Introduction

In the year 1643, on the shores of the Baltic, an obscure author published a small book on the plants to be found growing near his home town. Nicolaus Oelhafen's treatise was tiny, but it discussed what its author felt was a significant problem, one which extended far beyond its immediate setting, the merchant town of Danzig (today's Gdańsk). Why, Oelhafen complained, were so many people in his day fascinated by "strange" natural objects, "brought from faraway regions at great expense," while they "trod underfoot" those to be found at home? Rebuking them for their "ingratitude," he bitterly remarked that "Meanwhile, those things which grow under our own sun, in our own soil . . . if they don't lie entirely neglected and in contempt, are at any rate held to be viler than seaweed"![1] In his book, Oelhafen attempted to reintroduce his readers to the richness and variety of their own easily accessible countryside by compiling a detailed inventory of hundreds of local plant species, together with notes on where they could be found. By thus documenting local nature, he hoped, he could help to remedy his compatriots' ignorance while reestablishing a sort of balance and harmony in the greater world.

By taking this step, Oelhafen joined himself to a much larger enterprise. For across early modern Europe, many of his contemporaries – in such areas as Italy, France, England, the Netherlands, and the scattered territories of the Holy Roman Empire – were also beginning to contribute to "natural history," as they saw it, by documenting their own local natural worlds. Natural history, which comprised the study of rocks, plants, animals, and any other phenomena that might conceivably be described as "natural," was a pursuit with a venerable genealogy dating back to Greco-Roman antiquity.[2]

[1] Nicolaus Oelhafen, *Elenchus plantarum circa nobile Borussorum Dantiscum suâ sponte nascentium* (Danzig: typis & impensis Georgi Rheti, 1643), 1–2.

[2] See Nicholas Jardine, James Secord, and Emma Spary, eds., *Cultures of Natural History* (Cambridge: Cambridge University Press, 1996). Brian W. Ogilvie, *The Science of Describing: Natural History in Renaissance Europe* (Chicago: University of Chicago Press, 2006), 87–89, has recently argued that there is in fact a sharp discontinuity between ancient and Renaissance natural history, in other words that since no uninterrupted *community* of naturalists persisted throughout antiquity and the Middle Ages, the discipline itself must be seen as having been invented by Renaissance naturalists, who first established such an enduring community.

But Oelhafen's early modern counterparts had few words to describe exactly what it was that they were doing, in their efforts to investigate *local* nature in particular. The ubiquity of the term "local" is itself a relatively modern phenomenon; during the early modern period, it was used only in certain fairly narrow contexts, for example to discuss "local motion" in physics. Some compilers of inventories, then, declared the essence of their projects to be the study of their "domestic" natural worlds, while others talked of the "indigenous" or the "native," or used other similar terms (these decisions, of course, being highly dependent on the languages they spoke and wrote). Many just simply announced their intention to focus on natural objects in a particular place, whether a town or entire territory. Gradually, these compilers of inventories became aware of each other's existence; they began to cite each other and to compare their own local natural phenomena, wherever in Europe they might be, with those elsewhere. And gradually, they came to see their projects as sharing a common goal: not only the furthering of knowledge about the natural world in general, but also the furthering of a very specific sort of natural knowledge, that of "indigenous" natural kinds profoundly influenced by the places where they were to be found.

This book explores the meanings of the "indigenous" and related concepts in early modern Europe. When we use the term "indigenous" today, we tend to refer almost exclusively to the *non*-European – to those species, peoples, cultures, and knowledges most dramatically affected by the Columbian Encounter and its aftermath. Yet over the course of the early modern period, Europe saw the emergence of a fascination with a very different "indigenous": its own. Many early modern Europeans, as they struggled to make sense of the kinds of diversity they confronted from the fifteenth century on – previously unknown peoples, rediscovered ancient authorities, disturbing religious differences – sought new ways of understanding their worlds, and especially of coping with what they often perceived as "strange" and "foreign" influences.[3] In the process, many of them came to see these influences as embodied not just in human affairs, but also in the *material* world, most visibly in the trade in foreign medicines and exotic substances that had existed ever since antiquity, but had expanded substantially following medieval urbanization and the Columbian Encounter itself.[4] Debating

However, since early modern naturalists did in fact frequently draw on Pliny as a model, and the range of his concerns actually corresponds quite well with theirs, this book will use the term "natural history" in its broader chronological and thematic sense.

[3] Anthony Grafton, *New Worlds, Ancient Texts: The Power of Tradition and the Shock of Discovery* (Cambridge, MA: Harvard University Press, 1992).

[4] This topic has long been studied primarily by historians of medicine and pharmacy, as well as by economic historians and food historians. In recent decades, however, cultural historians have begun to contribute as well: see for example Wolfgang Schivelbusch, *Tastes of Paradise: A Social History of Spices, Stimulants, and Intoxicants*, translated by David

the qualities and merits of these substances, many early modern Europeans thus came to interpret their experiences of the foreign in large part through the natural world as well as the human one. And as they grappled with issues of geography, identity, and natural origins, many Europeans began to look *inwards* as well as outwards. In short, they began to pay attention to an "indigenous" located within Europe itself.

This may seem a controversial claim. But it is one rooted in intellectual debates and practices within early modern Europe, ones we have long since forgotten. In the wake of the Columbian voyages and early colonial endeavors overseas, a number of impulses joined to promote the scrutiny of local nature in Europe. New forms of fascination with the material world led to new conceptions of knowledge. New preoccupations with difference, both between and within communities, prompted new technologies for the gathering and recording of information. And polemics arose in which many Europeans – from physicians to popular pamphleteers – began to question the value of what they termed "exotic" substances more generally. Challenging boosters of expensive and fashionable remedies from afar, whether lavishly-prepared medicines long imported from the Mediterranean world or the increasingly trendy hot beverages of chocolate, coffee, and tea, some physicians in particular began, in reaction, to declare the need to take inventory of what they called the "indigenous" or "domestic" natural worlds of their own towns and territories. The resulting movement reached deep into Europe, attracting supporters not only in such colonial powers as England, France, and the Netherlands, but also, even more prominently, in the fragmented and decidedly non-colonial territories of the Holy Roman Empire, where local institutions and sentiments combined to produce the strongest push for the rediscovery of European natural objects and environments. In each of these places, people began to put pen to paper and to attempt, haltingly at first, to catalogue the "lowly" and "humble" weeds and pebbles in front of their doorsteps.

This book is thus, in part, about the ways in which, during the early modern period, the "indigenous" natural worlds of early modern Europe came to be debated and, ultimately, painstakingly documented. It was in Europe, rather than its colonies, that the kinds of works we today call "local floras" – books that catalogued the plant species to be found within a given radius of a town (often three, four, or five miles) – first began to be written. While medieval authors and, even more notably, the humanist botanists of the early Renaissance had shown a keen eye for local nature, their tendency

Jacobson (New York: Vintage Books, 1992); the articles in Roy Porter and Mikuláš Teich, eds., *Drugs and Narcotics in History* (Cambridge: Cambridge University Press, 1995); and David T. Courtwright, *Forces of Habit: Drugs and the Making of the Modern World* (Cambridge, MA: Harvard University Press, 2001).

had been to embed their descriptions of local species within universalizing works, ones which aimed to encompass all existing knowledge.[5] But early modern local florists gloried in their self-prescribed limitations to the local, explicitly restricting themselves to the pursuit of species "indigenous" or "native" to strictly limited regions. Such works were soon followed by other local inventories, from mineralogical surveys of areas' "subterranean riches," to ambitious schemes to write the "natural histories" of entire territories. The production of these kinds of inventories, which would ultimately shape many of the most basic structures and assumptions of today's environmental surveys, came to constitute one of the most significant arenas through which early modern Europeans engaged in reflecting on their own natural worlds – and, ultimately, on their perceptions of their own place within them.

By investigating this series of attempts to rediscover European nature, *Inventing the Indigenous* pursues several broader goals. One of these is to reconsider the ways in which Europeans thought about issues of geography and identity during this crucial period, so often labeled the "Age of Discovery." Recently, in the wake of the quincentenary of Columbus's first American voyage, a veritable explosion of scholarship on Europeans' encounters with extra-European peoples has occurred, examining these encounters anew from a wide range of critical perspectives, including those of postcolonialism and the emerging field of Atlantic history.[6] This literature has brought many new insights. For example, while some scholars of colonialism have unfortunately tended to treat Europe as a monolithic entity, others have begun to use more sophisticated analyses to reveal the ways in which religiously and politically diverse European polities in fact drew on colonial encounters to shape their identities in very different ways.[7] Similarly, studies of the ways

[5] Jerry Stannard, "Natural History," in *Science in the Middle Ages*, ed. David C. Lindberg (Chicago, IL: University of Chicago Press, 1978), 429–460; Karen Meier Reeds, "Renaissance Humanism and Botany," *Annals of Science* 33 (1976): 519–542; Karen Meier Reeds, *Botany in Medieval and Renaissance Universities* (New York: Garland, 1991); and Ogilvie, *The Science of Describing*.

[6] To cite just a few of the most prominent works belonging to this literature: Stephen Greenblatt, *Marvelous Possessions: The Wonder of the New World* (Chicago, IL: University of Chicago Press, 1991); Mary Louise Pratt, *Imperial Eyes: Travel Writing and Transculturation* (London: Routledge, 1992); Anthony Pagden, *European Encounters with the New World From Renaissance to Romanticism* (New Haven, CT: Yale University Press, 1993); and Stuart B. Schwartz, ed., *Implicit Understandings: Observing, Reporting, and Reflecting on the Encounters Between Europeans and Other Peoples in the Early Modern Era* (Cambridge: Cambridge University Press, 1994). On Atlantic history, see for example Bernard Bailyn, *Atlantic History: Concepts and Contours* (Cambridge, MA: Harvard University Press, 2005) and the essays in David Armitage and Michael J. Braddick, eds., *The British Atlantic World, 1500–1800* (Houndsmills, UK: Palgrave Macmillan, 2002), which both (despite the latter's geographical limits) include many useful references to broader work in the field.

[7] For a critique of some of the excesses of post-1992 revisionism, see Anthony Grafton, "The Rest versus the West," *New York Review of Books* 44, 6 (1997): 57–64, reprinted in *Bring Out Your Dead: The Past as Revelation* (Cambridge, MA: Harvard University Press, 2001),

in which differences between culturally, ethnically, and religiously disparate groups were perceived at the time have shown the complexity of early modern views on these differences, in an era when modern reifications of "race" had not yet fully developed.[8] In short, as recent research has revealed, contacts with newly-trafficked continents reached much more deeply into particular European societies than has previously been realized, as new ideas about their own place in a broader world subtly shaped their self-conceptions.[9]

Yet early modern Europeans grappled with issues of geography and identity not only through reports of new and strange peoples, but also – as scholars have only recently begun to recognize – through the *natural* world, both near and far. Europeans had long been accustomed to attaching meanings to natural objects based on their perceived origins, experiencing exotic products like spices, for example, as freighted with the mystery of the Eastern lands they came from, while viewing the vegetables that grew in peasants' gardens as emblematic of their "lowly" and humble nature.[10] This tendency

77–93. One key work demonstrating Europeans' highly diverse approaches to colonialism is Patricia Seed, *Ceremonies of Possession: Europe's Conquest of the New World, 1492–1640* (Cambridge: Cambridge University Press, 1996), though it too has been criticized as promoting a monolithic view of European societies, this time on a national level.

[8] Ivan Hannaford, *Race: The History of an Idea in the West* (Baltimore, MD: Johns Hopkins University Press, 1996); George M. Fredrickson, *Racism: A Short History* (Princeton, NJ: Princeton University Press, 2002); Joyce Chaplin, *Subject Matter: Technology, the Body, and Science on the Anglo-American Frontier, 1500–1676* (Cambridge, MA: Harvard University Press, 2001); Jorge Cañizares-Esguerra, "New World, New Stars: Patriotic Astrology and the Invention of Indian and Creole Bodies in Colonial Spanish America, 1600–1650," *American Historical Review* 104, 1 (1999): 33–68; and the special issue titled "Constructing Race: Differentiating Peoples in the Early Modern World," *William and Mary Quarterly*, 3rd ser., 54, 1 (1997).

[9] The classic work on the impact of the New World on the Old is J. H. Elliott, *The Old World and the New 1492–1650* (Cambridge: Cambridge University Press, 1970), though see also J. H. Elliott, "Final Reflections: The Old World and the New Revisited," in *America in European Consciousness, 1493–1750*, ed. Karen Ordahl Kupperman (Chapel Hill: University of North Carolina Press, 1995), 391–408. Recent studies complicating Elliott's theses include Grafton, *New Worlds, Ancient Texts*; Kathleen Wilson, *The Sense of the People: Politics, Culture, and Imperialism in England, 1715–1785* (Cambridge: Cambridge University Press, 1998); Kathleen Wilson, *The Island Race: Englishness, Empire, and Gender in the Eighteenth Century* (London: Routledge, 2002); and Benjamin Schmidt, *Innocence Abroad: The Dutch Imagination and the New World, 1570–1670* (Cambridge: Cambridge University Press, 2001). On the development not merely of new interests in the exotic, but of *exoticism* per se, see the recent work by Peter Mason, *Infelicities: Representations of the Exotic* (Baltimore, MD: Johns Hopkins University Press, 1998), and Benjamin Schmidt, "Inventing Exoticism: The Project of Dutch Geography and the Marketing of the World, circa 1700," in *Merchants and Marvels: Commerce, Science, and Art in Early Modern Europe*, ed. Pamela H. Smith and Paula Findlen (New York: Routledge, 2002), 347–369.

[10] On spices see Schivelbusch, *Tastes of Paradise*, 3–14; on vegetables, Paul Freedman, *Images of the Medieval Peasant* (Stanford, CA: Stanford University Press, 1999), 154 and Allen J. Grieco, "The Social Politics of Pre-Linnean Botanical Classification," *I Tatti Studies: Essays in the Renaissance* 4 (1992): 131–133.

seems only to have intensified in the wake of the Columbian voyages. As natural objects flowed in from an increasingly wide array of far-off continents, Europeans constructed imaginative geographies around their supposed origins. The New World medicaments known as "Brazil wood" and "balsam of Peru," for example, advertised their exotic genealogy through their very names, and descriptions of their virtues reflected this positioning.[11] Cartographers, meanwhile, drew strange creatures onto their new maps to fill uncharted spaces, and these came to symbolize entire continents; thus, for example, images of macaws, opossums, and armadillos increasingly took on the symbolic freight of South America in its entirety.[12] Not only plants and animals, but also a wide range of other kinds of natural phenomena were assigned their places in the European imagination. The appearance in 1494 of the disease now known as syphilis, for example, sparked a controversy around its own naming, as soldiers on the Italian battlefields where it first struck debated whether to call it the "French" or the "Neapolitan" disease.[13] This kind of imaginative geography was, obviously, often mistaken in its attributions of origin. The wild "Turkey" fowl brought back from the New World had, for instance, no connection whatsoever with the Ottoman Empire.[14] But early modern Europeans nevertheless seem to have found natural objects "good to think with," to paraphrase Lévi-Strauss.[15] Literally thousands of treatises were published over the course of the early modern period debating the merits of particular substances, from local beers or wines to exotic tinctures. In almost every case, the geographical origins of each item, as well as its prospects for replication or naturalization in

[11] For these examples, see Antonio Barrera-Osorio, *Experiencing Nature: The Spanish American Empire and the Early Scientific Revolution* (Austin: University of Texas Press, 2006). A thriving new literature has begun to emerge, based on the analysis of particular commodities in Atlantic or global contexts, and tracing their shifting cultural meanings: see for example John Brewer and Roy Porter, eds., *Consumption and the World of Goods* (London: Routledge, 1993); Arjun Appadurai, ed., *The Social Life of Things: Commodities in Cultural Perspective* (Cambridge: Cambridge University Press, 1996); Jordan Goodman, *Tobacco in History: The Cultures of Dependence* (London: Routledge, 1993); and Marcy Norton, *Sacred Gifts, Profane Pleasures: A History of Tobacco and Chocolate* (Ithaca, NY: Cornell University Press, forthcoming).

[12] Wilma George, *Animals and Maps* (Berkeley: University of California Press, 1969), 56–85.

[13] The former term stuck, to the indignation of Gallic physicians who repudiated the dubious honor. See Claude Quétel, *History of Syphilis*, translated by Judith Braddock and Brian Pike (Baltimore, MD: Johns Hopkins University Press, 1990), 10, and Jon Arrizabalaga, John Henderson, and Roger French, *The Great Pox: The French Disease in Renaissance Europe* (New Haven, CT: Yale University Press, 1997), 40.

[14] Ken Albala, *Eating Right in the Renaissance* (Berkeley: University of California Press, 2002), 233.

[15] For the original reference see Claude Lévi-Strauss, *Totemism*, translated by Rodney Needham (Boston: Beacon Press, 1963), 89. Another example of this phenomenon can be seen in the case of the court of Louis XIV, where certain kinds of flowers became powerful symbols for the king's own reign: see Elizabeth Hyde, *Cultivated Power: Flowers, Culture, and Politics in Early Modern France* (Philadelphia: University of Pennsylvania Press, 2005).

Europe, were presented as key topics for consideration. Natural objects thus offered Europeans attractive opportunities to think not only about faraway places, but also about where they themselves stood in a rapidly-changing world.

A striking example of this phenomenon may be seen in a cycle of four seventeenth-century paintings on the popular early modern theme of the "Allegory of the Continents," completed by the Flemish still-life master Jan van Kessel of Antwerp between the years 1664 and 1666. In these paintings, devoted to "Europe," "Asia," "Africa," and "America," respectively, van Kessel allegorized each continent as a queen, surrounded by a plethora of artifacts and, most prominently, natural objects clearly set forth as emblematic of the continent itself. Thus "Africa," for example, features a gigantic lion being stroked by its queen, while "America" is adorned by anteaters, an armadillo, a monkey, and several exotic birds.[16] Let us turn our attention, though, to the painting of Europe, or "Europa" as it is in fact titled (see Figure 1). Here Europe herself, represented as a queen, is seated in a large hall crammed full of objects and artifacts. Through a giant archway on the painting's left side can be seen the Castello Sant' Angelo with its bridge over the Tiber, placing the scene firmly in the traditional European cultural capital of Rome. Inside the hall, meanwhile, are ranged a vast array of both natural and artificial items which, it soon becomes apparent, symbolize the products of Europe. Among the artifacts shown strewn around the room, for example, are a celestial globe; several suits of medieval armor; a tall flag; assorted statues in the wall niches; an hourglass; a papal tiara; a portrait of Alexander VII (the Pope at the time); the Bible; and in the foreground, appearing somewhat incongruous amidst these more elevated objects, a set of playing cards and a tennis racket. Here, then, are depicted many of the most important symbols of European culture, representing its military, technological and scientific achievements as well as its religious triumphs, and not omitting its recreational pastimes – all displayed in liberal profusion around the figure of Europa herself.

Yet these symbols of European culture are in many ways overshadowed by the representations of European *nature* that occupy an even more prominent role in this painting. For the smiling queen's gaze is admiring *not* the above-mentioned symbols of her power, but rather a gigantic horn of plenty, stuffed full of fruit and grains, being handed to her by a cherub half its size. Meanwhile, at the very center of the picture stands a man (could he be Jan

[16] To add to the complexity of this cycle of paintings, Jan van Kessel placed a series of sixteen miniatures around the frame of each, surrounding its central panel and depicting animals and natural scenes associated with cities or places to be found on each continent; for the sake of simplicity, these are not treated here, though they reinforce many of the points made above. For further discussions of this cycle of paintings and of the broader genre of the "Allegory of the Continents," see Ulla Krempel, ed., *Jan van Kessel d. Ä., 1626–1679. Die Vier Erdteile* (Munich: Alte Pinakothek, 1973), and Sabine Poeschel, *Studien zur Ikonographie der Erdteile in der Kunst des 16.-18. Jahrhunderts* (Munich: Scaneg, 1985).

Figure 1. Jan van Kessel, *Europa* (central panel), 1664–1666. The crowned female figure at the left represents Europe; the man at the center, possibly the artist himself. Note the abundance of both natural and artificial objects symbolizing the wealth of Europe. Courtesy of the Bayerische Staatsgemäldesammlungen, Alte Pinakothek Munich.

van Kessel himself?) holding up and gesturing at a painting of butterflies, dragonflies, and other insects, depicted flat against its surface as if pinned. This painting is, in turn, surrounded by others: a gigantic still-life of carnations, roses, and tulips emerging from a tiny vase; another painting of butterflies, this time portrayed in mid-flight against a background of peaceful hills; and, most curious of all, a painting depicting writhing snakes and caterpillars spelling out the name of the artist himself. Nor is this cluster of paintings, occupying a vast block of space in the image, the only reference to the natural world. Shells spill out over the floor, perilously close to Europa's and the cherub's feet, while an open book reveals still more images of butterflies and other insects, a closed book labeled "Plinius" alludes to the famous Roman's *Natural History* (which indeed enjoyed a considerable revival during the early modern period), and in the lower left corner, yet another painting (half-draped) can be seen, illustrating mandrake roots. Meanwhile, above all this profusion, murals of marine invertebrates, high on the topmost walls, overlook the scene. All of these *naturalia* are presented as emblematic of the European continent, bountiful in its harvests of grain, surrounded by the sea as well as mistress of it, and of a wide variety of technologies for understanding and representing the beauties of the natural world. For the

European viewer, in short, every natural object in this and other similar visual and verbal descriptions of the world was replete with meaning. Nature's productions helped serve as means of interpreting the geography of a world in flux, where trade and travel increasingly connected Europeans with wider horizons, and forced them to attempt to construct their own sense of their place in the world.

Under these circumstances, as this image suggests, Europeans began to pay new *kinds* of attention to natural objects, as well as to "nature" in the abstract. Collectors, for example, drew on correspondence networks and personal ties to assemble vast quantities of unusual and rare natural objects, which they then showcased in their cabinets of curiosities or *Wunderkammer*, with walls, cupboards, and even ceilings hung with specimens and/or depictions of *naturalia*.[17] Painters and engravers, meanwhile, carefully studied particular items so as to produce such depictions, sharpening their skills at new naturalistic forms of representation in the process.[18] Goldsmiths and other artisans labored to transform select natural objects, such as giant conch shells, into magnificently-crafted artifacts like drinking cups, inviting these objects' users to reflect and converse on the paradoxical relationships between art and nature.[19] Courtiers at Renaissance princely palaces – and, eventually, the earliest scientific academies – honed their wits on discussions of striking natural phenomena from the mysterious "Bologna stone" to the "Medicean stars" observed by Galileo (now known as the moons of Jupiter).[20] And, last but not least, a wide range of writers and compilers scratched their heads and attempted to figure out how, using newly-arrived printing technologies and older manuscript ones, to develop new intellectual tools to enable them to set these newly vibrant natural worlds down on paper.[21]

[17] Oliver Impey and Arthur MacGregor, eds., *The Origins of Museums: The Cabinet of Curiosities in Sixteenth- and Seventeenth-Century Europe* (Oxford: Clarendon Press, 1985); Paula Findlen, *Possessing Nature: Museums, Collecting, and Scientific Culture in Early Modern Italy* (Berkeley: University of California Press, 1994).

[18] See for example Svetlana Alpers, *The Art of Describing: Dutch Art in the Seventeenth Century* (Chicago, IL: University of Chicago Press, 1983).

[19] Pamela H. Smith, *The Body of the Artisan: Art and Experience in the Scientific Revolution* (Chicago, IL: University of Chicago Press, 2004).

[20] Mario Biagioli, *Galileo, Courtier: The Practice of Science in the Culture of Absolutism* (Chicago, IL: University of Chicago Press, 1993); Bruce T. Moran, ed., *Patronage and Institutions: Science, Technology and Medicine at the European Court, 1500–1750* (Woodbridge: Boydell, 1991).

[21] See for example the articles in Marina Frasca-Spada and Nick Jardine, eds., *Books and the Sciences in History* (Cambridge: Cambridge University Press, 2000); Helmut Zedelmaier and Martin Mulsow, eds., *Die Praktiken der Gelehrsamkeit in der frühen Neuzeit* (Tübingen: Niemeyer, 2001); Mario Biagioli and Peter Galison, eds., *Scientific Authorship: Credit and Intellectual Property in Science* (New York: Routledge, 2003); and, though it deals with a slightly later period, Daniel R. Headrick, *When Information Came of Age: Technologies of Knowledge in the Age of Reason and Revolution, 1700–1850* (Oxford: Oxford University Press, 2000).

Historians of science in particular have, over the past several decades, done much to illuminate how these and similar practices came to infuse the study of nature in early modern Europe with still further cultural meaning and importance. Whereas traditional Aristotelian natural philosophy, as taught at medieval universities, had emphasized a "common-sense" understanding of nature, grounded on the commonly observed attributes of living organisms and other natural phenomena, the "new science" of sixteenth- and seventeenth-century Europe came to focus more and more on strange and unusual phenomena, on "particulars" and other isolated "facts" that often posed challenges to traditional natural-philosophical explanations.[22] Virtuosi sought out *naturalia* that were rare and unusual, that challenged conventional expectations of nature, and sought to explain them. Many of the natural objects that attracted the most interest within learned circles were, in fact, exotic. Stuffed birds or animals from the Indies, or depictions of strikingly-shaped or -colored fruits of the tropics, fascinated viewers through their revelations of the diversity of forms that nature could produce. Though few natural inquirers were willing to undertake perilous journeys to new continents themselves to collect strange specimens, they nonetheless hastened to examine them as they arrived in Europe, and avidly read accounts of natural phenomena from newly-trafficked lands, in search of whatever new insights about nature's workings these might provide.[23]

Yet as this book demonstrates, even while early modern Europeans sought out the rare and exotic, new and divergent ways of valuing nature simultaneously came into being, as many – especially the great majority of naturalists who would not have dreamt of travelling overseas – also began to pay new attention to what they called the "humble" and "common," even "vulgar" natural worlds surrounding them. The "rarities" of nature, they argued, could be found as well at home as abroad, and even the most apparently undistinguished kinds of plants or minerals might possess hidden value.[24] These kinds of objects, they felt, were well worth cataloguing in

[22] Lorraine Daston, "Baconian Facts, Academic Civility, and the Prehistory of Objectivity," *Annals of Scholarship* 8 (1991): 337–363; Lorraine Daston and Katherine Park, *Wonders and the Order of Nature, 1150–1750* (New York: Zone Books, 1998).

[23] For recent studies of early modern Europeans' scientific interests in the foreign, see the articles in Londa Schiebinger and Claudia Swan, eds., *Colonial Botany: Science, Commerce, and Politics in the Early Modern World* (Philadelphia: University of Pennsylvania Press, 2005); Pamela H. Smith and Paula Findlen, eds., *Merchants and Marvels: Commerce, Science, and Art in Early Modern Europe* (New York: Routledge, 2002); and, though it deals primarily with eighteenth-century developments, Londa Schiebinger, *Plants and Empire: Colonial Bioprospecting in the Atlantic World* (Cambridge, MA: Harvard University Press, 2004).

[24] Keith Thomas, *Man and the Natural World: Changing Attitudes in England, 1500–1800* (London: Allen Lane, 1983), 58 and 66–69, discusses the long-standing application of traditional social hierarchies, like those of "nobility," to the nonhuman world, and the gradual eclipse during the early modern period of these distinctions; his broader argument about