



What's Cooking

A QUARTERLY PUBLICATION OF THE SOUTH CAROLINA AQUARIUM'S

----- Sustainable Seafood Initiative -----



2011, Issue 3

Upcoming Events

SSI Dinner Series

October 20 - Anson St. Café

November 1 - Factory Creek Fish Company

December 7 - Old Village Post House

January - The Boathouse at Breach Inlet

February - Middleton Place Restaurant

March - Fleet Landing

2011 SSI Events at the Aquarium

November 8 - Wine on the Water

If you would like to host a dinner or participate in events at the Aquarium please let us know.

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Partner Updates

Welcome to the newest SSI partners: Emily's Restaurant and Tapas Bar (Beaufort), Factory Creek Fish Company (Lady's Island), Mediterra Catering (Charleston) and Shug's Smokehouse (Hartsville). In addition, congratulations to our newest Platinum Partners: The Atlantic Room at the Ocean Course and Fleet Landing Restaurant and Bar, who recently upgraded from the Gold Partner level by making substantial changes to their sourcing, shifting to more sustainable products.

2011 Partner of the Year: Fleet Landing

On September 19th, the South Carolina Aquarium presented the 2011 Sustainable Seafood Initiative Partner of the Year award to Fleet Landing Restaurant and Bar. The award is based on a points system, where partner restaurants accrue points through event participation, menu assessments and promotional activities. Fleet Landing received this award because of their dedication to the promotion of sustainable seafood through different avenues such as educational dinners, special events, staff training and television appearances. Past winners include Fish, Middleton Place, The Boathouse at Breach Inlet and Sea Island Grill at Wild Dunes.

Invasive Species: Eat 'em to Beat 'em

When we talk about sustainable seafood we usually explain that we need to limit our harvest now so we'll have more fish in the future. But there's a twist... When non-native fish are introduced to a new region they can spread rapidly and dominate ecosystems. Some scientists believe that the only way to sustain native fish communities may be to harvest as many of the invaders as possible. Again chefs can influence the sustainability of our oceans by introducing these new species to their guests' palates and showing how to properly prepare the new product. In these cases, instead of moderating our harvest to ensure continuing reproduction, we strive to intensify harvest, to discourage and hinder reproduction: eat'em to beat'em!

Here in the South Atlantic region, we are currently struggling against invasive lionfish. Lionfish are native to the South Pacific and Indian Oceans but have spread throughout the Caribbean and Atlantic. No one knows exactly how and where the first



Lionfish. Image courtesy of the Chinese Academy of fisheries Sciences

Our goal is to promote the conservation of fishery resources and the use of sustainable, especially local and domestic, seafood in restaurants.

lionfish were introduced to U.S. waters, but six were accidentally released in Biscayne Bay, Florida, when a beachside home aquarium broke during Hurricane Andrew in 1992. Further releases of pet lionfish have very likely contributed to the population that is spreading throughout the South Atlantic region. Lionfish are now common from the Florida Keys through North Carolina with isolated sightings as far north as Long Island, NY and as far west as Louisiana.



Lionfish sightings as of 2011. Image and data courtesy of USGS.

Lionfish have no natural predators in the Atlantic, yet lionfish themselves are voracious predators and will eat nearly anything in their path. They hunt small fish, shrimp, and crabs at night, using their widespread pectoral fins to ambush and trap prey in a corner, then swallow it whole. Lionfish can consume items 1/2 to 3/4 times their own size and their stomachs can expand 30 times in volume. In addition, lionfish reproduce rapidly and at a young age and their offspring can float great distances on ocean currents, enabling their population to spread easily.

Fortunately for us and our native reef communities, lionfish are also tasty. The meat is mild and flaky, similar to small snappers, with a slightly meatier consistency. Many people believe that lionfish are poisonous, this is not true – the dorsal, pelvic and anal fin spines are venomous (can inject a toxin into your body) but the meat is not poisonous or dangerous to consume. These spines must merely be cut away before filleting the fish.

Two SSI partners have been leading the charge against lionfish in South Carolina. Chef James Clarke, at SSI

Platinum Partner Waterscapes at the Marina Inn in Myrtle Beach, occasionally buys lionfish from local snapper and grouper fishermen, who catch it as bycatch. Chef Clark has posted instructional videos on YouTube showing how to safely clean lionfish.

Fleet Landing Restaurant, a Sustainable Seafood Initiative Platinum Partner and the 2011 Partner of the Year, has led the charge to serve lionfish in the Charleston. Executive chef Drew Hedlund and sous chef Brian Barber have pursued various sources of this invasive species and their efforts have paid off, allowing Fleet Landing to regularly feature lionfish over the past year. They have developed a consistent supply of lionfish from the Western Caribbean that they have passed on to the SSI to share with all partners.

For lionfish caught as bycatch in spiny lobster pots in Florida:

Gary Nichols, Nichols Seafood, Key Largo, FL
 Cell: 305-393-1415
 Home: 305-664-8358

For lionfish caught by spear and vacuum in the Western Caribbean:

David Johnson, Traditional Fisheries
<http://traditionalfisheries.com>
david@traditionalfisheries.com
 952-913-7228



Fleet Landing's Brian Barber removing the venomous dorsal spines from a lionfish.



Fleet Landing was the first restaurant in Charleston to feature lionfish. They served this potato encrusted lionfish over purple cabbage and heirloom grape tomatoes at an SSI dinner in May.

The mid-Atlantic region is dealing with two invasive species of their own: snakehead and blue catfish. Northern snakehead is a predatory fish native to Africa and Asia. Introduced to the Potomac River in 2004, snakehead quickly became established in the upper reaches of the watershed.

In mid-July of this year, a team of researchers discovered a mature female snakehead in the Rhode River (about 50 miles up the Chesapeake from the mouth of the Potomac) – the first report in that area. Typically found in freshwater, snakehead can survive in low salinities. Heavy spring rains with large amounts of freshwater runoff this year may have lowered the salinity levels enough to allow snakehead to move from the Potomac into other nearby rivers by way of the Chesapeake Bay.

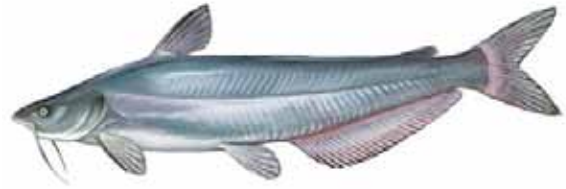
Snakehead have modified lungs that allow them to breathe air and survive on land for up to four days. They are also capable of traveling up to 1/4 mile on land by wriggling their body and fins. Snakehead are voracious predators that can consume animals up to 1/3 of their own size, leading scientists to be concerned about their impact on native fish species.



Invasive snakehead. Images courtesy of Profish Ltd.

A Washington, D.C. based seafood dealer, Profish, is leading the effort to encourage harvest and sale of snakehead. They buy snakehead from area fishermen, incentivizing future harvest, and sell it to restaurants in the D.C. metro area. The demand for snakehead is rapidly increasing.

Profish is also heavily marketing the invasive blue catfish. Blue catfish are native to North America, from Minnesota and Ohio southward into Mexico. They were originally introduced to Virginia's waters in the late 19th century but failed to establish a naturalized population. They were again introduced to Virginia waters in the 1970s and have been multiplying and spreading since.



Blue catfish. Image courtesy of Maryland Department of Natural Resources.

Blue catfish are the largest catfish in North America and can weigh over 100 pounds. They have become quite popular with recreational anglers and have until now been managed with a goal of attaining trophy-sized fish for recreational fishermen. Harvest has been limited and catch and release fishing encouraged.

But blue catfish are opportunistic, predatory fish, meaning they will consume anything they can find. They compete with native species for food sources, potentially hindering the government funded recovery efforts for shad, river herring, eel and sturgeon, and cause reductions in fish populations that ospreys and eagles rely upon for food.

Recently, Maryland's Department of Natural Resources reclassified blue catfish as invasive, instead of merely introduced or non-native. The distinction was defined by an Executive Order in 1999 - invasive species are "an alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health". This reclassification has angered some anglers who would prefer continued management for trophy-sized blue catfish as a naturalized, non-threatening introduced species. Instead, commercial fishermen are being encouraged to harvest blue catfish with hopes of curbing growth and reducing the population.

Through Profish's efforts to support the Maryland Department of Natural Resources goal to reduce the blue catfish population, chefs have found that blue catfish is a flaky white fillet with a very clean flavor – and a low price. Commercial harvest quickly rose from a few hundred pounds per week to 1,000s of pounds.

Another headline grabbing invasive species is the Asian carp. Bighead and silver carp are native to China and East Asia. After being intentionally introduced to aquaculture ponds and wastewater lagoons for algae control (they are filter feeders) in the 1970s, they quickly escaped into the wild.

Asian carp are now found throughout the Mississippi River basin (including tributaries) and have firmly established populations in Illinois and Missouri, south to

Louisiana. Asian carp have taken over the Illinois River, which connects the Mississippi River to Lake Michigan. Natural resource managers are working hard to prevent Asian carp from entering the Great Lakes system, which are protected only by an electronic barrier.



U.S. range of invasive Asian carp. Red areas denote established populations. Pink areas denote likely ranges based on watersheds where Asian carp are present. Map and data courtesy of USGS.

Asian carp have potential to severely impact native species because they feed on plankton required by larval fish and native mussels as well as adult fish such as shad. Carp are prolific breeders and rapidly grow to very large sizes – three to four feet in length and 60 to 90 lbs. Not only do they threaten native aquatic communities, they also pose a danger to humans. When frightened, such as by the noise of boat motors, Asian carp leap out of the water and can strike vessels and boaters, potentially causing severe injuries.



Asian carp leap out of the water after being frightened by a passing boat. Photo courtesy of www.asiancarp.org and Nerissa Michaels.

Asian carp meat is firm, mild and very nutritious with high levels omega-3 fatty acids – raising the possibility of controlling the population by eating it. Unfortunately,

the fish also has a complicated bone structure that makes it difficult to fillet. In addition, there is no major commercial fishing effort or processing infrastructure established. But the biggest obstacle is the name – “carp” carries a negative connotation that many potential consumers cannot get past.

The Louisiana Department of Wildlife and Fisheries and Louisiana chef Philippe Parola have teamed up to rebrand Asian carp as Silverfin and create a commercial and recreational market for this invasive species. In 2009, Louisiana Sea Grant and the LSU AgCenter produced a how-to video (available on YouTube) for recreational anglers demonstrating ways to clean and cook bighead and silver carp. They have also experimentally canned Asian carp for Haitian earthquake relief, finding that it is very similar to canned tuna but can also be canned with the bones in, like salmon. The Illinois Department of Natural Resources recently held a public tasting event in Chicago, hoping to encourage everyone from high end restaurants to food pantries to open their minds to Asian carp.



Asian carp. Image courtesy of www.asiancarp.org.

While lionfish is the immediate, local threat in South Carolina, invasive species are causing problems around the country. For some time, chefs have influenced seafood sustainability by what they chose NOT to serve. Now you have the opportunity to truly influence ecosystem health with what you choose TO serve. We encourage you to find a source for lionfish, or other invasive species, and experiment. If you choose to sell it, educate your servers so they in turn can educate your customers and help build a demand for invasive species as food and help curb their expansion and reduce their populations.