

2020 Conservation Record

The Billfish Foundation

The Billfish Foundation maintains the largest private tag and release database in the world, with over 270,000 records. In 2020 alone, over 7,000 new tag, release, and recapture recaptures were added, representing an enormous amount of data to help us learn more about billfish life history.



Species In This Record

Black Marlin

Page 3



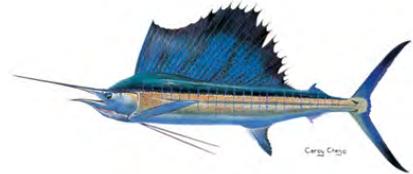
Blue Marlin

Page 7



Sailfish

Page 11



Spearfish

Page 17



Striped Marlin

Page 19



Swordfish

Page 23



White Marlin

Page 29



Bluefin and Yellowfin Tuna

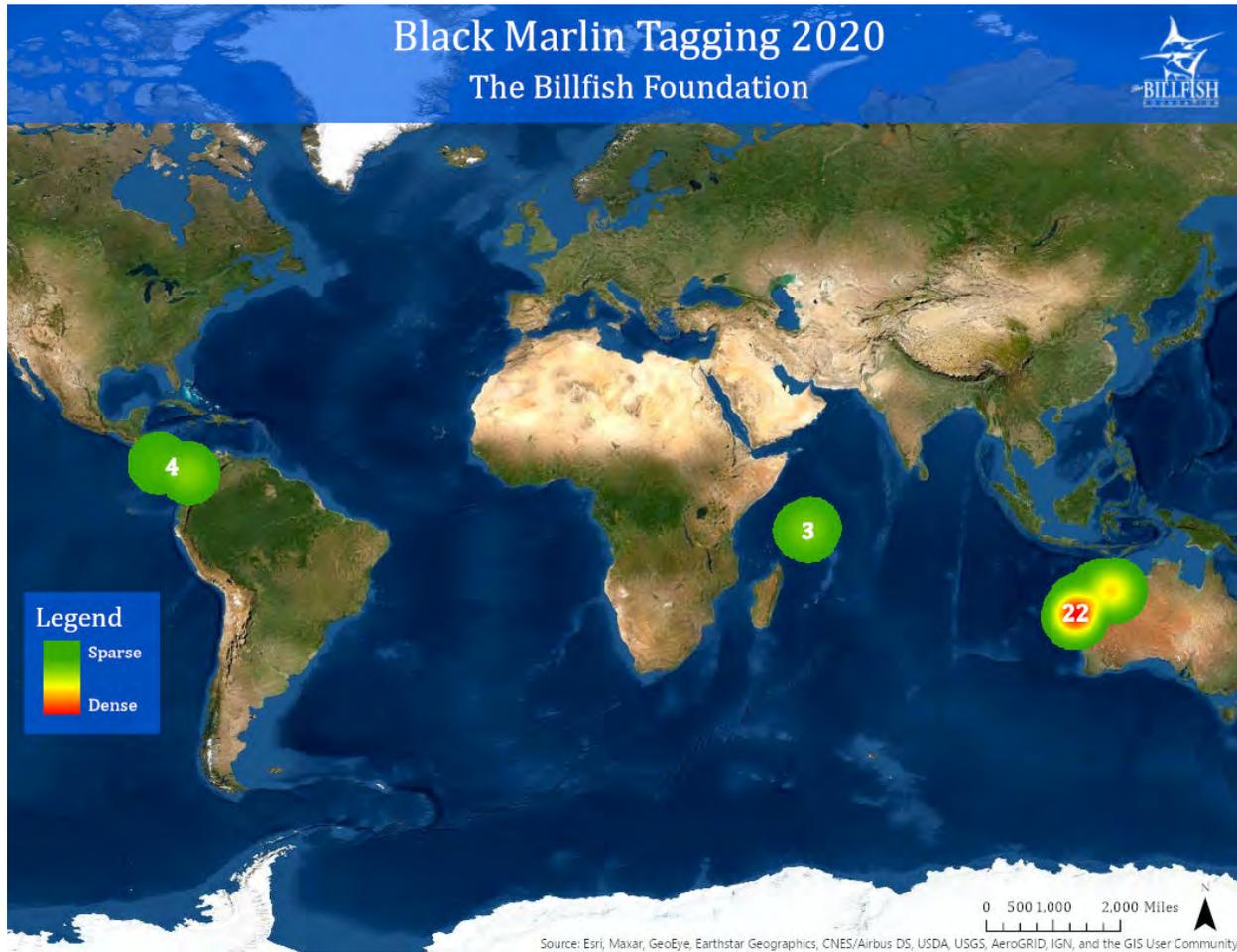
Page 33



Black Marlin

Tags

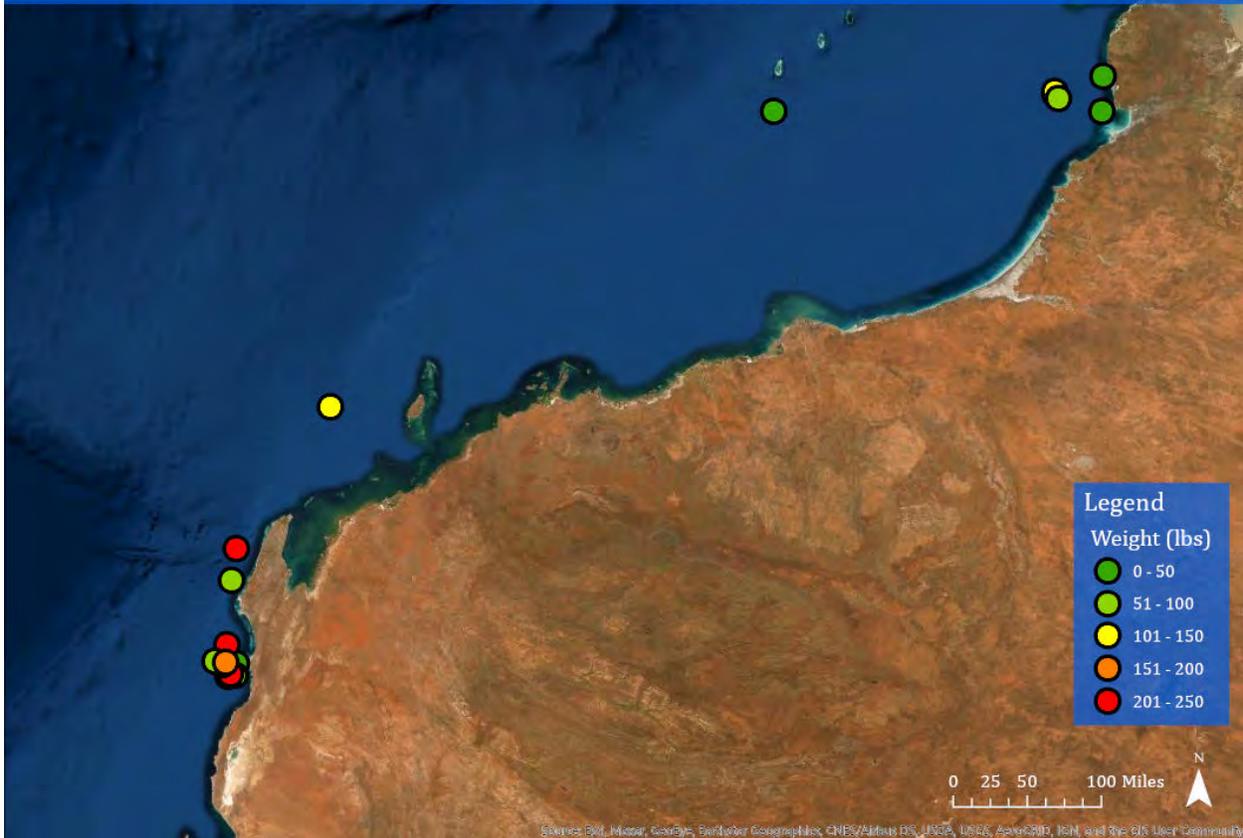
Twenty-one anglers and eight captains from across the world came together to tag black marlin in 2020. Together, these 29 individuals administered 29 tags off Australia, Costa Rica, Panama, and the Seychelles. While they can grow much larger, tagged black marlin were on average 175.8lbs (34.4kg) and 55.5in (141cm). However, black marlin size ranged broadly, with the smallest an estimated 33lbs (15kg) and the largest 500lbs (226.8kg).



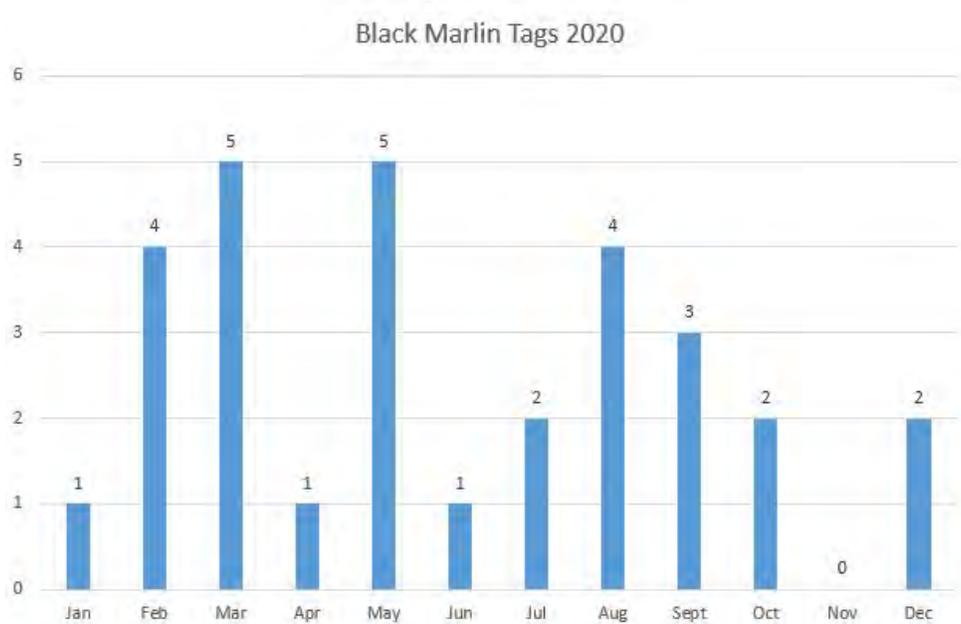
As in previous years, Australia is responsible for most of the black marlin tagging effort. More specifically, Western Australia is responsible for 22 of the 29 black marlin. In fact, Western Australia is home to all four of this year's most prolific black marlin tagging Captains: Dean Wilson, Ross Newton, Richard Worrell, and Roy Hodgkinson.

Black Marlin Tags 2020

Western Australia

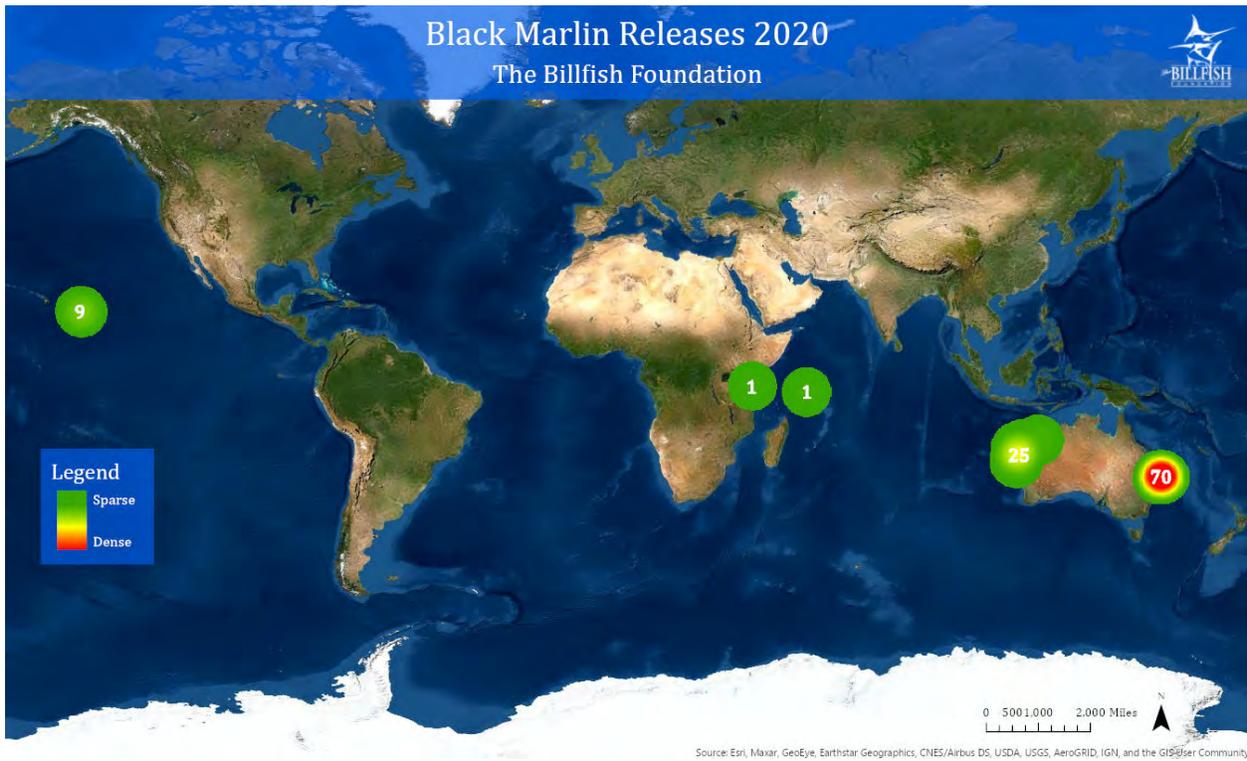


Black marlin tagging was fairly consistent throughout the year. However, because tagging numbers are fairly low, it would be hard to discern a trend even if one existed.



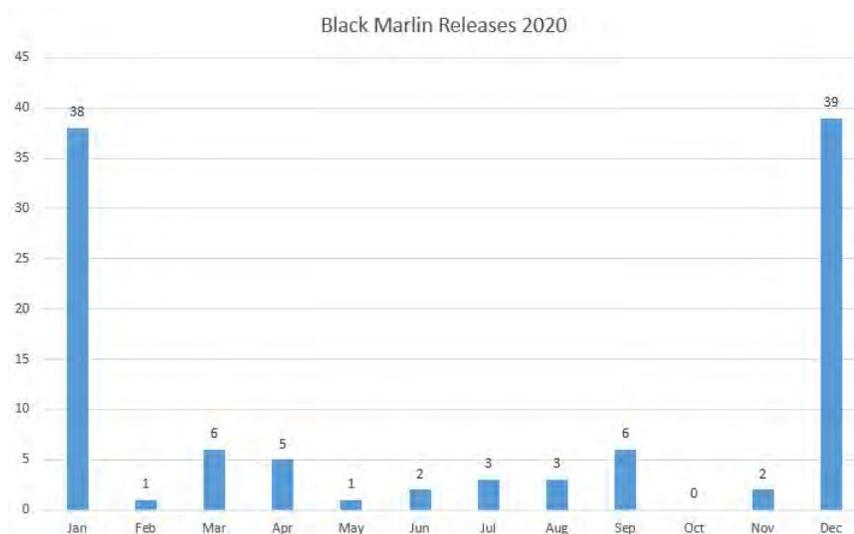
Releases

In total, 106 black marlin were released in 2020, three times as many as were tagged. While black marlin were still mostly released off of Australia, it was the East Coast, as opposed to the West Coast, that were majorly responsible. Black marlin were also released off Hawaii, the Seychelles, and Kenya.



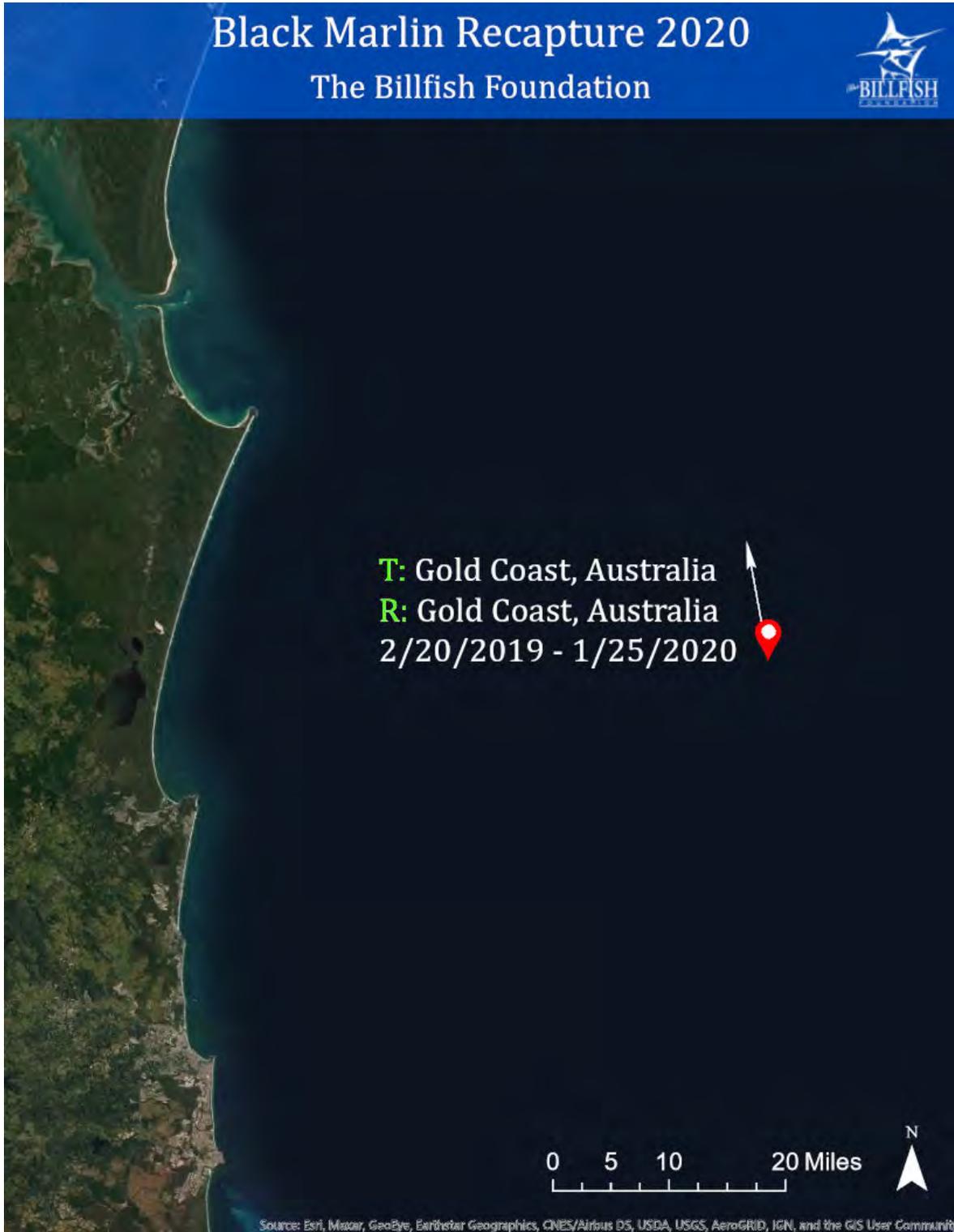
Sixteen anglers and twelve Captains released black marlin last year. Anglers Deb Foster and Taylor Bills, along with Captains Jason Hedges, Jesse Hill, Richard Worrell, and Neville Kent were the most prolific. Together, these six people released 85 of the 106 total black marlin.

A slight temporal trend exists in released black marlin that does not in tagged. Of the 106 total, 77 black marlin were released in December and January. As December and January are the summer in the Southern Hemisphere, it is unsurprising that all but one of these December/January black marlin were caught and released in Australia.



Recaptures

Only one black marlin was recaptured in 2020. At large for just under a year, it was recaptured less than 10 miles from its original tagging location off the Gold Coast of Australia.

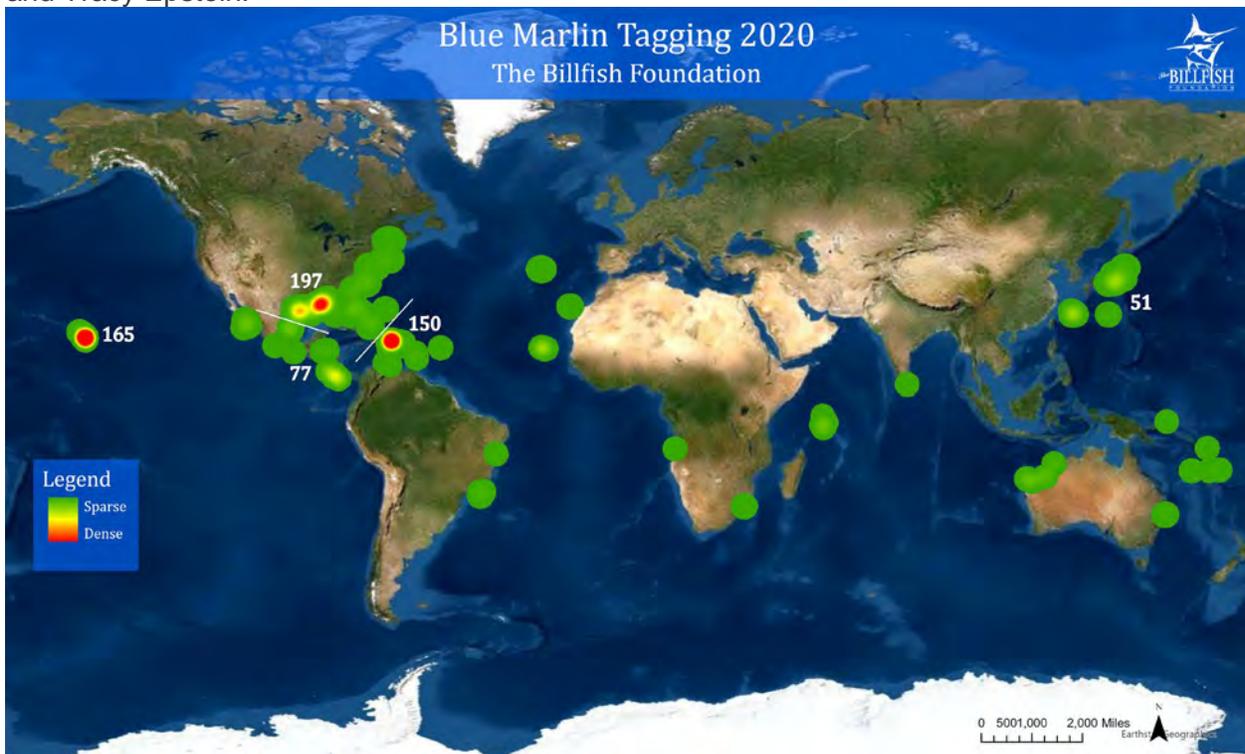


Blue Marlin

Tags

Captains and anglers across the globe tagged 716 blue marlin in 2020. Because blue marlin are some of the largest billfish, the average size of tagged blue marlin was larger than most other species. On average, tagged blue marlin weighed 266.3lbs (120.8kg) and measured 88.5in (225cm). However, they were as small as only 20lbs (9kg) and as large as 838lbs (380.1kg)!

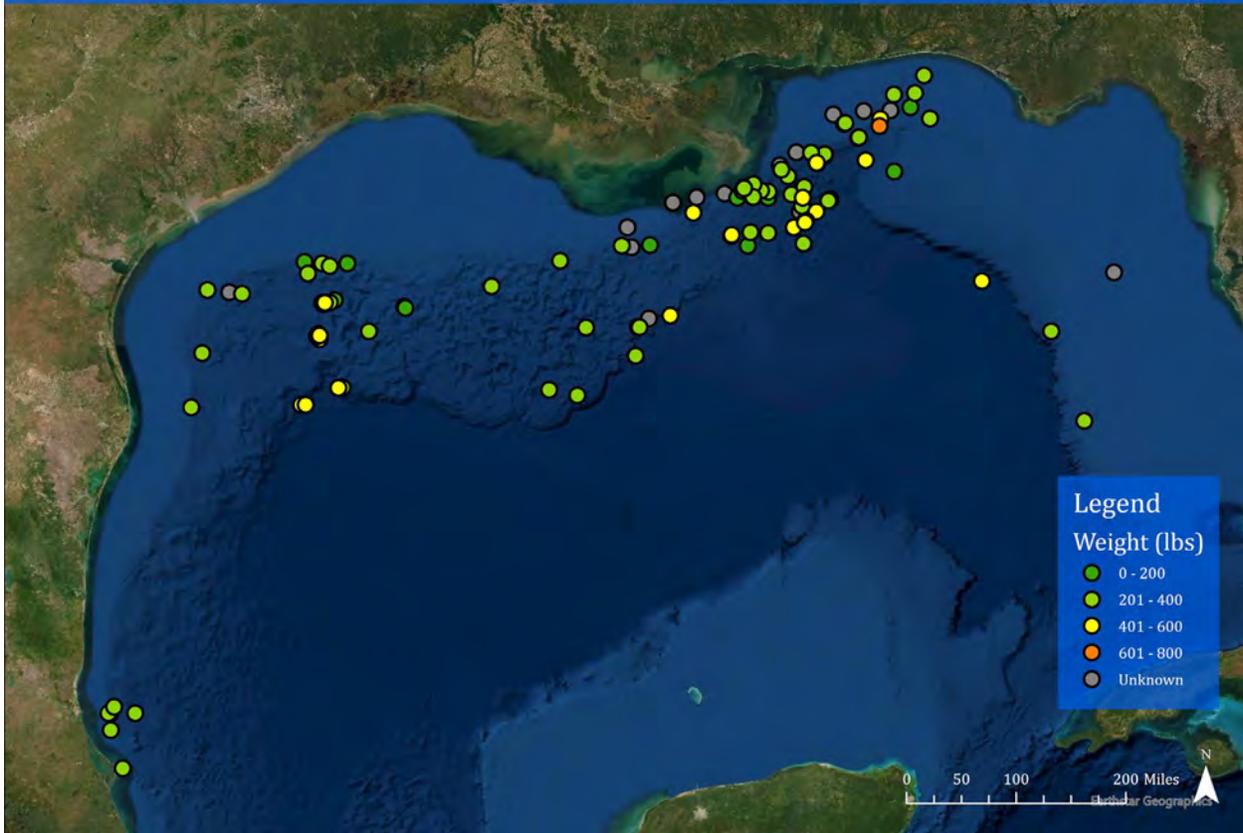
Blue marlin have the most geographically comprehensive tagging effort amongst all billfish. As a result, blue marlin were tagged in a remarkable 21 countries in 2020 alone! These include: Japan, Dominican Republic, USA, Aruba, Honduras, Cape Verde, Mexico, Sri Lanka, Australia, Cook Islands, Bahamas, Costa Rica, Angola, Puerto Rico, Brazil, Azores, Seychelles, South Africa, Solomon Islands, USVI, and St Lucia. Unsurprisingly, with many countries come many Captains and anglers. More specifically, 250 anglers and 124 Captains! The most prolific anglers were Kumie Saegusa, Chad Beaudry, Guy Arrington, and Jill and Scott Yates. The most prolific Captains were Ben Horning, Jim Brasher, Mark Pagano, Scooter Porto, Shane O'Brien, and Tracy Epstein.



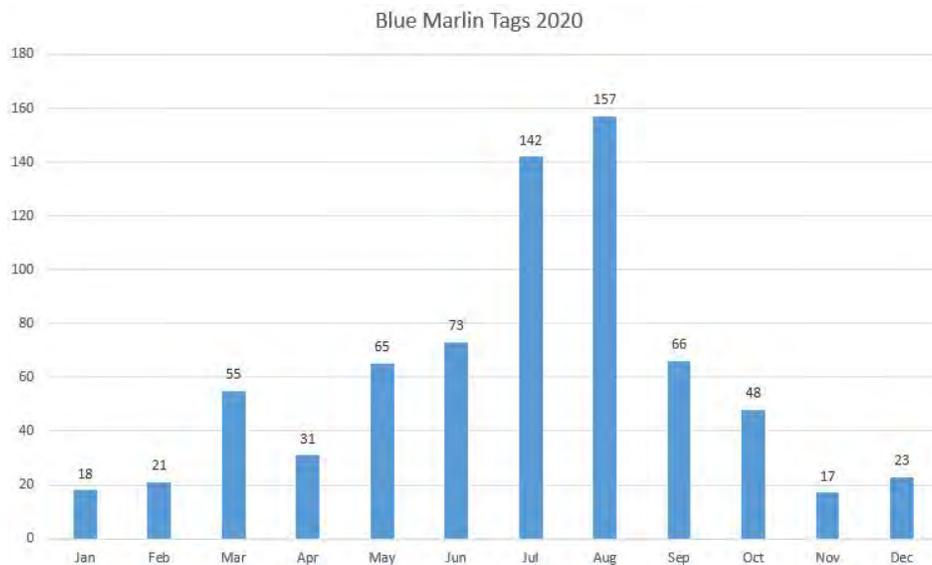
Of the 21 countries with blue marlin tags, the majority were in North America. More specifically, tagging is highest in the Caribbean Sea and Gulf of Mexico. Within the Gulf, the coasts of Louisiana, Mississippi, and Alabama distinguish themselves. Within the Caribbean islands, the Dominican Republic is prominent. Other hot spots include Hawaii and Japan.

Blue Marlin Tagging 2020

Gulf of Mexico



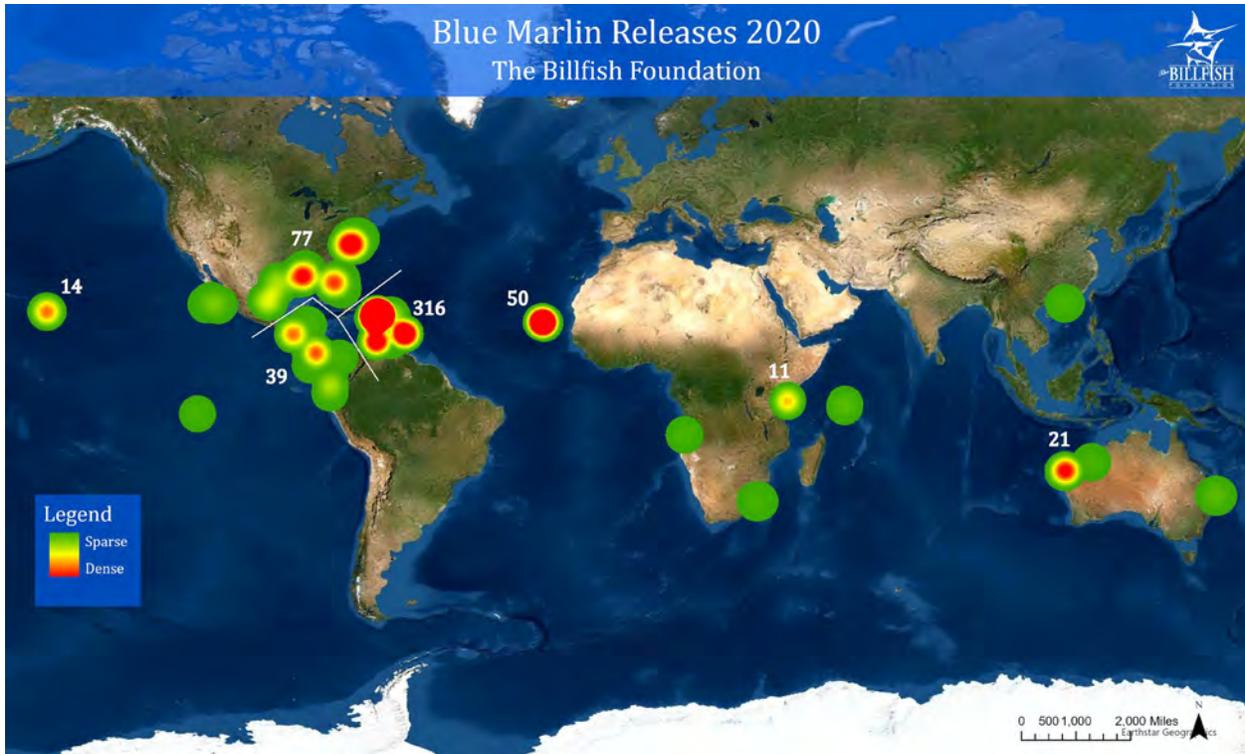
Blue marlin tagging exhibited a fairly smooth bell curve. Lowest in the early months of the year, it slowly trended up until it peaked in July and August. Afterwards, it fell sharply through the end of the year. Given most blue marlin tagging occurred in North America, a late summer peak during warm weather is quite normal.



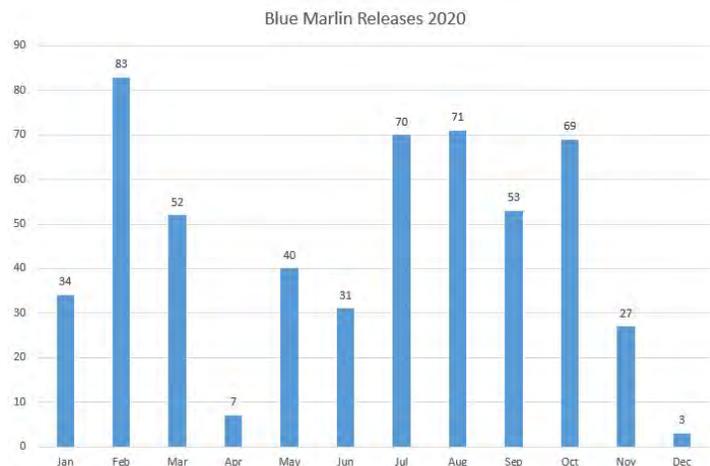
Releases

In total, 540 blue marlin were released in 18 different countries. These countries include: USA, Mexico, Dominican Republic, Cape Verde, Australia, Costa Rica, Guatemala, Bahamas, Curacao, Angola, Ecuador, Puerto Rico, Panama, Seychelles, USVI, St Lucia, Kenya, and Honduras. Like tagging, most blue marlin releases were in the Atlantic. However, unlike tagging, blue marlin releases were less evenly distributed throughout the Caribbean. Instead, blue marlin releases were highest in islands like Curacao, St Lucia, USVI, and the Dominican Republic.

Far fewer Captains and anglers released versus tagged blue marlin in 2020. Compared to the 250 anglers and 124 Captains tagging, only 99 anglers and 47 Captains released blue marlin in 2020. Of these, the most prolific anglers were Kanmair Kleinmoedig, Jill Yates, and Mike Brauser. The most prolific Captains were Mark Pagano, Tim Popfinger, and Gordo Heldewier.



Blue marlin releases were quite irregular and did not exhibit the same temporal trend as tags. In fact, February saw the largest peak in blue marlin releases, followed by the late summer and early autumn. This trend is odd, given releases and tags occurred in roughly the same number of countries. However, the high release effort in the Caribbean islands could have made blue marlin releases favorable year round, as these areas exhibit more consistent temperatures.



Recaptures

Seven blue marlin recaptures occurred in 2020. Unfortunately, of these seven, only three had original tag information. The first blue marlin recapture occurred in February of 2020 after just less than a year at large. In that time, the fish traversed nearly 3,200 miles of ocean. In contrast, a blue marlin in Exmouth was both tagged and recaptured within four days and ten miles. The third recapture had the longest time at large, ten months, but stayed in the Gulf of Mexico.



Sailfish

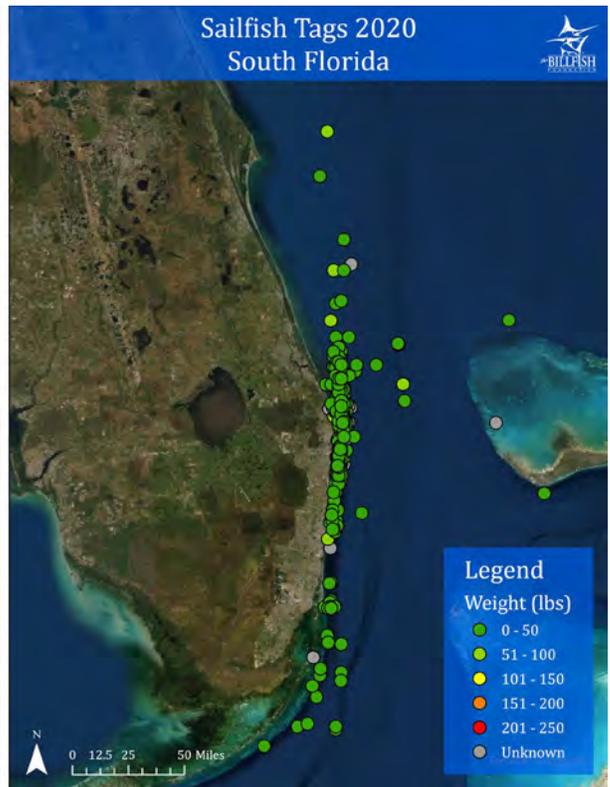
Tags

TBF Captains and anglers tagged a total of 1,357 sailfish in 2020. On average, sailfish were fairly small, weighing 46lbs (20.9kg) and measuring 66.5in (167cm). However, the largest was 250lbs (113.4kg) and the smallest was a tiny 8lb (3.6kg) juvenile. Most tagged sailfish were in the Caribbean Atlantic and measured below 100lbs (45.4kg).

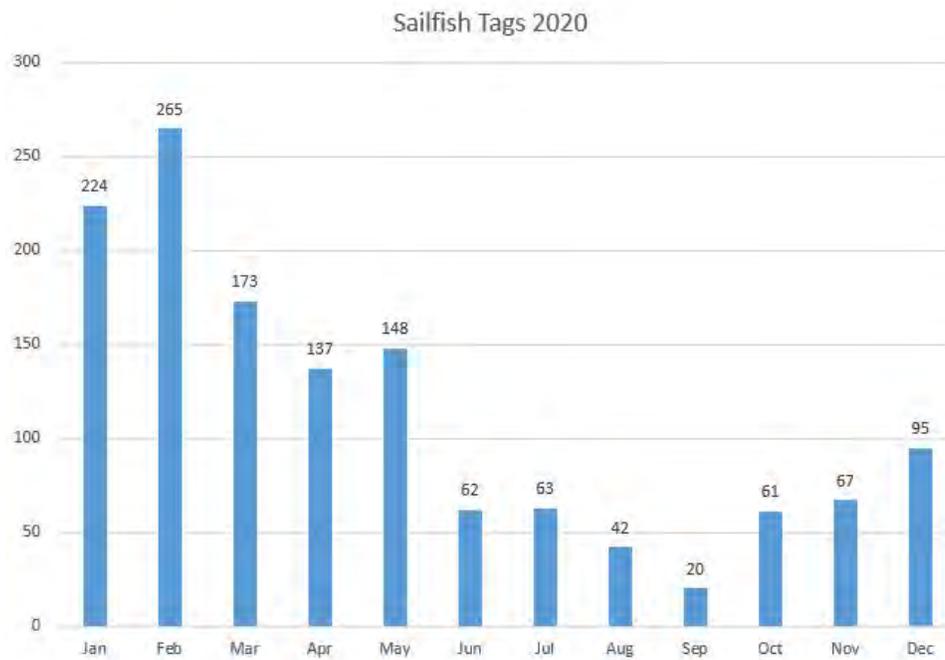
A remarkable 438 anglers and 116 captains tagged sailfish in 2020. The majority of these were in North America, but sailfish were tagged out of almost every continent. The most prolific Captains were Ben Horning, Bobby McGuinness, Mark Pagano, Mike Hunter, Patrick Price, Stephen Brexel, and Bomber Farrell. Outstanding anglers include Laura and Chris Jessen, Christian Hampl, Jill and Scott Yates, and Jacob Lepera.



Most tagged sailfish were in the North Atlantic around the Caribbean. Florida puts up a massive sailfish tagging effort and is responsible for the deep red hot spot of tagging in the map above. Also significant is the tagging effort of Costa Rica, our second highest contributing country, as can also be seen above. Worth noting, also, were the countries of Angola and Australia, specifically Luanda, Angola and Groote Eylandt, Australia. Both of these locations consistently exhibit a strong dedication to sailfish tagging. Worldwide, sailfish were tagged out of the USA, Costa Rica, Mexico, Australia, Papua New Guinea, Panama, Guatemala, Brazil, Seychelles, South Africa, Kenya, and Angola.



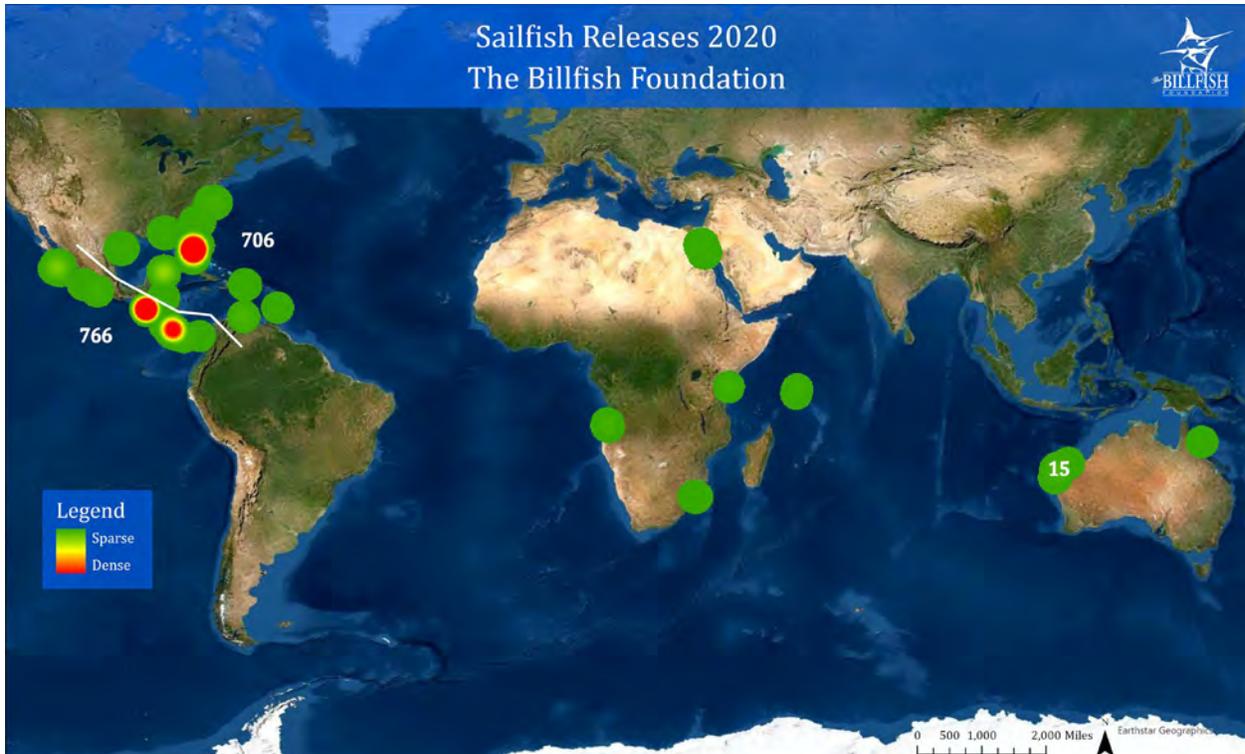
In the Northern Hemisphere, sailfish season is in the early months of the year. Thus, it is no surprise that the highest proportion of sailfish tags were from January to May. The trend seen below is similar to years past, as it is typical for sailfish tagging to dip in the summer and not begin to rise until the beginning of the following year. However, typically sailfish tagging stays much higher in March and April. The large dip from February to March is possibly due to the quarantine measures required in the beginning COVID-19.



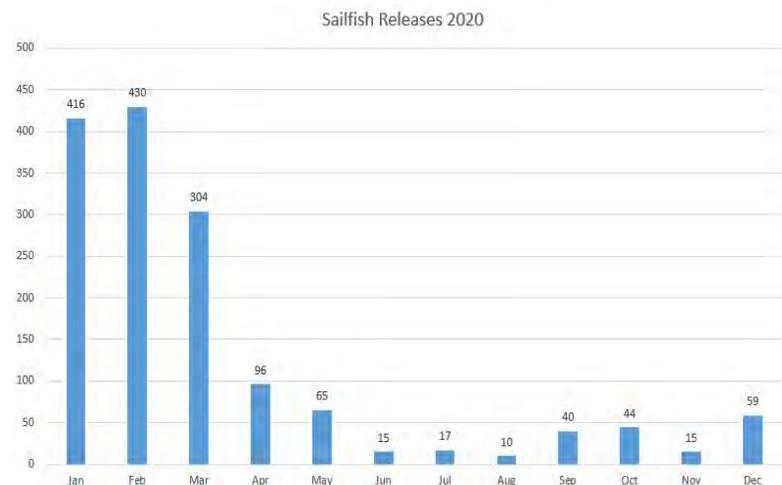
Releases

2020 saw more sailfish releases than tags. A total of 1,511 sailfish were released without tags in 2020. Almost all sailfish releases occurred in North America. However, where tags were higher on the Atlantic side of North America versus the Pacific side, releases are nearly equal between the two oceans. This is mostly due to the massive number of releases in Costa Rica and Guatemala.

Also starkly different from sailfish tags is the number of Captains and anglers involved in sailfish releases in 2020. 153 anglers released sailfish in 2020, roughly a third of the number that tagged. Similarly, 54 Captains released sailfish, less than half of those that tagged. However, the most prolific were similar to sailfish tags. The highest numbers were from anglers Scott and Jill Yates and Gray Ingram, along with Captains Jason Brice, Mark Pagano, and Dean Panos.

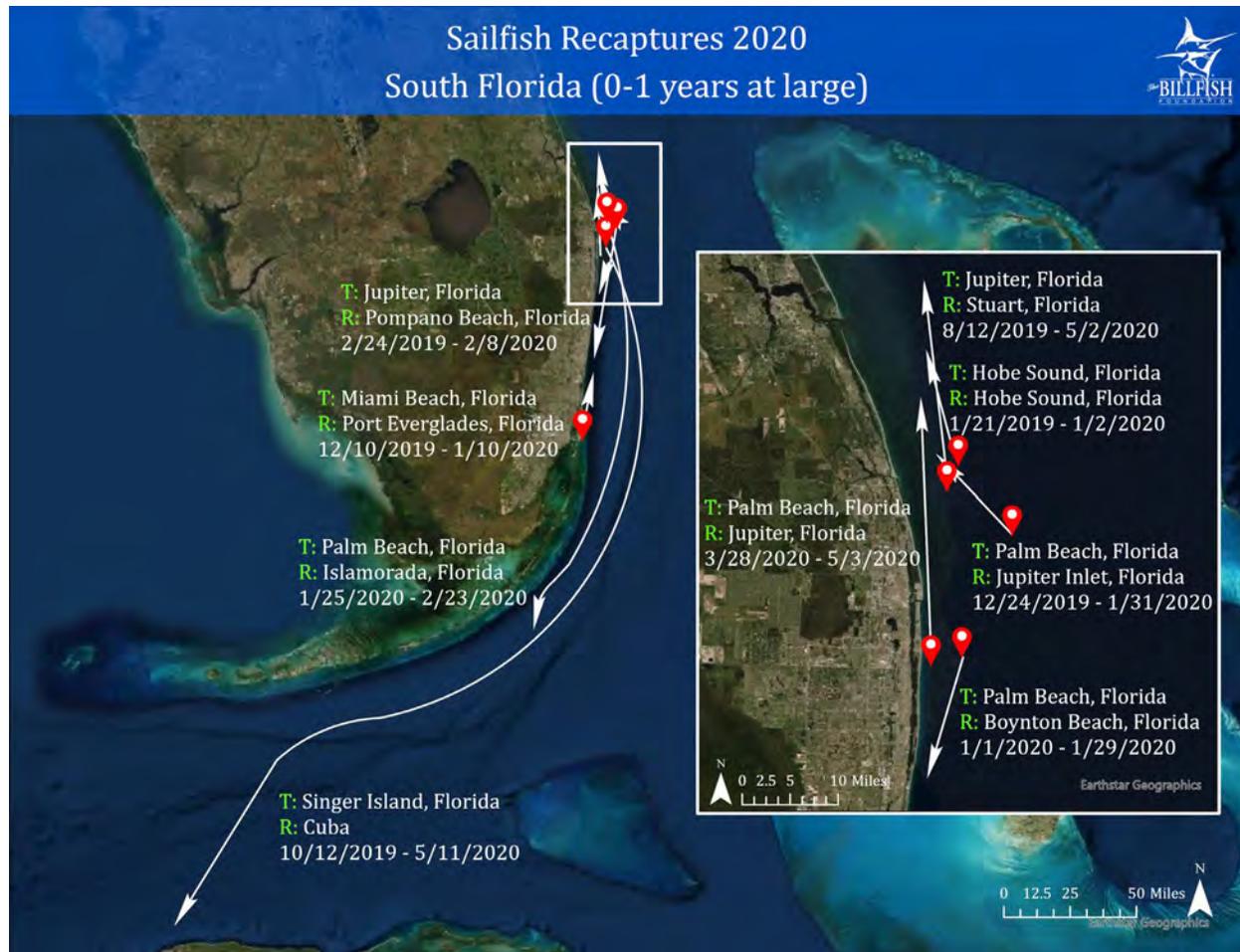


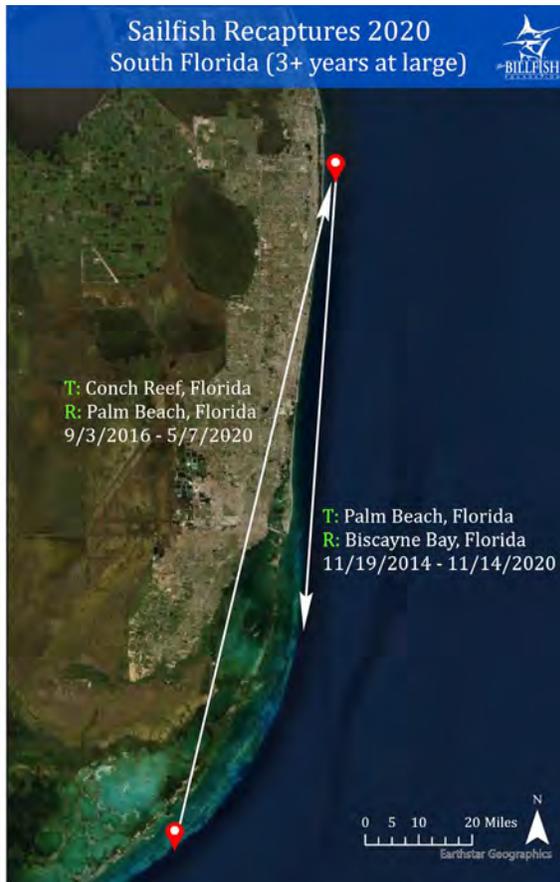
Sailfish releases and tags exhibited similar temporal trends. This is expected, given that they were both mostly concentrated in North America. The primary difference is simply in the severity of the trend. Like tags, sailfish releases peak in the first months of the year. However, the drop-off from March to April is substantially greater, with less than 100 releases per month for the entire rest of the year.



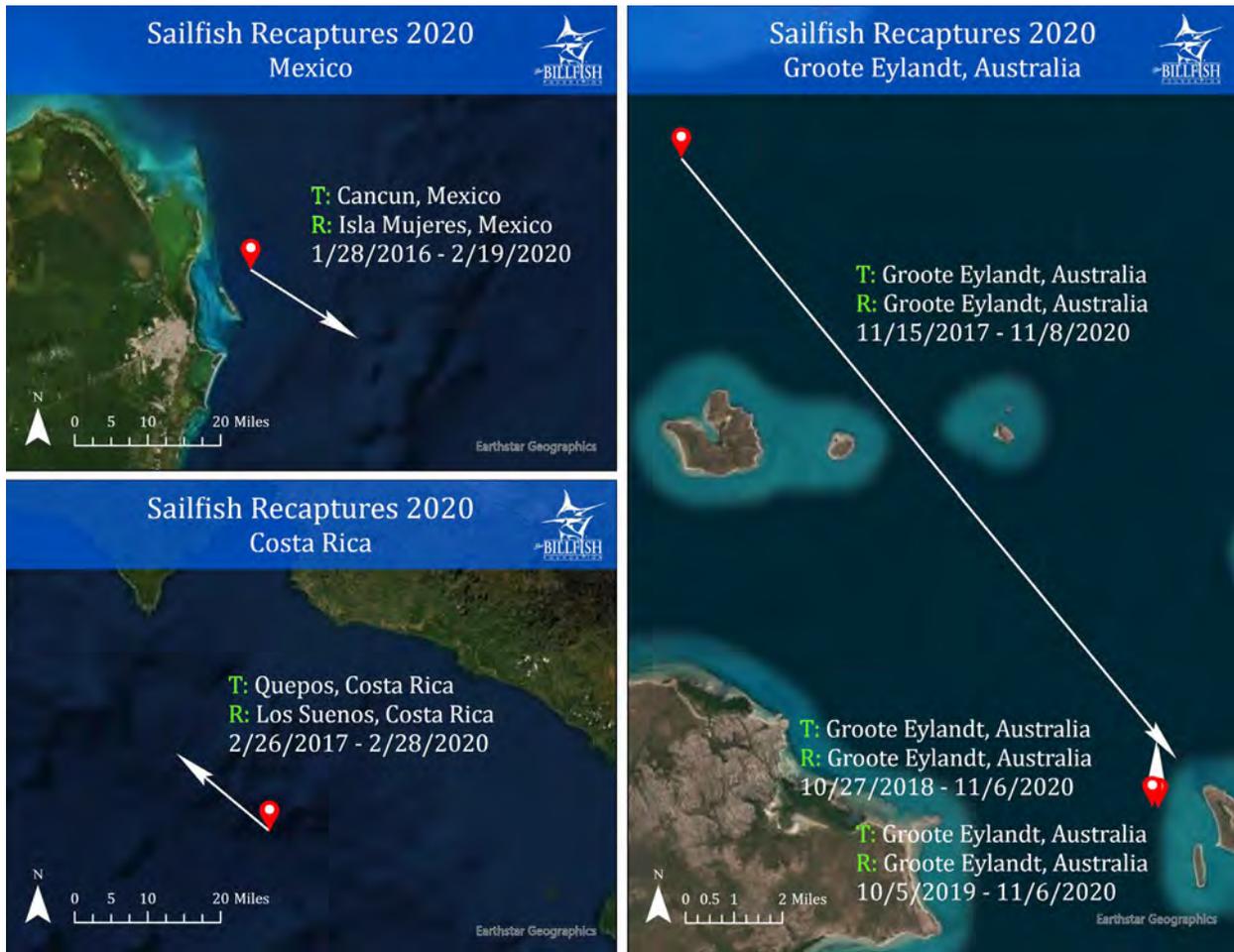
Recaptures

An incredible 40 sailfish recaptures occurred in 2020. Sailfish are typically our most recaptured species due to the high effort in South Florida, and 2020 was no different. In fact, South Florida had so many that we had to separate their maps based on time at large! Nine sailfish were recaptured after less than one year at large versus seven between one and two years, seven between two and three years, and two at large for over three years. Almost all South Florida sailfish stayed in South Florida except for one which migrated further South to Cuba.





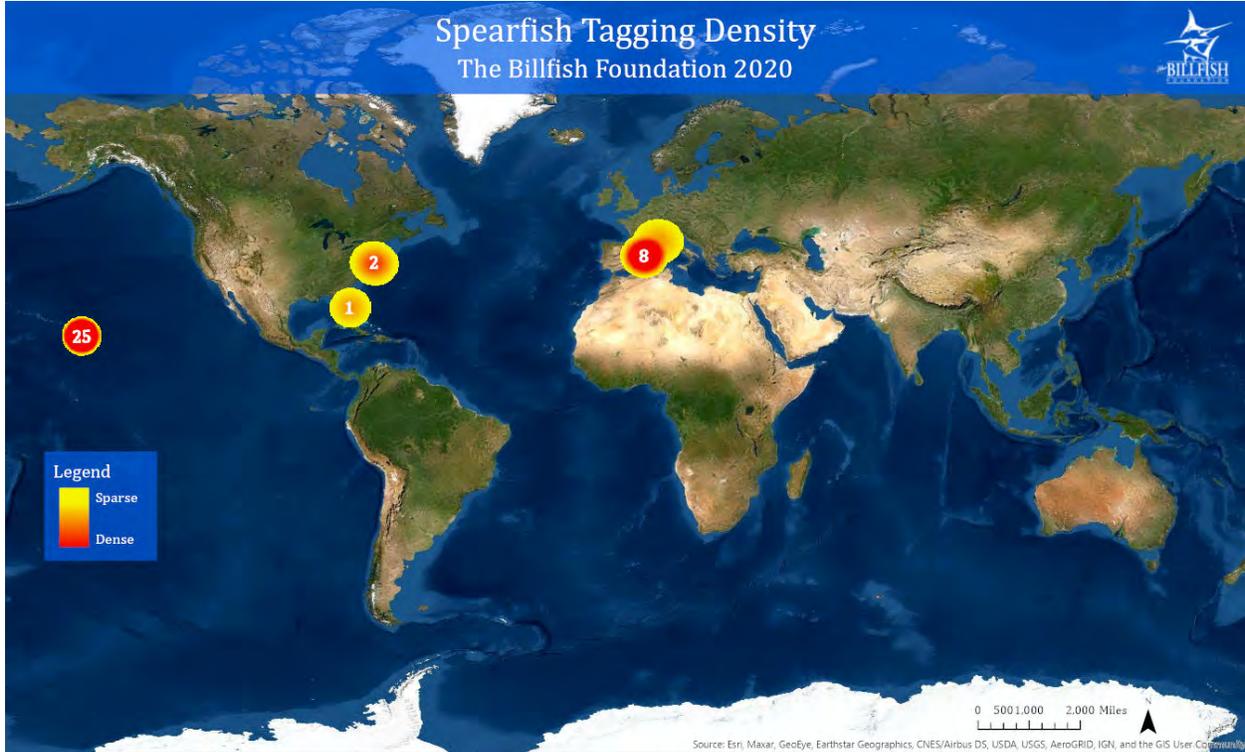
However, South Florida cannot take credit for all of the recaptures. Five recaptures occurred outside of Florida. Of these, only one, in Mexico, occurred in the Caribbean/Atlantic. The remaining four were based in the Pacific – one in Costa Rica and four in Groote Eylandt, Australia. For many years, Captains and anglers in Groote Eylandt have exhibited impressive tagging effort. As a result, it has become fairly common for them to recapture their own fish!



Spearfish

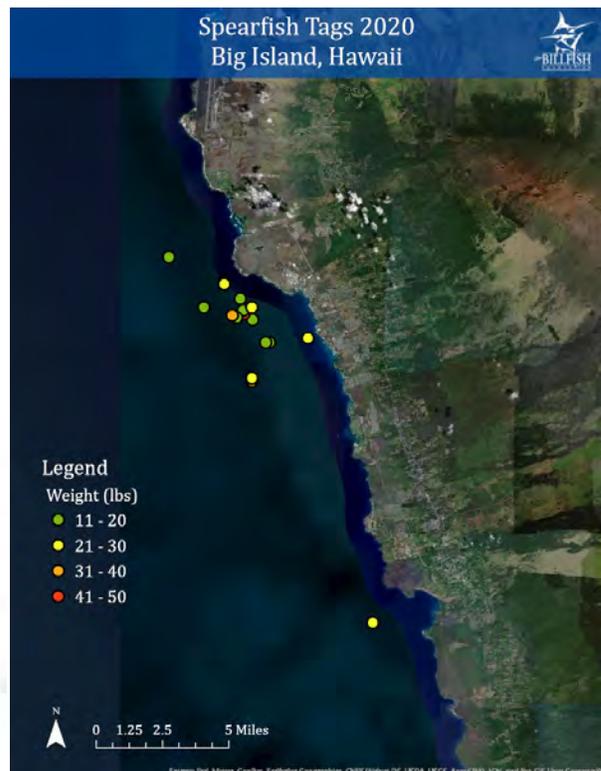
Tags

Worldwide, 36 spearfish were tagged in 2020. Of these, 25 were tagged in the Pacific and 11 were tagged in the Atlantic. More specifically, spearfish were tagged from only three countries: USA, Spain, and France. On average, tagged spearfish weighed 26.4lbs (12kg) and measured 52.2in (132.6cm). The largest was 50lbs (22.7kg) and the smallest was only 10lbs (4.5kg)!



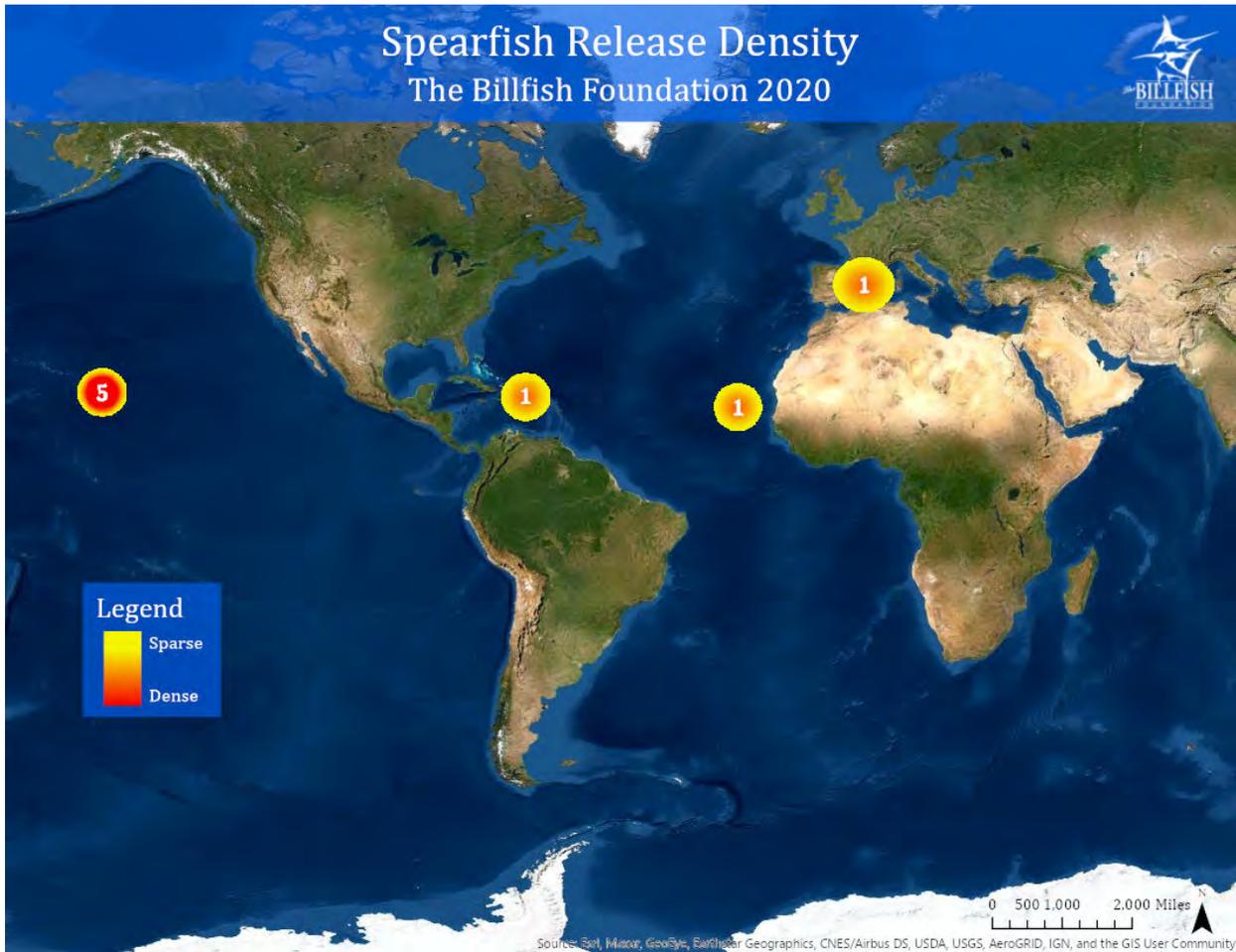
Sixteen anglers and eight captains tagged the spearfish last year. Most spearfish (25 of 36) were tagged in Hawaii by Captain Tracy Epstein and angler Chad Beaudry aboard Last Chance and Captain KJ Robinson and the Wyatt family aboard Sea Genie II. In the Atlantic, Captain Vince Riera aboard Mad Max out of Spain is responsible for the greatest tagging effort.

As in years past, nearly all of the spearfish tags were administered in the spring and summer.

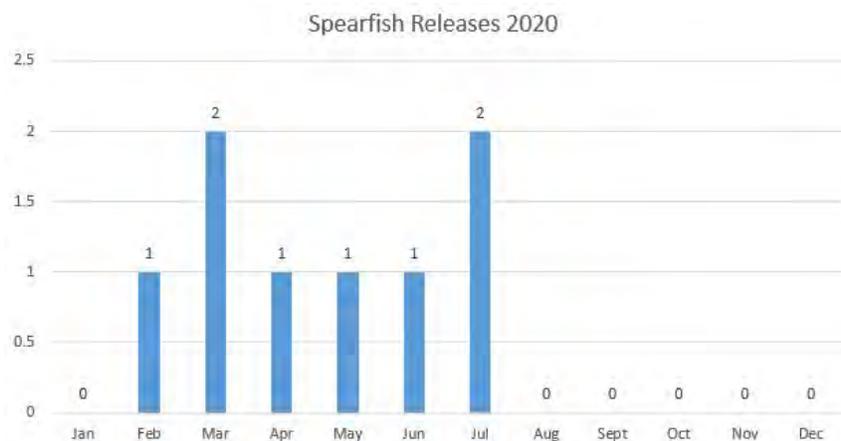


Releases

Only eight spearfish were released without tags in 2020. Once again, the majority of these were in Hawaii by Captain Tracy Epstein and Chad Beaudry aboard Last Chance. Similar to tags, one spearfish was released near Spain by Captain Vince Riera aboard Mad Max. Unlike tags, however, spearfish were released in two more countries: the Dominican Republic by the Eight Eights team and Cape Verde by the Hebe team. These teams make up the only four captains and four anglers that released spearfish without tags in 2020.



Also like the tagged spearfish, all of the spearfish released were done so in the warmer months.



Striped Marlin

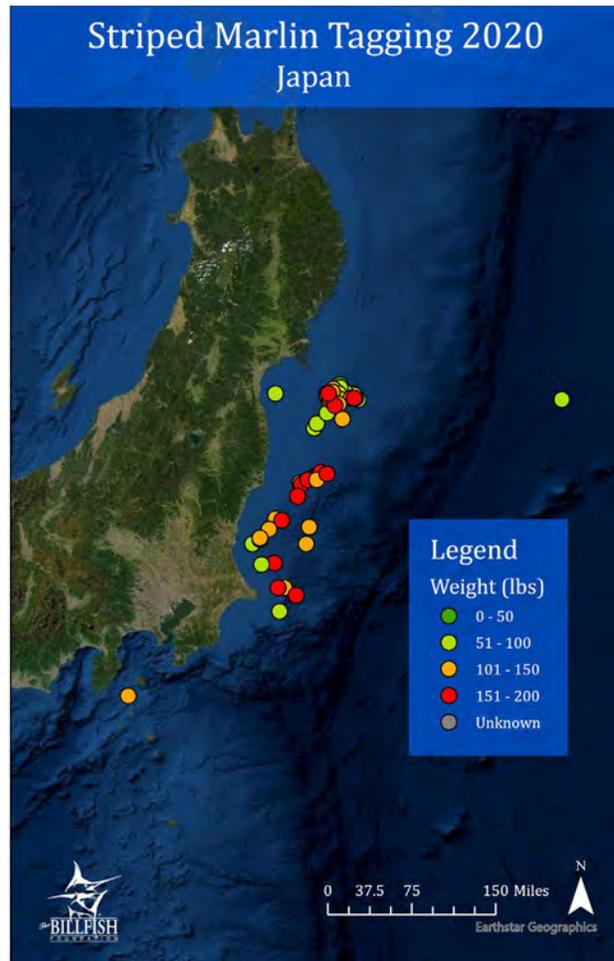
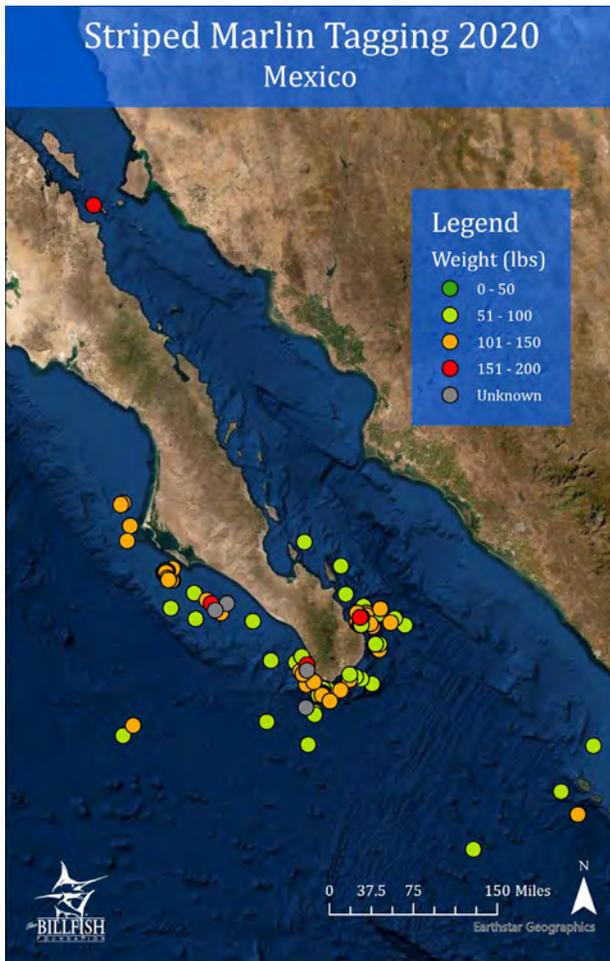
Tags

An impressive 482 striped marlin were tagged in 2020. Many of these fish were tagged under charter operations, as only 31 Captains were involved, but 102 anglers. The most prolific contributors were Captains Casey Carter, Chris Workmon, and Scott Jones. The most prolific anglers were Camila Ingram, Geri Christman, and Gray Ingram.

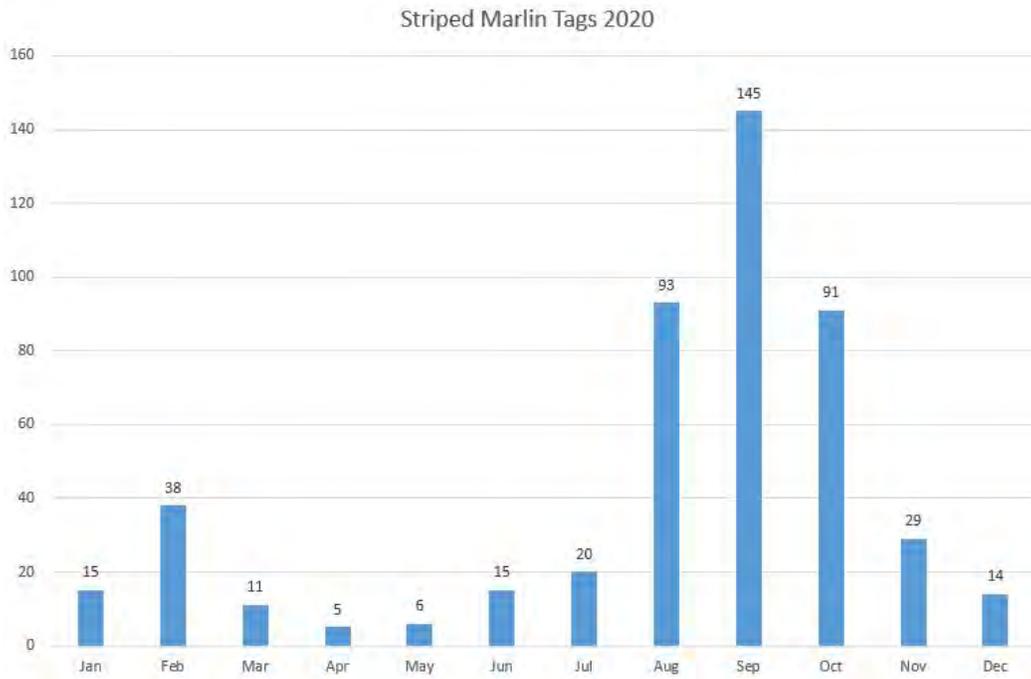
On average, tagged striped marlin weighed 93.6lbs (42.5kg) and measured 83.3in (211.6cm). However, sizes varied from as low as 20lbs (9.1kg) to as high as 198lbs (89.8kg). Striped Marlin are native only to the Pacific and Indian Oceans. Thus, all countries involved have an Indo-Pacific coastline, including Mexico, Japan, USA, Costa Rica, Seychelles, Oman, and South Africa.



Among the countries involved in striped marlin tagging, Mexico and Japan were the most prolific. These two countries are responsible for all but only a few dozen striped marlin tags. Mexico, more specifically the Baja California region, boasts high densities of striped marlin. In fact, many winners of the striped marlin categories in the TBF Tag & Release Competition center most of their efforts in Baja and Cabo. Japan, on the other hand, boasts fewer tags but larger striped marlin on average.



The vast majority of striped marlin tagging was in the Northern Hemisphere. Tagging was low in the early part of 2020 but spiked in the late summer and autumn before falling again.

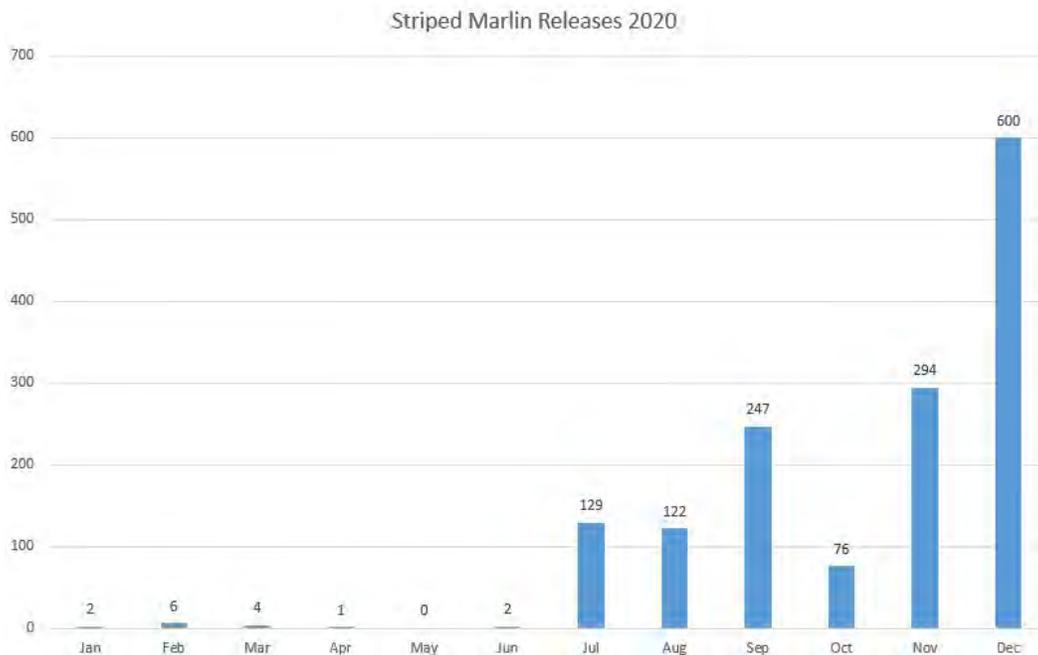


Releases

Striped marlin releases far outnumbered tags, totaling 1,483 releases in 2020. Like tags, almost all releases were in Mexico. In fact, 1,462 of 1,483 striped marlin releases were in the Baja region of Mexico. Other countries involved include the USA, Ecuador, Australia, Kenya, and South Africa. Unlike tags, no striped marlin releases occurred in Japan.



Striped marlin releases were almost nonexistent in the first half of the year. They rose in frequency beginning in July and, except for in October, numbered in the hundreds for the remainder of the year. This trend is fairly extreme and may be attributed to the COVID-19 quarantines that were especially strict in the beginning of 2020.



Recaptures

Five striped marlin were recaptured in 2020. However, only two of these recaptures had original tagging information. Unfortunately, this is common. If you tag fish, it is absolutely vital that you report your tags to TBF as soon as possible. Of the three orphan recaptures, two were in Japan and one was in Mexico. The two completed recaptures also took place in Japan and Mexico. This is quite expected, as, as seen above, the vast majority of striped marlin tagging effort is centered in these two countries.



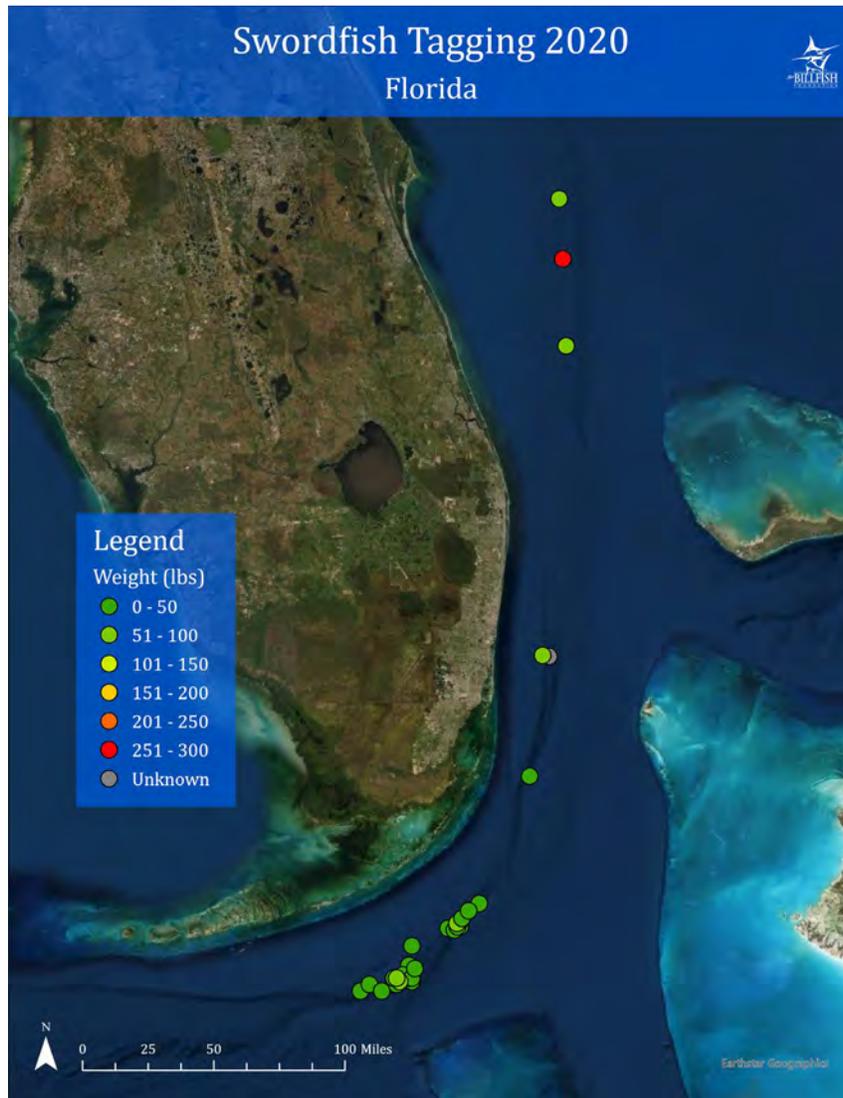
Swordfish

Tags

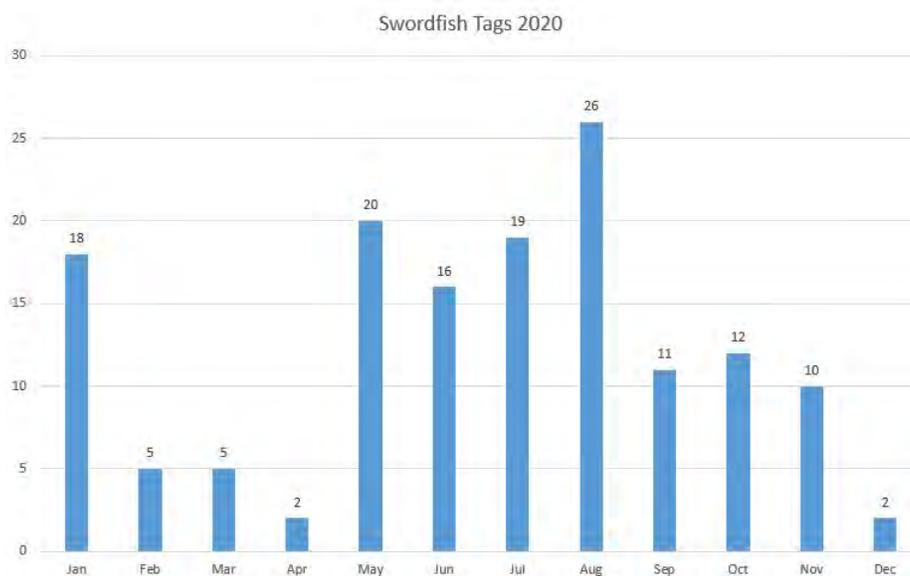
TBF Captains and anglers across the world deployed 146 tags on swordfish in 2020. Almost all 146 swordfish were tagged in the Atlantic out of the USA, France, and Spain. Only one was caught in the Indian Ocean, off of Kenya. On average, swordfish were 58.2lbs (26.4kg) and 48.4in (122.9cm). However, sizes ranged from a minimum of only 8lbs (3.6kgs) to a hefty 280lbs (127kg)!



Forty anglers and fourteen Captains tagged swordfish in 2020. The most prolific of these were father-son team Capt Rudy Urbain and Samuel Urbain out of France. Also a significant contributor was Capt Nick Stanczyk out of Florida. As a result, the two highest concentration areas for swordfish tagging were France and the East Coast of Florida.

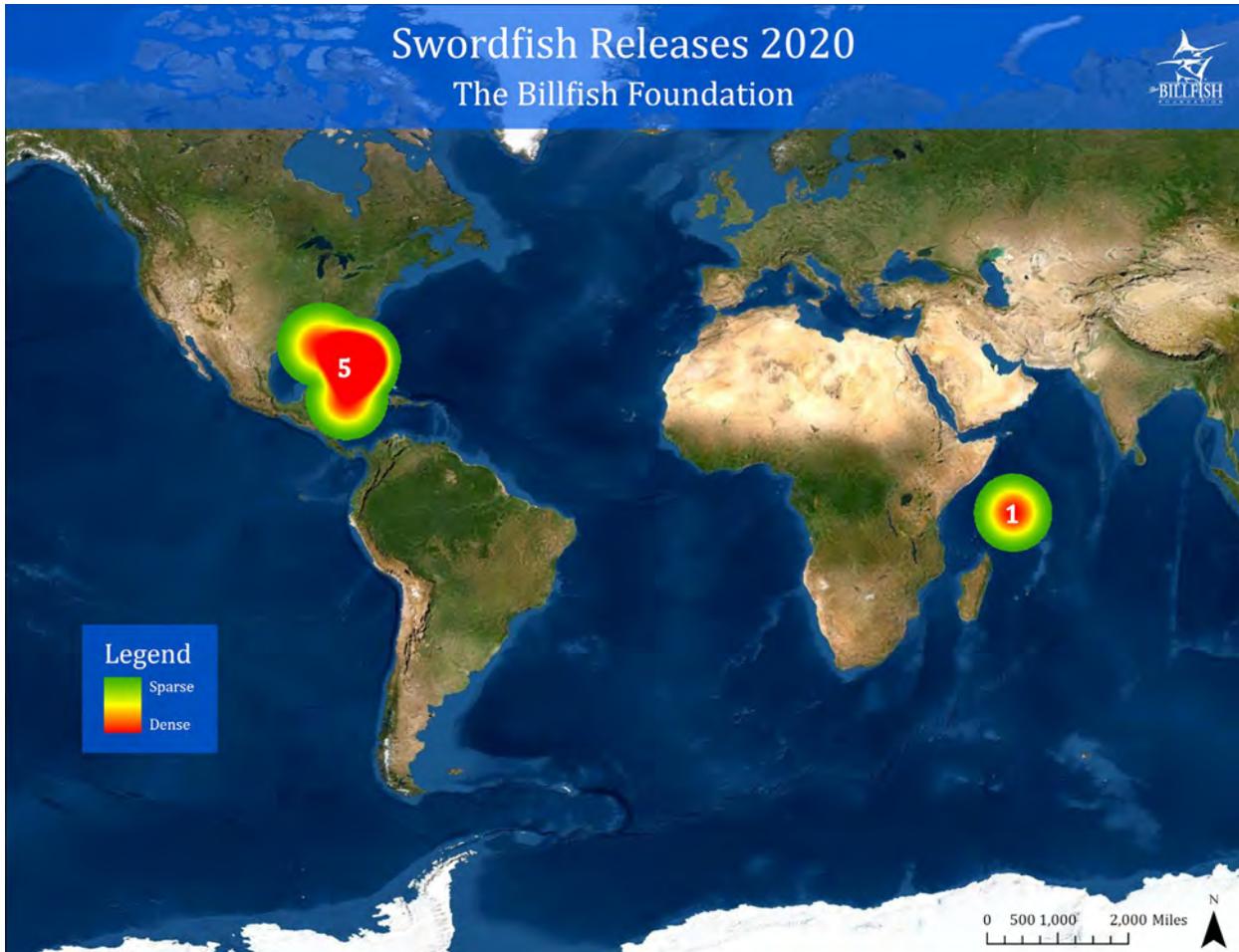


Swordfish tagging effort experienced some seasonality in 2020. Specifically, effort was highest in the summer and tapered slightly into the fall. Though tagging was quite high in January, it fell sharply in the following months, possibly due to COVID-19 quarantines.

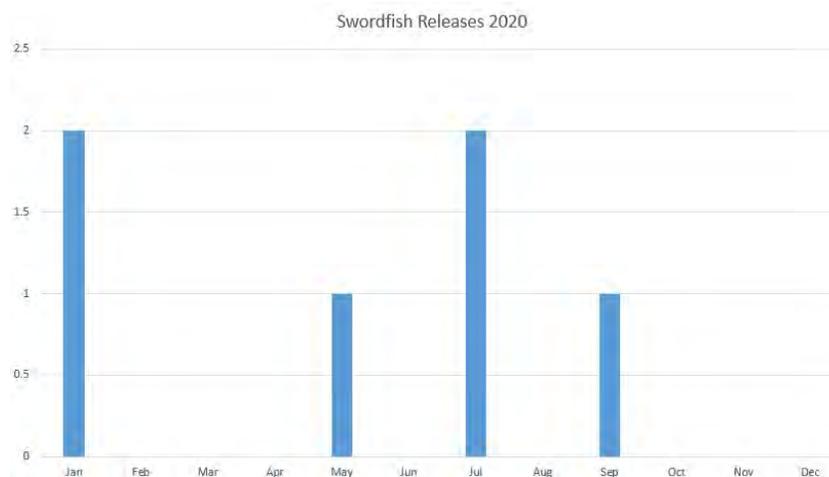


Releases

In general, TBF receives far more swordfish tags versus releases. As such, only six swordfish were reported released without tags in 2020. Five of six of these swordfish were in the Gulf of Mexico and tagged out of the USA and Cayman Islands. Only one was in the Indian Ocean, tagged off the Seychelles. Four Captains and four anglers reported these six releases to TBF.



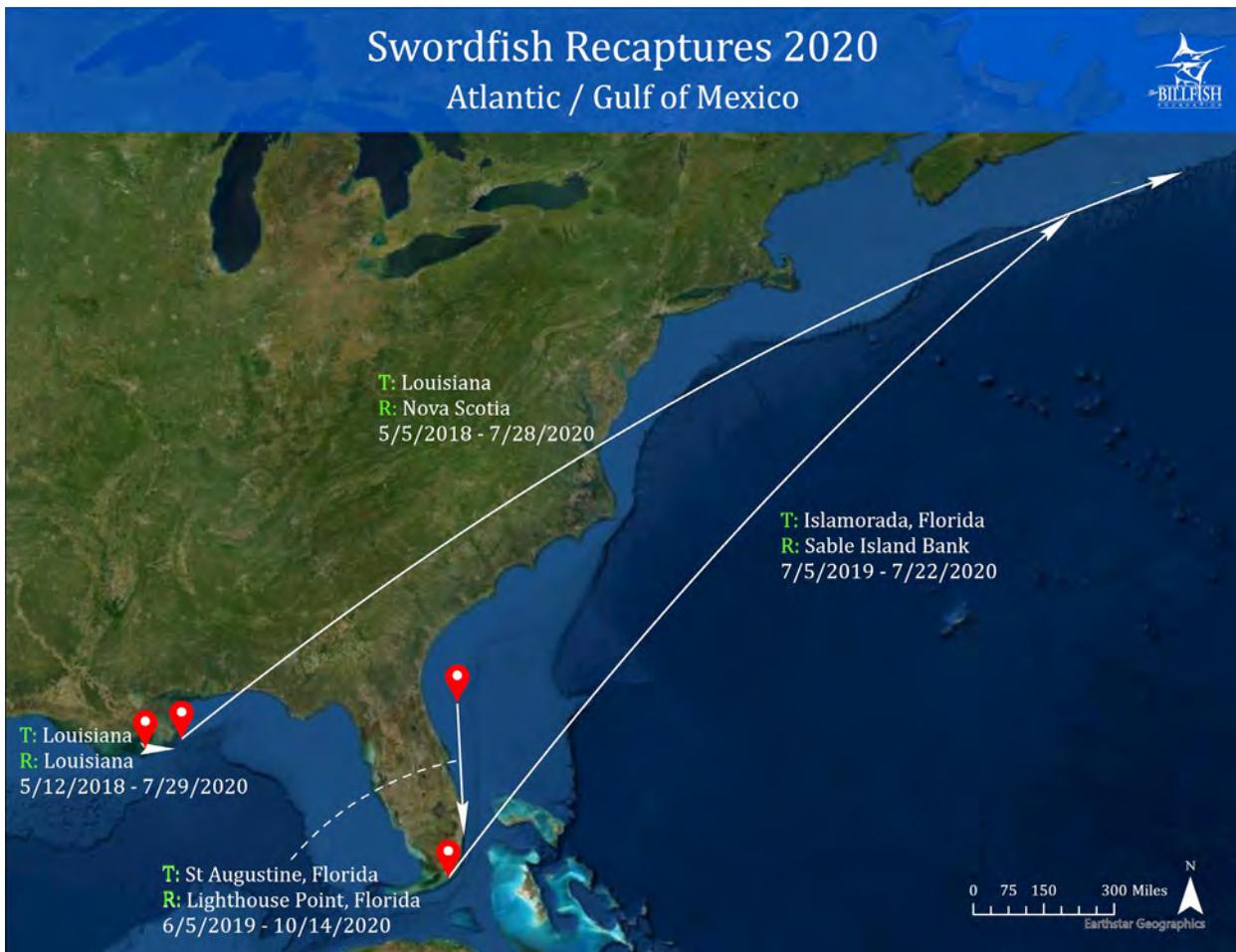
Swordfish releases were dispersed throughout the year. Two of the six swordfish were released in January, one in May, two in July, and one in September.



Recaptures

An impressive 17 swordfish were recaptured in 2020. Of these, 13 were complete and four were missing original tagging information.

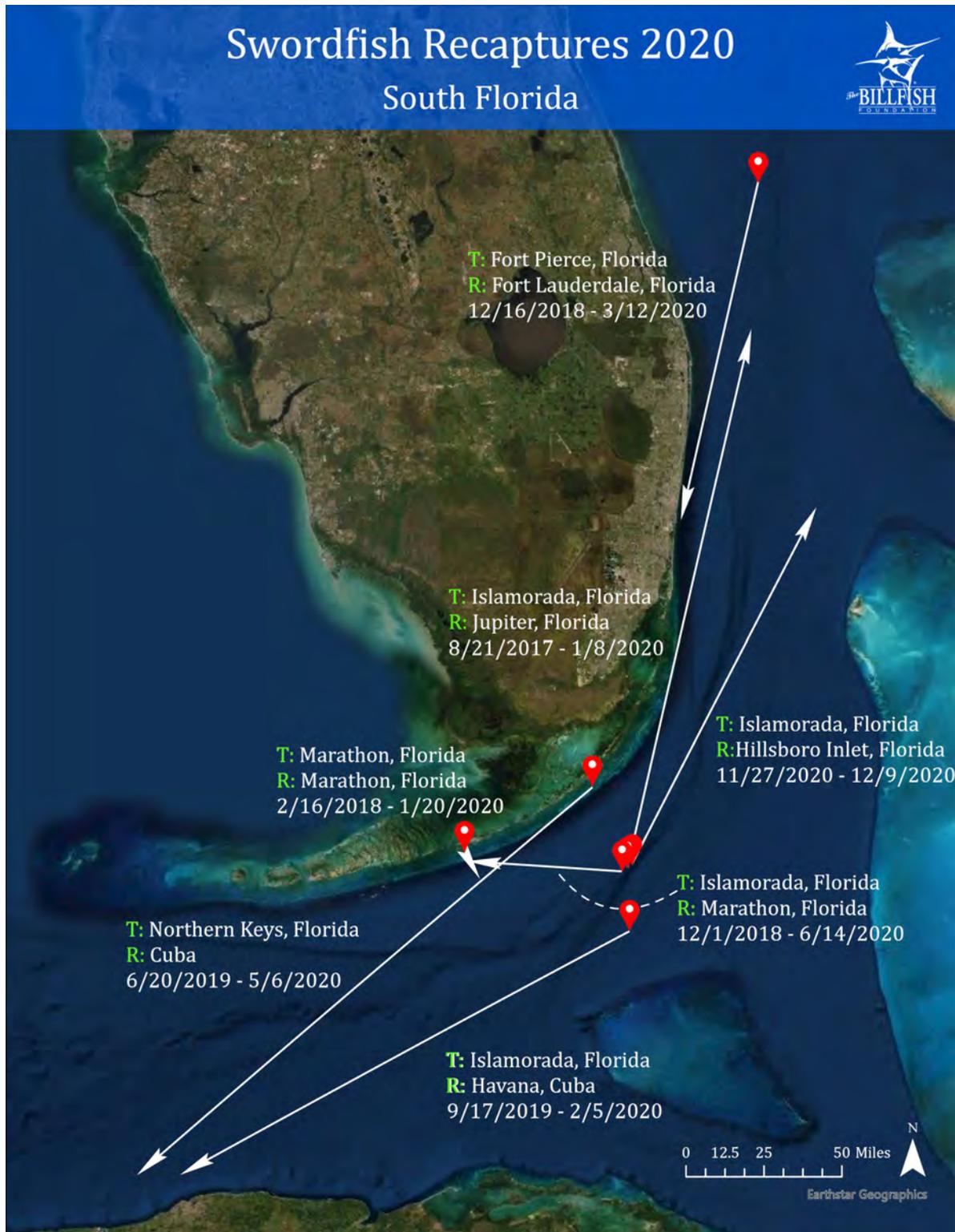
Four swordfish were recaptured in the Atlantic/Gulf of Mexico region. Of these, two originated off Louisiana. One was recaptured just miles from the original tagging location, while the other migrated all the way to Nova Scotia! The most fun part of these two recaptures? They were both tagged in May 2018 off Louisiana and recaptured in July 2020. In the same amount of time, one decided to head for colder Northern waters while the other stayed local. The other two Atlantic swordfish recaptures originated in Florida. One moved from the Northern to Southern Florida, while the other originated in the Keys and also traveled north to Nova Scotian waters.



Three swordfish were recaptured in the Mediterranean. All three recaptures originated in the Sainte Maxime/Saint Tropez area in the South of France and were tagged by father-son team Captain Rudy Urbain and angler Samuel Urbain. The Urbains have been absolutely vital in establishing swordfish tagging in the Mediterranean. In fact, they hold the incredibly rare accolade of being responsible for tagging every single Mediterranean swordfish that has been recaptured to date.



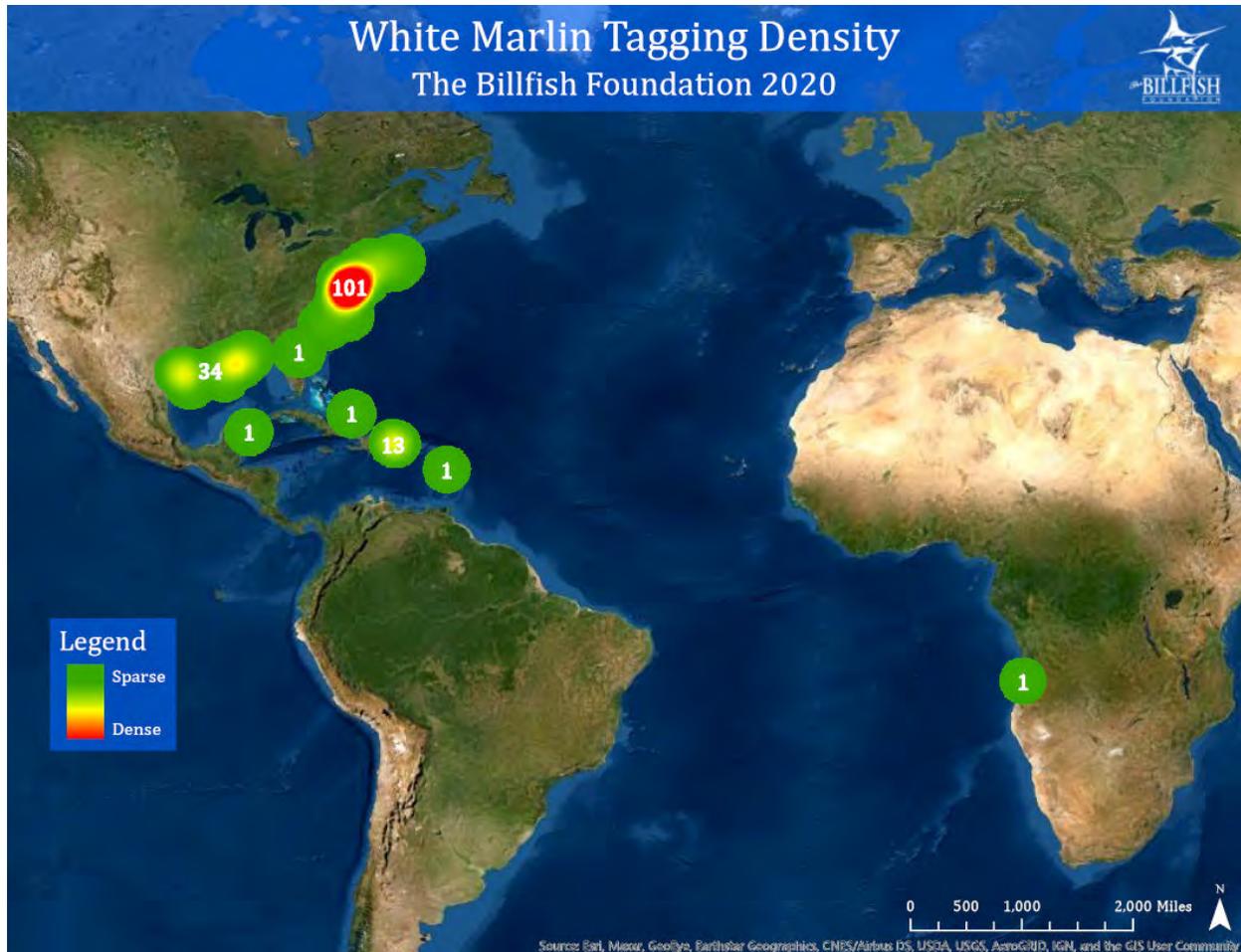
Finally, seven swordfish recaptures occurred in South Florida in 2020. These recaptures are in contrast to those mentioned before, as they were all both tagged and recaptured within South Florida. Six of the seven recaptures were originally tagged in the Florida Keys. Of these six, four stayed in the Keys or traveled South to Cuba. The other two migrated further North into South Floridian waters. The only recapture not originating in the Keys moved South from Fort Pierce to Fort Lauderdale. For all seven recaptures, time at large ranged from less than two weeks to over two years.



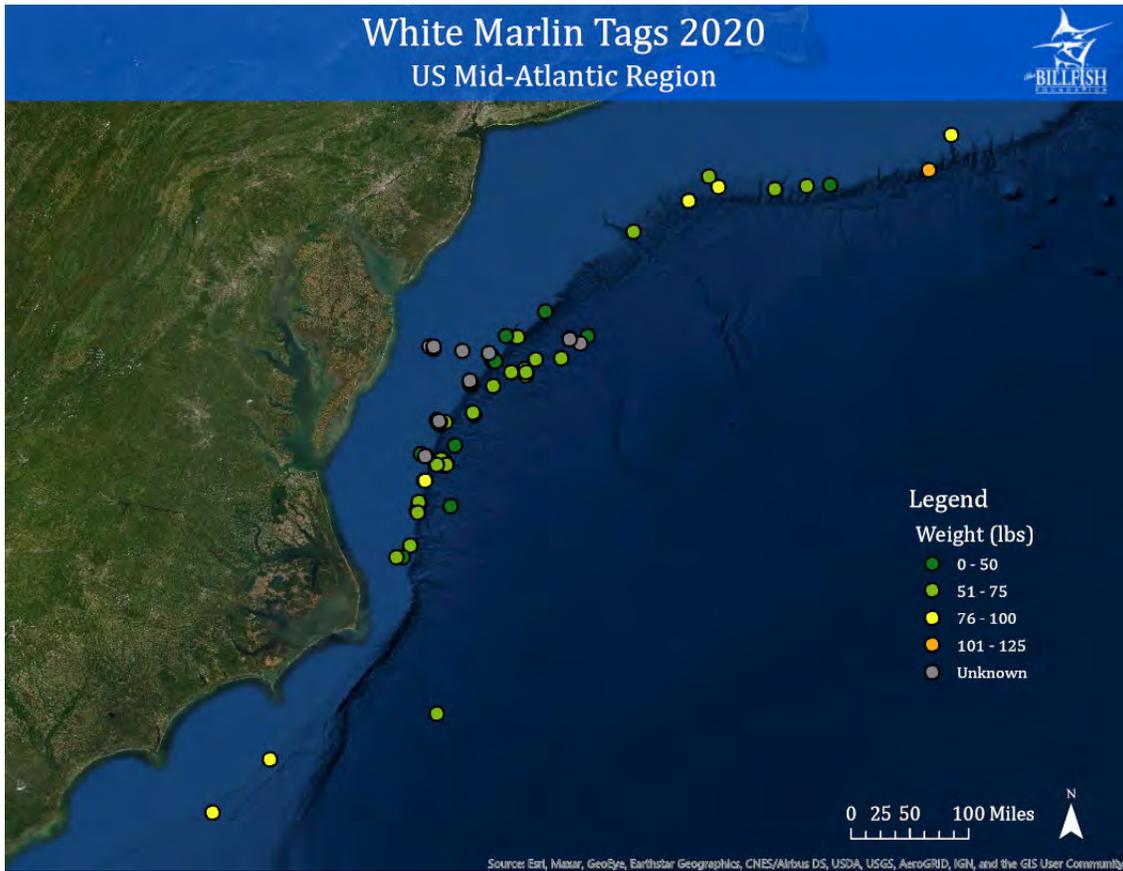
White Marlin

Tags

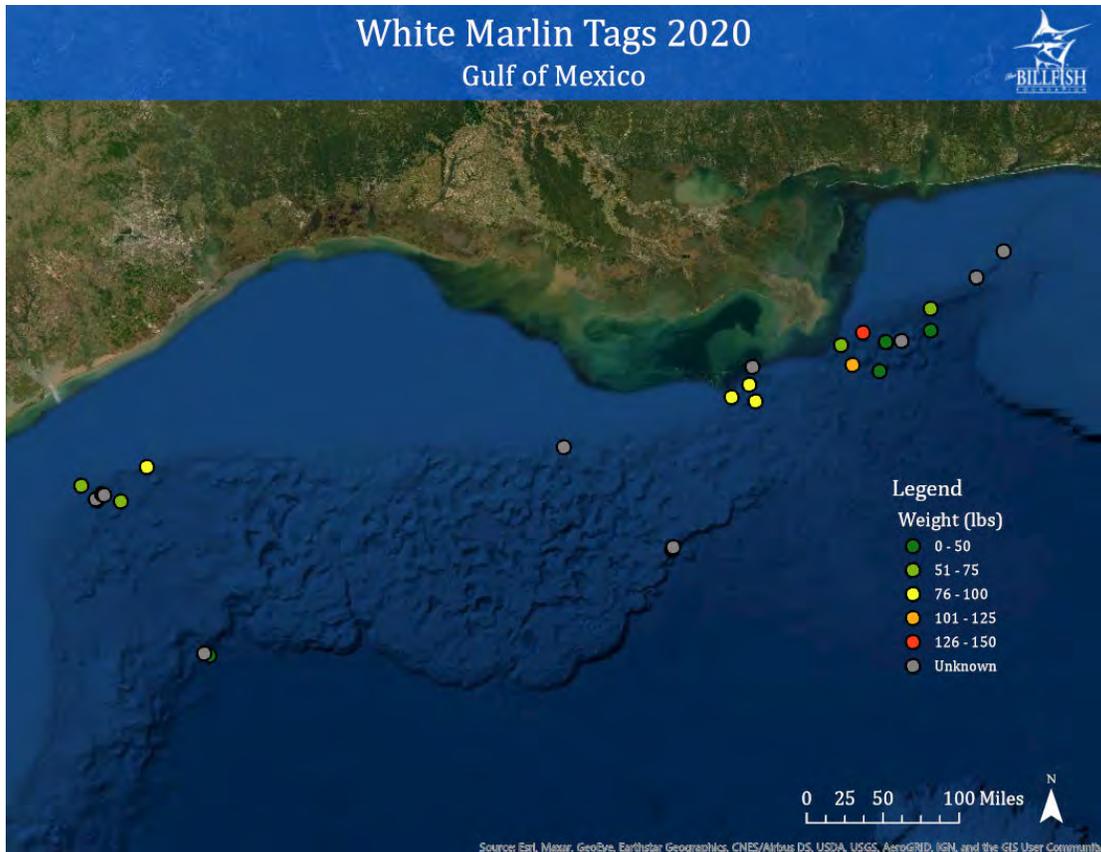
Captains and anglers tagged 153 white marlin in 2020. On average, tagged white marlin weighed 60lbs (27.2kg) and measured 63.2in (160.5cm) long. Most were in that range, with the smallest 40lbs (18.1kg). However, there were some large outliers that weighed up to 150lbs (68kg). While tags were concentrated in the Northwest Atlantic, there were many individuals involved in their deployment. A total of 78 anglers and 41 Captains tagged white marlin in 2020. The most prolific of these were Captains Rich Barrett and Jake Farley and angler Peter Cherasia.



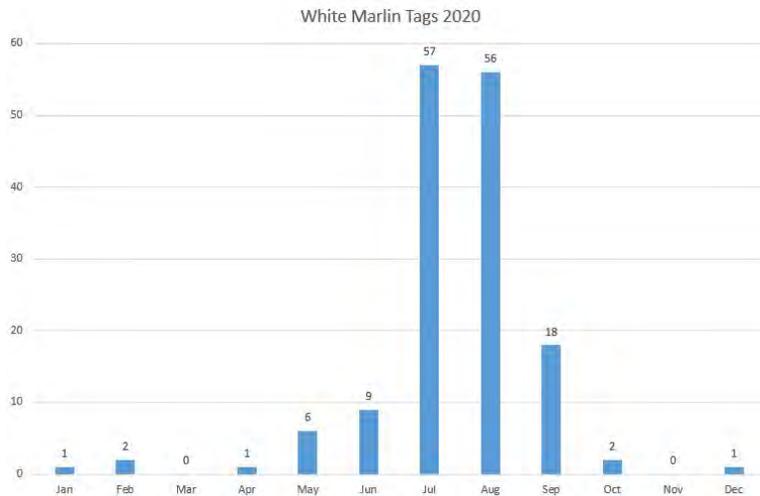
All but one white marlin was tagged in the Northwest Atlantic. The countries responsible for this effort were the USA, Bahamas, Dominican Republic, Mexico, St Croix, and the one East Atlantic in Angola. The US Mid-Atlantic produced the most tags, over 100 of the total 153. Almost all of the white marlin tagged here were less than 100lbs in size.



Behind the US Mid-Atlantic, the Gulf of Mexico produced the second largest number of white marlin tags. Most of these fish were concentrated near the coasts of Louisiana and East Texas.

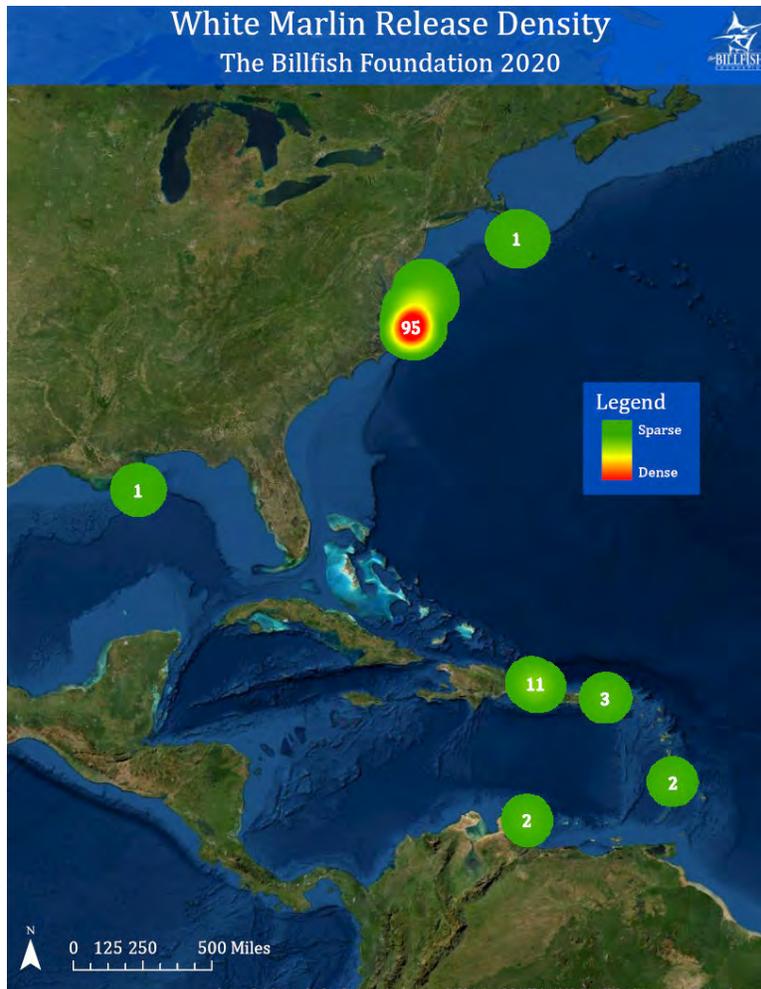


White marlin season occurs in the late summer. As a result, the vast majority of tags were deployed on marlin in July and August of 2020.

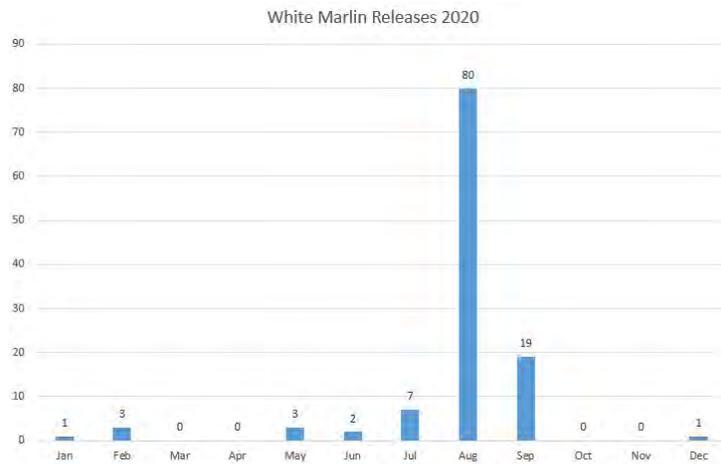


Releases

All 116 released white marlin were in US and Caribbean waters. 95 of these were in the Mid-Atlantic, with the remainder off other parts of the US, Dominican Republic, St Lucia, St Thomas, and Curacao. A total of 14 Captains and 53 anglers released white marlin, with the most prolific being Captains Fin Gaddy and Brent Gaskill and angler Harris Huddle.

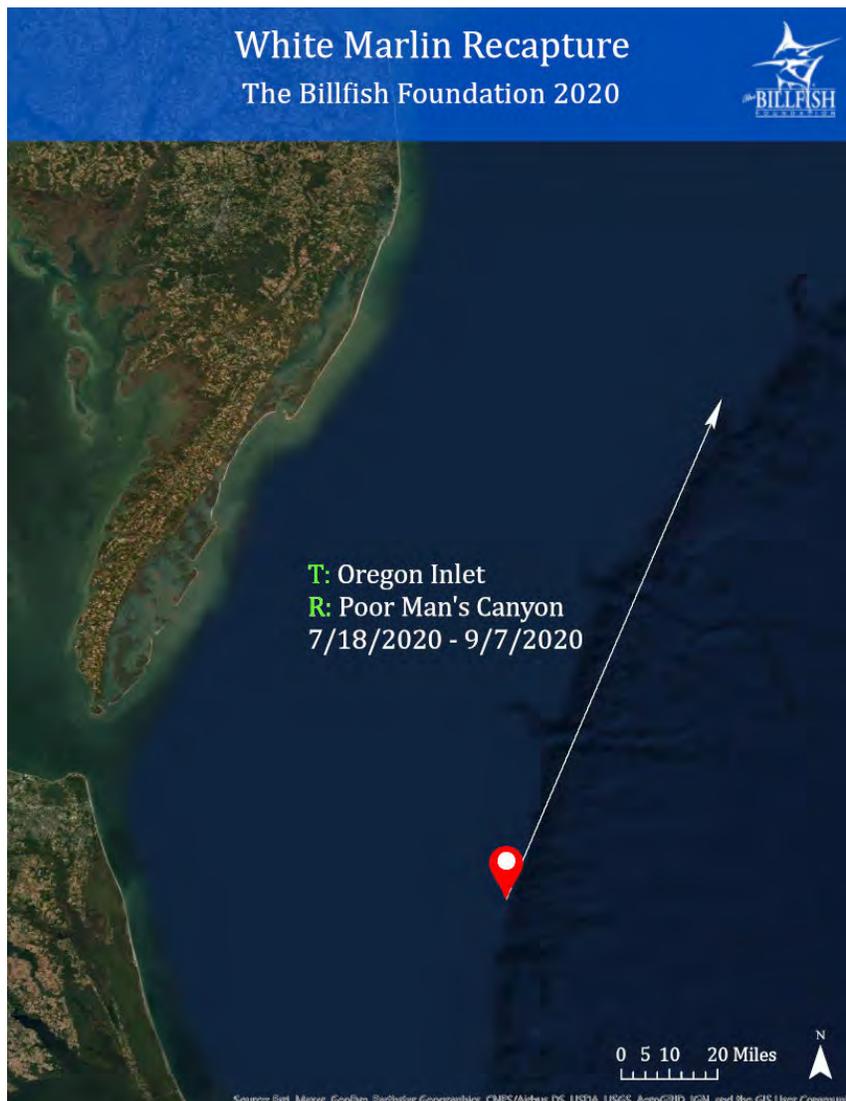


Released white marlin followed the same temporal trends as tagged white marlin. The vast majority, 99 of 116, were released in August and September.



Recaptures

Only one white marlin recapture took place in 2020. The fish was tagged off Oregon Inlet and recaptured at Poor Man's Canyon after less than two months at large.



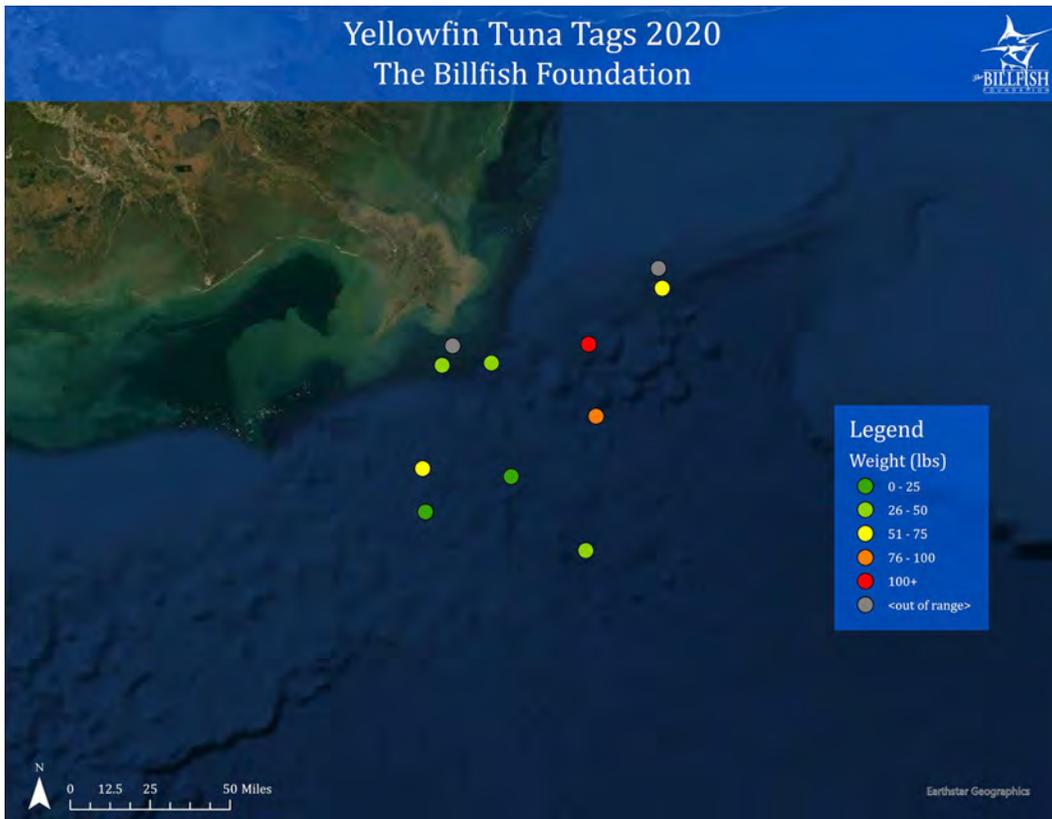
Bluefin and Yellowfin Tuna

Tags

A total of 49 yellowfin and 13 bluefin tuna were tagged in 2020. On average, yellowfin weighed 51.3lbs (23.3kg) and measured 43.2in (109.7cm) long. However, sizes ranged from as tiny as only 5lbs (2.3lbs) and as large as 150lbs (68kg). In contrast, bluefin weighed an average of 470lbs (213.2kg) and measured 68.1in (173cm). The smallest weighed 350lbs (158.8kg) and the largest 550lbs (249.5kg).



In total, 7 Captains and 23 anglers tagged yellowfin, while 6 Captains and 9 anglers tagged bluefin. Every single tuna was tagged in US waters in only two regions. For bluefin, all but one were tagged in New England. More specifically, these bluefin were tagged off the coasts of Massachusetts and New York. Only one was tagged outside of New England in the Gulf of Mexico. In contrast, yellowfin tuna were only tagged in the Gulf of Mexico off the coast of Louisiana. As such, in the map below, many points that dictate the location of a tagged yellowfin overlap.

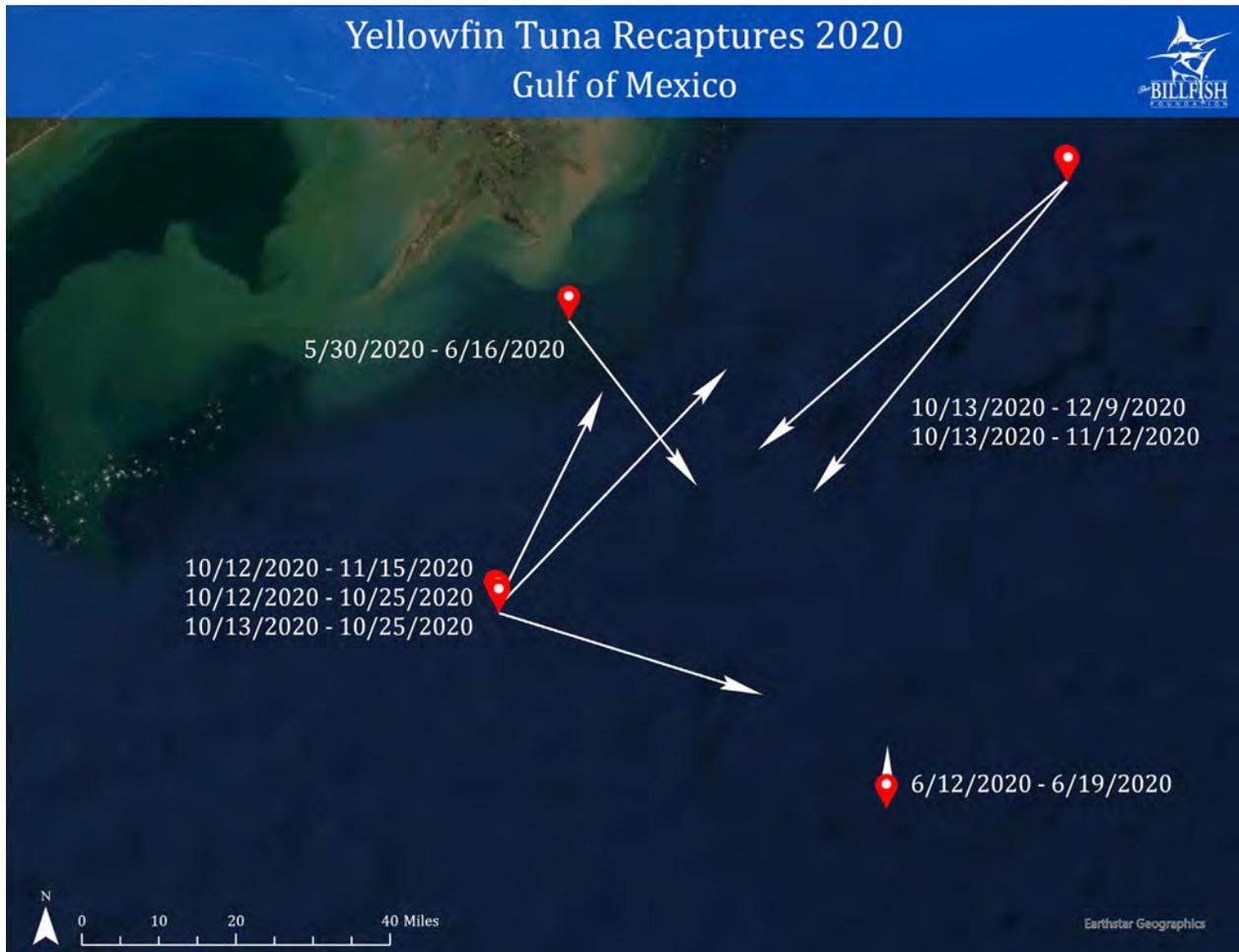


Recaptures

Nine yellowfin and three bluefin were recaptured in 2020. For yellowfin, one was recaptured in Panama. It was recaptured after a year only 31 miles from its original tagging location. However, in that time it grew from 14.5in (36.8cm) to 55in (140cm), a nearly fourfold increase.



The other six yellowfin recaptures were in the Gulf of Mexico. All were both tagged and recaptured off the coast of Louisiana. In fact, most of these recaptured tuna were originally tagged by anglers in the LA/Tex Tuna Invitational! Given that yellowfin are a frequently sought after species in the Northern Gulf of Mexico, it is not surprising that all of these tuna were recaptured in less than two months. In fact, a few were recaptured in just a few days or weeks of tagging!



There were fewer bluefin tuna recaptures than yellowfin in 2020, but they were over much longer periods. The shortest was over the course of a year and stayed fairly local, being both tagged and recaptured in the New England area. The other two were far more extensive. Both were tagged in Massachusetts in 2011 and 2012 by our friends at the Large Pelagics Research Center. Over the next 9 and 8 years, respectively, these tuna migrated across the Atlantic Ocean and into the Mediterranean, where they were recaptured in Malta, off the coast of Italy. The eight-year recaptured bluefin was tagged at 45lbs/45in (20.4kg/114.3cm) and grew to 494lbs/87in (224.1kg/221cm). Even more impressive, the nine-year recapture grew from 100lbs/55in (45.4kg/139.7cm) to 1,016lbs/111in (460.8kg/281.9in)!

Bluefin Tuna Recaptures 2020

The Billfish Foundation



Acknowledgements

Established in 1990, The Billfish Foundation's Tag and Release Program is the largest private billfish tagging database in the world and the cornerstone of TBF's conservation and advocacy efforts. With more than 270,000 tag and release reports, TBF receives over 15,000 tag and release records annually from across the globe and provides vital information for billfish conservation. The Billfish Foundation's Tag and Release Program would not be possible without the dedicated support of our sponsors. We are exceptionally grateful to King Sailfish Mounts, Casa Vieja Lodge, Yeti Coolers, Garmin, Costa Sunglasses, and the International Game Fish Tournament Observers for the unwavering support throughout the years. Thank you also to Carey Chen, who provided illustrations for the species represented in this record.



All data included was compiled by Faith Benner using The Billfish Foundation's Tag & Release Database. All maps were created by Faith Benner using ESRI ArcGIS Pro.