily Shanahan noticed that her three-year-old pooch was getting nauseated before meals. She took Mortimer to the vet, who prescribed medicine. But it didn’t help. Follow-up X-rays showed a total of 19 baby pacifiers in Mortimer’s tummy. Vets think Mortimer had been taking pacifiers from the Shanahan’s two children for months. All were removed using a medical scope that did not require surgery. Mortimer soon returned home to the family where hopefully his cravings can be pacified with more acceptable doggy treats.

A ship tows Boyan Slat’s trash-collecting device.
QUIZ MY READING

1. What three factors have scientists identified that may cause people to overeat highly processed foods compared to minimally processed foods?
   a) Highly processed foods are cheap, take little time to prepare and consume, and don’t cause a release of an appetite-suppressing hormone in the consumer that minimally processed foods cause.
   b) Anxiety disorders that prompt overeating, sedentary interests that coincide with snacking, and government-sponsored food programs that distribute low quality, highly processed foods are all rising.

2. “Too Good To Go” is a popular method of reducing food waste. It is __.
   a) a smartphone app that allows people to search for discounted unsold food
   b) an alert that tells people when food is getting ready to go bad

3. Peter Hanig’s idea for cow sculptures in Chicago was to __.
   a) see fine art in the middle of the city
   b) give people a reason to interact on the street

4. Which manual technology of the past century is making a comeback in popularity among young adults in the United States in the last 10 years?
   a) the manual typewriter
   b) the rotary-dial telephone

Viz-Quiz

Match the animal sculptures to the locations. Write the city names in the blanks.

MIND STIR

1. What do you think is the greatest appeal of community-sponsored, public art projects like the fiberglass animals in Chicago?

2. What is behind the renewed interest in manual typewriters, as compared to the readily available and higher-tech computers that are so much more efficient?
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Isaiah 61:3 “They will be called oaks of righteousness, a planting of the Lord for the display of his splendor.”
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