

SPRING 2016

SAGE

A PUBLICATION *of the* YALE SCHOOL *of* FORESTRY & ENVIRONMENTAL STUDIES

— One to the Sky

One to the Wind —

One to the Earth

Mongolia's herders face an uncertain future

Plus

COAL TOWN
WEDDINGS

WATER WARS IN
THE PHILIPPINES

GITMO'S
MANATEES



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Photographs by
MIKAEL RUSSELL CEJTIN

Urban and agricultural
landscape boundaries over
the Midwest in winter.

Photograph by
ANTHONY CLARK

The Binds that Tie

How important are our connections to place in a rapidly changing world?

S

HORTLY AFTER I GRADUATED from college, my brother dropped me off on a remote dirt road in southern Vermont. I set off into the forest, determined to hike the 272-mile Long Trail that runs the length of the state. After eight years away from Vermont, I sought to reconnect to a place that I remembered as wild and wooded.

The ensuing weeks quickly disabused me of that notion. I was confronted instead by a landscape shaped and altered by human hands. Old logging roads crisscrossed the trail deep in national forestland. Ski-lift chairs swayed above bare, black diamond slopes. Summit vistas featured a mosaic of farm fields below. And that was okay. Those human elements, I realized, were woven into the bond I felt for my home state. The meaning I derived from the landscape lay somewhere between the sacred and the sustaining, the worshipped and the worked.

What creates meaning in a place? We asked contributors for this issue of Sage to reflect on the question. For some, the response was deeply personal. In “The Backyard Sacred,” Nicole Wooten finds that she doesn’t need a government designation to discover wilderness. Her neighborhood creek suffices. Channeling her love of the sea, Ariana Spawn reminds readers in “Our Ocean Origin” about ancestral connections to the 70% of our world covered in salt water.

Other writers took the opportunity to examine how connections to place influence communities and even countries. Maha Qasim documents the emotional reactions of Pakistani villagers forced to relocate after devastating floods in “The Road to Ittehad.” Mikael Cejtin shifts our focus north, to Mongolia. “In the Land of Eternal Blue Sky” examines how a traditional herding society is adapting to the arrival of mining interests. Regardless of the scale of the story, a universal theme emerges: we are all rooted to place in a way that is fundamental to our identity.

The mission of Sage Magazine is to expand environmentalism through provocative conversation and the arts. We think we have succeeded in accomplishing our mission in this issue. I, for one, plan to celebrate by taking a hike in the Vermont woods.

Enjoy the read.

Will

WILL MURTHA
Editor-in-Chief



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OUTLOOK

Our Ocean Origin

Humanity's relationship to the ocean is arguably the oldest in our evolutionary history and could serve as a reminder of our duty to protect it.

By ARIANA SPAWN



THOUGH MANY THEORIES about the origin of life have been put forth over the centuries, life on Earth is now believed to have begun in the sea. Hydrothermal

vents—deep-sea fissures in the ocean crust where molten rock heats mineral-rich water to several hundred degrees—are thought to have created assemblages of organic molecules that eventually gave way to single-celled organisms, then to multicellular organisms, then to larger and more complex marine fauna. Our evolutionary heritage is nested within a lineage called lobe-finned fishes, which branched from the more familiar ray-finned fishes like salmon and tuna between 400 and 500 million years ago. This ancestry is still evident today: each of us develops gill-like structures during the first few weeks of embryonic development, which eventually morph into our jaw and palate. By the same logic we use to argue that birds are really dinosaurs with wings, humans are really fish with legs.

Our species has a complex bond with the ocean. Though we dwell on land, we

depend on the sea in ways that range from apparent to imperceptible. Nearly half of the world's inhabitants live within 100 miles of the coast, many of whom rely on ocean and coastal ecosystems for their livelihoods. One billion people worldwide depend on fish and other seafood for their primary source of protein. The ocean plays a fundamental role in shaping the global climate; if its currents did not move warm water and precipitation away from the equator, far less of this planet would be hospitable to humans.

Our species has profoundly altered the structure and function of many marine ecosystems over the last several hundred years. In the United States alone, coastal wetlands disappear at the rate of seven football fields an hour. We have reduced populations of large fish to 10% of their pre-industrial levels. Globally, the ocean is thought to have absorbed 90% of the extra heat humans have introduced to the climate system, and it is warming at a far higher rate than the atmosphere as a result.

These changes in the ocean matter for our common interest as a species, but they also matter to me. As some derive meaning from forests, lakes, or mountains, I derive it from the ocean: from its sheer expanse that

Land meets the sea along
the St. Thomas coast.



stretches from the shoreline to the horizon; from a fascinated and almost fearful curiosity about what lies beneath its surface; from how much I love eating seafood hauled out from its depths and its shores. The sea furnishes spiritual needs for many and utilitarian needs for all, whether we are aware of it or not.

I often meet people who do not share this perspective. If our relationship with the land suffers from a “human-nature divide,” then our relationship with the sea suffers from a divide that is profoundly vaster. We feel the land beneath our feet every day but, for many of us, the ocean is distant, hard to access, something “other.” This point is well illustrated by the recent debate that raged in the southeastern United States over whether to open the Atlantic Ocean to oil and gas exploration. Many lawmakers supported offshore drilling because of the revenue it would bring to their states. Coastal inhabitants, however, feared another Deepwater Horizon. The Department of the Interior settled the dispute in March of 2016, when it revoked its initial approval in response to public outcry.

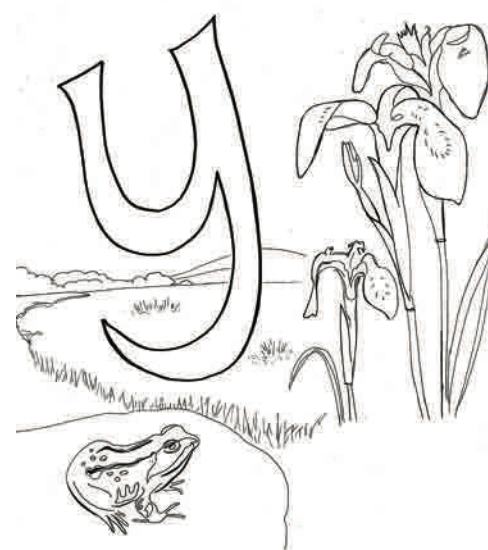
The conflict over drilling in the U.S. Atlantic is only one example of how the borders we draw between the land and sea have serious implications for how we manage our coasts. Yet these lines are artificial boundaries. The offshore oil and gas deposits on which we depend were formed through burial of terrestrially-derived sediment. The fish we eat rely on nutrients from the land to grow and reproduce. The coastal wetlands and barrier beaches that line our shores protect us from the hurricanes and nor’easters that bear down on our coasts every year. We all depend on the sea



CLOCKWISE FROM TOP:

Traps washed ashore on Plum Island, MA; sunset over the ocean horizon of St. Thomas; fishing boats docked in San Francisco Bay.

as the origin of our evolutionary history and as a driving force in the chemical, geological, and biological system that makes our planet habitable. In return, we must serve as champions for the sea by acknowledging the critical role it plays in our existence. Our relationship with the ocean is both a right and a rite, to be exercised and practiced by all. 🌿

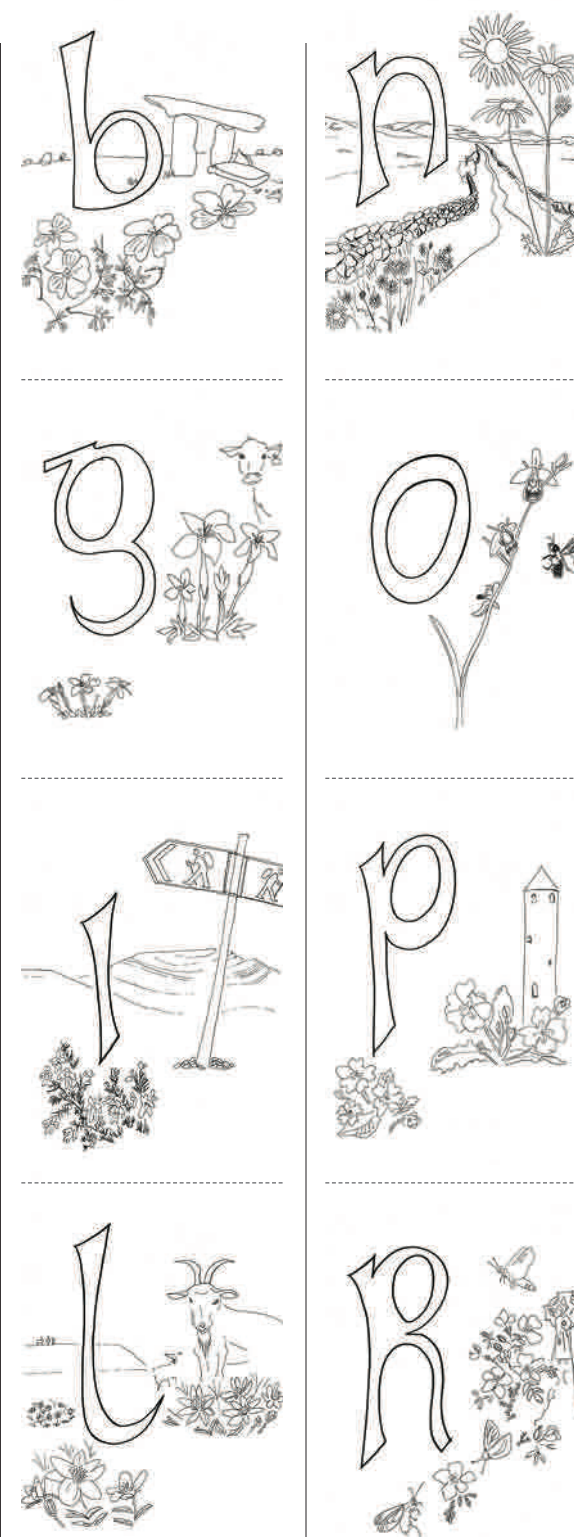


BURRENBEO LETTERS

‘Y’ is for Yellow Flag Iris

BY SARA ROSE TANNENBAUM

● **IN THE WEST** of Ireland is a vast, rocky land called the Burren. It is said that in this region “there is not enough water to drown a man, wood enough to hang one, nor earth enough to bury him... yet the cattle are very fat” (Edmund Ludlow, 1651-1652). Perhaps it is fate that the hills look like undulating swirls of giant cow patties. Each fall, farmers lead their herds to “winterage” pastures in the highlands. In the springtime, after the cows return to the lowlands, magnificent arrays of wildflowers fill the fields. These are sketches of some of those flowers. When the flowers bloom it is a sign that the farmers and their cattle are taking care of the land. When the farmers abandon their fields, cows no longer eat competing plant litter and grasses. Biodiversity dwindles and the landscape starts to change. Yet cattle didn’t always graze the Burren. Centuries ago the region was a dense forest. People cut down the trees and turned the land into the limestone expanse we know today. Humans in part created the Burren, and farmers and their cattle maintain it. Surely people are the true writers of their landscape’s heritage. 🌿



These sketches were designed during a summer spent with the Burrenbeo Trust. The letters of the alphabet are coupled with a Burren plant whose name (Common, Irish or Latin) starts with that letter—all set in a Burren scene.

The Backyard Sacred

Don't let a federal act determine your wild places; embrace the small spaces

By NICOLE WOOTEN

"This wilderness is the wildest of the wild."

—THE WILDERNESS SOCIETY, ON LANDS WITHIN
THE NATIONAL WILDERNESS PRESERVATION SYSTEM



LEGENDS PRECEDED US as we walked between the cornfields. Wild animals once owned this land—spider monkeys, armadillos, wild boars—but they had been replaced with expanses of dusty yellow stalks, leftover from harvest, filling every hill. El Salvador has lost 99.7% of its original forests. The wilderness was gone.

"Except there," said our friend and guide, "we're almost there." He was leading us to a

special place, where it was rumored that the last of those animals still visited. "They come at night; I have seen their tracks."

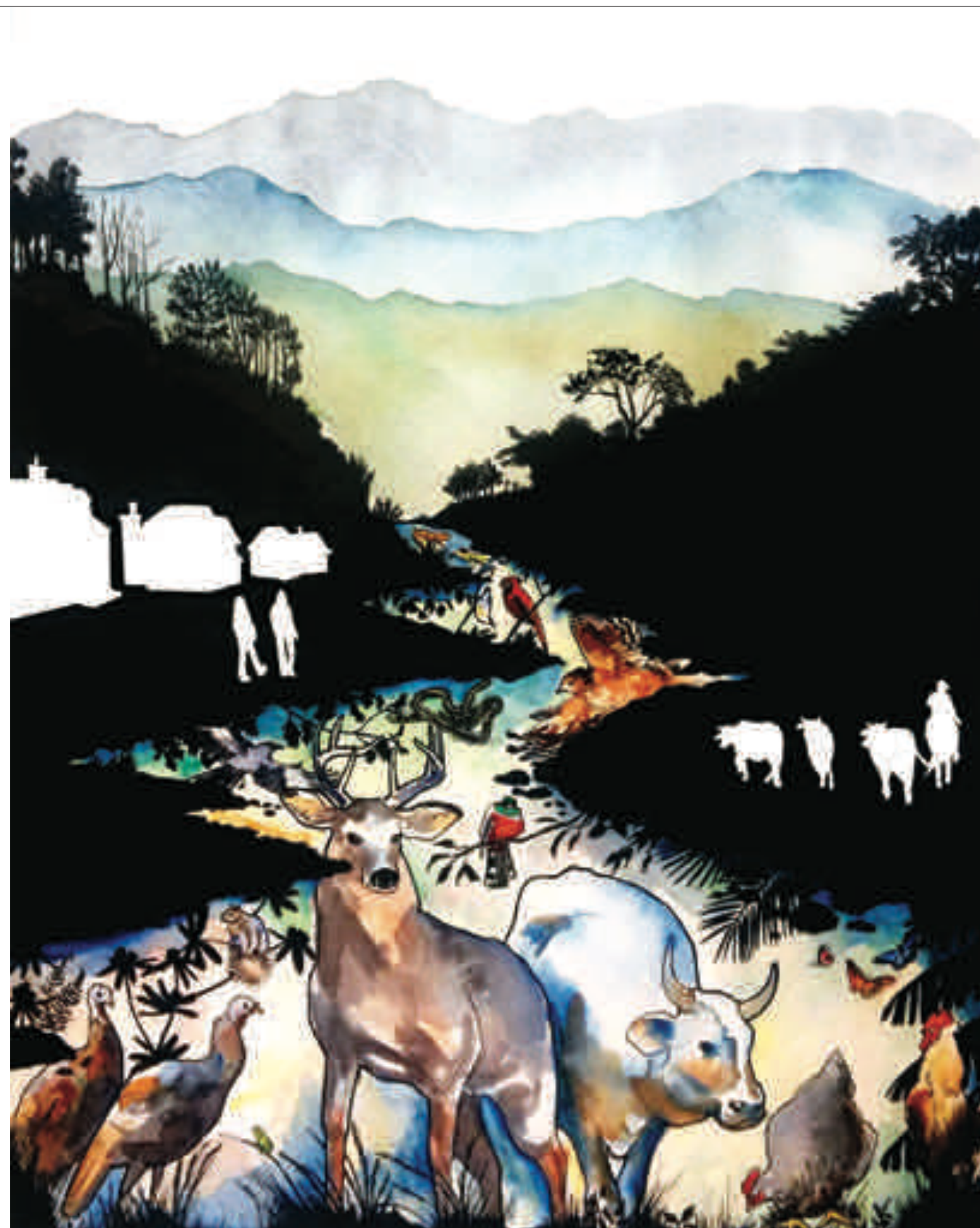
The other Peace Corps volunteer and I exchanged glances. Neither of us had seen anything larger than the endangered iguanas that occasionally resided in single trees left for shade in the cow pastures. Agricultural burns for subsistence corn and overseas demand for coffee had claimed most habitat niches many years ago.

But the hills held surprises. Javier led us into a cool, tree-filled glen, hidden by the topography to all except the adjacent farmers. The way was narrow, with a trickle of a stream underfoot and rocky sides too steep for planting. The still pool at the end, Javier explained, was full of water year-round. This in itself was rare. Water was a scarce commodity in La Union, the driest state in one of the hottest countries of Central America. "There are paintings on the rocks near here from the ancients," he explained.

"This was a place of significance."

As he spoke, a snow-white owl suddenly emerged from behind a tree perched on a boulder at the far end of the pool. A ghost of a time before cornfields. Its wings beat wind out of the stillness. It passed above, behind, beyond us, through the narrow opening of the drainage ditch. The moment froze, breathless.

In a similar silence, but ten years earlier and two thousand miles to the north, a creek trickled by steep backyards in a quiet neighborhood. Though lacking legends, the woods



and the creek were locally sacred. My childhood wilderness. The neighborhood kids and I caught crawdads there, feared leeches, climbed the granite boulders near the fence where creek met road. For us, it was wild.

But the collection of Carolinian backyards, like the glen between cornfields in El Salvador, was far from a federal designation of "wilderness." The first wilderness legislation in the world was the Wilderness Act of 1964, and it was picky. In order for a place to be truly wild, it decreed, it must contain 5,000 acres of "unimpaired" land. My sacred spaces were small, but I knew them as wild. They could easily tick the other legal requirements off the list: solitude, recreation, and ecological value—those qualities were embodied by the small spaces.

The writers of the Act envisioned big, sprawling, remote, pristine spaces. Functional traits, like cleansing toxins out of polluted waters, exist across the size spectrum. But bigger is often better, when it comes to ecological conservation. Five thousand acres have the power to nurse a watershed back to health and kiss the carbon out of a sick atmosphere in a way that no half-acre plot could pretend to.

Yet the Act neglects the importance of small wild spaces. Spiritual significance—a deeper cleansing of the soul—exists in any space of nature large enough to cradle a mind for a moment. The unnamable spark of meaning that the Wilderness Act was, in part, established for is not on any enumerated requirement list, but it is one of the core reasons we seek to preserve lands. That same spark of soul that thrives in the farthest corner of the remotest back-country stretch can also be tucked away in a gnarly, forgotten back corner of working lands, squeezed between backyards and cornfields. 🌱



IN THE LAND OF

ETERNAL BLUE SKY

Mining interests threaten the planet. Can sustainable Mongolian steppe and, in

largest intact grassland on development save the turn, save its people?

STORY AND PHOTOGRAPHS
BY MIKAEL RUSSELL CEJTIN

A HERD OF SHEEP GRAZES AT SUNSET IN THE TOSON HULSTAI NATURE RESERVE.

Eyes squinted and mouth shut, I glance both ways before jogging across the choked street through clouds of exhaust and cigarette smoke, narrowly dodging an oncoming car. I reach the sidewalk just before a critical mass of pedestrians breaks forward, provoking an outburst of honking and swearing from the drivers. Wading through the crush amid the din of construction and bass-heavy pop, I pass a Kentucky Fried Chicken and catch the unmistakable aroma of deep fryers and grease. Further down the block, a trio of cellphone-clutching, chicly-dressed women strut through the swinging doors of a shopping mall, their faces obscured behind oversized sunglasses. On the digital billboard across the street, attractive models with pearly-white teeth sip Coca-Cola.

The scene could be midtown Manhattan were it not for a few incongruences—the drabness of the surrounding buildings, the packs of stray dogs, the weathered old men in colorful robes and sashes who walk bowlegged from a lifetime lived on horseback. At the city's outskirts, the offices and apartments give way to a sprawling slum of round, white huts with low, wooden doors. These are gers, or yurts, as Americans know them. Thousands of them occupy tiny lots laid out in no apparent order. Cows and goats wander the dusty, trash-strewn alleyways between the lots, nibbling what little grass remains. Black smoke drifting from the gers' metal chimneys signals the coal-burning stoves inside. When the Mongolian winter plunges to -40 degrees Celsius and below, these stoves make Ulaanbaatar—UB to all who know it—not only the coldest capital in the world but also one of the most polluted. Thankfully for me, it is summer.

My morning commute through the urban chaos leads to a marble-floored hotel lobby, up a winding staircase to a second-floor hallway, and through the double doors of a conference room. A dozen Mongolians and a handful of Americans sit at a long table. I take my seat. A fan hums rhythmically overhead as city sounds and smells float up through the windows from the streets below. The air in the room is somber and still.

The Mongolians are officials from the Ministry of Environment, Green Development, and Tourism. The Americans are scientists from The Nature Conservancy (TNC), flown in to provide conservation consulting to the Mongolian government.

Conservation lessons from outsiders are a new development in Mongolia, a country still considered by many to be one of the last great frontiers. Mongolia averages fewer than 2 people per square kilometer, making it the least densely populated country in the world. Its harshly



// LEFT TO RIGHT: FOUND THROUGHOUT THE STEPPES OF CENTRAL ASIA, THE TRADITIONAL GER PROVIDES PORTABLE SHELTER FOR MONGOL HERDERS; A HERDER AND HIS YOUNG SON INSIDE THEIR GER IN TOSON HULSTAI; A MOTHER AND HER CHILDREN STAND BEFORE THEIR GOATS IN THE GOBI DESERT. //

beautiful expanse of mountains, deserts and plains offers refuge to snow leopards, wolverines and remnant tribes of reindeer herders and Kazakh eagle hunters. Little wonder that some liken traveling in Mongolia to stepping back in time or into a story book realm.

While a third of Mongolians remain nomadic herders, the majority has shed rural traditions. In the space of a single generation, the Mongolian population has shifted from ninety percent rural and nomadic, to fifty percent urban and settled. The urbanization rate in Mongolia is climbing hand in hand with per capita incomes and national wealth, while poverty and unemployment rates continue to drop. In 2011, Mongolia's GDP grew more than 17.5%, making it the fastest-growing economy in the world.

In the grand scheme of global trade and geopolitical calculus, nature, as usual, tends to get the short stick. Mining has driven Mongolia's growth, and hastily built railroads to ferry coal and ore from Mongolian mines into China risk severing the annual migration of the Mongolian gazelle. It is one of the greatest wildlife spectacles in the world, rivaled only by that of wildebeest in the Serengeti. Every year in the wake of shifting spring rains, herds hundreds of thousands strong flow across the vast grasslands of the steppe to wherever the grass is greenest. The mass calving of gazelle

young coincides precisely with the zenith of the grasses' nutritional quality. It is an all-important synchronicity for the gazelle and for a web of interdependent organisms and processes of which humans are a part.

The Mongolian gazelle population has fluctuated dramatically from disease, natural climatic variation, and hunting. Best current estimates put total gazelle numbers at just over a million, but the real concern is habitat loss. In fifty years, the Mongolian gazelle has lost—or perhaps more accurately, had taken away—three quarters of its former range, which once extended into parts of Russia, Kazakhstan and China. The Eastern Steppe of Mongolia is the gazelle's final stronghold, and conservationists are determined to defend it. I know the Eastern Steppe—my summer began there, in meadows of tall grass unfenced and unbroken as far as the eye could see.

TOSON HULSTAI is a gazelle calving ground twelve hours east of UB in Dornod, a pastoral province in the heart of the Eastern Steppe. TNC helps manage the reserve by providing funds and personnel. The conservation organization has hired me to monitor Mongolian gazelle and other steppe wildlife including marmots, wolves, and corsac foxes. In less than forty-eight hours, I have journeyed from

the suburbs of Chicago here, to a candlelit ranger's cabin beside an unmarked dirt road in the Mongolian countryside. Tuugi, the good-natured TNC biologist who helped arrange my internship, greets me. Exhausted and dazed, I follow him into the cabin where he introduces me to a handful of rangers. A surreal welcoming party of smiling, foreign faces cheers my arrival with vodka and the traditional Mongolian toast—one drop flicked to the earth, one to the wind, one to the sky.

Tuugi speaks English and readily teaches me the plants, animals, and history of Toson Hulstai. We spend days driving off-road through the steppe, recording the presence and counts of various animals. We often stop for tea or lunch at the homes of local herders. They always welcome us with warm hospitality, despite the presence of a white stranger who can't speak the language and incessantly snaps photos. The herders' treatment of me reflects more than just good fortune. The traditional Mongolian principle of reciprocity—borne of herder's hardships and the shared need to occasionally call on strangers for help—is still embedded in their ethos, leftover from a time when it proved vital to survival on the steppe.

Environmental awareness factors into the everyday life of traditional Mongolian herders not only on a practical, utilitarian level, but spiritually. Still practiced in varying forms throughout Central Asia and often blended with Buddhism, Mongolian shamanism—or Tengrism—strives to respect and live in harmony with the surrounding world by worshipping the spirits of Mother-Earth and Eternal Blue Sky. Mongolians still sometimes poetically refer to their country as the "Land of Eternal Blue Sky." Central to Mongolian history and folklore as the religion of Genghis Khan, Tengrism is enjoying a small resurgence. In a place where nature's gifts so clearly yet fragilely sustain life, and where the need to respect that balance is so pressing, worshipping the earth seems an act of supreme moral and practical intelligence.

The tightly interwoven fabric of herder society extends from the social to the environmental, only to fold back into itself. The herders know precisely where, when, and what combinations of different livestock to

graze in a particular place, in a particular season or year, so as not to reduce the steppe's future productivity. Like the gazelle, the people of the Central-Asian steppe originally adopted nomadism as a way of surviving shifting patterns of rainfall and natural abundance. Herders' livestock provide not only yogurt, cheese, and meat but also wool for clothing and padded ger walls, as well as transportation, companions and, more recently, cash.

It is difficult for me to temper my admiration for the apparent wholeness of herder life. Their lives are not easy, but their stresses seem simpler, less contrived, and more clearly tied to the realities of their community. The herders I meet on the steppe are quick to laugh and smile. They seem fulfilled in ways that so many are not. One day, I am lucky enough to experience the unrestrained joy of galloping bareback across the steppe, whooping alongside the rider I race. I cling tightly to my horse's mane and grip its sides with my legs, too exhilarated to feel the burning in my muscles.

We record healthy numbers of gazelle in Toson Hulstai, but it is hard to know how the overall population fares. Poaching remains an issue. One day, we come across a gruesome scene of recently skinned gazelle, their lifeless eyes staring up from the ground beside cigarette butts left by the poachers. Was the meat eaten by herders, or sold to middlemen and trucked to China? Tuugi doesn't know. Toson Hulstai's rangers find it difficult to patrol such a vast protected area with one truck, a handful of motorcycles, and a couple cans of gas. The reserve is better protected than most parts of the steppe, but its future no more certain.

I return to UB with Tuugi after a month on the steppe. On the way, we drive past groups of gazelle bounding away from the car with incredible speed. Twenty miles outside UB, a forty-meter tall platinum Genghis Khan juts above the horizon of green fields and rolling hills. The Mongol leader is mounted atop a gleaming steed, his visage fiercely imperious. The statue serves as a monument to Mongolia's past and future glory. The company that paid \$4.1 million to build it has plans for an accompanying theme park, replete with a spa, hotel, golf course, and rentable gers. Beside the great Khan, an army of terracotta warriors will be carved in the likeness of those of sufficient wealth and vanity to pay.

A FEW WEEKS after returning to UB from the Eastern Steppe, I travel to the Gobi with a team of Mongolian environmental consultants to survey wildlife in the vicinity of a limestone mine and accompanying cement factory that is under construction. En route, we stop at the dusty ger of

a herding family to talk about the factory-mine.

We enter through the ger's low, wooden door. The wind outside fades quickly to a low whistle. The ger is lit by a single, hanging bulb and the glow of a television playing Mongolian music videos. The operatic performances feature traditionally robed men belting out in booming baritones, their gesturing arms stretched wide as running horses and scenic vistas play in slow motion across the screen.

At the cast iron stove in the center of the ger, a plainly dressed woman dumps hand-cut noodles into a simmering pot, her leathery hands swift and precise. Sipping my salted milk tea, I try to guess her age. She doesn't appear old, but she has the flinty look of someone versed in hardship. She listens intently as her husband, a weathered man wearing a baseball cap over his jet-black hair, speaks Mongol with my colleague, a native from the capital. I can't understand their words, but when the herder's voice rises in anger, I don't need to.

The herder is upset about the factory. Soon the local spring will have to quench the thirst of not only his livestock, but also a brand new cement operation. With neither the herder's consent nor consultation, the construction is underway, its heavy machinery raising a perpetual dust cloud visible from the surrounding hills. Built to turn quarried limestone into cement, the completed factory will draw an untold amount of water from the ancient aquifer deep beneath the desert floor.

The factory-made cement is destined for the sidewalks and buildings of UB, where chain-smoking laborers work through the night to build high rises for elites flush from the mining boom. The cement factory and the herder's ger in the Gobi—the places bearing the cost of Mongolia's growth—feel distant from downtown UB and the plush offices of the international businessmen, bankers, and bureaucrats who are both the greatest beneficiaries of global development and arbiters of its sustainability.

For thousands of years, Mongolia's rangelands sustained wildlife, livestock, and herders alike. Mining is undeniably destroying that balance. Companies are technically required to rehabilitate mined lands, but corruption on all sides and the traditional tenets of Mongolian land law complicate enforcement. 'Customary law' in Mongolia holds that all rangeland is free and open-access, subject to claims over use but never over individual ownership.



// **LEFT:** LABORERS CONSTRUCT A CEMENT FACTORY IN THE GOBI. NEW CONSTRUCTION AND MINING ARE THE GREATEST CONTRIBUTOR TO MONGOLIA'S RAPID GROWTH IN GDP OVER THE PAST DECADE. **RIGHT:** THE REMAINS OF TWO POACHED GAZELLES. GAZELLE ARE KILLED FOR MEAT, WHICH IS OFTEN SOLD IN CHINESE MARKETS. //

Mongolia's version of property rights makes sense in the context of nomadic herding, but it's a carte blanche for mining companies.

The generation of Mongolia's future herders is abandoning the battered countryside in hopes of a better life in the city. Most youth end up in UB's ger district, the sprawling yurt shantytown. Driving Mongolia's urban migration are the same wickedly complex forces shaping the zeitgeist of our time: climate change and globalization. Mining in this context is both a vehicle for globalization and a climate change enhancer, a catalyst for the global shifts remaking Mongolia's physical and cultural landscape.

Mining companies offer jobs, build schools and infrastructure, and train youth to work for them. They buy goods from locals and loudly declare their commitment to community improvement. On the surface, it looks great. But the benefits are often dubious and short-lived. Most of the mining workforce, especially the skilled labor, comes from out of town. Menial jobs for herders to replace lost livelihoods don't make for a fair trade, especially when constant clouds of particulates sicken the herders' families. Herders cut open dead livestock and often find their organs dust-filled and coal black.

I AWAKE ONE morning in my quarters at the construction workers' housing facility. It consists of a neat row of bright, blue shipping contain-

ers located a short drive away from the unfinished factory. Each container is empty but for a bunk and dresser, air conditioning, and satellite TV. The night before, a smiling company man had presented me with two plastic-wrapped remotes as if they were the greatest of gifts. I join the workers for a mess hall breakfast of salty milk tea and limp hotdogs, then pile into an old van headed for the cement factory. On the way, we pass a line of double-humped Bactrian camels. They trek across the plain against a backdrop of ochre hills bunched like blanket folds, the image distorted by rising heat. The Gobi is the only place in the world where the species still roams wild, and less than a thousand remain. Camels can store water for remarkably long periods of time. I hoped the ability would get them through the dry future ahead.

Beyond the factory fence, cranes tower over the metal skeletons of half-finished buildings. Tarps flap in the wind, draped over the scaffolding in a futile attempt to keep the dust out. At the foot of the buildings, monstrous bulldozers and excavators dig trenches, piling up mounds of earth. Dozens of helmeted laborers in orange suits hustle to and fro, working with ant-like industriousness. I wonder how many are locals – the faces I can see look Chinese. Sobered by the scale of it all, I begin to imagine the other factories and mines rising in the Gobi, many of them much bigger than the one before me.

A wind picks up as I stand there, obscuring the scene in dust that blows into my eyes. Torn plastic bags shudder on the fence like tattered flags. At my feet lies a pile of plastic soda bottles and other trash discarded by the workers. Our driver remarks that litter is of small concern in Mongolia. "It all blows to China anyway," he says, smiling. 🌸

THE ROAD TO ITTEHAD*

In the summer of 2010, deadly floods along the Indus and Chenab Rivers in Pakistan wiped out entire communities and rendered millions of people destitute and homeless. This is the story of one community's efforts to rebuild and redefine its relationship to the land.

STORY AND PHOTOGRAPHS BY MAHA QASIM

WOMEN OWN THE HOMES IN ITTEHAD VILLAGE—A RARITY IN RURAL PAKISTAN.
WOMEN ARE LESS LIKELY THAN MEN TO ABANDON OR SELL THE PROPERTY.





EN ROUTE TO ITTEHAD,

donkey carts, minibuses, pick-up trucks and a herd of buffaloes jostle with one another on the bustling street. Hawkers line the roadside, selling everything from freshly squeezed sugarcane juice to hand-woven reed mats known as chatai. A barber shaves his client in a makeshift salon under a tree. He remarks, “Four years ago, this was all underwater; it seemed that life had come to an end.”

The floods of 2010 submerged almost the entire district of Muzaffargarh, killing two thousand people and displacing several million more. At the floods’ peak, waters inundated more than a fifth of Pakistan. The United Nations deemed it the “greatest humanitarian disaster in recent history” and estimated that the impact of the flood was greater than the destruction wrought by the 2004 South Asian tsunami, the 2005 earthquake in Northern Pakistan, and the 2010 Haitian earthquake combined.

Among the many villages affected by the flood, the Punjab government selected one, Basti Loomarwala, for a bold experiment: the creation of a new, model village, one built for greater resilience against extreme weather events. It would feature solar panels and sturdy brick houses—even a man-made wetland to recycle gray water for irrigation. Along the streets would grow hand-some Sukh chayn trees, their dense shade offering sukh (peace) and chayn (solace) from the blazing sun. The epic flooding gave birth to the vision of Ittehad Village, a vision which merges tradition and modernization.



LEFT TO RIGHT: WELCOME TO ITTEHAD VILLAGE; A BOY DRAWS WATER FROM HIS FAMILY'S HAND PUMP; SHABANA HOLDS A SOLAR PANEL FOR CHARGING SMALL ELECTRONICS.

TO THE CASUAL OBSERVER, Ittehad Village appears the product of an environmental architect’s utopian fantasy. Planners integrated sustainability principles into every aspect of the design and construction. Located in the south of Pakistan’s Punjab province, the village sprawls over twenty acres of land, laid out in six residential blocks. A green park lies at the heart of each block. The houses are built of red brick instead of adobe and each contain two bedrooms, a veranda, a bathroom, and a hand pump providing easy access to water. The native Sukh chayn trees stabilize the soil. Glistening solar panels adorn the rooftops, enabling continuous access to electricity. The streetlights, too, are solar powered. They switch off and shift to charging mode automatically with the dawn.

VILLAGE RENDERING: PUNJAB DISASTER



To the astute observer, however, Ittehad Village represents an attempt to adapt entire communities to withstand the impacts of climate change, particularly in regions where rainfall is expected to become more frequent and more intense in coming years. The Punjab government enlisted the help of the Engro Corporation, one of Pakistan’s largest conglomerates, to fund the project. The cost of building Ittehad Village averaged \$11,000 per home and totaled \$2 million—about the average cost of a single apartment in New York City or a home in the suburbs of London. When one considers that the village houses over one thousand flood-displaced individuals, the price comes as a bargain.

SHABANA, A SVELTE sixteen-year-old, now lives in one of the houses in Ittehad Village, along with her mother and siblings. She called Basti Loomarwala home as a young girl. It was one of the riverine communities located along the Chenab River. Her house was adobe; relatives lived nearby, and most of the families practiced agriculture in the fields. They owned a few goats and cattle, which provided milk for the household, and

they sold the surplus milk for some extra cash. Then the floods hit and changed everything.

“Every few years when the monsoon rains were stronger than usual, we would temporarily relocate to higher ground and return once the floodwaters retreated,” she recounts. In 2010, however, the flooding was too severe—their mud homes completely washed away. Shuddering at the memory, Shabana recalls, “When the waters receded, we returned to our basti only to find that our houses, our crops, our livelihoods... everything had been destroyed.”

Her father passed away after contracting an illness shortly after the floods. Doctors told her it was due to drinking contaminated floodwater.

The developers of Ittehad Village worked hard to maintain biradari—the extended family kinship which is the backbone of Pakistani rural culture. Traditionally, the biradari provides identity and protection. It also serves as a welfare vehicle when required, providing loans during periods of upheaval and arranging dowries and other expenses for poorer families. The decision to relocate all the residents of Basti Loomarwala



CLOCKWISE FROM TOP:
A WOMAN REMINISCES ABOUT HER LIFE BEFORE THE FLOOD; A MOTHER REJOICES AT HAVING ACCESS TO CLEAN WATER; SCHOOLGIRLS IN ITTEHAD. THE TRANSITION TO ITTEHAD HAS NOT BEEN EASY FOR MANY VILLAGERS, PARTICULARLY THE OLDER GENERATION.

helped ensure that Ittehad Village would begin with a ready-made social safety net which usually develops only years after living in rural communities.

The developers also pushed less traditional ideas in the spirit of biradari. For one, women own the homes. In a traditionally feudal area, the prospect of a female owning property is unheard of. The decision to transfer home ownership deeds to women signaled a paradigm shift in their status. Once financially dependent members of the family, the women are now empowered to make decisions for the household. The move prevented men from selling the property and weakening the bonds of the biradari.

WITH A ROOF NOW over his family's head, Shabana's brother, Kashif, sought to find a reliable source of income. In Basti Loomarwala, he would lease a plot of land from a landlord to grow cotton, wheat and fruit which he sold in the market. Between planting and harvest, Kashif would supplement the family income through manual labor in larger cities like Multan and Lahore. The flood, however, destroyed an entire season's worth of crops and inundated large tracts of land for several months. Farmers missed the planting season for the following year, too.

Kashif decided he needed an alternate skillset. Along with other interested young men, he completed a three-month construction skills training program in welding, masonry, shuttering, carpentry, and steel-fixing. His newly acquired skills help him more than double his monthly income as a construction worker.

Other village residents have learned how to develop

and manage small businesses and have received micro loans to help them get started. Shabana's cousin, Rukhsana, invested in a weaving machine. With the money she earns making and selling rugs, she can send all four of her children to school. Within Ittehad, the shops are managed by the residents, and a flourishing market has grown to serve the community.

NOT EVERYONE HAS enjoyed the smooth transition into the new Ittehad economy like Kashif. Some older men have found it difficult to follow his path. Agriculture is what they know, and what they're good at. They resist the idea of leaving home for months at a time in order to earn a living. They would rather establish an agricultural mill, or small industry, in the vicinity of Ittehad.

The solar panels, too, have faltered. Installed in 2012, they provide a modest 300 watts of electricity, enough to power four lights, two fans, and charge a mobile phone. However, three years later, few of the systems operate as intended. They worked well initially but, by



The residents of Ittehad lost everything in the floods, but their living standards have undeniably improved since the move to the new village. They now own their homes and have access to clean water and sanitation. One little girl asserted, "Even if our parents wanted to leave, we wouldn't let them."

CLOCKWISE FROM TOP:
SOLAR STREETLIGHTS IN THE MODEL VILLAGE; A MAN-MADE WETLAND RECYCLES GRAY WATER FOR IRRIGATION; A SOLAR PUMP FOR DRAWING WATER. WHILE ACCESS TO CLEAN WATER HAS BEEN A BOON FOR VILLAGERS, SOME SOLAR PANELS ARE STARTING TO BREAK DOWN.

the second year, the batteries stopped charging and eventually burned out. Villagers had no funds to replace the batteries or to repair the damaged appliances. Residents also note that 300 watts of electrical power is insufficient for income-generating activities. To operate even basic machinery like a sewing machine or a small refrigerator, they need more power and a reliable back-up source of electricity.

Access to sustainable financing for operating and maintaining off-grid renewable energy projects remains a challenge in the development sector. The villagers suggest that, rather than providing solar panels to individual houses, developers could power a community center equipped with sewing machines or computers. A portion of the income could then be used to maintain the batteries and appliances.

OF THE TWENTY-TWO model villages constructed in the wake of the 2010 floods, Ittehad boasts the highest percentage of the original community still living there.

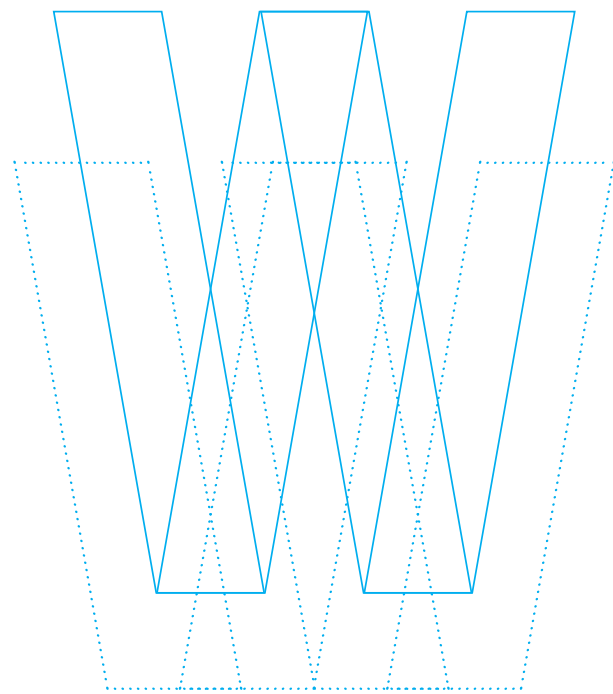
The residents of Ittehad lost everything in the floods, but their living standards have undeniably improved since the move to the new village. They now own their homes and have access to clean water and sanitation; they feel confident in their ability to fend for themselves and are optimistic about the future. One little girl asserted, "Even if our parents wanted to leave, we wouldn't let them."

Many of the village residents, especially the older generation, miss their former life. A grandmother in her eighties, her weather-beaten face lined with wrinkles, lamented, "I miss the freedom of being in an open space and the cool breeze by the river. Sometimes, these walls make me feel very confined."

A man reminisced about how he used to go fishing in the river, "When it was really hot, my friends and I would take a dip in the river to cool down. We can't do that here."

"But," he added, "at least now I have a place to call home." 🌸

**A government
plan to manage
water resources
provokes
centuries-old
tribal tensions
in the Philippines’
Cordillera
Mountains**



Water and Peace



**Story
and
photographs
by**

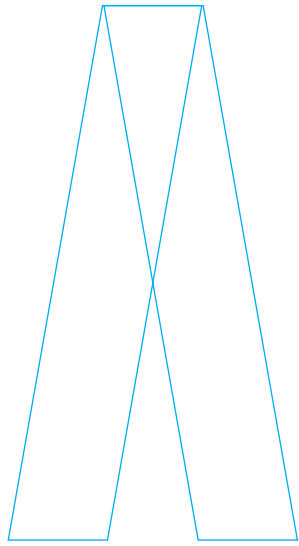
**Adrien
Salazar**

Young people have
led clean-ups of
nearby waterfalls
and waterways.
Signs remind locals
that these are
their resources.

Spring 2016

SAGE

25



A LARGE SURVEY MAP with blue etchings delineating the boundaries of Lias has materialized from somewhere in the community hall. Lias is a cluster of barangays, or hamlets, within Barlig municipality, tucked away in the northern Philippines between winding roads, dense forest, and rice paddy terraces carved into the landscape. Community members pass the sheet around, tracing the lines between Barlig and neighboring Natonin with their fingers.

The small community hall is packed—men and women shoulder-to-shoulder, seated and standing. Representatives from the regional Department of Environment and Natural Resources (DENR) stand at the front.

“We have many interventions for you. This watershed affects your barangay, and we are here seeking a resolution of acceptance from the town. We want to involve you, the indigenous peoples, the people’s organizations,” a DENR representative says. After presenting on a project to improve stewardship of water resources and forest lands in the area, he fields questions and frustrations. Hundreds of years of intertribal history bubble up and tempers run short.

A man in a camo jacket has hold of the map and walks up to the front of the room. “We are talking about tribal conflict. How can we implement this here with the conflict between Barlig and Natonin going on? If we do this, it could mean tribal war.”

THE DAY BEFORE the meeting, I am up early to catch a ride into Lias with Sergio, an agricultural officer of Barlig municipality. “Lias is a very interesting place,” Sergio says. “It is a place where people like to be outside and have picnics.”



Young people are familiar with these fields, the stone pathways, and the names of the rice varieties grown by their families.

The mountain verdure transforms from temperate pine to moist tropical dipterocarps, bamboos, and vines as we traverse the cordillera and cross concrete bridges onto unpaved road. Lias reveals itself, a cluster of homes and buildings huddled at the base of a valley by the Tanudan River.

Sergio tells me the first Lias community consultation meeting of the Integrated Natural Resource and Environmental Management Project (INREMP) failed. INREMP is a multi-million dollar watershed management project of the national DENR, funded by the Asian Development Bank, the International Fund for Agricultural Development, the Global Environmental Facility, and the Government of the Philippines’ Climate Change Fund.

The seven-year project began in 2013 and spans over a million hectares across four watersheds. Lias is part of the Barlig-Tanudan sub-watershed of the Chico River Basin, one of the project’s target watersheds.

INREMP was developed to help communities better manage water resources and forests. It proposes to fund reforestation and agroforestry programs, tree plantations,

improved roads, communal irrigation, and trading centers.

In accordance with the 1997 Indigenous Peoples’ Rights Act, the DENR must obtain consent for the project from indigenous communities. For Lias, this means resolving a boundary dispute with neighboring Natonin, ongoing since the early 2000s. Natonin is included in the project by virtue of a portion of contested land included in the sub-watershed. If the project is implemented, Lias residents fear that Natonin will be granted jurisdiction over the disputed territory.

SERGIO DROPS ME off in front of the high school. Here for the first Barlig Environmental Youth Congress, I am welcomed by Joseph, a charismatic young man who helped organize the event and would serve as my host. “Lias is the largest cluster in Barlig with many things to see,” he smiles, sweeping his arms to the surrounding hills.

Over the next two hours, I undergo a whirlwind tour of Lias. Along with a classroom full of high school students, I watch a short tourism reel that highlights the Changyasan cultural festival. I learn that Lias is one of three clusters of barangays in Barlig, each cluster representing an ethno-linguistically distinct tribal community. They have lived through peace and conflict with one another for generations.

The movie finished, a group of seven high school boys lead me across a short suspension bridge. Children swim naked and sunbathe on the rocks below.

“This is the Tanudan River. You can dive in the river



Top right: The rice fields of Lias, carved into the mountainside. The rice terraces of the Cordillera Mountains are world-renowned, with several in neighboring Ifugao province designated UNESCO World Heritage sites.

Bottom right: Students from Lias lead a tour of the landscape for their young visitors from far-flung Barlig barangays.

and see the fish, crabs, eel, kangkang—that means bullfrog,” Joseph’s fourteen-year-old brother, Isaac, tells me. “People catch these, they fish to eat at home, and they sell some.” The boys point up one trail to where there is a mystic rock that they say murmurs if you listen quietly. They point to another trail leading to Karanag Falls.

The boys are eager to answer the questions of this Filipino from a foreign land. A young man named Ronnel, in an earnest black beret, tells me about a village down the trail that follows the river.

“Originally, there were people living in Kangaw, and the leader of that tribe was named Kangkang. When the Changyasan—the people from Lias—went there, they went there for fishing, they stole their catch. When the Kangaw saw the Changyasan people, they threw stones at them.

“There came a time when the patience of the Changyasan people wore off, so they went to seek a mysterious creature—a white chicken with only one leg, said to be poi-

sonous. They fed it to the pig of the Kangaw people, and the pig died. When the Kangaw community ate it, all were poisoned. That's the reason we own the Kangaw land now.

"We don't know if it's true, but when you go there, you see the old community. So maybe it is true. That story comes from old folks, passed from generation to generation. There is tribal war. The reason we have wide land is because we always win the wars."

LATER IN THE AFTERNOON, I talk to Uncle Lupe, an engineer by profession. He sits on a short stool outside his house, weaving rattan around what looks like bicycle handlebars. He sports eyeglasses and a short, trim, black mustache. Chickens click-clack nearby.

"We have a different sense of land ownership," he says. "Forests are laid with pit traps by clans. You take care of the portion of the forest where you lay your traps. It is inherent to people to know the do's and don'ts. The only real traditional practice is we don't let other people intrude. We fear other people will exploit our resources. Everybody's enjoined to protect. In the old times, they protected with their lives – that leads to tribal war."

The Cordillera Mountain region is inhabited by numerous indigenous communities with distinct cultures and traditions. Under the Spanish colonial government, the highlanders successfully repelled expeditions and retained their lands. The people of this region have come to be known for a mythic culture of warriorship. Many tribes practiced head-hunting until the turn of the century – to settle territorial disputes and for men to gain honor.

In the 1980s, residents in neighboring Kalinga province successfully resisted the development of the Chico River Dam through community organizing and the support of the New People's Army, the guerrilla military force of the Communist Party of the Philippines. The fight against the Chico River Dam project has come to be known globally as one of the most successful cases of resistance to development led by indigenous groups. This history informs peoples' relationship to their lands, to their neighbors, and to outsiders. This is what a national watershed project rubs up against once it is face-to-face with community.

"The current conflict about boundaries is political," Uncle Lupe says. "With traditional territoriality and peace pacts before, it might be settled in a month—do you want war or no? One thing we in the Cordilleras have different is we don't conquer. Those who lose can stay on their land as long as we establish boundaries. We establish a peace pact.

"A chosen elder holds symbolic peace with the other



Top: After church service, men discuss the coming community meeting with the Department of the Environment.



Bottom: Women of Lias rest along the stone walkways between the shops and homes of a barangay.

community—the elders meet and talk. Here in Lias we have no written peace pacts. Once you enter a peace pact, that is sacred. We don't want to do anything to decrease the sacredness of the pact. All parties respect the pact. It's called panyew—it means 'just don't.'"

THE COMMUNITY MEETING is on Sunday. After mass at the squat wooden Catholic church, I find two elderly women in woven textile skirts sitting outside. Manang Cintia and Manang Lydia tell me about the culture of stewardship they grew up with.

"Our parents told us stories about protecting the forest. So we are telling our own children the same stories when they are young," Manang Cintia recounts.

Families have a share of the forest that they divide among their members. Logging is not permitted, except to build a house. Those who are not part of your family or clan are not allowed to log in your forest without permission.

The peoples of the Cordilleras have evolved complex tenure systems to govern the mountains' resources—from privately owned and collectively managed forest, to rules of primogeniture governing the inheritance of rice fields. Indigenous customary law has often come into conflict with national policy. During the American colonial period, the Land Registration Act of 1902 legislated legal title requirements for land ownership. The Public Land Act of 1905 declared lands without title public lands.

"We hope that there will always be peace in Lias. That cooperation will return. So there's no trouble over our lands."

—Manang Cintia

While a number of laws in the mid-twentieth century granted indigenous peoples of the Cordilleras right to claim legal ownership of their traditional lands, another body of law regarding "national patrimony" and national forestlands declared vast expanses of forest managed by indigenous peoples as part of the public domain.

This contradicting legislation regarding indigenous lands in the Philippines contrasts with traditional land tenure systems. Communal systems co-exist with individual and clan-based ownership to govern forest and agricultural land in these communities.

I ask Manang Cintia and Manang Lydia what their hopes are for the future of Lias. "We hope that there will always be peace in Lias," Manang Cintia says. "That cooperation will return. So there's no trouble over our lands."

Manang Lydia says, "Peace and happiness in Lias. Peace in our community and our borders."

AT THE COMMUNITY meeting, the government representatives examine one survey map from 1997, and another from 2013. They show different boundaries. The representative explains, "INREMP won't solve the problem of the municipal boundary. This will be solved by the provincial government. This project is a watershed project. This is not the venue to solve the dispute."

Hands shoot up across the room. One man argues that INREMP and the boundary issue are separate. Another says the community will protest the project if it goes through. An older man speaks up in i-Lias, the local native language, interspersed with English. His arms stretch out, striking the air as he emphasizes the few English words I catch, "peace pact," "Barlig-Natonin," "peace pact," "violence."

Finally, a large man dressed in the traditional red and black woven loin cloth and vest stands up. He is Melchor, an indigenous peoples' representative, and a native of Lias.

"Thank you to the DENR staff for explaining the watershed," he says. He then turns to address the community. "We all know this boundary has been our boundary since time immemorial. We know it has never been documented, because we have a peace pact with the Natonin people. By our customary laws it has been known. But now they want everything documented.

"For me, I would like everybody to approve the INREP project. Why not? We will get some benefit. It is being paid for by the government. Let us also find out by an investigation the matter of the boundary. It is really the court that should solve the disputed areas. We know the national laws, but how about our customary laws?

"Let our land be given to us—that is our inherited land. My people in Lias are shedding tears because our land is being grabbed. Accept INREMP, and we will

start a new resolution to address our loss. Let us be impartial. You must be impartial. You seek the truth and you defend that. Please accept INREMP."

AFTER SOME TIME, I leave the meeting. I find Joseph's grandmother, Lola Nina. It begins to rain, and, with my umbrella, I walk her along a narrow stone staircase down the hill to her house. She invites me in and feeds me rice with sugar.

She tells me she hopes the children of Lias will have some material improvement in their lives. The people of this small community are undergoing great change, but their passion for their land endures as a vestige of a history of defending their resources with their lives.

"What do you like about Lias?" I ask.

"I love everything," she replies.

The rain comes down hard. It is getting dark and I see flashes of lightning from the open window. A friend of Lola Nina's comes into the house, shaking off her umbrella. I say hello and quickly take my leave, thanking Lola Nina for the rice.

I scramble uphill in the rain, and learn that the community meeting has concluded. The end of the meeting is marked by a feast of pinikpikan, boiled salted pork, usually served on special occasions. Everyone is invited to eat.

As I spoon the rice and pork broth, I ask one of my colleagues from the agricultural office, "What was the outcome of the meeting?"

"They still have their differences," she says.

"The community did not approve the project?"

"Not yet."

POSTSCRIPT

The people of Lias are caretakers of their outdoors. They are divers and fishers, farmers and warriors. There is a confidence among the young men here born of the stories that tell them where they come from. They know their waterfalls and their rice fields. They know the stories of their ancestors. This is a place where the land means everything.

At the time of Sage going to print, the watershed project remains stalled. News from the province reports that some villages have passed resolutions to defer or deny the implementation of INREMP. The broadest areas of concern remain over lands not formally titled to the indigenous communities, but which have indigenous ownership under customary laws. The Barlig barangays have yet to endorse the project. 🌿

NOTE: Names in this article have been changed to protect the privacy of individuals.



THE AUTHOR (CENTER) OFFICIATES A WEDDING IN TAIYUAN, CHINA, A CITY BOOMING FROM COAL PRODUCTION.

White Wedding, Red Wedding
Two ceremonies in cities shaped
by coal—one American, one Chinese

By **DANIEL TAM-CLAIBORNE**

Photograph by **BOBBY GAO**



A CONVOY OF BMWs ESCORTS THE BRIDE AND GROOM THROUGH THE STREETS OF TAIYUAN.



PERFORMERS AWAIT THE ARRIVAL OF THE WEDDING PARTY.



THE BRIDE AND GROOM POSE FOR PHOTOS WITH FAMILY.

THE FIREWORKS STARTED just after midnight. The four of us—me, Andy, Rebecca, and Eric (their English names)—stood outside, waiting for them to go off. A large, red paper-cutting hung on the front door of the apartment complex, its Chinese characters signifying “double happiness”—two stick figures joined in an embrace, the perfect pictographic embodiment of marriage. An archway composed of pink and red balloons swayed in front of the weather-beaten doorway. Shreds of paper confetti blanketed the ground. Staring up, I counted at least seven stories, the lights either dimmed or absent in every window. Nothing about this scene struck my companions as unusual—they had partaken in multiple weddings as guests, but I was attending my first. It would take place in the northern city of Taiyuan, fifty miles from the rural Chinese university where I taught English.

Taiyuan served during the 19th century as the center of the Chinese banking industry. It is now better known as a seat of heavy industry dominated by coal barons. The region produces a quarter of China’s coal, which is used primarily to fuel the country’s bustling steel industry, currently the biggest in the world. Coal also transformed Taiyuan into one of the ten most polluted cities in the world and a boomtown home to the triumvirate of Western globalization: Walmart, McDonald’s, and Kentucky Fried Chicken. Like all get-rich-quick cities in China, Taiyuan was prone to its share of ostentation.

When the fireworks went off, they sounded like an artillery shell exploding, and I had to cover my ears. A light rain began to fall in neat symmetry with the combusted paper. No one seemed concerned that the noise

might wake up the other residents—they knew they could get away with it. The fireworks, I learned, ward off evil spirits before the wedding day; it would have been bad luck for anyone to protest.

The display felt both familiar and foreign. As a half-Chinese American, I had spent all my life cognizant of Chinese culture but had few chances to engage with it directly. The decision to teach in China, conceived partly as an effort to better understand my identity, ended up only obscuring it further. I was seen not as Chinese but as a Westerner, a harbinger of American culture. It didn’t matter what traditions I professed to know; cultural rituals appeared rooted firmly in place.

Weddings are perhaps the most enduring cultural ritual of all, a rite of passage celebrated in one form or another by practically every culture in the world. As strange as it felt to be the only American, it was also exhilarating, like I was party to a secret. I wanted to understand what it meant to be both Chinese and American, where one ended and the other began.

Something about that image—standing, as an anomaly, amidst the fireworks—came to mind again, nearly five years later, on the eve of my first American wedding—my sister’s—in a suburb of Philadelphia.

ALLENTOWN, PENNSYLVANIA might rightly be called the Taiyuan of the American Industrial Revolution. Located firmly in the Rust Belt, the city was once a hulking industrial powerhouse, home to the largest known deposits of anthracite coal found in the Americas and the second-largest steel producer in the country. But

it was a city already in decline for decades due to the rise of automation and deindustrialization. On the commute to the hotel, I passed a neighborhood housing office, two police precincts, a Western Union, and a 24-hour laundromat across the street from a cemetery.

I drove to Allentown with my girlfriend, my Chinese American mom, and my mom’s boyfriend. For the better part of a week, my mom and I had debated the merits of conducting a Chinese tea ceremony as part of the wedding. The tea ceremony is usually the centerpiece of a Chinese wedding. The bride and groom pay respects to their elders by serving them tea, often in exchange for money-filled envelopes. In so doing, they are welcomed into their spouse’s family and—because in China weddings are not typically presided over by a minister—become symbolically married.

The plan was to stage the tea ceremony at the rehearsal dinner on Friday, the evening before the wedding day. The Italian restaurant had been notified, and someone had already procured a teapot festooned with red and yellow dragons entwined around a yin yang. But at the last minute, my mom backed out.

“It just wouldn’t feel right,” she said, by way of explanation. Our extended family arrived Saturday, and thus would miss the ceremony.

“Wouldn’t it be more respectful doing it partway than not doing it at all?” I countered. The majority of my younger Chinese relatives had, like my sister, married outside of their race. Almost none chose to have a tea ceremony. “I just think having something celebrating our heritage should be at the wedding,” I persisted.

All of John’s, my sister’s fiancée’s, family was white;

Allentown, as of the 2010 census, was 2% Asian. The absence of the tea ceremony felt to me like a loss—both to my heritage and to the wedding. The sum total of Chinese culture could be boiled down to the sugar-dipped fortune cookies sitting beside our name cards at the restaurant.

“Some things about tradition can change,” my mom replied to stave off the conversation. We both agreed on this point, only in different ways. Change for me meant altering the guest list for the tea ceremony; change for her meant doing away with it entirely. I was the only one who had lived in China, but I could never claim to have two Chinese parents. Between place and identity, what, in the end, should be the greater arbiter for culture?

REBECA AND ERIC’S APARTMENT was both newly renovated and almost completely empty, save for a big screen TV (a wedding gift) and a gigantic wedding portrait that spanned nearly one full wall of the living room. In the photo, they were wearing all white and standing in a bright green field beset with palm trees. The whole scene looked patently un-Chinese, a feature I would continue to ponder all throughout the wedding.

Rebecca was one of my most competent graduate students. In a class of 35, she easily outpaced her peers in English.

When Rebecca invited me to the wedding, she insisted on a “Western” ceremony, uttering the word like Marco Polo might have spoken about “The Orient.” Traditional Chinese elements would remain, she told me, but she wanted to be married to Eric the way she saw it done on “Friends” and “Gossip Girl”—with



THE GROOM'S PARTY
IN ALLENTOWN.



THE FATHER OF THE BRIDE WALKS
HIS DAUGHTER DOWN THE AISLE.



SUGAR-DIPPED FORTUNE COOKIES
FOR GUESTS' ENJOYMENT.

a priest. The priest, naturally, had to be a foreigner. As the only foreigner Rebecca knew, I was quickly enlisted.

With an influx of money pouring into second and third-tier cities like Taiyuan, China had undergone a cultural transformation. Westernization, once viewed as a foreign scourge, was embraced as a metric to compare the development of one Chinese city from another. This attitude was no more prevalent than in Taiyuan, desperate to elevate its status from a provincial mining town to an exemplar of China's new role on the world stage.

It didn't matter to the couple that I grew up in an a-religious household and never attended church; my identity as an American superseded my cultural allegiance. Nor did it matter that the ritual felt completely incongruous with place or that I had no authority to marry. But like the city of Taiyuan itself, I latched onto the quixotic notion that I could be anyone. I borrowed my roommate's Chinese-English bible and downloaded a set of vows from a wedding company based in Toledo, Ohio.

On the morning of the wedding, an armada of white and red BMWs picked the wedding party up from the hotel. Rebecca wore curls in her brown-highlighted hair and a large hoop dress—her first of four outfit changes of the day. We drove in a caravan across the city, Rebecca and Eric's car in front, a small fleet following dutifully behind.

Outside of the wedding hall, a band of red and yellow-clad performers chanted, beating on drums and crashing cymbals. The ground was still wet from the night before, and firework confetti stuck to the concrete. The venue would host four weddings simultaneously that morning; a photo of each bride and groom, blown up to billboard-size, towered at the entrance.

Guests seated themselves banquet-style by table, each with a bottle of good *baijiu* and a tablecloth adorned with traditional wedding sayings. The food arrived, all of it Chinese dishes I recognized—dumplings, cold meat, fish, green beans, dried tofu.

The ceremony started when Eric and Rebecca—newly minted in a frilly light blue dress—rode in on a Jeep. The master of ceremonies gathered them up front on a stage bedecked with a giant LED screen. He had perfect skin and bangs so neatly coiffed that he could have passed as a Korean popstar. There was something oddly incongruous about the whole thing, a Western-style ceremony but in a fundamentally Chinese place.

When my name was called, in both English and Chinese, I introduced the couple and had each recite their vows. Eric, in English, struggled with the line, "I give you this ring, as a symbol of my love," despite all the times we had practiced it beforehand. I realized he had done it just to appease Rebecca. They said, "I do," resoundingly, as if declaring a campaign victory rather than a covenant of love. I was reminded of the skits my class performed to practice English vocabulary—students and teacher playing the role of husband, wife, and priest.

Americans, whether we like to admit or not, find comfort in aspects of our culture projected abroad. Whether it's Starbucks in Beijing or Coca-Cola in Laos, we like to see ourselves in everything. But at the wedding, the Chinese fascination with the West appeared more like imitation than respect. Taiyuan could afford to create its own traditions in an era of unprecedented economic boom. I couldn't help feeling that China's rise, in its quest for reinvention and Western validation, came partly at the expense of its own culture.

When the ceremony ended, I exited to find the street sweepers cleaning up the red confetti and preparing to usher in the next four couples.

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OHN REFUSED TO SEE my sister, Hannah, on the morning of the wedding. He wanted to stick to tradition.

"I'm not going to see her until she's walking down the aisle," he said, raising a glass. The decision, like so much of the ceremony, intended to preserve the stalwart, if stodgy, rituals passed down by generations of Americans. I found it oddly charming. Raised by a Chinese mom in New York City, I was enthralled with the idea of participating in my first American wedding.

At 5:30 in the afternoon, we gathered on the second floor of Allentown Brew Works, a downtown restaurant and brewery part of the city's larger effort to reinvent itself and attract a young, creative class. The redeveloped central business district includes a one-block "Arts Walk," though it features more juice bars than galleries. Neighboring cities have tried other strategies for revival; Bethlehem converted its foreclosed steel mill into a casino. Reinvention in the Rust Belt is slow and has taken decades. Allentown suffers from double-digit unemployment and a shrinking population. Even if the Chinese tea ceremony did go off as planned, there was still something too affected about it. Unlike Taiyuan's slick, modernist facelift, Allentown still clings to its old world sensibilities, a relic of a bygone era.

I watched my little sister walk down the aisle to a keyboard rendering of "Canon in D Major." We were crowded around two small aisles, John's family on one

side and Hannah's on the other. Standing at the center of the stage: a genuine ordained minister. She wore long, gray flowing robes and possessed a voice like liquid silver. The bridesmaids wore strapless purple dresses, a nod to my sister's favorite color. The groomsmen sported purple bowties paired with dove-gray suits that gave us the vague appearance of small-time criminals.

After the exchange of vows, we shifted upstairs for the reception. The dinner menu offered a choice of crab cakes or filet mignon—neither particularly memorable, but I was comforted by their appearance. I thought an American wedding would never come across as authentic to my Chinese roots, but my family's presence proved me wrong. We were all American, no matter the "place" we had come from, the languages we spoke, or the cultures we held dear.

Couples started getting up to dance. My Asian American relatives swarmed the photo booth, forcing the DJ to make a special announcement to corral them when the couple cut the cake. As I watched them with amusement, I came to a realization: my sister and my married cousins had neither foregone nor forgotten their Chinese culture—they'd simply adapted it. Chinese culture is a part of the fabric of America in a way that American culture is only starting to develop in China. Even this manifestly American-style wedding had become a part of our tradition, too.

I spotted my mom, standing near a crowded table.

"Isn't this just great?" she said, throwing her arms around me.

"It is," I shouted back over the din of Justin Bieber. "But for my wedding, I'm still having the tea ceremony." 🍵



THE SIRENS OF GUANTANAMO BAY

An interview with Jim Reid
of the U.S. Geological Survey

By WILL
MURTHA



NO ONE KNOWS how long manatees have quietly plied the waters of Guantanamo Bay. It is almost certain they predate the U.S. presence there, which began in 1903 when the Cuban government leased the 45-square mile patch of arid scrubland

and harbor to the Navy. Over a century later, Jim Reid of the U.S. Geological Survey and his team conducted a series of five trips to capture and tag the base's resident manatees, beginning with a reconnaissance trip in September of 2012. The effort, part of a larger manatee research study known as the Sirenia Project (manatees are of the order Sirenia), seeks to better understand the life history, population dynamics, and ecological requirements of the West Indian manatee throughout Florida and the Caribbean.

Sage caught up with Jim last November, shortly after his team wrapped up their fifth and likely final field trip. Excerpts from that conversation follow.

You received your bachelor's degree in zoology from the University of Montana. How is it that you wound up studying manatees in Guantanamo Bay, Cuba? That's a long way from Montana.

Yes, it's true. I joke that I majored in manatees in Montana, but obviously that's not that the case. It's more the experience I had—knowing how to drive boats and take photographs, and I knew the people with the Sirenia Project—those were all contributing factors that got me started with manatees.

There's a great deal of sensitivity around the detention facilities and other activities that go on at Guantanamo. Did the military require much convincing about the merits of the research?

No, in fact they were the initiators. The Department of Defense has a responsibility for natural resource protection at their facilities and land-holdings. They initially approached us fifteen years ago about doing work in Guantanamo in connection with some of our work in Puerto Rico.

Take me back to your first trip in September of 2012. What was it like landing in Guantanamo Bay for the first time? Leslie Stahl of "60 Minutes" dramatically described getting escorted across the bay by a gunboat—was that your experience?

No. We were escorted, but we were escorted by our natural resource partners!

Describe for me the process of capturing a manatee for tagging and study. Adults can weigh over a 1,000 pounds—that can't be easy to haul onto a boat.

The way we approached it in Guantanamo Bay is similar to other manatee capture and tagging efforts

that we've done in Florida and other countries. The initial understanding where manatees move within the bay is important. We use that information to identify potential capture locations that allow us to safely net capture and restrain them. We quickly realized that, with the deeper water and the few areas appropriate for land-based capture, we needed to ship a specialized manatee

capture boat down from Florida.

The boat is a modified net boat and allows us to catch manatees in more areas than we otherwise would if we were restricted to just shore-based net capture operations. We were able to patrol coastal areas, look for manatees, and use the boat to encircle the animals with a large net that's designed for handling manatees. The training and teamwork needed to develop that maneuver was super-critical—that's why we had the first educational talks and then more specific talks for team-building and our manatee 101 training.

Manatee boot camp, as it were...

That's right. Manatee 101 was our lecture series, and manatee boot camp was a way to get people hands-on and understand what it was we were up against.

As of the fourth trip [April 2014], the team had caught twelve manatees and tagged eight.

Those numbers are right. Probably our worst conditions took place during the April capture. The bay waters were very dark and the manatees were not occupying the same areas that they had previously. We were happy that we did catch and tag one small adult female—that was the last manatee that we handled, and that's what gave us our eight tagged individuals of the project.



"The Navy base has been there for a hundred years, and we feel like the manatees have likewise been there for a long time."

You've since been able to track the movements of the tagged individuals through satellite-linked GPS. What is the typical day like for a manatee in Guantanamo Bay?

There is some individual variation, but there are also some similar patterns that all the individuals express. Those patterns typically repeat on about a five to seven day cycle—foraging in the coastal seagrasses, mostly within the bay, then resting within some of the canals and lagoons. The main thread is they all traveled up the Guantanamo River to seek out freshwater. All the manatees did that repeatedly, showing us that the Guantanamo River was the primary source for manatees to acquire freshwater.

All of the tagged manatees have been named. Are there any unique individuals in the population of Guantanamo's manatees?

We give the manatees numbers and sequentially identify them for the research, but the purpose of the names is twofold: first, it makes it easy for us to remember when we're talking about a particular individual—having a name helps keep the individuals straight. Second, there's some significance with the naming. We felt Guantanamera was a great choice for the first manatee caught there, especially being an adult female. Some of the others were named based on locations where we caught them.

Corina was named for Corinaso Cove. Escondido was named because he was one of the three manatees who would routinely travel to a bay outside the base boundary [in Cuban waters] called Puerto Escondido.

The species of manatee found in Cuba—the West Indian manatee—is the same as that found in Florida. Is it possible that Cuba's manatees travel back and forth between Florida?

There is a paper published on the sighting of a Crystal River, Florida, manatee on the north coast of Cuba. There's no evidence of routine travel by individuals from Florida to Cuba. Essentially, we believe that there are some strays that may move across to a new population or new area, but there's no evidence of repeat movement.

What are the next steps for the research in Guantanamo Bay?

Our captures are done. We've been able to field monitor these manatees through VHF radio-tracking to observe behaviors and different areas they use. We finished our last habitat sampling trip, so now we're in the phase of developing the data, analyzing some of these results, and writing up the project.

The environment in Guantanamo—both human and natural—is a dynamic one; the prison may close and the U.S. could decide to hand the base back to Cuba, or another hurricane like Sandy could directly wallop the base. In light of those uncertainties, what do you envision for the future of Guantanamo Bay's manatees?

The Navy base in Guantanamo has been there for a hundred years and we feel like the manatees have likewise been there for a long time. We don't see any significant conflict between the base operations and manatee use patterns. We're also seeing reproduction where a number of females have given birth to calves during the term of this study, so I think the future is good. 🌱

Nature Questions, Art Answers

Finding inspiration in the remote corners of Chile and Argentina

By
ALLYZA LUSTIG

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AINTING A LANDSCAPE is both difficult and meditative. Artistic expression enables me to more deeply connect with a place by facilitating my full concentration.

Removed from the place, painting is a way for me to revisit it; art is my rite of return. My work allows me to explore the role of humans in nature, and the impacts of development and consumption: What are the implications of a perceived human-nature divide, and is that divide as real as we make it out to be? Does wilderness exist? Whose rights have been denied as we've created our so-called pristine natural spaces? And how do we protect those spaces today while still upholding justice for all people for whom the land is meaningful? Answers to these questions are elusive, and as I seek them I take solace in connecting to landscapes through art. 🌿

Clockwise from top: "Villa Cerro Castillo," oil on canvas; "Niebla, Chile," oil on canvas; "Olmue," acrylic on canvas.



SAGE

EXPANDING ENVIRONMENTALISM THROUGH
PROVOCATIVE CONVERSATION AND THE ARTS.

