MAIZE AND THE MAKING OF MEXICO

CHAPTER 1

When searching for authentic Mexican food, people often look to the ancient civilizations of the Aztecs and Maya. Culinary tourists seek out native foods to experience the taste of pre-Hispanic culture as they visit the pyramids of Teotihuacán and Chichén Itzá. Chefs meanwhile turn to the Florentine Codex, an account of indigenous culture given by the children of Aztec nobles to a Spanish priest, for further links between past and present. Foods described in the sixteenth-century Codex, such as lobster in red chile sauce, tamales with greens served in crab sauce, and tortillas made with cactus fruit, have become menu items in trendy Mexico City restaurants.[1] The desire of chefs and tourists to feel connected to a "deep Mexico" is understandable in an era when industrial fast food is commonplace. A sense of authenticity, based on historic traditions of foods tied to particular locations, can be a welcome refuge from the threat of global homogenization.[2] Nevertheless, efforts to trace a genealogy for a national cuisine confront basic historical problems, starting with the fact that pre-Hispanic peoples were not "Mexican." Although nationalist ideologues have often attributed contemporary identities to primordial peoples—for example, a German folk spirit among the Saxon and Swabian tribes of classical Europe—such accounts say more about modern nationalism than about ancient societies. Idealized views of an Indian past have likewise shaped

modern notions of authentic Mexican food. But as a product of the encounter between Native Americans and Spanish conquistadors, Mexican food was globalized from the very beginning.

In tracing the lineage of Mexican cuisine back to pre-Hispanic times, contemporary chefs have followed a well-established trend in Mexican historiography. Before the conquest, there was no place called Mexico. Linguistic groups such as the Nahuas, Zapotecs, and Maya, each with their own distinct lands, cultures, and histories, were given the common label of "Indians" in the colony of New Spain. When the Creole descendants of conquistadors came to perceive a separate identity from the European-born Spaniards who dominated the colony politically, they adopted an indigenous past and gave the land the indigenous name of Mexico. The historian Enrique Florescano explained that this group "attempted to create a common memory of the land it shared with other ethnic groups . . . [and] proposed to make the memories and historical traditions of the other ethnic groups its own." Like today's culinary nationalists, Creole patriots of the colonial era imagined themselves to be the heirs to Aztec emperors, but their attitudes toward indigenous foods were very different. Catholic missionaries had actually sought to eradicate the indigenous staple maize, with its pagan religious associations, and to propagate instead a gospel of wheat as the symbol and sustenance of Christianity. Although the campaign failed, corn tortillas were relegated to the indigenous and mestizo lower classes, while wheat bread became a status symbol for the urban, Hispanic elite. Bridging this cultural gap to create a national cuisine required a leap of historical imagination, just as "the formation of Mexican national conscience," according to Florescano, was the result "of the decision made by some segments of society to impose their own image of the past on others, of the decision of many indigenous communities to preserve their own identity, and, finally, of many things forgotten."[3]

Along with the long-standing disdain for indigenous culture, another thing that is often forgotten in Mexican nationalist ideology is the diverse parentage of the mestizo nation. The duality of the Spanish conquistador and his Indian concubine actually deviates from the original ideal of a universal "cosmic race" formulated by José Vasconcelos in the 1920s, and historians now reemphasize the global, cosmopolitan nature of New Spain's colonial society.[4] In addition to Indians and Spaniards, African slaves contributed to the multiracial mixture, particularly within coastal regions and urban areas. Immigrants also arrived

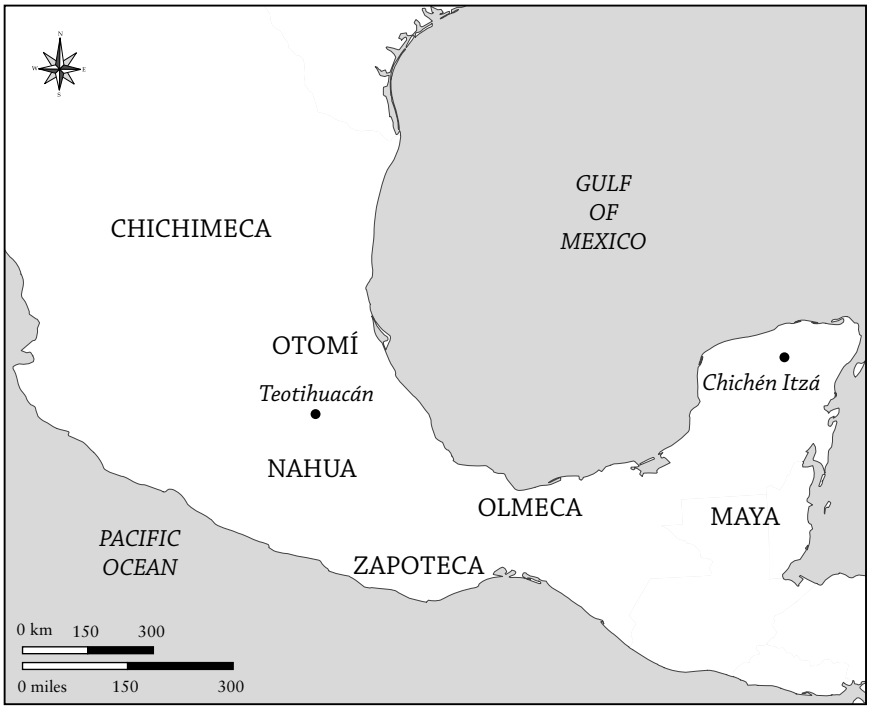

Figure 1.1. Map of ancient Mesoamerica.

from Asia by way of the Manila galleon in larger numbers than had previously been thought. The culinary influence of Africans and Asians can be difficult to document directly because of the circulation of foodstuffs before 1492; for instance, it is impossible to say with certainty whether rice arrived in New Spain from Europe, Africa, Asia, or all three. Moreover, European migrants to the colony were not all of Iberian origin. Catholic priests, in particular, were often recruited from Italy and the Habsburg territories of Central Europe. There were also profound culinary distinctions among indigenous societies, especially between the Maya of the Yucatán Peninsula and the Nahua of the central highlands. Taken together, these diverse influences produced more fluid social and political boundaries than modern nationalist ideologies often acknowledge.

Finally, although national histories have given little attention to the early modern globalization of Mesoamerican crops, this outward movement set

important patterns in the global history of Mexican food. Three items in particular—corn, chiles, and chocolate—illustrate the varied reception of new foods in the early modern world. Maize, as a sturdy and productive crop, spread around the world in the centuries after contact, but because of its usefulness to impoverished farmers working marginal lands, it acquired a plebeian image. In much the same way, prolific and flavorful chile peppers attracted a wide following as a spice for the poor. Only chocolate attained elite status in Europe, and it went no farther in the early modern period, gaining little ground in Africa or Asia before the nineteenth century. The foods that spread most widely during the early modern age of globalization traveled steerage, not first class.

Whether at home or abroad, maize played a crucial role in what might be called the prehistory of Mexican food, establishing images that shaped its local and global meanings after 1821, when political independence initiated the process of inventing a Mexican national cuisine. Before that time, as this chapter shows, there was no authentic Mexican food, but rather a variety of cuisines, deeply divided by region and culture. Moreover, when Mesoamerican foods did travel, they acquired plebeian images of danger and immorality, in part because they were rarely accompanied by indigenous cooking knowledge.

Pre-Hispanic Origins

Maize held deep significance as the source of life for Native American societies, and three critical moments in the culinary history of corn coincide neatly with turning points in the archaeological record of Mesoamerica. First, around 7000 BCE, the original maize plant was "born" from a remarkable genetic mutation. This unique event probably took place along the Balsas River in what is now southwestern Mexico, and it was likely overseen by a human midwife. It began a cooperative relationship between plants and people that encouraged both biological and social expansion. Next, around 1500 BCE, the first corn and bean stew was cooked in a newly invented ceramic pot, somewhere along the Gulf Coast. Starch and legumes, when eaten together, offered a protein-rich vegetarian diet capable of supporting sedentary, agrarian societies. The Olmecs, first to devise this recipe, became the "base culture" that established patterns for the future development of Mesoamerica. Finally, in the early centuries of the Common Era, corn was first *nixtamalized*, or simmered with alkaline ash, which remedied its vitamin deficiency. This nourishing recipe yielded plump, soft kernels that could be ground on a *metate* (grinding stone) and cooked as

tortillas, offering sustenance for large-scale urbanization in the first American metropolis, Teotihuacán.

According to the *Popol Vuh*, the sacred "Council Book" of the Quiché Maya of highland Guatemala, corn was present at the creation of the human race by the "Sovereign Plumed Serpent," known elsewhere as Quetzalcoatl. As dawn approached on the first day, the gods gathered at the "Split Place, Bitter Water Place," a cave in the mountains with a nearby spring, located along the modern-day border with Mexico, where a tall grass called *teosinte* grows in abundance. The maize used for creating human flesh was supplied by animals such as a fox, coyote, parrot, and crow, each a well-known thief in Maya fields. The goddess Xmucane ground the corn nine times into smooth dough and then modeled it into flesh as "human legs and arms."[5]

Recent biological research indicates that the fantastic myth of the *Popol Vuh* may well have happened, but in reverse, with humans taking an active role in the creation of maize. While most crops were domesticated through a mundane process of gradual experimentation, often on multiple occasions, the origins of maize were little short of miraculous. Botanists once thought that maize, like its cousin teosinte, was derived from a common ancestral plant, now extinct. However, recent genetic analysis has shown that it was domesticated directly from teosinte through a single, incredibly rare mutation. Computer modeling of corn's "family tree" dates this unique parent to around 9,000 years ago, while DNA comparisons with contemporary teosinte suggest the Balsas River Valley as the site of domestication. Moreover, some scholars conclude that this remarkable "Maizoid Eve" must have been discovered by humans. Unlike an ear of corn with a removable husk, teosinte seeds are encased in a thick woody sheath, which disperses for reproduction when consumed by herbivores. Left alone, the naked cobs of this first maize plant were an evolutionary dead end, destined to perish in the digestive tract of passing animals. Instead, a human gathering teosinte stalks must have observed the distinctive ears and recognized their importance, perhaps showing them off to her companions like precious jewels. That this early "botanist" was a woman seems likely given the gendered division of labor between female gatherers and male hunters, whose survival depended on a deep knowledge of the growing seasons and migratory patterns of plants and animals. Crossed back with neighboring stands of teosinte, to propagate the mutation, maize flourished under human protection, and to this day, it cannot reproduce in the wild.[6]

Maize domestication did not produce a "Neolithic revolution" immediately transforming archaic hunters and gatherers into sedentary farmers. Instead, these early foragers continued migrating for thousands of years, consuming the tiny ancestral corncobs as one component of an omnivorous diet, even while they selected larger and more productive plants in a process that would culminate with the large ears of modern maize. Many plants now associated with the Mexican kitchen such as chiles and tomatoes were originally domesticated in South America. During the ecological tumult at the end of the last ice age, when forest began displacing grass in the tropical lowlands of the Amazon and Caribbean, foragers took the first steps toward agriculture by propagating wild tubers and gourds. By 6000 BCE, early horticulturalists had begun to reclaim the tropical forest, slashing and burning the overgrowth to open land for their preferred cultigens. Even with more productive fields, humans continued to forage widely, retracing their steps to harvest plants when they had matured.[7] National and civilizational histories tend to skip quickly over these millennia between the domestication of plants and the rise of sedentary societies. Yet archaeologists have questioned progressive narratives of change and emphasized instead the stability of hunting and gathering, which yielded more varied and healthy diets than did farming, and for much less work. The real question is why humans ever abandoned a life of leisure to earn their meals by the sweat of the brow.[8]

The Mesoamerican kitchen required labor-intensive and sophisticated technology in order to maximize its nutritional yield. Although banging rocks together may not sound terribly advanced, Stone Age cooks were quite ingenious at using available resources, and they periodically redesigned their tools to create new recipes and food-processing techniques. With mortars and pestles, for example, the one-handed design and careful shaping allowed cooks to shift position and relieve muscle stress.[9] Maize needed multiple forms of food processing to achieve its nutritional potential. Grinding on a metate produced a denser, more caloric food than alternatives like popcorn. While maize and beans alone lack vital amino acids, cooking them together complements the value of their proteins as well as their tastes. The invention of ceramic vessels was therefore important to the development of the sedentary, agrarian Olmec society in the absence of protein from domesticated animals.[10] A final nutritional defect of maize is the shortage of usable niacin, a vitamin needed to prevent the disease pellagra, which is characterized by skin rash, intestinal problems, insanity, and death. Maize could not become the dietary staple for

dense urban populations until cooks discovered the nixtamal process in which limestone or wood ash freed the chemically bound vitamin. However nutritionally sound, the recipe for tortillas required enormous physical labor from women. Arguably, they worked as hard grinding corn on the metate as did the men they fed who constructed the physical monuments of Teotihuacán, the pyramids of the Sun and the Moon.[11]

As Mesoamerican populations grew, they took full advantage of the material resources of the land through innovative recipes and omnivorous tastes. The Maya, for example, prepared nixtamal as porridges and tamales with various wrappings and fillings. Archaeologists debate whether the Maya patted out tortillas in pre-Hispanic times. They did not use the same earthenware *comales* (griddles) as the Nahuas but may have cooked similar thin cakes in other ways, for example, on heated stones. The Maya certainly had their own unique recipes for nixtamal, including beers that were fermented like South American *chicha*, in contrast to the agave beer called pulque favored elsewhere in Mesoamerica. The Maya also cultured a "sour dough" nixtamal with bacteria that improved its nutritional value, just as yogurt does for milk.[12] In contrast to the sedentary Maya, the Mexica were originally a tribe of nomads who invaded the central highlands from the northwest around 1250 as part of a post-classical movement known collectively as the Aztlán migrations. They went on to found the Aztec Empire and, by 1500, received tribute from throughout Mesoamerica. These luxury goods provided the basis for an elaborate court cuisine, consisting of hundreds of separate dishes prepared daily for Moctezuma and served with freshly made tortillas. The rich variety reflected not only imperial power but also the omnivorous appetites of a people without cattle, sheep, hogs, or chickens. The emperor's chile pepper stews contained deer and geese, salamanders and grasshoppers, ant eggs and lake algae, and the two indigenous domesticated animals, turkeys and small, hairless canines. In the days of the Aztecs, the Taco Bell dog would have been *in* the gorditas.[13]

Although ancient cooks were remarkably skilled in making the most of limited resources, the particular forms of gendered labor that evolved to support dense populations in the arid environment of Mesoamerica were not inevitable. The Mississippian culture independently invented hominy (nixtamal) near Cahokia about 800 CE and, with this improved nutritional base, expanded across the eastern woodlands. But they did not employ the labor-intensive grinding of tortilla dough because they simply stewed the kernels whole. In South America and the Caribbean, potatoes and cassava root were

the primary staples, and the alkali treatment of corn never caught on.[14] It is also important to keep in mind the inevitable cycles of expansion and contraction within human societies. Declining population is often perceived as a sign of failure—the collapse of civilization—but such a perspective tends to privilege the elites, who do not perform the hard labor needed to support complex societies. To state the obvious, ordinary workers may prefer not to spend their leisure time building pyramids, just as women might wish to have less labor-intensive forms of food preparation. The causes of decline for the Olmecs, Teotihuacán, and classical Maya are still debated; climate change, ecological overreach, war, and revolution are all possible factors. But the resistance of subject peoples is clearly evident in the fall of the Aztec Empire, because large numbers of Indians chose to ally with the Spanish conquistadors against their former oppressors. Scholars have only begun to explore the connections between household labor and the fate of empires. Nevertheless, what is known of this history should discourage attempts to trace an inevitable and progressive path of civilization from ancient foragers to modern kitchens—without even considering the upheavals of the conquest, which toppled maize from its place of honor in Mesoamerica.

Culinary Conquistadors

Although Mexican food is often considered an iconic example of global fusion, the initial encounters between Spanish and Native American palates were marked by mutual disgust. Moctezuma's emissaries reported that European bread tasted "like dried maize stalks," while Bernal Díaz del Castillo complained of the "misery of maize cakes" that served as rations while on campaign.[15] Food even became an instrument of conquest; cattle and sheep, let loose to forage, often preceded the Spanish armies, devouring indigenous crops. The founding of wheat farms later helped to institutionalize European control over native land and labor. Animal and human incursions met with fierce resistance from Indians, who fought in court to preserve their fields for maize. By the end of the colonial era, this battle had reached a stalemate, both geographic and social, that left a strong regional imprint on the cuisines of New Spain. Native staples predominated in rural areas, especially in the south, where the indigenous population was heaviest before the conquest, while Hispanic foods gained the upper hand in urban areas and in the sparsely settled north. Despite colonial efforts to segregate Europeans and Indians in

distinct societies, native women working as domestic servants and concubines were conquistadors of a sort, seducing the Spaniards with the piquant flavors of their cooking.

Taste was only one of many reasons that settlers sought to transplant the Mediterranean complex of wheat, olive oil, and wine to New Spain. Food was heavily freighted with markers of status and identity in the early modern era. Colonists feared that without access to European foods their bodies would degenerate in the climate of the Americas, eventually transforming them into Indians. Perceiving themselves as a new aristocracy, conquistadors claimed the privilege of wheat bread and Oriental spices. Missionaries were equally intent on culinary change for evangelical purposes. Wheat was the only grain that could be used for the Eucharist according to medieval Church doctrine, while wine signified the blood of Christ, and olive oil was essential to sacraments and celebrations. Unfortunately for colonists, the life cycle of European plants did not match the climate of New Spain, where the rain came in summer instead of winter, causing fungus to grow on wheat and diluting the sugar in grapes, which made for insipid wines.[16]

Eager to maintain status, Spaniards willingly purchased foods they could not grow themselves. Customs receipts from Veracruz, reported by the German naturalist Alexander von Humboldt, indicate that wine and brandy alone accounted for nearly 20 percent of colonial imports from Spain in 1802. Olives, capers, nuts, and spices were also significant expenditures. This picture of conspicuous consumption of luxury goods was confirmed by rare menus from judicial archives indicating that colonial elites spent lavish sums—and occasionally walked out on the bills—for *pucheros* (stews), salads dressed with oil and vinegar, Jerez sherry and claret wine, and, for Christmas Eve, the traditional Iberian salt cod.[17]

If Spanish colonists paid dearly for most familiar foods, meat was cheap by comparison with the homeland, at least in the early days. The catastrophic decline of Indian populations from disease and abuse allowed European livestock to take over abandoned fields. This herbivorous invasion had serious environmental consequences. For example, the Mezquital Valley, northeast of Mexico City, was overrun by sheep in the 1550s. With neither predators nor competition, they denuded the hills and encouraged erosion, rendering the land unfit for farming or herding. Eventually the soil adjusted to the new demands, supporting smaller numbers of livestock than during the boom years. Meanwhile, Native Americans overcame their initial aversion and began

to raise animals and eat meat, particularly chicken, but it rarely constituted a significant part of their diet.[18]

Maize remained the foundation of indigenous livelihoods, in part because it was less expensive and more reliable than its European competitor at every step from the field to the table. Unlike the low yields of wheat, a single seed of corn produced hundreds of grains on each of several ears, all protected from disease by sturdy husks. Moreover, wheat required substantial capital investments, teams of oxen to plow the soil, mills to grind the grain into flour, and ovens to bake it into bread. By contrast, corn could be grown and cooked with only the simplest of tools: a digging stick for planting, and a metate and comal for cooking. Maize was particularly favorable on the hilly landscapes, and terraced agriculture flourished on mountainsides that farmers could never plow. Some native communities did grow wheat for sale to urban markets, just as some indigenous nobles ate bread in imitation of European rulers. Spanish priests also did their best to incorporate wheat bread into village festivals, but on a daily basis, maize was the grain of choice in rural Mexico in the sixteenth century, and it remains so in the twenty-first.

Social and culinary hierarchies were more complicated in cities because of widespread race mixture. Although the technical definition of a mestizo was the offspring of a Spaniard and an Indian, in practice, the legitimate children of wealthy parents were accepted as Spaniards, while those abandoned by their fathers often remained in their mothers' communities as de facto Indians. Over time, an urban underclass emerged comprising poor Spaniards, African slaves, unattached Indians, and assorted mestizos. To make sense of these people who did not conform to the expectations of either Spaniards or Indians, colonial officials devised an elaborate "system of castes" with bizarre, bestial categories such as *coyote* mestizo and *zambaigo* (literally "son of Sambo," the offspring of mixed Indian and African parents), in an attempt to divide and rule this variegated society.[19]

Definitions of race therefore depended as much on culture as on physical appearance, and the baker's guild of Mexico City reinforced this artificial hierarchy by producing breads appropriate for every rank and income. In the eighteenth century, the purest wheat was milled and cleaned by hand, kneaded with shortening and a little leavening, and then baked into delicate loaves called *pan frances* or *pan español* (French bread or Spanish bread). Just two master bakers had permission to make this special variety; one worked on consignment for the viceroy, the other for the archbishop. Wealthy Creoles purchased *pan floreado* (flowered bread), made of select wheat, and shaped in round or

Figure 1.2. Casta painting with tamales. "From Indian and Basina, Zambayga" ("De indio y basina, zambayga") by Miguel Cabrera. Inventory number 00010. Courtesy of El Museo de América, Madrid.

ring loaves. Large commercial bakeries used lower-quality wheat, maize, and other flours to produce coarse *pan común* and even less desirable *pambazos* and *cemitas*, thereby matching mixed-grain breads to people of mixed race, at least in theory. At the bottom of this hierarchy were Indians, who, even in Mexico

City, consumed large quantities of corn tortillas, as did many other plebeians unable to afford the cheapest bread. Of course, both racial and gastronomical castes emerged from the Spanish imagination and only approximated the complicated social realities.[20]

Foods crossed social boundaries in multiple directions in colonial New Spain. Some culinary borderlands were close to home, such as the kitchen gardens where Indian women planted aromatic European vegetables—onions, carrots, and garlic—to supplement their chiles and squash. Native cooks also learned to beat pork fat into the corn dough for tamales, giving a lighter texture to these steamed cakes. Other mixtures took place in commercial production, such as the use of European distilling technology to transform fermented pulque into a highly potent alcohol called *mezcal*. By the eighteenth century, colonial brewers had raised the ire of Spanish moralists with a wide range of beverages, Hispanic *aguardiente* (sugar cane brandy), hybrid *charagua* (pulque fermented with sugar syrup and chile colorado), and native *sangre de conejo* (literally, "rabbit blood," a bright red cocktail of pulque and prickly pear juice, named for the Nahua deity of drunkenness, 400 Rabbits).[21] Europeans also made dietary accommodations to the new environment and culture. Pork fat became a widespread substitute for expensive olive oil, and indigenous frijoles replaced chickpeas in Spanish pucheros. The native beverage chocolate quickly gained a following among Creoles, particularly women, who depended on it as a stimulant for Catholic fast days and even drank it during mass. Perhaps the most creative result of New Spain's mestizo kitchen was the perennial festival dish, mole de guajolote, a thick turkey stew blending chile peppers and chocolate with the spicy banquet foods of medieval Europe.

Despite this widespread fusion, distinctive Creole and indigenous cooking styles persisted throughout the colonial period. Fields of corn and wheat were the most obvious culinary symbols of separate Spanish and Indian societies, but domestic gardens reveal more subtle differences, for example, in the curious history of coriander, an herb called cilantro or *culantro* in Spanish. A native of the Mediterranean, it was known to the ancient Egyptians, and its aromatic seeds have been found in the tomb of Tutankhamen. The Roman cookbook of Apicius used both seeds and leaves; the former were pounded in a mortar with pepper and other spices, while the latter were cooked with leeks and mint. Coriander was also taken up in the spice trade and carried to India, where the seeds became part of the mixture known as *garam masala*. By the early modern period, changing European tastes had caused the leaves to fall out of favor,

Box 1.1 Recipe for Avocados in Guacamole

Peel and seed the avocados, chop with a knife of silver or wood—metal gives them a bad taste and bad color—arrange on a platter and serve with oil, vinegar, onion, oregano, and chile ancho. There are persons who mash the avocados and convert them into a paste. This platter can be eaten with all sorts of grilled meats and with stew.

Source: Vicenta Torres de Rubio, *Cocina michoacana* (Zamora: Imprenta Moderna, 1896), 18.

perhaps because many people considered them to have an unpleasant soapy flavor. Europeans ignored the herb until the nineteenth century, when it reappeared in Asian cookery under the exotic name of Chinese parsley. Nevertheless, coriander seeds continued to be used as a spice and indeed became a standard component in the Creole moles of New Spain. By contrast, Native Americans fit cilantro into their own culinary system in the category of *quelites*, assorted greens that were eaten wild as a snack, cooked in broth, or added to their own moles. The fragrant leaves proved to have a natural affinity for chile peppers, and today they are considered an essential ingredient in guacamole. But as late as the nineteenth century, the Creole version of guacamole—the recipe that appeared in cookbooks—was basically an avocado salad with chiles and onion, often chopped rather than mashed in a basalt mortar, and dressed with oil and vinegar.[22]

The cultural encounters of New Spain were not limited to Europeans and Native Americans; instead, this gastronomic system of castes incorporated cooks and cuisines from around the world. Tracing the origins of any given dish is difficult, not least because of the imprint left on Iberian cooking by eight centuries of Muslim rule, from 711 to 1492. Delicately perfumed Arab stews, roasts, and meatballs were taken up by European medieval courts and eventually carried to New Spain as the inspiration for mole de guajolote. Muslim traders also introduced sugar along with many Asian plants, and Indians learned to make candy with everything from sweet potato (*camote*) to coconut (*cocada*) and amaranth seeds (*alegría*). The convent kitchens of New Spain also reproduced Middle Eastern marzipan, nougat, and custard. Another Arabic cooking practice that became common was the vinegar marinade *escabeche*, used to

preserve vegetables, fish, and meat. Even the Day of the Dead bread, formed in the shape of skulls, had parallels in an ancient Persian custom for celebrating the Spring Equinox.[23]

African slaves worked in the fields and kitchens of New Spain, but their influence is difficult to discern because of this complicated history of culinary blending. The most important—and for some scholars controversial—African contribution to the foods of the Americas was rice. A common rice dish, for example, was called *morisqueta*, referring to the Moors. Yet the precise origins of this rice are unclear, for although Muslims had transplanted Asian rice (*Oryza sativa*) to North Africa, indigenous African varieties (*O. glaberrima*) were also grown in the Senegambia region of West Africa, an important source for slave traders in the sixteenth century. In any event, slaves in the Caribbean quickly began to combine rice with local beans, creating the highly nutritious combination now known as *moros y cristianos*.[24] The taste for spices and greens, two other characteristics of African regional cuisines, likewise blended with local ingredients in the Americas; thus, African cooks replaced malaguetta pepper with indigenous chiles. Such Afro-Indian blends became increasingly common over time; for example, Mónica de la Cruz, a *mulata* accused of sorcery by the Inquisition in 1652, was a vendor of tamales.[25]

Asians also made subtle contributions to the globalization of culture and cuisine in New Spain. The principal source of contact was the Manila galleon, an enormous trading ship that sailed once a year to the Spanish colony of the Philippines. Its landing in Acapulco, like the arrival of the silver fleet at Veracruz, occasioned a boisterous trade fair where merchants bargained for goods from around the world. In addition to ceramics and other items, Asian slaves and servants were imported legally or smuggled into New Spain. Asian sailors and even a few Japanese samurai warriors who served as mercenary guards settled in Pacific coastal towns and married local women. These *chino* immigrants numbered between 50,000 and 100,000 over the course of the colonial era and came from a variety of Asian lands, including China, Japan, the Philippines, India, and Southeast Asia. Also known as *chinos indios*, they often worked as peddlers because they could legally cross the boundaries between Spanish and Indian communities. In 1638, the Indians of Atalcomulco expelled a chino baker who forced them to buy bread against their will. Perhaps more popular with local consumers were the alcoholic coconut spirits that Asian migrants introduced. Asian cooks may even have introduced the *comiscal*, a version of tandoor oven along the southern coast, where it is still used in present-day

Juchitán.[26] Colonial officials, on the other hand, were more eager to transplant Asian spices than people or ovens, but experiments proved disappointing. Ginger took root, but Caribbean producers dominated the market for this commodity. Although the principal spices—clove, nutmeg, and pepper—failed to grow, the introduction of other Asian plants, including cinnamon, coconut, tamarind, and mango, greatly enriched the local cuisine.[27]

The globalization of food in New Spain was largely a story of conquest, but it unfolded in a highly uneven fashion. The continued reliance on maize by the majority of the population, including large numbers of mestizos and downwardly mobile Spaniards, illustrated the limits of culinary colonialism. Foods moved across social boundaries and entered at the margins of both native and European culinary systems. In rural areas, maize remained the foundation of everyday subsistence, while imported livestock and spices gained high status through their consumption during religious festivals, perhaps once a year, when a single animal might be slaughtered to feed an entire community. Meanwhile, those on the edge of urban Hispanic society generally ate a more indigenous diet, confirming their lower status. Even the elite, who could afford expensive wheat bread, soon acquired a taste for native condiments such as chiles and chocolate. Although the dual tyrannies of nature and status determined the broad outlines of food distribution, according to where crops would grow and who could afford to purchase them, cooks nevertheless had considerable latitude in shaping the flavors of New Spain. Despite this culinary blending, one looks in vain for an authentic Mexican cuisine in the colonial era.

The Globalization of Corn, Chiles, and Chocolate

Few around the world who came to eat the foods of Mesoamerica in the early modern era understood them to be Mexican. Maize circled the globe in the company of strangers and inspired mystery at every turn. In his prescient global history of corn, the anthropologist Arturo Warman has shown that the plant was everywhere an interloper, its origins unknown. Europeans called it "Turkish wheat," while Turks dubbed it "Egyptian grain"; it spread to India as "Mecca corn" and circled back to the Swahili Coast as "Indian sorghum." In China, it was considered the "Western barbarian wheat," and in the Congo, the "white man's grain." Along with confusion came low social status, as Warman explained: "Corn carried the stigma of being alien, strange, poor. The wealthy judged corn and declared it to be guilty. The poor, on the contrary, opened their

doors to it, embraced it, and adopted it."[28] Indeed, its prolific yields, particularly on marginal lands, made corn a precious commodity for some of the most destitute people in the world. But precisely because they "adopted it"—and cooked it using their own recipes—many eventually fell victim to the nutritional curse of pellagra. This tragedy resulted from the historical circumstances that rapidly globalized the seeds of maize but left behind the practical knowledge of Mesoamerican cooks, including the skill of making nixtamal.

The important contributions of the foods of the Americas to the cuisines of the world are well known—just try to imagine Italian cooking without tomato sauce or Indian curry before chile peppers. But it is more difficult to say how these transfers took place and why particular foods became so vital to local cuisines. The historian Alfred Crosby first tried to explain this historical moment of globalization, which he called the "Columbian exchange," in broad demographic terms. The terrible mortality caused by Old World diseases assisted the conquistadors in planting their foods in the Americas. Yet the reverse movement from New World to Old is not so clear. Crosby resorted to ecological and Malthusian determinism in concluding that American plants took root wherever they would grow and that their superior productivity spurred early modern population growth around the world.[29] Of course, ecology and demography helped shape the outcome of the Columbian exchange, but they do not fully explain local variations in culinary history. Just as Native Americans defied their colonial masters by cultivating maize, even while mixing pork fat into tamales, farmers and cooks in the Old World selected new foods that complemented existing practices. Recent research suggests that Crosby may have gotten the relationship backward; population often determined the spread of crops, rather than vice versa. In China, for example, peasants embraced productive American cultigens already in the early seventeenth century, a time of famine and social unrest at the end of the Ming Dynasty. In Mughal India, by contrast, relatively dispersed settlement and considerable available land allowed most people to ignore these novelties until pressured by British imperialists in the nineteenth century. Although a global process, the Columbian exchange was negotiated at the local level.[30]

Following the movement of three basic ingredients—corn, chiles, and chocolate—from the Mesoamerican kitchen out into the wider world can help to reveal the emergence of material and cultural patterns that later contributed to Mexican food's worldwide reputation. Already in the early modern era, these foods acquired vastly different images among elite and popular sectors. The

importance of social distinctions can readily be seen in the case of yet another New World plant, the tomato. A history based exclusively on elite writings might conclude that Europeans did not eat the tomato for much of the early modern era because medical authorities warned of its resemblance to the poisonous nightshade. Only at the end of the seventeenth century did cookbook authors recommend them in Italian tomato sauce. Yet significant numbers of Spaniards who had lived in the New World acquired a taste for the plant, and archival documents from Seville's Hospital de la Sangre demonstrate the consumption of tomatoes already at the beginning of the seventeenth century: apparently they were served in salads with cucumber. Patients in charitable hospitals were invariably poor, because all but the most destitute families cared for relatives at home in early modern Europe, but clearly tomatoes were recognized as edible. By the 1650s, they had also begun to appear on elite tables in Andalucía.[31]

Maize spread through Europe primarily at the initiative of industrious peasants farming marginal lands. Like other American emigrants, the plant first made landfall in Seville and was cultivated in the royal gardens of the Alcazar, an old Moorish palace used to acclimatize New World plants to the Mediterranean. It was quickly passed along to local kitchen gardens, but it did not catch on as a field crop along the southern coast of Spain, perhaps because rice and millet were already well established as summer cereals. Instead, corn was first planted on a large scale in the remote northwestern provinces of Asturias and Galicia and in neighboring Portugal. This mountainous terrain, once used only for sheep pasture, was cleared and planted with maize on terraced fields. By the eighteenth century, the region had become densely populated farmland, and corn had become a standard summer crop throughout the Iberian Peninsula and southern France. Meanwhile, in the 1520s, corn began to revolutionize agrarian relations in the countryside around Venice, where annual spring floods had severely limited the production of winter wheat. Peasants discovered they could feed themselves and their livestock with a summer planting of corn after the floodwaters had receded, thereby breaking the stranglehold of Venetian landlords, who demanded wheat bread. By the nineteenth century, the productive crop had been planted down the flanks of the Apennine Mountains to Sicily and across the Alps into eastern France and the Austro-Hungarian Empire.[32]

The European reception of maize was shaped not only by its productivity, but also by its properties when cooked. Although highly versatile in the field, maize

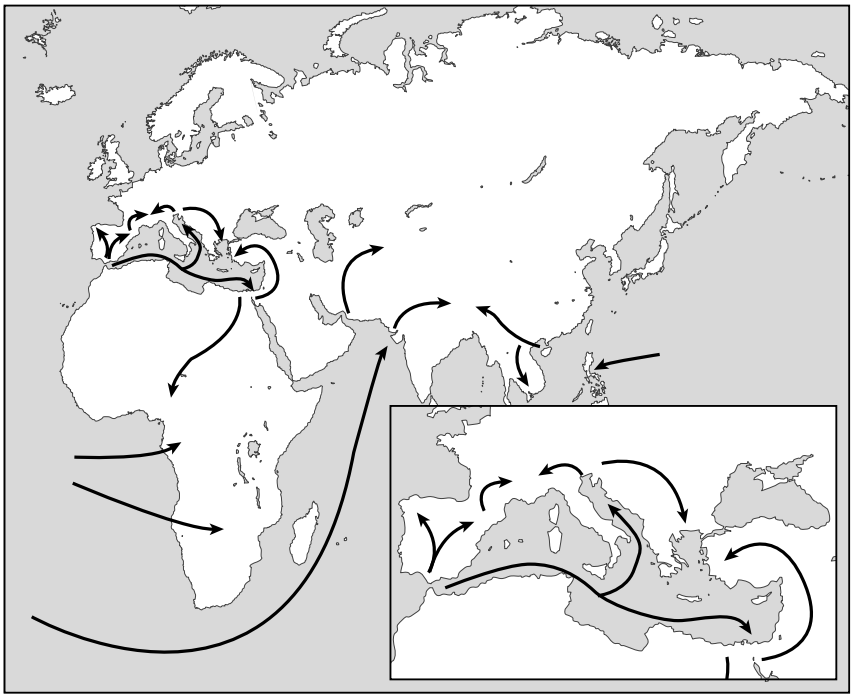

Figure 1.3. Map of maize's travels within the Columbian Exchange.

lacks gluten, the protein that allows wheat bread to rise. As a result, peasants made it into porridge, plebeians consumed it in flatbreads, and the wealthy spurned it as worthless. In rural Italy, where a thick porridge sometimes called polenta was made with everything from semolina to chickpea and chestnut flour, maize became a common ingredient for the dish. Urban bakers likewise employed a variety of different grains, and recipes from eighteenth-century Milan illustrate their experiments with the novel food as well as the tepid response of local consumers to the taste of maize. "To 48 ounces of the flour of this [Indian] corn, 2 ounces of rye corn is added as it will not adhere without it. . . . [The baker] divides it into saleable cakes of 12 ½ ounces, made round, and about an inch and a half thick in the middle." Another recipe suggested "potatoe meal improves the quality of the dough, promotes the fermentation or rising of it, and weakens or destroys the peculiar taste of the Indian corn."[33]

Enlightenment physicians soon diagnosed the nutritional limitations of maize and documented widespread health problems among populations that depended on it. In the 1750s, Dr. Gaspar Casal first linked excessive maize

consumption to the *mal de la rosa*, a skin irritation resembling sunburn that had become common among the peasants of Asturias. The disease was elsewhere known as the *mal del monte*, a reference to the mountainous countryside bordering Portugal. A few decades later, Dr. Francisco Frapolli of Milan named the disease pellagra and described its progression from "repulsively disfigured" skin to "trouble in the head," followed by "colliquative diarrhoea most resistant to all remedies," and finally "a ghastly wasting [as] they approach the last extremity."[34] By the nineteenth century, reports of endemic disease constituted a veritable map of European maize consumption, snaking from the Iberian Atlantic seaboard to southern France and northern Italy, then across the Austrian Tyrol to Romania. Scattered cases of pellagra also appeared in southern Italy, the Austro-Hungarian Empire, and southwestern Russia and Poland.[35]

Chile peppers, like corn, raised suspicion among naturalists and physicians, but they nevertheless gained devoted followings across much of Europe. John Parkinson, a sixteenth-century English herbalist, described them as "so fiery hot and sharp biting in taste, that they burn and enflame the mouth and throat." José de Acosta gave a more balanced appraisal, suggesting that moderate consumption could aid digestion but warning that "much use of it in the young is prejudicial to health, especially to that of the soul, for it heightens sensuality."[36] Spanish merchants made occasional shipments of chiles from the Indies to Seville in the late sixteenth century, but commerce was sporadic, perhaps because the plants could be grown easily in kitchen gardens. The Dutch botanist Charles de L'Escluse reported finding them in two locations, Castile and Moravia, in the Czech territory neighboring Hungary, which also became an important consumer of paprika. In Italy, they gained their greatest popularity in Calabria, yet another Habsburg territory, where the heat of the chile was widely considered a homeopathic treatment against malarial fevers.[37]

Europeans generally considered chiles as a substitute for East Indian pepper that could be grown in any warm, sunny garden, but chiles' favor among the lower classes limited their appeal to elites, who had already begun to abandon the heavily spiced stews of the Middle Ages in favor of more subtle and purportedly natural dishes. Parkinson, despite his reservations, provided one of the few written recipes for chiles, dried and ground like black pepper and other spices, as opposed to the Mexican technique of grinding the pods fresh or, in the case of dried chiles, after reconstituting in water. By contrast, chiles received little attention from early modern diet guides and cookbooks, which

were launching a revolution in European cooking—the first nouvelle cuisine—based on the ideal of unobtrusive flavors. Henceforth, sauces were made of the concentrated cooking juices of meat rather than bread crumbs and ground nuts, and flavored with fresh herbs instead of exotic spices. From a European perspective, mole de guajolote was already becoming an anachronism, although it was only just emerging on the other side of the Atlantic through the fusion of two older culinary traditions.[38]

Chocolate's popularity among the European aristocracy provides a curious counterpoint to the experience of corn and chiles, illustrating how a Mesoamerican food could gain status for its exoticism. The favored drink of Indian nobles, it was savored by Cortés and his band of conquistadors in the palace of Moctezuma. Merchants and priests also acquired a taste for chocolate while living in the colonies, and by the end of the sixteenth century, they had carried it home to Spain. Soon it was taken up by the court in Madrid, and from there it spread through the noble houses of Europe. As it traveled, the bitter drink of the Aztecs was transformed through the addition of sugar, spices, and other flavorings. Italians may have been the first to make chocolate ice cream, and less memorably, they experimented with grating it on polenta instead of cheese. Chocolate's exotic origins and distant sources added to the appeal for European consumers. Unlike chiles and corn, the tropical cacao tree was not easily transplanted to Europe, and it became an important article of transatlantic trade. Spaniards relied at first on supplies from Tabasco and Soconusco, at the southern tip of the old Aztec Empire, but growing demand prompted the establishment of plantations in Venezuela and Ecuador. The most valuable cacao was grown in Soconusco and Caracas, while the more abundant product of Guayaquil was considered the "chocolate of the poor."[39]

Europeans nevertheless looked with some ambivalence on the morality and healthfulness of chocolate. Both production and consumption continued to rely on pre-Hispanic technology, including heated metates, lacquered gourds (*xícaras*), and wooden whisks for frothing (*molinillos*). Its popularity as a mild stimulant increased after 1636, when a papal encyclical pronounced that it did not violate the Catholic fast. Nevertheless, moralizing sermons railed against the beverage; for example, Father Giuseppe Girolamo Semenzi warned: "Both Spain and Holland manufacture frothy ambrosias for a vain and gluttonous thirst; . . . it inflames the blood parched by too much heat and too many aromas and taste turns remedy to poison."[40] Nobles certainly agreed with this sensual view. In the early eighteenth century, the Marqués de Castelvell commissioned

an elaborate tile painting of bewigged nobles flirting over cups of chocolate for his palace courtyard near Barcelona. Meanwhile, Antonio Hurtado de Mendoza's racy "Couplets of Chocolate" posed the question: "What is it that embraces at the boiling point/So as to enjoy the perfect culmination?"[41]

Between Acosta's fears of chile-inflamed passions, Frapolli's diagnosis of pellagra from maize, and Hurtado's allusions to sex in a frothy cup of chocolate, Europeans perceived danger and transgression in every bite of food from the Americas. These reactions were fueled by sensationalist literature of the Indies, conquistadors' tales and moralizing sermons about pre-Hispanic cannibalism, or lurid accounts of Moctezuma drinking chocolate before visiting his concubines. Outside of Europe, these specific stereotypes had much less currency, and new plants tended to be associated with whoever happened to introduce them, whether they were long-distance traders or neighboring farmers. As a result, crops gained acceptance when they complemented but did not compete directly with existing cuisines. Chiles were perhaps the most successful of American plants within the wide tropical belt from North Africa to Southeast Asia, where nouvelle European ideas never supplanted age-old culinary traditions valuing spice. Meanwhile, corn proved to be an excellent pioneer crop, growing well in marginal lands, and as a result came to be associated with the impoverished people who inhabited these lands. By contrast, Spaniards failed to gain converts of any kind for chocolate, at least among cultures that already favored coffee or tea. Only with nineteenth-century industrialization and colonialism did cacao become a plantation crop in Africa and Southeast Asia.[42]

Chiles spread along the global networks of trade that had been developed in the early sixteenth century. Portuguese merchants took the lead in marketing the plants, calling them Pernambuco peppers after the Brazilian colony where they were first encountered after 1500. Traders had no trouble selling this novel spice in Africa, where "grains of paradise," or malagueta peppers, were already a widespread condiment. From ports along the Atlantic and the Swahili Coast, chile seeds became an item of trade throughout the continent. Likewise in India, a central hub of the spice trade, the chile was eagerly planted and named after local variants of black pepper. Unlike the latter, which predominated in the south, chiles flourished throughout the subcontinent and were eagerly taken up by gardeners. Already in the mid-sixteenth century, at least three varieties were grown and traded on the Malabar Coast. A South Asian poet declared this of chiles: "Saviour of the poor, enhancer of good food, fiery when bitten."[43] Chiles may have reached China from two directions: by

overland trade from India and from Portuguese spice merchants in South China. The seeds became particularly important in the western and southern regions of Sichuan and Hunan. The plant also spread through Southeast Asia from the north through Burma and from the Portuguese fortress at Malacca. In Siam, later Thailand, chiles supplemented the black pepper and garlic that had formerly been used to flavor rice. Through a curious independent invention, Southeast Asian and Native American cooks happened on the same flavor combination of chiles and cilantro, as the two plants crossed paths during the Columbian exchange.[44]

If chiles became ubiquitous and chocolate was ignored in the tropics of Africa and Asia, then corn followed the most idiosyncratic global trajectory. After landing in Europe, the plant first reached the Ottoman Empire by sea in Egypt and later traveled overland from Venice into the Balkans. In North Africa, the grain was often made into a form of couscous, and it largely replaced less productive millet and sorghum in the Nile Valley. In the Balkans, Turkish landlords fed their Greek and Serbian tenants maize while selling wheat in markets. Eventually, this hardy crop allowed peasants to live year-round in remote mountain valleys that had formerly been useful only as summer sheep pastures, thereby escaping Ottoman authority.[45] In sub-Saharan Africa, Portuguese merchants introduced maize and cassava up and down the coasts, but linguistic evidence indicates a simultaneous overland diffusion along the trade and pilgrimage routes to Cairo. The plant spread widely as a garden vegetable in the early modern era but became a basic staple for only a few groups, such as the Asante of West Africa, who made it a symbol of the state and of military power. A novel rotation of maize, cassava, and cocoyam fit into the local ecology, allowing Asante farmers to clear new land and attract more labor, both migrants and slaves. Over time, Asante warriors expanded across a range of habitats, ranging from the coastal forest to interior savanna, all climates that readily supported maize.[46] By contrast, in Asia maize was eaten primarily by poor people living in mountainous areas. From Portuguese enclaves, the plant spread upland along an arc from the Hindu Kush through the Himalayas and into the Shan of Burma, as well as Sichuan and Yunnan in China and highland areas of Southeast Asia. Meanwhile, a distinct variety of "Persian maize" spread through the Transcaucasus region into Central Asia. Throughout Asia, maize was prominent among minority populations, who often used slash-and-burn agriculture and hand tools rather than the plows of lowland farmers. Although local cooking methods may have resembled Mesoamerican dishes, as

with the tortilla-like Punjabi flatbreads called *makkai ki roti*, they were not nixtamalized. Fortunately, pellagra did not become a widespread problem outside the Mediterranean basin because growers supplemented maize with hunting, gathering, and other crops.[47]

Some unique permutations of early modern globalization appeared in the Spanish colonies of the Pacific. New World ingredients understandably became separated from their original cultural contexts when passing through successive hands in Europe, Africa, and Asia, but Mesoamerican cuisine also underwent significant changes when carried directly to the Philippines by conquistadors from Acapulco. In 1564, a fleet under the Basque Admiral Miguel López de Legazpi y Gurruchátegui occupied Manila with little military opposition from the Filipinos, who numbered at the time only one or two million people, dispersed across thousands of islands. King Philip II originally hoped to use the colony as a staging ground for capturing the Spice Islands, but trade with China ultimately proved more lucrative. With only a few thousand Spaniards, Manila was more of a trade entrepôt than a settler colony, and European culture left relatively little imprint on the decentralized Filipino society. Moreover, the tropical climate was ill-suited to the Mediterranean staples of wheat, wine, and olives. Sacramental wine and communion wafers had to be imported from Acapulco, while Chinese bakers supplied the colony's daily bread. Mesoamerican crops fared better in the Philippines, but although the natives acquired a taste for avocados and tropical fruit, they produced maize only under compulsion for sale to Hispanic markets. Thus, both the Mesoamerican crop and the mestizos from New Spain who consumed it simultaneously achieved social mobility, becoming Spanish conquistadors in the Philippines.[48]

Skeptics may point to linguistic evidence of more thorough implantation of Hispanic and Mesoamerican foods in the Philippines. Adobo, for example, is often referred to as the Filipino national dish, and tamales have also become common in the archipelago. But these names are misleading; in Manila, adobo is not so much a marinade for meats as a chicken stew flavored with soy sauce, vinegar, and garlic. Likewise, Filipino tamales are made of rice flour and steamed in banana leaves, although the occasional use of yellow dye gives them a certain resemblance to the Mesoamerican original. The most common maize dish is porridge with coconut milk, further illustrating the subjugation of alien plants to local cooking techniques. The conquistadors may have consumed Asian foods more often than the reverse. A friar guardedly reported back to colonial authorities that, in the Chinese district of Manila, "there are

also many eating-houses where the [Chinese] and the natives take their meals; and I have been told that these are frequented even by Spaniards."[49] One final mark of culinary influence can be found in "flavor principles," the basic mixtures of ingredients that immediately evoke the taste and smell of a culture. The fundamental essence of Filipino cuisine is not savory corn and fiery chiles, but, rather, in the words of one food writer, "twenty theoretical ways of making fish taste sour."[50]

A very different pattern emerged with the Spanish conquest of Guam, the largest of the Mariana Islands, 1,600 miles east of Manila. Visited briefly by the navigator Magellan in 1521, the island became a regular stopping point on the route from Acapulco to the Philippines, but Spaniards took little notice of the Polynesian natives until the Jesuits established a mission in 1668. Unlike the Filipinos, the Chamorro inhabitants of Guam fiercely resisted Spanish authority for thirty years and were annihilated in a brutal war of conquest. The few surviving Chamorros intermarried with colonists who came from Spain, Mesoamerica, and the Philippines, and a new mestizo culture soon predominated on the island. Unable to cultivate wheat in the tropical environment, the Jesuits pragmatically planted maize and encouraged the use of Mesoamerican kitchen tools, including the metate and comal. Chamorro women ground the dough standing up rather than kneeling, and they called their flatbreads *tortijas*. The introduction of nixtamal by Catholic priests in the Pacific, like the treatment of chinos in the Americas, illustrates the conflation of Native Americans and Asians within the category of "indio" by the Spanish colonial mentality. As a result, Mexican food, which was created by colonialism and globalization, finally achieved its own colonial hegemony in one of the most remote locations in the world.[51]

People have been confused about the nature of Mexican food for hundreds of years. Certainly there was no authentic Mexican food in pre-Hispanic times. Although the Creoles who first conceived of the idea of Mexico considered themselves to be the heirs of Aztec emperors, they had little desire to inherit Moctezuma's dinner. The indigenous cuisine of maize, while nutritious, diverse, and sophisticated, was more often associated with poor Indians living in the countryside than with the grandeur of pre-Hispanic civilizations. There were a few exceptions. Creoles eagerly adopted chocolate, the drink of the ancient nobility, and chiles, with their addictive spicy flavors. But ambivalence about the indigenous culinary heritage continued to frustrate efforts to define a

Figure 1.4. Native girl making tortillas in Guam. Photographic postcard from the 1920s, unknown photographer. Courtesy Daniel Arreola Collection.

Mexican national cuisine throughout the nineteenth century. Meanwhile, corn and chiles spread widely around the world, but they were often associated with poverty, illness, and immorality. Perhaps it was just as well that they were seldom considered to be Mexican.