

Snapper Grouper Advisory Panel Fishery Performance Report for Gag September 2020

On September 24, 2020, the South Atlantic Fishery Management Council's (Council) Snapper Grouper Advisory Panel (AP) reviewed fishery information for Gag and developed this fishery performance report (FPR). The purpose of the FPR is to assemble information from AP members' experience and observations on the water and in the marketplace to complement scientific and landings data. The FPR for Gag will be provided to the Scientific and Statistical Committee (SSC) and the Socio-Economic Panel (SEP) to complement material being used in the standard assessment (SEDAR 71) scheduled for completion in spring 2021 and to inform future management.

Advisory Panel Members:

James Hull Jr., Chair (FL/commercial)
Robert Lorenz, Vice-Chair (NC/recreational)
Vincent Bonura (FL/commercial)
Richen "Dick" Brame (NC/NGO)
Randall Beardsley (FL/recreational)
Jack Cox Jr. (NC/commercial)
Chris Militello (FL/recreational)
Robert Freeman (NC/charter)
Richard Gomez (FL/charter)
Lawton Howard (GA/recreational)
Rusty Hudson (FL/commercial)
Deidra Jeffcoat (GA/charter)*
Harry Morales (SC/recreational)

Randy McKinley (NC/commercial)*
Andrew Fish (FL/commercial)
Andrew Mahoney (SC/commercial)
Tony Constant (SC/recreational and charter)
David Moss (FL/recreational)
Fentress "Red" Munden (NC/conservation)*
James Paskiewicz (FL/commercial)
Andy Piland (NC/charter)*
Cameron Sebastian (SC commercial/charter)
David Snyder (GA/consumer rep)
Chris Kimrey (NC/charter)*
Dr. Todd Kellison (SEFSC non-voting)
*not in attendance

Fishery Overview

Summary information on the Gag fishery in the South Atlantic region is presented in a fishery information application (<http://data.safmc.net/FPRAll/>) intended to provide an overview of several aspects of the fishery including life history of the species, stock status, management overview, and trends in landings and fishery economics for both the commercial and recreational (for-hire and private) sectors. The information was provided as background to elicit the discussion presented in this Fishery Performance Report. The fishery information application presents data from 2000 through 2018.

Observations on Stock Abundance and Catch Levels

AP members generally agreed that abundance of Gag in the South Atlantic has decreased in recent years or has remained constant. According to some AP members, however, abundance may be increasing in a few areas.

Asked whether there have been substantial changes in the Gag fishery, a commercial fisherman from Morehead City, North Carolina, who has made his living primarily from the Gag fishery, observed that advances in technology have had a substantial impact on the fishery in that it has made productive fishing spots easy to find. Additionally, the increase in recreational fishing pressure has affected abundance of many species, not just Gag. In terms of

catch levels, he claims he has continued to see a drastic decline in Gag abundance in the area where he fishes. Fishermen are going to deeper water, because “the shallow water is getting hit pretty hard.”

Another commercial snapper grouper fisherman from Hampstead, North Carolina, agreed that there have been substantial changes in the Gag fishery over the last decade, with a particularly marked decline in the fishery over the past three years. He attributes the decline to an increase in commercial and recreational diving, lower fuel prices prompting more boats going offshore, an increase in the charter fleet in his area, disruptions of bottom habitat caused by hurricanes, and a northward shift in the species’ distribution in response to warming ocean water.

North Carolina fishermen (private recreational, for-hire, and commercial) fishing in Onslow Bay (Morehead City to Frying Pan Shoal) in 45 to 120 feet of water agree that the area has been very productive for shallow-water groupers. They claim that Gag used to gather on inshore ledges at the beginning of May whereas nowadays the fish do not arrive until mid-June and July. During that time of the year, the water is warmer, clearer, and full of bait and fishermen have a harder time catching grouper. They claim that commercial and recreational diving are negatively impacting these areas to the extent that Gag and other shallow-water groupers are changing their habits, noting that “when September comes and the Gags should be biting, they are gone.”

A private recreational fisherman from southeastern North Carolina offered that fishermen who are good at catching Gag find them in deeper water. He recounts that other fishermen in his community have said that 25 years ago, Gag could be caught in 30 to 60 feet of water, five to 10 miles off the beach, and were abundant in shallow water.

According to a charter captain and diver who has been operating since the 1980s off northern South Carolina and southeastern North Carolina, changes in the Gag fishery have not been substantial; however, he has witnessed a slight increase in the abundance of large Gag over the past two to three years. He maintained that the last decade has seen an increase in recreational fishing pressure from topside fishermen and divers and that the recent lift on the powerhead prohibition in federal waters off South Carolina may result in increased pressure on species like Gag.

A recreational fisherman from southeastern South Carolina recalled that 10 years ago fishermen had no trouble encountering grouper around the Betsy Ross Artificial Reef, in about 50 to 80 feet of water. Nowadays, fishermen must go out to 120 to 200 feet of water to catch Gag. He said this year he started catching Gag in 110 feet of water. Another South Carolina recreational representative on the AP agreed that grouper are in deeper water. Whereas Gag could be caught in 50 to 80 feet of water 15 years ago, fishermen are now going to much deeper water, another 20 miles offshore.

Off Port Canaveral, Florida, AP members indicated they feel there is more pressure on Gag from part-time commercial fishermen and agreed with other AP members that there has been a decline in the abundance of Gag in the last 10 years. Private recreational and charter fishermen in the Port Canaveral area now target grouper in 220 to 260 feet of water. Additionally, the abundance of aggressive Red Snapper has made it more difficult for fishermen to catch groupers. An AP member claimed that shark depredation is more common on Gag than on

other fish.

Off West Pam Beach, Florida, recreational fishermen reported seeing more Gag last year than this year (also more Reg Grouper). Off Cape Canaveral, however, fishermen were having no problem catching Gag in 250 feet of water. An AP member observed that things have “died off this year in the Palm Beach area”.

Further south, off Ponce Inlet, Florida, a commercial representative on the AP maintained that, while there was a decline in Gag abundance for some time, they now “seem to be doing better.” He claims that “the fish are hanging around a little bit longer before the closure and they are showing up in bigger numbers when fishing opens. Things are improving.”

In the Florida Keys, AP members agreed that Gag abundance has changed very little. In general, Gag are not common in the commercial catch in south Florida. One fisherman stated that he probably sees 3 to 5 Gag per year.

Similarly, a charter captain from the Lower Keys claimed that “nothing has changed in many years” regarding Gag abundance. He explained that Gag remains a seldom caught species while bottom fishing. He has observed, however, that there are more Gag on the Atlantic side, inside the reef, on the rocky areas.

Observations on Fish Size

Generally, the AP agreed that larger fish are further offshore than they used to be along the South Atlantic coast.

In the commercial fishery off North Carolina, the average weight of Gag has dropped 4 to 5 pounds since the 1980s, according to a representative from Morehead City. He claims no longer seeing the 12- to 15-pound fish that he used to catch. In addition, he recounted catching 40- to 50-pound “black bellies” in the 1980s and 1990s in deep water, including an 80-pound fish. Another North Carolina commercial fisherman offered that he is seeing “slightly larger fish.”

Off northern South Carolina an AP member who has been diving over a couple of decades, offered that he still sees a good mix of large and small Gag in the areas that he frequents and this has been relatively consistent over the years. On the other hand, his charter business has been consistently catching undersized Gag in 50 to 60 feet of water over the last two years or so.

A recreational angler from South Carolina stated that most of the Gag he has been landing have measured “between the low thirties to 38 inches.” He claims he is seeing many fish in the 34- to 36-inch range. However, he admits not catching a lot of smaller Gag over the last 2 to 3 years.

Another recreational representative from South Carolina who fishes off Hilton Head contributed that it was common to catch 2 or 3 gags of “decent size” in 80 to 140 feet of water. However, over the last several years, he claims the fish have been “nonexistent.” This year he recounts catching undersized Gag 12 to 18 inches during the Red Snapper season. He says that, on occasion, he may hook a 24-inch Gag, but he no longer catches Gag above 30 inches.

A commercial fisherman from Florida agreed that “cookie-cutter” fish are now the norm. He observed that most of them are probably female. He stated that he has seen a lot of big “black bellies” over his fishing career and in recent years. In fact, he recounts recently seeing more large fish than small ones.

A commercial fisherman from Daytona Beach, Florida, questioned the length-weight relationship used in the last stock assessment (SEDAR 10, 2006). He explained the small Gag are female and turn into “the big black bellies” usually around 35 to 40 pounds. He claims he has seen many 45- to 50-pound (gutted) “black bellies”. He wondered whether the length weight relationship captures such fish. He recalls once catching a 40-pound female and a 60-pound (gutted) fish but admitted that is a rare occurrence. He reiterated targeting large Gag in the past and catching 45- and 55-pound “black bellies”.

Another commercial fisherman on the AP offered that a commercial vessel recently landed a 51-pound female off Broward County, Florida.

From Cape Canaveral to Ponce Inlet, Florida, fishermen targeting Gag recreationally must go out further to the ledge in deeper water. However, a recreational fisherman from Port Orange, Florida, stated that he has been catching a lot juvenile Gag in deep holes in the inlets.

Observations on Effort Shifts and Discards

Asked about the number of Gag that are discarded in the commercial fishery, an AP member from Morehead City offered that there is “a fair amount of discards of smaller Gag.” The species is not discarded as much during the closed season, since all shallow water groupers are closed, so fishermen fish the smaller hooks and use smaller bait. He claims it is easy to avoid Gag during the closed season and offered that he is seeing “a lot of smaller fish” and is hopeful that this may indicate good recruitment.

According to another commercial representative, the amount of discarded Gag has not changed in the commercial fishery; however, he claims more discarding is taking place among recreational anglers. He attributes this increase in discards to higher recreational fishing pressure and the recent prohibition on catching Red Grouper in May off the Carolinas. During the open season (May-December), Gag are discarded on most of the commercial trips due to being undersized and/or after reaching the trip limit. During the closed season (January-April), he claims Gag are seldom discarded. He sometimes encounters Gag when fishing for Black Sea Bass in January and February. However, the light wire hooks used for Black Sea Bass allow the occasional Gag to easily escape.

Off northeastern South Carolina, a commercial/for-hire representative indicated that when commercial fishermen target Vermilion Snapper on multi-day trips, they try to “top off” their trip with Gag grouper when the season is open. Now that the Vermilion Snapper trip limit has been temporarily increased, boats try to get back to the dock as soon as possible. On the for-hire side of his business, he claims effort has remained consistent, with captains taking customers to the same areas and using the same bait to catch what their customers want. As far as feasibility in avoiding Gag during the closed season, he said that it is not hard since fishermen are targeting Vermilion Snapper.

A private recreational representative from southern South Carolina contributed that, when harvest of Red Snapper was prohibited, fishermen in his area became interested in grouper. Because of the difficulty in catching them, however, fishermen shifted to targeting Vermilion Snapper and Gray Triggerfish. He shared that this year was the first year that he threw back over half a dozen Gag, whereas he did not catch half a dozen over the previous three years.

Another AP member from southeastern South Carolina representing the for-hire industry maintained that effort has increased dramatically. Areas where there is productive fishing are now further offshore and the cost of fuel has also increased. Fishermen are using better lines and equipment to fish than they were 15 to 20 years ago. He claimed that Gag are “very picky”, and it requires skill to catch them. Regarding discards, he indicated he discards a few undersized fish and when there are a lot of Red Snapper around, he does not catch large Gag.

In the West Palm Beach area off Florida, recreational fishermen target Vermilion Snapper and Gray Triggerfish when Gag and other shallow-water grouper are closed. When harvest of grouper is allowed, fishermen targeting Mutton Snapper may keep a grouper if they catch one. According to a recreational AP member, anglers do not have to go far to be in 300 feet of water. Easy access has kept fishing pressure high and likely contributed to diminished abundance of fish such as groupers.

A commercial representative from south Florida indicated there are some discards of Gag in the Greater Amberjack fishery.

Observations on Price and Demand

In discussing how price and demand for Gag have changed in the commercial fishery, a representative from North Carolina indicated that dockside price per pound for Gag has been \$7.00 for the past three years. He maintained demand is consistently going up due to population growth in coastal areas, increased consumption of seafood, and customers demanding more local product. Gag are very important to commercial fishermen in North Carolina, especially in years when Vermilion Snapper or Gray Triggerfish close in-season. For example, when harvest for those two species closes in March and September, fishermen may rely on Gag from May through June and in October and November until Black Sea Bass and King Mackerel harvest picks up in December.

Gag are an important species in the for-hire industry in North Carolina and northeastern South Carolina and, according to AP members, demand is increasing. Customers value the opportunity to catch Gag and that is crucial for the for-hire industry in the area.

Off the Beaufort, South Carolina, area the for-hire industry does not commonly target Gag. According to a recreational/charter representative on the AP, most of the Gag are caught by seasoned private recreational fishermen who know how to catch them. However, a charter trip to catch Gag is expensive so customers tend to go for other species.

A representative from the restaurant business from St. Simons Island, Georgia, offered that Gag are a prized fish, as they have always been. Gag are one of the more popular fish among his restaurants' clientele. He maintains that no matter what is on the menu, customers always want Gag and he does not anticipate this changing. In his experience, even if new species are introduced and marketed to consumers, customers will consistently order grouper.

Off the Port Canaveral, Florida, area the charter industry does not directly target Gag, according to an AP representative from Merritt Island. Charter businesses target King Mackerel instead of bottom fish partly due to depredation by sharks, and the difficulty in catching a Gag Grouper.

A commercial fisherman from Ponce Inlet, Florida, maintains that the price of all domestic fish has increased in Florida, and the demand and price for Gag are ever increasing. He explained that there is a price point, where consumers will resist paying more for a product. However, he does not think that point has been reached with Gag. He maintains that the price of filleted Florida-produced Gag continues to rise. As a fish dealer and market and restaurant owner, he stated that he has been able to raise the retail price as the dockside price has increased. “Fresh local grouper are such a phenomenal product” he observes, “people are willing to pay, because they realize what they’re getting and the cost.” He also agreed that catching Gag is challenging and contributes to the species not being targeted in the for-hire industry. Off the Florida coast, the abundance of Red Snapper also contributes to a reluctance to target bottom fish.

An AP member inquired whether profit margin information for Gag was available, as the product moves from dockside to the retail market. It was noted that this type of economic information is currently lacking. The Southeast Fisheries Science Center can produce estimated margins but only on the harvesting side; data to track the product from dockside to consumer are limited.

Observations on Community Dependence

AP members agreed that the loss of infrastructure (docks, marinas, fish houses) is a very serious concern for Gag fishing and all commercial fishing in the South Atlantic. “The days of saying you are a grouper fisherman ended a few years ago”, observed a commercial representative from North Carolina. He claimed fishermen have had to shift further offshore to fish for Gray Triggerfish and Vermilion Snapper. “Grouper has become more of a bycatch. Seafood houses are simply buying more imported grouper.”

A recreational representative who fishes in the Beaufort/Hilton Head area, observed that more people are purchasing boats, and marinas are filling up. However, he has noted a reluctance from marina owners to allow access to for-hire vessels.

A recreational representative from West Palm Beach, Florida, who works in the marine insurance business, maintained that customer demand has increased significantly in the months since the COVID-19 pandemic began. He observed that more people own boats now and it is common for marinas to charge from \$500-\$800 for dockage for a 30-foot boat.

A commercial AP member from Ponce Inlet, Florida, maintains that Gag is a prized catch and is important to all sectors and communities. He states that fishing infrastructure in Florida is being lost; not only commercial docks, but also recreational access (marinas), and these losses directly affect access to the fishery and its economics. He says that fishermen have adapted to changes in the fishery by changing what they target and changing their fishing gear and how/where they fish (e.g., using smaller, hooks fishing in the upper water column).

Observations on Management Measures

Overall, the AP supported the current spawning season closure and some members suggested

extending it. AP members discussed a possible increase in the minimum size limit for Gag and the need to explore approaches to better manage the recreational fishery. In addition, some members support creation of protected areas to benefit shallow-water groupers.

A commercial fisherman from the Morehead City, North Carolina, area who has participated in the snapper grouper fishery since the 1980s expressed concern about the viability of the Gag fishery. He acknowledged the results of the 2014 update to the stock assessment indicating that the Gag stock in the South Atlantic is experiencing overfishing, although it was not clear how much overfishing was occurring. While he is eager to modify management of Gag to bring the stock back to a level that will increase opportunity for commercial fishing, he is not hopeful that the stock will rebuild to “what it used to be.” He proposes extending the current spawning season closure to encompass the month of May. He noted that this would coincide with recent changes to the spawning season closure for Red Grouper off the Carolinas. Additionally, he emphasized the need to know how much effort there truly is in the recreational sector. As a proponent of Spawning Special Management Zones (SMZs), he offered that he would encourage the implementation of one in shallow water. He spoke of an area off North Carolina in 30 to 50 feet of water where Gag congregate and remain from May through June. He claims the area would be a good candidate for implementing a three-square mile SMZ. He recounts frequenting this area over the years to spearfish and seeing 50 to 75 fish on the ledge and catching 600 to 1,000 pounds in a day. By his estimate, a fisherman today would only catch 150 to 200 pounds in that area during the same time of year. He maintains the situation is a serious one for Gag in his area.

Another commercial representative suggested reducing the Gag trip limit to 500 pounds and implementing a 100- or 150-pound bycatch allowance in January and February. He suggested creating more artificial reefs in 60 to 100 feet of water, studying the feasibility of a hatchery, and determining the impacts of commercial/recreational diving on shallow-water groupers.

A charter captain from southeastern South Carolina agreed that the current spawning closure should remain in place and spawning closures should be considered for more species. Additionally, since 50% of female Gag mature at 25 inches, he maintained that the current minimum size limit should be revised. He suggested increasing it to 25 or 26 inches to allow a greater percentage of females to spawn before entering the fishery. He also expressed concern over the amount of Gag bycatch in the commercial fishery.

Another South Carolina for-hire representative offered that an increase in the minimum size limit would be preferable to extending the spawning closure as “shutdowns are devastating for the charter/headboat industry.” He claimed that it is critical for his for-hire business to be able to market the opportunity of catching a fish and May is a crucial time for charter/headboat trips.

According to a recreational angler from southeastern South Carolina, the shallow-water grouper spawning season closure was an important step in managing grouper populations; however, it has not done enough. While he admitted thinking the stringent management placed on Red Snapper a decade ago was draconian, he acknowledged that management has clearly worked. On the other hand, he described the management approach imposed on shallow-water groupers as “hope and pray” and encouraged more aggressive regulations, perhaps extending the spawning season closure to include December and May.

An AP member from the Florida Keys suggested a management scenario in which recreational harvest was opened on alternating years for some species while keeping the current spawning season closure(s) and other management measures in place. Over a two-year period, he claimed, recreational take of shallow-water groupers could theoretically be cut in half. He suggested possibly alternating open seasons for Red Snapper and shallow-water groupers to increase recruitment and ease fishing pressure.

An AP member expressed serious concern saying the Gag grouper population is in graver shape than the Red Snapper population ever was, and he fears that a closure of the fishery may one day be necessary.

Environmental Observations

Among the environmental factors the AP discussed relative to the health of the Gag population were the impact of hurricanes in recent years, warming water causing fish to move north, coastal development and habitat loss, and overly abundant Red Snapper.

Off North Carolina, the number of overall fishing days for commercial fishermen has decreased due to unfavorable weather. In addition, hurricanes have disrupted inshore ledges. An AP member from North Carolina indicated that it took several years for inshore habitat to recover after Hurricane Fran and hurricane activity has been heavy in the South Atlantic over the last 5 years. Nonetheless, he has observed good recruitment to inshore areas but claims Gag are not as numerous on larger ledges due to fishing pressure from divers.

In northeastern South Carolina, bottom temperature has been consistent, with the occasional influx of cooler water.

Off Port Canaveral, Florida, fishermen claim water temperature has been cooler than normal: 68°F to 74°F from 80 to 135 feet.

An abundant Red Snapper population was cited as possibly negatively affecting the health of shallow-water groupers and other species such as Black Sea Bass. However, an AP member pointed out that before Red Snapper were declared overfished, their numbers were far higher than they are today, yet grouper populations were healthy. He questions whether other factors are responsible for the poor state of shallow-water grouper populations.

AP members talked about the possible impact of invasive lionfish on Gag populations. Off the Carolinas, fishermen claim lionfish are usually deeper than 70 or 80 feet and they are not as abundant as they once were. However, lionfish remain numerous on wrecks. Since the development of a market for lionfish, however, areas where they were once abundant have been “thinned out.” An AP member from Merritt Island, Florida, agreed and noted that eight years ago the market for lionfish was strong and fishermen took advantage of the opportunity. Today, he says, lionfish “have not come back in any kind of harvestable numbers worth our time.” In the area where he fishes, he has observed lionfish beyond 80 feet, generally in areas sheltered from the current. In his opinion, lionfish are not a significant threat to populations of shallow-water groupers.

According to a recreational representative from south Florida, nearshore and estuarine habitat degradation and loss of seagrass beds is has negatively affected juvenile stages of many fish

species, including groupers. Additionally, such areas provide forage fish for adult stages and are thus critical for the stability of the ecosystem.

Other Observations

AP members agreed that the current fishery-independent monitoring efforts are very important and need it to continue. However, some suggested that a fishery-independent hook-and-line survey, one that samples the fishery in the same way that fishermen do, would be a valuable addition. Such an effort could be undertaken co-operatively with fishermen, whether with vertical lines or longline gear, and may help paint a more complete picture of the fishery. The use of remotely operated vehicles or other such technology was suggested as a possible means to get a better estimate of absolute abundance for some species.

A reliable annual estimate of abundance for important recreational species, including Gag, was deemed necessary for successful future management of the fishery.

An AP member pointed out that this year's unprecedented circumstances provided a hiatus of fishing activity for some time which probably affected fishery resources in the region. The pandemic undeniably changed fishing behavior and its effects will stretch into the future. The for-hire industry will continue to be significantly affected and this may result in a reduction in for-hire effort. He noted an increase in demand for charter captains to take customers fishing on their own boats.

Lack of enforcement was noted as a hindrance to proper management in the region. A commercial representative from North Carolina offered that fisheries enforcement has diminished in his area. He noted the U.S. Coast Guard presence has been consistent; however, intercepts to inspect catch do not occur frequently enough. Similarly, an AP member from the Florida Keys strongly advocated for better enforcement. Without it, he maintained, fisheries management is pointless.