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President  
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Testimony  
Before the Committee on Resources  
United States House of Representatives

Lessons Learned Protecting and Restoring Wildlife in Southern United States under the Endangered Species Act  
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I am the founder and an investor in SeaChick (Miss.), Inc., a private Mississippi corporation that holds Mississippi's Aquaculture Permit No. 1. Started in August of 1987, SeaChick was involved with drafting the Aquaculture Act of 1988, with permitting done by the Mississippi Department of Natural Resources. Four years later, SeaChick started the legislative initiative which shifted permitting under the Aquaculture Act from the Mississippi Department of Wildlife, Fisheries and Parks to the Mississippi Department of Agriculture and Commerce, where it remains today. I welcome the opportunity to participate today in making what I hope will be a positive contribution to modifying the Endangered Species Act.

Although SeaChick was started with hybrid striped bass as its principle species, in January 1998, we switched to growing tilapia, which continues today as our focus. Our high-intensity warm-water facility can be seen in the accompanying aerial photo: Exhibit A. SeaChick uses geothermal 1/4-mile deep-well water and cooler shallow-well water in a single-pass flow-through technology involving sequential poly-culture and reuse of the well water. SeaChick can pump up to 8 million gallons of well water per day and discharges a like quantity per day. "U"-tube technology is used to efficiently inject liquid oxygen to oxygenate the 48 aboveground circular concrete production tanks. SeaChick was the first commercial fish farm in the world to use computers to feed fish. A close-up of the tanks and the feeding system is shown in the photo labeled Exhibit B. Much of SeaChick's high-intensity fish culture technology is protected by trade secret and does not leave the facility. An example of SeaChick's technology which does leave our facility can be found in U.S. Patent 6,557,492 -- "A System For Transporting And Storing Life Fish".

Today SeaChick produces its tilapia following five principles: 1) there are no antibiotics used anywhere in the facility, rather SeaChick is a world-leader in competitive exclusion, that is, using good bacteria to out-compete bad bacteria; 2) no sex-reversing or growth hormones are used; 3) no genetically modified fish are used; 4) no fish meal is used in our all plant protein (APP) production feeds; and 5) clean, pollution-free well water as old as 20,000 since it last fell as rain on the earth's surface, is used. We spin the water in our tanks so that our fish are swimming in moving water at all times, build and toning their muscles. By feeding them around the clock, under lights at night, SeaChick produces a flesh marbled with fat, much like red meats, but rich in the heart-friendly omega-3 lipids.

SeaChick started with three species of tilapia in 1988, that is, aurea, nilotica, and the mossambica. Hand selecting and breeding has been ongoing since then with the result called the SeaChick Gray, a hearty, fast-growing, efficient feed converter, with the goal of maximizing the percentage of boneless, skinless fillet weight to total live weight. The broodstock are placed in earthen ponds which combine first and third world technology in a manner which can produce 80-85,000 fingerlings per month with an average size of 80 to 120 grams for stocking into production tanks. 90-120 days after stocking we can harvest 1 ¼ to 1 ½ pound market-sized food fish. These ponds range from ¼ acre to 1 acre in size.

SeaChick had experienced some bird predation from such species as egrets, herons, osprey, and commorants during the years in which we were focusing on hybrid striped bass. We placed shade clothes over the 48 production tanks in a tent-like manner centered over the water and leaving access to the fish along the edges of the tank wall. We placed lightweight meshed bird netting over the smaller fingerling ponds and stretched mono-filament fishing line in a grid pattern over the two larger ponds. We referred to this as passive exclusion. When passive exclusion, by itself, wasn't getting the job done the Atlanta office of the USF&WS urged SeaChick to get a species specific limited take permit to shoot. I have never owned a gun or held a hunting license. I volunteered to serve in South Viet Nam as a member of the Agriculture Team of International Voluntary Services from 1967 to 1969, and never carried or possessed a gun for the two years I lived and worked in the war zone.

With genuine reluctance, I allowed SeaChick to acquire a USF&WS take permit for each of the species then giving us problems. We created a "no-fly" zone over our production tanks using the lightest load shotgun shells, shooting "warning shots" in the vicinity of the birds to scare them away. Then shooting closer behind the flight path of the returning "leaders". When the "leaders" continued to return, we shot at them from a considerable distance to "reach-out and touch them" but not harm them. Only as a very last resort, did we shoot to kill these few troublesome birds. This protocol has minimized the number of birds "taken", and maximized the desired behavior modification. For five consecutive years SeaChick has been permitted to "take" five osprey per year, and we have actual taken none over those five years, despite osprey visiting SeaChick almost daily.

The Mississippi brown pelican was listed under Endangered Species Act in 1985, while Florida and Alabama brown pelicans were not. The reason, cited by the listing USF&WS regional office in New Mexico, was that the State of Mississippi would be used as a "buffer" state for the State of Louisiana, which did have a pelican problem. SeaChick is located approximately 10 miles west of the border with Alabama, where we could get a USF&WS take permit for brown pelicans. Due to no brown pelican problem in Mississippi, but instead due to a Louisiana brown pelican problem, the entire state of Mississippi was and remains penalized, without take permits for brown pelicans.

The Endangered Species Act allowed the Albuquerque USF&WS (the USF&WS Atlanta Regional Office issues SeaChick's take permits) to impose the brown pelican listing upon Mississippi, but does NOT allow the USF&WS Atlanta Regional Office to start the delisting process of the brown pelican for states within its region. I am told that control of delisting a species covered by the Endangered Species Act resides with the originating regional office in Albuquerque. Meanwhile Mississippi and SeaChick suffer crippling losses to brown pelicans. We estimate direct losses to brown pelicans at \$300,000 to 400,000 during the 2003-2004 pelican season at SeaChick. This does not include the indirect losses to parasites, diseases, and lost sales opportunities. Electrical events between brown pelicans and power lines at SeaChick did thousands of dollars of damage to motors, transformers, wiring, electrical components, computers and various electronics throughout the facility.

During the 2000-2001 and the 2001-2002 brown pelican seasons, SeaChick managed to received a USF&WS brown pelican harassment permit which included a capture/tag/relocation provision. We were able to capture grossly engorged brown pelicans filled with our tilapia. With experimentation and research done at SeaChick's expense and documented with the USF&WS, we developed a relocation technique that was 80-90% successful in relocating none-returning brown pelicans. Imagine our dismay when the USF&WS refused to renew the harassment permit provision for relocating brown pelicans because the Migratory Bird Act required banding, and SeaChick personnel were NOT licensed to band migratory birds. Twice in the 2004-2005 pelican season, SeaChick returned brown pelican harassment permits. These well-intentioned harassment permits were so restrictive and detailed as to make lawful compliance all but impossible. We choose to have no harassment permits during those periods. Eventually a temporary authority was granted to SeaChick to resume relocating brown pelicans using the relocation technique we had developed and documented in previous years. This "conflict", over banding brown pelicans, between the Endangered Species Act and the Migratory Bird Act must be resolved.

SeaChick has filed a 90-day letter with the USF&WS Atlanta Regional Office of its intent to submit an invoice for the regulatory taking of our tilapia crop during the 2004-2005 brown pelican season. We have invested tens of thousands of dollars per year protecting our crop and protecting the brown pelican. Over the years, Federal and state agencies have placed their representatives at our facility for weeks at a time and witnessed and recorded the unnatural behavior of brown pelicans at our facility despite our best efforts. Given our highly successful take permit results with other species, SeaChick seeks relief by delisting the brown pelican in Mississippi.