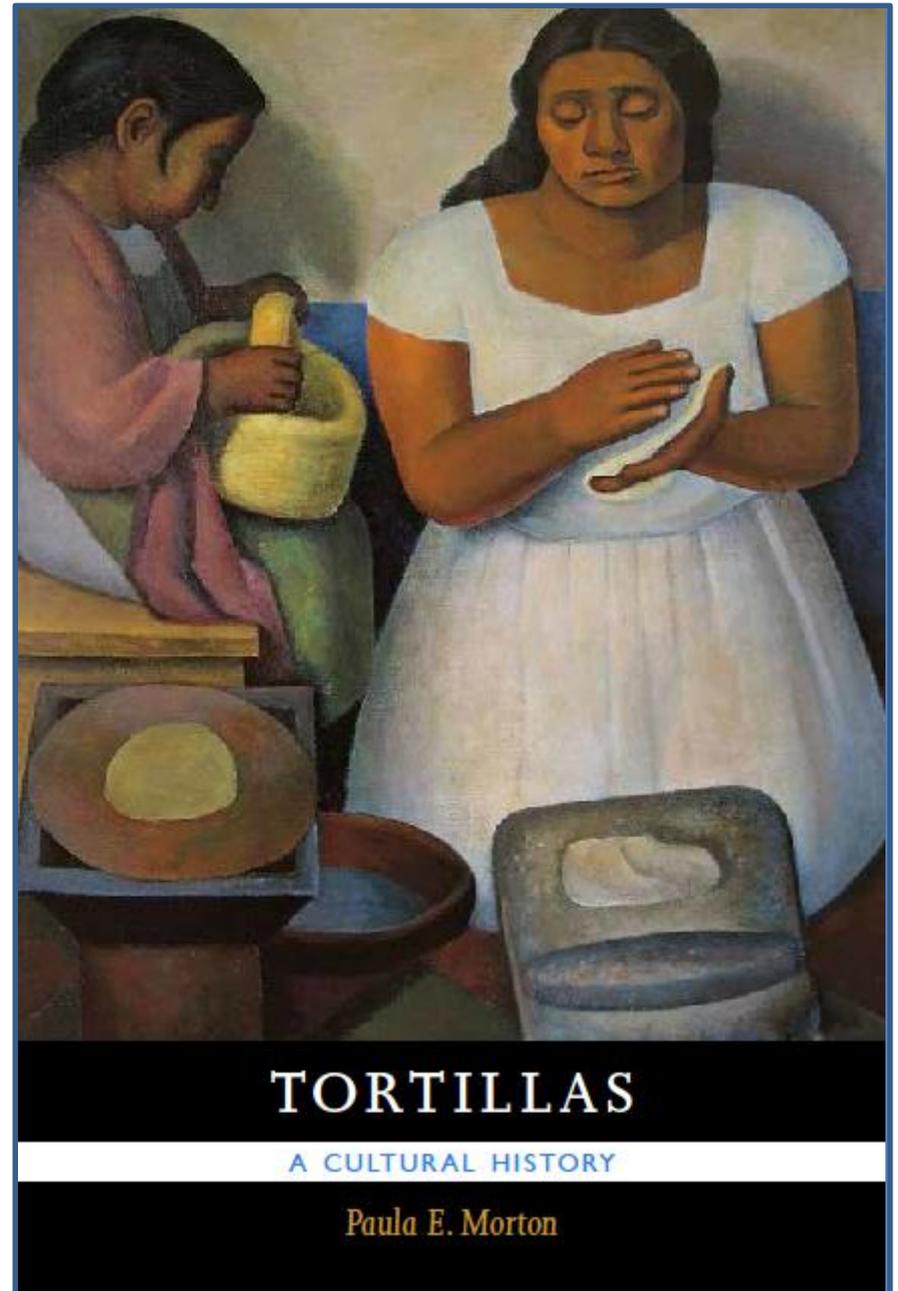


# La Tortillera (The Tortilla Maker)

Mexican artist Diego Rivera depicts a woman making traditional corn tortillas while a young girl holds a tortilla basket for the fresh tortillas.



# Eva Ybarra

“When you are hungry,  
pray you have tortillas.”

Her mother’s corn  
grinding tools:  
Three-legged *metate*,  
a sloping oblong stone  
to grind corn, and the  
*mano*, a cylinder hand-  
held stone rolled on  
the *metate* to crush the  
kernels.



# Metate and mano for grinding corn

It was the woman's task to spend four or five hours a day on her knees grinding corn on the *metate*; similar to the concave grinding stone in ancient Egypt, and one of the oldest domestic tools in the Americas.

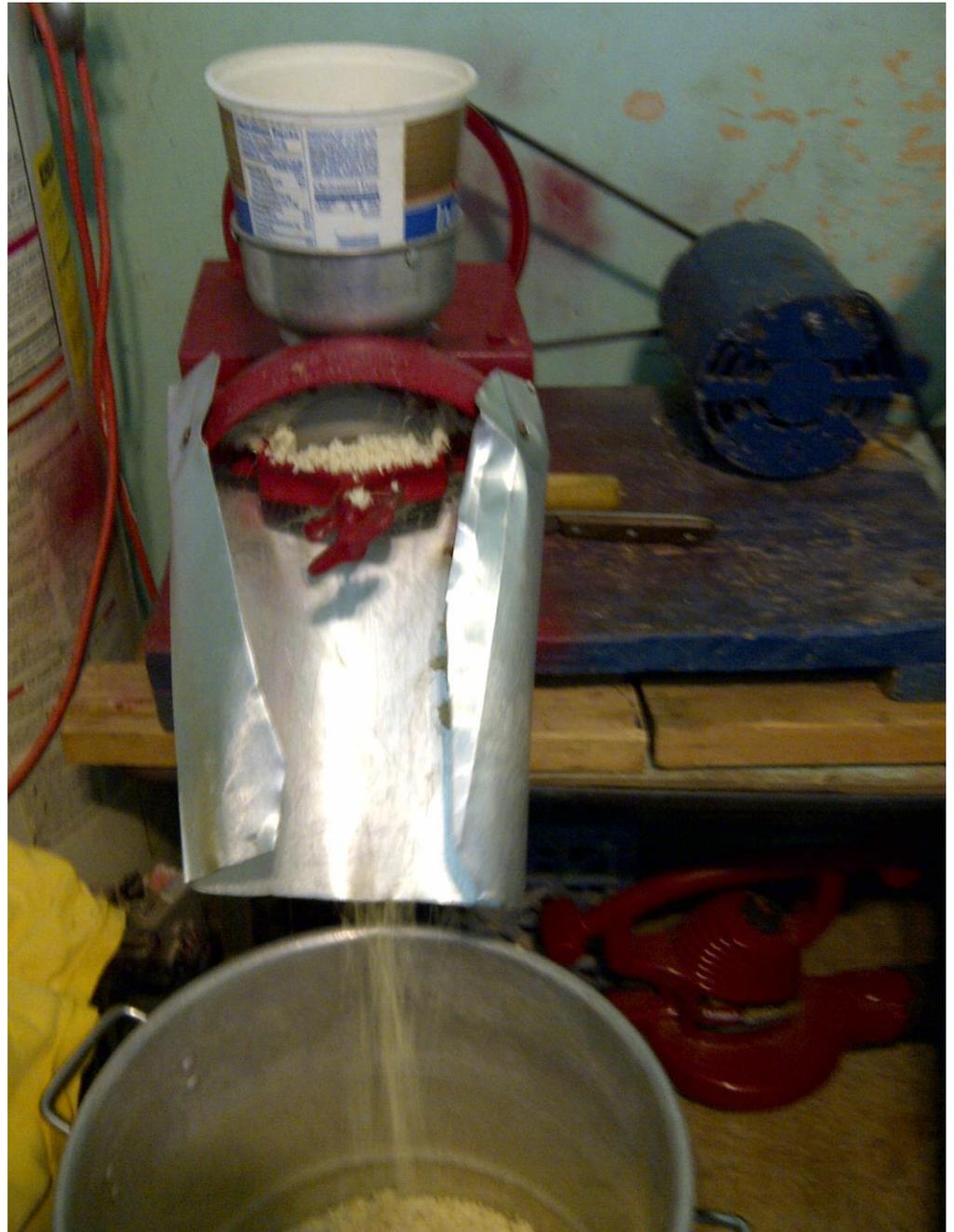




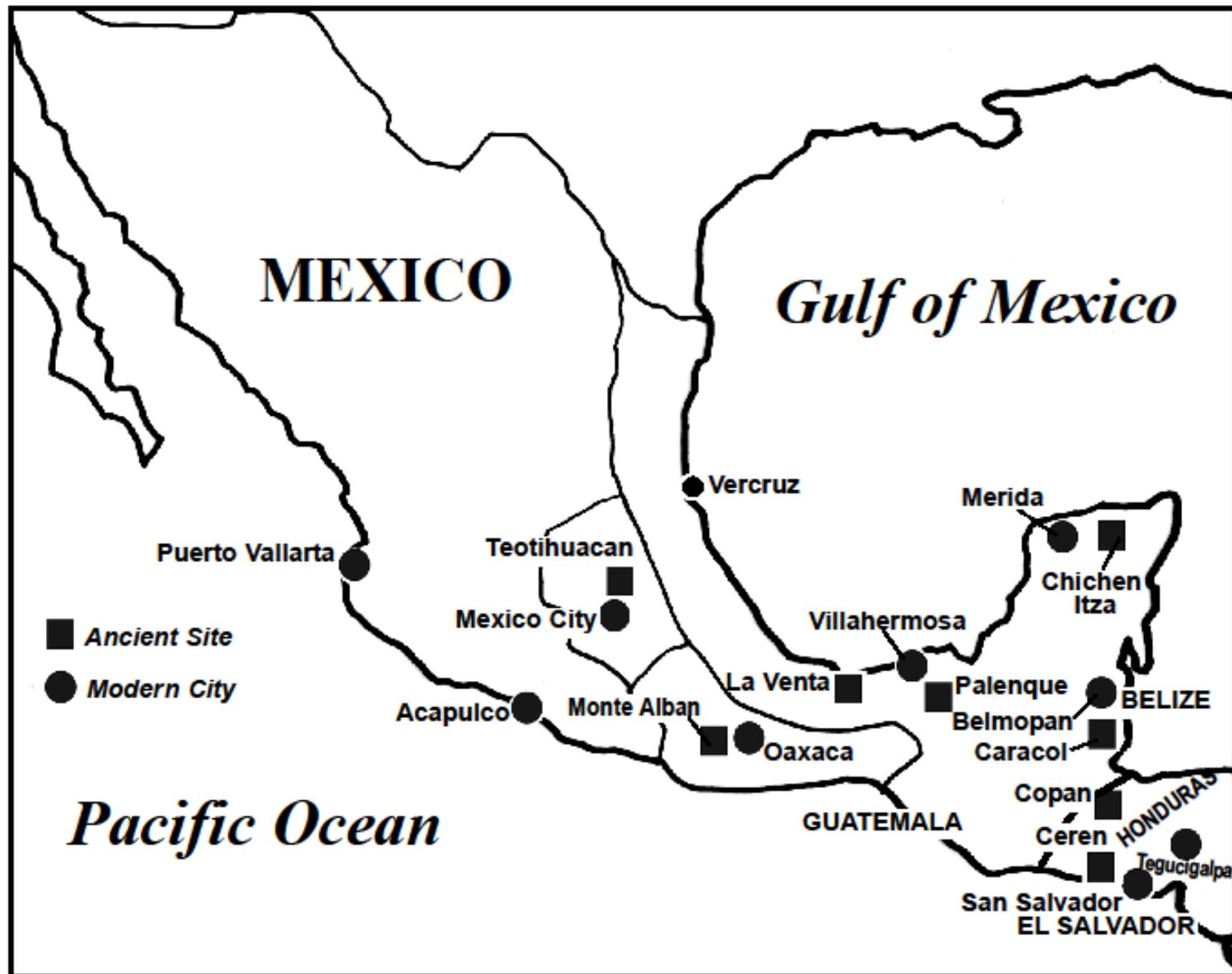
Eva's Parents

# Enrique's homemade mechanical corn grinder

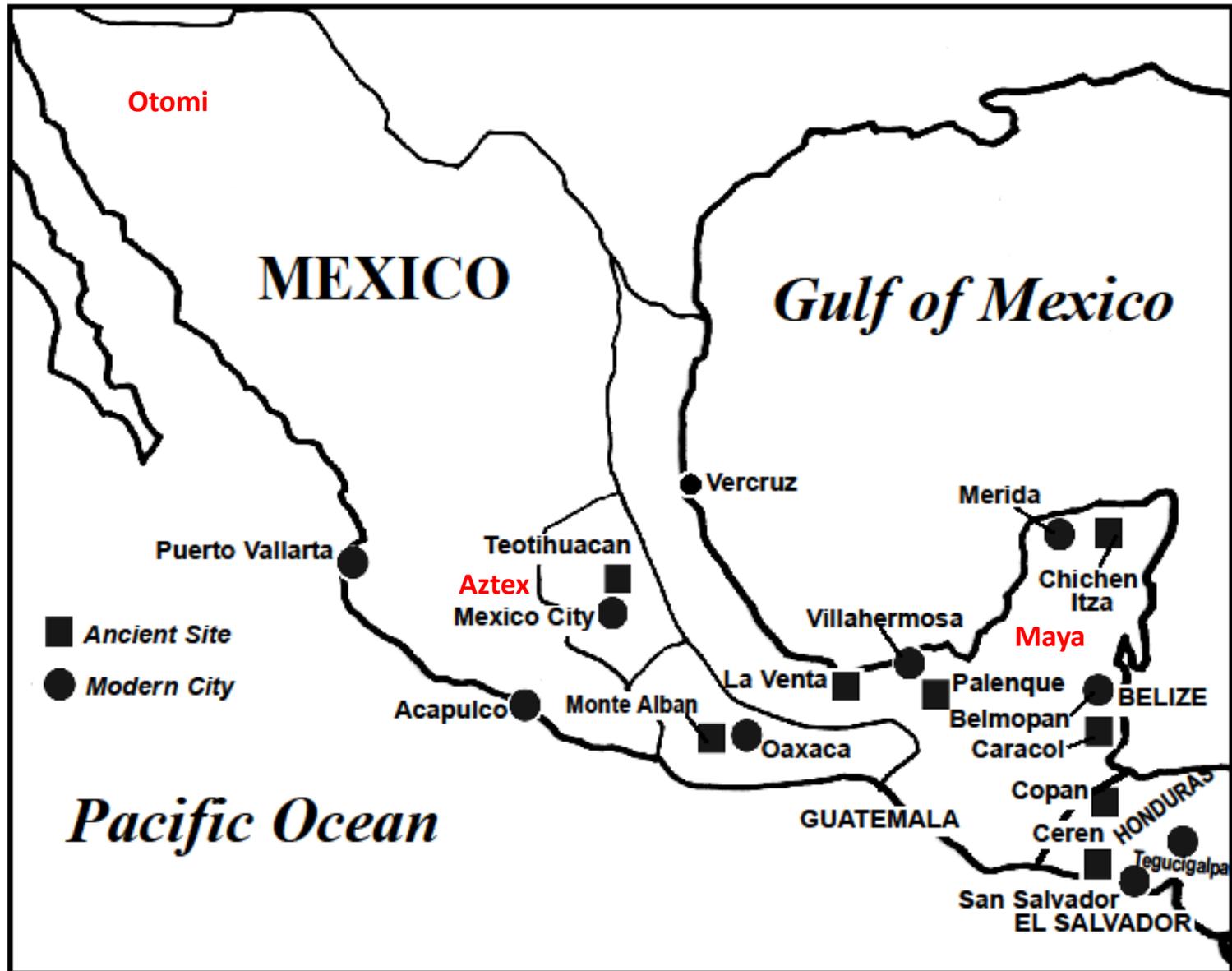
“My customers think  
fresh ground corn  
tortillas taste like  
home.”



# Map of Mesoamerica



# Map of Mesoamerica





Corn varieties from  
Oaxaca, Mexico

Corn is related to wild primitive teosinte grass. Archaeologists have uncovered cob fragments dating to approximately 4300 BC near Mitla in the Valley of Mexico

For the Mesoamericans, there was no country without corn,  
*“Sin Maiz no hay pais.”*

The Mesoamericans prayed to gods and goddesses of corn, talked to the tender shoots of corn, touched the moisture of the soil, and harvested the ears to nourish their bodies and souls.

And some believed the first human beings were created from corn dough.

Hero God  
Quezalcoatl,  
The Aztec  
Feathered  
Serpent



# Prehispanic comal hearth between AD 1000 and 1300



Modern comal hearth,  
Valley of Oaxaca, Mexico

# Comtemporary Nixtamal Corn

This is a vat of contemporary nixtamal corn, the heart of the traditional corn tortilla, the process whereby corn is cooked in a mineral lime water solution.



# Nixtamal

The first cooks in Mesoamerica used wood ashes, or cremated shells, or processed lime from limestone rocks to soak the hard kernels of mature corn in an alkali solution of mineral lime and water.

Perhaps a conscientious cook accidentally spilled ashes from the cooking fire into the pot filled with corn kernels and water and observed, yes, this corn cooked quicker than before, the kernels were soft and were easier to grind, and the corn dough stayed fresh longer. And the people felt healthy and energetic for the nutritional value of the mixture was unexpectedly enhanced.

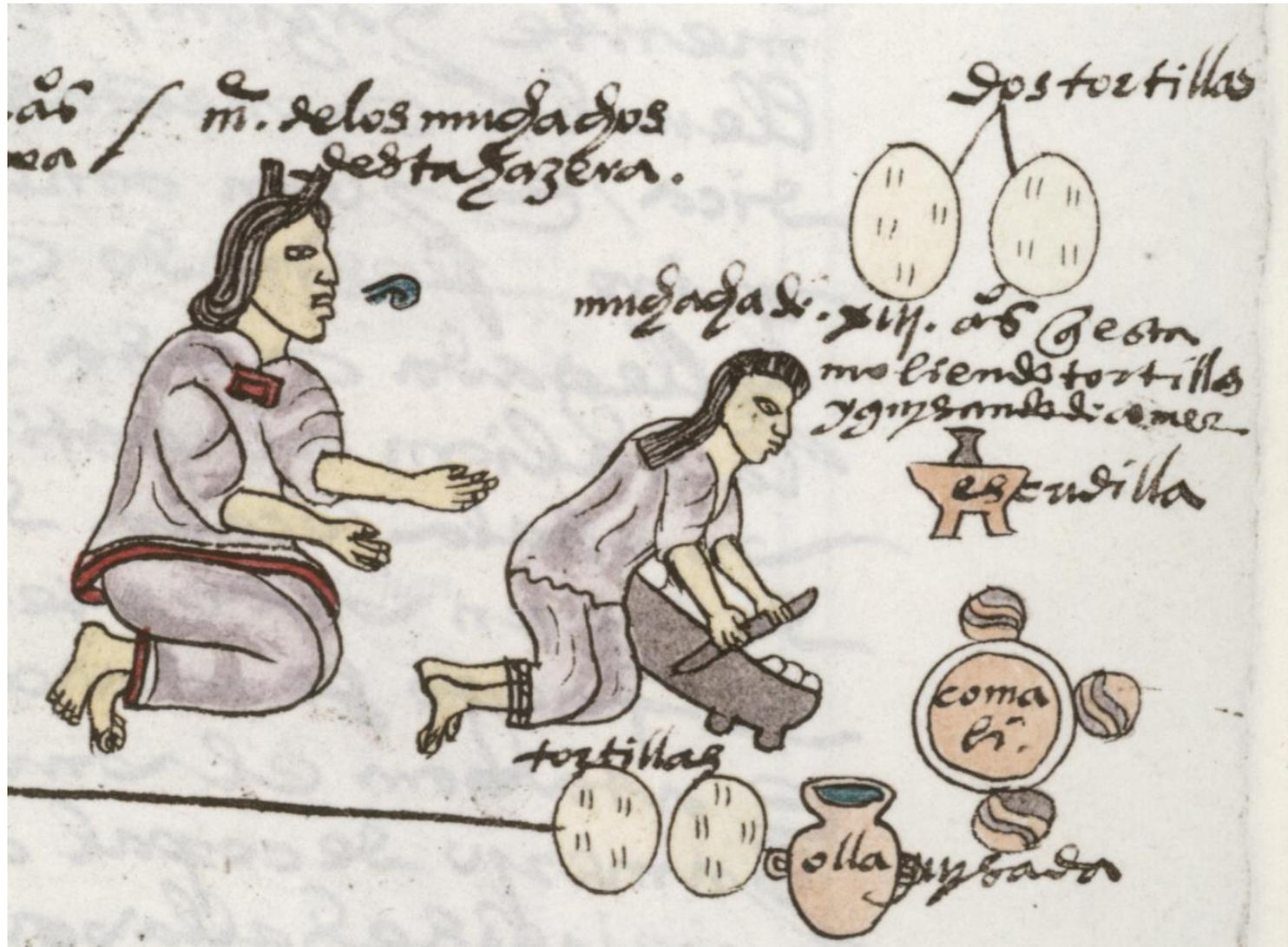
The lime infused corn dough increases the human digestive system's ability to access niacin, six amino acids, and calcium.

- “So superior is *nixtamalized* maize to the unprocessed kind that it is tempting to see the rise of Mesoamerican civilization as a consequence of this invention, without which the peoples of Mexico and their southern neighbors would have remained forever on the village level,” argued anthropologist Sophie Coe.

# Templo Mayor



# Aztec mother and child making corn tortillas



“Thou wilt become fatigued, thou wilt become tired: thou art to provide water, to grind maize, to drudge.”

Ceremonial painted tortillas cooking on the comal

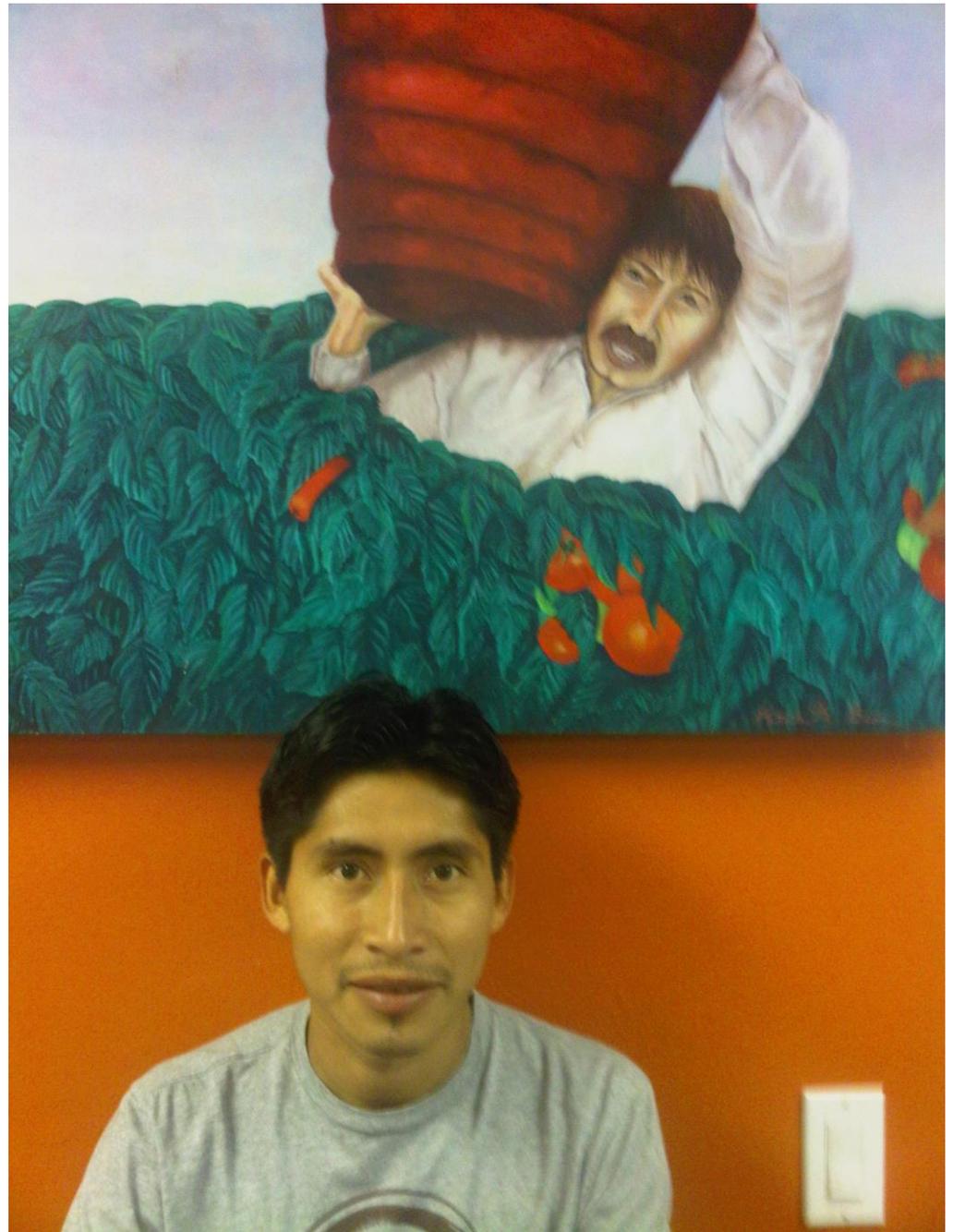


# Ceremonial painted tortillas

- Before the Spanish came the Otomí in Guanajuato, painted ceremonial tortillas with images associated with the earth and their gods.
- Two of the favorite colors of plant dye commonly used by the Aztec.
  - For purple, they boiled honeysuckle flowers and soaked the flowers in the water until the liquid thickened.
  - For shades of maroon from red to brown, they scraped off the white scale on the flat pads of the nopal plant and slid the scale into pots of boiling water until the heat released its color.
- After the Spanish occupation the Otomí mixed the old with the new. They included Catholic patron saints in their tortilla motifs.

Lionel Pérez,  
Mam Maya farm  
worker from  
Guatemala in  
Immokalee, Florida

“My grandmother says if  
you have tortillas you  
have life; if you have  
corn you have life...no  
need to worry if you  
have tortillas.”



# Cortes and Montezuma II

In 1521 the Spanish conquistador Hernan Cortes defeated the Aztec ruler Montezuma II





Tenochtitlan, the Aztec capital

# Colonial Mexico City





Map of New Spain



Las Tortilleras, Carl Nebel lithograph, about 1839

The ordinary tortilla was an extraordinary bond between the human and divine.

One Maya tribe even buried their dead with tortillas so that the dogs eaten as dinner during life would not bite the deceased in revenge.

Father  
Kino



Father Kino

Wheat



Men cooking flour tortillas  
in Juárez, Mexico, early  
1900s.



# El Norte

- A distinctive feature of Sonora on the Mexico northern frontier was the wheat flour tortilla.
- The Sonorans mixed locally milled White Sonora wheat flour with water, salt and lard rendered from swine, a divergence from the traditional vegetarian corn tortilla.
- They rolled each ball into a thin white wheat flour tortilla, *tortilla de harina*, stretching the tortilla to fourteen, sixteen or eighteen inches in diameter, the *tortilla grande de harina*.
- And now the men participated and learned the art of stretching the dough into a large thin tortilla or a thicker, smaller eight inch tortilla.
- Cooked on a griddle, often the traditional *comal*, and rolled around a mound of signature Sonora grilled beef, the Sonora tortilla transformed into today's worldly cross-cultural burrito.

Adobe home with horno, Spanish outdoor oven around 1900 in  
Santa Fe, New Mexico,



In the back yard of their homes in New Spain the colonists constructed the Spanish *horno*, an adobe domed oven shaped like a beehive to bake bread.



Covered Wagons



Mexican burro, early 1900s

No one knows the exact origin of the word “burrito” but it comes from a term for a small donkey, or in Spanish, little *burro*.

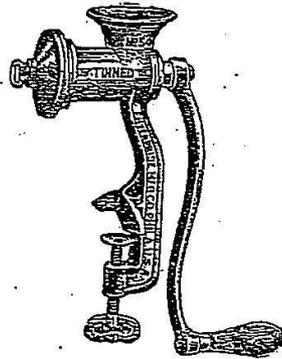
- In the depths of the copper and silver mines in colonial Sonora, Mexico, the miners sat on the ground beside the burros used as pack animals and ate stuffed flour tortillas, the tortilla of the northern Mexican frontier. The story goes, they named their portable lunch “burrito” for their lunch mate, the *burro*.
- However, on the open range of the frontier the early Hispanic cowboy claimed the name. He carried flour tortillas filled with beans in his saddle bag laid across the back of his horse. The tortillas in the saddle bag were as close a companion as the traditional sidekick of the horse, the *burro*.

Thus, the burrito.

# Enterprise Nixtamal corn grinding mill from the late nineteenth century

## “ENTERPRISE”

### Nixtamal or Combination Mills



**N**IXTAMAL is a corn food product largely used in Mexico, and this mill was primarily designed for grinding the corn so used.

Our development has shown many other purposes where the mill can be used with great advantage; such as grinding cereals, cocoa beans, vanilla beans, poppy seed, peanuts (for peanut butter), white lead, massage cream ingredients and for reducing other materials to pasty substances.

Very adaptable for druggists' use in grinding rosin, ginseng root, herbs, dried berries, pumice stone, coal, etc.

This Nixtamal Mill has the advantage that the cylinder is octagon, which permits the inside screw to get hold of the corn in a most effective way. Of the two knives which make up the mill, one is fastened to the machine by three screws. When the two knives are worn out they can easily be renewed, which makes the machine practically as good as new.

All parts are double tinned, which prevents the “masa” from becoming discolored and also prevents the machine from rusting. The hopper or receptacle is of cast iron, made in one single piece, which permits the operator to exert a pressure on the corn with the free hand.

#### HAND MILLS AS ABOVE ILLUSTRATED

#### Prices

No. 54, Weight, 6 pounds; Capacity, 2 pounds per minute,	\$1.75
No. 64, Weight, 12 pounds; Capacity, 3 pounds per minute,	3.50
Packed 6 in a case	
No. 74, Weight, 24 pounds; Capacity, 5 pounds per minute,	7.50
Packed 1 in a case	

“There are new Enterprise machines for grinding corn that are excellent and are superior to all others and do more than the old Mexican *metate*.”

# Cooking for the army of the Mexican revolution, 1910-1920



“It is better to die on your feet than to live on your knees,” said rebel leader Emiliano Zapata

# Camp family cooking tortillas, early 1900s



Following the Mexican troops were the *soldaderas*.  
“Who shall make my tortillas for me but my woman?”

# Las soldaderas

The women of the Mexican Revolution, 1910-1920

On the battlefield the most fearless and bold of the *soldaderas* fought. “Some in rags, some in plundered finery, wearing silk stockings and dresses, sandals, straw hats and gun belts, these women became terrors of the region.”



# Early Corn Flour Mill



Two side by side corn grinding mills, grinding wet nixtamal into corn dough.



# Instant Corn Flour

- Instant corn flour changed the home-grown art of the pre-Hispanic hearth into a mass produced, mass marketed, high technology commodity.
- The invention of the process for dehydrated *nixtamalized* corn flour, *masa harina*. was revolutionary.
- The difference was the lime-soaked corn dough passed through a specialized grinding mill and the coarse ground particles quickly dried at high temperatures before being cooled and sifted. Large particles were re-ground and sifted again to achieve the ideal final particle size for corn flour.

# Nixtamal-steeped corn in factory vat



The process was precise timing to cook and steep the corn in lime solution, not too long, not too short. “Like knowing how long to let good wine sit.”

# Basalt grinding stone for factory production of nixtamal corn tortillas



The process was the mechanical corn grinder rotating corn on the basalt grinding stone, the flavor of the ancient volcanic rock *metate*.

Rolling wheat flour tortillas by hand on piecrust roller, circa 1960s, Bueno Foods



# Modern factory production of wheat flour tortillas, Rudy's Tortillas



# Manufactured tortillas on conveyor belt



# La Virgin of Guadalupe, Tortilla Art by Joe Bravo



“As tortillas have given us life, I give it new life by using it as an art medium.”

# Tacos de nopales from Restaurante La Olla, Oaxaca, Mexico



The point is “how the culture and plants and foods come together,”

# Eva and Maria cooking tortillas



Tortilleria Nixtamal,  
Corona,  
New York

“The purpose of the tortilla is to enhance the flavor of the food, not merely to hold it together.”

