



January 5, 2023

10,000 Islands Dolphin Study Project
Marco Island, Florida
Fourth Quarter Report 2022 / Annual Report

The 10,000 Islands Dolphin Study Team monitors the travel range, social behavior, feeding habits, abundance, genealogy and overall well-being of the local bottlenose dolphin population in the waters of north Marco Island, Florida and surrounding vicinity. The study has a track record of information dating back to 2006 and created a new, unique database in 2018 to further detail the above-mentioned criteria and much more. The enclosed information describes data compiled for the calendar period of October 1, 2022 through December 31, 2022. The study continues.

The team experienced 71 excursions to collect data during this 3 month period with a total of 881 individual sightings of more than 110 identified, local dolphins for an average of 8 dolphins per excursion. Year to date there have been 4,685 total dolphin sightings during 425 excursions.

ECOSYSTEM: The 10,000 Islands and Rookery Bay are mainly a mangrove forest with a shallow water content. The development of Marco Island and surrounding areas introduced seawalls, docks and canals as forage opportunities in addition to the existing natural mangrove islands, sand bars and mud flats. Because of the abundance of food in this habitat the bottlenose dolphin population does not migrate any great distance from the survey area. They are residential, coastal species with a limited travel range.

FEEDING: Many of our dolphins feed individually along the sand bars and base of the mangrove islands because of the shallow waters here. They don't need a pod structure to capture food. They also solely trap fish along the seawalls. On occasion small groups have worked together herding fish to sand bars. Strand feeding has also been observed along a mud flat in our eastern survey area.

IDENTIFICATION: Our dolphins are identified by markings on the dorsal fin, mostly caused by one individual raking its teeth across another's dorsal fin, leaving a series of nicks and notches that are unique to each dolphin. Photos of each fin seen on each excursion are documented and transferred to a database for historical purposes. Markings will change over time so dated photo identification and constant updating of our database is required.

NAMES: Names given to dolphins here primarily derive from guests, staff and area organizations. They are unique to the 10,000 Islands Dolphin Study Project and are the property of the Study Project. Each dolphin also has a catalog number assigned and unique to our program.

COOPERATIVES: The team has worked with, and assisted, Florida Fish and Wildlife Conservation Commission (FWC) as well as NOAA to rescue and/or identify dolphins in need of assistance or to provide historical data of individuals that are injured or deceased.

HERE IS A SUMMARY OF ACTIVITY REGARDING OUR BOTTLENOSE DOLPHIN POPULATION OVER THE PAST 3 MONTHS WITH AN INCLUSION OF INFORMATION FROM OUR HISTORICAL DATA, DATING BACK TO FEBRUARY 2006

2022 FOURTH QUARTER REPORT

CALVES: The majority of dolphin births in the north end of Marco Island take place in late Summer and early Fall, primarily September and October. The birthing season in the south end is typically a month or two earlier and births of our coastal dolphins living mainly in the Gulf of Mexico have been seen in Spring and Summer. 11 new calves were seen and documented during 2022

Calf #1 / 2022: Adult female Batman (yep, Batman's a girl) gave birth in July of this year. Although Batman is seen often among our estuary and river population, she tends to spend most of her time in the Gulf, near shore, so the timing for this new calf makes sense. The calf was named Gotham and is Batman's third known offspring.

Calf #2 / 2022: Adult female Avery gave birth to her eighth known offspring in August. She is a regular sighting on our survey excursions and the early birth for her can be explained. Avery gave birth in October, 2020 to a calf named Stefin, a male. Highly unusual for our young, but Stefin left Avery's care in June 2021. Most young in our area stay with the mother for 32-48 months. With no calf to nurse Avery was courted by several males during the Summer of 2022, leading to the birth of her new calf, Snowflake, in August 2022.

Calf #3 / 2022: In mid September, 2022, adult female Orange gave birth to her second calf and it was named Razz. This is typical birthing season for our females and Orange's four year calf, Swoop, left mom's side in July, 2022, indicating the Orange might be pregnant. Orange's mother, Sparky, is still in the area and Razz would be her second grandbaby. Physically, it appears that Sparky may be pregnant and there is a possibility that both mother Sparky and her daughter Orange could give birth in the same season.

Calf #4 / 2022: Adult female Tateo was seen at the entrance of the Marco River, near the Gulf of Mexico. She had a calf by her side that appeared to be about 4-5 months old. Our Gulf females tend to give birth from May to August so the age would correlate with a May birth. Tateo visits the river entrance often. The calf was named Lillybet.

Calf #5 / 2022: Female Zipper was seen with a newborn about 2 weeks after Hurricane Ian passed through our area (9/28/22). This is Zipper's first known offspring and it was named Thimble. She was seen in Zone 1 of our survey area.

Calf #6 / 2022: Adult female Sintas gave birth to Jolley around the first part of October. Hurricane Ian had an affect on area water quality, causing many of our dolphins to seek alternate living areas until the water cleared. Jolley was not born here and appeared to be about 1 month old when first documented in November. This is Sintas' fourth offspring with others being Fireball, Gypsie and Jimbo.

Calf #7 / 2022: Female Chip gave birth to Queso in October. Seen very often in the Goodland area (south Marco Island) Chip visits our southeast survey area very frequently. This is Chip's 5th calf, others being Buster, Dip, Salsa, and Guac.

Calf #8 / 2022: Female Rakes delivered Pitchfork in October as well. She has moved from her normal feeding area to the sandbars at the entrance to the Marco River for some reason. Photos indicate that Pitchfork has a light scar from a shark attack. Other young dolphins have been attacked in Rake's normal feeding area as well, which may have prompted her move. Pitch. Fork is Rakes' 4th calf, others being Scamp, Tigertail and Sand Dollar.

Calf #9 / 2022: Female Kaya gave birth to Venture in early November. This is Kaya's 2nd calf, the 1st named Ariel. Many of our females give birth every 3 years. Kaya did not have a calf in 2021 so Ariel took advantage of an extra year by mom's side. Ariel is big for 4 years old and is doing well on his own.

Calf #10 / 2022: Adult female Sparky gave birth in November to Taco. This is Sparky's 5th known calf. Her daughter, Orange (mentioned Calf #3) has birthed 2 calves, making Sparky a 2 time grandmother. Both Sparky and daughter Orange gave birth this year within 1 month of each other.

Calf #11 / 2022: Female MT2 unfortunately prematurely birthed a calf in May. It appeared to be about 7 months developed and did not survive. Since it was seen and documented the calf was named Lillyfurd. MT2 grieved for 2 days, carrying the calf across her rostrum until saying goodbye. Several dolphins kept her company during this period. Just a month later, MT2 was courted by a male pair

bond and the team feels that she became pregnant by those males. We anticipate a calf from MT2 about July of 2023.

SUBADULTS: These are young dolphins that have left the care of a mother but are not yet fully mature. We have one group of subadults, three to five individuals, that constantly keep company with each other. They range in age from five to eight years old. Groups like this that become a bit older tend to separate and go their own ways. In general, the subadult population in our area does very well, with no loss of life noted and regular sightings of all of them. The only contrary point would be that some of the young males have been driven from the area by the adult males.

ADULT MALES: Jayson recently reached maturity and continues to be seen with another adult male named Kona. This is a potential new male pair bonding. Also adult male Simon has been keeping company with adult male Ellie May (yep Ellie May is a boy) for nearly a year, making this another potential male pair bond. C.U. Jimmie is an older adult male that has not been seen for 10 months and will be considered deceased. All of our other adult males seem to be thriving. The other three adult male pair bonds in our area have been busy courting area females. Our team assisted FWC to identify a large male that was found in a bay, not alive. Photos of the dorsal fin confirmed this was an older male named Cam. The team watched him slow down substantially during the year and his teeth were worn to the gum. There was no sign of physical trauma and we believe old age caught up with this big male. FWC reports will confirm the cause of death very soon.

ADULT FEMALES: As described above, 11 females gave birth in 2022. All of the calves born in 2021 are now one year old and all have survived their first year of life. 36 of 43 calves born from 2018-2022 have survived. MT2 had a premature birth and her calf did not survive. In addition Females Zipper and Kaya did not have their calves survive, possibly due to shark attacks or infanticide. All of our other females appear to be doing well, with no illnesses or environmental issues that have been noticed. The team will specifically look for new calves during October and November.

ENVIRONMENTAL ISSUES 2022: Hurricane Ian struck our survey area September 28th, 2022, causing a 9 foot storm surge around Marco Island. Our dolphins left

the area and, unlike Hurricane Irma in 2017, did not return very quickly to their home territories. Fort Myers, north of Marco, was hit extremely hard and carried debris and bacteria to the Marco Island area via the gulfstream current. It took several months before the majority of our dolphins returned here and there are just a few that the team has not seen since late September. Water quality and the presence of bacteria was a negative factor for several months. See “Special Note” below for more hurricane details.

FUTURE STUDIES: The team is comprised primarily of a Florida Master Naturalist, an Environmental Scientist and a Marine Biologist. We will continue to monitor our dolphins and record data and note any unusual or abnormal circumstances and / or events in our area. We maintain open lines of communication with FWC. Work sheets will be documented in real time by the team members on board each excursion and that data will be transferred to our database on a regular basis. Changes in dorsal fin markings will be noted in real time by photo identification so as not to lose track of any individuals over time.

SPECIAL NOTE: Hurricane Ian affected the Marco Island area on September 28th with a nine foot surge. Boating restrictions were placed on area waters because of debris, downed channel markers and generally hazardous conditions. The team is anxious to get back on the water when able, and will document sightings of each and every dolphin known to the area in an effort to determine any loss of life or missing members of our population.

REPORT: This report was compiled by the team’s lead naturalist, Florida Master Naturalist Bob McConville. You can contact Bob by phone at 239-642-6899 or by email at dolphinsofmarco@gmail.com. Bob welcomes all inquiries regarding this study and looks forward to other institutions sharing their data and thoughts with him.

Thank you for your interest in our study project!

Bob McConville, Lead Naturalist
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