

*Yuletide observance has come a long way from its somber beginnings in Puritan New England to the tradition-filled festivities of present-day*



## CHRISTMAS IN AMERICA

**O**UR American Christmas is like a Christmas tree, its evergreen branches decked with bright and colorful customs. We're a big family, in the United States, and what varied traditions and cherished old customs decorate our tree!

We all share Santa Claus, carol-singing, greenery, gifts and a fine Christmas dinner. But we keep the special Christmas ways of our city or region, too, and those ways may go back for decades, or even centuries.

On Beacon Hill in Boston, lighted candles glow on Christmas Eve in every window of the old, rosy-brick houses lining steep and snowy streets. The shining brass knockers on the paneled doors are hidden by enormous Christmas wreaths. In Louisburg Square, snow usually edges the iron-fence around the tiny park and the trees inside; lighted drawing-rooms prepare for Open House parties. Bands of carolers, a little group of bell-ringers wander up and down the streets, threading their way



## CHRISTMAS IN AMERICA

through the crowds. Below the Hill and the gold-domed State House, Boston Common shelters a lighted life-size crèche, and some of its huge old elms have been turned into fairy trees of ice-blue lights.

Boston's Christmas is no heritage from the far past. It took this Puritan stronghold more than 200 years to learn to keep Christmas, and for 22 of those years, celebrating Christmas was a crime, punishable by a hefty fine.

Our New England forefathers were as strict as the Puritans of England who also had banned Christmas, in 1642. They had this excuse: that they were protesting not only the practices of the Established Church, but also the wild carousing which had gone with a 17th century holiday. Unfortunately, when they ended the wassail bowl and the Lords of Misrule, they also proclaimed that church services, carols, holly and mistletoe, and mince pies were sinful. On Christmas Day a Puritan non-holiday prevailed. Everyone went to work as usual, the shops were open.

Once in a long while, a few gayer spirits would get out of line. Cotton Mather, that fiery minister, heard in 1711 that "a number of people of both sexes, belonging, many of them to my flock, have had on the Christmas night, this past week, a Frolick, a revelling feast, and a Ball, which discovers their corruption." Needless to say, the Reverend

Mr. Mather set out to "bring them into Repentance."

On the whole, Puritan strictness prevailed. A despondent young British soldier, quartered in Boston, wrote in his journal for December 25, 1774: "Bad day; constant snow until evening, when it turned out rain and sleet. A soldier shot for desertion; the only thing done in remembrance of Christ-Mass Day."

By the middle of the 19th century, Boston was beginning to break its Puritan mold. In 1832, the *Evening Transcript* did not publish a paper on Christmas Day, though the editor apologized, and hoped no subscriber would be offended. By the 1840's and '50's, the shops began to advertise "Rich and Elegant Goods Suitable for Christmas." In 1858, Christmas became a legal holiday in Massachusetts, but it was many years before the anti-Christmas feeling died out.

Irish immigrants who began to pour in brought Christmas festivities with them, including the custom of placing a lighted candle in the window to guide the Christ Child. When Beacon Hill took up this custom, and carol-singing began, about 1910, it marked the final conversion of Boston to Christmas.

New Yorkers today celebrate Christmas amid fantastic skyscrapers, with a Christmas tree seven stories high. The

All Christmas traditions commemorate the birth of Jesus in Bethlehem almost two thousand years ago. Reenactment of the manger scene binds all customs together.



scene at Rockefeller Center is the essence of Manhattan's cosmopolitan, worldly, beautiful Christmas. Fifth Avenue's lighted shop windows, rich with luxuries from all over the world, lead to the Center Promenade or Channel Gardens, flowering with evergreens and fanciful decorations. The Promenade in turn leads to the Tree — this year's king of the fir trees, a 75-to-85-foot beauty. Giant colored globes hang from the branches, swaying in the winter wind. Somewhere, beneath the tree, or along the Avenue, the voices of Christmas carolers ring out, while the carillon at St. Thomas's chimes "Adeste Fideles." The big city of New York, from the Bronx to Staten Island, is caught up in the gaiety and warmth of Christmas.



The Manhattan dwellers of 300 years ago, the Dutch burghers of New Amsterdam, also lived a hearty, sociable life, with fine imported furnishings in their spic-and-span houses, satins and velvets and high-heeled shoes for their wives, and heavily-laden tables for every meal.

How they jeered at the austere, plain-living Puritans up north who decreed "no gaming and revelry in ye streets" at Christmas. The Dutch devoted a whole rollicking month to little else. From St. Nicholas Eve (December 5) to Twelfth Night or Three Kings Evening (January 6), business practically stopped, and even the courts did not convene for the eight days following Christmas.

The burghers are gone, and with them the Dutch carols and cake-pasting parties. But they left us a legacy: Santa Claus! On December 5, Dutch children left their wooden shoes beside the fire, to be filled by St. Nicholas who came on a white horse in the night. A good child found presents, cakes, and sweetmeats; a naughty child found only a switch.

St. Nicholas was sometimes called "Sancte Claus" or "Sinter Klaas." Over the years he changed his personality and became for American children that jolly old fellow who drives a reindeer sleigh and fills stockings — Santa Claus.

Bang! bang! Firecrackers and guns herald the green Christmas of the South, and any Southerner will tell you that our American Christmas began in 1607 at Jamestown.

As the new colony prospered, Christmas prospered. It was a merry Old English Christmas the Virginians celebrated on their great tobacco plantations, with the wassail

bowl, the Yule log, carols, feasting, dancing, and gambling. To these, they added some New World innovations: firecrackers and Roman candles, fried oysters for Christmas breakfast, eggnog, and Virginia hospitality, which welcomed friend and stranger.

Most of the guests who came to the stately plantation houses stayed for days, weeks, or months. A Christmas ball might last from three to six days, with the happy dancers stealing quick naps through the days, and sitting down to candle-light dinner tables. Some thoughtful hosts provided a shoemaker, to resole the slippers danced away at night.

An old Virginia Christmas lasted from the middle of December to Twelfth Night. For weeks, the plantation mistress supervised the baking of luscious cream-filled or fruit-filled pies and cakes. Venison, geese, and partridges were hung, to be ready for holiday tables already loaded with roast beef, turkeys, hams, pork, and a dozen hearty dishes.

At holiday time, many planters came to fashionable Williamsburg with their families to spend the season partaking of the dances at the Raleigh Tavern, the round of entertaining, and evenings at the first theatre in America.

Nowadays the buildings in the modern town and in the restored colonial section are hung with wreaths and garlands, and the old customs are revived. Once again a visitor may enjoy an old Williamsburg Christmas, a fortnight of celebration—watch the Yule log lighted, drink a cup of steaming wassail, listen to Christmas carols sung by craftsmen in colonial dress, and to Christmas music played



in candle-light rooms, feast on 18th century meals, with breads and cakes fresh from the brick ovens. He can hear the guns bark out "Christmas," as they do throughout the South, and he can attend services in Bruton Parish church, built in 1710-15.

To this pre-Revolutionary holiday, today's Williamsburg citizens add their own traditions, such as the procession of children down Duke of Gloucester Street, each child carrying a lighted candle. The community Christmas tree is a descendant of that first Williamsburg tree which, in 1842, a homesick German professor at the College of William and Mary asked if he might light and decorate like those in Germany.

While early Virginians were keeping Christmas in English style, French settlers in New Orleans set a Parisian



pattern. Even after their Quarter had been taken over by the Spanish, then by Americans, the closely-knit French families continued to make Christmas a holyday and family day. New Year's was the gay celebration with presents.

On Christmas Eve, every relative, to the most distant cousin, came from villages and plantations along the Mississippi to join New Orleans members of the family. Through the sociable evening, they kept themselves awake with New Orleans' famous black coffee, until it was time to make their way to St. Joseph's Cathedral for midnight Mass.

Afterward, everyone came home for a delicious Réveillon supper — or breakfast, for it sometimes lasted till morning. By the 1850's, Papa Noël had become a part of Christmas Day for little French or Creole (French-Spanish) children. Papa Noël was a French version of Santa Claus, with a red suit, white beard, and Gallic humor. He brought only small gifts, however — the grand presents, usually ordered from Paris, were saved for New Year's Day. Later on Christmas Day, the children were taken to see the crèche at the Cathedral.

Christmas in Louisiana, now as then, is green and mild, scented with blooming flowers. Papa Noël has given way to the American Santa Claus, and Christmas is now the day for presents. But the doors of the Cathedral still open to throngs on Christmas Eve, the crèches in churches are viewed on Christmas Day. Families still call upon each other, and serve holiday meals which include those traditional New Orleans delicacies, daube glacé (jellied beef) and café brûlot (spiced coffee flaming with brandy).



In Santa Fe, New Mexico, as throughout the Southwest, the Christmas of Spanish-American people is as old as the 16th-century dons who came seeking gold in the mountains. In fact, some Christmas customs are even older, for they were observed in Spain for centuries before the Spanish came to the New World.

Nine days before Christmas, the celebration of *Las Posadas* —

“the inns” — begins. Every night, neighborhood families band together and act out the story of Joseph and Mary seeking room at the inn. A part of the group may represent the Holy Pilgrims, the others are the Wicked Innkeepers. Every night the pilgrims are finally admitted to one house, where they are led into a room with a lighted scene of the Nativity — the *nacimiento*.

After prayers and songs, the feasting and dancing begin. Very likely a *piñata* will be broken. The *piñata* is a thin earthen jar, filled with candies, and disguised by cut-out paper as a bullfighter, an animal, or almost anything, including an airplane. Each child (and sometimes grown-ups) is blindfolded and given a stick to hit the *piñata*. When one succeeds in breaking the jar, sweetmeats fall to the floor, and a scramble follows.

In some cities of the Southwest, Spanish-speaking citizens enact informal Christmas dramas like the one called *Los Pastores* — “The Shepherds” — based on centuries-old miracle plays used by the church in Spain.

Christmas Eve weather in Santa Fe is likely to be cold, and snow may cover the ground. The smell of piñon smoke comes from fireplace chimneys, and along the roofs and doorways of adobe houses small bonfires of dried cactus wood are burning, along with *luminarias*, which are candles stuck in sand in a brown paper bag.

Families walk to the Cathedral for midnight Mass. Christmas Eve is *La Noche Buena* — “the Good Night” — and the Mass is called *Misa de Gallo*, or “Mass of the Cock-crow.” The name goes back to early Roman times, when authorities decreed that the first Mass on Christmas Day should be celebrated about three o'clock in the morning, *ad galli cantum* — “when the cock crows.” Of course the cock does not crow at midnight, but the Mass still keeps its ancient name.

In earlier days, Spanish children brought presents — candles and coins — to the Christ Child in the church at Christmas, but their own gifts were left by the Three Kings on Twelfth Night. Today, they wait for Santa Claus on Christmas Eve. Some lucky children receive presents on both dates!

In pueblos of the Southwest, Indian people go to church on Christmas Eve to view the Nativity scene before the altar. Then they stand quietly against the walls. Into the church leap Indian dancers, bells on their knees, painted and dressed for the Buffalo, Deer, or Eagle dances. The men go through their primitive dances to the chant of a chorus and the beat of drums. Sometimes the dances come after vespers, or they may be followed by midnight Mass.

So our oldest Americans, the Indians, add one more ceremonial to Christmas, the holiday which spreads its branches wide enough to embrace people everywhere.





## BUGS THAT MADE HISTORY

rocks of various ages. When rocks that might contain such remains are examined at the surface, the paleontologist is in the habit of making his identification on the basis of shells large enough to be inspected easily by the naked eye. But in the process of drilling for oil, the drilling bit usually crushes any large shells encountered. In contrast, the shells of the foraminifers and the ostracods, being the size of fine sand grains, are not so easily destroyed. Securely embedded in small chips of rock or even detached from the rock, they survive the rough treatment of the drilling operation in large numbers, or provide fragments large enough for identification. For this reason, and because of their wide distribution, these minute fossil remains can be relied upon to appear if the rock layer in which they rest is penetrated. They provide a dependable record.

But although the record is dependable, it is not easily read; and men devote their working lives to the study of these two microscopic animals and the thousands of variations that developed in their children through geologic ages. These men, carrying the impressive title of micro-paleontologists, become profound and erudite as the many-syllabled scientific names of their charges roll from their tongues; but in the laboratory, both foraminifers and ostracods are casually grouped under the all-inclusive title of "bugs."

The process of separating the bugs from their associated sample of rock requires both patience and skill. If the rock is hard and well-cemented, the difficulty of the task increases; if the rock is relatively soft and if part of it breaks up readily in water, the separation is much easier and the number of unbroken and identifiable bugs is markedly increased. The process of separation is started by crushing any large fragments of the rock sample to pieces small enough to pass through a window screen. The expert knows how much crushing should produce the maximum crop of bugs with the minimum breakage. The crushed material is washed on a fine screen that will pass the smaller particles but will retain the bugs and larger rock fragments. Many of the latter may contain broken shells that can be recognized by the expert.

After the washed sample has been dried, the paleontologist starts his primary task: the discovery and removal of the bugs which, to the naked eye, appear as minute sand grains with little in the way of distinguishing characteristics. A small portion of the sample is placed in a tray a few inches in diameter, scattered over the bottom of the tray, and slid beneath the lens of a microscope. Through the lens, the minute grains are seen to possess forms not easily noted by the untrained observer, but highly significant to the man who spends his working hours examining and classifying them. The paleontologist holds a small camel's-hair brush, dampened and shaped to a fine point. Through the lens he spots a bug and guides his brush carefully to touch it. The damp hair holds the bug, draws it from the

tray and deposits it on a small specially designed receptacle. The brush returns to the sample and the search continues while the accumulation of bugs in the receptacle slowly increases. If the sample is being treated as a part of routine operations, the examination may be completed in a few minutes; if it presents a problem of special significance, it may require one or two days of study.

The paleontologist's next task is to identify the forms that he has isolated and to determine their concentration. He notes for the record the forms that are present and whether each is present rarely, commonly or in abundance. He may find types new to the area and some that at the time appear to have no special significance. But all are listed in his notebook, for who knows what significance will be given a particular bug form in the future?

The data having been collected, the paleontologist proceeds to the identification of the rock layer being penetrated in the drilling operation seeking oil. This is the main objective of his study. Because certain bugs lived in more than one time period of geologic history, their shells may be found in several rock layers, or formations. For this reason, the mere presence of a certain bug form may not identify a formation but merely indicate the presence of one of several formations. The paleontologist has learned, however, that the *first* appearance of a given bug form, as the hole is deepened into older rocks, is a dependable clue. For example: the bug known as Ostracod A in Saudi Arabian paleontology appears for the first time in a rock layer named the Wasia. The samples from a hole being drilled in rocks above the Wasia will contain no Ostracod A forms; but as the hole is deepened and Ostracod A appears, the paleontologist knows that the Wasia rocks have been reached.

When the position of the rock layers, or formations, has been determined in relation to the hole being drilled, the paleontologist can supply important information. He can calculate how many more feet of rock must be penetrated before the bottom of the hole will reach a layer that has been proved to be important in the oil search. He may identify a layer that is known to lie immediately above the oil reservoir, a layer to be used in excluding contaminating water from the oil reservoir to be penetrated. He may identify a rock layer known to exist *below* any probable oil reservoir, in which case, there may be little justification for drilling deeper.

These and many other questions may be answered partially or wholly by the record established during the past 400,000,000 years by two animals and their descendants, two animals so small that most of their associates probably were unaware of their existence — two animals and their descendants that in spite of, or because of, their smallness left an enduring record through millions of years to supply important clues to subterranean treasure and a knowledge of how our world was shaped.

# The Mistle

**T**HE cross on which Jesus died on Calvary was made by Roman soldiers from the wood of the mistletoe tree — and from that day onward, mistletoe has been forbidden to grow upon the ground. . . .

This medieval legend is only one of many strange tales about mistletoe that have come down to us over the ages. This plant, a member of the honeysuckle family, grows in a most peculiar way: it sinks its roots into the branches of other trees, tapping them for the nourishment it needs. In the dead of winter, when most trees are gray and naked, evergreen clusters of mistletoe sprout among their barren branches, high above the ground. If the host tree dies, the mistletoe dies with it. Small wonder that the ancients regarded the plant with amazement and awe!

The Druids — priests and seers of a pagan religion that flourished in Gaul and the British Isles in pre-Roman days — attributed sacred and magical properties to mistletoe. Although the plant grew on many different trees throughout Europe — apple, poplar, maple, pear, sycamore, locust, fir — superstition concentrated on the comparatively rare growth of mistletoe on oaks. Once a year, according to the Roman historian Pliny, the Druids led two pure-white bulls into the forest, seeking a mistletoe-bearing oak: "At the sixth hour, the ceremony takes place. . . . The sacrificing priest, clothed in white, ascends the tree and cuts

with a golden sickle the plant, which they take care to gather in a white mantle" — for the Druids believed that mistletoe lost its powers when it touched the ground.

At a banquet following the culling ceremony, the juice of the gathered leaves and berries was made into a potion, which was served to all assembled. Oak-mistletoe was a symbol of protection in all dangers, both mental and physical. Its medicinal properties were so highly esteemed that it was given the name All-Heal and was considered a never-failing remedy for all diseases.

A trace of the Druid gathering rite still survives in parts of Sweden, Switzerland, and Wales, where mistletoe is shot from oaks by archers and is caught before it hits the ground. In fact, the Druids' respect for mistletoe affected the mythology and superstitious beliefs of Europe for centuries. Medea, the sorceress, supposedly gathered the plant with a brass hook and used the juice in magic potions. The Romans declared that when Jupiter descended from heaven, he resided in a mistletoe bush; and they insisted that a sprig of mistletoe would assure safe passage across the river Styx into Hades.

Even today, in various parts of Europe, a mistletoe branch is credited with all sorts of miraculous powers. According to a multitude of superstitions, it can extinguish fires, prevent lightning from striking a house, induce pro-



# etoe

phetic dreams, ward off witches, prevent nightmares, and insure bountiful crops. Rings, knife handles, and necklaces carved from oak-mistletoe supposedly will heal wounds, cure a variety of illnesses, and prevent epileptic seizures.

Mistletoe was subjected to withering attacks for hundreds of years because Christian Europe associated it with pagan practices. (A strange tradition has it that mistletoe will not grow in Ireland and Devonshire because of a curse put on these places by a dying Druid priest.) In a story entitled "Christmas at Bracebridge Hall," Washington Irving describes a scene in which a parson rebukes his sexton for using mistletoe in church decorations: "It was, he observed, an unholy plant, profaned by having been used by the Druids in their mystic ceremonies; and though it might be innocently employed . . . in kitchens and halls, yet it had been deemed by the Fathers of the Church as unhallowed, and totally unfit for sacred purposes."

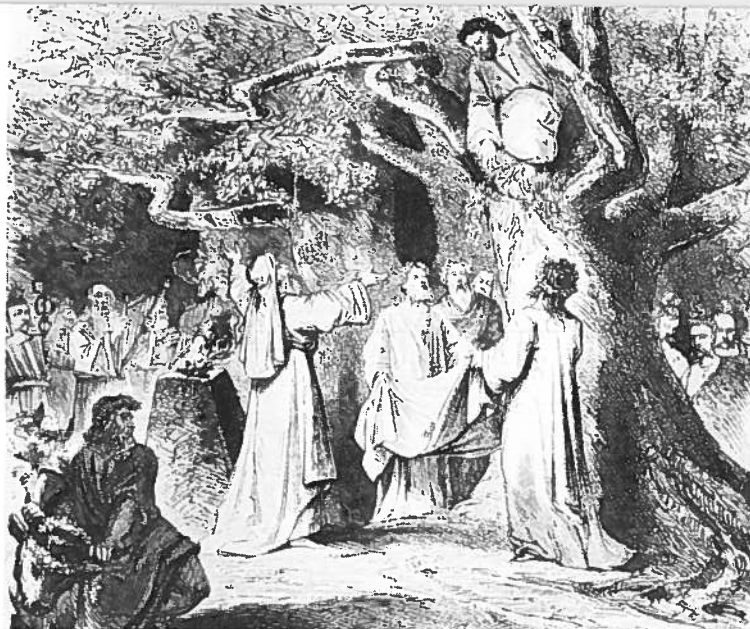
But in York, England, it was customary to place a branch of mistletoe on the high altar of the cathedral on Christmas Eve. This ceremony was followed by an evening of wild festivities and merry-making. Mistletoe also decorated homes throughout the area, probably as a survival of medieval agricultural festivals celebrated during the winter and summer solstice, when mistletoe was gathered.

The custom of kissing beneath a sprig of mistletoe probably started with those early festivals, but there has always been an aura of romance surrounding the plant. Norse mythology tells the story of Balder, son of Odin and God of Peace and the Sun, who was supposed to be invulnerable to wounds. The other gods used to amuse themselves by shooting arrows at him, knowing he could not be hurt. But an enemy made an arrow of mistletoe and urged the blind god, Hoder, to shoot it at Balder, who fell dead the minute it struck him. The other gods and goddesses restored Balder to life, and placed mistletoe in the safe-keeping of the Goddess of Love as her symbol.

The link between mistletoe and kissing was formalized in Old England by the Kissing Bough, a globe- or crown-shaped decoration which was popular long before the Christmas tree became fashionable.

The Kissing Bough was rekindled every evening throughout the Twelve Days of Christmas. It was hung from a center beam in the ceiling, high enough for a couple to stand or stoop for a kiss beneath it. One tradition warned that a girl not kissed beneath the Kissing Bough during Christmastide would not be married in the following year.

The mistletoe of story and legend is the European variety, which flourishes in the apple orchards of Normandy and Herefordshire. But American mistletoe, a look-alike



The Druids believed oak-mistletoe was magical. They gathered it each year at a sacred ritual.

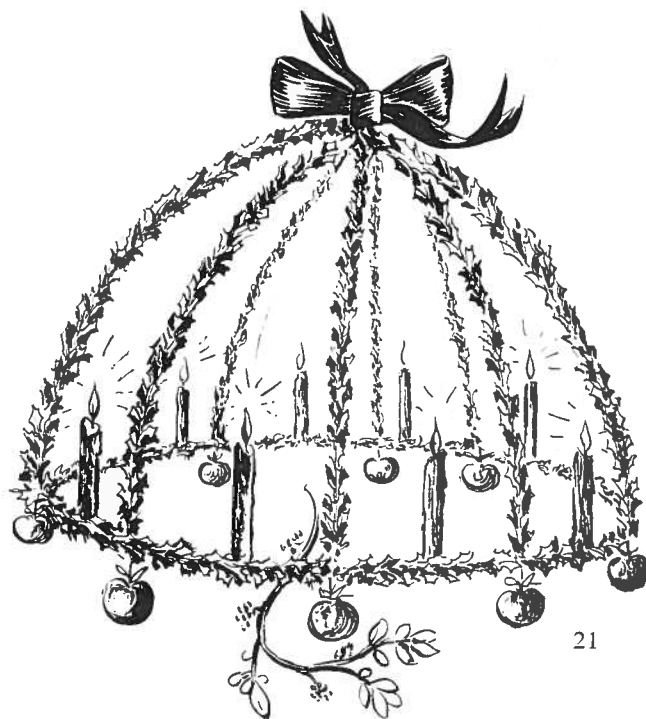
cousin, was granted an equal place in Christmas festivities by early English settlers. It grows from central New Jersey westward to Missouri and southward to Florida, Texas, and New Mexico. Over 20,000 pounds of it are shipped to the northern states each year at Christmastime, where it decorates homes and plays a part in a centuries-old tradition of merriment and romance.

Mistletoe will remain popular as long as the kiss remains a Western custom.

Yet why should this holy and festival mirth  
In the realm of Christmas only be found?  
Hang up love's mistletoe over the earth,  
And let us kiss under it all the year round.

And judging by the words of this old English carol, both are here to stay.

A crown-shaped Kissing Bough is made of box, bay, ivy, ilex, or holly evergreens fastened to a wire frame of four half circles and one full circle, 1'9" in diameter. Apples, candles, red ribbon, and mistletoe are attached. This charming Old-English ornament is rarely seen outside the British Isles.





# FOG FACTS

Here's a chance to shed some light on that eerie phenomenon that's with us at all seasons

**W**HAT is fog? It can be a magician, transforming a bright blue San Francisco day into an eerie, otherworldly twilight — a city floating among clouds, a place of enchantment.

Fog can be an enemy. As it blankets the great harbor of New York, commerce and movement are shackled. Planes are grounded at LaGuardia and Idlewild airports. Ships halt, or inch anxiously ahead, for even radar is no certain guarantee against disaster, as it tries to pierce the fog's thick screen. The *Andrea Doria*, the *Constitution*, and other ocean liners are mute evidence of that.

Fog can be a refuge, as it was in the war, when a carrier might slip into a fog bank to evade its enemies, or a city might be spared a night's bombing by a cover of fog.

Fog can be annoyingly familiar, as it is to Londoners, who grope their way through heavy, yellow, throat-rasping fogs day after day.

Fog can be poetry, coming, as Carl Sandburg saw it, "on

little cat feet. It sits looking over harbor and city on silent haunches and then moves on."

And it can even be death, mingling with smoke and poisonous gases to form a cruel, murderous smog, as in 1948 in Donora, Pennsylvania, when smog lasted five days and killed 20 people.

Yet fog, by definition, is only a cloud, lying close to earth or sea. Fogs form, as clouds do, when cold air flows over warmer water or moist ground, or when warm moist air meets cold (or cold water or ground). Warm air over snow cover causes most winter fog, especially along the eastern seaboard.

When any of these conditions occur, the moisture in the air is condensed and clings to the myriads of invisible particles always in the air (they come from desert sand, loose dry soil, sea-salt, smoke, volcanic ash). The moisture plus the particles makes fog droplets, each only 1/500 or 1/1000 of an inch in diameter. Small as each droplet is, taken



together they can cause great hazards, for each droplet is large enough in relation to the wave length of light to block off completely any direct rays of light. The human eye cannot see through fog.

Since fogs result from contrasts in temperatures, they are found in the temperate zones. They seldom occur in the tropics, and never in deserts, where the air lacks sufficient moisture.

Any season may have its fogs. In summer, "radiation" fogs are common, seeming to rise from the earth (they are sometimes called "summer" fogs or "land" fogs). One sees them on summer evenings, especially in valleys or low land. These fogs are caused by the cooling-off of earth and vegetation: radiating warmth into space. The temperature falls at ground level; when the air above is moist and warm, it condenses into fog. If there is a slight wind, the fog builds up higher, for the air just above is so near saturation that the wind mixes it with the fog.

These ground fogs often come in the evenings, and continue through the night, until the morning sun's rays penetrate the fog, warm the ground and air above it, and burn the mists away.

In the winter, "advection" fogs, also called "sea" fogs, are common. With a sea fog, the moist air moves in from some other area to the point of foggiess. Usually, it is warm moist air flowing over cold water, as when such air moves from the Gulf of Mexico over the frozen or snowy ground and cold waters of the Atlantic coast. Then that old fog rolls in!

The warm Gulf air causes fogs on winter-bound land, too. When it strikes the eastern slopes of the Rocky Mountains in winter, the fogs which form are called "slope" fogs, because the easterly winds push them up the mountains.

Inland waters have their "sea" fogs or "sea smoke," as when Canadian polar air sweeps down over the warmer waters of the Great Lakes. When cold air flows over warmer marsh water, the fog which forms is called "swamp mist."

There is also a "prefrontal" fog which forms two or three hours before a cold front moves through an area — in fact, fog is closely associated with all types of fronts.

On the ocean itself, sea fogs are commonest in summer. The foggiest place in the world is that famous fishing area, the Grand Banks, off the coast of Newfoundland, where the sea temperatures in summer are those of the Labrador Current, very low for the latitude. Just a short distance south are the warm waters of the Gulf Stream. Any movement of air coming from this area brings warm moist air to the cold waters northward, and with it great banks of fog. In the month of June, the Grand Banks' average is 20 foggy days.

Pacific coast sea fogs are heaviest in summer, too. Moist air from the warmer Pacific water is blown by prevailing westerly winds across the much colder upswelling inshore waters.

Other foggy areas are off the Aleutian Islands in the north Pacific, where a fog bank hangs for most of the year, and — an exception to the rule of no fog in the tropics — along the west coast of Peru, where warmer air meets the cold waters of the Humboldt Current.

Most of us will never see an ice fog, made up of countless ice needles, for it forms at temperatures of 40 to 60 degrees below zero. Air force bases in Alaska and Canada are located where the temperatures are higher, and yet a form of ice fog can be highly dangerous to their planes. This "impure" ice fog can form at temperatures of only 20 to 40 below zero, when the air is combined with smoke from mess halls or housing areas, or with the exhaust from a plane warming up. Cases have been known where a two-engine plane, warming up at one end of a runway, caused enough ice fog in the minutes before it took off to lower the visibility from "unlimited" to below one-half mile!

Two great cities — London and San Francisco — are always associated with fog. It is a part of their landscapes and daily living; it weaves in and out of stories and poems about them.

Though George Gershwin wrote one of his gayest tunes about "A Foggy Day in London Town," the fog is a dreaded winter visitor to Londoners themselves. It brings transportation tie-ups, accidents, and, when heavy with gases, illness.

The term *fog*, by international agreement, defines a visibility of less than one kilometer, or 1,100 yards. A London fog is called a *thick-fog* when visibility is less than 200 yards, but on the famous "pea soup" days, visibility is sometimes as little as 10 yards.

Yet we rather hate to imagine London with no fog ever lowering over Thames and city, for fog is the background of so many stories we cherish. Remember the beginning of "A Christmas Carol," when Scrooge looked out his window?

"The city clocks had only just gone three; but it was quite dark already — it had not been light all day and candles were flaring in the windows of the neighboring offices, like ruddy smears upon the palpable brown air. The fog came pouring in at every chink and keyhole, and was so dense without that, though the court was of the narrowest, the houses opposite were mere phantoms. To see the dingy cloud come drooping down, obscuring everything, one might have thought that Nature lived hard by, and was brewing on a large scale."

As for the immortal Sherlock Holmes and his faithful Dr. Watson, they went forth to solve mystifying cases in many sorts of weather, but one thinks of them most often in a London fog as it was that September evening (in "The Sign of Four") when they set off in their four-wheeler:

"It was . . . not yet seven o'clock, but the day had been a dreary one, as a dense drizzly fog lay low upon the great city. Mud-colored clouds drooped sadly over the muddy streets. Down the Strand the lamps were but misty splotches of diffused light which threw a feeble circular glimmer upon the slimy pavement."

In San Francisco, the fog is a boon, not a bane, giving the city its equable climate, with temperatures varying little the year round. The coldest, foggiest months are July and August, for that is when heat rises from the interior California valleys, sheltered by the Coast Range. This warm air rising sucks in cooler air through the Golden Gate, the lowest point in the range. With the cool air comes the fog,



The Editor  
Herald  
P. O. Box 1467  
Yakima, Wash.

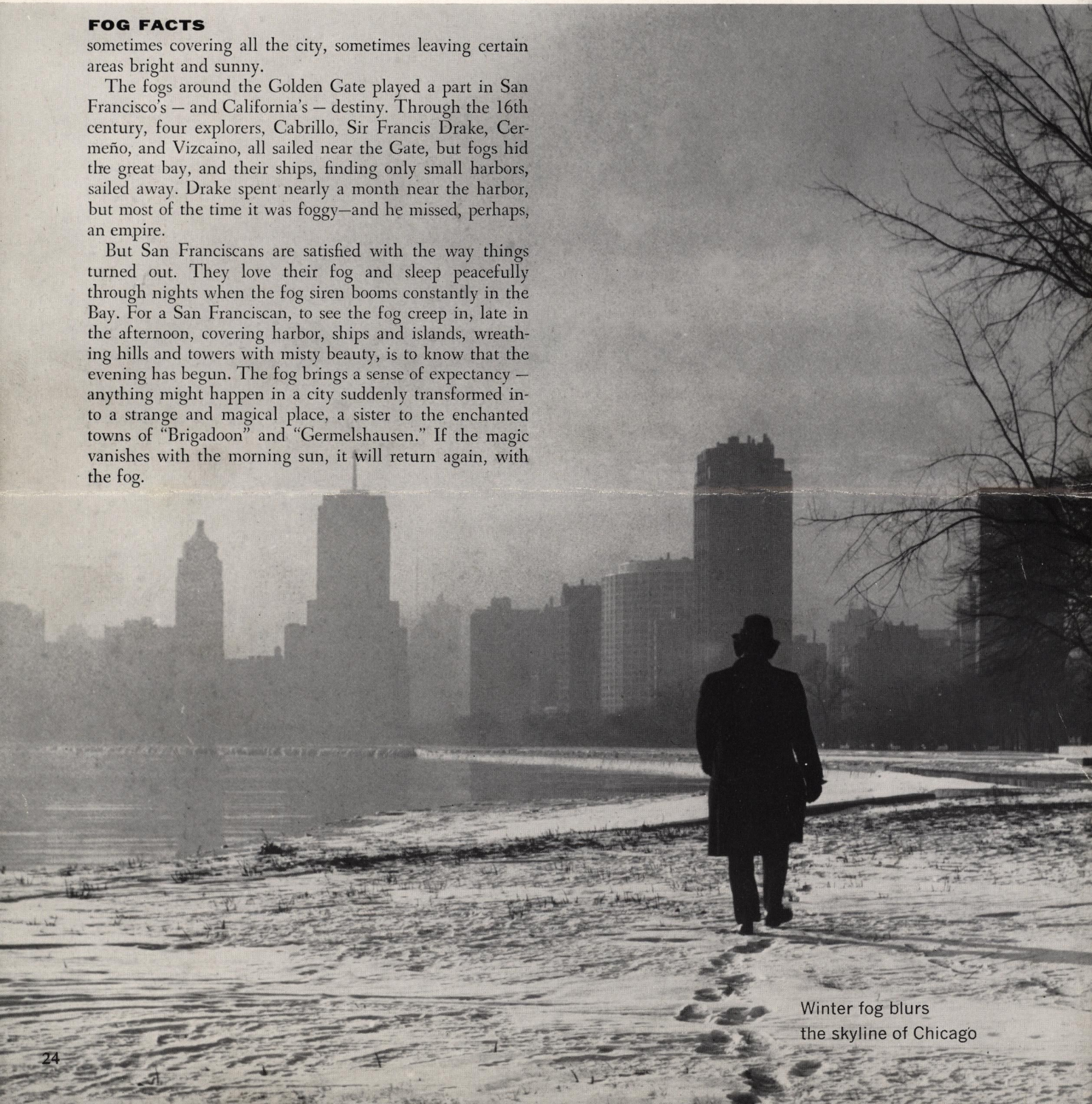
UDO

## FOG FACTS

sometimes covering all the city, sometimes leaving certain areas bright and sunny.

The fogs around the Golden Gate played a part in San Francisco's — and California's — destiny. Through the 16th century, four explorers, Cabrillo, Sir Francis Drake, Cermeño, and Vizcaino, all sailed near the Gate, but fogs hid the great bay, and their ships, finding only small harbors, sailed away. Drake spent nearly a month near the harbor, but most of the time it was foggy—and he missed, perhaps, an empire.

But San Franciscans are satisfied with the way things turned out. They love their fog and sleep peacefully through nights when the fog siren booms constantly in the Bay. For a San Franciscan, to see the fog creep in, late in the afternoon, covering harbor, ships and islands, wreathing hills and towers with misty beauty, is to know that the evening has begun. The fog brings a sense of expectancy — anything might happen in a city suddenly transformed into a strange and magical place, a sister to the enchanted towns of "Brigadoon" and "Germelshausen." If the magic vanishes with the morning sun, it will return again, with the fog.



Winter fog blurs  
the skyline of Chicago