EXECUTIVE SUMMARY
AUGUST 2015

CHINESE TALLOW TREE ISSUE

How bad are these trees?

Chinese Tallow (*Triadica sebifera*), a non-native tree from China, is currently transforming the southeastern Coastal Plain. According to the U.S. Forest Service: Even one tallow tree presents a danger of explosive expansion that can hurt local ecosystems. Tallow trees begin producing viable seed after only 3 years. They can spread by root fragments and cuttings, so are quick to invade after a hurricane. Tallow trees grow faster than nearly all indigenous species and quickly create a shade canopy that inhibits growth of native vegetation. Just one tallow tree can produce 100,000 seeds every year (3X more than indigenous species). Nearly all of these seeds are viable and can germinate even after several years. A mature stand can produce 9,921 pounds of seeds per 2.5 acres per year. Trees remain productive for 100 years. The tallow tree is listed as a "severe threat" by the South Carolina Exotic Pest Plant Council. The Nature Conservancy has designated Chinese tallow as one of the "ten worst alien plant invaders" in the United States. It is considered a damaging species by the U.S. Dept. of Agriculture, the U.S. Geological Survey of the Dept. of Interior, the So. Carolina Department of Health, Environment and Conservation. Beaufort County recently recognized Tallow tree as an invasive species. They are highly invasive and can eliminate or prevent native species from growing in an area.

What is the extent of the problem?

In 2014, the Dataw Island Conservancy conducted a Tallow tree survey of all properties fronting on Dataw Drive between Gleason's Landing and Oak Island Roads on May 20th and again on June 3rd. Results were as follows:

Number of Trees

	<4" dia.	> or = 4" dia.	All diameters
Undeveloped Lots	**109**	**124**	**233**
DIC/DIOA*	**1**	**4**	**5**
Home Properties	**4**	**3**	**7**
Total	**114**	**133**	**245**

*** Includes sales office parking lot, walkways and easements for utilities**

From this survey, we can estimate that there are thousands of Tallow trees on Dataw Island and that the geographic distribution will be roughly in the same proportions as listed above.
(The Dataw Island Conservancy has just purchased a Trimble R1 GNSS Receiver and the accompanying Terraflex Advanced Software package which will enable it to eventually measure the location (latitude/longitude) and create a GIS map of Tallow trees on the Island. At that time we will have an accurate count of trees by size and location).

What are the options going forward?

1. Kill all the trees and remove all the dead wood?
That should not be our goal. Chinese Tallow is so widespread over the Southeast and Gulf Coast States that, in light of the absence of an aggressive, Federally-funded, well-coordinated, multi-state effort to totally eradicate the species in the U.S., it would be impossible to permanently rid Dataw of this problem.

2. Do nothing?
Doing nothing is not an option either. For many years, the States of Texas and Louisiana failed to recognize Tallow trees as a problem. Now, the coastal prairie of Louisiana and Texas is nearly all Tallow tree forest. Chinese tallow can grow up to 30 feet and shade out native sun-loving prairie species. The disappearance of prairie species is troublesome because, in Texas, less than 1% of original coastal prairie remains, and in Louisiana, less than 500 of the original 2.2 million acres still exist. In the Houston area alone, Tallow trees comprise one out of every four trees in the DMA and Tallow is the most populous of all species. The State of Texas has now banned the sale or importation of this tree and is spending millions of dollars annually to remove it.

3. Something in-between?
We recommend a multi-year program, starting this year, aimed at controlling the spread of Tallow trees by systematically root-killing and removing the seed bearing trees in each of 10 designated Tallow Tree Management Areas (TTMA). This should be followed by a yearly monitoring and maintenance program. This would sufficiently control the problem.

This approach works for a number of reasons:

- Affordability - Costs can be budgeted over a multiple of years.
- Provides for needed time to sensitize/educate Residents and Property owners to the problem, perhaps a very modest increase in dues/assessments can be proposed to residents to offset these costs.
- Dataw's proactive approach to environmental integrity becomes a marketable feature for new prospects.

In some cases, such as the golf courses, stands of Tallow trees are integral to the play of the hole. Removal would affect the course rating. In those few cases, we recommend removal with substitution of native trees to maintain playability of the hole in question. (Red bud and Red Mulberry are recommended). Adequate funding needs to be available so there is the least amount of disruption. For these areas, we would recommend cutting down and removing the trees followed immediately by spraying the exposed trunk with GARLON-4 herbicide.

Common ground areas vary in their visibility to the public. For instance, medians separating major roads are the most visible. Fortunately, there appear to be few Tallow tree issues in the medians. Killing and removal of Tallow would be followed by planting a native replacement, if necessary.
Common ground removal can be dealt with based upon their proximity to the Tallow Tree Management Areas and budgeted for in the year that each TTMA comes up for treatment.

Initially, The Conservancy suggested that individual homeowners identify, kill and remove trees found on their respective properties. We have modified that approach due to concerns that individuals may improperly cut and remove trees and either over spray, under spray, or not spray at all.
The high cost of the specialized herbicide is also a factor in our decision. These considerations, it was felt, would lead to imperfect results which would be hard to track and difficult to correct.

We, therefore, have opted for a more uniform and controlled approach consisting of trained volunteers we call "Tallow Tree Terminators" who systematically canvass each of 10 TTMA's ensuring that an accurate record of the program can be kept.

In order to maintain and promote Dataw Island as a pristine, natural environment, effective control of invasive species needs to be an integral part of our community or Club landscaping plan.

In the Island's marketing polls of new owners, the "natural, pristine beauty of the Island" consistently heads the list of island amenities as to why prospects buy at Dataw. Certainly then, budgeting to preserve this amenity of "Natural and Pristine Beauty" should be as important to the future health, attractiveness and home values on the Island as other amenities i.e. Golf courses, Pool complex, Tennis courts, and Community center.

DIOA and DIC both have robust, community-funded Capital Investment and Infrastructure Replacement programs in place already. It makes sense to include ecological maintenance in these programs.

The Dataw Island Conservancy thinks that, when approached in this way, Dataw's residents and Club members will agree.

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