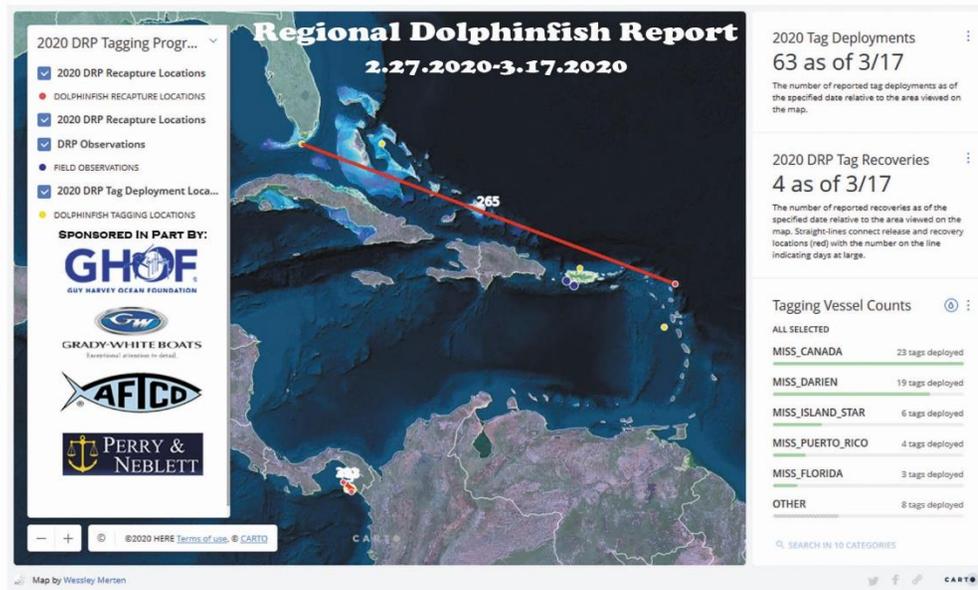


Dolphinfish Research Program™

Made possible by a grant from the Guy Harvey Ocean Foundation

March 2020

Dolphinfish Research Program™



Reported Tagging Progress from 2/27/2020-3/17/2020:

Gary Marshall (Wine Down) 1

Julien Brossel (Madatet) 1

Reported Recaptures Since 2/27/2020



In early March, before the travel restrictions and escalated outbreak of COVID-19 in the U.S., we traveled to Puerto Rico to deploy PSATs off the southwest coast of the island (to add to the seven PSATs deployed off that location since 2011) but were unsuccessful in finding fish during two 8-hr outings. Last year, on the exact day, we found multiple schools and successfully deployed a PSAT and boarded additional fish. But, this year, we did not see virtually any schools under birds or under the numerous floating objects we found during our two outings. During the fall and early winter of 2019, reports came in consistently of good catches off the south coast but things appear to have slowed through late winter and early spring. Reports from north of the USVI indicate similar slow conditions. Despite these reports, there was a recent recovery off Barbuda (47" cow) and a stellar report from Barbados just came in. Does this mean a pulse of fish is near and the spring run will just be late to appear off PR? We note these observations here for future reference.

Year to 3/17/2020 for Reported Releases:
63 tagged & released for conservation and science

7 Recaptures to date in 2020 4 verified
o PSAT movements
o PSAT Deployments o Acoustic Tag

Vickvram Dindyal reported a Colorado Magic tagged fish
Fernando Brias reported a Miss Puerto Rico tagged fish
Fernando Brias reported a Miss England tagged fish
Fernando Brias reported an un-verifiable tag from TSL

Captain Teke's Fish Recovered Off Barbuda

Last year, **Captain Ron Teke** and his fishing team, *Colorado Magic*, requested a sleeve of 50 tags. Part of their motivation to receive this many tags was that they were determined to become 2019's top tagging private boat and beat the reigning champions, the *Killin' Time II* fishing team, who fish offshore just down the road in the Lower Keys. Although they fell short of winning the coveted dolphin tagging award, little did they know that their drive to win and consequential uptick in tagging activity would result not only in a milestone recovery for the program but their second and most significant recovery since they began tagging for the **Dolphinfish Research Program (DRP)** in 2004. In addition, **Captain Teke's** fish, reported by **Captain Vickram Dindyal** while fishing a FAD northeast of Barbuda on March 4th, 2020, represents the third recovery in the Tropical Atlantic in the last 15 months for the DRP. Similar to the other recoveries, **Captain Teke's** fish grew 30" in 265 days, which equates to a weekly growth rate of .79". These observations show the movement of dolphin biomass from the U.S. East Coast to the Tropical Atlantic/Northeastern Caribbean Sea in 9 to 11 months. All three recoveries were dolphin that ranged between 16" and 24" fork length, were released during summertime off the Keys, grew to tackle testing adult fish, and were recaptured during winter in the Tropical Atlantic. Collectively, this is the 7th international recovery in the Tropical Atlantic for the DRP. When this event is compared to a geolocation track obtained from a 42" bull in 2014, it suggests this fish traveled more than the distance of that track (8,059.10 miles). We approximate that if this fish followed a path similar to that of the 2014 bull, and one assumes this fish followed the Gulf Stream north from its release site to offshore South Carolina (574 miles), this dolphin traveled at least 8,633 miles in 265 days. This would, however, put

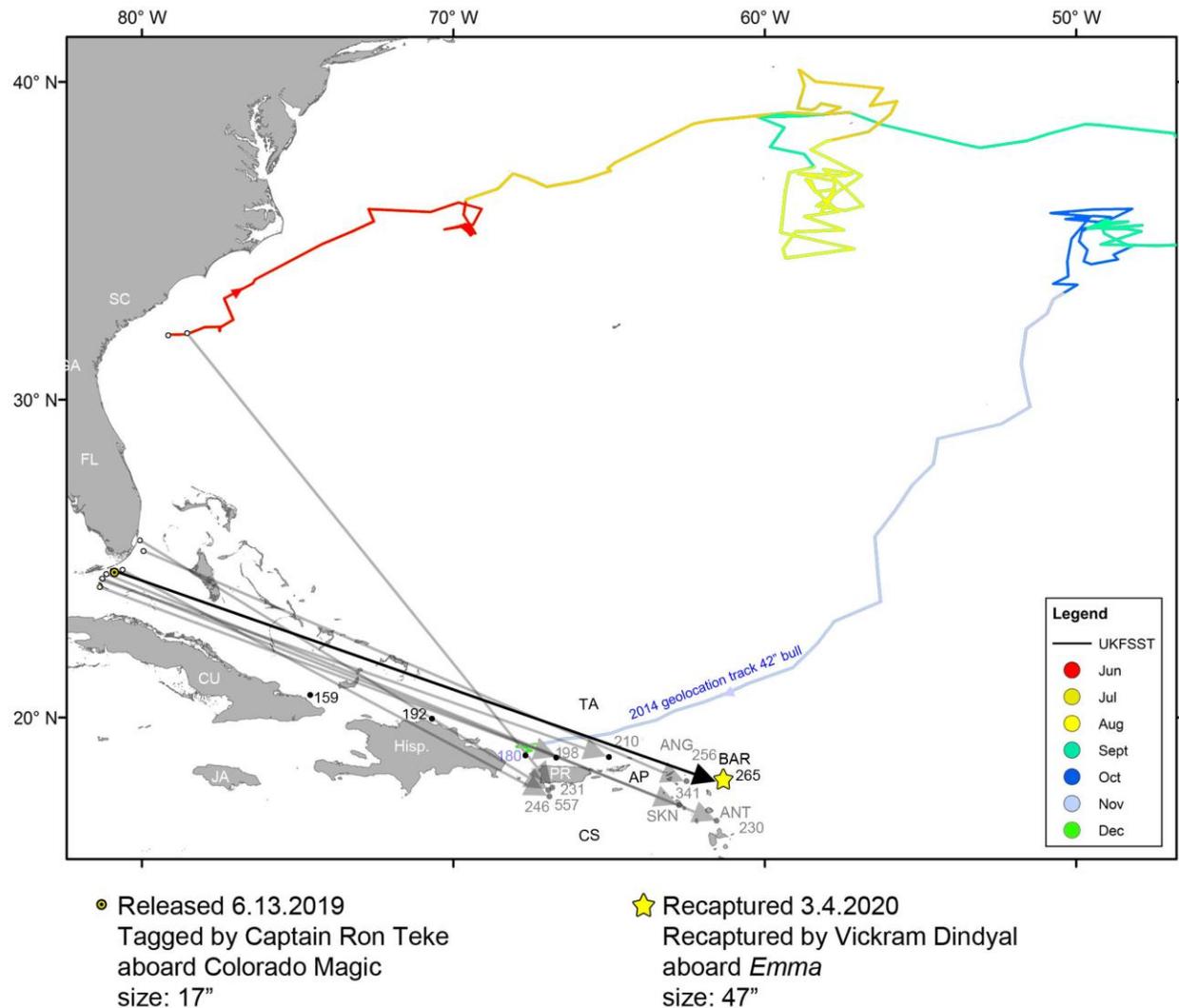
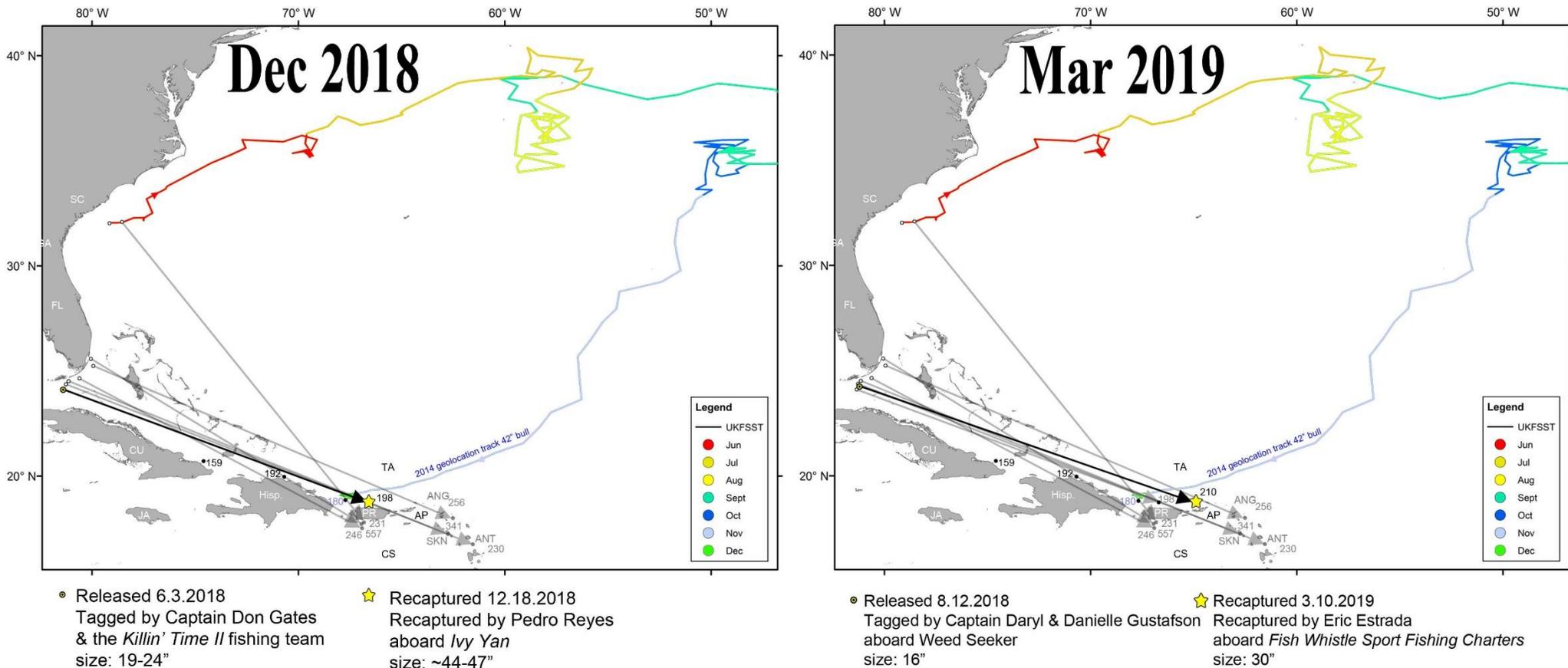


Figure 1 Dolphin dispersals from Florida and South Carolina to the Tropical Atlantic and Caribbean Sea. The bold black arrow is the most recent international recovery depicted as a straight-line between mark and recapture sites. Numbers indicate days at liberty. The colors of the geolocation track obtained in 2014 indicate the month. BAR = Barbuda; TA= Tropical Atlantic; CS=Caribbean Sea.

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the daily movement rate of this fish at 32.5 miles per day, which is substantially slower than the 2014 bull (44.7 miles/day). In a scientific paper published in 2014, the combination of both conventional mark and recapture data with surface drifter tracks provided realistic movement route comparisons given dolphin fidelity with drifting objects as well as their shallow diving nature ([click here](#) to see that paper and additional [web article](#)). In that paper, one fish recaptured in the north-central Atlantic (443 miles southwest of the Azores Islands) provided evidence of dolphin along the U.S. East Coast moving at least 2,400 miles into the Atlantic. When this observation is combined with surface drifter tracks and seven recoveries (Cuba, Hispaniola, Mona Passage, Puerto Rico, USVIs, Anguilla, and Barbuda) in the Tropical Atlantic, all observations point to fall/winter migration from the U.S. East Coast to the Tropical Atlantic with increasing days at liberty for recovered fish as you move east along the Greater Antilles from the Cuba event (see figures; 159 DAL) to the recent northern Leeward Islands event recently off Barbuda (265 DAL). In the future, additional geolocation tracks from dolphin tagged and released off Florida, South Carolina, or Rhode Island can provide routes dolphin take that can be compared to the patterns observed in conventional recoveries as well as surface drifter tracks. Congratulations to **Captain Ron Teke** and the *Colorado Magic* fishing team as well as **Captain Vickram Dindyal** for logging yet another fascinating recovery for the DRP.



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Figure 2 Examples of dolphin dispersals from Florida to the Tropical Atlantic in December (Dec) 2018 and March (Mar) 2019. The bold black arrows are the most recent international recoveries depicted as a straight-line between mark and recapture sites. Numbers indicate days at liberty. The colors of the geolocation track obtained in 2014 indicate the month. TA=Tropical Atlantic; CS=Caribbean Sea.

Tropic Star Lodge Dolphinfish Research Program Update

In November 2018, the **Beyond Our Shores Foundation (BOSF)** began work to expand the **Dolphinfish Research Program (DRP)** to the **Tropic Star Lodge (TSL)** in southwestern Panama. This work continues today and is funded in part by the **Guy Harvey Ocean Foundation (GHOF)**. Through mid-March 2020, a total of 500 dolphin have been tagged and released by 21 vessels and approximately 154 anglers. This effort has led to the recovery of 14 dolphinfish in the Eastern Pacific Ocean (EPO) and the deployment of eight pop-up satellite archival transmitters. We recently received three recaptures reported by **Captain Fernando Brias** of *Dios Primero*, an artisanal fishermen based out of San Miguel Bay, that provided the first evidence of annual residents in Panama. In a recent longline set, three fish had tags, and of those, two were fish that were tagged and released by *Miss Puerto*

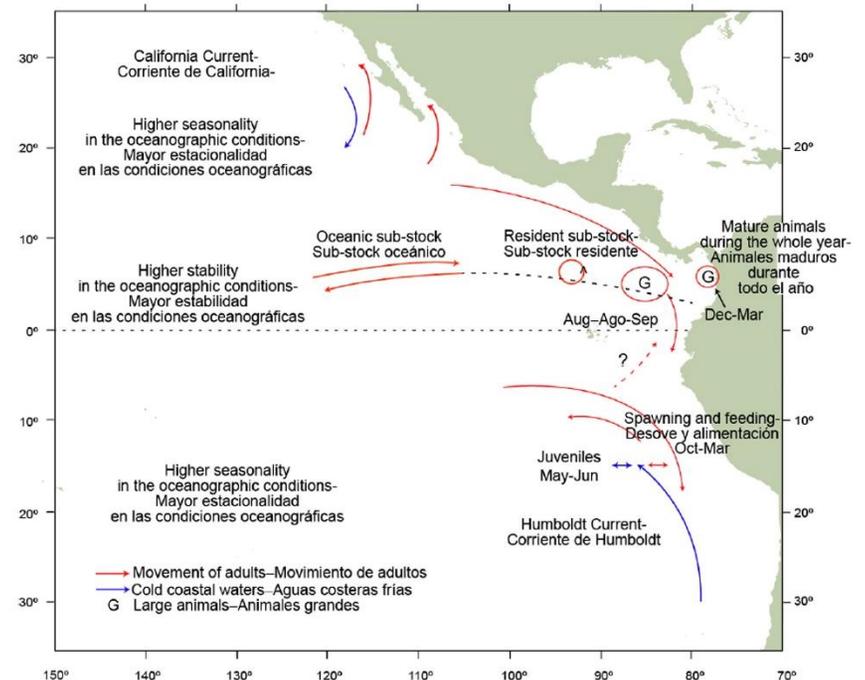
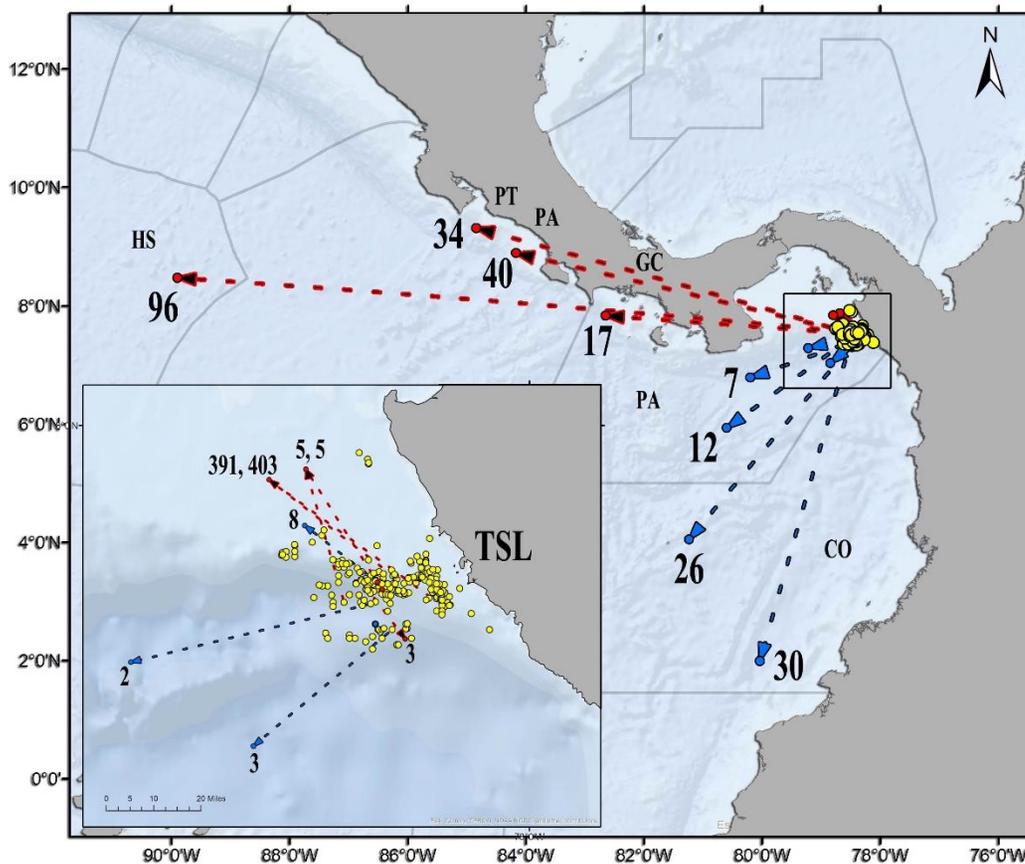


FIGURE 2a. Conceptual model of the movements and spatial distribution of dorado (2nd Technical Meeting on Dorado, 2015).

FIGURA 2a. Modelo conceptual de los desplazamientos y la distribución espacial del dorado (segunda Reunión Técnica sobre Dorado, 2015).

Aires-da-Silva, A., Valero, J.L., Maunder, M.N., Minte-Vera, C.V., Linnert-Cody, C., Roman, M.H., Martínez-Ortiz, J., Torrejón-Magallanes, E.J., Carranza, M.N. (2016) Exploratory stock assessment of dorado (*Coryphaena hippurus*) in the southeastern Pacific Ocean. IATTC document SAC-07-06a(1).

Figure 3 Quantitative (left) and qualitative (right) movement dynamics of dolphinfish in the Eastern Tropical Pacific Ocean. Numbers indicate days at liberty. Two dolphinfish were recently recovered over Panama's continental shelf after 391 and 403 days at liberty, the first two examples of annual residents in Panama. In addition, recent satellite tag deployments (blue arrows) revealed large southerly movements into Columbian waters in 26 and 30 days. TSL=Tropic Star Lodge; CO=Columbia; PA=Panama; HS=High Seas; PT=Playa tambor, Costa Rica; PA=Punta Arenas, Costa Rica; GC=Gulf of Chiriqui

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Rico and *Miss England* off Piñas Bay, Panama, in January 2019. While we do not know whether these fish remained in Panamanian waters for their entire time at liberty (resident substock?), these events could be the first evidence of annual return migrants to the region. The question then becomes, where did they go? Of the other conventional recoveries obtained, four were fish that were recaptured west-northwest of Panama. As for satellite tag deployments, recent movements showed west-southwest to nearly southerly dispersals into Columbian waters. After only 15 months of research funded by the **Guy Harvey Ocean Foundation**, we are beginning to acquire fascinating examples of the movements and life history patterns of dolphinfish in the EPO. Stay tuned for our next update that will examine the vertical movement strategy of the bull and cow that moved south into Columbian waters.

Overall Tag and Release Statistics:

Total reported releases from 11.24.2018 to 3.17.2020 = **500**

Number of Outings with reported releases = **123**

Number of vessels with reported releases = **21**

Number of estimated participants = **154**

Average size tagged = **31.64"** through 3.17.20

Largest fish tagged = **59"** (Record: Mr. Steve Roden)

Smallest fish tagged = **15"** (Record: Captain Fidel)

Most tagged in a single outing = **21** – Miss South Africa 11.27.18

PSAT Movements:

Total monitoring time = **89.69 days** / 8 records acquired - 6 Males / 2 Females – 2 MTI XTAGs / 6 WC mrPATs

Average size tagged with PSATs = **39"** through 3.17.20 / Range = 36" to 45"

Longest single PSAT record = **30 days** (interval) 45" female XTAG

Longest satellite tag movement = **397 mi** SSW of Piñas Bay pop-off after 30 days

Conventional Recaptures:

Totals = **14** total / **11** with release and recapture details (e.g., dates and locations for both events); Recapture Rate = **2.8%** recapture rate

Maximum conventional tag days at liberty = **403 days**

Longest conventional tag movement = **796 mi.** WNW caught by VZ purse seiner (Tagged by Miss Skandia) (oceanic and coastal stock mixing)

Maximum days at liberty for return migrant off Pinas Bay = **403 days**

Number of return migrant examples = **2** (391 and 403 days) - Tagged / recovered off Piñas Bay in a year subsequent to when it was tagged.

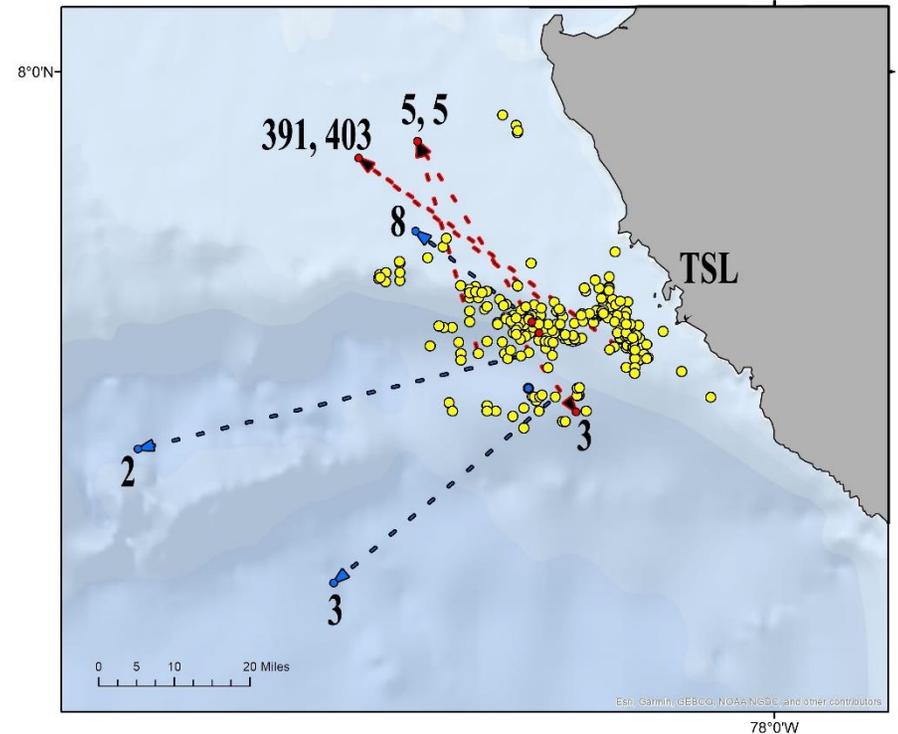


Figure 4 Quantitative movement dynamics of dolphinfish off Piñas Bay, Panama. Numbers indicate days at liberty. The unlabeled red oval in the cluster of yellow ovals (releases) was a fish recaptured after 56 days at liberty. Blue= satellite tag movements; Red= conventional movements. A comma indicates multiple fish recaptured in a longline set.

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Support the DRP by Purchasing a T-shirt



Help support our dolphin research by [purchasing a program tee](#). The logo featured on the shirts was created by [Guy Harvey](#), the renowned marine artist and fisheries scientist. Please [click here](#) to order a t-shirt.

Donate to Support the DRP



The **Beyond Our Shores Foundation** is the official [501\(c\)\(3\)](#) founded to support and expand the DRP. In 2020, we are working to surpass 30,000 tagged dolphin for the program. Help

us achieve this significant milestone by supporting our tagging program. Your donation will advance the expansion of the DRP, a leader in the conservation and research of dolphin, by helping to purchase more tags to distribute to anglers, support our education programs, and improve fisheries data collection among recreational, for-hire, and small-scale commercial fishermen. [Click here](#) to donate today.

Request Your Tagging Kit

Participation in the DRP helps collect information on many [research objectives](#). Greater tagging activity helps boost data collection, and in 2019, anglers tagged the 3rd highest amount of dolphin ever for the program. To date in 2020, we have distributed 89 tagging kits. Request your kit today to help us



maximize data collection in 2020. [Click here](#) to request a kit. This year we are excited to include two circle hook jigs, provided by [Bird of Prey Fishing Tackle](#), in every kit to promote the use of circle hooks while trolling, sight-casting, or bailing dolphin. To purchase a kit to support the DRP, [click here](#).

To make tax-deductible donation click image below:



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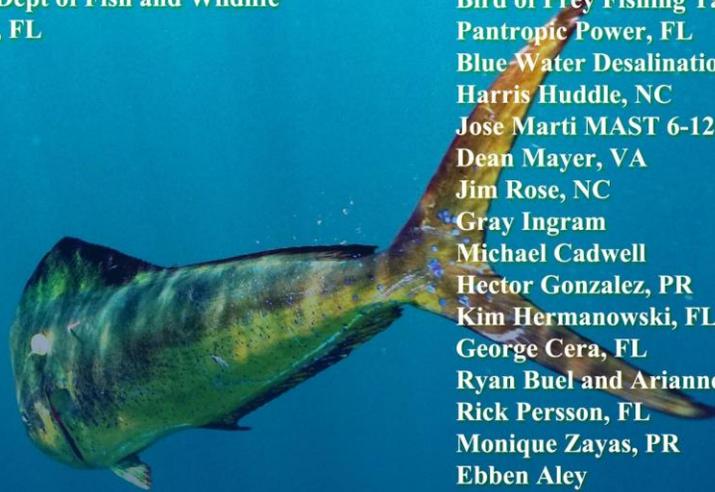


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