Riches to Ruin: Pharaohs of the New World
RICHES TO RUIN: PHARAOHS OF THE NEW WORLD
Reigning over the Lowcountry for almost two centuries, rice planters created the South Carolina coast’s distinctive culture and its most enduring conflicts.

ECOLOGY AND HISTORY OF THE COOPER FIELDS

EBBS AND FLOWS

ON THE COVER
From the 1750s until the Civil War, rice planters attended the Prince William Parish Church, burned by Tories in 1779 and by the Union Army in 1865. Known as the old Sheldon Ruins, the structure is located in Beaufort County.

PHOTO/WADE SPEES

SIFTING FOR GOLD. Plantation workers would winnow the rice seed from the husk after milling. COURTESY OF THE CHARLESTON MUSEUM, CHARLESTON, SOUTH CAROLINA

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Today, Hollywood often portrays Southern slaveholding aristocrats as lazy, brutal dandies. In television and movies, antebellum planters are characterized as feckless men with a taste for thoroughbreds and gambling, and as hotheads who pushed the South into a confrontation with the North and helped start the Civil War.

These portraits have more than a kernel of truth. In the late 18th and early 19th centuries, travelers to the Lowcountry noted the gentry’s almost unlimited hunger for amusement. Timothy Ford, a New Jersey lawyer who arrived in South Carolina in the 1780s, criticized the local elite for their “effeminate spirit of luxury and dissipation.” In the early 1800s, a Connecticut Yankee who moved to Georgia noted that rich men in Savannah cared only “to get money—dance—gamble—run horses” and women only wanted to “spend money—play piano—contemplate their own beauty.”

On the eve of the American Revolution, a close-knit group of super-wealthy planters had come of age along the southern Atlantic seaboard. Their extraordinary affluence derived from rice estates sprinkled from the St. John River in East Florida to Cape Fear in North Carolina. The heart of this rice empire was South Carolina; its capital was Charleston.

Lowcountry rice planters were actually a contradictory lot, with a complete range of character traits—idle and ambitious, nostalgic and visionary, decadent and practical. Yet the leaders among the planter class shared certain habits and values. As hard-eyed capitalists, determined to
Rigid and unbalanced

Although Lowcountry planters profited from other staple crops, such as indigo, most eventually fell back on rice almost exclusively. In a letter of 1753, the physician Alexander Garden reported that planters “have never made themselves fully Master of any one thing but the Management of Rice.”

Until the Civil War, South Carolina’s coastal economy relied heavily on rice traded globally through port cities, especially Charleston, the only sizable city in the region. The coast failed to develop various crops and to establish numerous healthy market towns. The region’s economic structure, “hooked” on one commodity and economic system, was “rigid and unbalanced,” wrote University of North Carolina historian Peter Coclanis in a 1989 book.

“In the 1840s and ‘50s, there was a lot of criticism of the rice planters’ dependence on a single crop, a lot of talk about market diversification,” says historian Lawrence Rowland at the University of South Carolina-Beaufort. “But vast fortunes were wasted by the worst offspring. That’s a traditional American story.”

The rice planters created one of the richest agricultural dynasties of their era, stimulated a boom in trade between Europe and the New World, and helped to establish the prototype of the Southern gentry. But they also introduced and supported slavery on a grand scale in the New World—a system of labor that led the South to catastrophe.

SUCCESS AND SLAVERY

Not long after the founding of Charles Town in 1670, white settlers poured in from the British West Indies—Jamaica, Antigua, Nevis, Montserrat, but especially the Bahamas and Barbados. The Carolina colony quickly became virtually an extension of the Barbados sugar-planting colony, noted Coastal Carolina University historian Charles Joyner in a 1984 book.

By 1680, major planters of the Caribbean had brought gangs of slaves to Charles Town. Carolina was the first North American colony in which some settlers arrived expecting to use large numbers of Africans to grow crops or harvest raw materials to sell in distant markets. Carolina was quickly established as a society with plantations of slaves, whose descendants would be slaves as well.

The earliest Carolina settlers searched for staples that would be in steady demand in Europe. First, they harvested naval stores from forests, gaining products such as turpentine and pitch used to caulk the seams of wooden ships. But soon they discovered a more profitable commodity: rice.

These days, tourists flock to the Lowcountry to admire the landscapes left behind by rice planters. Visitors are shown through handsome antebellum homes surrounded by gardens and farmland and woods and rivers. The rice estates are often described as places where Southerners lived in harmony with nature, as if the inhabitants had been early environmentalists.

Actually, planters were unsentimental about nature, viewing it as a force to be overcome and dominated. “Withhold the hand of cultivation, and nature immediately causes weeds and plants to spring up again; and, in course of time, covers them with her dark retreats,” wrote John Drayton in 1802.

The rice planters caused some of the era’s most extensive environmental changes along the Eastern seaboard. Water is the life-blood of rice. So planters used slaves to build extensive earthen dams to contain water from rainfall or natural springs in inland swamps, creating reservoirs. Next, within the dam walls, slaves installed wooden structures called “trunks,” large doors that could be opened to let water rush in or out of the reservoir. To make rice fields in adjacent wetlands, slaves cut down massive cypress-gum forests, drained off the water, and enclosed them with dikes.

Planters thus formed broad, shallow earthen bowls side by side, linked by trunks through which water flows were manipulated to flood or drain the rice fields.
Rice Cultivation in Coastal South Carolina

Competition

Cracks in the Lowcountry’s dominance of the rice trade began to appear in the early 19th century when South Carolina grain faced cheaper rivals.

In the 1820s, Great Britain controlled some of the best rice-growing areas of the East Indies, including Bengal and Burma, where peasant labor was extremely cheap. England was already trading heavily with this region, so ships could haul rice efficiently from there. Soon rice grown in Bengal cut into the Lowcountry’s European market—reaching South Carolina as well. In 1838, East Indian rice sold in Charleston cost less than South Carolina rice.

For a period, Lowcountry rice planters had been internationalists, eager promoters of free trade as they made their wealth from a rapidly globalizing economy. But in the early 19th century, facing growing competition from East Indian rice, Lowcountry planters were getting battered by free markets. In 1832-33, South Carolina’s leadership declared that tariffs were unconstitutional and threatened to leave the union if not abolished. But in 1846, the state pushed for and gained tariffs on rice to protect Lowcountry planters from foreign competitors.

In the 1880s, rice growers in the American Southwest emerged as a major threat to South Carolina planters. Farmers in Louisiana, Arkansas, and Texas used heavy equipment to cultivate rice in clayey soils, while in South Carolina such machinery sank in the soft mud. Over the next few decades, Lowcountry rice farmers were increasingly squeezed out by this new technology, scarce labor, and hurricanes.

Slaves, moreover, built canals for boats to carry rice from inland fields through salt marshes to rivers, where the grain could be taken to market. Eventually, planters lobbied for government funds to construct canals, roads, and bridges from their estates to rice ports. And in the 1750s, some planters also began building massive dams along rivers, which they used to irrigate fields.

For their time, Lowcountry rice planters established the largest and most technologically sophisticated agricultural businesses in North America, wrote University of Maryland historian Ira Berlin in a 1998 book. Indeed, these estates were the first commercial farming operations on the continent, growing crops for global markets, the forerunners of today’s giant, specialized corn and wheat farms in the Midwest, argues agricultural economist James Hite, fellow at Clemson University’s Strom Thurmond Institute.

By 1720, numerous rice operations were in full swing. Slaves began sowing in April or May, pressing seeds into the mud with their heels. Then they flooded the fields, so the seeds could germinate. In June, they drained the fields to hoe or hand-pick weeds, a task so grueling that many runaways who fled disappeared during that month. From reservoirs, slaves later flooded the fields again to provide moisture to the plants. So from early spring through the harvest in September or early October, blacks worked in soft muck under a broiling sun, enduring thick humidity, swarming insects, and disease.

When the harvest was completed, slaves cleared ditches and canals, repaired embankments and floodgates, fighting off snakes and alligators. Then they readied the fields for the next crop in the spring. During the winter, slaves processed the grain, beating rice in mortars, one of their most arduous tasks, requiring many hours of labor. “In short,” wrote Berlin, “rice was a hard master.”

In the colony’s frontier days, slaveholders often worked side by side with blacks in the fields. But as plantations grew more efficient and productive, and the colony grew richer, whites relied on slaves to perform nearly all of the heavy labor. Whites believed that Africans were better acclimated to survive the heat and diseases, especially malaria, in the swamps. Planters increasingly stayed away from their estates, congregating during the winter social seasons in elegant homes between the Battery and Broad Street in Charleston, or in Beaufort and Georgetown, talking crops and politics. During the hot growing season, they fled to their beach or upland retreats. Indeed, many whites could not imagine cultivating the damp, fever-ridden landscape without slave labor. As a Savannah merchant reported in 1784, the “Negro business . . . is to the Trade of this Country, as the Soul to the Body.”

Slave drivers, who supervised fellow blacks, often knew more about rice cultivation than slaveholders. Isolated most of the year from whites, some slaves rarely met their owners and never learned English. Instead, they spoke Gullah, a dialect of Atlantic creole, a blending of African and European languages. “A whole African-American culture developed around the cultivation of rice,” says Marvin Dulaney, director of the Avery Research Center for African American History and Culture.

To grow more rice, planters imported more slaves. In the 1720s, Africans outnumbered whites in Lowcountry South Carolina, while more than half of the value of all of the colony’s exports came from the rice trade. Only 50 years after the colony’s founding, rice cultivation and slavery already dominated South Carolina’s economy.

Meanwhile, conditions for South Carolina blacks were the harshest yet on the continent, more brutal than those of Virginia, settled decades earlier. “The demand for slaves was greater [in South Carolina], the importation of Africans more massive, and the degradation of black life swifter and deeper,” wrote Berlin.

South Carolina’s slave code was tougher than Virginia’s, with more stringent punishments. In the 18th century, greater numbers of slaves were punished by death—burned alive—for alleged crimes in South Carolina. For any act that “bruised, wounded, maimed or disabled a white man,” a slave could be put to death under a 1714 South Carolina law, while a similar offense required 39 lashes under a 1705 Virginia act, Philip D. Morgan noted in a 1998 book.

Europe was the primary market for rice grown in the New World. The demand was
TESTING THE WATERS. The rice fields of Mulberry Plantation on the Cooper River system were productive for generations. But in the decades after the fields were abandoned, many dikes broke, dropping water levels. In the 1980s, a portion of the river was diverted, lowering water levels further. To study how plant communities are changing under new conditions, Sea Grant researcher Joe Kelley, biologist at The Citadel, uses a geographic positioning system to find his location and a metric survey rod to determine the depth of aquatic plants in a remnant rice field. PHOTO BY WADE SPEES
Today's owners

A new generation of plantation owners has become a driving force behind South Carolina’s land conservation efforts, providing a model for rural land use and protection nationwide.

Since the late 1980s, plantation owners have established conservation easements on tens of thousands of acres, preventing subdivision development while allowing traditional uses such as logging. These protected private lands, in turn, have provided the core of larger conservation efforts in the state, especially in the ACE Basin (the Ashepoo, Combahee, Edisto river basin) where more than 40,000 acres are under conservation easements.

In recent years, the Historic Ricefields Association became a strong promoter of the newly established Waccamaw National Wildlife Refuge in the forested floodplains of the Pee Dee and Waccamaw rivers. Landowners hoped that a wildlife refuge just west of the Grand Strand would help protect existing plantations from suburbia’s onslaught.

“So many of the rice plantations are now golf courses and K-Marts, so that part of South Carolina history is lost,” says David Dwyer, president of the Historic Ricefields Association, Inc. “The refuge forms a very nice buffer to Myrtle Beach and tourism development in the Grand Strand, where housing developments continue to sprawl across the landscape. It’s important to protect the plantations, “because the rice planters created the only aristocracy we’d had in this country.”

ERAS OF INNOVATION

In 1843, agricultural reformer Edmund Ruffin described the estates north of Georgetown: “The Waccamaw, the Great Pee Dee & Black River all mingle their waters below & about the great Waccamaw Island, by several navigable ‘thoroughfares’ or straits . . . The whole is like the delta of the Nile, formed of alluvium brought down by the rivers from above, as rich as land could be, almost level . . . .” With “the aid of the numerous outlets afforded by the rivers, creeks, & thoroughfares, the creeks and river, the whole [is] capable of the most perfect system of drainage & irrigation, both of which are essential to proper rice-culture.”

This “perfect system of drainage and irrigation” was the result of decades of remarkable technical innovations, back-breaking slave labor, and powerful ocean tides.

Ocean tides drive salt water up rivers for 30 to 35 miles in the Lowcountry. Near the ocean, coastal rivers are salty from the bottom to the surface. But farther up some rivers, a layer of fresh water remains on the
The quickest way for a prosperous white man to get extremely rich in British North America was to buy slaves and Lowcountry swampland—called “the Golden Mines of Carolina” by a 1770 observer—and start a rice farm.

surface at high tide, as fresh water is lighter than salt water.

A number of planters began moving rice fields from inland swamps to riverine lowlands in the mid-18th century to capture tidal flows of fresh water. Before farmers could irrigate directly from rivers, however, huge flood-control structures had to be built. On a typical tidal estate, slaves constructed a permanent embankment about five feet high, three feet thick at the top, and 12 to 15 feet thick at the bottom—all with hand tools, primarily picks and shovels.

A series of trunks allowed water to flow into a ditch dug into the inner wall of the embankment that fed a system of smaller ditches carrying irrigation water to the fields. The irrigated fields were divided into squares, which were also enclosed by dikes.

Awed by these massive projects, poets and correspondents often compared them to the building of the pyramids.

Still, many estates could not use tides for cultivation because the water was too salty there. In other places, freshwater flooding—called freshets—frequently rushed down rivers and broke the embankments and ruined crops. As a result, many plantations could use only inland swamps for rice.

With tidal impoundments, planters had access to larger, steadier supplies of fresh water for irrigation. Farmers with tidal estates thus irrigated more frequently, sharply limiting weed growth while stimulating rice plants. A slave could harvest five or six times more rice per acre in a tidally irrigated rice field than in an inland one. Yet once the grueling work of building impoundments was complete, the new system benefited slaves by greatly reducing the amount of hoeing that was required.

As Lowcountry rice planting evolved through the late 18th century, most slaves performed a specific task, such as hoeing a given amount of a field a day—usually a quarter-acre—and when that job was completed, they owned the rest of their time. On tidal plantations, slaves often completed their tasks by early afternoon and then worked their own plots of land.

Many inland estates, which struggled to compete with tidal ones, eventually gave up cultivating rice, says Porcher. In 1843, Ruffin described the decline of many of the...
Caw Caw

Viewing the beautiful antebellum homes in Charleston or Beaufort, few tourists know the source of this wealth. “A lot of people don’t realize that the great houses of Charleston existed because of the rice plantations,” says Julie Hensley, project director of the new Caw Caw Interpretive Center, located on the headwaters of Wallace Creek, a tributary of the Stono River.

In September 1999, the Charleston County Park and Recreation Commission opened the Caw Caw center, a 654-acre tract that had once been part of a major inland rice plantation. The center features an interpretive building with educational exhibits on rice cultivation, classrooms, and walking trails and boardwalks where visitors can explore remnant rice fields and other historic sites and wildlife. Biologists have restored nearly 200 acres of abandoned rice fields, stabilizing earthen dikes and installing water-control structures.

Lowcountry visitors have rarely been provided an extensive view of slave life on rice plantations. At former plantations turned into tourist sites, many visitors become absorbed in the planters’ aristocratic lives—and not in the people who made such elegance possible.

But the Caw Caw center will provide exhibits on how slaves worked and lived on a rice estate. “We made sure that the slaves’ contribution was infused in the exhibits,” says Marvin Dulaney, director of the Avery Research Center for African American History and Culture, an advisor for the center.

Ashley River plantations, where the water was too salty for irrigation. Once “the most appreciated & productive lands in the colony,” now “little rice is made, & only by a few persons.” The “lands are almost left untilled, are rarely inhabited by the proprietors . . . & the whole presents a melancholy scene of abandonment, desolation & ruin.”

Tidal plantations, however, were exceptionally profitable. On the eve of the American Revolution, Carolina gold rice made the Lowcountry the wealthiest area in North America, and perhaps the richest in the world, noted historian Coclanis. As one could expect, rice planters dominated South Carolina’s political, economic, and social life. Even so, the cornerstone of this dazzling wealth and power—slavery—was coming under attack.

THE GREAT CONFLAGRATION

In England and America, political and intellectual leaders argued that to maintain the natural order it was just and efficient to keep blacks, who were considered inferior, in bondage. For most of the 18th century, slavery was not considered evil. Indeed, “slavery was no curious abnormality, no aberration, no marginal feature of early America,” wrote Morgan. “In labor recruitment, British America was the land of the unfree rather than of the free.”

In the 1770s, though, British Protestant dissidents, especially the Quakers and Methodists, challenged these notions, pointing out the contradictions between Christian ideals about human equality and the realities of slavery. Evangelicals were usually not welcome in American Southern colonies, where “Christianity was considered a dangerous force,” says Morgan. “There was a notion that if slaves were Christians, then they would want to be free.” White preachers’ attempts to Christianize slaves frightened some South Carolina planters, who suspected that secret evangelical gatherings of blacks were incitements to revolt. And the preachers were quickly sent packing.

Nevertheless, ideas about human freedom and dignity continued to spread. In the 1760s, colonial assemblies passed resolutions attacking England’s attempt to “enslave” them by taxation without representation. Over the next decade, a few progressive Americans saw the moral conflict between fighting England’s political “slavery” on the one hand and defending slavery based on race on the other. This colonial hypocrisy was not lost on some defenders of the British Empire, including the man-of-letters Samuel Johnson, who wondered “how is that we hear the loudest yelps for liberty among the drivers of negroes?”

For their own reasons, the Lowcountry gentry periodically sought to limit the foreign slave trade. A few years after the Revolution, Lowcountry planters already owned all the slaves they needed, and their slaves were having children, says Morgan. At that time, coastal planters sought to discourage slavery’s western spread into more productive agricultural lands that might compete with their own holdings. The rice pharaohs, moreover, wanted to reduce numbers of slaves along the frontier, where runaways disappeared more easily into the wilderness and formed “maroon” colonies. And state leaders were worried about South Carolinians incurring increasingly heavy debts purchasing slaves.
At the Constitutional Convention in 1787, South Carolina representatives fiercely defended slavery but accepted that the foreign trade would be banned in 1808. Still, South Carolina went even further, abolishing the foreign trade in 1787, more than two decades before the constitutional requirement. Rice planters had “their own selfish interest in not wanting slavery to spread,” says Morgan.

But it spread nonetheless.

In the 1790s, a man named Eli Whitney invented a tool that allowed farmers to process short-staple cotton, grown only in upland areas, far more efficiently. Within two decades, farmers in the districts of Abbeville, Chester, Edgefield and others in the lower Piedmont emerged as major cotton producers, according to University of South Carolina historian Walter Edgar in a 1998 book.

To grow more fiber, upcountry planters wanted to buy additional slaves, but South Carolina law had closed the foreign trade. So the South Carolina General Assembly reopened the foreign trade in 1803. Until 1808, when the Constitution declared the trade closed, South Carolinians bought tens of thousands of foreign slaves, many for cotton plantations.

Suddenly, the rice planters’ economic strategy emerged as the model for South Carolina and the entire South. Now upland planters were also using slave labor to grow staple crops for the global marketplace. “The rice planters created the culture and institution of slavery in North America, and the cotton planters wanted to imitate them,” says Rowland.

Since the mid-18th century, many backcountry farmers who owned small numbers of slaves made a good living. But during the cotton boom, a number of Piedmont planters became spectacularly rich and major slaveholders. As slavery seeped into all aspects of upcountry economy and culture, that region began to challenge the Lowcountry’s long-time dominance.

To diversify their investments, rice planters purchased property along the southwestern frontier—Alabama to Texas—where they grew cotton as well. Meanwhile, the demand—and price—for slaves

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continued to rise, and coastal planters saw that their investments in human chattel had greater value than ever before. By the 1830s, Charleston was the hot-bed of the secessionist movement, and South Carolina was the most radical proslavery state. Lowcountry planters continued to gain wealth from growing rice, but even larger profits were gained from cotton.

In the wake of the cotton revolution, Lowcountry doubts about slavery’s spread had disappeared. Over the next 30 years, many South Carolina slaveholders urgently promoted the expansion of human bondage into new Union states and territories as the nation spread west. Northern abolitionists, meanwhile, were equally determined to prevent slavery’s establishment in the West. The balance of power between free and slave states was at stake. Both sides realized that if all new states were free, then Southern influence would shrink, and slavery would be eventually abolished.

Finally, this tension built to a climax. In the summer and fall of 1860, South Carolina leaders declared they were prepared to leave the Union if Republican presidential candidate Abraham Lincoln, who opposed Western expansion of slavery, was elected. “My own countrymen here in South Carolina are distempered to a degree that makes them . . . real objects of pity,” wrote the Charleston dissident James L. Petrigru in October 1860.

After Lincoln’s election, South Carolina representatives gathered in Charleston in December 1860 and voted to withdraw from the Union. At the state secession convention, more than 90 percent of the 169 delegates were slaveholders, and 61 percent owned 20 slaves or more. Slaveholders, coastal and inland, spoke as one. But the rice coast supplied many of the vocal leaders who led the state out of the Union, noted Joyner. Soon other Southern states followed suit, and the Confederacy was born, precipitating four years of bloody conflict.

After the war, Lowcountry rice plantations began a long decline. Federal armies had damaged many estates. Freedmen resisted returning to the rice fields; the timber industry and phosphate mining provided better jobs. In some areas, freedmen became small landowners who operated truck farms for nearby cities.

South Carolina’s rice planters never completely recovered international markets that had been interrupted by the war. Over the next few decades, Lowcountry rice faced intense competition from grain grown in Texas, Louisiana, Arkansas, and the East Indies. A series of hurricanes from 1893 to 1911 damaged Lowcountry impoundments, and planters could not afford to rebuild. Subsequently, wealthy Northerners began to buy up the rice fields for hunting preserves. Today, about 70,000 acres of former rice impoundments remain encompassed by earthen dikes in South Carolina; another 74,000 acres of impoundments have deteriorated, and many are returning to their natural state, lost to history.

Still, the rice planters’ influence remains powerful. They handed down a tradition of struggle between South Carolina’s white and black populations, between rich and poor, established families and Northern newcomers, and tidewater and upstate leadership. We can also view the rice planters’ legacy in the great houses of Charleston, Beaufort, and Georgetown, in plantation homes and remnant rice fields near the coast, and in the culture and landscape they built on the backs of slaves.

**RICE MILL.** Some rice planters operated their own steam mills, such as this one at Chicora Wood Plantation. PHOTO/WADE SPEES
Ecology and History of the Cooper Fields

In the 18th and early 19th centuries, landowners cleared cypress-gum forests along the Cooper River and built extensive dikes to control flooding of rice fields. Planters drained and irrigated these fields to kill weeds and encourage rice to germinate. But in the decades following the Civil War, landowners abandoned the impoundments. As dikes broke, water levels dropped, and vegetation grew in the remnant fields. In 1985, a portion of the Cooper River flow was diverted to the Santee River, and average water levels dropped further, encouraging growth of plants and trees.

The Cooper River fields continue to grow thick with vegetation. Unless dikes are repaired or river water levels altered, the fields could become cypress-gum forests again. Sea Grant researcher James T. Morris, University of South Carolina marine biologist, is studying the process of how plant communities are changing in the remnant fields. But he’s not just examining plant life. “These are important historical sites,” Morris says. “If we’re going to interpret the ecology, we have to understand the local history.”

Morris is a member of a team of scientists, including Hank McKellar, USC environmental scientist; B.J. Kelley, a biologist at The Citadel; James Bulak, S.C. Department of Natural Resources research coordinator; and Mike McManus, a DNR fisheries biologist, who want to learn more about both ecological functions and human uses of the Cooper River rice fields.

Some impoundment owners would prefer to rebuild the dikes and manage for waterfowl. But some boaters and fishermen want fields left undiked, because unrepaired impoundments provide excellent places to fish.

Now, Sea Grant researchers are studying the ecology of the river system as remnant fields change from open water to forest. For example, larger amounts of vegetation in the fields could soak up nutrients, potentially improving water quality. Yet more vegetation could reduce fish habitat. This kind of information could help owners decide how the fields should be managed.

“We’re playing a neutral role,” providing scientific guidance to property owners and regulatory agencies, says Morris. “We want to understand the ecological interactions between the river and the different stages of ecosystem development within these fields, and we want to be able to predict the impacts of various management options. These options could include rediking the impoundments to keep the fields flooded for waterfowl hunting, or allowing the fields to return to cypress forest, or increasing water flow at the Pinopolis dam upstream to halt the growth of plants. No single solution can satisfy all the management objectives that stakeholders have identified. After our study, we will know more about the ecological consequences of different management scenarios, and that information can help to guide the management community.”

But first the scientists must examine the human history of the area. The former rice fields, Morris says, weren’t abandoned at the same time. Some were left fallow immediately after the Civil War, while others were surrendered in the early 20th century. “We need to know when the fields went out of production, when the dikes were broken, and when the fields were open to the river.” This information would help explain how quickly the fields can be expected to become forests under current water flow patterns. “The history of the area is an integral part of the ecology.”

SUPPER TIME. An egret looks for food in a former rice field. PHOTO/WADE SPEES
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The Aquaculture America 2000 meeting incorporates the national conference and exposition of the National Aquaculture Association, the World Aquaculture Association-U.S. Chapter, and the U.S. Aquaculture Suppliers Association. There will be technical sessions and producer seminars covering virtually all species involved with aquaculture. For more information, call (425) 485-6682 or visit the conference web site (www.was.org).

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