

**AQUATIC Toxin Hotline**  
**Florida Poison Information**  
**Center- Miami**  
**University of Miami &**  
**Jackson Memorial Hospital**  
**October 2003-September 2006**



CDC Grant #U50-CCU423360-01

# **Name of Project: Personnel**

- **Richard S. Weisman, Pharm.D.**
- **Jeff Bernstein, MD**
- **Eva Jerez, B.A.**
- **Lora Fleming, M.D., Ph.D.**
- **The Staff of the Florida Poison Information Center – Miami**

# Project Objectives

- **To Operate a bi-lingual, toll-free, Aquatic Toxin Hotline 24 hours/day, 7 days/week.**
  - Provide “Best-Practice” based treatment recommendations to our callers.
  - Reduce the duration and severity of illness from aquatic toxins.
  - Staffed by physicians, nurses and pharmacists at Florida Poison Center -Miami
    - All are certified as specialists in poison information by the American Association of Poison Control Centers (AAPCC).

## The Aquatic Toxin Hotline is part of the Florida Poison Center- Miami at UM/Jackson Memorial Hospital



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# Calls Managed by Marine Toxin Hotline

- Red Tide
- Ciguatera
- Scombroid
- Tetrodotoxin/Saxitoxin
- Shellfish Poisonings
- Harmful Algal Blooms
- Coelentera stings and envenomations
- Sea Bathers Eruption



# **Project Objectives**

- **Perform daily toxicosurveillance and data mining to detect the emergence of human health concerns from harmful algal blooms; and to detect the emergence of sentinel public health events involving rare marine and freshwater poisonings**

FPIC-M participates in the National Data Surveillance System. Data is uploaded from the 3 Florida Poison Centers at 4 minute intervals for data-mining.



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# Searching for Toxidromes

- Every 6-12 hr automated searches for toxidromes and syndromic patterns that suggest toxicity:
  - Red Tide
  - Ciguatera
  - Scombroid
  - Puffer fish
- Email notification of findings
  - Report of cases meeting case definition



# Data Mining

https://mail.med.miami.edu/exchange/rweisman/Inbox/Toxicosurveillance/Daily%20CE%20Totals%20for - Microsoft Internet Explorer

Address: https://mail.med.miami.edu/exchange/rweisman/Inbox/Toxicosurveillance/Daily%20CE%20Totals%20for%20Florida%20200683.xls%20(1)%20Outliers.EML/1\_multipart\_xF8FF\_2\_1

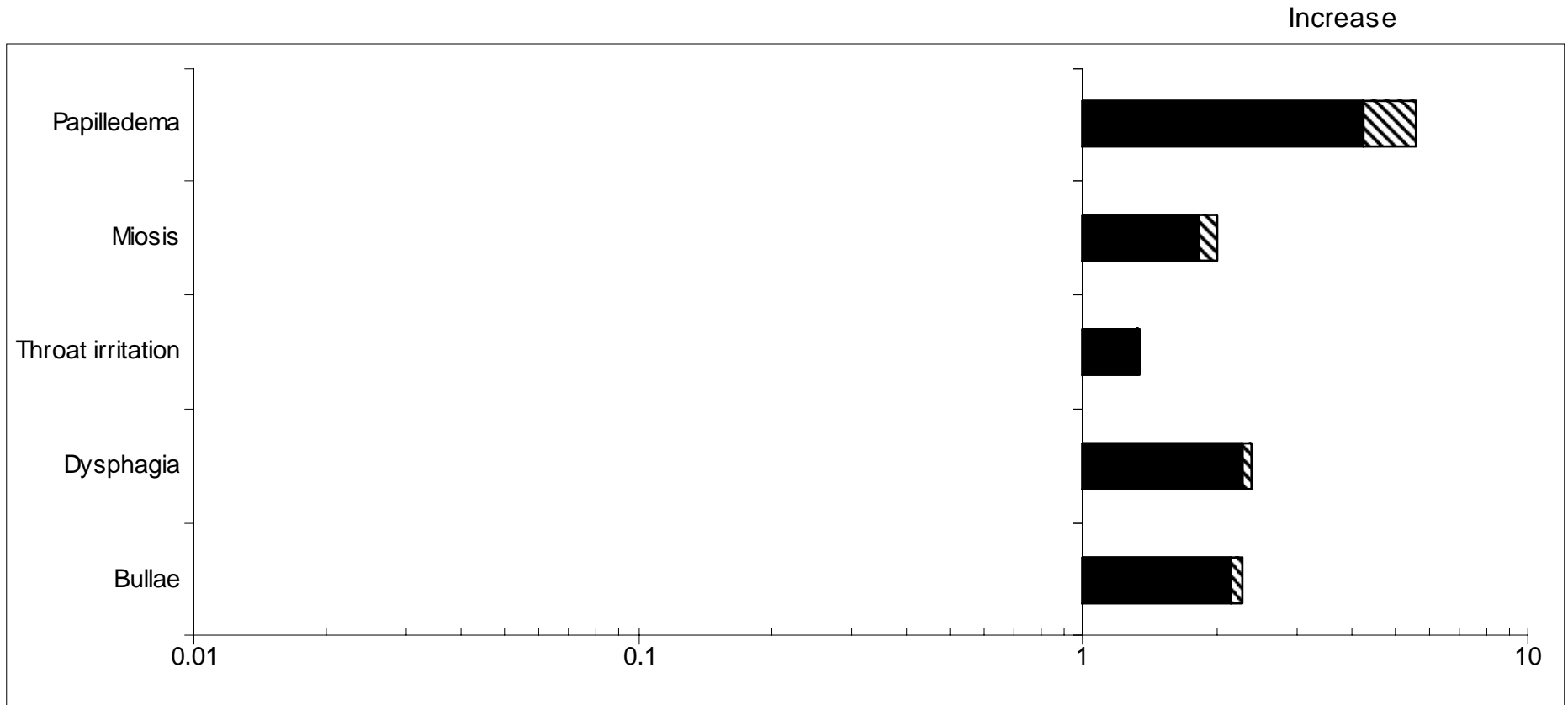
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
27	"2004/08/07"	6	5	0	5	0	2	18	0	0	0	4	0	0	1	
28	"2004/08/08"	4	1	2	7	0	4	32	0	0	0	2	0	0	1	
29	"2004/08/09"	7	2	2	4	0	4	19	0	0	1	2	0	0	1	
30	"2005/07/27"	1	3	1	5	0	7	22	0	0	1	3	0	0	2	
31	"2005/07/28"	5	0	5	4	0	3	29	0	0	0	3	0	0	1	
32	"2005/07/29"	11	5	2	5	0	5	24	0	0	1	0	0	1	0	
33	"2005/07/30"	4	2	1	2	0	3	12	1	0	0	1	0	0	1	
34	"2005/07/31"	7	1	2	6	0	6	28	0	0	1	1	0	0	0	
35	"2005/08/01"	3	3	1	1	0	4	27	1	0	0	6	0	0	1	
36	"2005/08/02"	7	2	0	2	0	4	23	0	0	2	7	0	1	2	
37	"2005/08/03"	5	1	2	3	0	4	22	0	0	2	1	0	0	0	
38	"2005/08/04"	5	3	1	2	0	3	13	0	0	0	4	0	0	1	
39	"2005/08/05"	7	0	1	3	0	4	22	0	0	0	2	0	0	0	
40	"2005/08/06"	2	1	4	2	0	4	18	0	0	0	2	0	0	0	
41	"2005/08/07"	4	1	1	5	0	1	22	1	0	0	1	0	0	0	
42	"2005/08/08"	5	0	3	0	0	3	18	0	0	2	5	0	1	1	
43	"2005/08/09"	6	3	1	2	0	0	27	0	0	0	3	0	0	0	
44	TextDate	Agitated/ir Ataxia	Coma	Confusion	CVA	Dizziness/\	Drowsines	Dystonia	Fasciculati	Hallucinatic	Headache	Intracrania	Muscle rigi	Muscle we	Numb	
45	"2006/08/03"	2	0	2	1	0	0	2	2	0	0	1	0	0	1	
46																
47	Baseline Avera	5.47619	2.095238	1.904762	3.833333	0.0001	3.809524	21.28571	0.166667	0.0001	1.095238	3.238095	0.0001	0.214286	0.880952	0.952
48	Date of Interes	2	0	2	1	0	0	2	2	0	0	1	0	0	1	
49	Ratio for Log C	0.365217	0	1.05	0.26087	0	0	0.09396	12	0	0	0.308824	0	0	1.135135	
50	SD	2.211258	1.55876	1.321668	2.240608	0	2.07468	4.830218	0.377195	0	1.143583	2.324939	0	0.470377	0.916046	1.167
51	SDX3	6.633775	4.67628	3.965004	6.721825	0	6.22404	14.49066	1.131586	0	3.430748	6.974818	0	1.41113	2.748138	3.50
52	Baseline Avg +	12.10997	6.771518	5.869766	10.55516	0.0001	10.03356	35.77637	1.298253	0.0001	4.525987	10.21291	0.0001	1.625416	3.629091	4.45E
53	Outliers(Colore	-10.11	-6.77152	-3.86977	-9.55516	-0.0001	-10.0336	-33.7764	0.701747	-0.0001	-4.52599	-9.21291	-0.0001	-1.62542	-2.62909	-4.4E
54	Base Avg+2SD	2.211385	3.231861	3.081627	2.753519	1	2.633811	1.680769	7.789518	1	4.132422	3.153988	1	7.585276	4.119508	4.67E
55	Ratio for graph	0.365217	0	1.05	0.26087	0	0	0.09396	12	0	0	0.308824	0	0	1.135135	
56	Base Avg +2SD	2.211385	3.231861	3.081627	2.753519	1	2.633811	1.680769	7.789518	1	4.132422	3.153988	1	7.585276	4.119508	4.67E
57	Hatch	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.7	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0
58	Series To Plot	0.365217	0	1.05	0.26087	0	0	0.09396	7.789518	0	0	0.308824	0	0	1.135135	
59	Series To Plot	0.365217	0.0001	1.05	0.26087	0.0001	0.0001	0.09396	12	0.0001	0.0001	0.308824	0.0001	0.0001	1.135135	0.0
60		"2006/08/03" Neuro effects compared to mean historical baseline (14 days per year for 3 years)														
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RawData Cardio / Dermal / Gastro / Heme / **Neuro** / Ocular / Renal / Resp / Misc /

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# Clinical Effect Outliers – April 12, 2006

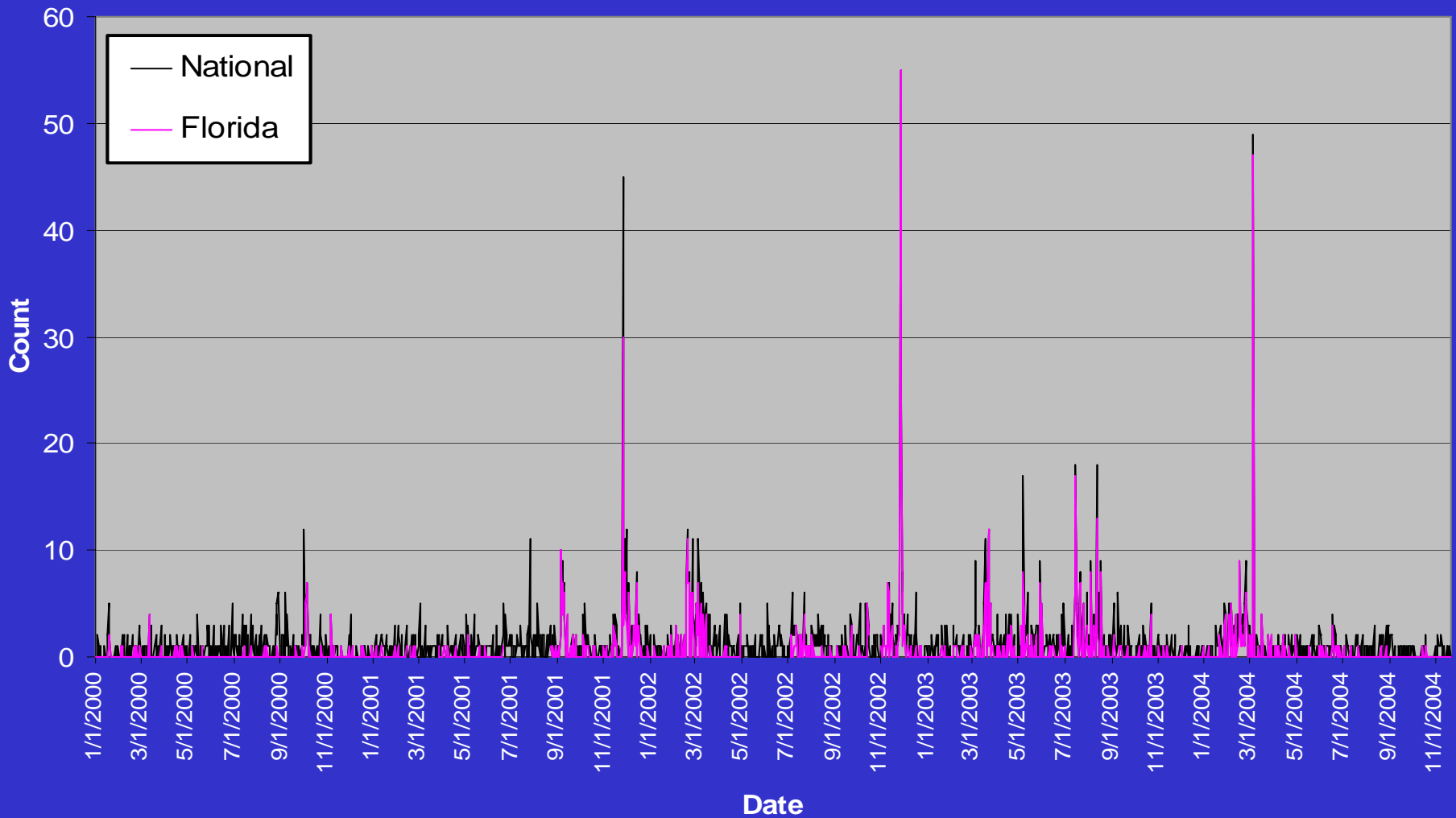
- 4/12/2003 Outlier effects compared to mean historical baseline (14 days per year for 3 years)
- ▨ Beyond 2ST



# Project Objectives

- Generate a monthly statistical report of all Marine and Freshwater Hotline reported exposures.

# TESS - Human Exposures - Red Tide Poisoning Jan 2000 through Nov 20, 2004



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# Project Objectives

- Develop an automated telephone information hotline where the user can get up-to-date information about the location of the red tide or discuss their clinical symptoms with a physician or nurse at the Florida Poison Information Center – Miami/Aquatic Toxin Hotline.

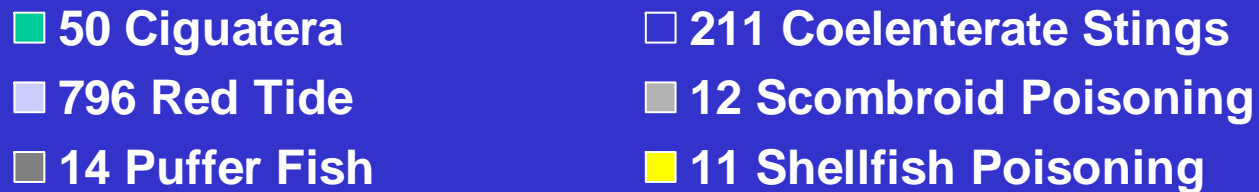
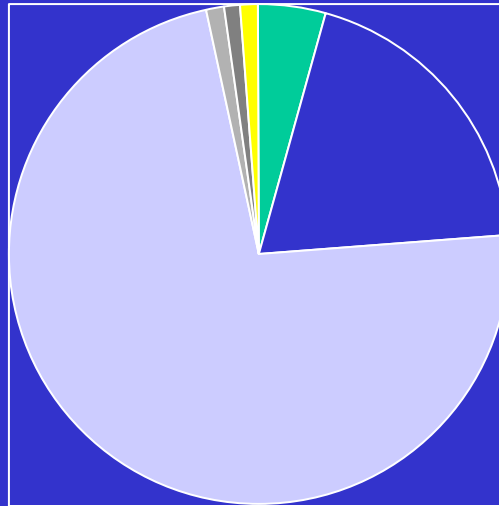
- 888-232-8635

# **Marine & Freshwater Hotline:**

## **Accomplishments**

- To date, the Aquatic Toxin Hotline has answered over 5,000 requests for medical treatment following exposure to a marine toxin.
- **Public Health Significance:** The Hotline now makes standardized treatment recommendations available to victims.

# October 1, 2004 through September 30, 2005



# Marine & Freshwater Hotline: Accomplishments

- Real-time, computerized data about Marine Toxin Exposures are available to the Florida Department of Health
- Public Health Significance: Sentinel cases and epidemiologic trends can be detected and monitored. Outcome data on treatments continues to improve patient care.

# Real-Time Surveillance

http://170.134.65.126 - Patient Tracking System - Plasma V0.9.6 - Microsoft Internet Explorer

Miami Calls Today	50	FPICN Calls Since Midnight	118
Tampa Calls Today	36	FPICN Calls Last Hour	13
FPICJAX Calls Since Midnight	32	FPICN Info Calls Since Midnight	44
Miami Info Calls Today	24	FPICN Exposures Today	67
Miami Calls Last Hour	4	FPICN Followup Since Midnight	9

Expo ID	Date/Time	Substance	County	Age	Sex	SPI Name	Patient
T1570702	08:02:00 EDT Wed Aug 30 10:14:00 EDT	(GENERAL FORMULATION) CALAMINE LOTION from OUR FAMILY	POLK	3	Male	ALCANTARA Twyla KIMBALL	J B
T1570698	08:34:00 EDT Wed Aug 30 08:34:00 EDT	CARDIZEM CD 120 MG (IMPRINT CODE): CARDIZEM	PASCO	56	Female	David P. BYE	L P
T1570692	08:55:00 EDT Wed Aug 30 08:55:00 EDT	CASCADE LIQUID from PROCTER	ORANGE	1	Male	Twyla KIMBALL	E F
J1477892	08:34:00 EDT Wed Aug 30 08:34:00 EDT	CLONIDINE HYDROCHLORIDE ORAL TABLET 0.1 MG from	LAKE	89	Female	Lynn MOLDER	M D
M1451954	09:42:00 EDT Wed Aug 30 09:42:00 EDT	CLOROX	MIAMI-DADE	0	Female	Frank ALCANTARA	H A
J1477894	08:44:00 EDT Wed Aug 30 08:44:00 EDT	CYCLOBENZAPRINE COATED TABLET 10 MG from GENEVA	DUVAL	31	Male	Lynn MOLDER	A A
M1451960	10:00:00 EDT Wed Aug 30 10:00:00 EDT	DESITIN from PFIZER CONSUMER HEALTH CARE	PALM BEACH	9	Male	Robert RDELVALLE	N B
M1451968	10:26:00 EDT Wed Aug 30 10:26:00 EDT	DESITIN from PFIZER CONSUMER HEALTH CARE	MIAMI-DADE	25	Female	Frank ALCANTARA	V U
M1451939	08:29:00 EDT Wed Aug 30 08:29:00 EDT	DIEFFENBACHIA AMOENA (BOTANIC NAME)	BROWARD	1	Male	Frank ALCANTARA	R G
J1477884	03:13:00 EDT Wed Aug 30 03:13:00 EDT	DIGOXIN	LEON	22	Female	Pam HODGE	A S
M1451946	08:54:00 EDT Wed Aug 30 08:54:00 EDT	DIGOXIN TABLET 0.25 MG from LANNETT	COLLIER	64	Male	Robert RDELVALLE	R R
M1451943	08:48:00 EDT Wed Aug 30 08:48:00 EDT	DIGOXIN, ALRA 233 (IMPRINT CODE): DIGOXIN TABLET 0.125	BROWARD	49	Male	Frank ALCANTARA	D W
J1477897	09:45:00 EDT Wed Aug 30 09:45:00 EDT	DILANTIN KAPSEALS EXTENDED-RELEASE	CITRUS	2	Female	Debra FORREST	S S
J1477902	09:45:00 EDT Wed Aug 30 09:45:00 EDT	DILANTIN KAPSEALS EXTENDED-RELEASE	CITRUS	16	Male	Debra FORREST	R S

Welcome to the Florida Poison Information

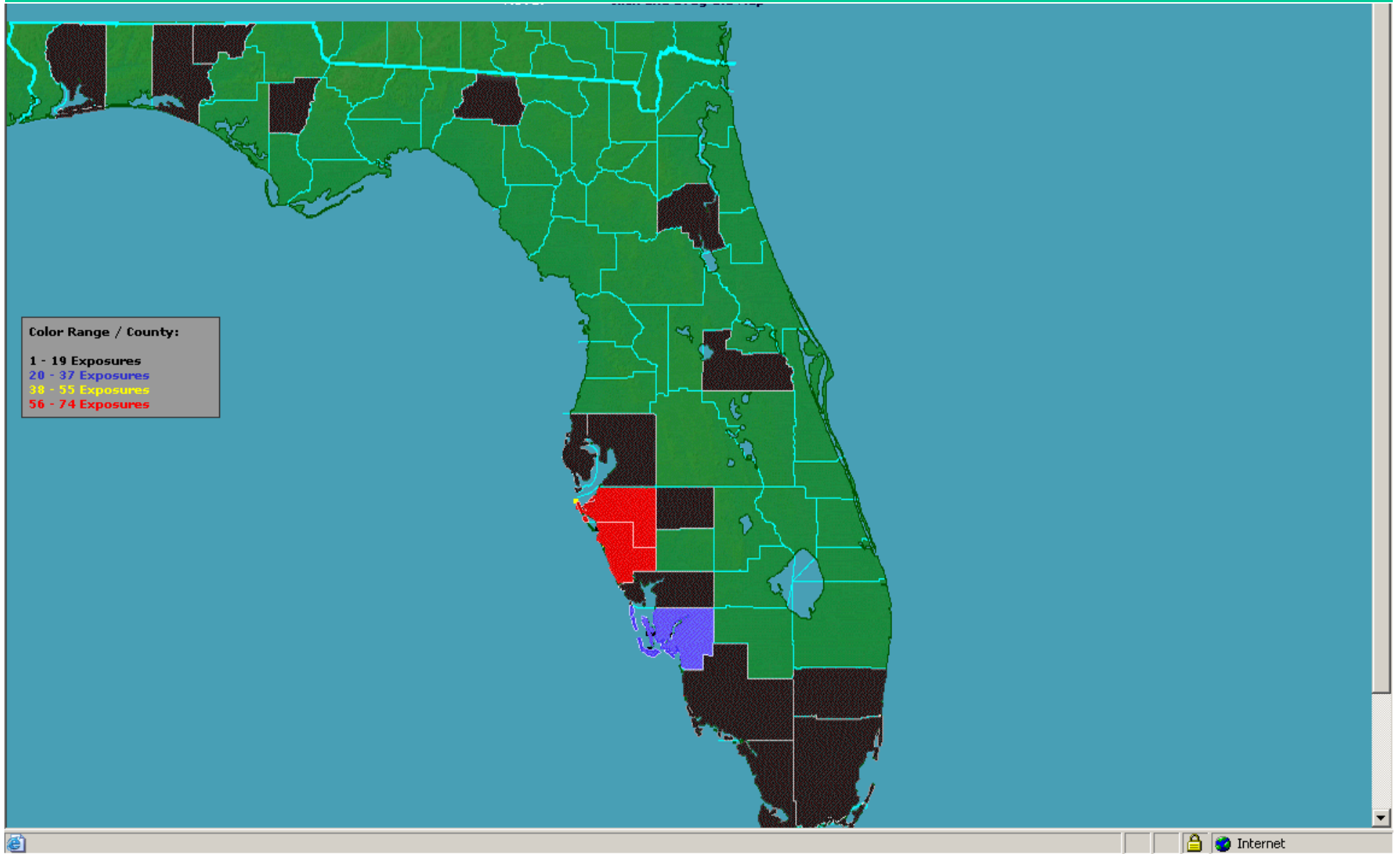
Screen: 1 Current Query: Network with Pts/Spi - Substance Sort

Data Updated: 10:59

Done Internet

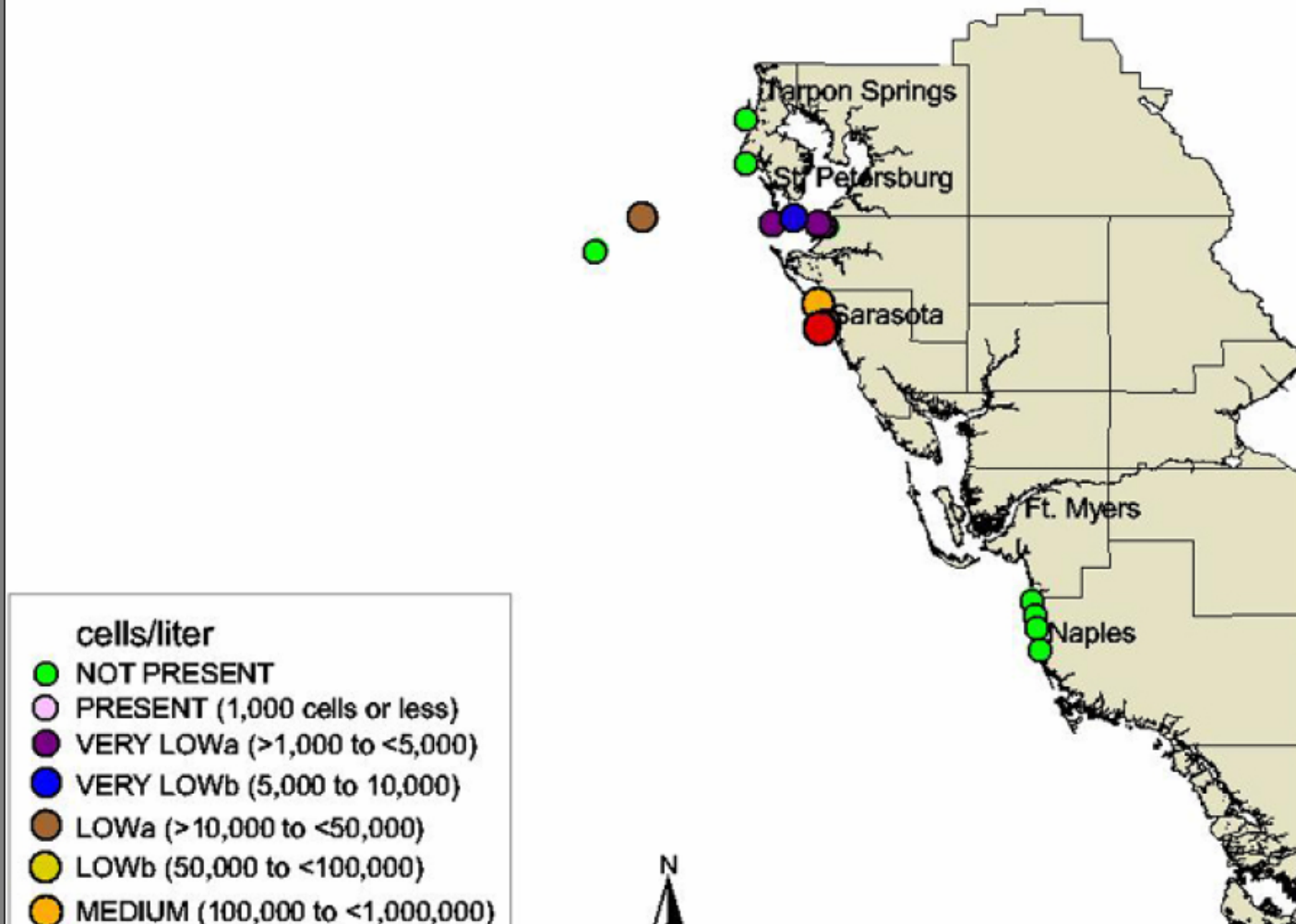
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# Red Tide, January - March 2005



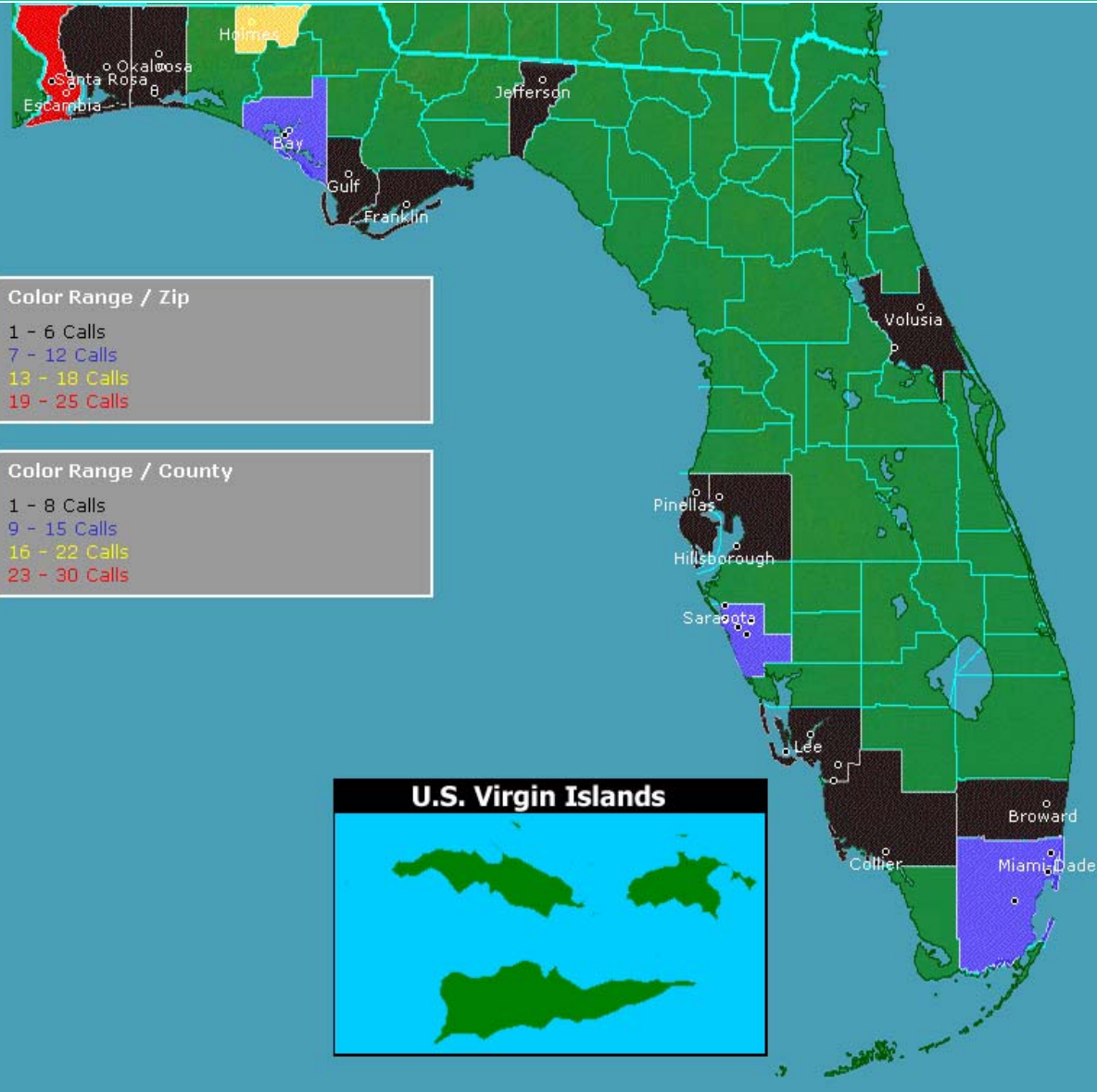
# Mote Marine Institute Detects *Karenia brevis* in water

*Karenia brevis* Counts, January 24-27, 2005

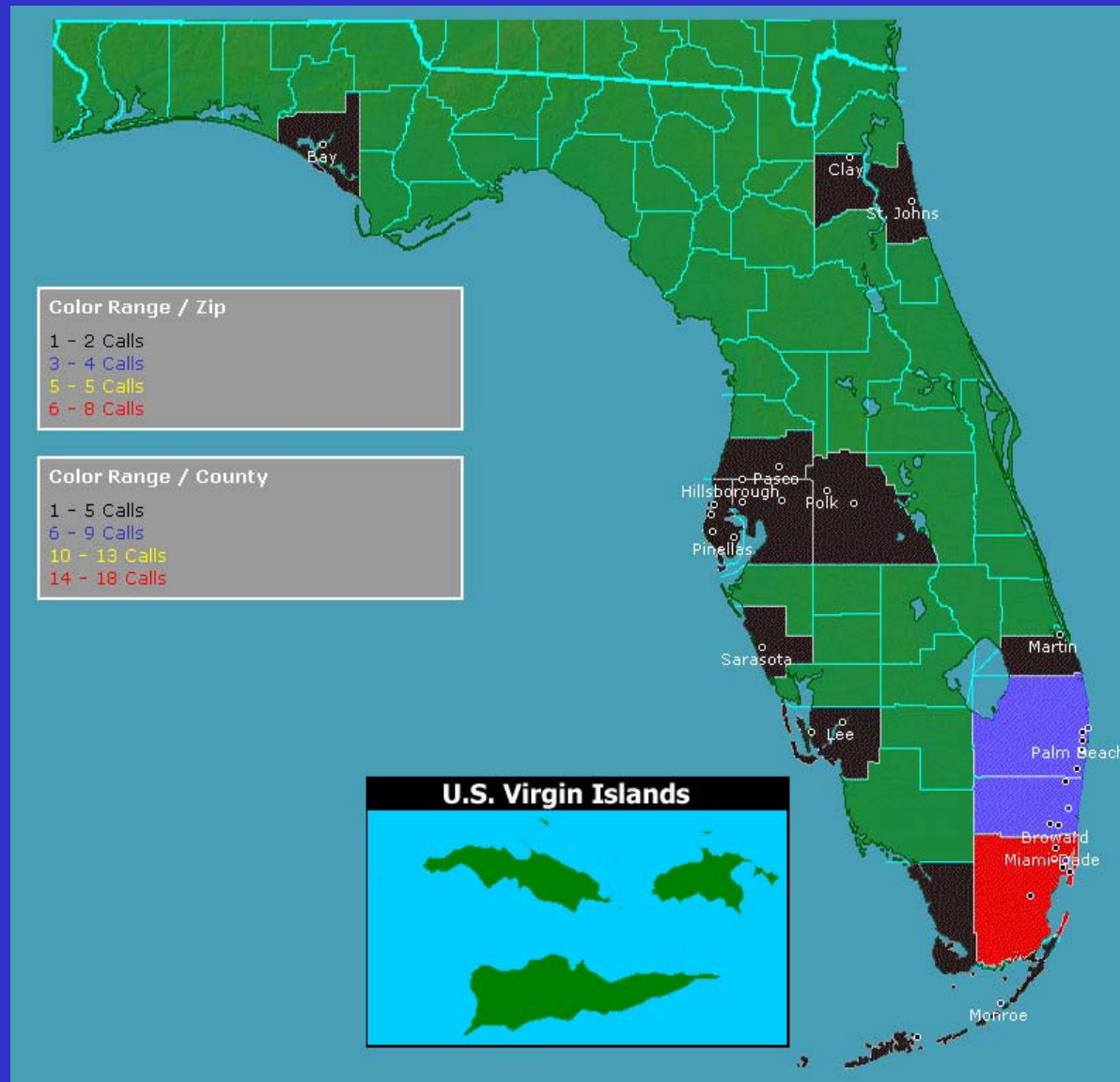


7.99 x 6.28 in

# Red Tide, January - September 2006



# CIGUATERA REPORTS: 10-01-05 TO 9-15-06





# Marine & Freshwater Hotline: Accomplishments

- Nearly 10,000 callers have used the automated information service to learn about the location and prevention of Marine Toxin Exposures.
- Public Health Significance: The automated bi-lingual service allows people to frequently check updates about the Red Tide and other topics of interest

## **Aquatic Toxin Hotline:** **Benefits for Environmental Public Health**

- Provides callers with accurate treatment recommendations
- Consolidates and standardizes data collection
- Allows for rapid detection of emerging health risks
- Provides a platform to evaluate the safety and efficacy of current treatments



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