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THURSDAY
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STATEN ISLAND ADVANCE/JAN SOMMA-HAMMEL

Jennifer Ida, left, of Eltingville and Brandi Adduce of Pennsylvania “uncorked” their homebrew made from corn.

Chicha sprouted from maize and amylase

Wagner College students brew beer from an ancient South American recipe

By PAMELA SILVESTRI
STATEN ISLAND ADVANCE

Purely in the interest of science, Dr. Celeste Marie Gagnon recently brewed beer in the chem lab at Wagner College. The anthropology professor and two undergraduates, Jennifer Ida of Eltingville and Brandi Adduce of Pennsylvania, whipped up the brew on the Grymes Hill campus from a traditional Peruvian recipe, one that is likely very similar to a prehistoric one. The ingredients were basic: water, yeast and sprouted corn, which yields amylase, an enzyme found in human saliva.

Chicha, Dr. Gagnon explains, is a generic word used in the South American Andes that refers to any fermented beverage made from starch — like peanuts, corn, rice — or sugar from peppers, strawberries and other fruits or vegetables. There are hundreds of different recipes for chicha, but the remarkable component of the traditional alcoholic beverage is spit, the catalyst that converts starch into sugar.

HEAVY OXYGEN

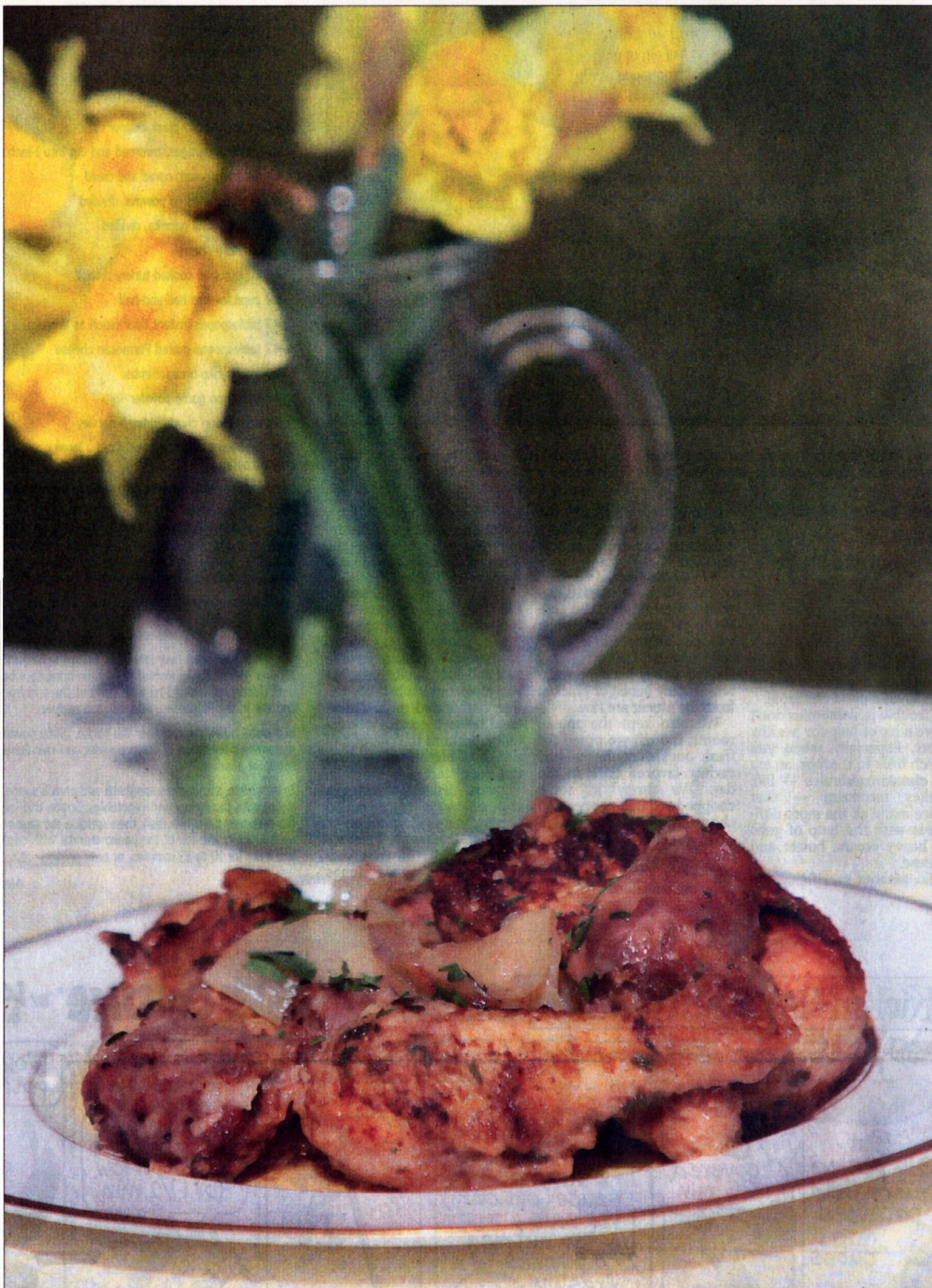
Dr. Gagnon's ultimate goal in brewing the beer was to determine if the process increases the amount of heavy oxygen in the water. And the amount of oxygen found in layers of bones in one of the groups Dr. Gagnon studies in the Andes may shed light on migratory patterns.

The professor likens brewing to cooking a stock or soup: The more you cook the liquid, the more concentrated it becomes. In other words, the more you cook water, the more highly concentrated are heavy oxygen molecules.

Chicha has become a fairly hot topic in some food circles. Anthony Bourdain featured it in one of his food explorations on his TV show “No Reservations.” Batches of chicha were offered on tap at Dogfish Head's brewery in Rehoboth Beach, Delaware. Brewmaster Sal Calagione produced a “cloudy and unfiltered” brew at 6.2 percent ABV with “a beautiful purple-pink hue from ... Peruvian corn, strawberries, and tree seeds,” as noted on Dogfish Head's Web site, Dogfish.com.

In discussing the anthropology of chicha, Dr. Gagnon explained that it is brewed in small batches, solely by women, in a three-day process. They begin, she said, by sitting in groups and chewing on dried corn.

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To compliment flavors in Chicken Scarpariello John Milano of Pete Milano's Discount Wine and Liquor Supermarket recommends a California fume blanc or sauvignon blanc. He says, “French wines are too dry, a little more austere.” California ones tend to have grassy notes and “up-forward fruit characteristics.”

MIX & MATCH

Served on-the-bone, a good Chicken Scarpariello satisfies on many levels

By PAMELA SILVESTRI / STATEN ISLAND ADVANCE

Come this time in March a serious gray area clouds my kitchen repertoire. This inspiration blip happens in the wake of corned beef ‘n’ cabbage fiestas and pasta con sarde feasts. The haze comes well before Easter week when there's strong desire for all things lamb. Also, typically wild March weather makes for a schizophrenic appetite — one day it's balmy enough to wear shorts and slip into barbecue mode. Tomorrow's weather could mean a temperature plunge and back to hankering for short ribs or a slow-simmered stew.

I have decided that March is a time to mix it up — literally. As a result, some of our recent family meals have included two or more protein combinations from opposite ends of the food spectrum. One night this meant espresso and thyme-rubbed flank steak topped with poached shrimp. Another night it was seared pork chops smothered with caramelized onions and steamed Littleneck clams. But the biggest hit at the table was a down-home Chicken Scarpariello, a stove-top skillet dish made with sausage and cut-up chicken parts.

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SCARPARELLO
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Scarpariello satisfies on many levels. There are moist dark meat pieces and succulent wings from which to choose. If you're not a chicken fan, you'll likely just pick out the sausage hunks. The dish makes a rich and flavor-packed sauce great for sopping with a slice of my new favorite bread, a crusty artisan loaf made by Mel-one Brothers of Port Richmond, which is baked with Asiago cheese and red pepper flakes.

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TABLE TALK

Cook blue claw crabs in tomato sauce for a Lenten pasta dish

To cook the live crustaceans, snip off their eyes with kitchen scissors (or have your fishmonger do this) and rinse under cold running water. (Watch the grabby claws!) In a big pot, sauté a diced onion, 2 garlic cloves and a few sprigs of thyme. Drop in the live crabs and 1 (32-ounce) can of crushed tomatoes. Simmer, covered, over medium heat for 45 minutes. Serve crabs and sauce over bucatini.



Chicha sprouted from maize and amylase

"It's women's work," Dr. Gagnon said, noting the tooth-bitten kernels provide the amylase.

After water and sugar are added, the beer traditionally is fermented in a ceramic vessel. Yeast is never added to the mixture because the vessel contains wild yeast spores that have built up with repeated use.

"There's no sugar added for the very traditional recipes. And it makes sense because before [Columbus] there was no sugar," Dr. Gagnon said, explaining that cane sugar came to South America via the Spanish, and sugar production took hold in the Americas after the 1500s.

THE EXPERIMENT

In Dr. Nick Richardson's chemistry lab, Dr. Gagnon had the students brew the chicha from whole corn purchased from a health food supply store.

"The sprouts contain amy-



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Anthropology professor Celeste Marie Gagnon, left, and Dr. Nick Richardson of the Wagner chem department add yeast to chicha.

lase, which will eventually turn the starch from the corn into sugar in the finished chicha product," said Dr. Gagnon. In other words, no spit was involved in this ex-

periment.

After sprouts were added to New York City tap water, the combination was boiled for about six hours, cooled and boiled again for another

three hours. The solids were removed and yeast added.

Three days later, the students "uncorked" the brew. The outcome was a classic chicha with a sour cider flavor profile and slight effervescence. Left unfiltered, it had a cloudy look to it.

The real deal in Peru starts with freshly hulled, sun-dried corn that is watered down and heaped into a pile. The baked corn sprouts are coarsely ground into a meal and mixed with water in a 1:3 ratio. With continued boiling, the beer is produced in a few days.

"The final product is a yellowish-tan (color) with a whitish, light, frothy head and a lot of sediment," says Dr. Gagnon. It's a combination DogFish Head brewers might declare "fruity, complex and refreshing."

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