

Dispatches

Night Vision

A writer takes a journey into the dark and finds that there is a lot to see

BY CHRISTOPHER KETCHAM

I'm told that this night-walking in the desert is foolishness, and that I will get lost, not find the trail again, go deep in the wrong direction. And that my body will be found weeks later, or probably never, sun-mummified, blackened as charcoal, clutching an empty water bottle. My reassurance of safety is the Utah sky. There are too many stars in the clear nights of the canyonlands to get lost; Polaris with its pinprick will point the way home.

But now here in Elephant Canyon, in the Needles District, the prophecy plays out as foretold: The night-walker does not know the way. Polaris is shrouded in clouds drawn up from the south, and soon Ursa Major, and Hercules, and Cassiopeia on her throne – all the constellation maps turning on the gyre – are gone. No compass in the pack, and the canyon has turned east and north and east again and maybe west – who knows?

Lance Keimig

Fool, fool. Should've watched the weather. Old black night unfolds to something small and intimate in a desert of impossible distances, this country of cliff and wall and spire, everywhere plummeting and leaping. No more distances now; the images in the rock a mile away seem to brush up against my legs. The eyes are taller, wider, dosed with the night-vision hallucinogenic. All is seen as if underwater: grey and blue-grey amid black-swimming schools of black fish. The rocks that in the daylight are shocked to stillness under the sun now pick up their skirts and their shadows and dance about, flitting in the sidelong glance. My night-eyes and night-ears play games. The junipers and pinyons, stirred by the breeze, stretch animal arms in their branches. The boulders creeping, the cliffs sliding, the towers bending, and when I find running water, it babbles a hundred human voices, whole crowds familiar and unfamiliar, some of them friends I have known, some of them my father, mother, daughter. The water splashes and plays and communicates the news that it knows exactly where it's going, and, ha ha, I do not. I wonder if hungry creatures have watched me, waiting for the hominid night-walker to make a mistake. I think I see a great cat moving on the cliff – my own shadow-cat in the moonlight. I conclude that in the desert the mammals with big teeth, what few are left, aren't interested, nor are the rattlesnakes, nor the scorpions, nor the great blooming banks of flowers, white-fluorescent, that open only after the sun has gone down, and which to us night-walkers are the secret we look for.

The habit has lasted almost ten years. I do it wherever no one wants to venture into the wilderness in the dark, which is pretty much everywhere there is wilderness. So, for example, in the Catskill Mountains north of New York City, among the hardwoods in the winter, when the forest is cleared of its cover and the moon is out playing its light on the snow, the black bears have gone to sleep, and my dog whistles at me when I miss the cold trail. So in Death Valley, in the dunes and the salt flats. So even in Fontainebleau Park, south of Paris, in December, amid the boulders and the pine duff, with the smell of wood burning in old stone chimneys in villages nearby, with my daughter, who is not happy that night has fallen, thinking the Thing-in-the-Woods will stomp us and eat out our eyes and violate us in ways only she can imagine. I tell her the darkness eats our eyes only if we let it.

I don't do the night-walking in grizzly country in any season, nor in any of the megafauna grounds. I don't do it with weight – no big pack or equipment that gets in the way of sharp footing. Best to do it in the cool rainless springtime on the Colorado Plateau. One of the planet's darkest nights is here, on high Cedar Mesa, near the Natural Bridges National Monument, declared as the first of the so-called Dark Sky Parks worldwide, rated by the [International Dark Sky Association](#) as a 2 on the Bortle scale's measure of light pollution (which rates the super-lit downtowns of cities as a 9). That means Cedar Mesa is just a little less light-polluted than the 1-rated skies in the open ocean, where there is no light pollution whatsoever. What we Dark Sky people mean to say by "dark night," of course, is that it's well-lit by the heavens.

Dimming the Lights

The next time you're gazing up at the Milky Way during a backpacking trip, you might think you're in the darkest darkness. But you'd be wrong. The darkest dark is long gone, because light pollution impacts even the most remote reaches of the United States. To understand just how much light follows us into the wilderness, and to figure out ways to protect our most sacred landscapes from the glare of civilization, the National Park Service launched its [Night Sky Monitoring Team](#) in 1999.

The small team's astronomers and ecologists use a sophisticated camera system to quantitatively measure the brightness of the night sky. They then translate this scientific data into an easy-to-understand, 100-point light quality index, which correlates to existing but much less granular measurement systems that stargazers use to rate the night sky (such as the Bortle scale). So far, the team has measured light pollution in about 25 of the 100 national parks, recreation areas, and national monuments it plans to survey.

Matt Lennert

The darkest wilderness areas – which, in the United States, are found in Southwest deserts – are the most affected by man-made light. The good news is that simple fixes, such as installing light fixtures designed to eliminate glare, can make "lightscares" significantly less corrupted and the night sky more visible. Park managers at Natural Bridges National Monument have already done this, and other parks, including Death Valley and Yellowstone, are following.

The team's methodology and index could also prove useful for

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The great majority of Americans live only in marginal night. When the street lamps come on, the TVs jolt in the bedrooms, the headlights flash on the roads, the Wal-marts and all-night Shell stations and the office buildings and car dealerships and billboards and baseball stadiums blaze unto God – then night is merely an interruption of day, a waiting-out, an inconvenience to commerce. It makes no sense at all to light most of these dead zones, empty of people in the early hours. But modern man can't have darkness where he has invested money.

Our light pollution, with its errant photons, will scatter as far as the wave-particles carry, into the reaches of the solar system and the galaxy and beyond. The screaming light from the casinos of Las Vegas alone extends a dome to eight national parks and monuments. The 30-story Luxor Tower dims the views at Death Valley a hundred miles to the west. Twice that distance the light of the casinos runs east to the Grand Canyon.

Two-thirds of Americans live in places that no longer afford a sight of the Milky Way. Light pollution increases at rates that experts say will cancel out every dark sky in the contiguous United States within 15 years – until there will be no more Milky Way for us. The alien light burns out the people it touches. Light pollution in excess – and it always appears in excess – correlates with higher rates of cancer. It poisons sleep, sucking melatonin from the brain. It is unnatural and invasive ... and accepted as the norm.

Against this deracinated night the code in our genetic makeup rebels. We need night, clean night, as much as clean water or air. Or as much, perhaps, as the night-walker mammals that began their peculiar speciation 80 million years ago to evolve into primates: The Euarchonta – four-legged, long-tailed, lemur-like – lived in trees, leaping among branches, eating insects in the dark, likely with shining eyes. The name means "true ancestors."

We need clean night, too, simply for the stars, the planets, the moon in its phases. The celestial objects bring the required messages, known to all who listen, that put us in our place and context: *Homo sapiens* being small as small can be and mostly insignificant, probably worthless in the big picture, and certainly ill-comprehending of the many more things in heaven than on Earth.

We make of them utile objects nonetheless. In Elephant Canyon, I am lost in the dark, and then found again, as the clouds split, the stars unveil, and I am at ease, seeing their ancient maps. A mere 5,000 of them tonight, the most the naked eye can find in the moonless desert, poured out like diamonds on the usual bed of cheap velvet and with the usual cognitive dissonance. (How many are dead and gone but still alive to us light-years distant?)

Robert Vizzini

I have at least twice this month walked underneath star beds ducking, thinking I'd bang my head, so low hanging is that light. I nearly fell off a cliff from the vertigo of too much looking up. Once in the canyonlands I saw the crescent moon racing after blue Venus, like rockets, and once I reached a hand and drew five new constellations, known only to me; a ringtail cat, his eyes like lamps, stood at the edge of my bed in the sand and stared. One time I saw the rare zodiacal light, product of cosmic dust that catches the sheen of the sun, named thus because it mounts its faint oval aura on the ecliptic, among the constellations of the zodiac. Astronomers call it the Second Milky Way, and tell us the zodiacal light, when it hits right and the moon is new, provides some 65 percent of the ambient light in the night atmosphere. Mohammed in the five daily prayers of Islam preferred to call it the false dawn.

Thus there is light upon light in this dark, and the true night has enough entertainments for prophets and scientists and also for men with fewer ambitions, who by this starshine find quite simply, like the speechless animals, that they can see in the dark. I imagine my eyes then glowing like the ringtail's or the coyote's or the housecat's. So I walk and walk. Up Elephant Canyon, and then out along the rim, aiming for Polaris, where it points to the Needles jeep road and to my camp near the shelter of a cave, where I'll sleep out much of the day.

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other organizations, such as municipalities or developers, that want to reduce their light footprints.

"A real estate developer called me recently, asking how much they'd need to reduce light pollution in their area in order to see the Milky Way," says Chad Moore, Night Sky's program manager. "That kind of goal-based management is possible if we are able to use the sky quality index as a Rosetta Stone for all the various ways to measure the night sky."

Moore advocates reducing light pollution because he believes that exposure to stars and deep dark wilderness is a source of renewal and inspiration. "People need help to reconnect with the sky," he says. "When you see a really dark night sky it's like being on another planet out in space. And it gives people a better appreciation for the fragility of our planet."

— Mary Catherine O'Connor

Watson

> Minefield