



Wrack and Ruin and the Creative Response, a Cautionary Environmental Tale

History

Since 2007, my husband David Kaminsky and I, along with dedicated friends, neighbors and artists, have been struggling to ameliorate the environmental impacts of our neighbor's state permitted 980' dock on the adjacent salt marsh ecosystem in front of our home and our neighbors' homes on a shallow tidal estuary of Tom Creek on Wilmington Island in Savannah, Georgia.

The dock acts as an artificial barricade to the seasonal, natural migration on high tides of dead marsh grass, *Spartina Alterniflora*, which sloughs off each spring as the new grass shoots start their yearly cycle. This dead marsh grass is an essential nutritive component to the ecosystem of Georgia's vast salt marshes and is a biofuel for many organisms that make up this diverse and productive habitat.

The dock collects this dead grass - called "wrack"- in such quantity and density (up to over two feet high in some years and every year is different), that the natural ebb and flow of tidal action in the smaller, shallower creeks is unable to dislodge it. The wrack can stay "in residence" on top of the marsh for up to six months with some fluctuations. When this happens, the healthy marsh grass underneath is denied light and oxygen and the marsh grass dies.





Depending on the length of time the wrack stays on top of the marsh, the rhizomes or roots of the Spartina can be killed off as well, effectively denuding the area of the one sustaining life force that is so integral to the marsh's survival. Once the rhizomes are killed, the destabilized mud softens and is scoured by the tides. The creek beds then collapse and silt-in. The structural support is gone. The life force is gone.





The negative impacts to the adjacent marsh from this particular dock over its six year existence have been profound over a large area, several acres in size, on both sides of the dock. Despite the hours we have dedicated to clearing this dock-assisted accumulation of wrack, we lose ground (marsh) every year. In both 2013 and in 2012, we logged over 400 hours of dedicated, muddy hours in the marsh, with commensurate hours and effort in 2007 and 2009. This is how we now spend our summers.



We have developed and created responses to this local eco-crisis by engaging the help of a community of volunteers. We call them 'wrack wranglers'. Starting after high tide, each person enters the creeks with rakes, kayaks, boats and invented wrack tools to pull the wrack off the covered marsh back into the creeks. We then escort it out by hand, pushing it out the entire length of the dock to a larger tributary on the outgoing tide and send it on its way to the ocean and beaches where it can help build dunes as well as supply its nutrients to the whole ecosystem.





In 2009, we built upon an previously effective idea (2007) of using bamboo poles to protect the upland marsh (closest to the shore) in front of our home from wrack. We applied for and received a permit from both the Army Corps of Engineers and Georgia's Department of Natural Resources to place bamboo poles in the marsh. We used over 600 poles to follow a creek line further away from the dock all the way out to the end of the dock. We used the tidal action of the creek to help us move the wrack more efficiently on an outgoing tide and to avert the heavily compressed build up of wrack against the dock, which was harder to approach and move. The marsh that had been impacted in previous years now had a chance to recover, to remediate. We called this our bamboo weir.



We harvested the carefully selected bamboo from UGA's Coastal Georgia Botanical Gardens at the Historic Bamboo Farm in Savannah with the help of Doc Garton, then Director, and a large group of volunteers. We then proceeded to place them in the marsh by hand, inventing some contraptions to help us place the poles in the pluff mud. Bodyweight alone proved to be the most effective way to place the poles.





bamboo poles in place along tidal creek (look carefully to the right of the end of the dock)

It was an interesting, creative experiment with mixed results. In the subsequent years 2010 and 2011, our bamboo weir did protect the damaged marsh from further inundation of wrack and we managed to keep the longer, shallower, and more convoluted ‘bamboo’ creek cleared of the wrack collected there. Patches of previously impacted marsh near the dock that still had their rhizomes began to regenerate and grow. It was a wonderful sight. The marsh wants to survive.





However in 2012, the springing tides in May combined with a Nor'easter (the prevalent pattern here) and subsequent high tides and more wrack in June and July proved to be the Trifecta for wrack accumulation against our bamboo poles.

We found ourselves with the dilemma of not being able to clear the bamboo creek (from the furthest point out 1,000 feet, working toward land) in a timely fashion (two months-three?) and thus having the wrack decimate previously unaffected marsh closer to the shore. We pulled 300' of upland poles and the wrack then moved on higher tides toward and against the dock. Now we had to attempt to clear this inundation as well as continue maintaining the bamboo creek. What became obvious is that with our limited human power, we were no match for what nature was handing us. Not that we thought we ever were, but doing something was better than doing nothing.



The photo above was the result of that year (2012) despite our best efforts: heavily and newly impacted marsh. *Note: upland marsh in foreground was protected by original bamboo placement in 2007.*

2013 proved to be another banner year for wrack accumulation against the remaining bamboo poles and the now opened 300ft passage which allowed more wrack to build against the dock. By this time we had invented some tools to help us move wrack. My studio mate Andrew Hartzell designed our 'wrack attacker', to be slipped over the bow of a small boat. Once again, we enlisted a growing community of people who wanted to help us and valued their time in the marsh and to this effort.





The wrack attacker was most effective at clearing an opening in the creeks and the wrack wranglers could work more efficiently to move the collected wrack out the creek.





Recreational docks are *exempt* from the State of Georgia's Coastal Marshland Protection Act.

Georgia Coastal Marshlands Protection Act, Adopted in 1970: (O.C.G.A. 12-5-280, et seq.)

The coastal marshlands of Georgia comprise a vital natural resource system. The estuarine area of Georgia is the habitat of many species of marine life and wildlife that cannot survive without the food supplied by the marshlands. The estuarine marshlands of coastal Georgia are among the richest providers of nutrients in the world. Such marshlands provide a nursery for commercially and recreationally valued species of shellfish and other wildlife, provide an important buffer against flooding and erosion, and help control and disseminate pollutants. The coastal marshlands provide a natural recreation resource which has become vitally linked to the economy of Georgia's coastal zone and to that of the entire state.

This coastal marshlands resource system is costly, if not impossible, to reconstruct or rehabilitate once adversely affected by man. It is important to conserve this system for the present and future use and enjoyment of all citizens and visitors to our state. Activities and structures in the coastal marshlands must be regulated to ensure that the values and functions of the coastal marshlands are not impaired and to fulfill the responsibilities of each generation as public trustees of the coastal marshlands for succeeding generations. (Code 1981, § 125281, enacted by Ga. L.1992, p. 2294, § 1) <http://coastalgadnr.org/msp/ap/marsh>



There are some restrictions on square footage and length of docks in Georgia, <http://coastalgadnr.org/pe/privatepgp> but the morphology of the creeks, orientation, view-shed and the issue of wrack accumulation in relationship to these extended docks over the public trust marsh and waters have not been included in the permit criteria for evaluating the need of such lengthy intrusions, especially when they lead to such damage to the ecology of the marsh. There are no leasing fees involved. The dock owner shoulders no responsibility to the damage caused.

Our neighbor's particular dock on Tom Creek was fast-tracked under the PGP83 Permit and only two adjacent property owners were notified. We live four 100' lots north and are in the middle of the zone of impact. We first knew about this dock being built when the barge showed up to start work. We now advocate for a larger number of property owners on either side of these mega docks be contacted before any permits are issued to voice their concerns.

With our neighbor Larry Gibson, we filed a TRO (Temporary Restraining Order) in Federal Court once it became evident that our community pleas and letters to our neighbor who was building the dock were unsuccessful. Don Stack and Ann Hartzell were our terrific legal team. <http://www.stackenvirolaw.com>

We did not win the TRO. The Court ruled that the DNR was not "egregious" in issuing this permit and followed its own guidelines. This is what must change: State Policy.



We have received welcomed and consistent media coverage from the Savannah Morning News, by environmental writer Mary Landers, as well as an editorial by Tom Barton about our attempts to counter the impacts to our marsh from this dock and concerns for the health of the marsh. We even rated an editorial cartoon by Mark Streeter.

<http://savannahnow.com/news/2007-09-17/docks-gets-bigger-so-do-concerns>

<http://savannahnow.com/opinion/editorial/2007-09-15/protect-treasure>

<http://savannahnow.com/1a/coastal-empire/2009-08-29/mega-docks-debate-persists>

<http://savannahnow.com/mary-landers/2008-07-16/island-residents-plan-bamboo-barrier-minimize-wrack-buildup>

<http://savannahnow.com/mary-landers/2009-06-28/bamboo-poles-divert-marsh-wrack>

<http://savannahnow.com/news/2013-09-20/marsh-turns-art-museum>



Our story has generated research by Dr. Clark Alexander of the University of Georgia's Skidaway Institute of Oceanography, by University of Georgia Professor Merryl Alber, and has elevated the discussion of wrack accumulation into the lexicon of concerns for the Georgia Department Of Natural Resources (where it did not exist before), as well as other interested parties whose concern is the health, study and preservation of this ecosystem.

The Southern Environmental Law Center has highlighted this issue as part of their larger Georgia Coastal Initiative: http://www.southernenvironment.org/cases/saving_the_georgia_coast
Saving the Georgia coast is one of the toughest conservation challenges we face in the South today, and it is also one of SELC's highest priorities. To defend this ecological gem, we have launched a comprehensive initiative that draws on all our skills and expertise

In SELC's Advocacy in Action Newsletter Summer 2009:

Long Boat Docks. *Excessively long boat docks are an increasingly common sight in Georgia's coastal marshlands. These outsized structures stifle the biological productivity of the underlying marsh by ensnaring large amounts of "wrack" (rafts of dead and decay-ing vegetation), which kills aquatic grasses by robbing them of sun-light. In league with a developer-dominated stakeholder group, Georgia's Coastal Resources Division is pushing for rule changes that work to streamline the permitting process for community docks that can extend up to a thousand feet into the marsh. SELC and its partners are calling for the agency to drop its recommendations.*



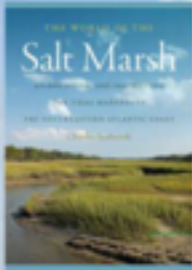
Coastal Issues Today:
A Study in the Tragedy of the Commons

Chandra Brown

Chandra Brown, then the Ogeechee Riverkeeper <http://www.ogeecheeriverkeeper.org>, reported in Coastal Issues Today: A Study in the Tragedy of the Commons about Georgia's golden

marshes laid to waste by our desire to be close to them. This report includes our photos of the dock and the heavy impacts. http://www.toms creek.info//Coastal_Issues_Today.pdf
We have received advice and support from David Kyler at The Center for Sustainable Coast

**Salt Marsh Art Show and Author Event to Benefit
the Center for a Sustainable Coast**

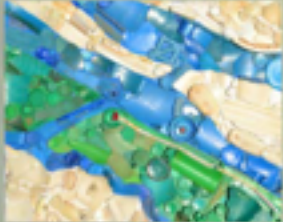


**Saturday, November 17th
7PM @ The Book Lady
Charles Seabrook**


*author of The World of the Salt Marsh: Appreciating and
Protecting the Tidal Marshes of the Southeastern Atlantic Coast*
will talk and sign books at the opening of our...

**Salt Marsh Art Benefit
featuring art from over 20 local artists**

including
Betsy Cain, David Kamansky, Harry Delorme,
Christine Sajecki, Joy Dunigan, Jan Clayton Pagratis
& Marcus Kenney



McQueen's Island
by Harry Delorme



Saltmarsh by Betsy Cain

Opening Night is November 17th
and the art will be on display through December 25th
A percentage of proceeds from Seabrook's book
and art sales will benefit the Center for the Sustainable Coast,
a non-profit organization whose mission is to improve the responsible
use, protection and conservation of Georgia's resources: natural, historic
and economic. Learn more about the efforts of the Center by visiting
their website at sustainablecoast.org

The Book Lady Bookstore
6 E Liberty St
Savannah GA 31401

(912) 233-3625
books@thebookladybookstore.com
www.thebookladybookstore.com

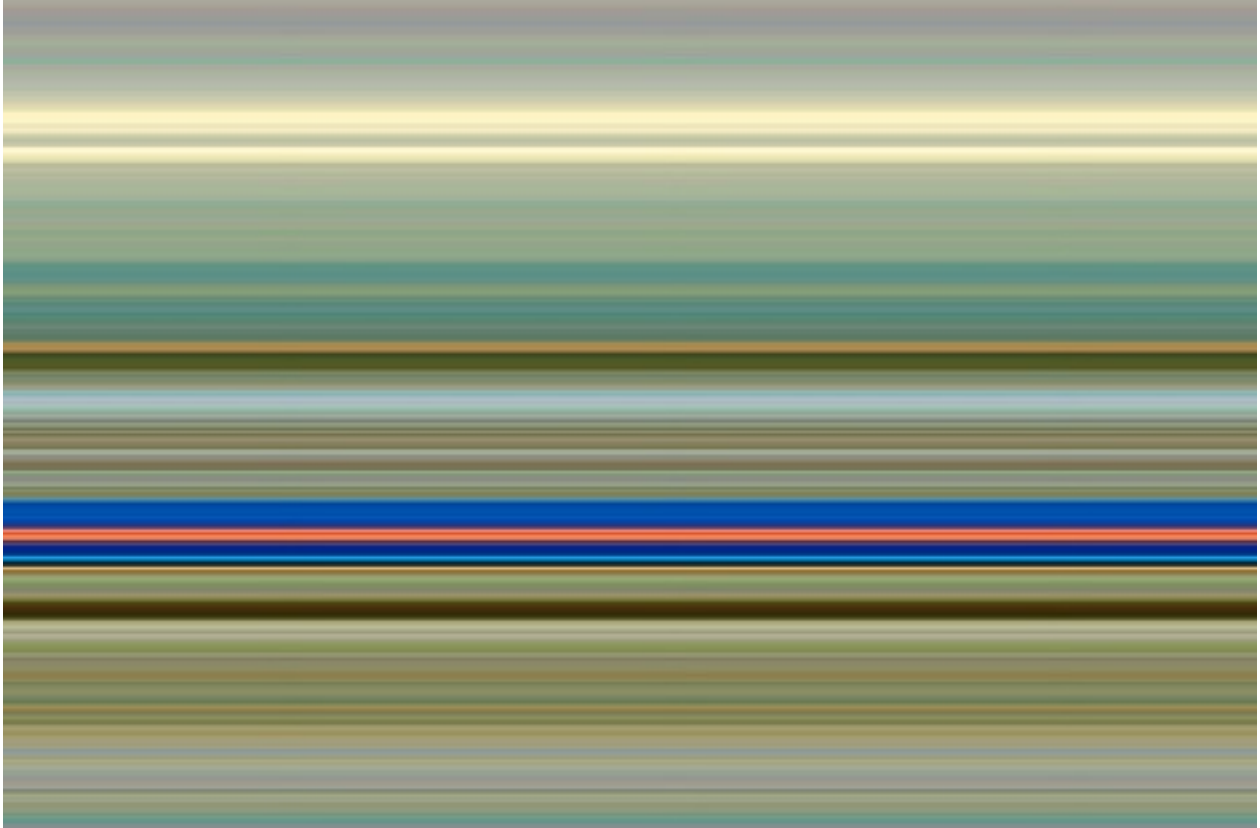
(<http://www.sustainablecoast.org>). The purpose of our non-profit membership organization is to improve the responsible use, protection, and conservation of coastal Georgia's resources - natural, historic, and economic.





marsh shroud, oil/painter's tarp, 9 x 14', 2009. Shown in the exhibition "in situ" at the Jepson Center for the Arts, Savannah, Georgia, 2011. Betsy Cain

In November 2012, we organized an art exhibit *Salt Marsh Art Show* at The Book Lady Bookstore <http://thebookladybookstore.com> in Savannah, featuring work by a great group of local artists, about the salt marsh. This show coincided with a book signing by Award-winning environmental journalist Charles Seabrook, author of *The World of the Salt Marsh: Appreciating and Protecting the Tidal Marshes of the Southeastern Atlantic Coast*. Critics call the book, published by the University of Georgia Press, "a must-read for anyone concerned for the future of our coasts." http://www.ugapress.org/index.php/books/world_of_the_salt_marsh/



Tom Creek #1, archival inject/canvas, 2010. David Kaminsky

One of the more phenomenal aspects that has resulted from all this are the people who have become involved in helping us. Sometimes we have as many as 20 people out in the marsh in one day. They are learning about the marsh, too: how the tides work, the power of the tidal currents, the fluctuations in height of the tides, (Georgia has the second highest tide fluctuation on the entire East Coast) and the diversity of the animals in the marsh, (crabs, clams, mussels, dolphins, fish, otters, minks and birds). They help to strategize how to approach such a daunting task and bring good spirits to our work. It has been a transforming experience. And not without its triumphs and celebrations! We are most grateful to all who have helped us.



David and I are both artists. He is a photographer and I am a painter. We have done extensive photo documentation of our personal experience of the slow and ongoing loss of the marsh in front of our home in an effort to advocate for closer scrutiny of these impacts and to hopefully effect change in policy and create a new discourse about permitting long docks. We have lived beside the marsh for 20 years and have become critically aware of the eco-value of the salt marshes not only to the State of Georgia, but to the planet. Georgia's marsh ecosystem is considered to be one of the most important and productive ecosystems in the world.

We make art that speaks to the ecology of the salt marsh habitat and to its beauty and power. It is our belief that interaction between scientists, artists and designers/engineers has the potential to bring new insights into the study and preservation of Georgia's salt marshes.

Our upcoming exhibition *Wrack and Ruin and the Creative Response: A Cautionary Tale* at The Circle Gallery in University of Georgia's College of Environment and Design (February 2014) in Athens, Georgia will combine both art and documentation about the cumulative and ongoing effects to the marsh from this particular site. Our goal is to bring what has happened to us to a larger audience and to speak to the idea of community building through art and activism as well as advocating for sustainable approaches to maintaining the health of this vast public resource.

Betsy Cain

<http://www.betsycain.com/>

betsy@davidandbetsy.com

David Kaminsky

<http://www.davidkaminsky.com>

david@davidandbetsy.com

<http://www.toms creek.info>

Wrack Wranglers

Carmela Aliffi	Eric Alstad	Melinda Borysevicz
Kip Bradley	Claire Brodhead	Peter Brodhead
Janey Brodhead	Harry Carter	Jerry Conner
Henry Dean	Suzanne Donovan	Stewart Dorhman
Genetta Eaton	Steve Ellis	Anna Fishel
Marilyn Fishel	Jane Fishman	Kathy Fritz
Gerry Gibson	Larry Gibson	Lauren Gibson
Rupert Halliwell	Alex Hannay	Tina Hardy
Mary Hartman	Andrew Hartzell	Ann Hartzell
Dave Hersh	Susan Krane	Susan Lamb
Diana Lane	Imke Lass	Dan Levine
Beth Logan	Jesse Lovell	Meghan Maylone
Bucky Mell	Leo Meza	Kofi Moyo
Deb Oden	Preston Orr	Kelli Pearson
Blanche Nettles Powers	Catherine Rendon	Kim Roberts
Lowell Roberts	Kristin Russell	Kevin Ryan
Christine Sajecki	Nicholas Silberg	Jamie Smith
Elizabeth Stewart	Meredith Sutton	Matt Toole
Paulina Tubb	Cole Tufts	Pat Walker
Thad Welch	Natalie von Loewenfeldt	

Honorary Wrack Wranglers:

Dr John Hunt
Judean and Joe Drescher
Ann and George Fuller