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LOOKING AHEAD

Dixon looks forward to 2013. Our commitment to manufacturing, lean practices and product innovation highlights our dedication to providing the best possible products and service.

Our industry, like others, depends on the health of the overall economy. We need our government leaders to ensure policies that promote the free enterprise system and the values that have made our country great. The fact is that successful businesses are the engine of job production; without them, the American Dream of success is beyond our reach. Let's hold our elected officials accountable—and together we can look forward to more jobs and less government interference in the months and years to come.

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Thanks for reading,

Dick Goodall

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The Golden Rule

> “Do unto others as you would have them do unto you.”

The Golden Rule is an ethical principle rooted in every major culture. You can find it in the writings of Confucius and Aristotle as well as in the scriptures of virtually all religions. You don't want to be lied to, yelled at or treated unfairly, so don't lie to, yell at or be unfair to others.

It's a terrific rule to create a more kind and just society, and it is central to the ethical principle of respect. But if we're not careful we can twist the meaning of the Golden Rule by treating it as a rule of exchange rather than a

rule of ethics. In other words, we are honest, kind or fair to others only so they will be honest, kind and fair to us.

There is, of course, a practical aspect to the Golden Rule. Kindness often begets kindness, and people are more likely to be honest with us if we're honest with them. The trouble is that if we anchor our willingness to treat others well in expectation that they will return the favor, what is our moral duty with respect to selfish, disrespectful and dishonest people? Can we modify the rule to “Do unto others as they have done unto us,” or “before they do it to us?”

Is it ethical to lie to a liar or cheat a cheater? Not for a person of character. We may feel like suckers from time to time if we're honest and kind to everyone, but in the end the best reason to follow the Golden Rule is not because it assures that others will treat us right, but because it *is* right. You see, how we treat others is not simply about them. It's about us. It defines who we are. ■

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Maven of Mercy

Clara Barton, founder of the American Red Cross, set the standard for selflessness

> Clara Barton is most widely known as the founder of the American Red Cross, the “Angel of the Battlefield” and the namesake of a busy service area on the southbound New Jersey Turnpike.

She was much more than that.

Barton was a pioneer at a time when women were expected to stay home and care for their families, an era when women were barred from working in many jobs and unable to vote. Barton worked as a teacher and patent clerk, a searcher of missing persons, nurse and humanitarian, tirelessly serving those around the world who needed help most.

“You must never so much as think whether you like it or not, whether it is bearable or not,” she said once. “You must never think of anything except the need and how to meet it.”

Clarissa “Clara” Harlowe Barton was born in North Oxford, Mass., on Dec. 25, 1821, to Captain Stephen and Sarah Barton. The youngest of five, she and her siblings were educated from the time they were small by their father, a veteran of the Indian Wars, about how important it was to serve one’s country and help others.

She first showed her devotion to



service through nursing when she was 11 and her brother David fell off the barn roof he was repairing. Doctors told the family that David would surely die of his serious internal injuries within a year. Barton stepped in and took care of her brother day and night for two years. He recovered.

In 1839 she became a teacher. When Barton was offered a “promotion” to teach in a more challenging school at the same \$2 weekly salary (about \$50

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today)—less than what male teachers in the same job were earning—she told the school board, “I may sometimes be willing to teach for nothing, but if paid at all, I will never do a man’s work for less than a man’s pay.” The school board agreed and decided to pay her the same salary as the male teachers.

Barton’s strong spirit served her well when, in 1854, she took a job as a copyist in the U.S. Patent Office in Washington, D.C., and became a civil servant. She was the first woman to get a substantial clerkship in the federal government, and she loved her job. However once the Civil War began, she resigned in order to volunteer in aiding soldiers on the front lines of battle.

Women had never been allowed on battlefields or in military hospitals or camps before, and officials declined her help at first. Barton prevailed and won the access and support she sought. “I

may be compelled to face danger, but never fear it, and while our soldiers can stand and fight, I can stand and feed and nurse them,” she said. “My place is anywhere between the bullet and the hospital.” Her courage and dedication as the “Angel of the Battlefield” won her much praise and attention, and she was named the superintendent of Union nurses.

When the Civil War ended in 1865, Barton still felt called to serve. “War, although the most tragic, is not the only evil that assails humanity,” she said. At her urging, President Abraham Lincoln granted her permission to search for missing soldiers through a letter writing campaign via the Office of Correspondence.

Barton’s schedule was relentless and taxing and took a toll on her health. A trip to Europe for rest in 1869 introduced her to the International

Red Cross. She started the American Association of the Red Cross in 1881, at age 60, expanding the concept of the organization to include assisting in the face of national disasters.

Barton was president of the American Red Cross for 23 years, leading the organization as it assisted victims of such disasters as the Texas famine in 1886, the Florida yellow fever epidemic in 1887 and the Galveston flood in 1900, as well as those injured in the Spanish American War.

She resigned as head of the Red Cross in 1904 and died in 1912 at the age of 90 at her home in Glen Echo, Md. An obituary of Barton published in the *Detroit Free Press* stated simply, “She was the most perfect incarnation of mercy the modern world has known.”

Today, Barton’s legacy lives on through the American Red Cross (www.redcross.org). ■

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A photograph of a sugar mill facility. In the foreground, a long conveyor belt filled with yellowish-brown sugar beets stretches from the bottom left towards the center. The conveyor belt has a blue metal frame with yellow railings and red rollers. In the background, there are several large industrial buildings, including a tall white silo and a brick building. A tall light pole stands in the middle ground. The sky is blue with some white clouds.

Sweet Spots

BY MARY K. ZAJAC

Sugar beets being delivered on a conveyor belt, for processing at a sugar mill.



JUSTIN TISCUALAS

OUR INSATIABLE APPETITE FOR SUCROSE KEEPS THE WORLD'S SUGAR REFINERIES COOKING

The air smells sweet in the courtyard under the giant Domino Sugars sign visible from all angles of the Baltimore harbor. The ship that discharged the current batch of raw sugar for American Sugar Refining's Baltimore refinery (formerly the Domino Sugar Corporation) has left the port. In a warehouse, a man in a front loader pushes piles of tawny, inedible raw sugar into what looks like giant sand dunes. A few bees, fat and drunk on sugar, buzz about lazily. Dressed in hard hat and safety glasses, his hair (and beard) encased in netting, refinery manager Stu FitzGibbon climbs the refinery's metal steps, pausing only to greet an employee by name or to take in a quick view of the harbor filled with sailboats and swooping Seagulls.

"I love sugar," says the 32-year industry veteran. The world would agree.

Imagine a world without refined sugar. No candy, no jam, no pickles. Bread rises with difficulty without sugar to boost the yeast. Medicines become a challenge to swallow in their unadulterated state. Forget that morning doughnut.

Imagine a world without refined sugar. Difficult, isn't it?

As Michael Pollan acknowledges in *The Botany of Desire*, his exploration of the complex relationship between plants and human desires, humans are wired for sweetness. "A taste for sweetness appears to be universal [among different cultures]," writes Pollan. "This goes for many animals, too, which shouldn't be surprising, since sugar is the form in which nature stores food energy." Mammals get their first taste of sweetness from their mother's milk, explains Pollan, and the taste for sugar only grows from there. Since sugar was first introduced to England in the 13th century, the world's taste for sugar hasn't ceased.

In recent decades, high fructose corn syrup and artificial sweeteners (from saccharine to Splenda® and aspartame) have made inroads into the sugar market. Yet old-fashioned sugar has prevailed. According to the USDA, in 2010, Americans consumed roughly 66 pounds of sugar per capita, the highest amount since 1999, whereas high fructose corn syrup consumption



Above: A sugar beet. Right: A worker stands among sugarcane plants on a plantation in India in 1929.

at 64.5 pounds hit its lowest levels since 1986.

“There’s been some migration back to sucrose as a sweetener,” says FitzGibbon. “The public started to realize that simpler is better. [Sugar] tastes better too.”

Sugar, or sucrose, is a naturally occurring product derived from both sugar cane and sugar beets—one- to two-foot-long white root vegetables weighing three to five pounds. Incredibly, the sugar produced from each source is virtually identical, but only an expert in the sugar industry might be able to tell the difference between the two sugars, concedes Mark Whitford, vice president of sales

“Beet sugar has more of an earthy smell, while cane has a clean, sweet smell.” — Mark Whitford

and marketing for Sweeteners Plus Inc., a sugar distributor in Lakeville, N.Y. “Beet sugar has more of an earthy smell, while cane has a clean, sweet smell,” he explains.

Still, says Jack Roney, director of economics and policy analysis for the

American Sugar Alliance (ASA), “no other commodity in the world that comes from such different plants has an outcome that is so indistinguishable. It’s the same outcome from grass and tuber.”

Sugar is produced on six continents and in more than 100 countries, including Brazil, the largest producer of sugar worldwide, as well as India, China, Thailand, Poland, Ukraine, Pakistan and the U.S. Eighty-one percent of sugar worldwide is made from cane (grown in tropical and subtropical areas), while sugar beet production is relegated to cooler climates.

Approximately 72 percent of the world’s sugar stays within each country of production, with the remaining 28 percent available on the international market. In the United States, nearly all the sugar produced in the 18 sugar-producing states is consumed by Americans.

In the U.S., however, the amount of sugar made from sugar beets versus sugar cane is roughly equal—55 percent comes from sugar beets, while 45 percent comes from cane. Sugar beet production is centered west of the Mississippi in cool climate states like California, Washington, Colorado, Idaho, Minnesota, Montana and North Dakota. Sugar cane, on the other hand, needs a warmer, more



humid climate and thrives in areas like Florida, Hawaii, Louisiana and Texas.

Production costs for each method of refining are highly dependent on weather, explains Roney. Monsoons can severely damage a cane crop in the Philippines, while drought can affect the sugar beet crop in Russia. “In most years with good rain, lower cost productions are associated with sugar beets,” says Roney. Both sides of the industry are interdependent on the other’s harvest, and will make up for shortfalls if necessary.

“In our industry, we never have two years that are the same,” says Whitford. Still, according to the ASA, sugar producers generate nearly \$20 billion a year for the U.S. economy. In Brazil, the sugar cane industry contributed \$50 billion, or 2.4 percent to the country’s GDP in 2010.

Sugar, says FitzGibbon, “is an old industry that’s thriving.”

A Powerful History

Sucrose has been part of the human diet for more than 12,000 years. It was “first domesticated in New Guinea,



Sugar Fun Facts

■ Sugar's name originated from the Sanskrit *sarkara*, which means "material in granule form."

■ Sweet is the only taste humans are born desiring.

■ Sugar cane stalks can reach up to 30 feet high.

■ One teaspoon of sugar equals 15 calories.

■ White sugar is pure sucrose. Brown sugar contains molasses. Dark brown sugar has more molasses content than light brown sugar.

■ Confectioners, or powdered, sugar is sugar ground to powder, sifted, and then blended with cornstarch to prevent caking.



Cultivating a sugar beet field. A truck unloads sugar beets at a sugar plant in Groningen, Netherlands.

first processed in India and first carried to the New World by Christopher Columbus,” explains Johns Hopkins University Professor Sidney W. Mintz, a world authority on sugar and the author of *Sweetness and Power*.

Before sugar reached the New World, the Crusaders brought it back to England in the 13th century. There it was used as both a spice and for medicinal purposes. In the 15th and 16th centuries, both sugar and honey were used as sweeteners, but by the 18th century, Mintz reports, “sugar—sucrose—won out over honey as an item of *mass consumption* ... and has never retreated.” In the 19th century, he adds, sugar consumption in the United Kingdom quintupled.

The sugar that Britons and other Europeans were stirring into their tea

and using to sweeten their chocolate came primarily from colonies in the Caribbean or West Indies. Christopher Columbus brought sugar cane from the Canary Islands to Santo Domingo during his second voyage in 1493. By 1516 Dominican sugar was being harvested and refined via slave labor and shipped back to Spain. In turn, Dutch, British and French sugar plantations dependent on slave labor would follow on islands like Jamaica, the Antilles, Cuba, Puerto Rico and Antigua.

Sugar would become an invaluable international commodity, and until the abolition of slavery in Europe and the United States in the 19th century, it was part of the insidious “triangle trade” that swapped human capital for goods like sugar and rum, made from sugar’s byproduct, molasses. After slavery was abolished, Europeans turned to sugar beets, something previously relegated to cattle feed, as a source for their sugar, establishing factories in Germany, France, Poland and other cool-climate countries.

In the United States, sugar refining from cane began in earnest in Louisiana in the late 18th century, with an influx of expert planters and refiners who were fleeing Haiti after its revolution. By 1812, Louisiana boasted 75 sugar mills. Sugar beet production was attempted in the U.S., mostly on the East Coast, soon after, but failed to flourish. It wasn’t until 1870 that the

first successful sugar beet factory was established in central California. By 1917, the U.S. operated 91 sugar beet factories in 18 states. Today there are 22 sugar beet refineries in 11 states. All the refineries are cooperatives, allowing smaller operators to pool their collective resources for equipment and better buying power.

Refining: From Field to Factory

On paper, the process of making sugar sounds easy: You simply remove sucrose from the sugar beet or cane and then separate molasses, a byproduct, from the raw sugar. In reality, the process is a lot more complicated and slightly different for each product being produced. Sugar beet harvesting is nearly 100 percent mechanical worldwide, whereas sugar cane harvesting varies, with developing countries more apt to use more manual labor. In Brazil, mechanization accounts for roughly 55 percent of the harvest.

“Once a beet is out of the soil or cane is cut, it has to be processed quickly because the sucrose depletes quickly,” explains Jack Roney. For this reason, most beet and cane refineries are located close to the beet or cane fields.

Although sugar beet refineries operate year-round, the process begins in earnest in the U.S and in most international beet-growing locations

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Processing raw sugar and molasses from sugar cane in Bais City, Philippines. A technician works inside a sugar factory in the Mexican town of Ameca, Jalisco.

with the October harvest, when sugar beets are harvested by machine. A defoliator removes the green tops and slices a portion from the top of the beet, which contains a high level of impurities, while a pinch wheel harvester pulls the beets from the soil at the root. Beets are weighed and a sampling is tested for sugar content, which can vary between 10 percent and 20 percent. Then the beets are moved to storage and stacked in piles measuring 18 feet tall and 1,500 feet wide. Although beet sugar refineries are busiest during the fall harvest, technology has made it possible for beets to be kept under controlled conditions for up to six months so that refining can occur throughout the year.

In preparation for extraction, beets are washed several times before being sliced by large drum slicers (industrial graters equipped with pairs of rotating opposed groove knives) into thin strips called cosettes, making them look a little like raw shoestring French fries. The cosettes are placed in large diffuser tanks filled with hot water and then agitated in a process called countercurrent flow—this extracts sugar, turning the water into a thick liquid mix of water and sugar called juice. To remove impurities in the juice, a slurry of calcium hydroxide called “milk of lime” is added and then the entire mixture is carbonated in large tanks

for 20 minutes to an hour. The milk of lime bonds with the impurities and is filtered out, leaving a thin syrup, which is first evaporated and then crystallized and spun in a centrifuge to dry. The result is refined white sugar; the byproduct is molasses. Some of the molasses is sold as food grade. In a

cane is put through rollers similar to an old-fashioned laundry mangle and crushed to extract the juice. Slaked lime is added to the juice to filter out impurities, and then the juice is thickened into a syrup through evaporation. The syrup is then boiled until conditions are right for the sugars to form

Unlike sugar beet production, cane refining is a two-step process that takes place at sugar cane mills and then at cane refineries.

process called molasses de-sugarization, a small quantity of molasses is run back through the system for further extraction, which often yields around 10 percent more sugar. The largest portion is sold to supplement cattle feed (yes, cows have a sweet tooth, too).

Sugar beets can yield 70 percent to 86 percent of the sugar already within beets when the process started, and a sugar beet cooperative like the Southern Minnesota Beet Sugar Cooperative in Renville, Minn., can process 6,500 tons of sugar beets per day, and 562.5 tons of sugar per day.

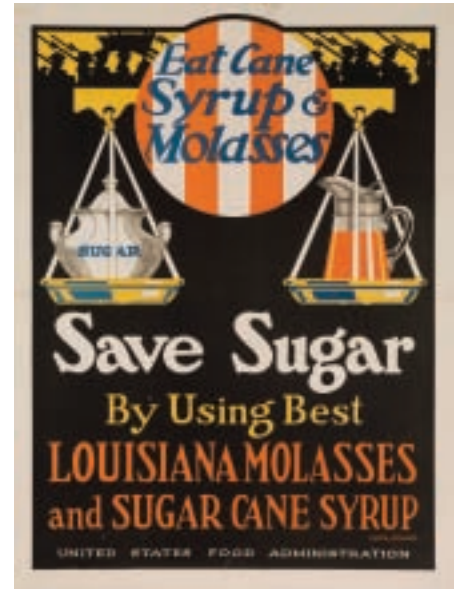
Unlike sugar beet production, cane refining is a two-step process that takes place at sugar cane mills and then at cane refineries. The first step in cane sugar refining is extraction, where the

crystals, and the resulting crystals are spun in a centrifuge to separate them from the remaining liquid. Next comes step two: The raw sugar, an inedible product that results from cane extraction, is sold to cane refineries, like American Sugar Refining Inc. (ASR), where it will be turned into 40 different sugar products—including white, confectioners and various browns—and sold under familiar labels like Domino, Florida Crystal, C&H and Redpath (ASR also packages sugar for other customers under their labels).

American Sugar Refining is the world's largest sugar company, with more than 17,000 employees (including manufacturing and distribution) and 10 refineries in the United States, Canada, Mexico, England, Portugal



A trio of sweeteners: regular, cane and high fructose corn syrup. An advertisement from the United States Food Administration, ca. 1918.



and across the Caribbean. The company farms 439,000 acres of sugar cane and harvests 12.5 million tons of cane annually. The Baltimore facility is second in production only to the New Orleans refinery; in 2011, the Baltimore plant produced 885,000 tons of refined sugar. It is, as refinery manager Stu FitzGibbon describes it, “a major operation.”

Still, on first glance, it’s also easy to understand what FitzGibbon means when he says that the public perception of sugar refineries is that they are old and outdated. The 29-acre ASR Baltimore refinery opened in 1922 and many of its darkened brick buildings are still in use (its iconic neon sign was erected in the 1950s). But “just because sugar refineries are old does not mean the technology and equipment are old,” says FitzGibbon. As he points out frequently throughout a tour of the Baltimore facility, jobs that once required mostly manual skills now require critical thinking.

“The main thing our employees do is think,” says FitzGibbon, pointing to a 10-year employee who is monitoring a computer screen that regulates “affination centrifuges”—tanks that spin 900 pounds of raw sugar that has been blended with a small amount of water and molasses (also known as magma) every three minutes. “It’s a more

thoughtful process than it used to be,” he adds.

Raw sugar is 98 percent sucrose, and the Baltimore refinery is “a huge facility for 2 percent removal,” jokes FitzGibbon wryly. The refining process is a series of melts, rinses and

The refining process is a series of melts, rinses and evaporations all designed to separate the molasses from the sugar crystals

evaporations all designed to separate the molasses from the sugar crystals. This refinery produces 6.5 million pounds of sugar (or melt, as the industry calls it) per day. It even has its own powerhouse.

Opportunity ... and Challenges

Consumers across the U.S. and around the world can choose from white, brown, confectioners and other specialty sugars in their supermarkets, and the industry continues to introduce new products and packaging. A demand for organic products has led

to a limited production of organic sugar. Domino has also begun to offer alternative packaging in the form of four-pound plastic tubs of refined sugar rather than the familiar five-pound bags.

Although the American sugar industry receives no government subsidies, it is heavily regulated, and both the domestic and international sugar industries pay close attention to discussions of free trade agreements since such agreements—as well as weather and supply—affect both the international commodity market and pricing.

The sugar industry will also continue to face competition from the artificial sweetener industry as people worldwide face the conundrum of trying to cut calories without eliminating sweetness.

“Sugar-free has taken a huge bite out of the sugar industry,” admits Mark Whitford of Sweeteners Plus Inc. “But while you get sweetness from sugar, you also get body. Take that away from soft drinks and you’re left with water and sweet. It’s not the same.

“Sugar will never go away.”



Concentrating squeezed sugar cane juice at a small, rural sugar factory in Myanmar, Burma.

Sugar Around the World

- Global consumption of sugar increased steadily by 2.5 percent per year between 2000 and 2010.
- Global sugar production for the 2011–12 marketing year is forecast at roughly 185 million tons, up 4 percent from 2010–11, according to the USDA.
- The U.S. is the largest consumer of natural sweeteners, consuming around 10 million tons of refined sugar each year.
- India is the largest consumer of sugar in Asia (roughly 17,000 tons), followed closely by China.
- Brazil is the largest exporter of sugar (accounting for 53 percent of world trade), followed by India, China and the United States.
- The U.S. produces approximately 70 percent of the sugar it consumes, importing the remaining 30 percent from other countries like the Philippines, Zimbabwe, Belize and Fiji.

Hero of the Skies

In an amazing act of daring and bravery, Butch O'Hare earned his place in history as America's first naval Flying Ace of World War II

BY GREG RIENZI

On Feb. 20, 1942, Navy Lieutenant Edward "Butch" O'Hare hopped into his Wildcat fighter plane aboard the USS *Lexington* aircraft carrier. This was no reconnaissance mission, flight drill or exercise. Duty, danger and fate beckoned.

The *Lexington* sat some 450 nautical miles from New Guinea and Japan's Pacific naval headquarters at Rabaul harbor.

Earlier that afternoon, the *Lexington* had been discovered by a four-engine Kawanishi flying boat. A U.S. fighter shot down the spotter plane, but not before it had radioed the carrier's position.

A full squadron of Mitsubishi G4M "Betty" bombers flew out of Rabaul to take out the *Lexington*. To counter, the *Lexington* dispatched six Wildcat fighters, which took down most of the enemy planes. The ship's anti-aircraft guns finished off the rest before any damage was done.

A second wave of bombers, however, was soon incoming. O'Hare and five other pilots roared off the carrier's deck to stop them.

These were the times when heroes were made.

Although just 27, O'Hare was already a seasoned and senior pilot who had established himself as a favorite with crew members. The handsome Irish-American was popular for his sense of humor and his modesty. A man's man, who

took his crew on fishing and swimming trips, he smoked Camel cigarettes and often flashed a Hollywood smile.

O'Hare also possessed remarkable stick-and-rudder and gunnery skills that made him a standout pilot and—on that fateful February afternoon in 1942—a nation's knight in airplane armor.

Edward O'Hare was born in St. Louis, Mo., on March 13, 1914, to Edward Joseph O'Hare and Selma O'Hare. Young Butch, as he quickly became known, had two sisters, Patricia and Marilyn.

Butch's father was a lawyer who early in his career met a St. Louis inventor, Oliver Smith, who developed a mechanical rabbit for use in dog racing, a new and popular pastime. Edward O'Hare helped Smith take out a patent for the device, and the two later toured the country introducing the rabbit (later popularized in a Bugs Bunny cartoon) at several racetracks.

When Smith died in 1927, the elder O'Hare allegedly swindled Smith's widow out of any rights to the mechanical rabbit and took all the earnings for himself. "Fast Eddie," as he would be known, was born.

Butch's parents divorced that same year,



Lt. Edward H. "Butch" O'Hare in his Grumman F4F-3 Wildcat giving a thumbs-up at Naval Air Station Kaneohe, Oahu, Hawaii, on April 10, 1942. Note the five Japanese flags representing the five enemy bombers he was credited with shooting down. Courtesy of The National Archives.

when Butch was 12. His sisters stayed with their mother in St. Louis, while Butch and his dad moved to Chicago. It was here that Fast Eddie met Al Capone, the American gangster whose crime syndicate was at the height of its powers. Capone brought on O'Hare to help run his horse and dog track operation in Chicago. The two struck up both a partnership and friendship.

Despite his father's dealings with such a notorious figure, Butch had a fairly normal childhood, with summer vacations to river camps, where Butch learned to sail and fish. His father also bought him a .22-caliber rifle that he used to shoot tin cans and other targets.

By all accounts, the elder Eddie doted on his son and praised him at every turn. But perhaps knowing the extent of Capone's villainy, he worried for the boy's future. At age 13, O'Hare was sent to Western Military Academy,

O'Hare speedily mastered the fine art of carrier landings, a pulse-raising maneuver he could not get enough of, impressing even more experienced pilots.

a private military preparatory school located in Alton, Ill.—an academy that in addition to O'Hare turned out several war heroes, including Paul Tibbits, who would go on to pilot the *Enola Gay* over Hiroshima.

O'Hare graduated from the Western Military Academy in 1932, and the following year enrolled at the United States Naval Academy in Annapolis, Md. Around this time, Fast Eddie provided incriminating evidence during Capone's infamous tax evasion trial, which helped finally to put the gangster behind bars.

In 1937, O'Hare graduated from the Naval Academy and was appointed an ensign. Though he longed for naval aviation, like all new officers of the time he had to spend two years on surface warships before he could specialize.

He served two years aboard the battleship *USS New Mexico*, and quickly moved on to flight training at Naval Air Station Pensacola in Florida. There he

learned the basics on such naval aircraft as the Factory N3N-3, or *Yellow Peril*, and the Stearman NS-1 biplane trainer. He trained in aerobatics on the Boeing F4B-4A, an agile pursuit aircraft, as well as in aerial gunnery. He also flew the SBU Corsair and the TBD Devastator.

During his training, O'Hare received heartbreaking news from home. On Nov. 8, 1939, his father was gunned down by some of Capone's men, just weeks before the famous mobster was released from Alcatraz prison. Fast Eddie was killed instantly. He was 46.

Butch O'Hare finished his naval aviation training in May of 1940 and was assigned to the *USS Saratoga's* fighter squadron, then transferred to the carrier *USS Enterprise*. O'Hare speedily mastered the fine art of carrier landings, a pulse-raising maneuver he could not get enough of, impressing

even more experienced pilots.

During the summer of 1941, O'Hare returned to St. Louis. During a hospital visit to a friend, he met a nurse named Rita Wooster and fell head over heels in love. He proposed on the spot. She said yes, but with a catch. O'Hare had to convert to Roman Catholicism so that they could marry in a Catholic Church. Butch agreed and the two married on Sept. 6, 1941.

The couple honeymooned in Hawaii, and then moved to Coronado, Calif. where Butch was reassigned until he was called to duty the day after the Japanese attacked Pearl Harbor on Dec. 7, 1941.

In January 1942, after the *USS Saratoga* was struck by a Japanese torpedo off Hawaii, O'Hare's squadron relocated to the *USS Lexington*, and O'Hare was temporarily promoted to lieutenant. One month later, O'Hare would cement his legend in military aviation history.

On Feb. 20, the *Lexington* was deep in enemy waters in preparation for a surprise air strike against the Japanese ships in the harbor of Rabaul. With their position spotted, the mission had to be aborted. Now it was just a matter of self-preservation. The second wave of enemy Japanese bombers took the *Lexington* off-guard, and O'Hare and his squad had to scramble.

The launch from the carrier, however, was far from ideal; four of the Wildcats quickly found themselves too



A recruiting poster, ca. 1942, appeals to the patriotic fervor of the day. Butch O'Hare's heroism undoubtedly inspired many young men to join the ranks of U.S. naval aviators.

far from the Japanese planes to reach them before they released their bombs. Only O'Hare and his wingman were within intercept distance, but the wingman's guns jammed.

O'Hare and his plane were all that stood between the eight enemy bombers, roughly 12 miles away from the carrier, and the *Lexington's* 2,000-man crew. As if these odds weren't long enough, O'Hare had only enough ammunition for 34 seconds of firing. He had to

make each round count.

Squinting into the sun, he quickly spotted the V-shaped bomber formation and took the enemy by surprise. On his first pass, O'Hare dived full throttle directly at the formation and took out two bombers in mere seconds. A burst from his plane's Browning M2 .50-caliber guns made a direct hit on a bomber's wing, and the engine ripped right out of its mountings.

O'Hare came around for another pass and took out another crop of bombers, which were now in complete disarray. With five bombers now taken out and another badly damaged, O'Hare was out of ammunition. More U.S. fighters joined the battle. Although three Japanese bombers managed to get

commander and awarded him the Medal of Honor. With the president looking on, Rita placed the medal around her husband's neck. The citation laid out his daring in dramatic detail.

"Without hesitation, alone and unaided, he repeatedly attacked this enemy formation, at close range in the face of intense combined machine-gun and cannon fire. Despite this concentrated opposition, Lieutenant O'Hare, by his gallant and courageous action, his extremely skillful marksmanship in making the most of every shot of his limited amount of ammunition, shot down five enemy bombers and severely damaged a sixth before they reached the bomb release point. As a result of his gallant action—one of the most daring,

cigarettes. The Camel smoker accepted the gift and wrote a letter of thanks to the Grumman employees: "You build them, we'll fly them and between us, we can't be beaten."

O'Hare would later embark on several war bond tours and other public relations duties throughout the country. In June 1942 he was relocated to Maui, Hawaii, to instruct other pilots in combat tactics. His daughter, Kathleen, was born in February 1943, but he didn't get to meet his firstborn until a month later.

O'Hare was kept out of combat until late October 1943, when he flew in attacks on Wake Island. In November, as Air Group Six commander on the USS *Enterprise*, O'Hare participated in



A squad of Grumman F4F-3 Wildcat fighter jets on a mission (plane in foreground piloted by Lt. Commander John S. Thach; pilot of plane in background is Lt. Commander Butch O'Hare) on July 3, 1942. O'Hare and Thach shake hands in front of a Wildcat fighter plane at an Oahu air base, ca. April-May, 1942.

through, none of their bombs would score a direct hit on the *Lexington*.

It was estimated that O'Hare used only 60 rounds per enemy bomber, an impressive display of marksmanship.

O'Hare's bravery and skill that day made him the first true naval "ace" of World War II (a designation for those who shoot down five or more enemy aircraft) and earned him the nation's highest military decoration. He would return to the United States to officially receive his honors. On April 21, O'Hare and his wife visited the White House. President Franklin D. Roosevelt promoted O'Hare to the rank of lieutenant

if not the most daring, single action in the history of combat aviation—he undoubtedly saved his carrier from serious damage."

On Saturday, April 25, 1942, O'Hare received a hero's welcome in his hometown of St. Louis. With confetti raining down, a beaming O'Hare rode down Washington Avenue with his wife and mother beside him, as some 60,000 took to the streets to cheer him home. As a token of appreciation, the workers at the Grumman plant in New York, where O'Hare's Wildcat was manufactured, took up a collection and bought him 1,150 cartons of Lucky Strike

the Gilbert Islands invasion.

Then, his good fortune ran out. On Nov. 26, O'Hare volunteered to lead a night interception to counter Japanese attacks with torpedo-armed Betty bombers, which attacked at night at low level. The pilots of the *Enterprise* had developed a clever counter to these attacks: Once an enemy plane was spotted, the carrier would launch Avenger bombers equipped with radar that would lead them into a position where the Hellcat fighters could spot the enemy bomber's exhaust flares.

O'Hare led one of these teams of two Hellcat fighters and one Avenger.

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It is not clear what went wrong, but a confused dogfight in the darkness took place, with the Avenger taking down two Japanese bombers. O'Hare was lost to radio contact.

Despite a search, Butch O'Hare's fighter was never found. He was officially listed as dead one year later.

What happened that night in November remains a mystery, but three theories persist. Some military historians believe that a Japanese bomber killed

Despite a search, Butch O'Hare's fighter was never found. He was officially listed dead one year later.

O'Hare outright with a lucky burst, others that O'Hare was shot down by the other Hellcat in the darkness, or that O'Hare took evasive action and clipped the ocean, crashing his plane into the waters. The surviving two U.S. pilots in that night raid defended the carrier and were awarded the Navy Cross. Rita O'Hare received her husband's posthumous Purple Heart and Navy Cross on Nov. 26, 1944.

In 1945, the U.S. Navy destroyer USS *O'Hare* was named in his honor.

Four years later, in September 1949, Chicago's Orchard Depot Airport was renamed O'Hare International Airport in memory of the fallen flying ace. O'Hare officially opened to commercial air traffic in 1955. In March 1963, President John F. Kennedy laid a wreath at O'Hare International Airport in Butch O'Hare's honor and spoke of his bravery.

"I remember as a young naval officer myself how the extraordinary feat of Butch O'Hare captured the imagination not only of our armed forces but also of the country," Kennedy said. "His extraordinary act in protecting his ship, shooting down, while he was alone, five of the enemy during difficult days in the Second World War, gave this country hope and confidence not only in the quality and caliber of our fighting men but also in the certainty of victory." ◀

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TRIVIA Did you know that...

Both π and the letter p are the 16th letter in the Greek and English alphabets, respectively.

In 2002, a Japanese scientist found 1.24 trillion digits of pi using a powerful computer called the Hitachi SR 8000, breaking all previous records.

The country with the largest number of World War II casualties was Russia, with more than 21 million.

The Air Force was part of the Army in World War II and didn't become a separate branch of the military until after the war.

Although initially created for college students, Facebook users over age 26 now represent 60% of the total U.S. Facebook population.

Curtis Institute of Music in Philadelphia has the lowest acceptance rate among U.S. colleges, at 4%.

Ancient Greeks and Romans originally used the term *Africa* to apply only to the northern region of the continent. In Latin, the word *Africa* means "sunny," and the word *Aphrike* in Greek means "without cold."

Since vampire bats have to drink as much as their own weight in blood every day, a human vampire like Dracula would have to drink the blood of a whole tableful of guests every night just to keep going.

Presidents William McKinley, Grover Cleveland, and James Madison are on the \$500, \$1,000, and \$5,000 bill, respectively. The bills are still used as legal tender but are no longer being printed.

On average, the moon is 238,750 miles (384,400 km) from Earth, or about 30 Earth widths away.

Although Nova Scotia was granted the British Empire's first flag by King Charles I in 1625, Canada did not have a national flag until February 15, 1965, when its maple leaf flag was adopted by its parliament. Before that, the red ensign, a British maritime flag, was in general use.

www.facts.randomhistory.com

ON THE LIGHTER SIDE

Ways Annoy People

- Specify that your drive-through order is "to go."
- Push all the flat Lego pieces together tightly.
- Leave your turn signal on for 50 miles.
- Declare your apartment an independent nation, and sue your neighbors upstairs for "violating your airspace."
- Follow a few paces behind someone, spraying everything they touch with Lysol.
- Holler random numbers while someone is counting.
- Staple papers in the middle of the page.
- Decline to be seated at a restaurant, and simply eat their complimentary mints by the cash register.
- Write "X - BURIED TREASURE" in random spots on all of someone's roadmaps.
- Drive half a block.
- Leave your Christmas lights up and lit until September.

- Sit in your front yard pointing a hair dryer at passing cars to see if they slow down.
- Chew on pens that you've borrowed.
- Select the same song on the jukebox 50 times.
- Make appointments for the 31st of September.
- While making presentations, occasionally bob your head like a parakeet.

Dates in History

1787 - On Dec. 7, Delaware becomes the first state to ratify the Constitution, doing so by a unanimous vote.

1823 - During his annual address to Congress, on Dec. 2, President James Monroe proclaims a new U.S. foreign policy initiative that becomes known as the "Monroe Doctrine." Primarily the work of Secretary of State John Quincy Adams, the Monroe Doctrine forbade European interference in the American hemisphere but also asserted U.S. neutrality in regard to future European conflicts.


1884 - On Dec. 6, in Washington, D.C., workers place a 9-inch aluminum pyramid atop a tower of white marble, completing the construction of an impressive monument to the city's namesake and the nation's first president, George Washington.

1921 - On Dec. 9, a young engineer at General Motors named Thomas Midgeley Jr. discovers that when he adds a compound called tetraethyl lead (TEL) to gasoline, he eliminates the unpleasant noises (known as "knock" or "pinging") that internal-combustion engines make when they run. Midgeley could scarcely have imagined the consequences of his discovery: For more than five decades, oil companies would saturate the gasoline they sold with lead—a deadly poison.

1965 - On December 9, the Cincinnati Reds traded outfielder Frank Robinson to the Baltimore Orioles, in exchange for the pitchers Milt Pappas and Jack Baldschun and the outfielder Dick Simpson. The trade was widely regarded as one of the worst in Major League Baseball history.

1993 - On Dec. 8, the North American Free Trade Agreement (NAFTA) is signed into law by President Bill Clinton. NAFTA, a trade pact between the U.S., Canada and Mexico, eliminated virtually all tariffs and trade restrictions between the three nations.
www.history.com

www.history.com



A weathered stone statue
in the Wat Po Temple
part of the Grand Palace
in Bangkok.



Taxis, known as “tuk tuks,” on Khao San Road, a popular landmark featuring a street-side market and many bars.

Thailand

A TALE OF TWO CITIES

Tourists flock to this country in Southeast Asia for its rich culture, chaos—and calm

BY JODI ETTEBERG

THAILAND IS A COUNTRY OF SUBTLE LAYERS, a complicated onion of history, culture and food that can be best explored by gradually pulling away pieces. With one of the highest rates of tourism in Southeast Asia, it has remained a top vacation spot for backpackers and luxury travelers alike. With its bustling capital of Bangkok, its cultural heart in the northern city of Chiang Mai and dozens of islands to explore in the south, the country packs a seemingly dizzying number of sights into a relatively small geographic area.

To truly appreciate its cities, beaches and lush green forests, however, it is worthwhile

digging under the surface to discover what makes Thailand such a unique destination. As the only country in Southeast Asia to have avoided colonial rule, its story and traditions are deeply intertwined with its monarchy and dominant religion, Buddhism. In recent years, the country has been in the news for a number of coups, a series of violent protests in the capital, a festering insurgency in Thailand's deep south and a massive flood that inundated large swaths of several provinces, including parts of Bangkok. Despite these struggles, tourism has thrived. It is partly Thailand's resilience that makes it such a fascinating destination.



An Escape from the Cities: Ko Samui

For those who want beaches as well as cities and mountains, Ko Samui is an easy option from Bangkok, with flights on Bangkok Airways (bangkokair.com/eng) and Thai Airways (thaiairways.com) plying the route several times a day.

While Samui is built up and fairly developed compared

to some of the smaller islands in Thailand, it is also easy to access and has some stunning beaches. For those looking for a place to stay, Rocky's Boutique Resort (rates available at rockyresort.com) is on Lanai beach, Samui's second-biggest shoreline and a quieter choice than the packed Chaweng beach.



Bangkok

Don't miss:

- A trip on the public boats along the Chao Phraya river, offering a very different view of the city.
- A morning at Wat Pho, one of the largest and oldest temples in Bangkok and the resting place for the huge reclining Buddha, his feet encrusted in mother-of-pearl.
- A weekend trip to Chatuchuk, one of the world's largest outdoor markets.

Name means: Where the olive plum trees grow. (The official

city name is Krung Thep Mahanakhon Amon Rattanakosin Mahinthara Ayuthaya Mahadilok Phop Nopparat Ratchathani Burirom Udomratchaniwet Mahasathan Amon Piman Awatan Sathit Sakkathattiya Witsanukam Prasit, one of the longest in the world.)

Where to stay: The Eugenia (267 Sukhumvit Soi 31, tel. +66 2259-9011, theeugenia.com), a colonial-inspired mansion with only a dozen rooms, tucked away on Soi 31. A quiet break from the chaos of Bangkok, it is

decorated with quirky art and furniture and offers a beautiful pool to counter the heat of the city.

Where to eat: American chef and food writer Jarrett Wrisley started Soul Food Mahanakorn

(56/10 Sukhumvit Soi 55 [Thong Lor], tel. +66-85-9042691, soulfoodmahanakorn.com) as an outlet for his love of Thailand's street food and its many nuanced flavors. On any given day, his menu is a variety of perfectly braised meats, rich coconut curries and spicy, tangy papaya salads. With sleek décor and a location right next to the Skytrain, this restaurant is the perfect spot for an evening meal. Don't miss his signature cocktails.





Wat Chedi Luang

Chiang Mai

Don't miss:

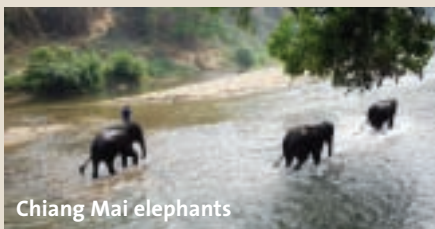
- The beautiful, old temple of Wat Chedi Luang in the center of town, with one of the oldest trees in Chiang Mai in its courtyard.
- An afternoon visit to the temple on the hill, Wat Doi Suthep, which overlooks the city below.
- A trip to the Elephant Nature Park, a rehabilitation center for abused and abandoned elephants. Volunteers can stay one day or a full week. Strongly recommended instead of an elephant ride at a closer camp.
- The Sunday night walking market on Ratchadaemnon road. Bring your appetite since every temple courtyard becomes a mini food court of its own. Cap off the night with a foot massage on the streets.

Name means: The new walled city.

Where to stay: 3 Sis Bed and Breakfast (1 Phra Pokklao Soi 8, tel. +66-5327-3243, 3sisbedandbreakfast.com). Located in the heart of Chiang Mai and around the corner from Wat Chedi

Luang, 3Sis is meticulously decorated in traditional northern Lanna style and features an attached restaurant and café, free WiFi, spotless rooms and a very friendly staff. The B&B is a short walk to Chiang Mai's huge Sunday night market.

Where to eat: The Riverside Bar and Restaurant (11 Charoenrat Rd., tel. +66-5324-3239, theriversidechiangmai.com) is located at the edge of the Ping River, with beautiful nighttime views of the city just over the bank. Its expansive menu of curries, *khao soi* (local coconut-based soup) and noodles offers something for everyone.



Chiang Mai elephants

Getting there: Air Asia (airasia.com), Thai Airways (thaiairways.com) and Bangkok Airways (bangkokair.com/eng) fly to Chiang Mai from Bangkok several times a day.

The Kingdom of Siam

The country's recent era can be traced back to the mid-14th century, when several kingdoms were jockeying for power in the region. The Kingdom of Ayutthaya emerged as a strong monarchy, channeling its energies along the Chao Phraya River near Thailand's central plains and establishing the city of Ayutthaya as the capital. Eventually calling the territory Siam, a name that held until the late 1930s, the Kingdom of Ayutthaya ruled until its fall at the hands of the Burmese in 1767.

With the city of Ayutthaya in ruins, Siam's new king, Taksin, moved the capital to Thonburi, across the river from Bangkok. Just over a decade later, Taksin was removed in a coup (and subsequently executed), and the new king, Rama I, relocated the capital yet again to Bangkok proper, where it has since remained.

The Chakri Dynasty, Rama I's descendants, have ruled Thailand ever since, shifting from absolute monarchy (in which the monarch rules with total power) to constitutional monarchy (limiting the monarch's power since he/she must rule along with a governing body) after a 1932 coup. In the years following the abolition of absolute monarchy, Thailand's politics have seen an uptick in political protests, coup attempts and charges of *lèse-majesté* (insults to the monarchy). Notwithstanding the cycles of occasional violence, the most recent in 2010, tourism in Thailand consistently bounces back. When violence does occur, it is almost always confined to the epicenter of the protests. For example, in 2010 as Bangkok was under curfew and emergency rule, the islands to the south were unaffected by the clashes.

It is worth noting that the country is extremely sensitive to any criticism of its monarchy, and *lèse-majesté* laws are some of the strictest in the world. See "Thailand Basics," on page 27 for more information about complying with *lèse-majesté* as these laws also affect travelers.

Expat Writers

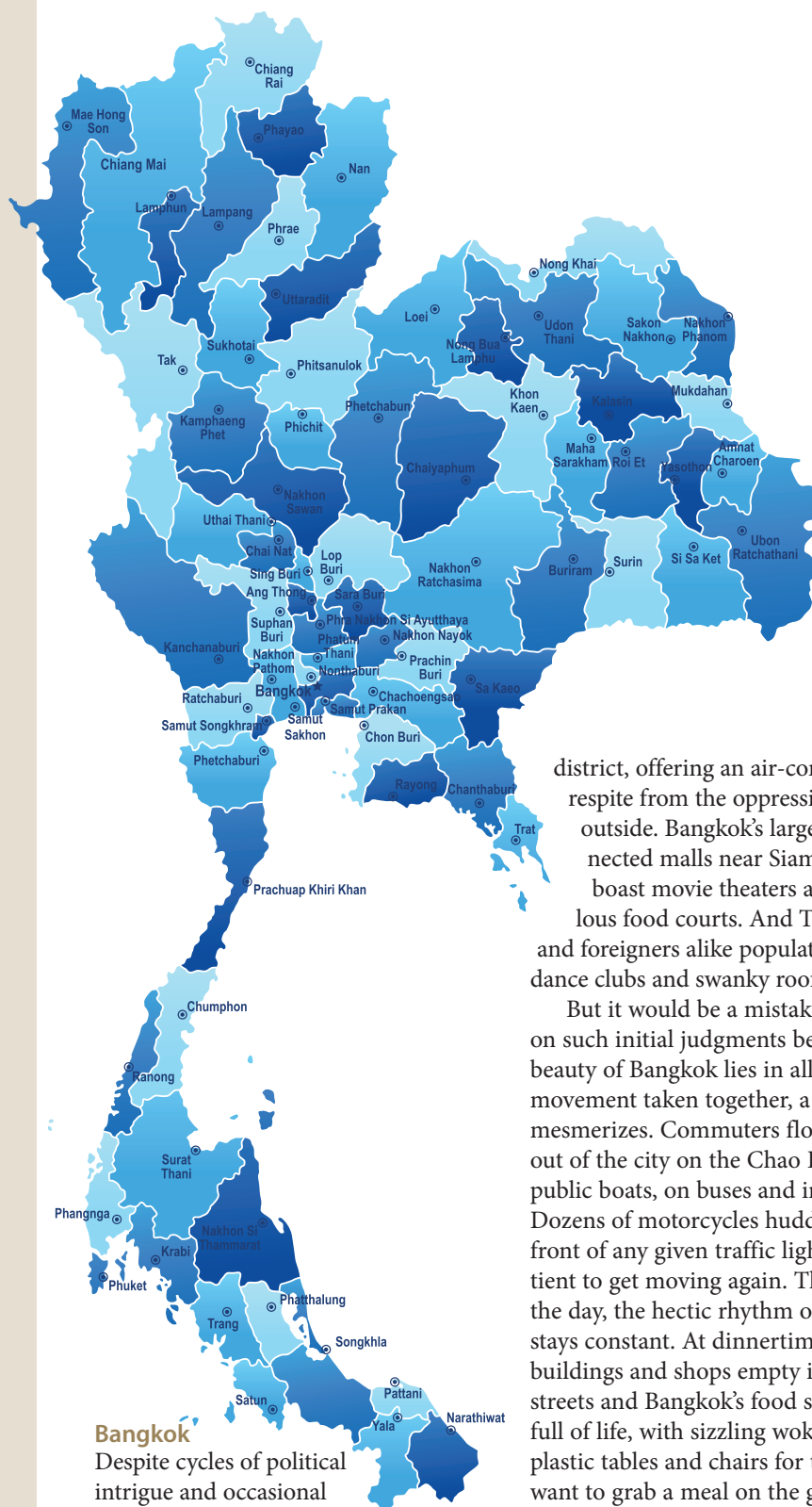
One of the more interesting ways to learn about a foreign country is through the eyes of its expats. Here are several websites and blogs written by Bangkok residents:

■ **Mark Wiens:** Arizona-born writer who grew up in Kenya and the States. Wiens' site emphasizes photography of food and the many attractions in Thailand and elsewhere in Southeast Asia. Though based in Bangkok, he also writes about his travels through Asia and Africa. migrationology.com

■ **Greg Jorgenson:** Canadian expat who has lived in Thailand for more than a decade. He writes about the quirks and chaos in his new home. gregtodiffer.com

■ **Newley Purnell:** American journalist living in Thailand and writing for a slew of different publications. His personal website focuses on the background to the stories he covers and other interesting happenings in Thailand. newley.com

■ **Austin Bush:** An American photographer who traveled to Thailand in 1999 and has remained there ever since. His photoblog, focusing primarily on food, is not to be perused on an empty stomach—it will make you hungry. austinbushphotography.com/blog



Bangkok

Despite cycles of political intrigue and occasional violence, Bangkok's economy continues to flourish. Like many capital cities, it receives an influx of residents from around the region, contributing to the bustling chaos that fuels the city from dawn until dusk. At first glance, Bangkok's 21st-century additions shine through: The ultra-modern Skytrain whisks travelers from the airport to the downtown business

district, offering an air-conditioned respite from the oppressive humidity outside. Bangkok's large interconnected malls near Siam station boast movie theaters and meticulous food courts. And Thais and foreigners alike populate trendy dance clubs and swanky rooftop bars.

But it would be a mistake to rely on such initial judgments because the beauty of Bangkok lies in all of its movement taken together, a dance that mesmerizes. Commuters flow in and out of the city on the Chao Phraya's public boats, on buses and in minivans. Dozens of motorcycles huddle at the front of any given traffic light, impatient to get moving again. Throughout the day, the hectic rhythm of the city stays constant. At dinnertime, office buildings and shops empty into the streets and Bangkok's food stalls are full of life, with sizzling woks and tiny plastic tables and chairs for those who want to grab a meal on the go.

Though the city appears extravagant from afar, its spirit lies in the confluence of its many disparate groups of people. Each back alley has a different feel, a specific type of food, a different cluster of residents. Like many capitals, Bangkok has an overabundance of sights and smells and noise, offering up miniature versions of the many provinces that make up the country of Thailand.

Chiang Mai

If Bangkok's strengths lie in its chaos, Chiang Mai's assets are its relative calm, emphasis on culture and its tantalizing proximity to the mountains. Chiang Mai sits about 600 kilometers (372 miles) north of Bangkok. Despite housing more than a million people, Chiang Mai remains a quieter alternative to Bangkok, with a history that developed in tandem with the south. Starting in the 13th century, the Lanna Kingdom ruled the north, flourishing as a trade point between Yunnan in China and Burma. It fell to the Burmese in the mid-1500s and was long ignored as Bangkok and its surroundings flourished. It was only during the last century that Chiang Mai saw a surge in development.

The Lanna Kingdom left its imprint on Chiang Mai, both on the temples and the ancient walls that trace a square around the old city. Northern Thailand has a different feel, a language closer to Khmer and a Lanna style of architecture with curled teak roofs and crumbling stupas (large moundlike burial structures

used as a place of worship).

Chiang Mai and its surrounding areas provide days' worth of sights to see. The city's ancient walls flank the center of town on all sides, with four main gates (and several smaller ones) still intact. They are not only a beautiful sight, lit up at night and glowing against Chiang Mai's tiny moat, but also excellent markers for navigating the city. Within the walls, it is easy to explore the many temples by foot; the roads are set out in a grid with tiny alleyways connecting the main thoroughfares.

Allocating a week to Chiang Mai allows for a thorough exploration of the city but also the flavors of the valleys and towns that surround it. With no water artery, getting around outside the moat is best effected with a motorbike taxi or a *songthaew*, a shared ride in the form of a red covered pickup truck. The Mae Tang valley is a short day trip out of the city, an adventure traveler's paradise with mountain biking, rafting and more. In addition, smaller surrounding villages provide a shopper's delight with handicrafts, Northern Thai

silk weaving and umbrella making.

Further adventures are recommended for those with more than a week to spare. To the north is Mae Hong Son, close to the Burmese border. The first road connecting it to Chiang Mai opened in 1960, and today's version has a nauseating 1,864 curves to maneuver on the six-hour drive (about 285 kilometers or 177 miles). The sleepy town features several temples, including the twinned temples of Wat Jong Klang and Wat Jong Kham, many small family-run restaurants with Shan-style Burmese food and an evening market around its tiny lake. It also presents an ideal jumping-off point to learn about the hill tribes of Northern Thailand, away from the clusters of tourists that breeze through Chiang Mai.

Bangkok and Chiang Mai are both popular tourist destinations in Thailand. With distinctive foods, opposing urban architecture and captivating histories, taken together they provide a small snapshot of a complicated and beautiful country. ●



WHEN TO VISIT: The most popular time to visit Thailand is between November and February, with a spike in pricing around Christmas time. Rainy season begins in earnest in early June, with the hottest months just prior, April and May. The islands to the south of Bangkok are affected by separate monsoon cycles.

ENTERING THE COUNTRY: Thailand offers free 30-day visas to Americans upon arrival in any of its international airports, with 15-day visas offered for land entries. Overstaying your visa is not recommended.

CURRENCY: Thailand's currency is the Baht, available at ATMs throughout the country, with several large banks to choose from (1 USD=30 Thai Baht). Higher-end hotels and restaurants will accept credit cards but carrying Baht is recommended for day-to-day transactions, and will be appreciated at smaller stalls and lunch spots.

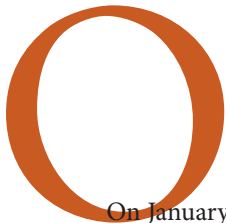
PROCEED WITH CAUTION WHEN DISCUSSING THE MONARCHY: Given the country's strict interpretation of its *lèse-majesté* law, travelers are strongly advised not to voice any negative thoughts about the monarchy. This includes statements about not just the king, but also others within the royal family.



William J. Glackens

Remember the Maine!

How a “splendid little war” put the United States on the map as a world power



BY EUGENE FINERMAN

On January 25, 1898, the USS *Maine* sailed into the harbor of Havana, Cuba. The battleship was to anchor there for an unspecified time and had the vague assignment of protecting American interests. In fact, the presence of the *Maine* was a challenge to the Spanish rule of Cuba. Spain would have had every right to protest the American transgression—but the weak European power chose not to provoke a war it

would certainly lose. Yet, three weeks later, on February 15, the USS *Maine* was blown apart by an explosion; the ship and 260 of its crew were lost. A faulty boiler was most likely the cause, but America preferred to blame Spain. In a matter of months, Spain had surrendered its empire, America emerged as a world power, and the U.S. secretary of state described it all as “a splendid little war.”

To the American public, the war could have been a Victorian melodrama: a fair Cuban damsel in the clutches of a snarling Spanish villain but rescued by the noble American hero. Indeed, this was how American newspapers depicted the conflict, and the underlying story was fairly accurate. Cuba, Puerto Rico and the Philippines were the last remnants of the Spanish Empire. That empire once extended

from Colorado to Tierra del Fuego, but Spanish misrule had lost most of its colonies to rebellion.

Worse, Spain had learned nothing. It was as repressive and corrupt as ever. In response, Cuba was in continual revolt; since 1835, there had been 11 attempts to overthrow Spain. The first 10 had proved heroic failures. However, the latest rebellion, beginning in 1895, had a strategy to goad American intervention: the destruction of the tobacco and sugar crops. Between 1894 and 1896, Cuba's tobacco crop decreased from 450,000 bales to 50,000. Its sugar exports dropped by 80 percent. Depriving America of its pleasures was tantamount to an act of war.

In 1896, the United States Congress passed resolutions supporting the rebels and demanding Spain's withdrawal from Cuba. Despite the demand, which proved popular with the American public, President Grover Cleveland would not be coerced into a war. His successor, William McKinley, was also reluctant. The decorated veteran of the Civil War said, "I have been through one war. I have seen the dead piled up, and I don't want to see another."

But the war had already begun, at least in the American press. The newspapers were competing with one another to report the latest Spanish outrage in Cuba. The accuracy of the reports was irrelevant. This was the age of yellow journalism, and facts were never allowed to ruin a good story. To cover the atrocities in Cuba—or concoct them—*New York Journal* publisher William Randolph Hearst assigned writer Richard Harding Davis and artist Frederic Remington.

Remington provided the accompanying sketch. We see a beautiful, naked woman surrounded by those leering Latin satyrs. So what if the story was untrue? Remington had drawn a masterpiece of propaganda: an irresistible appeal to patriotism and prurience.

And in this fevered atmosphere, the USS *Maine* was ordered to Havana. A month after the explosion, the U.S. Navy's board of inquiry concluded that a Spanish mine sank the ship. Modern scholars doubt it. Would Spain, a poor nation of 19 million, provoke a rich industrial power with a population of 72 million? A modern American fleet was but hours from Cuba, ready to blockade its ports and destroy any meager reinforcements that Spain could send across the ocean. Strategically and materially, Spain was hopelessly inferior; it would never have dared to start the war. But in the spring of 1898, America was not so analytical and rational.

A rallying cry resounded across America: "*Remember the Maine! To Hell With Spain!*"

On April 20, the United States confronted Spain with an ultimatum. If Spain did not immediately agree to Cuban independence, America would undertake a "forcible intervention." Spain responded, four days later, with a declaration of war. Ironically, the first major battle in the crusade to free Cuba was fought in the Philippines. In the early morning of May 1, an American flotilla of four cruisers and two guns sailed into Manila Bay. The Spaniards were taken by surprise; their anchored fleet was a collection of old and unarmored ships. After the first two hours of battle, noting the feeble Spanish defense, American Commodore George Dewey suspended the attack so



Left: American troops boarding transport steamer during the Spanish-American War. Above: A masterpiece of propaganda: artist Frederic Remington's front-page sketch for William Randolph Hearst, of Spanish officials strip-searching an American woman tourist in Cuba.

The accuracy of the reports was irrelevant. This was the age of yellow journalism, and facts were never allowed to ruin a good story.

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that his men might have breakfast. Afterward, the Americans resumed the battle and destruction of the Spanish fleet. Spain lost eight ships and control of Manila Bay; one American sailor died of heat stroke. Manila itself was besieged. An army of Filipino insurgents, supported by the Americans, was surrounding the city. Throughout July, American soldiers landed in the Philippines, tightening the siege of Manila. Its fall was inevitable, only a matter of time or negotiation.

The war in Cuba began in mid-June when the American army landed near Santiago, the island's second largest city. An American fleet blockaded Santiago's harbor while the army advanced on the hills that surrounded the city. The Spanish army had dug in and established a good defensive position on San Juan Hill. On July 1, the Americans attacked. Accompanying the American troops was Richard Harding Davis. If a shameless propagandist, he was also a heroic correspondent. He was there at "the charge up San Juan Hill" and described how...

They walked to greet death at every step, many of them, as they advanced, sinking suddenly or pitching forward in the high grass, but the others waded on, stubbornly, forming a thin blue line that kept creeping higher and higher up the hill. It was as inevitable as the rising tide.

In his reports, Davis made special note of one American officer: a New York socialite, Harvard scholar and former cowboy who was second-in-command of a cavalry regiment known as the Rough Riders. For once, Davis was not exaggerating. Lt. Col. Theodore Roosevelt would return to New York, be elected governor and within three years be president of the United States.

With the Americans on San Juan Hill and the surrounding heights, Santiago was at the mercy of U.S. artillery. The Spanish fleet was ordered not to surrender; so on July 3 its four cruisers and two destroyers sailed out on a quixotic venture against an American fleet of five

battleships and two cruisers. All the Spanish ships were sunk or run aground. One American was killed in the battle; 300 Spaniards died and 1,800 were captured. Two weeks later, the city of Santiago surrendered. On July 24, Spain asked for a cease-fire;

Lt. Col. Theodore Roosevelt would return to New York, be elected governor and within three years be president of the United States.

an agreement was signed on August 12. However, the news arrived a day late in the Philippines; on August 13 a combined force of Americans and the Filipino insurgents had captured Manila.

So ended the “splendid little war”—an absolute American triumph. Spanish and American diplomats met in Paris to negotiate the peace treaty. Spain signed away the last of its empire, ceding Cuba, Guam and Puerto Rico to the victor. It sold the Philippines for \$20 million (\$560 million today). While ostensibly liberating Cuba, the United States had acquired its own empire. But President McKinley could rationalize this windfall. “Territory sometimes comes to us when we go to war in a holy cause. Shall we deny to ourselves what the rest of the world so freely and justly accords to us?”

America had emerged as a world power, and relished its strength and



Theodore Roosevelt gained fame during the Spanish-American War as a “Rough Rider.” Illustration by Udo J. Keppler; July 27, 1898.

importance. In the ensuing decade, America established itself as the champion of free trade in China, the impartial arbiter of the Russo-Japanese War, and the engineer and master of the Panama Canal. The Great White Fleet, a force of 16 battleships, demonstrated America’s reach by sailing around the world.

The United States did honor its commitment to Cuba, recognizing the island in 1902 as an independent republic. Yet America insisted on a few unique prerogatives: until the 1930s the United States had the

right to military intervention, and Cuba could not enter into any treaties without American approval. As for the other acquired colonies, a restless Filipino population was pacified by both military force and the promise of eventual independence; that was finally granted in 1946. Puerto Rico and Guam are still American territories.

The age of imperialism is over, but a sense of global responsibility remains. President Theodore Roosevelt said, “Even if we would, we cannot play a small part.”

Reinvesting in American Manufacturing

> Dixon Quick Coupling will replace its plant in Charlotte, N.C., with a new facility in nearby Gaston County, N.C., that is on track to open during the first quarter of 2013.

“We had outgrown our existing facility in Charlotte,” which was part of the acquisition of Perfecting Coupling in 1993, says Dixon President Bob Grace. With the new 100,000-square-foot facility in the Gastonia Technology Park, “we are gaining 40 percent capacity to handle increased demand. We also have room to expand the building as demand requires,” says Grace.

The new plant will be home to Dixon Quick Coupling’s manufacturing, customer service, warehouse and divisional headquarters, and will bring more than 130 jobs to Gaston County. Grace expects that many of Dixon’s employees at the Charlotte plant will move to the new facility. A good number had already been commuting from homes in Gaston and Cleveland counties.

“We had added 20 jobs in Charlotte over the past 18 months,” Grace says. “We expect to hire more people to provide more American manufacturing jobs as business increases.” Dixon Quick Coupling manufactures pneumatic

Moreover, the county’s economic development team put together a very attractive package—including equipping the property with backup power generation to provide guaranteed uninterrupted power.

“WE ARE GAINING 40 PERCENT CAPACITY TO HANDLE INCREASED DEMAND. WE ALSO HAVE ROOM TO EXPAND THE BUILDING AS DEMAND REQUIRES,” SAYS BOB GRACE.

and hydraulic fittings used in the oil and natural gas, agricultural, construction and industrial sectors.

When Dixon began to search for a site for the new plant, Gaston County emerged as the clear winner, Grace says. Gaston College, the local community college, is working with Dixon on a variety of training programs, including employee development, lean manufacturing and machine-specific training.

“They put a lot of time and money into this land to attract businesses to provide jobs for Gaston County,” says Grace. Dixon will be the fifth business to locate in the Gastonia Technology Park, next to Gaston College.

“From the big strategic point of view, it is our desire to be a U.S. manufacturer, to keep making our products in the United States,” says Grace. “That’s our vision as we move forward.”

Dixon’s new 100,000-square-foot facility in Gaston County, N.C., set for completion in early 2013, will bring more than 130 jobs to the area.



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Airing on the Side of Caution

Compressed air is powerfully useful—and potentially deadly, unless proper protective measures are taken

> If you've ever endured road construction (and who hasn't) while making the daily work commute or during the family vacation trip, you may have noticed burly men creating quite a bit of dust while using tools that sound like machine guns. Congratulations—you've just encountered a pneumatic jackhammer.

Air-driven tools powered by portable compressors can be found at many job sites such as construction, mining, quarries and, yes, road repair. These tools make quick work of what otherwise would be a back-breaking

task. One such task is bridge maintenance. Surface repair is the most visible use. Structural maintenance, such as cleaning and painting metal surfaces, is less visible but far more important to the safety of those traversing the bridge. Repainting is a necessary step for retaining structural integrity. Without paint, metal oxidizes and weakens over time. Preparing the metal for paint is a hazardous job; workers must contend with an awkward work space high above the ground or body of water, while wheeling around a heavy air-driven

tool that kicks like a mule. The work is even more dangerous when certain regulations aren't followed.

One particular crew, behind schedule before they started, was scurrying around making final preparations to begin the cleaning phase of the bridge-painting contract they had landed. After securing the scaffolding under the bridge, two workers climbed down onto the catwalk and awaited their chipping hammers to be lowered to them. As was their common practice, the workers didn't secure their safety harnesses until they had their tools and were in position to begin work. With chipping hammer in hand, one worker began crossing to the far side of the scaffolding.

About two-thirds of the way across, the air supply line snagged. Without thinking, the worker began to violently jerk on the tool's whip hose (connected to the air supply line) in an attempt to free it. But instead of freeing the air supply line from the snag, he pulled

the fitting out of it. Almost instantly, the whip hose recoiled violently, striking him in the chest. The impact knocked him off the scaffolding and he plunged several hundred feet to his death in the ravine below. Meanwhile, the air supply

this ordeal with just a few bruises.

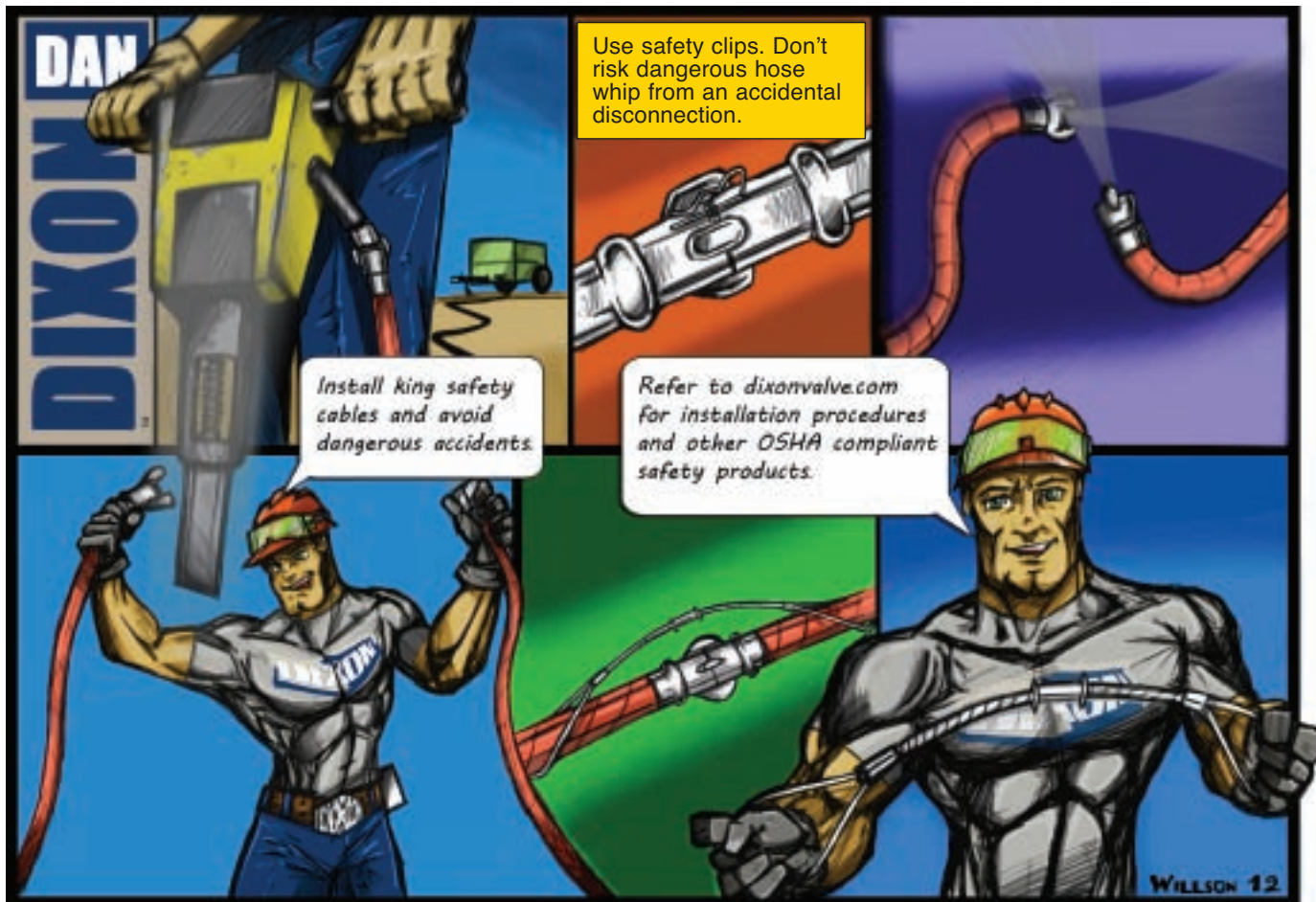
Compressed air is a very useful form of energy at remote locations because of its portability and its ability to travel great distances without power loss. But because of its compressibility,

29 CFR 1926.302 (a)(10) states: *Safety chains or equivalent means shall be provided for each hose connection to prevent the line from thrashing around in case the coupling becomes disconnected.* Safety devices, such as King Safety Cable, are designed to comply with OSHA regulations for portable compressed air and to prevent accidents like this from occurring. Anyone working with or near compressed air should be familiar with these regulations and the proper use and installation of required safety devices. Let's *Keep It Safe* by following established safety regulations and using proper safety equipment and devices. Failure to do so can have life-changing, or life-ending, consequences. ●

STRUCTURAL MAINTENANCE, SUCH AS CLEANING AND PAINTING METAL SURFACES, IS LESS VISIBLE, BUT FAR MORE IMPORTANT TO THE SAFETY OF THOSE TRAVERSING THE BRIDGE.

line, moving with blinding speed, struck the other worker in the back, knocking him off the scaffolding as well. Luckily, he had anchored his safety harness just moments before. Other than severely rattled nerves, he escaped

this energy source has grave dangers associated with it. As a result, regulations have been established to protect those working with and around it. Occupational Safety and Health Administration (OSHA) regulation



(Es)chewing the Fat

Dining out needn't derail your diet

> Most of us find it easiest to maintain a healthy diet when we dine at home, where we have some control over what we eat, how it's prepared and the size of our portions.

But in our time-crunched world, eating out has become the new reality. On average, Americans eat 4.2 meals per week in a commercial setting, according to the National Restaurant Association. For men ages 18 to 34, that figure is closer to six meals a week.

The good news? With a little thought (and advance planning) it is possible to enjoy a fast food lunch or restaurant dinner several times a week without packing on extra pounds. Some tips for what to order—and avoid:

Fast Food: Hold the Fat

We've all been conditioned to look to chicken or fish as a healthier substitute for beef. But when it comes to fast food sandwiches, you might want to think



again. Consider that a double cheeseburger at Burger King is 370 calories (18 grams of fat), while a TENDERCRISP chicken sandwich comes in at a whopping 750 calories—with 45 grams of fat. Almost as bad is the Alaskan Fish Sandwich (590 calories; 31 grams of fat). Holding the mayo or

FORTUNATELY, IT'S EASIER THAN EVER THESE DAYS TO GET A HANDLE ON THE NUTRITIONAL STATS OF FOOD SERVED BY RESTAURANT CHAINS.

tartar sauce can cut these fat counts by more than half and shave about 200 calories off each sandwich.

But a better strategy still is to avoid any sandwich fillers that are breaded and fried. Instead, go for the grilled and eschew the goopy toppings. Without mayonnaise, BK's TENDERGRILL chicken sandwich is just 360 calories with 6 grams of fat. McDonald's offers a similar option, with similar stats, with its Premium Grilled Chicken Classic Sandwich. And don't turn your back on the beef. A regular roast beef sandwich at Arby's, for instance, can sate your appetite while staying well within healthy calorie limits, at 320 calories and 14 grams of fat.



Now That's Italian!

Is there anyone left in the world who doesn't recognize Fettucine Alfredo (aka "heart attack on a plate") as the ultimate fat and calorie buster? So first things first: Run from anything with "Alfredo" in the title—including Olive Garden's 1,440-calorie Chicken Alfredo dinner, with its artery-clogging 82 grams of fat.

Also on the list to avoid: Lasagna (the twice-baked dinner version at Macaroni Grill carries a calorie count of 1,360, with 80 grams of fat) and Chicken Parmesan (1,490 calories and 68 grams of fat at Macaroni Grill).

Fortunately, there are some tasty Italian dishes that aren't smothered in cream, or bubbling with cheese. "Primavera" options, made with lightly sautéed spring vegetables, can be your best friend here. Olive Garden's shrimp primavera dinner, at 730 calories, 12 grams of fat, won't break your nutritional bank for the day.

"Pomodoro" sauce (thicker than marinara, with chunks of tomatoes, garlic and basil sautéed in olive oil) affords another flavorful choice. You can enjoy a satisfying bowl of Spaghetti Pomodoro at Carrabba's and consume 530 calories and just 1.5 grams of fat. Take a similar tack when ordering pizza. A Margherita pizza, with its fresh slices of mozzarella, tomatoes and basil, is a filling but reasonable alternative

(280 calories/slice; 11 grams of fat at Bertucci's) to a pizza loaded with cheese and meat.

Mexican: Go Naked

To borrow a popular catch phrase used by Mexican eateries, it's best to "go naked" when navigating the fixings lines of Mexican casual dining restaurants: Simply skipping the soft flour tortilla on your burrito shaves more than 300 calories off your meal.

Along similar lines, follow your good health instincts by ordering a salad—but don't eat the bowl! Despite its satisfying crunch, a tortilla bowl packs on more than 20 grams of fat and about 350 calories. Much better to order along the lines of the naked Mango Grilled Chicken Salad at Qdoba (with no cheese or sour cream),

which comes in at a heart healthy 280 calories and 10 grams of fat.

Whatever protein you choose (chicken, pork, steak), be sure to bulk up on the numerous veggie options now available at Mexican chains, and opt for brown rice over white rice whenever possible for more fiber. You can dig into a heaping burrito bowl at



Chipotle, for example, with steak, black beans, brown rice, fajita vegetables, fresh tomato salsa, cheese and lettuce, for a reasonable 580 calories and 20 grams of fat.

Plan Ahead

Fortunately, it's easier than ever these days to get a handle on the nutritional stats of food served by restaurant chains. Many already post calorie counts on their food items, and McDonald's jumped on the bandwagon this past fall, in advance of an expected federal mandate for menu-labeling that is expected to go into effect in 2013. Go online before heading out the door (or check the menu or your smartphone while standing in line) to make sure your order isn't a fat and calorie bomb. ■

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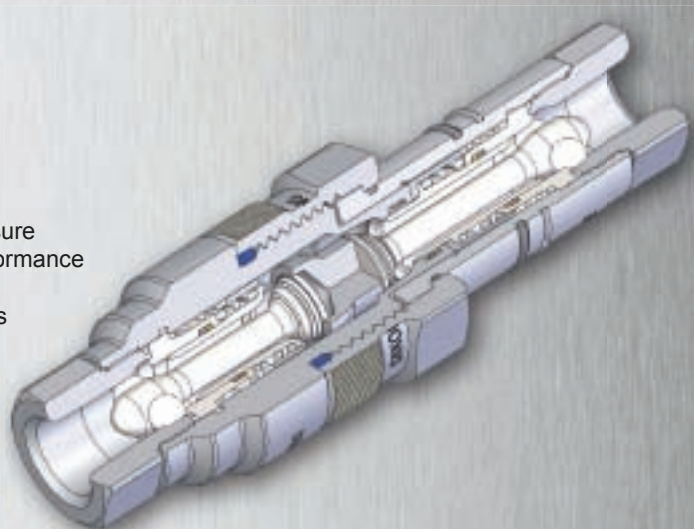
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Packed with Power

The development of the battery reflected the currents of the time



> Most of us don't think twice when popping a few AAA batteries into our flashlights, TV remotes and clocks. Our only expectation is that they keep the devices going and going and going—just as promised by the iconic bunny rabbit in the popular television commercials.

But like many things we take for granted in our modern lives, the battery has a fascinating history—a history that describes the development of electrochemical cells, which were crucial for industrial applications of electricity. Until the advent of electrical generators and electrical power grids in the late 19th century, people depended on batteries as the main source of electricity.

Many credit Italian Alessandro Volta with inventing the first battery in the late 1700s—but an archaeological discovery, made in what today is Iraq, puts that into question. In 1936, railroad workers dug up a clay jar, which held an iron rod surrounded by a copper cylinder. The object puzzled the finders. In 1938, German archaeologist Wilhelm Konig suggested that this device, if suffused in an electrolytic food acid like vinegar or lemon juice, could have been an early battery. Subsequent experiments showed that the “Baghdad Battery,” dating back 2,000 years, would have been capable of generating 1.1 to 2 volts of electricity.

Fast forward 1,600 years and thousands of miles west, where a number of ingenious European and American inventors were hard at work on the problem of generating and transmitting

electricity. Enter the aforementioned Alessandro Volta, of Milan, Italy. In 1800, Volta discovered that some fluids could conduct electricity. After much trial and error, he learned that he could generate even more power by stacking pairs of copper and zinc disks on top of each other, separated by brine-soaked cloth or pasteboard (the electrolyte), in a “voltaic pile.” When the plates were connected by wire, they produced electricity. Volta proudly presented this breakthrough at the prestigious Royal Academy of London and published the results, making him famous. Today we use the term “volts” to describe the strength of a battery.

Volta's battery was the first to emit a steady, lasting current, but it didn't last for long and there were other drawbacks: The metal disks corroded quickly, and the height of the voltaic stack was limited. England's John Frederich Daniell solved that problem with his “Daniell Cell”: a jar half filled with copper sulfate solution, with a copper plate at the bottom. A zinc plate was hung at the jar's top and zinc sulfate solution was added, which, being lighter, floated to the top and surrounded the zinc plate. A wire connected to the zinc plate represented the negative terminal, while a wire leading from the copper plate was the positive terminal. This worked well enough to power the telegraph and other stationary 19th-century electrical inventions. But even the Daniell Cell had its shortcomings, including that it was not rechargeable.


Swedish scientist Waldemar Jungner addressed this issue in 1899 by inventing the first nickel-cadmium rechargeable battery. Unfortunately, cadmium was expensive, so famed American inventor Thomas Edison replaced it with less pricey iron. This may have been an example of the axiom “You get what you pay for” because the Edison battery didn't perform very well. German scientists Schlecht and Ackerman overcame such problems by inventing something called the “sintered pole plate,” which carried larger currents longer.

The nickel-cadmium battery was used for many years, and for many purposes. (Duracell, a company whose name is recognizable today, began operating in 1964.) In the 1970s, the first lithium batteries came into use, but they had the disadvantage of being nonrechargeable. (Lithium metal is inherently unstable.) Efforts to create a rechargeable version failed, and research moved to a lithium-ion combination, with the Sony Corporation commercializing the first lithium-ion battery.

Today, there are a variety of compact batteries of various types—alkaline, lithium, carbon zinc, silver oxide and more—for different uses. These handy devices power many of our modern-day conveniences, from hearing aids to cellular telephones to digital cameras. ■

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