

Almaco Jack (*Seriola rivoliana* Valenciennes 1833)

Description

Almaco jack has a similar appearance to greater amberjack with a slightly compressed body. Their coloration is varied and can be silver, brown, blue, or olive green with dusky fins (Photographs 1a and 1b). Their head has a dark diagonal band that runs from the lip, across the eye to the beginning of their elongated dorsal fin. Juveniles have 5 – 6 well-defined dark bars that extend from the dorsal to the anal fin.

A



B



Photographs 1a and b. Examples of coloration in almaco jack. Credit: FGBNMS

Life History and Distribution

Almaco jack is a circum-tropical species distributed through the western Atlantic (Massachusetts, USA to Argentina), Gulf of Mexico (Gulf), Caribbean Sea, and the Indo-West Pacific Ocean. This species occurs offshore and is not generally found in nearshore waters. Adult Almaco jack range in size from 22 to 35 inches fork length (FL) (55 to 90 cm FL) but have been reported to reach a maximum of 48 inches FL (123 cm FL) (Frota et al. 2004; McEachran and Fechtelm 2005; SAFMC 2019).

Little is known about the life history and spawning behavior of this species (SEDAR 49). As part of a 5-year review of essential fish habitat (EFH), the Gulf Council created species profiles for all the species managed by the Council (GMFMC 2016). These profiles summarized information regarding species distribution at different life stages. Habitat use by almaco jack in the Gulf was identified in Figure 1. Despite limited information, almaco jack in the Gulf is assumed to be a single stock and this assumption is similarly applied to other *Seriola* species (i.e., lesser and greater amberjack).

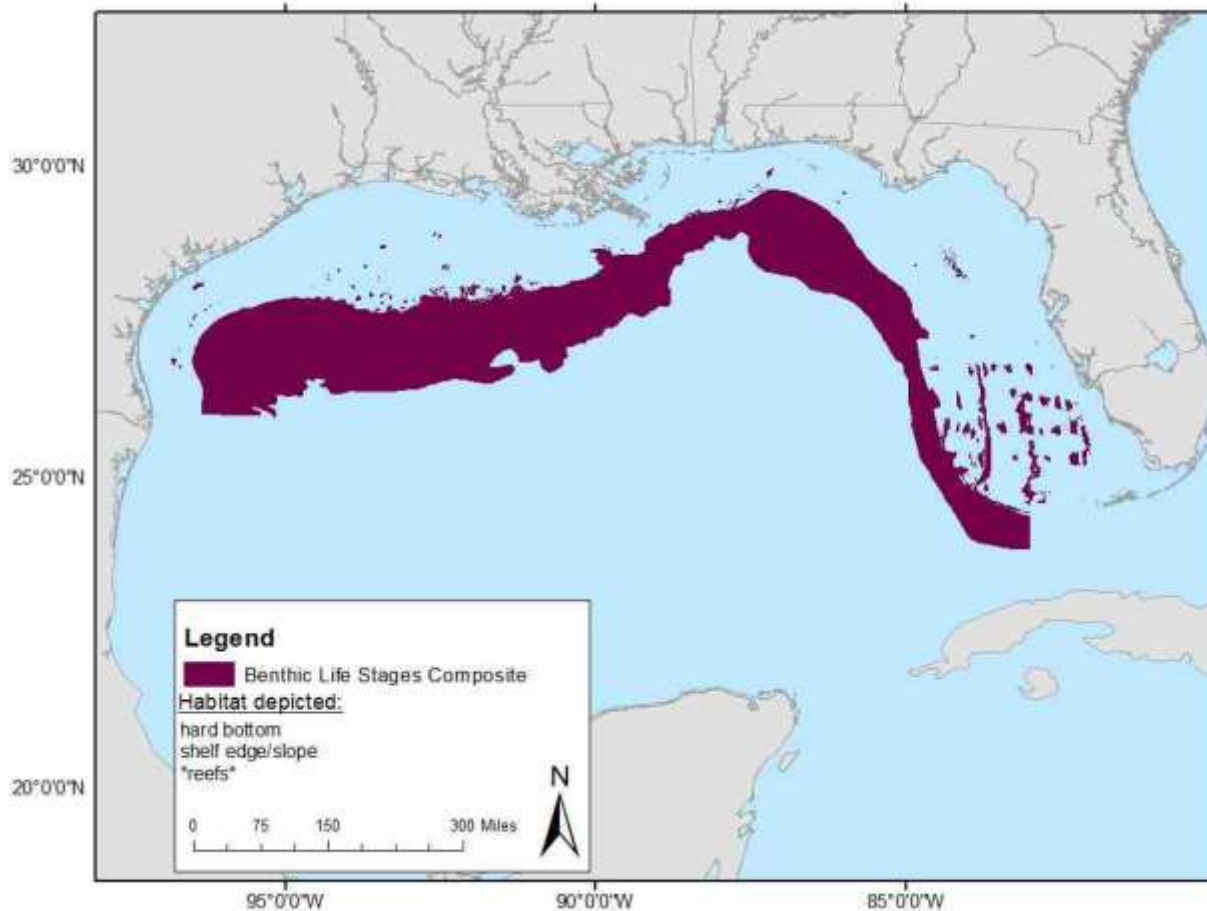


Figure 1. Map of benthic habitat use by all life stages of almaco jack. This species is primarily associated with the water column and drifting algae, but also shelf edge/slope, hard bottom, and reefs. Legend information in asterisks *reefs* refers to a habitat type identified in a study conducted outside GMFMC jurisdiction. Source: Figure 57 from 5-Year Review of Essential Fish Habitat Requirements (GMFMC 2016).

Studies on fish associated with pelagic *Sargassum* in the Gulf of Mexico reported the presence of juvenile almaco jack from April to November, which suggest spawning seasons occur in spring and summer (Dooley 1972; Wells and Rooker 2004). A recent report by Grüss et al. (2018) identified potential almaco jack spawning aggregation areas in the Gulf including the Flower Garden Banks area, in Alabama waters, Florida Panhandle shelf waters, Pulley Ridge, and the Dry Tortugas.

In the Gulf, almaco jack eggs and larvae can be found in waters from the Florida Keys to Pensacola Bay, and Freeport, Texas to the Mexico border (Smith-Vaniz 1986; Dooley 1972; Fahay 1975). Juveniles (0.5 – 7 in. SL [12 – 180 mm]) can be found throughout Gulf waters at depths of 20 to 55 ft (6 – 17 m), and are often associated with drifting *Sargassum* where they feed on fish, shrimp, and copepods (Dooley 1972; Bortone et al. 1977; McEachran and Fechhelm 2005; Casazza 2008).

Adults are pelagic and small schools are closely associated on outer reef slopes, offshore banks, and artificial reefs including oil and gas platforms in the northern Gulf at depths of 70 to 600 ft (21 to 180 m) (Stanley and Wilson 1997; GMFMC 2016, Fig. 1). As adults, their diet shifts from fish and small crustaceans to predominantly fish (Barreiros et al. 2003).

In captive trials, initial gonad development occurs in males within 20 months, and in females within 24 months. These fish are between 7 – 9 lbs (3 – 4 kg). Groups of captive, mature broodstock will spawn up to 3 or 4 times per week, although spawning patterns of individuals within the group is unknown. The growth rates of almaco jack in captivity can vary widely. Usually commercial offshore culture will expect a ~4.5 lbs (~2 kg) fish in 10 – 12 months (N. Sims, Kampachi Farms, pers comm. 2019).

Regulations

Almaco jack has been included as one of the species in the 20-fish aggregate bag limit for the recreational harvest of reef fish in Gulf federal waters since 1997 (Amendment 12; GMFMC 1995). In the South Atlantic, this species is managed under the Snapper-Grouper Fishery Management Plan (FMP) by the South Atlantic Fishery Management Council (South Atlantic Council). The South Atlantic Council approved a 20-inch FL minimum size limit for the commercial sector via Regulatory Amendment 27 (SAFMC 2019) to be implemented in the near future. The South Atlantic Council analyzed catch data from 2014 – 2016 and reported that 88.5% of commercial landings are above 20 inches (51 cm) FL, and that 66% of the catch is above 26 inches (66 cm) FL; therefore, regulatory discards are expected to be minimal (SAFMC 2019). The 20-inch FL minimum size limit is not expected to have negative economic effects on the commercial sector (SAFMC 2019). The South Atlantic Council is not currently considering a minimum size limit for recreational anglers. These regulations for almaco jack were developed as a result of stakeholder's concern over small fish being landed by the commercial sector, resulting in poor commercial value of the fish. A 20-inch FL minimum size is equivalent to 5 lbs (2.3 kg) gutted weight of fish, which fishermen indicated would have a higher price per pound in the restaurant market. As of July 1st, 2019, the State of Florida implemented a 20-inch FL minimum size limit for commercial harvesting of almaco jack in Atlantic state waters consistent with the South Atlantic Council action (SAFMC 2019). A summary of state and federal commercial and recreational fishing regulations for almaco jack is provided in Table 1.

Table 1. Almaco jack commercial (A) and recreational (B) regulations for Gulf states.**A**

Commercial Regulations	Gulf Federal	South Atlantic Federal	FL	AL	MS	LA	TX
Size Limit	None	20 inches FL [‡]	Gulf: None Atlantic: 20 inches FL [†]	None			
Trip Limit	None						
Closed Season	None						

[‡] Vision Blueprint Commercial Regulatory Amendment 27 (Snapper-Grouper FMP)

[†] Implemented July 1st, 2019

B

Private Recreational Regulations	Gulf Federal	South Atlantic Federal	FL	AL	MS	LA	TX
Size Limit	None						
Bag Limit	Included in the recreational reef fish aggregate bag limit of 20 fish per person/day	<i>Gulf:</i> 100 lbs <i>Atlantic:</i> 100 lbs or 2 fish (whichever is greater)	Included in the recreational reef fish aggregate bag limit of 20 fish per person/day				None
Closed Season	None						

Almaco Jack Landings in the Gulf of Mexico

Figures 2 and 3 contain almaco jack landings (i.e., harvested) in Gulf waters from 2000 – 2017. To maintain confidentiality of commercial participants, landings were combined with the adjacent Gulf state (i.e., Alabama/Florida, Louisiana/Mississippi). Trip ticket reporting for the State of Texas began in 2007. Additionally, before 2006 almaco jack, lesser amberjack, greater amberjack, and banded rudderfish were all grouped under *Seriola* and appear as “amberjack” or “greater amberjack” in the landings data. As of 2013, the Marine Recreational Fisheries

Statistics Survey (MRFSS) was phased out and replaced by the Marine Recreational Information Program (MRIP). However, the annual catch limit (ACL) for the Jacks Complex (i.e., almaco jack, lesser amberjack, and banded rudderfish) is still based on MRFSS landings. Conversion factors developed by the Southeast Fisheries Science Center (SEFSC) were used to adjust 2013 and earlier MRIP landings to MRFSS landings to ensure landings were comparable to the existing ACL. The ACL for the Jack Complex is currently set to 312,000 lbs. Total landings of almaco jack have stayed below the ACL (Fig. 2).

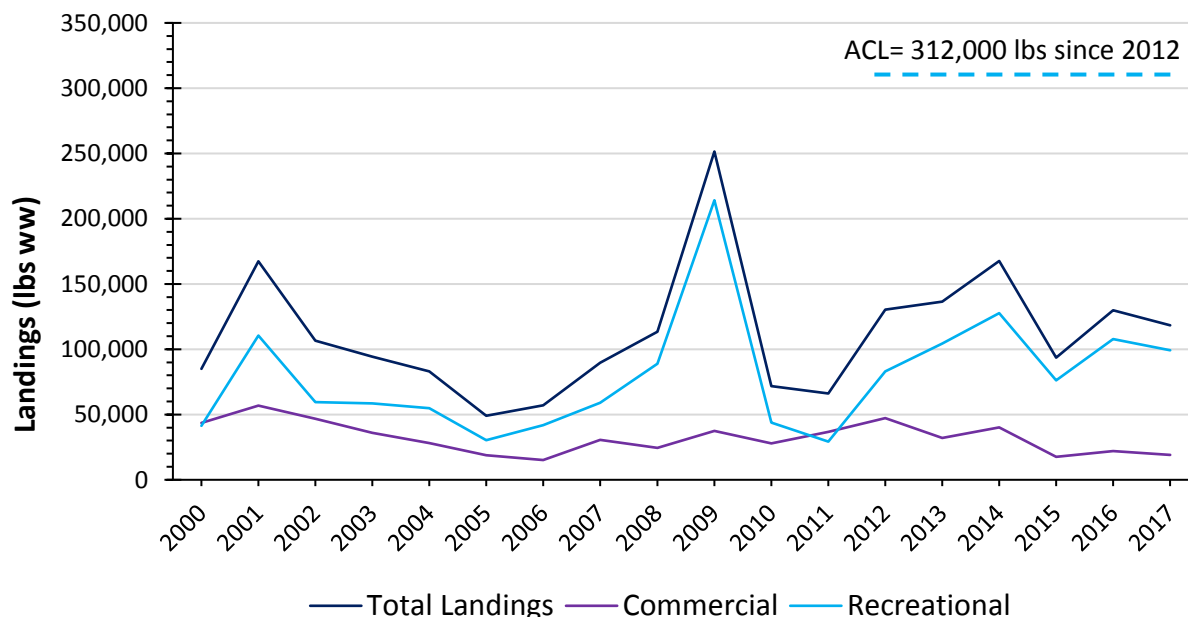


Figure 2. Total almaco jack landings in lbs ww from 2000 – 2017. Almaco jack are included in the annual catch limit (ACL, dashed line) for the Jacks Complex since 2012. Source: MRIP, Texas Parks and Wildlife, and LA Creel.

From 2000 – 2017, most of the commercial and recreational landings of almaco jack come from Alabama and Florida (Fig. 3A, B), with the recreational sector landing more fish (rec. 69,330 lbs ww \pm 45,663 SD; com. 16,917 \pm 6,747 SD). Landings, in pounds whole weight (lbs ww), were consistently less in Texas (rec. 1,417 lbs ww \pm 1,064 SD; com. 5,133 lbs ww \pm 3,095 SD) than in Alabama/Florida and Louisiana/Mississippi. Commercial landings in Louisiana/Mississippi (Fig. 3A) have decreased in the last two decades from an average of ~18,000 lbs ww (2000 – 2009) to an average of ~5,000 lbs ww (2010 – 2017); landings have been below 4,000 lbs ww since 2012 (1,767 lbs ww \pm 1,334 SD). In comparison, the recreational sector for this same region (Fig. 3B) has maintained a constant trend in landings (8,709 lbs ww \pm 7,963 SD), with a peak in 2008 (34,194 lbs ww). The average landed weight of almaco jack in the recreational sector (2000 – 2017) is 5.8 lbs ww per fish.

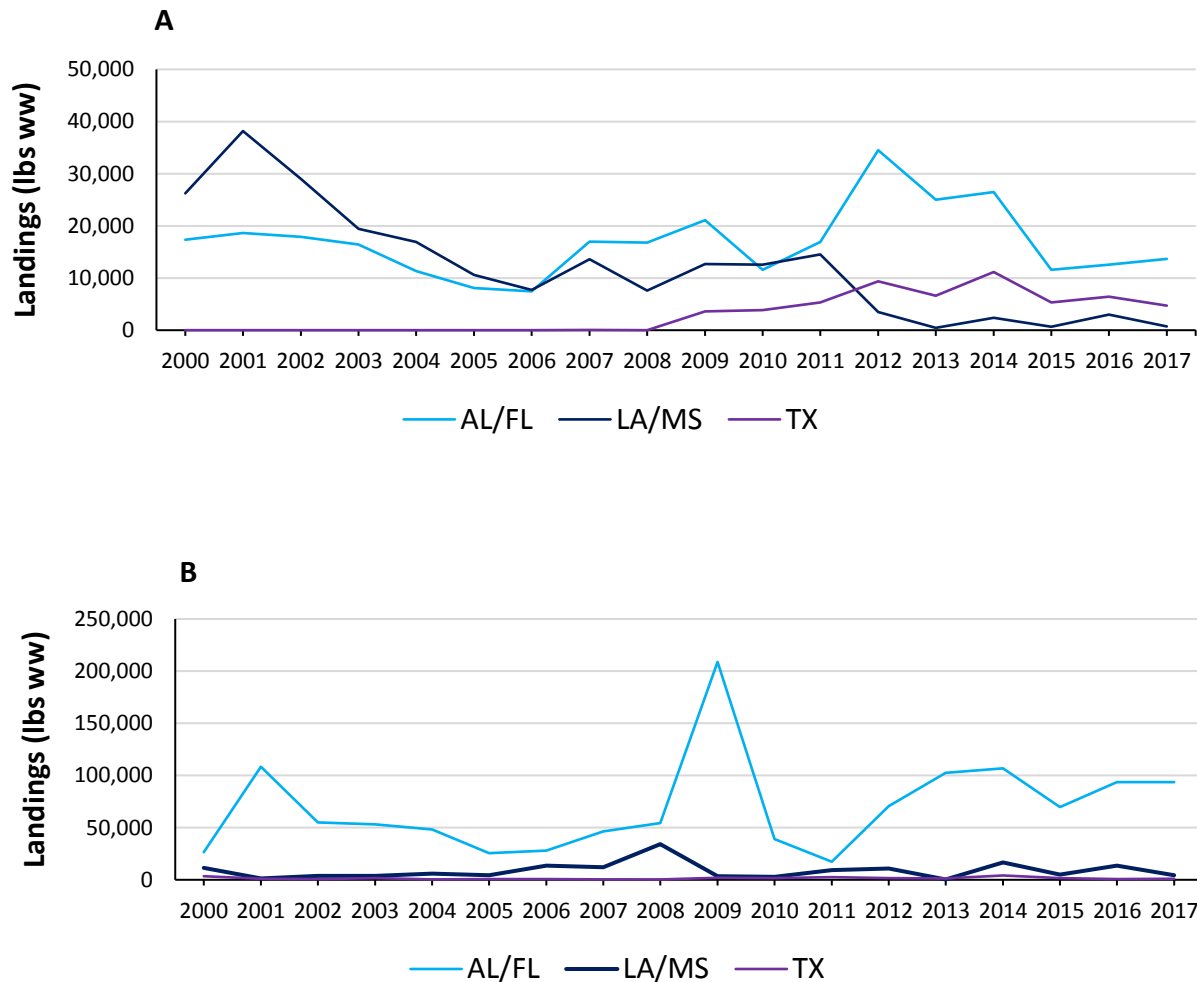


Figure 3. Commercial (A) and recreational (private and for-hire) (B) almaco jack landings in lbs ww; 2000 – 2017. Note the difference in scale between commercial and recreational landings data (y-axis). Source: MRIP, Texas Parks and Wildlife, and LA Creel.

During the June 2019 meeting, the Gulf Council requested the SSC to review the life history and recent landings data for almaco jack in the Gulf and provide feedback on the implementation of similar regulations that have been recently accepted. As referenced in the Regulations section of this documents, the South Atlantic Council approved a commercial minimum size limit of 20-inch FL (SAFMC 2019) and on July 1st, 2019 the Florida Fish and Wildlife Conservation Commission (FWC) established consistent size limits for Atlantic state waters. From 2014 – 2019, the average size of Gulf almaco jack commercial landings is 22-inch FL (56 cm), with an average weight of 6.22 lbs ww. Within that timeframe, 57% of the observed landings in the Gulf were fish equal to or above 20-inch FL (Fig. 4), compared to the South Atlantic data from 2014 – 2016 which reported an 88.5% of commercial almaco jack landings above 20-inch FL (SAFMC 2019).

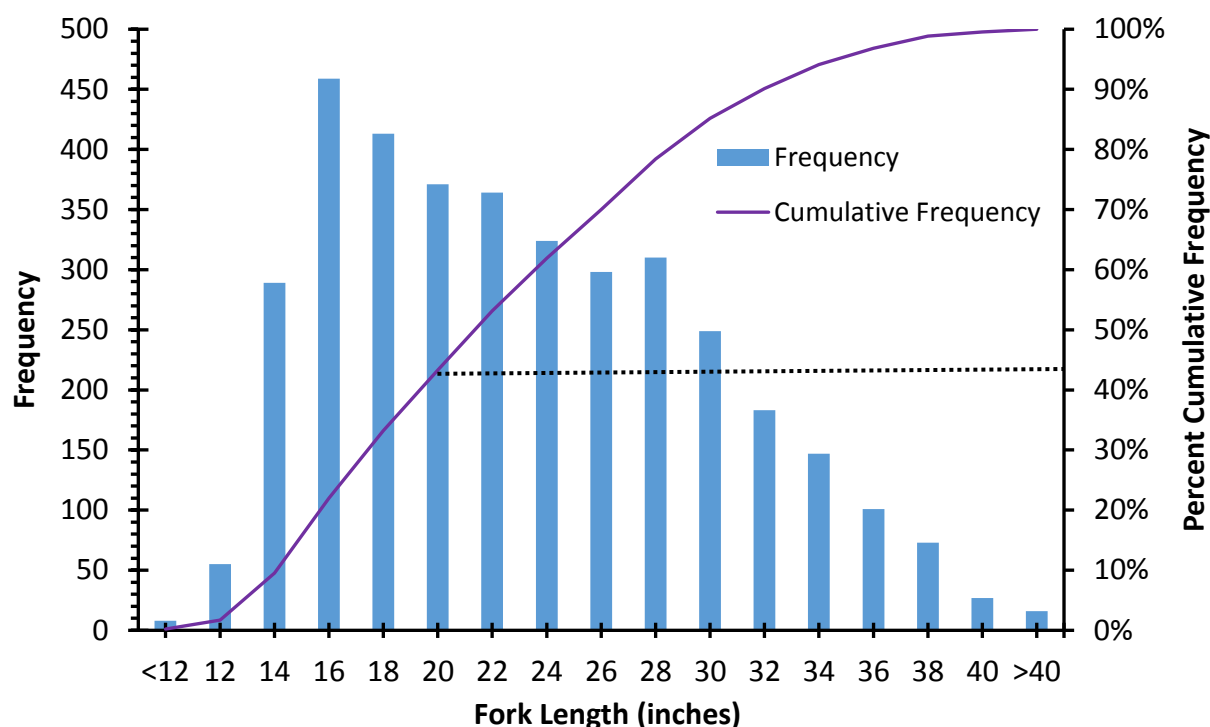


Figure 4. Length frequency for Gulf almaco jack harvested by the commercial sector from 2014 – 2019 (primary y-axis). The total number of fish samples were 3,687. Forty-three percent (dashed line, secondary y-axis) of the observed landings were less than 20-inches FL.
Source: Trip Interview Program data provided by the Southeast Fisheries Science Center on July 19, 2019.

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