The Rice-Paper is the electronic newsletter of the CGRF. Published periodically, it collects the most recent findings in the botany, cultivation, material culture, culinary preparation, and history of Carolina Gold Rice and associated heritage grains. Contributions and editorial correspondence should be directed to Dr. David S. Shields at the University of South Carolina: dshields@gwm.sc.edu. The information published here appears as a public service. CGRF encourages republication of The Rice-Paper’s contents provided there is no alteration of the substance of the material being reproduced, that the reproducer does not profit from the republication, and that a clear and full credit is given to author and source of the material.

Publication Announcement

It is with great pride and delight that the Carolina Gold Rice Foundation announces publication of Porcher & Judd’s history of the technology of rice processing. This landmark presentation of the many structures and machines developed from the 18th through the 19th century for the growth, harvesting, hulling, and milling of Carolina Rice supplies a comprehensive view of the immense expenditure of capital the exercise of mechanical ingenuity entailed in making Carolina Gold a world crop.

Professor emeritus of biology at the Citadel and board member of the Carolina Gold Rice Foundation, Richard Porcher examined the material remains of virtually all of the significant plantations in the region. His collaborator, draughtsman William R. Judd, has performed miracles of interpretation, taking ruins and jumbled knots of rust and translating them to schematic drawings of a variety of machines. These illustrations are impressive in their clarity and detail. They contribute greatly to one of Porcher’s theses—that the old canard that the South lacked mechanical genius and industrial development was patently false. The Market Preparation of Carolina Rice traces the historical development of a vertically integrated scheme of processing the equal of any sugar refinery in Barbados or Jamaica.

The organization of The Market Preparation of Carolina Rice derives from the order of labors requisite siting, formation, irrigation, planting, weeding, harvesting, and soil renovation of a plantation, then the process of the harvest—the cutting, drying, threshing, screening, milling, and polishing of the rice. The authors recount both the processes involved and the material means by which they were accomplished. As Richard Porcher demonstrates, only he has explored the several sorts of evidence needed to do this work: he alone of the several students of rice culture has visited the important historical sites, including the difficult to reach marsh islands in the Santee River, to record the remnants of the fields and the ruins of milling infrastructure there. Numbers of objects he photographed and measured thirty years ago have disappeared from the landscape. In parallel with these material evidences, Porcher delved southern archives for written commentary on the methods, the U. S. Patent Office records for drawings of machines, and sifted through the extensive corpus of agricultural literature published in the many farming periodicals of the 19th century for his reconstructions. Having explored the literary evidence extensively myself, I can attest to the depth of the research involved here. All of the most informed contemporary commentators are given preference in citations, while the testimonies of a great number of experienced planters and inventors flesh out the narrative.

Rice culture as a subject has inspired several masterworks of historical interpretation. Porcher & Judd’s The Market Preparation of Carolina Rice joins that distinguished list of essential volumes. The monograph was published by the University of South Carolina Press and released in summer of 2014.

The Rage for Rice Beer

By David S. Shields

On July 1, 1893, the Dispensary Law went into effect in South Carolina—the creation of agrarian governor Ben Tillman, who agitated the prohibitionist sentiments of upstate South Carolina Baptists and Methodist into the support of a scheme in which the state became the sole purveyor of alcoholic beverages. Grocers, bars, hotels, and wholesale manufacturers were in an instant legislated out of business. Tillman had opted for the Dispensary rather than outright prohibition because of the river of revenue it brought into the state’s hands. It also served as a pretext for enlisting an army of constables and spies to harass those who opposed his anti-
cosmopolitan, anti-Charleston world view.

The Evans Dispensary Bill defined an alcoholic beverage as any liquid with over 2.5% alcohol. The Palmetto Brewing Company of Charleston, a self-styled ‘soft drink’ company that had begun manufacturing a rice brew acceptable in prohibitionist southern locales in 1888, began the manufacturing of oceans of “Rice Beer”—a light beer with an alcohol content under the legal ceiling. It was a creation of political circumstance. “Up to this date our people have been innocent of the taste of rice beer, but now they are to learn what it is how it tastes.” (Charleston News & Courier, Octy 12, 1893, p. 6) Cases of rice beer were distributed to the hotels and restaurants throughout South Carolina. Charleston, Columbia, and Darlington embraced it particularly. Governor Tillman immediately saw the rice beer boom as a challenge to his monopoly. He pointedly refused to have the alcoholic content of the beer tested and arrested persons who dispensed the beverage, using his constables as attestors against the brew, declaring that it gave them the same buzz as lager beer.

In the face of the arrests the Palmetto Brewing Company went on a publicity offensive. Issues of the Charleston News & Courier, The State, and other anti-Tillman papers ran the following attestation: “We have noticed in the newspapers much comment on Rice Beer, especially so in the last few days, where much stress is laid on the percentage of alcohol it contains. It appears that there are certain persons in this State who are making much capital out of these reports. We desire by this notice to inform out patrons that we are the sole manufacturers and patentees of Rice Beer, that our Rice Beer comes within the law, that it does not contain sufficient alcohol to produce intoxication, consequently it is a non-intoxicant. The percentage of alcohol is also with the line laid down by the State board of control, newspaper reports notwithstanding.” (News & Courier October 11, 1893, p. 5). The notice then suggests that Tillman’s agents salted the samples purporting to be rice beer.

Repeatedly those arrested for Rice Beer when brought before the courts were exonerated and Tillman’s agents subjected to ridicule by judges and opposing attorneys. The farcical character of the prosecutions reached a climax at the State Fair on November 9, 1893, when Tillman and a phalanx of his agents attempted to arrest a fair merchant, W. B.Meeetze who was doing an immense rice beer business on the grounds. When Meeetze declared that he preferred death to be arrested like a cut-throat without a warrant, a large sympathetic crowd coalesced and the danger of spontaneous riot caused a stand down and later charges of resisting arrest.

The ridicule that descended on Tillman’s enforcement apparatus in the wake of the Meeke confrontation made him realize that the ambiguity of the law would lead to an unending stream of cases in which the State could not win conviction. He had to change the law. This was done in December of 1893. The remodeled Dispensary Act gave Palmetto Brewery 30 days to dispose of stock. A state-controlled lager beer brewery was constructed next to the Palmetto facility with an invitation for anyone to come through its doors to secure beer. (News & Courier, January 20, 1894, p. 8). In April of 1894 the arrest of Charlestonian Vincent Chicco and the confiscation of his stock of rice beer and bar paraphernalia created a martyr for the anti-Dispensary forces. In the Chicco cases wake the resistance to the law in the city became endemic. Arrests would never result in convictions. A netherworld of illegal saloons numbering at least 150 establishments sprang up. In this world rice beer gave way to harder stuff. By Spring of 1894 the brief Rice Beer boom was over.

So how did Rice Beer taste? The problem with answering this question is that the most ample testimony on the subject of rice beer consumption derives from Tillman’s spies given in court depositions. Their purpose was to claim that Rice Beer was as intoxicating as lager beer, and that no discernible difference in effect existed between the two. (See “Trial Justice Court,” Charleston News and Courier September 23, 1893, p 2) The other descriptions derive from Cramer & Kersten of the Palmetto Brewery. This company conceived of Rice Beer as one of the beverages to be dispensed in the burgeoning world of soda fountains—a.k.a. as a ‘soft drink.” Hence it described Rice Beer as Ginger Ale and Coca Cola did its product as a ‘delicious and healthy beverage.”

“It fills a long felt want for a stimulant and appetizer that is not intoxicating; pleasant to the taste, contains nourishment and specially of weak and delicate constitutions. It has the taste of lager beer of the finest flavor: besides to add to its purity and medicinal qualities is specially made of our celebrated world-renowned original Artesian well water.” (News & Courier, May 4, 1888, p. 2).

Chestnut Pig Barbecue, November 16, 2013

By David S. Shields

The Carolina Gold Rice Foundation, while devoted to the restoration of the crop central to the Lowcountry ‘rice kitchen’, has taken as its mission the restoration of the co-crops of Carolina Gold, and the other ingredients that made up classic southern cuisine. The Wilmington, Charleston, Savannah, and Jacksonville markets before the twentieth century were filled with fruits and nuts, beginning with loquats in March and continuing around the calendar to Christmas oranges and January tangerines. The autumn bounty of chestnuts coming from the hill and mountain country was a regular feature of these foodways . . . until the coming of chestnut blight and phytophthora, twin plagues that wiped out the vast eastern forests of American chestnut and decimated its dwarf cousin, the chinquapin.

The CGF Foundation has been greatly interested in reviving the chestnut foodways that had once been common in our region. This chestnut legacy has reduced to holiday “chestnuts roasting o’rer an open fire” and chestnut stuffing for the Thanksgiving turkey. We have recovered recipes for chestnut grits, chestnut skillet bread, chestnut soufflé, and chestnut puddling (with rose water). But as glories of the southern table went, none of these dishes competed with the most cherished dishes—chestnut fed pork barbecue and chestnut fed venison.

When word filtered up from Florida that two wild pigs had been seen grazing in a widow grove of Dunstan (a hybrid American-Chinese chestnut popularized as edible landscape in the 1950s), Glenn Roberts, president of the Foundation, sent a request that they be penned in. And so two pigs gorged on fallen nuts until they had grown sufficiently fat to warrant a truck trip southward. Glenn hauled two orny fat pigs into South Carolina, and on November 14, 2013 they were handed over to 601 Deer and Hog Processing in Fort Motte, South Carolina for butchering. One of the pigs would be handed over to Chuck Ross and James Helms for barbecuing. Master charcutier Craig Diehl drove up from Charleston to take charge of the second pig for curing.

I arrived at 601 Processing at 3:00 on November 15 and found the son of the proprietor and Craig deep in a consultation on the quickest way to cut
certain venison joints. These weeks in November constitute the crush time of 601. In the twenty minutes I was present, two and a half deer were disemboweled, skinned, and broken down. The bloody skeletons lay stacked in a corner crying out for a chef’s stock pot, but because of the game sale laws . . . no go. I did, however, learn that a substantial portion of the deer harvest is donated to Harvest Hope. That charity does not waste its materials.

The hog had been skinned when we arrived. (Alas, no cracklin’ for the guests.) Craig was tremendously enthused about the fat quality of the pig. It was admirable and the meat itself robustly red-pink. Craig sliced it through it quickly, his knife work singularly precise and quick. I told him to do his curing of the meat in ways that seem appropriate to the quality he found. We parted, and the proprietor commented that quite a number of chestnuts grew on a nearby ridge, and that he has seen wild hogs in the vicinity. He then informed me that he is one of only four processors given a state permit to process wild pigs.

On the evening of the 15th a film and acoustic crew from the University of South Carolina appeared, Michael Peterson of Eastover Nut Farm was present, Chuck Ross, James Helms, and two other members of the crew who prepared the wood. I had a splendid plate of venison cube steak, a dish of rice, and a good conversation. After dinner, in the dark, the crew went with James to 601 to pick up the pig.

On Saturday morning of the barbecue I made three of the four bbq sauces—the standard Lowcountry mustard, the classic Hemmenway SC vinegar & pepper, muscadine vinegar sorghum tomato & pepper, and there was blueberry as well. I wound up using Joseph Trapp’s sorghum rather than the Lindler. I brought several jars of Bradford watermelon pickle. I also made a cucumber, tomato, dill and onion salad dressed with benne oil and good madeira vinegar. I arrived at Oldfields Plantation in Hopkins, SC, the site of the barbecue at noon. Mike Davis of Terra Restaurant was already present with the chestnut skillet bread. The pig had been smoking for a good while and the compound was fragrant with the smell of smouldering chestnut husks. Much of the next two hours was consumed in setting up water stations, scrubbing down the tables, laying out the food displays. Chuck had begun the process of cutting the meat off the lustroously browned hog. He was the soul of self-control, refusing to taste until I, James, and Heidi Cooley, the head of the film crew, had partaken. Glenn Roberts, the provider of the pig, alas, was out in the field, unable to be present. So I had to report long distance that there was a distinct quality to the meat, an earthly basic flavor, a fine, almost floral fatty sweetness, and a long finish in the mouth. It was moist, tender, and the caramelized portions startling in their nuttiness.

There was, of course, hash with Carolina Gold Rice.

The first guests to arrive—some of host Ted Hopkins’s friends—senior neighbors—were fascinated with the stories connected with the food, and ready with their cups when I broke out my sake bottle. (Sake is better than beer or bourbon as a complement to barbecue). Nathalie Dupree, her husband Jack, and their passenger, Hanna Raskin arrived precisely at 2:00 and Nathalie went directly to the cutting station, going for some gnawing bones. For a half an hour the guests arrived, milled about, ogled the food (the panniers from the Palmetto Pig were covered, but the salads, cured loin I brought, and pickles were available for nibbling). Most guests gravitated to Michael Peterson’s chestnut basket where he peeled and hand fed a cluster of eager eaters. After Ted Hopkins arrived at 2:25, we were ready to begin. By this time there were approximately 50 persons present, including numbers from the press.

After a blessing, the panniers were uncovered, the lines quickly formed. The rhapsody on chestnuts and chestnut fed pigs had people’s gastric juices percolating. Chad Carter appeared suddenly bearing a number of Bradford Watermelon pickle varieties and gummi-treats.

James Helms made sure a portion of the meat and sauce were secured for pig provider Glenn Roberts upon his return. There was not much left at the end of the feast. We had gauged the invitations to food ratio well. It took a little over an hour to clean up. A splendid sunny day turned to dark slowly with a spectacular sunset over a wonderful countryside.

Southerners had tasted that day the first chestnut fed barbecued pig available in the South in a century.

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Old Southern Candies: Monkey Meat, Horse Meat, Horse Cakes, Benne Cakes, Groundnut Cakes

By David S. Shields

The Carolina Gold Rice Foundation assisted some years ago in the restoration of benne (southern low oil landrace sesame from West Africa) in fields and kitchens in the United States. It is currently engaged in the repatriation of the ancestral peanut of the South, the Carolina-African Runner Peanut, currently being grown under the care of Dr. Brian Ward at Clemson University’s Coastal Research and Education Center in Charleston. In the 19th century heyday of these ingredients, young people encountered them frequently in the form of street candy. Most of these famous sweets have vanished from the streets and stores, so this remembrance of them restores to memory one of the most cherished dimensions of childhood in southern cities.

On February 28, 1911, a reporter for the Charleston News & Courier hailed the appearance of the groundnut cake vendors on the city streets as the sure sign of Spring’s advent. At shaded stands on conspicuous corners and on the battery, they sat on three leg stools from dawn to late evening, dispensing “groundnut cakes, cocoanut cakes, horse cakes and gingerstable rate of one cent each.”

The cocoanut cakes mentioned here were more popularly known as monkey meat. The recipe for monkey meat was rather simple—equal parts molasses and brown sugar, a splash of malt vinegar to impart edge—cooked until it would crystalize when a blob was tossed into cold water—then taken from the stove, laid in a pan, whereupon shredded coconut was added (quantity depended on cost of the ingredient), and then worked into a taffy consistency. Flouring one's hands assisted in the last task. The portrait below of the Monkey Meat woman is taken from Harriette Kershaw Leiding's *Street Cries of an Old Southern City*, a tourist pamphlet privately printed in 1910. Leiding's booklet is particularly interesting for supplying musical notation of the various cries. Monkey Meat was the favorite children's candy of the era in the Lowcountry.
The horse cakes from 1854 were a cookie made from spiced molasses dough manufactured by Puckhaber Brothers Baker at 464 King Street and the Marjenhoff’s Charleston Biscuit Works. In other cities ginger was used as a flavoring in horse cakes, but in Charleston ginger biscuits were a separate category. Groundnut cakes, however, held pride of place among these various confections. From the 1830s until World War I it was Charleston’s signature candy, rivaled only briefly by Benne cake, a molasses and sesame seed candy.

Blanch one pound of peanuts; grind out quickly, it will so congeal that it cannot be taken out at all (p. 294). 

The benne wafer of the twentieth century, with its butter and flour, did not evolve out of the candy. 

In the era before the First World War groundnut cake was a signature dish of the city. Just as shrimp & grits, she crab soup, and frogmore stew were iconic foods of the Lowcountry in 2000, groundnut cakes belonged to the list of local delicacies in 1900: “Charleston submits groundnut cakes, palmetto pickle, waffles, shrimp pie, Bull’s Bay oysters, and ricefield turkey, among other strictly local dishes for the delectation of her guests,” August Chronicle (December 16, 1915), 6. When Carolina expatriates dreamed of returning to Charleston, the candy came to mind:

Fancy woke for groundnut cake That turbaned maumas cried. 
The glucose made confections cheat, And Dixie cookery died. 

“Charleston Revisited,” 1905. 

The remembered cry of the women was recorded by numbers of persons: “Entyyer wan, buy en’ny, I gwingiebrottus, efyer buy from me” (2-9-1902). A Brottus[a condensation of the children’s phrase, have you brought us something?] was an add-on, a lagannipe. Generally referred to as Maumas, the women vendors had a traditional public uniform. She “is always neatly dressed, her head gaily turbaned, a clean kerchief crossed over her bosom.” The cakes were displayed on “a clean sheet of brown paper spread over a waiter, which the seller holds on her lap” (1-20-1895). A waiter is a large round platter. Although represented as a generic figure in much reportage, we can ascertain from a number of sources including court records (where the vendors appear in some number as witnesses to occurrences in the street), the names of several of the famous ones. Celia Hall, who occupied the corner of John Street and King Street is perhaps the one with the longest paper trail.

For close the fifty years the price of a groundnut cake remained the same—a penny. As was perhaps inevitable a gentrified, white-folks version of the candy is developed, and finds its way into later editions of Sarah Rutledge’s landmark The Carolina Housewife:

Blanch one pound of peanuts; grind very fine in a marble mortar, adding a little brandy while pounding to prevent oiling. Add ten eggs, one pound of sugar, and one pound of butter. Beat the whole well together; make a puff paste, lay it on your tins, and fill them with the mixture; grate lump sugar over them, and bake in a slow oven.

These peanut tartlets were far too costly for street consumption at a 1 cent price point. Besides, they minimized the peanut flavor by blanching instead of parching the nuts. The Carolina African Runner Peanut—the standard Lowcountry peanut until early in the 20th century is smaller, oilier, and more flavorful (particularly after pan parching) than the Virginia or Valencia varieties. Blanching did not bring out the nuttiness of the legume. Furthermore, as observers of street food noted “in Charleston . . . a fine molasses is used for it instead of sugar” (8-22-1909). An 1895 reporter elaborated this point: “It has been asserted that these vendors of sweets go down on the wharves, where the molasses hogsheads and casks are being unloaded, and scrape up such of the molasses as chanced to leak out or overrun, straining it for use in their confections. Be that as it may, the groundnut cakes are delightful, crisp and wholesome, the syrup boiled to just the right consistency, the nuts selected with care” (1-20-1895). The final product was small and round and regarded by many visitors as “Charleston’s greatest charm” (5-17-1899). Besides molasses and peanuts, an egg white would be added to clarify the syrup. Furthermore they were “highly flavored with lemon peel” (2-9-1902).

The secret of cooking the groundnut cake was the length of time you cooked the molasses (or molasses and brown sugar mixture) before adding the egg white, parched peanuts and lemon flavoring. A half hour for a substantial batch was frequently mentioned as a benchmark. But too short a cooking and the molasses would ooze in the sun, too long and it would be too think to be manageable.

Philadelphia, like Charleston, had a street culture featuring groundnut cakes. Its versions, however, tended to be made from granulation brown or white sugar, and lacked that piquant lemon-molasses-parched peanut forwardness of flavor.

Seasoning Food in
Traditional Lowcountry Cuisine

By David S. Shields

Since the last Rice Paper, the members of the Carolina Gold Rice Foundation have been active on a number of fronts, agricultural and education. When Cook it Raw came to Charleston in autumn 2013, Glenn Roberts supplied many of the ingredients used by this collection of fifteen of the world’s greatest chefs in their encounter with Lowcountry cuisine. David Shields was named historian of the event and gave the following introduction to one dimension of the Carolina Rice Kitchen not often covered—seasoning.

Here are his remarks:

I’m honored to supply an introduction to Lowcountry Cuisine to the chefs and staff assembled here this evening. This region that we now celebrate extends from Wilmington North Carolina in the north to the St. John’s River in Florida in the South. Rice was the staple crop of the region, but other important field crops emerged during the antebellum period: peanuts in Wilmington, wheat around Orangeburg SC and Ebenezer GA, and citrus around Jacksonville and St. Augustine. Corn was greatly important and after the Civil War, garden vegetables. The new potatoes, asparagus, artichokes, radishes, lettuce, strawberies, and cabbages featured in Delmonico’s, the Union Club, and other temples of northern haute cuisines were grown here, in the vicinity around Charleston, during the Gilded Age—the 1880s & 1890s.

You’ve no doubt read the overview of the cuisine I wrote that was distributed before you arrived here at Middleton. So you grasp how the cookery that evolved here amalgamated practices of several cultures—the barbecuing, corn, beans, squash, and game of Native peoples—the citrus of the Spanish in Florida—the one pot meals—the okra, benne, guinea squash, watermelons, and to some extent rice of the West Africans—the domestic livestock & meat cookery, the puddings, and baked goods of the British settlers—the French Huguenot pastry cookery, fruit, vegetables, and confectionary. In the 19th century local vegetable breeders, pomologists, and agricultural experimentalists became fixated on the improvement of local cultivars and breeds. The cultivation of Sugar in Florida and Georgia enabled the preservation of fruit harvests for the first time and the creation of fruit wines and fruit vinegars that turned the taste palate of pickles into Technicolor. The immense wealth extracted from the region’s fertility, the labor of slaves, and the ingenuity of the agricultural improvers of rice, cotton, and other commodities enabled the port cities of the region to enjoy the most cosmopolitan array of ingredients—fruit from the west indies—oil from Italy—candies and cheese from France—wines from the island of Madeira—breeding stock from England and Scotland.

How this bounty coalesced into a coherent table with rice at its heart is something that made this region’s food historical and distinctive. The heyday of the cuisine lasted a little over a century—from 1820 to the mid 1920s—and then market forces, the expense of labor and land—and the redirection of food aesthetics from taste to convenience, from tradition to novelty caused the eclipse of our foodways until the 1990s. It was then the people—particularly people here today—began asking why was something so superb and distinctive permitted to decline into the ritual creation of a half dozen dishes—she crab soup—huegenot torte—benne wafers—hoppin john—shrimp & grits—using inappropriate ingredients grown in other areas of the country. It was at that juncture that a number of persons determined that the best parts of this region’s culinary heritage should be restored. In particular Glenn Roberts, and a handful of other persons, realized that the revival of the cuisine depended upon the reclamation of the ingredients. First the Carolina Gold Rice, the pencil cob and sea island white flint corn, the benne, the sea island red pea and the rice pea, the Carolina African peanut, the Bradford Watermelon. With these available in the kitchens and markets, the chefs preparing your meal tonight, and your chef host Sean Brock could engage in the task of taking Lowcountry cuisine into the future.

Tonight I didn’t want to give you a recapitulation of the story that you already have in printed form. I’ve tried to supply in that narrative an account of the lipids, sugars, grains, vegetables, indigenous game, and cooking techniques. Here I want to talk about one think particularly important to cuisine that I did not treat in my overview: seasoning. What were the flavoring agents, indigenous and imported, employed to enrich the flavor of sauces, soups, stews, perlows, and dressings?

First the Lowcountry consciously embraced seasoning. The habit of persons in central North Carolina to bake “cold water” cornbread—that is, cornbread without salt and any fat—was ridiculed as an affectation—and the idea that you have to consume a bland bread when consuming a dish with pronounced flavor such as Brunswick Stew or barbeque was ridiculed as a parsimonious notion.1 The fact the persons in Glascoock County in Georgia’s interior consume cucumber slices without salt was an item of puzzlement in the Lowcountry papers in 19th century.2 Salt was cherished and great attention was paid to the quality available. Within the Lowcountry the salt came from the northern and southern extremes of the region—from Wilmington’s sea water evaporation saltworks, or from the salt domes of Florida. Those of Turkey Island were deemed the most savory.

Traditionally meat dishes were salted some in advance of cooking. Vast amounts of salt were employed in curing meats. Another Lowcountry product that demanded salting was peanuts. Whether boiled or roasted, salt became a requisite of processing. Indeed in the Lowcountry the principle of enhancing the piquancy of sweetness by adding salt—the salty caramel effect—was first grasped when candymakers used salted & roasted peanuts in making peanut brittle. Yet in this region that principle was most in evidence in the seasoning of fruit, where nature’s sugars stand most directly apparent. The salting of strawberries, melons, peaches, pears, and citrus, particularly grapefruit became commonplace. One school of thought held that salt’s desiccating powers counteracted the phlegmatic nature of fruits in the old galenic medical dietary scheme. But it is obvious that by the mid-19th century gestures toward the old notion that you were counteracting dyspepsia were made tongue in cheek: From Florida: “Now that the luscious watermelon is on deck by an overwhelming majority, it may be well to inform an anxious public that it cannot be eaten with impunity as safely as with a good sprinkling of salt. If you wish to change the flavor to that of the cantaloupe, a liberal sprinkling of pepper will go far in that direction.” Tampa Tribune (June 21, 1895), 1.

Salt and sugar became cheap and ubiquitous during the early 19th century—both were central to the food preservation regimes. interestingly the began to be substituted for one

1“With or Without Salt,” Charleston News & Courier (September 9, 1897), 6.
2“All About the State,” Macon Telegraph (July 15, 1886), 3.
Lowcountry marriages between mustard and meat were the mustard-based bbq sauces for pulled pork found in South Carolina.

Carolina Gold Rice, the staple of the Lowcountry, being a non-aromatic rice with tremendously lustrous mouthfeel and a subtle hazelnut flavor, suited dishes that combined an layered pronounced, yet complementary flavors. The pilous, perlots, and rice bogs—the one dish rice stews favored hereabouts—became an improvisational mediums for the combination of proteins, condiments, stocks, and vegetables.

England of course did not provide the template for these culinary treatments. Historians Karen Hess and Jessica Harris have traced dimensions of these dishes to Middle Eastern and African diaspora cooking. But the heyday of these developments was in the 19th century when global trade connected the Lowcountry with a wider world. In the 1840s the Lowcountry became enamored of Curry Powder from south Asia. It also embraced dimensions of another rice cuisine the Dutch-Indonesia Riztaffel. In particular the omnipresence of catsups (signature colonial Dutch compositions) in cookbooks as condiments—not simply tomato catsup, but mushroom catsup, onion catsups, walnut catsups, and peanut catsups. The onion and peanut catsups were local innovations. These operated much like chutneys in Indian cuisine. They first appear in manifests in 1781. By 1800 Mushroom catsup is one of the standard import commodities. Here in an 1800 list of goods by the grocer C. Newall in Savannah. I’ll skip the liquors.

<table>
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<tr>
<th>English Cheese</th>
<th>Fresh Biscuit</th>
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<td>Hyson, Souchon, and Boha Teas</td>
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<th>Whole &amp; ground Coffee</th>
<th>Best Chocolate</th>
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<td>Sugar</td>
<td>Muscovado</td>
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| Mace                   | Cinnamon         |
| Cloves                 | Nutmegs Allspice |

| Black Pepper           | Cayenne          |
| Basket Salt            | Durham Mustard   |

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<th>Rose Water, Orange Flower Water</th>
<th>Pickled Walnuts</th>
<th>Pickled Olives</th>
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<tr>
<th>Quinn’s Fish Sauce Mushroom Catsup</th>
<th>Guava Jelly</th>
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| Bloom Raisins                   | Scotch Barley   |
| Split PeasZante                  | Currants        |

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<th>Fresh Almonds</th>
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Here we have something that in parts sounds like the greatest hits list for what Wolfgang Schivelbush called the first global drug culture: alcohol, caffeine, sugar, chocolate, capsicum, and spice—all items that enacted physiological change. Then cherished world flavors—cheese, Quinn’s Fish Sauce (a proto Worcestershire fermented fish & tamarind used in soups and stews), olives, catsups, nuts & raisins.

I want to talk about the spices. One signature of Lowcountry flavor is the preference for Mace in stews, soups, and in puddings and baked goods. This is old European. Cinnamon & Cloves derived from the early modern spice rack as well. Allspice is New World as is Cayenne. Rose water was used in puddings and confectionary. Orange Flower water derived from Spain, but also the southern segment of the Lowcountry—and Charleston made its own using its own wild orange. Guava Jelly was a West Indian taste imported northward.

The jellies paired with meat and game. The catsups with rice stews, and hominy based dishes. As pickles became more flavorful over the course of the 19th century that substituted for and then supplanted the catsups.

The taste world I’ve described here is that of port cities of the Lowcountry: Wilmington, Charleston, Savannah, Brunswick, Jacksonville, St. Augustine. A world of items brought from hither and yon for the hotel cooks, the caterers, the townhouse cooks. There is another form of Lowcountry cooking that took place in the countryside—more intensely seasonal—more dependent upon fish and game—and flavored with a set of indigenous ingredients peculiar to the coastal zone. If Sallie Anne Robinson had been with us tonight she would have talked about the use of dried fish powder, salty and pungent, in the Gullah cookery of the islands, and spoken of the use of dried okra (laid out on roofs after harvest), powdered as a thickener, or reconstituted in soups during the winter. Or lacking that the use of the Hand leafed violet as an okra substitute to give a stew the same desired slippery consistency.

Country people sought other plants and roots to heighten the flavor of stews. The roots of the Evening primrose, wild carrot, the bark of the Carolina spice bush, the flour of the white beech tree, the wild ginger in a host of preparations. Settlers had learned much about the employment of native nuts—making acorns from the White and Red Oak trees palatable by grinding them into meal and rinsing the tannins out with repeated drenching with water, using them as thickeners in stews or in meal for breads. The Hazelnut was rendered in oil and used in

A word about pepper. Its traditional marriage with salt in western seasoning is visible in Lowcountry cuisines. And its traditional uses as a germicide in curing meats was everywhere visible. It was an important additive to the barbecue sauces and rubs in the northern and southern portions of the Lowcountry. It was a grocery staple and omnipresent in pantries. But in the 19th century it was supplanted in any number of dishes by red peppers—America’s native capsicum. The names of the favorite peppers grown in early local gardens—Jamaican bird’s beak—West Indian cayenne—indicate that heating of Lowcountry cuisine derives from the Caribbean islands. Given the intimate political and trade connections between the regions, this is hardly surprising. What is interesting are the deviations from West Indian practice found hereabouts—the substitution of red pepper for black pepper in the curing of hams. This was forced by the skipper flies an insect not daunted by black pepper coatings on hams. Red pepper coating prevented the skipper from skeletonizing the joints. From the ham the red pepper migrated to the sausage in the smokehouse. Red pepper entirely supplanted ginger in the stews and composite dishes of the 18th century relegating it to baked goods. Red pepper also supplanted black pepper in pickling. A minimalist preparation in the pantry was pepper vinegar, used to impart heat to collards and braised greens.

Sometimes mustard operated in ways analogous to red pepper in culinary preparations. The Lowcountry used white mustard leaves before they roughed out as the sharp note in salads, prepared the seeds of black mustard into a condiment, and cooked the greens as one of the components of pot-likker. Anglo traditionalism was served by making mustard the accompaniment of meat dishes. Red pepper jelly was the innovative choice. The height of...
salad dressings. And a Lowcountry salad would consist of a range of items—Cress, peppergrass, mustard, purple wood sorrel, deer grass, evening primrose—dressed with Lowcountry capers (the pickled buds of Marsh Marigolds). Between bites a diner might sip Mulberry cider, or Service Berry Cider, or Crab Apple cider, or Persimmon Beer, or Honey Lucost Beer, or Sumac lemonade, or Tea Tree Tea, or Youpon Tea, or Blackberry wine, or Cherry Cordial.

You’ve already walked the grounds of Middleton Place in search of local provender and tomorrow you will scour the woods and fields of Turnbridge on the Savannah River. I can assure you, you will encounter tastes whose piquancy and distinctiveness will make you want to try your hand at new improvisations employing the old and rich larder of ingredients, weaving the rice, the fish, the game, the fowl, the benne, the greens, the oils, the fruit, and the resources of the Lowcountry fields and forests to the taste of this place for the future.

Pollinators of Heirloom and Modern Crops

By B. Merle Shepard

Pollinating species, mainly bees, are responsible for one out of every three bites of food consumed by humans. About 75% of all plants are pollinated by native bees. It is estimated that, in the U.S., bees are responsible for about 30 billion dollars in agricultural production. Long before the cultivated European or Western honey bee (Apis mellifera), wild native bees, along with butterflies, wasps, flies, and beetles pollinated most of our crops. Virtually all of our heirloom crops, with the exception of grains, relied on native pollinating species. And a large number of modern day food crops are still pollinated by native bees.

Without proper pollination, fruits may be small or misshapen or the plants bear no fruit at all. Crops that rely on pollinators include blueberries, strawberries, oranges, apples, squash, watermelon and many more. In addition, bees are required to pollinate fiber crops such as cotton, flax and oil crops (canola). The U.S. and Canada grow over 100 crops that are pollinated by bees.

When our forefathers were cultivating crops, there was no need for additional pollinating species because native bees were present in sufficient numbers to carry out this task. The farms were relatively small with lots of undisturbed habitat and a wide diversity of native flowering plants and nesting sites that supported adequate numbers of native bees. Unfortunately, there has been a serious decline in both cultivated honey bee and native bee populations. Today, the much of the farm landscape is very different with large expanses of crop monocultures, with “clean” field borders that caused serious loss of plant biodiversity that once supported these native pollinators and the ecosystem services they provided. Pesticides and diseases also have plagued our cultivated and native bees as well as other beneficial species. Urban sprawl has destroyed much of the native bee food plants and their nesting sites.

Because of the focus on vegetable (including heirloom) crops at Clemson University’s Coastal Research and Education Center and the U.S. Vegetable Laboratory in Charleston, ensuring healthy communities of pollinating species is critical to our research programs. In order to understand the biodiversity of our native pollinating species, a survey of the South Carolina Lowcountry began this year. In addition, an ongoing, survey included native and non-native plants as well as vegetable crops. The survey also included photographing the pollinating species on flowering plants on which they were found. The goal was to document the diversity and relative numbers of species present. We hope that this will help us to design ways to better conserve pollinators and to provide habitat to increase their numbers.

The following is a general summary of some of the results from these surveys. Although over 75 species were photographed and recorded, only a few of the major species will be mentioned in this report. The three most frequently encountered bee groups were bumble bees, carpenter bees and the European honey bee. Interestingly, across all crops surveyed, the native bees were more numerous than the cultivated honey bee. This may be in part because, during cool or cloudy days, native bees were still busy pollinating and nectaring on plants while the domesticated bees were inactive and remained inside their hives.

The following photos are of major bee pollinators, photographed here in the South Carolina Lowcountry, with the flowers from which they were taking nectar and pollen.
In addition to these major pollinating bee species, there were numerous species of bees, wasps, butterflies, beetles, and flies that were present in lower numbers. Below is a small representation of these important pollinating species.

**Eastern carpenter bee, *Xylocopa virginica***

**Western or European honey bee, *Apis mellifera***

**Leaf-cutter bee, *Megachile sp.***

**Mason bee, *Osmia sp.***

**Cuckoo wasp, *Chrysidinae***

**Scoliid wasp, *Campsomeris* sp.**

Pollinator conservation is essential to providing ecosystem services to both wild and cultivated plants. Because of the serious decline in species and numbers of pollinators, there is an urgent need to manage habitat for these insects that are so vital to heirloom as well as many modern crops. Diversification of the garden landscape is an important first step. Reduction or elimination of broad spectrum pesticides is essential. In addition, planting flowers and other crops, such as clover, buckwheat, etc. around or near gardens can help to increase pollinator numbers as well as those of other beneficial species such as predator and insect parasitoids. There are resources available through many websites but the Xerces Society for Invertebrate Conservation (www.xerces.org) provides excellent resources for anyone interested in gardening, farming or those interested in pollinator conservation. Their website also contains many references that will be helpful in managing habitats for sustaining and increasing the numbers and biodiversity of pollinators and other beneficial species. Any further loss or reduction of these essential species would have a serious negative impact on heirloom as well as modern crops.

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**Fall 2014 Carolina Rice Harvest and New Age Crop Report**

**By Glenn Roberts**

News! Finally, we have significant South Carolina, North Carolina and Georgia rice production ready for 2014 harvest. Starting with Matthew Raiford in Georgia running all the way to Orton near Wilmington, NC, the USA Rice Federation just helped celebrate the 2014 Rice Festival in Wilmington, NC, recognizing our potential for future rice production and honoring the legacy of Carolina Gold Rice. Some of the farms in production in our region: Sapelo, Delta, Turnbridge, Wise Batten’s Robertville farm, Lavington, Greene, Middleton, Cherokee Tract, Boone Hall, Kensington, Brookgreen Gardens, Plumfield and many, many more.

Add to the above a brand new effort at Longleaf Plantation in St. Matthews… 3 acres of “local” rice using raised bed moist ground organic management (System of Rice Intensification, or, SRI). Longleaf joins serious global research efforts, lead by Dr. Anna McClung, Dr. Susan McCouch, Dr. Erika Styger and our own Dr. Brian Ward at Clemson University to explore rice production without flood systems… i.e. growing rice just like tomatoes. There are research programs from 3 to 7 acres each, located in China, TX, Southern Louisiana, the Eastern Shore of Maryland, Princeton, NJ, Red Hook, NY, and Martha’s Vineyard, MA, ready for harvest soon. There are others out West as well.

There are also “local” systems in smallish flood plots in Chapel Hill and Morganton, NC, on the Pee Dee River and across New England including a Cambridge public schools program. Brooklyn, NY, sports a raised containment flood rice program for youth education and participation and will also begin SRI rice interpretation next spring. The Brooklyn program was covered in the New Yorker earlier this year.

Then there are stalwart outliers who farm against trends: Takeshi Akaogi near Putney, VT, farms acres of flood rice the same way he would in Hokaido, Japan. Takeshi is in his 8th year of production. Christian Elwell farms acres of beautiful Duborskian rice in flood culture. His rice seed came through Cornell from the Ukraine decades ago. Christian is well into his second decade of production in Western MA. Flats Mentor Farm has a 220 member international nuanced rice community in Lancaster, MA. At the famed Intervale Center in Burlington, VT,
locally grown production rice feeds a sizable community of immigrants. The same is true over in Cazenovia, NY, where a community of immigrants from the Congo are engaged in rice production. Atlanta has a robust Vietnamese rice production community and the same is true for New Orleans and elsewhere in the South. There are many other small to mid-scale farms entering community rice production across the USA.

The most impressive American entry into community scale rice research may be the 1200 acre New World Foundation Farm Hub near Kingston, NY founded in February this year. They are hard on the watershed and have considerable persistent moist ground acres in net zero through-flow conditions. They plan to jump into local moist ground rice research with force by partnering with Cornell and others next spring. They are already well into their first year of a diverse and formal fully funded three year cereal research and production program vectored toward small to mid-scale farms in the Lower Hudson with both plot and field replications of many cereal cultivars and cooperative arrangements with millers, farmers, chefs, bakers, brewers, maltsters and distillers already in place. It is stunning to realize that this program was barely a concept two years ago.

So that we keep all of the above in perspective, I agree that so far, the aggregate of local small scale rice farming in the USA is miniscule compared to the hundreds of thousands of commercial rice production acres farmed in TX, LA, MS, AR, MO and CA. But, with 80% of Southern rice acres planted to Clearfield rice, which lacks a distinctive quality rating on the international rice market and is not dedicated to US consumption, everyone should take note of our small rice growers. In my opinion, Big Ag rice farming has not yet solved our carbon footprint, toxic uptake or water depletion flood rice issues. The main challenge on the horizon for big Ag rice farming: commercial flood rice production is at the top of our commercial crop methane production chart.

On the other side of this tableau, “boutique” or niche rice producers are largely ignored even though they are recognized in local and occasionally national culinary media. Boutique rice farming is not yet in Ag journals or Commercial AG media, except where it intersects rice research. Seeking out small-scale producers and listening to their ideas can be revelatory.

The important point I hope to illustrate here: locally grown rice by very small producers is no longer a concept. Local rice from small farms is meaningful and growing exponentially. In my experience, even though I’m in awe of the capacity to feed millions in big ag systems, rice farming innovation is noteworthy only on small farms. I think of this the way big brewers should have taken note of the craft beer movement at least a decade ago or big distillers should note the exponential rise of small artisan distillers across the USA.

All of us at the Carolina Gold Rice Foundation can learn from this new thrust of rice research and its international scientific idea exchange. This year, 13 African nations joined in alliance behind their own fair trade SRI rice production systems presenting diverse rices, not a uniform single rice commodity or a narrow selection of industrial rices. This fact is worth considering as a model for the future of rice production.

America’s GF backlash, with surging culinary rice demand to offset diminished wheat consumption, is creating a tidal wave of new interest in rice ingredients in 2015 and beyond. The highest growth sectors will be in niche rices with place-based identity for gf flour, not industrial rices. Think craft beer.

To put all this in perspective in this issue of our CGRF newsletter, Dr. Brian Ward presents a brief overview of his Clemson Coastal REC 2014 rice research program results. For Dr. Ward’s full Rice Research Leader Report he prepared with Dr. Anna McClung at the request of the USDA, we invite you to attend the Carolina Gold Rice Foundation Fall Meeting on December 5th, 2014, at the US Vegetable Lab conference room from 1 to 2:30 pm. We’ll share the opportunity to look into the future of American (and South Carolina) rice.


ESTIMATE – 2015 CGR & CHGR Seed Required for Planting: 36 tons.

TRIA, LA, MSU at this time project no change in 2015 seed pricing over 2014 for delivery 1st QTR, 2016.

Tell your friends: “Time to plan and plant local Carolina Rice production.”

Glenn Roberts, CGRF President

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Fall 2014 Sustainable Rice as a Vegetable and Other Research

By Brian Ward

The first “Sustainable Rice as a Vegetable/Specialty Crop Utilizing System of Rice Intensification” peer reviewed journal article in HortTech of American Society of Horticultural Science is scheduled for submission December, 2014. In the acknowledgements portion of the paper, I would like to state that this research was partially funded by the Carolina Gold Rice Foundation, CGRF, in order to get its name into scientific literature. I look forward to the CGRF’s BOD permission for this citation.

Test plots of flood and SRI rice are being grown on a small scale basis at Middleton Organic Farm, College of Charleston’s Dixie Plantation, Rebellion Farms, and Incubator Farms at Rosebank Farms. This effort serves CGRF in multiple ways: 1) connects local growers to the mission of CGRF, 2) acts as a historical learning tool for rice culture and as a horticultural learning tool by educating local growers how to grow rice in both flood and SRI culture.

Per an invite from the USDA’s Dale Bumpers National Rice Research Center Rice Institute and Texas A & M University Rice Research and Education Center in Beaumont, TX, I presented a research overview report on the current status of the SARE grant on flooded rice variety trial titled “Improving Soil Quality to Increase Yield and Reduce Diseases in Organic Rice Production” and the SRI Rice Genotype by Environment Interaction trial being conducted Summer 2014, which I will briefly disseminate at the 2014 Annual CGRF Fall Meeting. Results from these flooded trials indicate that there are other varieties that can be successfully produced in South Carolina for competitive economic gains as well as for sustainability; however, much more work is needed in the areas of additional heritage and heirloom varieties. This work looking at additional varieties needs to be researched and factored against planting date, fertility, spacing and SRI versus flood trials.

Additionally, support from CGRF along with Anson Mills is now being supplemented by industry funding. This funding has been pledged again for Summer 2015. In addition, I have personally pledged to seek out multiple avenues for additional funding to continue this important work of South Carolina rice repatriation.
The work above covers the first mission of the CGRF. Here at CREC Organic Research Farm we have been contracted to carry out research covering the second mission of the CGRF with production of Summer 2014 James Island “Jimmy Red” Corn, and multiple lines of wheat to be grown Winter 2015. Folding heritage and heirloom vegetable crops into rotations with rice, grains, and legumes is a continuing integral part of our systems approach research.