ESTEROS DEL I BIERRA DE LA CONTRACTIVA THE GREAT WETLANDS OF ARGENTINA

ESTEROS DEL I BERRA

THE GREAT WETLANDS OF ARGENTINA

Photography Juan Ramón Díaz Colodrero

Essays Sofía Heinonen, Pedro "Perico" Perea Muñoz, Ignacio Jiménez Pérez, Marcos García Rams, Mauricio Rumboll, Douglas R. Tompkins

wonderland of sky, water, grass, and birdsong, the Iberá marshlands of Corrientes Province are the preeminent wildlife habitat in Argentina and a globally important natural treasure. One of the largest freshwater wetlands in South America, comprising more than 2.5 million acres, the Iberá was forged from ancient geological forces and the long-ago wanderings of the mighty Paraná River. Today the landscape is a locus of conservation activity—including a campaign to create a new national park to protect the biodiversity of this striking region. Increasingly a destination for nature lovers, the marshlands attract birdwatchers from across the Earth, who come to see some 360 avian species that are found here.

Photographer Juan Ramón Díaz Colodrero has spent years documenting the region's birdlife and other wild creatures. In *Esteros del Iberá*, his dazzling images put the reader into the heart of the Iberá's life-affirming beauty. Essays by leading regional conservationists and other experts illuminate the Iberá's diverse subtropical natural communities and distinctive human culture. While the area is remarkably unspoiled, innovative conservation projects are augmenting wildlife populations and returning missing native species—such as the giant anteater and the jaguar—to their rightful homes in the landscape of shining waters. The Iberá presents a stark contrast to the modern world, a place where the trajectory of land health is moving toward integrity and wildness. *Esteros del Iberá*, a landmark volume celebrating a peerless place, invites the reader to experience this natural spectacle.

ESTEROS DEL **BERENTEROS DEL** THE GREAT WETLANDS OF ARGENTINA



For its scenic, ecological, and cultural features, the Iberá must be considered a unique wetland in South America, and because it constitutes a great reserve of clean water and biodiversity, it is deserving of great care and respect.

—Juan José Neiff

ESTEROS DEL I BEREAT WETLANDS OF ARGENTINA



Essays

Marcos García Rams Sofía Heinonen Fortabat Ignacio Jiménez Pérez Pedro Perea Muñoz Mauricio Rumboll Douglas Tompkins Photography

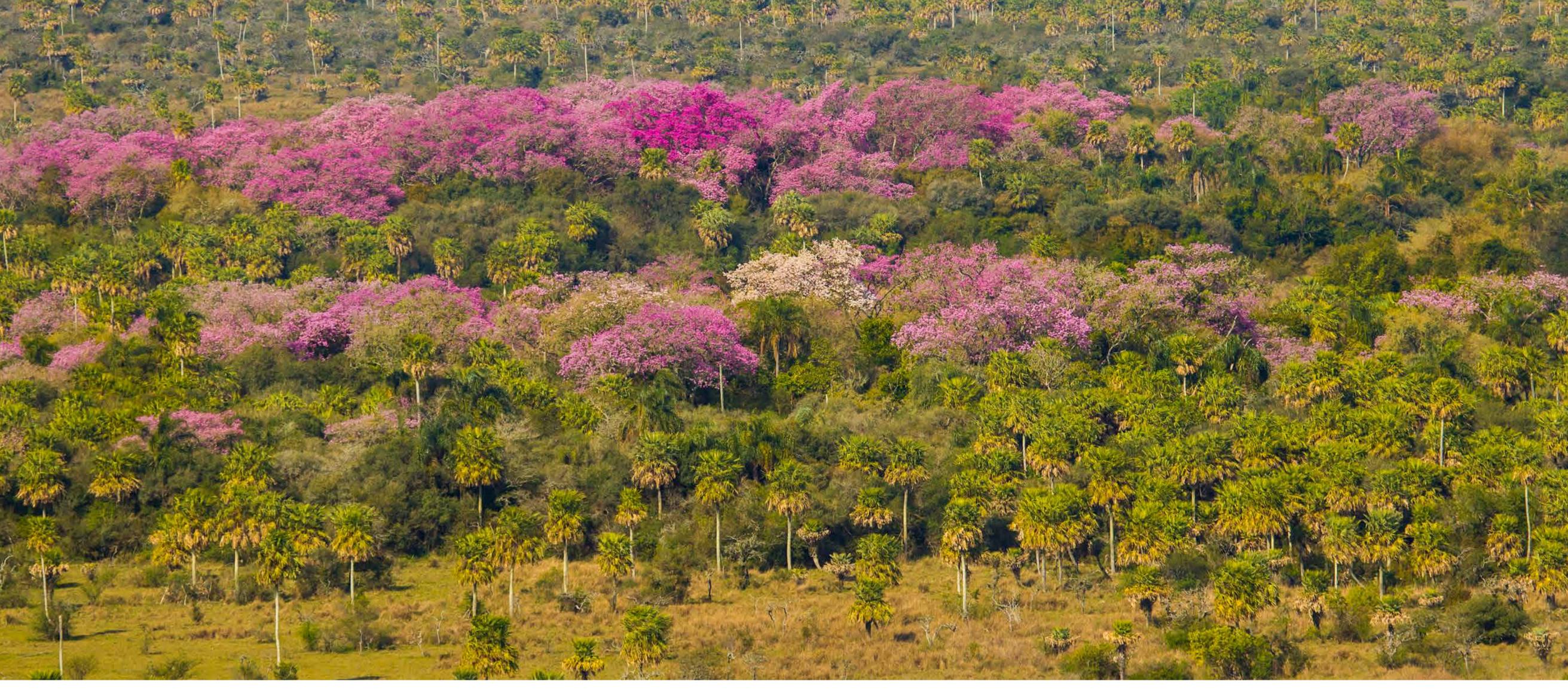
Juan Ramón Díaz Colodrero

Pedro Perea Muñoz 1948–2012 "Perico" Perea Muñoz's soul dwells out there . . . Either on the grasslands, or the wetlands, or the outback, or the forest. You may hear his joyous laughter during the day, Or find him peaceful, in the night, you may.

—Claudio Bertonatti



They say that the conservation of this world is a perpetual creation and that the verbs "conserve" and "create," so much at odds here, are synonymous in heaven. —Jorge Luis Borges

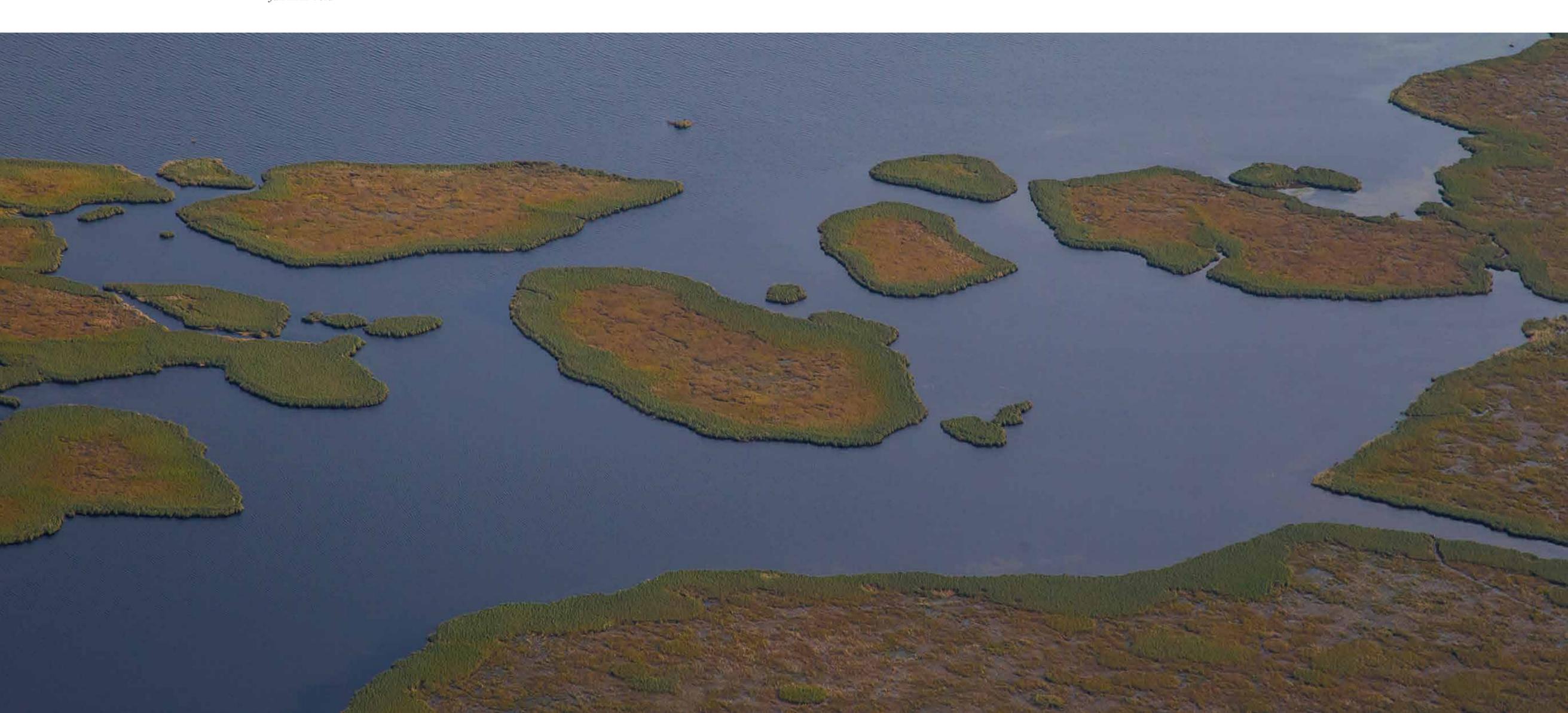


The hours when the mind is absorbed by beauty are the only hours when we truly live. —Richard Jeffries



The wild things of this earth are not ours to do with as we please. They have been given to us in trust, and we must account for them to the generations which will come after us and audit our accounts. —William T. Hornaday

If you gave me several million years, there would be nothing that did not grow in beauty if it were surrounded by water. —Jan Erik Vold





Love the animals, love the plants, love everything. If you love everything, you will perceive the divine mystery in things. —Fyodor Dostoyevsky



A sullen silence fell over the swamps, refuge for the deer and other mammals that escape from man. —Alcide d'Orbigny

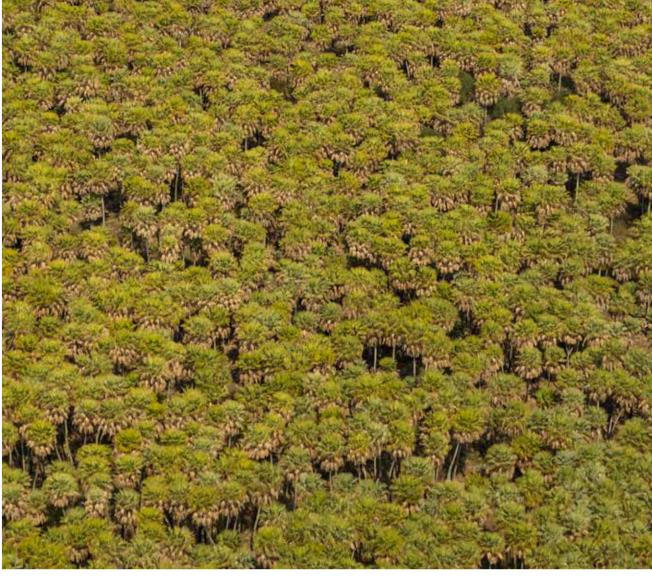


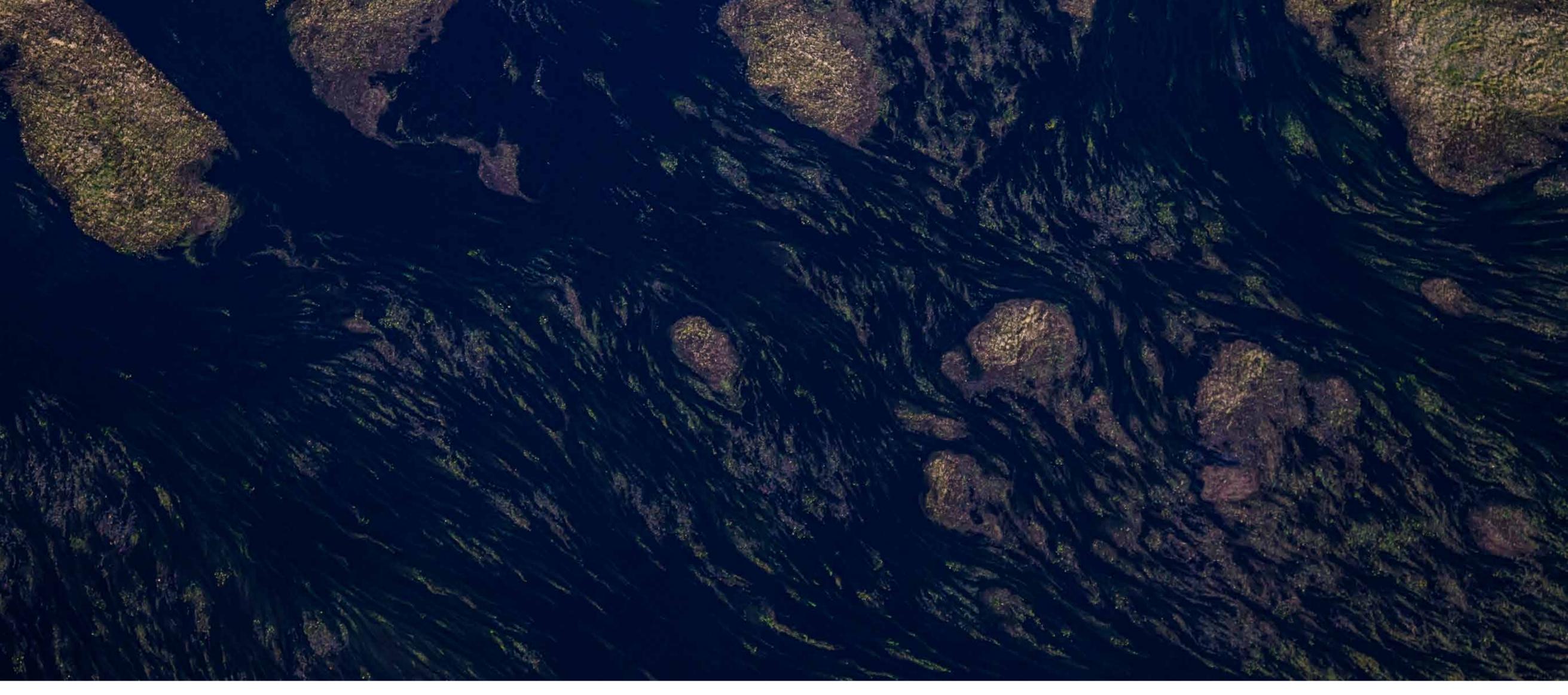


Parks are absolutely vital to the perpetuation of biodiversity in a human-dominated world. —John Terborgh and Carel van Schaik









Ultimately, evolution does the real, creative work, if we could but leave the caldrons of evolution the wild places—alone. Three cheers for natural selection and speciation. —Michael Soulé



Every being is an expression of God and has an essence. —Arne Naess



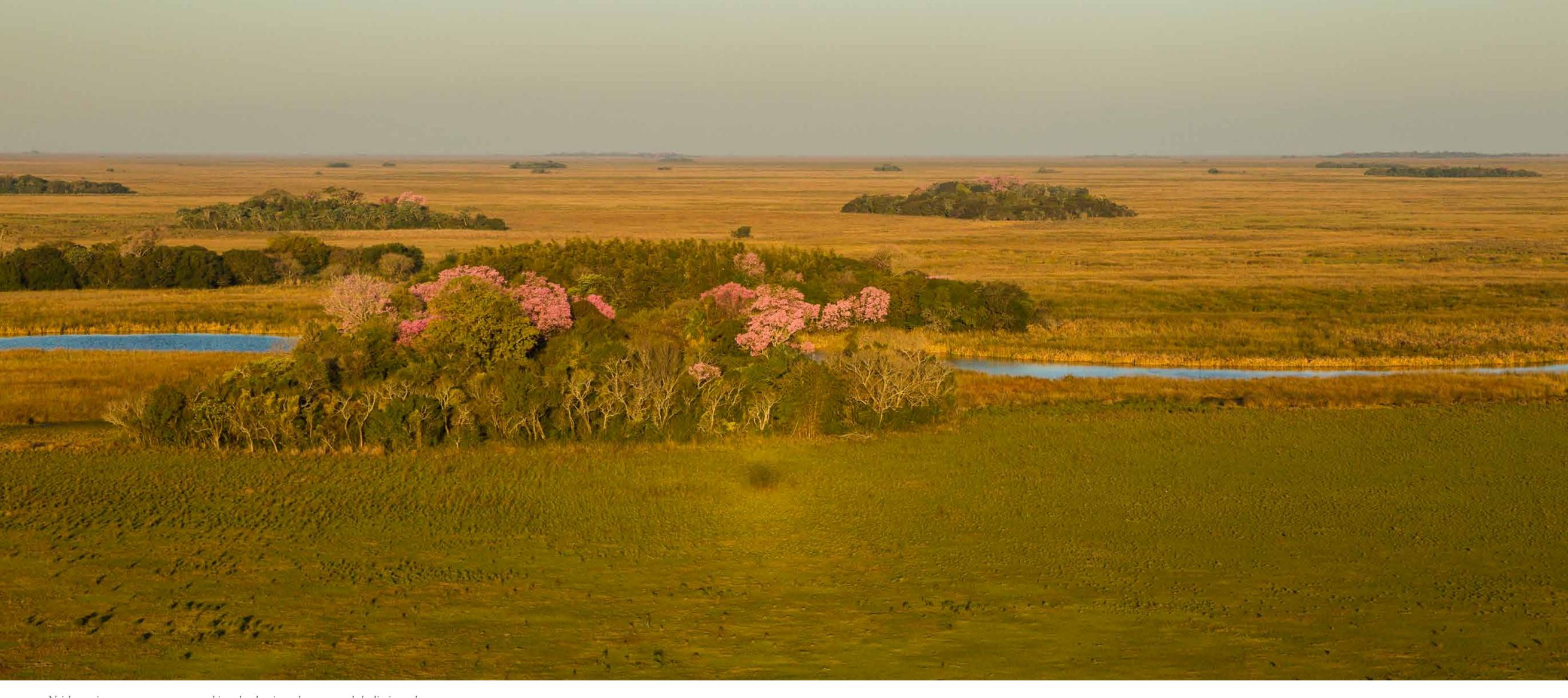




The wonder of the world, the beauty and the power, the shapes of things, their colors, lights, and shades; these I saw. Look ye also while life lasts. —Tombstone in a British Cemetery







Neither society, nor a person, nor anything else that is good must exceed the limits set by nature. —Hippocrates



What obliges us to care for these wetlands . . . is the fact that they have always been and will continue to be instrumental in shaping what it means to be a Correntino. —Pedro Perea Muñoz



Foreword

Douglas Tompkins

first came to Argentina in 1961. Now, more than fifty years later, I know and love the country well. I've had the privilege to travel extensively L through every province (even to Argentine Antarctica), climb formidable peaks in Patagonia, descend whitewater rivers in kayaks, train and ski race in Bariloche, fly my light plane over most of the country, and help establish provincial and national parks in Misiones and Santa Cruz. As a landowner of wildlifefriendly cattle ranches in Corrientes, and of farms in Entre Ríos and Buenos Aires provinces, I've studied and tried to demonstrate how conservation and production can be made compatible, mindful of the distinctive challenges that different Argentinean ecosystems pose to agricultural success and sustainability. This long history of mine in Argentina, and my deep affection for her landscapes and people, give me confidence in my opinion when I state that this is a country of exceptional beauty and ecological richness, and that the Esteros del Iberá, the Iberá marshlands of Corrientes Province, are one of its

greatest natural treasures.

For many years my wife, Kris Tompkins, and I have lived half of each year on the edge of this great wetland, which is increasingly recognized as a globally important treasure of freshwater biodiversity and bird life. This splendid landscape is the subject of the large-format book you now hold in your hands. The book is, in part, a testimony to my long love affair with Argentina, but more than that it is a celebration of the Iberá marshlands, conveyed through photographer Juan Ramón Díaz Colodrero's dazzling images of the flora, fauna, and culture of this unique place.

My fascination with and affection for the Iberá was first kindled in 1997, when Kris and I were invited to visit the region by colleagues who wanted to show us some properties that might be purchased by our nonprofit foundation, the Conservation Land Trust (CLT), to enhance biodiversity protection. We immediately saw the potential of these privately owned lands, if managed with conservation in mind, to enhance the overall effectiveness of the existing public lands that comprised the Iberá Nature Reserve, a provincial protected area.

Now, some fifteen years have passed and we have become totally enamored with the landscape, wildlife, and people of the region. CLT has acquired expansive holdings that we hope one day will be donated to the state and

combined with provincial conservation lands to become one of Argentina's largest and finest national parks. Such an outcome would add to the rich patrimony of lands safeguarded by the Argentine National Parks Administration. Argentineans are rightfully proud of their national park system (one of the oldest of any nation), a network of 34 parks that is absolutely world-class, on a par with the best in North America, Africa, or anywhere.

In 2002, through Conservación Patagónica, the conservation nonprofit that Kris manages, she and I had the good fortune to help create Monte León National Park by donating a former sheep *estancia* on Santa Cruz province's South Atlantic coast; this formed the country's first coastal national park. In 2013 we also donated a spectacular property on the north edge of Perito Moreno National Park, also in Santa Cruz province, to expand that very beautiful park. Around the globe there is a tradition of private citizens helping to establish or expand national parks. Again, Argentina is a historic leader in this regard, and Kris and I find nothing more gratifying than helping continue this tradition.

How did we come to fall in love with the Iberá? In the mid-1990s our foundations were busy with parkland-creation projects in southern Chile and had purchased nearly 400,000 hectares (nearly one million acres) there. We periodically heard reports of large properties for sale in Brazil and Paraguay that were intriguing for conservation purposes, but we decided to focus our efforts in Chile and Argentina, to allow easy travel back and forth to oversee projects.

Consequently, we contacted friends in Argentina about conservation opportunities. Francisco Erize, a former head of the Argentine National Parks Administration, put together a short list of priorities identified by Argentine conservationists and the parks administration. A trip was planned and, responding to an invitation by the Argentine government, we flew from Chile to Corrientes and then to Salta to look at potential projects. Within a few months, we decided to purchase a large cattle ranch in the middle of the Iberá that was for sale and which could be a key property in a possible future national park. Our reasoning was that even if a new national park was not possible in the short term, this ranchland, if secured for conservation, would in itself advance biodiversity protection in the marshlands region. So, we began there.

In the intervening years our foundation has been slowly adding properties

when private lands come up for sale: the Conservation Land Trust has accumulated nearly 150,000 hectares (roughly 400,000 acres) in strategic places throughout the Iberá watershed. These holdings, when combined with provincial conservation land, comprise a very large protected area, one of the largest in all of Argentina. Within this protected area and centered on our own lands we have begun "rewilding" the ecosystem by reintroducing extirpated (regionally extinct) species.

As will be detailed later in this book, CLT biologists have already had great success reestablishing giant anteaters and pampas deer in their former habitat. The jaguar, a challenging species to reintroduce, will be next, and after that we aim to take the tapir, giant river otter, and peccary off the "list of the missing" by restoring populations of these native species. Along with creating and expanding parklands, helping absent creatures return to their home landscapes is extremely satisfying work.

F or people unfamiliar with Argentina's greatest wetland ecosystem, which is sometimes called "Argentina's *Pantanal*" after the world-famous wetlands region of Brazil, the Iberá marshlands are the dominant natural feature of Corrientes Province, which borders parts of Paraguay, Brazil, and Uruguay. While no publication, even a dramatic book like this one, can fully capture the beauty and biological richness of the Iberá (one must come visit to experience it in person!), I have no doubt that readers will be inspired by the natural and cultural wonders depicted here. The images are a testament to the skill of local *Correntino* photographer Juan Ramón Díaz Colodrero, whose years of patient work are demonstrated in one stunning photograph after another. The essays, from a cast of luminaries, complement the images and similarly reflect the skill and knowledge of the contributing writers. Our goal has been to craft a volume as elegant as the landscape it celebrates.

Through the years, our foundation's publishing program has released titles on pressing ecological issues such as deforestation, industrial agriculture, and the negative effects of our current energy system. The subject matter is serious and can be depressing for individuals who haven't yet felt the personal energy that springs from activism. But we have also produced beautiful publications about wildlife conservation and park creation—books that offer hopeful examples of wild places that were saved because people loved them and were inspired to act. *Esteros del Iberá* is such a book; it is intended to raise awareness of this extensive wetland/grassland/savanna ecosystem that deserves special conservation attention in Argentina. It also may help readers better appreciate the beauty and glory in wild nature by taking them on a photographic journey through an extraordinary landscape.

The stark reality is that beauty and wildness are under threat around the globe. The world is immersed in what scientists generally call the "Sixth Great Extinction." Five previous mass-extinction events are known from Earth's geological record. Now humanity has plunged the planet into a sixth extinction crisis; human overdevelopment is the cause. Biodiversity is being radically reduced. Habitat is being devoured. Species are disappearing not by the day but by the hour. This is the Mother of All Crises, for extinction is forever. The finality of extinction is equivalent to the finality of death. Human numbers and behavior have caused the rupture of billions of years of evolution, a startling stop to the natural flow of the evolutionary process. Eminent conservation biologist Edward O. Wilson has called this "the death of birth."

It is a staggering thought that our own species has wrought such a horrendous calamity for the diversity of life. It is beyond belief if one only stops to contemplate the implications of the extinction crisis: once a species is gone, it is gone forever. This loss of biodiversity has profound ethical and practical ramifications for humanity, but there is an unfortunate cultural lag, and society is not waking up to this desperate crisis fast enough to save the Earth's precious biodiversity.

Thus the need for conservation action around the globe. We see parklands creation, species-recovery efforts, and conservation activism in its many forms as vital work that responds to the global extinction crisis. In the case of the Iberá, all of these actions help sustain an incredible landscape, but also model the kind of effective citizen engagement that can take place and that is occurring in many countries.

We implore readers of this book to not just close the cover when you finish, but to share it widely with family and friends. Encourage your neighbors to read it too, and begin a conversation with them about the values of the ecosystem you live in. Reflect on how healthy ecosystems everywhere are fundamental to a healthy and prosperous future. If we discharge our social responsibilities to help all the other members of the biotic community survive and thrive, then we, too, will have a promising future. I can attest from personal experience that anyone who engages in the meaningful work of conservation and building durable, nature-oriented, place-based local economies will find deep satisfaction.

We invite you to experience, in words and photos, the beauty of the Iberá and to consider the larger existential questions that surface when one is pondering the fate of nature and people. If we hope to transcend the present reality where our fellow creatures in the biosphere exist in peril, threatened by expansion of the human footprint, then I am certain that we will find some clues for the way forward in the work that conservationists in the Iberá watershed are doing to restore and protect their home region. I hope that you will be similarly inspired to ratchet up your commitment to preserve the diversity of life, reverse the extinction crisis, and restore wildness and beauty to our one and only planet swirling in space.



Introduction

Sofía Heinonen Fortabat

berá, the *shining waters* of the Guaraní, in the center of Corrientes province, is the wildest and most expansive stretch of natural habitat in "Argentine Mesopotamia," the region of northeastern Argentina bounded by the Paraná, Uruguay, and Iguazú rivers.

With this book—a collection of spectacular images that take us into hidden landscapes, depict beautiful birds in their most intimate behaviors, present charismatic fauna and flora, and show the people of the Iberá in their daily tasks—we would like to bring the reader into the heart of this extraordinary place. We want to share our vision of a present day rich in opportunities, and also of a prosperous future, in which nature and culture can continue to produce intense, hopeful emotions in those who become intimate with this corner of the planet. Our vision is of a landscape where people can experience, up-close, ecological recovery and the return of vanished species, where beauty is motivating and a source of pride for the region's inhabitants, and where the local human economy is in harmony with a vibrant, healthy environment.

The stories related throughout these pages tell of a change in land use during the last 25 years. They reflect many different perspectives: that of Marcos García Rams and Pedro Perea Muñoz, ranchers whose families have been in the region for generations and have been witnesses as well as agents of the rebirth of the Iberá; the more technical description of well-respected naturalist and bird lover Mauricio Rumboll; the conservation work carried out by a team of scientists, as described in the account of endangered-species biologist Ignacio Jiménez Pérez; and the poignant perspective of renowned photographic artist Juan Ramón Díaz Colodrero. But, above all, this book is a celebration of the beauty of the Iberá as seen through exquisite images selected by the perfectionist eye of Douglas Tompkins.

The Iberá wetlands are the most important wildlife reserve in Argentina, and the most extensive wetlands formed by the Paraná River in the last 15,000 years. In its 1.3 million hectares (3.2 million acres), naturalists have so far identified approximately 1,600 plants, 128 fish, 40 amphibians, 59 reptiles, 345 birds, and 58 mammal species, all generally with abundant and well-protected populations. But beyond these numbers, what is impressive about the Iberá is the tameness of its birds and mammals, which allow people to come within a few meters of them, to enjoy or photograph.

The diversity of fish species is particularly high, with at least two perch and a catfish that are unique to this place. The Iberá provides critical habitat for numerous grassland bird species, and hosts the greatest concentrations of strange-tailed tyrants (*Alectrurus risora*) in the world. It also harbors various other bird species in danger of extinction. Equally important for the protection of endangered species in Argentina are the populations of marsh deer, maned wolf, and pampas deer found here.

Landscape, Culture, and Conservation

The formation of the Iberá wetlands is tied to the wandering course of the Paraná River throughout six million years of climate change. Today, this great river runs east-to-west, between Posadas and Corrientes, but once it was a delta, and at other times a small trickle of water running toward what is now the Uruguay River. The Paraná River last flowed into the ancient tectonic depression of the Iberá some 10,000 years ago, leaving in its wake a wreath of lagoons only a few meters in depth, which were later filled in with the rainwater that is vital for the growth of the profuse vegetation and supports the impressive fauna that we admire. Though the slope is ever so gentle, the waters move and filter slowly through the wetlands into the Corriente River and finally into the Paraná, in this way maintaining a link with the fauna and flora of the great river that gave rise to these wetlands.

The wetlands of the Iberá are oriented northeast-to-southwest, in a funnel shape determined by a geologic fault line. Their southern and eastern boundaries are well defined by a small hilly region where parts of the riparian forests left by the old Paraná River survive to this day. These forested areas, called *mogotes*, contain pacara earpod (*Enterolobium contortisiliquum*) and black lapacho (*Tabebuia heptaphylla*) trees of great height, as well as queen palms (*Syagrus romanzoffiana*); myrtles such as the *ubajay* (*Hexachlamys edulis*), *ñangapiri* (*Eugenia uniflora*), and *guayabo* (*Psidium spp.*); *tembetari* (*Fagara rhoifolia*); *ivopé* (*Gleditsia amorphoides*); *alecrín* (*Holocalyx balansae*); *aguay* (*Chrysophyllum gonocarpum*); *sapirangui* (*Tabernaemontana catharinensis*); *lecherón* (*Sebastiania commersoniana*); *canelón* (*Myrsine laetevirens*); various bay trees; and numerous vines.

Along the same hilly region, but in the southern sector (Mercedes county), a

forest of *ñandubay* (*Prosopis affinis*) juts out. The forested hills give way to a savanna with *algarrobos* (*Prosopis nigra*) and *espinillos* (*Acacia caven*), as well as *caranday* palms (*Copernicia alba*), though one can still find riparian forests along the banks of the small seasonal streams that drain into the wetlands.

The north and west boundaries of the basin are not as well defined, since they consist of irregular river-generated sandy hills and patches.

This expansive wetland comprises more than 10 distinct types of landscape, differentiated by water depth and soil type. The large lagoons, which in reality connect directly with the neighboring wetlands, have a great concentration of fauna on their shores, where the *embalsados* or floating islands tend to be firm enough to allow the growth of shrubs. The lagoons most notable for their size and for their *embalsados*, some of them round like giant floating saucers, are the Galarza, Luna, Disparo, Conte, Naranjito, Iberá, Fernández, Paraná, Medina, and Trin.

A large part of the north central region of the Iberá is covered with various types of marshes of shallow depth, deficient in dissolved oxygen but abundant in organic material, filling out the immensity of the swamp. These extensive flooded flatlands tend to have a low diversity of plants and animals, and are dominated by sedges, reed beds, and patchy grasslands of *capií apereá (Paspalum durifolium*), all of which stamp a sense of timelessness upon the landscape.

Toward the north and west, small fan-shaped strips of sandy soil may be seen on the surface of the water, or their presence can be inferred from the appearance of small, perfectly round lagoons in the midst of the aquatic vegetation of the wetlands. These sandy patches afford improved opportunities for the appearance of grasslands and the growth of large trees. It is thus that the landscape is transformed into a colorful tapestry of reds, yellows, and brilliant greens, if wildfires and rains have allowed the grasses to re-sprout. The forested islands, normally of an intense green, often explode in a pink flowering in August, signaling the abundance of *lapacho* trees.

When everything seems quiet and still, the slow snaking of the flowing waters captures the imagination and invites one to gaze in wonder on the caiman alligators, the marsh deer, the capybara, and the flocks of ducks along the streams and the rivers—the Carambola, Carambolita, Plumero, and Corriente—along which all of these waters eventually drain into the great basin of the Paraná River.

The landscapes of the Iberá are mysterious for most people, since nothing stands out from the straight broad horizon of water and patchy clumps of grass. The imagination senses an impenetrable immensity of floating vegetation, streams of blue waters, sandbanks, island forests, palm trees with crackling leaves, and...the wing beats of hundreds of ducks, the silent flight of egrets, the clumsy rush of deer, the stampede of scores of capybara, and the mythic appearance of a jaguar with its gaze lost in that same infinite horizon that carries us away.

Far off in that distance, back in the days when the jaguar stalked packs of peccaries or followed the trail of a tapir, when the giant anteater wandered leisurely among the anthills, and when bright-blue glaucous macaws (*Anodorhynchus glaucus*) flew above the *butia yatay* palms, it is likely that the *Cará-carás*—indigenous Guaraní peoples who lived in the Iberá in small family units until the mid-1700s—would be found building their circular huts, sowing *mandioca*, or hunting with harpoons. As time passed, it would be the *mariscadores*—descendants of Europeans who adopted a large part of Guaraní culture—that would be moving through the waters in their pole-driven canoes, searching for skins and feathers with which to barter in the neighboring villages for *yerba mate*, salt, flour, and other staples.

More recently, much of the land, even deep into the wetlands, has been taken up by large cattle ranches. It is a "horseback" culture, where the *paisano*, or country dweller (the term *gaucho* being reserved for *paisanos* fugitive from the law for having committed a robbery or some other crime), with his skill at herding, lassoing, burning, fencing, taming, and drinking *mate*, from very early on drives an economy of meat production that has characterized the Iberá into the beginning of the 21st century. His customary attire, with wide *bombacha* trousers, broad belt, gaiters, collared shirt, red bandana, wide-brimmed hat, and knife at the hip, is the image of the "Gaucho Correntino" that has become a symbol of Argentinean culture in the rest of the country and the world. On a par with this image are the dance and music of the region, which are on display at every holiday or celebration where an *asado* (barbecue of immense proportions) is shared among friends.

This enchanted Iberá, which characterizes the Taragüi (the land of the Guaraní) and was home to locally revered Gauchito Gil and Gauchito Antonio María, struggles to endure in the face of the headlong advance of a global economy that demands homogeneity and systematization of land, culture, education, and beliefs. The changes prompt spirited debates, and various groups stake out different positions, though all have at heart the preservation of the Iberá.

Among several alternatives to industrialized resource utilization, those that are least detrimental to nature and that allow local traditions to be fostered are gradually gaining ground. In the last few years, ecotourism has arisen as an adjunct to cattle ranching. Colonia Carlos Pellegrini has slowly attained the status of a tourist destination for nature lovers, and has helped to establish an ecotourism circuit through all nine of the other municipalities bordering the Iberá. A scenic route now links all the entryways to the Iberá Nature Reserve, a provincially designated protected area.

Today, thanks to the work of park rangers, the fauna is recovering and the lands are being opened up to the public through services and infrastructure. Campsites, docks, walkways, and scenic overlooks are being built, and services are being organized in seven access points: Galarza (Municipality of Santo Tomé), Cambyreta (Municipality of Ituzaingó), Ñande Roga (Municipality of Loreto), San Nicolás (Municipality of San Miguel), Carambola (Municipality of Concepción), Itati, and Uguay (Municipality of Mercedes).

The good news of the past few years is that in the Iberá there are still 550,000 hectares (1.4 million acres) of government land that are well protected. Together with the 150,000 hectares (400,000 acres) owned by the Conservation Land Trust (CLT), these constitute the most important focal point for conservation in all of Argentina. This area of 700,000 hectares (around 2 million acres) is of prime importance for the preservation of species in danger of extinction in the country, for which it is here that the last remaining or largest wild populations are found.

The long-term ecological integrity of these lands in conservation will depend on the people of Corrientes. Their current status can be maintained as it has been up until now, with permanent vigilance on the part of civil society to ensure



that pine plantations do not invade the marshes, that individual landholdings do not cut off the flow of the waters, that water use for agriculture neither drains nor contaminates the lagoons, that public lands are not invaded by intruders, that exotic animals do not displace the native fauna, and that hunting does not extinguish threatened species. Alternatively, the central government could secure this natural patrimony of all Argentineans through strong enforcement of the law and through continuing stewardship of the natural landscape of the Iberá.

The Argentine National Parks Administration was created to conserve the best examples of the natural landscape of the country and to ensure the preservation of wildlife. National parks are recognized worldwide for their breathtaking landscapes and their diversity of fauna. The Iberá deserves to rank within this world-class system, and to be the image of a vibrant Argentina committed to the future. Corrientes province can make this a reality by

proclaiming the 700,000 hectares that make up the core of the Iberá a national park, and maintaining the Iberá Nature Reserve as a buffer zone around it.

If this came to pass, it would represent the ideal model of cooperation among private landholders located within the Nature Reserve; the province, which would administer the buffer zone, comprising some 600,000 hectares (1.5 million acres); and the central government, which would take responsibility for the care and maintenance of the core area. This outcome would ensure a source of ecotourism income for the inhabitants of the ten municipalities that are located within the river basin, who would benefit long-term through active participation in the administration of the public use of the Iberá. This outcome would also assure lasting protection for the vast natural diversity of this exceptional region of our living Earth.



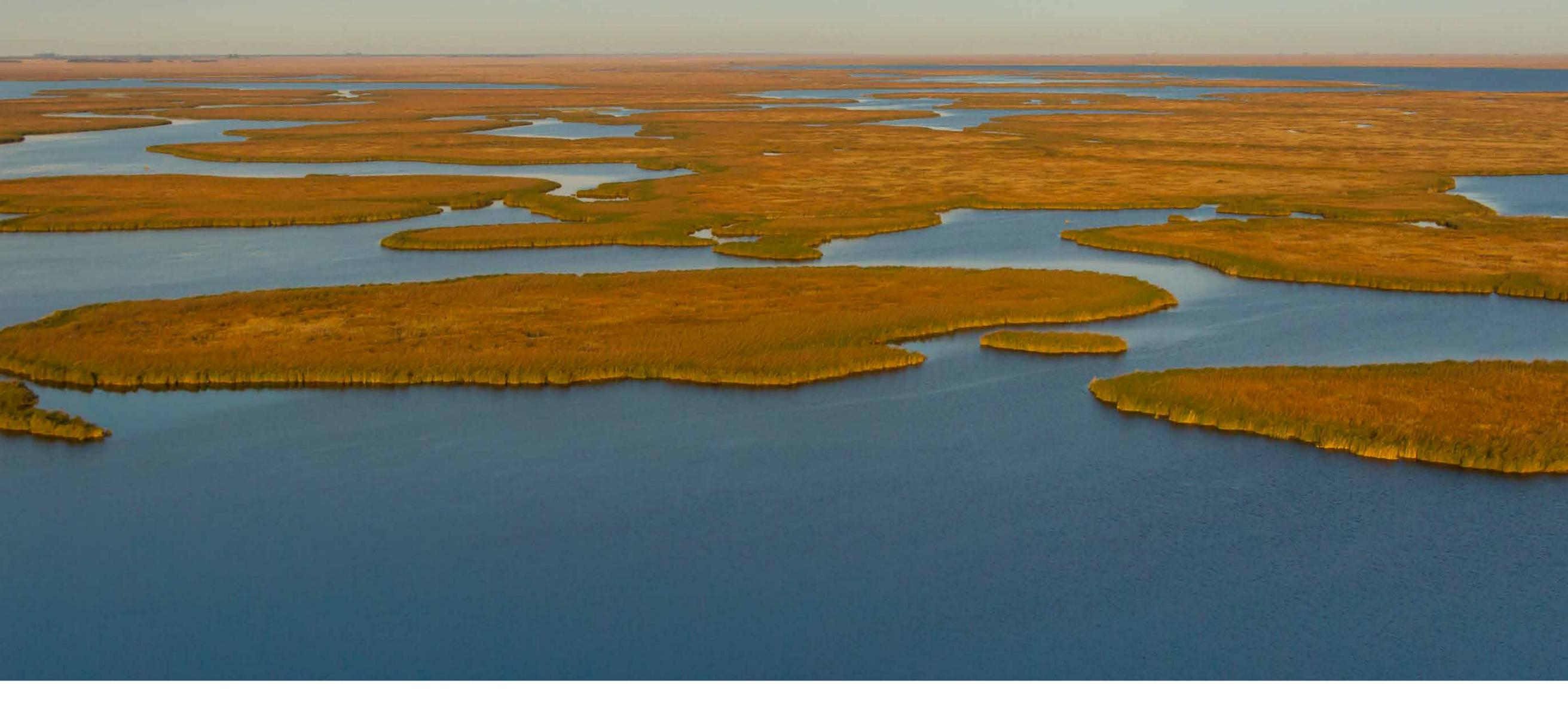
LANDSCAPES











MARSHES AND WETLANDS











For a short while our mothers' bodies are the boundaries and personal geography which are all that we know of the world Once we no longer live beneath our mother's heart, it is the earth with which we form the same dependent relationship, relying . . . on its cycles and elements, helpless without its protective embrace.

—Louise Erdrich







Birds of the Iberá

Mauricio Rumboll

he zoogeographical region of South America is part of what are known as the Neotropics, and just as Africa might be called the continent of large mammals, and Australia that of the marsupials, so the Neotropics might be labeled the continent of birds, the avifauna of this region having evolved over vast periods of time in a landscape that is essentially a huge island. The birds of the Neotropics generally do not migrate long distances, although some North American migrant species (from the region known as the Nearctic) do overwinter in the Neotropics, driven by the cruel northern winters. Neotropical birds do not go to North America for their winter, but stay within our more moderate continent.

In the entire world there are about 9,000 bird species. Of these, about 3,000 live in the Neotropics (compared with only about 750 in North America). Because of their long isolation here, the number of bird families that are endemic to our continent (that is, that are found nowhere else) is at least double that of the next closest ecoregion: Australia, with its 15 endemic families.

And it is not only for its great quantity of bird species that the Neotropics are known, but also for their variety, as well as for the ease with which these species may be viewed in the wide-open spaces of the region—grasslands, desert, wetlands—that have not yet been overly impacted by human "progress." As each species may be said to be a prisoner of its environment, the number of species in an area is directly proportional to the variety of its habitats. Thus open woods, riparian forests, tall and short grasslands, open water, reedbeds, streams and other waterways—even towns and cities—each environment contains its own characteristic birds, and most species remain in the environment in which they have evolved. The Iberá is a vast wetland of over one million hectares (2.5 million acres) comprising a great variety of habitats. Its surrounding area is equally varied. Consequently, the 360 species of birds found in this area are a reflection of its great habitat diversity.

A significant indicator of the health of a given environment is its birdlife. When an environment is altered through deforestation, drainage of lakes or wetlands, burning, flooding, or the introduction of commercial plantations of pine or eucalyptus, the original birdlife disappears, or is replaced by other species. Since the Iberá—with the habitats that surround it—endures largely in its pristine state, nature here, including the birdlife, is virtually unchanged. After centuries of abuse—including subsistence hunting and illegal poaching the Iberá area today is a popular destination for people interested in biodiversity and in the conservation of natural heritage. Ecotourism is booming, centered at Colonia Carlos Pellegrini, about a hundred kilometers (60 miles) northeast of Mercedes.

Birdwatching, especially, has seen tremendous growth in the last 40 or 50 years, and individual birdwatchers and guide-led groups tour the world to experience the birdlife of different ecoregions. To enjoy the astonishing variety of feathered life in the Iberá all one needs is a pair of binoculars and a bird book or other guide to regional birds. The following descriptive sketches may serve as a brief introduction.

BIRDS OF THE GRASSLANDS

Though rice is becoming an important crop, and commercial pine forestry has been growing, there are still areas of native grasslands to be seen, especially in the fields along Route 40, which joins Mercedes and Colonia Carlos Pellegrini; in the sandhills between Concepción and San Miguel; and on the islands—really just elongated fan-shaped sandbanks— interspersed among the northern ravines starting around Route 12, in the neighborhood of Ituzaingó and Villa Olivari. This type of natural habitat has largely disappeared as a result of the plowing, harvesting, and cattle grazing associated with commercial agriculture. But it is precisely where this habitat survives that one finds the remnants of several fascinating bird species that are now threatened.

Spotted Nothura and Rheas

If a visitor should see a partridge-like bird crossing the road, that will in all likelihood be the spotted nothura (*Nothura maculosa*), of the tinamou family and a not-too-distant cousin of the rhea—not at all related to the partridge or quail. As with rheas, it is the male of this species that sits on eggs laid by various females and raises the resulting brood. Rheas (*Rhea americana*) can also be seen in the fields along the road, with heads raised like periscopes.

Saffron-Cowled Blackbird and Tyrannids

One can see these birds from one's vehicle as one travels along the Mercedes– Pellegrini road. The saffron-cowled blackbird (*Xanthopsar flavus*) was once common as far south as Buenos Aires. One can also see here two or three species of the family Tyrannidae, with strange, twisted, or enormous tails.

Seedeaters and Grass Finches

Other grassland species of interest are the various seedeaters (*Sporophila spp.*), all of them small, with beaks adapted for their diet. Males have a variety of distinguishing colors and patterns; females are hard to tell apart, nearly all being olive-colored, brown, or grey. Also seen here are two species of grass finches (genus *Emberizoides*) that also eat seeds. They come in shades of striped brown on the back, with a pale-sepia chest. These are rare now due to the loss of their preferred habitat.

Southern Lapwing

In open fields of short grasses, or strutting on town lawns as if they own the place—which of course they do—noisy southern lapwings (*Vanellus chilensis lampronotus*) sport a slender crest from the back of the head. They are found throughout Argentina, except for the highlands; the Patagonian variety has a slightly different call and a smaller crest.

BIRDS OF THE WOODLANDS

Where scattered acacias start to grow in the grasslands, the bird fauna changes noticeably, with the addition of several new species—yellow cardinal (*Gubernatrix cristata*, endangered more from trapping for illegal trade than from loss of habitat), mockingbirds, doves, flycatchers, American kestrel (*Falco sparverius*), *chimango (Milvago chimango*), and southern caracara (*Caracara plancus*). These last two are the cleaning crew of the countryside, disposing of carrion, though occasionally they also hunt easy prey. All of these are birds that perch on tree branches at various heights.

Hawks

In spring and summer, Swainson's hawk (*Buteo swainsoni*) comes through in large migrating flocks from North America. Formerly, they fed on locusts, but since there are no longer any, now they feast on grasshoppers, to the benefit of surrounding crops. Nevertheless, this hawk is being harmed by the widespread spraying of pesticides in intensive agriculture. Two very spectacular hawks may be seen perched on telephone poles: the savannah hawk (*Buteogallus meridionalis*), generally chestnut in color until it spreads its wings for flight, when lovely black patterns are revealed; and the black-collared hawk, with its whitish head and black collar that gives it its name. The latter is most commonly seen near an expanse of open water, as it feeds almost entirely on fish.

Caciques and Orioles

For obvious reasons, forests are the most difficult habitat in which to view birds. One has to rely heavily on sounds to locate them. Three species of birds locally known as *boyeros (Cacicus chrysopterus, Cacicus solitarius,* and *Icterus cayanensis)* emit characteristic calls that are readily and uniquely identifiable. All three use various fibers to build nests that look like socks hanging on a clothesline. All of these birds are basically black, with sharp white beaks. Two of the species have bright patches of color (yellow shoulders and rump, or scarlet rump).

Great Kiskadee

The great kiskadee (*Pitangus sulfuratus*) is just a yellow-breasted tyrannid with black head and a white headband. It feeds in many and varied ways: hovering like a small bird of prey to catch insects such as grasshoppers; alighting on the edge of the water and fishing like a kingfisher; stealing fruit or the nestlings of other birds. When ants or termites perform their nuptial flight, the great kiskadee can be seen catching the flying insects on the wing as do many other species more typical of this large family of birds.

Toucan

Needing large holes in trees for nesting, the toco toucan (*Ramphastos toco*) is found in forests, in open areas with scattered trees, and even in gardens and

villages. The first warning of a toucan's presence is often a raucous "aaaaaaaak" croak emitted both while perched and in flight. Its diet consists of fruit, eggs and nestlings of other birds, small vertebrates, and large insects.

Hummingbirds

These birds may be seen darting from flower to flower, or acrobatically hovering in midair, collecting cobwebs to build their nests (only the female does this, as well as incubating the eggs and raising the young). Most of the locally recorded species show sexual dimorphism—the male displaying brilliant colors while the female dresses more modestly.

Whistling Heron

One of the loveliest of heron species is the whistling heron (*Syrigma sibilatrix*), which seems to seek proximity to humans, often nesting in large trees in parks and gardens. This heron announces itself in flight by a four-note high-pitched whistle. It is decked out in lovely pastel shades of blue-gray on top, buff on the neck and belly, a patch of mottled gold and black on the upper wing coverts, and a rose-colored black-tipped beak. It is a dry-land heron, though usually found not too far from fresh water. It flies with its neck extended and wingbeats below the horizontal.

BIRDS OF THE WETLANDS

There are also, of course, the marshlands themselves, this great extent of water, 6 to 10 feet deep, roughly 90 percent of which is covered with dense mats of floating vegetation known as *embalsados*. In the shallower areas near the banks there are stands of rooted cattails and beds of tule and other reeds. These islands of vegetation emerge or are submerged according to the fluctuating level of the water. Visitors to this area must travel by boats punted along narrow channels that open up and close according to the prevailing winds. The boatman generally is quite familiar with the flora and fauna and also serves as a nature guide.



Olivaceous Cormorant and Great Grebe

The local cormorant here is the *biguá* or olivaceous cormorant (*Phalacrocorax brasilianus*), all iridescent black during the mating season. It is sometimes seen fishing alone along the canals; at other times in organized flocks arrayed in V formation, herding together schools of fish and then diving in all at once to catch them. Also scattered along open water, one may find great grebes (*Podiceps major*), emitting their mournful contact calls—a long drawn-out "waaaaah" that gives them their local name: *bualas*.

Muscovy Duck

The largest duck on the continent, the muscovy duck, is widespread in the Iberá. It is often found in the areas farthest from human reach, or one may see them flying by in small flocks, in which it's easy to notice the size difference between males and females. Long before Europeans arrived, the indigenous Guaraní tribes had domesticated this species as a farmyard bird. When specimens for museums or for scientific study were shipped back to Europe by early collectors, they must have been mislabeled, because its scientific genus and species names ended up as Cairina moschata (which mean "from Cairo" and "from Moscow," respectively), with no mention of Paraguay or Bolivia, which were their true places of origin. A favorite prey of game-shooters, who prize its great size, this wild duck is now rare over most of its range, but making a comeback in protected areas.

Storks

Three species of storks inhabit the Iberá wetlands: (1) the *yabirú (Jabiru mycteria*), very large, with all-white plumage, bare scarlet neck, black head and beak, normally seen alone or in pairs; (2) the *tuyuyú* or American Wood Stork (*Mycteria americana*), all white with black flight feathers, dark-gray featherless head, and lighter-colored down-curved bill; and (3) the maguari stork (*Ciconia maguari*), a fairly typical-looking stork, just like the ones "that bring newborn babies." If one encounters an all-black stork in the wetlands of the Iberá, it is not a case of melanism or the discovery of a new species; this is merely the maguari stork's juvenile plumage, which lasts for about two months after fledging.

Scarlet-Headed Blackbird

Even in the marshes, many birds tend to stick to their particular habitat. Thus the scarlet-headed blackbird (*Amblyramphus holosericeus*) is found only in patches of bullrushes or cattails. To allow it to get at its favorite food—the worms that eat the pithy interior of the leaves of the plant—the tip of its beak is chisel-shaped. Simply by opening its beak, it splits the leaves open for a good look inside to get to the worms.

Southern Screamer

If ever a bird deserved its name it is the southern screamer (*Chauna torquata*), known locally as the *chajá*. This is one of three species of an exclusively neotropical family related to waterfowl. One of its distinguishing physical characteristics is a subcutaneous layer of vesicles (like bubblewrap) that serve to cushion the blow of puncturing spurs in fights. (On the leading edge of each wing a southern screamer has spurs with horny sheaths. These sheaths are often left behind, embedded in an opponent's chest muscles, after a fight.) The southern screamer is almost unique in lacking tracts of feathers-instead, it is completely feathered, like a penguin. It is about the size of a turkey and, in spite of spending most of its time in the water, its feet are not webbed! It grazes around marshes on short lawn-like grass, and builds a huge floating nest. Here the female lays five large eggs to a clutch, from which emerge chicks wrapped in golden down. The pair stay in touch by means of screams, and on spring and summer days they often soar to great heights, calling much of the time and gliding in great circles, no one knows why-perhaps in search of new territory, new habitat, or new mates.

Wattled Jacana

One of the world's seven species of jacana is abundant in the Iberá, and is often seen walking on floating vegetation such as water lettuce or water lillies. Its inordinately long toes allow it to spread out its weight and thus keep from sinking in the water. The chicks' stride is often too short to step over a water gap, so the adult carefully picks them up—holding two under each wing, their legs dangling—and carries them over.

Snail Kite

In low, floppy flight, with head looking down to the water, the snail kite (*Rostrhamus sociabilis*) searches for its only food, the apple snail. The bird, all black with a distinguishing white rump, drops softly to clasp in its talons its snail prey, which it then carries to a firm perch to process. First, it removes the snail's operculum, the rounded flat piece of shell that acts as its entry gate and probably keeps it from getting dehydrated in periods of drought. Then, with its highly adapted beak, it digs in, severs the columellar muscle that attaches body to shell, and hauls out its naked meal. Now it removes the bright pink ovary—probably foul-tasting or even poisonous—and gobbles the rest of the snail in one piece, taking wing immediately afterward to search for another helping. This kite, now endangered in North America, is very common at this end of its native range. It nests in colonies, a habit that is reflected in its scientific species name: *sociabilis*.

The brief descriptions that have been given here constitute only a very small "sampler" of the 360 avian species recorded for this region. They have not been presented as full descriptions for purposes of identification or recognition; only a few interesting facts have been noted for each bird. The objective is merely to pique the interest of readers interested in birds, and to spur them to grow their ornithological knowledge. May this essay sow the seed that leads to a lifelong interest in these useful and fascinating creatures.





























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There are seven areas of utter importance for the conservation of birdlife in the Iberá, which contain nearly twenty endangered species on global and national scales; there are few places in the world where such a treasure can be kept pristine.

—Adrián S. Di Giacomo







Birdwatching puts humans on a path of peace and joy, and provides tools for us to stop natural and human degradation.

—Tito Narosky and Darío Yzurieta













We need another and a wiser and perhaps more mystical concept of animals They are not brethren, they are not underlings; they are other nations, caught with ourselves in the net of life and time, fellow prisoners of the splendor and travail of the earth.

—Henry Beston













This magic wetland they call the Iberá, Is a flooded world hard to understand, Home to the capybara and the tuyuyú, And in whose "towns" nest the cormorant and the heron. This watery kingdom guarded by the caiman, Hides a thousand secrets that few can see, Sets you adrift among floating islands. There was a time when hunting and shooting reigned, But today the deer of the marshes are tame. If the old inhabitants called you "shining waters," It is because they knew of your many wonders.

—Juan Carlos Chébez













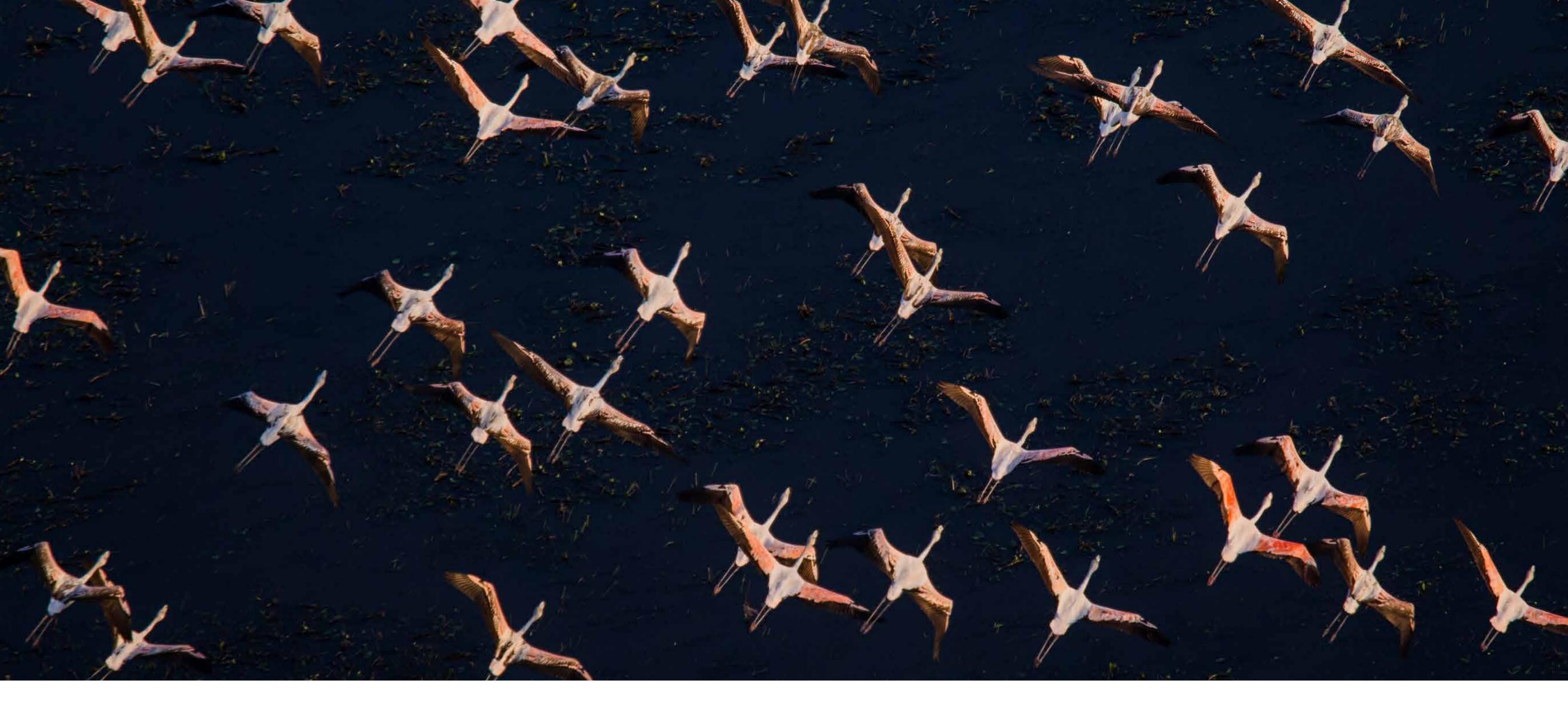




There is grandeur in this view of life . . . whilst this planet has gone circling on according to the fixed law of gravity, from so simple a beginning endless forms most beautiful and most wonderful have been, and are being evolved.

—Charles Darwin



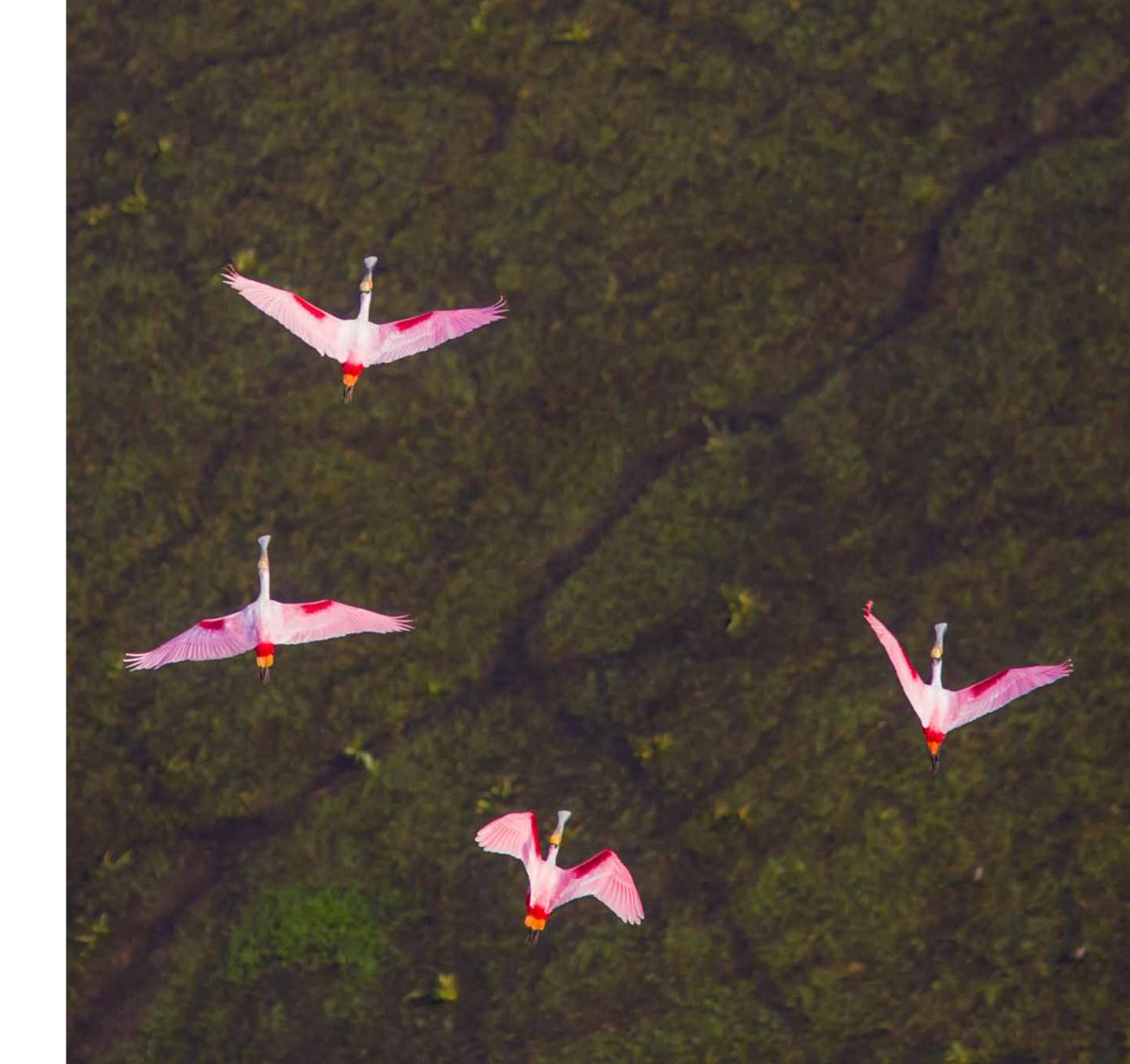


LIFE ON THE WING

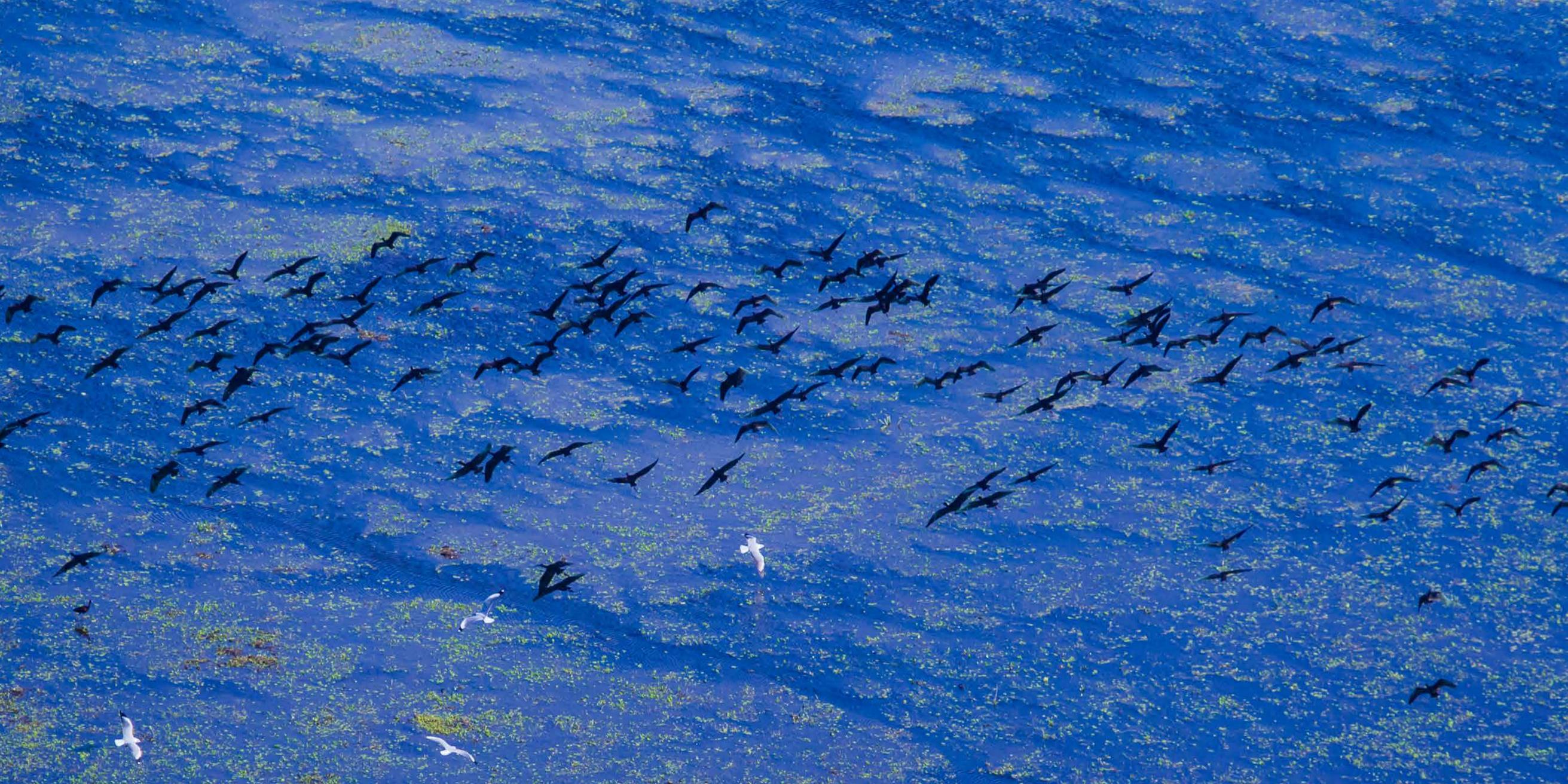


Every human being looks up to the birds What they feel they can voice, as we try to; they court and nest, they battle with the elements, they are torn by two opposing impulses, a love of home and a passion for far places.

—Donald Culross Peattie





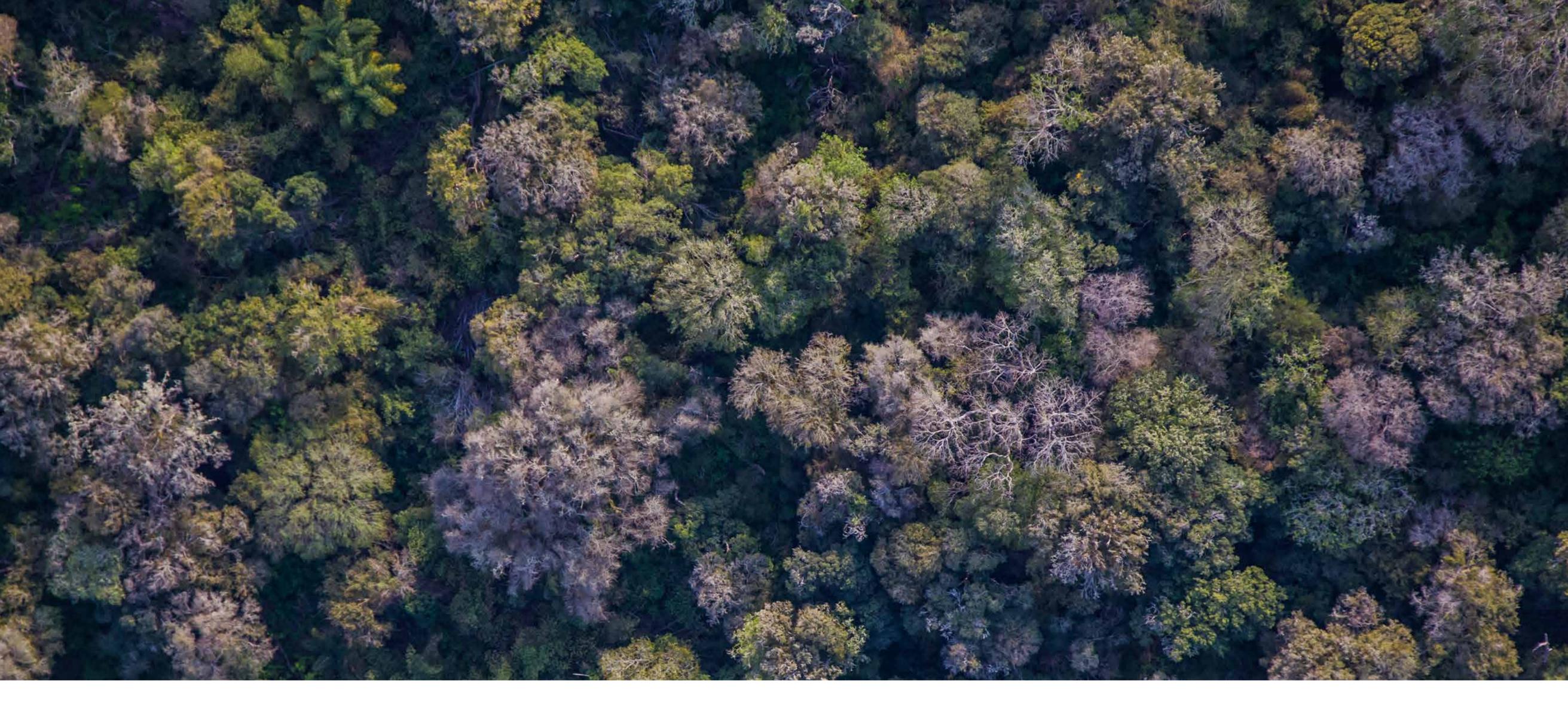






The Iberá is a great body of water that in some places takes the form of an actual lake, but is mostly full of plants; hence it is impossible to explore its interior, whether on foot, on horseback, or by boat.

—Félix de Azara

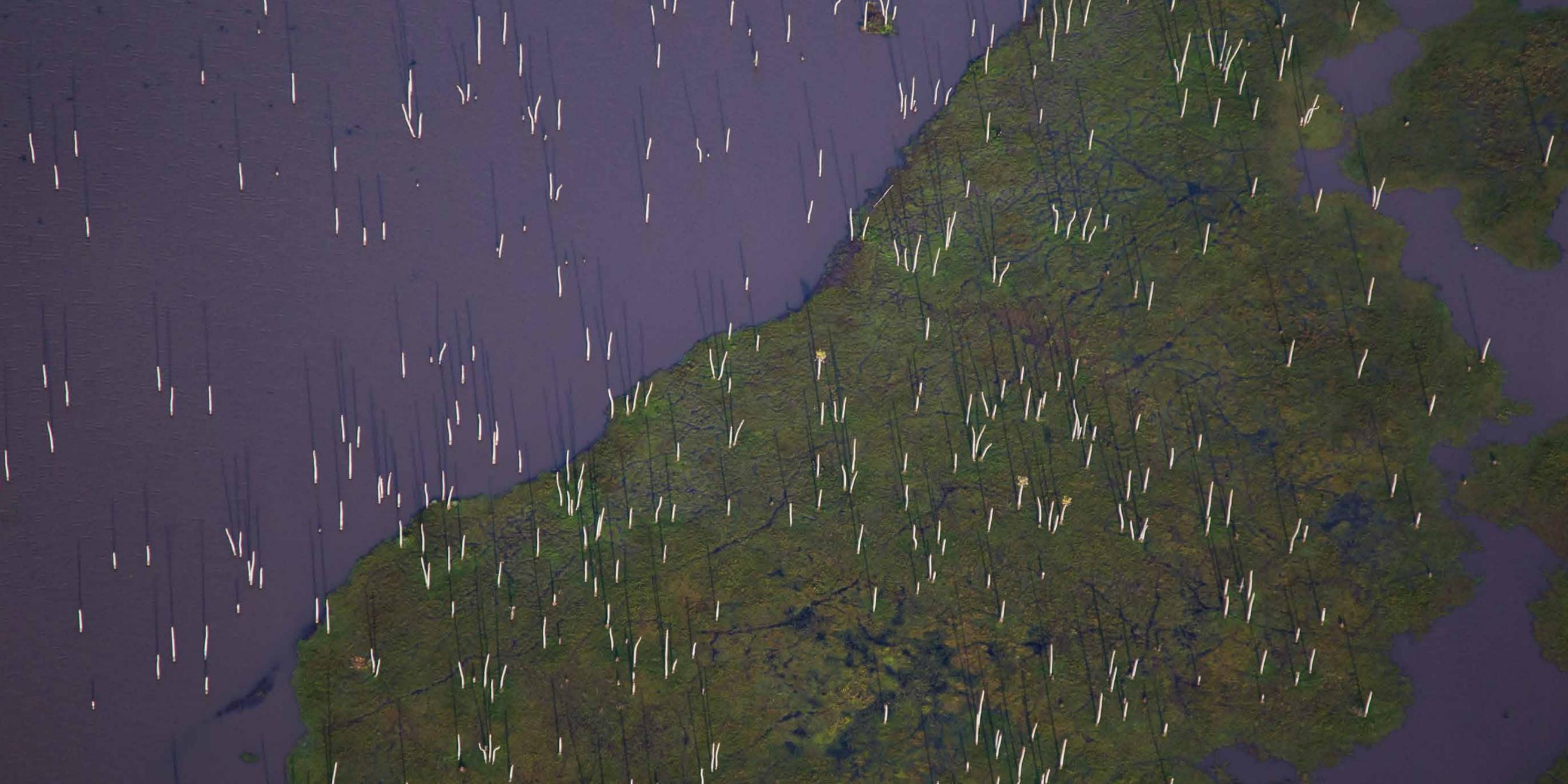


FORESTS AND TREES











To one who finds a charm in things as they exist in the unconquered provinces of nature's dominions . . . it is permissible to lament the altered aspect of the earth's surface, together with the disappearance of numberless noble and beautiful forms, both of the animal and vegetable kingdoms. For he cannot find it in his heart to love the forms by which they are replaced; these are cultivated and domesticated, and have only become useful to man at the cost of that grace and spirit which freedom and wildness give.

—William Henry Hudson



MAMMALS OF THE IBERÁ



A Journey through Time

Ignacio Jiménez Pérez

hirteen thousand years ago, the region now known as the Iberá was most likely covered by habitats very similar to those found here today: open grasslands, treed savannas, forests, and wetlands. Unlike in the present, however, these ecosystems were then populated by a megafauna as diverse and spectacular as that found in present-day Africa or tropical Asia. It included strange, majestic animals such as megatheriums, toxodonts, glyptodonts, pampatheriums, and smilodonts, the giant predators commonly known as "saber-toothed tigers." Sadly, all of these large mammal species disappeared from the Iberá and the rest of South America in just a millennium or two, as a result of the combined impact of the arrival of human hunters and climate change.

After this first wave of mass extinction, a few large mammal species lived on in the region for several millennia. The largest of these mammals was the tapir (*Tapirus terrestris*), followed by marsh deer (*Blastocerus dichotomus*), jaguar (*Panthera* onca), puma (*Puma concolor*), giant anteater (*Myrmecophaga tridactyla*), collared peccary (*Pecari tajacu*), pampas deer (*Ozotoceros bezoarticus*), giant otter (*Pteronura brasiliensis*), and maned wolf (*Chrysocyon brachyurus*). All of these animals inhabited the region's wildlands until the beginning of the last century. Something happened in the first half of the 20th century—possibly as a result of increased human density in the area, the increasing use of firearms, and the development of a lucrative trade in wild-animal products—that provoked the second period of mass extinction for large mammals in the Iberá and the rest of Corrientes province.

In just 60 or 70 years, the region experienced the complete disappearance of the jaguar, giant anteater, tapir, collared peccary, and giant otter. The puma was also formally declared extinct here, although there probably remained a few isolated or transient individuals in the province. In 1975, the great naturalist George Schaller visited the Iberá and described a small remnant population of marsh deer in the most remote reaches of the wetlands. Around this time, a remnant population of pampas deer in the outskirts of Concepción became extinct, as well as probably another one near Mercedes, although a significant population persisted in the region bordering the marshes of Aguapey, located to the northeast of the Iberá. At the same time, the maned wolf, which at least managed to survive in the area into the new millennium, was considered quite rare.

Up to this point I have recounted a story of continuous extinction or population decline of the great mammals of the region. Fortunately, it would appear that history has of late been giving the natural ecosystems of the Iberá a second chance. One could choose the year 1983, when the Iberá Nature Reserve was established, as the start date for this ecological resurgence of the region. For the new Reserve, a groundbreaking decision was made: to hire as park rangers some of the region's most seasoned trappers and hunters—or *mariscadores*, as they are locally known. This decision caused hunting to decrease markedly, at least in the area surrounding the town of Carlos Pellegrini.

The arrival of ecotourism as a commercial activity also reinforced the trend toward greater protection of the region's wild fauna, allowing the swift recovery of local populations of capybara, marsh deer, caiman alligator, and other species. Likewise, changing societal attitudes toward environmental protection, the global decline in the trade of wild-animal skins, and the progressive abandonment of inhabited enclaves in the interior of the Iberá all helped to accelerate the recovery of the wild fauna. As a result of all of these influences, formerly diminished populations of large mammals are on a clear path to recovery in the new millennium, both in the interior of the Iberá and in bordering areas.

Recent data suggest that some 8,000 marsh deer are living within the Iberá Nature Reserve; this is the largest population of this species in Argentina, and in the world second only to Brazil's Pantanal region. Several researchers have registered the presence of pumas in and around the Iberá in the past few years. In addition, the population of pampas deer that live in the neighboring lowlands of Aguapey appears to have grown in recent years; it is estimated that nearly 1,000 individuals live in these grasslands, which would make it the second-largest population of this cervid in the country. Even the elusive maned wolf has been seen with greater frequency in the areas around Carlos Pellegrini and has reappeared in places where it was thought to be extinct, such as the sandhills of San Alonso, right in the heart of the marshlands.

Unfortunately, other animals such as the giant anteater, jaguar, tapir, collared peccary, and giant otter do not have healthy populations nearby that would allow

a natural recolonization of the vast wild ecosystems available. Even the population of pampas deer is hemmed in by environmental and human barriers. For these species, the only way back to the region is through active reintroduction.

Happily, this work has already begun. In 2006, the Conservation Land Trust (CLT) and the Office of Natural Resources of Corrientes jointly undertook the "Project for the Recovery of the Giant Anteater in the Iberá." For the first time ever, an attempt was begun to restore an extirpated (regionally extinct) population of giant anteater. The project has been slowly gaining support from national and provincial wildlife authorities, and specimens have been donated from the nearby provinces of Santiago del Estero, Salta, Chaco, Jujuy, and Formosa. Private citizens, wildlife rescue centers, and zoos have donated individual specimens for reintroduction. The majority of the animals donated were juvenile orphans whose mothers had been killed by hunters. Some adult wounded animals were also provided by wildlife authorities in other provinces.

After receiving any needed medical care and undergoing a series of tests, the anteaters are released at Rincón del Socorro, a private reserve operated by CLT comprising 17,000 hectares (42,000 acres) of grassland, savanna, and forest near Carlos Pellegrini, within the Iberá Nature Reserve. Five years after the release of the first mating pair, there are currently between 24 and 28 anteaters living in the Reserve, seven of which—the offspring of reintroduced anteaters—were born in the wild. The acclimation of the reintroduced animals has been good, with an annual survival rate of 89 percent. As a result of this initiative a remarkable cultural phenomenon has taken place: the giant anteater, from being almost unknown, has become one of the most popular and well-loved animals in the region. People living near the Reserve and throughout Corrientes province have embraced the return of this native species.

Also in 2006, CLT began efforts to re-establish pampas deer in the region. We started with a count of the population in the marshes of Aguapey, which yielded the estimates mentioned earlier. Conservationists worked with local landowners and launched an education campaign to familiarize the general population of Corrientes with the pampas deer, a species that had been largely unknown to the inhabitants of the province. In 2009, a local conservation NGO (nongovernmental organization), the Fundación Flora y Fauna Argentina, created in Aguapey the first private reserve dedicated to protecting this species.

The most daring and innovative initiative, however, was the attempt to establish a new population of pampas deer inside the Iberá itself. The concept was to capture deer in Aguapey and move them to the San Alonso reserve, which has 10,000 hectares (25,000 acres) of strictly protected conservation land with optimum grassland habitat for the species. This was the first time someone had tried to capture these animals and transport them from one wild area to another. The work was particularly delicate because the deer are stressed during capture; minimizing this requires the use of very precise capture techniques and the use of anesthesia. Fortunately, Mauricio Barbanti-the world's foremost expert in capturing and handling Neotropical cervids-and his team were enthusiastic about the opportunity to participate in this project, and they shared their knowledge and technical skills with a local team of veterinarians during the first relocation of pampas deer, in 2009. Once the local veterinary crew had gained enough experience with capture and immobilization techniques, we completed two additional deer-translocation projects, in 2011 and 2012, to augment the newly introduced population.

Due to the excellent adaptation of the reintroduced animals, the new population currently includes 29 individuals, 13 of which were born in San Alonso. One of the young was even born to a deer itself born in the new area. Thus, three years after the first release, the area is already inhabited by the third generation of pampas deer.

The auspicious results of the recovery projects for the giant anteater and the pampas deer have encouraged the CLT team to move ahead with the ambitious task of bringing back all of the large mammals that became extinct in the Iberá, but still survive in other regions of South America. To this end, CLT biologists have already proposed a tentative plan to re-establish the collared peccary, and are currently awaiting approval from the Corrientes provincial authorities.

Perhaps the most complex initiative, and the one likely to have the greatest impact on the restoration of the ecological integrity of the Iberá, will be the reintroduction of the region's top predator—the jaguar. For seven years, experts from CLT and from several countries have been conducting investigations and holding meetings with the purpose of studying the project's feasibility and the

best way to implement it. As a result of this analysis, it has become clear that the ecological and social conditions of the Iberá are surprisingly well suited for restoring a population of this large feline.

Flavia Caruso, a biologist at the Universidad del Nordeste in Corrientes, carried out a study to gauge the knowledge and attitudes of *Correntinos* regarding the jaguar and its possible reintroduction. After surveying 433 people living in different areas of Corrientes, she found that 95 percent of provincial residents supported the return of the jaguar; notably, this high level of support was similar among urban inhabitants and residents of the surrounding rural areas. In addition, her study found that two-thirds of the cattle ranchers interviewed—a group traditionally opposed to large predators—favored the idea. These data have been validated by subsequent interviews, meetings, and conversations that the CLT team has conducted with ranchers, legislators, local politicians, and dozens of other citizens. It appears that *Correntinos* have a strong and positive identification with the jaguar as symbolic figure, a bridge between a proud past and a hopeful future based on ecotourism and conservation of the region's outstanding natural resources.

In parallel to the social-science research described above, the ecologist Carlos de Angelo evaluated habitat availability and carrying capacity for the jaguar in the Iberá. His study estimated that there are 240,000 hectares (600,000 acres) within the Iberá with optimal habitat and minimal potential for conflict with humans; this core territory for jaguar recovery would be surrounded by and interconnected with another 400,000 hectares (about a million acres) of habitats of lesser quality, but with similarly low possibilities for jaguar–human conflict. Based on jaguar density in other locations with ecological conditions similar to those in the Iberá, de Angelo concluded that the Nature Reserve could support around 100 jaguars, which would be equivalent to 50 percent of the current estimated population in all of Argentina.

There is no doubt that restoring a viable population of jaguars to the Iberá is an ambitious undertaking that presents significant financial, logistical, and scientific challenges. But rigorous external social and ecological research, combined with CLT's growing body of experience returning wild mammal species to their rightful places in the Iberá ecosystem, plus the support of the *Correntinos* themselves, together create a very favorable environment for such an ambitious project. Indeed, there may exist today in all of Latin America no better opportunity to restore an extinct population of this great feline.

These projects, and future efforts to restore other regionally extinct species, will require many years of work to obtain permits, design the best working practices, release translocated animals, and monitor the reintroduced populations until they are self-sustaining. Despite this being complicated and costly work, the results thus far show that wildlife recovery can be achieved given abundant highquality habitat and a committed, skilled, and experienced team of conservationists.

After having lost the largest representatives of its native fauna, the Iberá is now experiencing a new blossoming, with several large mammals returning to their home and even becoming abundant once again. The fruits of this labor of

ecological restoration might be safeguarded for the long term by the eventual creation of a national park, consisting of private reserves held by CLT and other NGOs, plus the public lands of Corrientes province, to protect in perpetuity half of the current Iberá Nature Reserve.

A national park would not only represent the best way to safeguard the fauna that is returning to the region, but would also serve as an engine for economic development fueled by the region's wildlife and natural beauty, and at the same time fostering its care. Without a doubt, it is an ambitious proposition, bordering on an impossible ideal, but the achievements of the previous decades beckon us to dream of a grand ecosystem in the Iberá with greater biological richness than has been seen here in centuries. For the formerly missing species, it is a homecoming to a place from which they should never have gone.













In the relations of man with the animals, with the flowers, with the objects of creation, there is a great ethic, scarcely perceived as yet, which will at length break forth into the light and which will be the corollary and complement to human ethics.

—Victor Hugo



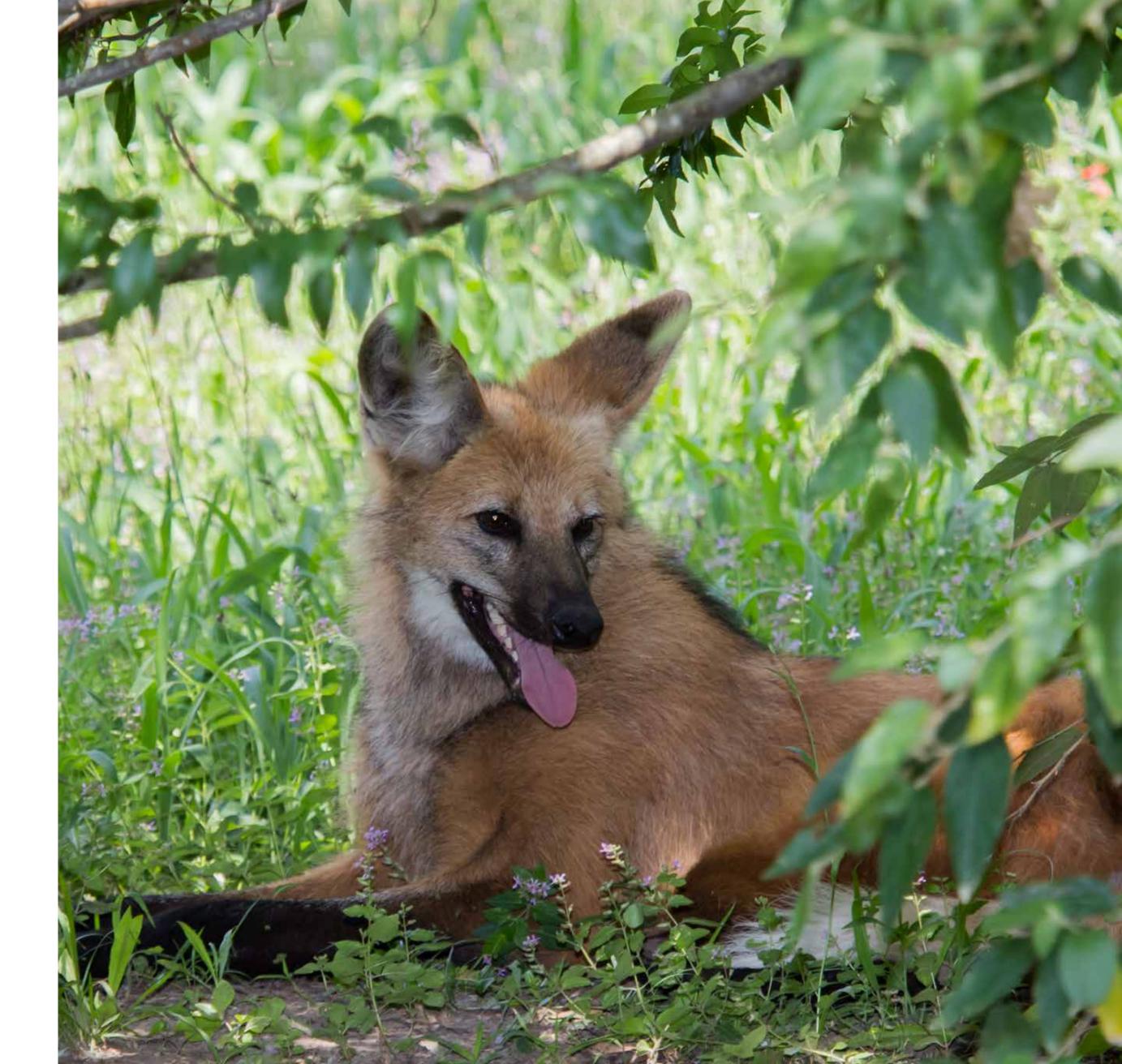






Animals are among the first inhabitants of the mind's eye. They are basic to the development of speech and thought. Because of their part in the growth of consciousness, they are inseparable from a series of events in each human life, indispensable to our becoming human in the fullest sense.

—Paul Shepard





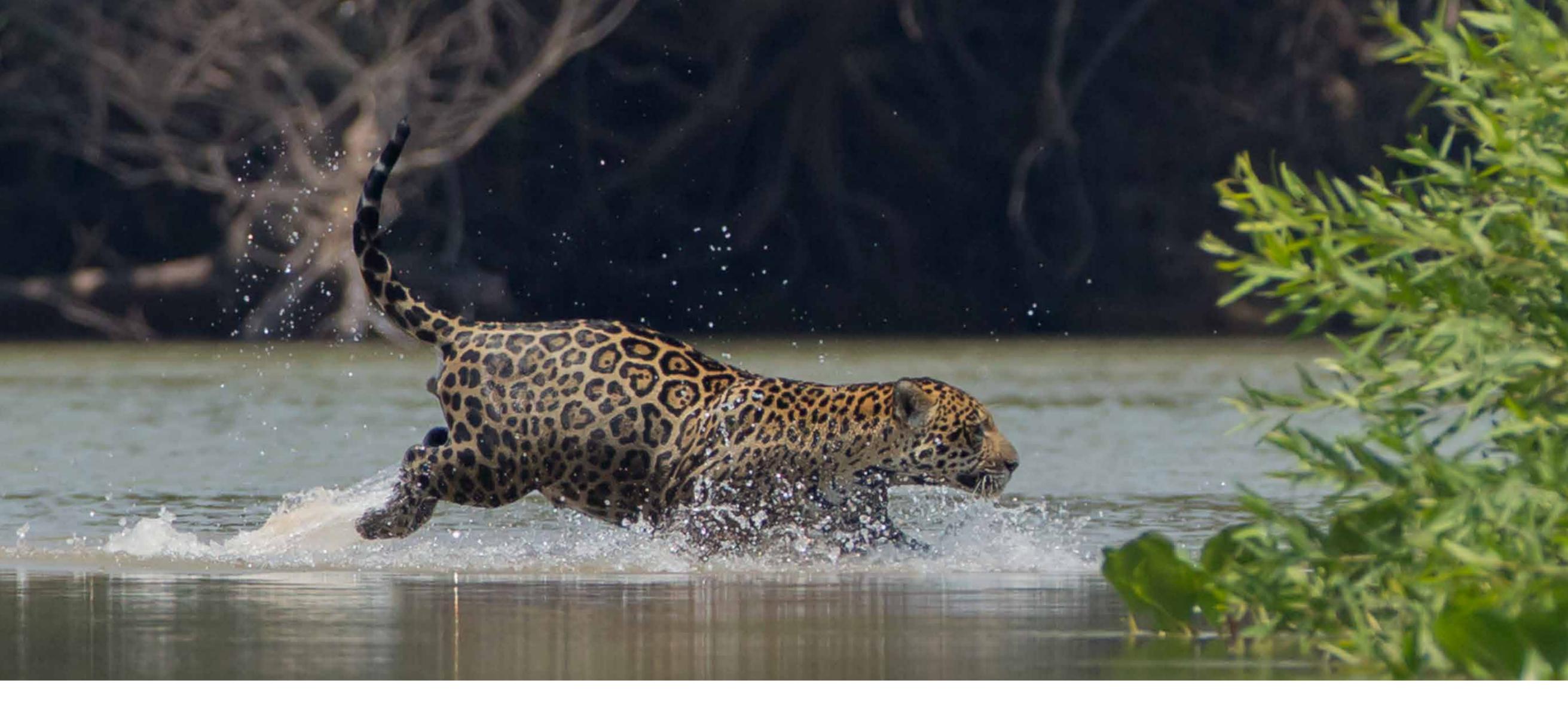






The greatness of a nation and its moral progress can be judged by the way its animals are treated.

—Mohandas K. Gandhi



SPECIES REINTRODUCTION







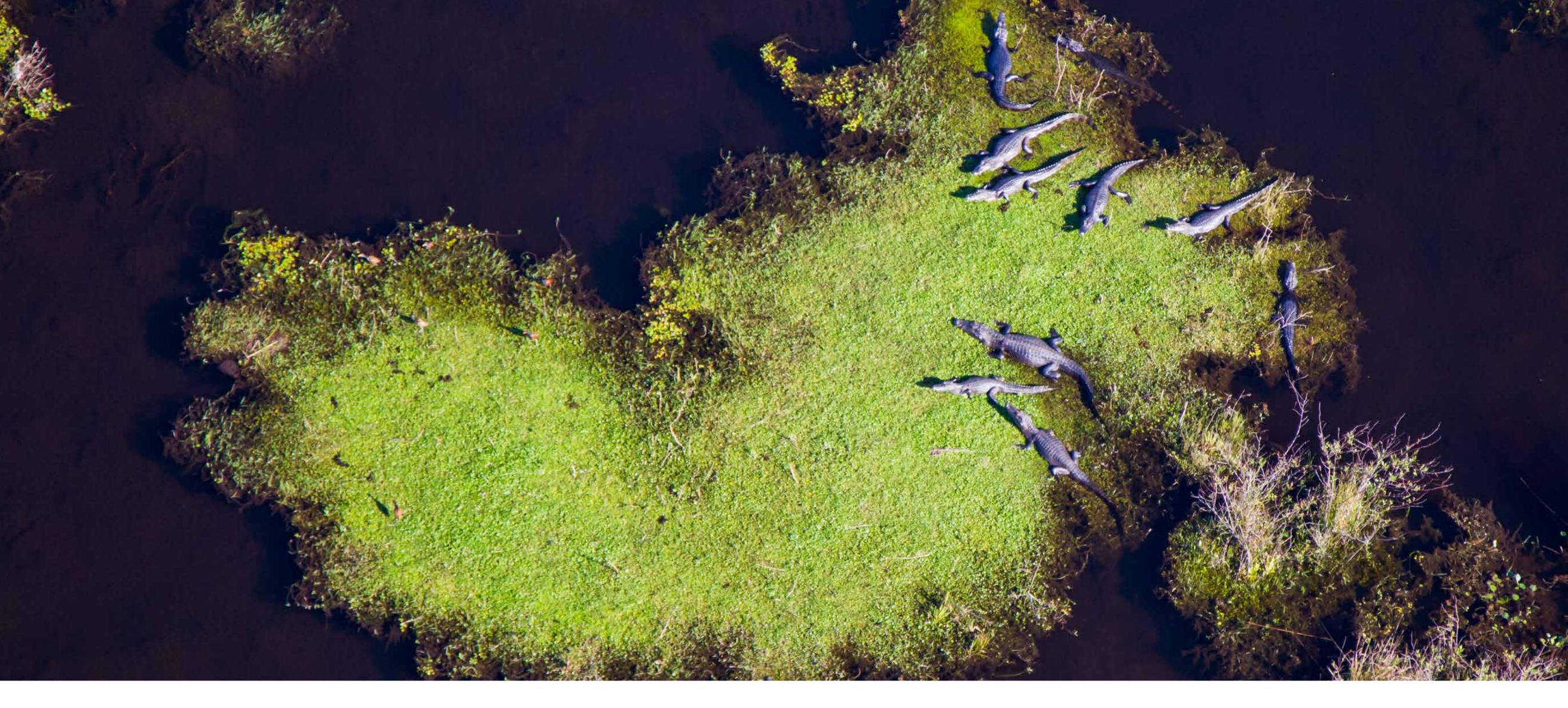




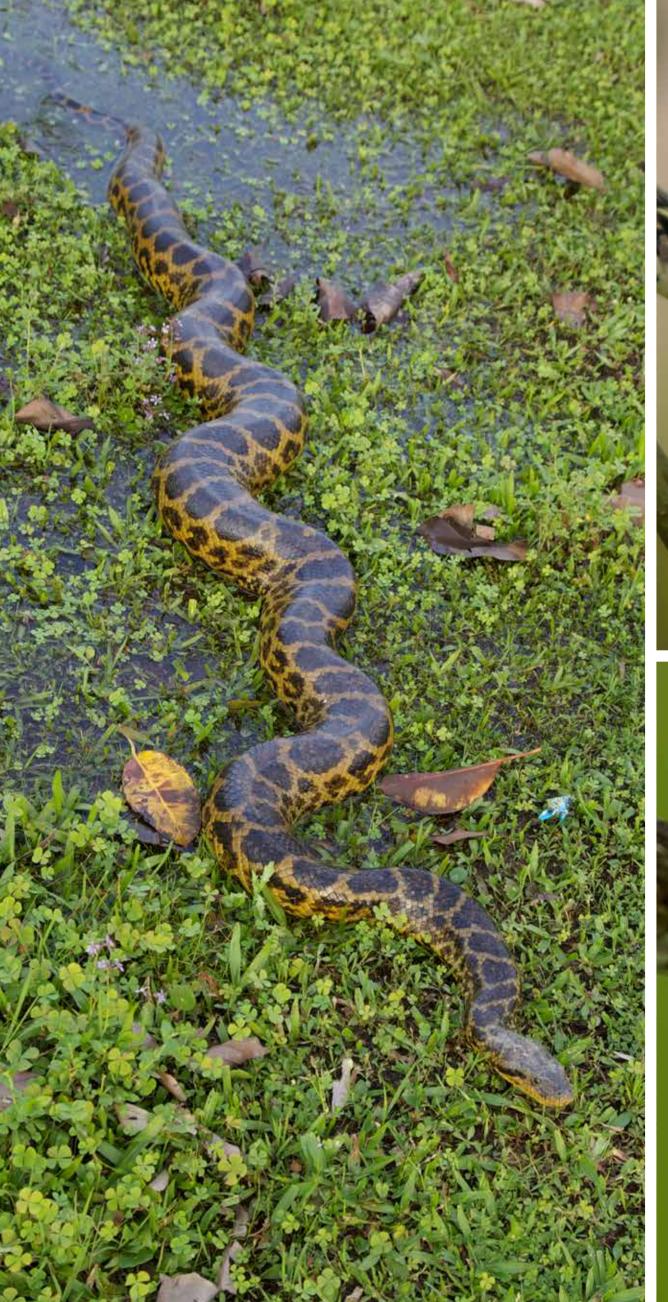


I learned long ago that conservation has no permanent victories, that one must retain connections and remain involved with animals and places that have captured the heart, to prevent their destruction.

—George B. Schaller



REPTILES AND AMPHIBIANS











The more clearly we can focus our attention on the wonders and realities of the universe about us, the less taste we shall have for destruction.

—Rachel Carson









Your name evokes the grandeur of Corrientes, My Guaraní province, where life and nature Overflow, surging in wetlands Like a necklace of dreams, without horizons.

—Alberto Ferreyra Casco

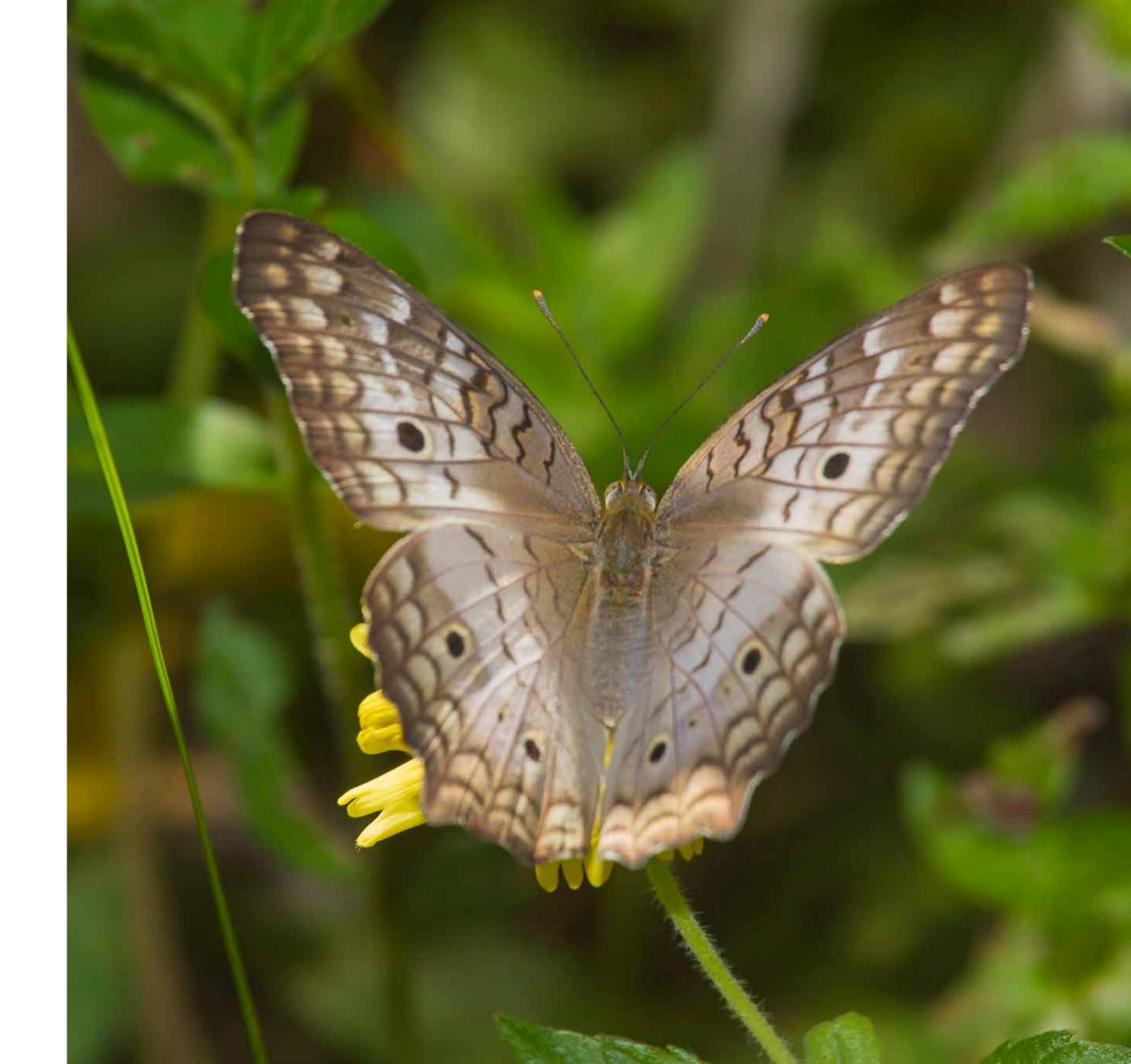


BUTTERFLIES AND INSECTS



People need wild places To be surrounded by a singing, mating, howling commotion of other species, all of which love their lives as much as we do ours, and none of which could possibly care less about us in our place. It reminds us that our plans are small and somewhat absurd. It reminds us why, in those cases in which our plans might influence many future generations, we ought to choose carefully. Looking out on a clean plank of planet earth, we can get shaken right down to the bone by the bronze-eyed possibility of lives that are not our own.

—Barbara Kingsolver







Humanity is changing its ways at a very fast pace and it cannot adapt as quickly as it should. Its action stays ahead of its understanding of reality, thus man cannot comprehend that vital resources for him and his descendants come from nature, and not from his mental power.

—Juan Domingo Perón



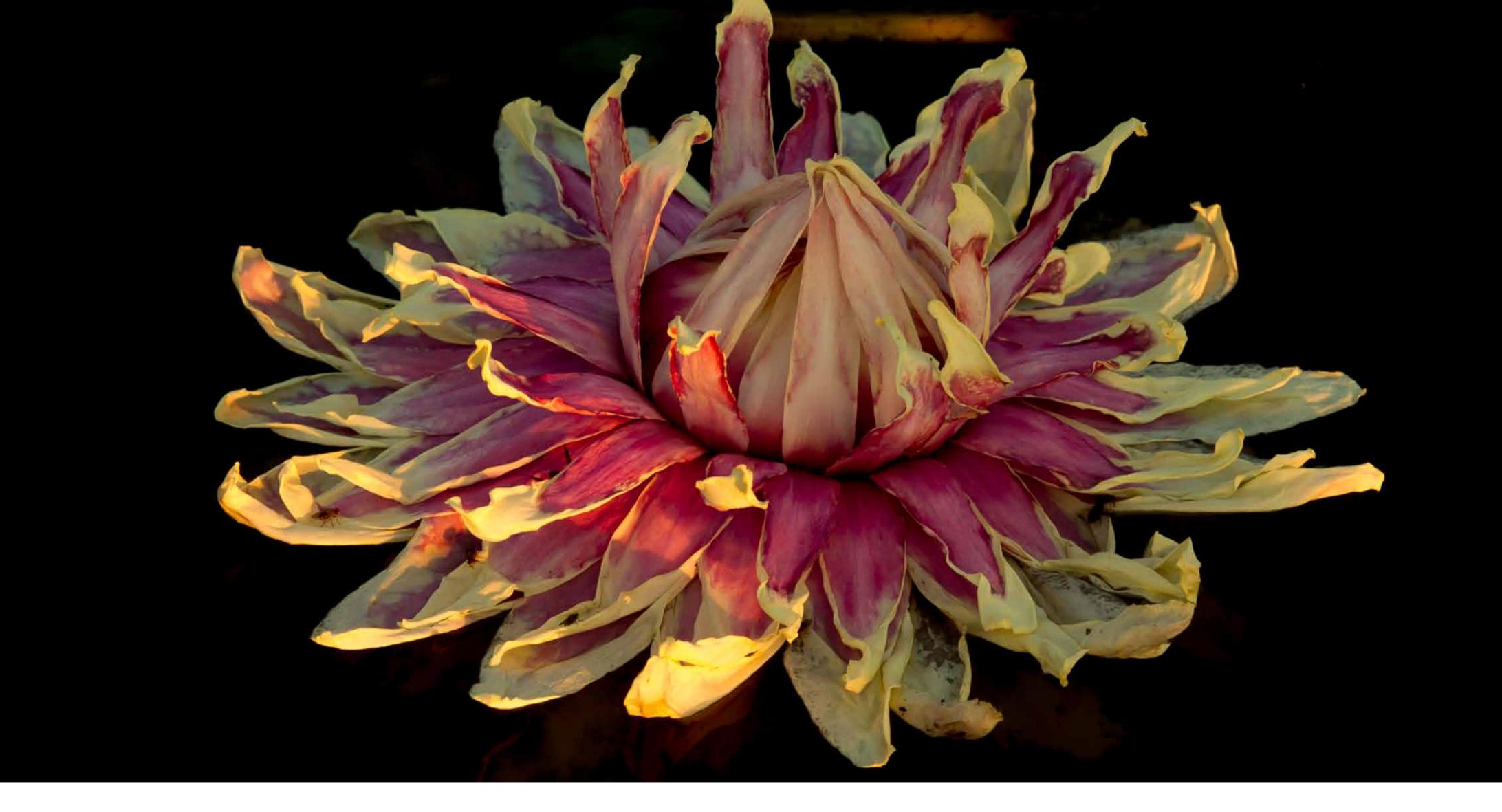






When we try to pick out anything by itself, we find it hitched to everything else in the Universe.

—John Muir





















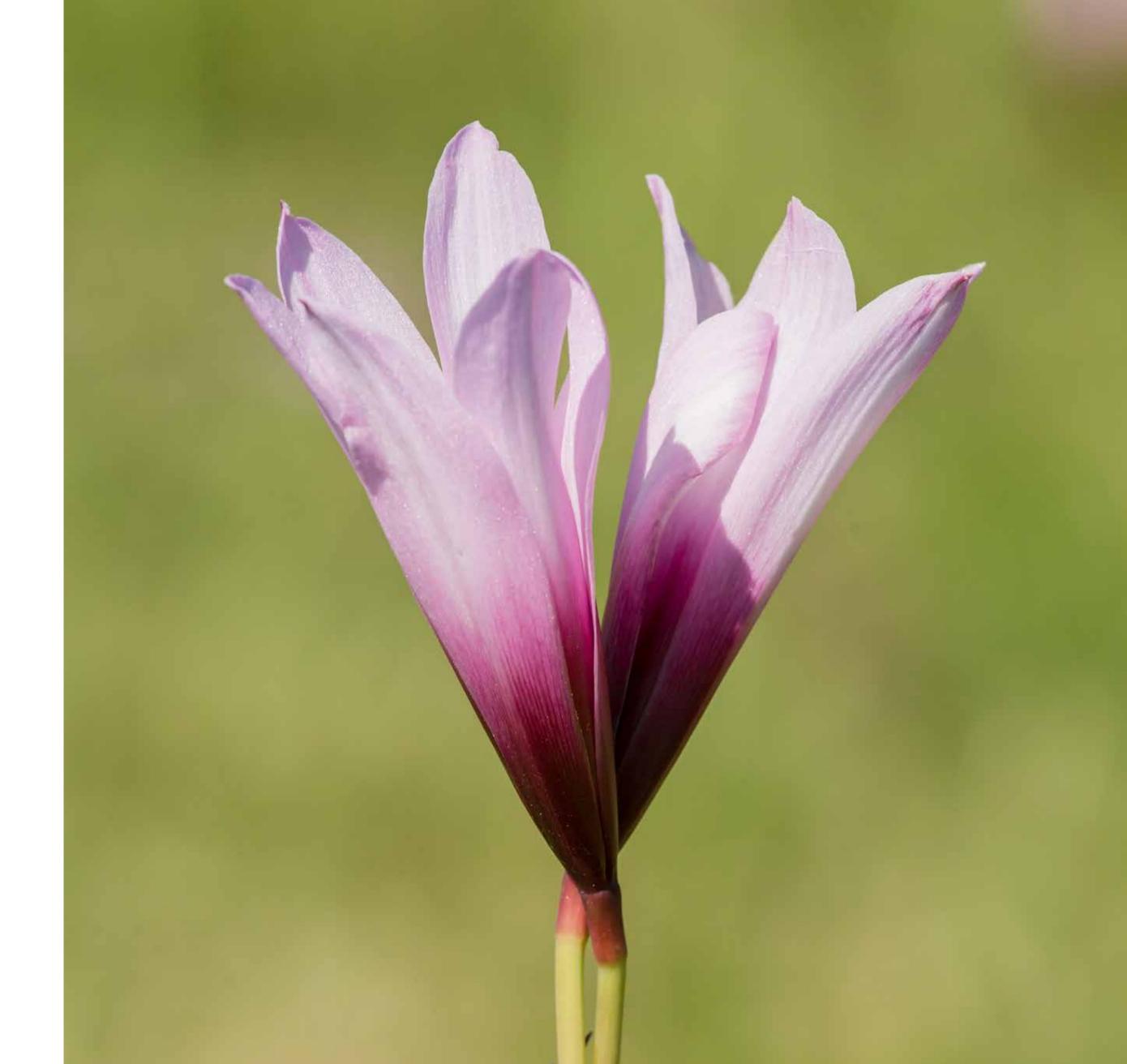


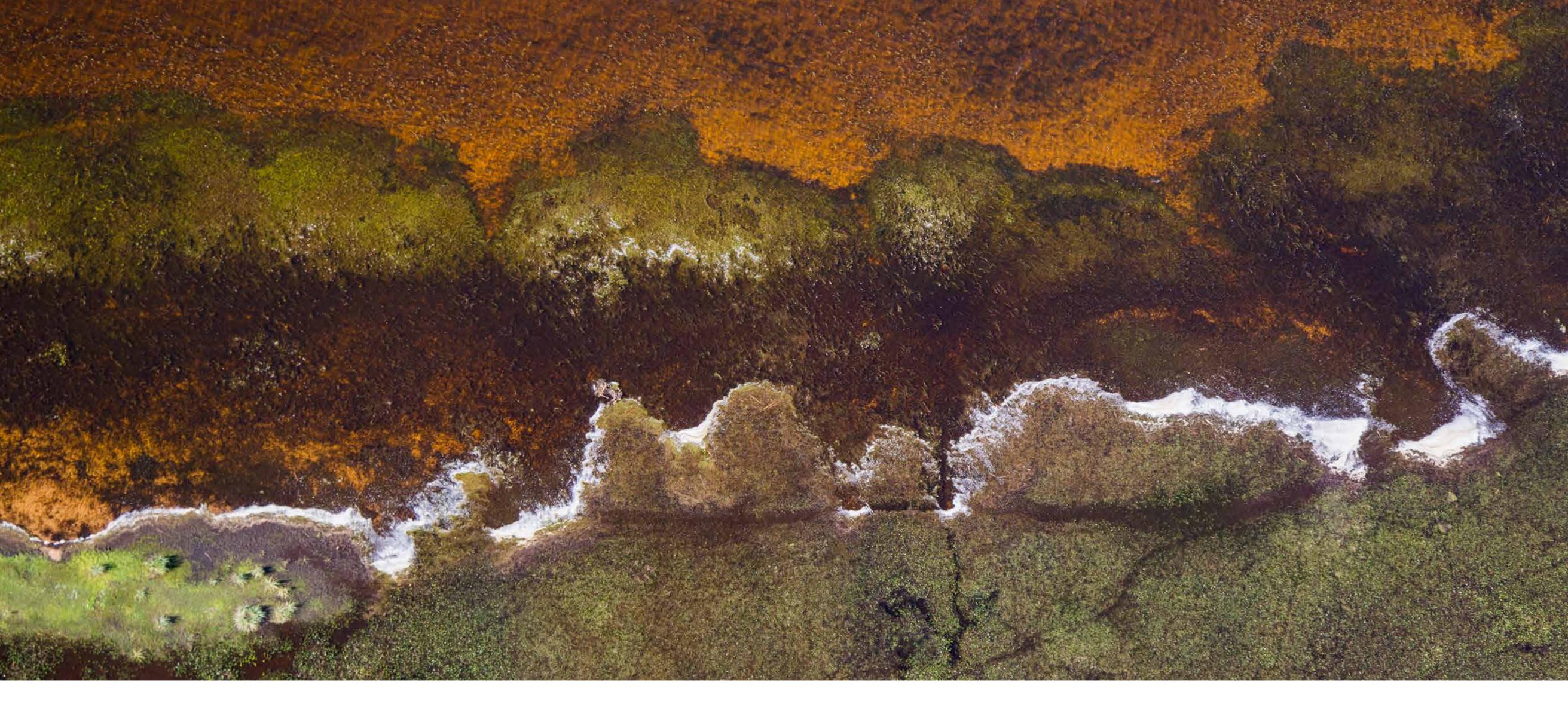




As for those who would take the whole world To tinker as they see fit, I observe that they never succeed: For the world is a sacred vessel Not made to be altered by man. The tinker will spoil it; Usurpers will lose it.

—Lao-Tzu





LIGHT AND TEXTURES







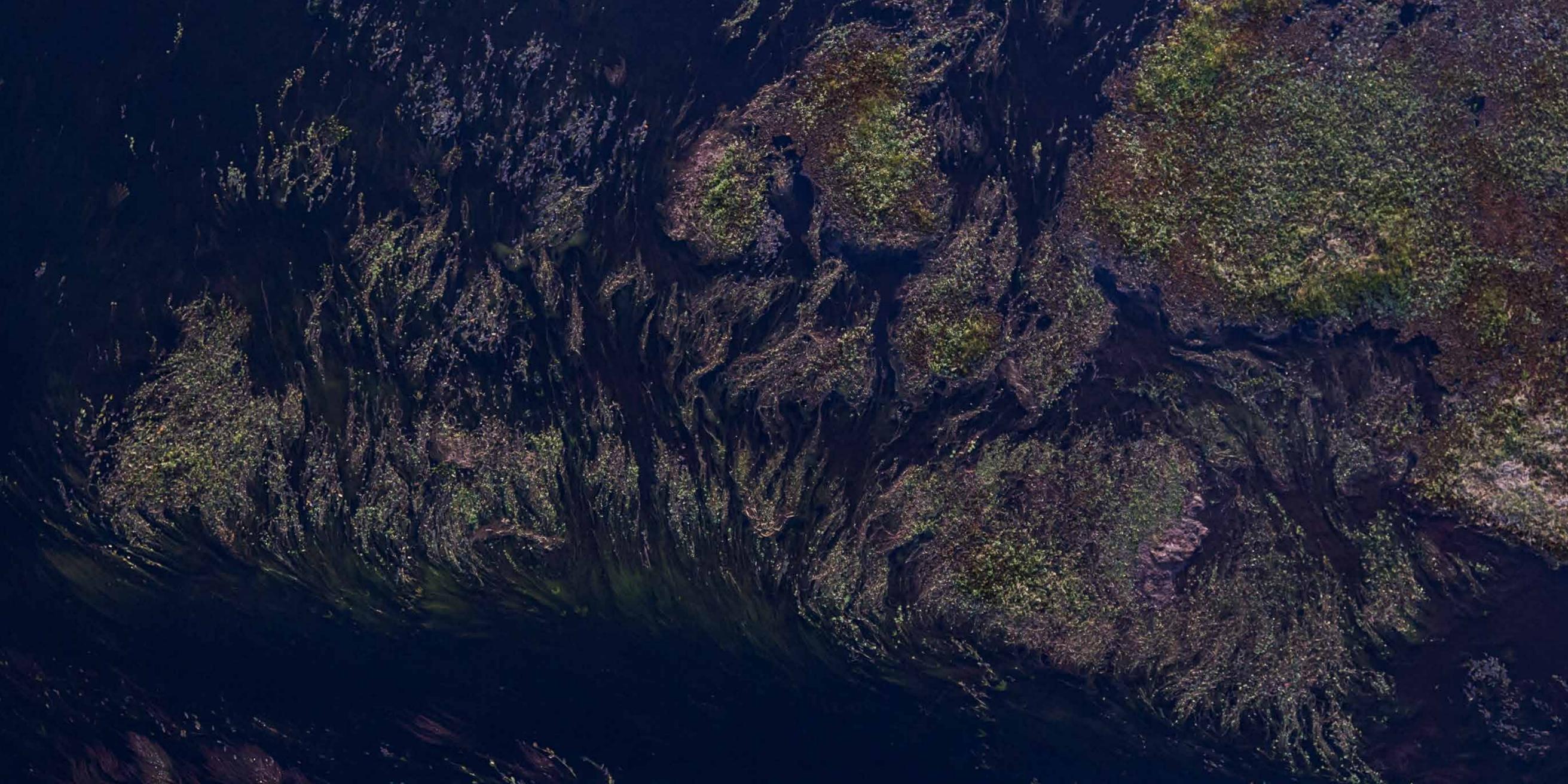






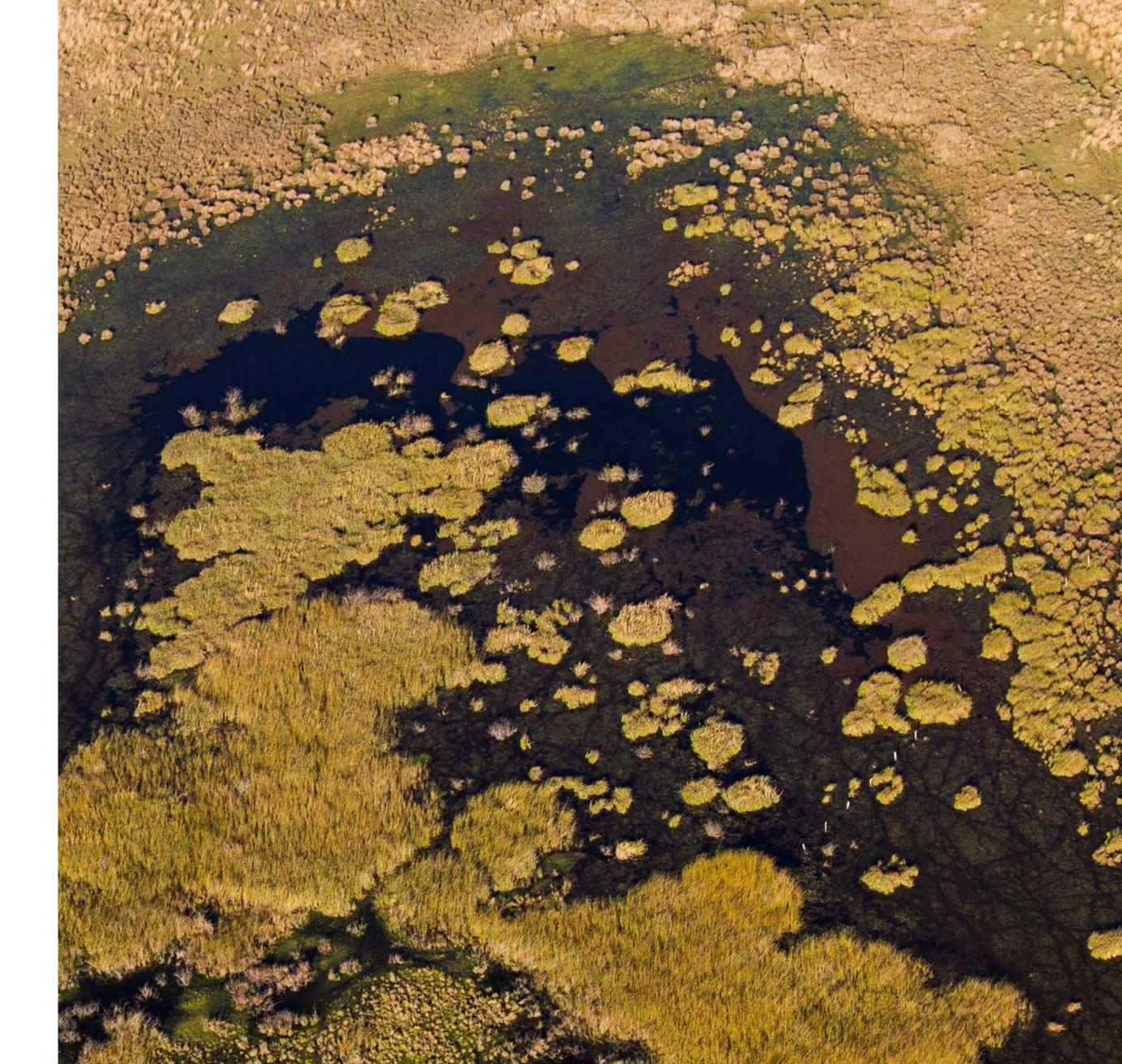


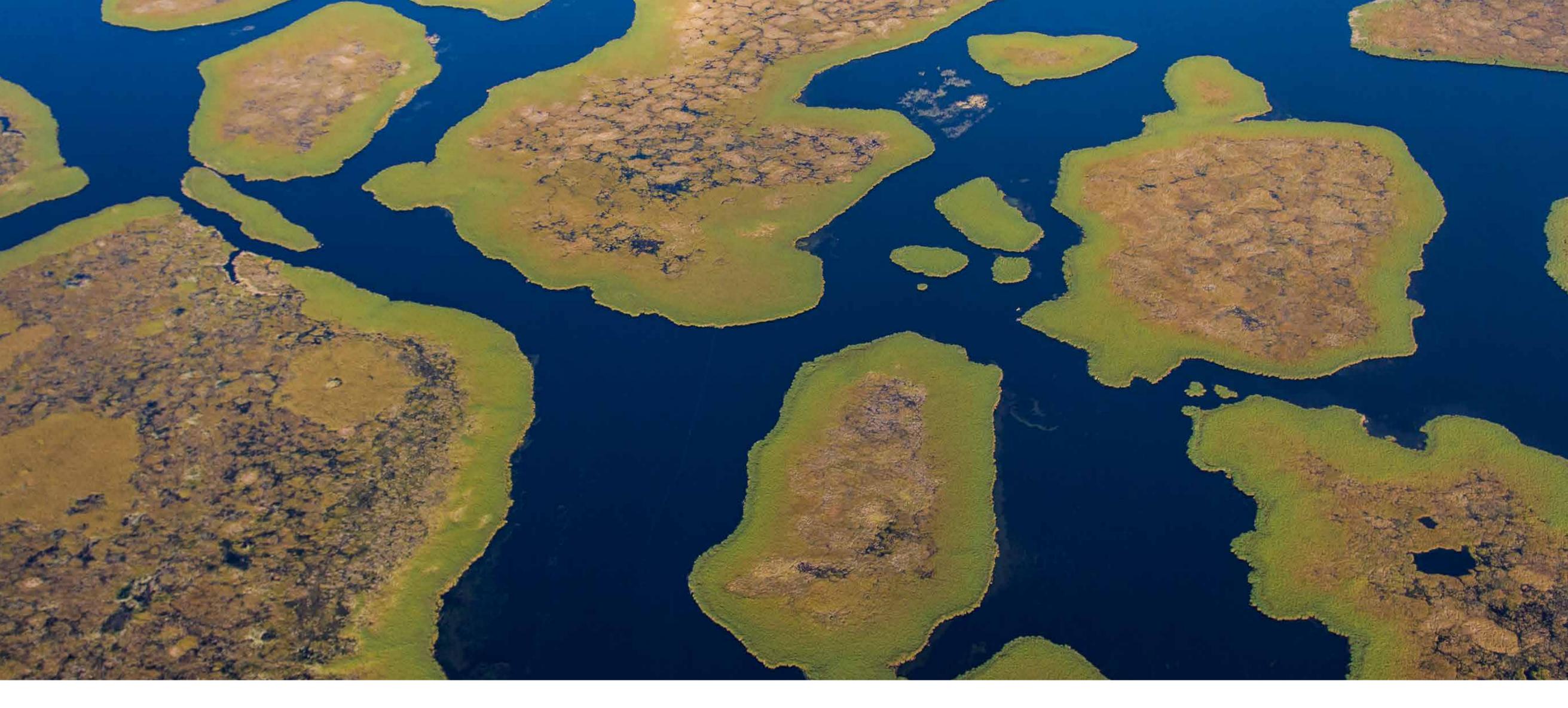




Between earth and earth's atmosphere, the amount of water remains constant; there is never a drop more, never a drop less. This is a story of circular infinity, of a planet birthing itself.

—Linda Hogan

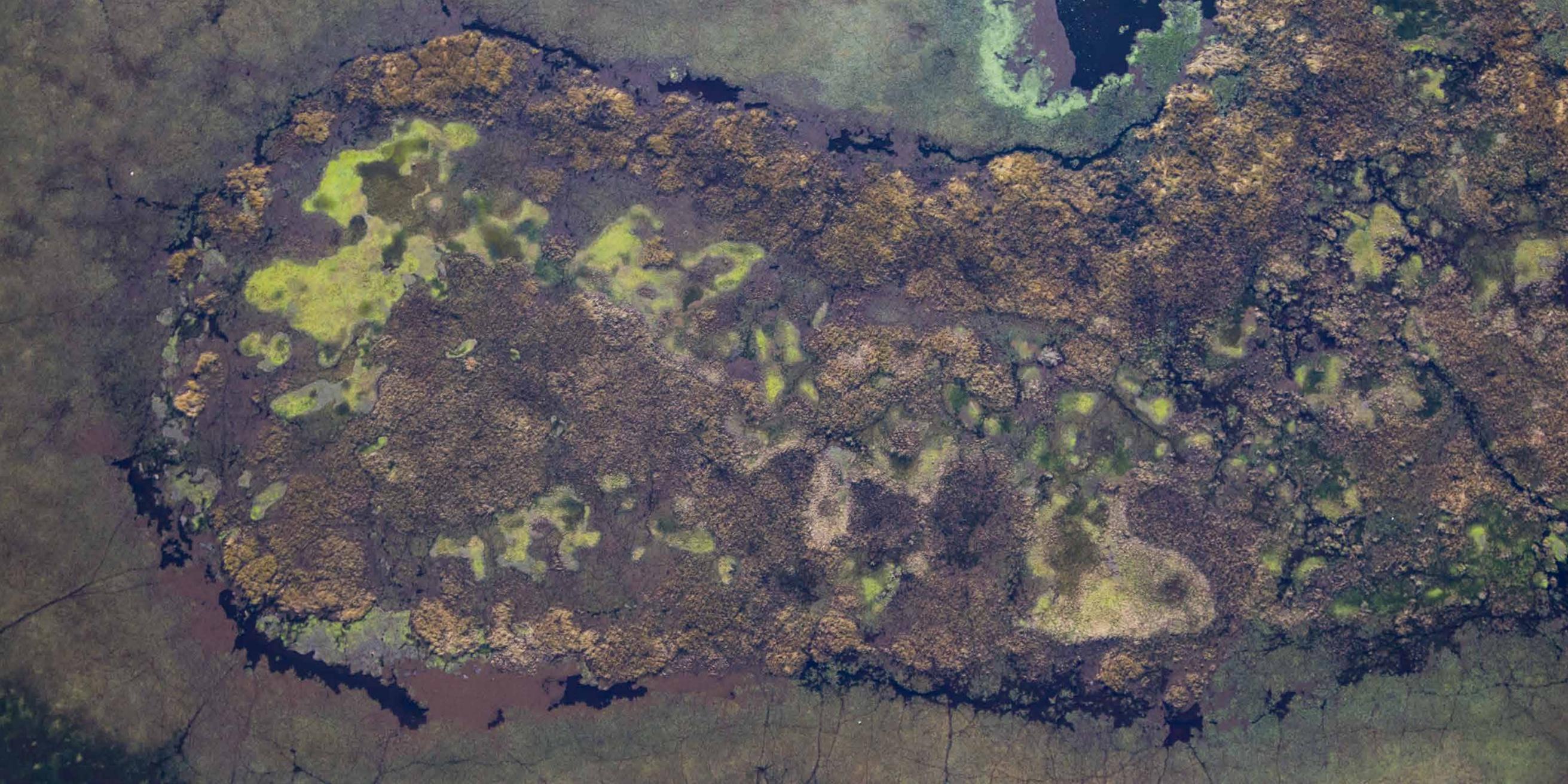




PATTERNS AND FORMS







Nature, life, and beauty cannot be untangled Where there is much life, there is the potential for great beauty. Indeed, beauty and biodiversity are concurrent, the multiplicity of life yielding patterns of living vibrancy.

—Sandra Lubarsky













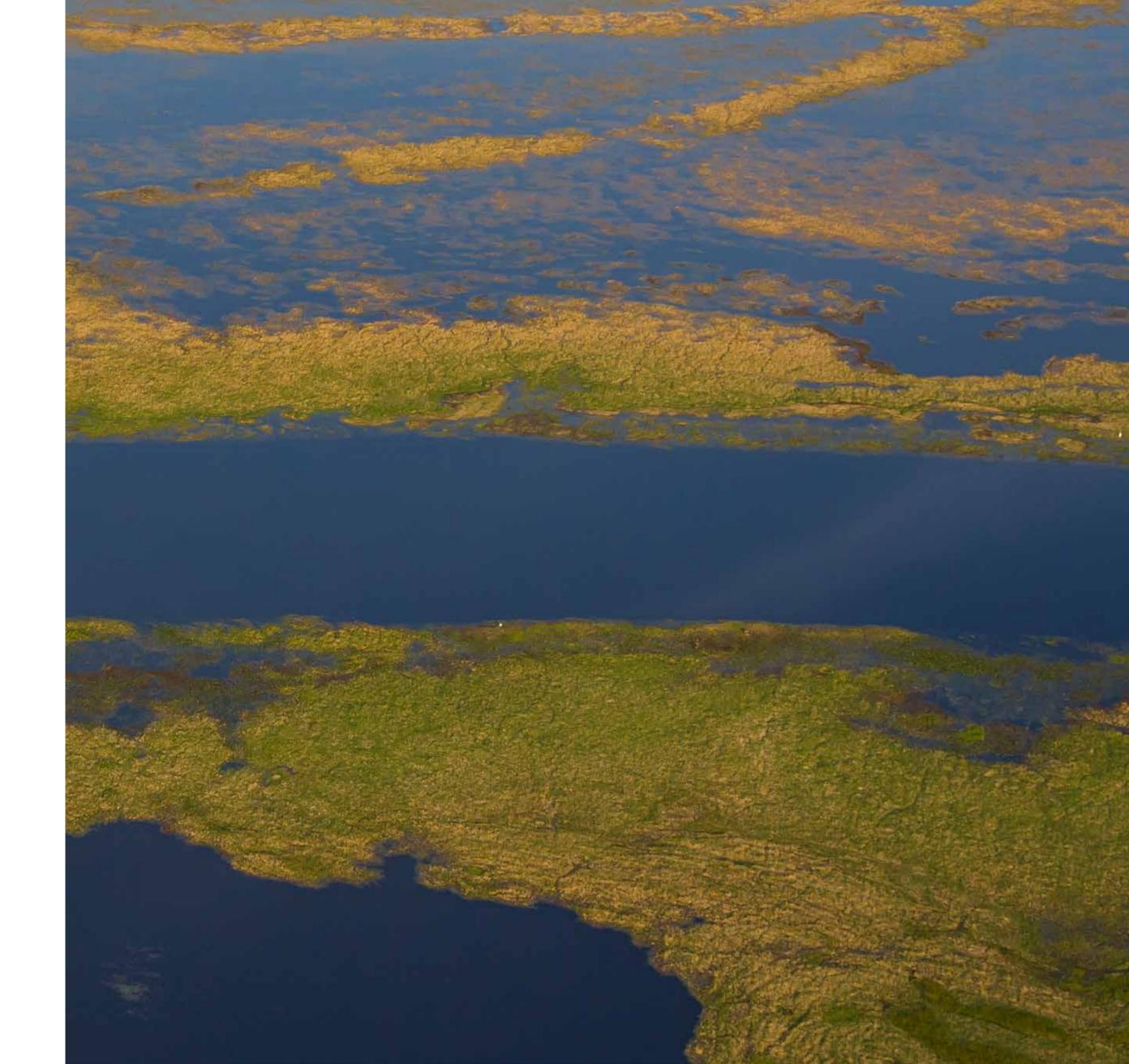






The need to maintain the integrity of the Iberá nature reserve goes along with mature, responsible thinking that considers the delicate situation in which man has put his home planet.

—Enrique Lacour





CULTURE



Rancher as Naturalist

Marcos García Rams

rom the time of the Jesuits—who in approximately 1630 established the first livestock-production operations in the Iberá region—few documents describing the area's fauna, flora, and geography have survived into the present. Some charts and maps drawn up by the Society of Jesus detail the region with some precision, giving the location of the *estancias*, large ranches for raising cattle and horses.

On January 16, 1828, the French naturalist Alcide d'Orbigny arrives in the Iberá from Loreto, situated in the northwest of the marshlands region. He had been sent by the Museum of Natural Sciences in Paris, to collect animals and plants and thus expand the scientific knowledge of that era. He became the first scientist to visit the Iberá, and his adventures are wonderfully set down in his work *Travels through South America*. He acquires specimens of pampas deer, marsh deer, a giant anteater, and a maned wolf; he also shoots and wounds a jaguar, which manages to get away. All of this is accomplished with twenty men, in the course of two sweltering summer days in the ancient Jesuit *estancia* of Rincón de San José, site of the present-day *estancia* San Juan Poriahú, all of which goes to show the abundance and diversity of fauna in the Iberá of that time.

The military campaigns that passed through the area both before and after d'Orbigny's study, though they may have written chronicles of their actions, failed to describe the local wildlife except in a very superficial way. As recently as 1910 the Geographic Society of Argentina organized an exploratory expedition that went up the Corriente River in a mid-sized motor vessel. Their report tells of the difficulties they encountered in navigating this labyrinth, and therefore their expedition was not as successful as they would have expected.

In the 1930s and 1940s, the provincial government undertook scientific studies and published excellent works, carried out with great effort, that started the systematic gathering of information about the Iberá. Later on, the voluminous studies on the soils of Corrientes published by the engineer Escobar launched a period of research projects carried out by large numbers of professionals hired by the government and other national organizations. These research projects revealed large gaps in what was known about the Iberá marshlands region. The *estancia* San Juan Poriahú, which includes the area originally described by d'Orbigny, has been in our family for generations and is still our property. This has been the site of the excursions of my youth and adulthood; in its rich and varied surroundings I observed and learned everything I could about the landscape, and this has led to a lifelong interest in nature. My love for the Iberá's wildlife and natural beauty prompted me to introduce the region to all my friends and acquaintances involved in conservation and biology, and to participate in an array of conservation-focused forums, conferences, meetings, and workshops in various settings. My conservation colleagues and I have found that together we can be more persuasive, and more effective in our work of informing the public of the importance of protecting the Iberá's ecological and cultural values.

The nature-oriented tourism that we began promoting in 1986 gave the marshlands region a new identity. In a few short years, the environmental recovery made possible the growth of Colonia Carlos Pellegrini. This town became a tourist gateway to the Iberá, and is an excellent example of how nature returns a profit—yes, even an economic profit—on the time, effort, and money invested in it. The greatest triumph, however, has been to observe the increase in numbers and diversity of the formerly much diminished animal populations, which was our primary conservation objective. I often recall the stories of my grandfather, Don Raimundo Meabe, who first came to San Juan Poriahú in 1905, about his frequent encounters with fauna, some of which are still here and some of which have been extirpated. Those of us who love the Iberá keenly feel their absence. Like those who came before me, I had a dream of living in this landscape and experiencing its natural qualities undiminished. This dream has prompted one of the projects that has brought me the greatest joy—the rehabilitation of this portion of the ecosystem that is under my stewardship.

Other travelers—some of them ornithologists, photographers, writers described in greater detail the diverse regions that make up these vast wetlands. But it was with the creation of the Iberá Nature Reserve, in 1983, that a new golden age opened for Argentine naturalists, yielding a wealth of studies of all types:

• Beccaceci with his work on the maned wolf and marsh deer in 1984;

- Waller and Micucci on caiman alligators and the Paraguayan anaconda (*Eunectes notaeus*) in 1986;
- Parera on the neotropical river otter (*Lonta longicaudis*) in 1988;
- Carnevale on phytogeography in 1994;
- and Bechara, Casciotta, and Almirón with their *Fish of the Iberá* in 2003, a study that included the discovery of a new species.

Helping to complete this mosaic are the National Institute of Agricultural Technology (INTA), the Corrientes Institute of Water and Environment (ICAA), and other divisions of the Corrientes Ministry of Production. Many other naturalists and conservationists have contributed to make us better know and appreciate this extraordinary landscape.

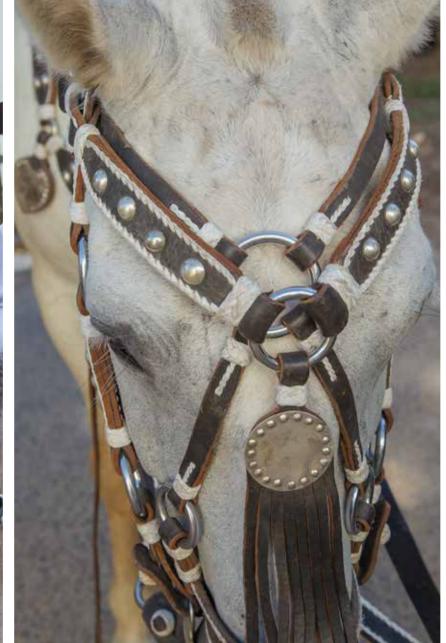
Various documentaries by the BBC, the first of which was filmed by J. Waters in 1991, portray the Iberá as a conservation benchmark, a place where the inhabitants and their culture are intimately connected to their environment in a way that sets them apart from any other geographic region in the country, and in the world. Their rich traditions, the Guaraní language, their style of dress, and their customs make them unique.

The new challenge facing conservationists today is the reintroduction of iconic native species that have recently become extinct in the region, such as the giant anteater, the pampas deer, the giant otter (*Pteronura brasiliensis*), the collared peccary, and the jaguar, king of the felines of the Americas. This huge project, carried out with great success by the Conservation Land Trust (CLT) in the eastern region of the Iberá, has already accomplished its objective with the first two species, and we expect that the remaining species will also be successfully re-established. This work is very important for the balance of populations and for the distribution of seeds and plants that help maintain diversity. Much has been done these past few years, and much remains to be done, but as we look back, it is heartening to witness the positive changes.

I am a state-of-the-art livestock rancher, and I must produce if I am to keep the lands I inherited. Our family ranch, the *estancia* San Juan Poriahú, is living proof that it is possible to produce and to conserve at the same time, with thoughtful management and by diversifying farming activities. Those who preceded me in the *estancia*'s administration passed on the basis for the current environmental recovery. In their time they laid the foundations for the conservation-minded attitudes and actions that have spurred wildlife recovery across the rest of the Iberá reserve.

We cannot fail to give thanks for the continued support from the province of Corrientes, the directors of the Reserve, its administration, park rangers, and especially the selfless support of all those individuals who, over the course of many years and with great effort, are returning the landscape and fauna to the state in which they were experienced by d'Orbigny and other early naturalist explorers. The future of the Iberá is a wild future—natural wonders and natural splendor that will attract visitors and sustain the region's unique culture as it flourishes long into the future.



















The Iberá is an unprecedented wetland in Argentina, a place forged as a result of bundreds of years of interaction between man and nature. This is an example that the whole country watches with admiration; a lesson that the people of Corrientes, with pride and courage, give the rest of their fellow citizens.

—Alejandro Brown









Preserving the integrity of the Iberá Nature Reserve and guaranteeing its appropriate management will lead to an ecological triumph, but most of all, to a great benefit for its inhabitants, who now see conservation as their choice for a bright future.

—Father Rubén Barrios













Now we're coming to the end of the line, so we find ourselves returning to the open country; to the Iberá, to the high Paraná, to Maloyas, to give ourselves the final solace—as when we look in a mirror and see there the faded features of a loved one gone forever—of dreaming once again of your legends, which still linger there, along with the ghost of your noblest offspring, the Corrientes Countrydweller.

—Ernesto E. Ezquer Zelaya



Afterword

Pedro Perea Muñoz

he lagoons, marshes, and open waters that make up the Iberá wetlands complex—the second largest of its kind in South America—embody two essential truths. The first of these is that this is an area of outstanding natural beauty, where scientists, ecologists, and observers can work in one of the most important wetlands on the planet. The whole of this ecosystem is described with greater detail throughout this publication. The act of getting to know this place will oblige us even more to redouble our efforts toward its conservation.

The second essential truth applies especially to us natives of Corrientes province—*Correntinos*—since these wetlands occupy a large part of our provincial territory. But what obliges us to care for these wetlands more responsibly is the fact that they have always been and will continue to be instrumental in shaping what it means to BE a *Correntino*. Without the Iberá wetlands, Corrientes is simply not Corrientes.

From the outset of the region's colonization, settlements were founded on the banks of the Paraná and Uruguay Rivers. Later, the indefatigable Jesuits established farms to provide for the indigenous inhabitants of their missions. The enormous farms, called *estancias*, were almost always founded on the edges of the wetlands. These communal dwelling places were later transformed into sites where groups of houses were built near one another, for the mutual aid and protection of the people, who subsisted primarily on hunting and fishing.

Over the years, the growing population transformed these places into villages and, eventually, into cities. The material needs of these places grew, and with them the demand for resources. The wetlands were near at hand, with their enormous wealth of flora and fauna and, as was to be expected, the people went into the wetlands in search of animal skins to sell as pelts. In this way, commercial hunting emerged, and proliferated until the 1980s. The wetlands got a dose of harmful human impact.

Significant events take place in history when the right people come together in the same place at the same time. Fortunately, this was the case in the Iberá. In the 1980s, the province of Corrientes was governed by General Juan Alberto Pita, a man from southern Argentina, a nimble decision maker, and, above all, adept at surrounding himself with skilled collaborators. Familiar with protected areas, he knew upon seeing the Iberá that he must do something to help sustain the extraordinary natural qualities of this wetland region.

To this end, he enlisted the help of Juan Leonardo Aquino, an accountant, his Minister of Economy, and a trusted advisor. Aquino, originally from Mercedes, came from a traditional family from Corrientes and was a tireless promoter for local progress. He understood that one of the keys to progress was the formation and administration of a nature reserve that could be used to foster tourism.

Two other early advocates for the wetlands were central to their eventual designation as a reserve: Ince Apostol, mayor of Carlos Pellegrini, had the singular virtue of always supporting what was best for the people of his town; Vicente "Pico" Fraga, a veterinarian also native to Carlos Pellegrini, was invariably modest, honest, and loyal, and had an amazing knack for weathering political storms.

These four men coincided at the same time and in the same place, and they formed the legal, administrative, and logistical framework for the Iberá Nature Reserve. The results have completely vindicated their efforts. They set up their center of operations in Carlos Pellegrini and made the best decision I have seen in my life when they took on as gamekeepers the ten best-known hunters, trappers, and guides of the region.

What resulted was incredible, and is a shining example of exactly how to go about harnessing local resources and knowledge. These hunters and trappers, who had previously worked illegally and had been persecuted by the authorities, themselves became the authorities in their lands, responsible for keeping alive the animals they had previously killed. They were matchless in their work, going above and beyond their duties.

This original group honored me by asking me to join them, thereby allowing me to expand my own conservation vision. We called on all capable people and

on all nongovernmental organizations that shared our common objective: the survival of the wetlands. Thirty years later, this group endures, with the same enthusiasm and energy. I am proud to be counted among them.

Today the work of conservation continues, with ambitious projects to reintroduce or augment populations of species that were extirpated from the Iberá in past decades. As a native *Correntino*, it is my dream that all the native species of the province thrive here anew someday. I hope that one day we will reread the books of the honored *Correntino* poet and thinker Ezquer Zelaya with the knowledge that the roar of the jaguar is no longer a past memory, but a present reality.

I am fully aware that this abbreviated summary leaves out the names of many important people. One of the organizations that could not go without mention is my esteemed Fundación Iberá, a cornerstone of the conservation of the wetlands.

Regarding tourism, we know that a protected area attracts visitors. People everywhere want to come and see the abundant wildlife and beauty of the Iberá wetlands. The increase in tourism that we have experienced in these past years, coupled with the potential contributions of new ecotourism initiatives, will represent one of the main sources of income for the province of Corrientes. In light of this, we can say that our work here has been accomplished. What remains is for the provincial government to fulfill its obligations by assuring that conservation protections that have been written into law will be enforced in practice.

I give thanks to my family, which has stoically supported my passion for conservation, and whose actions allowed me and my companions to rest easy with the knowledge of having fulfilled our duty, confident that we are leaving the wetlands for future generations in better condition than we found them, and with an established protected area in place. I am certain that the Iberá is on the path to even higher levels of public support and conservation.





Photographer's Note

Juan Ramón Díaz Colodrero

y interest in photography stems from my love for animals, nature, and the outdoors, and from my connection with all of these things since childhood.

After living for many years away from my native Argentina, traveling around the world and taking pictures, I decided to return in order to satisfy my desire to record Iberá in photos-the beauty of the wildlife in all its splendor, and especially its fauna.

Through photography, I try to embody in a physical artifact the memory of those moments that I most enjoy in life; as well as to express my impressions of this natural world that surrounds us, portraying its great majesty, or at least attempting to capture a mere instant of it, always conveying the great need we feel, as living beings, to preserve it.

The natural world of Iberá and the vast geography of Corrientes provide me, at their whim, with unique opportunities to depict an exuberant variety of birds, mammals, and other wildlife; allowing me, a mere visitor, to show the world the multiplicity of natural communities and ecosystems that make up this great region. Almost six years have passed already in this, my Correntine adventure. Iberá has regaled me for two of these years, and has yielded, after a lot of hard work,

the greatest satisfaction of this magnificent experience.

What I feel daily in my contact with nature cannot be expressed through words. That is why I am infinitely grateful to have these images to relive the experience.

Looking back, it is difficult for me to believe how many different species I have had the privilege of photographing, and each one of them has inspired me in a different way.

Photographing nature has proven to be in my experience a challenging profession, but one that provides me with stimulation, passion, and satisfaction. In addition, it has permitted me to work in many different parts of the world through the years.

I have walked for hours through tall grasses, and have waited out long stretches of cold winter mornings and intense summer afternoons, but I have never failed to feel profoundly satisfied in the company of my camera, keeping my photographic eye peeled.

Spending so much time in the marshes of Iberá has even allowed me to experience what it feels like to be an animal on the verge of being eaten. Once, I was crawling along the ground, using the technique known as "thumbing," trying to photograph flamingos and plovers at dawn near La Sirena Lagoon. With the early morning light, the local birds began to arrive. I became so absorbed in watching them that I slowly lost track of what was happening around me. After a few minutes, I heard the sound of a *caracara* bird just above my head, but I was too intent on what I was doing to take notice. Suddenly, I felt a blow to my calf, and I realized that it was trying to eat me! It seems I was easy prey.

Living in Iberá has had a huge impact on my life, and has allowed me to experience and capture moments that happen only once.

I always do preliminary research on the particular species I intend to photograph: its habitat and its habits, thinking about and imagining the end result. A good shot, in my professional opinion, is based on four elements: light, composition, behavior, and patience. Then, in the editing stage, I optimize the material, always trying to keep pristine the original digital files.

All the photos in this book have a great deal of love, dedication, and patience behind them—the image that attempts to unveil the beauty of a flower as much as the image that portrays a wild animal in its natural habitat.

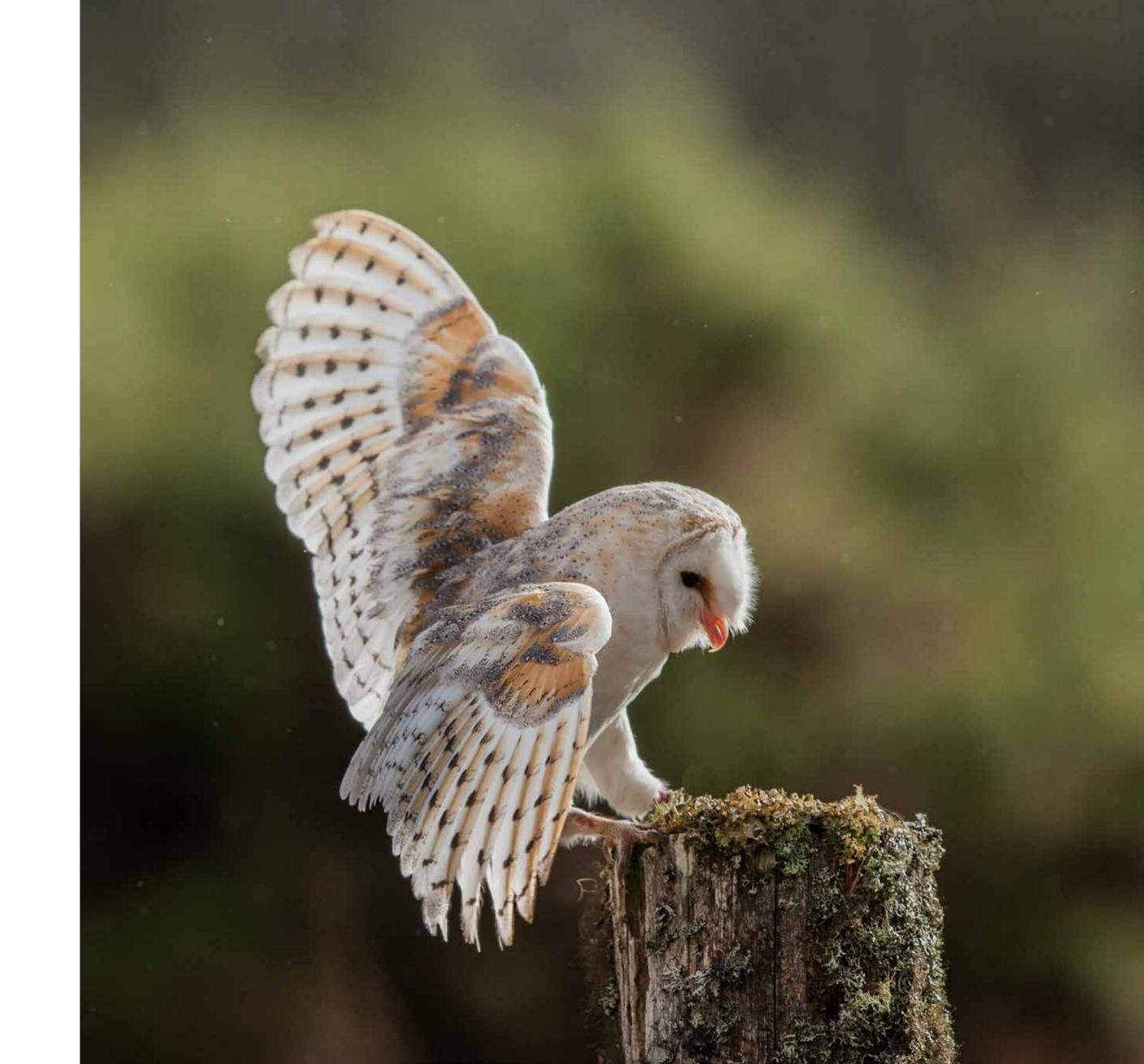
I recall once flying over the marshlands, with my friend Douglas Tompkins

as pilot, looking for a small island of *lapacho* trees to photograph from the air. Suddenly, I spotted an extremely old *algarrobo* tree and, pointing it out, lamented not being able to get a better shot of it. No sooner had I finished speaking than Doug took the plane down and landed in a matter of minutes on the banks of the Corriente River, on a landing strip that hadn't existed until then, consisting only of the river's narrow flood plain. While I struggled to understand what had happened, Doug pointed at the *algarrobo* and with a broad smile said, "There's your tree. Take all the photos you want!"

So many pleasant memories and feelings fill my heart and my soul! Among them, perhaps the most memorable from all my work on this book are the hours spent with Doug in the selection and profound analysis of the many stunning nature images. Our goal was to present an aesthetically impeccable work, edited with tremendous attention to detail, that we believe will delight all those who love nature.

This wonderful work was possible in part thanks to the company of my wife, Graciela, who was always by my side, physically and morally; and also of course to the invaluable help of my friend Douglas Tompkins, who accompanied me on this photographic adventure through the imposing region of the Iberá marshlands.

It is my wish that you enjoy looking at these photos as much as I enjoyed taking them.





Contributors



Sofía Heinonen is on the board of directors of Conservation Land Trust-Argentina and heads up Project Iberá. She lives with her two children in Estancia Rincón del Socorro. Previously she has worked with the administration of the Iguazú National Park, in the management of parks in northeast Argentina, and with nonprofits dedicated to the defense of protected areas and endangered species.



Marcos García Rams was born and educated in Buenos Aires. As a young man he joined the Fundación Vida Silvestre Argentina (FVSA). After settling permanently at Estancia San Juan Poriahú, in Corrientes, which was the first refuge for the fauna and flora protection programs of FVSA, he implemented projects to foster ecosystem sustainability. Rams participated in the creation of the Iberá Nature Reserve and was a pioneer in opening up San Juan Poriahú to ecotourism.



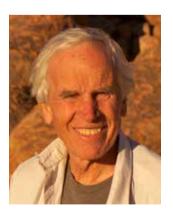
Pedro "Perico" Perea Muñoz was an inspiration to many as head of Reserva Provincial Esteros del Iberá. He and his team of park rangers succeeded in changing a local economy based—of necessity—on exploitation, to a sustainable model that supports conservation. "Perico" was also the creator of the pioneering Fundación Iberá. In both positions, he supported everyone that came to work for the good of this natural wonder. He died on August 17, 2012, the anniversary of the death of José de San Martín, the great Correntine Liberator of Argentina.



United Kingdom. Following his compulsory military service, he followed his calling—learning about local nature. After extensive travels, he joined the staff of the Argentine Museum of Natural History, where for ten years he worked as a traveling naturalist. He was later transferred to the National Parks Service, to head the training program for rangers. Now well past his retirement age, he keeps busy, continuing his work with the National Parks Administration.



Ignacio Jiménez Pérez serves as coordinator for endangeredspecies restoration for CLT's Project Iberá. In Spain he earned an undergraduate degree in biology and later, in Costa Rica, an advanced degree in wildlife management. He has ample international experience in conservation, having coordinated research and management projects on manatees (Costa Rica and Nicaragua), golden-crowned sifakas (Madagascar), and wetlands and protected areas (El Salvador). He has also coordinated an overall review of the national experience of endangered-species restoration in Spain.



Douglas Tompkins is a wilderness advocate, mountaineer, organic farmer, and conservationist. For more than two decades, he has worked alongside his wife, Kristine Tompkins, to restore degraded farms and to create large-scale protected areas, including national parks in Argentina and Chile. Through a family foundation, Doug Tompkins supports activist campaigns in North and South America and has helped produce numerous conservation-related books.

Mauricio Rumboll was born in Argentina and educated in the



Acknowledgments

his book has attempted to convey the essence of the Iberá marshlands through images and stories. But behind these "descriptions of reality" lie a lot of dreams, work, sleepless nights, and selfless giving of themselves by people who have contributed days, years, crucial moments, and all they had to offer. Beyond what nature itself models and creates, it is very difficult to know precisely everyone that we have to thank for this the fruit of all that labor; and so this acknowledgment is meant for all of those involved, whether or not they are named below.

We would also like to explicitly thank, at the risk of leaving some out, all those who have shared experiences with the editors and authors of this book. We have learned much from them and, thanks to them, achieved positive results for nature conservation in the Iberá.

First of all, we want to thank the neighbors of the ranchlands of The Conservation Land Trust. Those nearest to Rincón del Socorro: the people of Paraje Uguay, especially María "Mica" and Aldon Casco; Chacho Ojeda and Mercedes Ojeda, along with their daughters María and Ornella; the members of the Molina family: Pascual Molina, Beatriz Lovera, Celina Molina, Juan Molina, Dalmasio Molina, and Elías Molina. Thanks also to Pablo Lovera, Viviana Flores, and their children, to Eustaquio and Claudia Lovera, Leslie Cook, Valeria Verdaguer, Cecilia Bolla, Rocío Strukel, Romina da Pieve, Emilia De Blasi, Santiago Stabile, Denise Billiet, Martín González, Tito González, Elisa González, Jorge González, Ramona Godoy, Agustina Godoy, Roxana García, Claudia Amarilla, Mabel Ocampo, María Marta Cabrera, Arturo Pettit, Patrick Buchanan, Silvia Pavón, Arián Páez, Andrea Ojeda, Alba Pellozo, Rocío Ojeda, Angélica Ojeda, Daniela Fernández, Beda Gamboa, Hermelinda Núñez, Gisele Reynoso, Nidia Morel, Alberto Pera, Raúl Cabrera, Cintia Machado, Luis Pérez, Tania Pintos, Valeria Ojeda, Teresita Ojeda, Carmen Rolón, Marcelo Fernández, Eduardo Robledo, Ramón Villalba, Victoriana Barrios, Alejo Alegre, Mirta Lovera, Ceferino Alegre and his wife, Bonifacio Pera, Celestino Pera, Juana Pera, Reinaldo Canteros, Clementino Pera and Marilú Canteros, Claudio Barrios, Felipe Miño, Ramón Miño, Abelina Pérez, María Miño and Jacinto Cabral, Neri Barrios, Juan Moreira and his wife, the Medina family, Gloria Aguirre and the Ferreira family, Rito Valdovino, Ramón Ojeda and Modesta

González, Tolentina Maciel de Quintana and Ramón Maciel, Carlos Cabral, and finally, to Diego Caram, Marcelo Ávalos, and Marisel Miralles, teachers at School 584.

We would also like to thank the residents of Colonia Carlos Pellegrini, who often see us pass by in too much of a hurry, and who are a shining example of the incredible phenomenon of a sustainable local economy based on the protection of nature. Thanks go to Juan de la Cruz "Tato" Fraga and Isabel Brouchoud, Dr. Jorge Fraga, Dr. Cristina Espinola, Estrella Losada and José Martín, Maíta González Sampaio and Julio "Mono" Dreher, Elsa Güiraldes, María Paz Galmarini, Rafael Muzzio, Naldo Martín, Delfina Ackerman, Rodrigo Fracalosi, Roque Pera, Tati Drews, Bruno and Luisa Leiva, Mauricio Lacona, Diana, Flavio, Pibe, and Yiyo Frete, Pato Fernández, Gastón, Hugo, Renzo, and Gonzalo Bocalandro, Cristián and Jorge Mendieta, Silvia and Jorge Martín, Carlos and Adela Rosso, Nene Gómez and Mrs. Alcides Farinon, Don Aveiro and his wife, Negro and Tita González, Vicenta Pera, Raquel Duchini, Mimi Monzón, Rolo Segovia, Fernando Segovia, Cristina Cabral, Delia Carrillo, Vilma Pelozo, Pedro Piedrabuena, Ramón Ávalos, Marcelo Cabral, Nicolás Caminos, Mariano and Marcos Paredes, Ariel Sánchez, Fabián and Alberto Quintana, Martín Ledesma, Ricardo Paniagua, Bernardo Ojeda, Mingo González, Martín and Raúl González, Elsa González, Emilio González, Andrea and Laura Martín, Ramón Gómez, and Tino Martín; and to the staff of the local radio station, among so many others. They number more than 800, and so, while we cannot name them all, this acknowledgment goes out to each and every one.

Next we would like to thank our neighbors in the Iberá watershed, and those whose lands are in the vicinity of the ranches San Nicolás, Carambola, San Alonso, Guayaibí, Yaguareté Corá, San Ignacio, Monterrey, and Guazutí. Thanks go to Eduardo Chorén, Facundo Márquez, Mario Segovia, Karina and Jorge Martínez of Estancia Iberá, Miranda Collett, to the landowners and all the staff of Estancia San Pedro, Raúl Motta and Gregorio Rodríguez and family, the majordomo of Altinia S.A., Adrián Vogel, Lucas Fragueiro, Dilmer Morales, Atilio López, Liliana Tannuri Zayas, Delio González, Nelson Aguirre, Gringo Tossolini, Sergio Sánchez, Pipi Barrios, Fortunato Leiva, Miguel Fernández, Julián Ramos, Chichito Bordón, De La Cruz and camp tenders, the family of Crispín Rodríguez, Felipe Ramírez, Mario Fernández, Roberto, Diego, and Oscar López, the staff of Estancia El Tránsito, Ivan Pecozzi, Roberto and Teresa de Jesús Ríos, Peta Ávalos and Toni Sotelo and the rest of the neighbors of Paraje Ñupy. Thanks go to the Vizcaychipi family of Estancia San Lorenzo, to Raúl Falero, Marco Grisetti, Edgar Arce, Pedro and José Luis Bermúdez, María Silvia Tonelli and Charles Kardosh, neighbors of Estancia Guazutí. Thanks to the neighbors of San Miguel, Héctor Mainieri and family, Carolina Romero, Mecho Aguilar. Thanks go as well to Gringo Olmedo, to the Centurión family and to the staff of Estancia San Dionisio, to the neighbors of Rincón del Socorro, Martín and Ana Helvig de Taberetá, Matías Jara of San Juan Corá, Gabriel Cortés of Estancia San Pedro, Mauricio Losada, and Chacho Ascué.

Thanks and acknowledgments go as well to the officials in the Government of Corrientes, with whom we have interacted along the way to implement several projects for the reintroduction of species, as well as the creation of park-ranger divisions in San Nicolás and Cambyretá. Thanks go to park rangers Walter Drews, Humberto Rodríguez, Eduardo Gómez, Marcelo Blanco, Julián Lugnevich, Andrés García, Roque Bocalandro, Mario Sánchez, Ramón Molina, Mingo Cabrera, Daniel Leguiza, Vicente Benítez, Ana Laura Cufré, Mariana Richarte, Carlos Palombella, Adrián Kurt, Alejandro Singh Said, Sebastián González, and Alejandro Moreira, and to their Deputy Director Vicente "Pico" Fraga, who has dedicated 365 days a year for the last 30 years to the Iberá Reserve; as well as to all their Directors and technicians: Sergio Zajarevich, Rodrigo Badesich, Marcelo Beccaceci, José Alberto Meabe, and Santiago Faisal; to Ovidio Eclesia, Omar Imhoff, Bernardo Holman, Gabriela Roteta, Josefina Pérez Ruiz, Daniel Segovia, and to the Subsecretary of Tourism Inés Presman, to Sergio Flinta, who promotes the conservation of the marshlands from Concepción, to the Ministers of Production Alfredo Aún and Jorge Vara, and to Governors Arturo and Ricardo Colombí, who made possible these efforts leading to better nature preservation in the Iberá.

Thanks are extended to the legislators and judges who used their positions to act for the protection of the Iberá marshlands through legal means, and who now make sure that the laws are enforced.

We would also like to thank all the officials and employees of the

municipalities connected to the Iberá marshlands, with whom we have worked to establish the marshlands as a tourist destination, to generate public access, and to promote a scenic route that will highlight their natural beauty. Thanks go to the officials of Colonia Carlos Pellegrini, to Víctor Daniel Giraud and Nélida Rocha of Santo Tomé, Manuel Valdés and Viviana Metifogo of Ituzaingó, Alberto Antonio Yaborsky and Zita Vallejos of Villa Olivari, Jorge Chapay and Félix Antonio Galarza of Loreto, Jose María de Jesús, Alicia González, and Mariano Escobar of San Miguel, Gustavo Aguirre and Emanuel Acosta of Concepción, Atilio Romero of Chavarría, Carlos Pertile of Felipe Yofre, Jorge Molina and Graciela Díaz Pérez of Mercedes, Cristián Guastavino of Mburucuyá, Sandro Pérez and Miguel Torres of Palmar Grande, Mateo Maidana of La Cruz, and Carlos Mauricio Camau Espíndola, Adrián Giudice, and Facundo Palma of the City of Corrientes.

It is also very important to thank the national park rangers and the many officials of the Administration of National Parks and the Ministry of Tourism: the great promoter of national tourism, Mr. Carlos Enrique Meyer, Minister of Tourism, Alicia Lonac, National Director of Tourism Development, Valeria Pelliza, Patricia Vismara of the Undersecretariat of National Tourism Promotion, Nahir Chabeldin, Cristina Morales of PROFODE (Program for the Support and Stimulus of Emergent Tourist Destinations), Leonardo Boto of INPROTUR (National Institute for the Promotion of Tourism), Mariana Giachino, Florencia Cerda, Florencia Azzaro, and Gastón Zúñiga of the "Viajá por tu País" ("Travel in Your Own Country") campaign, Santiago Rossi, Coordinator of Institutional Affairs, Alicia Caruso of Ceremony and Protocol, Ana Julia Montenegro of the Division of Public Relations and Observances, José María Hervás, Gerardo Elst, Giselle Muller, Sebastián Raviculé, Leonardo Juber, Alcides Vallejos, Lorena Pazko, and Osvaldo Miño of Mburucuvá National Park, Daniel Crosta of Iguazú, Alejandro Caparrós of Los Glaciares National Park, Raúl Chiesa, Patricia Gandini, Carlos Corvalán of the National Parks Administration, Paula Cichero, Guillermo Gil, Ariel Soria, Silvina Fabri, and Andrés Bosso of the Regional Delegation for Northeastern Argentina, Guillermo Martín, Ana Balabusic, Marcelo Almirón, and the other technicians of Casa Central.

We would like to thank the journalists and newscasters of Corrientes and the

City of Buenos Aires that help us publicize each new development in Iberá. Thanks go to Liliana Romero (Radio Sudamericana), María del Carmen Ruiz Díaz, Horacio Torres, and Facundo Sagardoy (Momarandu online newspaper); Sergio Elguezabal (TN Ecología), Sergio Federovisky and Juan Patricio Costa (Ambiente y medio and Contaminación Cero); Mario Markic and Ana Pace (En el Camino), the production team of CQC (Caiga Quien Caiga), Gonzalo Rodríguez and Román Volnovich (CQC), Mike Rial (TV Pública - Canal 7), Henry De Ridder (El Aventurero), Gustavo Sylvestre (Con Voz Propia), Sibila Camps (Clarín newspaper), Susana Parejas (Siete Días magazine), Laura Rocha (La Nación newspaper), Marina Aizen (Viva magazine, Clarín newspaper), Cristina Di Pietro, and Silvina García Guevara (Muy Interesante magazine), Rolando Hanglin (Radio 10), Rolando Graña (América TV), Nadine Kuhn (Nature's Keepers, TV France International), Luis Pavesio (Alerta Verde/C5N), Verónica Echezarraga (El Litoral newspaper from Corrientes), Ximena Pascutti (Rumbos magazine), Lorena López (Vida Silvestre and Weekend magazines), Fernando Gómez Dossena, Andrea Arbeláiz and Romina Solari (Luz magazine), Gonzalo Sánchez (Clarín newspaper), Matías Loewy and Ana Pere Vignau (Lonely Planet), Alba Silva, Gustavo Espeche, Patricia Arrua, Celia Carbajal, and Alejandro San Martín (Agencia Télam), Federico House (Aventura), Soledad Barruti (Página 12 newspaper), Julia Tramutola, Sol Oromi, and Laurence Thouin (Ecosistema magazine), Gabriela Grosso and Paul Roger (Hola magazine), Daniela Calabró (Positiva magazine), Javier Martínez Zubiría (Travel magazine), Luciana Rosende (TercerSector magazine), Luciana Manzi (Alta magazine of Aerolíneas Argentinas), Sonia Renison and Douglas Mac Donald (El Federal newspaper), Agustina Grasso (Noticias magazine), Silvina Ocampo (Para Ti magazine), Sergio Ciancaglini (La Vaca Mu magazine), Silvio Roubens (Radio FM Identidad), Sorrel Moseley-Williams (Buenos Aires Herald newspaper), El Ojo del Cóndor magazine of the Instituto Geográfico Nacional, Gustavo González (Biciclub magazine), Martín Caamaño (Un Camino magazine), Fabiana Scherer (La Nación magazine), Nahuel Maciel (El Argentino newspaper), Wenceslao Bottaro (Travel magazine), Eileen Murphy (Contraseñas magazine), Inés López, Norberto Lema (Radio FM Simphony), Victoria Dannemann (Deutsche Welle radio), Natalia Kidd and Alfredo Martínez (EFEverde), and Hilary Sandison (Francia).

Deserving of our infinite gratitude are all those researchers and naturalists who have furthered the understanding and appreciation of the biodiversity that we protect in the Iberá. Thanks are extended to the biology and ichthyology specialists of the Universidad Nacional del Nordeste (National University of the Northeast), and to the botanists of IBONE (Botanical Institute of the Northeast), who compiled information on the Iberá in five first-rate books. Thanks as well to Juan José Neiff, Adrián and Alejandro Di Giacomo, Juan Carlos Reboreda, Sara Tressens, María Silvia Ferrucci, Mario Di Bitetti, Yamil Di Blanco, Luis Calcaterra, Carlos De Angelo, Agustín Paviolo, Sol Domínguez, Pablo Beldoménico, Bernabé López-Lanús, Ignacio Areta, Nathalia Scioscia, Jorge Casciotta, Adriana Almirón, Andrés Cozar Cabañas, Pablo Cuervo, Valeria Debarbora, Santiago Nava, Ayelén Eberhardt, Eduardo Etchepare, Víctor Zaracho, María del Rosario Ingaramo, María José Corriale, Rafael Lajmanovich, Daniel Loponte, Luis Oakley, Darién Prado, Vanina Raimondi, Alejandro Giraudo, Susana Merani, Mariella Superina, Flavia Caruso, Chele Martínez, Flavia Miranda, Juan Pablo Julia, Mauricio Barbantis, Alejandro Vila, Marcela Uhart, Daniel Ligier and his team at INTA Sombrero, Igor Berkunsky, Talía Zamboni, Wanderlei de Moraes, Federico "Cacho" Bode, Patricia Koscinczuk, Luz Guaimas, Carolina Repetto, Martín Kowalewski, Guillermo Pérez Jimeno, Débora Di Francescantonio and Hernán Maturo.

Thanks to volunteers Tobías Strumia, Federico Urrutia, Facundo Acevedo Miño, Agustín Echeveste, Eugenia Acevedo, Fabio Tejerina, Nicolás Cowper Coles, Nicolás Varlamoff, Gastón Massart, Esteban Popelka, and Sabrina and Yohana (Peti).

We cannot forget to acknowledge the environmentalists and conservationists who have fought to preserve the biodiversity of the Iberá and to prevent the degradation of its environment. Thanks to our partners at Fundación Iberá, to Pedro "Perico" Perea Muñoz, Enrique Lacour, Yuyito Figuerero, Horacio Cardozo, Hernán González Moreno, Peter Healy, Luis Miguens, Francisco Erize, Oscar Iriani, Miguel Costaguta, Fernando Arias, Orlandro Vilavedra, María Mercedes Vallejos, Colo Nocetti and Julio Manzanelli, Ricardo Ibazeta, Thilo Von Spangenberg, Juan Leonardo Aquino and Elsa Salas; to Emiliano Ezcurra, Romina MacGibbon, Nicolás Schifman, and Ricardo Navarro (Banco

de Bosques), Santiago Dalessio, Hernán Casañas, Gustavo Costa, and Juan M. Raggio (Aves Argentinas), to Santiago Imberti (Ambiente Sur), to Rosario Espina, Yanina Rullo, Gonzalo Strano, and Leonardo Silva (Greenpeace), to Diego Moreno, Mario Beade, Pablo Preliasco, and Fernando Miñarro (Fundación Vida Silvestre), to Daniel Sabsay, María Eugenia Di Paola (FARN: Fundación Ambiente y Recursos Naturales), to Jorge Rulli, María Inés Aiuto, and José Luis Siviero (GRR: Grupo de Reflexión Rural), to Juan Carlos Chébez and Bárbara Gasparri, Claudio Bertonatti and Lorena Pérez, Bruno Leiva and Patricia McCormack, Rubén Barrios, Eduardo Haene, Emilio Spataro (Guardianes del Iberá), Rossana Bril (Planeta Tierra Universo), "Peta" and Betina Friedrich, Diana Friedrich, Constanza Pasian and Leandro Vázquez of the Park Ranger School of Corrientes, Gustavo Aparicio (Fundación Hábitat y Desarrollo), Gustavo Aprile, Javier Pereira (ACEN: Asociación para la Conservación y el Estudio de la Naturaleza), Diego Varela, Nicolás Rey (ACEN-Conservación Argentina), Adrián Giachino (Fundación Félix de Azara), Daniel Blanco (Wetlands International), Alejandro Brown, Lucio Malizia (Fundación ProYungas), Diana Carrero and Lilian Corra (Médicos por el Ambiente), Luis Castelli (Fundación Naturaleza para el Futuro), Lucía Soler (Asociación Huellas), Nicolás Lodeiro (Red Yaguareté), Tomás Waller (Fundación Biodiversidad), Verónica Quiroga (Ceiba), Lucas Chiappe (Proyecto Lemu), Agustina Stegmann (Grupo Pampa Natural), Liliana Olveira (CONAT: Centro de Observación de la Naturaleza), Silvia Villalonga (FUCI: Fundación Ciudadanos Independientes), Jorge Capatto (Fundación Proteger), Marcelo Canevari, Carlos Fernández Balboa, Alejandro Franzoy, Mariano Masariche, Lutz Faesher, Johannes Burmeister and Michael Succow (Fundación Michael Succow), George Schaller, John Terborgh, Lisi Krall, and Sebastián Letemendía.

We would like to thank the photographers, documentarians, and artists who work to help conserve nature. Thanks to the steadfast Marcelo Viñas, Hernán Povedano and Darío Podestá, Astrid Sanguinetti, Beth Wald, Roberto Güller, Rubén Diglio (*Viva* magazine, *Clarín* newspaper), Esteban Widnicky (*Lonely Planet*), Tadeo Jones (*Hola* magazine), Sergio Goya (*Rumbos* magazine), María Luisa and Norberto Monzón, Jasmine Rossi, Celine Frers, Boy Olmi, Natalia Oreiro, Nito Artaza, Antonio Tarragó Ros, Andrea Isasti, Facundo Mastrapasqua, Laura Sordi, Ricardo Lani, José Luis Pogacnik, Margarita Besnati, Héctor Etchebarne, Los de Imaguaré, Jorge Casal, Ramón Frete, Ignacio Báez, Gustavo Marangoni, Nadia Quevedo, Ariel Ocampo, Sergio Seipke, and the group Kossa Nostra, who with their works have motivated us to make known the wonders of the Iberá.

Special thanks to current members of the CLT team, as well as to all those that have worked with us in the past for the protection of the Iberá. Thanks to Sofía Heinonen, Debra Ryker, Esther Li, Fay Li, Laura Fernández, Valeria Gil, Verónica Angrisano, Gladys Scholles, Elsa Clar, Alejandro Bértola, Damián Moruzzi, Andrés Delgado, Mariana Stamparín, Florencia de Carli, Josefina Cuenya, Luciana Cristallo, Michelle Seinhart, Corina Gutiérrez, Elías Scholles, Daniel Oroño, Jorge Leconte Vidal, Alberto Fernández, María de Marchi, Carola Guimaraes, Verónica Pessini Mierez, Federico Fernández, María Laura Carbajal, Diego Arquier, María Susana Buzzi, Víctor Fabián Gómez, Alberto Acosta, Alberto Ansola, Víctor Reinoso, Pascual Pérez, Sebastián Cirignoli, Marisi López, Ignacio Jiménez Pérez, Malena Srur, Gustavo Solís, Alicia Delgado, Giselda Fernández, Javier Ricardo Fernández, Marcela Orozco, Federico Pontón, Rut Pernigotti, Karina Spoerring, Paula Bertolini, Verónica Pecozzi, Carina Grandoli, Clarice Neves, Pedro Núñez, Alejandra Eliciri, Agueda Balbastro, Hely Giraldo, Fernando Laprovitta, Cynthia Dabul, Marian Labourt, Fernando Sosa, Ricardo Quintana, Omar Rojas, Antonia Segovia, Olegario Segovia, Juan Alberto Fernández, Margarita Leiva, Pedro Leiva, Gladys Aguirre, Ramón Aguirre, Silvia Aguirre, Asunción Álvarez, José Luis Insaurralde, Simeón Insaurralde, Alejandro Ocampo, Martha Pera, Ramón Pera, Ramón Maidana, Diego Alberto López, Oscar Ramón López, Maximiliano Navarro, René Ocampo, Daniel Sandoval, Mariano Sotelo, Salvador Sotelo, Tomás Sotelo, Cavetano Núñez, Renzo Esteban Ramírez, Fernando Vier, Domingo Ávalos, Horacio Sotelo, Ricardo Portillo, Donato Fernández, Héctor Juncton, Miguel Rolón, Paublino Maidana, Ramón Villagra, Walter Cerdán, Diego Montenegro, Marcelo Montenegro, Diego Silva, Tiburcio Núñez, Cristián Moreira, Bernardo Falcón, Lisandro Gómez, José Luis "Pipo" Vera, Alfonso Petroski, Fabián Leiva, Horacio Verón, Jonathan Quintana, Héctor Ortiz, Alfredo Fernández, Javier Goldschtein, Daniela Martínez, Marcelo

Robledo, Luis Pera, César Ledesma, Gabriel Ledesma, Lydia Linik, Walter Miño, Sandro Conde, Enrique Zarza, Pablo Díaz, Cecilia Accattoli, Víctor Matuchaka, Juan Noguera, Francisco López, Víctor González, Gustavo Ariel Rodríguez, Raúl Sotelo, Jorge Espíndola, Jorge Salguero, Germán Romero, Guillermo Salina, Martín Barrios, Abel Fleita, Míriam Sotelo, Javier Puig, Nadine D'Arc, Andrés Stubelt, Guillermo Alduncín, Valeria Francisco, Jonathan Thompson, María Aime, Marla McPherson, and Daniza "Tita" Aldana.

Thanks as well to all those we rely on in Mercedes, Posadas, Ituzaingó, San Miguel, Concepción, and Corrientes to help resolve the day-to-day obstacles of living and working in the Iberá, such as Bity and "el Pato" Pipet, Víctor Cemborain, "la China" Sánchez, Miguel Semhan, the Posadas Branch of the National Administration of Civil Aviation, the Posadas Airport, and the Aeroclub of Posadas.

We also thank our architects, landscape artists, and decorators: Dolores Perea Muñoz, Eugenia Chorén, Sofía Sundblad, Victoria Solari, Omar Zaracho, Eloísa Malvido, Cynthia Taylor, Marga Bowden, and Joaquín Leyes; our woodworking artisans, Diego Padilla and Pablo Murillo; and our builders: Alejandro Ziegler, Pipi Huguet, and Luis Arjol.

We would like to thank our accounting, tax, legal, and financial advisors: Marval O'Farrell & Mairal, especially Drs. Sebastián Iribarne, Fermín Castro Madero, Ignacio Torino, Lorena Aimó, María José Estruga, Andrés Molinario, Catalina Sarrabayrouse, Jorge Leconte Jr, José María Llano, Martín Cosentino, Santiago Noguerol, Mauricio Bartolomé, Carlos Jorge López, Eduardo Bonis, and Ana Parisi; the surveyor Joaquín Romero; Shilton, Weyers & Associates, especially accountants Edgardo Shilton, Hugo Maffi, Carlos Mercero, Gustavo Strauss, Marcelo González, Cynthia Tutiun, Nicolás Bielli, and Pablo Toledo; to PricewaterhouseCoopers, particulary accountants Gabriela Slavich and Sergio Testoni; accountant Marcela Mizutani; accountant Pacho Rossetti; Customs Brokers H. Daniel Cristiani & Associates; notaries Alfonso Gutiérrez Zaldívar, Alvaro Gutiérrez Zaldívar, Mónica Santas, and Mónica Cristiani; Drs. Andrés Nápoli, Carlos López, Guillermo Pomares, and Edwin E. Harvey. Thanks as well to the translator Miguel Grinberg; our insurance agents Armando Boschetti, Renzo Macchiaroli, and María Elena Landa; our cartographers Santiago Doeyo and María Soledad Rodríguez; our graphic artists Leticia Kutianski and Ricardo Ángel Farías; our communications technicians Ariel and George Saínz; and our systems advisors Santiago Terrera (Urgencias Computación), Fernando Adaro (Lantech Soluciones), and Ricardo Freitag.

Finally, we want to thank all of our enthusiastic friends, the many people who promote ecotourism in the Iberá, and all those who help us communicate our work, such as Alejandra Boloqui and Cepi Oporto, Mariela Pedelhez, Damasia Ezcurra (University of San Andrés), Diana Mondino (UCEMA: Universidad del Centro de Estudios Macroeconómicos de Argentina), Genaro José Rossina and Mario Augusto Rossina (Arandú), Luis María Loza (Atalajes Arandú), Raúl Costa, Cristóbal Costa and Teresa Okecki (Patagonia), Ricardo Palma, Jorge Gibbons, Edwin R. Harvey, Alejandro Benítez, Margarita Carlés, Jenny Bazán, Pedro Tarak, Mario and Andrea Bortot, Agustín and Luli Dondo and sons, Marie Jeanne Reynolds, Ricardo Palenque, Diana Simonetti, Alejandro Ronchetti, Sebastián A. Ballari, Sergio M. Zalba, Javier Muzón and Gustavo Spinelli, Irma Gamarra, and all those who come to the Iberá and are renewed by its natural beauty, of whom it would be very hard to compile a list without forgetting anyone. To all of them: Thank you!...because it is the positive energy, the amazement at the tameness of the fauna, the discovery that dreams and goals can be realized, and the appreciation of what we have accomplished that inspire us most to continue our work.



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PARAGUAY O Nuestra Sra. del Rosario de Caá Catí I. Apipé (Arg., 5 Complejo Hidroeléctrico Yacyretá-Apipé Villa Olivari San Miguel O **O** Ituzaingó Reserva Natural del Iberá 12 a Posadas (Prov. de Misiones) Pje. Libertad 1 Pje. Galarza Pje. Uguay Colonia Carlos Pellegrini Gobernador Igr. V. Virasoro O ARGENTINA Corrientes Paso Mesa 🔸 14 / a Santo Tomé (puente Inter. de la Integración) São Borja



1.22



Juan Ramón Díaz Colodrero

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The Conservation Land Trust (CLT), a nonprofit private operating foundation incorporated in California, works to create and expand national parks in Chile and Argentina. Since its founding in 1992, CLT has developed innovative projects in South America that preserve wilderness, conserve biodiversity, protect endangered species, and restore degraded ecosystems. CLT has conserved more than 1.6 million acres to date and has partnered with government agencies and other nongovernmental organizations to establish multiple new protected areas.

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© 2014 by The Conservation Land Trust ISBN: 978-0-9846932-5-2

Distributed by Goff Books, an imprint of ORO Editions. www.goffbooks.com info@goffbooks.com

Printed in Malaysia by Dai Nippon Printing

Paper: 170gms Magno Satin Matte Art Paper

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Photography

Juan Ramón Díaz Colodrero is among the top nature photographers of Argentina. Born and raised in Corrientes, and trained as a cabinetmaker in Santa Cruz, he spent much of his adult life living in Spain. Largely self-taught as a photographer, Juan Ramón returned home in 2008 and has since devoted his time and talents to capturing the exceptional beauty and wildlife diversity of the Iberá marshlands. Through his photography, he seeks to celebrate—and help sustain—the natural and cultural heritage of his beloved Corrientes.



The Conservation Land Trust

The Conservation Land Trust (CLT), a nonprofit private operating foundation, works to create and expand national parks in Argentina and Chile. Since its founding in 1992, CLT has completed projects that preserve wilderness, conserve biodiversity, protect endangered species, and restore degraded ecosystems. CLT has partnered with government agencies and other nongovernmental organizations to establish multiple new protected areas, including Chile's Corcovado National Park.

The Conservation Land Trust–Argentina, CLT's Argentinean affiliate, has acquired expansive tracts in the Iberá basin, a region of subtle beauty and diverse wildlife habitat including open waters, marshlands, seasonally flooded grasslands, and forests. These privately owned conservation lands are now strictly protected for wildlife and natural processes. CLT–Argentina conceived and implemented Argentina's first reintroduction of an extirpated species, successfully returning the giant anteater to Iberá after decades of absence. Similar efforts to recover populations of other missing creatures, including the jaguar, are under way, as part of an overall vision for the Iberá that anticipates flourishing human communities set amongst a whole and healthy ecosystem, with all its native biodiversity intact.





For its scenic, ecological, and cultural features, the Iberá must be considered a unique wetland in South America, and because it constitutes a great reserve of clean water and biodiversity, it is deserving of great care and respect. —Juan José Neiff