

Virgin Islands National Park

Sea Turtle Program

SEASON REPORT

Friends of Virgin Islands National Park

Willow Melament, Adren Anderson, Kaitlyn Cummings
friendsvinp.org



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OVERVIEW

Since 2015, the Virgin Islands National Park Sea Turtle Program, funded by the Friends of Virgin Islands National Park (FVINP) and collaborating with the Virgin Islands National Park (VIIS), has been coordinating sea turtle monitoring and protection efforts on the island of St. John, USVI.

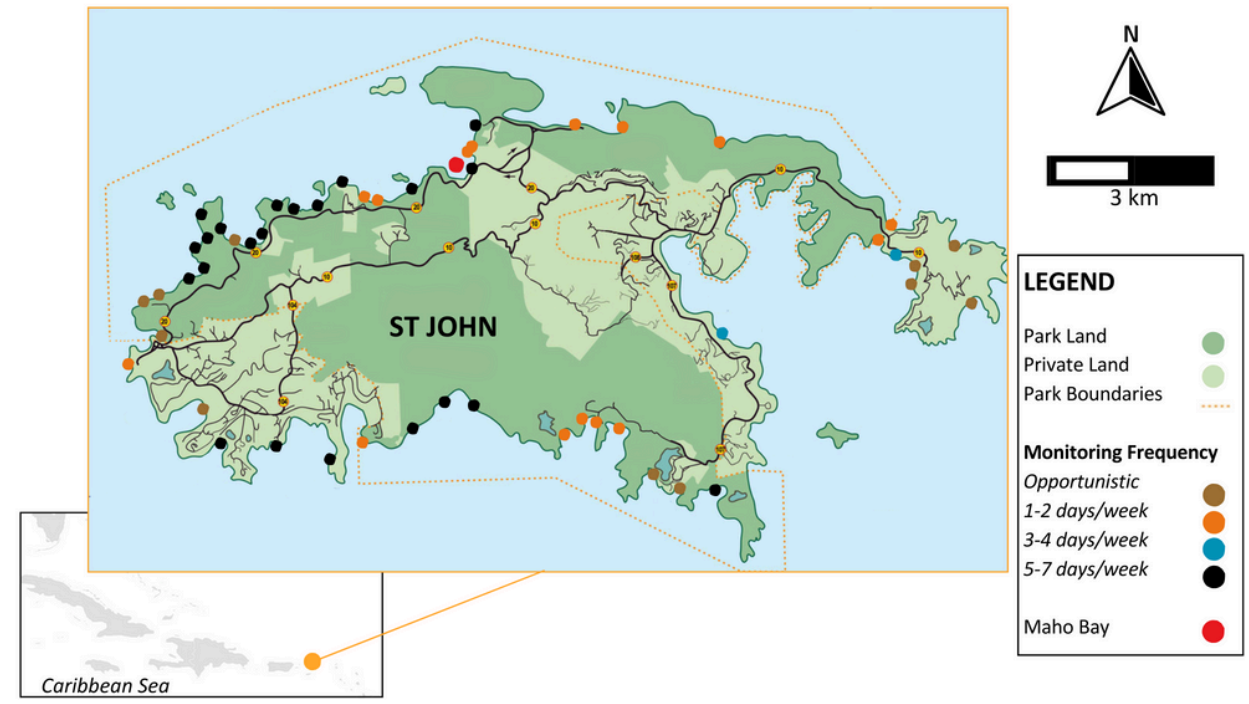
MAIN OBJECTIVES:

- Document nesting activity
- Promote conservation through education and outreach
- Mitigate threats to sea turtles that utilize the beaches and waters of the Virgin Islands National Park and Virgin Islands Coral Reef National Monument

THIS REPORT COVERS:

Nest Monitoring and Protection
Volunteer Engagement
Education and Outreach Initiatives
Research
Sea Turtle Assistance and Rescue
Networking and Professional Development

VIRGIN ISLANDS NATIONAL PARK SEA TURTLE PROGRAM STUDY SITES



SPECIES STUDIED



GREEN
Chelonia mydas



HAWKSBILL
Eretmochelys imbricata



LEATHERBACK
Dermochelys coriacea

AT A GLANCE

SEASON HIGHLIGHTS



11
estimated nesting females



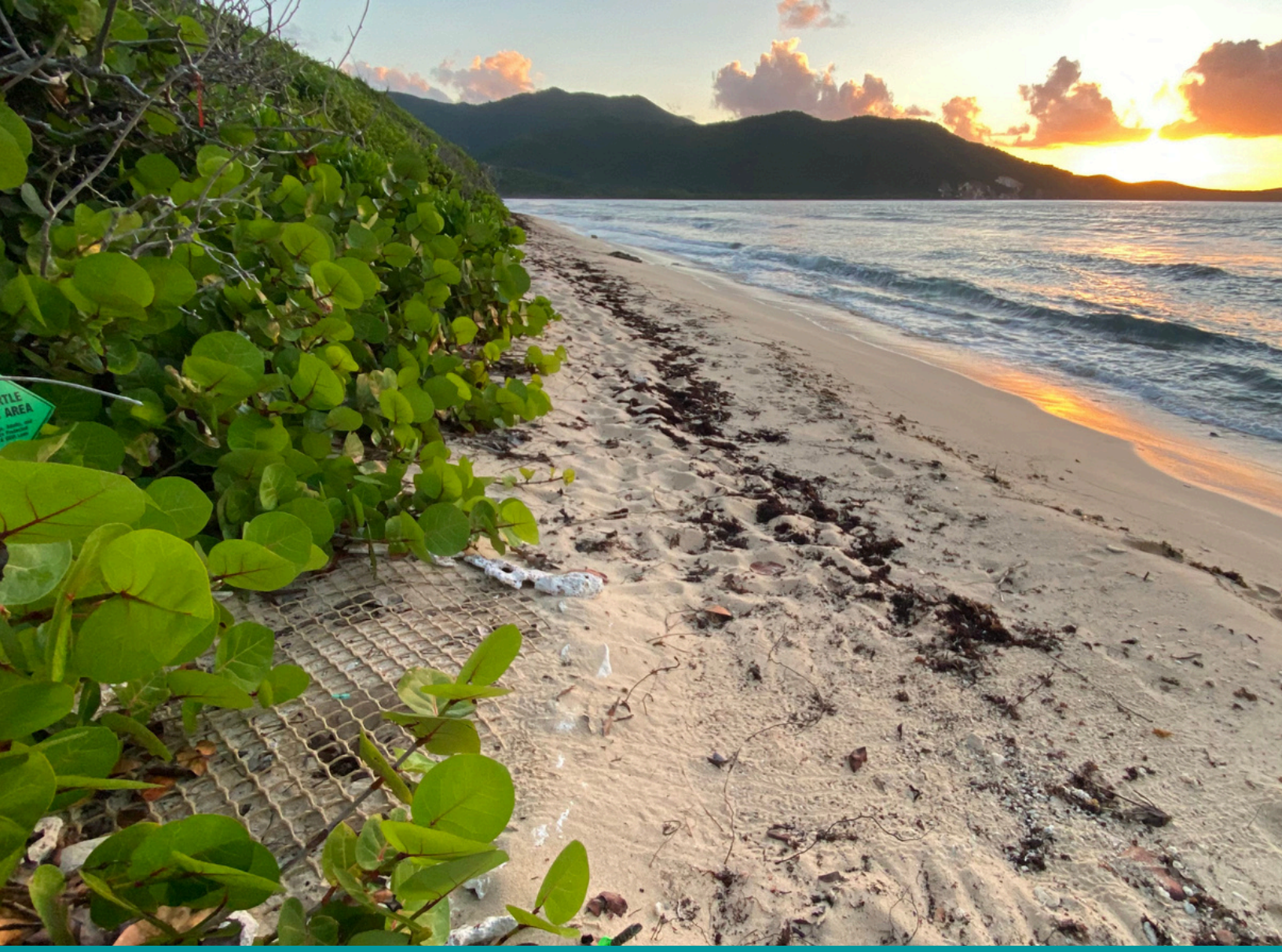
38 nests
(second highest season)

9
new turtles IDed at Maho

3,221
hatchlings to sea

new
nesting beach documented





NEST MONITORING & PROTECTION

OVER THE YEARS

Due to the year-round activity across multiple beaches, our program relies heavily on volunteer-based beach monitoring to document, monitor, and protect sea turtle nests.

To date, volunteer numbers have stabilized to around 75-95 volunteers monitoring 45 beaches.

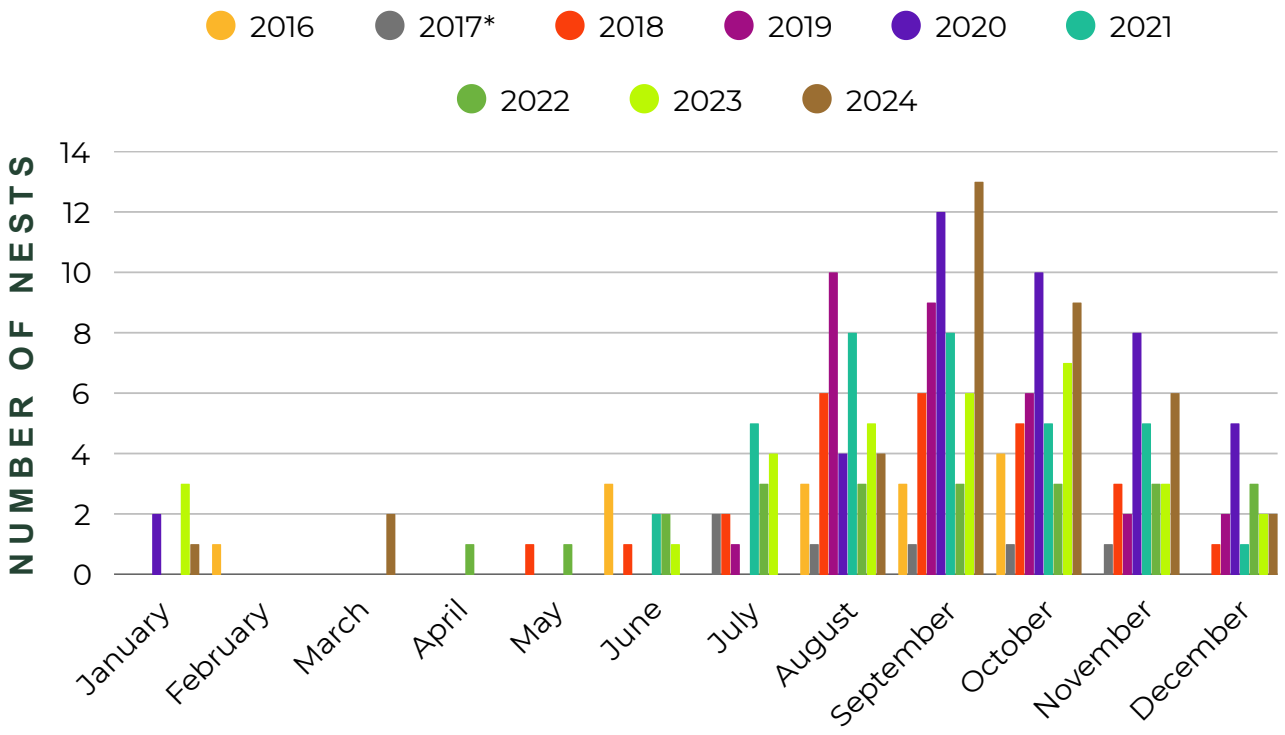
The increase in volunteer efforts over time has shown a direct correlation with an increase in the number of nesting activities documented.

Number of beaches surveyed, number of volunteers, and number of nests over time from 2016-2024. Nest counts represented by calendar year.

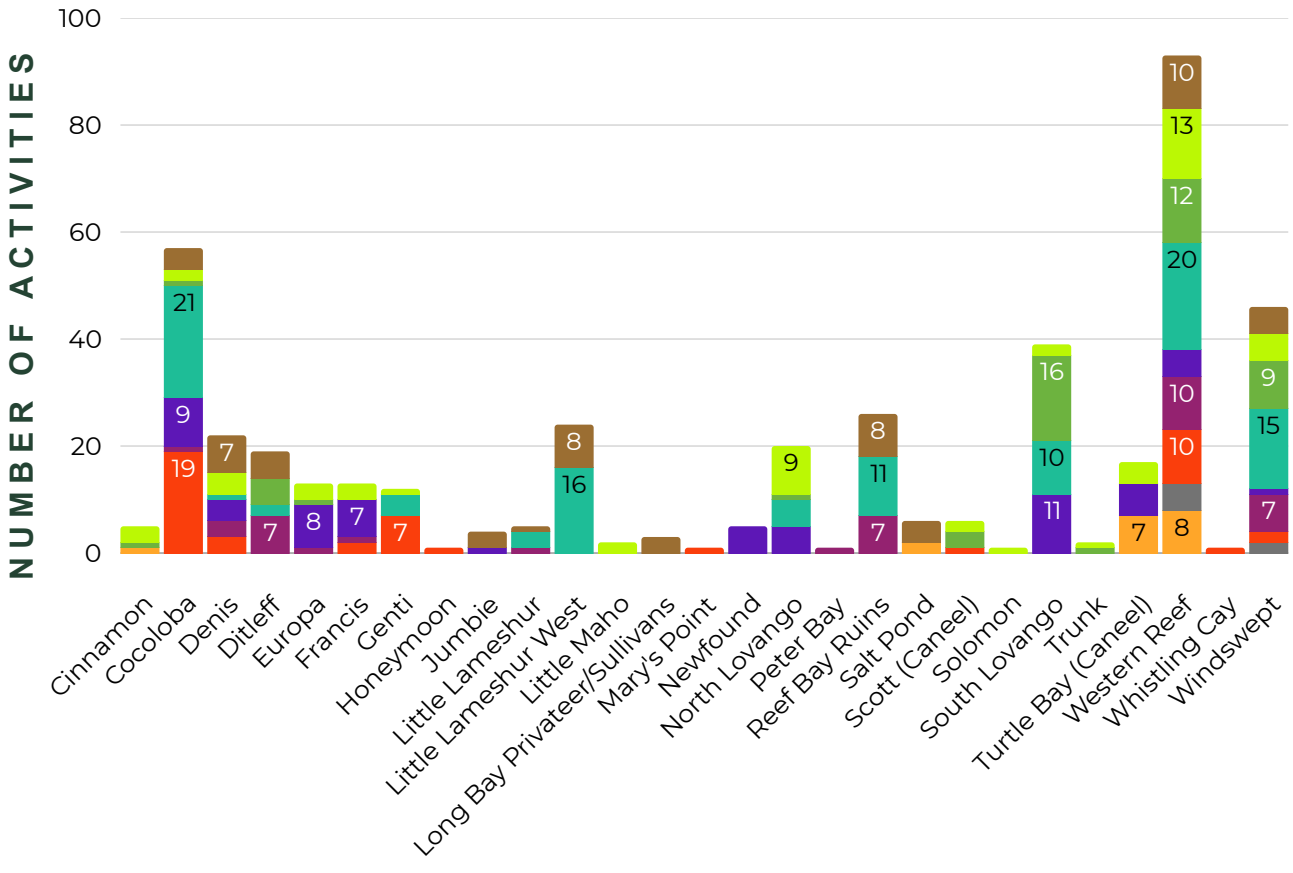
YEAR	NO. OF VOLUNTEERS	NO. OF BEACHES SURVEYED	NO. OF NESTS		
			HAWKSBILL	GREEN	LEATHERBACK
2016	38	14	13	-	1
2017*	39	40	4	2	-
2018	45	37	24	1	-
2019	32	36	29	1	-
2020	99	47	41	-	-
2021	100	47	34	-	-
2022	67	47	18	2	2
2023	90	42	34	3	-
2024	95	45	37	-	-

Our research over the past decade has revealed sea turtle nesting activities on **over 27 beaches** on the island of St. John and associated offshore cays during every month of the year.

CONFIRMED NUMBER OF NESTS BY MONTH FROM JUNE 2016 - December 2024



NUMBER OF ACTIVITIES PER BEACH PER SEASON 2016-2024



*Monitoring efforts ended 9/4/2017 due to hurricanes Irma and Maria. Monitoring efforts are not consistent across beaches between 2016-2020.

2024/25 SEASON

SEASON: Data presented represents a timeframe of March 2024-April 2025. Nests laid in January 2025 are from a nesting female that started her cycle in 2024, and is therefore included in the “2024 nesting season”.

FIRST NEST: March 29, 2024 **FINAL NEST EXCAVATED:** April 14, 2025

SPECIES: All documented nests were laid by hawksbills.

EFFORT: Peak season (July-November) 45 beaches regularly monitored by 95 volunteers; Low season (December-June) 20 beaches monitored by 35 volunteers.

Activity types and totals for each beach with documented sea turtle activity for the 2024 nesting season

Beach	Dry Runs	Possible Nests	Unconfirmed Nests	Confirmed Nests	TOTAL ACTIVITIES
Western Reef Bay	4	-	1	5	10
Reef Bay Ruins	-	-	-	8	8
Cocoloba	3	1	-	-	4
Ditleff	1	-	-	4	5
Jumbie	1	-	1	1	3
Little Lameshur West	5	-	-	3	8
Little Lameshur	1	-	-	-	1
Denis	2	1	1	3	7
Salt Pond	-	-	-	4	4
Windswept	-	-	-	5	5
Long Bay Privateer	-	1	1	1	3
TOTAL	**17**	**3**	**4**	**34**	**58**
			38		

NEST PROTECTION 2024/25

SCREENING

- 4 x 4 foot plastic mesh
- 2 inch openings allowing hatchlings to escape
- Deters predators

MONGOOSE ERADICATION

- Contracted services through USDA
- Targeted trapping on high-priority beaches

When used in conjunction, these methods have proven to be effective at increasing nest success.





RELOCATION

TOTAL NESTS RELOCATED: 2

REQUIREMENTS:

- Nest is located in imminent danger of inundation or erosion
- Site located within 12 hours of deposition
- Maintain egg orientation

NEW SITE:

- Similar to the environmental conditions of the original nest
- Confidence in safety of new site
- Mimics egg chamber dimensions

NEST SUCCESS 2024/25

NEST INVENTORIES

- Excavated within 5 days of emergence
- Document contents and evaluate hatch and emergence success

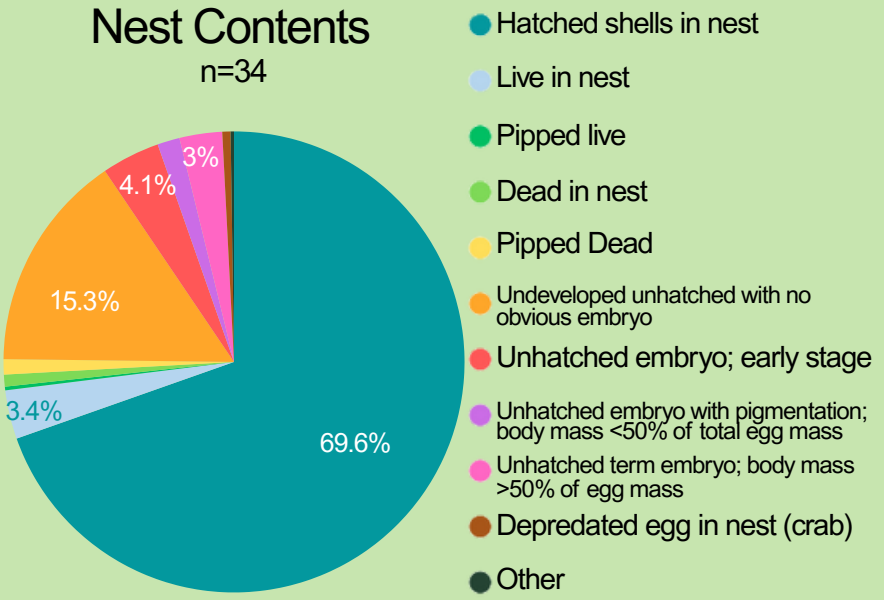


34 nests inventoried

4,473 eggs

3,221 hatchlings to the sea

160 hatchlings found alive in nests and released





	Average	Standard Deviation	Range min	Range max
% Hatch Success (Ei)	71.2	25.5	0	95.8
% Emergence Success (Ei)	66.4	25.4	0	95.3
Clutch Size (Ei)	131.6	25.1	45	166
Incubation time	64	9.9	53	82

BEACH PROFILING

Volunteers submitted standardized photographs across 33 nesting beaches in an effort to document changes in beach profiles, sand accumulation, erosion, and sargassum abundance.

JUMBIE BAY BEACH



(a) July 17, 2024; (b) August 28, 2024; (C) September 11, 2024; (d) October 2, 2024



Documentation of erosional areas aids in future relocation and nest management decisions





VOLUNTEER PROGRAM

VOLUNTEER PROGRAM

Our "Turtle Team" consists of **95** dedicated members of the island community that advocate for the sea turtles of St. John

TRAINED VOLUNTEERS IN 2024 (CALENDAR YEAR):

- Conducted early-morning turtle patrols
- Beach cleanups
- Engaged interested beachgoers
- Assisted with outreach events



3,666 beach surveys

1,159 beach clean-ups

1,887 hours logged



VOLUNTEER ENGAGEMENT AND CONTINUED LEARNING OPPORTUNITIES:

- Annual training sessions for new and returning volunteers
- Weekly update emails
- Monthly presentations
- 10 group nest excavations that were well received and attended

MVP AWARD

Each season one volunteer is awarded the MVP necklace, honoring and celebrating their efforts.



2020
Lani Clark



2021
Rafe Boulon



2022
Kiko Posada



2023
Luke McClain



2024
Beverly Melius



EDUCATION& OUTREACH

OVER THE YEARS

Our education and outreach initiatives continue to grow and develop over time.The timeline below shows the beginning dates for various continual programs with the numbers in parentheses representing the number of people engaged on an annual basis.

2016

- SKIP field trips and classroom visits (200-300)
- Community events - Earth Day fair, Culture Day, Folk life festival (500-1000)
- Summer Trail Crew and YCC (15-35)
- Volunteer excavations and trainings (25-100)



2020

- Ocean Week seminar (50-100)
- Enhanced volunteer engagement (50-100)
- Monthly volunteer seminar series (25-50)



2021

- Weekly Maho Turtle Table (500)
- Expansion and creation of interactive displays



2022

- Cinnamon Bay weekly turtle talk (500)
- Monthly educational boat trips (200-300)
- Marine stewardship with Virgin Islands Professional Charter Association (200-300)
- Public nest excavations (50-100)



FUTURE

Beginning in 2025:

- Boater outreach targeting local charter companies and captains
- Sea Turtle Assistance and Rescue awareness
- Traveling Trunk outreach by Inwater Research Group



SCHOOL KIDS IN THE PARK

The SKIP sea turtle field trip incorporates various topics on sea turtle ecology, life cycle, nesting and threats **as we strive to foster a fun and interactive learning experience** while teaching on a national park beach. The following initiatives were accomplished during the 2024 calendar year.



- **180** pre-K to 12th grade students from **5 schools** reached through **13 field trips**
- **65** children reached through **3 summer camps**
- **25** students reached through **in-class presentations**
- **935** children reached through two **community events:** Earth Day Fair & Culture Day
- **25** young adults reached through the Youth Conservation Corps and Summer Trail Crew







COMMUNITY & VISITOR OUTREACH

- Visitor outreach initiatives are geared towards **informing the public about general sea turtle biology, mineral based sunscreen, snorkeling etiquette and best practices**.
- Our continued goal is to spread conservation messaging virtually and in-person with scheduled seminars, events, interactive displays and a charismatic sea turtle mascot!



MAHO TABLE

- Informative booth with interactive games
- Tuesdays 9-11am (December-May)
- Exposing **hundreds** of beachgoers and directly engaging **475** interested beachgoers in 2024

CINNAMON CAMPGROUND CHATS

- 3rd year running
- Monday evenings (November-May)
- Informative 'Turtle 101' talk
- Reach between **10-50** people each week
- **397** participants in 2024

FRIENDS EVENTS

- Earth Day Fair
- Culture Day
- Interactive turtle table engaged nearly **1000** students in 2024

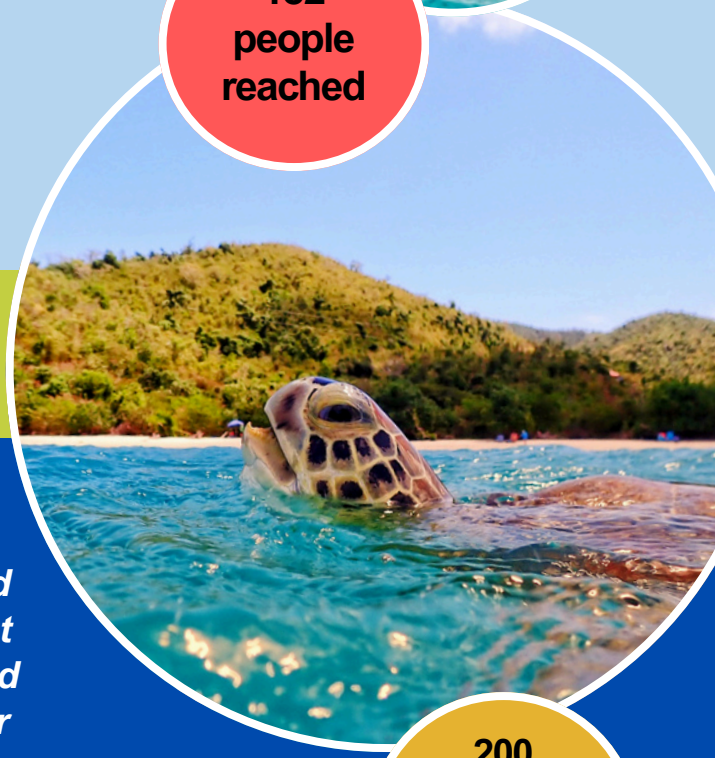
MARINE STEWARDSHIP

SEA TURTLE BOAT & SNORKELING TRIP

- Unique boat trip provided by Ocean Surfari
- Marine experts Jeff Miller and Kaitlyn Cummings share their knowledge of turtle, fish, and coral biology
- Monthly from December-May for a third year running
- Averaging 35 participants per trip
- 182 people reached for 2024



182 people reached



BOATER OUTREACH

We strive to foster an appreciation and awareness for the marine environment through mariner specific education and outreach in an effort to promote better on-the-water awareness and protection of sea turtles.

- 'Sea Turtles and Us' presentation given at the *Virgin Islands Professional Charter Association (VIPCA) Yacht Show*
  - For a third year, 200 informative packets were distributed
- Future collaboration in 2025 with *The Captain School USVI* in St. Thomas
  - implementing outreach focusing on sea turtle safe boating practices
  - Increasing STAR awareness

200 packets distributed to VIPCA





Steve Simonsen Photography Inc.

IN-WATER RESEARCH

RESEARCH

PHOTOGRAPIC IDENTIFICATION

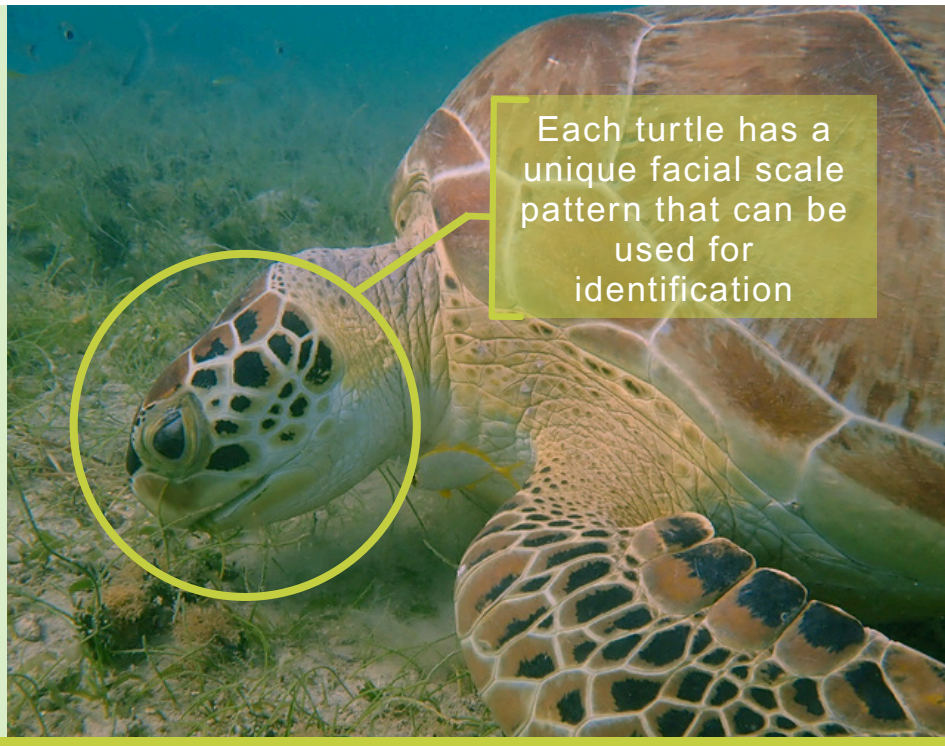
Since 2016, the foraging population of green sea turtles in Maho Bay has been regularly photographed in an effort to identify individuals for subsequent monitoring. Photographic 'tagging' of sea turtles is a non-invasive and sustainable alternative to traditional tagging techniques such as flipper tags.

PHOTO-ID DATABASE:

- Each time a turtle is photographed, it is manually compared to each individual in our catalog and either matched or given a new ID
  - Subsequently uploaded and verified on the *Internet of Turtles,* an online database using facial recognition to identify turtles

STANDARDIZED PHOTOS

- Opportunistic encounters by trained personnel
- Aim to capture the following angles:
  - Right side
  - Left side
  - Anterior (front)
  - Posterior (back)
  - Ventral (bottom)
  - Dorsal (top)
- Additional notes are kept on physical anomalies



510 encounters cataloged dating back to 2012

491 re-capture encounters

81.2% recapture rate

101 individuals identified

82 photographed more than once

6 turtles with residence durations over **7** years

RESEARCH

FIBROPAPILLOMATOSIS DOCUMENTATION & MONITORING

Fibropapillomatosis (FP) is a panzootic disease affecting sea turtles worldwide, primarily green turtles. This neoplastic disease presents as both external and internal tumors that can interfere with an individual's sight, ability to swim, reproduce, forage, and evade predators.



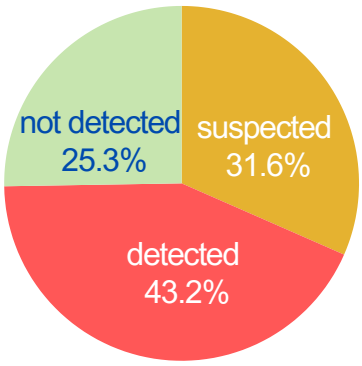
Fernando Ramos

Due to the presence of FP at Maho Bay, a study was conducted in 2024 using photography as a mean of mark-recapture to:

- Evaluate the efficacy of using photo-ID to monitor FP status
- Determine the prevalence and severity of FP in the foraging population
- Monitor tumor growth and remission over time
- Provide a baseline and recommendations for future studies

This study is has been submitted for publication and we look forward to sharing the full study thereafter

FP PREVALENCE (n=95)



Of the 95 individuals analyzed, FP was detected in 41 individuals, with an additional 30 individuals suspected to have early stages of FP on at least one occasion from 2012-2024. **The majority of the population was detected or suspected to have FP.**

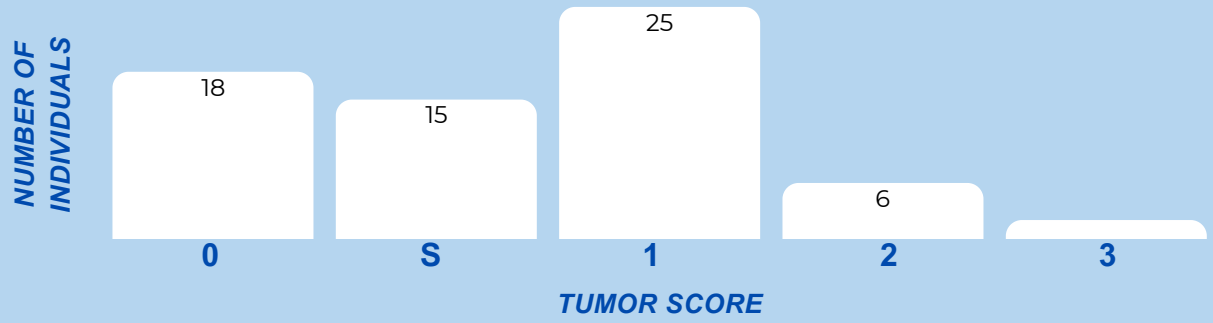
RESEARCH

FIBROPAPILLOMATOSIS DOCUMENTATION & MONITORING

The status of FP severity was assessed by assigning a tumor score to individuals with encounters capturing all or the majority of camera angles from 2020-2024.

- Scale: 0-3 with 3 the being the most severe and S being suspected FP
- 66 individuals were assigned a tumor score using their most recent encounter
- The most frequently observed tumor score was 1, while the least common was 3
- **Although FP prevalence is high within this population, only a very small portion has moderate to severe afflictions**
  - Consistent with other studies showing predominance in tumor scores of least affliction

TUMOR SCORE DISTRIBUTION (n=66)



A variety of growth and remission trends were observed throughout the study

- While research suggests that individuals with severe tumor scores have increased immunosuppression and lower chances of survival, we observed remission from severe and moderate scores and hope the continuation of our study may reveal insights in wild populations and support newer models suggesting that almost all new recruits develop and recover from FP before emigrating



Duane, STJ0026, exhibits the growth and subsequent remission of an ocular tumor from 2021 to 2024.



Jo, STJ0032, shows the remission of an ocular tumor from 2021 to 2024.



Woody, STJ0046, displays the growth of tumors on epidermal tissues of neck, shoulders and inguinal areas from 2023 to 2025.

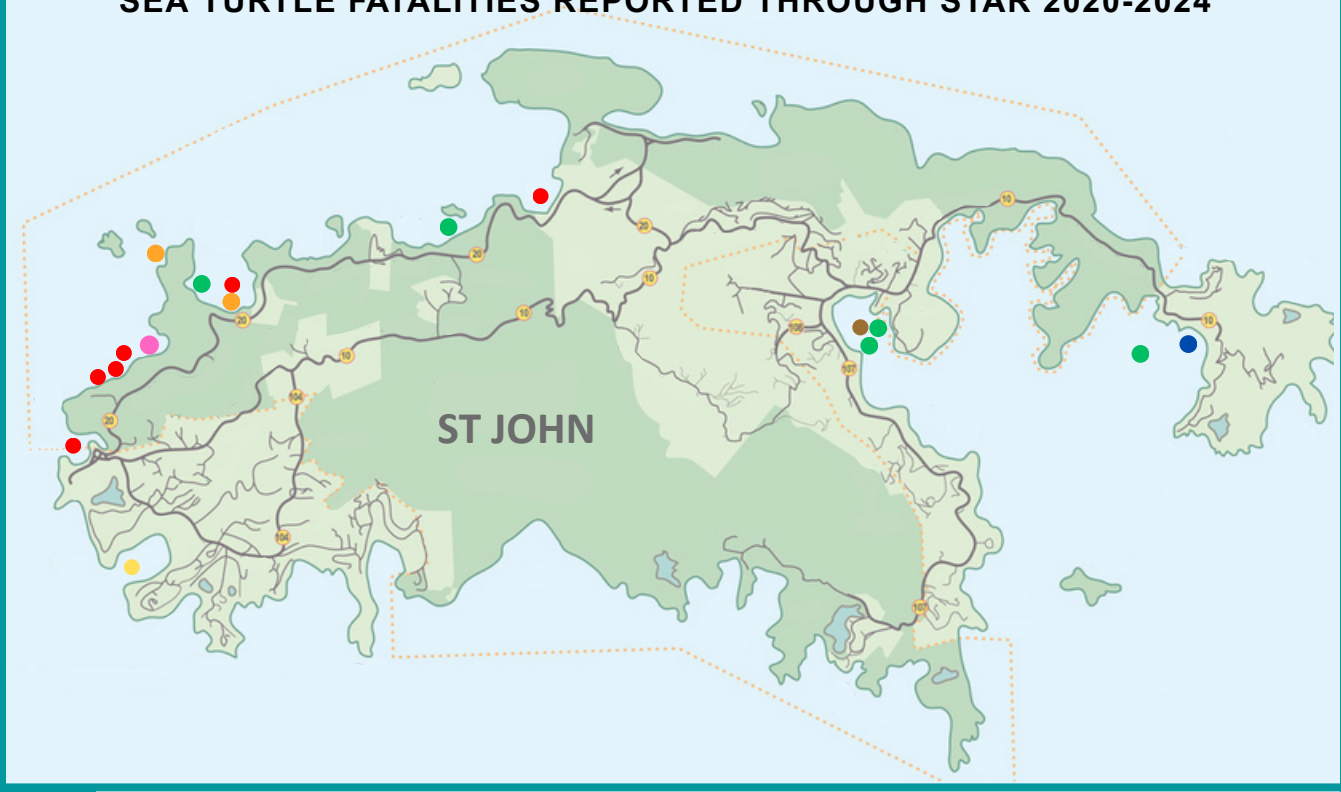


SEA TURTLE ASSISTANCE & RESCUE

SEA TURTLE ASSITANCE AND RESCUE

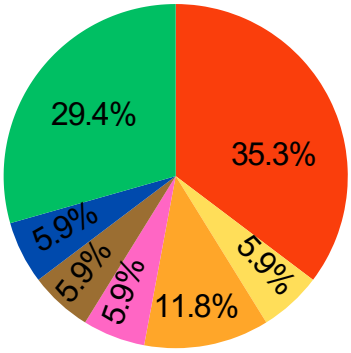
The collaborative efforts of the Sea Turtle Assistance and Rescue (STAR) network is an invaluable resource that provides rescue and stranding response for sea turtles on all three islands. STAR is a network of territorial and federal agencies, veterinarians, and community volunteers that are trained to respond and document sea turtle stranding events of sick, injured, distressed, and deceased turtles in the USVI.

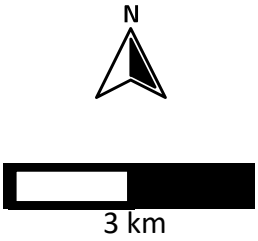
SEA TURTLE FATALITIES REPORTED THROUGH STAR 2020-2024



LEGEND

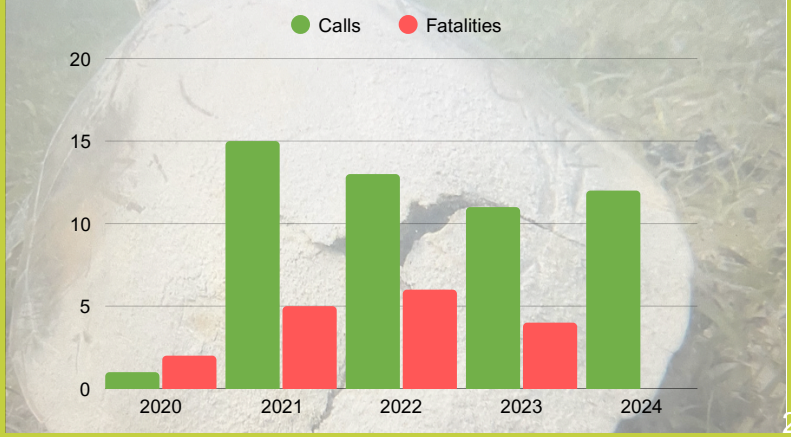
- Watercraft collision
- Predation
- Watercraft collision & predation
- Entanglement
- Suspected poaching
- Emaciated/Disease (FP)
- Undetermined/Unable to assess





STAR
SEA TURTLE ASSISTANCE AND RESCUE
340.690.0474

A variety of calls are made to the STAR hotline including watercraft collisions, entanglements, ingestion of fishing line, physical deformities, disease, and unusual behavior.



Twelve calls documenting various injuries and physical ailments were recorded in 2024, including: ingested fishing line (top photo), suspected watercraft collision and predation, disease (bottom photo), shell deformities, non-fatal watercraft collision, and entanglement in fishing gear.





SLOW DOWN FOR THOSE BELOW

Compliance and installation of no wake zones

PROBLEM: ***Watercraft collisions are the leading cause of sea turtle mortality on St. John***

- Commonly occur in known turtle foraging areas coinciding with mooring fields and channels
- Non-adherence or unawareness of regulations in federal and territorial waters

SOLUTION:

- Conduct boater outreach and education about sea turtles, their foraging areas, and the no-wake zone and speed limit regulations in place
- Work with local government to define speed limits and no-wake zones consistent with VIIS terminology (5mph)
- Pursue planning for installation of speed limit and no-wake zone signs in specific high risk areas



NETWORKING & PROFESSIONAL DEVELOPMENT

Our program was proud to attend a variety of sea turtle meetings, providing invaluable opportunities for networking and professional development. Collaboration is an integral component to the recovery of the species as well as the enhancement of our program.

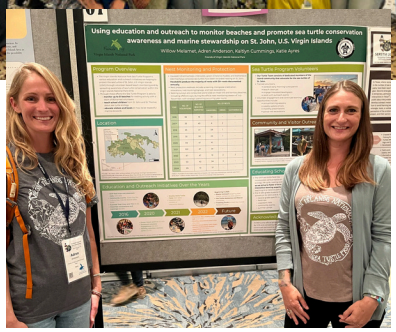
USVI SEA TURTLE MEETING

Friends Program Director, Mark Gestwicki and Education Specialist, Kaitlyn Cummings, attended a three day sea turtle meeting in St. Croix in August. Turtle protection organizations from all over the southeast regions including St. Thomas, Vieques, Culebra, and Florida discussed sea turtle research, nesting trends, sea turtle stranding efforts and more.



SOUTHEAST REGIONAL SEA TURTLE MEETING





- Willow Melamet (Program Coordinator) and Adren Anderson (Research and Data Management) presented two posters:
  - *'Using education and outreach to monitor beaches and promote sea turtle awareness and marine stewardship on St. John, US Virgin Islands'*
  - *'Using photo-ID to monitor the status of fibropapillomatosis (FP) in green turtles at Maho Bay, St. John, United States Virgin Islands'*
  - Co-authors on the poster presented by USVI STAR coordinator, Natalie Monnier, *'44 Years of Strandings in the U.S. Virgin Islands.'*
- USVI represented by 15 attendees from all 3 islands, including program volunteers Lani Clark and Trisha Capuano



INTERNATIONAL SEA TURTLE SOCIETY SYMPOSIUM

- Accra, Ghana
- Attended by Willow and Kaitlyn
- 43rd international conference
- 301 people in attendance
- 58 countries around the world

ACKNOWLEDGEMENTS

THANK YOU

FVINP is the official philanthropic partner of the Park, with the sea turtle program being overseen by VIIS and consisting of three part-time FVINP staff and community volunteers. **Thank you** to the continued partnership of VIIS and FVINP, donors of FVINP, the Marisla Foundation, the community of St. John and our dedicated volunteer team **for making this important conservation work possible.**

Marisla foundation

Friends of Virgin Islands National Park

NATIONAL PARK SERVICE

STAFF

Thomas Kelley: VIIS Chief of Natural Resources
Mark Getswicki: Friends Program Director
Willow Melamet: Sea Turtle Program Coordinator 2020-present
Adren Anderson: Program Coordinator July 2016-May 2023, December 2023-present Data Management & Research
Kaitlyn Cummings: Education Outreach Specialist November 2023-present

VOLUNTEERS

Adrian Davis
Alasdair Dunlap-Smith
Amanda Arquit
Amy Roberts
Angela Ebner
Ari Davis
Asher Davis
Aubrey Logsdon
Ayn Riehle
Beth Nolan
Beth Simmons
Bev Melius
Bill Hall
Bob Hooven
Bruce Elliot
Carol Beckowitz
Carrie Butcher
Carrie Hoffman
Chandler Minner
Cheryl Kinney
Courtney Ramey
Craig Morris
Crystal Christy
Dan Boyd
Darcie Logsdon
Debbie Proffitt
Denise Carey
Dianne Cameron
Donn Watson
Duane Goranson
Ella Granger
Eloise Simons
Emily Anderson
Emily Cunningham
Emily Sturrock
Eric Fales
Erin Hudson
Fernando Ramos
Fiona Russell
Francisco ' Kiko' Posada
Gwendolyn Woodbury
Heather MacCurdy
Hilary Richards
Isabella Oesteregaard
Jack Kinney
Jaime Merashoff
Jean Lynn
Jeannie Bishop
Jodi Jackson
John Van de Water
Karen Granger
Kate Swan
Katherine Hooven
Kathy Guidi
Kathy Hilliard
Kayla Hoffman
Keith Woodbury
Keleigh Rees
Keryn Bryan
Kyle Grimm
Lani Clark
Leslie McGibben
Lila Uzzell
Lilly Hall
Lindsey Elliot
Liz Hoffing
Luke McCain
Mary Vargo
Mary Vargo
Melissa Coles
Miles Stair
Nancy Borowick
Nancy Schutt
Noah Ramos
Pam Holmes
Paula Smail
Rachael Fox
Rafe Boulon
Rob Whritenour
Rollie Simmons
Ron Vargo
Ruby Ramos
Sarah Swan
Scott MacCurdy
Scott Simmons
Shira Whritenour
Sophia Woodbury
Susan Bradley
Susan Stair
Tammy Donnelly
Teri Gibney
Theresa Rellecke
Thom Bradley
Tommy Gibney
Tove' C. Bolken
Tracy Pajewski
Trisha Capuano
Trista Sigler
Valerie Tarr

RECOGNITION

Alasdair Dunlap Smith: Photography (pg 4, 10)
Steve and Janet Simonsen: Photography (pg 19, 25)
Willow Melamet: Photography
Jeff Miller: Boat trips
Natalie Monnier: STAR Coordinator
Claudia Lombard: STAR
Kiko aka "Turtilla": sea turtle mascot
Kelly Stewart: Program Support
Cinnamon Bay Campground: Education outreach support
St. John Hardware: Nesting sign update location
Ocean Surfari: Boat trips
Kate Mansfield: UCF Marine Turtle Research Group; donation of Inwater Research Group Traveling Trunk



Willow Melamet

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