



# Gulf Coast Fisherman



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## **SPECIES SPOTLIGHT:** Greater Amberjack, *Seriola dumerili*



Known regionally as "reef donkeys" for their stubborn fight, these fish are a tasty treat if you're lucky enough to land one.

### **Distribution**

- Both Atlantic and Pacific oceans; in Western Atlantic, range extends from Nova Scotia to Brazil, including the Gulf of Mexico and the Caribbean Sea

- Juveniles school around *Sargassum* mats in the Gulf of Mexico
- Sub-adults and adults inhabit seafloor structures, such as reefs, rocky outcrops, and wrecks, in depths of 60–240 feet

### **Biology**

- Largest of the jacks
- Grow up to 6 feet long and live up to 15 years
- Can weigh up to 200 pounds, but are most commonly found up to 40 pounds
- Females grow larger and live longer than males
- Peak spawning occurs March–April in the Gulf of Mexico
- Feed on squid, fish, and crustaceans

### **Management**

- Gulf of Mexico Greater Amberjack are overfished and undergoing overfishing
- The stock is currently under a rebuilding plan
- The fishery is dominated by recreational landings
- Recreational fishing is open August–October and in May
- Fixed closed seasons exist from November 1–April 30 and June 1–July 31
- These closed seasons protect the population during peak spawning and still allow for spring and fall harvest

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# **Reef Donkey Research**



***What's the problem?*** In the Gulf of Mexico, the recreational season for Greater Amberjack is closed during peak spawning times to provide protection for large females, which promotes population recovery for the species. However, during these season closures, anglers often catch Greater Amberjack while targeting other reef fishes. These Greater Amberjack must be released and are known as “regulatory discards.” While we assume that these regulatory discards survive post-release and return to the population, some degree of post-release mortality occurs. Stock assessments routinely attempt to estimate a value for post-release mortality, but accurately determining what percentage of released fish die is understandably difficult.

***How do we address it?*** Electronic tagging studies provide a way to estimate post-release mortality for regulatory discards. Given the popularity of Gulf of Mexico Greater Amberjack and the relatively high number of regulatory discards in the recreational fishery, we conducted an electronic tagging study to estimate post-release mortality for this species.

***What did we do?*** We deployed acoustic hydrophones, which are underwater microphones designed to record signals from acoustic transmitters, at two locations known to have high abundances of Greater Amberjack. We then fished for Greater Amberjack using recreational angling techniques. Once fish were captured, we inserted acoustic transmitters, which are small electronic tags designed to transmit a unique code that can be detected and deciphered by an acoustic hydrophone, inside the body cavity of the fish. We did this for 36 Greater Amberjacks

(18 legal-sized, 18 under-sized), which were then released back into the water.

***What did we find?*** One month later, we returned to the two tagging locations and downloaded data from the acoustic hydrophones in hopes that they had recorded detections from the fish we'd tagged. At both locations, most of the fish we'd tagged had been detected by the hydrophones, and the data allowed us to "see" the swimming behavior for these fish during the month following the tagging date. Using these data, we were able to calculate the percentage of fish that experienced post-release mortality, which was 20%.

***What does it mean?*** Our findings demonstrate that 1 in 5 Greater Amberjack that are caught and subsequently released experience post-release mortality. Providing these data to the scientists who conduct the stock assessment will allow them to better predict the status of the stock in years to come.

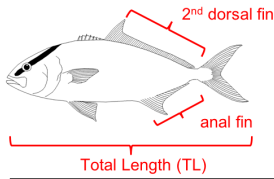
*For the full details of this work, please read our forthcoming publication, which is currently in press in the journal Fisheries Research. You can access this publication on our website, located [here](#).*

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## Know Your Jacks!

In the northern Gulf of Mexico, there are four amberjacks (jacks of the genus *Seriola*), all of which look very similar. Learning to tell them apart takes a skilled eye, patience, and a bit of practice. We've put together a step-by-step guide to help you navigate your jacks.\*

*\* A special thanks to Diane Rome Peebles for allowing us to use her exceptionally detailed and accurate amberjack illustrations.*



## Identification Guide for Amberjacks Common to the Northern Gulf of Mexico

**1. How long is the anal fin compared to the second dorsal fin?**

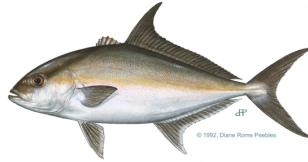
If the anal fin is  $1/2$  as long as 2<sup>nd</sup> dorsal fin, it's a **BANDED RUDDERFISH**. If it's  $2/3$  as long as 2<sup>nd</sup> dorsal fin, go to 2.



**BANDED RUDDERFISH** are slender bodied and commonly reach 20" TL (max size 30" TL)

**2. Is it deep bodied or slender bodied?**

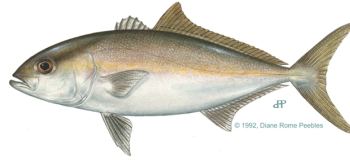
If the anal fin is  $2/3$  as long as 2<sup>nd</sup> dorsal fin, and it's deep bodied, it's an **ALMACO JACK**. If it's slender bodied, go to 3.



**ALMACO JACKS** have a very high 2<sup>nd</sup> dorsal fin, are olive/gray in color and commonly reach 35" TL (max size 63" TL)

**3. If the anal fin is  $2/3$  as long as the dorsal fin, and it's slender bodied, it's either a LESSER AMBERJACK or a GREATER AMBERJACK.\***

\*If larger than ~ 3 ft, then it's a Greater Amberjack



**LESSER AMBERJACK** often have a dark band from their eye to their first dorsal fin and commonly reach 20" TL (max size 27" TL)



**GREATER AMBERJACK** are the most common species of amberjack, and can grow much larger than the other 3 species. Like lesser amberjack, they often have a dark band from their snout through their eye, and into their 1<sup>st</sup> dorsal fin. They commonly reach 39" TL (max size 74" TL)

If you found this guide useful, look for the forthcoming Mississippi State University Extension publication to take offshore with you on your quest for the ultimate reef donkey.



## Sea of Acronyms

Being an informed angler begins with understanding the terminology used in fisheries management. This series helps demystify the concepts hidden beneath a sea of acronyms.

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## Fishery-independent

Data collected on fish or a fishery by scientists who catch the fish themselves, rather than depending on fishermen and seafood dealers.

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## Upcoming events

### [Carl Legett Fishing Tournament](#)

*Aug 3-5*

Point Cadet Pavillion, Biloxi MS

### [CCA Horn Island Casting for Conservation](#)

*Aug 18*

Pascagoula, MS

### [Alabama Coastal BirdFest](#)

*October 3-6*

Various locations, AL

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I'm Marcus Drymon, an Assistant Extension Professor at Mississippi State University and a Marine Fisheries Specialist at Mississippi-Alabama Sea Grant. I'd like to hear from you - please send any comments or questions to [marcus.drymon@msstate.edu](mailto:marcus.drymon@msstate.edu), and click on the links below for more information on my website and Facebook page.

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Contributing authors shown with their favorite fishes: Extension Associate Amanda Jefferson (triggerfish, left) and Extension Program Associate Emily Seubert (sharpnose shark, right).



Facebook Website

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