









# STATUS OF BEACH VITEX IN NORTH CAROLINA

Melanie Doyle and Dale W. Suiter  
February 2013







\*photo taken in September



# Beach Vitex

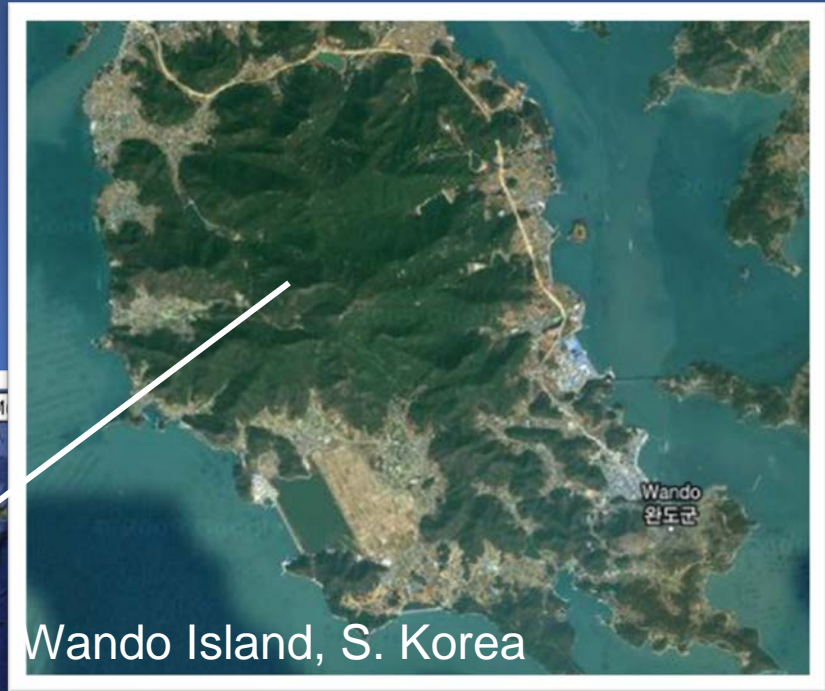
- Beach Vitex (*Vitex rotundifolia*)
- Plant family: Verbena (Verbenaceae)
- Habit: Generally a woody vine
  - can grow upright when sheltered  
*or cut/trimmed*
- Habitat: Sand, full sun





# From Whence It Came...

- Western Pacific  
Korea to SE Asia, Malay  
Peninsula to India  
Pacific Islands (Hawaii?)





# How?



*“We saw it in Korea last year where it is native – there it is the last plant to survive farthest out in the sand dunes toward the water.”*

J.C. Raulston, Arboretum Newsletter, Vol. 14, 1986













**“Pōhinahina” in Hawaii**



McAfee

http://mauiinvasive.org/2012/12/06/plants-out-of-place-n

7-Day Forecast for Lati... Plants Out of Place...

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# Maui Invasive Species Committee

BLOG OF THE MAUI INVASIVE SPECIES COMMITTEE: WHAT WE DO, WHO WE ARE

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INVASIVE PLANTS


## Plants Out of Place—Native to Hawaii but Invasive Elsewhere

POSTED BY MAUIINVASIVESPECIESCOMMITTEE · DECEMBER 6, 2012 · LEAVE A COMMENT


FILED UNDER MAUI, NATIVE HAWAIIAN PLANTS, NAUPAKA, POHINAHINA

The native Hawaiian ecosystem is often described as fragile and prone to invasion, so it may come as a surprise to find that some of our island species on the most unwanted list of invasives in other parts of the world.

In Hawai'i, beach naupaka decorates miles of coastline, but in Florida this attractive plant is listed as a state noxious weed. Known as *Scaevola taccada* to the scientific community, naupaka outcompetes the endangered *Scaevola plumieri* native to Florida. In the Cayman Islands in the Carribean, where naupaka is also invasive, there is some concern that sea turtles may not be able to access nesting sites with mounds of naupaka blanketing the coasts. Naupaka was introduced to Florida as a landscaping option.



Native to Hawaii, naupaka, or *Scaevola taccada*, invades a beach in Fort Lauderdale, Florida. Naupaka chokes out plants native to Florida and may alter nesting habitat for sea turtles. Photo courtesy of Forest & Kim Starr.



In Hawai'i, pōhinahina, *Vitex rotundifolia*, sometimes known as beach vitex, grows alongside naupaka but it's wreaking havoc elsewhere.

Pōhinahina is a sprawling coastal shrub with small purple flowers. Landscapers introduced pōhinahina to the Southeastern and Mid-Atlantic States, where it now smothers coastlines, choking out native plants like the endangered sea beach amaranth. Pōhinahina is a noxious weed in North Carolina. Virginia has enacted a statewide quarantine in hopes of stopping its spread. Communities gather regularly to fight back this kudzu of the coastline.

Pōhinahina is another Hawaii coastal native that's proven invasive elsewhere. Crews on the coast of North Carolina remove this dune-destroying shrub. Photo courtesy of beachvitex.org

CATEGORIES

- For Teachers
- Get Involved
- In the field
- Invasive Animals
- Invasive Plants
- MISC Target Species
- Uncategorized

ARCHIVES

- January 2013
- December 2012
- November 2012
- October 2012
- September 2012
- August 2012
- May 2012
- April 2012
- March 2012
- February 2012
- January 2012
- December 2011







*“It has great potential for the entire coastal area of the S. E. U. S. from Maryland to Texas... we want to encourage use of this fine plant as much as possible in its difficult introduction phase”*

J.C. Raulston,  
Arboretum Newsletter,  
Vol. 14, 1986



# Invasive Qualities of Beach Vitex

- Fruits float



- Stems root at the nodes



- 20,000 seeds m<sup>2</sup>



- Grows rapidly (up to 25 ft per year)







One Season's Growth, about 17'





Sea Turtle Nest laid on  
July 22, 2006



Same Nest on  
August 15, 2006

Photos by B. Brabson





Beach Vitex roots were growing into nest when eggs were relocated.

Photo by B. Brabson





Masonboro Island, New Hanover County



# Task Force Plan of Attack

- Surveys
- Education
- Partnerships
- Funding
- Regulations
- Eradication





**SURVEYS**

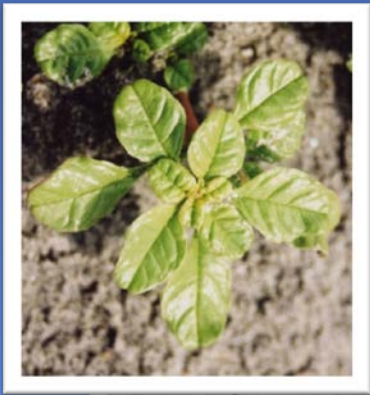
# Proper Identification



Beach Vitex



Seashore Elder



Seabeach Amaranth



Beach Croton



# SURVEYS

## Distribution in North Carolina



- NC has over 300 miles of (linear) coastline
- B.V. has been found in 7 of the 10 coastal counties
- Over 1000 known sites/colonies in NC



# EDUCATION

# Public Education

**Beach Vitex Task Force**

In 2003, a workshop on beach vitex was hosted by the North Inlet-Winyah Bay National Estuarine Research Reserve in Georgetown, SC. This workshop brought together private citizens, personnel from different state and Federal agencies, and representatives from non-profit organizations, resulting in the formation of the South Carolina Beach Vitex Task Force. In 2005, North Carolina joined the effort and the name was changed to the Carolinian Beach Vitex Task Force. Virginia became a member in 2009 and the name simply became the Beach Vitex Task Force. The objectives of the Task Force are to:

1. Detect and map beach vitex populations.
2. Conduct an ecological assessment to determine beach vitex's impact on native plants and animals.
3. Research and implement environmentally sound methods for removal.
4. Restore affected areas with native plants.
5. Educate homeowners, landscapers, and the general public about beach vitex.





**What can you do to help?**

1. Don't plant beach vitex. Contact the Beach Vitex Task Force for a list of beneficial native plants that can be used in landscaping.
2. Notify the Task Force of any potential beach vitex you may find. Leave how to identify beach vitex and how to distinguish this plant from native plants. Don't try to do any removal yourself. The Task Force is mapping all locations in an effort to monitor this plant. Take note of where you have seen beach vitex and submit an online report at [www.beachvitex.org](http://www.beachvitex.org). Photographs can also be submitted.
3. Volunteer! The Task Force needs volunteers to monitor our beaches and to help with projects. Get involved!!



## BEACH VITEX TASK FORCE

*Task Force Partners Include: Federal and state agencies, municipalities, universities, non-profit groups, corporations, private foundations and environmental organizations.*





**Beach Vitex :  
A Coastal Menace**

For more information and to report any suspected beach vitex locations, please contact:

Betsy Brabson, SC BV Task Force Coordinator  
(843)546-9531  
[wbrabson@sccoast.net](mailto:wbrabson@sccoast.net)

Melanie Doyle, NC BV Task Force Coordinator  
(910)458-8257 ext. 250  
[melanie.doyle@ncaquariums.com](mailto:melanie.doyle@ncaquariums.com)

Lee Rosenberg, VA BV Task Force Coordinator  
(757)664-4373  
[lee.rosenberg@norfolk.gov](mailto:lee.rosenberg@norfolk.gov)

or visit the website at:  
<http://www.beachvitex.org>







# PARTNERSHIPS

## Partnerships Beach Vitex Task Force in NC

### 50+ Partners in NC:

- 20 coastal communities
- 6 Divisions within DENR
- NC DOT, NC DA&CS
- Five university affiliates
- Three federal agencies
- Three conservation organizations



## NC STATE UNIVERSITY





**FUNDING**


# National Fish and Wildlife Foundation Grant \$130,000

- November 2007, the NC BVTF was awarded a grant from the National Fish & Wildlife Foundation
- 5 year grant for eradication and education work in NC
- Requires a match from recipients, “in kind” work included
- Managed through the Raleigh Field Office USFWS



**REGULATION**


# 2009 listed as a State Noxious Weed!

 **NORTH CAROLINA**  
DEPARTMENT OF AGRICULTURE & CONSUMER SERVICES

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**Plant Industry - Plant Protection Section**

Beach Vitex (*Vitex rotundifolia* L.f.)  
"Class B" State Noxious Weed



■ Denotes quarantine areas

Movement of the noxious weed beach vitex or other regulated articles from quarantine areas is prohibited except under certificate or permit. Certificates or permits may be obtained from an [NCDASCS Plant Protection Specialist](#) in your area or by contacting the Plant Protection Section at 1-800-206-9333.

- Plant Industry Home
- Plant Protection Section
- Apiary Services
- Biological Control Services
- Biotechnology Services
- Plant Conservation Services
- Plant Disease Services
- Entomological Services
- Nursery Regulatory Services
- Program Support Services
- Weed Regulatory Services
- Applications - Forms - Permits



**ERADICATION**

# Progress: 95 % of sites treated

Beach / Island	No. Sites	No. Sites Treated	Percent Complete
Outer Banks	27	27	100
Bogue Banks	130	116	89
Topsail Island	285	265	96
Figure Eight Island	78	78	100
Wrightsville Beach	57	57	100
Masonboro Island	17	17	100
Carolina / Kure Beach	23	20	87
Bald Head Island	250	250	100
Oak I. / Caswell Beach	54	54	100
Holden Beach	5	0	0
Ocean Isle	10	10	100
	936	894	95.5



(*Vitex* spreadsheet woes, Winter '09)



State	City	Address	Latitude	Longitude	Rank	Notes	P.L. Received	Treated
NC	Wrightsville Beach	15 North Ridge Lane	34.2253669	-77.7819479	3	In landscape at back of green house & on dunes	11/4/2008	Yes
	Wrightsville Beach	13 North Ridge Lane	34.225571	-77.7818513		the vacant lot	Yes	Yes
	Wrightsville Beach	9 Southridge Lane	34.2255177	-77.7825487	2/3	landscaped in back of house	10/7/2008	Yes
	Wrightsville Beach	11 Southridge Lane	34.2252117	-77.782039	3/4	in dunes	Yes	Yes
	Wrightsville Beach	18 Southridge Lane	34.2250076	-77.7821141	3	in dunes	11/7/2008	
	Wrightsville Beach	Access #4 2398 N. Lumina	34.2266355	-77.7815723	2	at NE end of parking lot	Yes	Yes
	Wrightsville Beach	Access #9 1700 N. Lumina	34.2183763	-77.7863896	1	a few plants	Yes	Yes
	Wrightsville Beach	Mallard Street Access #10	34.2176488	-77.7869797	3/4	Large colony	10/7/2008	Yes
	Wrightsville Beach	10 Mallard Street, Unit 1	34.2172319	-77.787087	2	Spreading from access 10	Yes	Yes
	Wrightsville Beach	10 Mallard Street, Unit 2	34.2171786	-77.7871513			Yes	Yes
	Wrightsville Beach	2604 N. Lumina	34.2327916	-77.7767658	3	lots and lots of Beach Vitex here	10/10/2008	Yes
	Wrightsville Beach	2606 N. Lumina	34.2330222	-77.7765512	3		Yes	Yes
	Wrightsville Beach	2608 N. Lumina	34.2331819	-77.7763796			Yes	Yes
	Wrightsville Beach	2304 N. Lumina			1			Yes
	Wrightsville Beach	15 Palmetto Drive	34.2204257	-77.789737	2	on lattice in front of steps	Yes	Yes
	Wrightsville Beach	103 Parmele Blvd	34.2195917	-77.788707	2	street-side corners, by mailboxes	11/7/2008	Yes
	Wrightsville Beach	105 Parmele Blvd	34.2196805	-77.7887392	2		11/7/2008	Yes
	Wrightsville Beach	200 Parmele Blvd, Public Works			2	couple of sites, all dead		Yes
	Wrightsville Beach	2400 N. Lumina, Duneridge Condos			1+	seen from beach - single plant on dune		Yes
	Wrightsville Beach	10 Cowrie Lane	34.2227766	-77.7832139	3	A medium-large colony	10/6/2008	Yes
	Wrightsville Beach	8 Cowrie Lane	34.2229451	-77.7836967	4	Spreading	Yes	Yes
	Wrightsville Beach	6 Cowrie Lane	34.2230338	-77.7840185	4	Spreading	10/9/2008	Yes
	Wrightsville Beach	5 Cowrie Lane	34.2233266	-77.7837396	3	small amount	Yes	Yes
	Wrightsville Beach	3 Cowrie Lane			1			Yes
	Wrightsville Beach	1 Cowrie Lane	34.223504	-77.7845228			Yes	Yes
	Wrightsville Beach	4 Sand Dollar Lane	34.223983	-77.7839863	1	medium colony in front	Yes	Yes
	Wrightsville Beach	2 Scotch Bonnet			2	on property line in back		Yes
	Wrightsville Beach	4 Scotch Bonnet			1			Yes



2005









2009





**W.B., Oct 2009**





Conch Lane, 2009





2010





**Masonboro Island plants**





2005





**2009, mid April**





2012, late summer



A black and white photograph of a dead, tangled plant on a beach covered in shells. The plant is the central focus, with its bare, thin branches spreading out across the ground. The ground is densely covered with small, light-colored shells, likely from a nearby beach. The overall scene is desolate and suggests a state of environmental decay or the end of a cycle.

**The End**

*... is in sight!*



