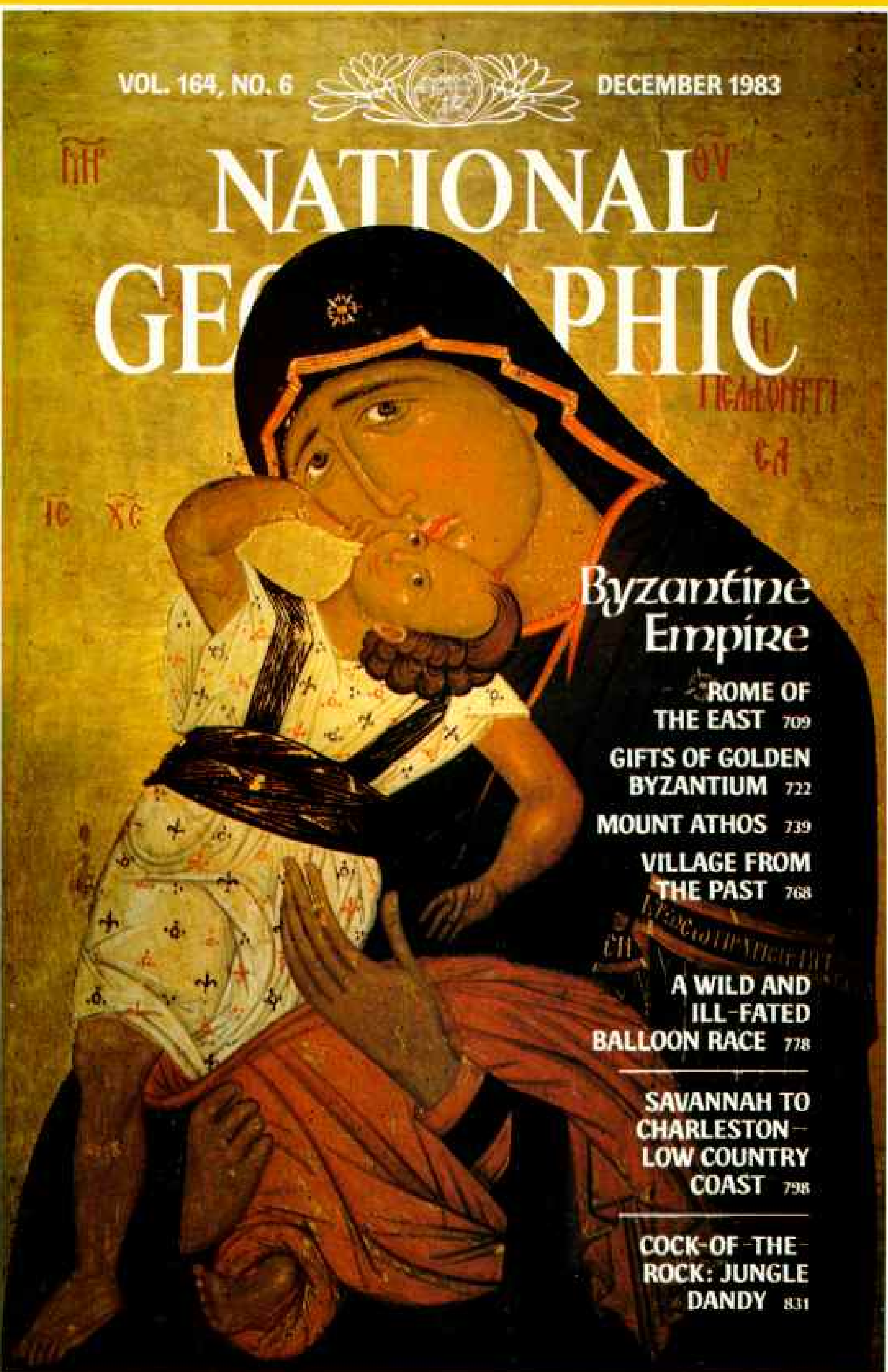


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NATIONAL GEOGRAPHIC

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NATIONAL GEOGRAPHIC

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December 1983

Byzantine Empire 709

The glorious "Rome of the East" fell in 1453, but much of its heritage can be traced in Western culture, laws, and religious concepts. Merle Severy and James L. Stanfield document the "Gifts of Golden Byzantium." A large double map portrays modern and historical Europe.

Mount Athos 739

A community of 20 monasteries where pious men work and pray separated from the world, Greece's Mount Athos is a living reflection of Byzantine culture.

Village From the Past 768

Small isolated Ólimbos on the Greek island of Kápathos still celebrates Easter with many Byzantine customs, reports returning native Maria Nicolaidis-Karanikolas.

A Wild, Ill-fated Balloon Race 778

Balloonists from around the world gathered in Paris last June to celebrate the 200th anniversary of the first manned balloon flights. One of the participants, Cynthia Shields, tells of her harrowing flight amid stormy weather. Tragically, the event claimed the lives of Americans Maxie Anderson and Don Ida.

Good Life in the Low Country 798

The grace and traditions of the Old South survive amid 20th-century development. John Putman and Annie Griffiths explore the island-fringed coast from Savannah to Charleston.

Cock-of-the-Rock: Jungle Dandy 831

In the rain forest of Suriname, a little-known bird plays out an elaborate courtship ritual, chronicled by ornithologist Pepper W. Trail.

COVER: Icon from a millennial outpouring of sacred art, the Virgin and Child at Yugoslavia's Skopje Art Gallery reflects late Byzantine style. Photograph by James L. Stanfield.

IT WAS CERTAIN to be a day not to be forgotten. Even for Paris in June it was special. Nineteen magnificent balloons in their "coat of Joseph" colors, piloted by the best balloonists from nine countries, would lift out of the Place de la Concorde in gaudy, surrealist formation to race across Europe in celebration of the first manned flights.

Not surprisingly, the first team off the ground was Maxie Anderson's. But the bright hope of another record or another win by the famous U. S. balloonist was not to be. Maxie and his partner, Don Ida, died in a landing accident in West Germany the next afternoon.

It's superfluous to say the obvious, but I will: Maxie was a special man. When I first met him in 1978, he had just become a world celebrity. He and partners Ben Abruzzo and Larry Newman had landed outside Paris in *Double Eagle II* after the first crossing of the Atlantic in a balloon.

We wanted to bring you their first-person story. So did other publications that could pay more money. Even as we bid for the rights, Maxie, as a loyal reader, had decided their story should appear in NATIONAL GEOGRAPHIC. It was an earlier story we had presented, Ed Yost's "The Longest Manned Balloon Flight" in February 1977, that had inspired him to attempt the crossing.

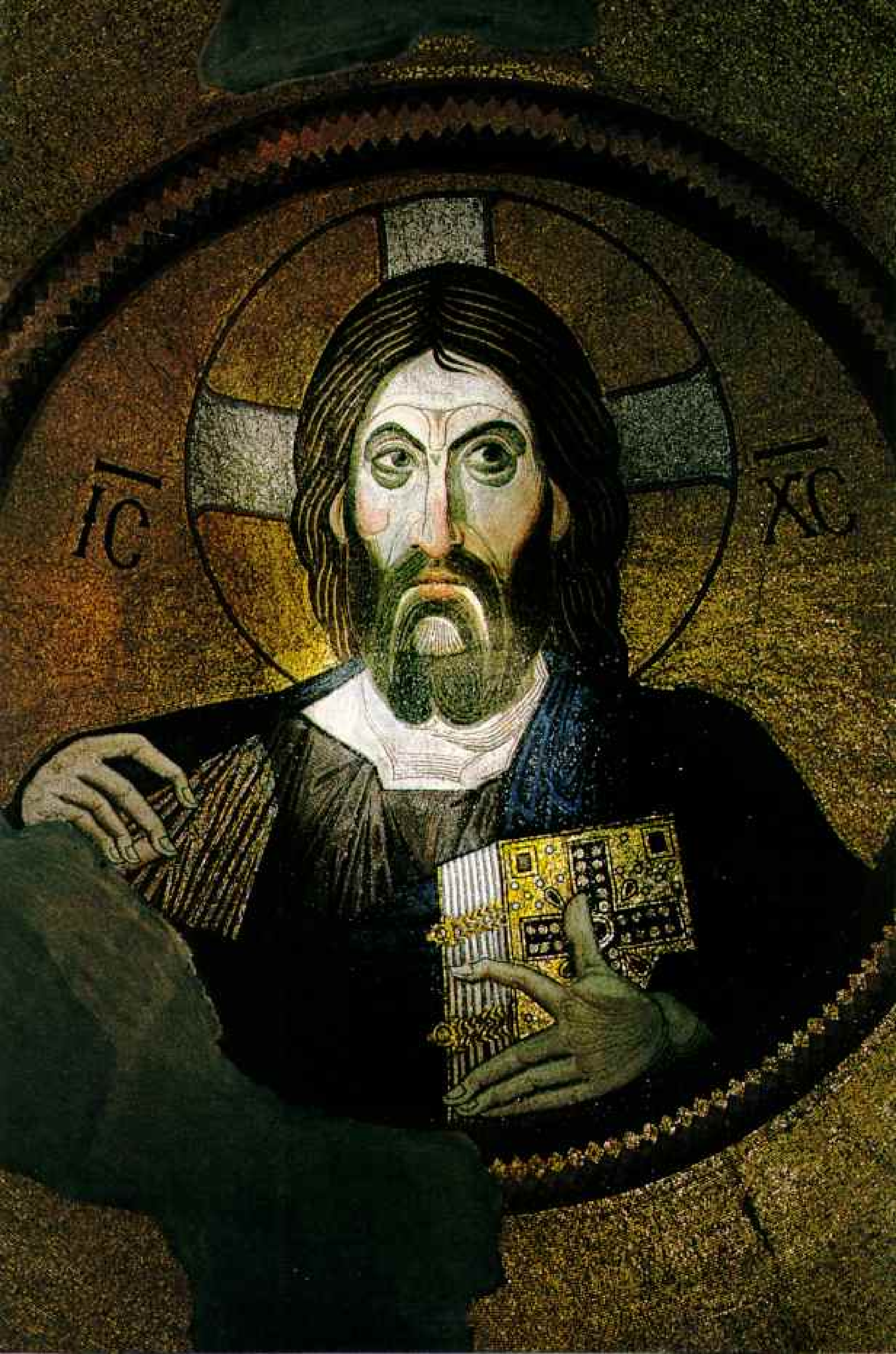
Publication of the *Double Eagle II* story in December 1978 began a warm relationship. The Society awarded the team the John Oliver La Gorce Medal for the exploit. Maxie and Ben independently set other ballooning records that we reported.

As we worked with Maxie over the years, it was clear that this hard-driving industrial engineer and adventurer radiated a special energy. Those close enough to be in the fall-out zone were infected by his optimism and zest for living. He died at 48, but he lived a hundred years by normal standards.

Perhaps the only days of our lives that matter in the long run are the ones that are not forgotten. Maxie gave a lot of us many to remember.

Once, when questioned about the danger of his exploits, he said, "When it comes my time to go, I'll be as nervous as anyone, but it won't be because I haven't gotten my full share of living."

Wilbur E. Garrett
EDITOR



THE BYZANTINE EMPIRE

Rome of the East

EASTERN STAR OVER EUROPE'S DARK AGES, the Byzantine civilization, centered on Constantinople, burned bright, preserving the heritage of Greece and Rome and spreading Christianity across a vast realm. After 11 centuries, it finally splintered, and its manifold accomplishments fell in the shadow of the Italian Renaissance and later eras. But the 20th century has taken a closer look at the Byzantine legacy. Now, as author Merle Severy brilliantly details in his interpretive essay, we see Byzantium's importance as a buffer shielding medieval Europe from the empire-building Persians, Arabs, and Turks; as a bridge between ancient and modern times; as the creator and codifier of laws and religious, political, and social practices vibrant to this day.

Torchbearers of Christianity, withstanding the barbarian turbulence that engulfed Rome in the fifth century, the Byzantines in their New Rome on the Bosphorus, nearly a thousand miles east of the old, lived with the exuberance of a religion in its youth, seeking to bring heaven to earth in their imperial order and its outpouring of sacred art. Masters of mosaics, they enthroned Christ the Pantocrator as Lord of the Universe in the domes of many of their shrines—a powerful example ennobling the Church of the Virgin at Daphni in Greece (left).

By MERLE SEVERY

ASSISTANT EDITOR

Photographs by JAMES L. STANFIELD

NATIONAL GEOGRAPHIC PHOTOGRAPHER



Haven from brigands and the siren world, the monasteries of Meteora in central Greece still



*uphold the Orthodox tradition of monasticism,
once the chaste soul of a gilded Byzantium.*



THE BYZANTINE WORLD

AT HEIGHT OF EMPIRE, UNDER JUSTINIAN I (A.D. 527-565)

- SIGNIFICANT CENTER
- ✚ MONASTERY
- ✕ BATTLE SITE



Haloed demigods, Byzantium's most celebrated rulers have stood immortalized in mosaic for 14 centuries in the

Church of San Vitale at Ravenna, Italy. Justinian the Great, acclaimed as God's vice-regent on earth, is flanked



by his sources of power—court officials and the military on his right, the priesthood on his left. On the facing

wall, Theodora, elevated from courtesan to queen, exemplifies the luxury of the Byzantine court.

JAMES L. STAMFIELD, VICTOR H. BOSWELL, JR., AND LARRY D. KINNEY, ALL NATIONAL GEOGRAPHIC STAFF

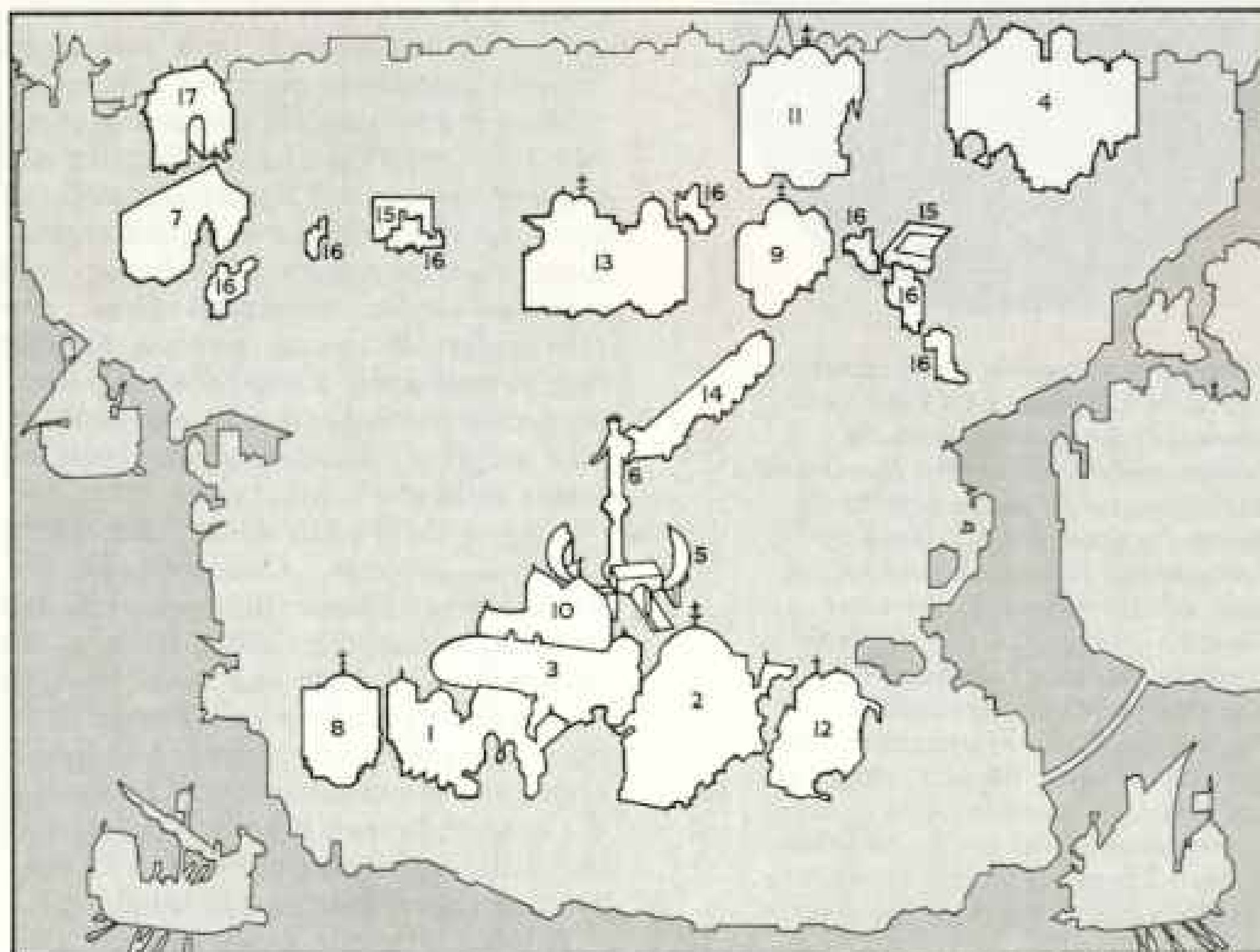


Magical view of old Constantinople

A NEW ROME on the Bosphorus—
one dedicated to the newly
triumphant Christian religion—
Constantinople soon surpassed its
Italian sister in size. In its glory from
the sixth to eleventh centuries, the
fortress city, crowded by half a million
people of diverse nationalities, is here
telescoped in time and space on a
canvas painted by the late Jean-Léon
Huens. Requisites for social acceptance
were the Greek tongue and adherence to
Christianity, celebrated in a host of

state-supported churches. Progressive for
its time, the city offered free medical services
and care for the destitute. A remarkable
system of aqueducts, cisterns, and
drains provided water and sanitation.

Entrepôt for world trade routes, the
prosperous city was the envy of other
empires, which repeatedly tried to
breach its 13 miles of walls and the
great chain guarding the Golden Horn.
Before the Turkish conquest, only once
did attackers succeed. Ironically, they
were Christians of the Fourth Crusade.



DRAWN BY CHRISTOPHER A. KLAY, M.S.S., CARTOGRAPHIC DIVISION

Power and pageantry filled the walled peninsula that harbored the Great Palace of Byzantine emperors (1); Hagia Sophia, seat of the patriarch (2); and the Hippodrome, scene of races and circuses (3). After royal fortunes dwindled in the 13th century, rulers resided in the smaller Palace of Blachernae (4). Largest of six commercial and social centers, the Forum of Constantine (5) was paved in marble and held a column (6) commemorating the

city's founder. A center of manuscript production, the Church of St. John in Stoudion (7) was a Roman basilica, while the Church of Saints Sergius and Bacchus (8) was an early example of the domed Byzantine style. Revered by pilgrims were the Church of the Holy Apostles (9), burial place of Constantine, and the Church of St. Euphemia (10), named for a martyr. The Church of the Chora (11) was lavish with mosaics and frescoes, while Hagia Eirene (12)

reflected the eighth-century iconoclasts, who abjured figural art. The Monastery of Constantinian Lips (13) served as a major school for city youth. Aqueducts (14) provided the city with water, stored in huge cisterns (15). A century after its founding, the city expanded with a landward wall built far beyond the original remnants (16). One of 50 gates, the triumphal Golden Gate (17) was reserved for state occasions and coronations.

The Gifts of Golden Byzantium



Warrior and apostle, Constantine the Great, here depicted on a Roman coin, chose a Christian emblem for his banner and won an empire. He elevated the persecuted Christian faith to the favored religion of the temporarily consolidated Roman state, which had been divided between Eastern and Western co-emperors. In A.D. 330 he dedicated his new Eastern capital, Constantinople, on the site of the ancient Greek port of Byzantium. With passing centuries, Western vestiges of the empire fell away to Goths, Vandals, and others from the north, while these Eastern Romans, speaking Greek, shaped a culture distinctly their own.

ON THE 29TH OF MAY in 1453—6,961 years after the creation of the world, by Byzantine reckoning; 1,123 years and 18 days after Constantine the Great dedicated his new Christian Rome on the Bosphorus—Constantinople fell to the Turks.

With it fell the heart of the Byzantine Empire that once ruled from the Caucasus to the Atlantic, from the Crimea to Sinai, from the Danube to the Sahara.

Yet 1453, a pivot on which ages turn, was a beginning as well. Just as the double-headed eagle, symbol of Byzantium and its spiritual heir, imperial Russia, looks both east and west, forward and backward in time, so Byzantine ways of government, laws, religious concepts, and ceremonial splendor continue to move our lives today.

Much of our classical heritage was transmitted by Byzantium. Its art affected medieval and modern art. Byzantines taught us how to set a large dome over a quadrangular space, gave us patterns of diplomacy and ceremony—even introduced forks. (An 11th-century Byzantine princess brought these in marriage to a doge of Venice, shocking guests, just as her cousin, wed to a German emperor, scandalized his court by taking baths and wearing silk.)

"City of the world's desire," hub of the medieval universe, Constantinople bestrode a superbly defensible peninsula and sheltered harbor, the Golden Horn, at the crossroads of Europe and Asia. Here, in the legendary past, Greek settlers named the place after their leader, Byzas. And Byzantium it also continued to be called, as well as the Eastern Roman Empire it ruled, until the Turks captured it in that fateful year, 1453, and later renamed it Istanbul.

To this day the city retains its fascination: The kaleidoscope of craft like water bugs on the Golden Horn, the cries of vendors in the labyrinthine covered bazaar, porters jackknifed under loads threading teeming alleys—the unpredictability of its life. Forget logic if you search a street address. Sit to sip tea by the seawall near Justinian's palace, and don't be surprised if a brown bear shags by with a gaggle of Gypsies.

Threading crowds of fervent Muslims boarding buses for the pilgrimage to Mecca, I entered Hagia Sophia, once the Church of

the Holy Wisdom, Christendom's crowning glory. Fragmentary mosaics hint at the golden sheen that illumined the shrine. Light shafting through a corona of windows seems to levitate the giant ribbed dome. Let imagination fill the vast nave with worshipers, chanting clergy robed in brocade, incense swirling through a constellation of oil lamps toward that gilded dome suspended as if from heaven, and you will share Justinian's exultation. In 537 he beheld his masterwork complete: "Solomon, I have outdone thee!"

CONSTANTINE and Justinian—these two emperors, both born in Serbia, set Byzantium on the path to greatness. Constantine's Christianization of the Roman Empire in the fourth century is one of history's mightiest revolutions. He chose a persecuted minority sect—an illegal, subversive intruder into the Roman state—and made it the cornerstone of a world-shaking power: Christendom.

His sainted mother, Helena, in her old age made a pilgrimage to the Holy Land. There, with a rapidity and assurance that can only strike wonder in the modern archaeologist, legend has it she unearthed the True Cross, the lance, the crown of thorns, and identified, under a temple of Aphrodite, the tomb of Christ. Over it her thrilled son ordered buildings to "surpass the most magnificent monuments any city possesses"—a decade-long labor now incorporated in Jerusalem's Church of the Holy Sepulchre.

Constantine himself presided over some 250 bishops assembled at Nicaea for the first of seven ecumenical, or universal, councils that forged the Orthodox faith. They formulated the familiar Nicene Creed ("I believe in one God, the Father Almighty, maker of heaven and earth. . ."). Those opposing the council's decrees were branded heretics.

Constantine gave Byzantium its spiritual focus. Justinian in the sixth century gave it its greatest temporal sway. Reconquering lands once Roman, he magnified his empire by founding or rebuilding cities, monasteries, and 700 fortifications. In the Balkans, the Levant, Italy, from the Euphrates to the Pillars of Hercules, I found impressive works. In Algeria, Tunisia, and Libya I strolled cities roofless to the North African sky. Triumphal arches, amphitheaters,

baths, and grids of stone-paved streets lined with shops and town houses bespoke Roman origins. Justinian's fortresses and churches placed them in the Byzantine world. Some stand alone in an empty countryside.

In the Algerian-Tunisian frontier city of Tebessa, Byzantine Theveste, life pulses at the crossroads of a fertile belt of towns shielded from the Sahara by a crescent of the Atlas Mountains. Burnoosed men and veiled women, donkeys, and vehicles stream through a sculptured, porticoed Byzantine gate. Children clamber on Byzantine walls in whose shade old men sit and watch the passing parade, and women gossip.

But none of Justinian's cities matched the splendor of his Constantinople.

Medieval visitors from the rural West, where Rome had shrunk to a cow town, were struck dumb by this resplendent metropolis, home to half a million, its harbor crowded with vessels, its markets filled with silks, spices, furs, precious stones, perfumed woods, carved ivory, gold and silver and enameled jewelry. "One could not believe there was so rich a city in all the world," reported the crusader Villehardouin.

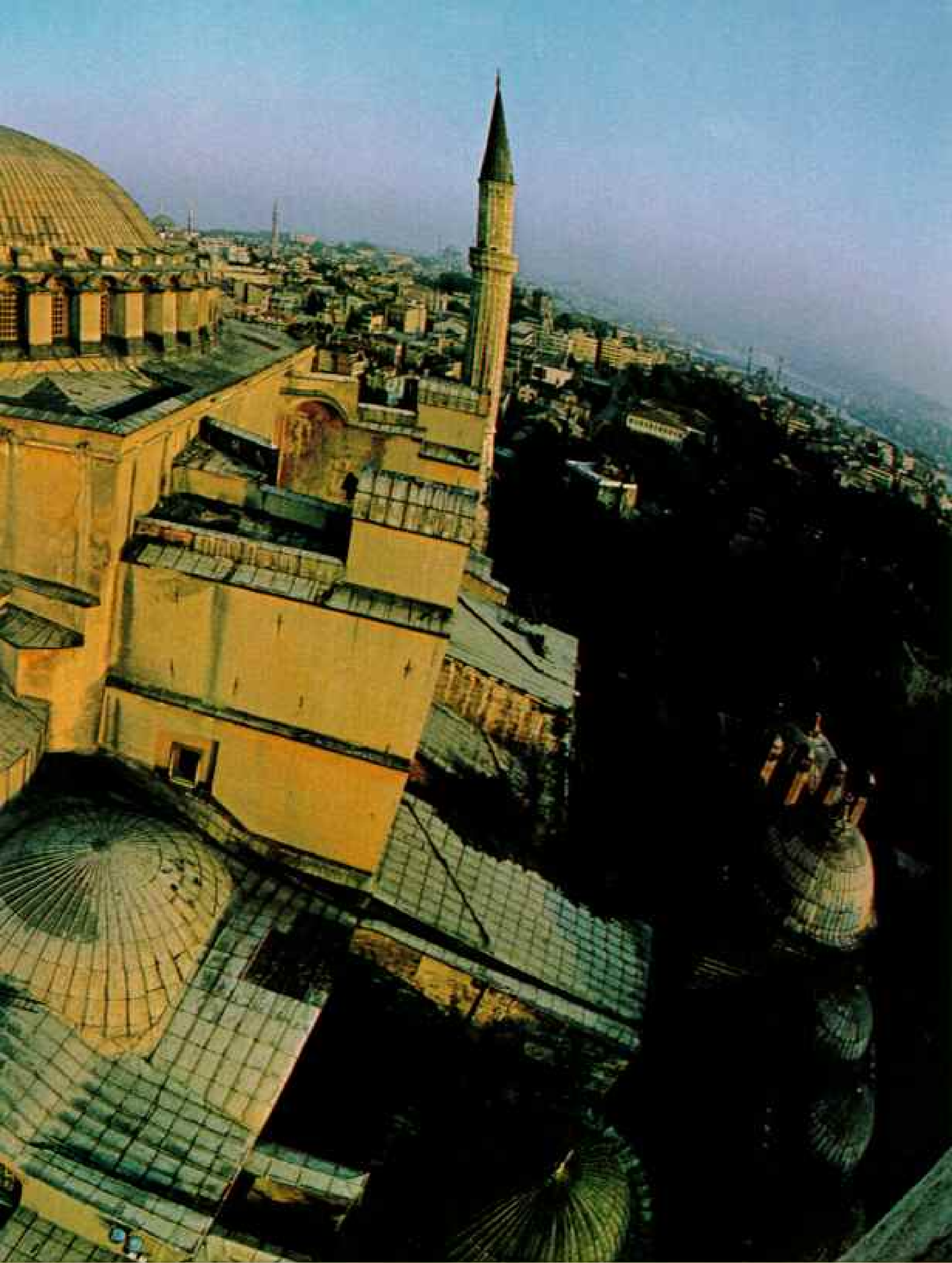
The first Rome, on the Tiber, did not fall in 476, as schoolbooks often say; it withered away. No emperor died on its walls when it was sacked by Visigoths in 410, or by Vandals from Carthage in 455; emperors had long resided elsewhere. From the third century the course of empire had set eastward.

The Dark Ages are dark only if you look at Western Europe, for long centuries a backwater: decaying towns, isolated manors, scattered monasteries, squabbling robber barons. In the East blazed the light of Byzantium, studded with cities such as Thessalonica, Antioch, and Alexandria, more cosmopolitan than any Western society before the modern age. (See *Europe*, a historical map supplement with this issue.)

While Charlemagne could barely scrawl his name and only clerics had clerical skills, many Byzantine emperors were scholars. Even laymen knew their Homer as they knew their Psalms. While men in the West for centuries tested guilt by ordeal—picking up a red-hot iron (you were innocent if you didn't burn your hand)—Justinian set scholars to compiling his famous *Corpus Juris Civilis*, the foundation of Roman law



Once the world's largest church, now a museum, Hagia Sophia was dedicated 1,446 years ago by Justinian, who built it on the foundation of an earlier church that



had been destroyed, along with much of Constantinople, during riots that nearly deposed him. Muslim minarets rose after the city fell to the Ottoman Turks in 1453.



in continental Europe today. Via the Code Napoléon, Byzantine precepts were transmitted to Latin America, Quebec Province, and Louisiana, where they still hold sway.

Though the empire became officially Greek in speech soon after Justinian's day, people of the East still considered themselves Romans. (Westerners they called Latins or Franks, when they weren't calling them barbarians.) Their Emperor of the Romans was the legitimate heir of Augustus Caesar. Down to 1453 theirs was *the* Roman Empire. But it was the old pagan Roman world Christianized and turned upside down, the kingdom of heaven on earth.

SUCH WAS the Byzantine world view: a God-centered realm, universal and eternal, with the emperor as God's vice-regent surrounded by an imperial entourage that reflected the heavenly hierarchy of angels, prophets, and apostles. One God, one world, one emperor. Outside this cosmos was only ignorance and war, a fury of barbarians. The emperor had a divine mandate to propagate the true faith and bring them under his dominion.

Ceremony reinforced his role. His coronation procession moved through the Golden Gate along the Mese, the arcaded, shop-lined avenue leading through the Forum of Constantine and past the Hippodrome to the Augusteum, the main square with its gargantuan statue of Justinian on horseback gesturing eastward atop his pillar, and the Milion, the milestone where the routes of empire converged. Along the way a legitimate successor or victorious usurper transformed himself by a series of costume changes from a hero in gleaming armor to a robed personification of Christ. On Easter and at Christmas 12 courtiers symbolically gowned as the Apostles would accompany him in procession to worship in Hagia Sophia, the populace prostrating in adoration.

Ruling from his labyrinthine sacred palace, the emperor, crown and gown festooned with precious stones, invested his

officials in silken robes and bestowed titles such as Excellency (used by ambassadors, governors, and Roman Catholic bishops today) and Magnificence (still used by rectors of German universities). Popes would adopt his tiara; England's monarchs, his orb and scepter; protocol officers, the order of precedence at imperial banquets.

The splendor of Byzantine ceremonial in rooms with doors of bronze and ceilings in gold and silver awed the foreigner, especially when a bit of mechanical wizardry was thrown in. Liudprand of Lombardy, on a diplomatic mission in 949, describes an imperial audience:

Golden lions guarding the throne "beat the ground with their tails and gave a dreadful roar with open mouth and quivering tongue." Bronze birds cried out from a gilded tree. "After I had three times made obeisance . . . with my face upon the ground, I lifted my head, and behold, the man whom just before I had seen sitting on a moderately elevated seat had now changed his raiment and was sitting at the level of the ceiling."

Beneath the glittering ritual we can perceive a prototype of today's bureaucratic state. A hierarchy of officials, including the custodian of the imperial inkstand, who readied the quill pen and red ink with which the emperor signed decrees, minutely supervised this "paradise of monopoly, privilege, and protectionism" that subordinated the individual's interest to the state's.

Constantinople organized its trades in tightly regulated guilds; controlled prices, wages, and rents; stockpiled wheat to offset poor harvests. Officials inspected shops; checked weights and measures, ledgers, quality of merchandise. Hoarders, smugglers, defrauders, counterfeiters, tax evaders faced severe punishment.

Unlike the West, trade or industry seldom bore a stigma. One empress distilled perfume in her palace bedroom. The emperor himself was the empire's leading merchant and manufacturer, with monopolies in minting, armaments, and Byzantium's

Awesome still, Hagia Sophia once glittered with mosaics, and art treasures filled every corner. Arabic medallions testify to five centuries as a Muslim mosque when offending Christian images were covered. Revolutionary in design, the great domed edifice has withstood hundreds of earthquakes.



Spirit of Byzantium abides in more than a hundred million members of the Eastern Orthodox churches, whose rituals have changed little since the fall of the empire. Simion Boca and his bride, Georgeta Niga (above), pledge vows in Humor Monastery in northeastern Romania, wearing wedding crowns, a tradition that dates from before the time of Justinian. The emperor's sweeping codification of Roman law strengthened marriage contracts and improved the lot of women. A roomful of appetizers at the wedding reception (right) awaits a turnout by the village. Christianity spread in the Balkan regions after the conversion of the Bulgar tsar, Boris, in the ninth century.





renowned luxury articles. Justinian had founded its famed silk industry with silkworm eggs smuggled into Constantinople (hitherto the empire had paid a pound of gold for a pound of Chinese silk). Special brocades from imperial looms and other "prohibited articles" not for sale abroad made prestigious gifts for foreign princes.

Import, export, sales, purchase taxes, and shop rents swelled the imperial coffers (Basil II left 200,000 pounds of gold)—this at a time when the West more often bartered than bought. Nor were interest-bearing loans condemned as sinful; in the West they were, and this put moneylending into the scorned hands of Jews. Justinian set an 8 percent ceiling on interest—12 percent on maritime loans because of increased risk (the borrower did not have to repay if ship or cargo was lost to storm or pirate). Insurance and credit services were developed. Banking was closely audited. The gold solidus, the coin introduced by Constantine and later called bezant for Byzantium, held its value for seven centuries—history's most stable currency.

IN THE SPIRIT "if any would not work, neither should he eat," the indigent were put to work in state bakeries and market gardens. "Idleness leads to crime," noted Emperor Leo III. And drunkenness to disorder and sedition—so taverns closed at eight.

God's state would protect the working girl: a fine of two pounds of gold for anyone who corrupted a woman employed in the imperial textile factories. Incest, homicide, privately making or selling purple cloth (reserved for royalty alone), or teaching shipbuilding to enemies might bring decapitation, impalement, hanging—or drowning in a sack with a hog, a cock, a viper, and an ape. The grocer who gave false measure lost his hand. Arsonists were burned.

The Byzantines came to favor mutilation as a humane substitute for the death penalty; the tongueless or slit-nosed sinner had time to repent. Class distinctions in law were abolished. Judges were paid salaries from the treasury instead of taking money from litigants, "for gifts and offerings blind the eyes of the wise."

"Men . . . should not shamelessly trample upon one another," observed Leo VI, the



Teaching Scripture with art, the 15th-century monastery church of Voronet bears frescoes inside and out that



illustrate Romanian folklore and stories from the Bible. Once teaching aids for the illiterate, the remarkably preserved painted churches of Moldavia represent a striking regional adaptation of Byzantine art.

Wise. Contractors had to replace faulty construction at their own cost. Housing codes forbade balconies less than ten feet from the facing house, storing noxious matter, or encroaching on a neighbor's light or sea view.

As solicitous for its subjects' welfare as it was in controlling their thoughts and deeds, the state provided much of the cradle-to-grave care expected by the Communist faithful today. Emperors and wealthy citizens vied in endowing hospitals, poorhouses, orphanages, homes for the blind or aged (where "the last days of man's earthly life might be peaceful, painless, and dignified"), homes for repentant prostitutes (some became saints), even a reformatory for fallen women aristocrats. Medical services included surgical and maternity wards, psychiatric clinics, and leprosariums. In contrast to the unwashed West, early Byzantium abounded in public baths. Street lighting made the nights safer.

A modern state in many ways. Passports were required for travel in frontier districts. Tourists can sympathize with Liudprand; he ran afoul of customs on his way out. From his baggage, officials confiscated prized cloths of purple silk.

SUNRISE burnished the gold of autumn leaves in the Balkan Mountains. A horse plowed a Bulgarian field where peasant women bent to their toil. My photographic colleague and I stopped our camper to capture the scene.

A police car pulled up. A policeman and a political official checked and recorded our documents. The official ordered us to strip our cameras. With no explanation, no heed to our anguished protests, he ground the cassettes under his heel, pulled out the film and cast in the dirt our color record of the region's Byzantine churches.

The incident came as an unpleasant reminder that a harbinger of Eastern Europe's police states was Byzantium, suspicious of foreigners and as chary about letting out information as it was avid in gaining it.

State visitors were shown what officials wanted them to see. En route to Constantinople a guard of honor kept them from deviating from the imperial post route. Assigned servants and interpreters learned as much as possible from the envoy's entourage. Also,

merchants were kept under surveillance. No alien might trade or trespass beyond fairs held near the borders except in the presence of an official. In the capital the prefect assigned them separate compounds to curb spying—fur-clad Rus with drooping mustaches; unkempt Bulgars belted with iron chains; Khazars and Petchenegs from the steppes; merchants of Venice, Genoa, Pisa, Amalfi, Lombardy, and Catalonia. If one overstayed his three-month term, he was stripped of goods, whipped, and expelled.

How free was speech? How welcome criticism? One clue was the name of the imperial council: *Silentium*. The historian Procopius extolled Justinian's military and building campaigns—on the emperor's orders. He had to reserve his bitter personal opinions for a *Secret History*, "for neither could I elude the watchfulness of vast numbers of spies, nor escape a most cruel death, if I were found out." Only at chariot races and other events in the Hippodrome could the populace express discontent before the emperor. Factions among the 60,000 spectators sometimes exploded into riot. Justinian survived one attempted rebellion by drowning the Hippodrome in blood.

Behind the court's glittering facade lay perhaps "the most thoroughly base and despicable form that civilisation has yet assumed," fulminated a Victorian historian, William Lecky: "a monotonous story of the intrigues of priests, eunuchs, and women, of poisonings, of conspiracies, of uniform ingratitude, of perpetual fratricides."

Surrounded by would-be usurpers and assassins, no incompetent emperor remained God's vicar on earth very long. Of the 88 emperors from Constantine I to XI, 13 took to a monastery. Thirty others died violently—starved, poisoned, blinded, bludgeoned, strangled, stabbed, dismembered, decapitated. The skull of Nicephorus I ended up as a silver-lined goblet from which Khan Krum of the Bulgars toasted his boyars.

The Empress Irene was so obsessed with retaining power that she had her son blinded and took his title of emperor. Even the sainted Constantine the Great had his eldest son slain and his wife suffocated in her bath.

Yet the empire, ringed with enemies, endured more than 1,100 years. Behind the silken glove of its diplomacy lay the mailed

fist of its navy, sophisticated defenses, and small but highly trained army, based on a battering wedge of armored cavalry and mounted archers.

Proudly continuing Rome's iron discipline, the Byzantines now defended the empire as "champions and saviours of Christendom." On campaign they rose and slept to a round of prayers. Parading a most sacred relic—the Virgin's robe—around Constantinople's walls was credited with saving the "city guarded by God" from Rus attack in the ninth century. The Emperor Heraclius's ultimate triumph was not in crushing the millennial enemy, Persia, near Nineveh. Rather it was in recovering the True Cross looted by the Persians and returning it in person to Jerusalem in 630.

WHAT ABOUT that nasty reputation for duplicity and cowardice? The Byzantines weren't cowards. They neither romanticized war nor gloried in it as a sport. They studied it as a science and used it as a last resort if gold, flattery, and intrigue failed.

Fire beacons and flag towers gave distant early warning. Ten centuries before Florence Nightingale set up field hospitals in the Crimean War, Byzantine medics got a bonus for each man they brought alive off the field of battle.

The fortified Crimea was the empire's listening post for the steppes, that invasion corridor for Huns, Slavs, Khazars, Magyar hordes "howling like wolves," and Bulgars born of that wild marriage of "wandering Scythian witches to the demons of the sands of Turkestan." Information also came from distant ports, naval patrols, envoys, merchants, spies, defectors. ("Never turn away freeman or slave, by day or night," counseled a tenth-century officer.) Collating this intelligence, the Bureau of Barbarians—Constantinople's CIA—analyzed strengths and weaknesses of each nation, calculated the price of each prince, determined when to unleash a pretender to spark rebellion.

If fight they must, Byzantines bet on brains over brawn. Military manuals stressed mobility, scouting, surprise. Immobilize an invader by capturing his baggage, food, and mounts while grazing. Scorch the earth, block the springs. Don't join an action

unless strategy, numbers, and odds are in your favor. "God ever loves to help men in dangers which are necessary, not in those they choose for themselves," explained Justinian's famed general, Belisarius.

If things got desperate, the Byzantines unmasked their ultimate weapon: Greek fire. Volatile petroleum, preheated under pressure, was projected through a flame-thrower, incinerating ships and crews (page 747). It even spread fire on the water, turning a foe's fleet into a raging inferno. This Byzantine A-bomb broke five years of naval assaults on Constantinople in the late seventh century and a yearlong siege in the early eighth, changing history by stopping the



METROPOLITAN MUSEUM OF ART

The Holy Grail? Unearthed by a Syrian workman in 1910 near Antioch, an early center of Christian faith, the Antioch Chalice is thought by many to contain the cup used by Christ at the Last Supper. The gilded silver outer vessel depicts Christ and His disciples. From Crucifixion nails to the crown of thorns, objects believed associated with Christ were revered by the Byzantines as relics with miraculous powers.

Arabs at Europe's doorstep. And when, two centuries later, Rus flotillas swept into the Bosphorus, Byzantines sent them reeling with "lightning from heaven," in the words of Prince Igor's defeated force.

I CAME TO A PLACE named Ohrid in today's Yugoslavia—a peaceful town, its red-tiled roofs shouldering down a peninsula to a Macedonian lake backed by the stern mountains of forbidden Albania. A fishermen's church stands on the promontory, high-checkboned saints staring out of their halos with large black Byzantine eyes. Ohrid a thousand years ago was the capital of a Bulgarian empire whose Tsar Samuel had triumphed from the Black Sea to the Adriatic. But in Byzantine Emperor Basil II, Samuel found his nemesis.

For decades their campaigns seesawed through the Balkans with ghastly carnage. Samuel, slippery as a Lake Ohrid eel, finally set a trap for Basil in a gorge along the upper Struma. Eluding it, Basil pinned Samuel's entire army there. Now he would teach the tsar a lesson in Byzantine revenge.

Descending at dusk from Samuel's citadel, which still crowns the peninsula at Ohrid, I joined the stream of parents, children, and lovers promenading in the main street. Dark eyes flashed, teasing in courtship; restless eyes scanned, recognized, questioned, eyes gazing boldly, eyes falling shyly.

A shudder shot through me when I thought of another procession. Basil blinded the 15,000 prisoners, sparing one in a hundred to lead the macabre march home.

Samuel watched in horror the return of his once proud army, eye sockets vacant, shuffling, stumbling, clutching one another, each hundred led by a one-eyed soldier.

The sight killed him. And his empire too—swallowed by Byzantium. Basil the Bulgar-slayer was one name Bulgarians would not forget.

Awesome magnificence and diplomatic

Holdover from ancient times, a Gypsy bear act, rehearsing for a carnival outside Istanbul, recalls the days when such animals entertained throngs at Constantinople's Hippodrome. Gypsies came to Byzantium in the ninth century.





cunning, military might, terror—more effective than these were Byzantium's missionaries. The Orthodox faith forged unity out of a diversity of nations. It brought the Slavs into the Byzantine universe.

The "apostles of the Slavs," ninth-century Cyril and Methodius of Thessalonica, invented an alphabet in which the newly converted Slavs first learned to write. Their script, and the Greek-based Cyrillic that soon supplanted it, conveyed Byzantine liturgy and learning to the Balkans; then to Russia, molding their thoughts, giving them brotherhood in faith and a Slavonic literary language, the Latin of the East.

"Civilizing the Slavs was Byzantium's most enduring gift to the world," Harvard Professor Ihor Ševčenko told me. Among the consequences, Kievan Russia emerged from pagan isolation to join the European political and cultural community. Byzantium was Russia's gateway to Europe.

In Kiev, Professor Andrei Bielecki told me how Vladimir, prince in that Mother of Russian Cities, shopped about for a religion for his people. He sampled the Hebrew, Latin, and Islamic faiths. Fond of women, he favored the Muslim promise after death of fulfillment of carnal desires. But alas. No wine. "Drinking is the joy of the Rus," a chronicle has him say.

So he sent emissaries to Constantinople. Inspired by the resplendent liturgy in Hagia Sophia, they "knew not whether we were in heaven or on earth. For on earth there is no such splendor. . . . We only know that God dwells there among men. . . ." Whereupon Vladimir had his people, on pain of the sword, baptized in the Dnieper.

Out of the wreckage of the Mongol empire, princes of Muscovy climbed to power, golden domes and crosses gleaming above the red-brick walls of their Kremlin. Cossacks, fur traders, missionaries spread across Siberia.

At Sitka, on snow-peaked Baranof Island in Alaska, the icons, incense, and chanting in onion-domed St. Michael's Cathedral

serve as reminders that in the 18th century the faith of Byzantium came across the Bering Sea to its fourth continent: Russian America. Here I joined a Tlingit congregation worshipping with an Aleut priest—a ritual like that I had witnessed in Justinian's monastery of St. Catherine in Sinai.

"We change very little," Father Eugene Bourdukofsky said as he proudly showed me an icon, the Virgin of Sitka. "That is the essence of Orthodoxy, the true faith."

TO CHANGE or not to change. Here was a key to understanding the chasm that divides the thought world of Byzantium—and Eastern Europe—from the West.

The West transformed itself through the Renaissance, Reformation, Enlightenment, and the rise of science into a dynamic society enshrining the individual and progress through free inquiry and experiment. The East, until the 18th century, remained essentially static. Byzantine thought sees its world not in process; it has arrived, its eternal order God-ordained.

The Byzantine mind transformed the classical Greek word "to innovate" into "to injure." In a monarch, a penchant for innovation is disastrous, Procopius insisted, for where there is innovation, there is no security. In a subject, deviation is not only heresy but also a crime against the state.

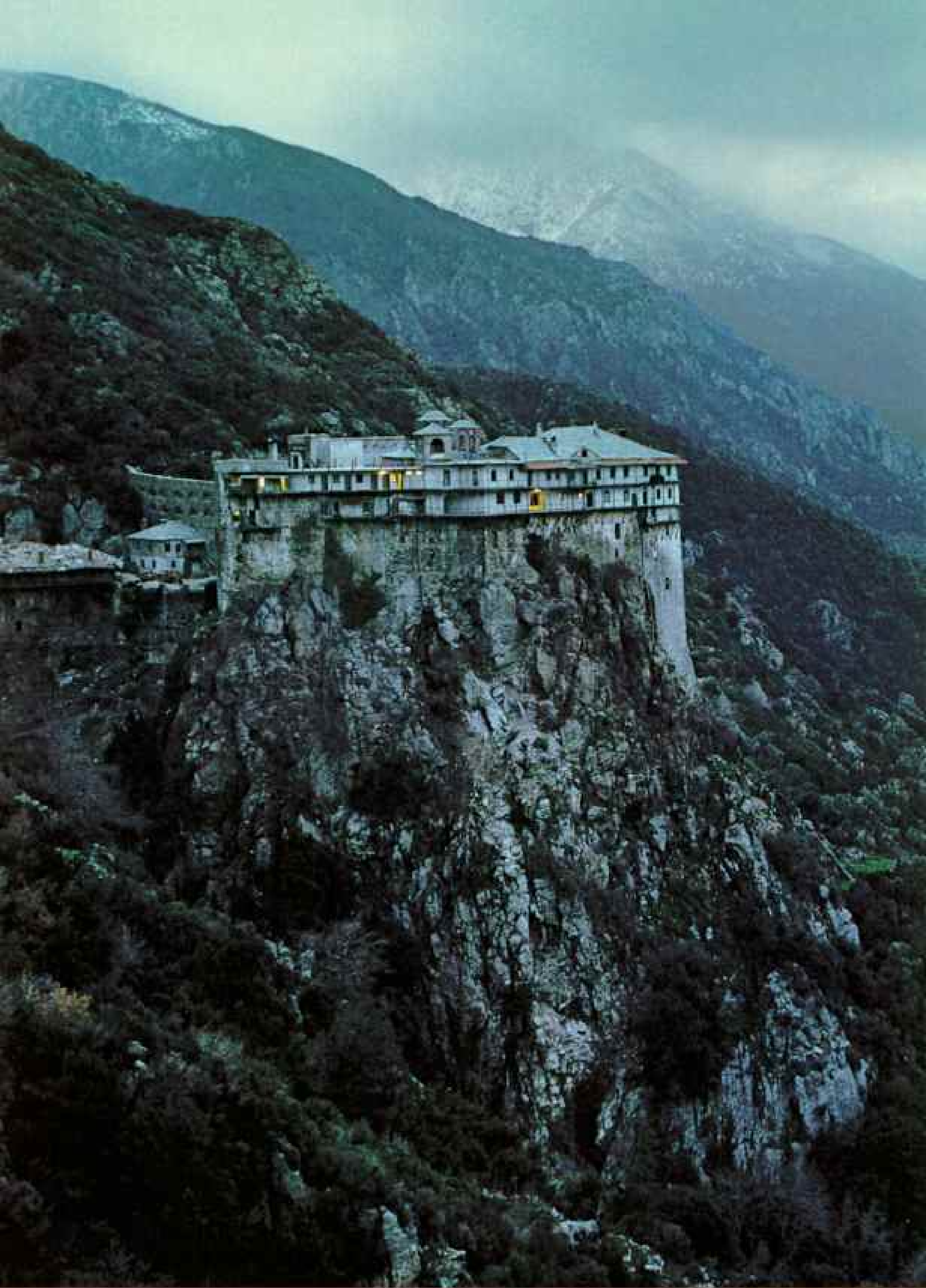
So threatening was change that ritual reforms in 17th-century Russia split the church. Old Believers endured unspeakable tortures and martyred themselves in mass suicide rather than make the sign of the cross with three fingers instead of two.

Ritual details widened the rift between Rome and Constantinople in the 11th century. Until then East and West shared a common faith and heritage.

The patriarchs of five Christian centers had helped shape this universal faith. Then in the seventh century the march of Islam engulfed three—Jerusalem, Antioch, and Alexandria. *(Continued on page 746)*

Holy grottoes of Cappadocia once housed the largest community of monks in Asia Minor. From here missionaries spread the Christian faith as far as Ethiopia. Some 300 beautifully frescoed churches and dwelling spaces for 30,000 were carved from the soft volcanic pinnacles between the 4th and 14th centuries.

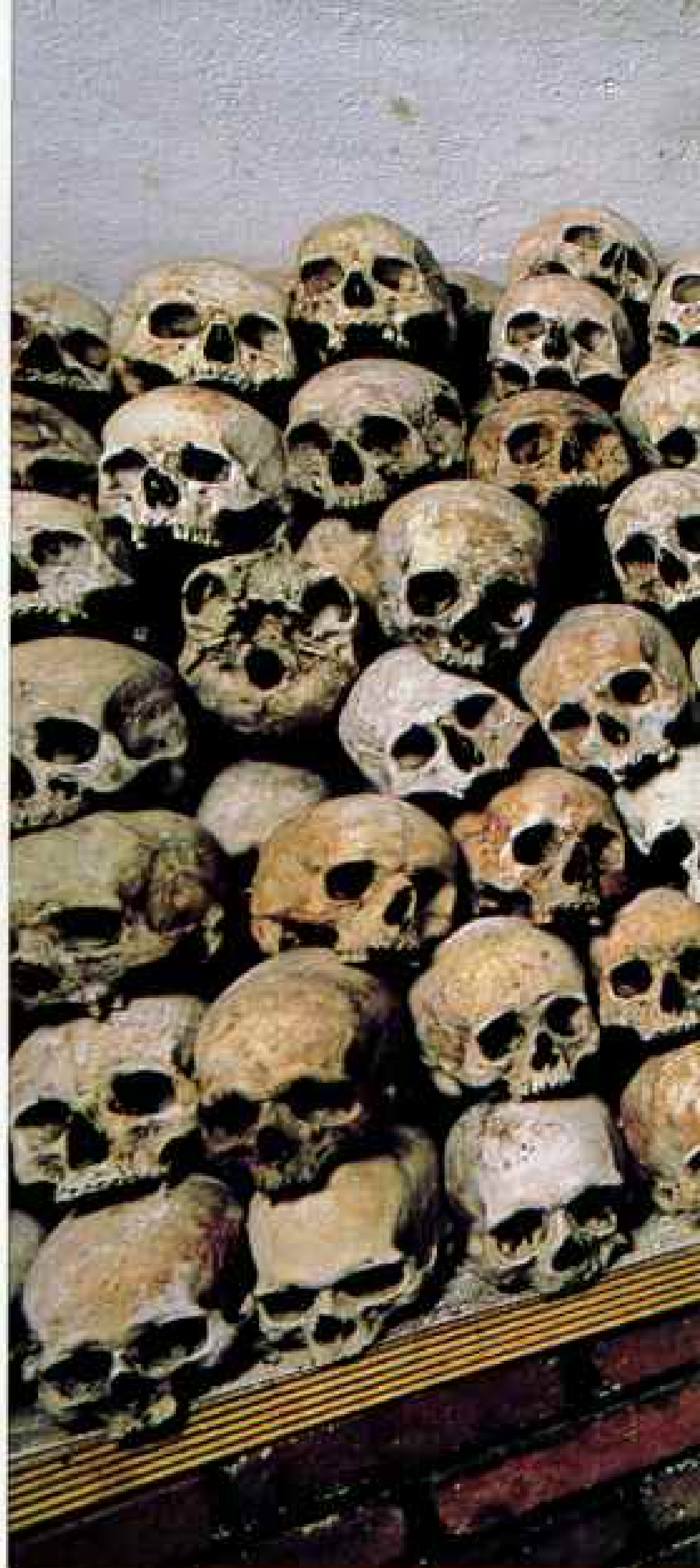




Mount Athos

FAR AWAY from the worries of the rest of humanity, the Simonopetra Monastery (*left*) towers high above the Aegean Sea on a small peninsula of northeastern Greece. Founded in the mid-14th century, it stands like a fortress with 19 other Eastern Orthodox monasteries and a host of small compounds in a religious community named after snowcapped Mount Athos, background. Within these sanctuaries, pious men retreat from the world in a tradition dating back to the start of the Byzantine era. Father Niphon (*below*), a master carver, has lived as a hermit for more than 50 years.





SAINTS ruled the lives of men who died in faith. A mosaic at Stavroniketa Monastery earned its name—St. Nicholas of the Oyster (*above*)—in the 16th century after fishermen found the icon with an oyster embedded in its forehead.

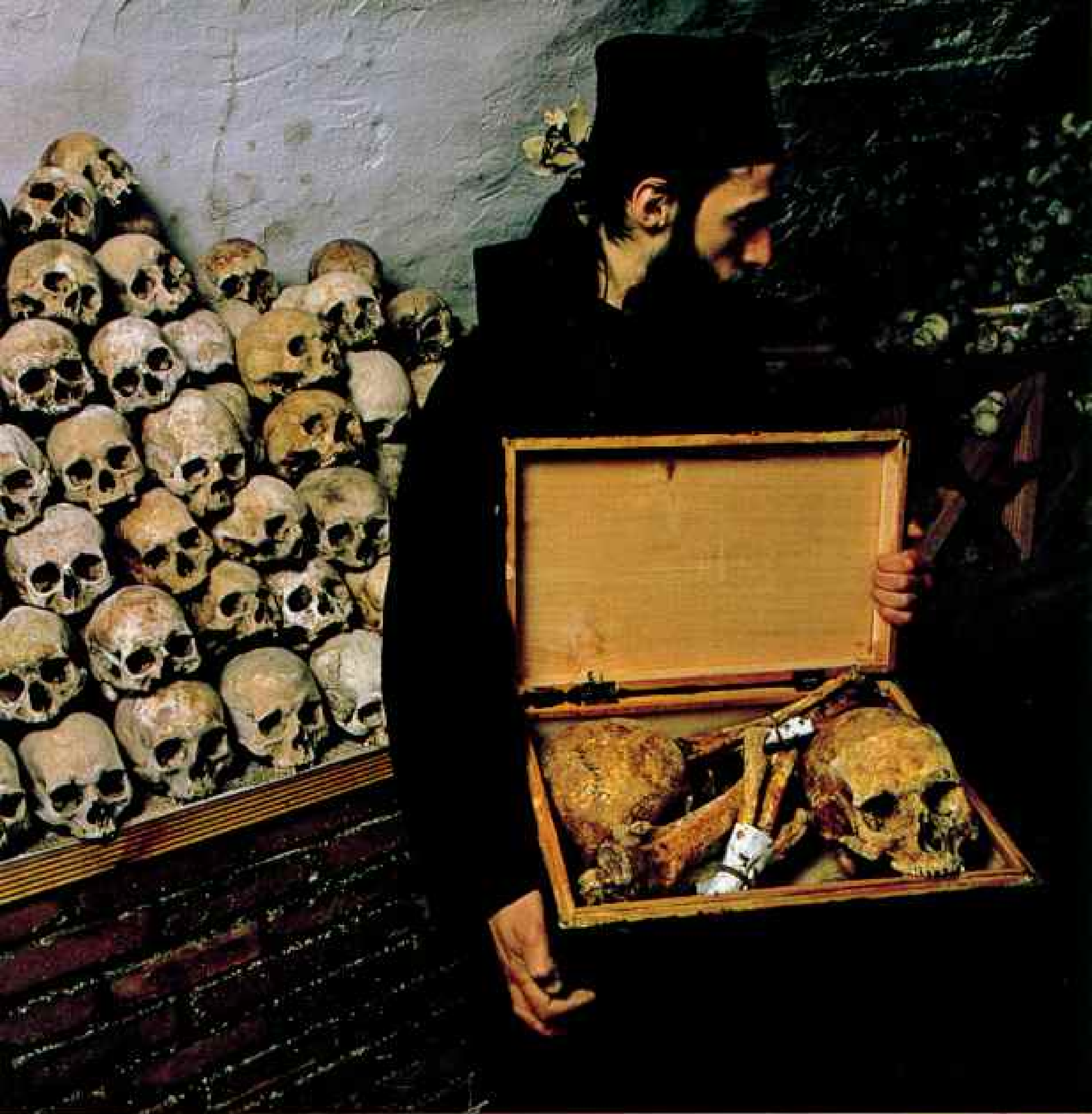
At Simonopetra monks pile the bones of brothers in a charnel house. The remains of a former abbot (*above right*) rest in a special

box held by Father Macarius. To the monks who pray here, these orderly rows of skulls evoke the monastery's long history and the devotion of the men who kept alive its spirit. The inscription on a skull (*right*)—at St. Anne's monastic community—records the death of a Father Gregentios in 1979.

Hermit monks came to Mount Athos as early as the ninth century. The first

monastery, Great Lavra, was founded by St. Athanasios in 963 with financial help from the Byzantine emperor. By 1400, 19 of the 20 monasteries active today had been completed. Expansion later took place among the *sketes*, or outlying ascetic settlements. Some 1,500 monks now inhabit the Holy Mountain.

The monasteries are living museums of



Byzantine culture. Church walls are covered with frescoes, the earliest from the late 12th century. The monks' libraries hold about 15,000 manuscripts, many from the classical and medieval periods. Treasured relics include reputed fragments of the True Cross, a cloth dropped by the Virgin Mary at Calvary, and part of Christ's crown of thorns.

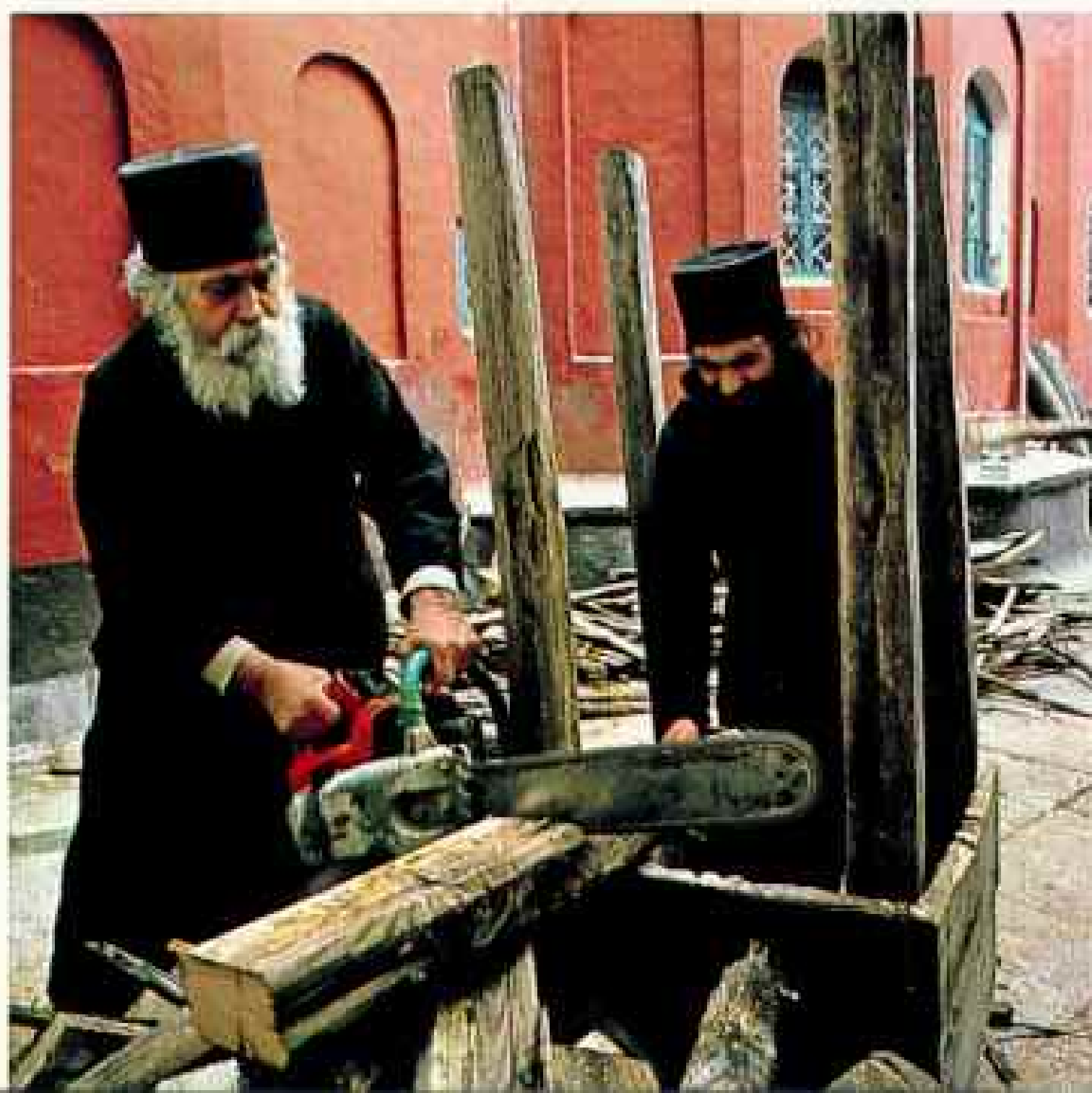




ALONE WITH HIS PRAYERS, Father Niphon has spent a lifetime communing with God in isolation. He dwells in a small house on the sheer cliffside of Karoulia, where some two dozen hermits inhabit caves and



Spartan huts. When he first came to Karoulia, Father Niphon shared the house with three other monks. "One became blind and went back to the world. Two went to sleep," he said. "I miss the others now and then."



NO WOMEN may visit Mount Athos, under a constitution followed since 1045. But men with religious or scholarly purposes are welcome to free food and lodging. Meals are simple and solemn at the Stavroniketa Monastery (*above*), where the monks refresh themselves with soup, olives, bread, and wine, as one brother reads a lesson against gluttony.

Most monasteries follow a Byzantine system of time that begins the day at sunset. Sworn to chastity, obedience, and poverty, monks fill the



hours with labor, private meditation, and communal prayer. Father Mothestos (*left*) cuts old beams in a project to restore the Dionysiou Monastery.

The majority of the monasteries are run as strict communes. The rest are less rigid, allowing monks to have personal property and to keep their own hours.

No fish may be eaten during Lent. But at a branch of St. Paul's Monastery called New Skete, Father Spiridon (*right*) believes that there should still be just a little for the cats. * * *



(Continued from page 736)

Slavic invasions of the Balkans and Lombard conquests in Italy drove a wedge between the remaining two. Rome, deprived of imperial support, linked its fortunes to the rising Germanic West. Constantinople's contracting empire became increasingly Greek.

The break came in 1054, when Rome and Constantinople exchanged excommunications. The Latins had added *Filioque* to the Nicene Creed, making it read that the Holy Spirit proceeds from the Father *and the Son*; they also used unleavened rather than leavened bread in the Eucharist.

Absurd that East and West should sunder over a phrase and a pinch of yeast? Not when eternal salvation seemed at stake.

This was the lesson of Byzantine monasticism: I saw men bend their necks to the yoke of obedience and, through self-denial and punctilious repetitions of ritual, follow unquestioningly an ordained path of salvation. For as Orthodoxy was central to Byzantium, monasticism, ever the conservator of traditions, is the living heart of Orthodoxy.

THE FACE OF THAT BOY still haunts me. I saw him on the boat to Mount Athos—father and son come from Germany to see the Holy Mountain. He was about 13, the same age as my son. We boarded at a Greek port at the base of the steep-walled peninsula that juts 35 miles into the northern Aegean. The motors revved up, and with a flurry of monks crossing themselves and murmuring "*Kyrie eleison*—Lord, have mercy," we were off for a United Nations of monastic communities—Greek, Russian, Bulgarian, Serbian—where no female has been allowed to set foot for a thousand years.

I saw the boy again when we debarked at Daphni. We crowded in, wall-to-wall black robes and black cylindrical hats, for the jolting bus ride up the mountainside to Kariai, headquarters village for the monastic republic, the world's oldest. Then, as I trudged off to join the rounds of worship and work and share Spartan meals in half a dozen monasteries, the boy slipped from mind.

Stavroniketa, thrusting massive walls and crenellated keep above the sea, was a hive of purposeful piety. There the rhythmic beats of the semantron awakened me in the

night. Noah had summoned the animals into the ark with such a resonant wooden plank and mallet, I had been told. Now it called the faithful into the spiritual ark, the church, to save them from the deluge of sin.

In Stavroniketa's church, under the brazen eagles of Byzantium agleam in chandelier coronas, I stood absorbed by the symphony of motion—monks bowing, prostrating themselves, making rounds to kiss the icons, lighting and snuffing candles, swinging the smoking censer, reading and singing antiphonally, raising voices in fervent prayer. The frescoed church itself mirrored the cosmos, martyrs and saints and angelic hosts rising in a scale of sanctity toward the symbolic vault of heaven where a stern Pantocrator, the almighty Christ, looks down disturbingly into the depth of one's soul.

To relax my limbs, I shifted position.

"*Hissssssssssssss!*"

I had clasped my hands improperly. As the hours wore on, if any one made a false move or kissed an icon in the wrong order, a hiss signaled instant correction.

Back in our guest cell near dawn, my cell mate, an American anthropologist, whispered: "Reminds me of the military. The Benedictines in France are the infantry; the Franciscans in Italy, the air force, free and easy. These Orthodox monks are the marines—a crack outfit of shock troops under a tough master sergeant. No sloppiness here."

As I topped a shoulder of the 6,670-foot Holy Mountain, wincing at each sharp penitential stone in the steep path, I found monks building a wall. A decade earlier dilapidated Philotheou Monastery had seven graybeards. I counted ten times that many monks, beards as black as their robes.

Father Nikon, the young *archontaris*, or guestmaster, radiated inner peace and joy as he offered me the ritual brandy, coffee, gummy sweet *loukoumi*, and water, then showed me to a neat guest room near a flower-lined balcony over the courtyard.

"People come to us troubled," Father Nikon said. "A day or two in the monastery brings peace, and they leave refreshed."

On Athos, even meals are a continuation of worship. A bell clangs in the courtyard. The monks file in, stand silently at long tables until the abbot blesses the food. After

a communal prayer, all sit, and eat swiftly under the eyes of frescoed saints lining the refectory walls while a monk at the lectern reads from a saint's life. A bell tinkles. He returns the book to its niche, kneels to kiss the abbot's hand, receives his blessing. Then all file out silently. After Vespers, the monastery gates swing shut and everyone turns in, soon to rise for the night's round of prayers, for the first hour of the Byzantine day begins with sunset.

"Lord Jesus Christ, have mercy on me." Pinpoints of lamplight in the cells silhouette monks in ceaseless prayers of repentance. Four hours of solitary prayer before the call to four hours of communal prayer. Bread and tea, a snatch of sleep, and then silent prayer continues as the monk goes about his daytime tasks, in the kitchen, garden, at manual labor.

One moonlit night at Dionysiou Monastery a howling wind rattled the window of my cell. Dawn disclosed gray clouds beetling the brow of the Holy Mountain, and the face of the sea furrowed in anger. Below,

waves slammed over the landing. No mail boat today. To get to Gregoriou, next monastery along the coast, meant going by foot.

"It's a very dangerous path," cautioned Father Euthymios as we set out together. The gangling, New York-born Vietnam veteran was coming from the "desert," hermitages farther out on the peninsula, where he paints icons. "Part of it is along a causeway swept by the sea." Then came an afterthought of small comfort: "Darius lost his fleet here in such a storm." Three hundred of the Persian king's ships and 20,000 men dashed on the rocks of Athos in 491 B.C.

Pausing on a crest, buffeted by a devil of a wind, Father Euthymios said, "I always fear this next stretch. It's along a cliff with a straight drop to the sea. But with God's grace we will make it." We did. And next day, we again tempted fate.

The storm roared unabated. Winds clutched at us as we climbed and descended ravines, bone weary, wet through. Breakers roared as we leaped from rock to slippery rock at the base of sea cliffs. Too close.



BIBLIOTECA NACIONAL, MADRID

Breath of a guardian dragon, Greek fire wins victory for the Byzantines. As depicted in a 13th-century manuscript, a secret volatile liquid, such as hot oil, is ignited and projected by a flamethrower at an enemy warship. Russia's Prince Igor reportedly lost 10,000 vessels to Greek fire in a battle in 941.



Led by the Three Wise Men, a procession of virgins approaches the Madonna and Child in a mosaic at Sant'Apollinare Nuovo at Ravenna, Italy. Last capital of



JAMES L. STANFIELD, VICTOR R. BOGHELL, JR., AND LARRY D. KINNEY

the old Roman Empire, Ravenna would flower from the fifth through the eighth centuries as a fountainhead of Byzantine culture on the Italian peninsula.



Dressed in borrowed finery, Venice wears Byzantine arches and mullioned windows along the Grand Canal (right). Under Constantinople's sway from the seventh to the ninth centuries, Venice took control of her own destiny and ultimately usurped Byzantium's trade routes. She helped finance the Fourth Crusade, which in 1204 plundered treasures of Constantinople, including the famous bronze horses now adorning the lagoon city's Cathedral of St. Mark.

The tradition of false faces to hide the identities of bacchanals during carnival also dates from the 13th century. Masks are still crafted by artisans such as Giuseppe Donà (above, in mirror).

If you must wait out an Athos storm, you will find no more dramatic haven than Simonopetra, high on a spur above the Aegean. It opens its dovecote of cells onto tiers of rickety balconies propped by aged beams. To walk along one 800 feet over the sea in a storm is an act of faith. Clutching the splintery rail, stepping over a gap in the floor planks, I looked down mesmerized at walls of water battering walls of rock.

Next day Simonopetra no longer shook. The wind had lost its howl; the sea was flattening its crests. No more dodging waves. I had been lucky. Not so that boy who looked like my son. As he leaped across the rocks, a wave swept him away before his father's eyes. When the boats ran again, they found his body and brought it in from the sea.



THE YEAR 1071 was a bad one for the Byzantines, East and West. At Manzikert, in the highlands of eastern Turkey, the multinational Byzantine Army, riven by dissensions and desertions and for once sloppy in reconnaissance, was annihilated by the invading Seljuk Turks it had marched east to destroy. Anatolia, breadbasket and prime recruiting ground for Byzantium, subsequently was stripped forever from Christendom, opening the way to later Ottoman invasions of Europe.

In Bari, port city in southeastern Italy, I saw blood on the pavement. Assassins had gunned down a political opponent, and grieving partisans marched around the stain in bitter memorial. Nine centuries earlier blood had flowed in the streets of Byzantine

Bari, sacked by the Normans after a three-year siege. Five years after the Battle of Hastings in England, the Normans had conquered southern Italy.

The year 1204 was even worse. On April 13, Fourth Crusaders en route to Jerusalem committed what historian Sir Steven Runciman called "the greatest crime in history"—the Christian sack of Constantinople. Burning, pillaging, raping, the crusaders looted what they didn't destroy to enrich Venice, Paris, Turin, and other Western centers with "every choicest thing found upon the earth." (They even brought back *two* heads of John the Baptist, so rich was Constantinople in relics.)

When, after 57 years, a Byzantine emperor once again reigned in Constantinople, the

Heaven paved in gold, the Pala d'Oro altarpiece in St. Mark's enshrines the art of Byzantium. In a solid-gold setting, 2,500 gems enhance 324 enamels portraying Christ surrounded by angels, prophets, and saints.

Universal Empire was but a large head on a shrunken body. The Venetians and Genoese had a stranglehold on its trade. Franks still held territory. Trebizond ruled an independent empire on the Black Sea. Byzantine princes had set up their own power centers in Greece. Byzantium was soon pressed between the Ottoman Turks and the Serbs.

Crossing the Dardanelles, the Turks first settled in Europe at Gallipoli in 1354. A year later, with Serbian power at its peak, Stephen Dushan, who had proclaimed himself emperor of Serbs and Greeks, made his bid for Constantinople. Death robbed him of a chance to sit on Byzantium's throne, but the Serbs never forgot the common Balkan dream of conquering Constantinople. Nor will they ever forget the collision three decades later with the Turks.

IN THE MISTS of morning rolling over brown-tiled earth at Kosovo in Yugoslavia, I peopled that "field of the black-birds" with Turks and Serbs locked in battle. A physical defeat, it was yet a moral victory the Serbs celebrate to this day. Folk legend and epics extolling Serb bravery fed the fires of nationalism during the five centuries the Serbs suffered the Turkish yoke. Kosovo: June 28, 1389. How ironic that Archduke Franz Ferdinand of Austria chose June 28 of all days to make his entry into Sarajevo, where his assassination by a Serb patriot plunged the world into war in 1914.

As the Turkish shadow lengthened, Byzantine emperors traveled west to reconcile differences in an effort to secure military aid. Neither pope nor patriarch considered the rupture of 1054 final. Twice, union of the churches was proclaimed (only to founder on the reef of residual hatred for the crusaders' desecration of holy Constantinople in 1204). As for aid, the West dragged its feet. Venice arrested one emperor for debt.

On a spur of snow-crowned mountains walling Sparta's valley in the Peloponnesus





ΘΑΡ ΜΗΑ

ΑΓΙΟΣ
ΑΓΙΟΣ

ΑΓΙΟΣ
ΑΓΙΟΣ



clings the Byzantine city of Mistra. Today its citadel, palace, red-roofed churches, and dwellings lie empty. Only a few nuns live in this once vibrant city, the renown of its scholars and artists outshining the empire's fading power. Here in 1449, where a double-headed eagle is carved in the cathedral's marble paving, the last Byzantine emperor was crowned.

With him as he journeyed north went a legend: Constantinople's last emperor would bear the same name as the first. His

name? Constantine. And his mother, like the mother of Constantine the Great, was named Helena.

Acclaimed by the populace, tolerated by the indolent Sultan Murad II, he could settle, it seemed, for peaceful coexistence. Having failed in besieging Constantinople and succeeded in crushing a crusader army at Varna on the Black Sea, the sultan was content, in his sumptuous capital of Edirne (ancient Adrianople) in Thrace, to let Constantinople wither on the vine while he



Where battle once raged on the field of Manzikert near this Turkish village of Erentepe, cattle move to pasture. Here Christians fell to the Seljuk Turks in 1071, heralding the end of Byzantium as a great territorial power.

peaceful cemetery by walls where 40 carts could not have carried away the Turks slain in a single assault, noted an eyewitness to the siege. Imagination restored these impressive ruins to the triple-tiered ramparts raised by fifth-century Emperor Theodosius II—13 miles around, studded with 192 towers to landward, 110 to seaward, and pierced by 50 gates. In my mind's eye I saw centuries of invaders—Huns, Avars, Persians, Arabs, Rus, Bulgars, Turks—pour out their blood in futile assaults.

Mehmed (Muhammad) II invested the city with the largest force it had yet faced: an estimated 100,000 troops deployed to landward, the Ottoman fleet massed offshore. Against this: a scant 8,000 to man the walls, and a few ships behind the chain across the Golden Horn.

Why so few defenders? Stripped of the lands that gave it food and fighters, Constantinople was a skeleton, and divided against itself. The West had finally promised help—but at a fearful price: submission of Byzantium's Holy Orthodox Church to the Church of Rome. The pope's emissary presided over a *Te Deum* in a nearly empty Hagia Sophia to sighs of dismay. "Better the Turkish turban than the Latin miter!" ran the popular sentiment. Still, they had the invincible walls. Optimists quoted the old saying: The city would stand until ships sailed over land, a manifest impossibility.

sported with his stable of stallions and his harem of hundreds of women.

Murad's death in 1451 changed that. His mantle fell to his eldest son, who began his reign typically by strangling his baby brother. Scarcely 20, he burned to conquer Constantinople. As legend would have it, he bore the Prophet's name—Muhammad.

Mounting the walls of Constantine's city, I scanned the line of towers. The green of garden vegetables flooded moats that in 1453 had run red. An aged Turk tended a

THE THUNDER of Mehmed's attack on April 11, 1453, shook the invincibility of those walls. Ramparts shattered under the barrage of bronze cannon, the largest the world had ever seen. The smallest of the sultan's 67 guns fired a 200-pound stone shot. The biggest, three feet in bore, hurled a 1,200-pound ball. Sixty oxen were needed to draw it from Edirne, preceded by road and bridge builders and flanked by 10,000 cavalry. Fortunately for the defenders, the Basilica, as Mehmed

called it, took so long to clean and load that it could fire only seven times a day.

Filling breaches in the ramparts by night, the defenders beat back assault after assault. Turkish sappers were countermined and slaughtered underground. When four ships made it through the Turkish gantlet into port, the furious sultan gave his admiral a hundred lashes.

Seven weeks: Still the city held. Advisers urged Mehmed to raise the siege.

Give up his dream? Never! The impetuous sultan would press the siege to victory.

If he could get a flotilla inside the Golden Horn, the Byzantines would have to thin out to defend that side too. His engineers built a log slipway over the hill between the Bosphorus and the Golden Horn. Brute force—man and beast bending to the ropes—inched some 70 ships over the crest.

Dismaying sight! Descending to the Golden Horn, canvas bellying to the breeze, were "ships sailing over the land!"

IT IS MAY 28. For the last time the setting sun glints on the cross atop Hagia Sophia. This evening, as on all others, the tireless Constantine attends holy services and checks the guards on the walls, though his courtiers have begged him to flee. Day by day anxious eyes have scanned the horizon for relief that does not come. Now the city is one, the thin line of soldiers determined to sell their lives dearly.

For several evenings the Turkish lines have blazed from the Sea of Marmara to the Golden Horn, the din of trumpets, drums, shouts driving a deep wedge of terror into the night. Tonight, in sultry air, the lines fall ominously silent.

Two hours after midnight men on the wall hear a rustle: the Turks moving 2,000 scaling ladders into the moat and up to the walls.

Flames roaring from cannon mouths signal the attack. Batteries concentrate on St. Romanos Gate. Here the emperor takes the point of greatest danger beside the Genoese captain, Giustiniani (Italian for Justinian), whose 700 men have fought valiantly.

Turkish archers, musketeers, slingers rain deadly fire on the parapets. Turks swarm up the ladders, but are hurled back. Heavy infantry attack through breaches pounded by the cannon. Defenders repel

them. Mehmed commits his elite Janisaries. Hand-to-hand battle seesaws.

Then, Turks discover a lightly guarded sally port in the moat. They pour through. "The Turk is in the city!" The emperor turns to meet the new threat. As night fades, he falls, hidden as bodies heap up around his.

Dawn reveals a lurid sight: streets crimson with blood as Turkish soldiers race through the city, slaughtering, sacking. Screams split the air as they drag women and children from hiding places in looted homes. They topple altars, seize golden chalices. They force open the massive bronze portals of Hagia Sophia and burst in upon the last Christian service ever held in Justinian's great church.

At midday, Mehmed, whom history will call the Conqueror, rides into the city on his white horse. The chronicler Kritovoulos reports that the sultan shed tears of compassion: "What a city we have given over to plunder and destruction!"

It is Tuesday, May 29, 1453. Don't ever ask a Greek to embark on an important project on a Tuesday. That's the unlucky day his city fell to the Turk.

CATASTROPHICALLY, the Byzantine Empire was no more. Zealots of Islam removed the cross from atop Hagia Sophia, and soon the muezzin's chant rang from minarets rising by the Bosphorus. But Byzantium lived on.

Priding himself as a new Constantine sitting on the throne of the Caesars, Mehmed the Conqueror repopulated his new capital and restaffed its bureaucracy partly with Greeks and Serbs. In his court, influenced by Persian as well as Byzantine traditions, he became an aloof autocrat surrounded by elaborate ceremony.

The once migratory Ottomans, now based on Constantine's city, proceeded to conquer a mosaic of nations similar in extent to Justinian's empire. The Ottoman Empire let its Orthodox subjects keep their Christian religion and Greco-Roman laws—so long as they paid tribute, kept their churches inconspicuous so as not to offend Islamic eyes, and furnished levies for its armies and administration. This tithe in humans periodically took the strongest, most intelligent Christian Balkan boys, aged eight to fifteen,

converted them to Islam, and drafted them into the elite army corps, the Janissaries, or trained them as court functionaries.

The conquerors emulated Hagia Sophia in their great single-domed shrines, such as Istanbul's Blue Mosque, built over and using materials from the Great Palace. Greeks became prominent in trade, seafaring, banking, and medicine; Greek and Serbian initially served alongside Turkish as the languages of the chancery; and the Turks, who had long used Byzantine currency in foreign exchange, minted their own gold coins two decades after the conquest.

"When we Turks came off the steppes, we were nomads with little culture," Dr. Nezih Firath, then director of Istanbul's Museum of Archaeology, told me. "It was natural to adopt some Byzantine ways. Our forebears had no ovens for making bread—only portable iron griddles for unleavened flat cakes. Hence the Turkish word for oven comes from the Greek." The Turkish *han* replaced the Byzantine caravansary, and the

famed Turkish bath, the Byzantine bath.

Daily life in Nicaea or Philadelphia (Turkish İznik and Alasehir) only two generations ago differed little from Byzantine times. "Byzantine continuity is not a popular idea in Turkey," said Dr. Firath, looking me squarely in the eye, "but it is the truth."

To create a modern Turkish state, Mustafa Kemal (Atatürk) turned his back on cosmopolitan Constantinople and made his capital at Ankara in the heart of Anatolia (though, ironically, the national flag bore the crescent-and-star device first stamped on coins of ancient Greek Byzantium). In 1922, during an abortive Greek attempt to reconquer Ionia, considered a "cradle of the Hellenic civilization," came a violent break with the Byzantine past.

In that fateful year Atatürk's army hurled the invaders back into the sea amid the wreckage of 3,000 years of Greek settlement in Asia Minor. This rout triggered a mass exodus from Turkey. A 23-year-old correspondent for the *Toronto Daily Star*, Ernest



Martyred by Tatar invaders in 1330, a humble Greek tradesman from Trebizond wins sainthood as St. John the New and becomes Moldavia's patron. This scene of his death appears in silver on a panel of his coffin, a treasure in an Orthodox church at Suceava, Romania.





Soul of medieval Russia haunts Zagorsk, burial place of Tsar Boris Godunov and a favorite setting for Russian film epics. Founded in the 14th century, the walled monastic compound of a dozen churches harks back to an age when Russian rulers began to call themselves "tsar" for Caesar, convinced they were heirs to the Byzantine Empire. The Bolshevik Revolution shattered those dreams in 1917 and nearly destroyed Russia's Orthodox Church. Today Zagorsk's theological seminary, where neophytes sing at evensong (left), is one of the last schools to train priests.

Christianity took root in the Ukraine when Vladimir, Prince of Kiev, sent his envoys shopping for a religion. Impressed by Byzantine liturgy, in 988 he chose the Orthodox faith over Islam, Judaism, and the Roman Church.

Hemingway, described a silent, ghastly procession: "Twenty miles of carts . . . with exhausted, staggering men, women and children . . . walking blindly along in the rain" as the Christians of eastern Thrace jammed the roads toward Macedonia.

NEAR the Byzantine walls of Thessalonica, which threw back waves of medieval Slavs, nestles the Byzantine Church of St. David. Lamp flicker animated a beardless fifth-century mosaic Christ and caressed the deep-etched face of a woman. She told me of the tragic exchange of populations—one and a quarter million Greeks from Turkey, 400,000 Turks from Greece. Her gnarled hands clasped and unclasped, tears ran down her cheeks as she recalled her family's being wrenched, when she was 14, from their village near Ankara, and dying one by one of malaria in a refugee camp in a Macedonian swamp.

I had visited a village like hers near Konya (Byzantine Iconium) in Anatolia, its Greek Orthodox church padlocked, the screened women's balconies empty, the ornate iconostasis gaping eyeless, stripped of icons.

I had climbed a spectacular mountain gorge behind walled Trebizond, the last Byzantine city to fall—in 1461, eight years after Constantinople. Ancient Trebizond, where Xenophon's 10,000 Greek soldiers exulted to reach the Black Sea. Fabled Trebizond, where caravans brought riches of Persia and China, and monarchs sought the beauty of its Byzantine princesses. Noonday Trebizond, where phalanxes of schoolchildren in black smocks pour out onto cobbled streets teeming with colorfully garbed women and turbaned merchants hawking fish, hot chestnuts, and fruit.

Eight hundred feet over a foaming mountain stream I had climbed to a great monastery that seemed to cling to the towering rock wall by faith alone. Founded even before the age of Justinian, Soumela in the later Middle Ages was one of the richest monastic establishments in the East. I found it gutted, blackened by fire. Since 1923 no chant of Greek liturgy has sounded in that solitude, as it still does in the western mountains and valleys of Cyprus, where achingly empty Turkish villages tell of another more recent transfer of populations. These have lessened

the danger from fifth columns but have done nothing to allay the hatred that has poisoned relations between Greek and Turk.

There on Cyprus I saw barbed wire and military checkpoints in the divided capital city of Nicosia, and white-painted UN tanks patrolling the advance lines of the Turkish Army, which had invaded in response to a Greek overthrow of the island republic. This 1974 coup brought to mind the *Megali Idea*—the Great Idea—that fired the Greek imagination for generations: reconquest of Constantinople and the Byzantine Empire.

“FOR GREEKS there is only one city. *The City*—Constantinople,” the widow of a Greek Army officer told me in Thessalonica. “Even the Turkish

name ‘Istanbul’ comes from the Greek *eis ten polin*—to the city.” Her sentiments echoed 19th-century patriots: “Our capital is Constantinople. Our national temple is Hagia Sophia, for 900 years the glory of Christendom. The Patriarch of Constantinople is our spiritual leader.” In cherished legend a priest bearing the chalice, interrupted in the last liturgy in Hagia Sophia, will emerge to complete the service when the shrine is again Christian.

The Greek dream, however, collided with Balkan dreams of imperial glory. The sultan fanned endemic hatreds by classing all his Orthodox subjects—whether Serb or Bulgar, Greek or Albanian or Romanian—as the *Rum Milleti*, the Roman people, and putting them under the civil as well as



A stubborn faith continues to fill Soviet churches despite deterrence by a government that has converted many

churches into museums with antireligious themes. A young Muscovite is christened (above)

ecclesiastical control of the Greek Patriarch of Constantinople. Patriarchs adopted the eagle symbol, ceremonies, dress, and functions of a Byzantine emperor and set their Greek bishops to hellenizing the proud Balkan peoples.

In the 1820s Greece rose against the Ottoman overlord; in 1830 it was the first Balkan nation to break free. But many more Greeks lived outside the new kingdom than in it. With *enosis*—union—with Greece the battle cry, the modern map of Greece was assembled piece by piece, escalating the hatred of her neighbors, who watched with cannibal eyes and devoured one another in two Balkan Wars.

Then Sarajevo . . . 1914. Today it is a market city tucked amid the stern Bosnian

mountains of Yugoslavia, where minarets of nearly 80 mosques thrust like rockets above Orthodox and Catholic churches, and men in fezzes and women in veils and baggy trousers thread a booth-lined bazaar. Near this crossroad of cultures Emperor Theodosius the Great in 395 ran the line dividing the unwieldy Roman Empire administratively into East and West. Here, by the embanked Miljacka River, a pistol shot split the world when a Serbian student assassinated the heir to the Austro-Hungarian Empire, which had annexed lands once Serbian. Austria, backed by Germany, determined to crush Serbia. "Holy Russia" came to the aid of her Slavic Orthodox brother. And interlocking alliances swept Europe's nations into a war that claimed ten million lives.

Greece, entering that holocaust with the prospect of Turkish territory, at war's end occupied ancient Smyrna (today palm-shaded İzmir ringing its spacious Aegean harbor). Then, with defeated Turkey in revolt and the sultanate toppling, the Greeks saw their big chance. But their invasion deep into Asia Minor, hurled back, perished in the carnage of Smyrna and the mass exodus that ensued.

IN ISTANBUL'S Rum Patrikhanesi, a garden of peace amid the city's clamor and squalor, stands the 18th-century terra-cotta basilica of St. George and the modest residence and offices of the spiritual leader of the Orthodox faithful throughout the world. His All Holiness, Dimitrios, "by the Grace of God, Archbishop of Constantinople, New Rome, and Ecumenical Patriarch," rose from his desk and took my hand warmly in both of his.

The patriarch told me he sees as his role the promotion of understanding and harmony among "sister" Orthodox Churches. Many separated from Constantinople's fold when their nations broke free of the Turks.

More than 70 percent of the baptized Orthodox today dwell in Communist countries. Churches in exile abound. The national churches of Serbia, Bulgaria, Romania, and Russia are autocephalous (self-headed), with their own patriarchs. But the Ecumenical Patriarch is *primus inter pares*—first among equals—and his spiritual sway extends far beyond the confines of



GEORGIAN ENAMEL, CA. 1100; RIVY MUSEUM

in honor of St. Dimitry (above), guardian of Thessalonica, long Byzantium's second most important city.

his church in Istanbul, which he heads as a Turkish citizen.

With a dwindling flock, stripped of the last vestige of civil authority, even forbidden to proselytize in his few Turkish parishes, why does he remain in a Muslim city? The Archbishop of Constantinople became head of the Byzantine Church because of his special position at the capital of the empire, he said. He is bound to this historic see.

On my way out I paused by the patriarchate's central gate, painted black and welded shut. Here a patriarch was hanged for treason when the War of Greek Independence broke out in 1821. As I stepped into the teeming streets where a priest is forbidden to wear his clerical garb, I thought back on the fallen glories of Byzantium's great church, still claiming universal dominion, still clinging in the City of Constantine.

GOD HAD PUNISHED the Greeks, Russians piously observed in 1453 when the Turks took Constantinople. For betraying their faith by submitting to Rome, He withdrew His protection, and their empire fell. Now Moscow moved from the periphery to the center of the Orthodox world, shining in the purity of her faith. "Two Romes have fallen. A third stands fast. A fourth there cannot be," ran the monkly prophecy.

Rising from medieval isolation in Russia's forested northern plains, Muscovy shook off the Mongol yoke that had crushed Kiev, overcame Novgorod and other fur-trading rivals, and pushed back Catholic Lithuanians and Poles. Ringed by enemies of her faith, xenophobic Moscow raised onion-domed churches and monasteries in forest clearings all the way to the inhospitable shores of the White Sea and fiercely clung to traditional rites.

Ivan the Great married Sophia Paleologus, niece of the last Byzantine emperor, adopted the Byzantine double-headed eagle and the title of tsar, derived from Caesar. Holy Russia became one great religious house, ever purging herself. Military campaigns became crusades. The court banqueted to sacred readings. In homes the father took on the abbot's role, wielding absolute power over wife, child, servant, and serf. With the clanging of Moscow's 5,000

church bells in their ears, visitors commented on fasts, church discipline, and seven-hour standing services "severe enough to turn children's hair gray."

Dogma and ritual from Byzantium fossilized in spiritual isolation and distrust of inquiry; so did the political and social structure rigidify, with sacred and temporal power vested in the tsar, supported by a subservient church. Inheriting the Byzantine conviction of her destiny to rule, and suspicious of the heretical and corrupt West, Russia grew to a giant with Orthodoxy in her veins, whether she worshiped at the shrines of the Mother of God or Marx. She knew no middle ground between autocracy and anarchy.

The tsars are gone; the Revolution of 1917 homogenized Russian society. But even the "new" Russian, embracing a Western ideology and Western technology, cannot escape his Byzantine roots. Ubiquitous party leaders' portraits are the icons of today. And the living iconostasis of officials at a review of armaments in Red Square is as precisely ordered as the ranks of saints flanking the image of Christ in Zagorsk's cathedral.

"There can be no change. It is a terrible thing. The program is the idol. If one link in the chain is broken, we will not be able to grasp the end." As he said this, shock showed on the face of the young *Novosti Press* agent with whom I would travel thousands of miles in the Soviet Union.

Involved was not the writ of God, but an itinerary prepared by bureaucrats. Yet the suggestion that it be altered to my objectives stirred the same visceral response that impelled thousands of Old Believers to choose death rather than change.

Since claiming the Byzantine birthright, Russia has looked possessively, obsessively south. In the 1770s she wrested from the Turks that ancient Byzantine frontier land, the Crimea. A treaty empowered her to build and protect a church in Istanbul. She interpreted this as a protectorate over the Balkan Orthodox, many of whom saw Holy Russia as a savior. Russian Pan-Slavism influenced Russian expansionism in the push toward the Mediterranean.

"Economic and political motives figure as well," Soviet scholars told me in Moscow. "But yes, there *was* a Russian crusade to put the cross back on top of Hagia Sophia."

Like the Greeks, Catherine the Great had her own Great Idea—a restored Byzantine Empire in the Balkans, to be ruled from a reconquered Constantinople by her grandson Constantine. She even hired John Paul Jones, unemployed naval hero, to command a Russian flotilla fighting in that cause in the Black Sea. Ironically, Russia came within a hairbreadth of gaining Constantinople and the Straits in World War I. The Allies promised them to her upon Turkey's defeat. Then her revolution knocked Russia out of the war, scuttling that prospect.

Neither Britain nor France had wanted Russia in the Mediterranean. Six decades earlier, both had supported Turkey against Russia in the Crimean War, which put Tennyson's stirring "into the valley of Death rode the six hundred" on every tongue.

While in the Crimea I sought Soviet permission to visit that valley where the Light Brigade, those cavalymen who were unquestioningly but to do and die, had charged. But I was not allowed to go. Nor was I told the reason why.

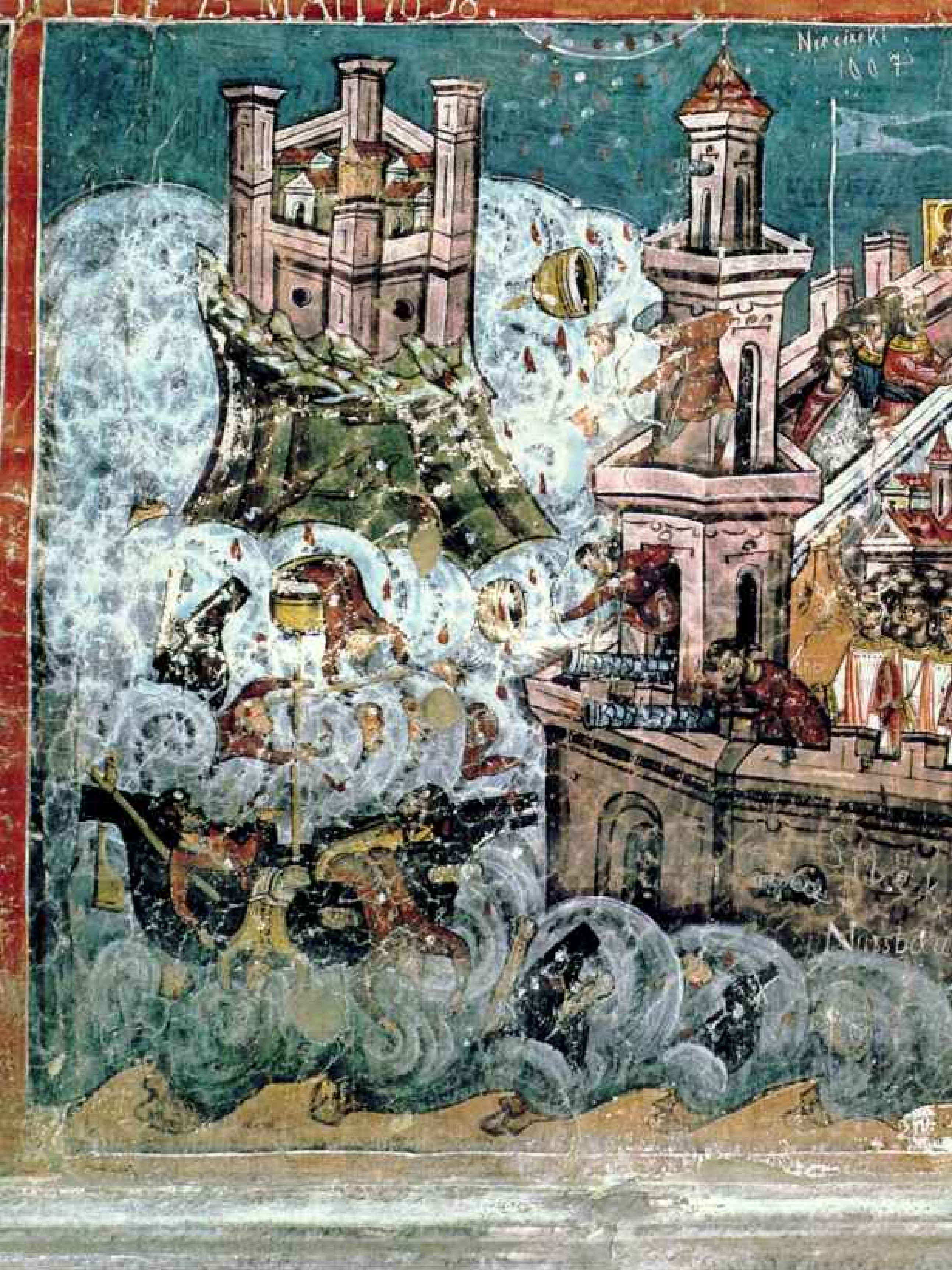
"The Crimean War really began in Bethlehem," Yosef Uziely, then treasurer of Jerusalem, told me on the garden terrace of his home near the Israel Museum. The Ottomans, he said, had trouble keeping peace among Christian sects, who bloodied the shrines with their strife. In 1853 Russia's dispute with France over guardianship of Holy Land shrines came to a head. The Russians based their claims on the Byzantine establishment of these shrines; the French, on their reconquest by Latin crusaders.

Riot broke out in Bethlehem's Church of the Nativity. Several Orthodox monks were killed. Tsar Nicholas, accusing the Turkish police of complicity, reasserted his claim that he was protector of the sultan's Orthodox Christian subjects, invaded Turkey's Danubian provinces, ordered his ships to sea, and sank a Turkish fleet in port. The specter of Russia cutting the England-to-India lifeline soon brought Britain into the war, a war which ended 17 months later with the fall of Sevastopol.

"Now it's Russian against Russian in



A stitch in time, of gold and silver thread, helps restore a 15th-century embroidery of Christ and the Virgin in a textile restoration laboratory of the art museum in Bucharest, Romania. Such luxury goods were often the exclusive monopoly of imperial workshops, which during Justinian's time employed thousands of craftsmen.



Day of wrath for Eastern Christendom, depicted on a Romanian fresco, came on May 29, 1453, when Constantinople fell after a seven-week siege by Mehmed II and



100,000 Ottoman troops. Manned by 8,000 defenders, the walls proved invincible to the largest cannon the world had yet seen—until a lightly guarded portal offered a way in.



NATIONAL GEOGRAPHIC PHOTOGRAPHER JONI COBB (RIGHT)

The True Cross of Christ, held by St. Helena and her son Constantine, adorns a Cappadocian fresco (above). According to legend, Helena—first famous Christian pilgrim to the Holy Land—not only found the Cross, but also the tomb of Christ. Her son ordered a magnificent building raised above the Resurrection site; parts are incorporated in the present-day Church of the Holy Sepulchre (facing page, foreground) in Jerusalem's Old City. The Dome of the Rock, background, marks the traditional site of Muhammad's ascension to heaven.

Constantine's dream of a universal church would not survive the Orthodox split with Rome in 1054. But all Christendom, a quarter of mankind, owes his empire an enduring debt for its spiritual and civic legacy.

Jerusalem," Mr. Uziely went on. "The Soviets against the émigré Russians. They've been battling in Israeli courts for years. At stake are millions of dollars of ecclesiastical properties in Israel."

In 1948 the new State of Israel, desperate for diplomatic recognition, acceded to the Soviet demand that all Russian religious holdings in Israel be turned over to its Orthodox Church in Moscow—despite their belonging to the Russian Orthodox Church Outside of Russia, now headquartered in New York City. The crowning irony: After the Six Day War in 1967, the Soviet Union severed relations with Israel.

IT IS THE EVE of Easter in Jerusalem—Easter by the Orthodox calendar. From early morning, pilgrims have filled the Church of the Holy Sepulchre for the ceremony of the holy fire, to me the most exalting ritual of the Eastern churches.

Squeezed against a parapet amid that press of humanity, I watch black-clad women kneel to spread oil on the Stone of Unc-tion, said to be the slab on which the body of Jesus was anointed, and press their weeping faces against it.

The thump of maces and rhythmic clapping and chanting draw my eyes to phalanxes of the faithful slowly moving around Christ's tomb in the center of the rotunda. In the banners and gleaming vestments I see Byzantium pass in review: skull-capped Syrians, Armenians in pointed hoods, turbaned Copts of Alexandria, Greek Orthodox in cylindrical hats and robes of gold and crimson and black.

Thrice circling the tomb in solemn procession, the Greek Orthodox Patriarch of Jerusalem pauses at its entry. He steps inside. The clamor in the rotunda fades to silence. The church is dark, the tension electric.

Suddenly, I see a lighted taper thrust from the tomb—the holy fire, symbolizing Christ rising from the dead. Flames leap from taper to taper until the darkness is punctured by a thousand fiery holes. Tower bells thunder, shaking the very walls. Cries rise in a multitude of throats as the splintered churches of Byzantium coalesce into a single mass of believers celebrating the Resurrection.

"He is risen!" Through faith in this miracle Byzantium lives. □



Eternal Easter

By MARIA NICOLAIDIS-KARANIKOLAS



in a Greek Village

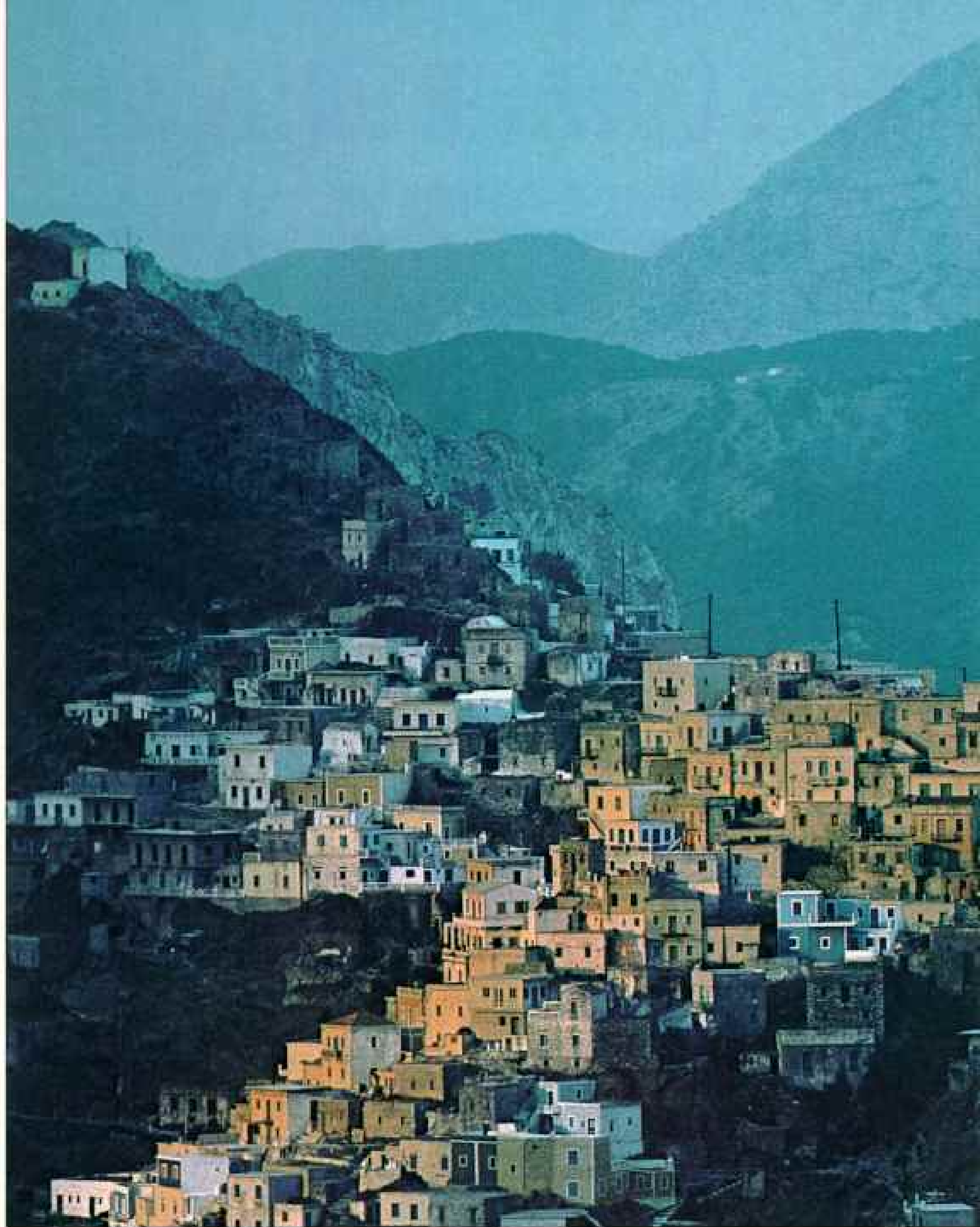
Photographs by JAMES L. STANFIELD NATIONAL GEOGRAPHIC PHOTOGRAPHER



WE celebrate Easter in Ólimbos, the Greek village where I was born, just as they did in the time of the Byzantines. I have heard this said ever since I was a little girl. The procession that takes place on the Tuesday after Easter (left) is one of our older traditions. To honor the dead and celebrate the Resurrection of Christ, we carry icons from the main Orthodox church to the cemetery, where our priest says a prayer over each grave. Then we take the icons into the fields to pray at small private chapels—to ensure good crops, some old people say. An auction is held when we return to the village, and the highest bidders carry the icons back into the church. After that there is a big dance.

Easter has always been the happiest season in our village. The stark mountains on the island of Kárpáthos turn green again, and everyone begins to feel springtime inside themselves. There are so many things to do to prepare for the holiday, and when it begins, one ceremony follows another.

Yet this Easter was to be especially happy for me, because it was my first back home since my husband and I left for the United States ten years before. A few things have changed in the village since my departure. But many old Easter customs are still followed just as they were centuries ago by my Byzantine ancestors.

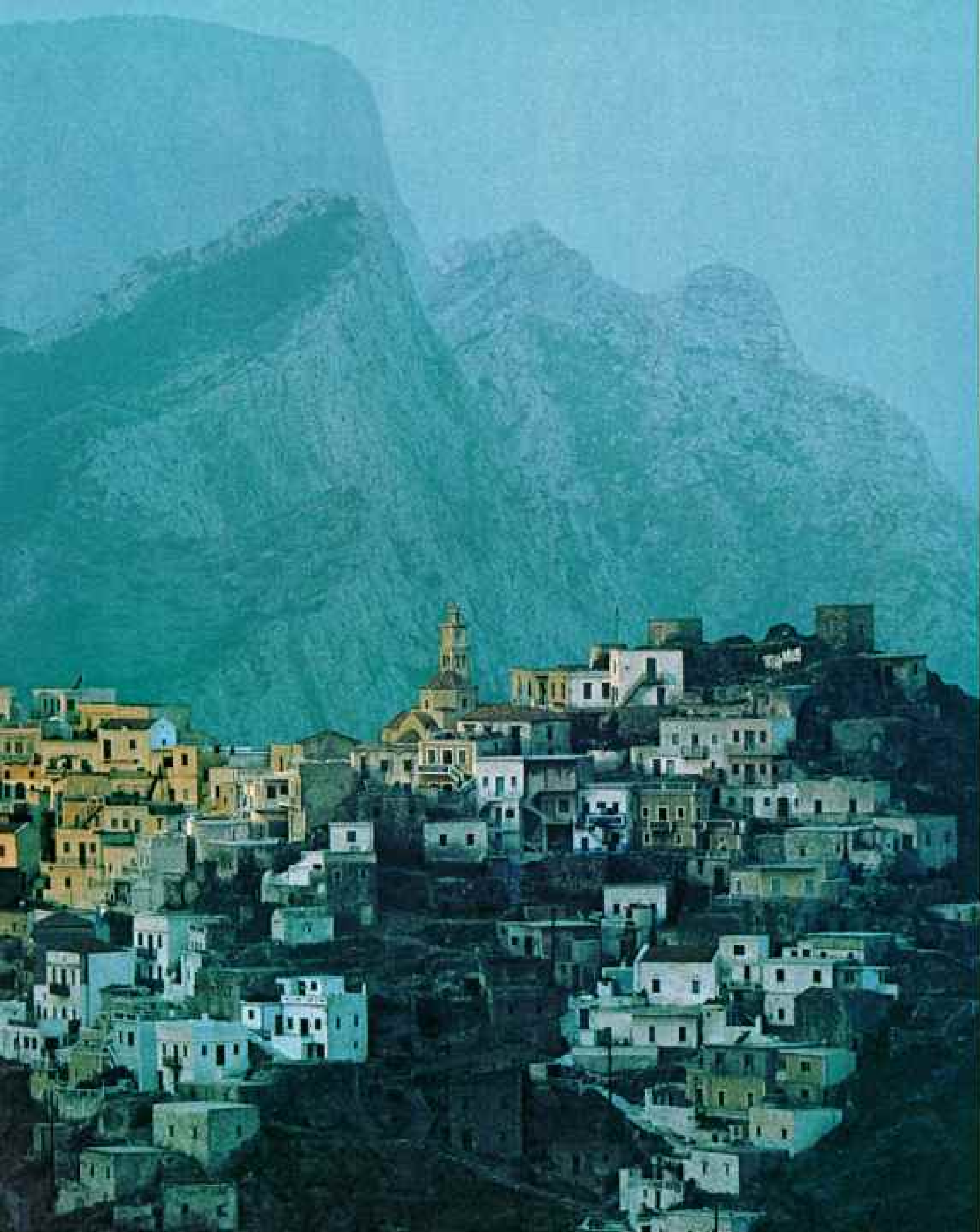


PERCHED on a mountain in the northern part of Kárpathos, an island between Crete and Rhodes, Ólimbos is still one of the most isolated villages in Greece. The dialect that

we speak is so old that many of our words date back to the time of Homer. The tools used by village farmers to cultivate wheat and barley on the terraced slopes are the same as those used in

Byzantine days. Our instruments are time-honored—a goatskin bagpipe, lute, and three-stringed lyre—and our musical couplets are renowned on the island.

Ólimbos was first built



down by the sea on a beautiful natural harbor. But pirate attacks forced the people to move up onto the mountain in the ninth century A.D. Until recently there was no road connecting Ólimbos to the other 11

villages on Kárpathos. And there is still only one telephone for the 600 residents.

Yet these are the things that make Ólimbos unique, and we are very proud of our heritage.

Village From the Past





TO GET READY for the festivities, some men of the village have their hair trimmed in a street (*above*) outside the main coffeehouse.

Homes have been whitewashed and doors freshly painted in anticipation of the holiday.

The women of Ólimbos bake special breads at

Easter time in large outdoor ovens (*right*) that are shared by several neighborhoods: round loaves, called *koulouria*, and fancifully shaped and more ornate



ones, called *pouloi*. They often enclose eggs dyed different colors, red being most common because it signifies the blood of Christ on the Cross. These old

ovens are also used to roast the lambs or goats for the Easter dinner.

Most women of the village still prefer traditional dress, though the men and

some of the young people wear the clothes of modern Greece. Our long-sleeved dresses, black scarves, and colorful aprons are everyday links to a distant past.



GRIEF POURS forth on Good Friday as women cry for members of their families who have died during the year. Pictures of their loved ones have been placed on a bier decorated with flowers, which represents the tomb of Christ (*above*). And now, after a formal church service where they had mourned Christ's death, they show pain for their own loss.

The mood of the whole village lifts on Saturday as

everything is made ready for the celebration of the Resurrection. The highest moment comes late that night after all the lights in the church are put out to symbolize the darkness of the world.

At the stroke of midnight, white-bearded Father Timotheos Hatzipapas (*right*) steps from the Royal Doors of the sanctuary carrying a lighted candle. Then he chants, "Come forth and receive light from the unwaning light

and glorify Christ, who is risen from the dead."

Parishioners come forward with a new white candle to receive this holy light, which we later take home. We consider it good luck if the candle stays lighted all the way home.

Children set off firecrackers when the service is over. Once home, all sit down at table to break the Lenten fast with a late supper of soup, salad, sour cream, cheese, and wine.

We dwell in joy.





PREPARING the Easter meal for her family, Irini Diakogeorgiou (*left*) shows her daughter, Marina, how to stuff a baby goat. At our home my mother hands me some lace as my daughter, Arhontoula (*below*), gets help from my cousin and sister-in-law, both named Maria, with a *kolaina*, a necklace of gold coins passed down by the women of my family. Just before Easter dinner we tap eggs together (*right*). The person whose egg lasts longest without cracking will have good luck. As for me, I could not wish for more than to be with my family again at Easter time. □





WILD LAUNCH

Honoring the bicentennial of the first manned balloon flight, 19 gas balloons representing nine countries prepare to take off from Paris's Place de



OF AN ILL-FATED RACE

la Concorde in the face of a violent thunderstorm last June 26. First to launch, the translucent polyethylene balloon manned by

Americans Maxie Anderson and Don Ida lifts off at far left on a flight that would end tragically the next day in West Germany.

DAVID BURNETT

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THE MIRACLE of manned flight was achieved for the first time on November 21, 1783, near Paris's Bois de Boulogne (*below*). On that date two young Frenchmen, Jean François Pilâtre de Rozier and François Laurent, Marquis d'Arlandes, made a 25-minute flight in a hot-air balloon designed by the Montgolfier brothers, Joseph and Étienne. A later flight inspired one onlooker to declare that man at last had solved the riddle of eternal life. In fact, many were to die in the development of hot-air and gas balloons.

This year in celebration of ballooning's bicentennial, the French Air Museum commissioned the construction of a replica of the Montgolfier balloon (*facing page*) with an envelope fashioned of coated nylon in place of the original paper-and-linen fabric. The



COURTESY BALDARCHEV FREIZEBISCHER KULTURBEREIT, BERLIN (ABOVE); ALAIN GUILLOT (FACING PAGE)

Montgolfier balloon was designed with an open gallery around the base as a platform for the pilots—a feature abandoned in favor of the suspended gondola.

For all their engineering genius the Montgolfier brothers originally believed that smoke, not hot air, provided the lifting element for their balloon. They chose such smoke-producing fuels as rotten meat, old shoes, and wet straw for their early flights.

Seen here soaring above the 984-foot spire of the Eiffel Tower beside the River Seine, the Montgolfier replica rides cloudless skies on a light summer breeze. Balloonists at the Place de la Concorde five days later were less

fortunate. They had gathered to compete in an event sponsored by the Aero Club of France combining two races—one honoring the U. S. publisher and balloon enthusiast James Gordon Bennett, the other commemorating the French inventors of the manned gas balloon, Professor Jacques Charles and assistants Jean and Nicolas Robert.

As an estimated crowd of 300,000 gathered in the square for lift-off, gusting winds and threatening clouds delayed the launch. "It was the worst launch weather I've seen in 30 years," recalls one veteran balloonist.

In an effort to avoid the oncoming storm, pilots Anderson and Ida launched in midafternoon, followed by fellow American Cynthia Shields and a German/Canadian entry, *Augsburg*. Within minutes Anderson radioed to the race control center: "We're being sucked up in this weather—I'd advise no further launchings until conditions improve."

The remaining 16 balloons battened down as the storm struck the launch site. Rain fell in torrents, lightning arced nearby, and winds up to 35 miles an hour tore at anchor ropes. Gas envelopes slammed together, releasing precious helium.

Within an hour and a half the storm passed, and the 16 balloons lifted off in turn, but prospects for the race were dim. With a 1,500-foot cloud ceiling the balloons flew at low altitude, some with dramatic results. Shortly after launch a Dutch pilot flew so low he nearly collided with the Paris Opera building and was obliged to land soon after. In a memorable gesture race officials awarded the pilot a free season ticket for this winter's performances.

Fewer than half the balloonists chose to fly at night. Most, including Shields, landed before dark to the north and east of Paris. Those who remained aloft included the Americans Anderson and Ida and the Polish team. By next afternoon tragic news arrived: Anderson and Ida had died in a landing accident near Bad Kissingen, West Germany.

Last to launch and last to land, the Polish team won the Gordon Bennett race with a flight of 428 miles, from Paris to a point near the Czech border. The U. S.'s *Rosie O'Grady's Flying Circus* came second, with a flight of 326 miles.







BERNARD BANSCHNET/QUILLON (LEFT); JAMES A. SUGAR, BLACK STAR

SINGING IN THE RAIN, a pair of young enthusiasts (*left*) ignore the storm sweeping over tethered balloons at the launch site in Place de la Concorde. Entries in the Gordon Bennett race were official representatives of their respective countries. Those in the Charles and Robert race—including pilots Shields, Anderson, and Ida—participated privately.

Sodden members of the British team (*above*, from left) Nicholas Bosanquet and Glen Allan wait it out in their gondola.

Veteran balloon pilot Joseph Kittinger (*below*), a retired Air Force colonel, makes a last-minute rigging check on *Rosie O'Grady's Flying Circus*. Kittinger still holds the world's high-altitude parachute jump record—a leap of 102,800 feet in 1960.





Panorama of Paris unfolds beneath the balloon Augsburg during a



JEAN-CLAUDE CONTRASSAC/SHILLON

break in the storm. Spires of Sacré Coeur crown Montmartre at right.



AERIAL PARADE follows clearing skies (left) as officials give permission to re-new launching. Balloons positioned farthest downwind go first to avoid collisions with neighbors. In this view looking northward past the Obelisk of Luxor, *Olympus* rises ahead of the French Post Office balloon, *Megève*, poised for takeoff. Last in line, *Polonez* and *Rosie O'Grady's Flying Circus* suffer no penalty, since the only objective is distance.

The event attracted balloonists from all over the world, including multiple teams from West Germany and the U. S., and one from as far away as Japan. It was "the Olympics of ballooning," one pilot put it.

Young French Scouts volunteer helping hands beside the American balloon *Old Glory* as crews make final adjustments in ballast, mostly sand, packaged in bags



PETER TURNLEY (REUTERS)



BLAIN SULLOU (LEFT); JAMES A. SHERR (ABOVE AND RIGHT)

for controlled jettisoning.

Partially inflated balloons (above) swell with helium pumped in through flexible hoses. European balloonists, accustomed to the use of dangerous hydrogen, welcomed supplies of the safer gas.

Clutching her pet, a Parisienne (right) greets lift-off with an "Oo-la-la!" * * *







NATIONAL GEOGRAPHIC PHOTOGRAPHER OTIS IMBODEN (RIGHT), OTIS IMBODEN AND JOE STANCAK/PHOTO LAB/VEY



The Fantastic Flight of *Cote d'Or*

By CYNTHIA SHIELDS

TO GO OR NOT TO GO? The storm decided it. Dark clouds and gusting winds threatened to close the launch site. The balloon ahead of me, Maxie Anderson and Don Ida's *Viking Maru*, had already taken off; the one behind, *Augsburg*, was eager to be gone. Above me my own balloon, *Cote d'Or*, strained at the ropes like Pegasus at the bit. It was now or never. Reassuring my crew with one final glance, I gave the order: "Launch!"

As if in answer, there was a violent crack of lightning and peal of thunder. But suddenly we were airborne—copilot Rien Jurg, National Geographic photographer Otis Imboden, and I (**above**)—climbing gently above the Place de la Concorde (**left**) and releasing ballast as we went in order to gain altitude. As we cleared the roof terrace of the Hôtel de Crillon, I saw a flash of familiar



faces gathered around the tables below, and I thought, "Have some sand in your tea, dears."

A quick glance behind told me that *Augsburg* had lifted off, though a momentary downdraft swept the balloon perilously close to the ground. While Maxie's radio warning against further launchings came within moments, *Cote d'Or* was already airborne, and there was nothing to do then but

fly the race. Such a decision is irrevocable.

Mechanically, I assessed our situation—16 bags of sand ballast—not enough to risk a night flight in such unstable conditions, knowing from experience that updrafts and downdrafts consume ballast. Our air-to-ground radio did not function properly, and I could only think of the concern reflected in the eyes of my crew as we made our dramatic takeoff.



JACQUE MERVILLE (LEFT); OTIS UNBODEN

A canopy of darkness shrouded Paris (*above*) as *Cote d'Or* skimmed east of the Seine just ahead of the storm. From our gondola the balloon *Augsburg*, having launched immediately behind *Cote d'Or*, appeared half enveloped by clouds, far right, only shortly before beginning its descent and landing just outside Paris.

Ballasting carefully, we stayed beneath the overcast, with the great Parisian plain

spread out before us. Only one major obstacle loomed ahead, the massive 40-story column of Tour Pleyel, a modern skyscraper, center foreground. But it was well below us, and we seemed headed to the left of it. Then a sudden downdraft caught us, dropped us a hundred feet or more, and aimed us directly at the building (*facing page*).

"No more ballasting, everybody down!" I shouted, as *Cote d'Or's* gasbag collided with

the building and our gondola swung inward against the metal-and-concrete facade projecting out from heavy plate windows. And then we were brushing along the side of the building, towing the gondola with three cowering aeronauts inside. I had the curious sensation of a sleepwalker watching her own dream, or rather nightmare.

Had we ballasted just before or during impact, the results might have been fatal. With increased buoyancy the gas envelope could have scraped its way up the concrete face of the building, probably ripping the fabric to shreds and dumping us several hundred feet to the street below. Instead, *Cote d'Or* simply rolled around a corner of the building and spun gracefully away, apparently no worse for wear.

None of us had panicked during the crisis. As we drifted away from the building, Otis surveyed the lines overhead and reported, "Everything seems okay, no problem." Rien's only reaction was a shake of the head and a muttered, "Oh boy, oh boy!"

It was literally our last contact with Paris. Carried northward by the storm, we gradually left the city and then the suburbs behind and came to open country. Soon it would be time to land. There was still plenty of light, so we could carefully pick our own spot, and we chose a small village whose name turned out to be Villiers-Adam.

At 5 p.m. we began our descent, with Otis on the dragrope, me at the release valve, and Rien on the emergency rip line for the gas envelope.

We landed like a feather, drifting across a wheat field at a height of about three feet and touching down at last in what is known among balloonists as a "stand-up" landing (**above**). Stepping out of the gondola, we were met by villagers who had seen the balloon, and moments later by the owners of the field, a farmer and wife named Plisson.

"*Bienvenu*," people in the crowd exclaimed, almost as though they had been expecting us. Someone pulled out a map (**right**) to show us where we were, north of Paris. "Just over there," he said proudly, "lies Nesles-la-Vallée, where the first manned gas balloon landed in 1783. You are most welcome."

It was incredible that we had come so close to landing at the very site that ended



the Charles and Robert flight our race had been planned to honor. I had read that one of the earlier balloon landings had been met by a crowd of suspicious peasants armed with pitchforks. Now, two centuries later, we were greeted with traditional French kindness and hospitality. In return, we later paid Monsieur Plisson for the minor damage we had caused his wheat.

After a toast from the champagne bottle I had brought along, we packed up the balloon. As souvenirs of our visit I presented the Plissons with a toy balloon and one of our remaining bags of ballast.

Then we hurried back to the farmhouse. There was a special event on television—the launching of the bicentennial balloon race from Place de la Concorde! * * *



PHOTO BY OTIS IMBODEN





Suspended beneath a gleaming bubble of helium, Viking Maru soars over Paris

LAST ASCENT OF



JEAN-CLAUDE COYBAISSE/GUILLOU

during the first moments aloft. The towers of Notre Dame rise in the distance.

A HEROIC TEAM



OTIS WOODEN

TYPICALLY, when trouble came, their first thought was of others. Caught in violent updrafts shortly after launch, Maxie Anderson and Don Ida spent precious seconds radioing the ground in an attempt to warn fellow balloonists of the danger. Although two other crews had already launched, the flight director's decision to delay lift-off more than an hour for the remaining 16 balloons may well have saved lives and prevented injuries.

For the two veteran balloonists—Anderson with wife, Patty (*above*), and Ida (*facing page, top*)—the bicentennial race offered the chance to practice for a cherished goal: nonstop circumnavigation of the earth by balloon. Anderson had already flown more than a third of the distance—some 9,000 miles—in three memorable flights. The first, with teammates Ben Abruzzo and Larry Newman, leaped the Atlantic for the first time by balloon, an accomplishment for which the trio was awarded the National Geographic Society's John Oliver La Gorce Medal.*

The second flight, with Anderson's son Kristian, then 23, set another record by crossing North America nonstop.† The third flight, with Don Ida in a balloon christened *Jules Verne*, spanned nearly 3,000 miles, from Luxor, Egypt, to Hansi, India, before a small leak in the gas envelope forced the pair to land just short of a major hurdle, the Himalayas. That was their first attempt at an around-the-world flight.

"In time they would have made it around the world," declares Jim Mitchell, a long-time crew member and friend. "Neither man knew what it meant to quit."

In the race last June, after initially being carried aloft by updrafts, Anderson and Ida flew eastward across France, Luxembourg, and West Germany at altitudes as high as 9,000 feet.

Nearing the East German border on the

*See "Double Eagle II Has Landed!" by Ben L. Abruzzo, with Maxie L. Anderson and Larry Newman, in the December 1978 issue.

†The father-and-son team contributed "Kitty Hawk Floats Across North America," in the August 1980 NATIONAL GEOGRAPHIC.



BERNARD BAUGHNITT/SHUTTERSTOCK (REDUX); JAMES R. SHAN



second afternoon of the race, Anderson and Ida radioed West German authorities that they intended to land near the town of Bad Kissingen, some 350 miles east of Paris. The balloonists had been unable to obtain permission to enter East Germany.

No one witnessed the landing, though a distant observer saw the balloon descend beyond a line of trees, then sighted the gas envelope rising high without the gondola.

Later inspection at the crash site suggested a malfunction in the release mechanism: Instead of separating cleanly at the moment of touchdown, envelope and gondola rose again. At an estimated height of 130 feet, the gondola broke away and plummeted to earth with Anderson and Ida in it. The envelope came to rest in some trees three miles downwind (*left*).

In an interview shortly before launch, Maxie Anderson had contrasted the art of ballooning 200 years ago with the sport as it is practiced today. "We understand it a little bit better now," he said. "I'm not sure we'll fly it any better." □



SAVANNAH TO CHARLESTON
A Good Life in the

By JOHN J. PUTMAN NATIONAL GEOGRAPHIC SENIOR WRITER



Low Country

Photographs by ANNIE GRIFFITHS

Antebellum grandes dames in Charleston's historic district overlook the river harbor of South Carolina's three-century-old port and earliest city. As queens of the Sea Islands coast, both Charleston and Savannah—her slightly younger Georgia sister—preserve the gracious air and look of the Old South while tapping the Sunbelt prosperity of the New.



Spring banners emblazon the banks of Cypress Gardens near Charleston. These waterways once threaded rice fields when plantations sprawled across the Low Country's riverine land and barrier Sea Islands. Indigo and cotton also enriched



an aristocracy of old families in town and country. Bruised and impoverished after the Civil War, Charlestonians never abandoned their city, and they have sailed through the 20th century with traditions, houses, and a select society intact.

THERE ARE many kinds of journeys, but the best are journeys of discovery; the discovery not only of places and people you have not known before but also of forgotten parts of yourself. You cannot foretell such a journey, but sometimes you may be given an inkling. As the plane approached Savannah, I read again the description of the place written by an Englishman in 1733: "Every insect here is stronger than in England. The ants are half an inch long and . . . will bite desperately." There was, another added, "an abundance of torments, as Cock-roaches, Wood-ticks, Sand-flies, Mosketos." A 19th-century visitor wrote that the city looked "as if 30,000 people had gone out . . . into a bowery forest glade, and . . . made summer-houses amidst its flowers and plants," while a visitor in our own century compared it to "a beautiful woman with a dirty face."

I looked out on the city. She appeared as an island, surrounded by great pine forests and salt marshes; the river of the same name swept by her, then sidled like a timber rattler toward the sea, 12 miles away. She was a special city, founded "for settling poor persons of London," and as a refuge for persecuted Protestants of Europe. She was to be a polyglot town, without pretension, without rum, without slaves.

The journey I was to begin there would lead across the river and a hundred miles north, through the Low Country of South Carolina to Charleston. I was to look into recent developments: the restoration of the historic cores of the two cities, so that they have become among the most beautiful in the United States; the development of resorts and retirement communities on the coastal islands; a great surge in tourism; a growing tide of newcomers seeking the Sunbelt; a swelling concentration of the nation's strategic military forces. There was talk of a quickening in this once sleepy region, of change. I wondered. In the South, the present seldom breaks clear of the past.

I had barely settled into a room in one of the city's old houses, close by Chippewa Square, when a lady volunteered: "Let me tell you about Savannah. In Charleston they'll ask, 'What's your family?' In Augusta they'll ask, 'What's your church?' In Savannah they'll ask, 'What's your drink?'" I had

to believe her, for I had arrived just in time for St. Patrick's Day. Savannahians bill their celebration as the second largest in the nation. It may well be.

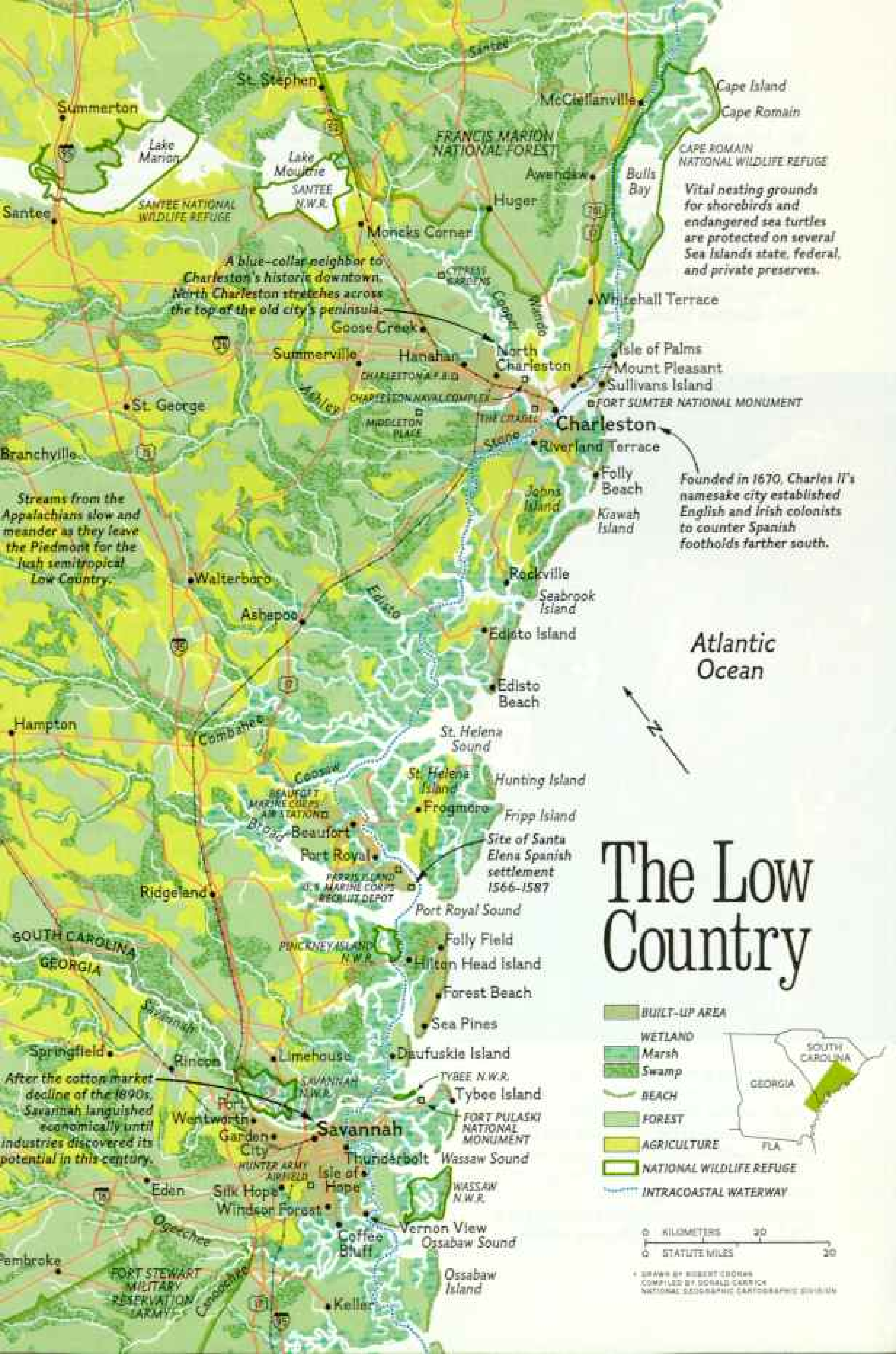
I began the day with Mass at the crowded cathedral; went to an Irish bar, elbow-to-elbow at 9:30 a.m., the jukebox playing "Danny Boy" and "Dixie"; watched the great parade; was escorted to other houses, other parties; was thrust into a tuxedo to end the evening at the annual Hibernian Society dinner—Irish songs, filet mignon Killarney, bourbon. The next day was for rest.

ISAT IN THE SUN in one of the city's squares, amid live oaks and Spanish moss and great explosions of azaleas. How beautiful this city is, I thought. It was as if parts of Dublin or London had been picked up and set down on some subtropical island. The houses were part of it, handsome but not too grand, built in the 1800s on profits from shipping cotton to England. But it was also the plan of the city. Seldom has one man marked a city's face so strongly as James Oglethorpe when he laid out Savannah on Renaissance ideals of balance and proportion. The city was conceived as a series of wards, each with its own square.

The last of the city's 24 squares was built by 1855. These squares distinguish the city, give it repose. Rush down Bull Street on an urgent matter, and by the time you've passed the second square, you begin to wonder about that urgency. Sit in one at evening, as shadows deepen, and the present seems to melt away.

You seem to hear the scratch of a quill pen as one of the colony's first secretaries describes his fellow colonists: "poor unfortunate men, who were render'd incapable of living at home . . . a parcel of poor people." Or the earnest young cleric John Wesley addressing his beloved in a garden: "I am resolved, Miss Sophy, if I marry at all, not to do it till I have been among the Indians." (Miss Sophy wed another; John went back to England and later founded the Methodist Church.) Or the clop of horses as city fathers ride out to surrender their city to General Sherman's forces. "Where resistance is hopeless, it is criminal to make it."

But Savannah almost lost it all: the squares, the houses, the beauty. Savannah's



A blue-collar neighbor to Charleston's historic downtown, North Charleston stretches across the top of the old city's peninsula.

Vital nesting grounds for shorebirds and endangered sea turtles are protected on several Sea Islands state, federal, and private preserves.

Founded in 1670, Charles II's namesake city established English and Irish colonists to counter Spanish footholds farther south.

Streams from the Appalachians slow and meander as they leave the Piedmont for the lush semitropical Low Country.

After the cotton market decline of the 1890s, Savannah languished economically until industries discovered its potential in this century.

The Low Country

- BUILT-UP AREA
- WETLAND
- Marsh
- Swamp
- BEACH
- FOREST
- AGRICULTURE
- NATIONAL WILDLIFE REFUGE
- INTRACOASTAL WATERWAY

0 KILOMETERS 30
0 STATUTE MILES 30

* DRAWN BY ROBERT COOPER
COMPILED BY DONALD GARRICK
NATIONAL GEOGRAPHIC CARTOGRAPHIC DIVISION

economic decline began with the Civil War and lasted a very long time. By the 1950s the central city was largely a shell. Fine houses had become slum tenements or were abandoned, the squares run over, young people gone to the suburbs. Modern-minded developers moved in. The old market was demolished to make way for a parking garage. A fine old house was to be razed to create a parking lot for a funeral home.

A handful of Savannah women, including Mrs. Reuben Clark, now 86, perceived the

danger. "We decided that something had to be done, that we were going to start organizing."

The son of one of them, Leopold Adler II, a young investment broker, went to see a block of row houses slated for demolition. The buyer wanted the Savannah grays, the fine old bricks.

"I went into one house in December 1957," Lee Adler said, "and I looked out over the park and to the cathedral—it was winter and so many trees were bare and you could see some distance—and I thought, my God, we are just absolutely crazy!"

He remembered his years as president of Historic Savannah Foundation, founded in 1955. "We got professional estimates of the tourist potential, a professional inventory of noteworthy buildings—we had 1,100! The only way we could save them was to buy them. We borrowed money, asked people to cosign notes. We established a revolving fund, added a line of credit.

"We bought up huge amounts of property. Since we realized we didn't have the money to restore all these buildings, we had to get other people to do it by getting the property into their hands. We sold about a hundred buildings, and the rest were done by individuals attracted to the idea."

Lee and many others moved on to the Victorian district, built in the late 1800s, a wonderland of gingerbread. Federal tax breaks now make raising capital easier; rent subsidies enable the area's residents, mainly black, mainly poor, to remain.

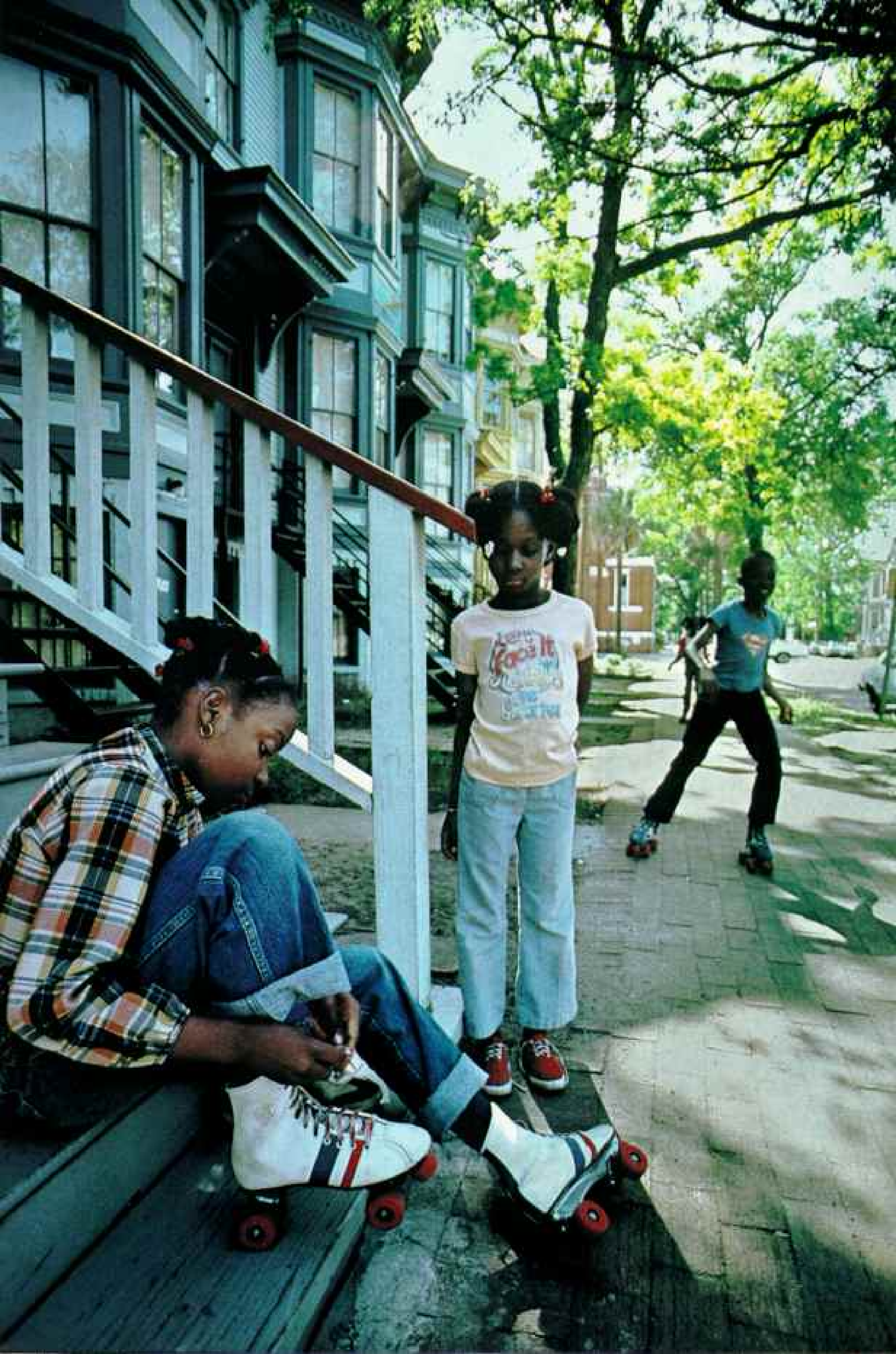
THE SAVING of Savannah has quickened the city's pulse. Tourism is the fastest growing industry. "Last year we had two million visitors," a chamber of commerce official said. "They spent 150 million dollars; that's big league. And 90 percent came to see the old houses." But part of Savannah's charm is that it is not just a museum city, but a sinewy, hardworking city. Seventeen hundred ships a year come up the river, some containerships so large it seems they're sure to sideswipe the new hotel on River Street. They carry away, as in the past, products of the earth: kaolin, wood pulp, wheat, soybeans, poultry.

They bring raw sugar to be refined, gypsum for wallboard, titanium dioxide for



Everything goes with green on St. Patrick's Day in Savannah, and rainy Irish weather can't faze parade watchers (opposite). In a port city that prides itself on multiethnic roots—and rarely turns down a party—the day of the Irish assumes legendary proportions. Businessman Tom Long is a "belly dancer" for the Shriners (above).





Grace notes in iron (below) embellish once abandoned 19th-century mansions in Savannah's historic district. Founded in 1733, Georgia's first permanent settlement grew around a pattern of open squares where Savannahians built with elegance and lived well. Surrender to Sherman saved the city's architecture in



1864. In this century suburban flight left the old houses empty eyesores. Private citizens began a spirited revival in the 1950s. At the Green-Meldrim House (right)—Sherman's headquarters and now a church parish house—an oriel window makes a reading nook. Renovation's crest has rolled to the newer Victorian district (left), where special subsidies keep low-income renters in homes after restoration.





"Done from pure love," says Mayor John Rousakis (above, right) of Savannah's turnaround restorations, such as renovated cotton warehouses on River Street, background. Waterfront personality "Cap'n Sam" Stevens, left, caters to

paint pigment, container cargo for the distribution centers of K Mart and Kawasaki. "We're serving more than 125 countries," a port official said. "The Japanese are especially good customers; we go out of our way to cultivate them."

The economy is enriched by another industry, one the old soldier Oglethorpe could appreciate: defense. In the western suburbs of Savannah, one can hear at night the rumble of cannon from Fort Stewart, home of the 24th Mechanized Infantry Division, part of the nation's Rapid Deployment

Force. At Hunter Army Airfield in Savannah the 1st Battalion (Ranger), 75th Infantry, stands poised to "conduct special operations in support of American foreign policy." The men wear black berets, combat gear; their operations are secret.

THE PRESENT, the past: In Savannah they sometimes seemed to merge. I sat in the parlor with W. W. Law, a long-time civil rights leader. He was still in his postman's uniform, shoes off. He said he came from an old Savannah family. "My



tourism—Savannah's fastest growing industry—with sightseeing boats (above) that share the river with oceangoing shipping. Port revenue, manufacturing, and defense spending all contribute to the city's currently rising fortunes.

grandmother took quite a bit of pains with us. I remember the games she taught us, the stories she told in the evening—illustrating the stories by lamplight with her hands to make the rabbit and the fox.

“I remember people visiting her; some told of their experiences as slaves. She had a boarder who had fought in the Civil War. I recall going under the house, opening the trunk, dressing in his uniform.

“My grandmother took in washing and ironing for the white folks, and on the weekend when it was necessary for her to carry

the clothes back to them, I went with her. We had to go in through the back, but I got a chance for the first time to see how white folks lived, and how different it was. As we would walk along, and I would be pulling the wagon with the clothes, she took pains to tell me many things about the places we passed.”

In time Mr. Law became president of the local chapter of the National Association for the Advancement of Colored People. He helped guide the 18-month boycott of downtown merchants “until they were driven to

the wall, until they decided to negotiate"; helped file the lawsuits on school integration; helped reach agreements with "young white candidates seeking to unseat old white politicians" so that blacks could gain access to public offices and jobs.

"We've come a long way," he said. "Now there are people in position, black and white, who are working for progress. A great deal of pushing remains to be done—for more jobs, better schooling."

Now that Mr. Law had laid down some leadership roles, he had turned to new interests: a black heritage trail, "to show Savannah from the black perspective"; a black-heritage museum, "a wonderful old Victorian house, with unusually fine gingerbread." I looked at Mr. Law, gray-haired, tired that evening, and in my mind's eye I saw a small boy pulling a wagon full of laundry, a woman beside him, talking to him.

WHAT KIND of city is Savannah? It has a statue to the "Waving Girl," and everyone knows her legend. Charlie Hopkins, a tugboatman with a weathered face and one earring, knew her.

"She was the sister of the light tender, and he used to light all the lights in the river. They lived in a house about halfway down the river. My mother was a friend of hers, and we used to stop by and see her. She'd come down on the dock with all her dogs. She had about a dozen collies.

"She looked exactly like that statue. Old maidish. Wore long clothes, you know, like spinsters used to do. Like I say, she started waving to the ships just because she was there, and the ships started blowing their whistles every time they came by.

"And it just got to be, and the legend grew that her lover had gone to sea and never returned—and she was waving to each ship in the hope that he was on it. Truth is, she did it, well, just out of boredom, I guess. Just she and her brother lived there, and it was very isolated, the only way in and out by boat."

To take the tale of a lonely spinster and

fashion it into a love story; well, that's Savannahian. I left the city with regret.

The little city of Beaufort lies halfway between Savannah and Charleston. Antebellum homes line the waterfront. Their architecture bespeaks a Barbadian origin: great lawns, verandas. When I walked its streets, I seemed to sense a preternatural quiet, as if something was amiss. One day Larry Rowland, a university history professor there, told me what had happened.

"Well, before the Civil War, there was vast wealth here, an aristocracy. It was based on cotton, slaves. And just poof, it went away. They got themselves into the Civil War. Robert Barnwell Rhett, the 'father of secession,' lived right there. Beaufort was the first city in the Deep South seized by Union forces; it served as a base for a blockading squadron. Well, of course the planters didn't pay taxes on their land to the federal government, so that government seized it and sold it off. A lot to freed slaves.

"In other parts of the South, the planters lost the war and their slaves, but not the land. They could rebuild, perhaps; but these guys had no chance. They had lost their land and their slaves, and their slaves were occupying their land and owned it legally. So the old planter families never returned; very few of them ever came back to Beaufort. Others moved in, mostly from up-country."

Larry sensed a quickening in the old town now. "See that house? Used to live there. Heard it sold the other day for \$550,000. Has to be outsiders. Nobody here has that kind of money." The quickening was inspired by a national quest for the Sunbelt, the sea, lovely places. Land that had grown cotton, been abandoned, grown into timber was now yielding a new crop.

TWO ARCHING BRIDGES lead to Hilton Head, first of the Sea Islands' great modern resort and retirement communities. Its 13,500 residents had just voted to incorporate the island and its plantations, as the large developments are

Epitaphs of liberty from times of slavery mark the graves of "free persons of color" visited by civil rights leader W. W. Law in Savannah's oldest black cemetery. The half-black city integrated most public places before courts required it. Law remembers of the era, "Not unusually violent . . . but we had a struggle."





High tide floods a grassy maze near the mouth of the Savannah River. Extreme tidal ranges create the most extensive salt marshes on the East Coast. Marsh and currents isolated most Sea Islands until recently, when bridges accompanied a boom in planned resort developments.

called, into a town. There were all the required facilities and amenities, the sheen of upscale resort life: yachts, tasteful homes of muted cypress, kids with Izod shirts and well-tanned arms, bicycles, Mercedes, the whop of tennis balls, little guardhouses protecting the entrance to each plantation.

The first of those plantations, the granddaddy, was Sea Pines, begun by Charles Fraser 25 years ago (page 817). The example



he set shaped all those that followed. The presidents of 19 other resorts worked under him. He was the first to show that a large block of seafront property, carefully controlled as to architecture and land use, could be commercially successful. When I caught up with him, I discovered he was selling out!

"Sea Pines has largely been completed. All the roads that will ever be built and all the legal limits to be imposed are in place. I

have no passion for restaurant or hotel management. So I am selling all resort operations—four golf courses, 75 tennis courts—but I'll stay involved with things that are fun and personal, like the golf tournaments."

Was he happy with what he had done? "Extremely." One thing he would have done differently. "I would have retained a 20 percent interest in every lot I sold. I sold beachfront lots for \$10,000 that now command a



Airborne breakfast arrives via royal tern at a Sea Islands nesting ground. Left in their natural state, the islands slowly retreat shoreward before a rising sea level, delivering seaside forests to the surf as on Daufuskie Island's

price of \$500,000. And I get none of the enhanced value." It amounted to millions and millions of dollars.

I wondered what had shaped his vision. "Growing up in a family that valued a live oak and masses of azaleas; exploring this island after my father and business associates bought thousands of acres to harvest the timber; a course at Yale Law School on private land management; a fascination with books and magazines on architecture. I had meant to be a lawyer, but these things all came together."

He remembered the early days: buying his family's 4,500 acres with borrowed money;

walking the property in his boots, getting his ideas; struggling to sell the next few lots.

All that was over; he had shown the way. But another, younger man on Hilton Head was just beginning his adventure. Charles Cauthen is tall and bearded, with an up-country accent. He and his partners had bought half of Daufuskie Island, just across Calibogue Sound. No bridge reached the island, it had grown back into forest, fewer than 100 people lived there, mostly black.

Mr. Cauthen and his partners planned to develop an elegant resort. There was to be regular ferry service, the banning of automobiles, big lots with fine houses, a



Bloody Point (above). Standing relatively high among the East Coast's barrier islands, the Sea Islands are also more stable than most, but erosion may increase where oceanfront development interferes with beaches or dune lines.

turn-of-the-century ambience. "We're not out to develop the island so much as to restore it," Mr. Cauthen said. For once it had flourished with farms, houses, people.

BUD BATES picked me up in his small boat, and we cruised down the Intra-coastal Waterway. Our world became one of water, marsh, sky; then we reached Daufuskie. No one was about. You could hear the wind in the pines, the cries of birds, a dog barking in the distance. Bud got the pickup and we went down sand-and-shell roads to his cabin-like house.

Bud had come over a few years ago to

shrimp and run the small community store; now he's in real estate. "There are three large holdings on the island; most of the rest are small tracts, half of them owned by blacks. And most of those blacks live away. They are my clients. The ones who are living here don't want to sell, and I hope they don't. Right now I'm selling interior lots, from \$8,000 to \$12,000 an acre. Prices have just shot up in the last couple years."

Bud took me on a tour of the island. We stopped at the school where Pat Conroy once taught; his novel *The Water Is Wide* and the movie *Conrack* portrayed a young white teacher amid rural blacks. There I found

Jim and Carol Alberto, also young, also white. They had answered an ad, come for a year, stayed nine. Now they were leaving. The memories would be bittersweet: the frustrations, the boat trips in winter, the inevitable frictions in a small community. The pupils had dwindled from 22 to 11, would probably dwindle again next year.

"They'd be better off in a bigger school," Carol said, "where they are able to mingle with others. Peer pressure is often helpful. They don't have it, they don't realize their own potential."

William "Hamp" Bryan, 79, sat on his porch and remembered the back times. "Oh, the island was crowded in those days, 750 population, but now I don't think there's 100 head. They farmed, had an oyster factory. Oh, yes, peoples were doing a lot of farming. See those pines? People farmed there. And it's growed up into a swamp." He thought development of the island might be good. "Be more jobs. Ain't nothing around here to do no job on. Best part of the younger people, they have to leave."

Postmistress Billie Burn, white, said, "I don't want to see development, to see nature lose so much; but if something isn't done, we're all gonna be gone." The fear of the island's dying was as pervasive as the island's great silence. But change was coming. The developers had tucked an office into the old lighthouse, brought over a horse and surrey to carry around prospective buyers.

BLACK and white all mix'd together,
Inconstant, strange, unhealthful
weather

*Burning heat and chilling cold
Dangerous to both young and old
Boisterous winds and heavy rains
Fevers and rhumatic pains
Agues plenty without doubt
Sores, boils, the prickling heat and
gout. . . .*

Thus an 18th-century sea captain described Charleston. She has survived more: bad fires, hurricanes, tornadoes,

earthquakes, bombardment by sea and by land, two enemy occupations. She stands on her peninsula today like an 18th-century Venice, old white houses glittering by the sea, an air of great times past. Her heyday was the 1790s, when the sailing ships from Europe followed the trade winds in a wide southern loop through the West Indies. Miraculously, that age is preserved in the jumbled streets, the old houses—by one count, 73 from pre-Revolutionary times, 136 from the late 18th century, 623 built before 1840.

I took a room in one of those old houses, 7 Meeting Street. I was awakened in the mornings by sunlight spilling through tall windows, the soft sound of voices outside, the clip-clop of the horse-drawn tourist wagons proceeding to their stations.

I learned that Charleston had been a pioneer in preservation, in 1931 passing the first historic-district zoning ordinance. That Charleston was first is not surprising. Does not the city seal, dating from 1783, proclaim: "She guards her buildings, her customs, and her laws"? In that order.

Individuals and organizations joined to save old houses and neighborhoods that, as in Savannah, had been ravaged by hard times. Each spring some 70 houses are open to tours; neighborhoods continue to be revived; and, as in Savannah, tourism is a fast-growing industry.

To walk the streets of Charleston is to be whisked back not only to antebellum but also to colonial times; narrow lanes, olean-der lined; churches with pew stalls and classical severity; public buildings, small, remindful of Greek or Roman temples; houses with fretwork and spiral staircases, formal dining rooms and the great verandas that Charlestonians call piazzas.

I wanted to clear up two puzzlements about Charleston houses. Why were many built with one end, rather than the front, to the street; and why were what appeared to be porches or verandas called piazzas? *Piazza*, after all, is an Italian word meaning a square or open space. I talked with historian

A neat set of courts draws the tennis-minded to Hilton Head's Sea Pines Plantation. Opened in 1958, the carefully planned island resort community has been emulated at several coastal leisure retreats designed to provide services and security for homes and facilities that blend with the island's natural beauty.





Jumbo shrimp tip the scale in McClellanville (above left), a fishing town where Gullah is still heard. This Low Country coastal tongue blends archaic English and West African languages. Evolved in isolation, it is fading with exposure to the outside world. On undeveloped Daufuskie Island, Bud Bates and sidekick Sabra



Robinson cast for mullet (above). Eight years on the island, Bates has often befriended its 60-some remaining black natives. He now serves as a real estate agent, selling land owned primarily by heirs who have left the once thriving community. Large-scale outside owners hold two-thirds of the island.



Gene Waddell, who had just completed a ten-year study of Charleston houses.

"Piazza? When English architect Inigo Jones came back from Italy to London, he designed Covent Garden, putting in a piazza and a colonnade. But the English thought the colonnade, not the open space, was the piazza, and they began to call any covered walk a piazza. Well, that usage got here, and we find the word in a public act of 1700. Now I'll have to tell you about those houses, which are called Charleston single houses. They are only one room wide.

"I think they evolved from row houses, long and narrow. There had been a series of fires, and it became necessary to get away from row houses, to provide firebreaks. So you began to get a house, then an open space, then a house, and so on. The single house and the row house have many common features: the chimney set inside the wall, the back wall blank or almost blank." Indeed, it often appeared as if a block of row houses had been pulled apart, a lovely garden inserted between each.

"Now, because the street door of these houses usually led into a merchant's shop, a door was opened farther back for a family entrance, another for a slave entrance. The path to these doors was then provided with a covered walkway—a piazza."

The Charleston single house, initially a residence above a business, evolved into only a residence, the piazzas into verandas.

In time, Charleston's old houses appeared as collectibles, like paintings or Oriental carpets. Ownerships shifted among old families or to wealthy outsiders; a few were converted into inns or condominiums. No one liked to see one empty. One woman described the house she grew up in: "It was a big wooden house, ten rooms, nothing remarkable. A Charleston house, about 1790. Bought by a couple from New York State. Did nice things to it, but they don't live there so much. I'm sorry about that."

AS CHARLESTON'S old houses survive, so too do the old families, those that made their fortunes in the deerskin trade, as merchants, and as planters of rice, indigo, cotton—and that ruled the city and region Venetian style, as an oligarchy, proud, inward-looking.

One historian told me: "Traditionally in America it has been sufficient to have money to get into society; in Charleston that doesn't count. What counts is lineage, and that has been true for 200 years."

To learn about those families, I went out to Middleton Place, a plantation that has been in the same family for nearly three centuries. It is open to the public. Visitors relish its formal gardens and butterfly lakes, the stable yards with animals and craftsmen, the house filled with period furnishings.

Charles Duell, now master of Middleton, led me through it. Portraits of ancestors lined Low Country history: Henry Middleton, who received the original 725-acre



The ever present past pervades downtown Charleston, where round "earthquake bolts" of an old house (facing page) reinforced brick walls after a terrible quake in 1886.

Italian maestro Gian Carlo Menotti (above) has brought the Spoleto Festival of the arts here annually since 1977 to climax a full calendar of cultural events.



Berth-day greeting and a daughter born while he was gone welcome destroyer crewman Tim Kollman home at Charleston's naval base (left), the largest of

plantation as a dowry and built his holdings into 20 plantations and 50,000 acres and still had time to serve as a president of the First Continental Congress; Arthur Middleton, a signer of the Declaration of Independence; Williams Middleton, a signer of the Ordinance of Secession. Thus Williams, like other South Carolinians, had acted to rend the Union his forebears had helped to create.

"We know that all the old families intermarried many times," Charles said. "Henry Middleton's children married an Izard, a Manigault, a Rutledge, a Drayton, a Pinckney, a Smith, and a Parker. And that's just Henry's children. Arthur's children married almost all the same families. And the second Henry Middleton's children married almost all the same families too. So today it's very difficult to find a Pinckney or a Rutledge

who isn't also a Middleton or an Izard."

Social rituals strengthen bonds of blood: discreet parties, fine manners, societies like the St. Cecilia. "In order to become a member," I had been told, "one's father has to have been a member, and for generations back. Money cannot buy your way in, lack of money cannot keep you out."

But changes had occurred, spurred in part by economics. To preserve the core of Middleton Place, Charles had formed a corporation to perpetuate family stewardship and a foundation to administer the national historic landmark for public benefit. To provide capital, he was selling a few select homesites and planning a small country inn.

Another scion said: "Anyone who wants to keep pace with what is happening in the real world really cannot afford to live in the



several defense installations that provide the area's biggest source of income. Leaving home port, a nuclear submarine (**above**) heads down the Cooper River.

traditional patterns that one's ancestors did. We live in a high-speed world, and we've got to stay with it. If we don't—well, Charleston is a very popular place, and someone from the outside will come in and do the things that must be done."

Outsiders are already in evidence, entrepreneurs large and small, young people to man the restaurants and shops, all seeking not only opportunity but also a special place.

Mayor Joseph P. Riley, Jr., is a symbol of change himself. Of Irish stock, he represents a new generation and has pledged to make Charleston "a city for all its citizens." He sketched vigorous plans for growth: annexing areas across the Ashley River, revitalization of the old business district, a hotel and conference center, a waterfront park. He had worked to bring to the city Gian Carlo

Menotti's Spoleto Festival of Two Worlds—days and nights filled with music, dance, theater.

At times the old houses concentrated south of Broad Street, on the tip of the peninsula, seemed an elegant fortress, the last bastion of an old and gracious way of life.

SUMMERTIME an' the livin' is easy . . . oh, yo' daddy's rich, an' yo' ma is good-lookin'. DuBose Heyward drew on his own city in creating the novel *Porgy*, basis of the opera *Porgy and Bess*. Cabbage Row, an old black tenement, became Catfish Row; Samuel Smalls, a crippled beggar, was transformed into Porgy.

There are people who still remember Mr. Smalls. "I dearly remember that black man in the cart. I think he would ride down the



street. I never talked with him. The cart was square-looking; shaped like this book, you know. And the old goat pulling it."

George Gershwin spent months in and around Charleston gathering material and motifs for the opera, visiting the islands, going to black churches, listening to gospel music, joining in the "shouts."

There are those who remember the islands in those days and even before, among them Septima Clark, a distinguished civil rights leader. She went over to Johns Island in 1916 to teach. "Big farms were there when I went over; cotton and corn and white potatoes. The women who had young babies, they would put them in little pasteboard boxes at the head of the rows they were working in. They had a piece of fresh lard and some sugar, and they put it in a cloth and stuck that in the babies' mouths for a pacifier, to keep them quiet. That's the way they did. It was hard for those babies. They couldn't fight off the flies and the mosquitoes, and so they just stayed there with those bites. And too many of 'em died.

"The sea was all around, and they could get fish of all kinds. Alligators were plentiful. They killed them in the springtime, put the meat out on the side of the houses, salt-cured it. Yep." And she remembered the Promised Land School: two rooms, 132 children, no toilet, a water bucket and dipper.

When I went to Johns Island, I talked with Bill Saunders, a black leader. He had come back from the Korean War determined to change things. "Today on the island my wife is chairman of the school board, where once there was no black. Three of my children have been president of the student body at St. John's High School, a place where I could not go." There are now a medical facility, retirement units, a home for the aging.

Problems remained. One black said, "People have an idea the city of Charleston wants to annex or control Johns Island. They feel threatened, pinched."

There was, he said, apathy among the young. And there was the land issue. The development of nearby Kiawah and Seabrook Islands had drawn speculators. Much of the black land was poorly deeded, or split among many heirs—"heirs' land." It requires only one heir to throw the whole property into the courts. The promised land was not yet at hand, the future still uncertain. I was invited to come back for church. "First Sunday is best." I said I would.

IN CHARLESTON you never go very long without being reminded of one searing aspect of human experience: war. Walk along the Battery. Fort Sumter sits down the harbor like some Cyclops, dark,

As perfect as toy soldiers, two companies of the Citadel's all-male cadet corps form ranks at barracks in Charleston (left). In 1861 the cadets of this state military college fired some of the first shots of the Civil War. Today about half of its graduates enter the armed forces as officers. President Emeritus Gen. Mark Clark—here with fishing companion Bill Cooper in Charleston Harbor (right)—retired from the Army in 1953 to head the college for 11 years after commands that included Allied forces that liberated Rome in 1944 and United Nations forces in the Korean War.



brooding. You pass cadets from the Citadel, the Military College of South Carolina—white uniforms, pale-blue shoulder boards. Their predecessors fired what many consider the first shots of the Civil War, driving away a ship seeking to resupply that fort.

There are the resident generals. Mark Clark, 87, full of years and repose. His was our Homeric war, far-flung, hero laden. And William Westmoreland, traveling about the country to help rally the morale of his men, Vietnam veterans, the returning Army the nation chose to ignore.

There is the air base, its C-141s lumbering over the city, gaining altitude, then heading toward Europe, Africa, or South America. And there is the naval base, third largest in the nation: 24,000 sailors, 10 minesweepers, 30 cruisers, destroyers, and frigates, 30 submarines. Half the subs are armed with nuclear missiles, their mission "to be underneath the water where the Russians can't detect us—where nobody can—and to be ready to launch those missiles within 15 minutes of receiving the order."

I slipped through the sail hatch and down the ladder in the *Nathan Hale*, SSBN 623. The captain, quiet-spoken, a Coloradan, led me through his ship: the little galley where 600 meals a day are prepared for the 150-man crew; the enlisted men's sleeping area, with racks hung three high; the torpedo room with its shiny green torpedoes; the missile compartment with its computers and benign-appearing cylinders. "This is the weapons officer's station," the captain said. "This is the training trigger." It was black and resembled a pistol grip with a trigger.

"The actual one is similar, only it is red and locked in a safe there. Only the weapons officer has the combination and can get it. But he cannot act alone. I have a key that I must insert in the control room. But I can't get my key until two other officers agree I should have it. It is locked in a safe that I don't have access to."

I talked with some enlisted men, average age 23. One said there was little spare time

on patrol. "There's the watches to stand, the qualifying for the next rank." When there was spare time, he read. "One thing I read, I don't read enough. I'm a Christian, and I read my Bible. That's a help at times. You know, you're out there and the Lord's out there too, and He can help you."

The *Nathan Hale* was soon to leave on patrol. She would slip downriver, out to sea, and submerge. Nobody would hear from her, nobody would know exactly where she was until some two months later when she would surface again off Buoy Two Charlie.

ON FIRST SUNDAY I was, as promised, back on Johns Island, at Wesley United Methodist Church. A large mural in the sanctuary depicted Jesus carrying the Cross, a black man helping Him. The choir came down the center aisle, marching and singing in syncopation: *We're marching to Zion, beautiful, beautiful Zion . . . the beautiful city of God.*

Speakers exhorted the congregation. "When you go out, you'll be measured by the white man's yardstick. So stay in school, study, work." Some spoke in Gullah, the Low Country tongue drawing on English and African words, all speeded up, unintelligible to outsiders. The minister urged: "Seek ye first the Kingdom of God. . . . Put your feet on solid ground. . . . Take your problem to God and leave it there." We sang: *In the sweet by-and-by, we shall meet on that beautiful shore and There is pow'r, pow'r, wonder-working pow'r, in the precious blood of the Lamb.* An older man next to me provided a refrain to songs and sermon: "Yes-sir, we'll all be together Lord. . . . Yes, Jesus fix it for you." There was Communion and the service ended with a gospel song, *In the evening, when the sun is going down. . . .*

We stepped out into the churchyard and talked in the shade of live oaks and their moss. The service had reminded me of a tide. It had reached an emotional high, and those who had cried out had been comforted; then it had receded. I climbed into my car

Graduation-day gift for Ashley Hall senior Maureen Riopel wins the approval of classmate Paige Canaday in a drawing room at the private girls' day school in Charleston. All 31 graduates of the class of '83 planned to attend college. The majority will come out in Charleston society in this winter's debutante season.





Seaside drive challenges golfers at the Wild Dunes course on Isle of Palms, which boomed as a Charleston holiday spot early in this century when a railroad connected it to the mainland. After trains stopped running, it went bust. Now it has rejoined the growing family of wealthy island havens, where vacationers and investors come looking for their dreams of a golden coast.

and started back to Charleston. It occurred to me that we are all marching to Zion in one way or another, and that the recognition of this softens life in the Low Country.

The sailor out under the North Atlantic with his Bible, the Citadel cadets in their pretty uniforms, the tourists in the horse-drawn wagons, the developers with their blueprints, W. W. Law sitting in his parlor in his postman's uniform, me picking up speed on the blacktop. All marching to Zion.



Nature here helps in this realization. The marshes seem silent, still, until the red-winged blackbird arrives with his clacker-like call; and you notice that the tide has quietly gone out, leaving the mudbanks bare, glistening.

The cities help in this realization too, for they are small and on a human scale, and so you often speak or nod to passersby on the sidewalks, affirming their and your own humanity. The church steeples reaffirm old

verities, particularly an awareness of something beyond ourselves, while the graveyards by those churches remind us that others came before, that we did not come from nothing; and the old houses, great or modest, offer not only their beauty or charm but also a reminder of the generations who inhabited them, who within them laughed, schemed, struggled, died.

All, in their own way, in their own time, marching to Zion. □



Cock-of-the-Rock: Jungle Dandy

ARTICLE AND PHOTOGRAPHS BY PEPPER W. TRAIL

LIKE SQUABBLING NEIGHBORS, male cocks-of-the-rock threaten each other with strident calls and flapping wings in defending their territories in a Suriname rain forest. After several years of study, the author reveals the extraordinary habits of these brilliantly colored, little-known birds.





“**H**HEY! HEY! HEY!” Insistent and strangely human, the bird’s call rivets my attention as I walk along a crude trail in the rain forest. Looking up, I see a male Guianan cock-of-the-rock perched in the tangled lianas. The bird’s dazzling orange plumage glows against the dark foliage, and his helmeted head bobs up and down as he scolds me fearlessly.

Observing the pattern of colored plastic bands on my caller’s legs, I identify him as an old friend that I had captured and marked three years previously. I have just returned to this remote area in the Raleigh Falls-Voltzberg Nature Reserve in Suriname (*map, facing page*) to resume my research on these colorful, elusive, and unsung creatures.

My destination is a jungle

gym of vines (*above*) a few hundred feet farther along the trail. Here this male and 51 of his rivals gather every morning during the mating season to form one of the most spectacular courtship groups known in the animal world.

The pigeon-size Guianan cock-of-the-rock (*Rupicola rupicola*) is a member of the neotropical family of birds called the cotingas, found in remote areas of South America from Colombia and Venezuela east to French Guiana, and in Brazil north of the Amazon.

Though unrelated to the chicken, the male bird earned the name “cock” because of its rooster-like appearance and combative behavior. The female bird added the “rock” to the name because of her habit of nesting and rearing the young in sheltered rock niches.

Despite the reports of two mid-19th-century naturalists, the behavior of the cock-of-the-rock was not described by ornithologists until 1961, when the late E. Thomas Gilliard observed three displaying males at a site in the mountains of southern Guyana.*

Dr. Gilliard’s work, extended by the British ornithologist David Snow, revealed that the cock-of-the-rock is among the world’s few birds that exhibit complex social courtship behavior at leks.

A lek is a place where a group of males gathers together in a dense cluster to claim and defend individual territories used solely for courtship and mating. Each male cock-of-the-rock on

*See “Strange Courtship of the Cock-of-the-Rock,” by Dr. Gilliard, in the January 1962 NATIONAL GEOGRAPHIC.



or near the ground in the above photograph is located on such a territory.

Lek probably derives from a Swedish word meaning “to play,” and the courtship capers of groups of cocks-of-the-rock and other lek birds do indeed resemble play. For the birds themselves, however, “lekking” is serious business.

Males compete intensely among themselves for the ownership of desirable display sites so that they may court visiting females. The results of both competition and courtship determine the number of matings each male performs, and hence the number of offspring each is able to contribute to the next generation.

For the successful male, the benefits are enormous. One extraordinary male performed more than 30 percent of all

matings for three successive years at the lek I studied. For the average male, however, the odds are decidedly dismal; more than half fail to mate in any given year.

The unusual reproductive behavior of the males developed in part because an abundant supply of fruit liberated them from parental feeding chores. The female, clad in drab brown for concealment from predators, builds the nest, incubates the eggs, and raises her young by herself. Indeed, the only time the two sexes interact is during that brief period of courtship and mating.

When I began this study, many of these facts were unconfirmed. No ornithologist had ever observed actual mating of the cock-of-the-rock or followed its complete nesting cycle. The goal of my research



was to individually color-band an undisturbed population of male and female birds and observe their courtship, mating, and nesting behavior for several years. Only through detailed, long-term study can the mysteries of the birds' behavior be unraveled.





WRESTLING match erupts between two males (*above*) furiously fighting for territory as another watches curiously. The birds lock their powerful talons together, flail at each other with their wings, and occasionally lock beaks. Such matches can last as long as three hours and leave the combatants panting and exhausted.

If there is not a clear winner, the birds rest awhile and then fight again until superiority has been established. Fights are not uncommon because the display territories of cocks-of-the-rock

are among the most tightly clustered of any lek bird. Each is centered around a cleared patch of ground—the “court”—about three feet in diameter.

Since the birds also claim territorial perches in the vines above, an individual's territory includes the airspace above the court, comprising a cylinder about five feet wide and as high as six feet.

The close proximity of territories prompts aggressive encounters at their borders (*facing page*), where the birds posture and threaten each other without entering into serious

combat. After a minute or two of wing flapping and noisemaking, these birds returned to their own domains, having asserted themselves without coming to physical blows.

In contrast, a court fight usually occurs when two males battle each other for a territory whose owner has died. The challengers meet on equal terms and must fight for supremacy. It is rare, though, for a well-established owner of a territory to be vanquished. Thus violent challenges to resident birds are unusual. You might call it the home-court advantage.



WINGS beating, wildly calling, a male bird (*above*) attempts to entice a female to his court. Males are constantly on the lookout for the inconspicuous females, who

glide into the branches above. Instantly the lek explodes with color, movement, and sound. Each male bounds from his perch to his court and lands with a thump. The wing beating attracts the females'

attention and also sweeps leaves from the court, preparing it for courtship.

The lek is soon transformed again as males switch from the pandemonium of welcome to the tense immobility of



courtship itself. Each male crouches rigidly, his display plumage fully spread. Ritual requires that he keep his back turned to the female, thus displaying rump plumes to their best advantage. Soon the

females descend to observe closely the display of particular males (*above, top*).

Females visit the lek for an average of five days before mating, usually dropping in on the courts of three or four males for

close-range inspection. Her choice made, a female mates on the court of her male or on the perches immediately adjacent to it (*above*). The following season females tend to return to the same mate.



NO BEAUTY at three weeks of age, a male cock-of-the-rock nevertheless exhibits the remarkable development of his talons (*above*), allowing him to grip the nest lining shortly after he hatches. This prevents nestlings from being dislodged as mothers scramble for footing. Females lay one or two eggs and incubate them for four weeks. Fruits and an occasional insect or lizard make up the diet of both adults and nestlings.

A one-year-old male displays brownish plumage and a small crest (*right*). These feisty youngsters disrupt courtship by chasing females or by practicing mounting on courting males. At two years of age a male has attained adult plumage (*facing page*), though a few brown freckles remain.

The birds' dependence on large nesting boulders within undisturbed rain forest means that the species is broken into scattered local populations and thus is particularly vulnerable to human activities.

Fortunately, much of the species' range remains untouched. As the destruction of tropical forests continues, however, the fascinating and beautiful cock-of-the-rock will be increasingly threatened. □





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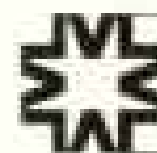
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Members Forum

WASHINGTON'S OLD POST OFFICE

Your feature (September 1983) was very interesting, but requires correction of one item. The peal of bells is not "the only replicas ever cast of those in London's Westminster Abbey." Another complete peal is hung in Christ Church Cathedral in Victoria, British Columbia.

George S. Elliott
Fremont, California

The Christ Church bells are replicas of Westminster Abbey's bells as they existed in 1929. In 1971 six of the old bells were recast and four new ones added. The Old Post Office bells are the only duplicates of the current peal at Westminster.

TULSA

In "High-Flying Tulsa" (September 1983), you refer to the Gilcrease Museum's collection of U. S. Western art, mentioning the more popular masters Remington, Russell, etc. I would call your attention to another master displayed at the Gilcrease: Solon H. Borglum. Unlike his contemporaries of the late 19th to early 20th century, he was a *real* cowboy, the first cowboy sculptor, and his "portraits" of horses show him to be one of the two or three finest equestrian sculptors in the history of art.

John B. Kelley
Wilton, Connecticut

I find it very disturbing that you highlighted the likes of Mr. Roger Hardesty. While he may have made it as a businessman, I find it difficult to believe that people have a passion for the cold-blooded killing of some of the most magnificent animals on the face of our earth, not to mention stuffing them for display in their living rooms. Shame on you for running this back to back with the "Living Sands of the Namib."

Fritz Veal
Tucson, Arizona

NATIONAL GEOGRAPHIC neither approves nor disapproves of the subject matter in our photographs. We show the world as it is, allowing our readers to make their own judgments.

ULTRALIGHTS

I greatly enjoyed Luis Marden's excellent article "The Bird Men" (August 1983). My only regret is that he failed to mention, among other pioneers,



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Max Stupar and Dr. August Raspel. Stupar was a pioneer builder of improved Demoiselles used in early American exhibition flights. Dr. Raspel was a foremost researcher and designer of sailplanes and lightweight motor-driven planes and inventor of the flying bicycle.

Edward Gobetz
Kent, Ohio

I don't want to diminish the feats of the Wright brothers, but the first man to fly a powered heavier-than-air craft was the Frenchman Clément Ader on October 9, 1890. Eyewitnesses observed a bat-shaped aircraft called *Eole* making a leap of about 50 meters.

Jean Cavaro
Saint-Médard-en-Jalles, France

French and English aeronautical historians have concluded that Ader made a short, uncontrolled hop but never a sustained flight under power. The honor remains with the Wrights.

Luis Marden calls the airplane a "killing machine" and "too fast, complicated, and expensive for any but the rich or subsidized." The use of aircraft in combat has saved as many lives as it has taken. In World War II aircraft began to serve medical evacuation and also general evacuation purposes. The airplane does not kill, man does.

I own two airplanes and half of a third, and I am a long way from being rich. Mr. Marden's

well-written article shows the historical significance of the ultralight. He could have represented general aviation much more fairly.

Scott E. Cooper
Ventura, California

Mr. Marden erred in calling ultralights bicycles of the air. Ultralights are motorcycles, hang gliders are bicycles. These parallels hold for noise, pollution, safety, ability, and operator attitude.

Steve London
Seattle, Washington

The article on ultralight aircraft contained unfortunate technical errors. If you compare the kinetic energies of a 1,600-pound aircraft traveling at 55 miles per hour with an ultralight craft weighing 550 pounds traveling at 27 mph, the ratio of kinetic energies is 12, not 16. One cannot say that the big plane will "impact with 16 [or 12] times the force" because one does not know the details of the crashes. What one can say is that on impact the big plane will have 12 times as much kinetic energy to dissipate as will the light plane.

Albert A. Bartlett
Boulder, Colorado

You are correct. The aeronautical engineer who did the calculation used the specifications for a single-seater ultralight instead of the two-seater that crashed.

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DELAWARE

Having lived in Delaware in the early 1970s, it was with much appreciation that I read "Delaware—Who Needs to Be Big?" (August 1983). I have often tried, but with limited success, to explain to the uninitiated that unique area sandwiched between Maryland, Pennsylvania, and New Jersey. Now I shall suggest that if they have any further questions about Delaware, they go directly to NATIONAL GEOGRAPHIC.

J. Christopher Walsh III
Washington, D. C.

I was surprised to see an error. A caption on a map states that Mason and Dixon surveyed the northern and western boundaries of Delaware. The curved northern boundary was surveyed by Taylor and Pierson in 1701. Mason and Dixon had no business with it and never even thought of surveying it, except for the very short distance at the head of the Wedge, where it is a straight line.

John A. Munroe
Newark, Delaware

Like others before us, we repeated an old error.

You make it sound as though raising fat chickens in crowded conditions and in minimum time is a wonderful by-product of technology. I disagree. I wonder if animals raised this way are not

transmitting more germs, chemicals, and cholesterol to the consumer. And that is apart from the issue of humane treatment, which is a legitimate concern on its own.

Helen S. Gumbert
Columbus, Ohio

Chickens are bred to yield more meat, which has less cholesterol than beef. Vaccination, sanitation, and refrigeration reduce the hazard of germs. Government inspectors monitor birds as well as feeds, additives, and their residues. Sentiments about such technology differ widely.

"Delaware—Who Needs to Be Big" credits the Swedes for introducing the log cabin to America. Let us not forget the Finns, who as conscripted craftsmen under Swedish rule hewed log cabins in New Sweden. Finns are *not* Swedes, just because the boss is!

Jorma R. Keto
Greencastle, Pennsylvania

You are right. We should have also credited the Finns, who were Swedish subjects in 1638, with helping introduce log cabins to the New World.

AUTOMOBILE

I have read the article "Swing Low, Sweet Charlotte" (July 1983). But I was dismayed to see the picture with the aggressive poster of the United

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- Please apply your artificial intelligence in Silicon Valley.

Wolfgang Biegert
Kernen, West Germany

You mentioned pioneers like Karl Benz, Gottlieb Daimler, and Henry Ford. But you left out Nicolas Cugnot of France, who built a steam-engine car in 1769. It made its first trip in 1770 and had a top speed of three miles per hour (five km/h).

Landry Butler
Madison, Tennessee

COAL COUNTRY

In the June 1983 issue I noticed that millionaire mine operator Arthur M. "Smiley" Ratliff wishes to live on remote Henderson Island. Presumably the island will be developed, but I hope Mr. Ratliff does not disturb the island's ecology. It is the home of four species of land birds, all of which are endemic. These birds include a rail (*Nesophylax ater*), a fruit pigeon (*Ptilinopus hutani*), a parrot (*Vini stepheni*), and a flycatcher (*Acrocephalus vaughni*). Perhaps my concern is

unnecessary, and both Mr. Ratliff and the British government will provide measures for the preservation of these birds.

Dennis J. Buchanin
Allentown, Pennsylvania

The British government is aware of the island's unique bird population—one of the reasons Mr. Ratliff's proposal is still under consideration.

OLD GEOGRAPHICS

In 1988 the Olympic Games will be in Seoul, and the Korean people are anxious to brush up on English. We think the NATIONAL GEOGRAPHIC is one of the finest vehicles for them to become more comfortable with the basic language. We are collecting back issues, and your members are relieved and delighted to find a good use for the magazines they love. To date, our combined Rotary and United Church of Christ efforts have brought in more than 3,000 copies. Our ultimate objective is to expand this project worldwide.

Robert L. Henrickson
Kamuela, Hawaii

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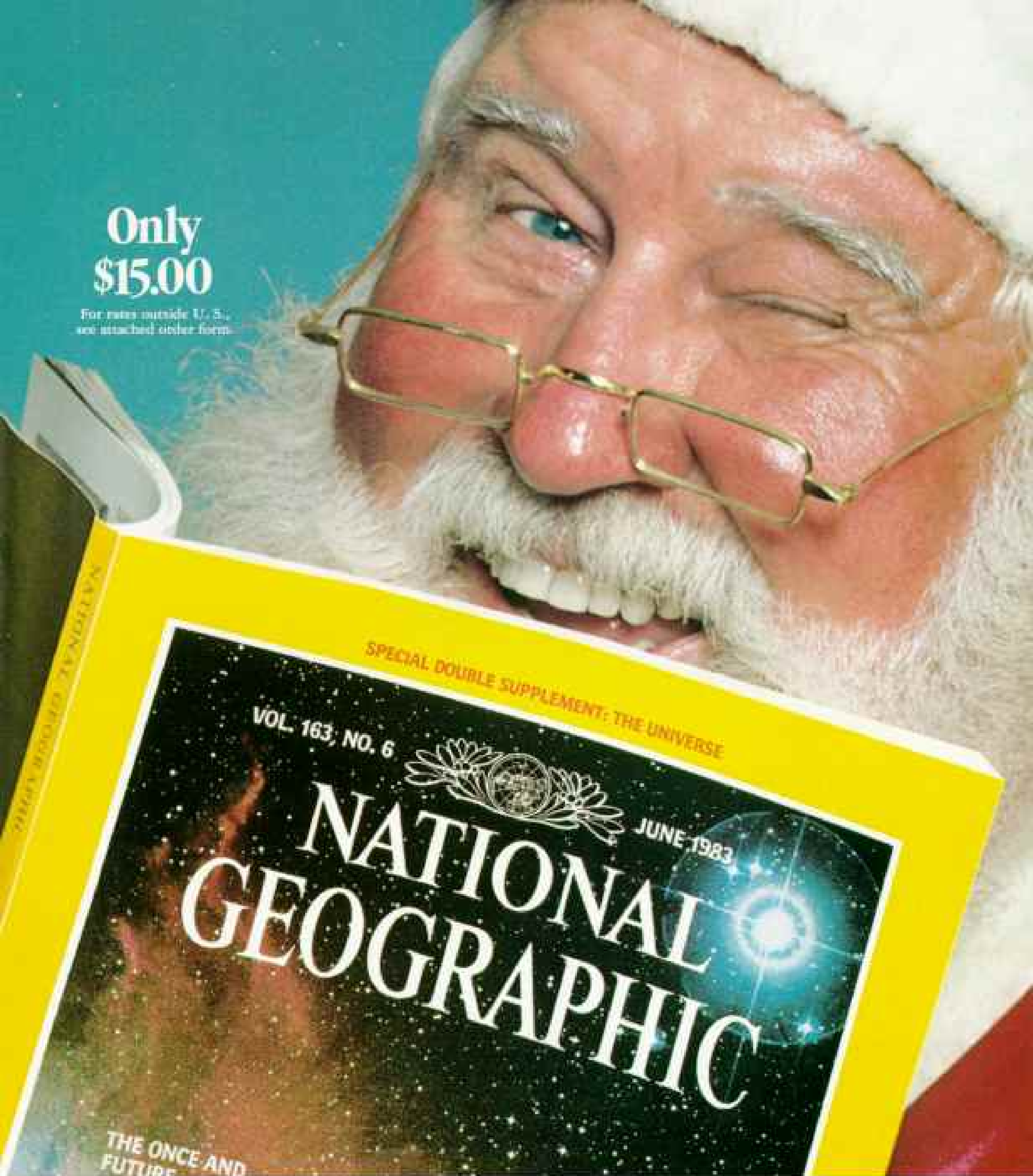
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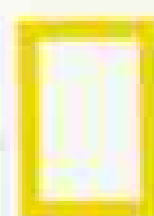


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On Assignment



MARINA DEJAN

EPIC COVERAGE is nothing new for staff photographer *James L. Stanfield* (*above*), perched on a crane high above Dubrovnik, Yugoslavia, once a stronghold of the Byzantine Empire. He has spanned the globe for stories on Charles Darwin (October 1969), gold (January 1974), and rats (July 1977). For this issue's in-depth view of Byzantine civilization, he visited Italy, Turkey, the Soviet Union, and most of Eastern Europe.

Winner of prizes that are the envy of his profession, including three White House News Photographers' grand awards, Jim often devotes *all* his time to the story. "At Mount Athos I stayed up several nights with the monks through their vigils," he says. "I was there during Lent. The menu was Spartan: bean soup, bread, and raw onions. It was very cold, and warm water was scarce. Yet it was one of my most memorable experiences."

EVEN A LEATHER GLOVE proved poor protection for *Pepper W. Trail* (*right*) as he banded 250 cocks-of-the-rock in a Suriname rain forest. The birds' powerful talons would frequently pierce the leather and puncture the ornithologist's fingers. "At least a

quarter of them nailed me," he says. "Sometimes it was hard to keep a positive attitude toward them."

Once, while observing the birds from a palm-frond blind during his four-year study, Trail was approached by a jaguar. "I started coughing and made metallic noises by tapping my tripod with a knife," he recalls. "The cat stopped, stared, and went bounding off. Then the muscles in my calves started to twitch."



GARY TROTT

The new generation 1984 Toyota trucks are turning the truck world upside down, because they're the most advanced trucks ever built. But if one truck had to do it all by itself, this would be the one.

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Photographed by Scott Stewart. *Wolf: Genus: Canis Species: lupus Adult size: Stands 65–81cm at the shoulder Adult weight: 27–54kg Habitat: Forests, tundra and prairies in parts of North America, Europe and Asia. Surviving numbers: Highly variable; endangered in the contiguous U.S.A., Mexico and parts of Europe; more prevalent in Alaska, Canada and Asia.*



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