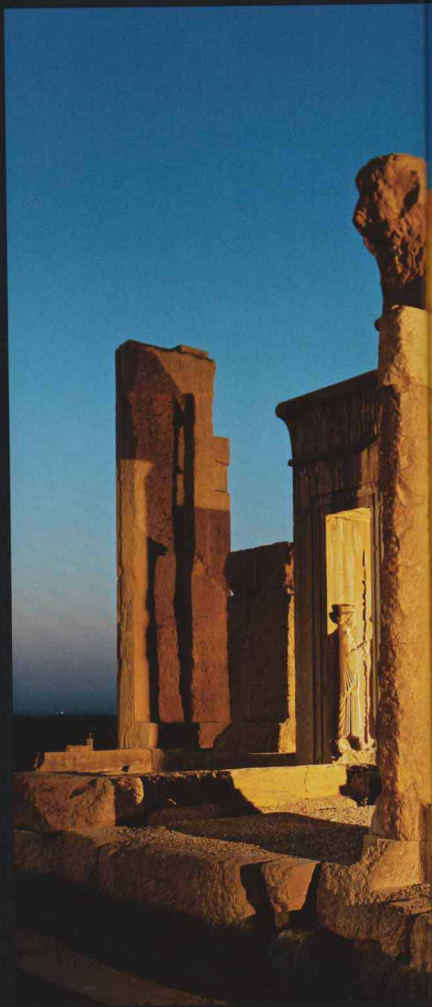
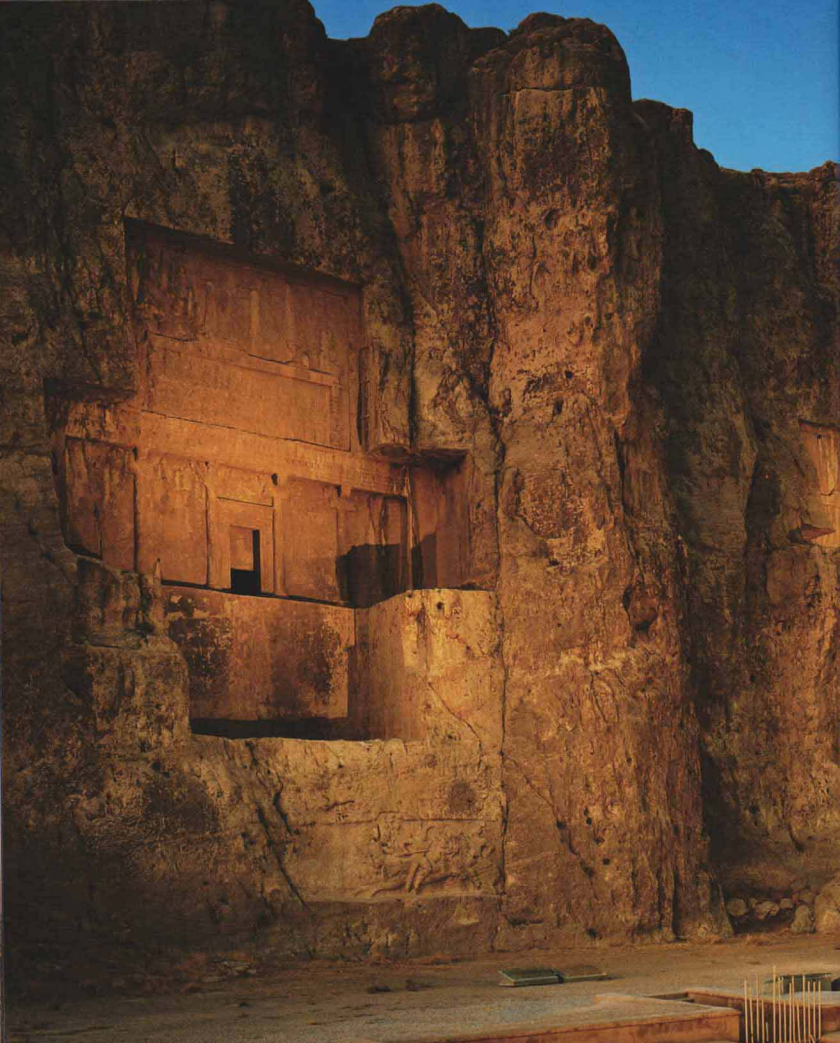


**PERSEPOLIS** *Monumental doorways are nearly all that remain of Darius's palace, known as Tachara (right). Their design, with Egyptian-style cornices, underscores the cosmopolitan taste of the Achaemenids, whose artisans made works of lasting beauty. Artistic motifs as on a gold finial (above), which may have adorned a staff, spread throughout the empire.*



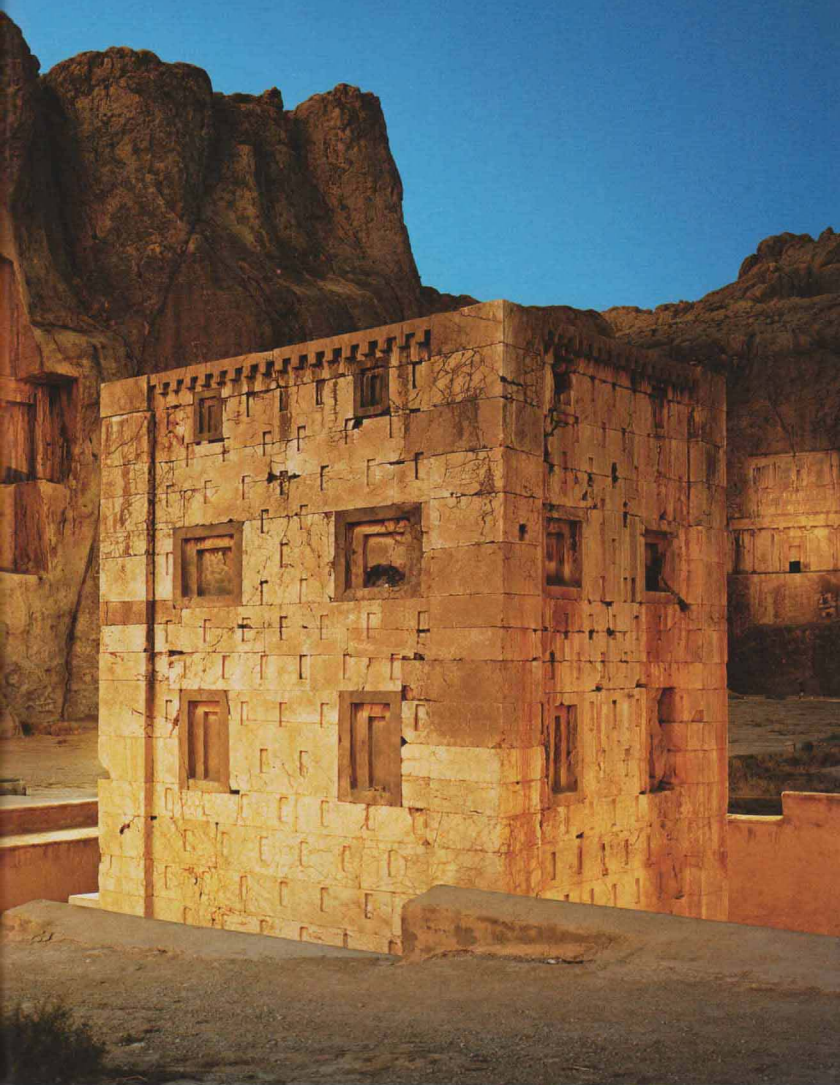


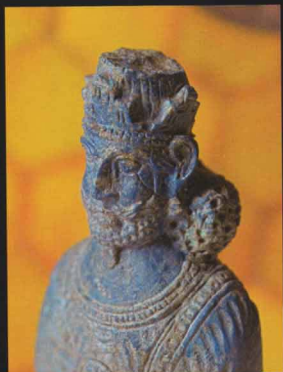




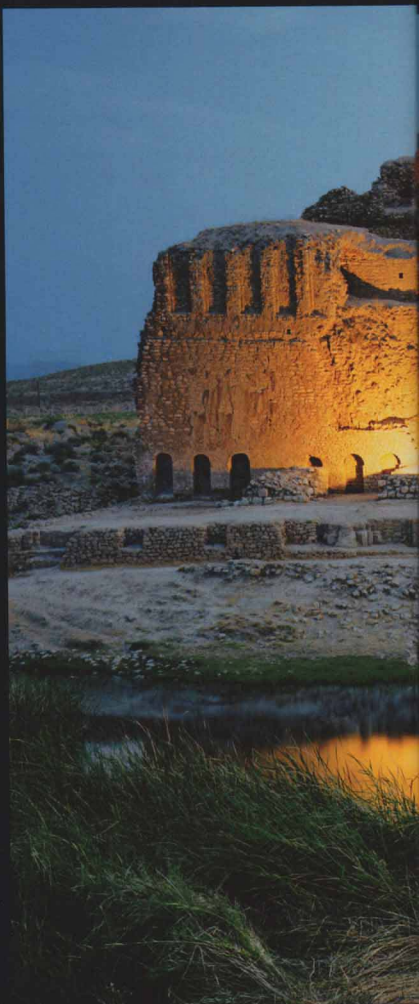
**NAOSH-E ROSTAM** *Cross-shaped tombs cut into cliffs a few miles from Persepolis held the bodies of Darius and his immediate successors. The purpose of the cube-like building in front is a mystery; it may have played a role in Achaemenid coronations.*

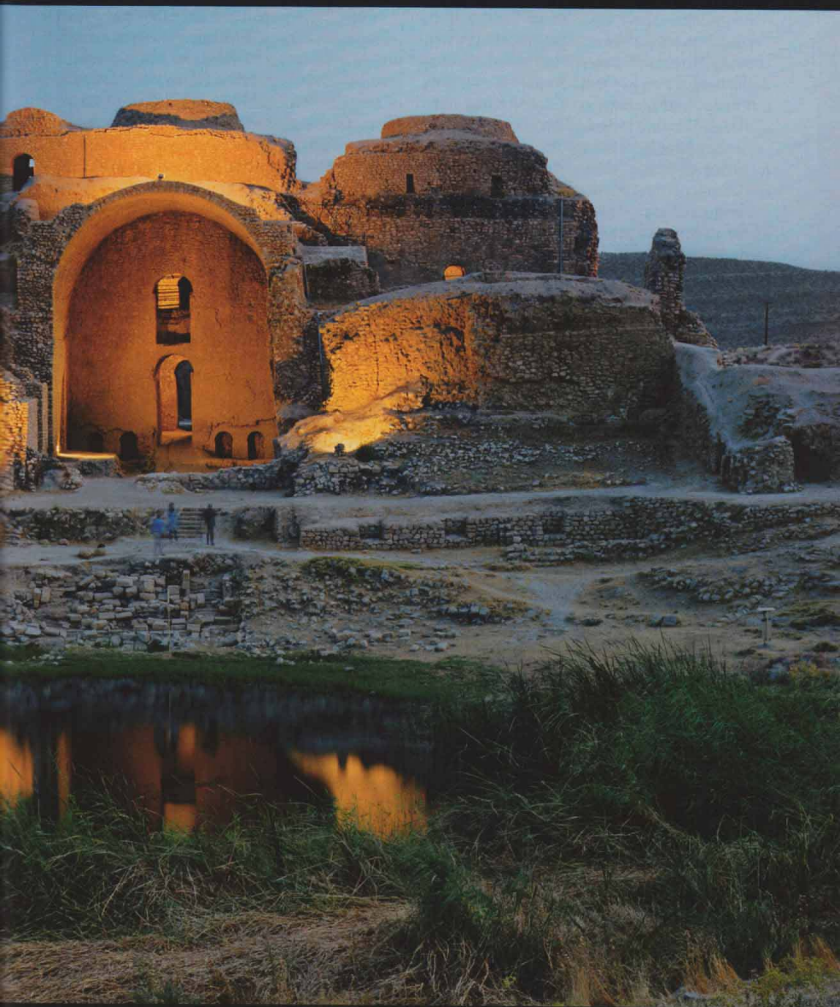






**FIRUZABAD** *The ravages of centuries do not obscure an arched hall leading to an inner domed chamber in the palace of Ardashir I (right), built after A.D. 224. Such design elements were echoed later in classic Islamic architecture. Ardashir founded the Sassanid dynasty (lapis-colored bust of a Sassanid royal, above), the last flowering of ancient Persian culture before the Arab conquest.*







(Continued from page 49) know it, she said. "When I go abroad, people get surprised when they realize that 65 percent of the college students here are girls. Or when they see Iranian paintings and Iranian architecture, they are shocked. They are judging a civilization just by what they have heard in the last 30 years"—the Islamic revolution; the rollbacks of personal freedoms, particularly for women; the nuclear program and antagonism with the West. They know nothing of the thousands of years that came before, she said—what the Iranians went through to remain distinct from their invaders, and how they did it.

For instance, she said, after the Arabs came, and Iran converted to Islam, "eventually we turned to the Shiite sect, which was different from the Arabs, who are Sunni."

They were still Muslims, but not Arabs. "We were Iranian."

In fact, the first thing people said when I asked what they wanted the world to know about them was, "We are not Arabs!" (followed closely by, "We are not terrorists!"). A certain Persian chauvinism creeps into the dialogue. Even though economically they're not performing as well as Arab states like Dubai and Qatar, they still feel exceptional. The Arabs who conquered Iran are commonly regarded as having been little more than Bedouin living in tents, with no culture of their own aside from what Iran gave them, and from the vehemence with which they are still railed against, you would think it happened not 14 centuries ago but last week.

I met a woman at a wedding who gave off the air of an aging movie star, her dapper husband beside her wearing his white dinner jacket and smoking out of a cigarette holder, and it wasn't five minutes before she lit into the Arabs.

"Everything went down after they came, and we have never been the same!" she said, wringing someone's neck in the air. And a friend I made here, an English teacher named Ali, spoke of how the loss of the empire still weighed on the national consciousness. "Before they came, we were a great and civilized power," he said, as we drove to his home on the outskirts of Shiraz, dodging motorcycles and tailgaters. Echoing commonly stated (though disputed) lore, he added: "They burned our books and raped our women, and we couldn't speak Farsi in public for 300 years, or they took out our tongues."

#### THE CULT OF FERDOWSI

The Iranians spoke Farsi anyway. The national language has been Arabized to some extent, but Old Persian remains at its root. The man credited with helping save the language, and the history, from oblivion is a tenth-century poet named Ferdowsi. Ferdowsi is Iran's Homer. Iranians idolize their poets—among many, Rumi, Sa'ad, Omar Khayyám, Háfiz (whose works are said to be consulted for guidance about love and life as much as, if not more than, the Islamic holy book, the Koran). When the people were oppressed by the latest invader and couldn't safely speak their minds, the poets did it for them, cleverly disguised in verse. "Sometimes they were executed," said Youssef the archaeologist, "but they did it anyway." So today, although Iran is home to many cultural denominations (and languages) other than Persian—Turkmen, Arab, Azeri, Baluchi, Kurd, and others—"everyone can speak Farsi," he said, "which is one of the oldest living languages in the world."

The poet-hero Ferdowsi, a sincere Muslim who resented the Arab influence, spent 30 years

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**T**he first thing people said when I asked what they wanted the world to know about them was, "We are not Arabs!" (followed closely by, "We are not terrorists!"). They feel exceptional.

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writing, in verse with minimal use of Arabic-derived words, an epic history of Iran called the *Shahnameh*, or *Book of Kings*. This panorama of conflict and adventure chronicles 50 monarchies—their accessions to the throne, their deaths, the frequent abdications and forcible overthrows—and ends with the Arab conquest, depicted as a disaster. The most heralded character is Rostam, a chivalrous figure of courage and integrity, a national savior and “trickster hero,” according to Dick Davis, a Persian scholar at Ohio State University who has translated the *Shahnameh* into English. “The stories of Rostam are their myths,” he said. “This is how the Iranians see themselves.”

The tales involve feuding kings and herochampions, in which the latter are almost always represented as ethically superior to the kings they serve, facing the dilemmas of good men living under an evil or incompetent government. The work is haunted by the idea that those ethically most fitted to rule are precisely the ones most reluctant to rule, preferring instead to devote themselves to humankind’s chief concerns: the nature of wisdom, the fate of the human soul, and the incomprehensibility of God’s purposes.

The original *Shahnameh* is long gone, and all that’s left are copies, including one in Tehran’s Golestan Palace museum. Its caretaker, a sweet-faced young woman named Behnaz Tabrizi, cleared a large table and covered it with a green felt sheet. She retrieved a black box from a safe in an adjoining bulletproof room equipped with fire and earthquake alarms and climate control and laid a red velvet cloth on top of the green felt cloth, because the Iranians like to make little ceremonies out of everything, if they can. I had to wear a surgical mask to protect the manuscript from stray saliva and the condensation from my breath, and Behnaz put on white cotton gloves. She gently lifted the book, which dates to about 1430, out of its box and gingerly turned the pages with the tips of her fingers while I examined its 22 illustrations with a magnifying glass. They depicted scenes the collective cultural memory is steeped

in—someone tied to a tree while awaiting his fate; Rostam unwittingly killing his own son, Sohrab, in battle; men on horseback with spears fighting invaders on elephants—all precisely drawn and vibrantly colored, using inks that were made from crushed stones mixed with the liquid squeezed from flower petals.

It is said that just about anybody on the street, regardless of education, can recite some Ferdowsi, and there are usually readings going on at colleges or someone’s apartment or traditional Persian teahouses, like one in south Tehran called Azari. The walls were covered with scenes from the *Shahnameh*, among them the one of Rostam killing Sohrab. A storyteller did a one-man dramatic reading, and afterward musicians played traditional music and sang about yearning for the love of a woman or for the love of Allah. People sat together at long tables or stretched out on platforms covered with Persian rugs, smoking their tiny Bahman cigarettes and clapping to the music, while waiters brought dates and cookies and tea in delicate little glasses with little spoons, followed by kebabs, yogurt milk, pickles, and beet salad. Children danced on the tabletops as the patrons cheered them on and took pictures with their cell phones.

#### “THEY CAN’T CONTROL WHAT’S INSIDE US”

Thanks to Ferdowsi, the Iranians always had their language to unite them and keep them different from the outside world—and they also took pains to safeguard their cultural touchstones.

Take the New Year: Nowruz, a 13-day extravaganza during which everything shuts down and the people eat a lot, dance, recite poetry, and build fires that they jump back and forth over. It’s a thanksgiving of sorts, celebrated around the spring equinox, and a holdover holiday from Zoroastrianism, at one time the state religion of the Persians. Zoroastrianism’s teachings—good and evil, free will, final judgment, heaven and hell, one almighty God—have influenced many religions, including the world’s three main faiths, Judaism, Christianity, and Islam. By the time the



Arabs arrived, bringing what was for them the new idea of worshipping a single God, Persians had been doing it for more than a millennium.

These days some officials see the bond with antiquity as a focus for hope. "We are a nation with such a history that the world could listen to us," Iranian Vice President Esfandiar Rahim Mashaei told me. "We hope that by taking pride in our archaeological sites, the people realize their capabilities, and it imbues the soul of the nation." But conservative Islamists who have no interest in reviving Persian identity can still hold sway. At times the government has tried to diminish the importance of Nowruz or replace

it with a different New Year, such as the birthday of Imam Ali, the historical leader of the Shiite Muslims. "They would bring forces and arrest people," my friend Ali said. "But they couldn't get rid of Nowruz because we've been practicing Nowruz for 2,500 years! They don't really control us, because they can't control what's inside us."

That has never stopped Iran's leaders from trying, or foreign powers from interfering—particularly after the country was discovered, around the turn of the 20th century, to be sitting on what Iran claims is an estimated 135 billion barrels of proven conventional oil reserves, the second largest in the world after Saudi Arabia.





*Candles illuminate the face of a Zoroastrian boy during Mehregan, an autumnal festival celebrated from the time of the first Persian Empire or earlier. Zoroastrianism survived the Arab conquest nearly 1,400 years ago and today has some 30,000 followers in Iran.*

popular prime minister, Mohammad Mossadegh. Mossadegh had kicked out the British after the Iranian oil industry, controlled through the Anglo-Iranian Oil Company (later BP), was nationalized, and the British had retaliated with an economic blockade. With the Cold War on and the Soviet bloc located just to the north, the U.S. feared that a Soviet-backed communism in Iran could shift the balance of world power and jeopardize Western interests in the region. The coup—Operation TP-Ajax—is believed to have been the CIA's first. (Kermit Roosevelt, Jr., Teddy's grandson, ran the show, and H. Norman Schwarzkopf, the father of the Persian Gulf war commander, was enlisted to coax the shah into playing his part. Its base of operations was the U.S. Embassy in Tehran, the future "nest of spies" to the Iranians, where 52 U.S. hostages were taken in 1979.) Afterward, the shah, Mohammad Reza Pahlavi, was returned to power, commercial oil rights fell largely to British and U.S. oil companies, and Mossadegh was imprisoned and later placed under house arrest until he died in 1967.

To Iranians like Shabnam Rezaei, who has created the online magazine *Persian Mirror* to promote Iran's cultural identity, Operation TP-Ajax set the stage for later decades of oppression and Islamic fundamentalism. "I think if we had been allowed to have a democratic government," she said, "we could have been the New York of the Middle East—of all of Asia, frankly—a center for finance, industry, commerce, culture, and a modern way of thinking."

#### FOR THE LOVE OF GOD

The shah had his own uses for Persian identity. He was big on promoting Persepolis and Cyrus while at the same time pouring Western

Adding to the drama is that the Persian Gulf is located along Iran's southern border. On the other side lies much of the rest of the world's crude, in the oil fields of Iraq, Kuwait, Saudi Arabia, and the United Arab Emirates. There's also a hairpin waterway in the gulf, the Strait of Hormuz, through which much of the world's oil passes every day. So Iran is in a unique position to threaten the world's oil supply and delivery—or sell its own oil elsewhere than to the West.

Oil was at the root of a 1953 event that is still a sore subject for many Iranians: the CIA-backed overthrow, instigated and supported by the British government, of Iran's elected and

music, dress, behaviors, and business interests into Iran. One attempt to instill nationalistic pride, which backfired and helped turn public opinion against him, was the ostentatious celebration he staged in 1971 to commemorate the 2,500th anniversary of Persian monarchy. It featured a luxurious tent city outside the entrance to Persepolis, VIP apartments with marble bathrooms, food flown in from Paris, and a guest list that included dignitaries from around the world but few Iranians.

The shah's vision apparently involved too much modernizing too fast, and many Iranians bristled. "We were getting westernized," said Farin Zehedi, a drama professor at the University of Tehran. "But it was superficial, because the public had no real understanding of Western culture." Iranians experienced it as a cultural attack and rebelled in the press and with street demonstrations. The more paranoid the shah became, the more heavy-handed were his secret police—SAVAK, created in 1957 with the help of American and Israeli advisers. At least hundreds of people are believed to have been executed by SAVAK; many others were imprisoned, tortured, and exiled, and more than a thousand were killed by the army during demonstrations. So when Ayatollah Ruhollah Khomeini spoke in the late 1970s of liberating the people from this latest yoke, they were moved by his eloquence and moral rectitude, and for a time the reemergence of religion after the shah's relentless modernism felt like a cleansing.

Yet many Iranians by nature are not particularly religious, in the sense of being mosquegoers and fasters. "They have a powerful soul and spirit," said a carpet salesman named Arsha, "but that is not the same." There's a tendency to follow more of a Zoroastrian model from antiquity, with its disdain for rules and for the

presumption that an intermediary, such as a mullah, is required to know Allah. The spiritual journey has tended to be more inward, in keeping with the Persian proverb "Knowledge of self is knowledge of God."

So while Iranians at first were open to the idea of an increased role of Islam in public life, they weren't prepared for it to be forced on them with such rigor, especially given the Koran's specific instruction that there should be "no compulsion in religion." They certainly didn't expect the clerics to take over commerce, government administration, the courts, and day-to-day life, down to and including how to go to the bathroom and how to have sex. Punishments reminiscent of the Dark Ages—public stonings, hangings, the cutting off of fingers and limbs—were put into effect. The central government now discourages some of these archaic practices, but stubborn conservative mullahs out in the provinces cling to the old ways. Beneath it all is the spiritual aim to serve Allah and prepare for paradise.

"They're forcing heaven on me!" Ali said.

At his home one night, half a dozen friends sat in a circle and confided how awful it was to be trapped in an environment of fear and secrecy, not knowing if a friend or a loved one has been put in a position to make reports on what you're thinking and saying and doing.

"The ayatollahs and the ordinary people—everyone has to pretend," said a soft-spoken locksmith with a huge mustache named Mister D. "You don't know who is telling the truth; you don't know who is really religious and who isn't."

The Persians have a saying: The walls have mice, and the mice have ears.

"You can't trust your own eyes," Ali said.

"If you breathe in or breathe out," Mister D said, "they know."

**A**n irony is that the Islamic revolution—at times referred

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to here as the "second Arab invasion"—appears to have strengthened the very ties to antiquity that it tried so hard to sever.

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## THE GENERATION OF THE REVOLUTION

As for the revolution's effect on Persian identity? A typically Iranian thing seems to have happened.

For ten years the doors to the West were closed, and conservative clerics running the government went about trying to minimize any cultural identification that was pre-Islamic, a period referred to in much of the Muslim world as *Jahiliya*, age of ignorance. In official documents, where possible, references to Iran were replaced with references to Islam. Zoroastrian symbols were replaced with Islamic symbols, streets were renamed, and references to the Persian Empire disappeared from schoolbooks. For a time it seemed that Ferdowsi's tomb—a big, pale-stone mausoleum outside the holy city of Mashhad, with a beautiful reflecting pool leading up to it and chirping birds racing about the columns—might be destroyed. Even Persepolis was in danger of being razed. “But they realized this would unite the people against them,” Ali said, “and they had to give up.”

The people had welcomed the removal of cultural junk from the West, said Farin, the drama professor, as we sipped tea in her tasteful Tehran apartment. “But we soon realized that the identity the government was introducing also was not exactly who we were.” In the cultural confusion, “elements of the old culture”—traditional music, Persian paintings, readings from Ferdowsi—were rekindled. “We call it ‘the forgotten empire.’”

A young underground Persian rap singer named Yas joined us then. He had black spiky hair, stylishly long sideburns, handsome eyebrows shaped like two black bananas, and around his neck he wore a silver *fravahar*, the Zoroastrian winged disk that signifies the soul's upward progress through good thoughts, words, and deeds. He's part of the Generation of the Revolution, who grew up after 1979 and account for more than two-thirds of the country's 70 million people. Various described as jaded and lacking belief in their futures—“a burned generation,” as Kurdish filmmaker Bahman Ghobadi put it—they are increasingly leaving for Europe

and elsewhere. Some have a rich consciousness of their Persian past while at the same time supporting the idea of Islamic unity; some feel only Persian or only Islamic; and others immerse themselves in Western culture through television programming received on illegal satellite dishes. Farin said: “They're schizophrenic.”

Yas raps about Persian poets, grandparents, and the history of Iran. One of his most popular cuts, “My Identity,” was in response to the movie *300*, about the famous battle at Thermopylae between the Spartans of Greece and the so-called Persian immortals. “The Greeks were portrayed as heroic, innocent, and civilized,” Yas said. “The Persians were shown as ugly savages with a method of fighting that was unfair.” The movie set off a tirade from Iranians here and abroad, who experienced it as a cultural attack. In defense, Yas rapped about Persepolis and Cyrus but also chastised his fellow citizens for resting on the laurels of greatness past.

An irony is that the Islamic revolution—at times referred to here as the “second Arab invasion”—appears to have strengthened the very ties to antiquity that it tried so hard to sever; it has roused that part of the national identity that remains connected to the idea, memorialized in places like Persepolis and Pasargadae, of Iranians as direct descendants of some of the world's most ancient continuous people. A civil engineer named Hashem told me of a recent impromptu celebration at Cyrus's tomb. People text messaged each other on their cell phones, and a couple of thousand “coincidentally” showed up, buying multiple entrance tickets to support restoration of the tomb. The celebration was informal. No speeches, no ceremony. “Just to honor Cyrus and show solidarity.”

As Farin put it, shaking her lowered head with an air of world-weariness, “there has been this constant onslaught on our identity, and the reaction has always been to return to that deepest identity. Inside every Iranian there is an emperor or an empress. That is for sure.” □

✦ **Persian Excursion** Explore artifacts and ruins from bygone eras in our photo gallery at [ngm.com](http://ngm.com).

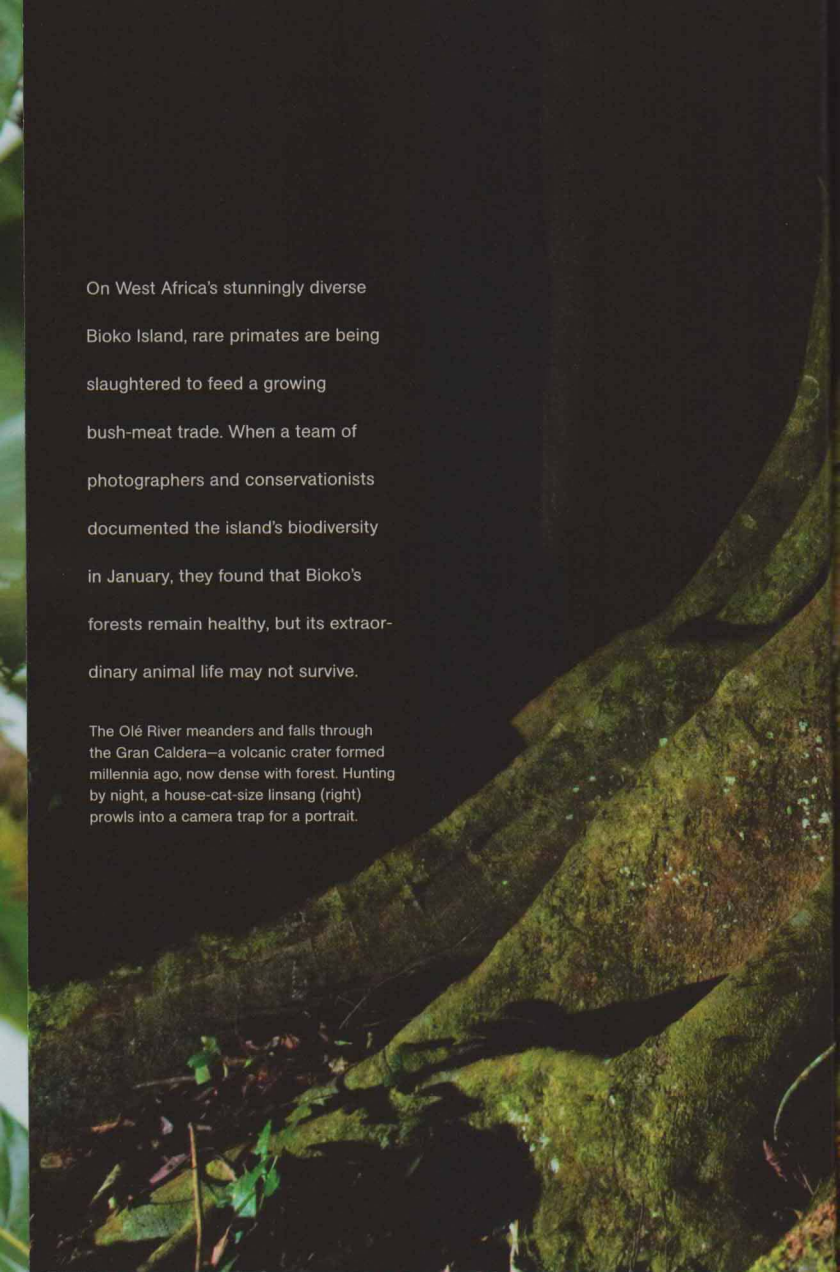




An aerial photograph of a dense, vibrant green forest. A waterfall cascades down a rocky ledge on the right side of the frame. In the background, misty mountains rise against a cloudy sky. The overall scene is lush and verdant.

# Island Ark

a threatened African treasure



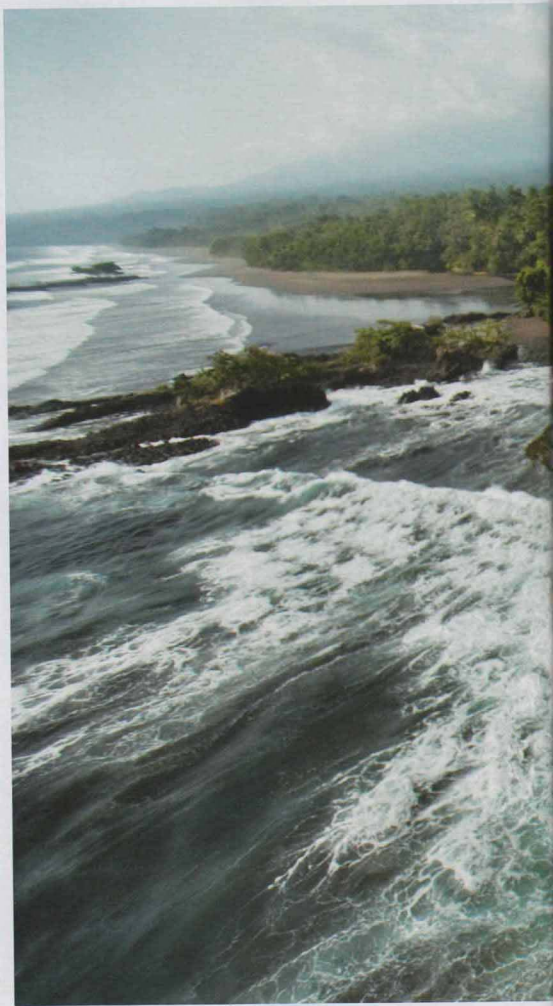
On West Africa's stunningly diverse Bioko Island, rare primates are being slaughtered to feed a growing bush-meat trade. When a team of photographers and conservationists documented the island's biodiversity in January, they found that Bioko's forests remain healthy, but its extraordinary animal life may not survive.

The Olé River meanders and falls through the Gran Caldera—a volcanic crater formed millennia ago, now dense with forest. Hunting by night, a house-cat-size linsang (right) prowls into a camera trap for a portrait.





Twenty miles of ocean, rocky headlands, and boat-beating surf—like that pounding Point Dolores here on the southern coast—have helped keep Bioko wild. Most of the island's estimated 150,000 people live in Equatorial Guinea's capital city, Malabo, in the far north.







By Virginia Morell

Photographs by Tim Laman,  
Ian Nichols, Joel Sartore,  
Christian Ziegler

IN THE YEAR 1551 a strange male animal was put on public display in Augsburg, Germany. He had humanlike fingers on his hands and feet, observers noted, and a “cheerful nature,” although he also had a tendency to turn his backside to viewers. Based on an illustration of the creature, biologists think it was most likely a drill (*Mandrillus leucophaeus*), a baboonlike primate. Even today, more than 450 years later, drills are studied so infrequently in the wild that when a small team of biologists recently spotted a troop of them on Equatorial Guinea’s Bioko Island, they collectively gasped, then sat down on the rain forest floor to watch.

The drills, the largest primates on Bioko, were climbing and feeding in a fig tree at the floor of the island’s 7,000-foot-high Gran Caldera. Earlier that morning the scientists had spotted troops (each five to thirty strong) of chattering monkeys: red-eared, black colobus, and red colobus, the latter one of the most threatened of all primates.

Biologists regard Bioko Island as a living laboratory for studying how plants and animals evolve in isolation. It lies in the Gulf of Guinea, 20 miles off the west coast of Africa, one of four islands in an archipelago. The three others—São Tomé, Príncipe, and Annobón—are deepwater isles formed tens of millions of years ago and colonized by plants and animals from Africa that arrived on their shores by chance.

Bioko, however, was connected to the African mainland during each ice age, most recently about 12,000 years ago. Like an exclusive ark, the island shelters an isolated set of sub-species evolved separately from those on the mainland. There are seven species of monkeys, including the drills; four galagos (bush babies); two small antelopes (duikers); one species of porcupine; one species of tree hyrax; one species of pouched rat; and three species of scaly-tailed squirrels. There are catlike linsangs (but no lions or leopards). The roster once included forest buffalo, but they were hunted to extinction a century ago.

Add orchids, land snails, freshwater fish, amphibians, spiders, and insects—all evolving apart from their mainland relatives. In the island’s interior, woodlands, grasslands, and rain forest remain much as they were when the first Portuguese explorers stepped ashore in the

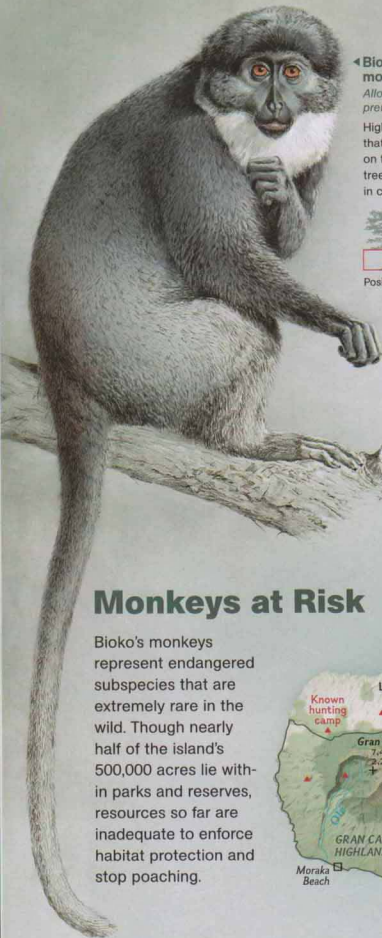
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■ **Society Grant** This research project was funded in part by your Society membership.



Island residents help land supplies on Moraka Beach in preparation for biodiversity surveys and the photographic blitz. Eyes trained on the treetops, Drexel University biologist Gail Hearn has been tracking Bioko's primate populations for a dozen years. "It's so lush here it's overwhelming," she says, "a real monkey paradise." And unlike so many ecosystems worldwide, "humans are still in a position to save it."

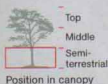




**Bioko Preuss's monkey**

*Allochrocebus preussi insularis*

High-altitude monkey that spends more time on the ground than in trees. No populations in captivity.



**Bioko red-eared monkey**

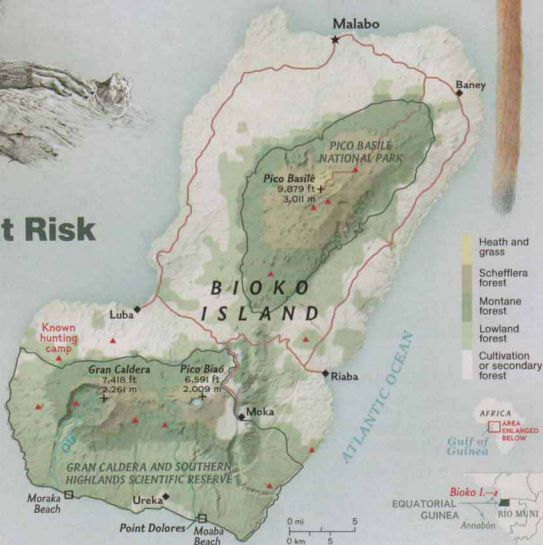
*Cercopithecus erythrotis erythrotis*

Tolerates light farming and selective logging. Common on Bioko, but mainland range very limited.

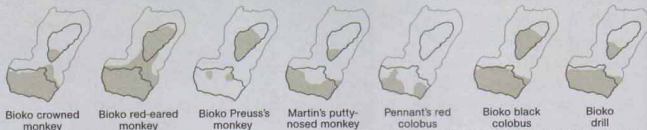


# Monkeys at Risk

Bioko's monkeys represent endangered subspecies that are extremely rare in the wild. Though nearly half of the island's 500,000 acres lie within parks and reserves, resources so far are inadequate to enforce habitat protection and stop poaching.



**Distribution**



**Group size**

**Size**

WEIGHT (lb)  
BODY (in)

5-25	5-25	2-12	5-25	5-25	3-12	8-30							
7-11	5-7	7-12	5-7	10-14	6-10	9-13	7-10	24	22	16-29	15-22	30-60	14-27
15-18	14-16	15-20	14-17	17-21	15-17	17-22	16-20	19-22	18-21	20-27	20-27	24-35	19-24
	Male Female												







◀ Martin's putty-nosed monkey

*Cercopithecus nictifans martini*

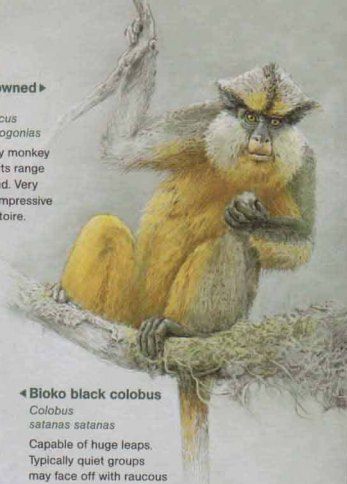
Easy to hear but difficult to see, this monkey is known for a distinctive, explosively loud alarm call (sounds like pee-ow).



▶ Bioko crowned monkey

*Cercopithecus pogonias pogonias*

May be only monkey expanding its range on the island. Very agile, with impressive vocal repertoire.



▼ Pennant's red colobus

*Procolobus pennantii pennantii*

Noisiest monkey on Bioko, with assorted honks and squawks. Slow to react to danger. Does not survive in captivity.



▶ Bioko black colobus

*Colobus satanas satanas*

Capable of huge leaps. Typically quiet groups may face off with raucous roars. None in captivity.



▶ Bioko drill

*Mandrillus leucophaeus poensis*

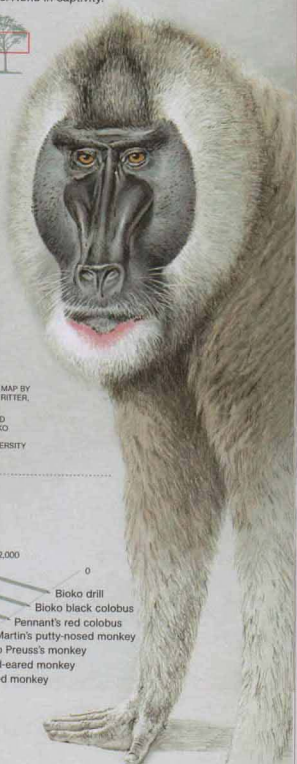
Bioko's largest monkey. Travels on the ground but sleeps up high.



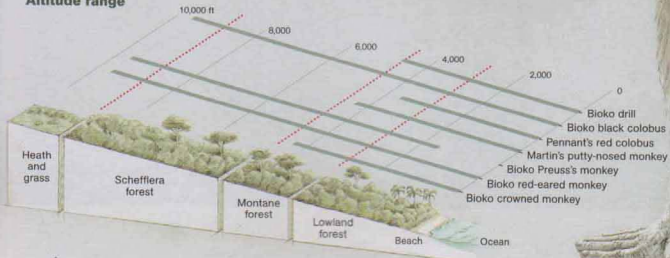
Drawings not to scale

ART BY FERNANDO BAPTISTA, MAP BY CHARLES BERRY AND LISA R. RITTER, ALL HQ STAFF

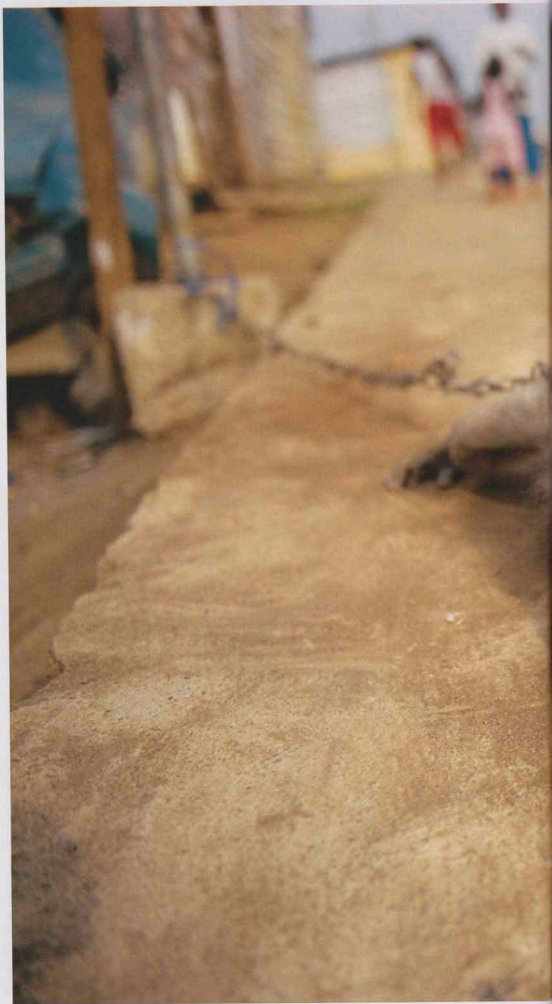
SOURCES: TOM BUTYNSKI AND GAIL HEARN, BOTH WITH BIOKO BIODIVERSITY PROTECTION PROGRAM AND DREXEL UNIVERSITY



Altitude range



Chained to a post in Malabo, where the bushmeat trade thrives, this orphaned drill may be sold as a pet, or become dinner for its captors. Bioko's drill population shrank by a third from 1986 to 2006.







## Oil and natural gas have brought new wealth to the island.



Shoppers spend over \$200 for a large male drill at the Malabo market, paying extra to have the fur singed off on-site. Chicken and other protein sources are readily available, and far cheaper than bush meat.

15th century: largely untouched and beautiful.

"It's as close to pristine as any place I've seen," said Gail Hearn, one of the researchers leading the expedition into the Gran Caldera—her 13th trip into its forested depths. A primatologist at Pennsylvania's Drexel University, Hearn made her first trip here in 1990, intending to start a long-term study of the Bioko Island drills. Instead, "I just fell in love with the whole place," she said. "We've done so much damage to this planet. Here it's undamaged and impossibly beautiful. It feels like a place where one person could make a difference."

Hearn organized the Bioko Biodiversity Protection Program (BBPP). Each January she brings together teams of scientists and

American and Equatorial Guinean students for comprehensive biodiversity surveys. This year a team sponsored by *National Geographic* magazine, Conservation International, and the International League of Conservation Photographers joined her for a 12-day RAVE (Rapid Assessment Visual Expedition) to document as many monkeys as possible, along with the rest of Bioko's stunning variety of other species—a richness protected by the island's history but now threatened by rampant hunting.

Bioko's flora and fauna so impressed the first European visitor, 15th-century Portuguese explorer Fernão do Po, that he named the island Formosa, "beautiful." Europeans who followed wanted to plant their first African colony here.

## People who love the taste of monkey meat now have the cash to buy it.

The indigenous Bubi people, however, who had arrived from mainland Africa, refused to cooperate with the white-skinned arrivistes, scuttling every attempt at European settlement until 1827. That year Britain established a base at Malabo (now Equatorial Guinea's capital) to combat the West African slave trade. Spain, which later colonized the neighboring mainland region of Río Muni, ultimately gained control of both colonies. The two together, called Spanish Guinea, gained independence from Spain in 1968 and emerged as the Republic of Equatorial Guinea.

Settlers from the mainland belonging to the Fang ethnic group took control from the Bubi, and since the Spanish left, Bubi separatists have clashed often with government forces. Neither the Fang nor the Bubi locals, accustomed to hunting the island animals for food, share the scientists' appreciation of Bioko's unique biodiversity. Further thwarting conservation efforts is a burgeoning offshore oil industry. Vast stores of oil and natural gas were discovered in the last decades of the 1900s, and now American corporations are pumping some 400,000 barrels of oil and natural gas a day, bringing new wealth to the island. More and more people who love the taste of monkey meat have the cash to buy it.

PRIMATOLOGIST TOM BUTYNSKI, senior conservation biologist on the expedition, first visited Bioko in 1986 in response to an International Union for Conservation of Nature report that identified the island as an important place to survey for monkeys. At the time, no biologist had visited for more than two decades, and Butynski expected to find the monkeys hunted nearly to extinction.

Instead, he found them thriving. It turned out that to prevent Bubi uprisings the Fang government had confiscated the islanders' shotguns from 1974 to 1986, which had given the primates a reprieve. Further, large tracts of lowland rain forest that the Spanish had cleared for cocoa plantations were returning to forest after the plantations were abandoned.

Monkeys were busy recolonizing the forests.

"We saw about two troops a kilometer in the Gran Caldera transect," Butynski said. The monkeys were abundant, and they were fearless. "I remember thinking how naive they were. We were able to get good, close-up looks."

But there were ominous signs as well. During the same ten-week survey, Butynski spotted 14 Fang hunters with shotguns and saw numerous traps set for duikers, monkeys, and smaller mammals. Around the same time, bush-meat sales increased in Malabo. As in much of West Africa, bush meat, from wild animals in the forest, particularly from monkeys, is prized as a delicacy, even though it costs much more than chicken in local markets.

The steady slaughter of monkeys has taken its toll. By the time of this year's BBPP survey, hunters had wiped out many of the monkeys at the northern end of the 780-square-mile island, including those in a national park. They had also started shooting the monkeys in the Gran Caldera and Southern Highlands Scientific Reserve at the south end of the island, where villagers aided by the BBPP monitor monkey numbers.

Over the past decade BBPP staff have recorded the number of monkeys in the meat markets, and the tally had reached more than 20,000 by the end of March 2008. Tens of thousands of other animals have ended up there too. It is clear that all seven monkey species are in danger of becoming extinct, and that the Equatorial Guineans could well eat their way through the island's fabled biodiversity.

Documenting the carnage has had some effect. In October 2007 the BBPP convinced Equatorial Guinea's president, Teodoro Obiang Nguema Mbasogo, to issue a ban against the hunting, selling, and consumption of primate meat. It had been in place for two months

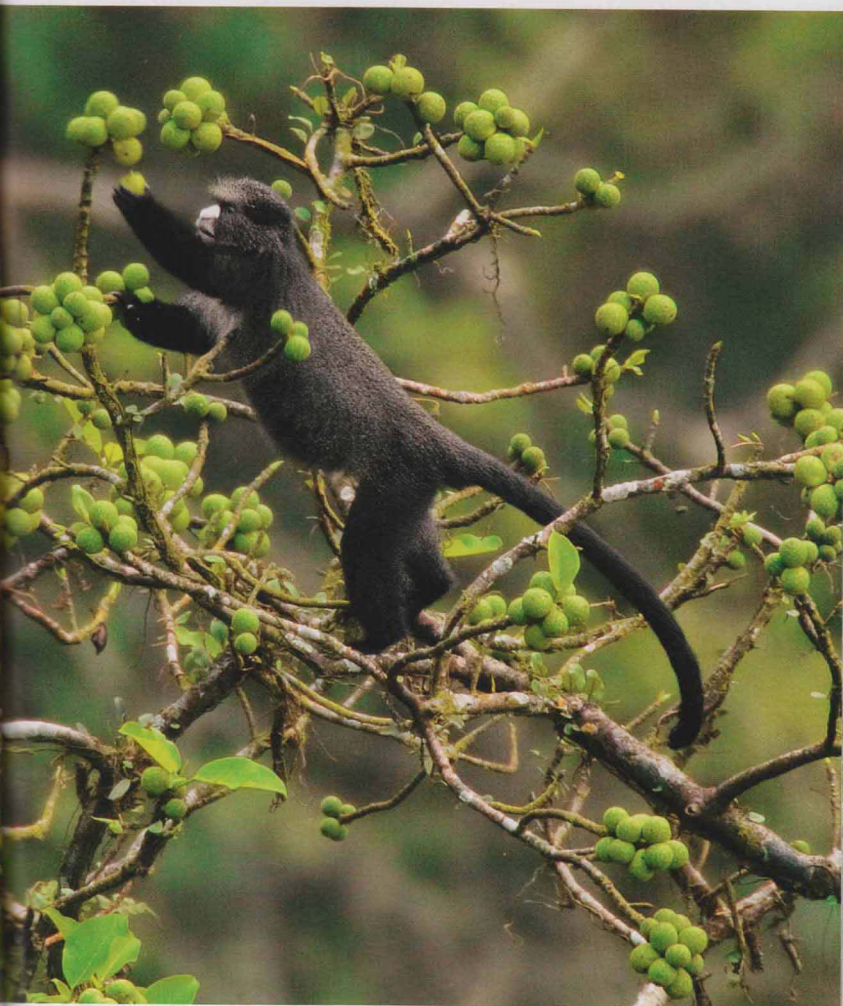
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*Author Virginia Morell writes regularly about science and natural history. Christian Ziegler specializes in ecology and conservation of tropical rain forests. Joel Sartore and Tim Laman are veteran shooters for the Geographic; Ian Nichols is currently on assignment photographing chimpanzees in Congo.*

A thickly fruited fig tree provides nourishment for a Martin's putty-nosed monkey. The rainy season lasts nearly all year in Bioko's south; more than 400 inches of annual rainfall in some spots help a diverse garden grow.







## “Here it’s undamaged and impossibly beautiful. It feels like

when the BBPP team arrived in January. How were the monkeys faring? And how would they react to humans who wanted to count rather than shoot them? It didn’t take long for the biologists to find out.

IT WAS DUSK, A TIME WHEN monkeys chatter as they settle in for the night, but the caldera forest was oddly quiet. Butynski had anticipated an especially lively chorus because all seven monkey species live in the caldera. But there was little to hear aside from the trilling hum of insects and frogs. Butynski kept to a trail, stopping every 50 feet or so to look and listen. “Well,” he said at last, clearly baffled, “maybe the monkeys have moved to another part of the forest for the night.”

No sooner had he finished speaking than two fur bombs the size of large dogs hurtled overhead. They splashed into the leafy crown of a nearby tree and then plunged into another, as if diving from one green pool to the next. Finally, having uttered not a single call, they disappeared over the edge of a river gorge and into the forested twilight.

Butynski, who has made dozens of primate surveys throughout Africa, pulled out his notebook to record the sighting. “That’s a surprise—two drills,” he said. “They must have been in the trees sleeping when they heard my voice.”

The next morning Butynski set out into the caldera again. The instant he spotted a troop of red-eared monkeys, they began to give *hack* calls and chirps, eyes wide with terror. Mothers clutched babies to their breasts; branches bounced and limbs heaved as the monkeys scurried to get away.

Such fleeting glimpses were all the scientists came to expect. In the first three days of the survey, as the team hiked from the island’s southern shore 2,000 feet up the caldera, all the monkeys they spotted gave alarm calls before vanishing into one of the steep river gorges that cut through the caldera.

On the fourth day, however, the monkeys were less afraid. After hiking up and down steep, muddy trails littered with rough lava cobbles,

the team reached the caldera’s northern end, its inner sanctum. Bioko receives more than 400 inches of rain a year, and although this was supposed to be the dry season, daily thunderstorms unleashed torrents. Between storms, the sun shone fierce and bright, and large beads of sweat rolled off everyone’s foreheads and noses.

Despite increased hunting, the forest canopy in this distant part of the crater fairly exploded with monkeys. In their leafy shelter a dozen red-eared monkeys leaped in alarm, trailing their long copper-colored tails along the branches and shouting their nasal call of warning. Forty feet farther on, a smaller group of gnomelike black colobus interrupted their leaf breakfast to race away. Just beyond them, a single charcoal-colored Preuss’s monkey jumped from a low bush where he’d been feeding into a towering mahogany tree, then leaped into a neighboring tree, his dark tail curled in a shepherd’s crook over his back. In the distance troops of red colobus gave *honk* calls, and crowned monkeys made their throaty *booms*.

Occasionally, red Ogilby’s and blue duikers crashed through the tangled undergrowth. Dozens of butterflies in brilliant hues and patterns to rival a Missoni gown flitted along the trail, while *Jurassic Park*-size earthworms and millipedes slithered into damp ravines, and pairs of gray parrots pirouetted in the sky.

Butynski jotted down each monkey troop and duiker, and stopped to inspect flowers, leaves, and fruits that monkeys had nibbled. Sometimes a strong, ammonia scent filled the air—the calling card of a troop of red colobus, one of the rarest of Bioko’s monkeys. But it was the drills—even scared drills—that we all most wanted to see.

Finally we spotted a small troop of drills below us on the far side of a river feeding in a tree. The distance and rushing water extinguished the sounds and smells of our little clutch of humans, and the drills went about their business as if we weren’t there. This was when we sat down to watch.

All had bushy, gray-brown pelts, and all but one were adult females or adolescents. The



a place where one person could make a difference.” —GAIL HEARN



As tiny leatherback turtles scramble from their nest on Moaba Beach, researchers Daniel Fitzgerald and Shaya Honarvar count 48 hatchlings. Instinct sends the young seaward (right). Those that manage to elude hungry shorebirds and crabs face a gantlet of predators in the open ocean. Isolated Bioko Island is an ideal research site—and a haven—for the four endangered sea turtle species that nest on its shores.







FRUIT BAT (*LYSSONYCTERIS* SP.)



GECKO (*HEMIDACTYLUS FASCIATUS*)



TUSSOCK MOTH CATERPILLAR (FAMILY LYMANTRIIDAE)



FLOWER (*ROTHMANNIA* SP.)



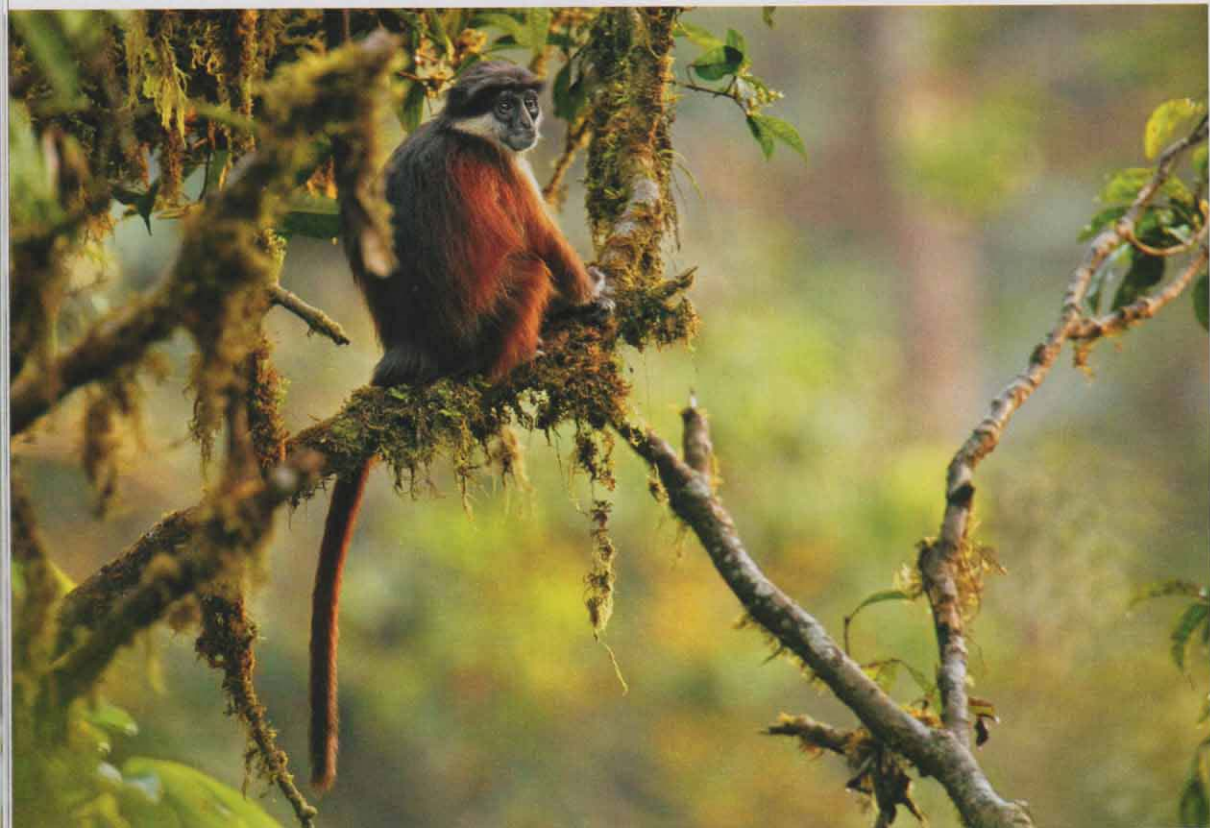
BIOKO ALLEN'S GALAGO (*SCIUROCHEIRUS ALLENI ALLENI*)



A bush baby gazes from its sleeping tree with eyes that suit its nocturnal lifestyle. This one-pound primate subspecies is unique to Bioko. Hunters rarely take them, but biologists can't ignore them. "They'll sit on top of your tent and screech all night," says Gail Hearn. Bats (left, at top) share the bush babies' hours. Daylight brings out geckos, bugs, and blooms.



**It was dusk, when monkeys chatter as they settle in for the night,**



Slow to leap, and an easy target for poachers, the Pennant's red colobus ranks among the world's most endangered primates. Preserving its island sanctuary demands good science—and law enforcement.

sole adult male was nearly twice as big as the others. He was simultaneously muscled and rotund, his Buddha belly at odds with his sharp-featured, obsidian black face. So sculpted were the angles of his cheeks, brows, and nose that he looked as if he wore a mask. White fur bristled around his face; his rump shone red, blue, and purple. Whenever he moved, the other drills got out of his way. At last, when they had eaten their fill, the troop clambered down the tree and vanished into the shadowy forest.

"Isn't it remarkable?" Butynski said after the last drill was gone. For nearly 30 minutes the biologists had been able to observe monkeys that weren't frightened of humans. "No one has studied the ecology and behavior of these

animals in the wild," he said. "But that might be possible here now: Someone could habituate a troop of drills to humans and start a long-term study."

Even with the number of dead monkeys that the BBPP staff had counted in Malabo's market, the northern caldera survey revealed a substantial and healthy primate population. "They're certainly not naive anymore, and they're not as abundant as in 1986, but they're still in relatively good numbers," Butynski said. His calculations suggested that the caldera's forest shelters a little more than one monkey troop a kilometer. "It's a much lower rate of encounter than what we recorded in 1986," he noted. That year there were almost twice as many monkeys.



but the forest was oddly quiet—just the trilling of insects and frogs.

Nevertheless, Butynski remains hopeful. “The forest is still intact, even in places where there aren’t monkeys now,” he said.

Intact habitat is key for Bioko’s monkeys. Most species go extinct for one of two reasons: overhunting or loss of habitat. It’s far easier to control the first problem, Butynski said, than to rectify the second. “Bioko is not like parts of East Africa, where people have cleared the forest to the mountaintops for agriculture. Even still, in East Africa people seldom hunt monkeys.”

“I’m an optimist,” he continued, taking a seat on a slope overlooking the caldera’s rugged rim and vine-draped woods. Recent monsoon winds and rainstorms had left parts of the forest flattened like wilted salad. Above the ruffled greenery, red-brown African mahogany trees rose at random, their trunks tall and straight, their limbs sagging with the weight of orchids and ferns. “Just look at those mahoganies. Anywhere else, they would have been logged long ago. This place is just too remote and difficult for large numbers of hunters to get to. It’s what keeps the monkeys relatively safe.”

Hearn, who hiked into the caldera a few days later, is not so sure. “We used to think the monkeys were safe here, that it was just too far for the hunters to travel. But it isn’t.”

On a camp table she unrolled a topographical map of the Gran Caldera and surrounding area. “See this area? It’s not that far from the northern edge of the crater.”

Hearn thinks the hunters probably use some of the trails the BBPP has cut over the years. “They know it’s a protected area, but there’s no law enforcement, so they come right in and shoot monkeys and duikers,” she said. “In the Malabo market they’ll even tell you brazenly, ‘It’s a Gran Caldera monkey.’”

For the first two months after the ban on primate meat was announced, monkey carcasses vanished from the market. You could still buy all the duikers, pangolins, pythons, pouched rats, and porcupines necessary to make a fancy stew—but not monkeys.

Part of the presidential edict explains that monkey meat is unsafe because “primates are

carriers of epidemics and other pathologies” that can infect people. (Indeed, epidemiologists have found several simian immunodeficiency viruses in western and central Africa primate species, among which the precursors of HIV-1 and HIV-2 have been identified.) Hearn thinks the health risk may have discouraged the trade. “No one is going to serve their family meat that could make them sick,” she said.

Back in Malabo, Felix Elori, a former monkey hunter now employed in the oil industry, shook his head at Hearn’s suggestion. “Monkey meat is something we’ve eaten since we were young; it has a good flavor and isn’t bad for you,” he said. “It’s never made us sick.”

Elori doesn’t eat monkey meat himself, though. Two female drills he’d killed had had babies, a male and a female. He had nursed and raised them; now his sister keeps them in a cage. “I can’t eat monkeys anymore. They look like people. And anyway, it’s more economical to eat chicken.”

Did we want to buy the two young drills? he wondered.

Elori thinks the whopping fine—as much as a thousand dollars—is the best reason to forgo hunting monkeys. But after the two-month lull, the trade in monkey meat may be resuming. The day after Hearn and Butynski returned with the expedition to Malabo, a drill and two red colobus went up for sale. They’d probably been killed near the caldera.

Hearn’s face fell at the news. “It shows the ban alone is not enough. It’s going to take law enforcement and armed forest patrols,” she said. “At least they’ve taken the first step.”

If the hunting can be stopped for good, monkeys may return to all of Bioko’s forests. The caldera populations will serve as the source, Butynski says, and scientists, students, and the people of Bioko will have a rare chance to watch a natural experiment take place: monkeys reclaiming their ranges of old. □

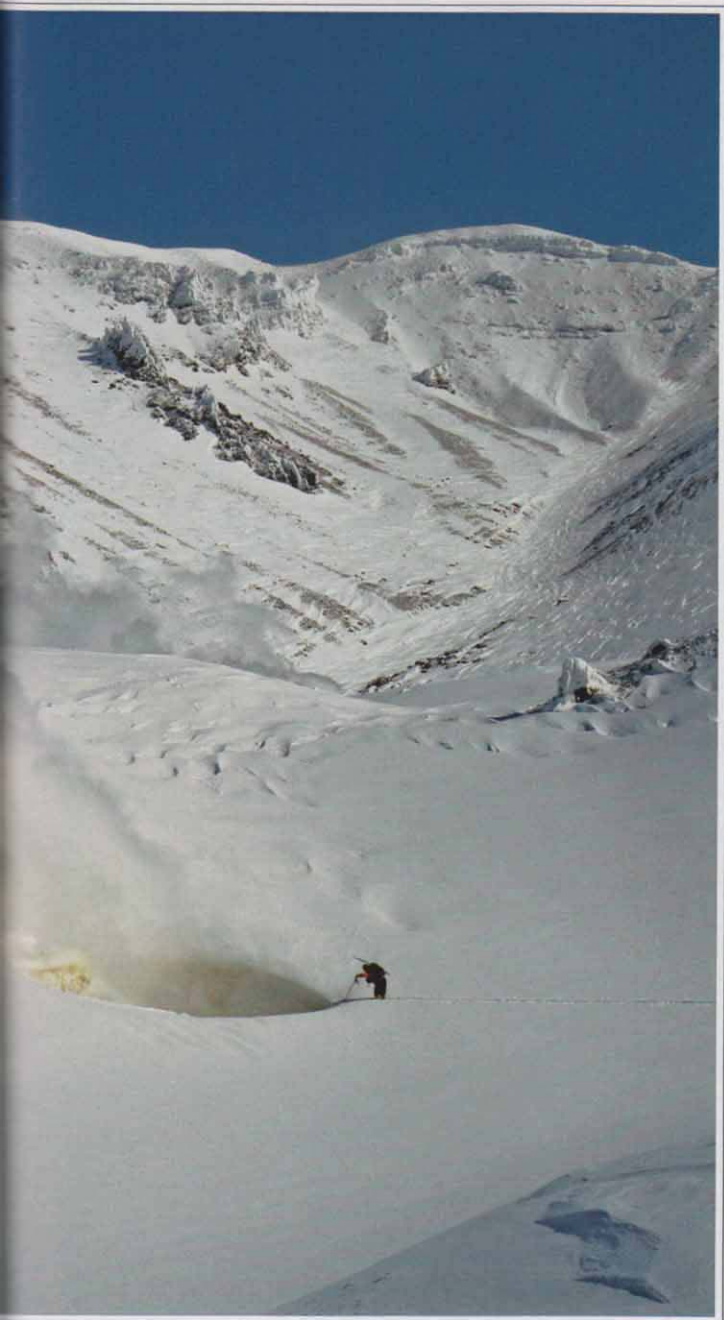
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➤ **RAVE Reviewed** Follow four *National Geographic* photographers on the Rapid Assessment Visual Expedition to Bioko Island in a video, at [ngm.com](http://ngm.com).

# daisetsuzan



(big snow mountain)



SULFUROUS FUMAROLAS ON ASAHI DAKE MARK THE FIERY HEART OF JAPAN'S LARGEST AND WILDEST NATIONAL PARK.

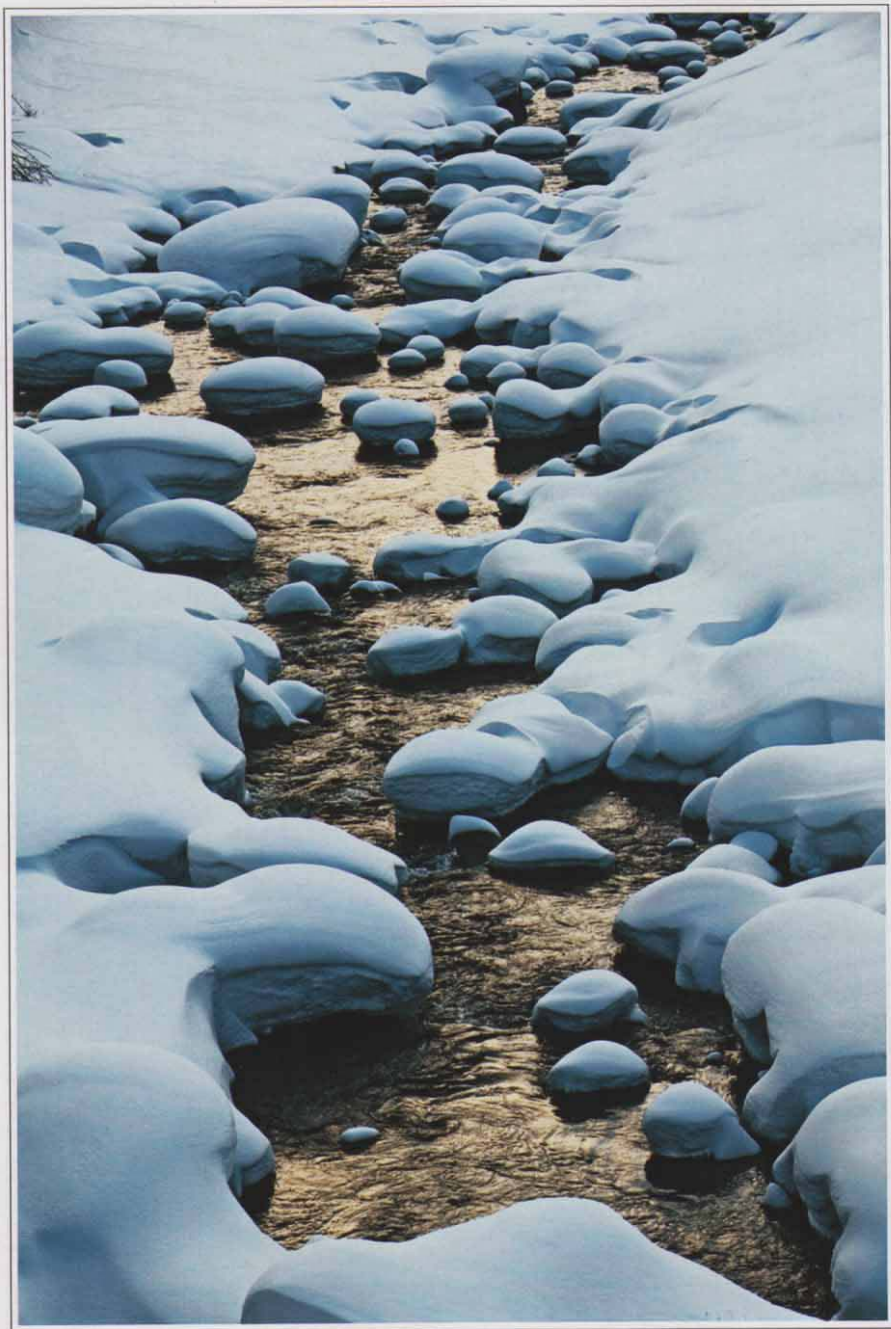


daisetsuzan



FRIGID WINDS FROM SIBERIA SWEEP DAISETSUZAN IN WINTER, ETCHING FAIRIES IN FROST ON A TRUCK WINDSHIELD.









SNOWMELT NOURISHES THE CHUBETSU RIVER, AND MOUNTAIN SPRINGS FEED THE ANGEL'S ROBE WATERFALL.

**F**ire and water collide in Daisetsuzan. Two massive volcanoes pin the national park at the center of Japan's northernmost island, Hokkaido, their steaming peaks dropping off into forested, snow-pillowed, river-washed slopes—half a million acres churned green, orange, red, and white by the seasons.

Japan rose from the sea in seismic violence. Tectonic plates slid and were subducted, mantle rock melted and pooled underground, volcanoes erupted. Quiet for centuries, Asahi Dake, the highest peak in Hokkaido, rises to the north. Tokachi Dake, to the south, last erupted in 2004. In the cold, wet climate of Hokkaido, summits built by Earth's internal fires draw snow, and snow turns to rushing water, forest, moss, and flower. Daisetsuzan means "big snow mountain."

Thick ground cover makes much of Daisetsuzan impenetrable, a self-preserving preserve, untrammled except for the few specified trails. In a crowded island country—one of the most industrialized and densely populated in the world—the park offers rare open space, its peaks and forests bounded by neatly cultivated fields. The park is a haven for deer, birds, hares, and bears as well as trees, shrubs, and flowers. Japanese backpackers move in silent respect through the massif.

Occasionally in the summer and fall, Michiko Aoki, the daughter of a Buddhist priest, hikes eight hours up and over Asahi Dake, crosses a windy ridge, and descends into a secret valley to visit her boyfriend, who helps monitor the park's Hokkaido brown bears.

Early on a warm autumn day, I join her. As we approach Asahi Dake, the hollow breathing of volcanic vents tells us there is a mountain ahead, but, cloud-wrapped, it eludes us. In the mirrored face of a pond called Sugatami-ike, a distant patch of snow mingles with steam; strings of steam tie Asahi Dake to the *kamuy*, the Ainu spirits that live everywhere.

During the glacial maximum 18,000 years ago, Hokkaido was linked by land bridges to Asia, not Japan, and the ancestors of the Ainu

people crossed to Hokkaido. Few indigenous Ainu remain, their forebears having been dispossessed and assimilated by the Japanese. Yet it is impossible to look at these rivers and mountains without thinking of their sacred view of the place.

The Ainu divided their lands into village gathering grounds, or *iwor*, where they fished for salmon, hunted bear, and gathered wood and berries. The living things that sustained them were gods in disguise, spirits visiting the earthly world. *Kamuy* came as inanimate objects as well: hunting knives and bamboo houses. To return *kamuy* to the spirit world, the Ainu performed rituals, with gifts of food and prayer. Their central ceremony honored the bear—provider of food, fur, and bone for tools. They called Asahi Dake peak Nutap-kamui-shir, which means "the god mountain which contains the inside area of the bend of the river."

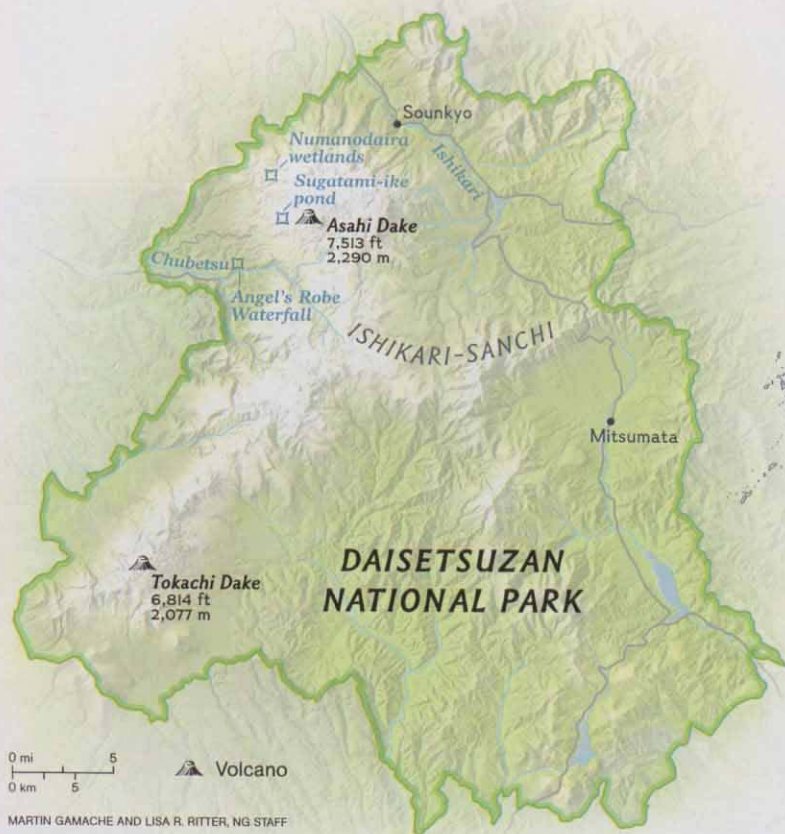
Asahi Dake used to be a perfect cone, but an eruption long ago blew out its flank. The path skirts a chaotic cleft torn by eight sulfur-collared vents issuing steam. An 80-year-old man coming off the mountain tells us that during World War II people gathered the yellow mineral for gunpowder. Michiko and friends, a more fortunate generation, ski the concavity in winter. Now the path is steep with lingering patches of snow. Above, cloud swallows mountain; volcano swallows cloud. Finally the top of Asahi Dake stands clear.

Weekend hikers crowd the summit. They eat ham sandwiches and rice wrapped in seaweed, drink cold tea, and rest rock-sore feet. Fewer come here than to many of Japan's 29 national parks, far fewer than to Mount Fuji. That iconic peak draws a hundred million visitors a year. Daisetsuzan sees just six million, many of whom arrive by bus to soak in autumn's colors. Others test themselves on the slopes of Asahi Dake.

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*Gretel Ehrlich's most recent book is This Cold Heaven: Seven Seasons in Greenland. Michael Yamashita photographed the Basho article in the February issue.*





MARTIN GAMACHE AND LISA R. RITTER, NG STAFF



Daisetsuzan National Park encompasses 900 square miles at the primal core of Japan's northernmost island, Hokkaido. Founded in 1934, it protects groups of active volcanoes, the headwaters of several rivers, sprawling wetlands, and deep forests that harbor many rare species, including most of Japan's few remaining brown bears.

High above the fog, the domed top gives a 360-degree view of the park: mountains and rivers as numberless as dragonflies. One of the rivers is the Ishikari, which a local mayor, Ryutaro Ota, explored in 1910. He begged the government to set aside these mountains and forests lest they be sold to private buyers. Because of Ota's passionate entreaty, in 1934 Daisetsuzan became one of Japan's first eight national parks. No other had wildlife to match Daisetsuzan's, nor backcountry more remote.

The way down is red dust and weathered rock. But soon dappled sun reveals thickets of blue and red berries, flowering white tiger tails, and purple, belled blossoms that the Ainu once used to make poison for their arrows. A river flows alongside the trail, past *basho* (thread banana) and *fuki* (sweet coltsfoot). Beyond lies the hidden heart of these mountains.

The trail opens into a clearing. A hiker's lodge appears, and then Michiko's boyfriend, Tomohisa Matsuno. "There's one female bear with two cubs

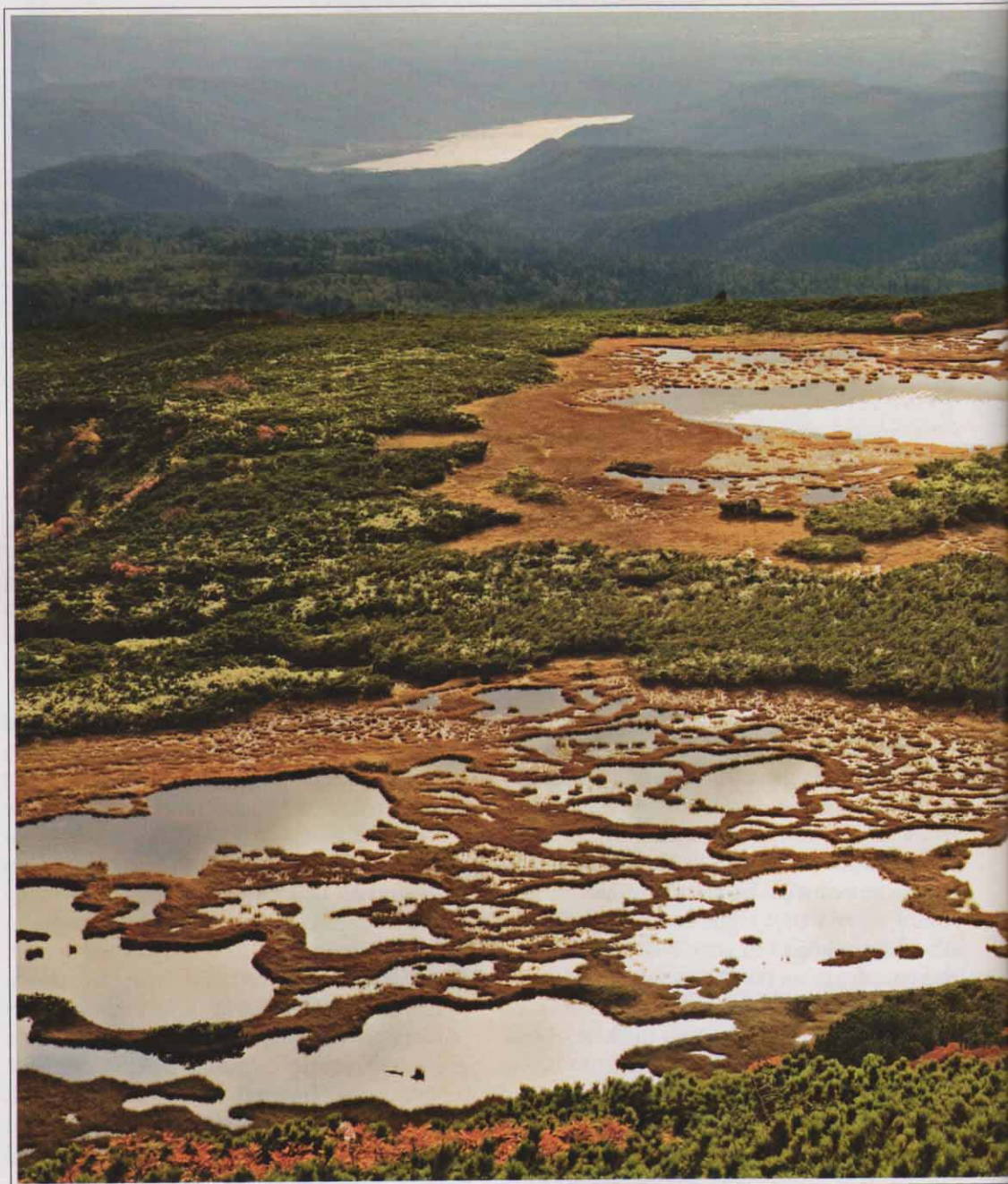
up there," he says, pointing to a far revetment.

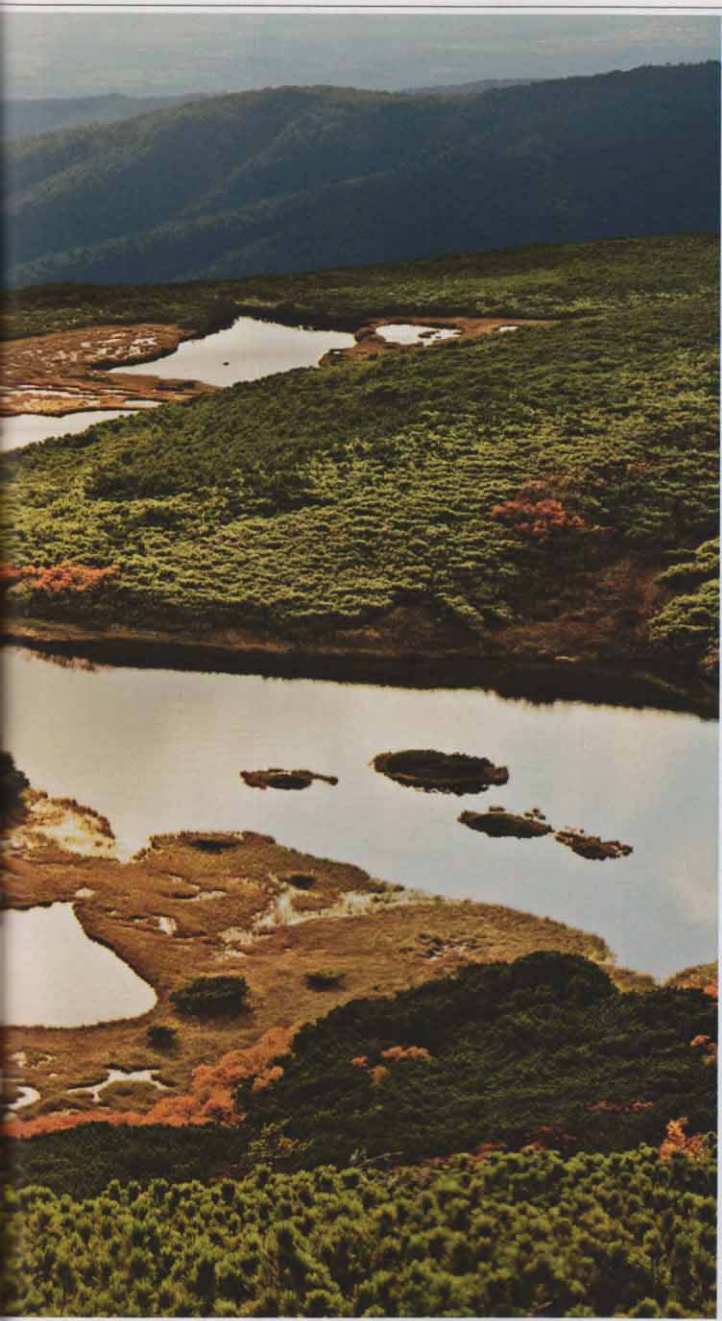
Early the next morning we hike up toward the bear pastures. Beyond a last pitch lies an open bowl where the bear has just gone over the mountain. Waiting for her return, we sit all day at the edge of a drying pond, living in Daisetsuzan's trance, brought on by the sweet intimacy of this place. Bears are like mountains—they cannot always be seen. But their presence can be felt. Hours go by. The bear does not appear. Water bugs skate the pond. Time unspools: Preparations for the Ainu's reverential bear-sending ceremony took three years.

A cool breeze spins pond water into spirals, a reminder of typhoons to come. Splotches of red and orange appear in the trees. It is getting too late in the season to call this time summer, and too late in the day to stay. —Gretel Ehrlich

📌 **Hike the Backcountry** See more images from the trail as photographer Michael Yamashita explores Daisetsuzan National Park, at [ngm.com](http://ngm.com).







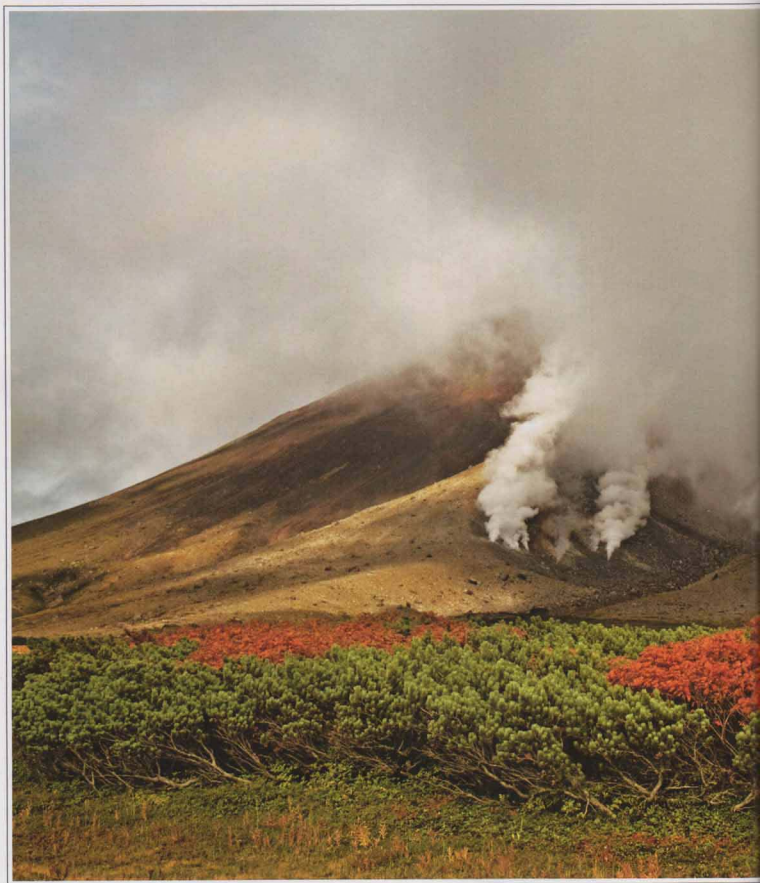
THE NUMANODAIRA WETLANDS' SWIRL OF LAKES, BOGS, AND BEECH FORESTS EMBODIES THE SPIRIT OF A JAPANESE GARDEN.

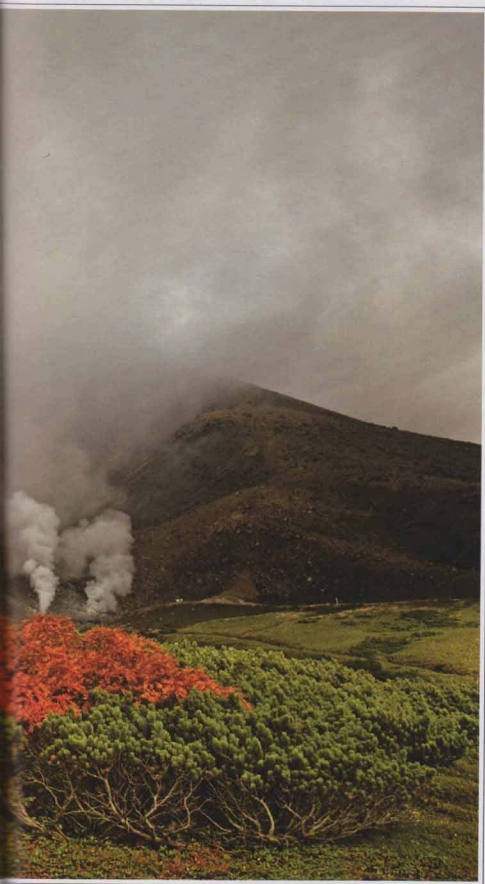






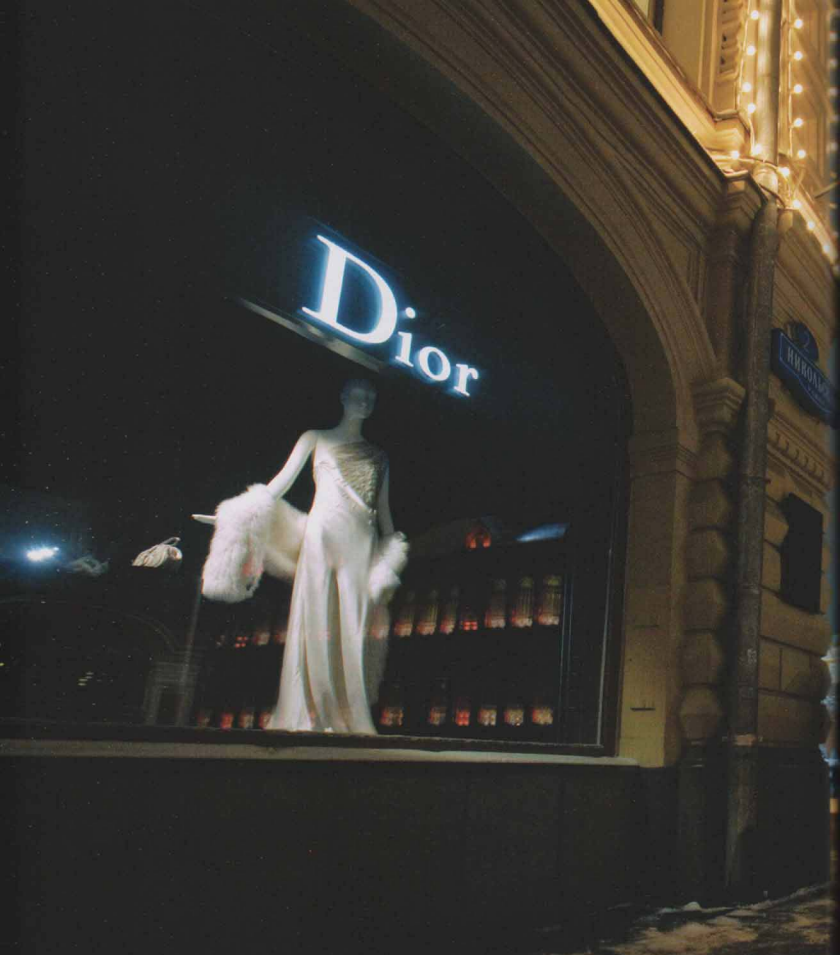
JAPAN'S LAST WILDERNESS HAS MANY FACES: WHITE BIRCH GLADES, FIELDS OF WILD PRIMROSE, MOUNTAINS VEILED IN MIST.





AT THE FOOT OF ASAHI DAKE VOLCANO, MOUNTAIN ASH TREES ERUPT IN AUTUMN CRIMSON AMID THICKETS OF CREEPING PINE. □





Novelist Martin Cruz Smith  
and photographer Gerd Ludwig  
discover the sinister magic of a city  
that reveals its true colors at night.

# moscow

6:01 P.M. A shopper scythes through bitter cold to reach a boutique on Red Square. These materialistic days.