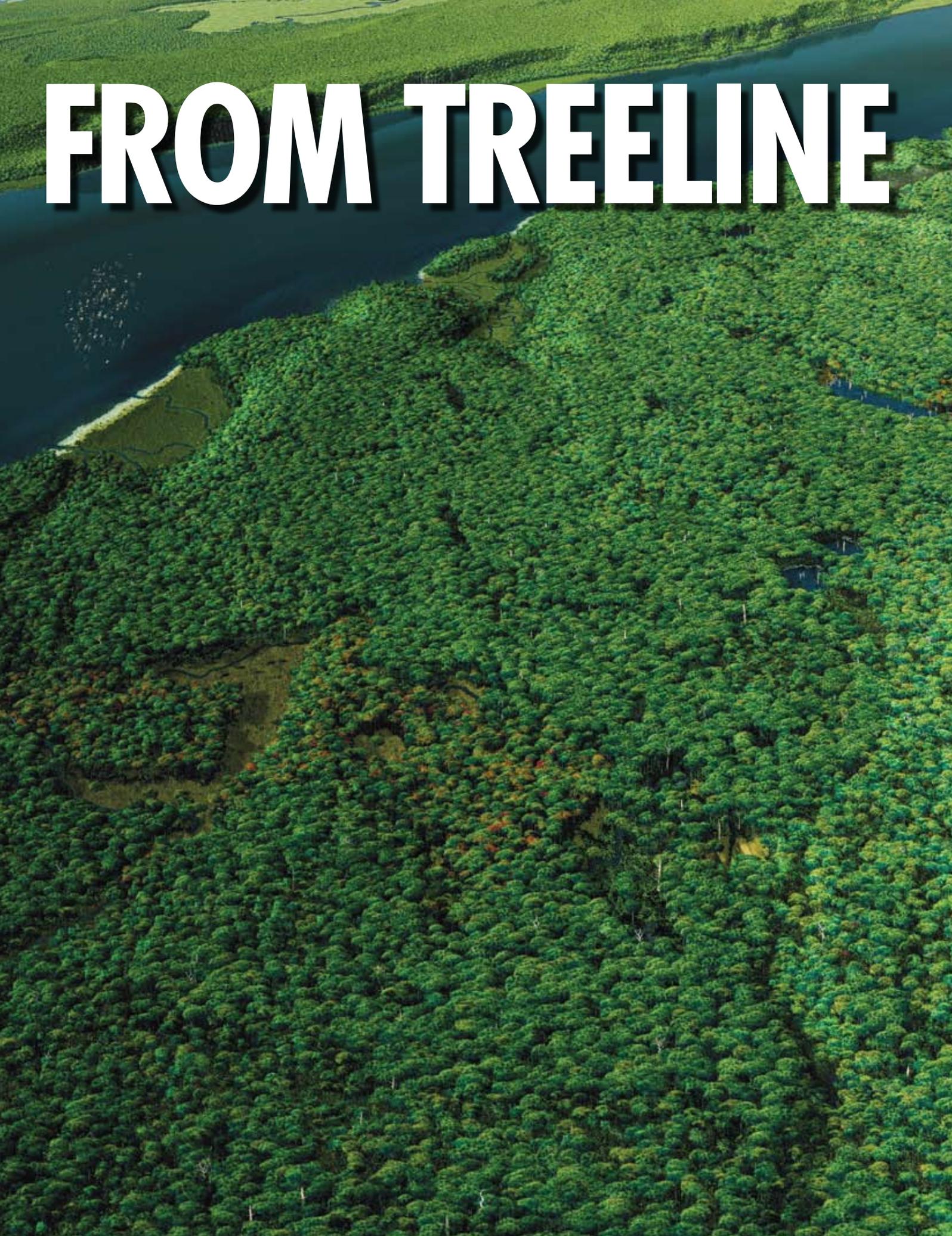


FROM TREELINE





TO SKYLINE

THE MANHATTAN PROJECT: NEW YORK CITY'S NATURAL HISTORY



EXCERPTS FROM *MANHATTAN* BY ERIC W. SANDERSON

On a hot, fair day, the twelfth of September, 1609, Henry Hudson and a small crew of Dutch and English sailors rode the flood tide up a great estuarine river, past a long, wooded island at latitude 40° 48' north, on the edge of the North American continent. Locally the island was called Mannahatta, or "Island of Many Hills." One day the island would become as densely filled with people and avenues as it once was with trees and streams, but not that afternoon. That afternoon the island still hummed with green wonders. New York City, through an accident, was about to be born.

Mannahatta had more ecological communities per acre than Yellowstone, more native plant species per acre than Yosemite, and more birds than the Great Smoky Mountains National Park. Mannahatta housed wolves, black bears, mountain lions, beavers, mink, and river otters; whales, porpoises, seals, and the occasional sea turtle visited its harbor. Millions of birds of more than a hundred and fifty different species flew over the island annually on trans-continental migratory pathways; millions of fish—shad, herring, trout, sturgeon, and eel—swam past the island up

IF MANNAHATTA EXISTED TODAY AS IT DID THEN, IT WOULD BE A NATIONAL PARK

Hudson, an English captain in Dutch employ, wasn't looking to found a city; he was seeking a route to China. Instead of Oriental riches, what he found was Mannahatta's natural wealth—the old-growth forests, stately wetlands, glittering streams, teeming waters, rolling hills, abundant wildlife, and mysterious people, as foreign to him as he was to them. The landscape that Hudson discovered for Europe that day was prodigious in its abundance, resplendent in its diversity, a place richer than many people today imagine could exist anywhere. If Mannahatta existed today as it did then, it would be a national park—the crowning glory of American national parks.

the Hudson River and in its streams during annual rites of spring. Sphagnum moss from the North and magnolia from the South met in New York City, in forests with over seventy kinds of trees, and wetlands with over two hundred kinds of plants. Thirty varieties of orchids once grew on Mannahatta. Oysters, clams, and mussels in the billions filtered the local water; the river and the sea exchanged their tonics in tidal runs and freshets fueled by a generous climate; and the entire scheme was powered by the moon and the sun, in ecosystems that reused and retained water, soil, and energy, in cycles established over millions of years.

The vast rich landscape Hudson found on Mannahatta housed animals we could only imagine seeing there today, and contained more native species than many modern-day national parks.





A visual reminder of the once-forested landscape, Central Park is the green heart of today's Manhattan—an essential component for its people and wildlife.

Living in this land were the Lenape—the “Ancient Ones”—of northeast Algonquin culture, a people for whom the local landscape had provided all that they and their ancestors required for more than four hundred generations before Hudson arrived. On Mannahatta these people lived a mobile and productive life, moving to hunt and fish and plant depending on the season; they had settlements in today's

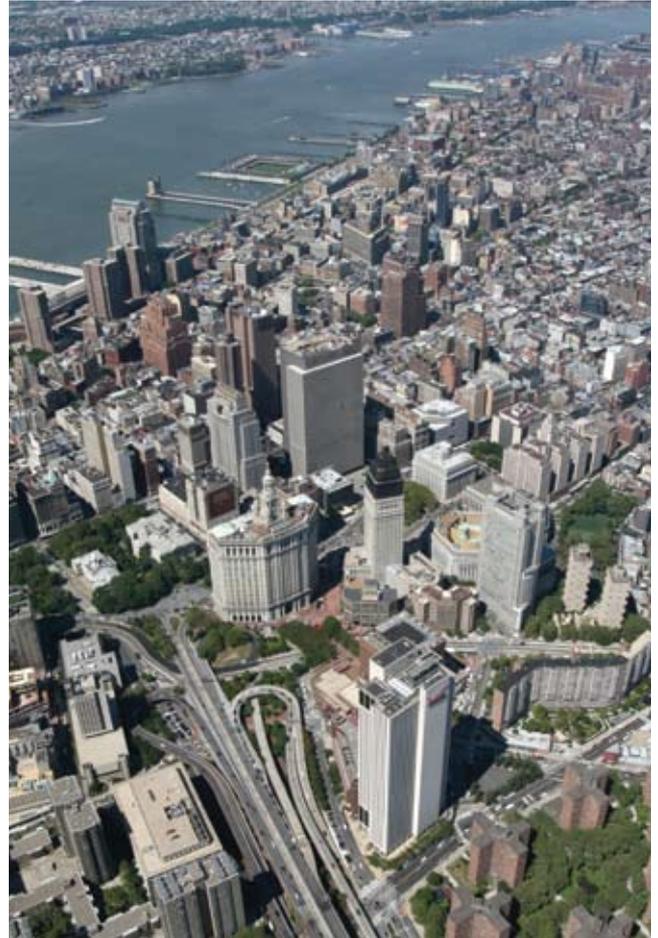
in and benefactors of the rhythms of the nature that obviously connected them to their island home.

Many things have changed over the last four hundred years. Extraordinary cultural diversity has replaced extraordinary biodiversity on the island; today people from nearly every nation on earth can be found living in New York City. Abundance is now measured in economic currencies, not ecological ones,

NEW YORKERS LOVE THEIR PLACE WITH A FEROCITY THAT THE LENAPE WOULD HAVE RECOGNIZED

Chinatown, Upper East Side, and Inwood, and fishing camps along the cliffs of Washington Heights and the bays of the East River. They shaped the landscape with fire; grew mixed fields of corn, beans, and squash; gathered abundant wild foods from the productive waters and abundant woods; and conceived their relationship to the environment and each other in ways that emphasized respect, community, and balance. They lived entirely within their local means, gathering everything they needed from the immediate environment, participants

and our economic wealth is enormous—New York is one of the richest societies the world has ever known, and is growing richer each year. Millions of people fly in from all over the world to a narrow, twelve-block-wide island to gather in buildings a thousand feet high to see what's new and what's next. Thousands of tons of materials follow them into the city—foodstuffs from six continents and four oceans; concrete and steel and clothing from the other side of the globe; power from coal, oil, and atomic fission—all the resources necessary



Over the past 400 years, Manhattan has evolved from a land of extraordinary biodiversity to that of extraordinary cultural diversity.

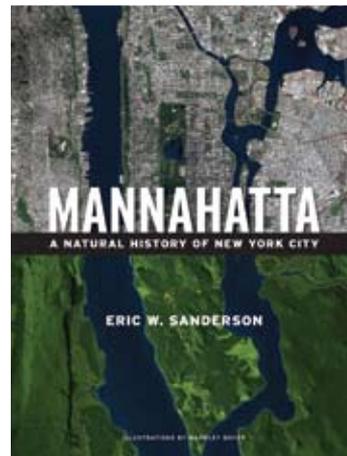
for the modern megacity, delivered as the natural systems once delivered, through elaborate networks, though now the networks are composed of people, products, money, and markets, as opposed to forests, streams, sunshine, and grass.

To many outsiders, Manhattan Island is a monument to self-grandeur and a potent symbol of the inevitable—but yet to be realized—collapse of our hubris. But inside of New York another way of thinking is emerging, a new set of ideas and beliefs that do not depend on disaster to correct our course and instead imagines a future where humanity embraces, rather than disdains, our connection to the natural world. Many New Yorkers celebrate the nature of their city and seek to understand the city’s place in nature. They see their city as an ecosystem and recognize that, like any good ecosystem, the city has cycles, flows, interconnections, and mechanisms for self-correction. New Yorkers love their place with a ferocity that the Lenape would have recognized; active observers of and participants in their neighborhoods, where every change is a source of discussion and debate. We know, when we stop to think of it, that no place can exist outside of nature. As was true for the original Manahate people, our food needs to come from somewhere; our water, our material life, our sense of meaning are not

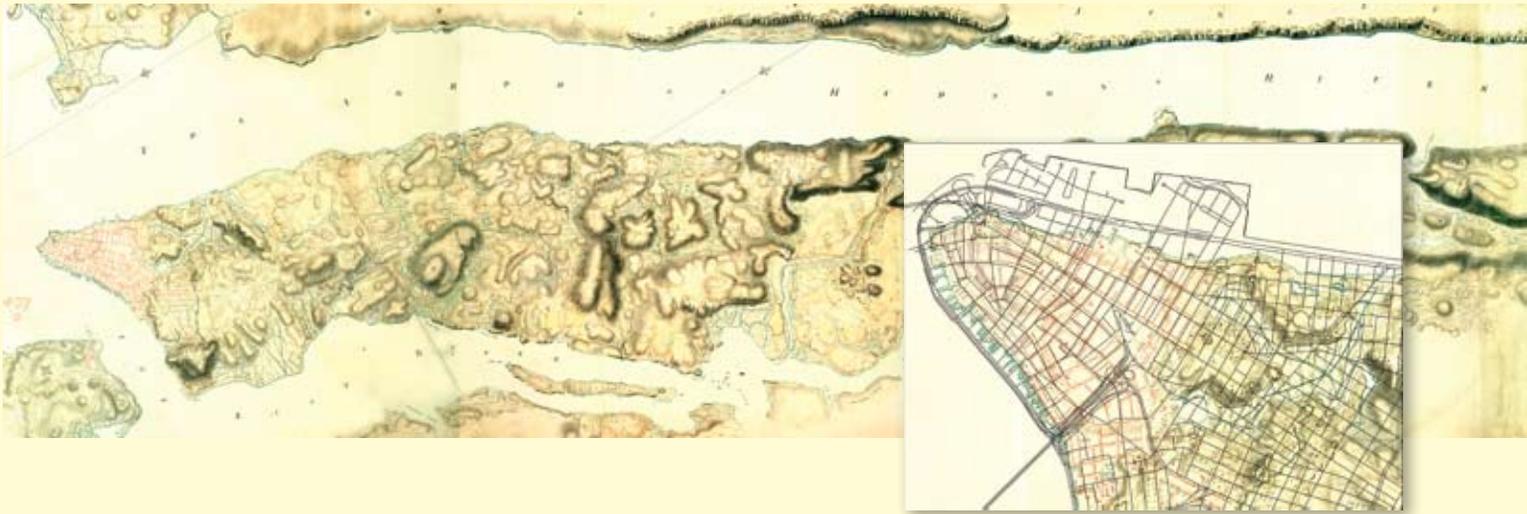
disconnected from the world, but exactly and specifically part of it.

Understanding the ecology of Mannahatta helps us bring into focus the ecology of Manhattan today and plan for the urban ecosystem of the future, while at the same time enabling us to reflect upon the value of the wild ‘Mannahattas’ that still exist in the world.

Eric Sanderson is a senior conservation ecologist at the Wildlife Conservation Society, headquartered at the Bronx Zoo in New York City. He is the founder and director of The Mannahatta Project.



All images used herein are taken from the 352-page book *Mannahatta: A Natural History of New York City*, written by Eric W. Sanderson, illustrated by Markley Boyer and published by Abrams, which is now available at bookstores.



THE MANNAHATTA PROJECT

Compiled by Eileen Stegemann

It is difficult to imagine what Hudson first saw when he arrived at the mouth of the Hudson in 1609, but for more than a decade, landscape ecologist Eric Sanderson has been working to do just that. Beginning with historical maps, Sanderson and colleagues labored to create through words and images a living, breathing portrait of the wild island as it existed four hundred years ago, when Hudson first reached its shores. Sanderson's goal was to recreate every hill, valley, stream, spring, beach, forest, cave, wetland, and pond that existed on Mannahatta, and in *Mannahatta: A Natural History of New York City*, you can see the forests of Times Square, the wetlands of downtown, and the meadows of Harlem.

Discovering a copy of the British Headquarters Map—an incredibly detailed map created by British mapmakers in 1782 during the Revolutionary War and illustrated with the locations of natural features, such as salt marshes, streams, hills, and woods—Sanderson overlaid this map on a grid of modern Manhattan to match the original landscape to the current city blocks (see inset above). By taking into account key ecological data, the new technology of Muir Webs, and years' worth of primary research, he was able to reconstruct the geography and establish neighborhoods of plants, birds, and animals that once inhabited Mannahatta, as the island was known to the native Lenape. Through computer imaging, the information was then transformed into geo-referenced images, matched to the city today.

Timed for the Hudson-Fulton-Champlain Quadricentennial in 2009, the Mannahatta Project allows New Yorkers to visualize what Henry Hudson might have seen when he sailed his ship, the *Half Moon*, into New York Bay on September 12, 1609. The project reclaims a part of history that has

been missing—the ecological history of an island, as Hudson wrote “as pleasant as one might tread upon.” New York City may trace its founding to 1609, but the land and waters on which the city was built have a much longer history and ways of living that predate the city itself.

As stated in his book, “The goal of the Mannahatta Project has never been to return Manhattan to its primeval state. The goal of the project is to discover something new about a place we all know so well, whether we live in New York or see it on television, and, through that discovery, to alter our way of life. New York does not lack for dystopian visions of the future...But what is the vision of the future that works? Might it lie in Mannahatta, the green heart of New York, and with a new start to history, a few hours before Hudson arrived that sunny afternoon four hundred years ago?”

To learn more about the Mannahatta Project, to explore Mannahatta block by block, to download educational materials that can be used throughout New York State, and to discuss what Mannahatta means for the future of New York, point your browser to themannahattaproject.org. An exhibition about Mannahatta and Manhattan runs through October 12, 2009, at the Museum of the City of New York, 1220 Fifth Avenue, New York.

The Mannahatta Project was prepared for the New York State Department of State Office of Coastal, Local Government & Community Sustainability with funds provided under Title 11 of the Environmental Protection Fund in partnership with the City of New York Department of Parks and Recreation. This project has also been funded in part by grants from the New England Interstate Water Pollution Control Commission and the New York State Environmental Protection Fund through the Hudson River Estuary Program of the New York State Department of Environmental Conservation and by several private foundations and individuals.