Florida Shorebird Alliance Monitoring Data at Work

Florida Fish & Wildlife Conservation Commission
August 2021

Florida Fish & Wildlife Conservation Commission

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Cover photo by Britt Brown (Wilson's plover chick)

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Wilson's plover, photo by Britt Brown

LETTER FROM THE EDITORS

Wilson's plover chicks
Photo by Jean Hall

To Our Readers,

Each year, FSA partners overcome unique monitoring and conservation challenges to protect and conserve beach-nesting birds. The 2020 nesting season added the unprecedented challenge of a global pandemic that impacted all FSA partners. Along the coast, it was business as usual for nesting shorebirds and early-nesting seabirds, but it was anything but usual for partners with the statewide safer-at-home order to protect our health and safety. Given the circumstances, we could not have predicted the level of monitoring, protection, and conservation that occurred in 2020 and even more - the increased communication, collaboration, and outreach among FSA partners. It was truly a remarkable year filled with challenges but also remarkable success stories. This year's report includes some of the highlights of shorebird conservation during the time of COVID-19 and demonstrates the resilience of both the FSA partners and the birds.

In 2020, the FWC Shorebird Data Team developed a process for estimating shorebird abundance using FSD data. Abundance estimates for 2019 (in the Species Fact Sheets) will serve as the baseline for shorebirds and seabirds and will be calculated annually. We look forward to presenting abundance estimates for Florida's focal shorebirds and seabirds from 2019-2021 in next year's report.

We are deeply grateful to be part of the FSA and to share the incredible monitoring achievements and data products in this annual report.

-The Annual Report Editorial Team

Glossary & Acronyms

BBP / protocol - the Breeding Bird Protocol for Florida's Shorebirds and Seabirds is the standardized set of methods for collecting breeding data. The protocol is used in tandem with the FSD.

Focal Species - beach-nesting birds that are State Listed as Threatened (American oystercatcher, black skimmer, least tern, snowy plover), and a Species of Greatest Conservation Need (Wilson's plover)

FSA - the Florida Shorebird Alliance is a statewide network of local partnerships committed to advancing shorebird and seabird conservation in Florida.

FSD - the Florida Shorebird Database is the online repository for Florida shorebird and seabird monitoring data collected using the BBP.

FWC - the Florida Fish & Wildlife Conservation Commission

IBNB - Imperiled Beach-Nesting Bird.

IBNB Region - six imperiled beach-nesting bird management regions based on historical distributions of beach-nesting birds. Population recovery objectives are outlined by IBNB region.

Recipe: for Conservation Success

SERVINGS statewide COOK TIME 10 years

Add equal parts of foundational ingredients:

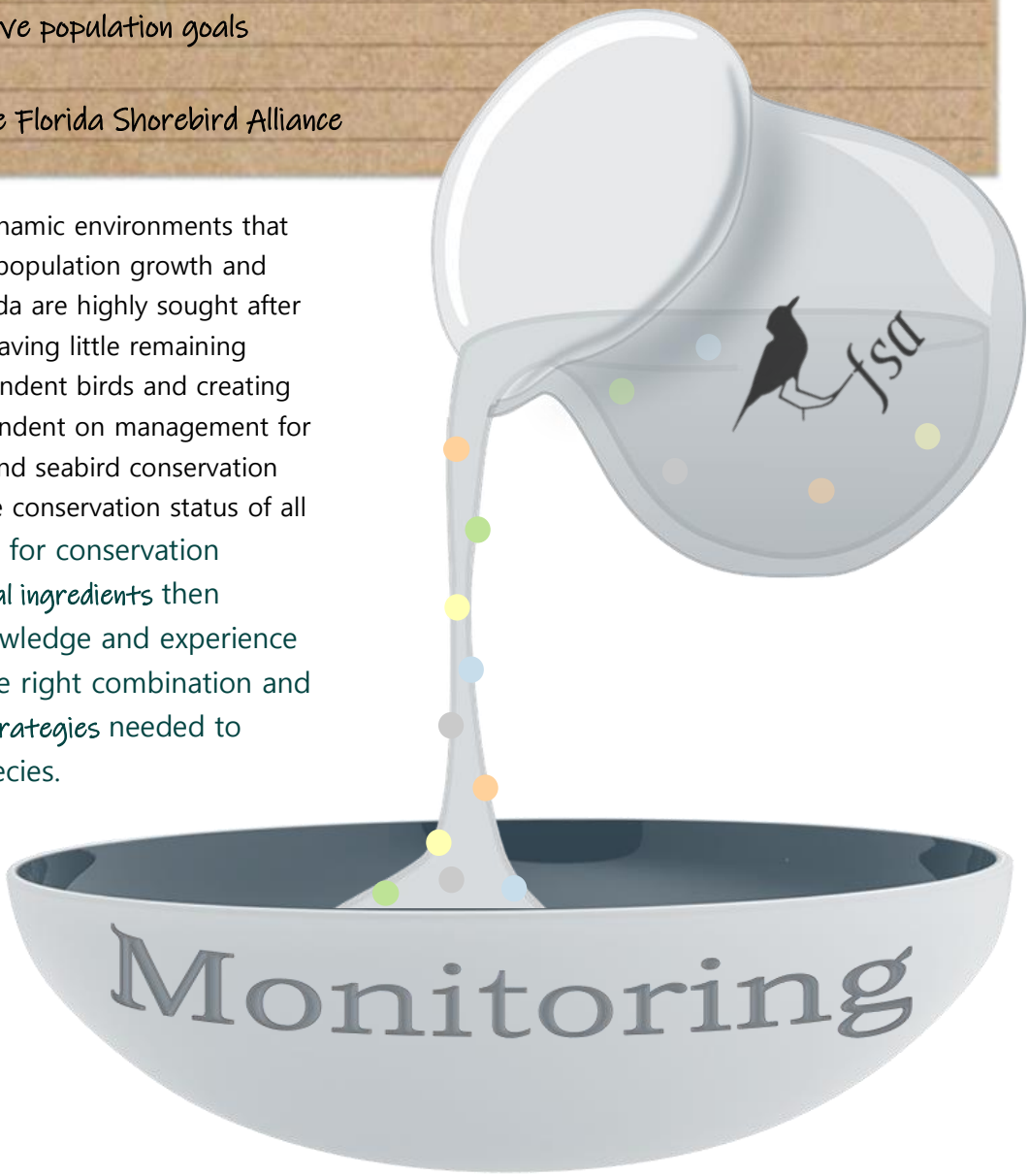
- Imperiled Beach-nesting Bird Plan
- Florida's Beach-nesting Bird Plan
- Florida Shorebird Alliance
- Breeding Bird Protocol
- Florida Shorebird Database

Measure and mix the right conservation strategies:

- Reduce Human Disturbance
- Manage Habitat
- Manage Predation
- Address Information Needs
- Improve Regulatory Coordination

Adapt and repeat to achieve population goals

FROM THE KITCHEN OF The Florida Shorebird Alliance



Coastal habitats are naturally dynamic environments that are globally stressed by human population growth and climate change. Beaches in Florida are highly sought after for development and tourism, leaving little remaining suitable habitat for coastal-dependent birds and creating conditions where birds are dependent on management for survival. The goal of shorebird and seabird conservation work in Florida is to improve the conservation status of all beach-nesting birds. The recipe for conservation success starts with foundational ingredients then combines the cumulative knowledge and experience of FSA partners to identify the right combination and proportions of conservation strategies needed to grow populations of focal species.

The Imperiled Beach-nesting Bird Plan is a long-term species recovery plan that guides communication and coordination for conservation, management, and species population recovery actions. Short-term goals provide achievable benchmarks toward reaching the population

RECIPE FOR CONSERVATION SUCCESS

recovery goal and can jumpstart conservation momentum. The goal of Florida's Beach-nesting Bird Plan is to increase the population of five focal species, the American oystercatcher, black skimmer, least tern, snowy plover, and Wilson's plover, by 10% by 2029.

Since 2011, Florida Shorebird Alliance (FSA) partners have monitored 20 species of shorebirds and seabirds using the Breeding Bird Protocol for Florida's Shorebirds and Seabirds (BBP) to guide and standardize survey efforts. The BBP ensures consistency and allows FSA partners to adjust and respond as new data needs are identified. Data collected using the BBP are entered into the Florida Shorebird Database (FSD) then undergo rigorous quality control to ensure confidence in the data.

By 2015, partners reached near-complete coverage of suitable nesting habitat for focal species statewide. Since then, there has been a steady increase in survey frequency, leading to a substantial amount of data that can be analyzed to provide insight into the status, trends, and challenges faced by Florida's shorebirds and seabirds.

Successful adaptive management across 1,350 miles of coastline is predicated on standardized monitoring and data management. Monitoring underpins all our management and conservation actions. With partners monitoring statewide, **the FSA provides a structure for carrying out conservation actions in Florida. This robust, partner-led monitoring program is crucial for gauging progress toward population goals and adaptively managing important sites.**

Breeding success at ground and rooftop sites requires a combination of conservation strategies (below) that vary in response to site-specific threats. Ever-increasing human populations living and recreating on Florida's coastlines means more human disturbance, higher predator abundance, and continued regulatory conflicts. This can undermine successful recovery of beach-nesting birds in the absence of a multi-pronged approach to shorebird conservation. It is the suite of strategies implemented at a site over time that ultimately leads to success. The FSA network recognizes that a shorebird conservation effort missing any of these key strategies is akin to a recipe missing a crucial ingredient.

Snowy plover, photo by Kylie Wilson

5 CONSERVATION STRATEGIES TO BENEFIT FOCAL SPECIES

- Reduce human disturbance
- Manage habitat
- Manage predation
- Address management information needs
- Improve regulatory coordination

Look for these dots in each section of the report to see the five strategies in action!

ADAPTING DURING A PANDEMIC


Photo by Jean Hall

In 2020, the COVID-19 pandemic shaped the Florida Shorebird Alliance's annual effort to monitor beach-nesting shorebirds and seabirds in Florida, creating both challenges and opportunities for conservation. Faced with unprecedented circumstances, the network of FSA partners demonstrated its resilience by adapting to evolving needs that varied across the state. FSA partners worked together to improve communication, identify potential gaps in survey coverage, install and maintain posting in critical nesting habitat, and respond to changing recreation patterns. Conservation success can be traced back to the local focus and collaborative spirit of FSA partners across the state. By remaining flexible, the FSA network advanced shorebird and seabird conservation while prioritizing health and human safety amid a pandemic that transformed our lives and work.

Monitoring Nesting Areas

Each year, FSA partners collaborate to ensure that routes and rooftops are surveyed regularly. In 2020, partners adapted to beach closures and other restrictions by expanding existing coordination and communication strategies. Statewide, FSA partners exhibited a spirit of collaboration, community, and problem solving in response to the COVID-19 pandemic. Furthermore, collaboration expanded opportunities for monitoring, identifying emerging threats, and implementing management throughout the state. FSA partners contributed to positive nesting outcomes and the development of new management strategies.

Example of partner coordination from the panhandle:

When the severity and magnitude of the pandemic became clear, FSA partners immediately knew that frequent communication and coordination was needed to maintain the collective shorebird conservation efforts under unprecedented circumstances. In order to enhance coordination while balancing safety and shorebird conservation, weekly calls were established between FSA partners working in the region. Additionally, partners developed a list of all shorebird routes to track rapidly changing safety protocols, beach closures, partner availability, and monitoring and management needs - developing new strategies where needed. Many challenges required collaborative strategies in the panhandle, including:

⇒ **Beach Closures -** Nesting habitats were pre-posted, game cameras were installed to monitor breeding outcomes, and FSA partners rallied to complete as many surveys as possible in advance of beach closures. The partners focused on banded bird resights to tie nesting individuals to breeding territories and to facilitate tracking of nesting outcomes once beaches reopened.

⇒ **Limited Supplies -** Shipping delays limited critical supplies (e.g., stakes, game cameras), so a regional supply inventory was created and supplies were

ADAPTING DURING A PANDEMIC

shuttled between partners to be used where they were needed most.

⇒ **Fewer Resources -** Safety considerations limited the hiring of essential monitoring staff so existing staff and partners in the region accomplished what seemed impossible – they worked together to maintain survey coverage and to protect nesting areas despite fewer resources.

The regional coordination network that was established in the panhandle and within other partnerships set the foundation for future conservation efforts with the awareness that shorebird conservation is best accomplished as a team.

FSA partners adopted creative monitoring approaches to overcome the challenges that accompanied the 2020 season. With enhanced collaboration, FSA partners prioritized health and human safety while still achieving remarkable monitoring coverage. The pandemic impacted survey coverage and frequency at local scales, however statewide coverage remained high due to extraordinary partner effort. Although fewer partners were able to monitor regularly throughout the season, FSA partners monitored more shorebird nests and seabird colonies than ever before (Table 2). This is a testament to the collaborative approach that enabled partners to identify potential gaps and address them at key points in the breeding season.

Photo by Ali Flisek

Table 1. Statistics from the FSD and monitoring data from 2011 - 2020.

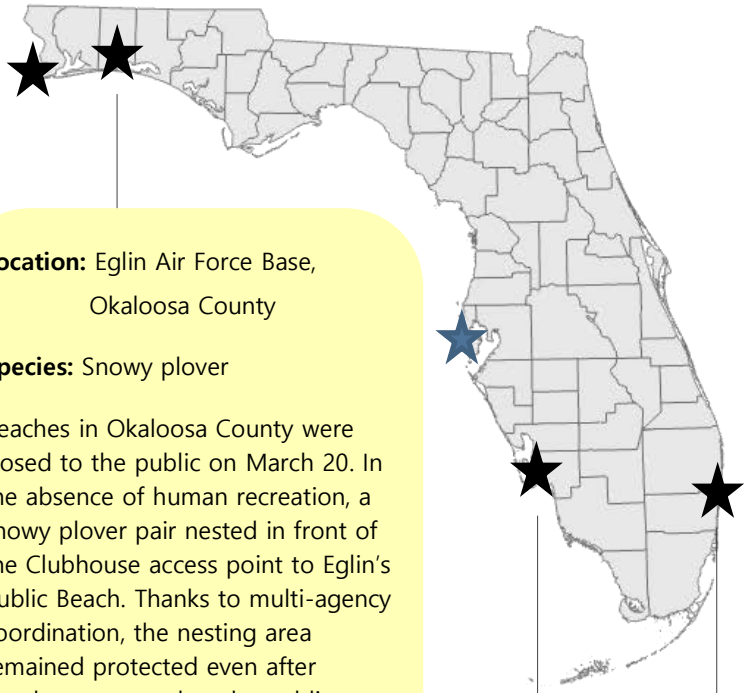
			2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
FSA Monitors			112	161	183	191	255	279	274	273	247	210
Routes	**Number of Routes**		184	228	203	268	299	331	304	336	346	377
	Total Route Surveys		1107	1824	1967	3158	3370	3920	4128	4189	4437	4677
Ground	**Solitary**	sites	888	1105	1265	1331	1578	1061	1161	1234	1152	1161
		visits	2524	3123	3859	4430	5387	4317	4647	5052	4314	4091
	Colonial	sites	123	170	170	194	196	208	196	277	212	251
		visits	656	1028	1164	1531	1427	1804	1826	2766	1909	2014
Rooftop		sites	169	221	260	313	387	407	387	402	322	294
		visits	320	661	1000	1473	2419	2886	2889	4176	2532	2427
Chick/young sightings			617	1027	1172	1339	2262	2404	2154	2287	2310	2231

Note: FSA Monitors is the number of people submitting data in a given year. Number of routes includes all unique routes that were completely surveyed at least once during the season. Number of solitary sites is the total number of nest attempts reported for a given year (one pair may re-nest multiple times) for all shorebird species. Colonial sites contain multiple nests and re-nests. Rooftop sites include all previously documented rooftops that were checked, whether they were active or inactive. Chick sightings can include repeat observations of chicks over time. Numbers may change as archived data are reviewed and corrected.

Query Date: March 5, 2021; source data server: FWC-WPCL001-A

BEACH CLOSURES

Because of beach closures, disturbance was reduced at some nesting sites and shorebirds and seabirds bred in unusual locations in 2020. In some parts of the state, birds bred in areas that had not supported nesting in recent years. In other areas, birds expanded into habitat adjacent to historical nesting areas when recreation was reduced. These changes in nesting patterns across the state required enhanced coordination among FSA partners, who spearheaded novel management and monitoring solutions.



Location: Gulf Islands National Seashore, Escambia County

Species: Black skimmer & least tern

The beaches at Gulf Islands National Seashore were closed to staff and visitors from March 30 to May 6. When staff and the public returned to the beaches, they found hundreds of least terns and black skimmers nesting throughout the area, including in multiple parking lots. Gulf Islands was able to provide recreation opportunities while protecting the colonies by closing these parking areas until nesting was complete.

Location: Eglin Air Force Base, Okaloosa County

Species: Snowy plover

Beaches in Okaloosa County were closed to the public on March 20. In the absence of human recreation, a snowy plover pair nested in front of the Clubhouse access point to Eglin's Public Beach. Thanks to multi-agency coordination, the nesting area remained protected even after beaches reopened to the public. Eglin Air Force base fledged a record number of chicks in 2020, including two from that nest.

Location: Bonita Beach, Lee County

Species: Wilson's plover

In 2020, Wilson's plovers returned to Bonita Beach after nearly a decade of absence. In collaboration between FSA partners and FWC, three pairs were documented on Bonita Beach. The nests and surrounding habitat were posted. The protection and monitoring efforts were successful, and four chicks successfully fledged.

Location: Deerfield Beach, Broward County

Species: Least tern

Least terns nested on Deerfield Beach for the first time in recent history! Deerfield Beach, a popular recreation area, was closed in March and least terns established a colony in April. The colony was posted with signs and symbolic fencing and had regular monitoring and stewarding after the beach reopened to the public in May. These conservation measures were successful, and the colony produced 75 flight-capable chicks. The community liked the birds so much that they named the least tern the official bird of the City of Deerfield Beach!

American Oystercatcher Success

Check out the Summer 2021 edition of Audubon Florida Naturalist Magazine to learn more about American oystercatcher nesting success in 2020 at Shell Key Preserve in Pinellas County!

REDUCING HUMAN DISTURBANCE

The pandemic influenced recreation patterns across the state, resulting in new disturbances at some nesting areas. Although many beach habitats were temporarily closed to public access, residents in some areas were allowed to access coastal habitats using boats and other watercrafts. Many isolated nesting areas, such as shell and sand islands that support breeding American oystercatchers, experienced higher than usual disturbances. In response to these changing recreation patterns, FSA partners increased posting efforts in areas where human disturbance had not previously been a primary threat to nesting success. For example, FWC Law Enforcement in northeast Florida generously assisted with posting to make sure that sensitive nesting areas were protected.

POSTING DURING A PANDEMIC

FSA partners posted 6,891 focal species nests in 2020. That's over **600 more** than were posted in 2019!

Photo by Ezra Thompson

Photo by Jean Hall

The pandemic also transformed stewardship in nesting areas. Holiday weekends typically present an opportunity for proactive, interpersonal stewardship to educate beachgoers about sharing the beach with nesting species. Safety measures leading up to a busy Memorial Day weekend reduced the statewide capacity for this type of stewardship, so the FSA pursued an innovative approach – a digital media campaign. The social media campaign was designed to increase public awareness and understanding of beach-nesting birds. This targeted advertising approach supplemented traditional stewardship by educating prospective beachgoers about how to share the shore and reduce disturbance to nesting shorebirds and seabirds. The three new digital media ads were viewed by over one million people during the last two weeks of May 2020. As a result of the successful campaign, social media advertising was incorporated into recurring FSA media strategies.

The 2020 breeding season was accompanied by new challenges that gave the FSA network an opportunity to demonstrate its flexibility, as partners adapted conservation tools and expanded outreach opportunities to meet emerging needs.

SHOREBIRD ABUNDANCE ESTIMATES

THE PUZZLE

The FWC Shorebird Data Team created a custom analysis strategy to estimate the abundance of breeding American oystercatchers, snowy plovers, and Wilson's plovers using data from the Florida Shorebird Database (FSD). Using FSD data to estimate abundance has been a long-term priority for shorebird conservation. Now that the strategy is complete, the FSD will serve as the data source for estimating statewide shorebird abundance.

Shorebird Abundance Estimate Strategy: Movement of breeding adults within the nesting season presented the greatest challenge for estimating shorebird abundance. Renesting, foraging, and brood rearing are common reasons for movement, so we developed an analysis that limited the risk of counting the same breeding adults in different areas. Accounting for movement was much like a puzzle; we had to figure out how the pieces fit together to get the best result. More than a decade of consistent monitoring by FSA partners informed the analysis strategy by providing a wealth of data, including frequent surveys, renest information, natal nest associations, and supplemental banding information. We created a four-part process to account for movement and estimate abundance. Learn more about the process on the next page.

Breeding Adults vs. Breeding Pairs: The abundance estimates are reported as total breeding adults. The survey protocol guides observers to report breeding adults observed at nests, with chicks, or along survey routes. Converting the estimates to breeding pairs will lead to an inaccurate representation of abundance.

We are excited to share the 2019 statewide abundance estimates for American oystercatchers, snowy plovers, and Wilson's plovers!

	2019 Breeding Adults	Range of Breeding Adults
American Oystercatcher	455	450 - 458
Snowy Plover	359	343 - 379
Wilson's Plover	912	871 - 1,028
Query Date: July 16, 2021; source data server: FWC-WPCL001-A		

Table 2. Abundance estimates with ranges based on uncertainty in movement for American oystercatchers, snowy plover, and Wilson's plover during the 2019 breeding season.

Notes: The 2019 abundance estimates include 14 rooftop-nesting American oystercatchers and the abundance estimates developed during a study of Wilson's plovers in the Florida Keys and Florida Bay.

Photos by Britt Brown

SHOREBIRD ABUNDANCE ESTIMATES

SOLVING THE PUZZLE

TIMING: PEAK NESTING PERIODS

Breeding adults are easiest to count when they are defending nesting territories. We used FSD data to identify periods for each species that encompassed peak nesting and early-season brood rearing.

The peak nesting periods were:

American Oystercatcher, March 1 - June 24

Snowy Plover, March 10 – June 19

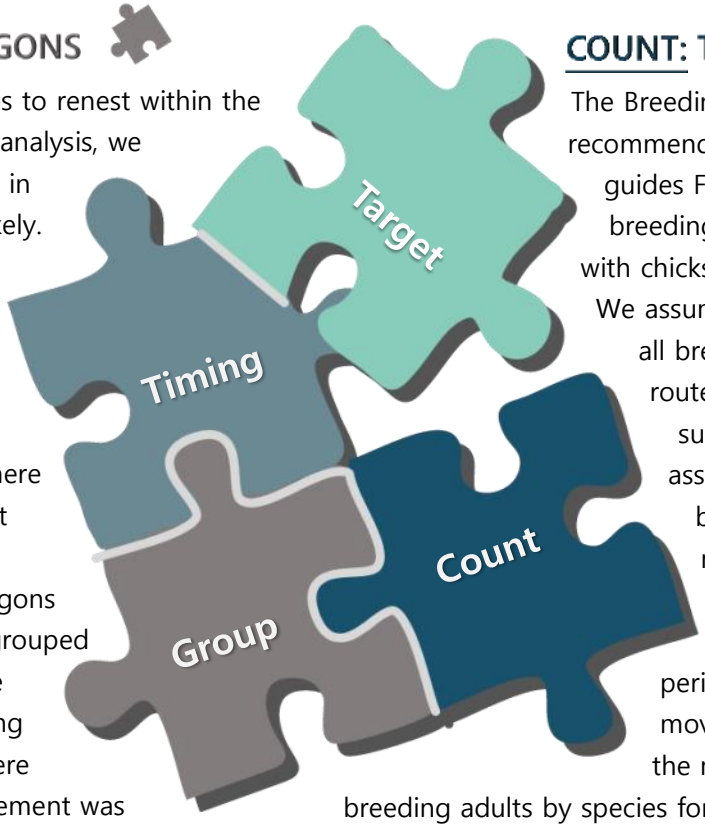
Wilson's Plover, April 14 – June 24

TARGET: BREEDING AREAS

We reviewed the FSD data to identify routes where breeding adults were reported, but nests or chicks were not observed. These routes often included foraging areas that breeding adults are known to use throughout the nesting season. To avoid double-counting, we excluded routes where historical FSD data and local knowledge confirmed that nesting did not occur and retained routes where nesting was probable but not confirmed.

GROUP: NESTING POLYGONS

Shorebirds move among routes to renest within the **peak nesting period.** For this analysis, we needed a way to group routes in areas where movement was likely. To evaluate movement, we calculated renest distances by species from 10 years of FSD data. We identified renest distances, by species, that allowed us to group routes where movement was known, without over-grouping in areas where movement did not occur. Polygons were then drawn around the grouped routes to describe areas where birds were likely to move during peak nesting. The polygons were expanded in areas where movement was known to exceed the renest distance. Resights of banded birds and local knowledge from FSA partners were key to identifying areas where breeding adults regularly moved distances larger than the renesting distances.



COUNT: TOTAL ADULTS

The Breeding Bird Protocol recommends weekly surveys and guides FSA monitors to document breeding adults observed at nests, with chicks, or along survey routes. We assumed partners documented all breeding adults along each route given the rigor of the survey protocol. We also assumed double-counting breeding adults across multiple routes within a **nesting polygon** was rare over a 10-day time period. We used a 10-day moving window to determine the maximum number of breeding adults by species for each **nesting polygon**. We began the 10-day moving window at the start of the **peak nesting period** and shifted it one day at a time, generating new counts for each day shift, until the end of the **peak nesting period**. The maximum count for each **nesting polygon** occurred in a unique 10-day time period. We summed the maximum counts across the nesting polygons to estimate abundance statewide and by Imperiled Beach-nesting Bird Region.

Nesting Polygons

Areas where birds were known to move among survey routes within the peak nesting period.

SHOREBIRD ABUNDANCE ESTIMATES

THE COMPLETED PUZZLE

Abundance Range:

We present each abundance estimate with a range to represent how far birds may move to renest. Each species has a variety of renest distances that were calculated from renest data in the FSD. We accounted for possible bird movement by repeating the analysis using the minimum and maximum renesting distances for each species. The range for American oystercatchers is narrow because this species rarely moves between routes. Snowy plovers have a wider range because the birds sometimes move long distances during the breeding season.

The Completed Puzzle:

The shorebird abundance estimates were produced using tools tailored to the data in the FSD, and the analysis strategy incorporated local knowledge of breeding shorebirds. The analysis explicitly accounted for potential movement of shorebirds both temporally and spatially to reduce the risk of under- or overestimating the abundance of each species. The comprehensive survey coverage by FSA partners combined with the analysis strategy limited the risk of double-counting birds. The result is a statewide population estimate that accurately represents the breeding population and provides the necessary foundation to estimate trends and track progress toward population recovery for American oystercatchers, snowy plovers, and Wilson's plovers in Florida.

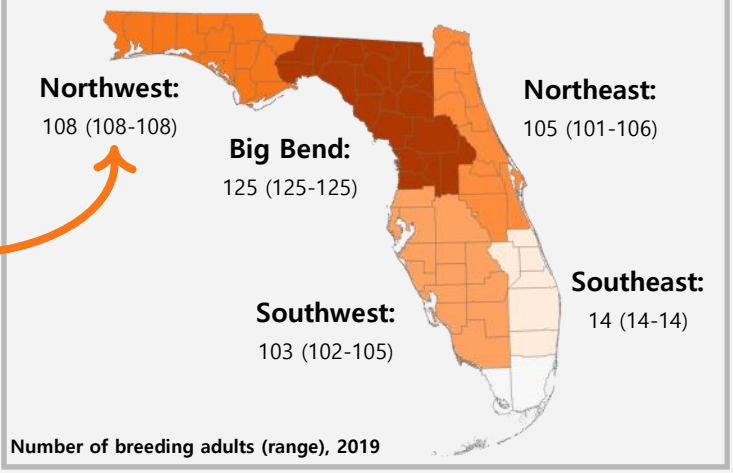
Want to learn more about shorebird abundance estimates– how the puzzle pieces fit together?

Join the webinar in November 2021!

Subscribe to the Wrack Line newsletter for webinar details.

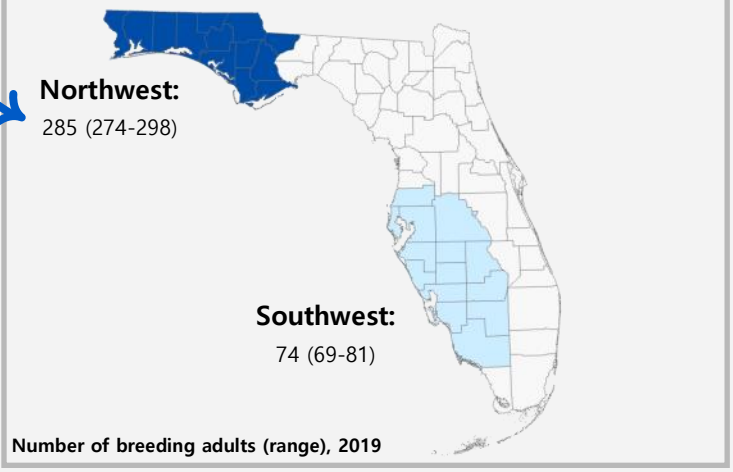
Breeding Adults by IBNB Region, 2019

AMERICAN OYSTERCATCHER



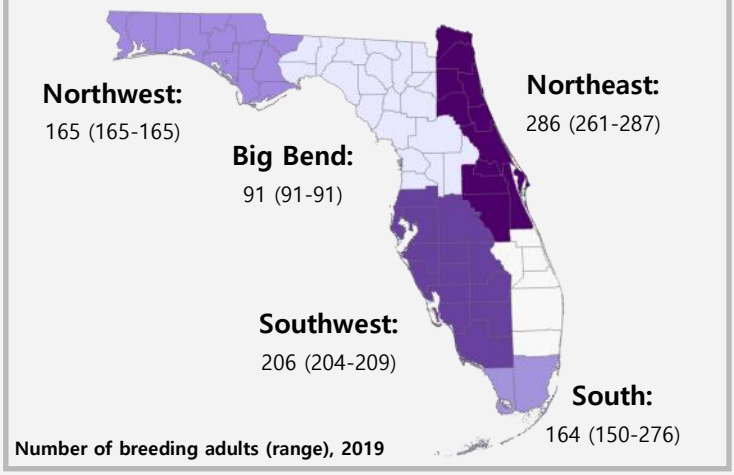
Number of breeding adults (range), 2019

SNOWY PLOVER



Number of breeding adults (range), 2019

WILSON'S PLOVER



Number of breeding adults (range), 2019

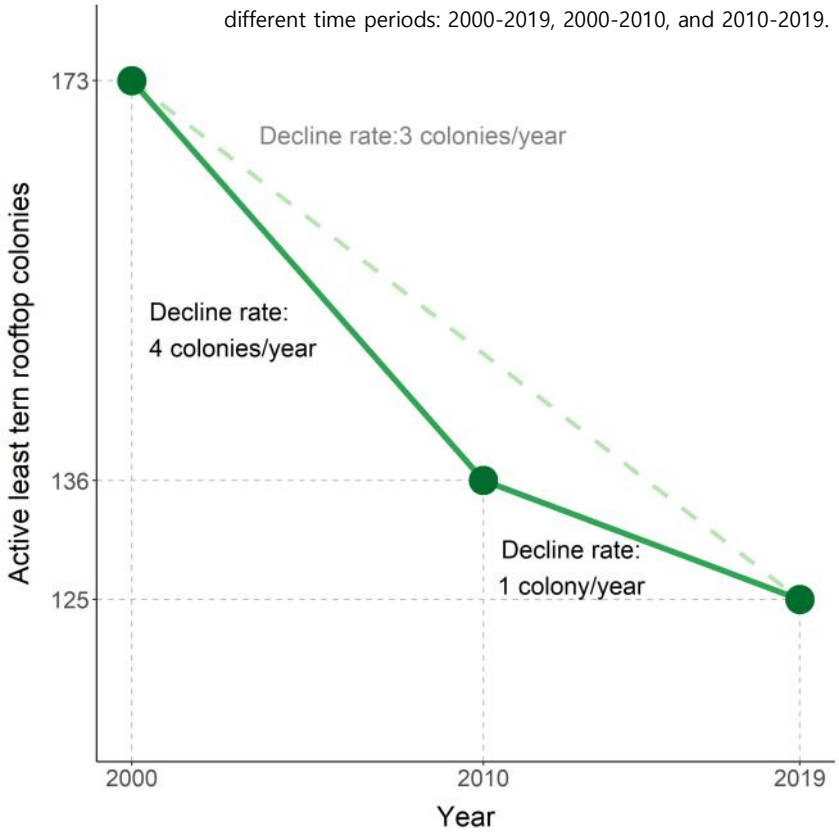
HABITAT HIGHLIGHT: ROOFTOPS

In Florida, gravel rooftops provide alternative nesting habitat for American oystercatchers, black skimmers, gull-billed terns, killdeer, least terns, and roseate terns. In fact, rooftops supported 55% of the population of least terns breeding in Florida in 2019. Local populations of American oystercatchers and black skimmers also use rooftops as alternative habitat in regions where their natural breeding habitat is reduced due to development and disturbance.

When buildings are re-roofed, gravel on rooftops is often replaced with energy-efficient materials that are not suitable for nesting, thereby reducing the availability of alternative rooftop habitat. From 2000 to 2010, the number of least tern colonies on rooftops decreased an average of 4 colonies per year. In recent years, 2010 to 2019, the rate of decline has slowed to 1 colony per year (Fig. 1). Due to the continued use of rooftops by nesting least terns, there is a need to learn more about how to best manage and protect birds nesting on rooftops.

Figure 1.

Number of rooftops with least tern nesting in Florida. The average number of rooftop colonies lost per year (decline rate) was calculated at three different time periods: 2000-2019, 2000-2010, and 2010-2019.



To achieve conservation recovery goals, it is essential to identify roof-nesting patterns and manage primary threats to the reproductive success of roof-nesting birds. Preliminary data indicate that productivity on rooftops is likely low for roof-nesting species. FSA partners will continue to implement unique conservation strategies to increase the success of roof-nesting birds. Data collected by FSA partners will be used to 1) estimate productivity of seabirds and shorebirds at rooftop colonies, 2) identify primary threats to rooftop colonies, and 3) develop and implement conservation strategies to address those threats.

Unique Management Actions

Rooftop nesting poses unique threats. Chicks can get stuck in gutters or fall from rooftop edges or into downspouts where they can become trapped or killed. FSA partners improve the reproductive success of seabirds and shorebirds nesting on rooftops by:

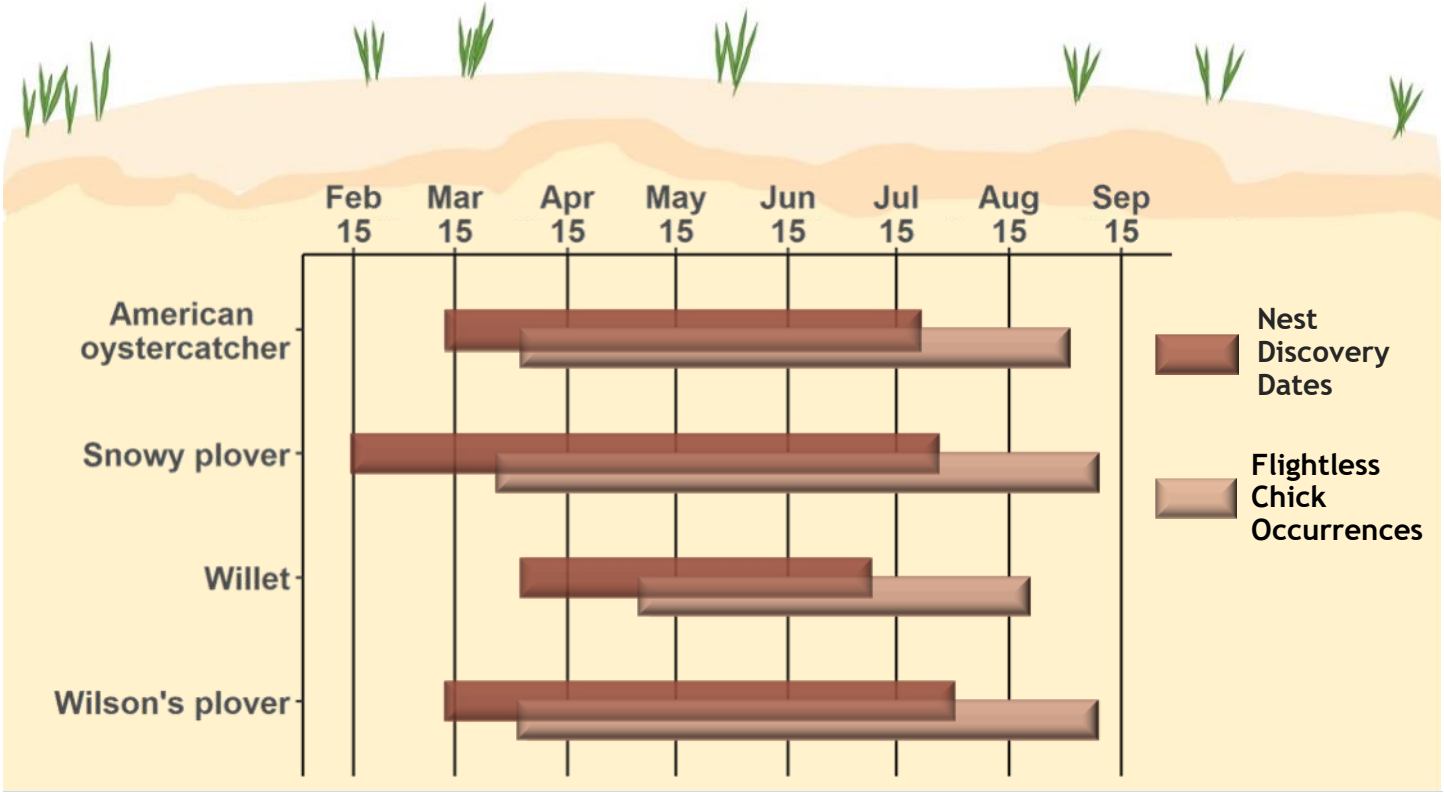
- Checking for fallen chicks during nesting season
- Communicating regularly with business owners and providing outreach about roof-nesting birds
- Chick-proofing rooftops by screening downspouts, edges, and gutters

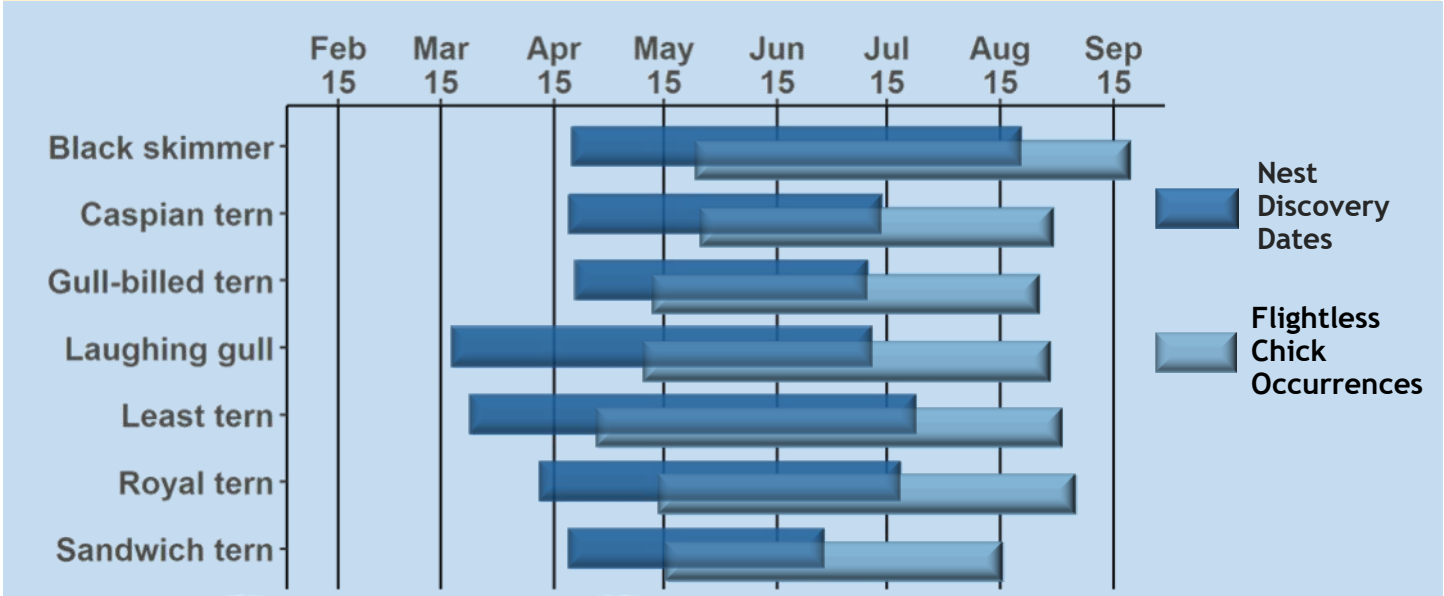
Photo by Jean Hall

Timing of Ground Nesting & Flightless Chicks

Sensitive time periods for nests and chicks in ground-nesting habitats in Florida

Discovery dates may be influenced by FSD survey windows; nests and chicks can occur outside these ranges.





Ground nest discovery dates and flightless chick observations from the Florida Shorebird Database (FSD) for 2011-2020

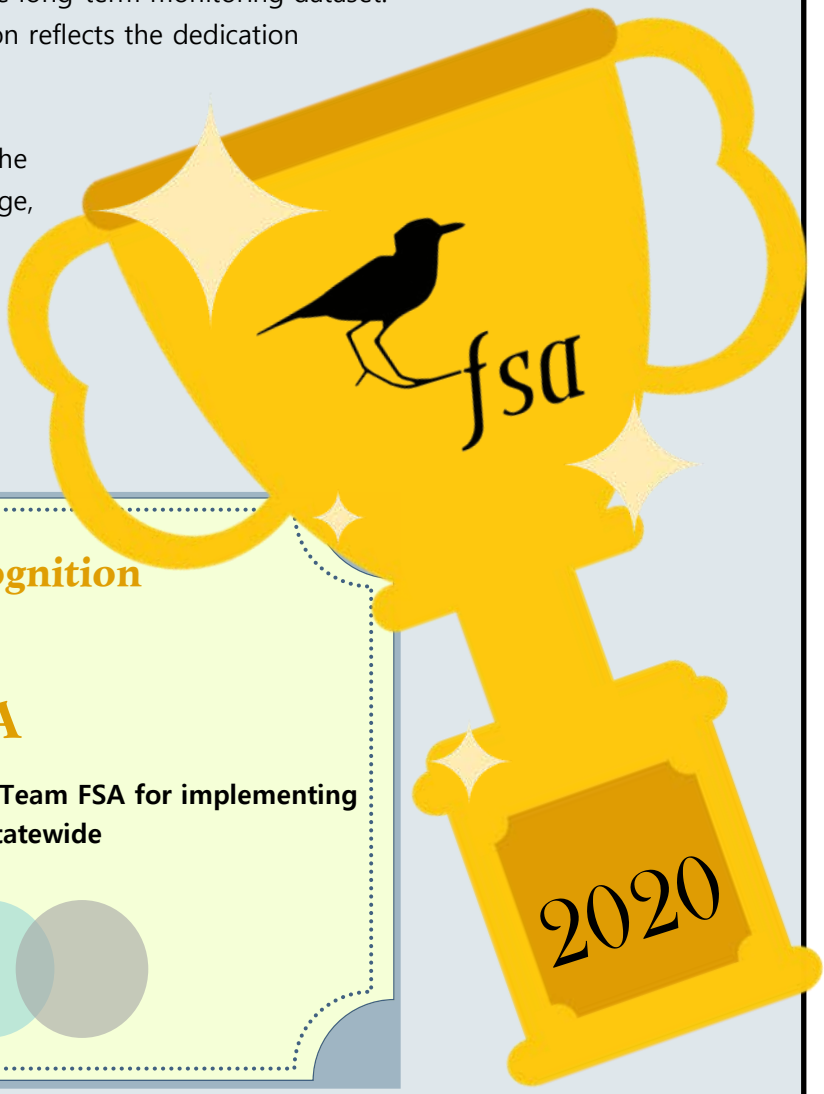
Query Date: March 5, 2021; source data server: FWC-WPCL001-A

2020 TEAM AWARD GOES TO...

Last year tested the resilience of the FSA partners during an unprecedented moment in history. With safety as the highest priority and with personal and shared challenges, partners came together to find creative solutions to continue to protect and manage shorebirds and seabirds. When partners could not promote bird conservation on the beaches, they used innovative digital and social media approaches to reach more beachgoers heading to the coast, virtually sharing ways to support shorebird and seabird conservation. Partners shared resources and communicated to make sure that critical nesting areas were protected and posted. They ensured rooftops and survey routes were covered by whoever was available and willing. They discovered birds nesting in areas where they were never documented before, then they rallied local communities around the protection of these nesting areas- even in areas where local beachgoers had never seen beach-nesting birds.

The FSA once again proved that the enormous task of monitoring and protecting shorebirds and seabirds can only be accomplished through teamwork. In 2020, FSA partners contributed to ongoing statewide population recovery efforts and ensured the continuity of the long-term monitoring dataset.
The data collected during the 2020 nesting season reflects the dedication of FSA partners who overcame seemingly insurmountable challenges. During a time of uncertainty and risk, FSA partners strengthened the statewide conservation network to protect, manage, and conserve Florida's nesting shorebirds and seabirds. For this we express our gratitude for your participation in the FSA and we are proud to be a part of this team.

The Annual Report Editorial Team



Certificate of Recognition

Is presented to

Team FSA

The annual report editorial team recognizes Team FSA for implementing conservation strategies statewide

AMERICAN OYSTERCATCHER

Haematopus palliatus

455 Breeding adults in 2019

Conservation Status in Florida: Threatened

Site Importance

Oystercatchers will return to the same nest site each year sometimes arriving ~60 days before they initiate a nest. They often stay in one location for at least 150 days during the nesting season!

Rooftop Territories

Pairs that nest on rooftops will defend a territory that extends to the ground or beach near the rooftop.

3 **Three percent of the Florida population nests on rooftops.**

Homebodies

Oystercatcher chicks depend on their parents for food and protection ~25 days after they can fly.

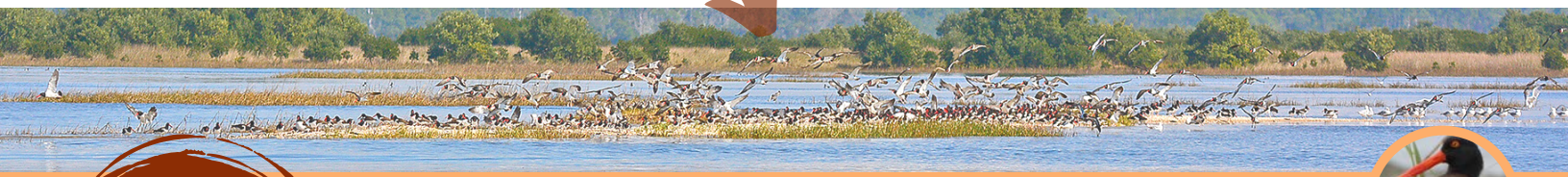
WHERE THEY BREED

Breeding Grounds

They nest on sand/shell rakes, natural islands, spoil islands, beaches, and occasionally rooftops.

Field Notes

A partner documented a flock of 658 wintering oystercatchers on a single shell rake near Cedar Key. This is 5% of the entire population of American Oystercatchers.



Movement Patterns

Immigration

The Tolomato River in St. Johns County is one of the most productive sites in the state and monitors have documented many banded birds from other states entering the FL breeding population here.

Banding Insights

Banded oystercatchers nesting in St. Johns County have been documented wintering in Central America. Thanks to our international conservation partners for the band resights!

Photos:
Jean Hall, Pat Leary, Joe Marchionno

August 2021
www.flshorebirdalliance.org

BLACK SKIMMER

Rynchops niger

6,010 Breeding adults in 2019

3% of the Florida population nests on rooftops.

Conservation Status in Florida: Threatened

Jaw Dropping

Black skimmers are tactile feeders. They use their longer lower mandible to skim the water's surface, feeling for fish instead of relying on sight.

Night Moves

The foraging movements of GPS-tracked black skimmers in coastal Louisiana revealed that skimmers foraged mostly at night and traveled as far as 16 km (~10 mi) from their colony.

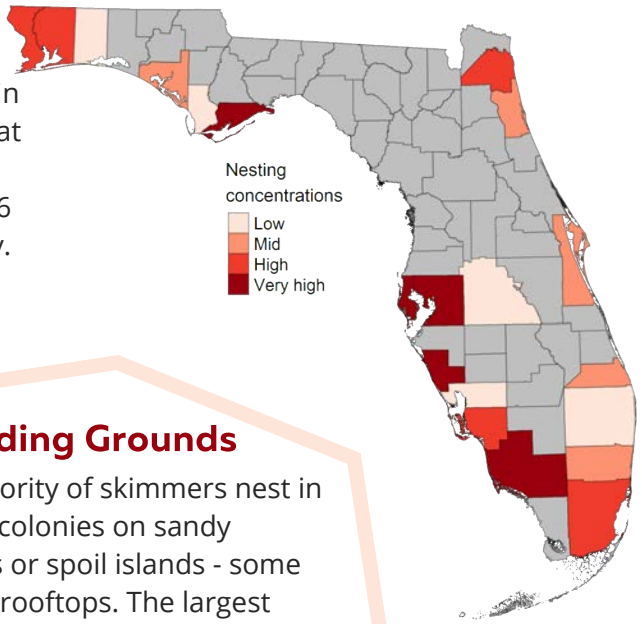
Chick Development

Chicks hatch with equal length upper and lower mandibles – they do not develop a longer lower mandible until after they learn to fly.

Field Notes

Male and female black skimmers can be differentiated in the field by comparing size – males are visibly larger and heavier than females. Male chicks are heavier than females at just 23 days old!

WHERE THEY BREED



Breeding Grounds

The majority of skimmers nest in ground colonies on sandy beaches or spoil islands - some nest on rooftops. The largest colonies are in Southwest Florida.

ZZZ

Resting Skimmers

Loafing Around

Resting skimmers often lay their entire bodies on the sand to give their busy neck muscles a break after foraging. This is behavior is called loafing. Groups of resting or loafing birds are called a roost.

Vital Rest

Like sleeping, loafing is a vital part of a bird's survival. Help loafing skimmers by giving them space to rest and replenish energy stores.

Photos:
Jean Hall, Mia McPherson

August 2021
www.flshorebirdalliance.org

LEAST TERN

Sternula antillarum

14,382 Breeding adults in 2019

Conservation Status in Florida: Threatened

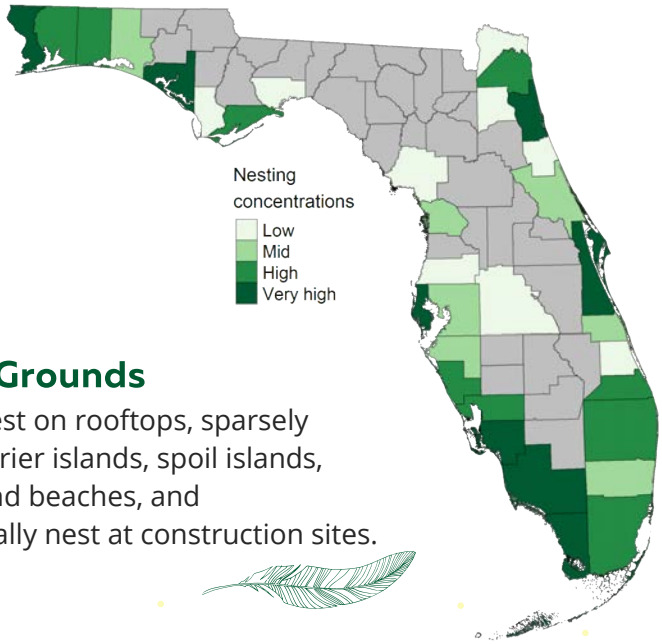
Help From My Friends

Least terns are attracted to locations where other terns are nesting. They prefer sites that have a mix of single and paired birds over sites with just singles or just pairs.

Food Matters

Growth of least tern chicks varies between years and colonies but depends on environmental conditions - especially food availability.

WHERE THEY BREED



Rooftop Revelation

Since 2000, Least terns in Florida have consistently lost an average of three suitable nesting rooftops per year. However, the rate of loss has slowed, from four losses per year from 2000 - 2010 to one loss per year from 2011 - 2019.

Breeding Grounds

Least terns nest on rooftops, sparsely vegetated barrier islands, spoil islands, shell rakes, and beaches, and opportunistically nest at construction sites.

55 **Fifty-five percent of the Florida population nested on rooftops in 2019.**

SURVEY TIPS

Good Timing

From mid-May to late June, least tern adults spend more than 90% of their day incubating eggs! Maximize your chance of counting peak nest numbers by surveying between 6am - 2pm.

Be Choosy

Weekly counts of fledglings from mid-June to the first week of August greatly improves productivity estimates for least terns.

Photo: Jack Rogers

August 2021
www.flshorebirdalliance.org

SNOWY PLOVER

Charadrius nivosus

359 Breeding adults in 2019

Conservation Status in Florida: Threatened

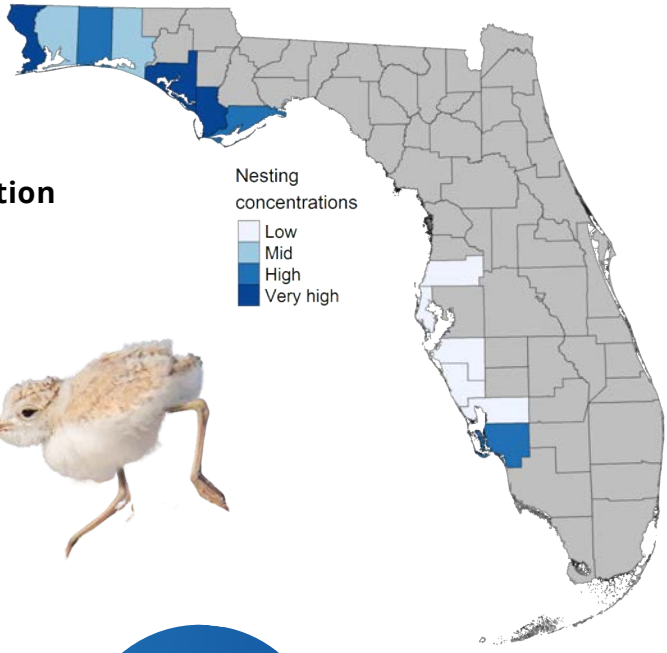
Genetically Unique

A recent study described the Florida Snowy Plover as genetically unique and recommended that the species be considered part of a new conservation unit that includes the eastern Gulf.

85

85-87% of this population is found in Florida!

WHERE THEY BREED



Conservation Strategies

Access to high quality brood-rearing habitat is critical for chick survival. When access is limited, chick growth is slower, chicks take longer to fledge, and chick survival decreases.

Breeding Strategy

Within a nesting season, females often have multiple nests with different males. As soon as a nest hatches, some females leave their mate to initiate a new nest with a different male, leaving the chicks to be cared for solely by the male.

Florida Residents

Based on resights of banded birds in the Florida panhandle, ~75% stay at or near their breeding sites year-round. The remaining ~25% migrate for the winter to the SW Florida coast or to neighboring gulf states.

Breeding Grounds

In Florida, snowy plovers are found on the Gulf coast and nest on sparsely vegetated barrier islands, sandy beaches, and occasionally on spoil islands.

SURVEY TIPS

Vocalization

Snowy plovers make a variety of calls while breeding. Learning their calls can help determine breeding behavior (territorial, nesting, or brood-rearing).

Survey Timing

Conduct early breeding surveys during the month of March. Not only are snowy plover adults more visible during pre-nesting periods, but observations can be used to identify breeding territories.

Photos:
Britt Brown, Jean Hall, Emily Hunter

August 2021
www.flshorebirdalliance.org

WILSON'S PLOVER

Charadrius wilsonia

912 Breeding adults in 2019

Conservation Status in Florida: Species of Greatest Conservation Need

Regional Importance

Northeast Florida is an important stronghold for breeding Wilson's plovers, holding 34% of the statewide population.

Living on the Edge

Wilson's plovers often nest on the margins of coastal wetlands, and small changes in water levels may flood nests.

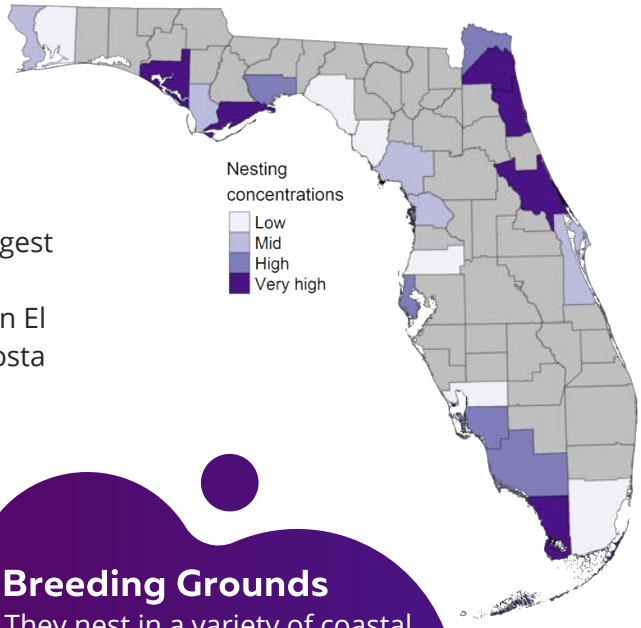
International Travelers

Resights of individuals banded by partners across the Gulf coast suggest they frequently winter in Central America. They were documented in El Salvador, Honduras, Nicaragua, Costa Rica, and Panama!

Chasing Food

Wilson's plover chicks find food for themselves while the parents watch for danger. They travel from their nest to their preferred foraging locations, such as the muddy margins of coastal lagoons, where they hunt for crustaceans like fiddler and ghost crabs.

WHERE THEY BREED



Breeding Grounds

They nest in a variety of coastal habitats along the Atlantic and Gulf coasts, including salt flats, sandy beaches, shell rakes, lagoons, and marsh edges.

SURVEY TIPS

Sight and Sound

Actively listen and stop periodically to scan ahead to look for birds. Although plovers may blend in, they might call and alert you of their presence.

Hidden Chicks

Chicks will often hide in vegetation until flight-capable. Pay close attention to adult behavior to determine if chicks are present. If adults are excessively calling and flying or feigning an injury, they likely have hidden chicks!

Photos:
Mia McPherson, Britt Brown Raya Pruner

August 2021
www.flshorebirdalliance.org