







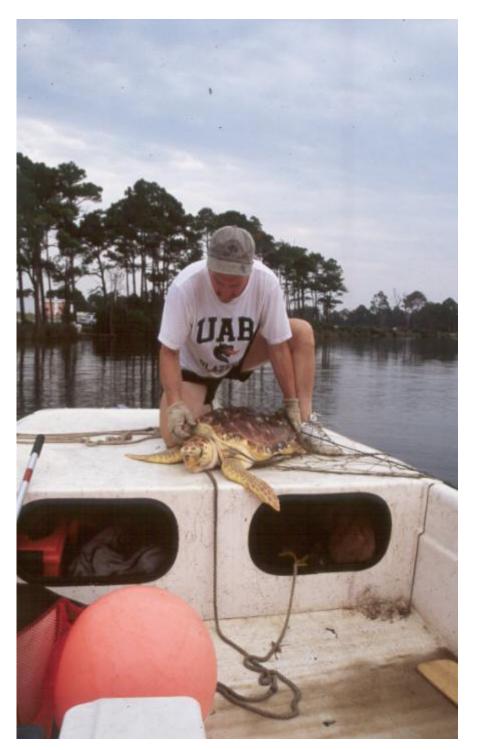




## Diamondback Terrapin







# <u>Loggerhead</u> <u>Sea Turtle</u>

### Perdido Bay, Alabama

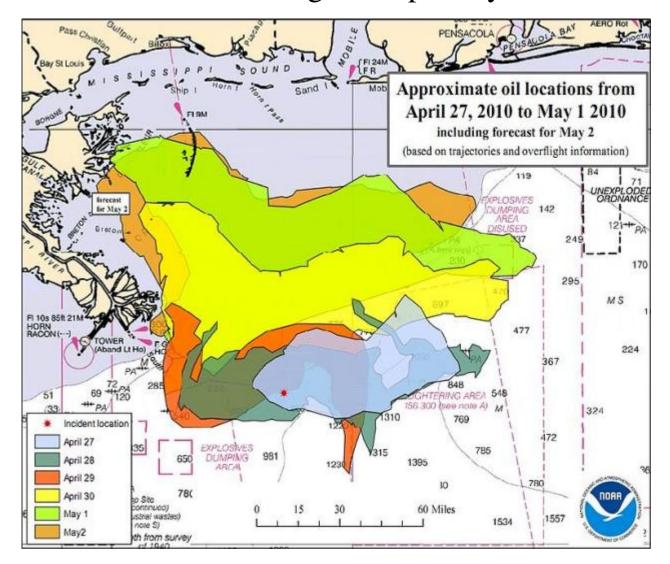
## Deepwater Horizon: April 20<sup>th</sup>, 2010

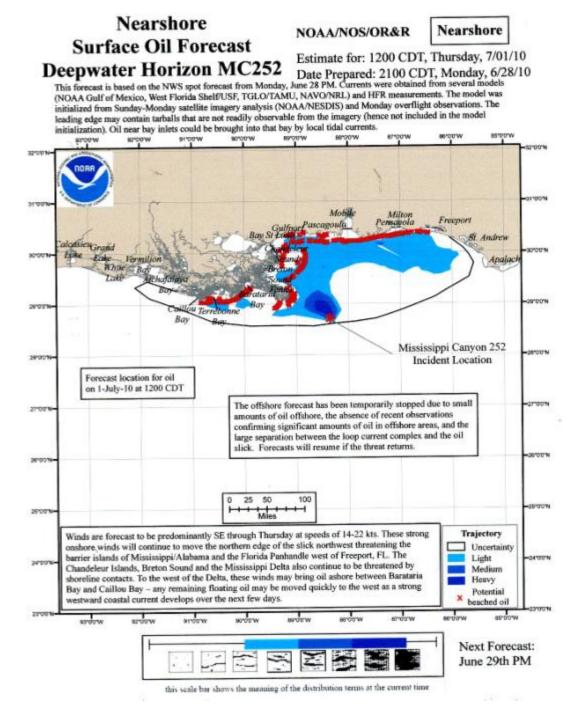


9:45pm Gas, oil and concrete explodes up onto deck of DWH and catches fire The explosion kills 11 workers, injures 17 others.



#### Deepwater Horizon Oil Spill April 20, 2010 Estimated 200,000 gallons per day minimum





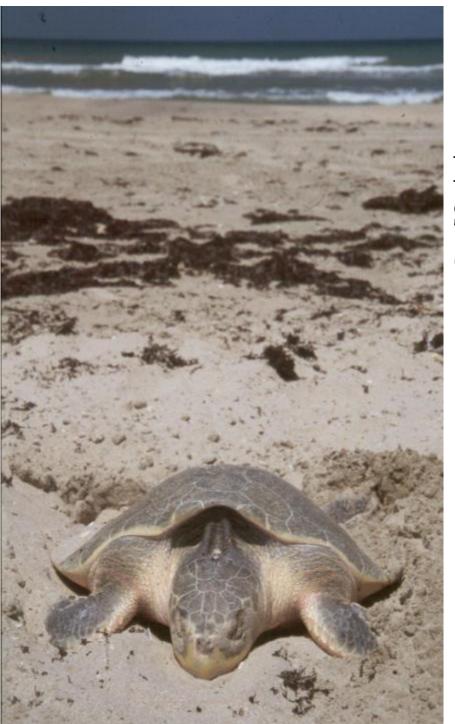
Deepwater Horizon Oil Spill April 20, 2010

Estimated 53,000 Barrels of oil per day (2,226,000 gallons/day)

Estimated Total Of 4.9 million barrels Of oil (205.8 million gallons)

771,000 gallons of Dispersant Northern Gulf of Mexico Deepwater Horizon Oil Spill April 20, 2010 Estimated 53,000 barrels per day minimum 2,226,000 gallons per day





Kemp's Ridley Sea Turtle (*Lepidochely kempii*)

> One of the Seven Species of Sea Turtles

# Loggerhead Sea Turtle





# Immature Green Sea Turtle



#### Leatherback Sea Turtle, Juno Beach, Florida

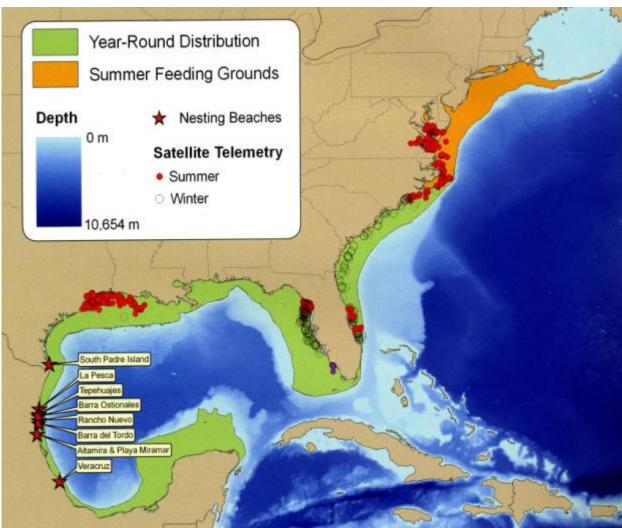




# Programa Binacional de la Tortuga Lora







## Kemp's Ridley

### **Limited Distribution**

Primarily in the Gulf of Mexico

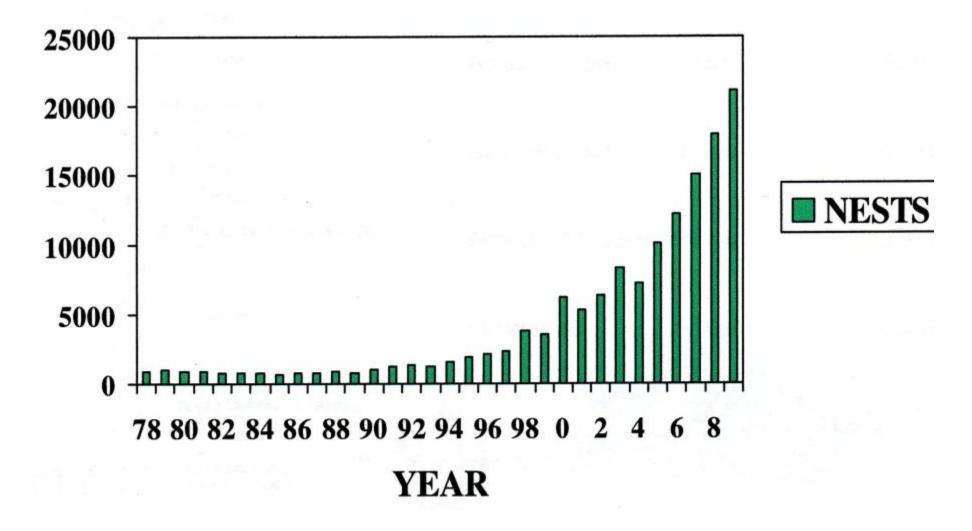
#### Kemp's Ridley Arribada, Rancho Nuevo Mexico, 1947



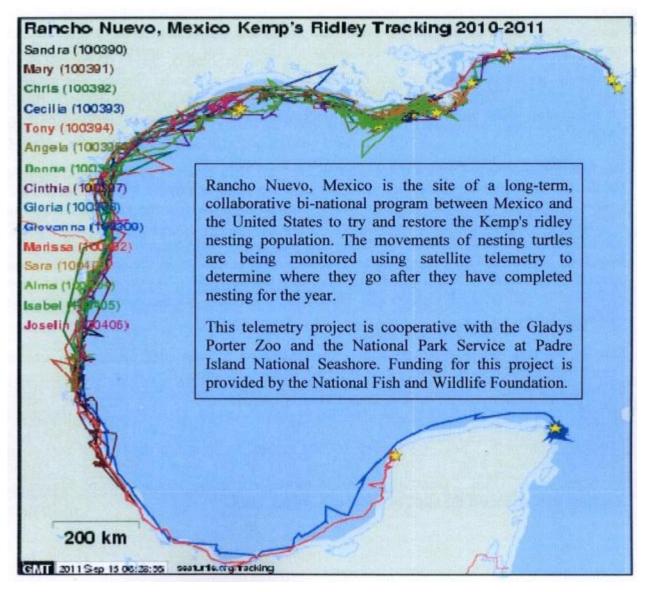


Kemp's Ridley Sea Turtle, Rancho Nuevo, Mexico

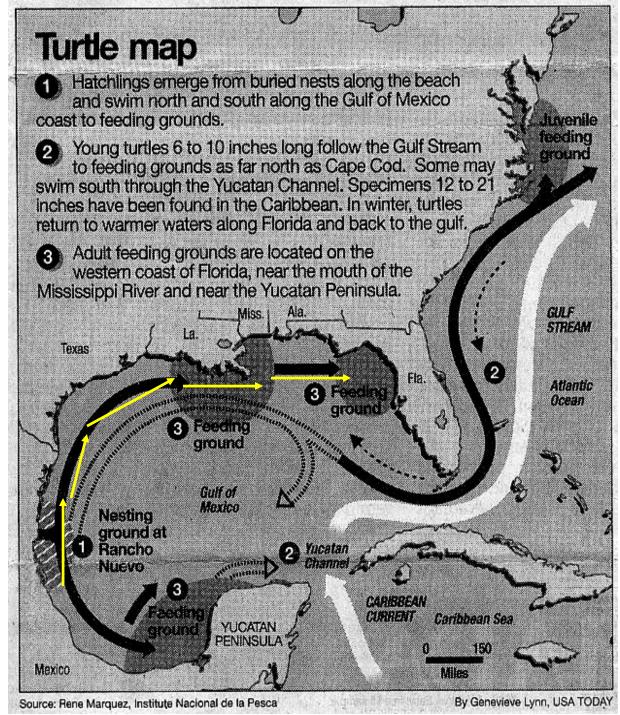
#### KEMP'S RIDLEY NESTS RECORDED IN RANCHO NUEVO, 1978 - 2009



#### Kemp's Ridley Migration Corridor from Mexico Nesting Beach To Northern Gulf of Mexico



Data from Donna Shaver National Park Service



## <u>Kemp's Ridley</u> <u>Distribution</u>

### Deepwater Horizon Oil Spill April 20, 2010 Estimated 53,000 barrels per day minimum 2,226,000 gallons per day

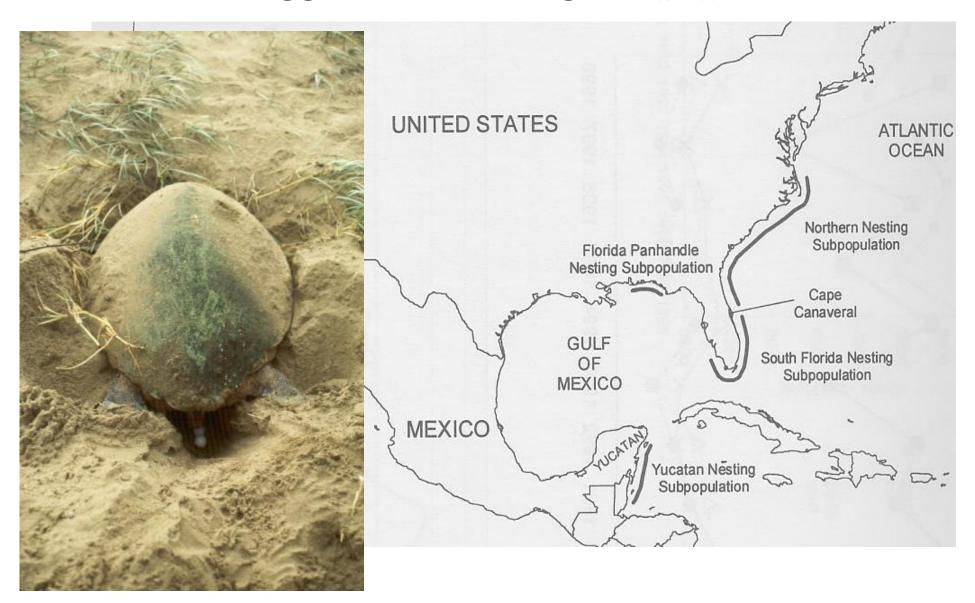


# Loggerhead Sea Turtle

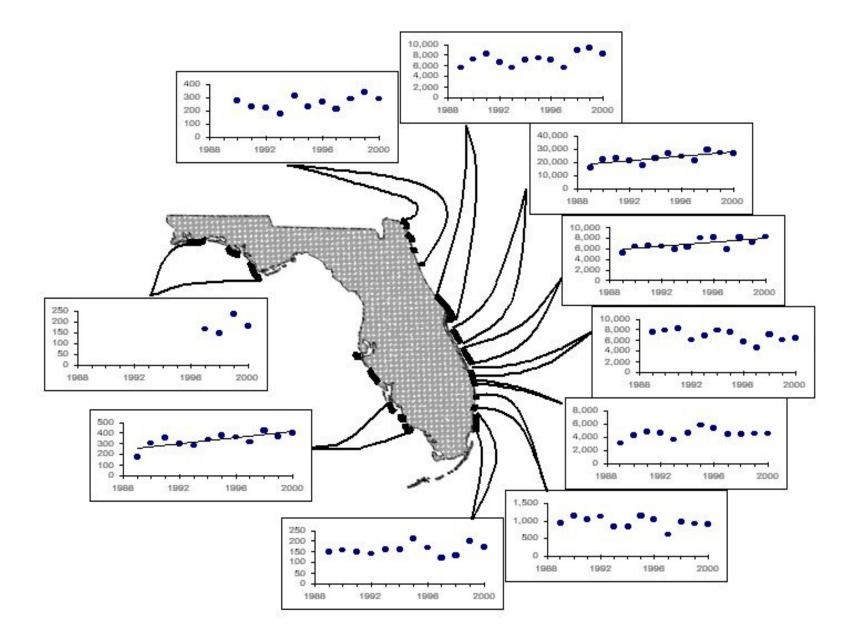




## **Loggerhead Nesting Subpopulations**

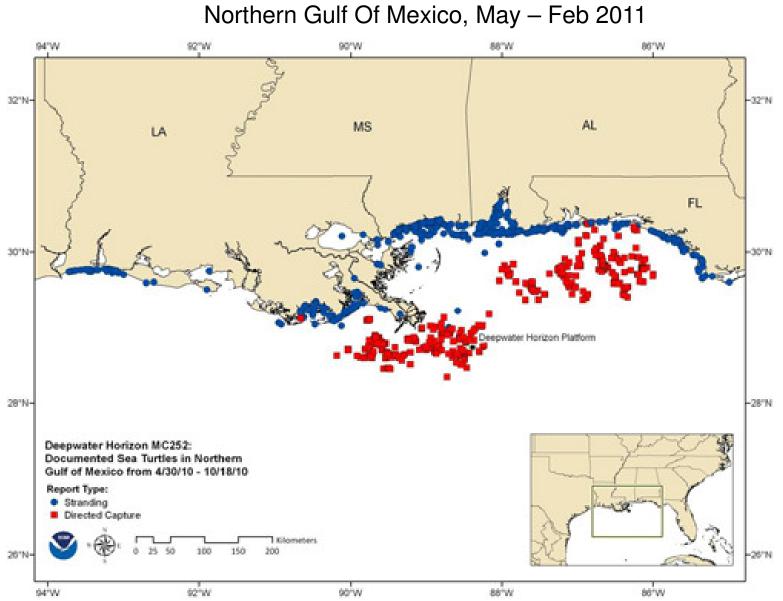


#### Loggerhead Nesting Beaches in Florida

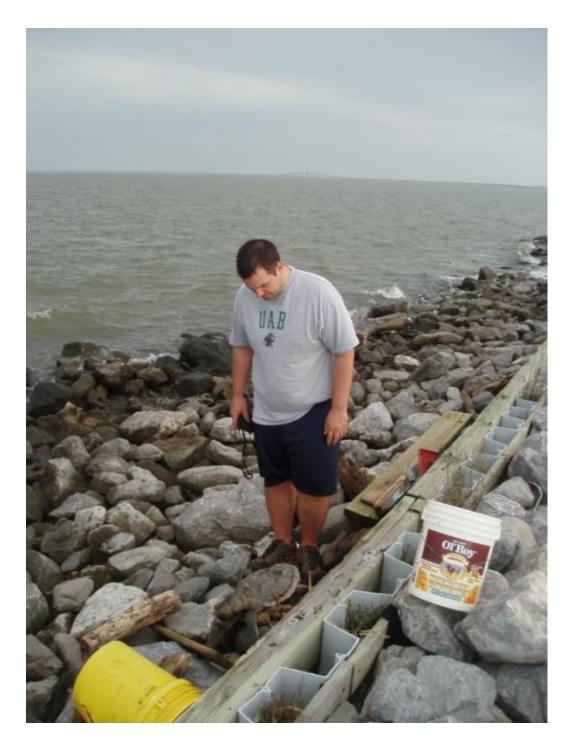


### Loggerhead Nest, Dauphin Island, Alabama





#### Sea Turtle Strandings and In Water Collections Northern Gulf Of Mexico, May – Feb 2011



Dead Stranded Kemp's Ridley North of Mobile Bay Summer 2010 Necropsy of Dead Stranded Sea Turtles from Northern Gulf of Mexico University of Florida Veterinary School, Brian Stacy: NOAA Veterinarian







#### Retrieval of Oiled Turtles at Sea

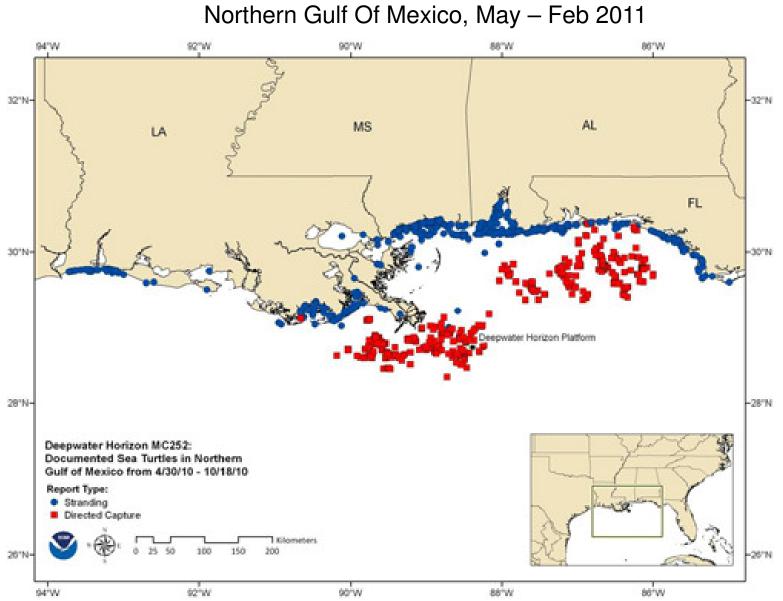




## Sea Turtle Strandings and Oiled Turtles Following Deepwater Horizon Oil Spill, Summer 2010



Sea Turtle Release by NOAA and U.S. Coast Guard in Cedar Key, FL Credit: NOAA (click photo to play video)



#### Sea Turtle Strandings and In Water Collections Northern Gulf Of Mexico, May – Feb 2011

# Stranded Sea Turtles, Northern Gulf of Mexico, May – Feb 2010

Turtle Species	Alive	Dead	Total
<u>Green turtle</u> ( <i>Chelonia mydas</i> )	172	29	201
<u>Hawksbill turtle</u> (Eretmochelys imbricata)	16	0	16
<u>Kemp's ridley turtle</u> ( <i>Lepidochelys kempii</i> )	328	481	809
<u>Loggerhead turtle</u> (Caretta caretta)	21	67	88
Unknown turtle species	0	32	32
TOTAL	537	609	1146

#### **Northern Gulf Live Strandings 2010**

	Visibly Oiled	Not Visibly Oiled
April	0	0
May	12	17
June	91	34
July	152	8
Aug	198	11
Sept Oct	3	8
Oct	0	0
	456	78
	Tat	-524

Total = 534

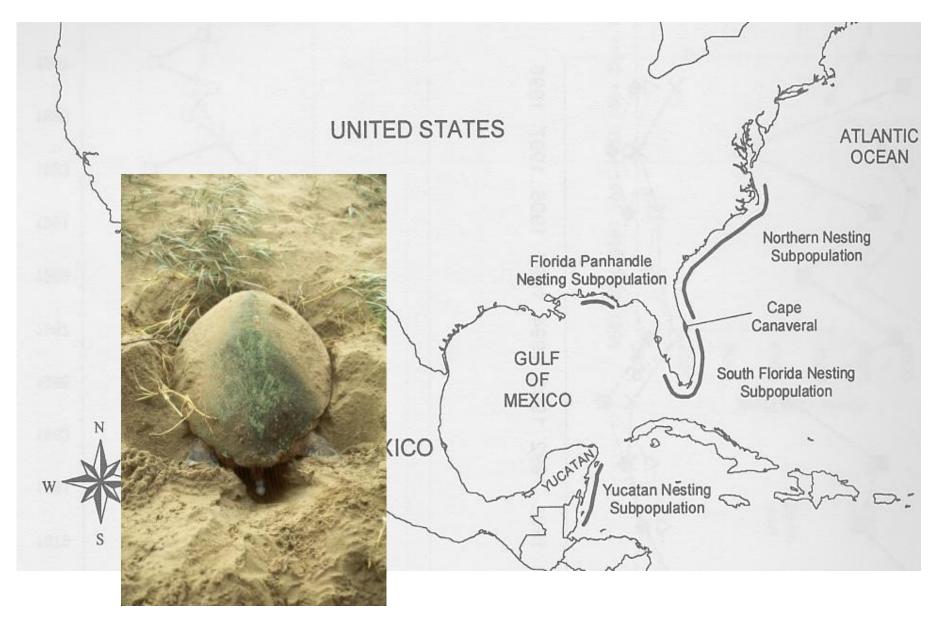
362 of which released

#### Northern Gulf Dead Strandings 2010

	Visibly Oiled	Not Visibly Oiled	Pending
April	0	6	0
May	3	164	63
June	9	143	53
July	6	5	50
Aug	0	1	55
Sept Oct	0	0	37
Oct	0	0	10
	18	319	268

Total = 605 (234 in Alabama or near offshore)

## **Loggerhead Nesting Subpopulations**



## Sea Turtle Nest Relocation Following Deepwater Horizon Oil Spill, Summer 2010

Sea Turtle Nest Relocation (U.S. Fish & Wildlife Service)



Sea turtles can lay 100 eggs per nest Credit: Bonnie Strawser, USFWS (click photo for high resolution)

#### Sea Turtle Egg Evacuations **Begin Along Gulf**

CBS News / 9th Jul 2010



800-822-9919 After about 90 minutes of parting the sand with her fingers like an archaeological dig, 107 eggs were placed in two coolers and loaded onto a FedEx temperature-controlled truck.

#### **PHOTOS: Kennedy Space Center in pictures**

They are being transported to a warehouse at Florida's Kennedy Space Center where they will incubate and, hopefully, hatch before being released into the Atlantic Ocean.

#### VIDEOS: Kennedy Space Center in videos

Special Section: Gulf Coast Oil Disaster The effort began in earnest along Florida's Panhandle, with two loggerhead nests excavated. Up to ....

#### READ MORE >>

RELATED STORIES Sea turtle egg evacuations begin along oiled Gulf Breitbart Sea turtle egg evacuations begin along oiled Gulf The Daily Caller Sea turtle egg evacuations begin along oiled Gulf Democratic Underground

Places Atlantic Ocean, Gulf Coast, Florida, Kennedy Space Center

Kennedy Space Center

Tags Evacuation, Oil Disaster, Oil

IN THIS STORY

Sea Turtle Eggs That Were Translocated To Atlantic Coast of Florida Due To Deepwater Horizon Oil Spill

Species	Trans- located Nests	Hatchlings released
<u>Green turtle</u> (Chelonia mydas)	4	455
<u>Kemp's ridley turtle</u> ( <i>Lepidochelys kempii</i> )	5	125
Loggerhead turtle (Caretta caretta)	265*	14,216

\*Does not include one nest that included a single hatchling and no eggs.

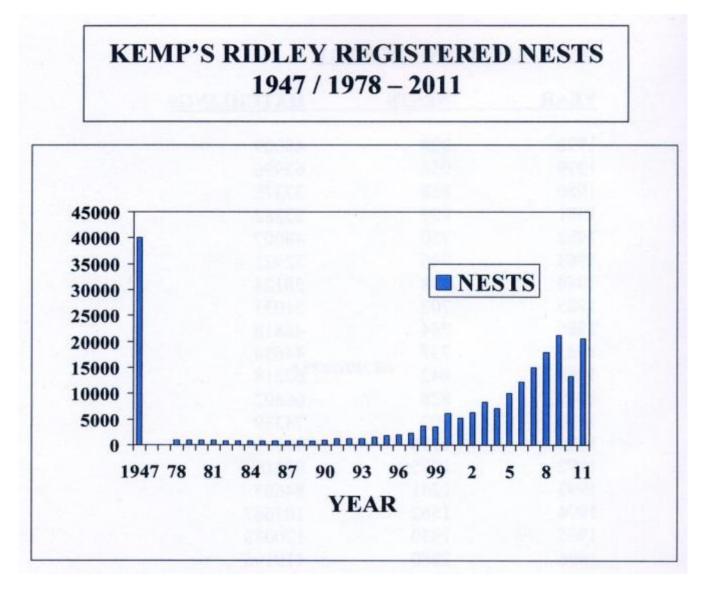


# Programa Binacional de la Tortuga Lora





### Kemp's Ridley Nesting Beach at Rancho Nuevo, Mexico



Kemp's Ridley Natural Resource Damage Assessment (NRDA) Project: Evaluating the Impact of the Deepwater Horizon Oil Spill



# The Diamondback Terrapin in Alabama:



## Diamondback Terrapin Biologically Unique

 Only turtle in North America that exclusively inhabits estuarine waters and salt marshes

(Occurs in Salt Marshes in the Northern Gulf of Mexico that were impacted by the Deepwater Horizon Oil Spill)





## Historically a Valuable Marine Resource

### Diamondback Terrapin Stew, Chesapeake Bay Style Recipe #283841

Turtle soup or stew is no longer a popular item on today's menus, but it once graced the tables of the rich and powerful. From the Southern chapter of the United States Regional Cookbook, Culinary Arts Institute of Chicago, 1947. Cooking time is approximate.

by Molly53

21/2 hours | 20 min prep

SERVES 6-8

- 3 large terrapins (turtles)
- 6 eggs, hard-cooked

3 tablespoons flour

1/2 teaspoon ground nutmeg

- 3 tablespoons lemon juice (fresh is best)
- 1 tablespoon lemon rind, grated
- 1 onion, peeled and sliced
- 2 stalks celery, diced
- 1 tablespoon worcestershire sauce
- 1/2 cup cream
- 2 cups sherry wine
- salt and pepper, to taste
- 3 cups chicken stock or vegetable stock

hot milk, if necessary

## Terrapin have been utilized for several centuries for making terrapin stew

- Drop live terrapin into boiling water and let stand for 5 minutes.
- Remove from water; rub skin off feet, tail and head with a towel, drawing the head out with a skewer.
- 3. Clip off claws.
- Scrub shell with boiling water; break apart with a cleaver or axe.
- 5. Remove meat and liver.
- Discard heart, sandbag, entrails and gall bladder (taking caution not to break it as it's bitter).
- 7. Cut the liver in thin slices.
- 8. Take out eggs, remove film and set aside in cold water.
- Mash yolks of eggs; add flour, nutmeg, lemon juice and rind.
- 10. Stir in 1 cup of soup stock.
- Add onion, celery, terrapin and terrapin eggs and enough more stock to cover meat.
- 12. Cook in double boiler until meat falls from bones.
- Remove bones, add worcestershire sauce, salt, pepper, chopped egg whites, cream, sherry and milk (if necessary).
- 14. Heat thoroughly and serve with toast.

### CODE OF ALABAMA 1975

With Provision for Subsequent Pocket Parts

Prepared under the Supervision of The Legislative Council

Jerry L. Bassett, Code Commissioner by. The Editorial Staff of the Publishers

#### VOLUME 7

2001 REPLACEMENT VOLUME

Including Acts through the 2001 Regular Session and annotations taken through Southern Reporter, Second Series, Volume 780, page 672

> EST GROUP A THOMSON COMPANY

> > 2001

American Digest System: Fish @=10.

C.J.S. Fish # 36

#### § 9-12-45. Tax on terrapins caught, etc., for commercial purposes; minimum legal size; possession of undersized terrapins.

A tax of \$.05 is hereby laid on each turtle or terrapin packed, canned or caught for commercial purposes in this state or the waters within the territorial jurisdiction of this state. It shall be unlawful for any diamond back terrapin measuring less than six inches from the anterior to the posterior

### Alabama Terrapin Tax Enacted in 1923 § 9-12-41 en only under the

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Code 1923, § 2769

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, p. 192; Code 1940,

No. 308, p. 501, § 1;

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\$9-12-46

MARINE RESOURCES

\$ 9-12-47

extremes of the body underneath to be caught or taken from the waters of Alabama, and any person having in his possession an undersized turtle shall be guilty of a misdemeanor. (Acts 1923, No. 504, p. 672; Code 1923, § 2769; Acts 1936-37, Ex. Sess., No. 169, p. 192; Code 1940, T. 8, § 139; Acts 1943, No. 422, p. 388, § 1; Acts 1945, No. 308, p. 501, § 1; Acts 1961, Ex. Sess., No. 108, p. 2028, § 1.)

#### § 9-12-46. Minimum weight of shrimp taken, etc., for commercial purposes; possession, sale, etc., of nonconforming shrimp.

The Commissioner of Conservation and Natural Resources shall set by regulation the minimum weight requirement of shrimp which are caught or taken from the territorial waters of Alabama for commercial purposes or which are brought into Alabama from waters beyond the territorial jurisdiction of Alabama for commercial purposes; provided, however, that such minimum weight requirement as set by regulation of said Commissioner of Conservation and Natural Resources shall require not more than 68 shrimp with heads attached to weigh one pound and shall require not more than 114 headless shrimp to the pound.

It shall be unlawful for any person, firm, corporation or association to sell, offer for sale or have in possession for sale for commercial purposes any shrimp which require more in number to weigh one pound than the number per pound as set by regulation of the Commissioner of Conservation and Natural Resources.

Any person, firm, corporation or association who or which violates any of the provisions of this section shall be guilty of a misdemeanor and, upon conviction, shall be punished by a fine of not less than \$25.00 nor more than \$100.00 for each offense.

Nothing in this section shall be construed to apply to shrimp which are used solely as bait. (Acts 1939, No. 565, p. 891, § 1; Code 1940, T. 8, § 161; Acts 1947, No. 49, p. 16, § 1; Acts 1951, No. 931, p. 1599, § 1; Acts 1967, No. 569, p. 1322, § 1.)

CROSS REFERENCES

**Corpus Juris Secundum:** 

As to standard measure for shrimp, see § 9-12-27. C.J.S. Fish §§ 26, 28.

RESEARCH REFERENCES American Digest System: Fab 6+8, 12.

#### 19-12-47. Condemnation, disposition, etc., of shrimp not fit for human consumption.

No person shall purchase, sell, can, ship or otherwise transport any fresh altwater shrimp which are not in prime condition, that is, suitable to be taten by human beings as food; and, upon condemnation by the Director,

## Diamondback Terrapin Recovery Program in Alabama 2005 - Present

- UAB, USA, Dauphin Island Sea Lab
- Alabama Department of Conservation and Natural Resources
  - State Wildlife Grants Program
  - Alabama Coastal Area Management Program





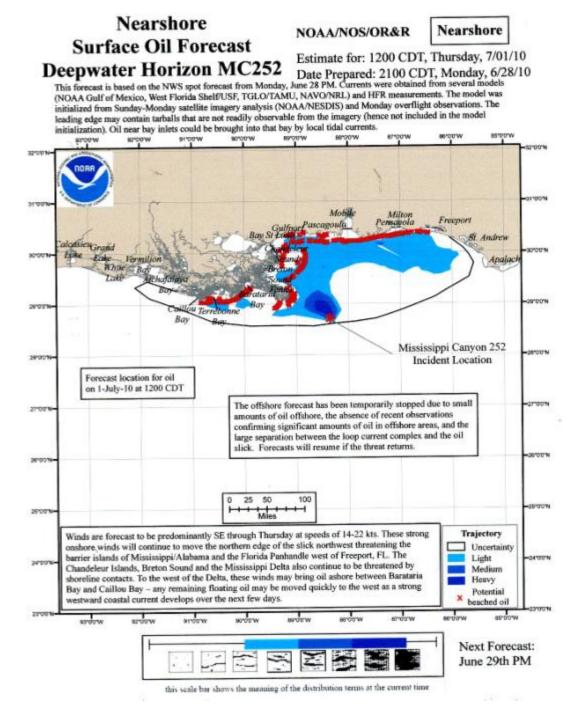












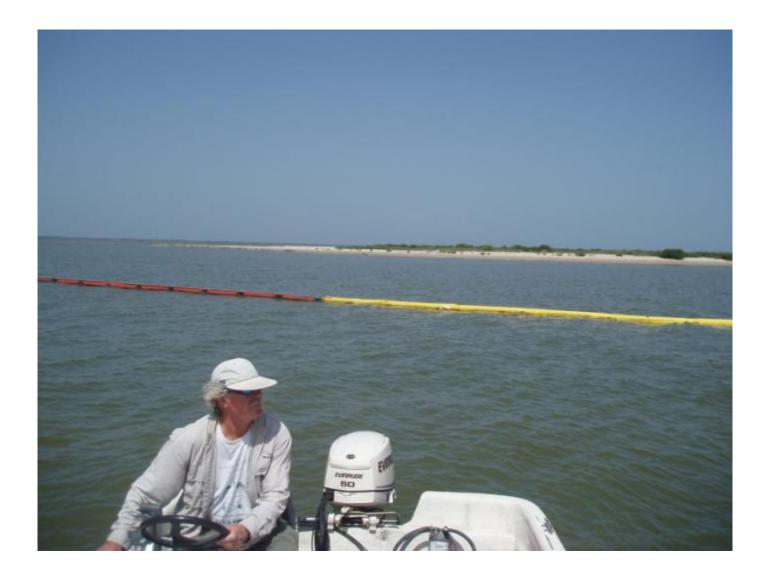
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771,000 gallons of Dispersant







## **DISL Marine Turtles Course**



Cedar Point Nesting Beach Drift Fence For Terrapin



Results to Date Regarding Nesting Surveys Reproductive Output Did Not Decrease in 2010 or 2011







## Headstart Program

 Approximately 10 - 12 clutches each year
2008 - 2011

Probable depredated nests

- Incubated at either 31 ℃ or 26 ℃
- Approximately 80 hatchlings per year
- Release after 9-12 month of captive rearing

## Analyzing Eggs for Oil Contaminants







Diamondback Terrapin Surveys in Alabama Salt Marshes

Analyzing terrapin for survival, growth, and oil contaminants

