A New New World
Review by Peter Bane

CHARLES C. MANN
1491: New Revelations of the Americas Before Columbus
Alfred A. Knopf. New York. 2005. 465 pp. cloth. illustrated. $30.

A revolution in historical scholarship and archaeology has been quietly brewing over the past generation. Charles Mann, in a delightfully well-written account of its surging tides and controversies, has given us the outline of an America before Columbus, the likes of which most people have scarcely dreamed.

Initial settlement as much as 20,000 years earlier than previously thought; the world's first urban civilization on the coast of Peru; social engineering on a scale that makes the Soviet Union look amateurish; a high urban culture that arose from fishing not farming; the Amazon a vast, cultivated garden of food plants and a region teeming with people; enriched tropical soils stabilized by charcoal; the Maya undone by warfare not drought; American cities larger than any in Europe or Asia. These, and countless other startling new conclusions emerge from recent research, providing a wholly different vision of the "New World," which ironically, may be older than post-glacial human settlement in Europe.

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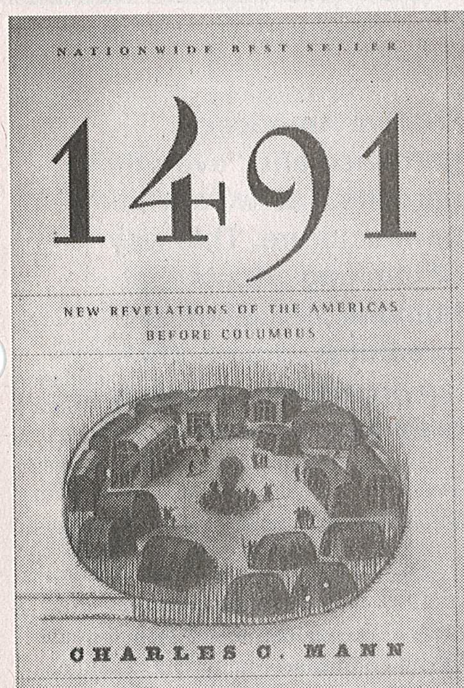
Supported by prodigious scholarship (the book offers over 100 pages of references), Mann concludes that the American continents may have contained as many as a hundred million inhabitants at the time Columbus arrived, about one-

fifth of the human race. It seems the lands from Alaska to Tierra del Fuego were swarming with people in the 15th century. Tragically, epidemic diseases brought by the first Europeans laid low vast swaths of Indians within a hundred years, so that the English Atlantic colonists did indeed land in what seemed to them an untrammeled wilderness, empty of people.

Mann's style is fresh and engaging as he creeps stealthily up on one myth of conquest after another, blowing them over with the lightest of breaths. As introduction to the central idea of the book—that there were an awful lot more Indians here than (almost) anyone has thought heretofore—he surveys the first contact literature of New England.



For more than a century before the Mayflower sailed from Ipswich with her unlucky cargo of 100-odd religious dissenters (and a few scalawags, including one of Mann's ancestors, an ill-fated chap named Billington), European ships had been visiting Dawnland, as its dwellers called the Atlantic coast of North America, trading with the natives and being successfully contained by them offshore. The Pilgrims (including Billington, later hanged for mischief), walked ashore without so much as an arrow being launched. They were thoroughly unprepared for their presumptuous project. They had brought neither plants nor animals with them; they arrived in November, six weeks before winter; they had no idea what to expect and little inclination either to explore the territory into which they had blundered, or to even to use it for their sustenance. None of them were farmers. Despite meeting no opposition, half of them died within the first winter. That all of them did not perish is attributable to their occupying an abandoned Wampanoag village and finding there buried grain and other stores. What had changed?

A region filled with hundreds of tribes of people leading a rich and varied life had emptied out. Measles, smallpox, and other European maladies had taken nine of ten native Americans in the years just prior to 1620. Diseases introduced by Hernando de Soto's men a century earlier had reached every corner of the continent, devastating populations that carried little resistance.

Even with 90% of the area's former inhabitants gone, the Massachusetts Bay Colony would certainly have been destroyed had they not become an unwitting ploy in a native political squabble. The decimated Wampanoag, led by their sachem, Massasoit, allied themselves with the English colonists to keep their own more numerous neighbors, the Narragansett, at bay. Massasoit's scheme worked, but it also let the settlers survive. With reinforcements and their technological advantages (large animals, steel weapons, etc.) they eventually prevailed.

More interesting even than the wealth of new stories Mann relays, are the implications of a world no longer empty. Noble savages or brute barbarians, the native peoples of the Americas have occupied an enormous psychic territory in the modern mind. Because they were so little known in reality, yet the impact of Europeans' entering into their world was so vast, these vanished peoples came to stand for the mythic forces grappling for supremacy in the European collective consciousness. Mann charts the terrain of this mythos. Among other things, it is the homeland of environmentalism: The Red Man as careful steward of the land. Occupants of a wilderness fierce and primeval, the Indians had lived lightly on the land and came to stand for an ethic of conservation. On the other hand, the utilitarians, flying the flag of Manifest Destiny, argued that the feckless natives had done nothing with a great and fertile territory, that it only waited for the arrival of European "vigor" and industry to make it pour forth wealth unimaginable. The implication being that a few dead Indians, natives pushed out of their rude huts in the name of progress, was a small sacrifice to make for so great a result as the coming of the "Great White Hope."

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Balderdash and racist rubbish, says Mann. The natives were here in great numbers and diversity. They had been here for tens of thousands of years and had achieved things Eurasians had not, including the world's greatest empire (the Inka of So. America), some of its largest buildings, and without a doubt some of the most extensive and immense public works of engineering on earth. To paraphrase the author, "Native Americans were well along in the process of terraforming a third of the Earth's land mass to make it hugely productive, when Columbus arrived and ruined everything." Dismissal of native suffering and the genocide of Western expansion have been politically incorrect for a generation or more, though the image of an empty land occupied for the greater good still underpins Americans' image of themselves. Less well understood but more critical to a low-energy future, however, the claptrap that Indians maintained a pristine nature has bolstered preservationist arguments against everything from water impoundments to non-native species.

Mind you, I am not arguing either for clearcutting old growth forests, drilling for oil on the coastal plain of Alaska, or any other thoughtless diminution of natural capital. Please.

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The implications for permaculture of Mann's review of native land use, however, are profound. Indians remade the Amazon into the world's largest forest garden. Even today, a half millenium after abandonment, every tenth tree in the world's greatest rainforest bears fruits edible by humans. These same people made humus-rich soils by low-temperature burns of food waste, manures, brush, and bones. The resulting immensely fertile, charcoal-rich soils, called *terra preta do Indio*, a Portuguese phrase meaning "dark Indian earth," hold water and minerals and resist leaching under the heat and heavy rainfall of the tropics. It was an original invention of startling power, never known in Africa or Eurasia. Mesoamerican plant breeders (read farmers) created maize, today the world's largest crop by weight, through a daring intergeneric cross of unpromising native grasses, without a doubt the greatest feat of genetic "engineering" to this day. The water management schemes of the Nazca, the earthworking of the Beni—a lowland flood savannah in the north of Bolivia—the chinampas of central Mexico, and the incredible agricultural sophistication of the Inka, point to a creativity and audacity in land use second to none.

While most of the book explores the revelations emerging from new pre-Columbian research, a dialogue the author is careful to document in guarded terms, he allows himself to make a few comments on the meaning of these discoveries; they are all the more weighty for his general restraint. The difference between the Eastern Hemisphere and the Western had little to do with the former being worked over by humans and the latter being preserved in some imagined "state of nature," he asserts. Both halves of the planet were highly developed and richly diverse. Indeed, the trackless forests and immense herds of bison and flocks of pigeons Europeans encountered were an aberration—ecosystems in crash and recoil from the removal of the real keystone species: human beings! If there is a proper contrast between the hemispheres, it was more a case of the so-called "Old World" being environmentally tapped out to build one failed farming civilization after another, and the "New World" being brought into ever great productivity and richness by its gardening inhabitants.

I can fairly "hear" the words rolling off the author's pen (or his keyboard as it were): Native Americans gardened and "everything gardens," as we say in permaculture. This way of thinking admits that humans, like all other creatures, modify their environments to enhance their own survival. There is no "going back" to a pre-Columbian state of grace or wilderness, rather we should learn from the creativity of native Americans as we shape the landscape for an uncertain future.

Comparisons with Jared Diamond's *Guns, Germs, and Steel* are inevitable. Both make Pizarro's conquest of the Inka a central image of their books. Diamond illustrates the astonishing power of Europeans' relative immunity to diseases that decimated the Indians, and the overwhelming force they were able to muster through the combination of horses, guns, and steel armor. He makes these part of a larger argument for the dominance of Eurasian biogeography. Mann, while conceding the great power of steel tools and horses (the Indians coveted them fiercely wherever they were introduced and quickly became adept at handling them), refines our picture of the shock of encounter between Europe and America: chiefly, the damage was microbial. Had nine-tenths of Americans not succumbed to Eurasian diseases within decades of contact, it would have been a different story altogether. Pizarro had the extraordinary good fortune to have arrived in the Andes in the midst of a bitter and dramatic civil war, or his otherwise incredible daring would not have been enough to carry the day. Cortes alone did not conquer Mexico. He shrewdly allied himself with the Toltecs, enemies of the imperial Mexica.

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No, the picture is much, much more complex than we have understood. *1491* bears close reading. It is stylish, thoughtful, and immensely important. Mann has opened a window on a world whose real legacy could not be more timely to the dilemma facing humanity today. Extraction or cultivation? Δ

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