

The Rice Paper

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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.

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Searching for the Origin of Carolina Gold Rice

At its October meeting, the Carolina Gold Rice Foundation Board agreed to allocate \$900 to underwrite a search of the rice fields of South Sulawesi, Indonesia, in the hopes of finding the primitive form of Carolina Gold in its original locale of cultivation. While the circumstantial history of Carolina Gold's transit to the Lowcountry remains obscure, there is circumstantial evidence about where the grain originated; on the south end of a long peninsula on the south coast of an orchid-shaped island in east Indonesia, known as South Sulawesi.

Once the center of maritime commerce on the South Asian seas, and still the home of a robust ship-building industry, South Sulawesi has long exported rice grown in the fields inland from the port of Ujang Pandang (now known as Makassar). Rice cultivation dominates the province's agriculture. The Board hopes that among the several strains currently in cultivation one might be the progenitor of the elegant, flavorful gold seed rice that came to dominate the Lowcountry landscape sometime after the 1770s. Support from the CGRF will pay for the transportation, lodging, and labor expenses of an Indo-

nesian assistant professor, Mr. Carolus Rante, from Sam Ratulangi University, Manado, N. Sulawesi. Mr. Rante is from the Tanah Toraja area of S. Sulawesi where Carolina Gold might have originated. He will survey and collect local seed varieties. Because much of the material culture of the area, including the distinctive funeral ceremonies, is traditional, Board members hope that agriculture too may retain a strong traditional component, preserving old strain rice varieties. Because the international transit of seeds and agricultural materials is subject to rigorous regulation, the Board has taken care to secure the proper permits through

the Plant Protection and Quarantine Service of the U. S. Department of Agriculture that will enable the transportation of any discovered material to the U.S.A. for genetic and field testing. Dr. Anna McClung, rice geneticist at the USDA/ARS facility in Beaumont, TX will carry out tests to determine if the seeds sent from S. Sulawesi are related to the Carolina Gold grown in the Lowcountry. For more information on Sulawesi, visit: http://www.etm.pdx.edu/htltoness_genrl.html



Carolina Gold Rice: Pure Seed

Fame, Fortune & Hurricane Rita

by Glenn Roberts

Carolina Gold Rice matures in the field as a lovely four to five foot tall golden hulled heirloom. Many historians note that CGR's famous color is associated with the origins of its name and the fortunes its export brought to Carolina and Georgia Planter aristocracy. But Carolina Gold Rice is also known by its late 18th century common field name: "The Two Sisters". The name describes CGR's genetic instability, its unique duality and the continual struggle to isolate and replicate "true" Carolina Gold Rice during our colonial era. A few food historians believe Carolina Gold Rice was never "one" kind of rice. Period literature and plantation records document at least two distinct export rices labeled and marketed as Carolina Gold Rice: the Carolina Gold Rice exported before 1810 and "Fat" or "Northern" Carolina Gold Rice exported between that time and the Civil War. It is at least conceivable there were other distinct varieties of rice exported under the name Carolina Gold, though shipping manifests and marketing ads of the period designate only Carolina Rice, Carolina Gold Rice and Northern Carolina Gold Rice. A key to understanding multiple variety CGR may lie in the facts behind the colonial Carolina name "Two Sisters".

The Carolina Gold Rice in today's world seed banks (USDA-GRIN and IRRI, to name just two) hold Carolina Gold Rice selected and increased according to a formal characteristic description handed down by Carolina planters in the twentieth century to the USDA seed banking system. Rice geneticists around the world occasionally bring rigorously selected Carolina Gold Rice genetics from these banks into modern breeding programs. Tiripana 7 of CIAT origin and an on-going experimental CGR japonica dwarf



aromatic breeding program here in the USA are two recent standouts. Although these efforts have far reaching positive impacts on rice horticulture and, in the case of Tiripana 7, employ self-determination to address third world hunger, it is important to step outside these scientific achievements based on accepted CGR genetics and identify the earliest definition of Carolina Gold Rice through the collective experience of the 18th and 19th Century rice planter and examine the question: what determines "pure" Carolina Gold Rice?

Rigorously selected Carolina Gold Rice from modern scientifically managed seed sources grows and matures into two distinct rice varieties, not one: Carolina Gold and Carolina White....the famous "Two Sisters" mentioned above. DNA marker analysis of both rices show identical patterns, except those indicating hull color. Carolina White is slightly earlier, slightly more aggressive and has a slightly improved standability over Carolina Gold. These facts, derived from modern field trials, invite open speculation about why Antebellum Carolina planters selected Gold over White. Following this line of thought, one factor within this speculation based on field realities would be the present day near exclusive subsistence farming of Carolina White (Carolina Blanco) over Carolina Gold in South America. This fact seems to argue against Carolina Gold as the "better" rice and

also raises the specter of other CGR varieties.

Antebellum Carolina planters charged with seed rice breeding, selection and production (as opposed to planters dedicated only to export production) spent extensive time and capital resources breeding and selecting Carolina Rices to develop and maintain pure Carolina Gold. The high integrity of this breeding and selection rigor resulted in the astonishing rise of Carolina and Georgia rice export production that impacted elite global markets as far away as Asia by our revolution. One thing is certain: the broad effort to breed CGR eliminates the possibility that Carolina Gold Rice was simply a marketing term.

Beginning in 2001, in an attempt to better understand why Carolina Gold became the dominant American export rice before 1860, a group of growers and scientists associated with the CGRF established a Pure Carolina Gold Rice breeding and production program. To date, the effort required to isolate pure Carolina Gold Rice has become a discovery of what early Carolina rice seedsman must have endured to succeed. Stated in a more historically accurate manner, the scientists and growers associated with the pure CGR effort have experienced every positive and negative act of nature that brought hope and plague to early Carolina rice planters. The research team se-

lected Carolina Gold away from Carolina White in a 36 month subtropical and tropical year round program to increase and select it to pure head row seed. They increased this seed to breeder, then to foundation seed, then passed it to experienced CGR growers to move the pure CGR into first year production only to discover a red out-cross in the subsequent pure Carolina Gold production rice harvest. The red out-cross proved to be a harbinger of Hurricane Rita, which nearly blew the research facility away. These obstacles match the litany of woes penned by Carolina planters three centuries ago.

Earlier this year we returned to headrow and breeder seed rice evaluation and established that the breeder was free from outcross. Our geneticist, Dr. Anna McClung, sent the remaining pure headrow Carolina Gold to Dr. Merle Shepard at CREC for safe keeping and increase trials in South Carolina, while the growers at her research station replanted and selected new breeder and foundation seed for 2007 production. We hope for a great growing season leading to the first pure CGR production trial rice harvest in late 2007.

After six years of tightly focused research activity we have developed a new respect for the risk and rewards associated with breeding heirloom rice. And one surprising fact stands out: breeding, selecting and increasing CGR to production, even with the best technology available, is very daunting in the 21st century ... it must have been unfathomably difficult in the late 18th century. Early Carolina planters assuming the mantle of rice breeding must have cared deeply for rice quality and had a vision of that quality precisely focused on the world rice market. On closer consideration, they must have been remarkably faithful in their dedication to and pursuit of their ideal to risk the time and resources required to create the first uniquely American rice. Time will tell if their effort will succeed again three centuries later and help in our understanding of which Carolina Gold Rice is most authentic.

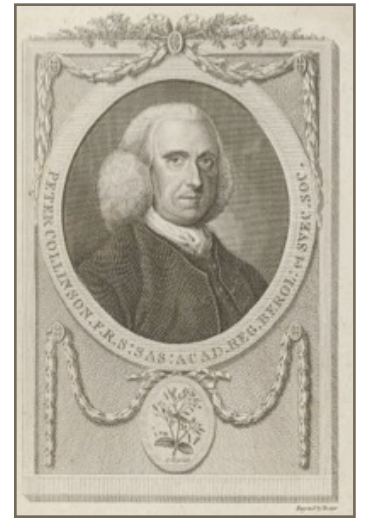
Richard Porter and David Shields join the CGRF Board

Plant biologist Richard Porcher (Professor emeritus, Department of Biology, The Citadel) and cultural historian David S. Shields (McClintock Professor of Southern Letters, University of South Carolina) were elected to the Board of Directors of the Carolina Gold Rice Foundation at the October 2006 meeting in Charleston. Each has developed distinctive areas of expertise about the history of rice cultivation and kitchen use in the South.

Dr. Richard Porcher, widely known for his lavishly illustrated *A Guide to the Wildflowers of South Carolina*, had devoted much of the past decade to documenting the ecology of traditional rice fields in South Carolina. He has collected historic seed stock at numbers of historic mills and processing sites in the state, a valuable resource in determining the genetic profile of Carolina Gold over the past century and a half. His current work includes a systematic investigation of the evolution of rice milling—its technology, economics, and labor culture.

Dr. David Shields, an extensively published historian of early southern history, literature, and culture, directed the landmark 2004 conference, *Cuisines of the Lowcountry and the Caribbean*, co-sponsored by Johnson & Wales University and the College of Charleston's Program in the Carolina Lowcountry & the Atlantic World. He has collected every recipe employing rice published in antebellum American periodicals and has amassed an extensive archive of printed articles and pamphlets dealing with 18th- and early 19th-century rice agriculture.

Porcher and Shields will bring different strengths to the CGRF. Porcher has agreed to superintend a graduate student survey of historic rice processing structures for surviving seed samples. Shields will take over the editing of *The Rice Paper*.



Chronicles of Carolina Gold Rice

Several early writers comment on the origin of rice culture in the Lowcountry providing rival accounts of its first cultivation in South Carolina. In the next several issues of *The Rice Paper*, we will reprint key testimonies so that readers can draw their own conclusions. It should be noted that the rice seed spoken of here was probably not Carolina Gold which written evidence suggests came to Carolina in the 1770s.

Extract of a Letter of Peter Collinson to Gentleman's Magazine, May 26, 1766.

In the year 1696, my sagacious friend, Charles Dubois, then treasurer to the East Indian Company, told me often with pleasure, that he first put the Carolinians on the culture of rice.

He happened one day, in that year, to meet Thomas Marsh, a Carolina merchant, at the coffee-house, to whom he said, I have been thinking, from the situation, nature of the soil, and climate, that rice may be produced to great advantage in Carolina: but, says Marsh, how shall we get some to try? Why, says Dubois, I will inquire for it amongst our Indian captains. Accordingly, a money-bag full of East India rice was given to Marsh, and he sent it to South Carolina; and in the year 1698, he told his friend Dubois, that it had succeeded very well.

But, from so small an original, it required a long time to spread to advantage; besides, the people being unacquainted with the manner of cultivating rice, many difficulties attended the first planting and preparing it, as a vendible commodity, so that little progress was made for the first nine or ten years, when the quantity produced was not sufficient for home consumption.

About this time, a Portuguese vessel arrived, with slaves from the east, with a considerable quantity of rice, being the ship's provision; this rice the Carolinians gladly took in exchange for a supply of their own produce. This unexpected cargo was distributed, which gave new spirit to the undertaking, but was not sufficient to supply the demand of all those that would have procured it to plant.

Therefore the Assembly of South Carolina, taking into consideration the importance of the culture of rice, very prudently voted a bounty to encourage its importation, that there might be a supply of seed for every undertaker.

My ingenious friend, Tho. Lambol, esq. now living, informs me, that in the year 1704, being then a lad, going to school at some distance from Charles-Town, he took notice of some planters who were essaying to make rice grow.

In the year 1712, the same gentleman was an apprentice to a principal merchant in Charles-Town, who was appointed public treasurer; and he well remembers that a bounty (granted by the Assembly) was then paid to a captain, who brought in the first cargo of rice, after the bounty was ordered; this cargo came from the Straits, probably from Egypt, or the Milanesse.

In the year 1713, another ship arrived, and the captain made the like demand, and received the bounty for bringing a cargo of rice and slaves from Madagascar.

From these particulars it appears that the progress of raising rice in any considerable quantity was very slow; and I can find no account of any being exported for

the first fifteen years. But it is reasonable to conclude, that after the arrival of these two cargoes of rice, for sowing, the planters were amply furnished, to extend its culture; and being a yearly production, it soon became a staple commodity; it is therefore very probably, that in the years 1715 or 1716, a quantity was raised sufficient for exportation, which continued to increase till the year 1726, and then it became a great article of commerce. For my correspondent, Sam Eveligh, a merchant residing in Charles-Town, writes me that, from the year

	Barrels of Rice
1726 to 1727	were exported 40,000
1729 to 1730	were exported 41,957
1740 to 1741	were exported 80,000
1755 to 1756	were exported 60,000
1757 to 1758	were exported 67,040
1760 to 1761	were exported 100,024
1761 to 1762	were exported 34,972
	half barrels 3,600

The Carolina Gazette of June 12, 1762, says the crops of rice are so great that we expect to make 150,000 barrels.

I cannot express the satisfaction I feel, in reflecting on the wonderful increase of so valuable a commodity, from so small a beginning, in about, or little more than, half a century.

May 26, 1766 P. Collinson

Gold Rice in the Media

Summer 2006's issue of *Coastal Heritage*, the journal of the S. C. Sea Grant Consortium, is devoted entirely to South Carolina rice culture. Entitled "African roots, Carolina gold," the periodical touches upon many of the central issues shaping the history of the Lowcountry's most important staple. Available on-line at <http://www.scseagrant.org/content/?cid=131> the journal features four articles that will be of interest to readers of *The Rice Paper*: editor John Tibbetts's exploration of the African contributions to Gold Seed Rice's culture, a brief meditation on

the disappearance of the old Rice Fields, a piece on the reintroduction of rice into Lowcountry cultivation in the 1980s and its subsequent development. The S. C. Sea Grant Consortium is a university-based network supporting research, education and outreach to conserve coastal resources and enhance economic opportunity for the people of South Carolina.



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