



The Right Connection®

8 Code Talkers

Using words
as weapons

20 Ian Fleming

Creator of
James Bond

26 National Parks

Exceed
expectations

32 Prohibition

The noble
experiment

BOSS

SUMMER 2016 ASIA/PACIFIC – WINTER 2016

CONNECTING TO INDUSTRY

WAKE UP TO COFFEE!

FIND OUT WHAT IT TAKES TO SATISFY
ONE OF THE MODERN WORLD'S
MOST INCURABLE CRAVINGS

DIXON
CELEBRATES
100 YEARS

UNCOMMON EXCELLENCE™



Dixon Valve & Coupling Company
1916-2016



It's been an honor to serve
our customers for 100 years.

Thank you!



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BOSS

SUMMER 2016
ASIA/PACIFIC –
WINTER 2016



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THE ROAD AHEAD

It has been an exciting—yet challenging—year for Dixon. Our 100th anniversary has brought new energy and a bit of pride, but as with many other businesses, the economic slowdown has been difficult. However, with challenge comes opportunity, and those of us who have been around awhile understand that today's economic situation is not new.

A few years ago, a retired three-star Air Force general worked with us at Dixon to help refine our planning process, especially focusing on our long-term strategic planning. He pointed out that many people only look at the hood of the car and ignore the road ahead. While it's obvious that it's important to know what is right in front of you, failing to look long term can kill you. Great companies and smart leaders know this and work hard on current challenges while simultaneously focusing on the long term.

Here at Dixon, our focus—both long term and short term—is on you, the customer. We're proud of our longevity, and by continuing to serve you, we hope to continue to delight you for many more years.

Thanks for your business, and I hope you enjoy this edition of *BOSS* magazine.

Thanks for reading,

Dick Goodall

BOSS

SUMMER 2016

ASIA/PACIFIC – WINTER 2016

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ON THE COVER

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JOIN US!



Doing Business Honorably

The "Standards of Business" excerpted here were articulated in the 1920s by the Rice Institute—an organization that Dixon founder Howard W. Goodall belonged to in the company's early years. These tenets of good character are timeless, and they continue to inspire Dixon's leadership today.

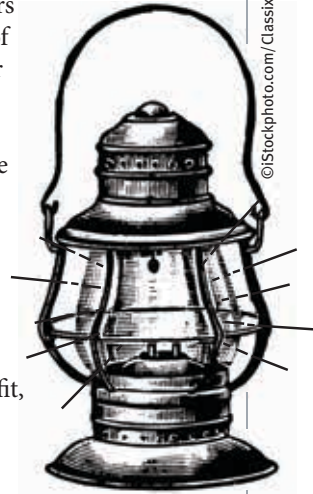
> "The character of a good man inspires faith in him. His example shines like a lantern guiding the footsteps of those who would walk in the path of honor and fair dealing. The standard set by such a man is an inspiration to all who know him. As knowledge of him increases, his circle of influence widens and benefits to others multiply.

"The same principle is applicable to business. A manufacturer whose character and reputation measure to

the highest standard has an inspiring influence upon all who know him. It is, therefore, clearly to be seen that when more people know of such a manufacturer the business world in general is benefited.

"It is true that through wider knowledge of the character and reputation of a worthy manufacturer he benefits individually. Careful buyers naturally place their orders with a manufacturer known to be deserving

of their confidence. But more than this; distributors who sell the goods of such a manufacturer strengthen their own reputation for handling dependable merchandise. The beneficial effect is extended to the consumer—he has the consciousness of using a product designed for his profit, health, happiness and comfort." ■



©iStockphoto.com/Classix

API Coupler with Bonded Nose Seal

Applications:

- Recommended for crude oil service, also used at petroleum loading racks

Size:

- 4"

Materials:

- Body: 356 T6 aluminum anodized hard coat
- Handle: aluminum
- Seal: FKM-B

Features:

- No special tools needed for maintenance
- Safety locking 5 cam design for easy alignment and tight connection
- Ball-end handle for easy, comfortable operation
- Durable bonded nose seal cannot be washed out

Specifications:

- Maximum operating pressure: 150 PSI
- Pressure rating: 350 PSI peak surge
- Temperature range: -10°F to 400°F (-23°C to 204°C)



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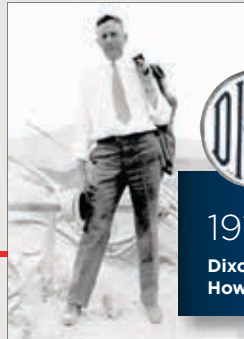
(1916-2016)

A CENTURY OF INNOVATION

It's a momentous milestone few privately owned companies ever reach:
In 2016, Dixon celebrates its 100th anniversary.



ca. 1900s
Product catalog for the
Goodall Rubber Company



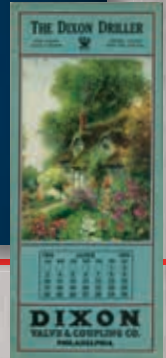
1916
Dixon is founded by
Howard W. Goodall.

PENNSYLVANIA

Philadelphia

1934

The Dixon Driller,
launched in 1918,
is the longest
continually
running corporate
advertising
publication in the
United States.



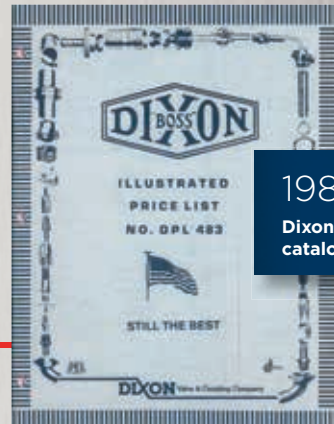
1994

Brothers Douglas (Vice
President) and R.L. (President)
become the third generation
to lead Dixon.



1993

Dixon purchases Perfecting
Service Company, now
Dixon Quick Coupling.



1983

Dixon product
catalog cover

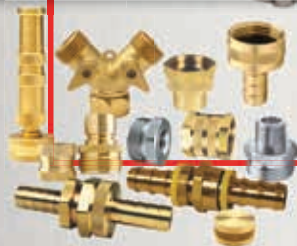


1999

Dixon purchases
American Couplings
Company (now
Dixon Brass) and
Bayco Industries.

2001

Louis Farina Jr. becomes the
company's fourth president.



2000

Dixon purchases
Bradford Fittings,
now Dixon Sanitary.



2004

Dixon Fire
is created.

1939

Dixon product catalog cover



ca. 1940s

Distribution trucks prepare to head out from the Philadelphia warehouse.

1940

Dixon purchases the Mulconroy Co. and incorporates its products into the Dixon line.



ca. 1940s

Mulconroy Co. product catalog cover

1976

Dixon moves its company headquarters to Chestertown, Maryland.



1966

The Dixon Driller marks the company's golden anniversary.



1951

Richard B. Goodall becomes the company's second president.

1950

The Buck Foundry



2010

Bob Grace becomes the company's fifth president.



2012

Dixon acquires Eagle America (now Dixon Eagle).



100

Unbroken Excellence
1916 - 2016

2016

Dixon product catalog cover



Words as Weapons

During the world wars, Native American code talkers helped win battles and save countless lives

> Though they were the first Americans, Native Americans have had little voice for much of their time in the United States.

Historically, there were 500 distinct Native American languages spoken in North America. Beginning in the late 1800s, Native American children educated in government- or church-run boarding schools were forbidden to speak their native tongue and punished if they did. Native Americans were not considered U.S. citizens until 1924, and many were unable to vote until the late 1950s.

But during World War I and World War II, their words served as weapons. Hundreds of Native Americans joined the U.S. military and used their native languages and the codes they developed to transmit secret tactical messages. These code talkers helped the United States and its allies win battles and save countless lives. Yet for years, their contributions went unrecognized.

“In a desperate hour, [they] gave their country a service only they could



Native American Marines George Kirk and John Goodluck, pictured here at their shelter on a Guam hillside, circa summer 1944, were both with a Navajo code talker communications unit and were veterans of combat with the Japanese.

give,” President George W. Bush said during the July 2001 ceremony in which 21 Navajo code talkers were presented with Congressional Gold Medals, the nation’s highest civilian honor, for their service in World War II. “In war, using their native language, they relayed secret messages that turned the course of battle. At home, they carried for decades the secret of their own heroism.”

The first Native Americans to transmit codes during wartime served in World War I. In October 1918, near the end of the war in Chardeny, France, Solomon Bond Louis and Pvt. Mitchell Bobb were overheard speaking Choctaw. Their

commanding officer realized that the language, which has 26 dialects, would be undecipherable by the enemy.

“I’ve got an idea that just might get those [Germans] off our backs,” the commander was said to reply, referring to the fact that his battalion was practically surrounded by Germans, who had successfully “broken” the Americans’ radio codes and tapped their phone lines.

The commander wrote out a message in English and asked Pvt. Bobb to deliver it via phone in Choctaw. Another soldier received the message and translated it into English. Within a few hours, the eight Choctaw speakers Louis identified were reassigned as code talkers. Ten more Choctaw speakers were found and assigned. Louis was posted at headquarters, where he could receive messages from the front.

Not long after the Choctaw code talkers began their work of transmitting key messages in their native tongue, the

U.S. Marine code talkers during a 2001 visit to Washington, D.C., where they received Congressional gold medals.



tide of the battle shifted, with the Germans retreating and the Allies on full attack. After a month or so, the war ended, their code unbroken.

The commanding officers of the men praised them and told them their work would be recognized. However, decades passed without anyone even learning of their contributions.

In 1942, during World War II, Philip Johnston, a World War I vet familiar with the success of the Choctaw code talkers, suggested to the Marine Corps that the Native American soldiers could be helpful in the war.

Within two weeks, the Marines recruited 29 Navajo soldiers to develop a code using their language. They assigned a Navajo word for each letter of the English alphabet and created new

words for planes, ships, weapons and other military terms. Other tribes, including the Comanches, also developed codes.

By the end of the war, hundreds of Native Americans from more than a dozen tribes had worked as code talkers, helping win key battles in the Pacific, Europe and Africa.

Asked how Native Americans were able to memorize such complex codes so quickly, code talker Carl Gorman explained in *Power of a Navajo: Carl Gorman, the Man and His Life* by Henry and Georgia Greenberg: "For us, everything is memory, it's part of our heritage. We have no written language. Our songs, our prayers, our stories, they're all handed down from grandfather to

father to children—and we listen, we hear, we learn to remember everything."

After the war, the code talkers returned home without official recognition. After the Navajo code talkers program was declassified by the U.S. military in 1968, more people learned of the critical contributions Native Americans made during the two world wars.

In 2001, Navajo code talkers were at last honored for using their native tongue to save lives and serve their country. They received Congressional Gold Metals at a ceremony led by President George W. Bush. On each of the medals there was inscribed a statement in Navajo. It read, "With the Navajo language they defeated the enemy." ◀

Connect-Under-Pressure Flush Face Nipples

Applications:

- Ideal for hydraulic applications where connecting against residual pressure is required. Largely used in the construction equipment market, these fittings are the ultimate solution anywhere trapped pressure is an issue.

Sizes:

- 3/8" to 1"

Materials:

- Componentry: RoHS compliant zinc nickel plated steel
- Rings and pins: stainless steel
- Dust caps: nitrile

Features:

- To be used in conjunction with the HT series couplers
- Interchangeable with Parker FEC series, Stucchi APM series, Faster 3FFH series and similar models
- Smooth connection action

Specification:

- Can be connected with residual pressure in the nipple up to 5,000 PSI

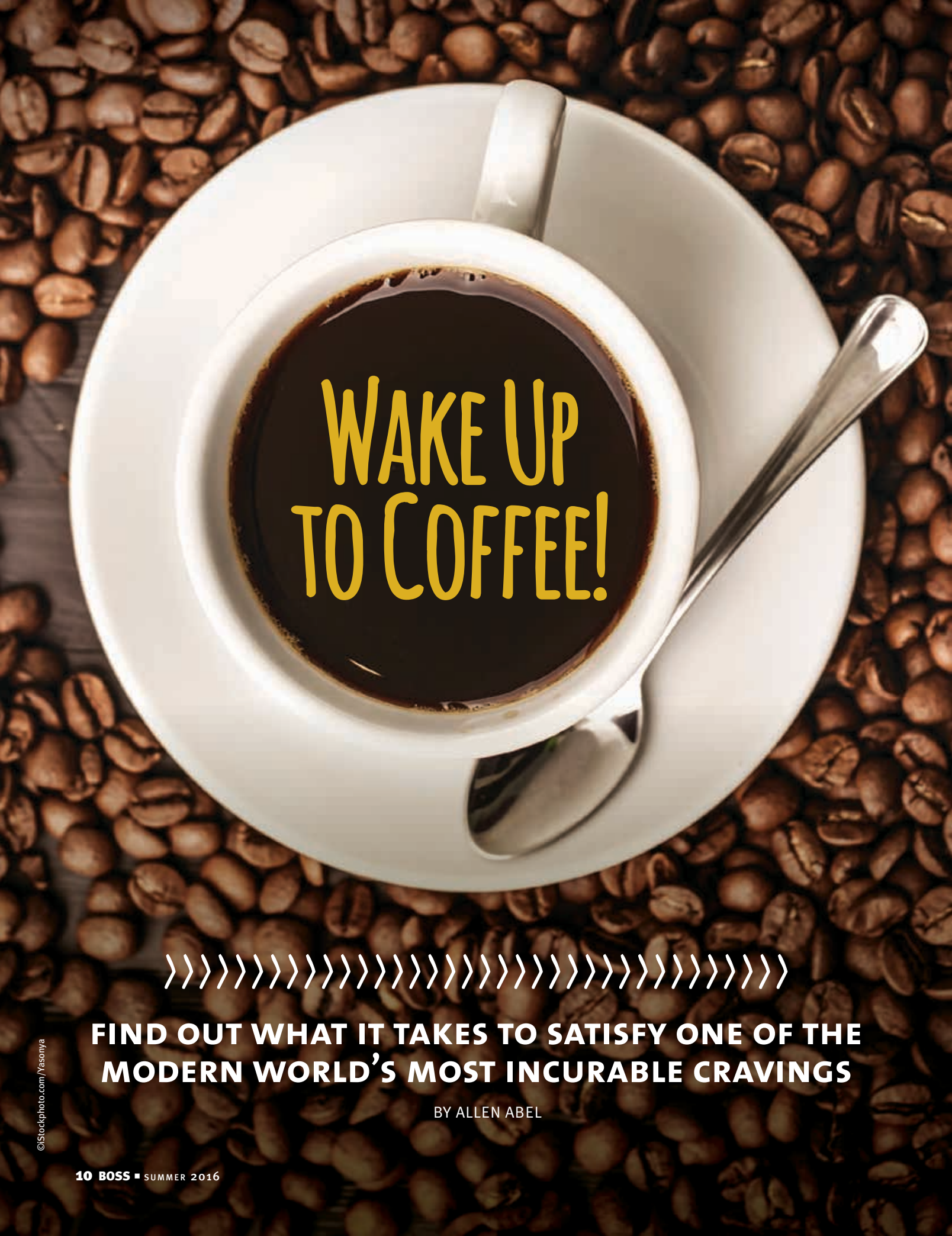
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The Right Connection®



WAKE UP
TO COFFEE!



**FIND OUT WHAT IT TAKES TO SATISFY ONE OF THE
MODERN WORLD'S MOST INCURABLE CRAVINGS**

BY ALLEN ABEL

THE WORLD'S MOST PRECIOUS

hill of beans fills a warehouse in New Jersey from the pallet to the penthouse. It's your morning coffee—40,000 jute-fiber sacks of unroasted “green” coffee beans, about halfway along their long and fascinating journey from snip to ship to sip.



The beans in this hangar, and at the warehouses of hundreds of other wholesale importers and distributors in the world's busiest ports, are the produce and the pride of some of the planet's poorest nations. Their origins are as far-flung as Rwanda and Honduras, Brazil and Burundi, Costa Rica and Colombia, Ethiopia and Indonesia, Peru and Panama and Papua New Guinea. But the beans will be enjoyed by people in some of the world's richest nations.

Here in South Plainfield, New Jersey, the sacks are imprinted with the exotic names of provinces and plantations thousands of nautical miles from the teeming American docks—Papua New Guinea Kimel Estate Peaberry, Organic Java Taman Dadar, Guatemalan Huehuetenango Limonar. Each sack weighs between 60 and 70 kilograms, or about 145 pounds. At 10 beans per gram, there are approximately 650,000 beans in each bag.

Do the math, and that's a total of 26 billion coffee beans in this one building alone. Every single bean—they form as twins inside a firm, red, edible “cherry”—already has been plucked by hand from its carefully cultivated shrub at what the planter deems to be the peak of ripeness. Then it's been washed to soften and remove the outer pulp and sticky “mucilage” and “parchment,” sun-dried, bagged,

trucked to the nearest harbor and freighted across the sea.

Still to come is the “cupping”—the analysis by experts of the specific flavor, aroma and body of each individual bag—and then the wholesaling, retailing, roasting, grinding, blending and brewing of the beans, be it at home or at a trendy café (see sidebar, “From Crop to Cup” on pages 14 and 15).

The result is a beverage whose history encompasses centuries of ingenuity and invention, slavery and colonialism, marketing and merchandising—all to satisfy one of the modern world's most incurable cravings: a steaming mug of stimulation for the mind and body, packing a powerful jolt of caffeine and a taste that, if everything has gone according to plan along the voyage from crop to cup, is truly good to the last drop.

A LUXURY YOU CAN AFFORD

“It much quickens the Spirits and makes the heart Lightsome, it will prevent Drowsiness, and make one fit for Business,” declared a broadside for the first coffeeshouse in London, circa 1652. “You are not to drink of it after Supper, unless you intend to be watchful, for it will hinder sleep for 3 or 4 hours.”

Nearly four centuries later, the essence of the experience has hardly changed.

In the United States, where one-half of the nation's adults drink at least one cup of coffee a day, one-third of all the tap water drawn for human consumption is used to brew coffee. In Italy, tiny cups of espresso are served in more than 200,000 shops and stands. Yet more coffee per person is downed in Holland than in any other nation, large or small. Northern Europeans are the world champions of coffee drinking; the colder the climate and the longer the winter nights, apparently, the greater the demand for a jolt of steaming joe.

“It's 99 cents for a plain cup of coffee,” says David Planer, director of marketing and education



“Sack of Coffee” ©iStockphoto.com/LeventKonuk

HARD TO DIGEST

Some **25 PERCENT** of American coffee drinkers now favor an organically grown brew. But only a very few elitists demand the liquefied essence of beans that have been fermented in the digestive systems of the small, squirrel-like Asian mammals known as palm civets, stuffed down the hatch and retrieved when they come out the other end. Elephant dung coffee from Thailand is coming on market too—for just \$500 dollars a pound. Passage through Jumbo's stomach is said to sweeten flavor and lessen bitterness.



for Royal Coffee New York Inc. “But it’s only a few dollars more for a cup that distills one farmer’s years and years of experience into a cup that is not just acceptable but perfect. Good coffee is a luxury—a luxury you can afford every day. You can get the best coffee in the world, roasted by the best roaster in the world, served in the best café in the world by the best barista in the world for only \$15, maximum. You certainly can’t do that with wine. It’s incredible, but people take it for granted.”

“Coffee has become the quintessential item to establish yourself as a tasteful person,” says professor Denise Gigante, who teaches a course in the history of coffee and European coffeehouses at Stanford University in California. “I think it’s because it has been mass-marketed so well. If you want to make your place as an art connoisseur, it’s going to take serious money. But anybody can buy a cup of coffee.”

Gigante calls coffee “an acquired taste and a manufactured product associated with culture.” Millions of field hands in developing nations

call it a route out of dire poverty. Environmentalists and human rights activists see the chance to leverage the beverage’s popularity into increased concern for indigenous workers, degraded landscapes and nesting birds. Dozens of nations—coffee is grown in 80 countries—see it as a major export and the means to the favorable “branding” of an entire country on the basis of a dime-sized bean.

On commodity exchanges, coffee is the world’s second most valuable export by total dollar volume, trailing only oil. Its price can fluctuate dramatically according to each sack’s country and region of origin, the speculative whims of investors who purchase and hedge futures contracts months in advance, and the unpredictable vagaries of weather on three continents. (Predictions of a rare frost in the Brazilian uplands can have an especially unsettling effect on the markets.) Yet many of the world’s biggest countries—China, Russia, India, the United States, Canada, Japan, Australia, Western Europe—produce only a minuscule fraction of the global supply.

The *Coffea* tree thrives in the zone between the tropics of Cancer and Capricorn and, nearest the Equator, does best at altitudes from 3,000 to 6,000 feet. Two principal varieties are grown—arabica, the higher-priced and more delicately flavored bean preferred by gourmets, and robusta, which gives its gusto



BOSS PRODUCTS USED IN COFFEE MANUFACTURING:

- Sanitary ball valves
- Cam and groove couplings
- Washdown nozzles
- Hot and cold washdown stations
- Sanitary fittings



©iStockphoto.com/OliverJW

Costa Rica coffee plantation

to pure Italian espresso and, being less expensive, is the main ingredient in many mass-produced instants, freeze-dried granules and discount supermarket brands.

caffeine. (Vietnam is the No. 2 exporter, most of it robusta.) Millions of trees in locations as scattered as Martinique, Timor, Madagascar, Jamaica, Hawaii's Big Island and Bali all are said to trace their



Coffee has become the quintessential item to establish yourself as a tasteful person. If you want to make your place as an art connoisseur, it's going to take serious money. But anybody can buy a cup of coffee.

Unlike other fruit-bearing trees, such as apples, peaches or pears, some coffee trees can simultaneously bear flowers, unripe fruits and ripe cherries, making mechanical harvesting impractical and necessitating careful, manual picking every day for six months or more.

One-third of the world's coffee is shipped from Brazil, where huge swaths of tropical forest were cut down early in the 18th century to make way for coffee plantations, and where legions of slaves labored in appalling conditions to satisfy the world's growing craving for

ancestry to a single sapling that was smuggled to the Caribbean aboard a French naval vessel in 1720 by a clever salt named Gabriel de Clieu.

But it all began—at least in legend—with a goat.

A pleasant and persistent myth maintains that, 1,000 years or more ago, an Ethiopian goatherd named Kaldi spied his usually listless flock chewing on little red berries and cavorting
(Continued on page 16)



©iStockphoto.com/Bartosz Hadyniak



1.



2.



3.



8.



9.



10.



FROM CROP TO CUP

1. Coffee shrubs are cultivated on plantations that circle the globe, mostly between latitudes 25 degrees north and south.

2. Clusters of red “cherries” are harvested, usually by hand, at the peak of ripeness.

3. The cherries are dried in the sun until the outer husks shrivel. Then the inner beans are separated from the husks by hand or by machine; *OR*
The cherries are washed and left to ferment for 18 to 35 hours, then rinsed, dried in the sun or in ovens, and mechanically hulled, a process that removes the glutinous mucilage and the thin outer parchment.

4. The beans are sorted on conveyor belts for consistency and size.



5. The sorted “green” beans are bagged in sacks made from jute fibers, about 60 to 70 kilograms of beans to each bag.

6. The sacks are trucked to port and loaded into containers for export, and the containers are shipped to the destination country or region.

7. The containers are imported and trucked to a wholesale importer’s warehouse, or to the roasting plants of large coffeehouse and supermarket companies.

8. Samples of each sack are selected, roasted in small batches, brewed and cupped by experts to determine quality, profile and tasting notes.

9. Sacks of select varieties are purchased by cafés, manufacturers and retailers.

10. The “green” beans are roasted to a temperature of approximately 440 degrees Fahrenheit (225 degrees Celsius) by a forced-hot-air process in industrial-sized cylinders; in smaller roasters in cafés, restaurants and specialty markets; or at home in a frying pan; **OR**

The beans are decaffeinated by treatment with methylene chloride or by steaming them until the caffeine rises to the surface.

11. The roasted beans are cooled in vats exposed to cold air.

12. The cooled beans are ground in-store, at home, at a café or in large-scale manufacturing facilities, then packaged in bags or cans for retail sale.

13. The ground coffee is brewed and enjoyed.





Left to right: Coffee flowers on tree. Farmer in Rwanda holding shelled and unshelled coffee beans. Coffee farmer drying beans at a plantation in Alfenas, Brazil.

(Continued from page 13)

like kids. Curious as to the source of this manic behavior, he plucked a few coffee cherries himself, chewed them and thereby got the first java jolt in human history.

“Like most legends, it probably has some basis in truth,” says Gigante. “Most accounts have coffee production originating in either Ethiopia or Yemen, and there was probably some observation of how the coffee bean affected animals.” (The Yemeni port of Mocha was an early center of the trade.)

“The route that coffee takes goes up through Syria, and then it winds up having quite an active life in Constantinople,” Gigante explains. “Turkish coffee really was the origin of coffee’s trajectory to Europe—it went with the Ottoman armies through the Middle East to Egypt, and from Cairo it went north across the Mediterranean to Italy and to France.

“Originally, it was valued for its medicinal purposes—in 17th-century England, coffee was thought to cure everything from menstrual problems

to scurvy. Around 1800, during the Enlightenment, it began to be used to stimulate the mind and enliven conversation, the same way we use it today. After the French Revolution, with the rise of gastronomy, we had the beginnings of food being taken seriously as an art form. When that happened, coffee joined food as something that could be appreciated for its own taste.”

DAINGEROUS IDEAS?

“The history of coffee is the history of globalization,” says professor Robert Nemes of Colgate University in Hamilton, New York. “Coffee is one of the earliest of crops to globalize, along with tobacco—and like tobacco, it becomes an incredibly popular drug supply system [due to its caffeine]. The big question among academics is whether its spread is due to cultural and economic forces, or whether it’s the caffeine itself that drives it forward.

“If you look at the pathways it has taken, the resistance that coffee meets in a lot of different countries is really





Wayne Hutchinson/ELPA image BROKER/News.com



©iStockphoto.com/dolphinphoto

interesting. You have sultans trying to crack down on it and intense debates within Islam about whether or not this is sanctioned by the teaching of the prophet. The coffeehouse is one of the first places that people can go to that is not work or home or the mosque. And it is a place where people of all social classes come together to talk about dangerous ideas.”

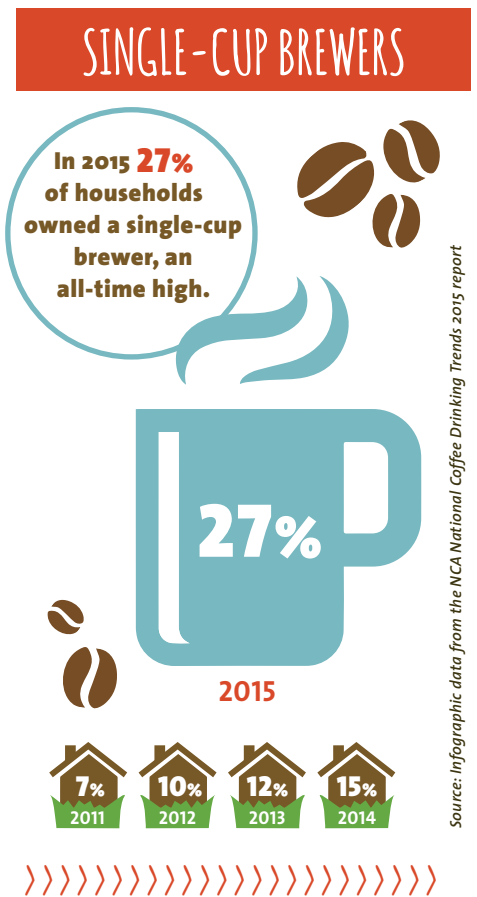
In 17th-century London, coffee was hailed as “a simple, innocent thing, composed into a Drink by being dried in an Oven, and ground to Powder, and boiled up with Spring water.” But King Charles II saw the coffeehouses as a breeding ground for sedition and ordered them shut down. The royal prohibition was shouted down by the wide-awake masses and never took effect.

Across the Atlantic, popular history holds that the anti-British anger that culminated in the Boston Tea Party flipped colonists’ taste from tea to coffee. This belief has at least some basis in fact, as witnessed by a famous letter written by Founding Father John Adams

to his wife, Abigail, in 1774: “Tea must be universally renounced. I must be weaned, and the sooner, the better.”

During the Civil War, soldiers on both sides roasted their own beans over bivouac campfires and brewed their coffee in the same pots that they used to wash their laundry. (But the boiling of putrid pond and river water undoubtedly saved lives.) Then came a wave of innovations in vacuum-sealed preservation, industrial-scale processing, dehydrated “instant” coffee, decaffeination, supermarket branding and mass marketing that has never ended.

In 1958, a brilliant advertising campaign for coffee from the Colombian highlands made a fictional farmer named Juan Valdez and his trusty mule an icon of quality and launched a craze for country-of-origin roasts. By the time a Dutch immigrant named Alfred Peet opened his first café in Berkeley, California, in 1966 and offered a darker, richer brew, North America was ripe for turning coffee from a cup of dishwater at the local



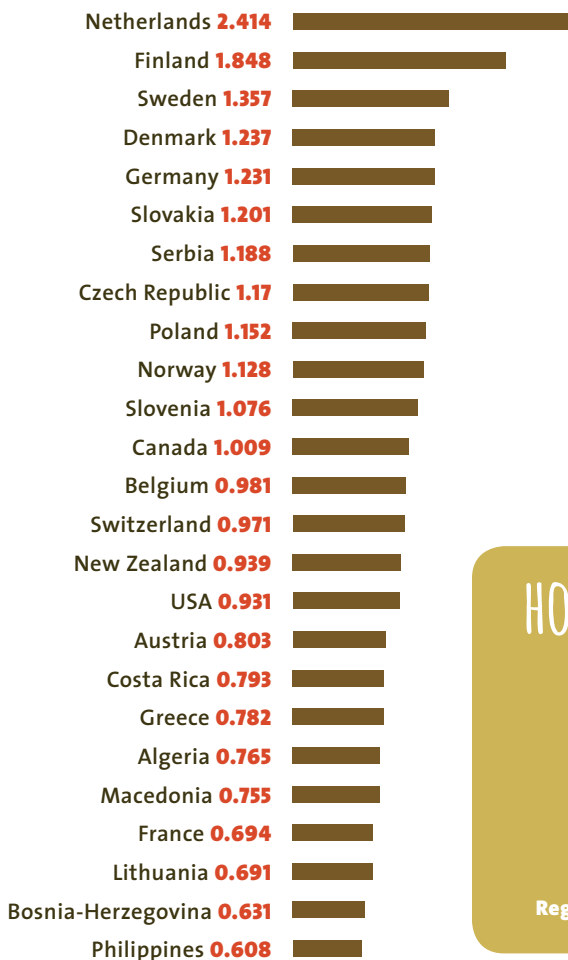
COFFEE BY THE NUMBERS

All coffee is grown in a region found between the Tropics of Cancer and Capricorn, otherwise known as "The Bean Belt."



WORLD'S BIGGEST COFFEE DRINKERS

(cups per day/person)



TOP PRODUCERS

(2014)

1. Brazil **2.72 BILLION kg**
2. Vietnam **1.65 BILLION kg**
3. Colombia **750 MILLION kg**
4. Indonesia **540 MILLION kg**
5. Ethiopia **397.5 MILLION kg**



TOP IMPORTERS

(2013)

- America **\$5.5 BILLION**
- Germany **\$3.6 BILLION**
- France **\$2.4 BILLION**
- Italy and Japan **\$1.6 BILLION**



HOW MUCH CAFFEINE IS IN COFFEE?



AVERAGE
95 mg

Regular brewed coffee (8 oz)



AVERAGE
2 mg

Decaf brewed coffee (8 oz)

Sources: NCA National Coffee "The Influence of Coffee Around the World Facts 'N' Stats" Infographic and <http://www.theatlantic.com/business/archive/2014/01/here-are-the-countries-that-drink-the-most-coffee-the-us-isnt-in-the-top-10/283100/>

"Coffee Map" ©iStockphoto.com/studiocasper

diner into a multisensory experience of connoisseurship and taste.

Starbucks took it from there, adding global standardization, a range of more than 80,000 combinations of flavors, frappés and foams, the elevation of the barista-as-artiste, and an inviting ambiance of soft lighting, comfortable chairs and social awareness.

Now, a millennium after a lucky goat happened upon a cherry with a kick, a rich, nutty fragrance wafts through a back room in Baltimore, Maryland, where a squadron of hipsters have come for a complimentary “cupping” at an upscale roastery called Ceremony. “Try to get a nice inhale,” encourages customer service representative Erissa Mann.

This is the summit of coffee’s 21st-century ascendance as an object of high culture and mystique. In front of the tasters are samples that range from Jaguar Ocotique from Honduras to a Colombian El Cedro “washed,”

DECAF DECONSTRUCTED

Today there are a variety of processes used to remove caffeine from coffee, but all begin by treating the coffee beans in their green, unroasted state. In the most common **direct solvent method**, the beans are steamed to open their pores and then soaked in an organic solvent—most commonly methylene chloride or ethyl acetate—that selectively unites with the caffeine. Then the beans are steamed again to remove the solvent residues, dried and roasted like any other green coffee.

Other decaffeination methods include the **indirect solvent method** (in which water boiled from the beans is treated with solvent rather than the beans themselves); the water-only **Swiss water process** (which strips caffeine by percolation through activated charcoal); and the more recent **carbon dioxide method** (which uses compressed CO₂ and charcoal filtering to remove the caffeine).

SOURCE: *Coffee Review*



in Mann’s description, “to our espresso profile.” Tasting notes on each package highlight “almond butter aromatics ... dark chocolate ... apple pie in a sugary shot ...”

“Get really, really close to your coffee,” Mann advises. “Stir gently in the top half and you’ll get a nice big puff of aroma.” ☛



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The Right Connection®

SPY TALE SPINNER

Ian Fleming, the creator of James Bond, drew on his experiences in World War II intelligence to bring his agent 007 to life

BY DAVID HOLZEL

Horst Tappe / Contributor

German U-boats were infesting the waters of the Caribbean in July 1943 when high-level American and British naval intelligence agents met in the British colonial outpost of Jamaica to jaw out a response.

The head of the British team, 35-year-old Ian Fleming, was the charming personal assistant to the chief of naval intelligence. At the end of each day of meetings, Fleming and his British colleague and friend Ivar Bryce escaped the humidity of Kingston to an old manor house on the mountainside above the city. There they sat on the balcony, drinking grenadine and looking out at the tropical rain.

After the conference, on the flight out of Jamaica, Fleming surprised Bryce by telling him, “I am going to live in Jamaica, swim in the sea and write books.”

Until the war, Fleming had drifted without much focus or purpose. But intelligence work had brought out his natural abilities, “which included sociability, organization and imagination,” writes biographer Andrew Lycett in *Ian Fleming*.

Once he discovered Jamaica, Fleming had all the elements for a postwar livelihood that would propel him to fame. During the three months he spent each year in Jamaica, he took the raw materials of his life—notably his experience in intelligence work that so animated his imagination—and fashioned them into action novels about a dashing British intelligence officer: “James Bond.”

Bond’s character would take on a life of its own, first in print, and later in film.

Child of Privilege

Ian Lancaster Fleming was born in London on May 28, 1908, into wealth, although it was new wealth. His paternal grandfather had made a fortune trading railroad stocks. The family of his mother, Eve, had begun humbly, but her grandfathers had risen in their professions and had been knighted.

Ian and his three brothers were children of privilege. Their father, Valentine Fleming, was a Conservative member of parliament and a friend of Winston Churchill. When World War I broke out in 1914, Valentine volunteered to fight. He was killed in a German attack on his squadron in Picardy, France, in 1917 when Ian was 9. In death, Valentine was remembered as a paragon of virtue that his sons struggled to live up to.

And Ian did struggle. The second son, he was indifferent to his studies at Eton College and no match for his intellectual older brother, Peter. After passing the qualifying exam for Sandhurst Military College, Ian participated in an 18-month training program for officers, thinking that perhaps he could live up to his father’s legacy. But Ian chafed at discipline and withdrew from the program.

His mother was not about to see Ian fail, and with her help he found a job at



Reuters in London, which led to trips to Berlin and Moscow. But Ian wanted to live well, independent of family money. So he left journalism and worked for a time in stockbroking.

He was not a success as a stockbroker, but he was good at meeting people and making friends. When World War II broke out, banking and stockbroking friends recommended him for work in navy intelligence, where he became personal assistant to the director, Adm. Sir John Godfrey, and rose to the rank of commander.

Fleming was Godfrey’s troubleshooter, acting as his “eyes and ears, while running a worldwide information-gathering operation,” Lycett writes. Fleming extended his wide network of influential

An attractive rake in his navy uniform, with a broken nose he had acquired at Eton that added to his good looks, Fleming was irresistible to many women.



Ian Fleming with his mother, Evelyn St. Croix Fleming, in November 1957.

acquaintances, using his power of patronage to find intelligence jobs for friends. And he brought together people who could further the war effort.

Operating from Room 39 of the Admiralty in London, Fleming churned out memos and reports and dreamed up operations that were worthy of a fictional action hero. With British intelligence struggling to break the German Enigma code, Fleming proposed to fly a German plane that the British had captured, man it with a German-speaking British crew and crash it. When the Germans came to the rescue of their fellows, the British officers would overpower them and get the sea codes for Enigma.

In his proposal for the plan, which was never carried out, Fleming

Bond was an immediate hit, and through astute marketing, Fleming's fame spread. As Fleming delivered one new Bond book a year, his fictional hero began taking on a life of his own.

stipulated, "The bomber pilot should be a tough bachelor, able to swim."

Spies and Gadgets

The description sounded a bit like Fleming himself. An attractive rake in his navy uniform, with a broken nose he had acquired at Eton that added to his good looks, Fleming was irresistible to many women.

"He's the right shape, size, height, has the right sort of hair, the right sort of laugh, is 36 and is beautiful," an admirer gushed.

Fleming also participated in drawing up for Operation Golden Eye in 1941 a plan of "limited sabotage" if the Germans marched into Spain, which, despite its fascist government, was officially neutral in the war. The plan never had to be implemented, but during preparations, Fleming met with William J. "Big Bill" Donovan, head of the pre-CIA Office of Strategic Services in the United States. These and other meetings helped Britain develop its intelligence relationship with the U.S.

It won't surprise anyone with even a passing knowledge of James Bond and the spy craze he set off to learn that Fleming was particularly intrigued with

the gadgets the British were developing: a gas pistol disguised as a fountain pen, shaving brushes with secret cavities, shoelaces that could act as saws, a hollowed-out golf ball to conceal messages to prisoners of war (a similar device was used to transport uncut stones in the Bond novel *Diamonds Are Forever*).

Fleming became senior commanding officer of the 30 Assault Unit, an intelligence unit that accompanied advancing Allied troops to capture as many German secrets as possible. He also played a role in the creation and operation of the T-Force intelligence-gathering unit. Among its operations was capturing German rocket scientists before they fell into the hands of the Soviets. In his 1955 Bond novel *Moonraker*, Fleming used elements of T-Force's activities.

After the war, Fleming used his charm and good breeding to land a plum role in British journalism. *The Sunday Times* newspaper hired him as its foreign manager—a title that gave him two months of guaranteed vacation a year.

He spent those vacations in Jamaica, writing the Bond books, in a house on the island's north shore that he named



Geoff Wilkinson/REX/Newscom

The interior of Goldeneye, the house in Jamaica, West Indies, where Fleming wrote his Bond books.

Goldeneye. One of Fleming’s neighbors was English playwright Noel Coward. The two became close friends. When he first saw Goldeneye, Coward described it as “quite perfect. A large sitting room, sparsely furnished, comfortable beds and showers, an agreeable staff, a small private coral beach with lint-white sand and warm, clear water.”

‘Bond, James Bond’

At Goldeneye, Fleming followed an unvarying routine: Awake, swim, eat breakfast and then three hours of writing at his typewriter, emerging at noon.

Over the years, Fleming had been toying with the idea of a book. According to Lycett, he began writing on the morning of Jan. 15, 1952, finishing 63,000 words later on March 18 with the James Bond debut, *Casino Royale*.

Less than a week later, the lifelong bachelor, at 43, married Ann Rothermere. He had engaged in an affair with her through her two earlier

marriages, and Ann was pregnant with Fleming’s child. On Aug. 12, 1952, their son and only child, Caspar, was born.

In later years, Fleming downplayed the literary importance of Bond: “Bang, bang, kiss, kiss, that sort of stuff. It’s what you would expect of an adolescent mind—which I happen to possess.”

But others saw more. *Casino Royale* reflected the moral ambiguities of the Cold War and the attractions of the postwar consumer culture.

Reviews of *Casino Royale*, written by Fleming’s journalistic friends, were uniformly positive. The review in the *Manchester Evening News* by Julian Symons, whom Fleming didn’t know, called the plot “staggeringly implausible,” yet the book was “thoroughly exciting and absorbingly readable.”

Bond was an immediate hit, and through astute marketing, Fleming’s fame spread. As Fleming delivered one new Bond book a year, his fictional hero began taking on a life of his own.

But Fleming was a heavy drinker and smoked 70 cigarettes a day. In 1961,



BOND BOOKS by Ian Fleming

- *Casino Royale*, 1953 (movie, 2006)
- *Live and Let Die*, 1954 (movie, 1973)
- *Moonraker*, 1955 (movie, 1979)
- *Diamonds Are Forever*, 1956 (movie, 1971)
- *From Russia, with Love*, 1957 (movie, 1963)
- *Dr. No*, 1958 (movie, 1962)
- *Goldfinger*, 1959 (movie, 1964)
- *For Your Eyes Only*, 1960 (movie, 1981)
- *Thunderball* (based on a screen treatment with Kevin McClory and Jack Whittingham), 1961 (movie, 1965)
- *The Spy Who Loved Me*, 1962 (movie, 1977)
- *On Her Majesty’s Secret Service*, 1963 (movie, 1969)
- *You Only Live Twice*, 1964 (movie, 1967)
- *The Man with the Golden Gun*, 1965 (movie, 1974)
- *Octopussy* (a compilation of short stories), 1966 (movie, 1983)

“Casino Royale Book” ©iStockphoto.com/enscap67

Sean Connery in *Dr. No*

at the age of 52, he suffered a massive heart attack. While in the hospital, he began writing down the children's stories he used to tell his son about a family who owned a flying car. *Chitty-Chitty-Bang-Bang*, published in 1964, was Fleming's only children's book. The motto of the story's father, Commander Pott—"Never say 'no' to adventures. Always say 'yes,' otherwise you'll lead a very dull life"—could have been Fleming's own.

James Bond seemed a character born for Hollywood, but it wasn't until 1962 that the filming of the first Bond movie, *Dr. No*, began. As Bond, Fleming had envisioned David Niven, an actor with a British upper-class bearing much like Fleming's. The role went instead to 31-year-old unknown Sean Connery, who was selected for his sex appeal, and who also was "younger, tougher and somehow more modern and classless" than the Bond of the books, according

to Matthew Parker, author of *Goldeneye Where Bond Was Born: Ian Fleming's Jamaica*.

Connery created the eternally vital Bond we think of today. Yet the Bond of the novels kept aging. In *You Only Live Twice*, published in 1964, the hero is in serious decline. While in hiding, Bond's need for a smoke becomes so strong that he puts his life in danger just to have a cigarette.

If anything, Bond was in better shape than his creator. On Aug. 11, 1964, Fleming collapsed in London and was rushed to a hospital. He died of a heart attack at age 56. It was his son Caspar's 12th birthday.

Bond has far outlived his creator. A half-century after Fleming's death, 007 is an indelible part of our culture whose popularity only seems to be growing. ◀

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Did you know that...

TRIVIA

Fireworks Facts

The first fireworks were hollowed out bamboo stalks stuffed with black powder.

It was not until the 19th century that pyrotechnicians discovered that mixing potassium chlorate into the powder made it burn much hotter, enabling it to burn red when strontium was added, green when barium was added and bright yellow when sodium was added.

The first fireworks were called "arrows of flying fire," and were

shot into the air during religious occasions and holidays to ward off imaginary dragons.

Blues and violets (caused when copper and chlorine are added) are the hardest colors to create in fireworks.

White was impossible to produce until the mid-1800s, when scientists developed ways to add aluminum magnesium and titanium to black powder.

Fireworks Lingo

- *Willows*: Fireworks with long, colorful "branches" that stream down toward the ground.

- *Palm Trees*: Willows that leave a brightly colored trail from the ground as they're shot into the air.
- *Chrysanthemums*: Fireworks that explode into perfect circles.
- *Split comets*: Fireworks that explode into starlets, which explode again into even more starlets.
- *Salutes*: A bright white flash, followed by a boom.
- *Triple-Break Salutes*: Salutes that explode three times in a rapid succession.

(Excerpted from *Uncle John's Biggest Ever Bathroom Reader*)

ON THE LIGHTER SIDE

"I will never understand why they cook on TV. I can't smell it. Can't eat it. Can't taste it. The end of the show they hold it up to the camera, 'Well, here it is. You can't have any. Thanks for watching. Goodbye.'" —*Jerry Seinfeld*

"Thank you, hard taco shells, for surviving the long journey from factory, to supermarket, to my plate and then breaking the moment I put something inside you. Thank you." —*Jimmy Fallon*

"Spring is nature's way of saying, 'Let's party!'" —*Robin Williams*

"As American as an apple is and as American as baseball is, they don't go together. You can't be chewing an apple at a baseball game. You've got to let go of the diet that day." —*Kevin James*

"The secret of staying young is to live honestly, eat slowly and lie about your age." —*Lucille Ball*

"When someone is impatient and says, 'I haven't got all day,' I always wonder, How can that be? How can you not have all day?" —*George Carlin*

"If it wasn't for the coffee, I'd have no identifiable personality whatsoever." —*David Letterman*

(brainyquote.com)

Dates in History

1776: On July 4, the Declaration of Independence was signed, but it took four more days before it was publicly read. July 8 marks the anniversary of that first public reading in Philadelphia. The next day, it was read aloud to Gen. George Washington's troops in New York. It took two days to prepare copies for shipment to all the colonies. It took another month until all the copies were signed.

1866: The Atlantic telegraph cable between England and the United States was completed on July 27. From that day forward, news crossed the ocean instantly. And that, in turn, speeded up the tempo of world events to a relatively rapid pace.

1911: On July 24, Hiram Bingham climbed to a Peruvian mountaintop with a native guide and walked through a mysterious city in the clouds. Bingham discovered one of the last Incan cities: Machu Picchu.

1957: On July 29, President Dwight D. Eisenhower signed the National Aeronautics and Space Act, which created the NASA program. This began the race to be the first nation to put a man into space and to send a spacecraft capable of landing on the moon's surface.

www.history.com



NATURAL WONDERS

Whether you're looking for a family vacation in the great outdoors or an adrenaline-pumping wilderness adventure, a visit to one of the United States' most popular national parks—Yellowstone, Great Smoky Mountains or Acadia—will exceed your wildest expectations

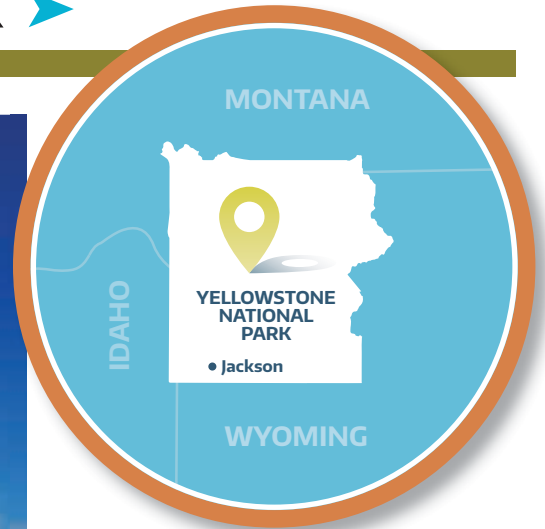
BY CLAIRE RICCI

Madison River, Yellowstone

YELLOWSTONE NATIONAL PARK ▶



Old Faithful eruption at Yellowstone



YELLOWSTONE NATIONAL PARK

is often defined by the world's most famous geyser, Old Faithful. Undeniably, no visit would be complete without seeing Old Faithful erupt at least once, but be wary of allowing it to eclipse the park's many other attractions.

Months—and even years—could be spent taking in the grandeur of Yellowstone, which lies primarily in Wyoming but also extends into Montana and Idaho. Yellowstone lays claim to more than half the world's thermal features, including some 10,000 hot springs, geysers, mud pots and fumaroles that belch, thunder and hiss. Easily accessible by boardwalk paths, not-to-be-missed features include Old Faithful, the rainbow of colors at Grand Prismatic Spring and the geyser basins. Park rangers and posted notices provide schedules of geyser eruptions, making it easy to see several in one

Right: Wild bison roam free beneath mountains in Yellowstone National Park. Far right: Yellowstone Grand Prismatic Spring.

afternoon. (Insider's tip: What's that horrible smell? Thermal features exude sulfur. Bring a handkerchief!)

Hiking and walking are great ways to see the park. Mystic Falls Trail provides a flat and short jaunt, great for kids and beginning hikers. Steam rises from Little Firehole River close to the 70-foot cascade of the falls. Travelers with more energy can extend the climb to Inspiration Point overlooking Hidden Falls and find fewer crowds.

Keep an eye out for bison, coyotes, wolves and bears—all frequently sighted by hikers and walkers, making for amazing up-close encounters with wildlife. While these are exciting experiences, it's essential to remember that Yellowstone is a wilderness.

Caution and safety should trump a great photo opportunity, no matter how docile the bison might appear. One safe way to get close to the natural world—in the form of brown trout, rainbow trout and mountain whitefish—is to cozy up to anglers reeling in the bounty of the Madison River. Stop at the Yellowstone Fly Shop for pointers first.

Planning your visit with overnight stays along the 142-mile Grand Loop Road gives a good overall sense of the park. Arrive at Jackson Hole, Wyoming, and consider stays at Jenny Lake Lodge, Mammoth Hot Springs Hotel, Mammoth Cabins (a village of one-room cabins), Lake Yellowstone (the granddaddy of all National Park lodges) or Old Faithful Inn (where the deck is the perfect vantage point for enjoying a cocktail and Old Faithful eruptions). Campgrounds are plentiful as well. Reservations fill quickly and can be made one year in advance. ➔➔



GREAT SMOKY MOUNTAINS NATIONAL PARK ▶

THE RUGGED BEAUTY of the Appalachian Mountains sets Great Smoky Mountains National Park apart as the most visited national park, with around 10 million visitors each year. With the southern terminus of the Blue Ridge Parkway providing easy driving access and stunning scenery, this 522,419-acre park—which sprawls into both Tennessee and North Carolina—lends itself especially well to travelers in search of a driving vacation.

Fall is prime time to visit and take in vibrant color in the woods and wonderful festivals in Gatlinburg and Knoxville. Use The Oliver Hotel in Knoxville as a base and choose from a wide array of day activities, including fly fishing for native Appalachian brook trout, a drive along 33-mile Newfound Gap Road (U.S. Highway 441), wildlife spotting at Cades Cove (also home to a number of preserved historic buildings worth visiting), and learning about the history and culture



Scenic spring landscape, Blue Ridge Parkway, Smoky Mountains

of the Tennessee foothills at the East Tennessee History Center.

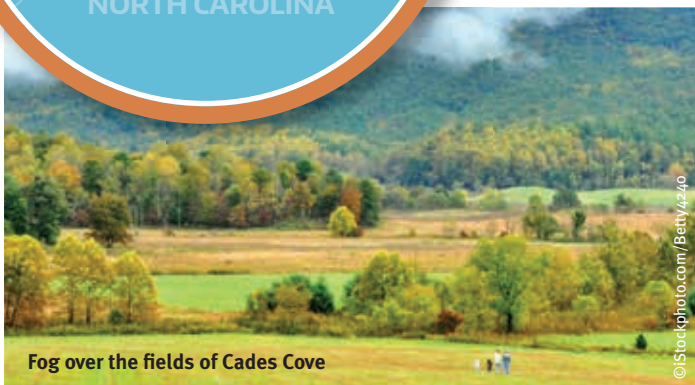
The Hen Wallow Falls Trail is an easy out-and-back hike through hemlocks and rhododendron, ending with the reward of a beautiful 90-foot waterfall. Or challenge yourself—and your kids—by summiting Rich Mountain for a jaw-dropping view of Cades Cove.

If you'd like to take a break from enjoying nature's grandeur, consider a daytrip to nearby Dollywood (a theme- and waterpark named for Dolly Parton), or head to the beautifully restored Tennessee

Theatre in Knoxville to take in a movie, concert or Broadway show.

Knoxville offers the energy and vibrancy of the University of Tennessee, with the chance to catch a game during football season. Pair that with a lively food and music scene (headlined by the Bijou Theatre) and you'll be able to round out your wilderness National Park vacation with cultural offerings.

Camping is the only lodging available in Great Smoky Mountains National Park, but nearby Gatlinburg, Pigeon Forge and Knoxville offer a broad array of hotels, inns, cabins and B&Bs. ▶▶



Fog over the fields of Cades Cove



A black bear in the North Carolina mountains



“Map” ©iStockphoto.com/lbgblue

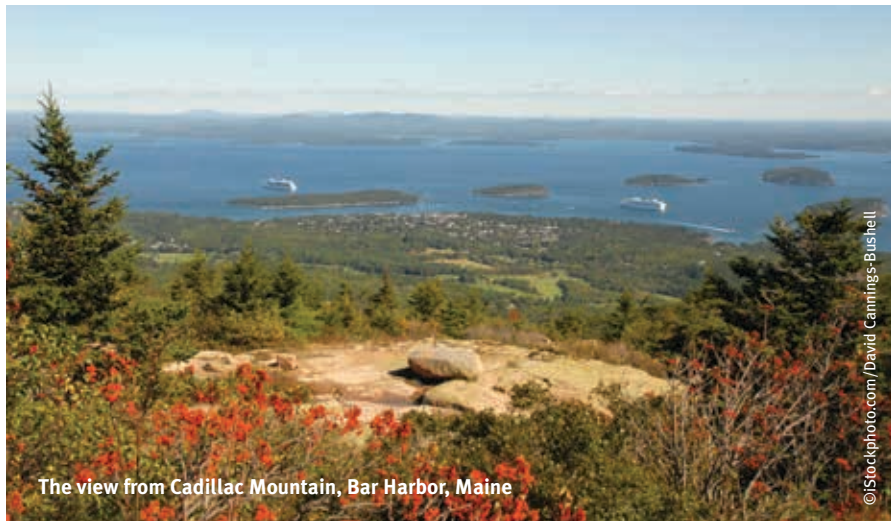
THE 10 MOST POPULAR U.S. NATIONAL PARKS

- | | |
|---|-----------------------------|
| 1. Great Smoky Mountains: 10.7 million visitors | 6. Zion: 3.6 million |
| 2. Grand Canyon: 5.5 million | 7. Olympic: 3.3 million |
| 3. Rocky Mountain: 4.16 million | 8. Grand Teton: 3.1 million |
| 4. Yosemite: 4.1 million | 9. Acadia: 2.8 million |
| 5. Yellowstone: 4.1 million | 10. Glacier: 2.4 million |

SOURCE: National Park Service 2015

“Grand Canyon” ©iStockphoto.com/tobiasjo; “Glacier” ©iStockphoto.com/world-travellers; “Grand Teton” ©iStockphoto.com/vkbhat; “Olympic” ©iStockphoto.com/Spondylolithesis; “Zion” ©iStockphoto.com/theoccasion; “Yosemite” ©iStockphoto.com/Dean Pennala; “Rocky Mountain” ©iStockphoto.com/Deniz Tokatli

ACADIA NATIONAL PARK ➤



The view from Cadillac Mountain, Bar Harbor, Maine

©iStockphoto.com/David Canning-Bushell

THE FIRST NATIONAL PARK

created entirely by private donations of land, Acadia National Park, which sprawls over Maine's Mount Desert Island (and associated smaller islands) off the Atlantic coast, celebrates its centennial anniversary in 2016.

Home to the highest point along the North Atlantic seaboard, Acadia's 47,000 acres offer an appealing array of options for outdoor enthusiasts—whether you choose to scale the park's granite peaks, bike along its historic carriage roads or just marvel at the wildlife: moose ambling across the road, peregrine falcons soaring overhead or

harbor seals sunning themselves on bedrock.

Though some visitors plan their trip for early fall and the start of leaf peeping season (September through early October), by far the most popular time to visit is summer, when temperatures climb into the 70s.

Getting around the park is easy via the 27-mile Park Loop Road, which offers easy access to Acadia's most popular sites. (If you opt *not* to rent a car, you can travel via the Island Explorer, a free shuttle bus.) Start at

the Hulls Cove Visitors Center, then head to Cadillac Mountain, which looms 1,530 feet high. The mountain draws big crowds in summer, so start early and drive slowly, especially when the roadside cliffs get steep. At the summit, you'll be rewarded with breathtaking, 360-degree views of the glorious vista below.

Next stop: Sand Beach, which sits between two walls of solid pink granite. Stroll the 290-yard shoreline, with towering evergreens overhead, or take a hike up the granite steps of Great Head Trail. Just south of the beach is Thunder Hole, a semisubmerged cave that derives its name from the echoing booms—as loud as a thunderstorm—that emanate an hour or two before high tide.

From Thunder Hole it's less than a mile to Otter Cliff, a 110-foot-high granite precipice that emerges after you

Thunder Hole in Acadia National Park



©iStockphoto.com/JaysonPhotography



THE NATIONAL PARK SERVICE TURNS 100

ON AUGUST 25, 1916, President Woodrow Wilson signed the act creating the U.S. National Park Service, a new federal bureau in the Department of the Interior responsible for protecting the 35 national parks and monuments then managed by the department and those yet to be established.

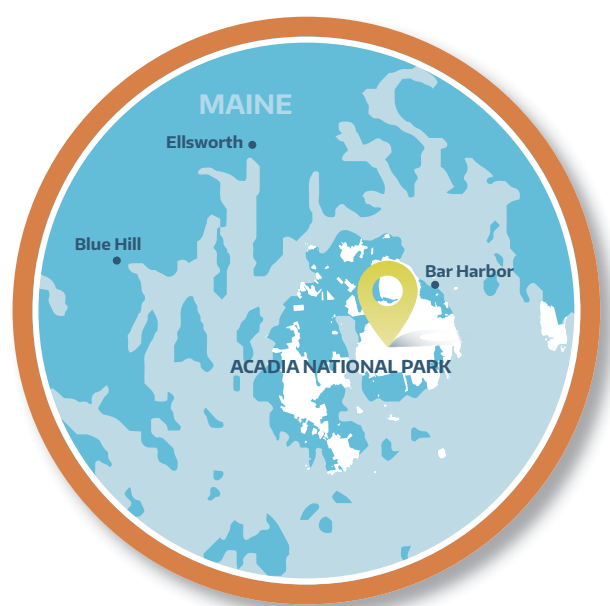
Today the National Park System of the United States comprises more than 400 areas covering more than 84 million acres in 50 states, the District of Columbia, American Samoa, Guam, Puerto Rico, Saipan and the Virgin Islands. More than 20,000 National Park Service employees care for America's national parks and work with communities across the nation to help preserve local history and create close-to-home recreational opportunities. Visit www.nps.gov for more information.

SOURCE: National Park Service



Jordan Pond in Acadia National Park

©iStockphoto.com/JaysonPhotography



hike through groves of spruce trees. Gazing down, you'll be rewarded with picturesque ocean views—including whale pods spouting off shore.

When you're ready to stretch your legs, head to the Jordan Pond Nature Trail for an easy stroll through the evergreens (or take a more difficult hike along the rocky coast of the Jordan

Pond Shore Trail) to end at Jordan Pond, known for its crystal clear waters and the nearby Jordan Pond House Restaurant (perfect for lobster rolls or popovers and tea).

For easy access to Acadia's attractions, stay in Bar Harbor, a picturesque seaside town known for its lobster boats and yachts, taverns,

shops, restaurants and B&Bs. Be sure to stroll the half-mile-long Shore Path. Originally built in 1880, it begins near the town pier and offers an appealing view of the four Porcupine Islands off to the east—especially beautiful at sunrise. ●

A Swivel for Every Application

Applications:

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- O-Ring: carbon steel, stainless, aluminum, brass, iron

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'The Noble Experiment'

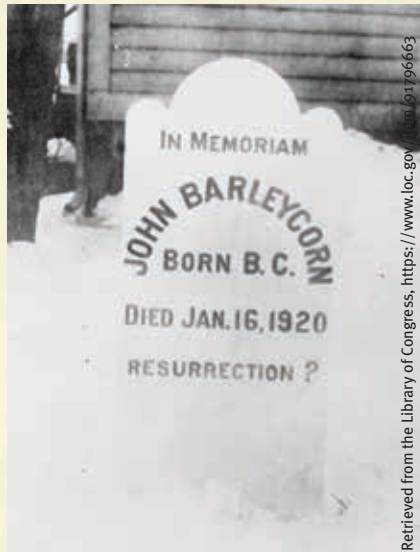
THOUGH HISTORY WOULD PROVE IT A FAILURE, PROHIBITION WAS LAUNCHED WITH THE BEST OF INTENTIONS

BY EUGENE FINERMAN

The funeral was a day early; John Barleycorn was not quite dead. But on Jan. 16, 1920, 10,000 people in Norfolk, Virginia, celebrated the end of intoxication in America. As the mythic personification of liquor, John Barleycorn required a 20-foot-long coffin because buried with him were all the diseases and vices associated with drinking. Officiating at the "funeral" was the popular evangelist Billy Sunday, who proclaimed: "The reign of tears is over. The slums will soon be only a memory. ... Men will walk upright, women will smile and the children will laugh. ... Goodbye, John. You were God's worst enemy. You were Hell's best friend."

The following day, the 18th Amendment went into effect: "The manufacture, sale, or transportation of intoxicating liquors within, the importation thereof into, or the exportation thereof from the United States and all the territory subject to the jurisdiction thereof for beverage purposes is hereby prohibited."

Contrary to the Rev. Sunday's expectations, paradise was not the consequence. A decade called the Roaring '20s does not convey an uplifting sobriety. In the novels of F. Scott Fitzgerald, the era seems an orgy. In Hollywood films, America is the battleground of gangsters, and



Left to right: A Connecticut monument dedicated to the mythical John Barleycorn, giving his death as Jan. 16, 1920, the date of the ratification of the 18th Amendment. Evangelist Billy Sunday with Mrs. Sunday, photographed at the White House, where they called on President Coolidge.

everyone in Chicago has a Tommy gun. When the stock market crashed in 1929, it proved that even the economy was on a bender.

Prohibition was a failure; in hindsight, we could not imagine its success. Yet in 1920, the 18th Amendment reflected a public consensus, the best of intentions as well as undeniable bigotry.

Well into the 19th century, doctors had recommended temperate consumption of alcoholic beverages:

Whether brewed, fermented or distilled, liquor was healthier than water. That's because all too often, rivers and sewers were one and the same. No doubt put off by the smell of the local water supply, people opted for a mug of beer in order to avoid common waterborne ailments such as dysentery, typhoid or cholera.

By the 1870s, however, cities began filtering their water supply to rid it of the more obvious and noxious pollutants. The practice of chlorination



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Anti-Saloon League at the White House, Jan. 16, 1924

eliminated germs in the water supply. Water now was healthier than liquor, and there were social alternatives to the alcoholic libation. Coffee was popular, cheap and stimulating (see p. 10); the boiling process also made it safe. Flavored carbonated water was becoming a public staple too. Temperance had become effortless, as advances in medication and sanitation had seemed to make liquor irrelevant.

America, at the turn of the 20th century, had an unbounded faith in the future. In the ebullience of Teddy

Roosevelt, and the achievements in science and industry, progress seemed a certainty. Temperance was part of this promise.

Indeed, the consumption of alcohol was declining. The average American of the early 19th century drank seven gallons a year. A century later, people drank one-quarter as much. However, the character of drinking had changed. This was no longer the rural society where a flagon of hard cider began the day. No, in an industrial America, a whiskey or two

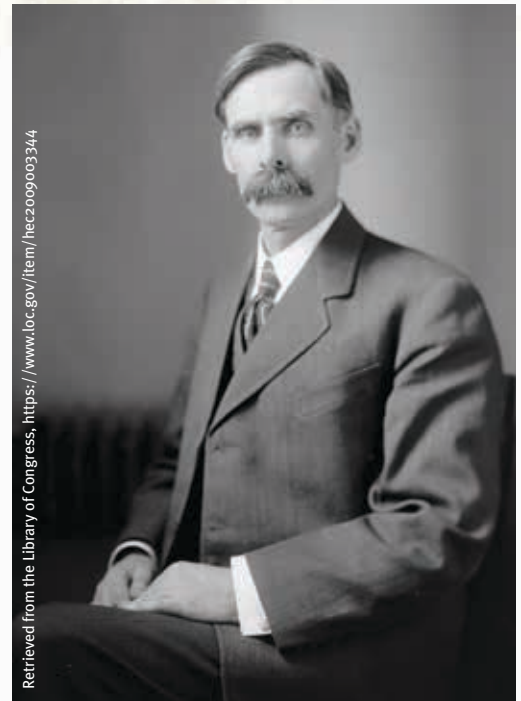
was the numbing reward after 12 hours at the foundry.

Furthermore, drinking now was regarded as the vice of the immigrant. "The foreign-born population is largely under the social and political control of the saloon," wrote John Marshall Barker, a professor of sociology. With less subtlety, the Anti-Saloon League described itself as "the Protestant Church in action." Amid the idealism of the temperance movement, there was a distinct bias against Catholicism.

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New York City Deputy Police Commissioner John A. Leach, right, watches agents pour liquor into a sewer following a raid during the height of prohibition, 1921. Right: the Honorable Andrew H. Volstead.



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The Anti-Saloon League was the most outspoken and shameless proponent of temperance. “Liquor is responsible for 19 percent of the divorces, 25 percent of poverty, 25 percent of insanity ... and 50 percent of crime in this country. ... And this is a very conservative estimate.” Of course, these are not statistics but wild accusations. Yet the liquor manufacturers were helpless to respond; could they quibble over the correct percentage of alcoholic insanity? The Ohio-based league proved just as effective as a lobbying organization, going state by state to promote a temperance agenda. Every state began to include temperance education in public schools. In 1907, Georgia was the first state to adopt Prohibition. By 1913, nine states had taken the pledge.

Although temperance had become a political movement, the liquor industry

remained a powerful influence in Washington. One-third of federal revenues—\$10 billion a year—came from taxes on alcohol. The temperance movement endorsed an alternative: a federal income tax. Proposed as the 16th Amendment in 1909, it was ratified in 1913. That same year, the Anti-Saloon League proposed Prohibition as a Constitutional amendment. For four years, the proposal was voted down or sidetracked by a congressional committee; the liquor industry still had its advocates.

In 1917, however, World War I made temperance irreproachably patriotic. If beer drinkers had been suspiciously foreign, now the beer brands were incriminating: Schlitz, Pabst and Anheuser-Busch. This was no time to be German or liquor. As a war measure, the federal government imposed a prohibition on the manufacture of

spirits. Grain was only to be used for food. The passage of the amendment merely was a formality; the vote was on Dec. 18, 1917. Within three weeks, Mississippi became the first state to ratify the amendment. On Jan. 16, 1919, Nebraska became the 36th state, enough for Constitutional ratification. America had adopted Prohibition. However, the amendment would not go into effect for a year. The liquor industry was allowed that time to sell its stockpiles and adapt its production to soft drinks or industrial chemicals.

The 18th Amendment set the policy, but it was the Volstead Act that enforced Prohibition. Andrew Volstead, a congressman from Minnesota, introduced the legislation on the House floor, but the bill actually was the work of the Anti-Saloon League. By the league’s definition, intoxicating liquor had a content of 0.5 percent alcohol.

IN 1917, WORLD WAR I MADE TEMPERANCE IRREPROACHABLY PATRIOTIC. IF BEER DRINKERS HAD BEEN SUSPICIOUSLY FOREIGN, NOW THE BEER BRANDS WERE INCRIMINATING: SCHLITZ, PABST AND ANHEUSER-BUSCH. THIS WAS NO TIME TO BE GERMAN OR LIQUOR.

The bill provided a long list of violations and their penalties but also included a number of exemptions. There was to be no regulation of the alcohol content of “medicinal preparations.” Citizens jumped on this loophole and their doctors complied, prescribing 90-proof “tonics” for coughs and anemia. Perhaps by coincidence, the Walgreens chain of drugstores grew from 20 to 525. The Volstead Act also took a rather lax approach to the home production of “fruit juice.” Vineyards sold tons of grape jelly concentrates, with detailed instructions on how to avoid fermentation.

Ultimately, Prohibition could not withstand the egregious challenges of organized crime. Liquor was legal in Canada, and the vast border impossible to control. The number of speakeasies can only be estimated; 200,000 is the lowest figure. The temperance movement had long claimed a link between alcohol and crime. In a way, Prohibition proved that true. The homicide rate nearly doubled.

Prohibition was an issue during the 1928 presidential election. Al Smith, the Democratic candidate, supported the modification of the Volstead Act to

permit beer. His Republican opponent, Herbert Hoover, defended the status quo. “Our country has undertaken a great social and economic experiment, noble in motive and far-reaching in purpose.” Prosperity favored the incumbent party, and Hoover won the election.

But that prosperity did not last through 1929. By 1932, America was exasperated with the noble experiment: “Open the spigots. Drown the bigots.” Reopened distilleries and breweries would provide jobs in a desperate economy. The Democratic platform called for the repeal of the 18th Amendment. Franklin Roosevelt saw no need for Prohibition. “I trust in the good sense of the American people,” he said.

Ironically, Hoover was still president when confronted with a bill to repeal the 18th Amendment. Given the overwhelming majority for the bill, he did not attempt to veto it. The bill passed on Feb. 20, 1933. Within nine months, 37 states had ratified the



21st Amendment: “The 18th article of amendment to the Constitution of the United States is hereby repealed.”

So ended Prohibition. It proved more of an adventure than an experiment, better remembered for its failures than its intentions. In 1933, a weary old Billy Sunday announced that he would give up preaching Prohibition. John Barleycorn had risen from the grave. ■

Los Angeles liquor store with customers purchasing and drinking liquor, Dec. 6, 1933



Building Better Bones

Prevent osteoporosis before its destructive powers can take hold

> A 64-year-old woman visited her doctor complaining of a persistent pain in her lower back. Though the woman suffered from various ailments ranging from diabetes to asthma, her doctor was more concerned about an altogether different symptom: The woman was shrinking. She had lost nearly 4 inches in height in just five years, according to a case study published by online health educator NetCE.

To the doctor, it was the unmistakable hallmark of osteoporosis—a dangerous and debilitating weakening of the bones. The woman's skeleton was failing her, literally compacting and curving with the weight of her every move. While diminishing stature is a concern with osteoporosis, sufferers are prone to far more dangerous fractures, particularly in the spine, hips and wrists.

Osteoporosis affects millions worldwide, mostly older women. Nearly one-half of all women will experience osteoporosis to some degree in their lives, but men are not free from risk. In total, 10.2 million adults in the United States alone have osteoporosis, with men accounting for about 2 million osteoporosis sufferers,

according to the National Osteoporosis Foundation.

A bone density test will pinpoint the condition. Experts recommend routine screenings for women older than 65 and much earlier for those deemed to be at high risk of fracture.

Despite the perception that bone is rigid and permanent, it is actually a living tissue in a continual cycle of deterioration and regrowth. Osteoporosis occurs when the body fails to form enough bone, when too much existing bone is reabsorbed into the body—and sometimes both.

In side-by-side medical images of unhealthy and healthy bone, the weakened samples appear noticeably hollow. It is this hollow appearance that gives the disease its name: “oste,” Greek for bone, and “poros,” meaning holes or pores.

“For women, loss of bone density in the years right after menopause can be dramatic. A woman can lose 10 to 15 percent of bone density in the first five years after menopause,” says Susan Randall, senior director of science and education for the National Osteoporosis Foundation.

That drop is largely due to decreasing estrogen levels during menopause, which some



BSIP/News.com

doctors counter through hormone replacement therapy. In men, falling testosterone levels can similarly lead to osteoporosis. Other causes of bone loss include lack of exercise, certain medications, a family history of osteoporosis, and smoking and/or alcohol use.

Perhaps the best way to fight back against bone loss is by increasing your intake of dietary calcium—one of the most important minerals needed for bones to form—and vitamin D, which aids in the absorption of calcium and is therefore almost as important as calcium itself. This nutritional synergy is why milk, a rich source of calcium, is often fortified with vitamin D.

“The National Osteoporosis Foundation recommends getting most dietary calcium directly from food sources—fruits, vegetables and low-fat dairy, in particular,” Randall says. There are surprising sources of calcium out there. Broccoli rabe, collard greens, fortified orange juice, and even salmon and sardines are all rich in the mineral.

Recommended daily intake of calcium for adults under 50 is 1,000 milligrams a day. For women over 50 and men over 70, it bumps up to



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“The biggest message is that there are things you can do in every stage of life. Build bone in childhood and adolescence, maintain bone strength in middle age, and later increase physical strength, balance and flexibility,” Randall says.

1,200 milligrams per day. For comparison, just 8 ounces of milk—1 cup—can deliver 300 milligrams of calcium, almost one-third of the necessary amount for most adults.

“With vitamin D, on the other hand, it can be hard to get through diet alone, so supplements are often necessary,” Randall counsels.

While some doctors prescribe calcium supplements as well, it’s important to note that there are dangers

of getting too much calcium. A study in Sweden found that women who consumed more than 1,400 milligrams each day more than doubled their risk of heart disease and had a 40 percent increase in death in general. There is also evidence that calcium supplements can lead to kidney stones.

As a last resort, there are medications known as bisphosphonates that can slow the loss of bone density. Recent studies challenge the

effectiveness of such drugs, however, and even raise concern of serious side effects in some patients.

In light of the risks, the National Osteoporosis Foundation recommends working to prevent osteoporosis long before it can ever take hold.

“The biggest message is that there are things you can do in every stage of life. Build bone in childhood and adolescence, maintain bone strength in middle age, and later increase physical strength, balance and flexibility,” Randall says.

Increasingly, the key to staving off osteoporosis seems linked to exercise. If you exercise rarely or sporadically, consider stepping up the pace a bit and, of course, always get enough calcium and vitamin D. Your body and your bones will thank you for it later. ●

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Pure Pasteur

The French scientist saved the wine industry—and perfected a way to rid foods and drinks of harmful microbes

> In the 1860s, Napoleon III, emperor of France, had a problem. French wine was turning sour and no one knew why. In France, when the wine goes bad, everything goes bad. So the emperor turned for help to France's greatest scientist, Louis Pasteur.

Pasteur had a theory, not altogether popular at the time, that living things too small to see were at the heart of the matter. Peering at samples of wine in a microscope, he noted that good wine showed plenty of plump, round cells—while the spoiled samples were replete with longish, rodlike cells.

We now know those plump cells to be yeast and the rodlike ones to be *Mycoderma aceti*, a bacterium known as “the mother of vinegar.” Pasteur's discovery was so profound that he overturned conventional wisdom in winemaking that believed that the transformation from grape juice to wine was a chemical process, not biological.

Pasteur then went one step further and devised a way to kill the harmful microbes, all without affecting the flavor



World History Archive/News.com

or appearance of the wine. It was the birth of the patented process known today as pasteurization, after its inventor. Today, everything from milk and cream to orange juice and beer are pasteurized. (Surprisingly, however, wine is rarely pasteurized anymore, as it compromises its desirable processes of aging.)

The act of pasteurization could not be simpler, nor the results more profound. The food product is heated to a specific temperature for a prescribed time and cooled, killing most if not all of the disease-causing microbes lurking within. Pasteur was not the first to show that heat could preserve foods and beverages, but he standardized the process by describing the exact temperatures and time necessary to rid foods of specific harmful microbes.

With milk, for instance, pasteurization initially called for heating to 155 to 178 degrees Fahrenheit—not quite boiling—for a mere instant. Temperature standards were later adjusted downward, but for a longer time, to kill the bacteria responsible for tuberculosis and Q fever (or query fever, passed to humans via livestock).

Pasteurization is perhaps now best known for its impact on the dairy industry. Bacteria borne by milk have been shown to cause sometime life-threatening diseases, such as listeriosis, typhoid, tuberculosis, botulism, diarrhea, cholera, diphtheria and brucellosis, among others. (Pasteur had watched three of his five children die of typhoid.) All can be neutralized by pasteurization.



Milk undergoing pasteurization

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Despite Pasteur's success as savior of the French wine industry, commercial pasteurization of milk did not arrive for three decades and, even then, proved controversial, as people thought it would compromise milk's flavor, nutrients and color.

In 1908, Chicago passed the first law in the United States mandating pasteurization—which was overturned two years later—and it was another four decades before Michigan became the first state to pass such law. Pasteurization is almost universal today in the United States.

Over time, new variations have arisen. Ultrapasteurization at 280 degrees Fahrenheit for a mere two seconds can extend the shelf life of refrigerated milk to weeks or more, while ultra-high-temperature (UHT) processing at up to 300 degrees Fahrenheit makes it possible to store sealed milk at room temperature for several months.

Of course, Pasteur could never have guessed the broad-ranging impact his discovery would have when he shared it with Emperor Napoleon and his men at the royal residence. But Pasteur did celebrate the fact that his hard work paid off. He later wrote to his son Jean-Baptiste: “The honor of spending a week in the Emperor's company which I have just received will make you understand the rewards of hard work and good conduct.” ●



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