



ENHANCE ★ PROTECT ★ CONSERVE

# BLUE CRAB BEACON

SPRING 2018




Cover Artwork by Matt Stebly



# TRIP TICKET REQUIREMENTS

## REQUIRED FOR COMMERCIAL CRAB FISHERMEN TRIP TICKETS AND MONTHLY SUBMISSION FORMS

A Fresh Product Permit is required if you transport your catch out of state or sell your catch to anyone other than a licensed seafood dealer or processor. This is a reminder that while in possession of a Fresh Product Permit you must turn in a Monthly Submission Form (See example below) by the 10th of the following month indicating the number of trips taken - even if that number is zero. If you sell your catch to anyone other than a licensed seafood dealer/processor or transport your catch out of state, you must fill out a trip ticket (See example on page 2) for each trip and send it in with your Monthly Submission Form. **THE IMPORTANT LANDING INFORMATION YOU SUBMIT IS STRICTLY CONFIDENTIAL AND CAN ONLY BE VIEWED BY YOU AND EMPLOYEES OF THE MISSISSIPPI DEPARTMENT OF MARINE RESOURCES WHO ARE DESIGNATED AS INFORMATION CONFIDENTIALITY PORT REPORTERS. YOUR REPORTS ARE VALUABLE TO FISHERIES MANAGERS.**

														
<b>TRIP TICKET</b> <b>MONTHLY SUBMISSION FORM</b> Mississippi Department of Marine Resources Trip Ticket Coordinator 1141 Bayview Avenue Biloxi, MS 39530 (228) 374-5000 or (800) 374-3449														
<small>This report must be submitted monthly in order to comply with the requirements of MS Title 22 Part 9 and rules and regulations adopted pursuant to those statutes. Completed trip tickets for the time period should accompany this form. DO NOT STAPLE TRIP TICKETS.</small>														
USE BLUE OR BLACK INK ONLY														
<b>Fresh Product Permit or Dealer License Number</b>														
License No. <table border="1" style="display: inline-table; text-align: center;"><tr><td>1</td><td>0</td><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td></tr></table>	1	0	0	1	2	3	4	Current Date: <table border="1" style="display: inline-table; text-align: center;"><tr><td>0</td><td>3</td></tr></table> / <table border="1" style="display: inline-table; text-align: center;"><tr><td>0</td><td>1</td></tr></table> / <table border="1" style="display: inline-table; text-align: center;"><tr><td>1</td><td>8</td></tr></table>	0	3	0	1	1	8
1	0	0	1	2	3	4								
0	3													
0	1													
1	8													
Reporting Period														
From: <table border="1" style="display: inline-table; text-align: center;"><tr><td>0</td><td>2</td></tr></table> / <table border="1" style="display: inline-table; text-align: center;"><tr><td>0</td><td>1</td></tr></table> / <table border="1" style="display: inline-table; text-align: center;"><tr><td>1</td><td>8</td></tr></table>	0	2	0	1	1	8	No of tickets <table border="1" style="display: inline-table; text-align: center;"><tr><td>0</td><td>0</td><td>0</td><td>0</td><td>9</td></tr></table>	0	0	0	0	9		
0	2													
0	1													
1	8													
0	0	0	0	9										
To: <table border="1" style="display: inline-table; text-align: center;"><tr><td>0</td><td>2</td></tr></table> / <table border="1" style="display: inline-table; text-align: center;"><tr><td>2</td><td>8</td></tr></table> / <table border="1" style="display: inline-table; text-align: center;"><tr><td>1</td><td>8</td></tr></table>	0	2	2	8	1	8								
0	2													
2	8													
1	8													
By signing this document I hereby certify the following:														
the attached trip tickets represent all transactions of fish and shellfish obtained from anyone other than a licensed dealer for the reporting period described above.														
all records (receipts) submitted in this report constitute all transactions required to be reported by law.														
all the attached information is accurate and accounts for all actual business transactions required to be submitted in this report.														
I understand that providing false information may result in criminal consequences.														
PRINT Dealer/Processor or Fisherman Name:	<u>Joe Crabber</u>													
SIGNATURE Licensed Dealer/Processor or Fisherman:	<u>Joe Crabber</u>													



All trip tickets shall be returned to the MDMR or electronically submitted on or before the 10th of each month for actual transactions from every commercial fisherman during the preceding month. A monthly summary form that states the total trips taken in a given month shall be submitted by the 10th of each month by the seafood dealer/processor or commercial fisherman.

Any unlawful act under this Part committed by any person, firm or corporation shall be deemed a violation of the provisions of this Part and shall constitute a misdemeanor and upon conviction, said person shall be punished in accordance with Mississippi Code Ann. § 49-15-63, as amended, unless a penalty is specifically provided elsewhere in the Mississippi Code Ann. of 1972, as amended.

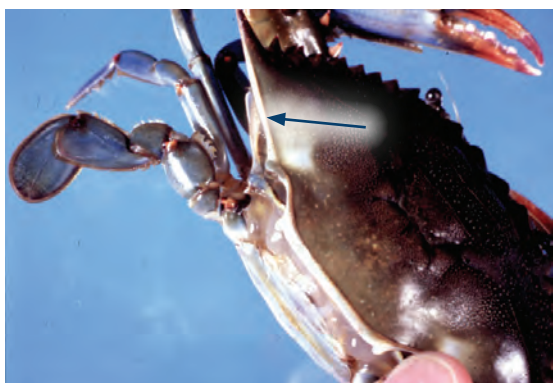
MDMR CRAB AND SHRIMP BUREAU | 2

# BLUE CRAB MOLTING

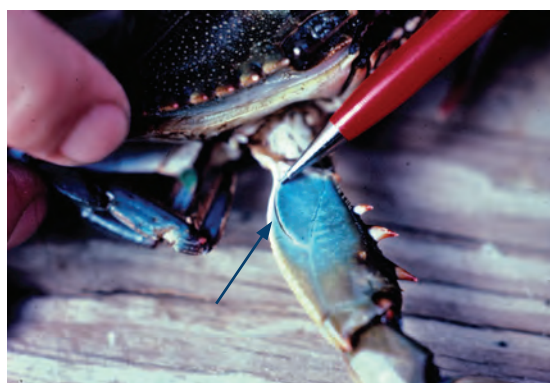
As with other crustaceans, the Blue Crab must molt or shed its hard, outer shell (exoskeleton) in order to increase in size. When the body grows too large for the old exoskeleton, a new soft one forms beneath it. A crab preparing to molt is called a "peeler" or a pre-molt crab.

## STAGE 1: PRE-MOLT/PEELER

During this stage, Blue Crabs can be separated from inter-molt or hard crab through the presence of shedding along the merus and long lateral spines of the carapace. Many fishermen check these areas first to see if the suture lines are present and soft. Prior to molting, blue crabs absorb the calcium from suture lines in the exoskeleton. These suture lines split open to help the crab back out of the shell.



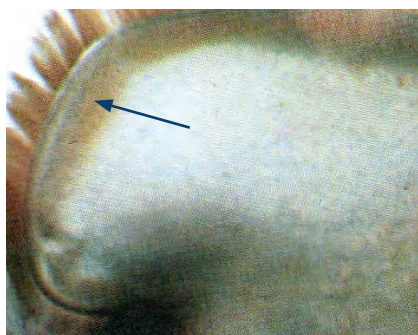
▲ Suture lines on the long lateral spines of the carapace



▲ Suture lines in the merus, a segment of the claw

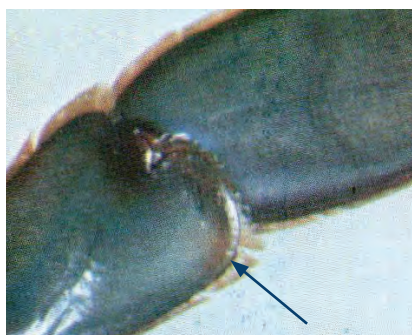
## STAGE 2: CHANGES IN COLORATION

Other molting signs involve changes in coloration. Check the last two segments of the swimming leg or paddle where the newly formed shell is most easily visible to determine the crab's molt stage. Crabs are classified as either green or ripe/rank based on their coloration stage. Some areas refer to a green crab as those that don't show any sign of molting. When holding crabs, it's important to separate white lines from pink and red line crabs as white line crabs are still capable of cannibalism.



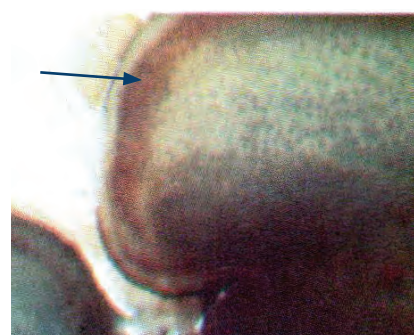
### ▲ WHITE LINE (GREEN)

- Sheds within 7-14 days
- Grade every 2-3 days for signs of advancing to the pink line



### ▲ PINK LINE (RIPE/RANK)

- Sheds within 3-6 days



### ▲ RED LINE (RIPE/RANK)

- Sheds within 1-3 days

*Figures were taken from the following publication: Perry, Harriet M. and Ronald F. Malone. 1989. Blue crabs: soft-shell production. In: Cake, E. W., L. F. Whicker, and C. M. Ladner (editors), Mississippi Aquatic Ventures Center: Aquaculture Profiles and Opportunities in Mississippi. Mississippi Department of Wildlife, Fisheries & Parks, Bureau of Marine Resources.*



## STAGE 3: BUSTING

The "buster" or "soft-shell" stage begins when the hard shell splits across the back and the crab starts to pull out of the old shell. To expand its soft and wrinkled body, the crab takes in large amounts of water to stretch the new shell and allow for future growth. After molting the soft shell hardens and are referred to "paper-shell" or "leather" crabs. Paper-shell/leather are marketable, but soft crabs bring top prices.

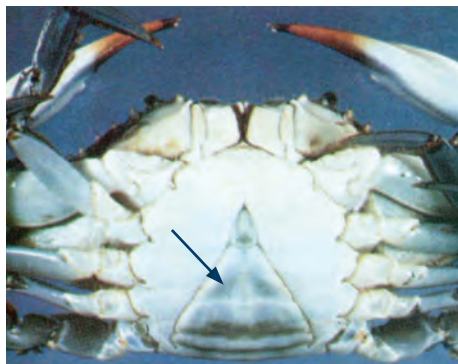


▲ Crab pulling out of old shell



▲ Paper-shell or leather crab

## OTHER SIGNS OF SHEDDING

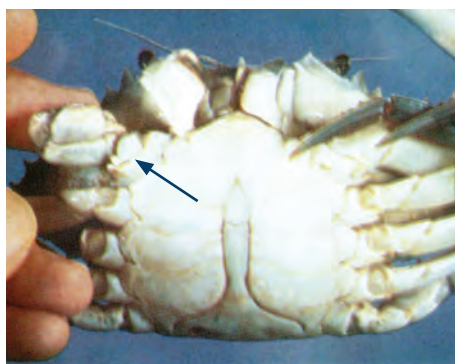


▲ Immature female crab

*The abdomen or apron in immature female crabs changes from creamy white to reddish-purple.*



▲ Ripe female crab



▲ Male possesses well-developed limb buds.

# BYCATCH REDUCTION DEVICES

## CRAB TRAP ESCAPE RINGS



Escape rings are devices that help reduce the catch of sublegal crabs (less than 5"), allowing these smaller crabs to escape. This has a positive impact on the Mississippi Blue Crab Fishery. The use of escape rings reduces the time it takes to cull your catch and also decreases the amount of non-targeted bycatch.

The MDMR has successfully distributed over 56,000 rings Mississippi. All crab traps placed in the marine waters of the state of Mississippi shall be equipped with no less than two escape rings positioned on the vertical outside walls of the trap, with at least one ring located in each chamber. Escape rings must have a minimum of 2 and 3/8 inches inside diameter. From April 1 to June 30 and from September 1 to October 31, escape rings may be obstructed for the purposes of retaining peeler or buster crabs (Title 22 Part 4).

## TERRAPIN EXCLUDER DEVICES

Terrapin Excluder Devices (TEDs) are a simple rectangular device that attach to the funnels of crab traps that prevent the entry of diamondback terrapins, but allow Blue Crabs to still enter the traps. TEDs are made of plastic or metal and are attached to the funnels by simply using hog rings, wires or zip ties. The use of TEDs is encouraged to help reduce the number of incidental catch of diamondback terrapins.

Through the Mississippi Crab Trap TED Program, the MDMR has installed the 2" X 6" TEDs in over 19,500 crab traps to date. We also work closely with Singing River Services and Ability Works of Mississippi, a network of community rehabilitation programs that provide vocational assessment, job training, and actual work experience for individuals with disabilities. They have currently installed TEDs into over 500 traps that they have built and sold to the public.



**THE MISSISSIPPI DEPARTMENT OF MARINE RESOURCES, THROUGH THE NOAA-FUNDED BONNET CARRE' FISHERY DISASTER PROGRAM, PROVIDES RESIDENT LICENSED COMMERCIAL AND RECREATIONAL CRAB FISHERMEN WITH FREE ESCAPE RINGS AND TEDS.**

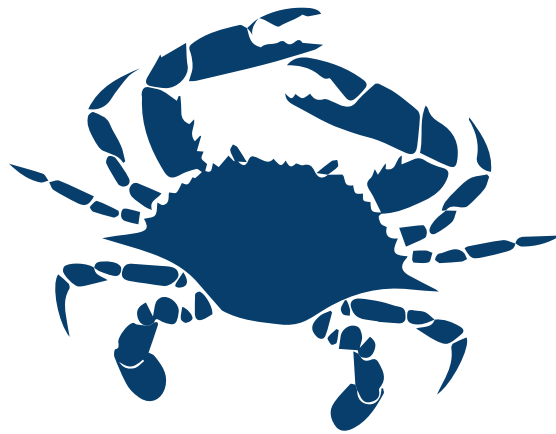
**VISIT OUR OFFICE AT 1141 BAYVIEW AVENUE IN BILOXI TO REQUEST THEM.**



# NOTICE

**IT'S ILLEGAL TO TAKE  
CRAB TRAPS OR  
CRABS FROM TRAPS NOT  
LICENSED TO YOU.**

**(SECTION 49-15-92 MISSISSIPPI CODE OF 1972)**



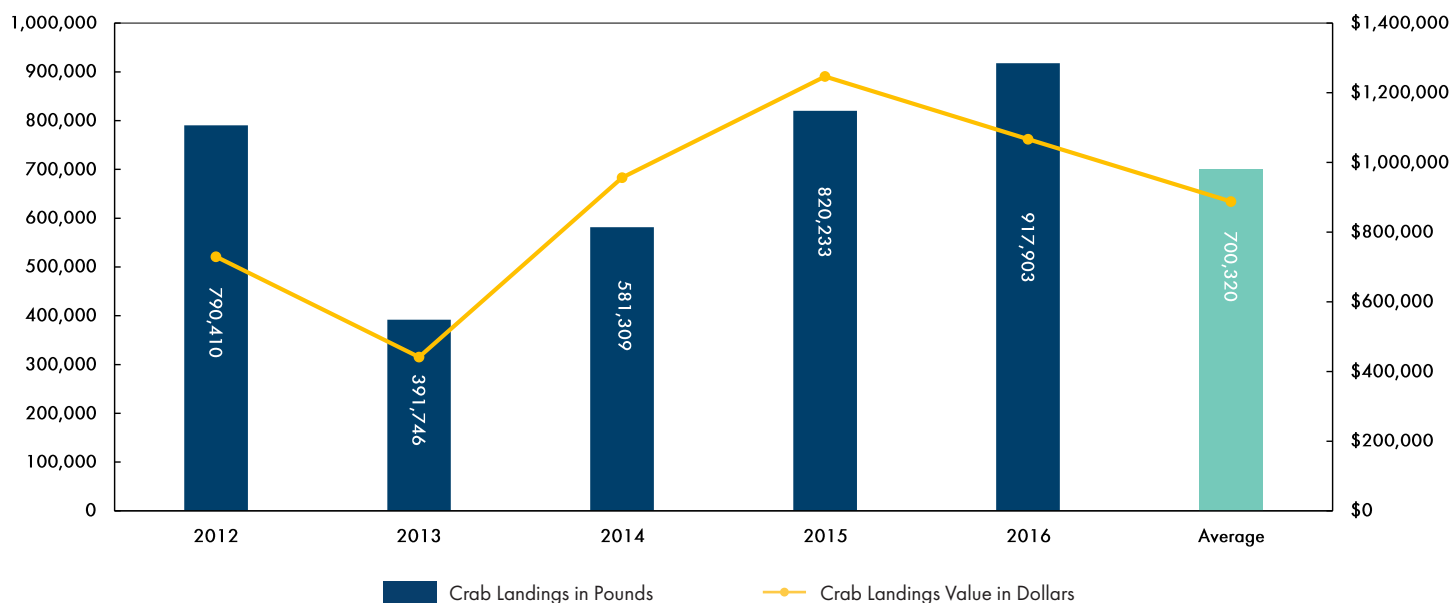
**PUNISHABLE BY A FINE  
OF UP TO \$500 FOR THE  
FIRST OFFENSE**

**QUESTIONS? CALL THE MISSISSIPPI DEPARTMENT  
OF MARINE RESOURCES AT (228) 374-5000**

# CRAB LANDINGS

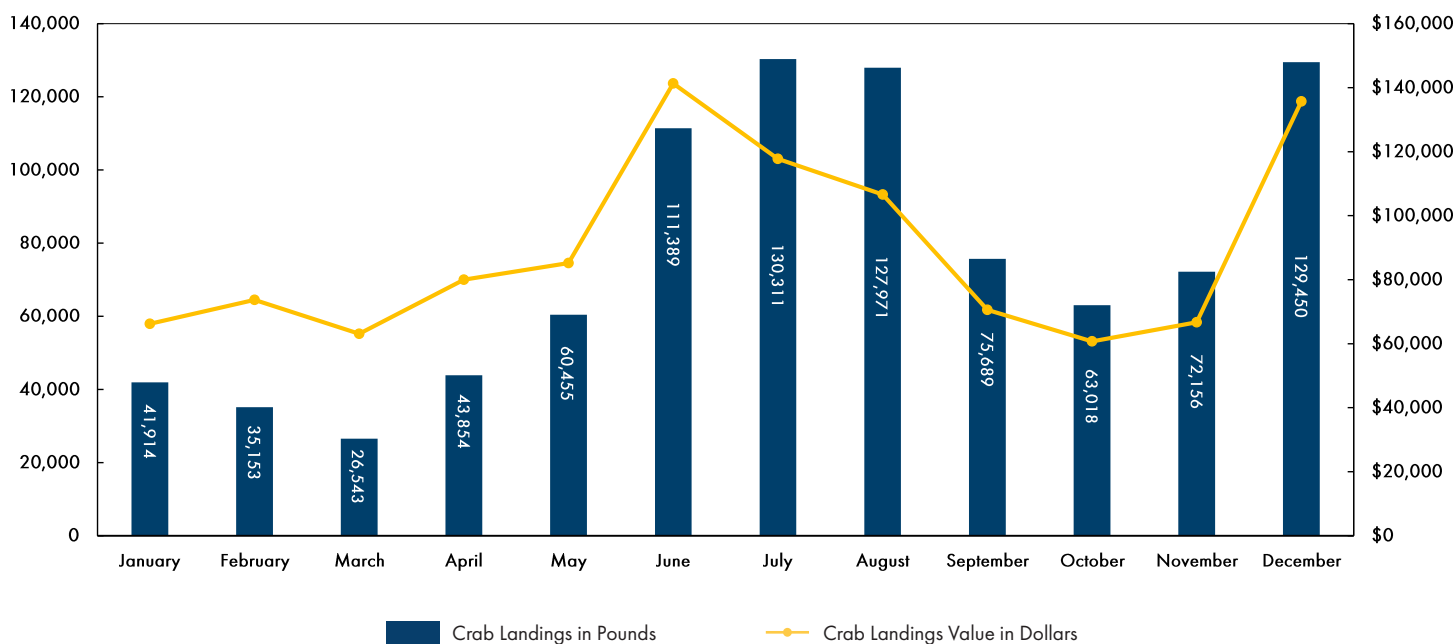
## MISSISSIPPI LANDINGS 2012- 2016 - BLUE CRABS (*Callinectes sapidus*)

The blue bars represent the total number of pounds landed for the given year while the green bar represents the average landings over the same period. The yellow line represents the total value in dollars for the given years. 2016 was the highest total weight of Blue Crab landed from 2012 to 2016 at 917,903 pounds and resulted in the second highest value for the period at \$1,066,833.



## 2016 MISSISSIPPI LANDINGS BY MONTH - BLUE CRABS (*Callinectes sapidus*)

The blue bars represent the total pounds of crabs landed each month and the yellow line represents the total monthly value in dollars of those landings. The highest landings of Blue Crab in 2016 occurred in July (130,311 pounds). The highest value of commercial landings occurred in June (\$141,322).

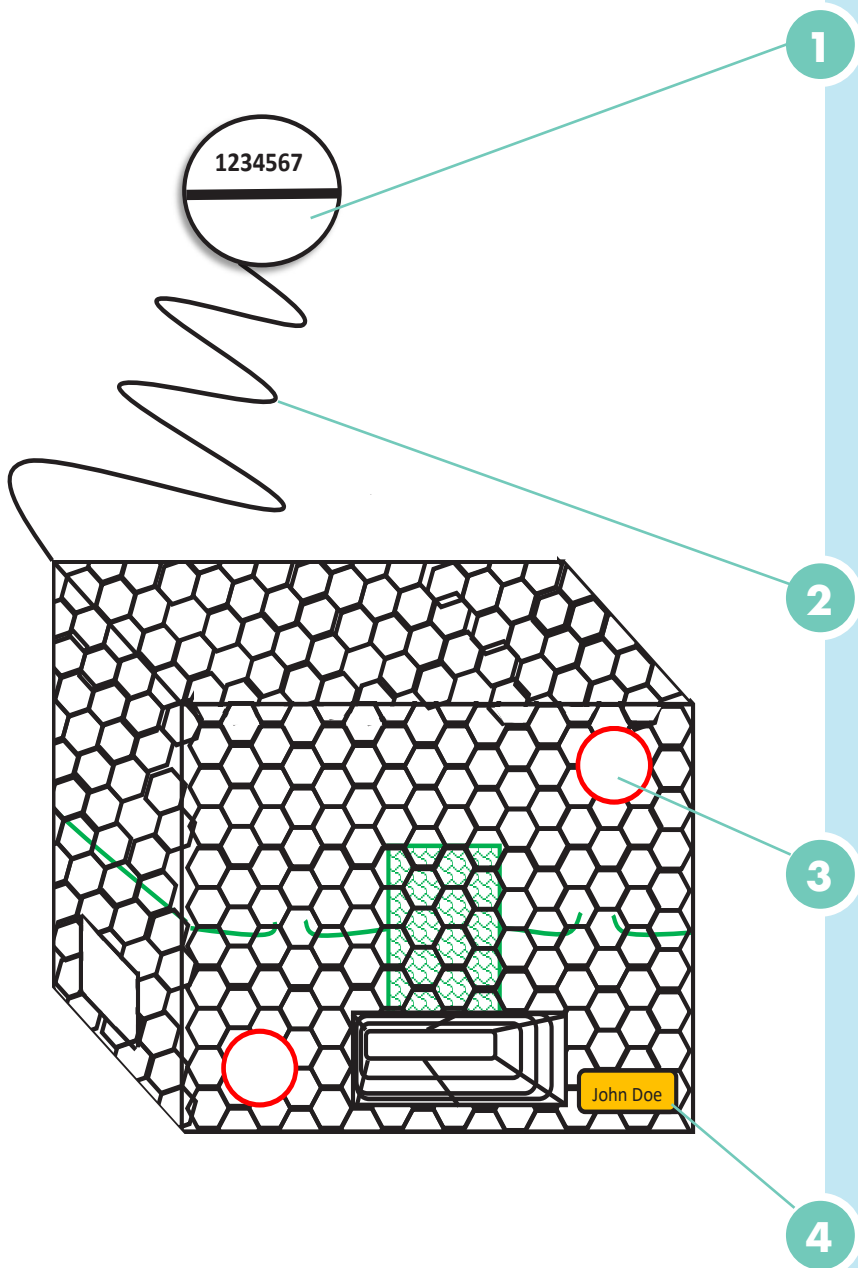




# TITLE 22 PART 4

## RULES AND REGULATIONS FOR THE TAKING OF CRABS IN THE STATE OF MISSISSIPPI

### CHAPTER 6—GEAR REGULATIONS REVIEW



**1** **FLOAT:** All crab traps or pots placed in the marine waters of the state of Mississippi must be marked with a float of at least six inches in height, length and width. The float must have a highly visible color. It shall be unlawful for any person, firm or corporation, fishing for crabs by means of crab traps to fail to mark each said trap float with the corresponding commercial or recreational crab license number in such a manner to be clearly visible to an inspecting officer. However, licensed commercial crab fishermen may obtain a registered color code design from the MDMR Marine Patrol Office. Contact Marine Patrol at 228-523-4134. Once obtained, this color code must be placed on each buoy or float and painted or affixed to each side of the vessel used to harvest crabs from said traps or pots.

**2** **FLOAT LINE:** Buoys shall be attached to crab traps by use of a weighted line or non-floating line. It shall be unlawful for any person, firm or corporation to attach any buoy/float to any crab trap/pot with materials other than lines of nylon, hemp, cotton or woven synthetic materials which can easily be cut with a standard steel knife.

**3** **ESCAPE RINGS:** All crab traps placed in the marine waters of the state of Mississippi shall be equipped with no less than two escape rings positioned on the vertical outside walls of the trap, with at least one ring located in each chamber. Escape rings must have a minimum of 2 and 3/8 inches inside diameter. From April 1 to June 30 and from September 1 to October 31, escape rings may be obstructed for the purposes of retaining peeler or buster crabs.

**4** **NAME TAG:** All crab traps placed in or on the marine waters of the state of Mississippi shall utilize the following materials to permanently mark the crab trap for ownership: a corrosion resistant metal or plastic tag must be attached to the trap. The tag used to mark the traps must be legibly and permanently stamped with letters containing the applicable licensed crab fishermen's full name. The minimum height of the letters must be at least 3/16 of an inch.

FOR THE FULL TEXT OF TITLE 22 PART 4,  
PLEASE VISIT [WWW.DMR.MS.GOV](http://WWW.DMR.MS.GOV).

# ONGOING PROJECTS

## GULF-WIDE BLUE CRAB TAGGING PROJECT

by Zachary Darnell, Ph.D., Assistant Professor, Division of Coastal Sciences  
Gulf Coast Research Laboratory

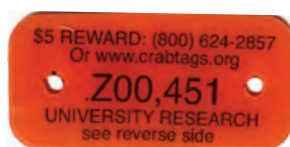
Researchers at the University of Southern Mississippi's Gulf Coast Research Lab (GCRL) are tagging mature female Blue Crabs across the Gulf Coast. This project is a collaboration with state fisheries management agencies and commercial crabbers, with the goal of gaining a better understanding of crab migrations throughout the bays, bayous, estuaries and offshore waters of the Gulf of Mexico. Female Blue Crabs migrate seaward to spawn, moving to the high salinity waters needed for the offspring to survive. When a crab is tagged, researchers record the location, date and tag number. When that crab is later recaptured and reported, researchers can use the information on where it was caught to determine when it began the migration, how far and how fast the crab moved, and the route taken by the crab. This information is important for understanding Blue Crab migrations into and out of each states' fishable waters, and for ensuring the continued productivity of this valuable fishery.

Since March of 2016, over 13,000 female Blue Crabs have been tagged and released across the five Gulf states, and over 2800 of these have been recaptured and reported. Tagged crabs have been recaptured as far as 120 miles from where they were tagged. In Mississippi, 1885 crabs have been tagged and released, and 465 of these crabs have been recaptured. Crabs tagged in Mississippi have been recaptured in Mississippi, Louisiana and Alabama.

Tagging will continue through 2018 and potentially beyond. Tags are orange, printed plastic rectangles attached with wire wrapped around the lateral spines of the crabs. If you catch a tagged crab, please report it by calling 1-800-624-2857 or online at [crabtags.org](http://crabtags.org).

A \$5 cash reward is being offered for each tagged crab that is reported. You do not have to return the crab to get the \$5 reward. Additional reward for a frozen crab with the tag still attached. A GCRL employee will pick up your crab (applies to first 500 returned crabs only - please do not mail).

Additional commercial crabbers are being recruited to help tag crabs.  
**IF YOU ARE INTERESTED IN WORKING WITH GCRL PERSONNEL**



**TO TAG CRABS, PLEASE CONTACT ZACK DARNELL AT  
1-800-624-2857 OR ZACHARY.DARNELL@USM.EDU.**



## REWARD DETAILS

**IF CAUGHT, PLEASE REPORT  
THE FOLLOWING INFORMATION  
TO 1-800-624-2857 OR  
CRABTAGS.ORG:**

- Tag Number
- Capture Date
- Capture Location (GPS if possible)
- Egg Mass/Sponge Color (if present)

### REWARD INFORMATION:

- \$5-50 for each reported tagged crab
- Additional reward for a frozen crab with the tag still attached. A GCRL employee will pick up your crab (first 500 returned crabs only).







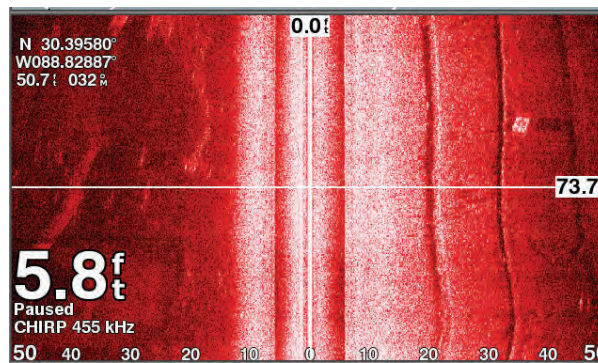
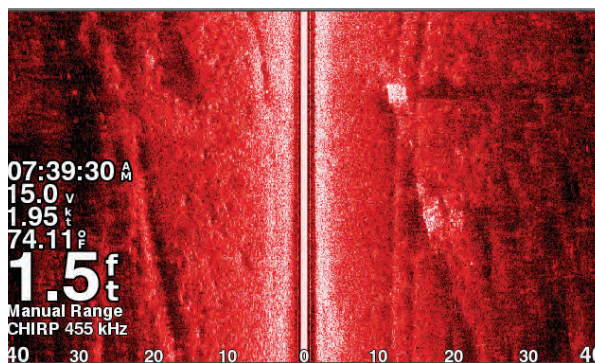
## DERELICT CRAB TRAP REMOVAL PROGRAM

The Mississippi Derelict Crab Trap Removal program began in 1999 and has been an effective measure of removing lost crab traps. To date the program has removed over 21,600 traps, with 15,000 of those being brought in by Mississippi commercial fishermen. The program was recently recognized by the Environmental Protection Agency as the recipient of the 2017 Gulf Guardian Award in the partnership category as well as the Mississippi Chapter of the American Fisheries Society by receiving the 2018 Fishery Conservation Award. However, there is still an underlying issue of deep water derelict traps that may otherwise go unnoticed during these highly successful routine trap removals.



### HOW MDMR DETECTS AND RETRIEVES SUBMERGED DERELICT CRAB TRAPS

The Office of Marine Fisheries, Shrimp and Crab Bureau has begun utilizing side scan technology to locate submerged derelict crab traps that may otherwise go unnoticed. The side scan sonar can detect crab traps sitting on the bottom in the shape of a trap or "box" (see pictures below). The detected traps are marked on the GPS and a grappling hook is utilized to retrieve the trap.



**TO DATE, 57 TRAPS HAVE BEEN RETRIEVED USING THIS METHOD  
THROUGHOUT THE MISSISSIPPI SOUND, BAYS AND BAYOUS.**



ENHANCE PROTECT CONSERVE

## SHRIMP AND CRAB BUREAU

1141 Bayview Avenue  
Biloxi, Mississippi 39530

### STATE OF MISSISSIPPI

**The Honorable Phil Bryant**, *Governor*

### MISSISSIPPI DEPARTMENT OF MARINE RESOURCES

**Joe Spraggins**, *Executive Director*

### MISSISSIPPI COMMISSION ON MARINE RESOURCES

**Steve Bosarge**, *Chairman*  
Commercial Fishermen

**Ron Harmon**, *Vice Chairman*  
Charter Boat Operators

**Richard Gollott**  
Commercial Seafood Processors

**Jolynne Trapani**  
Nonprofit Environmental  
Organizations

**Mark H. Havard, II**  
Recreational Sports Fishermen

### COMMENTS OR SUGGESTIONS?

Mississippi Department of Marine Resources  
Shrimp and Crab Bureau  
228.374.5000

**WWW.DMR.MS.GOV**



PA 117058 03.18

PRST STD  
U.S. Postage Paid  
Permit No. 144  
Biloxi, MS 39530

