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THE BUTTERFLIES OF SARASOTA COUNTY

A YEAR-LONG DATA DRIVEN SURVEY

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The Southern Lepidopterists' Society

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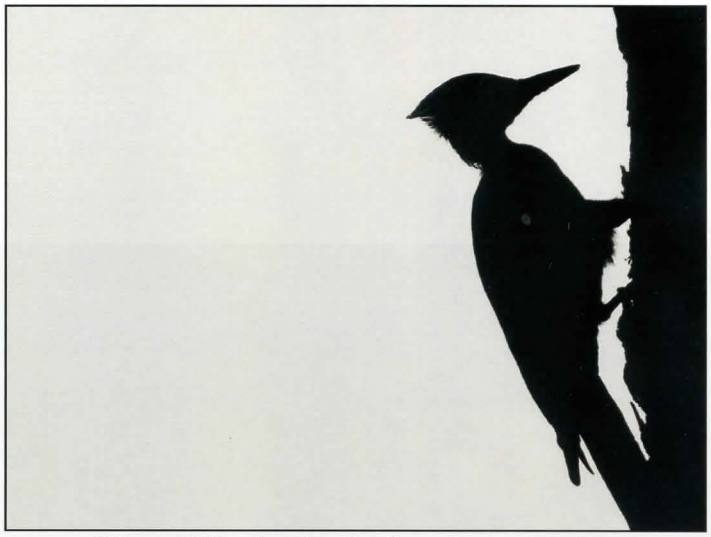
Sarasota County Wildlife



Pileated Woodpecker feeding, September 29, Red Bug Slough

Great Egret hunting, September 29, Red Bug Slough

American alligator just lost a meal, June 5, Venice (in the author's backyard)

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"Cover illustration: First known drawing of a North American butterfly from the Modern Age: Eastern Tiger Swallowtail *(Papilio glaucus)* by John White, North Carolina, 1587 (original design by J.V. Calhoun, 1996)."

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Of all the butterflies in Sarasota County, the White Peacock, *Anartia jatrophae*, was found in the greatest numbers for this full-year survey. This mating pair was sighted in the morning at the Celery Fields on September 1 on a day when almost 200 were found. The backlighting of the two butterflies creates an effect similar to stained glass and the top edges of their wings seem to mate in a flawless flowing line creating a unique organic form that truly joins them as one.

THE BUTTERFLIES OF SARASOTA COUNTY
A YEAR-LONG DATA DRIVEN SURVEY

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All photography was taken by Scott D. Anderson except where noted.

The author (seated) on his 9th birthday joined by his friends. It all started in Columbia Heights, Minnesota – a neighborhood filled with kids, all the same age, enough energy to run all day and butterflies to chase (photograph by Dee Anderson).

THE BUTTERFLIES OF SARASOTA COUNTY
A YEAR-LONG DATA DRIVEN SURVEY

BY

SCOTT D. ANDERSON

Prologue

I have fond memories of my childhood. While I grew up in a place renowned for winter, it's the summers I remember best. Long northern days, lots of sunshine, baseball, bicycles and butterflies – that's what I remember. My friend's older brother was good at making nets with broomsticks, coat hangers, and white silk. They were long and the illuminated fabric flowed in front of us as we ran. We caught nothing but didn't care. We ran like a pack chasing Monarchs and Swallowtails; after all, we were after big game. Ever since, the sight of a butterfly has brought a smile. Among those friends, I still run between houses and down long alleys, part of the chase when a butterfly appears. It's a part of me I won't let go.

What follows is a carefully measured data-driven study with numbers, tables and charts. Don't be fooled. Behind every one of them, is that boy, from a long time ago, running to the laughter of friends, his eyes filled with sunshine, on days that never end.

Abstract

In order to complete a baseline study of the butterflies in Sarasota County, in 2020, I surveyed 21 sites during 100 field trips each averaging 3 hours. My total time in the field was 300 hours and at an average speed of 1 mile per hour (I brake for butterflies), I walked 300 miles. I found 61 species, my last on December 10, a Least Skipper. It was hardly the least of my findings. I counted 13,143 individual butterflies, well beyond my original goal.

The most common butterfly in Sarasota County, by my findings, was the White Peacock (2,384), followed by the Barred Yellow (1,650), Dainty Sulphur (1,497), Ceraunus Blue (1,252), Phaon Crescent (938), Fiery Skipper (668), Gulf Fritillary (620), Horace's Duskywing (406), Little Yellow (366), and the Dorantes Longtail (258). Though these butterflies were plentiful, I never got tired of seeing them and the more I did, the more I learned about location, plants, flight patterns, and how the appearance of the butterflies change (male to female, season to season, brood to brood).

There were 8 butterfly species of which I found a total of 5 individuals or less. They were the Palamedes Swallowtail (5), Fulvous Hairstreak (4), Northern Cloudywing (4), Red Admiral (4), Hackberry Emperor (3), Mangrove Skipper (2), Neamathla Skipper (2), and the Least Skipper (1). Though these butterflies were scarce, I was grateful for what seemed a chance encounter each time they were found. Each time I found one of these hard-to-get species, I would walk away smiling, tempted to laugh out loud in celebration even though I was alone.

I found quite a few species in only one location – Carolina Satyr (Deer Prairie Creek), Hackberry and Tawny Emperors (Celery Fields), the Least and Neamathla Skippers (Scherer Thaxton), Mangrove Skipper (Lemon Bay), Palamedes Swallowtail (Old Miakka), and the Southern Oak Hairstreak (Sleeping Turtles North). This highlights the importance of visiting as many locations as possible and attempting as many visits as possible too. Failing to include a single site can greatly impact the results. I often wonder what I would have found in places I did not have time to go. (Note: in the next few years, the county will open another new preserve recently saved. Orange Hammock Ranch is 5,777 acres and there is no telling what butterflies are there.)

The year is over. I find myself sitting right where I started. A baseline butterfly count now exists for Sarasota County and when compared with future data, it may be used to draw conclusions based on changes the county experiences from climate, development, management practices, fire, flooding, and large scale weather events such as tropical storms and hurricanes. I hope that comparison happens but even if it doesn't, I have been inspired by the walks I've taken, amazed by the things I've seen, and I've drawn immeasurable pleasure from the natural world around me. Sarasota County is a beautiful place to explore, a beautiful place to live.

Introduction

The convergence of two events were the motivation for this study. First, in November of 2019, the local chapter of the North American Butterfly Association, aka "The Sarasota Butterfly Club," held its monthly meeting in Sarasota.

The guest speaker was Dr. Marc Minno who spoke about the "Conservation of Florida's Butterflies." We learned about butterflies breeding in Florida, butterfly species in decline and those which are imperiled, the possible reasons for the declines, and ways to conserve our disappearing biodiversity. Over the course of the event, although Florida has been well studied, it became clear more information was needed about Sarasota County.

Second and around the same time, our butterfly club's board, of which I am a member, approved "The 2020 Challenge," a program for club members to commit to an activity that would make a positive difference for the conservation of butterflies. I chose to do this project.

After a few practice walks in December, I set out at the beginning of the year to bring these ideas together. If my sampling was large enough and my locations both diverse and sufficient in number, I hoped to create a baseline of information for future study. If butterflies are declining or becoming imperiled here, we will have locally collected data on which to base those claims. More optimistically, if butterfly numbers and distribution improve, we will know that too.

A brief description of Sarasota County

Sarasota County is located in southwest Florida roughly in between Tampa to the north and Fort Myers to the south. It is on what many here call Florida's SunCoast. The county borders on the Gulf of Mexico to the west and 3 other counties – Manatee to the north, DeSoto to the east, and Charlotte to the south. Sarasota County's estimated population is more than 440,000 with a growth rate of more than 1.62% according to the most recent United States census data. Sarasota County is the 14th largest county in Florida.

Besides its famous white sand beaches, the county is also the home to extensive holdings of land that have been set aside as preserves and environmental parks so what some call the "Real Florida" can continue to be seen and enjoyed for all time. The county is especially rich in these lands set aside along the Myakka River corridor. The Myakka River is 72 miles long and much of it flows through Sarasota County. In total, the county manages over 50,000 acres of natural land (1). In addition to county preserves and parks, Sarasota County is the home for most of Myakka River State Park. This state park includes a total of 37,000 acres making it one of the largest state parks in Florida.

With its beaches along the Gulf and its many protected lands within its borders, Sarasota County is a perfect place to search for, find and photograph butterflies.

Study Objectives

1. Visit as many diverse landscape types as the county has to offer and look for, find and document as many butterflies and butterfly species as possible in Sarasota County during calendar year 2020.
2. Document the findings using spreadsheets, tables, charts and maps as well as photography. The data collected would create the first ever baseline of information for the species present, their volume, and their geographic distribution in the county.
3. Publish the above and wherever possible, visualize the data for easier consumption.

2020 Measurable Goals

1. Complete 100 or more field trips.
2. Visit 20 or more unique sites.
3. Document 60 or more species of butterflies.
4. Document 10,000 or more individual butterflies.

2020 Measured Results

1. Completed 100 field trips.
2. Visited 21 unique sites.
3. Documented and photographed 61 species of butterflies.
4. Documented 13,143 individual butterflies.

Methodology

Locations were selected based on a number of factors. My preference was to visit more "wild" places than developed or garden settings. As a result, I spent most of my time walking in preserves and environmental parks which are largely undeveloped except for pathways. *The Natural Areas Guide* published online by the county highlights 23 unique sites that feature exceptional outdoor recreational opportunities, hiking in particular. As I started exploring the county in search of butterflies, I relied on this guide extensively. I chose properties that would give me the best county-wide distribution of butterflies, *i.e.*, north to south and east to west. I spent ample time in suburban settings (large preserves surrounded by suburban neighborhoods), rural settings (large preserves on the outskirts of suburban areas leaning toward rural), and settings near the bay system that interacts with the Gulf of Mexico. I spent the most time along the Myakka River corridor because it is centrally located in the county, rich in butterfly species and individuals, and extensive in terms of acres protected.

Transects were defined appropriate for each location. Smaller preserves were divided into sections and most smaller preserves were visited in their entirety on each visit. Each visit mimicked the previous one in terms of paths followed and the same ground was covered on each walk. Sometimes, variations were caused by mowing, defoliation treatments to remove exotic plant species, the presence of feral hogs, or flooding. Larger preserves were simply too large to cover by one individual so portions of the preserve were chosen and the transects were defined. Like the smaller preserves, every effort was made to replicate the previous walks in terms of paths followed. To clarify, whether it be small or large preserves, I was not beholden to formally mowed paths or dirt trails and frequently walked off-trail. Simply stated, I walked wherever I thought I would find butterflies.

Whether I was following physical pathways or just transects defined by me, I typically applied the "Pollard Walk" methodology for counting. This was especially important for large open areas where I would divide the space mentally into a grid and walk back and forth to avoid duplication. This was also important whenever it was necessary to walk both out and back through the same area. In such an instance, counting was always done on one side going out and the other side coming back, again, being careful to avoid duplication.

Most of my field trips started mid-morning. During the cooler months, the benefit was more butterflies in flight as the day began to warm. During the warmer months, it was a requirement for my own survival since Florida's heat and humidity are such a challenge in the afternoon.

In the field, butterflies were counted and logged onto index cards using simple stroke counts. Once home, the results each day were then logged into a master spreadsheet. The data collected included location, date, time of day, high and low temperature, sky conditions, wind, butterfly species and number of individuals by species. Photography was used extensively to accurately identify species, especially the skippers. In the course of the year, I took more than 15,000 photographs.

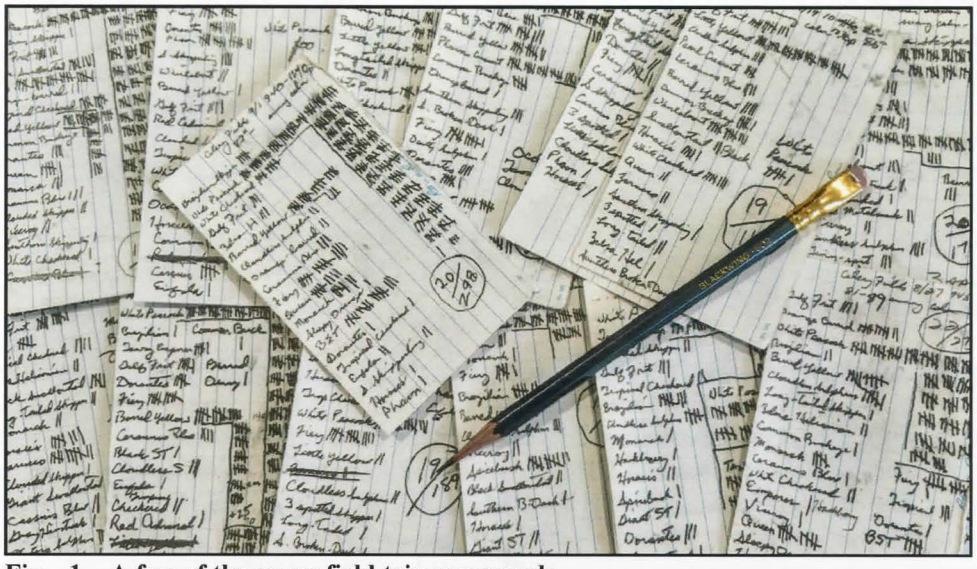


Fig. 1. A few of the many field trip scorecards

Sarasota County
Preserves, Reserves, Parks and Gardens Surveyed in 2020

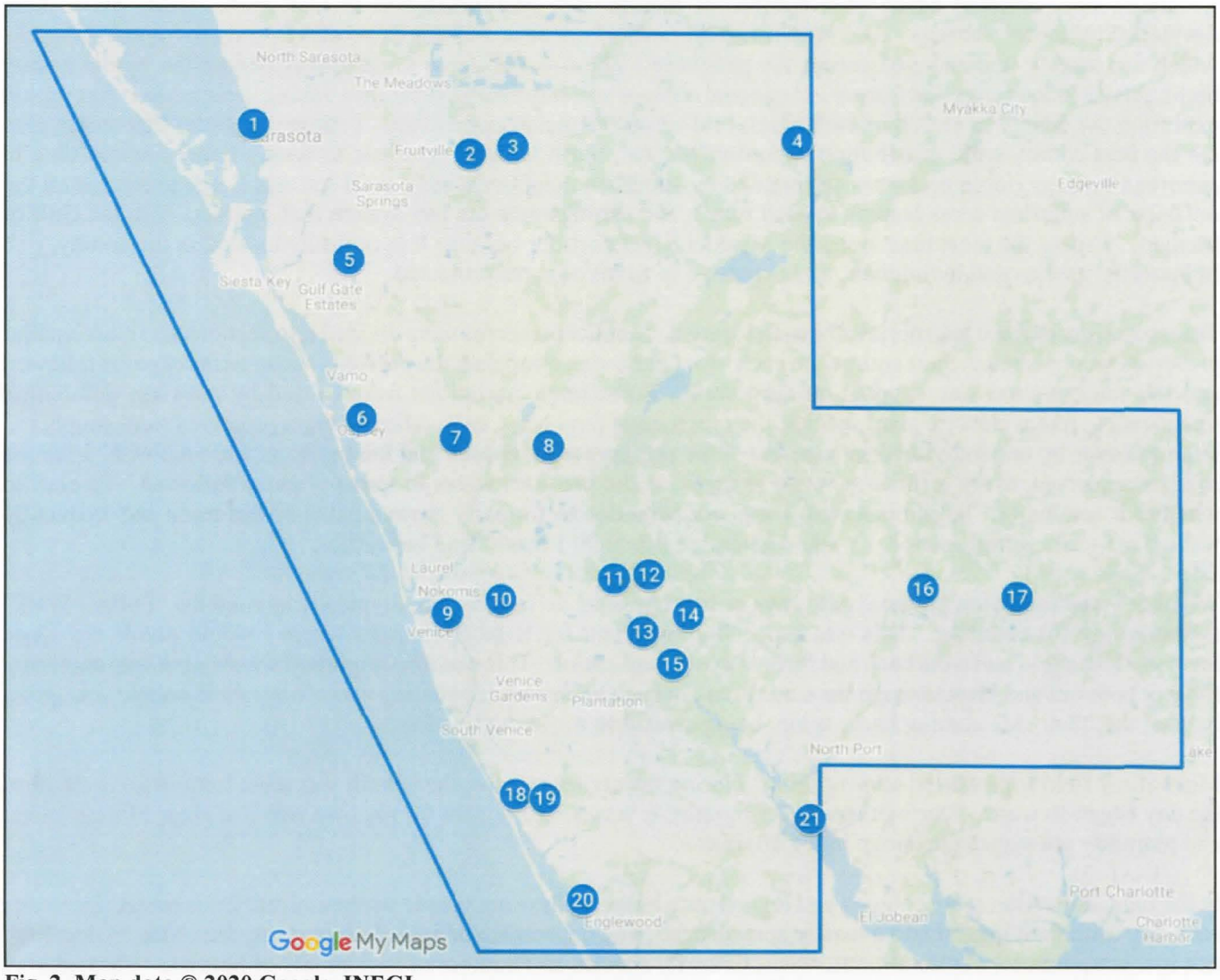


Fig. 2. Map data © 2020 Google, INEGI

1. Sarasota Garden Club
2. Celery Fields
3. Private Residence/Sarasota
4. Old Miakka
5. Red Bug Slough
6. Historic Spanish Point
7. Scherer Thaxton
8. Pinelands
9. Private Residence/Venice
10. Curry Creek
11. Sleeping Turtles North
12. T. Mabry Carlton, Jr.
13. Sleeping Turtles South
14. Deer Prairie Creek
15. Jelks
16. Myakkahatchee Creek
17. Walton Ranch
18. South Venice Lemon Bay
19. Manasota Scrub
20. Lemon Bay Park
21. Myakka Islands Point

As the county map and list above indicate, Sarasota County is rich in land set aside as preserves and environmental parks. For those of us who live here, we have many choices for hiking, birding, canoeing, kayaking, fishing, and of course, butterflying too. Of the 23 preserves and parks managed by the county, I surveyed 17. To that list, I added 2 additional gardens (Sarasota Garden Club and Historic Spanish Point) and two private residences, one in Sarasota and another in Venice. I chose locations that would give me the best overall distribution of butterflies in the county. In one year's time, this was an ambitious list of properties to visit especially for one person. The summaries below include all 21 preserves, parks and properties I visited. The number scheme below corresponds with the numbered locations on the map above.

1. Sarasota Garden Club
Address: 1131 Boulevard of the Arts, Sarasota, FL 34236
Size: 1 acre
GPS Coordinates: N 27.341744, W -82.547624

Description: The Sarasota Garden Club occupies over an acre of land with nine individual gardens which have been cultivated to accommodate a variety of growing conditions and purposes. They are designed and maintained solely by dedicated club members. The Master Plan for further development of the gardens calls for continuation of the wheelchair accessible pathway connecting all nine gardens with signage to identify the garden and its plant life. In this way the gardens will serve members and the public not only as a source of natural beauty and serenity, but as a Demonstration Garden for those interested in identifying plants appropriate to Florida gardening.

The Sarasota Garden Club is working with The Bay Park Conservancy to create natural connectivity between the gardens and the new 53-acre Bay Park that is currently under development.

The Sarasota Butterfly Club is also an active participant in maintaining and supporting the garden especially in the Catherine and Richard LaBrie Butterfly Garden which is found on the west side of the property (2).

Transects designated and surveyed:

Transects here are not required given the size of the garden. The primary focus for counting butterflies is the butterfly garden itself which amounts to one bricked walkway path through dense plantings specifically chosen to host and attract butterflies. Many of the plants are very mature and are excellent hosts for caterpillars and nectar sources for adults.

Comments: For such a small space, the butterflies can be plentiful here. It is common to see Orange-barred Sulphurs, Cloudless Sulphurs, Zebra Heliconians, White Peacocks, Dorantes Longtails and Monk Skippers. With mangroves nearby in the Bay Park, an occasional Mangrove Skipper can be sighted as well. Of special note, this is one of only two public spaces (both gardens) in the county where I was able to see the Polydamas Swallowtail and it was present on almost every visit. This is a beautiful butterfly and worth the visit to see them although don't expect them to land for a photo. The Polydamas proves to be very elusive but it is great fun to watch them fly circles around visitors in the garden.

Times surveyed in 2020: 5
Total butterfly species: 16
Total individual butterflies: 79

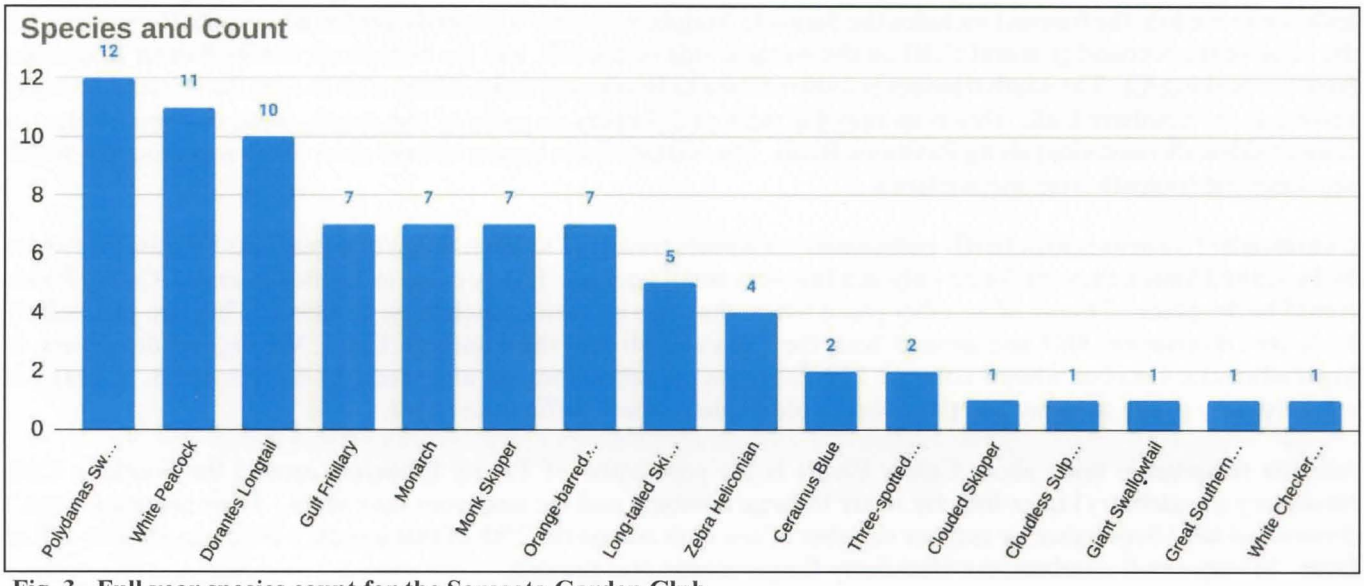


Fig. 3. Full year species count for the Sarasota Garden Club

Fig. 4. Garden entrance

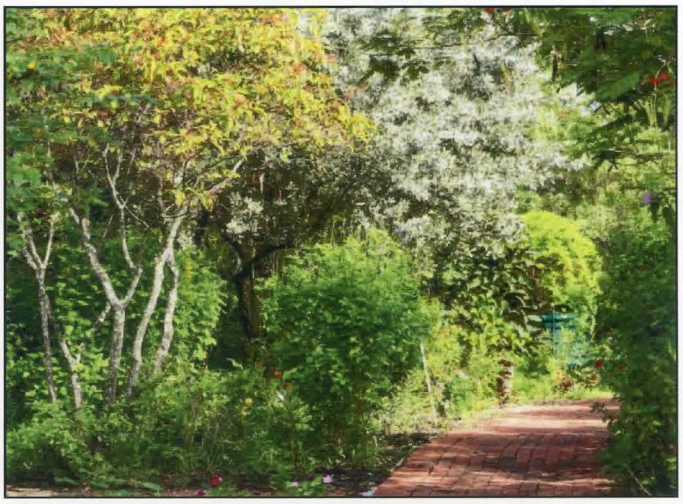


Fig. 5. Interior pathway

2. Celery Fields Regional Stormwater Facility
Address: 6799 Palmer Blvd., Sarasota, 34240
Size: 400 acres
GPS Coordinates: N 27.325275 W -82.433664

Description: The Celery Fields Regional Stormwater Facility is an important regional stormwater facility, handling runoff from 3,500 acres of the upper Phillippi Creek Basin. Historically farmed as celery fields, the existing wetlands were created to improve water quality and provide important wildlife habitat. The site provides varied terrain to walk, run or hike. Wildlife viewing may include a wide range of birds, as well as many migratory birds. You may see herons, black-necked stilt, ibis, terns, anhinga, cormorant, limpkin, sparrows and wrens. The Sarasota Audubon Society has noted at least 225 species (3).

Transects designated and surveyed: The most notable features of Celery Fields are the large Observation Hill, altitude 85 feet and 2,000 feet long (4), and the large stormwater ponds which give the place its purpose. The property is bisected by Palmer Boulevard with roughly half north of Palmer and the other half south. Given the size of the property, two transects were designated with each taking about 3 hours to study.

The north transect explores Observation Hill. The hill is generally oval shaped and has footpaths that traverse its sides and crisscross its flat top. Adjacent to the footpaths are large grassy areas or thick areas with shrubs and small to midsize trees. The transect frequently leaves the paths wherever possible to investigate what might be found. In addition to the hill, the transect includes the Sarasota Audubon Society's butterfly garden adjacent to the parking lot, the edge of the wetland (Central Cell) on the western side of the hill, and the boardwalk across Palmer Boulevard from the parking lot. The south transect is south of Palmer Boulevard and is a loop trail around the wetland formally known as the Southern Cell. This is an easy flat walk of 2-3 miles on paths of dirt (north, west, and south sides) or cement sidewalk (east side) along Raymond Road. The wetland has a border of trees most of the way around it which separates the footpath from the wetlands.

Comments: I've been told butterfly enthusiasts sometimes travel to Florida to see White Peacocks because elsewhere in the United States, they are found only in a few very small pockets. If they come to Sarasota County, Celery Fields would be the place. I know of no other place where they can be seen in such large numbers. They are particularly thick on Observation Hill and around both the Central Cell and the Southern Cell. My biggest days were in September and October when I counted 277 Peacocks on September 16, and then 323 on October 8. It really is extraordinary to see so many and their sheer volume make them difficult to count.

Another remarkable thing about Celery Fields is the population of Tawny Emperors around the Southern Cell. Hackberry (Sugarberry) trees line the water in large numbers and the emperors love them. Their presence wasn't discovered until September by another member of our club and on the 25th of that month, a field trip yielded 148 of them. In very small numbers, the Hackberry Emperor was also present.

The best place I found in Sarasota County to find and observe Brazilian Skippers is also at Celery Fields. Across the road from the parking lot on the south side of Palmer Road is a boardwalk over a small portion of the Southern Cell

wetland. The wetland is full of Alligator Flag, the host plant for the Brazilian. I found the skippers present almost every time I walked there and it's nice to be able to look down on the plants and the skippers actively flying about.

These three things alone make Celery Fields an interesting and productive place to visit. In addition to the species already mentioned, it is common to see Queens, Monarchs, Orange-barred Sulphurs, Fiery Skippers, Dorantes Longtails, Barred Yellows, and Black Swallowtails. Of special note, the Mallow Scrub-hairstreak and the Red Admiral were also sighted there.

Times surveyed in 2020: 7
Total butterfly species: 33
Total individual butterflies: 2,351

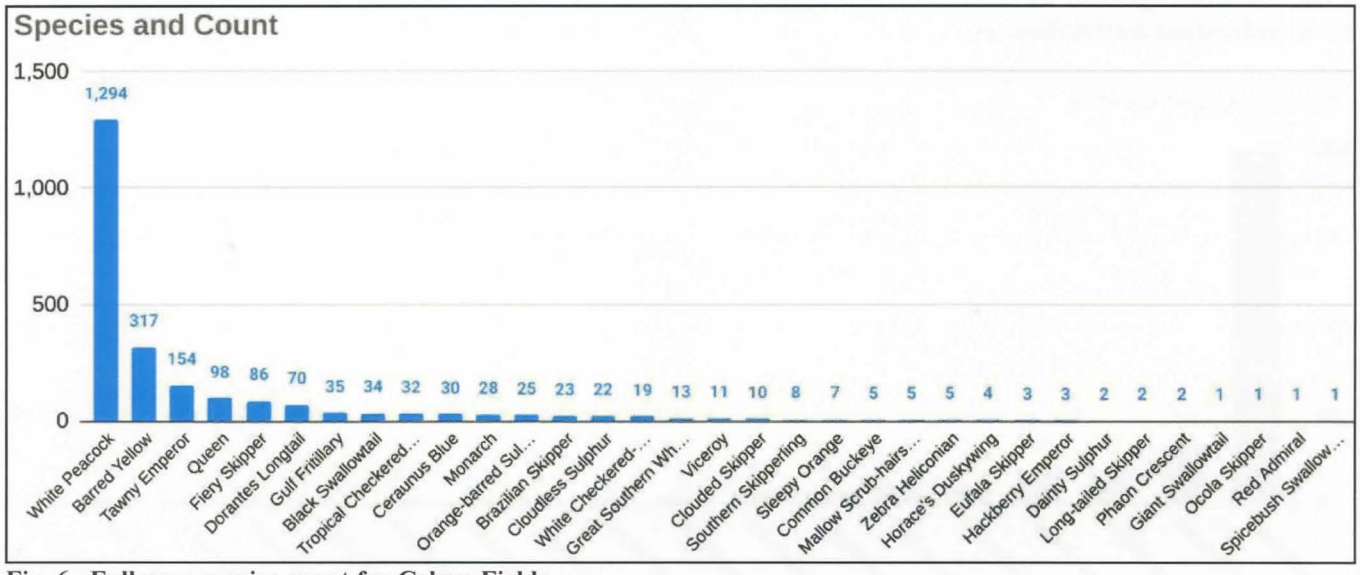


Fig. 6. Full year species count for Celery Fields

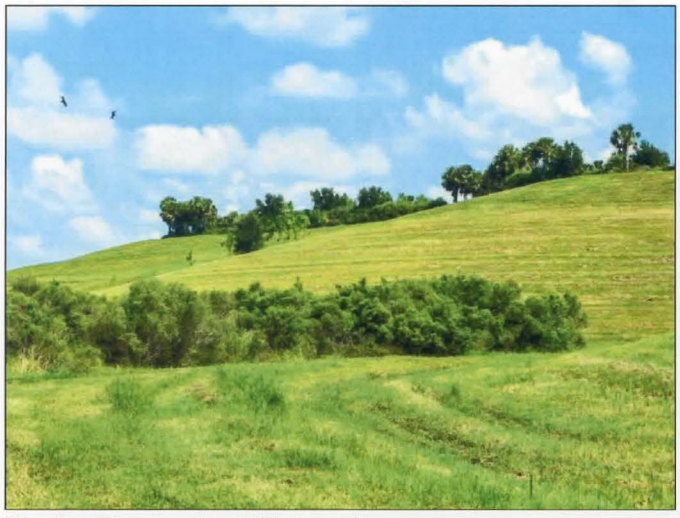


Fig. 7. Observation Hill from the west

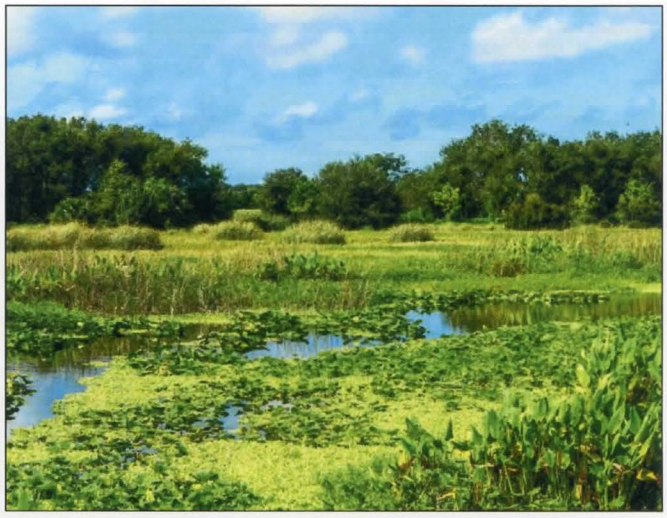


Fig. 8. Central Cell from the north boardwalk

3. Private Residence - Sarasota
Address: Private residence, address not available for publication
Size: 5 acres
GPS Coordinates: Near N 27.337634 W -82.439292

Description: The couple that owns this property made it available to survey as a courtesy to members of the Sarasota Butterfly Club. It is a 5-acre property, formerly cow pasture, and it is being returned gradually to its natural state. The property includes a home, some out buildings for animals, and both open and forested land.

Transects designated and surveyed: The land being relatively small compared to parks and preserves, no formal transects were required. The property was divided into grids and walked to cover it well.

Comments: Since this is a private residence and visiting was by invitation only, one visit was made during the year although the owners have an interest in making the property available to the Sarasota Butterfly Club for counts in the future. There was a very large number of White Peacocks on the property and they would flush up from the grass almost everywhere I walked. Also found were Phaon Crescents, Fiery Skippers, Dorantes Longtails, and both common blues, the Cassius and the Ceraunus. Most notable, a Red Admiral was sighted making this one of the few times I had spotted one during the year.

Times surveyed in 2020: 1
Total butterfly species: 18
Total individual butterflies: 167

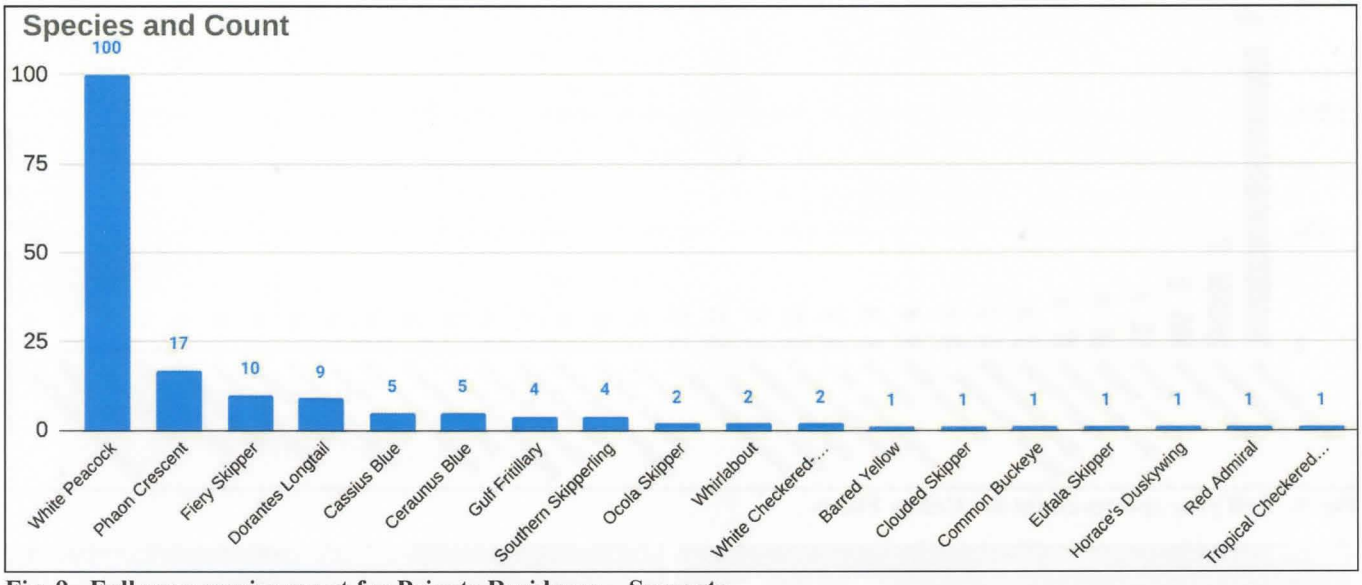


Fig. 9. Full year species count for Private Residence – Sarasota

Fig. 10. (LTR) John Lampkin and Wilbur

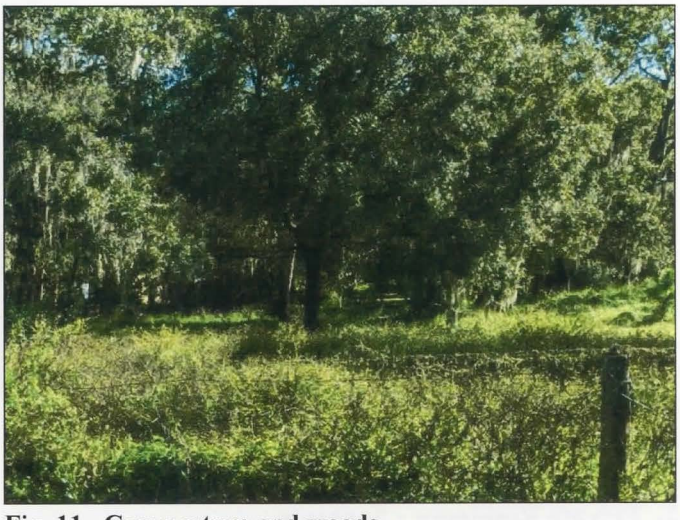


Fig. 11. Cow pasture and woods

4. Old Miakka Preserve
Address: 251 Myakka Road, Sarasota, 34240
Size: 132 acres
GPS Coordinates: N 27.334184 W -82.262337

Description: The preserve is named for Old Miakka, the historic rural community where the preserve is located. The variety of plant life here inspired Tim Cash (1954-1993), a local nursery owner and founding member of the Serenoa Chapter of the Florida Native Plant Society. A trail named in his honor passes through subtle changes in habitat, allowing visitors to experience the natural diversity that Tim admired. The tranquil beauty of this preserve has wildlife viewing that may include: gopher tortoise, swallow-tailed kite, and migratory songbirds. Plants such as longleaf pine, scrub oaks, Florida paintbrush and pawpaw are plentiful. Old Miakka Preserve has the highest natural elevation of any county park. The elevation reaches a height of 54 feet (5).

Transects designated and surveyed: The Tim Cash Loop Trail was the intended transect and there are many offshoots that lead deeper into the woods and scrub from the main trail. For the most part, walking is restricted to the trail system although off trail hiking is possible on a limited basis. The trail system can be completed in a single outing.

Comments: While the trail map is simple enough, I got lost each time I visited the preserve. I can only blame myself although part of the reason was the backtracking required due to seasonal flooding. Old Miakka Preserve is on the outer reaches of Sarasota County to the northeast so it is a must to include to study the distribution of butterflies county wide. It is also a beautiful and remote location all the way out Fruitville Road, so much so, that the road leading there changes from pavement to gravel.

On the one hand, based on my findings, I wouldn't necessarily recommend a visit to the preserve to look for butterflies. On the other, it turned out to be a place of discovery and still holds some interest. While butterflies are not present in large numbers, it is a good place to look for swallowtails.

On both my visits, I found Zebra Swallowtails and in varying parts of the preserve. It seems to be a common find due to the presence of pawpaw, the Zebra's host. The preserve also yielded my first Spicebush Swallowtail of the year. Although I later found them elsewhere, the one I found at Old Miakka was memorable. It was late in my first walk there and I was starting to suffer the effects of both heat and dehydration. I got lost and a little concerned about finding my way out of the preserve with the little water I had left. At a point when I started to feel a bit of desperation, I was joined by a beautiful Spicebush that posed for me right alongside the trail. It calmed me down and with the help of Google Maps, I walked out of the preserve.

Times surveyed in 2020: 2
Total butterfly species: 23
Total individual butterflies: 99

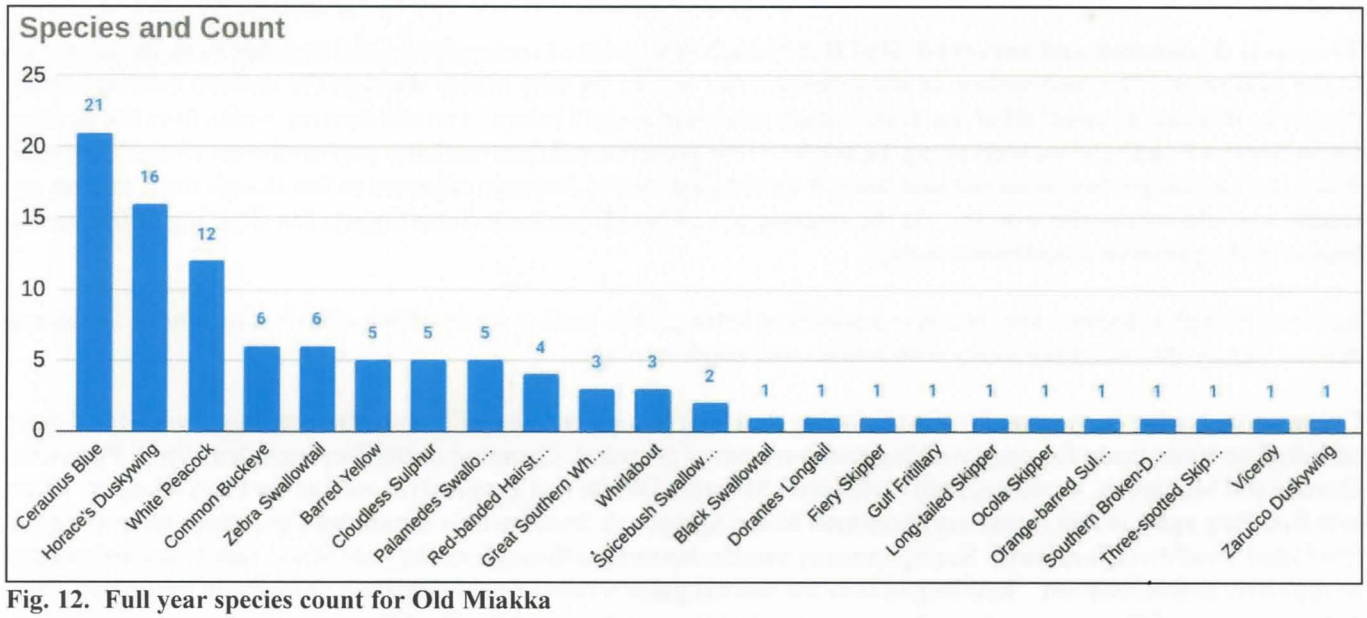


Fig. 12. Full year species count for Old Miakka

Old Miakka is the only preserve where I was able to find and photograph the Palamedes Swallowtail. I had done some research and found that redbay, the host for the Palamedes, was present around the preserve. It is wooded and can be a swampy place, so that was also favorable. On my second visit, I was near the end of my walk and

still hadn't found a Palamedes. I decided to walk into the scrub and just wait. I had seen large swallowtails from a distance – and so I waited. After about 15 minutes, a number of Palamedes actually came to me and stayed near my location for more than 10 minutes. I was able to check another elusive butterfly off my list. At the same location but from afar, I may have also seen an Eastern Tiger Swallowtail. However, given the distance and the uncertainty, it remains on my list as does Old Miakka for future visits.

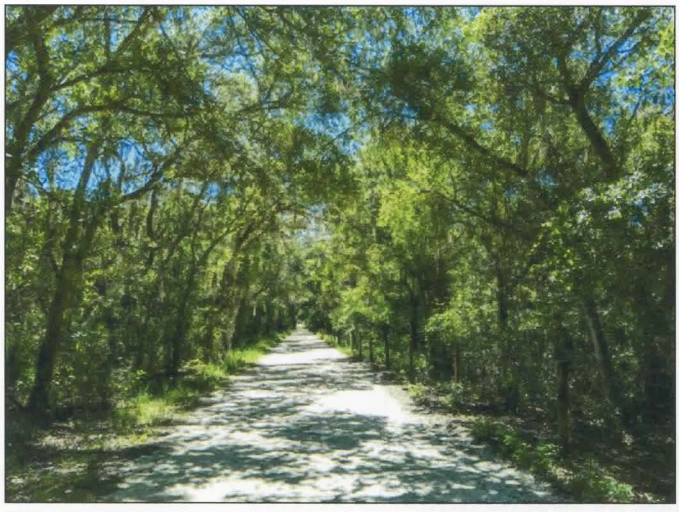


Fig. 13. Gravel entrance road

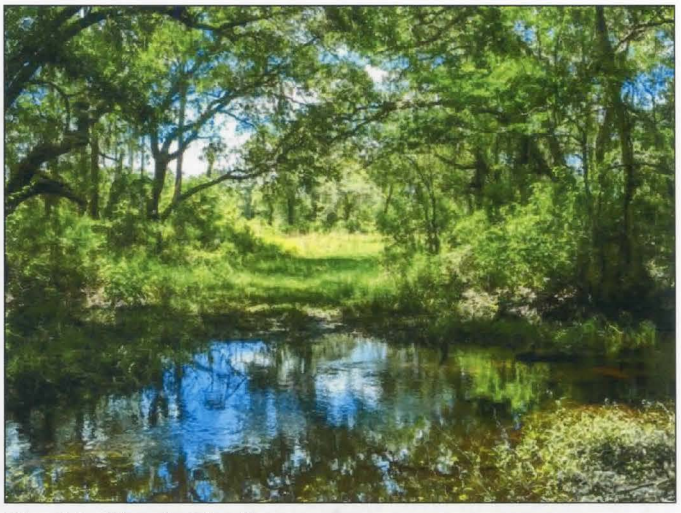


Fig. 14. Flooded trail

5. Red Bug Slough Preserve
Address: 5200 Beneva Road, Sarasota, 34231
Size: 72 acres
GPS Coordinates: N 27.277198 W -82.497745

Description: Red Bug Slough Preserve is a small oasis of natural Florida in the midst of suburban Sarasota. The slough, named for the cotton stainer bug, flows through the preserve and forms a calm lake. Hiking and biking trails through the preserve are shaded by pines and loblolly bay that give way to oaks draped with Spanish moss. Wildlife viewing may include: grey squirrel, marsh rabbit, river otter, and occasional alligator, migratory songbirds, wood ducks and plants such as partridge pea, string lily, milkweed, passionflower and frostweed (6).

Transects designated and surveyed: Red Bug Slough is a series of rectangles joined together from the southeast to the northwest. The trail system is not extensive but works its way nicely through the various sections of the preserve. It is easy to cover all of the trails in each section in about 3 hours. I would start my walks from the parking lot on Beneva Road heading west along the border of the preserve and then work my way northwest along the slough. Since the central portion is an out-and-back, I would first survey the area adjacent to the slough itself and on my return, I would survey the woods. At the intersection of South Lockwood and Gypsy, the final leg of the survey begins in the preserve's northwest section.

Red Bug Slough is located very much in a suburban setting. The walk is a mix of beautiful oak hammock landscape nestled tightly into neighborhoods with houses and condominiums.

Comments: Earlier in the year I resisted visiting Red Bug Slough because of its suburban setting. I wish I had gone earlier. The trails made for easy walking and were never crowded. Common butterflies included White Peacocks, Queens and Monarchs, Viceroys, both Checkered-Skippers (White and Tropical) as well as the Fiery Skipper. What sets Red Bug apart is that it was very common to see Spicebush Swallowtails in numbers and there were always a few Giant Swallowtails as well. Seeing so many smaller butterflies throughout the year, it was nice to see larger ones so regularly at this location. Red Bug is only the second place where I found Brazilian Skippers in the county. The central section of the preserve has a few ponds with Alligator Flag and the Brazilians were present on every visit. Given its location near the city of Sarasota, Red Bug Slough is a convenient location for many people to spot butterflies.

Times surveyed in 2020: 4
Total butterfly species: 25
Total individual butterflies: 477

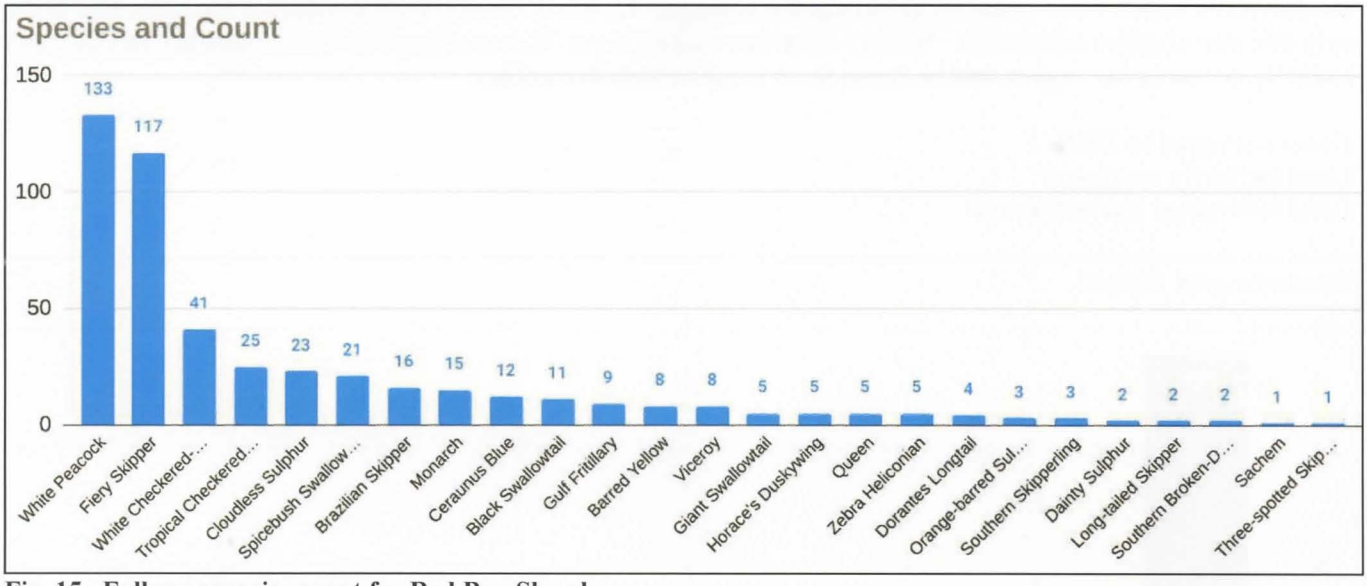


Fig. 15. Full year species count for Red Bug Slough

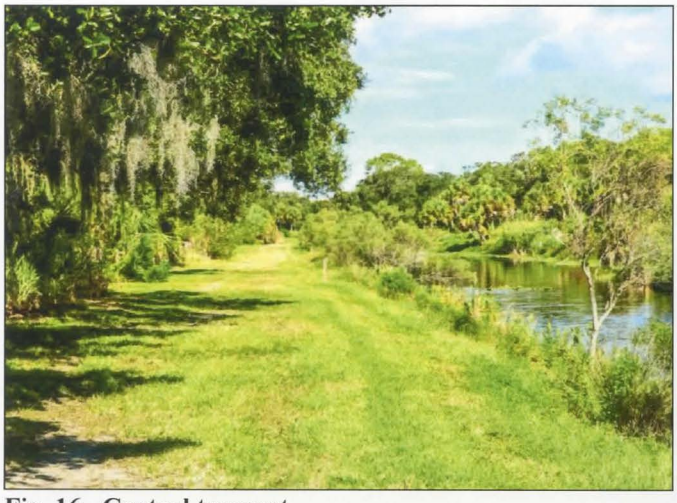


Fig. 16. Central transect

Fig. 17. The slough

6. Marie Selby Botanical Gardens' Historic Spanish Point Campus
Address: 337 N Tamiami Trail, Osprey, FL 34229
Size: 30 acres
GPS Coordinates: N 27.201350 W -82.490586

Description: In 2020, Selby Gardens adopted Historic Spanish Point as a second campus. This cultural landmark is less than 10 miles from the Downtown Sarasota campus and boasts an archaeological record that encompasses approximately 5,000 years of Florida prehistory. A one time pioneer homestead and the former winter estate of Chicago-born Bertha Palmer, Marie Selby Botanical Gardens' Historic Spanish Point campus provides visitors the opportunity to explore that heritage via an ancient shell midden and collection of historic structures and serves as one of the largest preserves showcasing native Florida plants that is interpreted for and open to the public. It was Palmer's family who both donated the property and helped it become the first site in Sarasota County to be listed in the National Register of Historic Places (7).

Transects designated and surveyed: No formally designated transects were required. This is a botanical garden and paths and walkways are conveniently laid out for visitors. The size of the gardens lends itself well to a visit of a couple leisurely hours during which butterflies may be spotted.

Comments: The Sarasota Butterfly Club has outings for its members and this was the site of one of those. Butterflies are easiest to spot at the outdoor native butterfly garden in the middle of the property. Since it was March, it was a little early to find butterflies in abundance but we were treated to a number of Polydamas Swallowtails which I have only found in garden settings. Of the 21 places I visited during the year, this is the only one that charges admission. While I have not visited it yet, Historic Spanish Point currently has the only butterfly house in the region and its focus is on local Florida butterflies.

Times surveyed in 2020: 1
Total butterfly species: 8
Total individual butterflies: 28

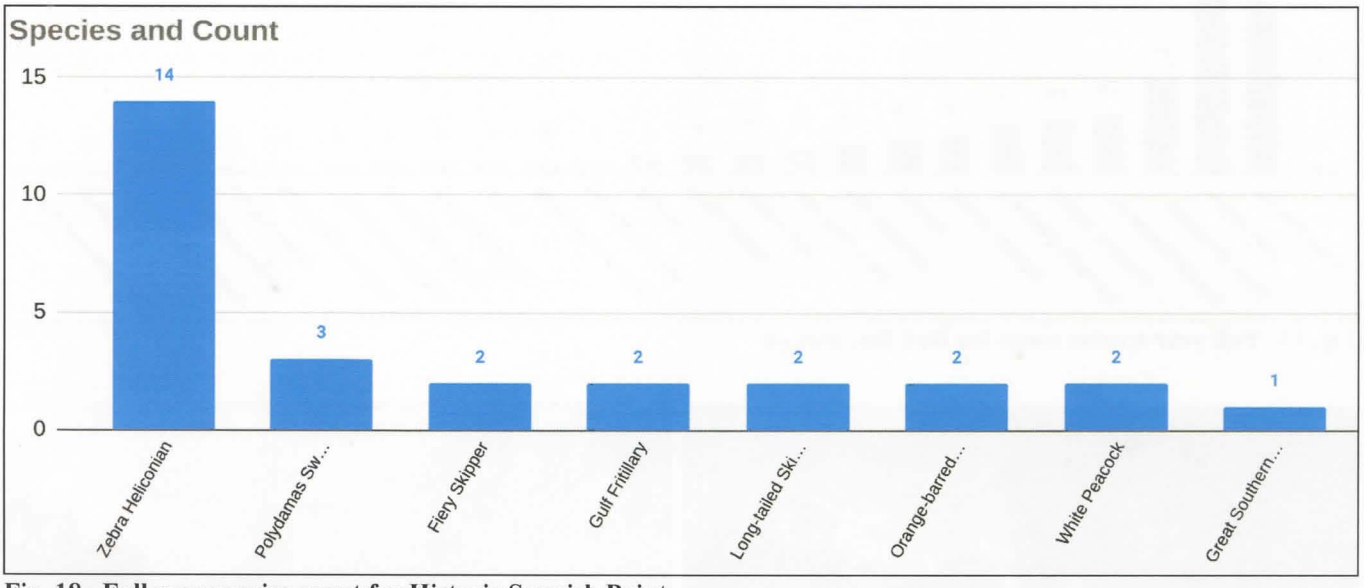


Fig. 18. Full year species count for Historic Spanish Point

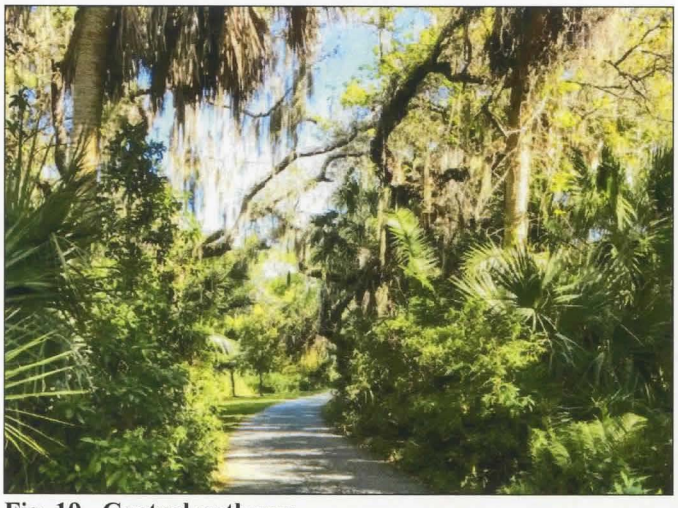


Fig. 19. Central pathway

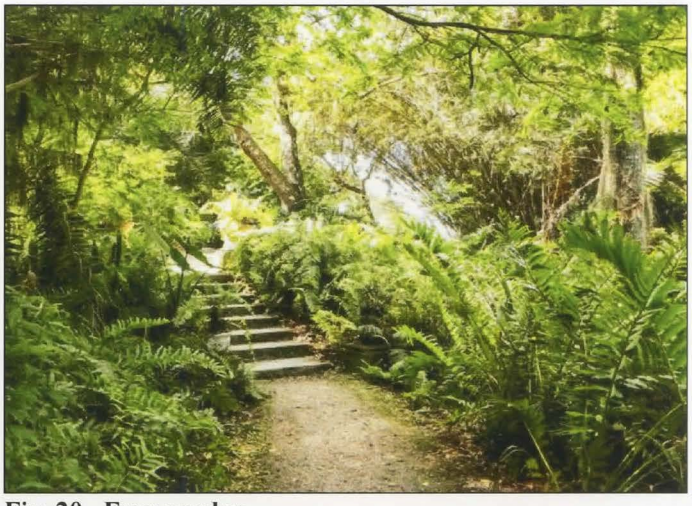


Fig. 20. Fern garden

7. Scherer Thaxton Preserve
Address: 13125 Honore Ave., Osprey, 34229
Size: 287 acres
GPS Coordinates: N 27.140614 W -82.416526

Description: This property was acquired in 1992 to continue the natural landscape and wildlife corridor adjacent to the Mary Thaxton Memorial Preserve of the Oscar Scherer State Park. Elsa Scherer Burrows left her family's ranch to the state in memory of her father, Oscar. Former Sarasota County Commissioner Jon Thaxton, a local Florida scrub jay expert, led the effort to protect additional lands adjacent to the park. Habitats include pine flatwoods and depressional wetlands (8).

Transects designated and surveyed: Simply stated, Scherer Thaxton is a walk around a lake. Having said that, there are open mowed areas near the parking lot and a marked wetland buffer between the mowed area and the lake. The transect proceeds from the parking lot counter clockwise around the lake and there are many small offshoots from the trail to explore. On the west side of the lake, there are wide trails joining the lake trail with the powerline which runs northwest to southeast. At the northwest most area of the powerline is a large wetland. Also on the west side, there is access (during the dry season) to a small peninsula that juts into the lake. The trails including the powerline area are typically mowed but at times the grass can be as high as two feet. The final quarter mile of the loop is paved along Honore Avenue and finishes at the parking lot.

Comments: Scherer Thaxton was the second most visited preserve in my survey. It was surveyed at least monthly. It is centrally located in the county, has abundant butterfly species and individuals, and is interestingly juxtaposed between wilderness preserve (Oscar Scherer State Park) and I-75, the major north-south transportation artery in southwest Florida.

The most common species include Barred Yellows, Phaon Crescents, Ceraunus Blues, White Peacocks, Dainty Sulphurs, Pearl Crescents, Little Metalmarks, and Southern Skipperlings. Of note are the Little Metalmarks. They are consistently found on the west side of the lake and on April 22, 2020, I counted 18 of them. I did not find Little Metalmarks anywhere else in the county with the same regularity or abundance. Also on the north and west side, this is an excellent area to find Viceroys due to the presence of willows along the lake. Perhaps most notably, it was here at Scherer Thaxton where I twice found the Neamathla Skipper. I found it nowhere else county wide and I know of no evidence it has been spotted by anyone else in the county.

This preserve is easily accessed and easily walked. Survey challenges are primarily related to rainfall and subsequent flooding. This impacts mostly the west side trail and the powerline area. During the rainy season, it is common to wade through open water. Also, it is a noisy place – a very noisy place. No matter where you are in the preserve there is a significant amount of road noise from both Honore Avenue and I-75 just to the east. This will only worsen.

The Honore Avenue corridor is one of the most actively developing areas of Sarasota County. A large apartment complex has just been completed adjacent and to the north of Scherer Thaxton and other very large tracts of land are being subdivided and developed nearby for single family homes. This whole area will experience a significant transformation in the coming years. Like a number of the other county preserves, development will shape this environment and Scherer Thaxton will sit in the middle of it.

Times surveyed in 2020: 13
Total butterfly species: 41
Total individual butterflies: 1,804

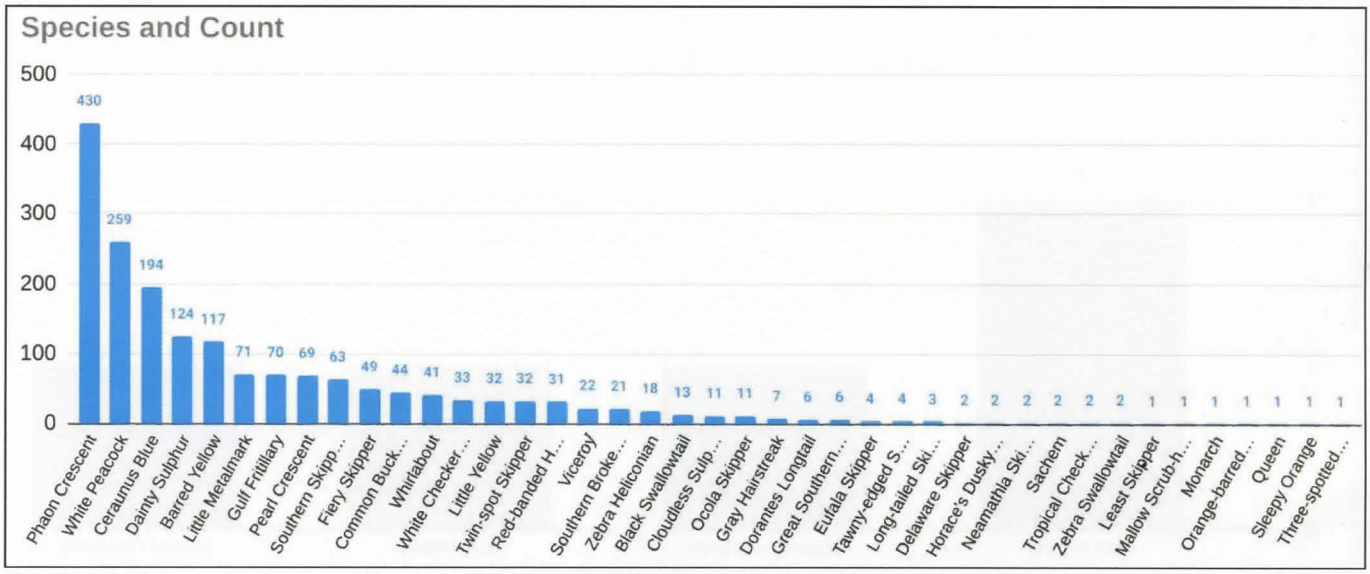


Fig. 21. Full year species count for Scherer Thaxton

Fig. 22. The lake

Fig. 23. Lake trail – west side

8. Pinelands Reserve
Address: 4000 Knights Trail Road, Nokomis, 34275
Size: 6,151 acres
GPS Coordinates: N 27.166585 W -82.404300

Description: Pinelands Reserve is a 5,601-acre site that surrounds the Central County Solid Waste Disposal Complex. Currently, a small portion of the reserve is open to the public, with more access and trails planned for the future. Great views of wildlife may include: bald eagles, a wide variety of birds, alligators, turtles, fish, deer, bobcats and gopher tortoises (9).

Transects designated and surveyed: The trails are quite simply laid out. Walking them can be easily accomplished in an hour. I also walked the mowed border areas of the preserve even though they can't be described as trails. Flooding was a problem on the border paths even though it was early into the wet season.

Times surveyed in 2020: 1
Total butterfly species: 4
Total individual butterflies: 5

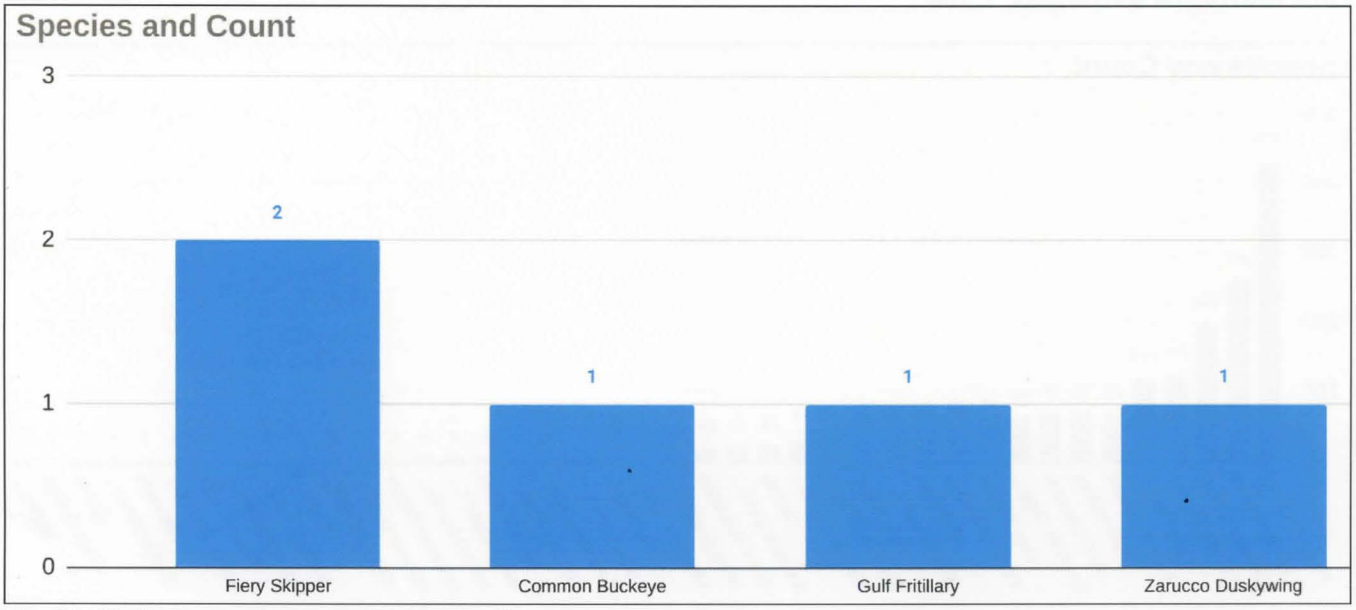


Fig. 24. Full year species count for Pinelands

Comments: Of all the places I visited in the county, Pinelands showed the least promise for butterflies. I found only 5 butterflies in an hour and a half. Most of the trails run through thick palmetto scrub so presumably, there just aren't host plants to attract butterfly species. A nearby shooting range was quite active and the noise of gunfire could easily be heard. My visit being so unproductive, I decided to leave and not to return to the site.

Fig. 25. Mowed border area

Fig. 26. Mixed forest trail

9. Private Residence - Venice
Address: Private residence, address not available for publication
Size: 1 acre
GPS Coordinates: Near N 27.107733, W -82.444338

Description: This is a heavily wooded private residential lot well situated on a channel leading into Roberts Bay and the Gulf of Mexico. The property is graced with extensive gardens offering a variety of nectar flowers. Coinvine grows wild and offers the Statira Sulphur a perfect home.

Transects designated and surveyed: Given the size of the property and the density of vegetation, walking was permitted only on narrow paths. Most of the property is easily accessible by its path system.

Times surveyed in 2020: 1
Total butterfly species: 8
Total individual butterflies: 24

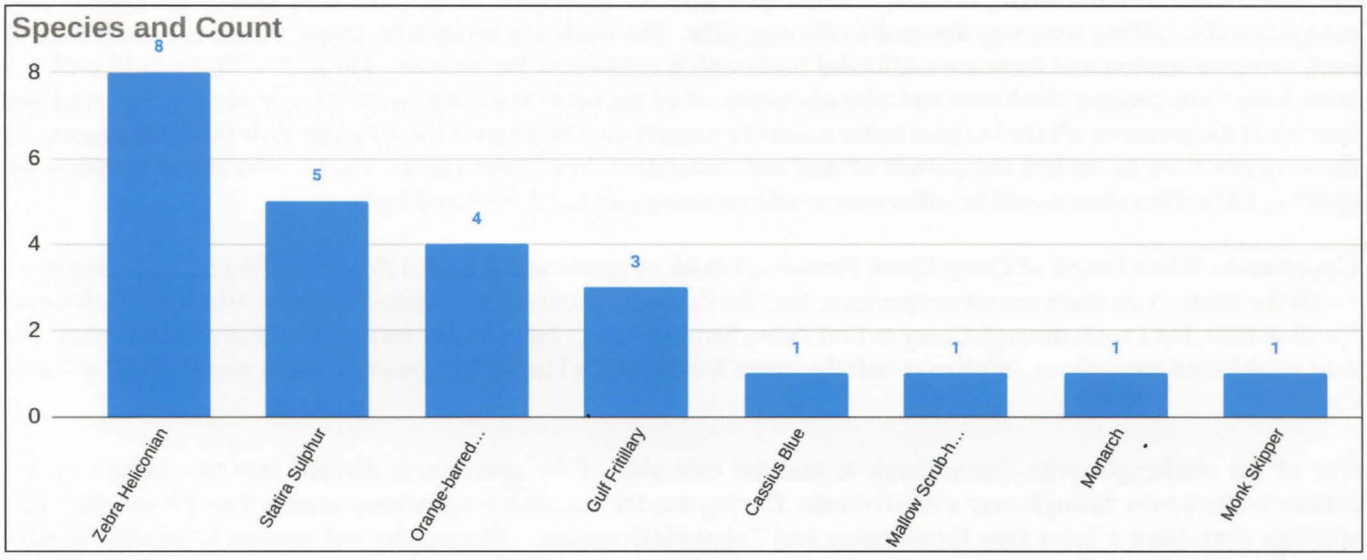


Fig. 27. Full year species count for Private Residence – Venice

Comments: It was May and I received an email from a friend asking me to verify the species of butterfly in a photo just taken. It was a Statira Sulphur and the first 2020 sighting in the county I was aware of. A quick visit was required to see if I too could spot and photograph the species. Along with individual Statiras there was a mating pair and a number of other species including Zebra Heliconians and Orange-barred Sulphurs. For a day which had no plans for butterflies, it became very productive. Even if there were no butterflies, a visit would have been worthwhile. For a private residence, the gardens are extensive and the plantings are lush. It is a testament to years of hard work and botanical understanding. The butterflies which inhabit the place are lucky to live somewhere so enchanting.

Fig. 28. Statira Sulphurs

Fig. 29. Statira Sulphur chrysalis

10. Curry Creek Preserve
Address: 1500 Pinebrook Road, Venice, 34285 (east entrance)
Size: 80 acres
GPS Coordinates: N 27.115563 W -82.417324

Description: This preserve protects rare coastal longleaf pine flatwoods while providing valuable open space for a growing community. Scrub and pine flatwoods blend into tidal marshes and swamps along the creek's edge. Mangroves and giant leather ferns line the creek. Wildlife viewing may include: gopher tortoise, alligator, bobcat, bald eagle and wading birds such as the herons, ibis and limpkins (10).

Transects designated and surveyed: There are two entrances into Curry Creek Preserve - one on the west side of the park off Albee Farm Road, the other on the east side off Pinebrook Road. The west side of the park is very compact and so all my time was devoted to the east side. The trails are set up with loops around the outer edge of each preserve section and there are additional trails which criss-cross the interior. On each visit, I would walk the outer loop trails counter clockwise and take advantage of all the interior trails as well. Frequently, I would walk the interior of the preserve off-trail to gain better access to butterflies. The interior scrub can be quite thick but aggressive mowing practices to control the growth of mid and understory trees opens up access to more of the property for spotting butterflies than would be otherwise available using just the designated trails.

Comments: When I think of Curry Creek Preserve, I think of gentle and graceful Zebra Swallowtails floating by as I walk the trails. Yes, there are other species to see like Zebra Heliconians, Cloudless Sulphurs, Black and Spicebush Swallowtails, but I walk through Curry to find Zebra Swallowtails. Pawpaw grows in abundance and the Zebras are well established throughout. Well over half the Zebra Swallowtails I found in Sarasota County were sighted at Curry Creek.

One of the challenges with Curry Creek is that the east side of the preserve is divided into two large sections connected by a pass through over a small creek. During the dry season it is quite easy to pass through and the creek area has even been a good area for skippers and Zebra Heliconians. During the wet season, however, the pass through may be flooded and without tall boots, it may be impassable. While in both sections Zebra Swallowtails may be found, the back section beyond the pass through has the most. It's worth getting wet to get back there.

Times surveyed in 2020: 6
Total butterfly species: 20
Total individual butterflies: 129

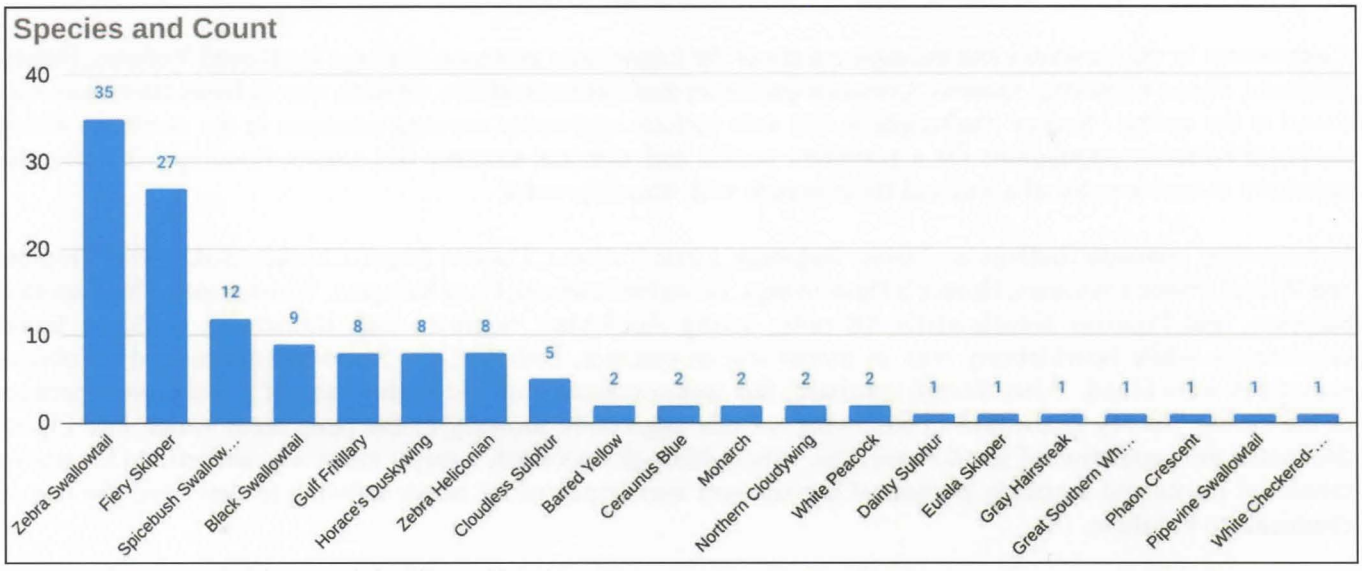


Fig. 30. Full year species count for Curry Creek

Fig. 31. Pine flatwoods

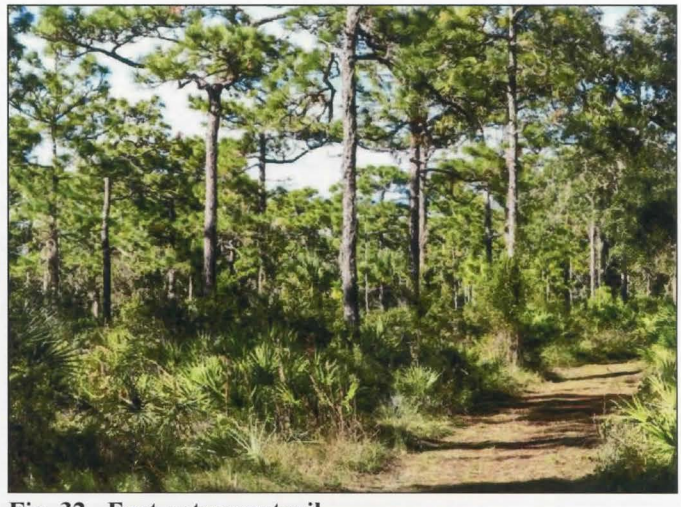


Fig. 32. East entrance trail

11. Sleeping Turtles Preserve North
Address: 3462 Border Road, Venice, Florida 34292
Size: 174 acres
GPS Coordinates: N 27.122678 W -82.351988

Description: Sleeping Turtles Preserve North provides multiple passive recreation opportunities and preserves the character and quality of the Myakka River. The preserve's trails wind through floodplain swamps, pine flatwoods, upland mixed forests and overviews of the river where visitors might see "sleeping" turtles basking on fallen trees. Other wildlife viewing may include: gopher tortoises, swallow-tailed kites, alligators, snakes and migratory songbirds (11).

Transects designated and surveyed: Sleeping Turtles Preserve North is divided equally north and south by Border Road. The northern tract is called the Ligon Family Conservation Area and the southern tract is simply referred to as Rohlwing.

The Ligon area transect starts at the single parking area designated for the preserve and heads west parallel to Border Road and covers extensively the grassy meadows on the west side of the Ligon area. The transect does not follow designated trails. The intent here is to survey the meadows and small hammocks in the middle of them. The Rohlwing

transect starts to the south across Border Road from the parking area. The area surveyed represents the northern quarter of Rohlwing. There are numerous small open sections here but most of the landscape is heavily wooded with palms, oaks and other trees. In between the Ligon and the Rohlwing transects is Border Road and the ditches alongside should not be overlooked. They are abundant with butterflies.

Comments: In the meadows and the adjacencies of the Ligon area, common findings are Barred Yellows, Dainty Sulphurs, Phaon Crescents, Queens, Common Buckeyes and Ceraunus Blues. Of note, one Fulvous Hairstreak was found in the spring. Survey challenges in this area include aggressive mowing practices in the meadows which decimate butterfly populations for a sustained period and seasonal summer wet season flooding. At times, the meadows resemble more of a wetland environment with standing water.

In Rohlwing, common findings are Dainty Sulphurs, Little Yellows, Cassius Blues, Checkered-skippers (Tropical and White), Phaon Crescents, Horace's Duskywings, Zebra Heliconians, Fiery Skippers, Whirlabouts, Three-spotted Skippers, and Pipevine Swallowtails. Of note, during April-May, Southern Oak Hairstreaks could be found consistently while Sparkleberry was in bloom and in summer, both Mallow Scrub-hairstreaks and a Fulvous Hairstreak were found. Also, though unrelated, this area contained multiple mating pairs of pileated woodpeckers in the spring. Survey challenges in Rohlwing include aggressive mowing of the open areas which like Ligon, decimated the population of small butterflies. Also, although important, a major effort was undertaken to remove unwanted plants and a sizable portion of the transect was impacted by heavy mowing to deter and the use of chemicals to kill them.

In the ditches separating Ligon and Rohlwing, species in particular abundance are Dainty Sulphurs, Ceraunus Blues, Little Yellows, Phaon Crescents, Tropical Checkered-skippers, Fiery Skippers and Whirlabouts. Like all ditches, they are mowed periodically and butterfly populations vary from abundance to near zero based on that schedule.

Sleeping Turtles North Preserve was surveyed more than any other area in Sarasota County for a number of reasons. Part of the Myakka River corridor, it is centrally located within the county. It has a varied landscape with plentiful meadows, wooded areas, and productive roadside ditches. This diversity leads to an abundance of both butterflies and butterfly species. It is also close to where I live and in this first year of pandemic, it served as a nearby and safe place to visit. Significant development (home building/subdivisions) is occurring now and will continue near the preserve in the coming years. Establishing a detailed baseline of butterfly volume and diversity in 2020 should greatly help to understand the impact of development in years to come.

Times surveyed in 2020: 32
Total butterfly species: 46
Total individual butterflies: 5,313

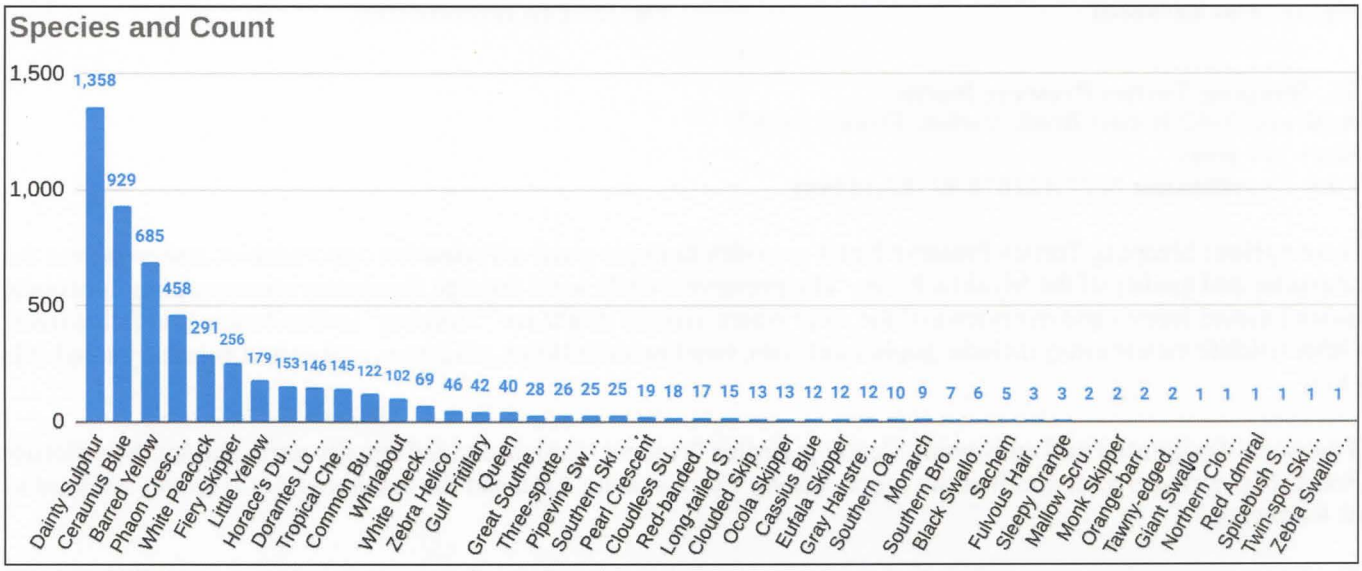


Fig. 33. Full year species count for Sleeping Turtles North

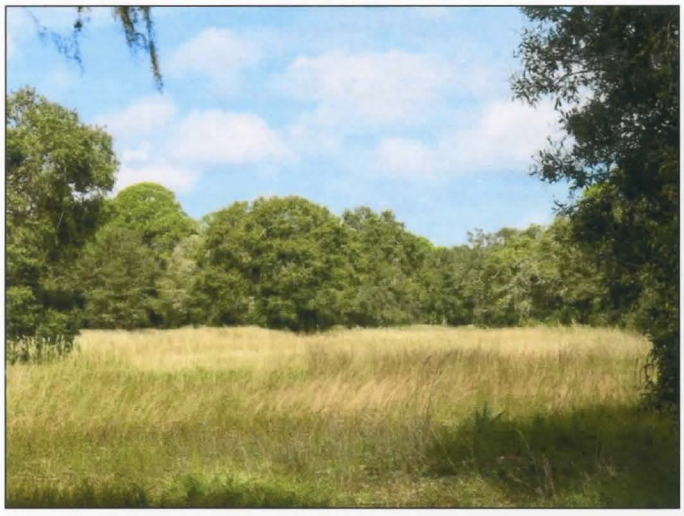


Fig. 34. Ligon meadows

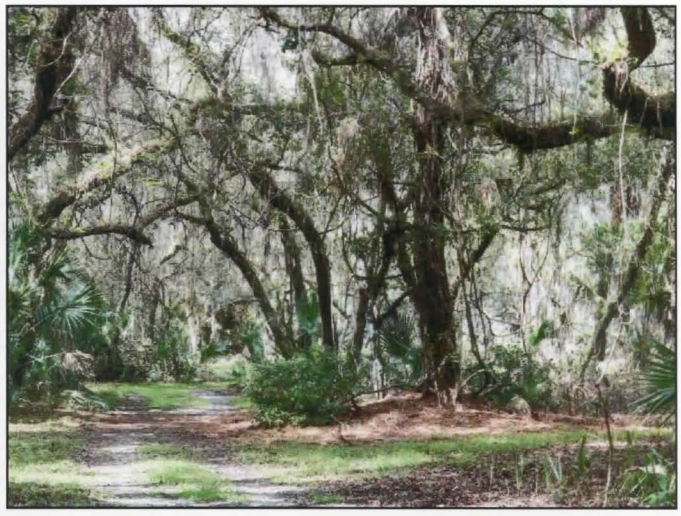


Fig. 35. Rohlwing trail

12. T. Mabry Carlton, Jr. Memorial Reserve (Carlton Reserve)
Address: 1800 Mabry Carlton Parkway, Venice, 34292
Size: 24,565 acres
GPS Coordinates: N 27.122836 W -82.342744

Description: The T. Mabry Carlton, Jr. Memorial Reserve (Carlton Reserve) was acquired in 1984. It is a multifaceted property where protection of wetlands, expanses of pine flatwoods and dry prairies provide natural area conservation, unique wilderness recreation opportunities, cultural heritage preservation and public water supply safety. It is a true wilderness excursion with unique getting back to nature experiences. Wildlife viewing may include: whitetailed deer, turkey, bobcat, swallow-tailed kite, and various wading birds. Plants to be seen include pine lily, tarflower and blue flag iris (12).

Transects designated and surveyed: Initial attempts to survey the reserve were met with failure. The trails beginning at the main parking lot proved to be frequently flooded but when passable, yielded little or no butterflies. Rather than giving up, a final attempt was made to survey the South Border Trail and this proved to be highly productive. The South Border Trail access point is just north of the intersection of Border Road and Mabry Carlton Parkway, on the parkway itself. There is no formal parking at the entrance so one has to leave a vehicle on the shoulder of the road. The trail may be accessed on both the east and the west side of Mabry Carlton Parkway. The west side is most productive although butterflies are present on both sides. According to reserve staff who I met out on the trail, the west side was burned "some years ago" and therefore, now that it has regrown, features good plant diversity. The South Border Trail transect includes the whole loop on the west side of Mabry Carlton Parkway. It is approximately 3 miles long and both butterfly species and individuals are plentiful. The transect also includes a portion of the trail to the east of the parkway, from the parkway to the creek, about a quarter mile out and back. The ditches along the parkway are also surveyed, in particular, for smaller species that like disturbance, *e.g.*, frequent mowing.

Comments: The most common butterfly species found along the South Border Trail is the Gulf Fritillary and it is found in large numbers, more than anywhere else surveyed in Sarasota County. The passionvine is thick. For example, my survey of this area on July 24, 2020 counted 101 Gulf Fritillaries. Other butterflies commonly found here include Little Yellows, Horace's Duskywings, Cloudless Sulphurs, Whirlabouts, Zebra Heliconians, Ceraunus Blues, and Queens.

Survey challenges include the remoteness of the trail, a small creek that must be waded when the water is up, and feral hogs. The trail itself is a loop on the west side of the parkway which requires a walk of more than a mile to reach its apex. It is at that point that one must wade through water during the rainy season. The "back side" to the west and the most remote part of the loop has significant trail damage from feral hogs and it was there, at that location, where I had my one and only encounter with one. It was a distant encounter (60 yards), uneventful, and before I was noticed, I backtracked away from that trail section and worked my way back to the car.

Carlton Reserve is part of the Myakka River corridor and it is centrally located within the county. With almost 25,000 acres it is large enough to study on its own. I've only touched the reserve but the part I have, shows a significant number of butterflies, especially the Gulf Fritillary. Like most of the conserved land in Sarasota County, Carlton Reserve will be a neighbor to new and expanding development especially along Border Road. While the park is generally large enough to withstand it, the transect that I surveyed and described above is immediately adjacent to the planned development of new luxury homes on 45 acres. The data collected in 2020 may be used in the future to judge the impact of that and other development nearby. Also, it is my understanding that this reserve is well managed and part of the management here is to employ fire through controlled burns. Should the South Border Trail area experience either a natural or controlled fire, my data could be used to determine the degree and speed with which butterfly species and populations return.

Times surveyed in 2020: 7
Total butterfly species: 38
Total individual butterflies: 978

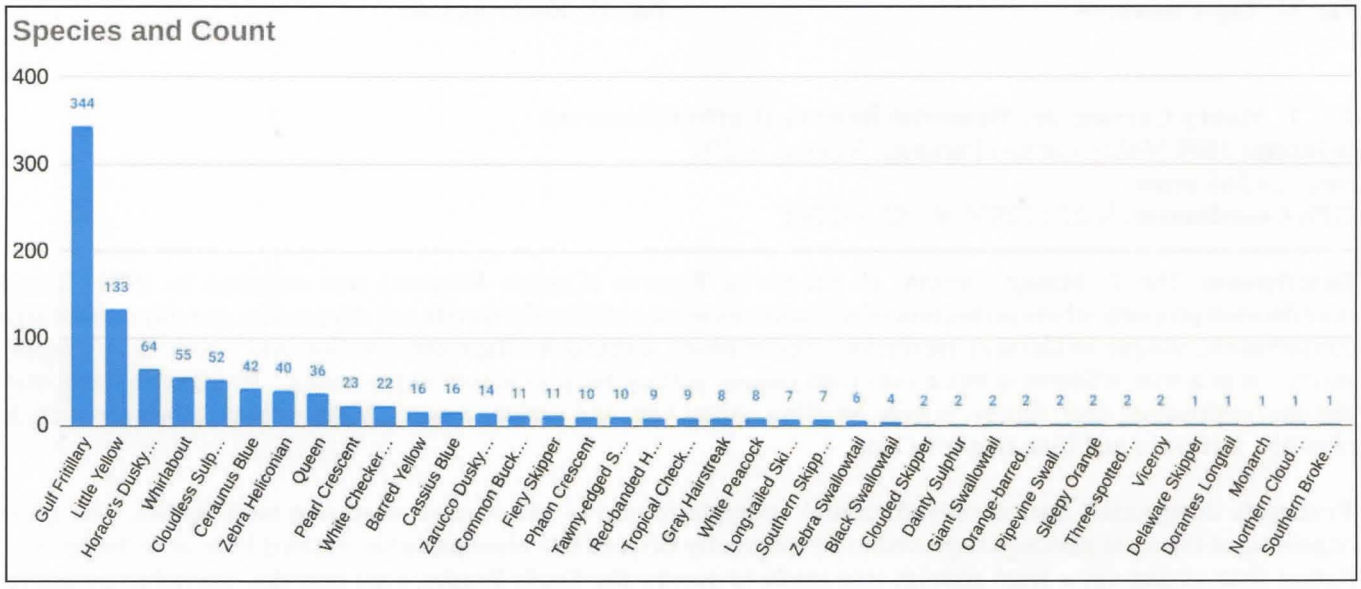


Fig. 36. Full year species count for Carlton


Fig. 37. South Border Trail – West


Fig. 38. South Border Trail – East

13. Sleeping Turtles Preserve South
Address: 2800 N. River Road, Venice, 34292
Size: 213 acres
GPS Coordinates: N 27.106561 W -82.346281

Description: Sleeping Turtles Preserve South provides shady hiking trails through oak hammocks and pine flatwoods. It is bordered on the east by the Myakka River and has a large man made lake in the center of the preserve. Fishing, hiking and birding are some of the nature-based recreational activities available. Wildlife viewing may include: gopher tortoises, swallow-tailed kites, alligators, snakes and migratory songbirds (13).

Transects designated and surveyed: The parking lot is located in the southwest corner of the preserve. After entering the preserve, I would walk north parallel to River Road to the first trail that heads east into the interior. There are a series of 5 loop trails within the preserve and I would walk them all. Gradually heading north, the trails join with the lake trail which circumnavigates the lake. I would walk about half of this trail, the southern half, and then head back toward the start. Adjustments must be made by time of year since some of the trails including the entrance can be flooded during the wet season.

Comments: Sleeping Turtles Preserve North is just to the north on the other side of I-75 from Sleeping Turtles Preserve South. Given how abundant and diverse the butterflies are in the northern preserve, it is surprising Sleeping Turtles South does not have more to offer. It is a nice walk and it performs a very useful role protecting both water quality and the Myakka River corridor from development; however, there just aren't many butterflies here. What I did find were small sulphurs, mostly Barred Yellows, Phaon Crescents, and White Peacocks, all very common butterflies that can be found in most other parts of the county.

Besides having few butterflies, some of the challenges with this preserve are road noise and feral hogs. With River Road to the west and I-75 to the north, most parts of the preserve are impacted by noise. On the east side of the lake where the trail narrows and the forest canopy is more overgrown, I found areas where feral hogs had caused damage. Walking alone wherever feral hogs are present represents a risk and given how many other places there are to spot butterflies, the risk is not necessary. The above challenges speak to why I only visited this preserve twice during the year.

Times surveyed in 2020: 2
Total butterfly species: 16
Total individual butterflies: 89

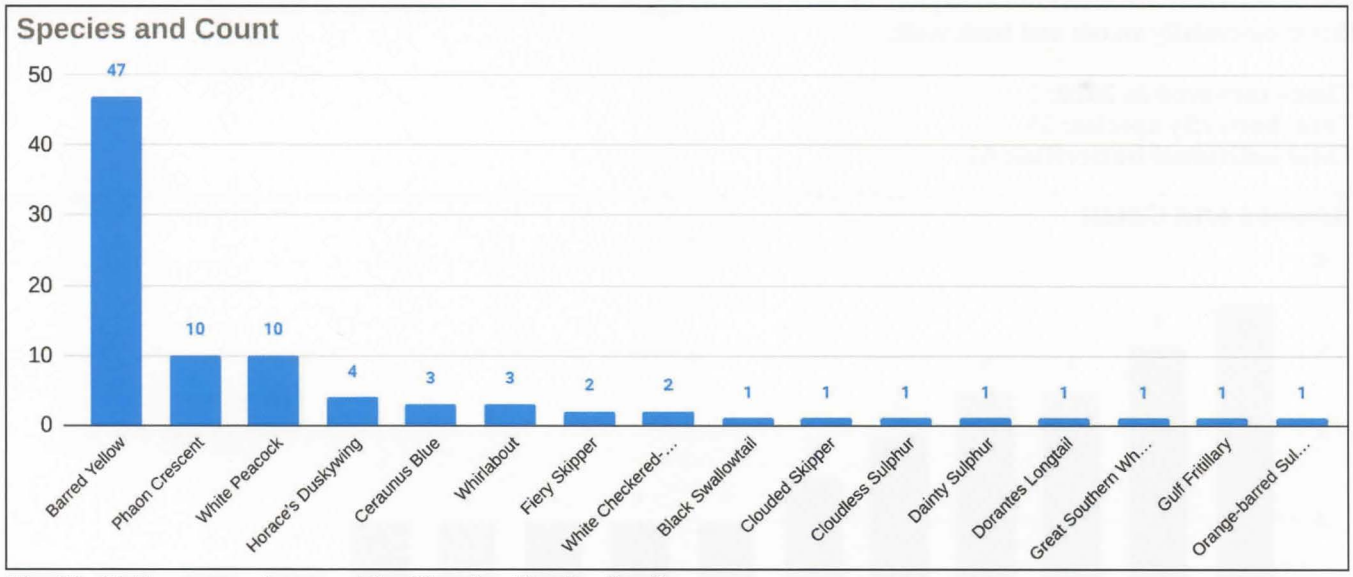


Fig. 39. Full year species count for Sleeping Turtles South

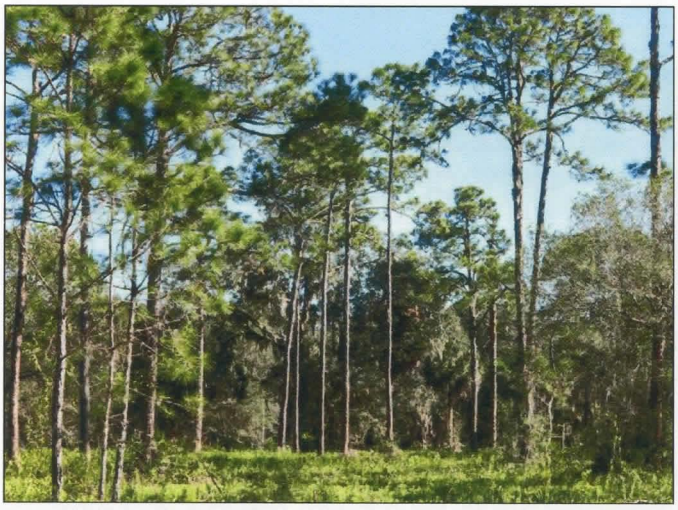


Fig. 40. Pine flatwoods

Fig. 41. From the lake trail looking south

14. Deer Prairie Creek Preserve
Address: 7001 Forbes Trail, Venice, 34292 (north entrance)
Size: 6,439 acres
GPS Coordinates: N 27.107847 W -82.318981

Description: This preserve protects the floodplain of the Myakka River, a designated Wild and Scenic River. The preserve features pine flatwoods, prairie hammock and seasonal wetlands, providing scenic overlooks along the Myakka River and Deer Prairie Creek. It is a wilderness lover's dream for nature hiking. Wildlife viewing may include: gopher tortoise, alligator, river otter, wild turkey, swallow-tailed kite, Florida scrub-jay, and wading birds. Plants include: St. John's wort, tarflower and pine lily (14).

Transects designated and surveyed: Parking for the preserve is at its very north end so all trails lead to the south. With more than 70 miles of trails it is hard to do this property justice on foot. The trail leading into the park also serves as a road for maintenance. There is a parallel track immediately to the east so this helps avoid a simple out and back. There are meadows to explore on both sides so again, it helps avoid counting in the same area even though this is essentially an out and back walk.

Times surveyed in 2020: 1
Total butterfly species: 15
Total individual butterflies: 61

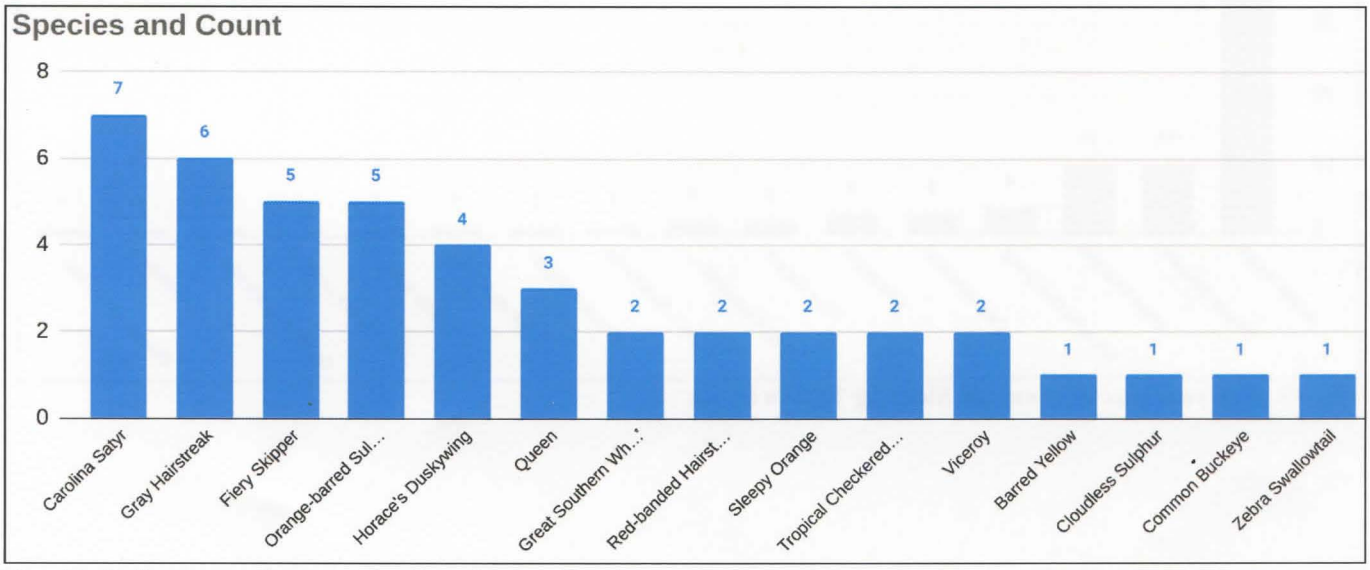


Fig. 42. Full year species count for Deer Prairie Creek

Comments: More time needs to be spent here in the future. My first visit was successful and I enjoyed surveying the preserve but I did not visit until early July. Oddly enough, the species I found the most of was the Carolina Satyr. This was the only site in the county where this species was found. I also spotted Orange-barred Sulphurs, Horace's Duskywings and a Zebra Swallowtail, but overall, there weren't that many butterflies. I was looking forward to a return trip, which I made in late summer, but the road to the preserve was closed due to construction. I made a third attempt in late fall and the preserve was flooded due to a recent tropical storm. I look forward to returning to Deer Prairie Creek but it will have to be next year.

Fig. 43. Entrance trail from parking lot

Fig. 44. Westside meadow

15. Jelks Preserve
Address: 2300 N. River Road, Venice, 34292
Size: 614 acres
GPS Coordinates: N 27.091104 W -82.338187

Description: Acquired in 1999 with generous support of the Jelks Family Foundation, the preserve borders the Myakka River, forever protecting a piece of the riverine floodplain. Visitors will traverse through a varied landscape of hammocks, pine flatwoods, and seasonal wetlands. Some trails may be cool as you stroll to the river through canopy hammocks, others may be open and sunny as they cross pine flatwoods. Wildlife viewing may include: gopher tortoises, swallowtail butterflies and swallow-tailed kites, song birds and an assortment of wildflowers, such as Carolina jessamine and coralbean (15).

Transects designated and surveyed: One large loop trail leads around the entire preserve and cross trails allow shortcuts to be made at many points along the loop. The designated transect is to walk the outer loop clockwise covering the entire park.

Comments: The thing I remember most about the preserve is hog damage. Feral hogs had torn up the ground significantly and in numerous places. The hog damage was obviously such an issue that I even came across a very large steel cage trap designed for capturing them. Given the risks of encountering hogs, I did not feel comfortable walking the grounds but did so anyway. (A large Audubon group had just finished a hike so I thought if they could, I could too, although they were a large group and I was alone.) The first section of the preserve was fairly extensive pine flatwoods and the butterflies were few. In fact, generally speaking, the butterflies were few at the entire preserve with the exception of two places.

Well into the preserve and on the east side not far from the Myakka River, there is a wet prairie.. It was filled with sunshine and like an oasis where butterflies collected. It was very accessible from the main trail and was populated with White Peacocks, Barred Yellows, and even a Red Admiral. This was one of the very few places in the county where I found a Red Admiral. A second small haven for butterflies was an unlikely place near the corner of North River Road and Center Road, two of the largest roads in the area. In a tight space near the outer perimeter of the preserve were 7 Queens, the only Queens I found in the park.

Jelks is another valuable resource protecting the Myakka River both in terms of water quality and protecting the river from development. That said, with few butterflies and what appears to be too many hogs, it proved less than ideal to survey.

Times surveyed in 2020: 1
Total butterfly species: 8
Total individual butterflies: 55

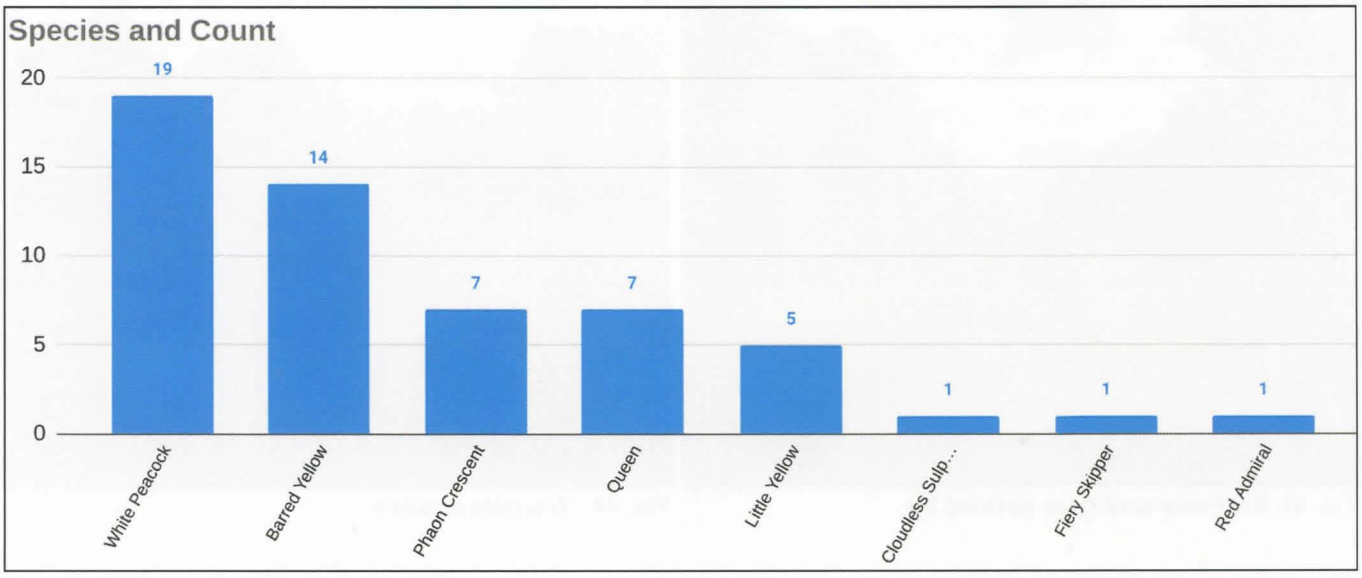


Fig. 45. Full year species count for Jelks

Fig. 46. East side trail

Fig. 47. Trail heavily damaged by hogs

16. Myakkahatchee Creek Environmental Park
Address: 6968 Reisterstown Road, North Port, 34291
Size: 162 acres
GPS Coordinates: N 27.109727 W -82.206252

Description: This park is owned by the city of North Port and operated by Sarasota County. The shared-use trails are popular with equestrians, off-road bicyclists and hikers seeking nature and solitude. Wildlife viewing may include: a wide variety of birds, alligators, turtles, fish, deer, bobcats and gopher tortoises (16).

Transects designated and surveyed: The preserve is, generally speaking, a long oval running northwest to southeast. Myakkahatchee Creek bisects the preserve lengthwise. While there are some small loop trails to walk, the main trail follows the creek on both its banks. Small bridges are situated to cross the creek. I walked the trail counterclockwise

and took every opportunity to leave the trail both to explore the creek's banks as well as any land that was adjacent and accessible. Notably, on the north side of the creek trail, there is a marshy area thick with willow trees and this area, during the warmer months, is one of the best in the county for finding Viceroys.

Comments: Myakkahatchee Creek is a little jewel of a park. Most all of the creek trails are heavily shaded so it isn't necessarily the most productive place for finding butterflies. In fact, on my first visit there in late winter on a day a little too gray and chilly, I found no butterflies at all. I didn't even count the outing as a field trip since there was nothing to count. My return trip in May was more successful but the numbers were still quite small except for Viceroys. For this species of butterfly alone, I recommend a visit to the creek. In the course of about 30 minutes, I found 9 Viceroys among the willows, more than I found anywhere else in Sarasota County.

Times surveyed in 2020: 1
Total butterfly species: 8
Total individual butterflies: 28

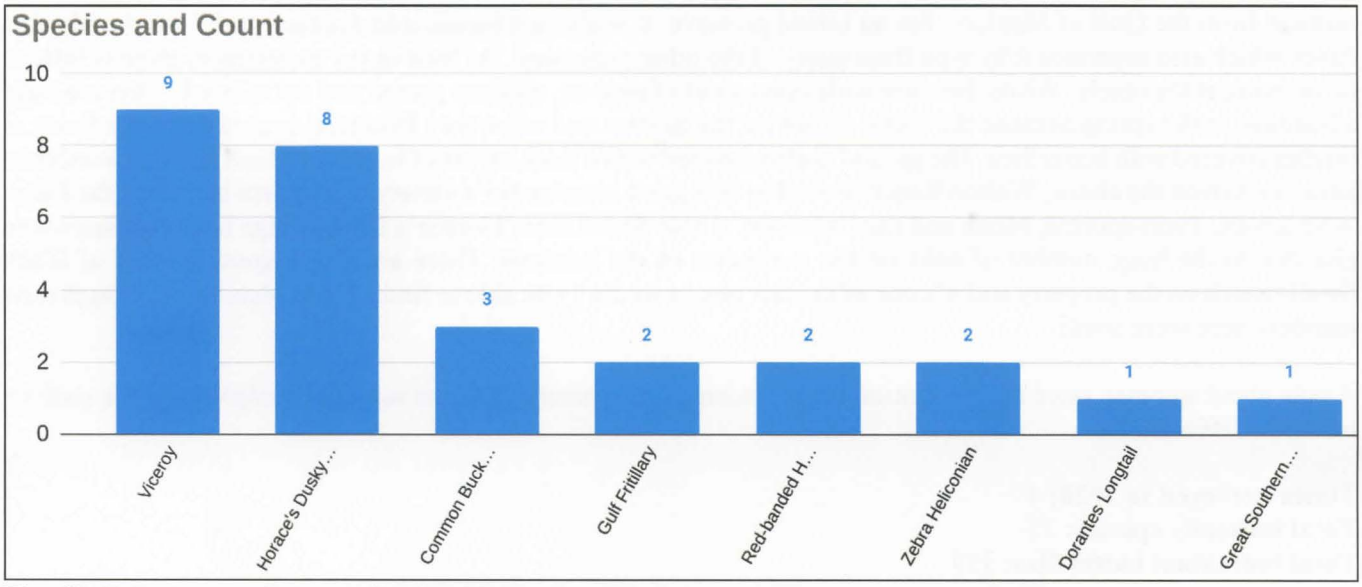


Fig. 48. Full year species count for Myakkahatchee Creek

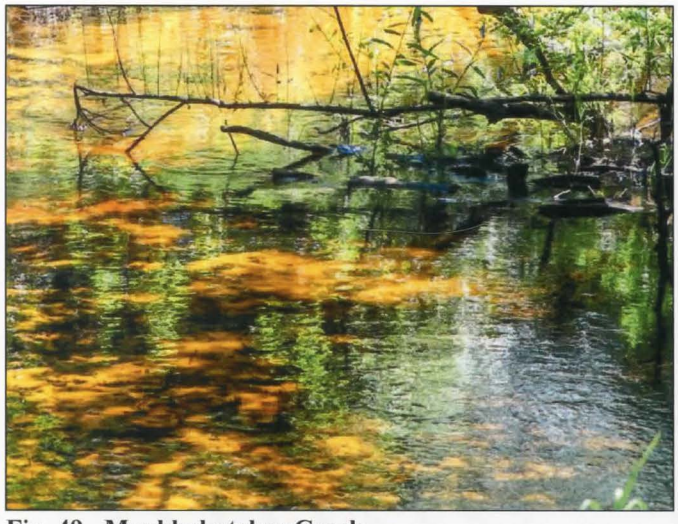


Fig. 49. Myakkahatchee Creek

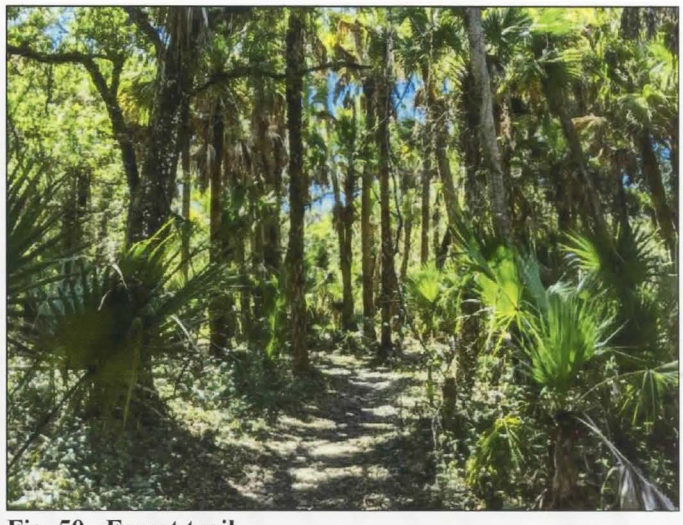


Fig. 50. Forest trail

17. Walton Ranch
Address: 7020 N. Toledo Blade Blvd., North Port, 34291
Size: 3,760 acres
GPS Coordinates: N 27.120250 W -82.1155346

Description: Walton Ranch is an active cattle ranch with beautiful natural areas. The shared-use trails are popular with equestrians, off-road bicyclists, birders and hikers seeking nature and solitude. Great views of wildlife may include: gopher tortoises, alligators, and a wide variety of birds, including caracara and wild turkey. Visitors can also observe a wide array of wildflowers, such as narrow-leaf sunflower and blue flag iris (17).

Transects designated and surveyed: Walton Ranch is so large that it isn't possible to see most of it on foot. Of all the places I visited in Sarasota County, the ranch is the most wide open. That makes sense since it is pasture land and it is not uncommon to see cattle in the distance. I restricted myself to an area about the size of a square mile in the southwest section of the ranch. This includes the parking lot. I would spend little time on the designated trails. I would use the trails just to get me to a new section and then walk off trail using a Pollard technique, traversing the landscape to cover it well. I found I could cover a square mile well in about 3 hours.

Comments: Of all the surveyed areas this year, Walton Ranch is the farthest to the east, also meaning, it is the farthest from the Gulf of Mexico. For an inland preserve, it is also a considerable distance east from the Myakka River which also separates it by type from many of the other preserves. At least in my experience, there is little to no mowing at the ranch. While there are wide open areas of pasture, they are grazed and not mowed. This is a huge advantage in the spring because the cattle do not eat the thistles and when they flower, it is as if there is a forest of thistles covered with butterflies. The ground is also covered with a thick carpet of frog fruit which is also a wonderful attractor. Given the above, Walton Ranch proved to be a good location for a variety of skippers including the Fiery, Whirlabout, Twin-spotted, Monk and the Delaware. I also found more Horace's Duskywings here than anywhere else due to the huge number of oaks on the perimeter of the pastures. There are also a good number of Black Swallowtails on the property and it's one of the few places where I was able to find a Little Metalmark, though their numbers here were small.

A note about summer, once the wet season begins, some of the pastures become seasonal wetlands and the walking becomes difficult.

Times surveyed in 2020: 4
Total butterfly species: 25
Total individual butterflies: 339

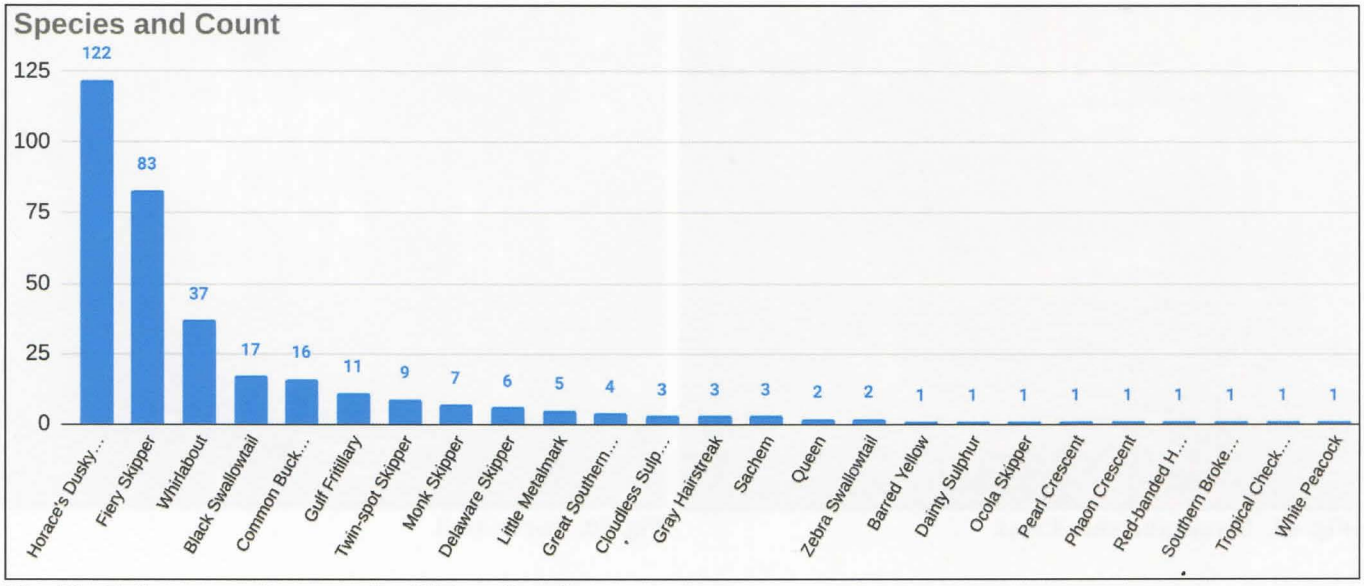


Fig. 51. Full year species count for Walton Ranch

Fig. 52. Wide open pasture

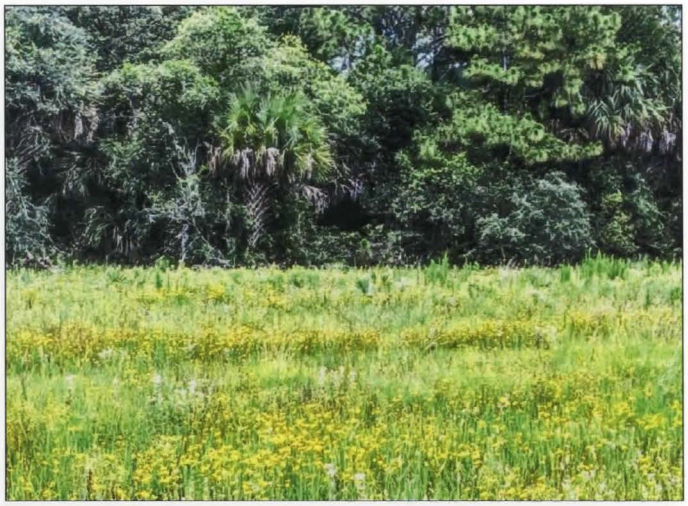


Fig. 53. Wildflowers under the power lines

18. South Venice Lemon Bay Preserve
Address: 6200 Osprey Road, Venice, 34293
Size: 225 acres
GPS Coordinates: N 27.022834 W -82.410164

Description: A peaceful retreat for visitors and a refuge for several protected animals and plants. Tucked in an urban location, the park provides opportunities for outdoor recreation and environmental education. Look for plants such as mangroves, cord grasses, oak species, lupine, palafox, coontie, and Curtis' milkweed. Wildlife viewing may include: gopher tortoises, Florida scrub jays, bald eagles, river otters and an assortment of snakes, including the Eastern coachwhip (18).

Times surveyed in 2020: 2
Total butterfly species: 10
Total individual butterflies: 50

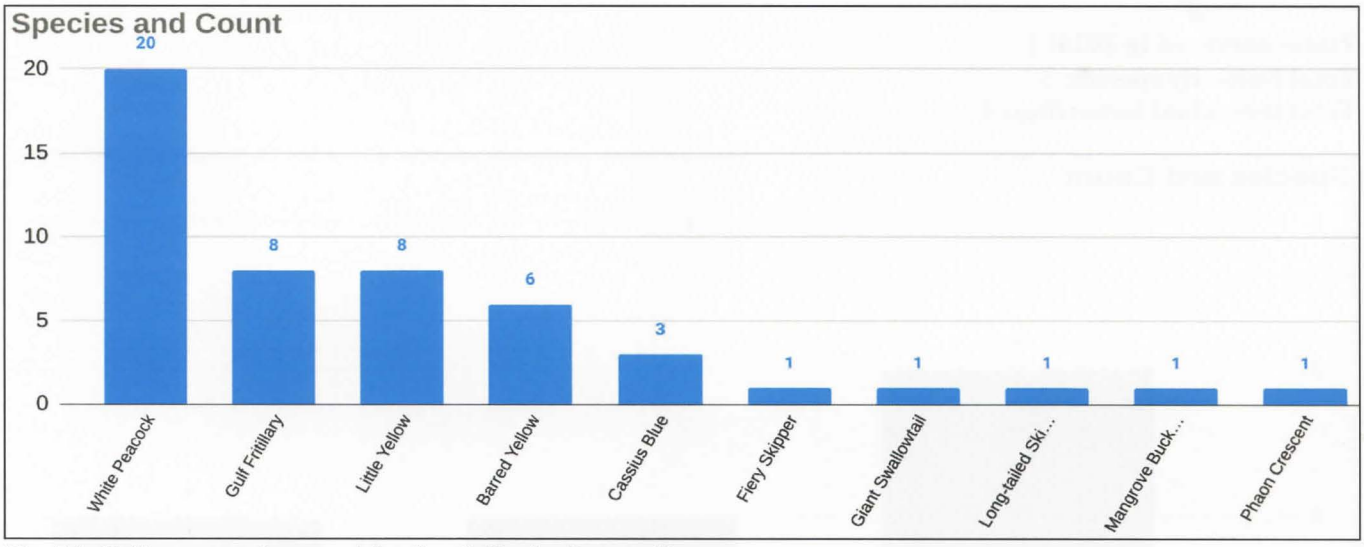


Fig. 54. Full year species count for South Venice Lemon Bay

Transects designated and surveyed: This preserve is unusual in that it has two separate sections, north and south which are connected by a trail. In between is a private development. Walking from one section to the other is easy so this is not a problem. The preserve is generally quite open and exposed to full sun and because the preserve sits on Lemon Bay so close to the Gulf of Mexico, the trails are often white sand. I walk all of the trails in the southern section of the preserve and all of the trails in the southern portion of the northern section. The interior of the property is dense scrub so going off trail is difficult but the trails are good and traverse the park well so it can be quite thoroughly covered.

Comments: Butterflies are not found here in large numbers. White Peacocks are common along with the yellows, Barred and Little. Gulf Fritillaries are a common sight while an uncommon sight was to find a Mangrove Buckeye, only the second place in the county where it was found. This is no surprise since the shore of the preserve is dense with mangroves along Lemon Bay. I'm sure if more time was spent here, a Mangrove Skipper could be found as well. It's good to have a reason to return.

Fig. 55. White sand trails

Fig. 56. Palms near Lemon Bay

19. Manasota Scrub Preserve
Address: 2695 Bridge St., Englewood, 34223
Size: 179 acres
GPS Coordinates: N 27.017725 W -82.394127

Description: Manasota Scrub Preserve is home to some of the county's remaining scattered pockets of scrub habitat. The system of trails and a boardwalk offers picturesque views of a variety of upland and wetland habitats right within a suburban community. Wildlife viewing may include: gopher tortoise, wood ducks, swallowtail butterflies and great horned owls (19).

Times surveyed in 2020: 1
Total butterfly species: 3
Total individual butterflies: 4

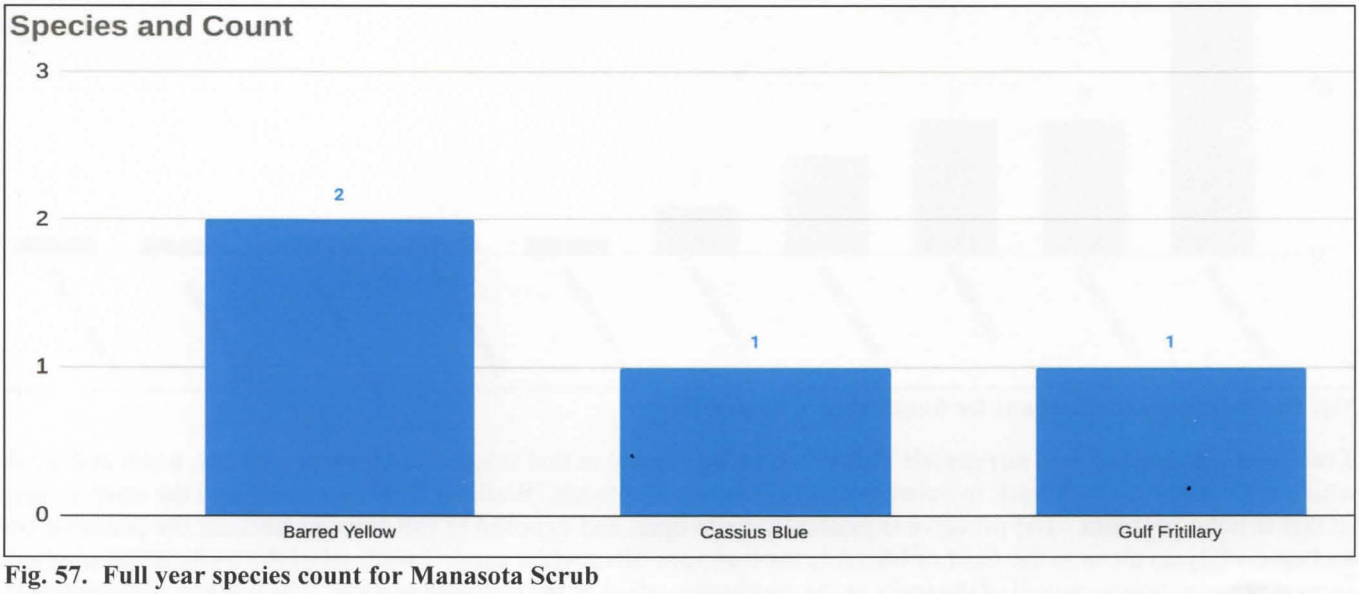


Fig. 57. Full year species count for Manasota Scrub

Transects designated and surveyed: The size of the preserve is such that walking all of its trails is doable in a few hours. I start on the west side where the trails are fewer and then work east where the trails crisscross the remainder of the preserve. Walking off trail is difficult here and sections can be quite wet so my transects are limited to the trails provided. Walk them all.

Comments: This is a gopher tortoise preserve and much less so, butterfly habitat. While the preserve is surrounded by houses, which presumably have backyard gardens, I did not find many butterflies including strays from the neighborhood. There were so few butterflies here, it didn't warrant further exploration. Despite the lack of butterflies, it's a wonderful park, a nice walk and a great refuge for gopher tortoises which are always a joy to encounter.

Fig. 58. Wetland habitat

Fig. 59. Gopher tortoise having lunch

20. Lemon Bay Park and Environmental Center
Address: 570 Bay Park Boulevard, Englewood, 34223
Size: 210 acres
GPS Coordinates: N 26.971914 W -82.373363

Description: Lemon Bay Park has preserved the pine and scrubby flatwoods and natural shoreline along Lemon Bay. Tucked in an urban location, the park also provides outdoor recreation and environmental education. Varied tree and wildflower species include lupine, palafox, coontie and Curtis' milkweed. Wildlife viewing may include gopher tortoise, grey fox, bobcat, river otter, raccoon, butterflies, and a variety of birds such as anhinga, bald eagle, snowy egret, flycatchers and frigates (20).

Transects designated and surveyed: From the parking lot I would walk directly to the edge of Lemon Bay and head south along the mangroves to the boardwalk. The boardwalk forms a short loop that swings around to the east and then north through a dry gopher tortoise habitat. This area even has cactus growing among the sparse vegetation. From there, I would survey the grounds around the education building and the native plant gardens and then head north, across the footbridge and west back to the bay. The trail that heads along the bay to the north is an interesting combination where flatwoods meet the mangroves. This section of trail is an out-and-back so I would not count on the return unless I found a new species. I always finished on the eastern border of the park where the park sits adjacent to suburban houses. The drainage ditch border has quite a few willows so it was a good spot to look for Viceroys.

Comments: I always looked forward to visiting Lemon Bay, one main reason being the boardwalk. This is a unique feature to the park and it enables walking right over the edge of the bay and along the thick mangroves that populate the shore. While hard to find, there are Mangrove Skippers sunning themselves along the water's edge. In the same area but just away from the water, I found Mangrove Buckeyes in the heavily shaded areas. This was the only place in the county where I achieved what I call the Mangrove double – Mangrove Skippers and Mangrove Buckeyes in the same location.

One of the best places to see Giant Swallowtails is near the education building and the native plant garden and the very best place in the county to encounter the Statira Sulphur is along the bay on the trail north of the education building. The area has coinvine in abundance and the Statiras dart about everywhere on that whole stretch of trail.

The park is also a great place to see Zebra Heliconians, White Peacocks, Cloudless Sulphurs and Gray Hairstreaks. Near the footbridge immediately north of the educational center, Cassius Blues were sighted on almost every visit.

Times surveyed in 2020: 5
Total butterfly species: 31
Total individual butterflies: 807

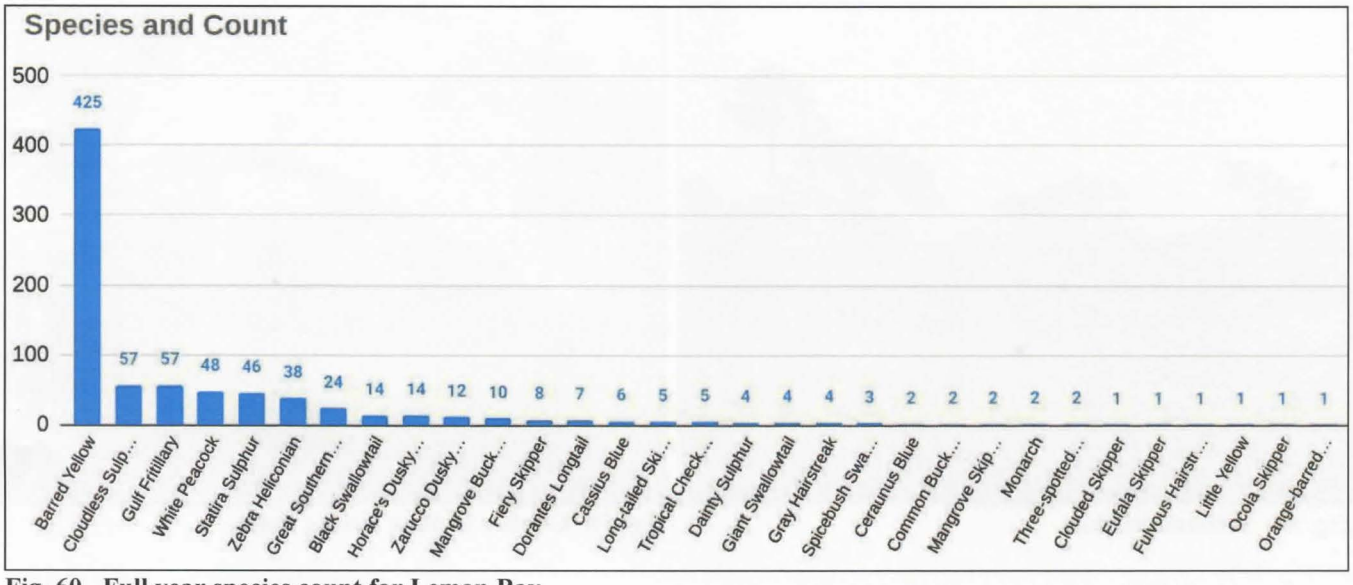


Fig. 60. Full year species count for Lemon Bay

Fig. 61. Mangroves along Lemon Bay

Fig. 62. Aerial mangrove roots

21. Myakka Islands Point
Address: 1289 Campbell St., Port Charlotte, 34293
Size: 100 acres
GPS Coordinates: N 27.010580 W -82.254818

Description: Myakka Islands Point is an ecologically productive and important site. The expansive tidal marsh that surrounds an "island" of upland flatwoods provides habitat for wading birds and fish. Catching a glimpse of the Myakka River, it's easy to understand this region's historic associations with fishing, navigable waterways and Native American culture. Wildlife may include: American kestrel, swallowtailed kite, a variety of wading birds and amphibians (21).

Transects designated and surveyed: The preserve sits on a point of land at the confluence of the Myakka River and Charlotte Harbor. The point has an out and back trail with a small loop at its far end. The designated transect is to walk all the available trails in the preserve when possible; meaning, when they are passable. On my first visit, mosquitos kept me from completing the trail. On my second visit, it was flooding. This preserve deserves more attention which I plan to give it in the future.

Comments: For me, this proved to be the most challenging site I visited in the county. It's a beautiful place and I was immediately drawn to it. Plus, it's a unique wetland environment compared to all the rest but the wetland is the challenge. My first visit was so impacted by mosquitoes that for a long time I could not bear to return. After finishing about two-thirds of the trails, the mosquitos were so severe I almost started running to get out. My second trip was so impacted by flooding that I couldn't even get to where the mosquitoes were. I still plan to return. White Peacocks are by far the predominant species. The sulphurs are well represented, especially Cloudless and Little Yellows. Both Ceraunus Blues and Cassius Blues are here. Notably, I found more Southern Skipperlings at Myakka Islands Point than anywhere else except for Scherer Thaxton. Bug spray liberally applied, I will complete the trails someday and I will be looking for saltgrass followed by an Obscure if not a Salt Marsh Skipper.

Times surveyed in 2020: 2
Total butterfly species: 19
Total individual butterflies: 270

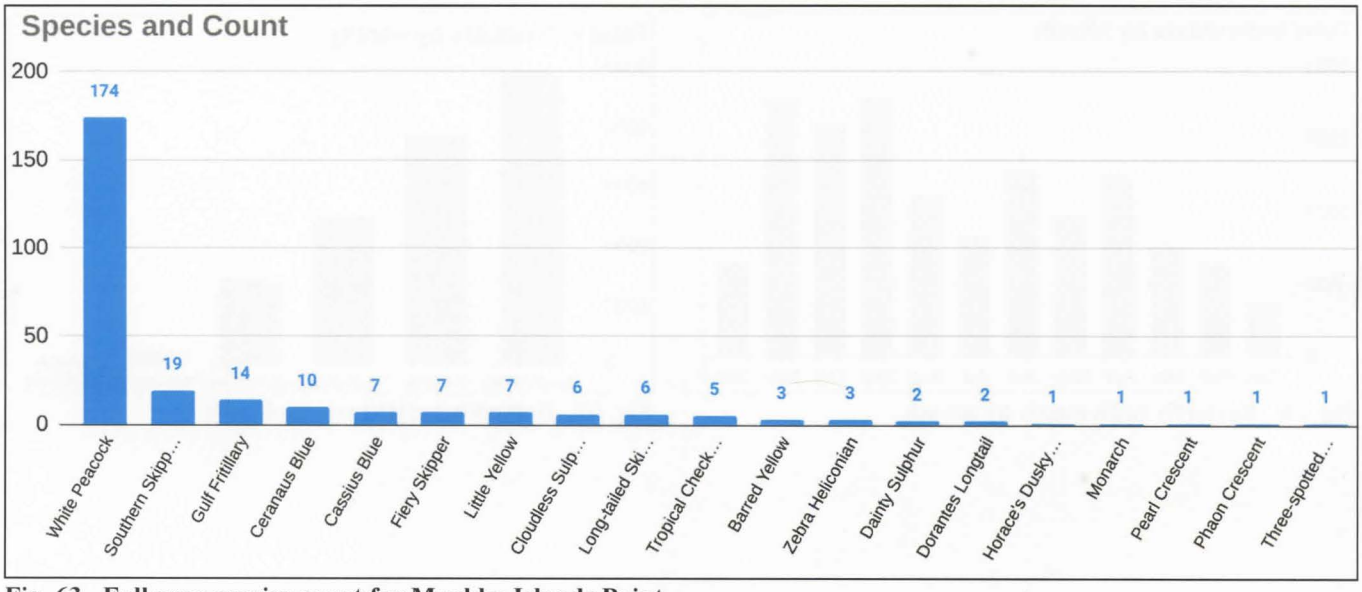


Fig. 63. Full year species count for Myakka Islands Point


Fig. 64. Palms and marsh beyond


Fig. 65. Entrance trail

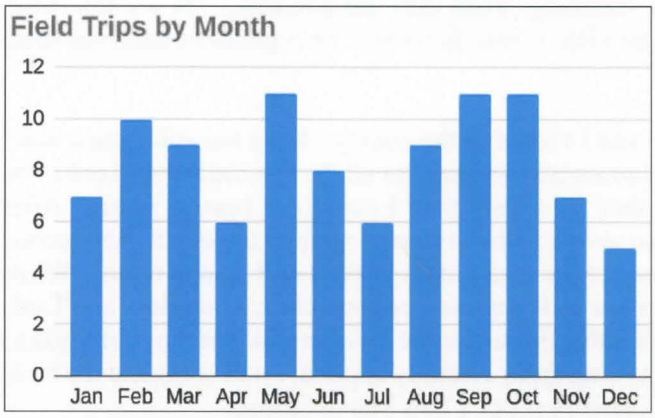


Fig. 66. 100 field trips by month

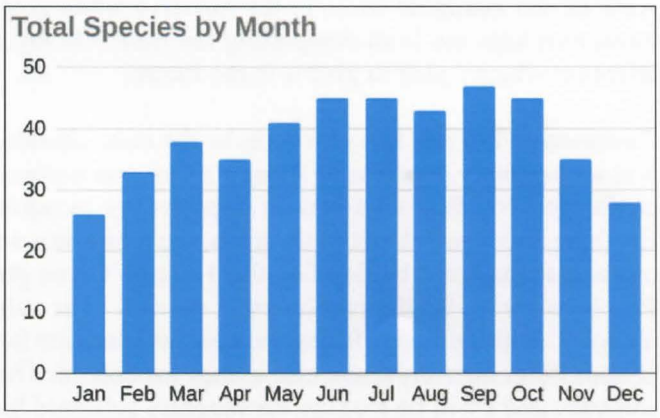


Fig. 67. Butterfly species by month

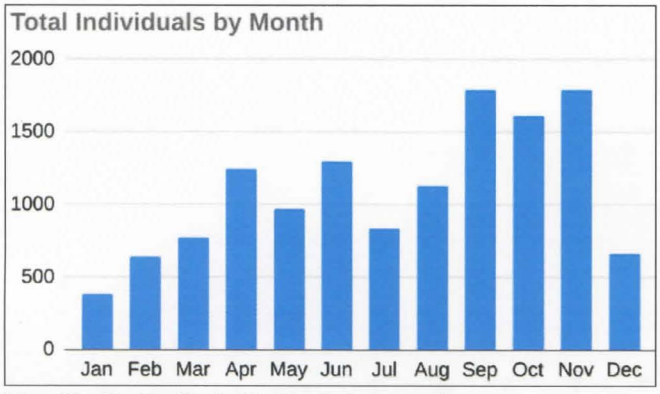


Fig. 68. Butterfly individuals by month

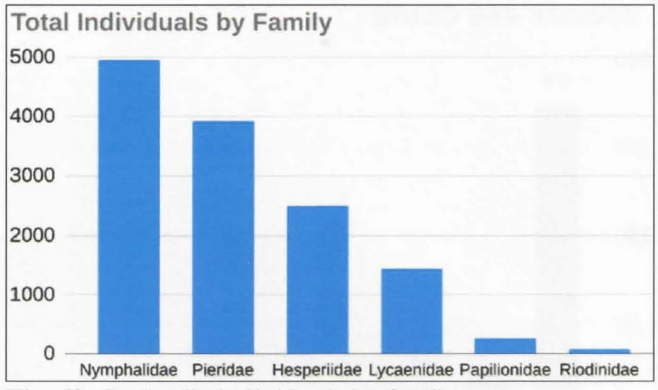


Fig. 69. Butterfly individuals by family

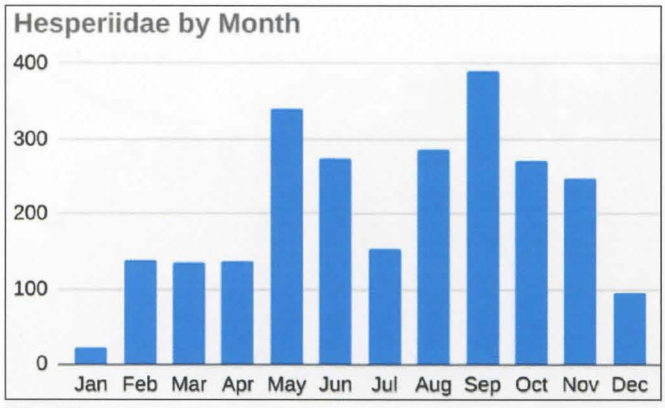
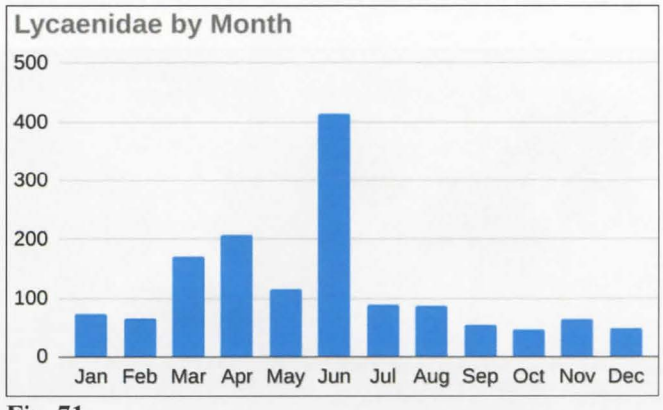


Fig. 70.



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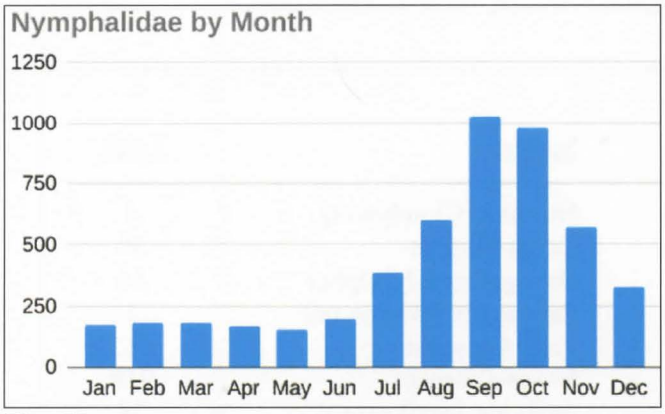


Fig. 72.

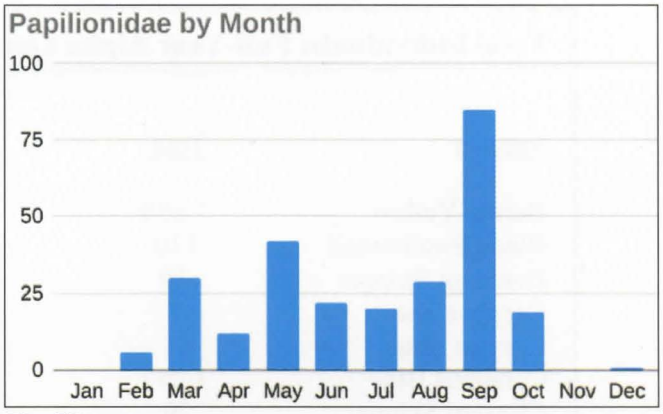


Fig. 73.

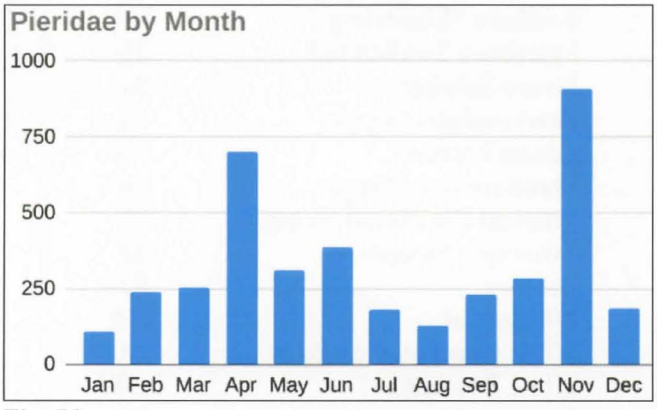


Fig. 74.

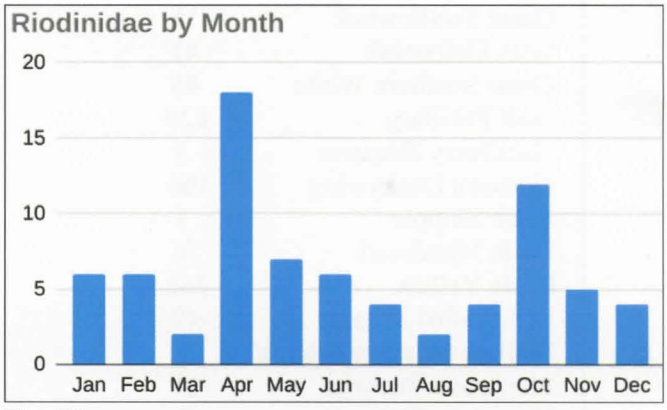


Fig. 75.

Total Individuals: Full-Year Alpha List

Species	Total	Species	Total
Barred Yellow	1,650	Northern Cloudywing	4
Black Swallowtail	110	Ocola Skipper	30
Brazilian Skipper	39	Orange-barred Sulphur	54
Carolina Satyr	7	Palamedes Swallowtail	5
Cassius Blue	51	Pearl Crescent	113
Ceraunus Blue	1,252	Phaon Crescent	938
Clouded Skipper	29	Pipevine Swallowtail	28
Cloudless Sulphur	206	Polydamas Swallowtail	15
Common Buckeye	212	Queen	192
Dainty Sulphur	1,497	Red Admiral	4
Delaware Skipper	9	Red-banded Hairstreak	66
Dorantes Longtail	258	Sachem	11
Eufala Skipper	22	Sleepy Orange	15
Fiery Skipper	668	Southern Broken-Dash	33
Fulvous Hairstreak	4	Southern Oak Hairstreak	10
Giant Swallowtail	15	Southern Skipperling	129
Gray Hairstreak	41	Spicebush Swallowtail	40
Great Southern White	85	Statira Sulphur	51
Gulf Fritillary	620	Tawny-edged Skipper	16
Hackberry Emperor	3	Tawny Emperor	154
Horace's Duskywing	406	Three-spotted Skipper	36
Least Skipper	1	Tropical Checkered-Skipper	227
Little Metalmark	76	Twin-spot Skipper	42
Little Yellow	366	Viceroy	55
Long-tailed Skipper	49	Whirlabout	245
Mallow Scrub-hairstreak	9	White Checkered-Skipper	190
Mangrove Buckeye	11	White Peacock	2,384
Mangrove Skipper	2	Zarucco Duskywing	28
Monarch	67	Zebra Heliconian	191
Monk Skipper	17	Zebra Swallowtail	53
Neamathla Skipper	2	**Total**	**13,143**

Fig. 76. The table above shows year-end totals in alphabetical order by species.

Total Individuals: Full-Year Descending List

Species	Total	Species	Total
White Peacock	2,384	Twin-spot Skipper	42
Barred Yellow	1,650	Gray Hairstreak	41
Dainty Sulphur	1,497	Spicebush Swallowtail	40
Ceraunus Blue	1,252	Brazilian Skipper	39
Phaon Crescent	938	Three-spotted Skipper	36
Fiery Skipper	668	Southern Broken-Dash	33
Gulf Fritillary	620	Ocola Skipper	30
Horace's Duskywing	406	Clouded Skipper	29
Little Yellow	366	Pipevine Swallowtail	28
Dorantes Longtail	258	Zarucco Duskywing	28
Whirlabout	245	Eufala Skipper	22
Tropical Checkered-Skipper	227	Monk Skipper	17
Common Buckeye	212	Tawny-edged Skipper	16
Cloudless Sulphur	206	Giant Swallowtail	15
Queen	192	Polydamas Swallowtail	15
Zebra Heliconian	191	Sleepy Orange	15
White Checkered-Skipper	190	Mangrove Buckeye	11
Tawny Emperor	154	Sachem	11
Southern Skipperling	129	Southern Oak Hairstreak	10
Pearl Crescent	113	Delaware Skipper	9
Black Swallowtail	110	Mallow Scrub-hairstreak	9
Great Southern White	85	Carolina Satyr	7
Little Metalmark	76	Palamedes Swallowtail	5
Monarch	67	Fulvous Hairstreak	4
Red-banded Hairstreak	66	Northern Cloudywing	4
Viceroy	55	Red Admiral	4
Orange-barred Sulphur	54	Hackberry Emperor	3
Zebra Swallowtail	53	Mangrove Skipper	2
Cassius Blue	51	Neamathla Skipper	2
Statira Sulphur	51	Least Skipper	1
Long-tailed Skipper	49	**Total**	**13,143**

Fig. 77. The table above shows year-end totals in descending order by species.

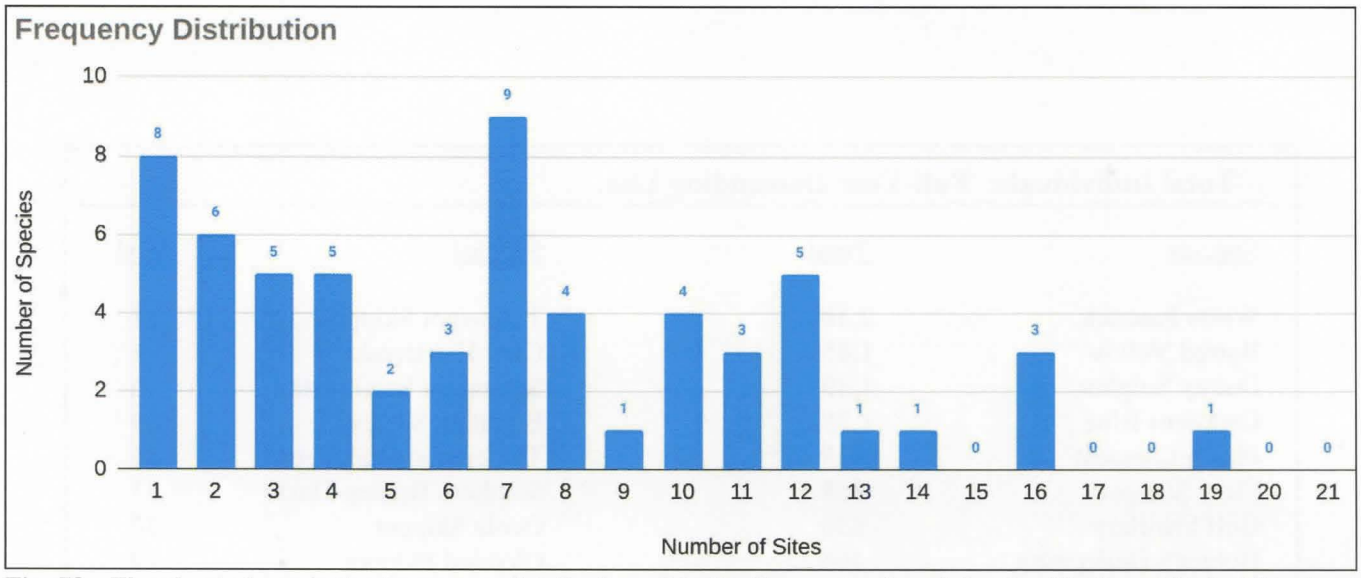
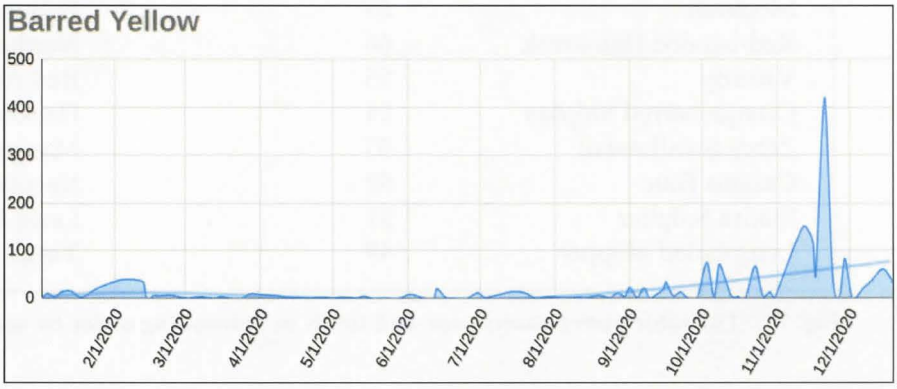
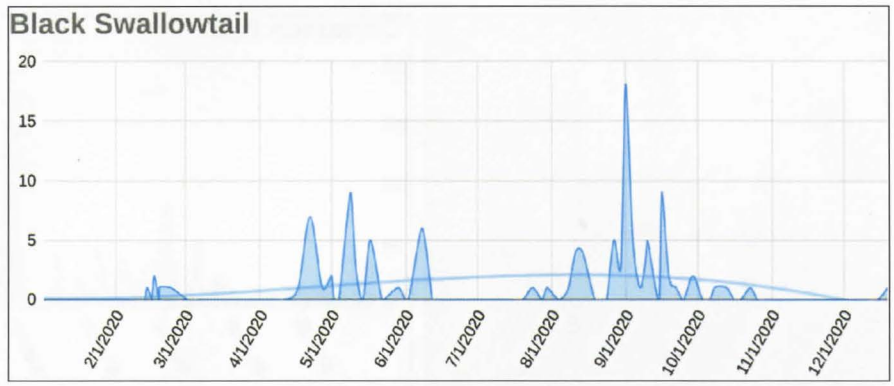
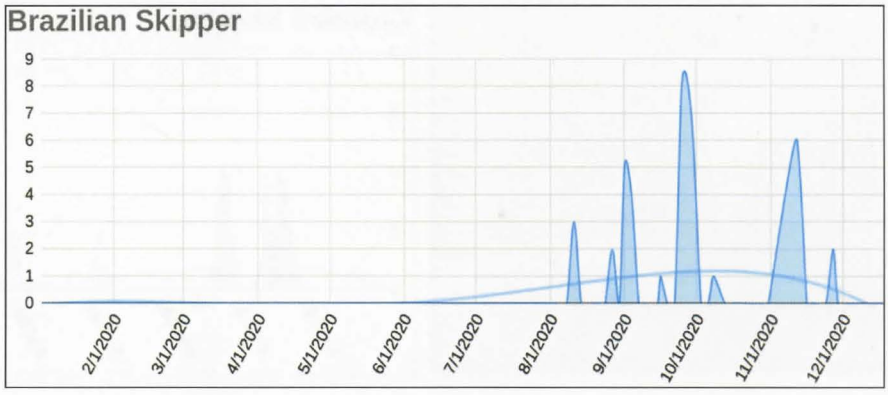


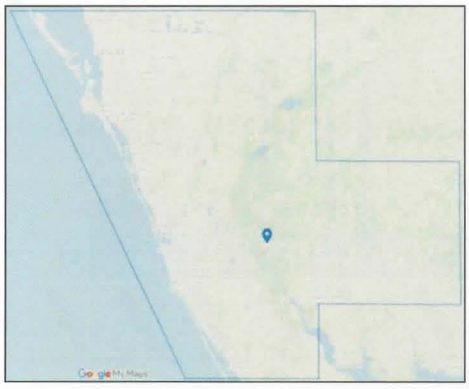
Fig. 78. The chart above is the frequency distribution of butterfly species found for the 21 sites visited. The chart summarizes the number of species (values) and the number of sites (frequency) at which they occur. For example, 8 species were found at only one location, 6 species were found at only two locations, etc. Most butterfly species were found at 7 or less locations highlighting that species are not evenly distributed throughout the county. This is consistent with the variations in the landscapes and flora found. This also emphasizes the need to study a sufficient number of sites (at least 10) widely spread by location to understand butterfly populations in Sarasota County. More on that later.

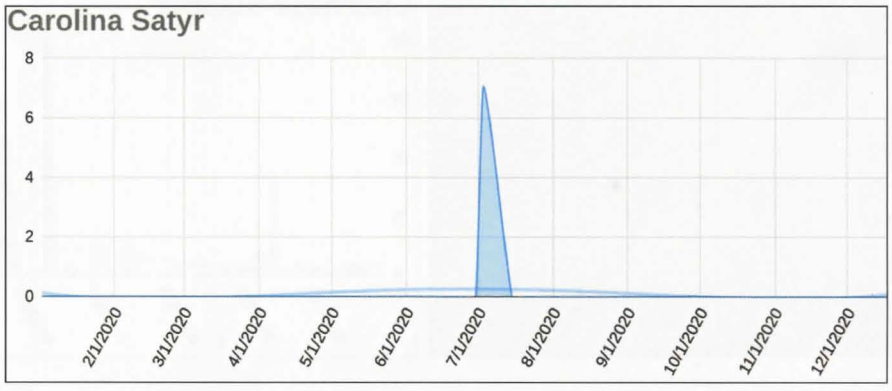
Distribution and Full-Year Area Charts by Species

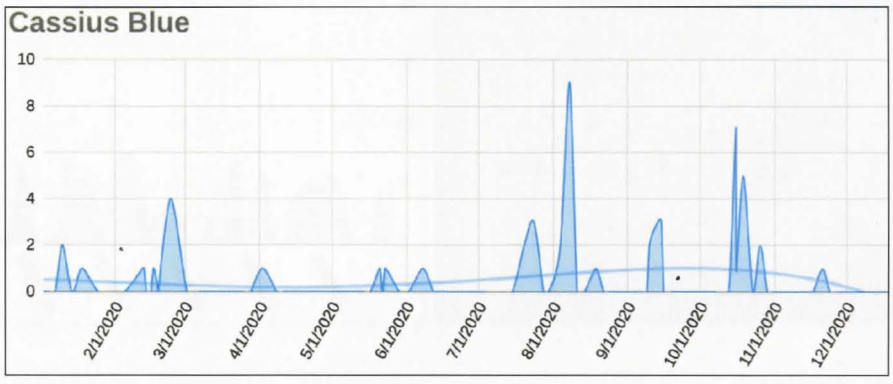


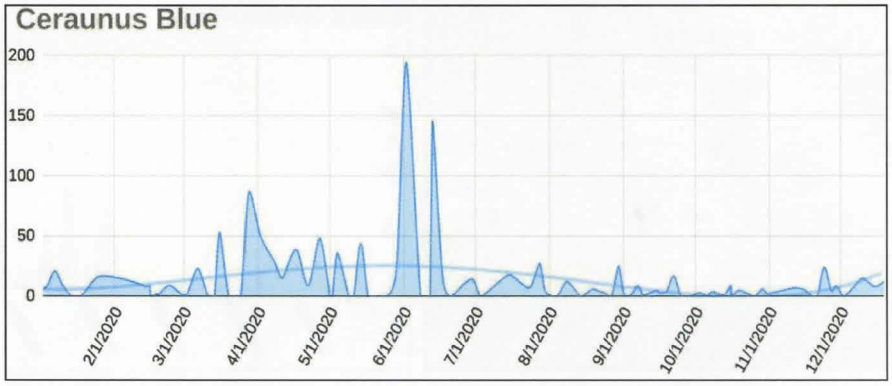

Black Swallowtail
20
15
10
5
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

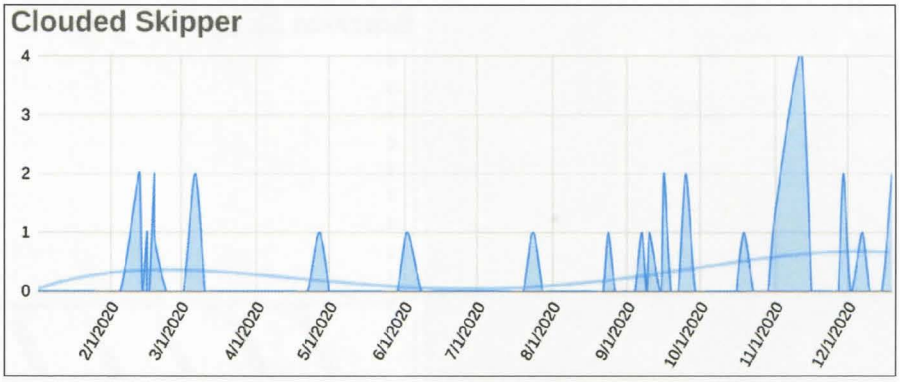

Brazilian Skipper
9
8
7
6
5
4
3
2
1
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

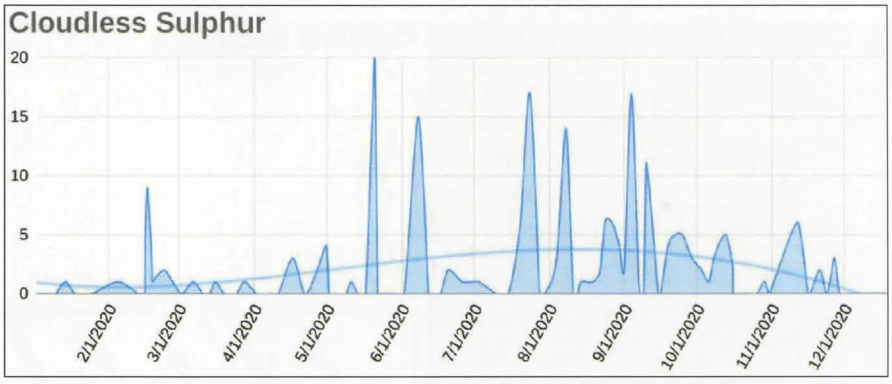


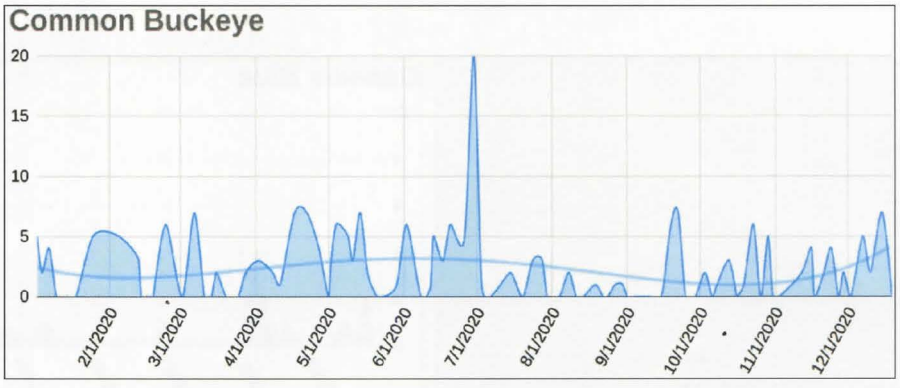

Carolina Satyr
8
6
4
2
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

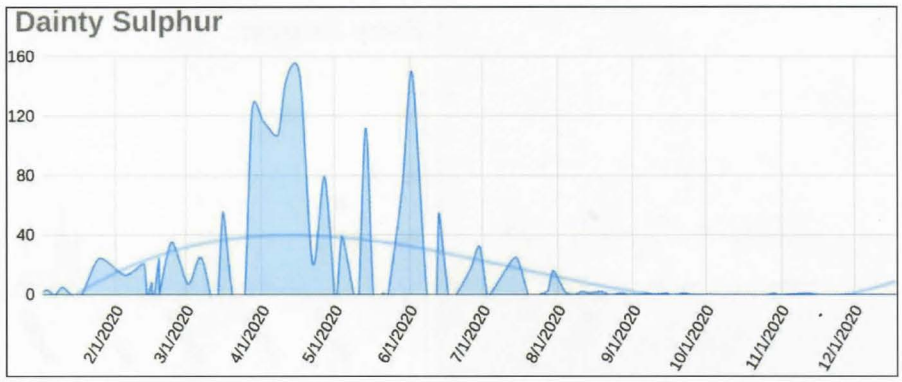

Cassius Blue
10
8
6
4
2
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

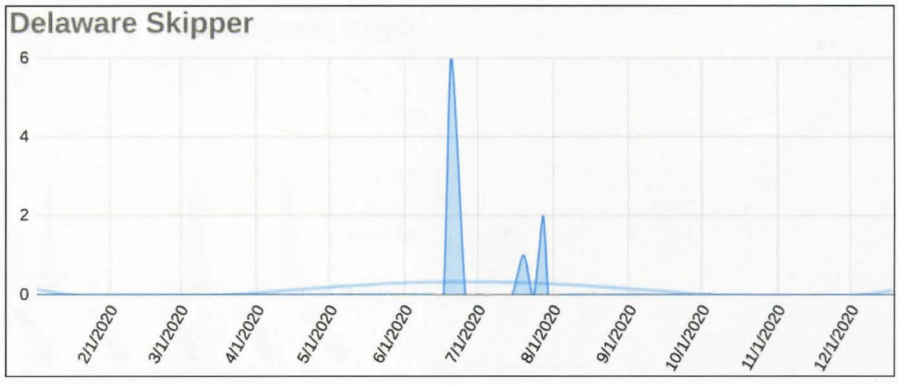

Ceraunus Blue
200
150
100
50
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

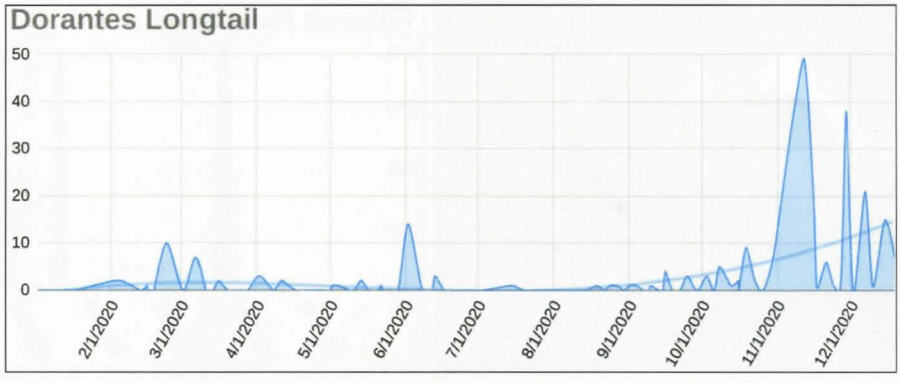

Clouded Skipper
4
3
2
1
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

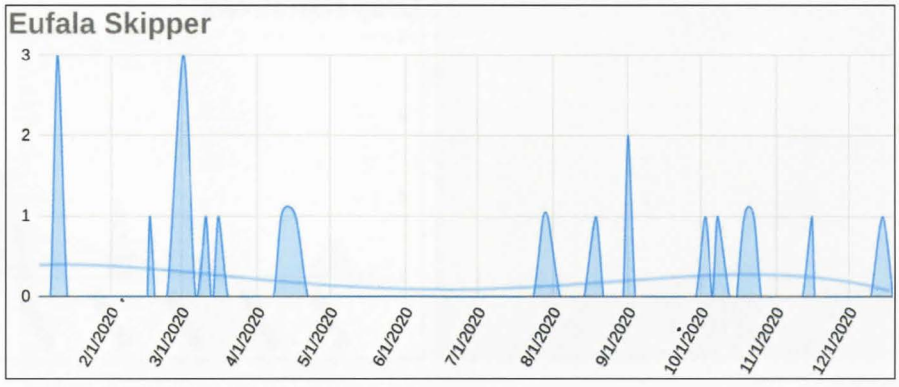

Cloudless Sulphur
20
15
10
5
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

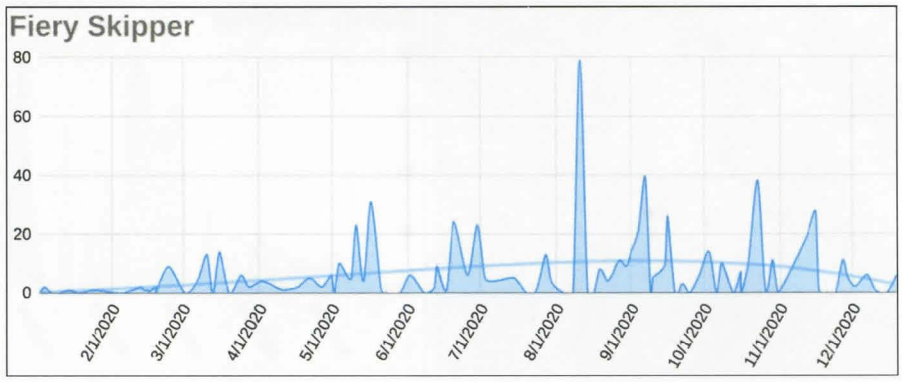

Common Buckeye
20
15
10
5
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

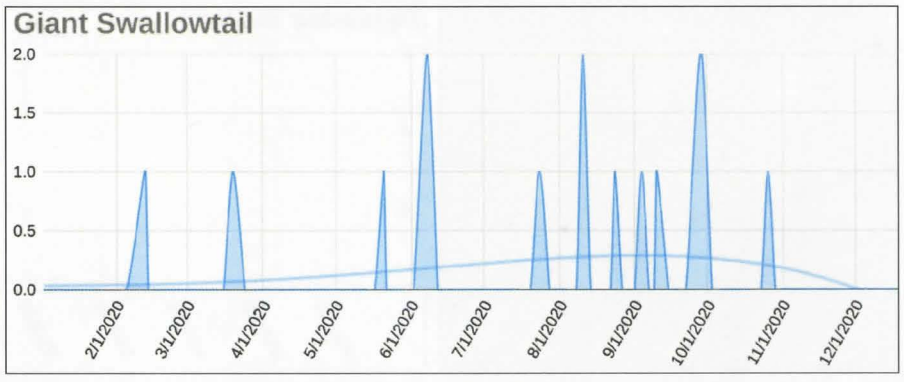

Dainty Sulphur
160
120
80
40
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

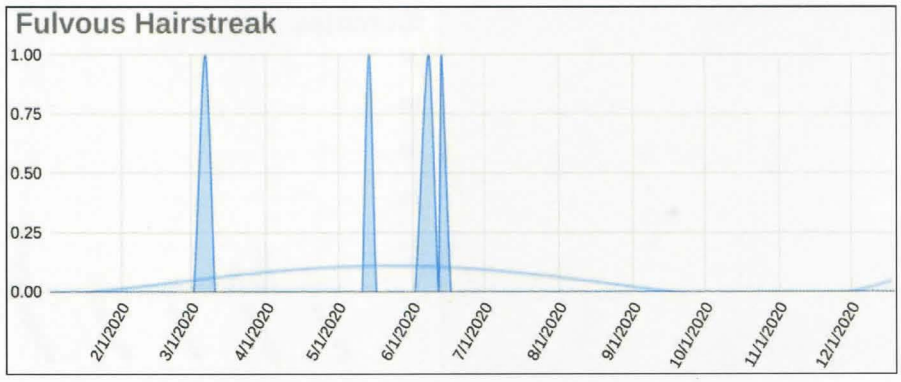

Delaware Skipper
6
4
2
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

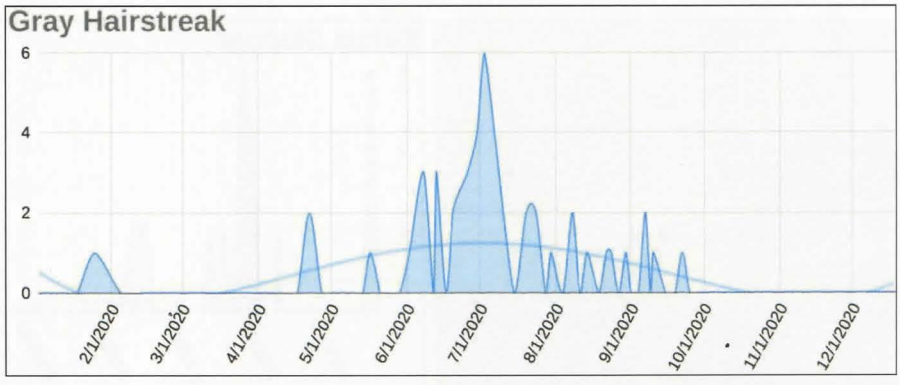

Dorantes Longtail
50
40
30
20
10
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

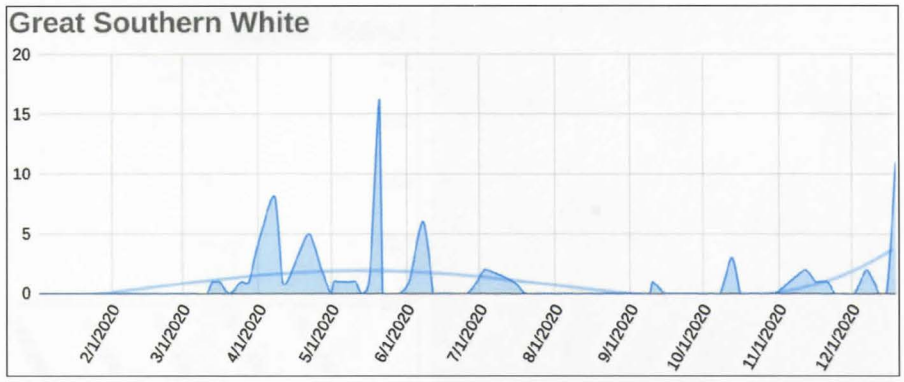

Eufala Skipper
3
2
1
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

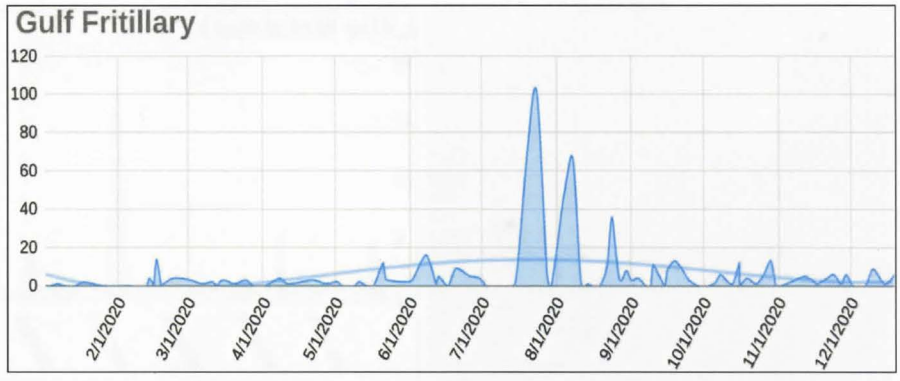

Fiery Skipper
80
60
40
20
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

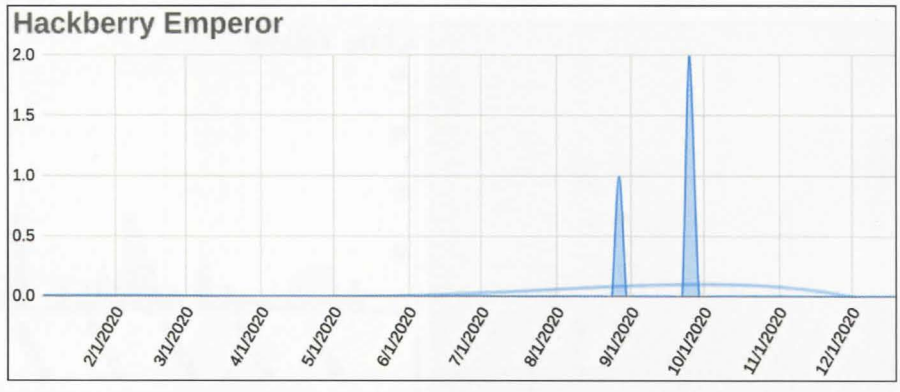

Giant Swallowtail
2.0
1.5
1.0
0.5
0.0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

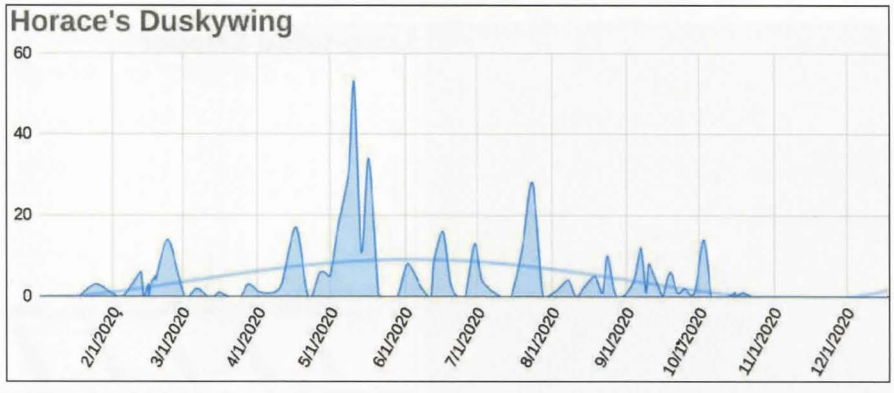

Fulvous Hairstreak
1.00
0.75
0.50
0.25
0.00
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

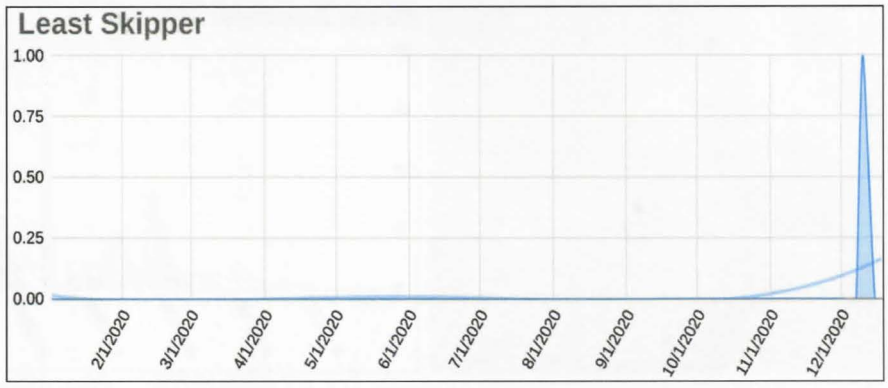

Gray Hairstreak
6
4
2
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

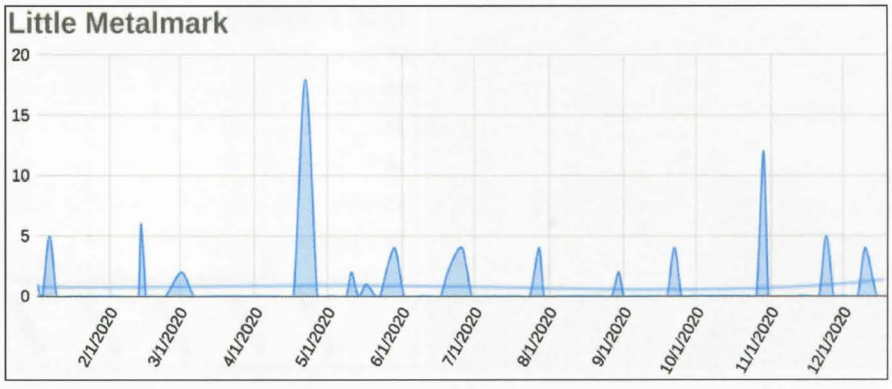

Great Southern White
20
15
10
5
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

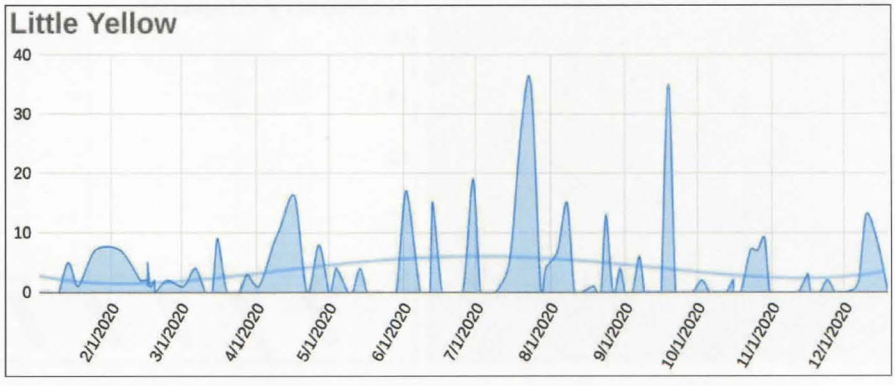

Gulf Fritillary
120
100
80
60
40
20
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

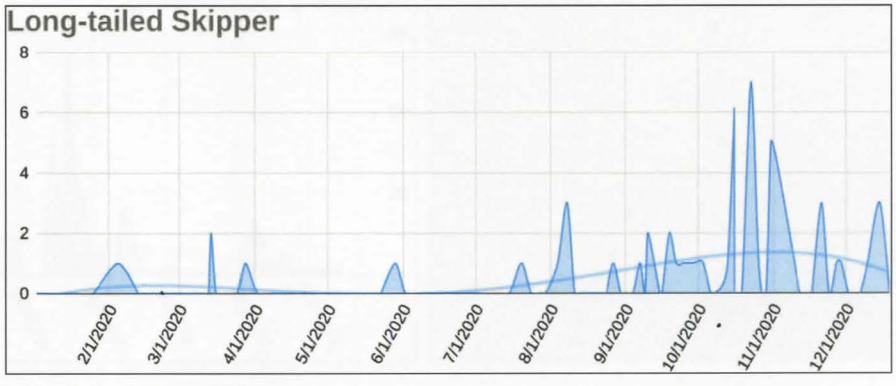

Hackberry Emperor
2.0
1.5
1.0
0.5
0.0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

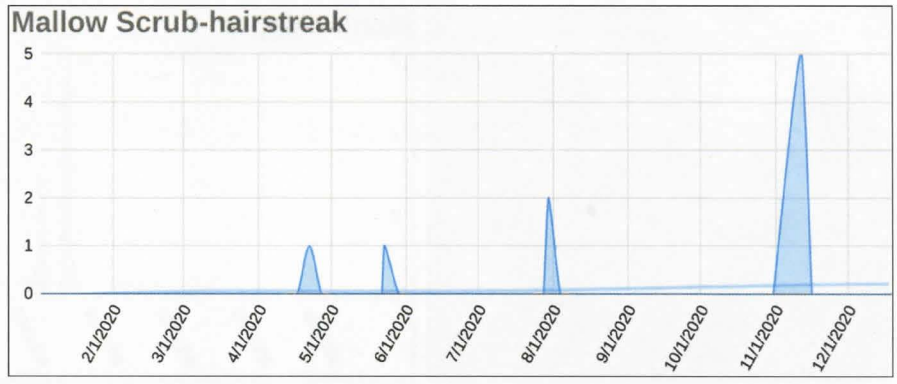

Horace's Duskywing
60
40
20
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

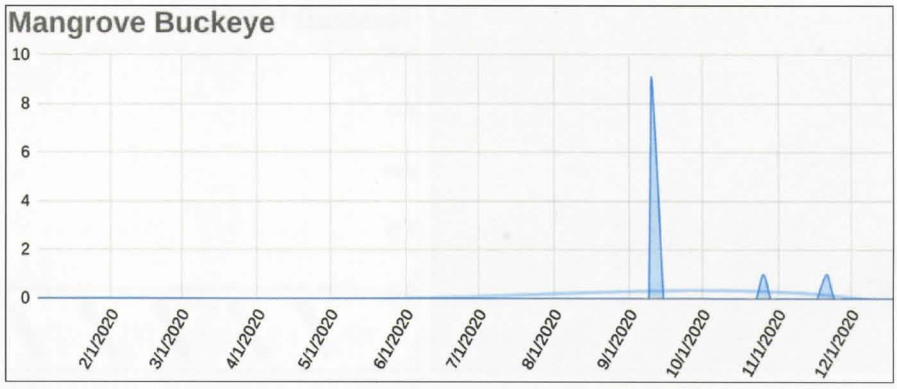

Least Skipper
1.00
0.75
0.50
0.25
0.00
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

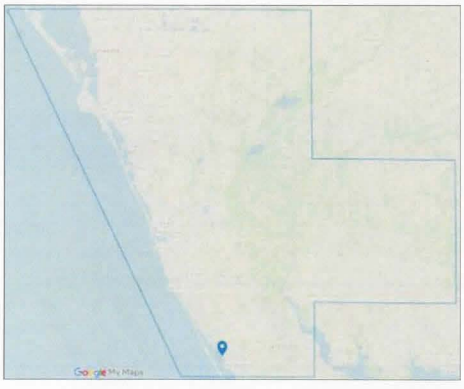

Little Metalmark
20
15
10
5
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

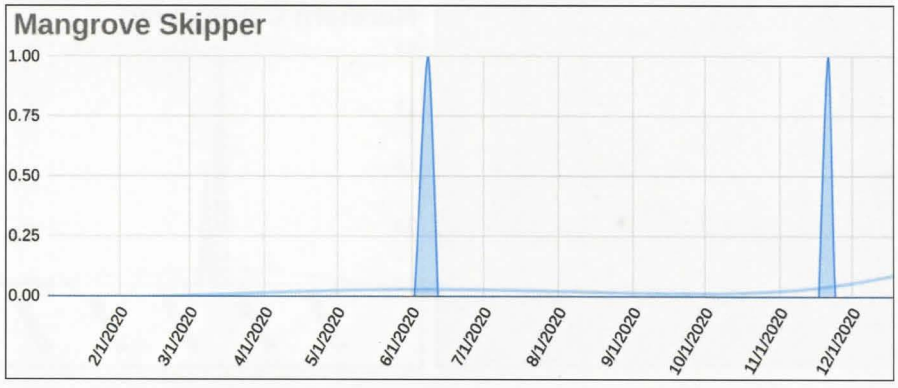

Little Yellow
40
30
20
10
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

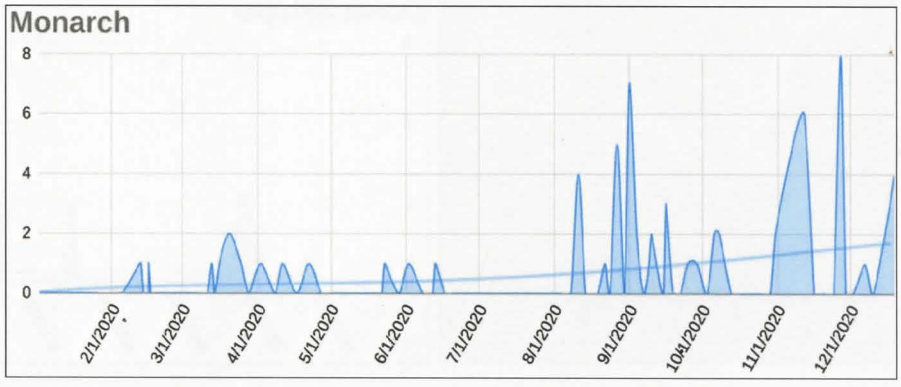

Long-tailed Skipper
8
6
4
2
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

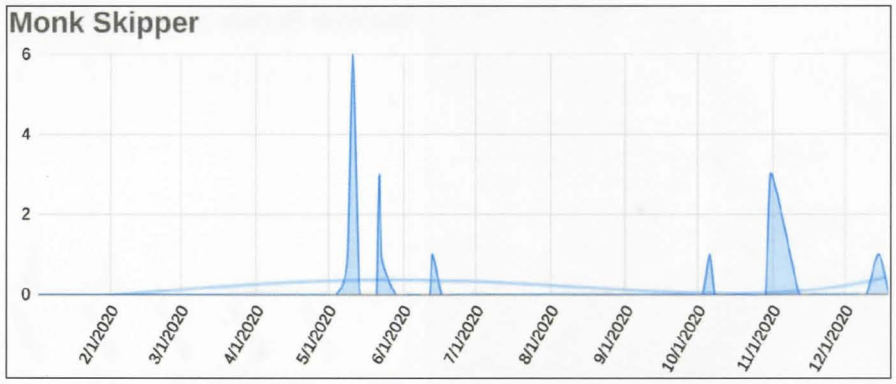

Mallow Scrub-hairstreak
5
4
3
2
1
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

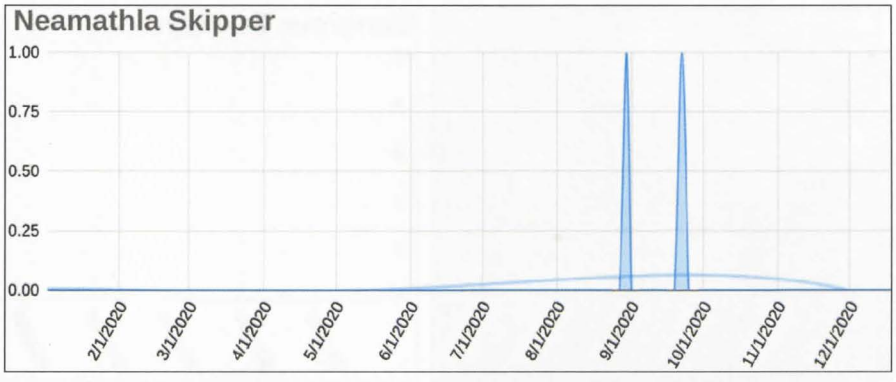

Mangrove Buckeye
10
8
6
4
2
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

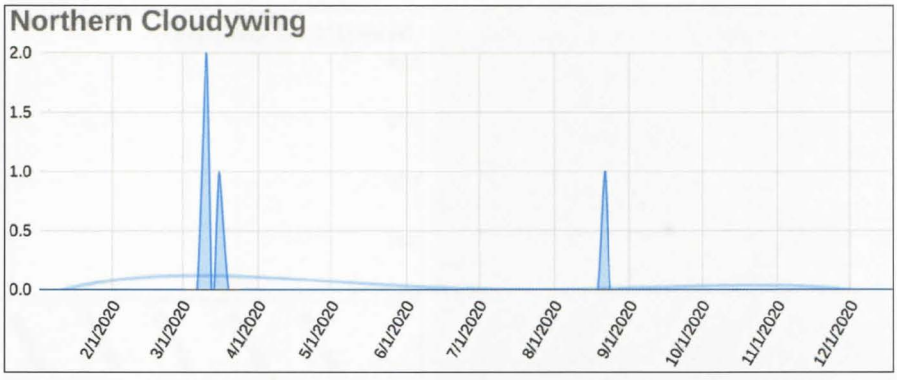


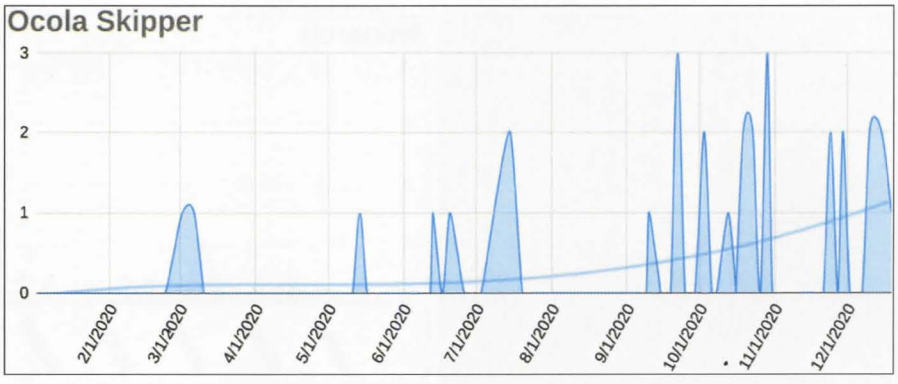

Mangrove Skipper
1.00
0.75
0.50
0.25
0.00
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

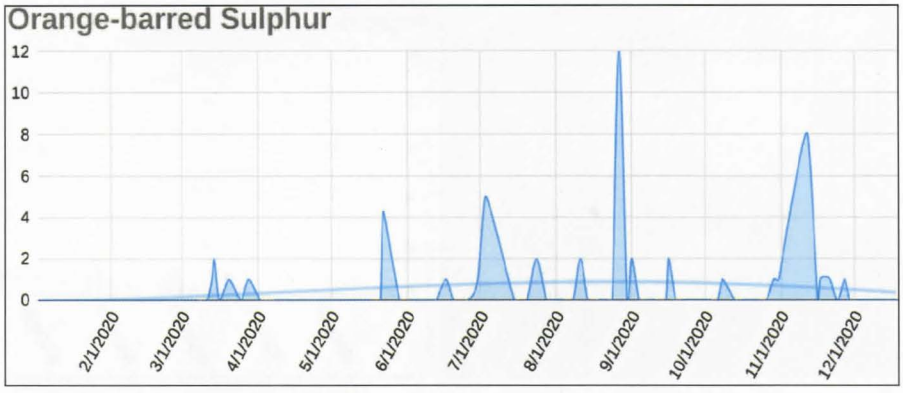

Monarch
8
6
4
2
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

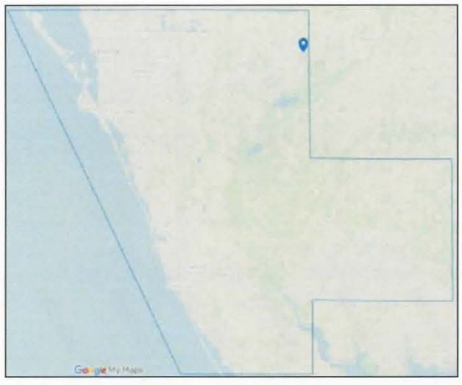

Monk Skipper
6
4
2
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

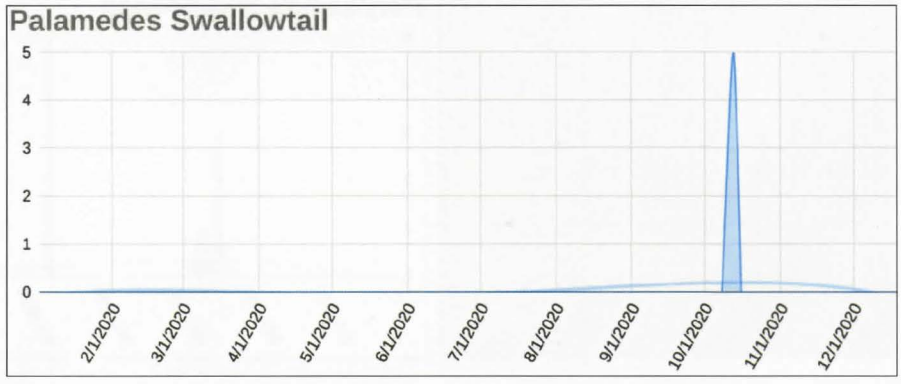

Neamathla Skipper
1.00
0.75
0.50
0.25
0.00
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

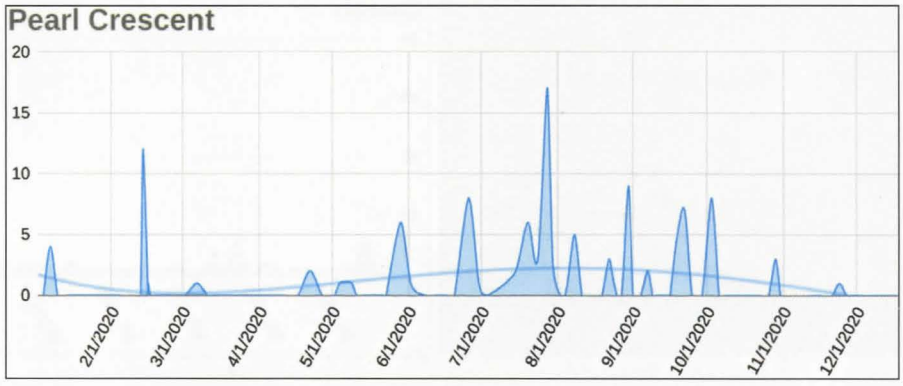

Northern Cloudywing
2.0
1.5
1.0
0.5
0.0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

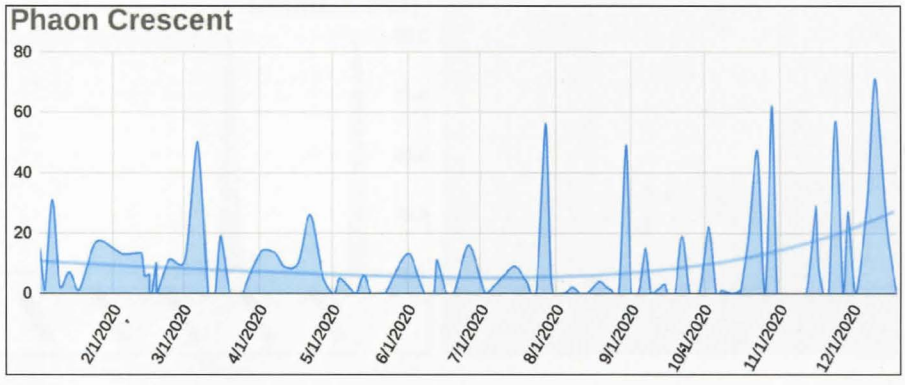

Ocola Skipper
3
2
1
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

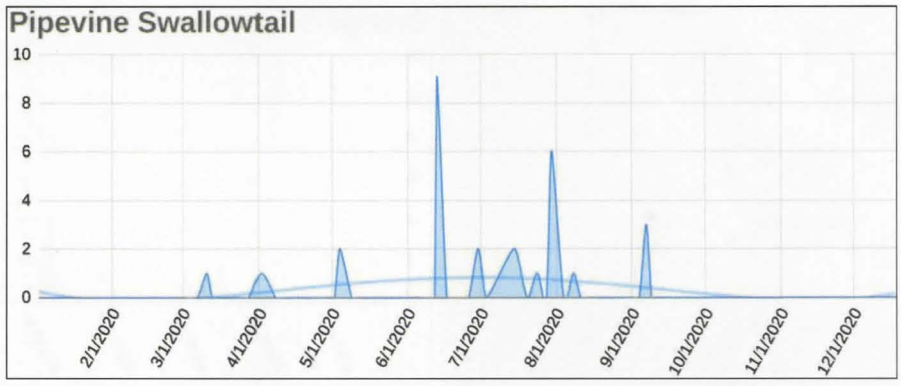

Orange-barred Sulphur
12
10
8
6
4
2
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

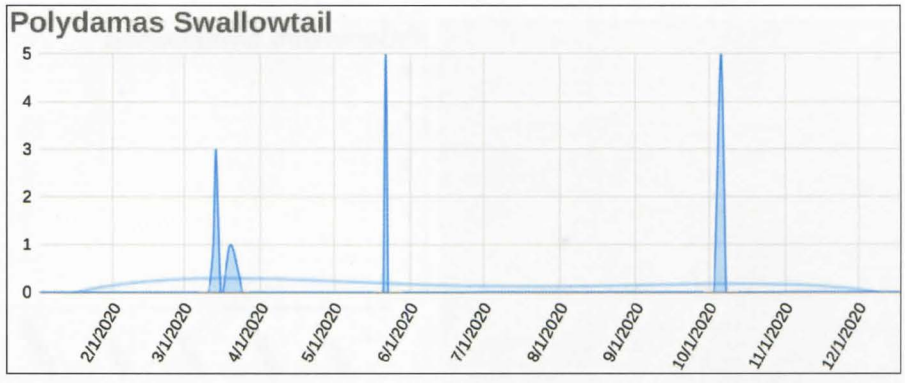


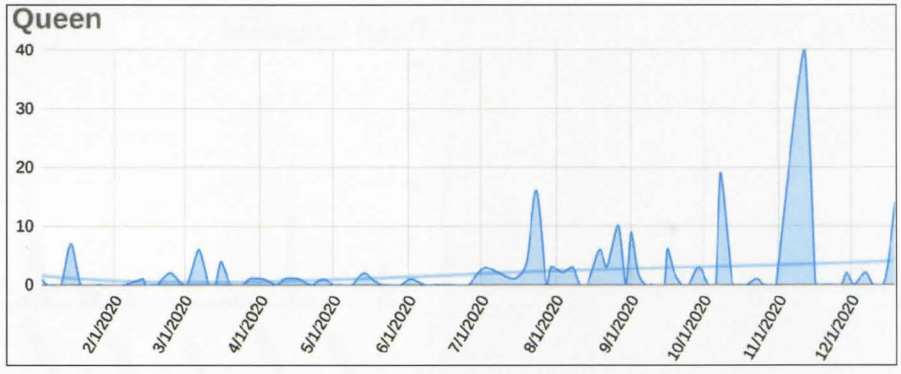

Palamedes Swallowtail
5
4
3
2
1
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

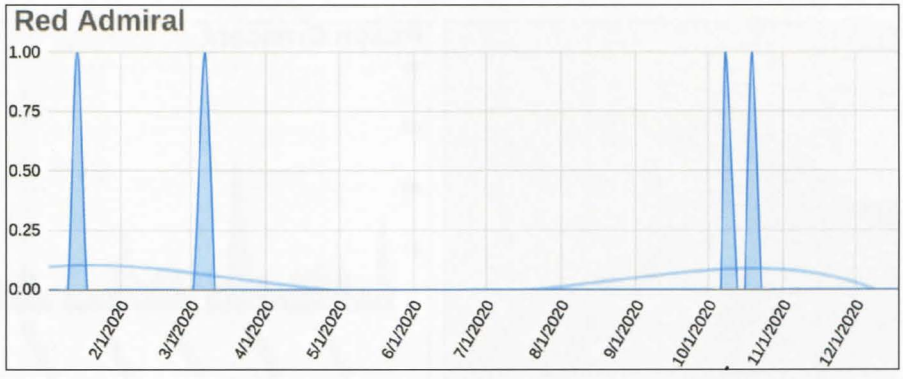

Pearl Crescent
20
15
10
5
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

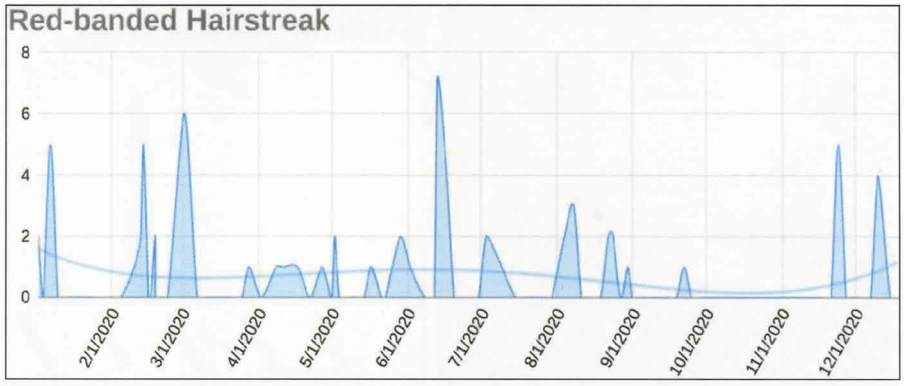

Phaon Crescent
80
60
40
20
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

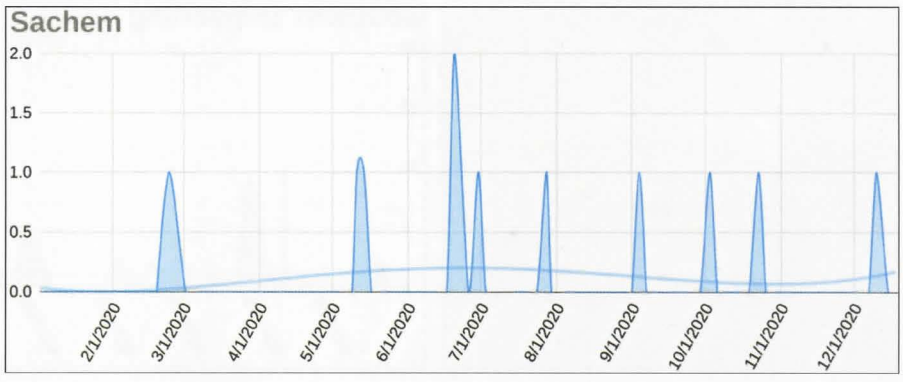

Pipevine Swallowtail
10
8
6
4
2
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

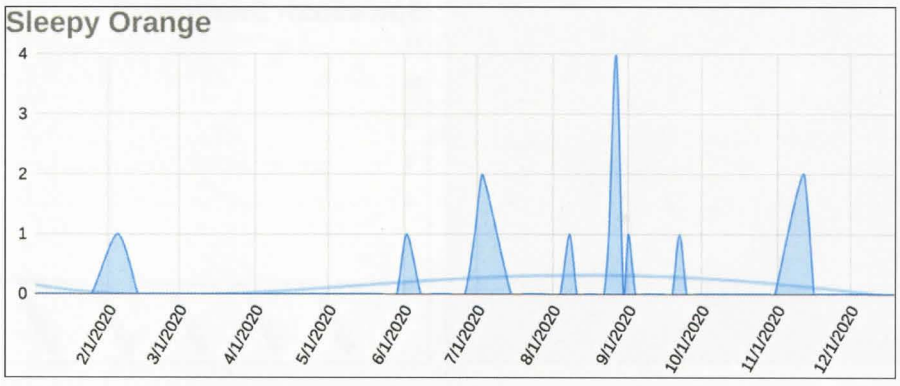

Polydamas Swallowtail
5
4
3
2
1
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

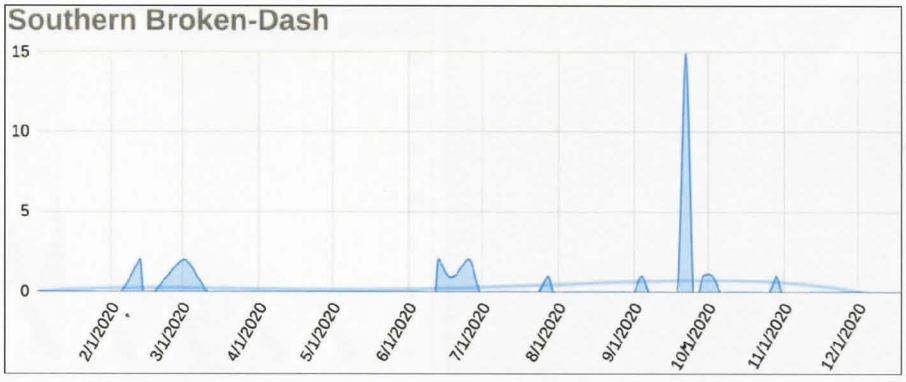

Queen
40
30
20
10
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

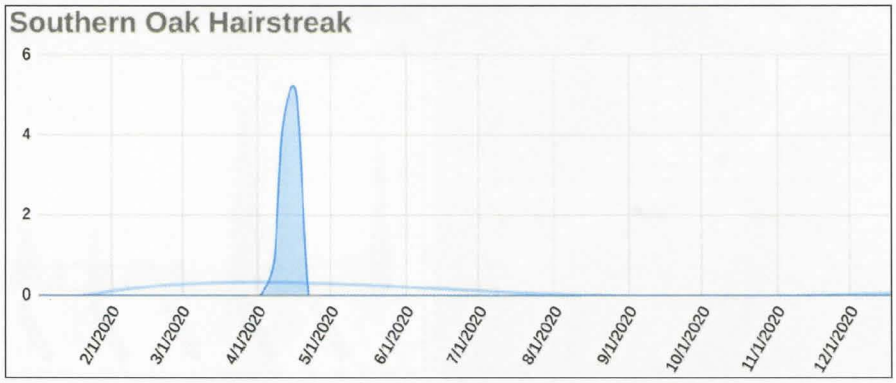

Red Admiral
1.00
0.75
0.50
0.25
0.00
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

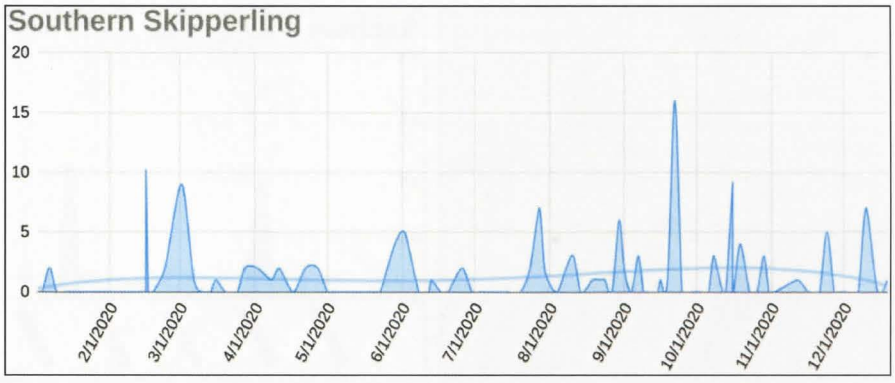

Red-banded Hairstreak
8
6
4
2
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

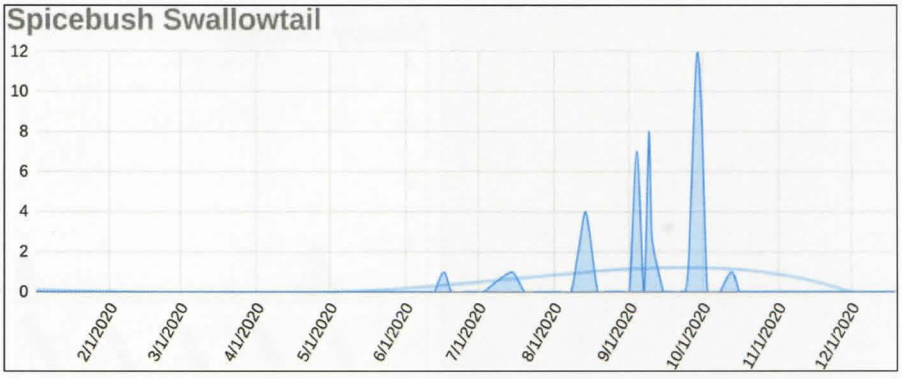

Sachem
2.0
1.5
1.0
0.5
0.0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

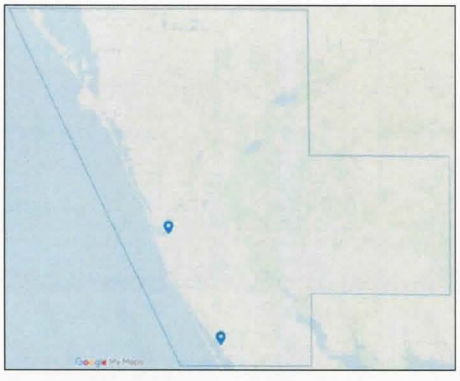

Sleepy Orange
4
3
2
1
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

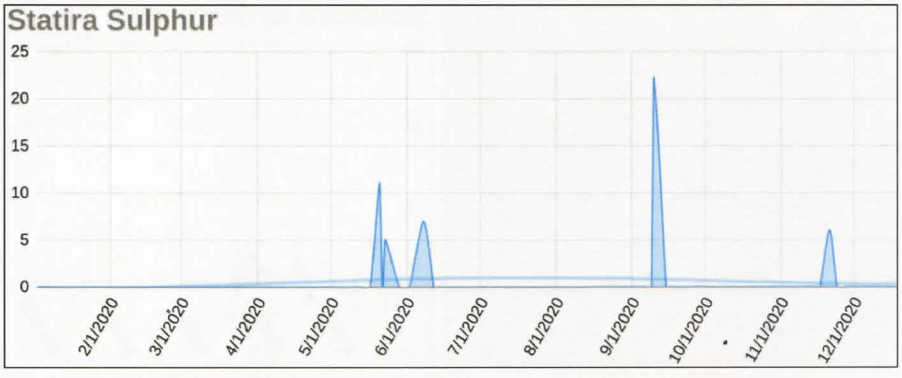

Southern Broken-Dash
15
10
5
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

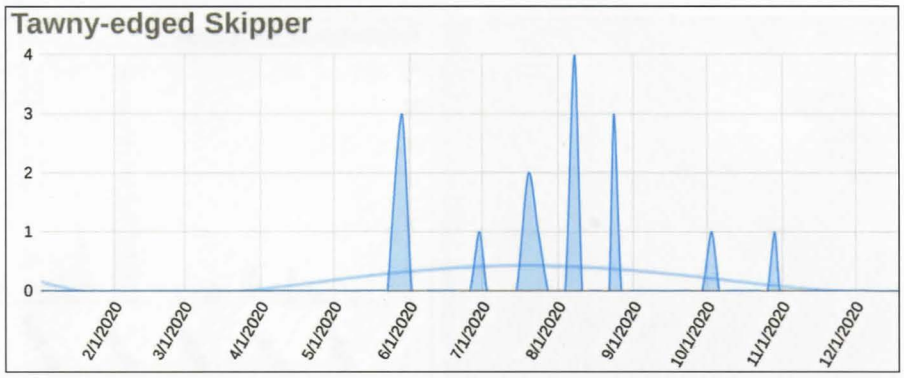

Southern Oak Hairstreak
6
4
2
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

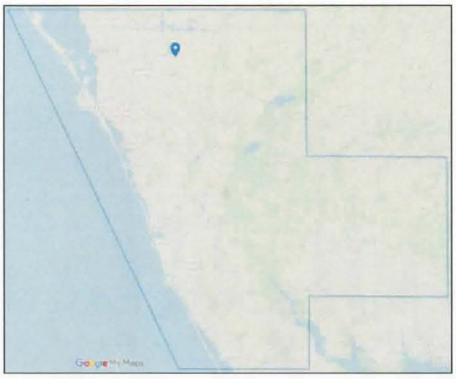

Southern Skipperling
20
15
10
5
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

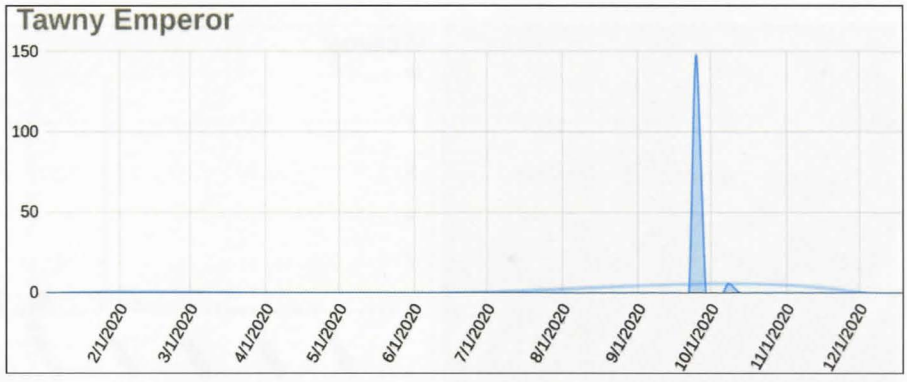

Spicebush Swallowtail
12
10
8
6
4
2
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

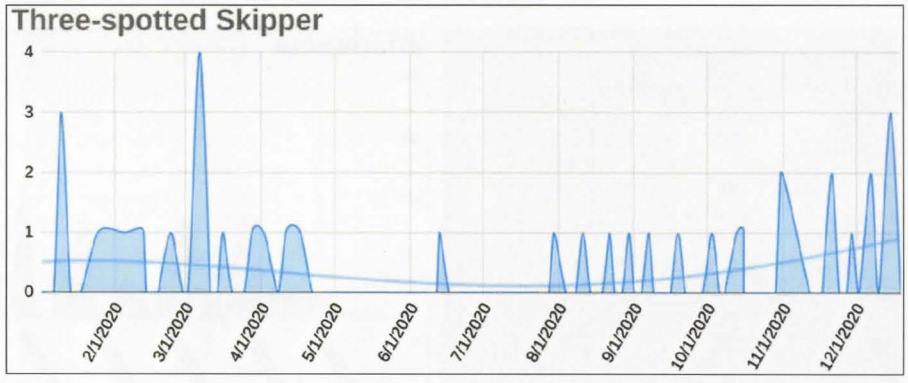


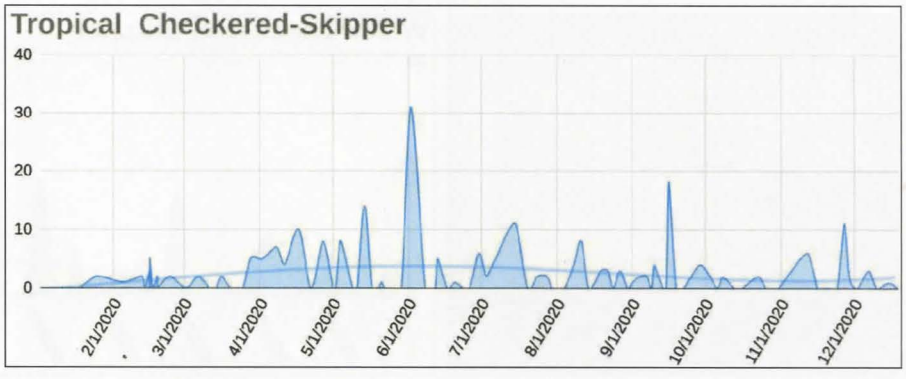

Statira Sulphur
25
20
15
10
5
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

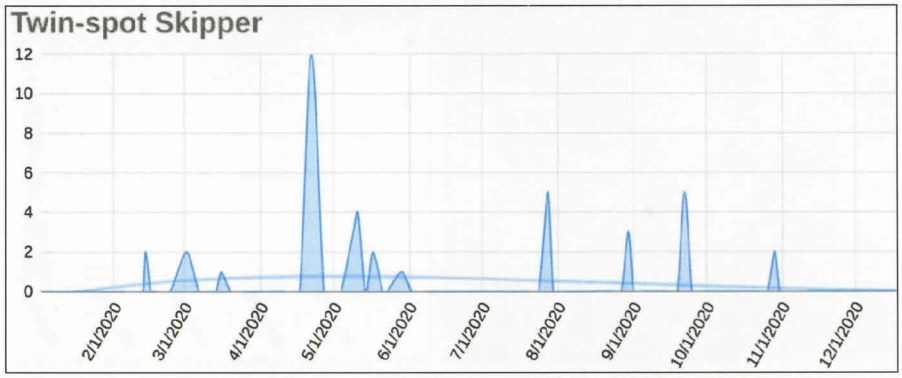

Tawny-edged Skipper
4
3
2
1
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

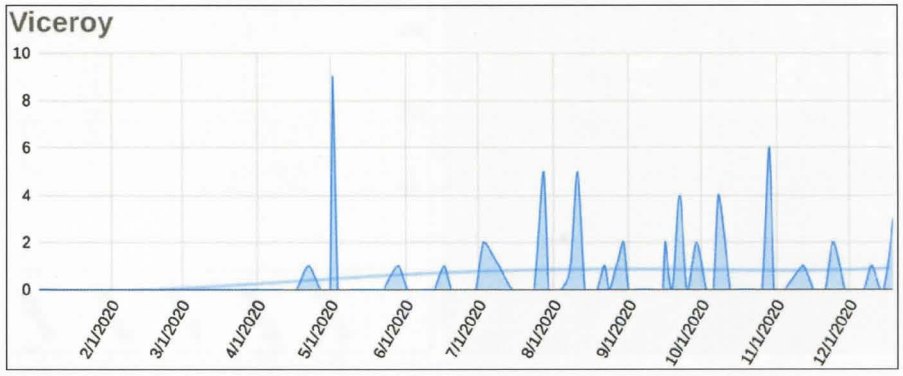


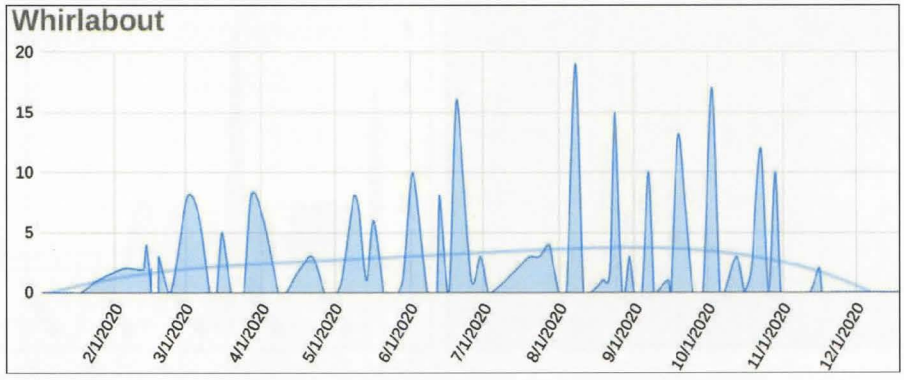

Tawny Emperor
150
100
50
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

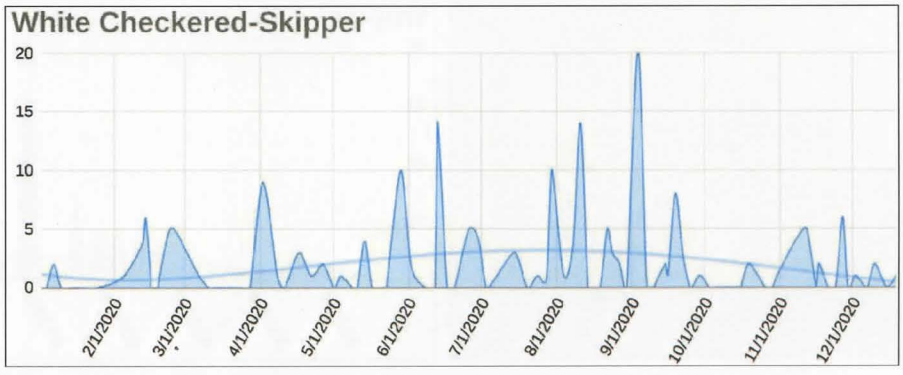

Three-spotted Skipper
4
3
2
1
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

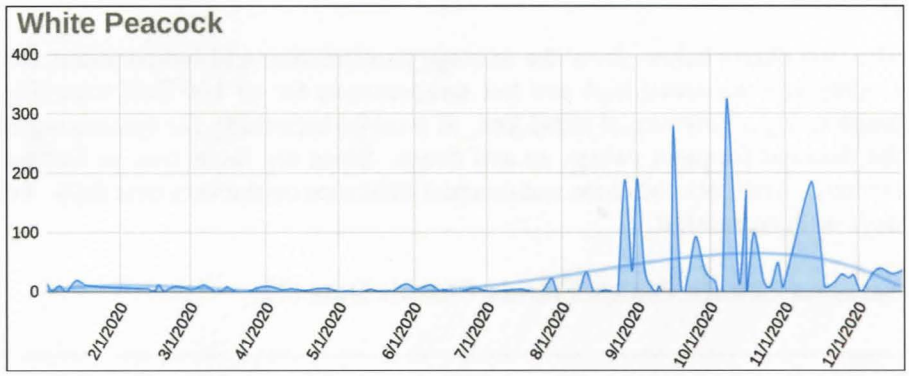

Tropical Checkered-Skipper
40
30
20
10
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

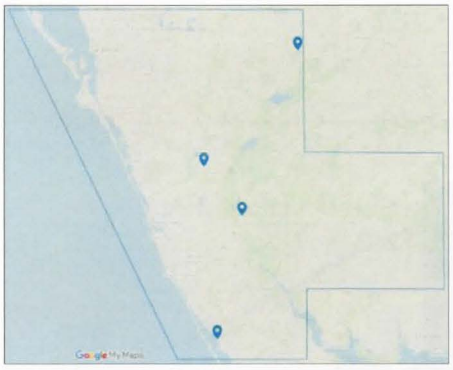

Twin-spot Skipper
12
10
8
6
4
2
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

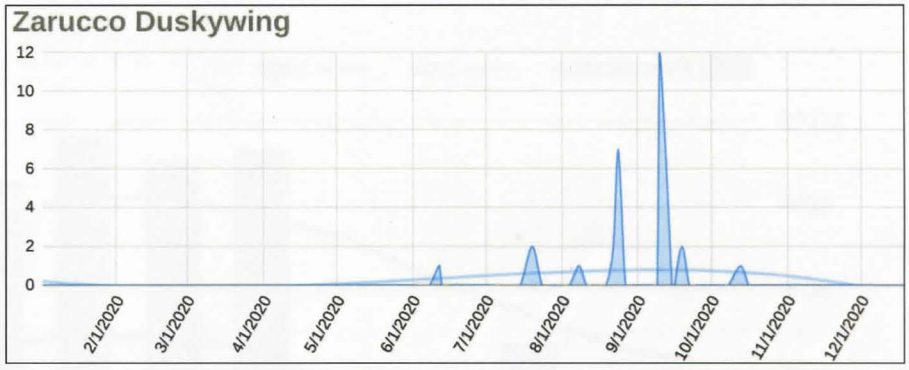

Viceroy
10
8
6
4
2
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

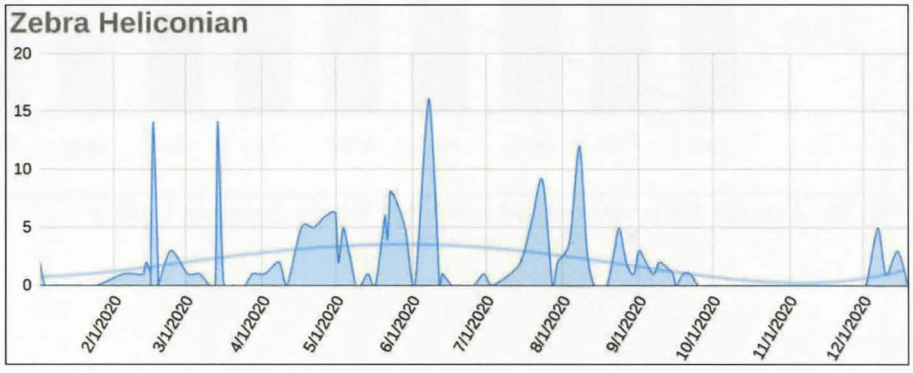

Whirlabout
20
15
10
5
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

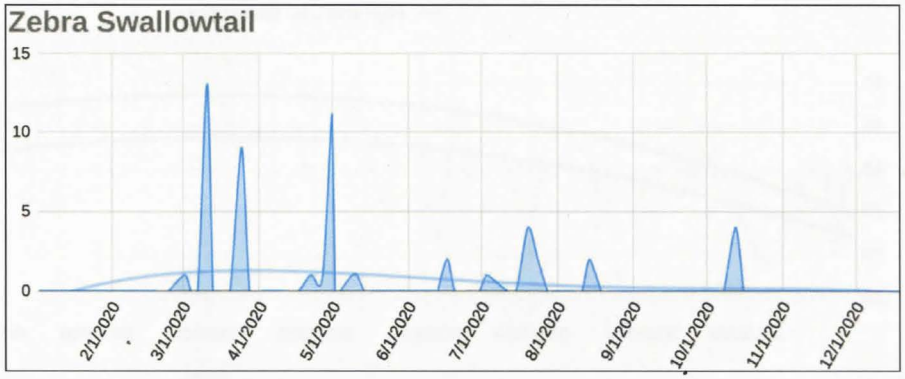

White Checkered-Skipper
20
15
10
5
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020


White Peacock
400
300
200
100
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020




Zarucco Duskywing
12
10
8
6
4
2
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020


Zebra Heliconian
20
15
10
5
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020


Zebra Swallowtail
15
10
5
0
2/1/2020
3/1/2020
4/1/2020
5/1/2020
6/1/2020
7/1/2020
8/1/2020
9/1/2020
10/1/2020
11/1/2020
12/1/2020

Weather

The two charts below show the average precipitation and temperatures for Venice, Florida (Fig. 79), in Sarasota County and the actual high and low temperatures for all 100 field trips (Fig. 80). The actuals are smoothed in the graph using a polynomial trend line. It's useful especially for visualizing large amounts of data when the graph of the data has frequent swings up and down. Since my focus was on finding butterflies, I did everything I could to optimize weather conditions and conduct field trips on the very best days. I did everything possible to walk on sunny days with no rainfall.

Sarasota County/Venice, Florida Climate Data (22)

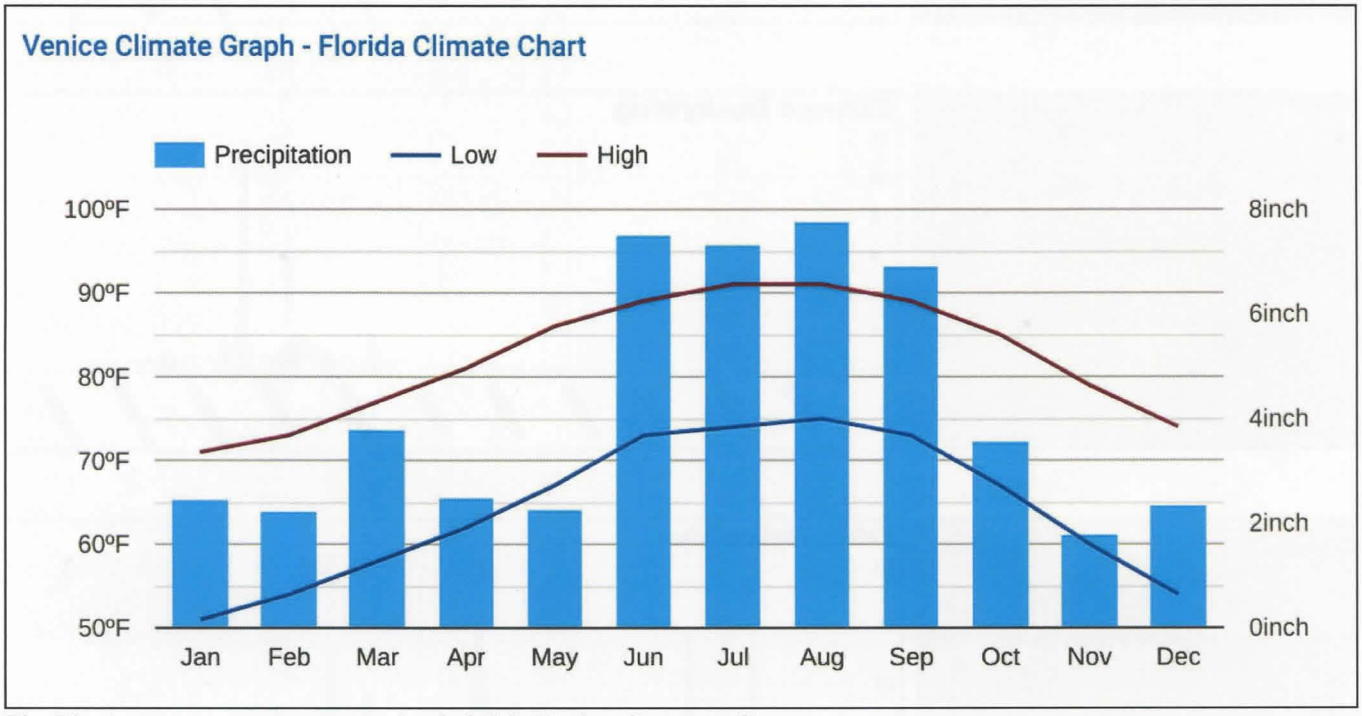


Fig. 79. Average temperatures and rainfall in Venice, Sarasota County

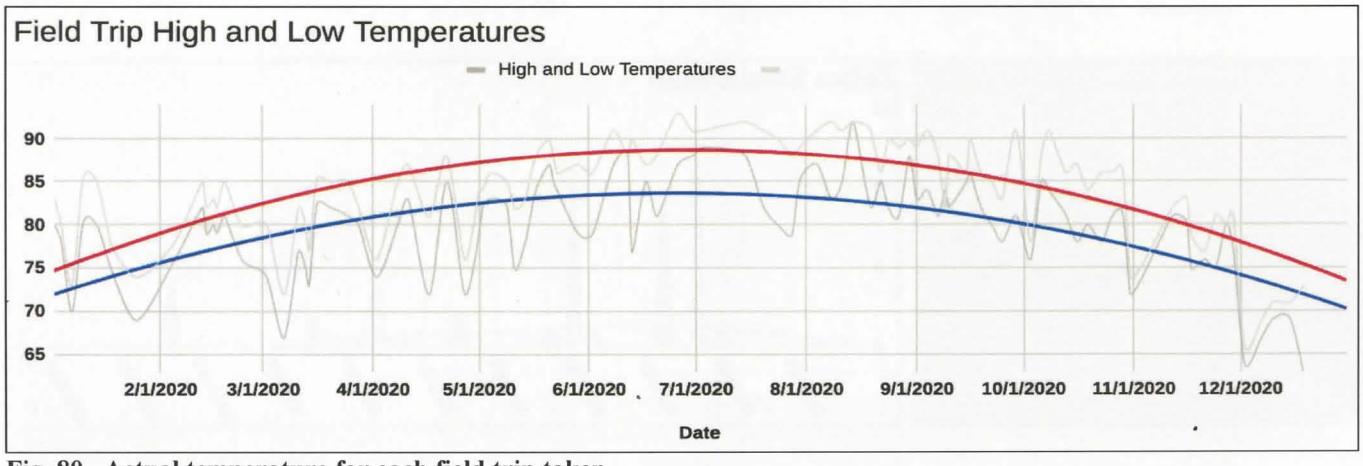


Fig. 80. Actual temperature for each field trip taken

According to the National Oceanic and Atmospheric Administration (NOAA) National Centers for Environmental Information, the 2020 full-year weather for Sarasota County was as follows (23):

* The county average temperature was the warmest on record (by 3 degrees Fahrenheit) when compared with all years back to 1895.

* Rainfall was just above average compared with rainfall during the same period back to 1895.

Technology – A Quick Word

To undertake and create the above, I used a variety of tools to collect data and report on it. In the field, I used good old fashion stroke counts as I've already mentioned. Beyond that, the hardware used was a Canon EOS Rebel T6i with a Canon EFS 55-250mm zoom lens with an image stabilizer (photography), a Google Pixel 3 phone (interface between the camera and Google Photos, and occasionally, Google Maps for navigation in the field), and a Samsung Google Chromebook (desktop applications). The applications used were Google Sheets (data storage and the generation of charts, tables and graphs), Google Docs (word processing), Google Photos (storage and editing of photography), and Google My Maps (creation of Sarasota County maps in their various forms). Microsoft Word was used to deliver the final document for publication.

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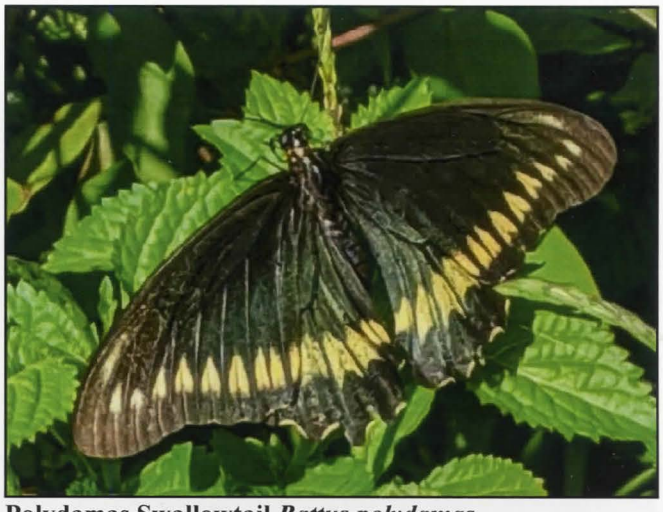
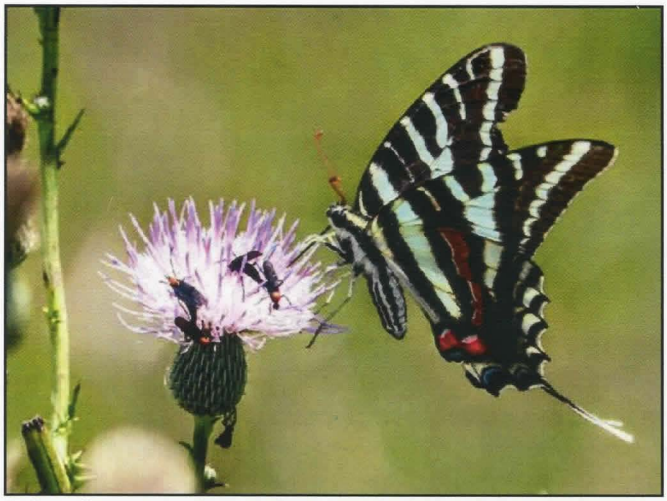
PHOTOGRAPHY – BY FAMILY AND SUBFAMILY

Swallowtails Family Papilionidae
Swallowtails Subfamily Papilioninae

Pipevine Swallowtail *Battus philenor*
Sleeping Turtles North, June 13



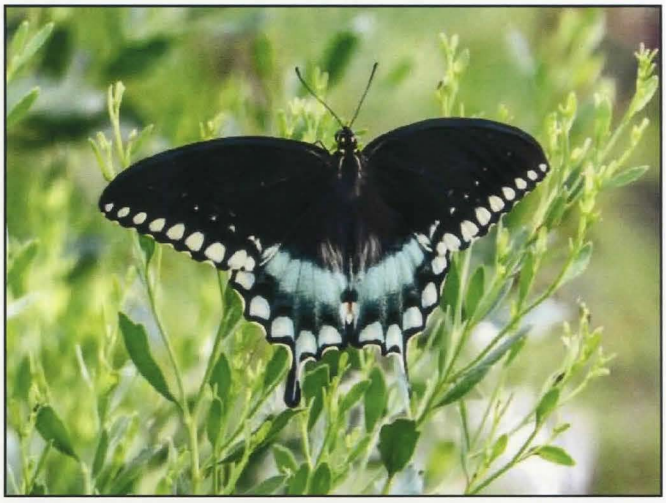
Polydamas Swallowtail *Battus polydamas*
Sarasota Garden Club, May 22



Zebra Swallowtail *Eurytides marcellus*
Walton Ranch, May 9

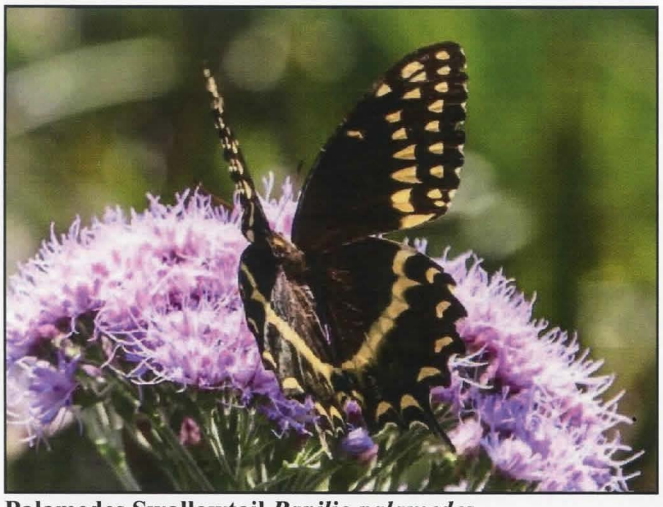
Black Swallowtail *Papilio polyxenes*
Lemon Bay Park, September 10

Giant Swallowtail *Papilio cresphontes*
Lemon Bay Park, June 8



Spicebush Swallowtail *Papilio troilus*
Red Bug Slough, August 11

Whites and Sulphurs Family Pieridae
Whites Subfamily Pierinae

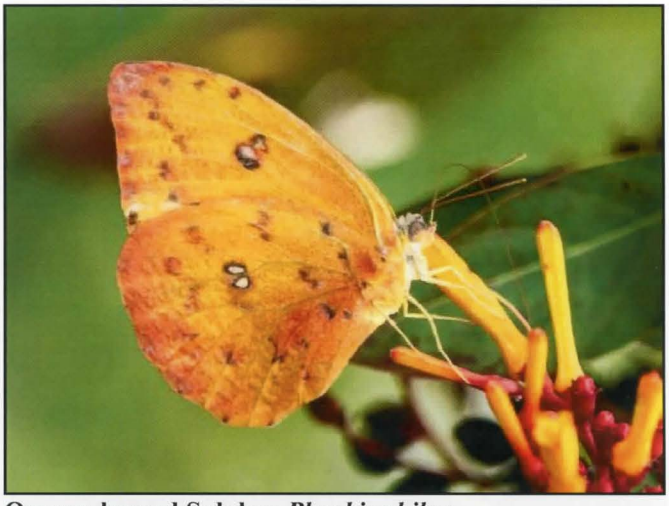


Palamedes Swallowtail *Papilio palamedes*
Old Miakka, October 13

Great Southern White *Ascia monuste*
Historic Spanish Point, March 14

Sulphers Subfamily Coliadinae

Cloudless Sulphur *Phoebis sennae*
T. Mabry Carlton, July 20



Orange-barred Sulphur *Phoebis philea*
Celery Fields, November 12

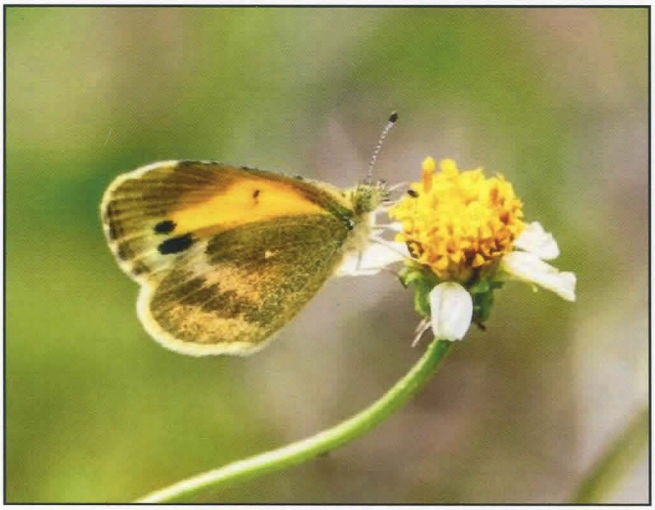
Statira Sulphur *Phoebis statira*
Lemon Bay Park, November 21

Barred Yellow (winter) *Eurema daira*
Sleeping Turtles North, February 5

Little Yellow *Eurema lisa*
T. Mabry Carlton, August 4

Sleepy Orange *Eurema nicippe*
Deer Prairie, July 3

Sulphers Subfamily Coliadinae (cont.)



Dainty Sulphur *Nathalis iole*
Sleeping Turtles North, April 11

Gossamer-wing Butterflies Family Lycaenidae
Hairstreaks Subfamily Theclinae

Oak Hairstreak *Satyrium favonius favonius*
Sleeping Turtles North, April 11

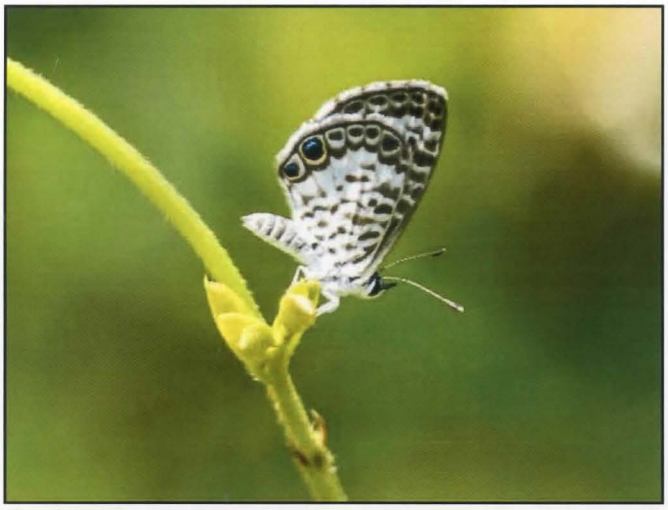
Gray Hairstreak *Strymon melinus*
Scherer Thaxton, April 22

Mallow Scrub-Hairstreak *Strymon istapa*
Private Residence, Venice, April 5

Fulvous Hairstreak *Electrostrymon angelia*
Scherer Thaxton, April 22

Red-banded Hairstreak *Calycopis cecrops*
Old Miakka, June 17

Blues Subfamily Polyommatinae



Cassius Blue *Leptotes cassius*
Lemon Bay Park, June 8

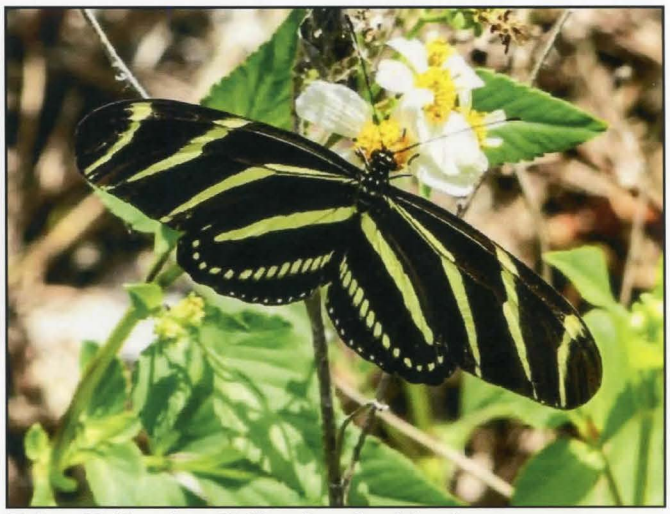
Ceraunus Blue *Hemiargus ceraunus*
Sleeping Turtles North, April 8

Metalmarks Family Riodinidae
Metalmarks Subfamily Riodininae

Little Metalmark *Calephelis virginiensis*
Walton Ranch, June 20

Brushfooted Butterflies Family Nymphalidae
Heliconians and Fritillaries Subfamily Heliconiinae

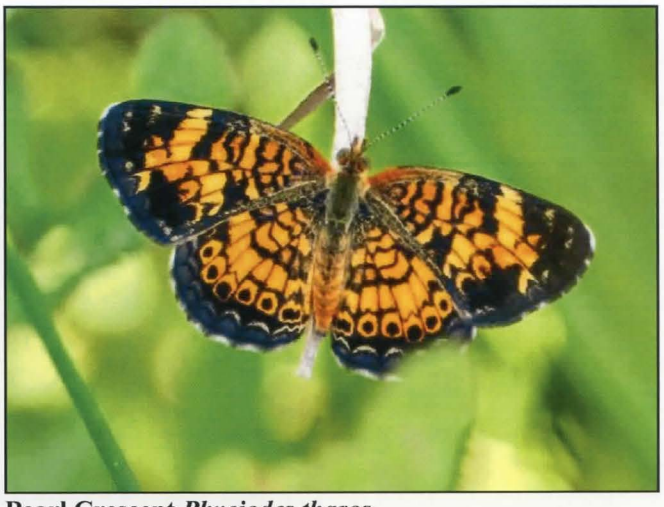
Gulf Fritillary *Agraulis vanillae*
T. Mabry Carlton, July 20



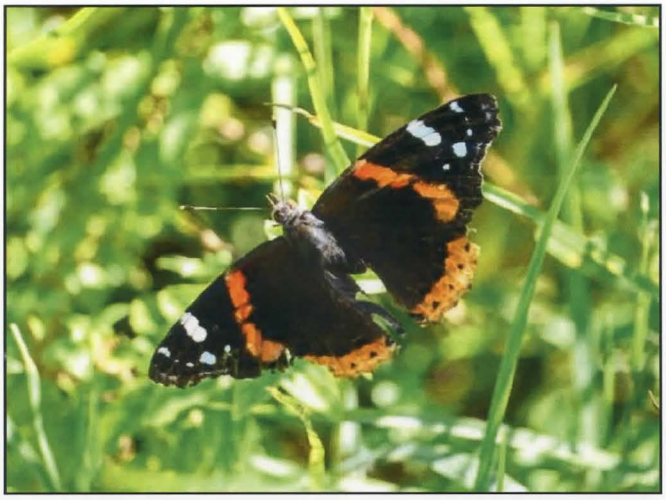
Zebra Heliconian *Heliconius charithonia*
Scherer Thaxton, March 2

True Brushfoots Subfamily Nymphalinae

Phaon Crescent *Phyciodes phaon*
Myakka Islands Point, October 16

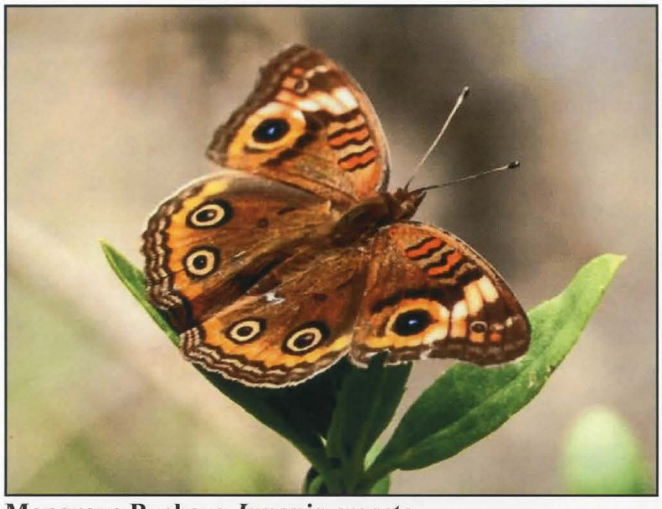


Pearl Crescent *Phyciodes tharos*
Scherer Thaxton, May 29



Red Admiral *Vanessa atalanta*
Celery Fields, October 8

Common Buckeye *Junonia coenia*
Lemon Bay Park, November 21



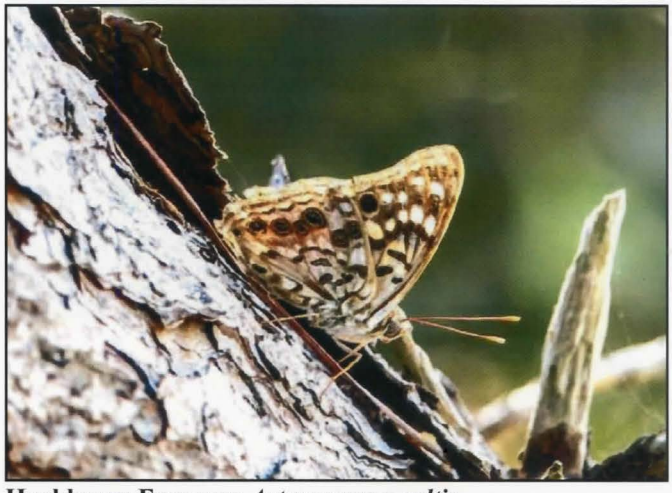
Mangrove Buckeye *Junonia evarete*
Lemon Bay Park, September 10

White Peacock *Anartia jatrophae*
Celery Fields, September 1

Admirals and Relatives Subfamily Limenitidinae

Viceroy *Limenitis archippus*
Myakkahatchee Creek Park, May 2

Emperors Subfamily Apaturinae



Hackberry Emperor *Asterocampa celtis*
Celery Fields, September 25

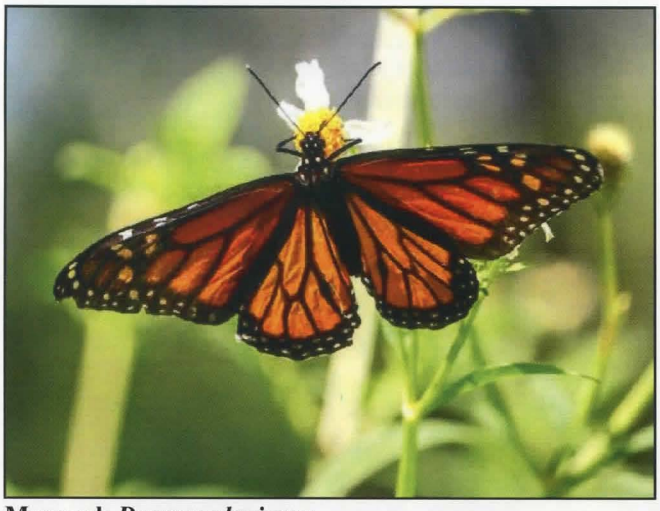
Emperors Subfamily Apaturinae (cont.)

Tawny Emperor *Asterocampa clyton*
Celery Fields, September 25

Satyrs Subfamily Satyrinae

Carolina Satyr *Hermeuptychia sosybius*
Deer Prairie, July 3

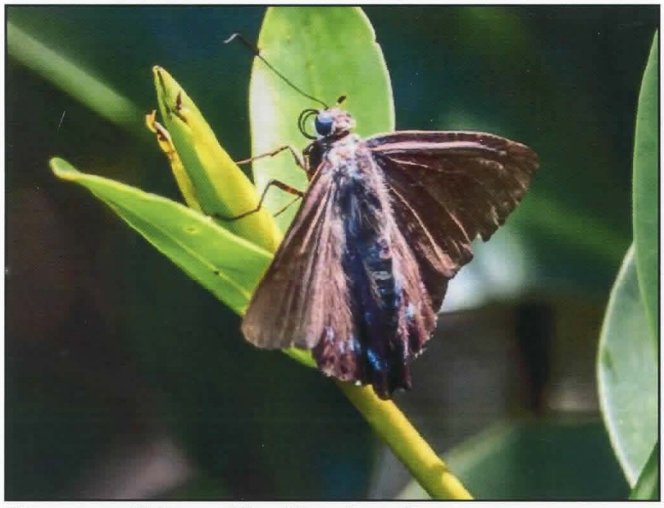
Monarchs Subfamily Danainae



Monarch *Danaus plexippus*
Celery Fields, September 1

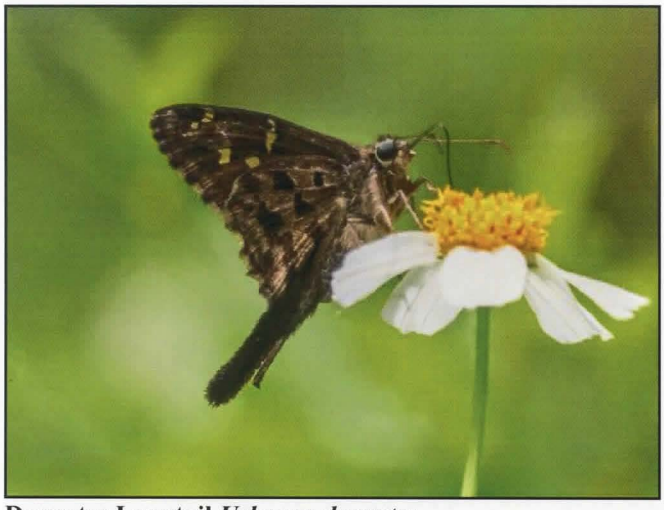
Queen *Danaus gilippus*
Deer Prairie, July 3

Skippers Family Hesperiidae
Spread-wing Skippers Subfamily Pyrginae



Mangrove Skipper *Phocides pigmalion*
Lemon Bay Park, June 8

Long-tailed Skipper *Urbanus proteus*
T. Mabry Carlton, August 8

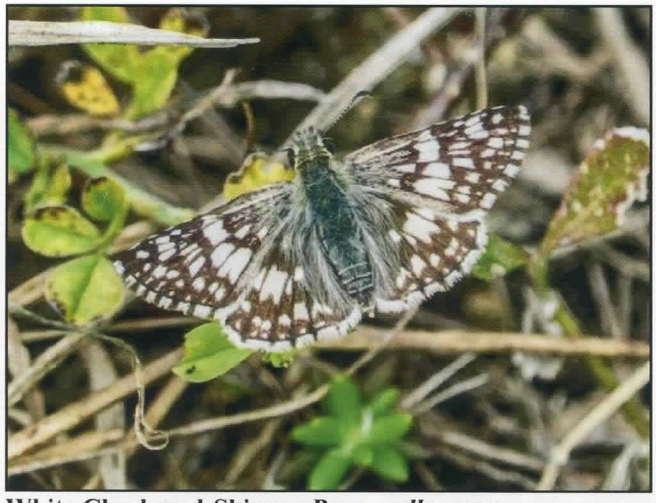


Dorantes Longtail *Urbanus dorantes*
Lemon Bay Park, September 10

Northern Cloudywing *Thorybes pylades*
T. Mabry Carlton, August 22

Horace's Duskywing *Erynnis horatius*
Sleeping Turtles North, June 2

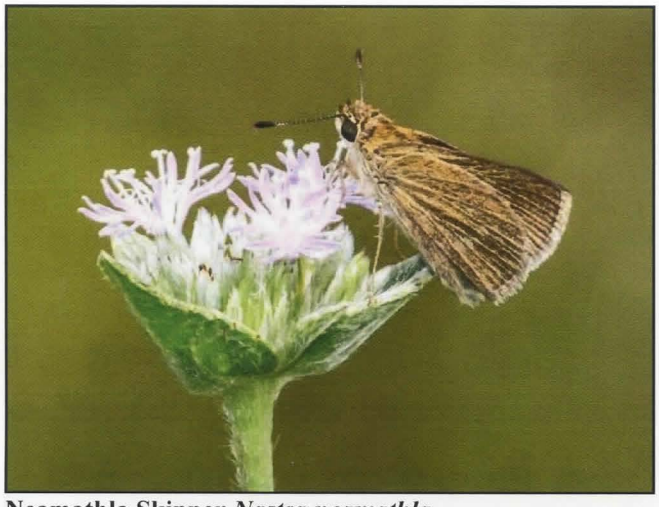
Zarucco Duskywing *Erynnis zarucco*
T. Mabry Carlton, July 20



White Checkered-Skipper *Pyrgus albescens*
Sleeping Turtles North, February 5

Tropical Checkered-Skipper *Pyrgus oileus*
Sleeping Turtles North, June 2

Grass-Skippers Subfamily Hesperiinae



Neamathla Skipper *Nastra neamathla*
Scherer Thaxton, August 30

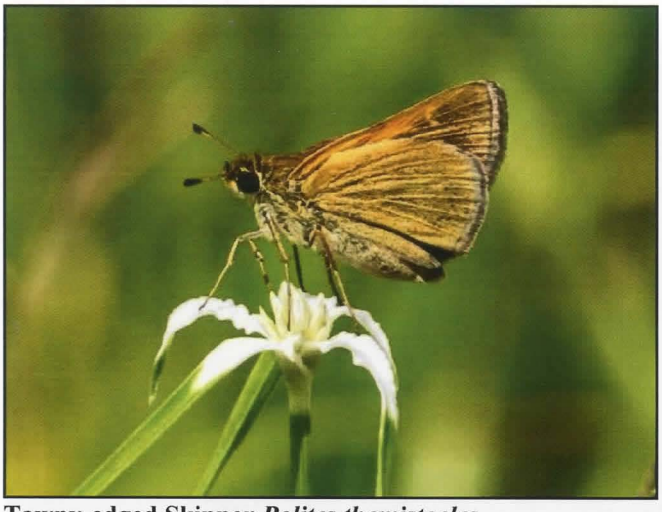
Three-spotted Skipper *Cymaenes tripunctus*
Sleeping Turtles North, July 30

Clouded Skipper *Lerema accius*
Sleeping Turtles North, February 13

Least Skipper *Ancyloxypha numitor*
Scherer Thaxton, December 10

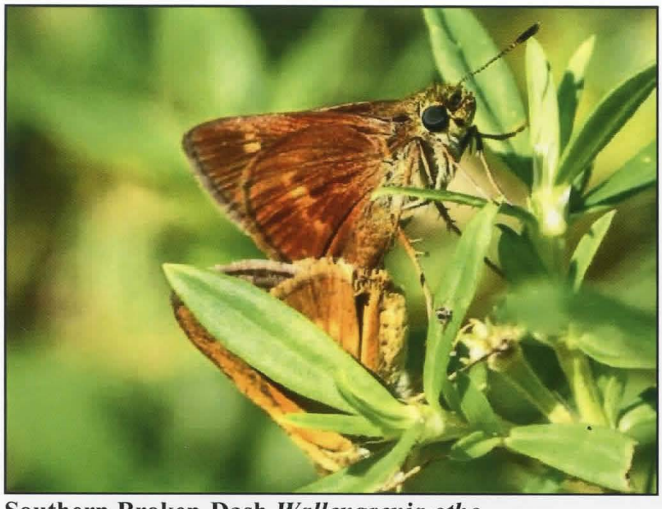
Southern Skipperling *Copaeodes minimus*
Celery Fields, September 16

Fiery Skipper *Hylephila phyleus*
Scherer Thaxton, April 22

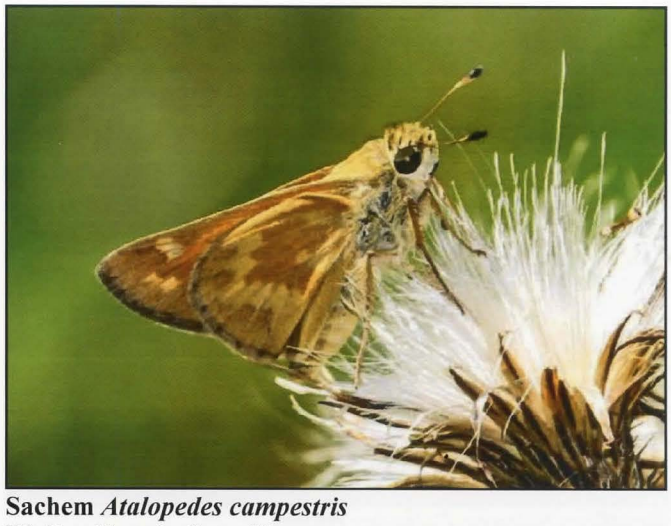


Tawny-edged Skipper *Polites themistocles*
Scherer Thaxton, May 29

Whirlabout *Polites vibex*
Scherer Thaxton, March 2



Southern Broken-Dash *Wallengrenia otho*
Scherer Thaxton, September 22



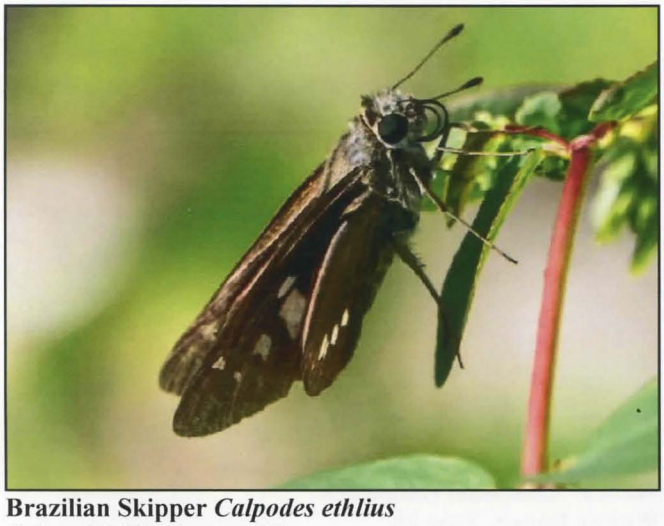
Sachem *Atalopedes campestris*
Walton Ranch, June 20

Delaware Skipper *Anatrytone logan*
Scherer Thaxton, July 28

Monk Skipper *Asbolis capucinus*
Walton Ranch, May 11

Eufala Skipper *Lerodea eufala*
Scherer Thaxton, March 2

Twin-spot Skipper *Oligoria maculata*
Scherer Thaxton, July 28



Brazilian Skipper *Calpodes ethlius*
Celery Fields, August 27

Ocola Skipper *Panoquina ocola*
Lemon Bay Park, September 10

Lessons Learned

It's easy now to look back after a year in the field and to realize there are things I should have done differently. I freely admit improvements could have been made but that is based on lessons learned and learning them takes time and hard work. Knowing what I know now, I would do things differently as follows:

* I would reduce the number of sites visited from 21 to 10. The 10 sites would still be geographically spread, offer enough uniqueness and contain the highest number of butterfly species and individuals. That is not to say the other sites do not have merit but for one person to attempt such a survey, reducing the number of sites would be more realistic and manageable. I can think of only one species (Polydamas Swallowtail) I would miss if I dropped 11 of the sites. The 10 sites remaining would include Celery Fields, Old Miakka, Red Bug Slough, Scherer Thaxton, Curry Creek, Sleeping Turtles North, Carlton Reserve, Deer Prairie Creek, Walton Ranch, and Lemon Bay Park. A quick single trip to the Sarasota Garden Club and the Polydamas would be back on the list.

* I would visit half of the 10 sites monthly and the other half quarterly for a total of 80 field trips. Again, by reducing the number of field trips, the effort would be significantly more manageable. By visiting every site either monthly or quarterly, the resulting data would be more consistent and improve the understanding of seasonality both for species and locations. Perhaps, 80 field trips are still too many, but for now, it sounds right.

* I would map my transects. While I hope to be able to retrace my steps for years to come, mapping out the transects would enable anyone to follow in my footsteps. This would be helpful for collecting and comparing future data to this baseline. The good news is that there are applications I am already familiar with to do the mapping. I just need to put them to work. Perhaps this is a good project in the coming year or two.

* I would walk more often with a partner. I walked an extraordinary distance and amount of time alone and in places where if something happened to disable me, I would have been hard to find. I enjoyed where I was most of the time and the solitude was precious but there were a few occasions where my safety was at risk and I'm not sure the risk was acceptable. On multiple occasions I was nearly overcome by heat, got lost, became exhausted, or to some small degree, feared for my safety. Having a partner would have been much more reassuring in those situations but, admittedly, finding a partner for the whole venture would have been impossible.

Epilogue

The long walk is over, 300 miles, most of it alone. Hours of solitary exploration yielded many things – more butterflies than I expected, snakes, turtles, tortoises, deer, alligators, hogs, spiders, fish, birds of all kinds, plants I still have so much to learn about, but not many people. I enjoyed the quiet and most of it was. I enjoyed the feeling that something was watching me. The subtle reminder that I was visiting wild places, the home to so many other creatures. I enjoyed the anticipation of what I might find, the heat of summer, the rain that soaked me, and even wading through unexpected high water. I enjoyed the changing of the seasons. Yes, even in Florida, the seasons change. It all became part of the story, part of me, but for now, the long solitary walk is over.

That is not to say I didn't enjoy those times when I had company. Thank you to Veronica Battles, John and Jane Lampkin, Nancy White, Delia Smith, Karen Rosenbeck, Randy Brown and a few members of the Sarasota Butterfly Club for the shared experience. I enjoyed the conversation and finding things together.

I'll never know who they all were, but I'd like to thank the visionary people of Sarasota County, for knowing the county would someday grow and for setting aside and preserving so much land for those of us who like to wander. This is a beautiful place to live, a beautiful place to discover, and we are fortunate that the legacy of so many was to set aside and save our natural resources.

Finally, I'd like to thank a mentor, Father Francis Michael, the Abbott Emeritus of the Monastery of the Holy Spirit back in Conyers, Georgia. He taught me how to count butterflies, why it's important, not just for conservation but for the soul. He taught me that to count a butterfly is to count a blessing.

Acknowledgements

Marc Minno, for his presentation to the Sarasota Butterfly Club in November 2019. It helped me further understand that we all have a role to play in the conservation of the natural world and to butterflies. I would also like to thank him for his continued support and encouragement throughout the life of this project.

John and Jane Lampkin, for his example in the field and his continual reminders that the study of butterflies should concurrently be the study of plants. For both their assistance in field work at Walton Ranch, Sleeping Turtles North, Private Residence – Sarasota, and Celery Fields.

Delia Smith, for her discovery of the Tawny Emperors at Celery Fields and leading me to them.

Ed Perry, for his assistance in identifying certain species, especially Hesperiidae, the skippers, most notably, the Neamathla.

Veronica Battles, no married person goes off on a hundred field trips in one year without tremendous understanding and support from their spouse, and for that, I will always be grateful. Her contribution to this was significant and greatly appreciated.

The Sarasota Writers Group, for their inspired writing and for listening to me read selections of the first draft of this work, and for their kind words and constructive criticism. Every paragraph I write, I write hoping it meets their standard of excellence.

J. Barry Lombardini, editor of Southern Lepidopterists' News, for showing an interest in this project while it was still in its formative stages, for his editorial expertise, and for publishing the work.

Contact

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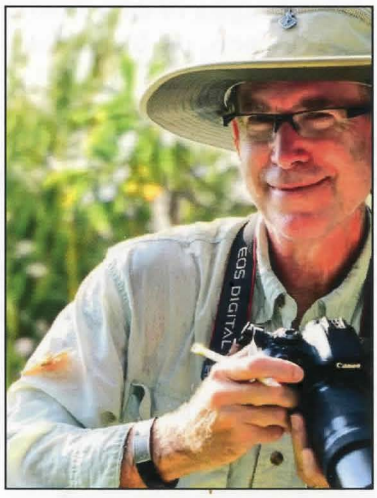
Email: scottdanderson53@gmail.com

About the author

Born in Minneapolis, Minnesota, Scott D. Anderson was raised in the Minneapolis area and resided there for more than 35 years. A graduate of the University of Minnesota, he worked in the travel industry both for a major U.S. airline as well as a leading travel commerce platform providing distribution, technology, payment and other solutions for the global travel and tourism industry. For business and for pleasure, he has traveled extensively throughout North America, Europe and Asia. He is an avid naturalist with a primary interest in butterflies and actively studies them in their native habitats. He sits on the board of the Sarasota chapter of the North American Butterfly Association. He is also a member of the Sarasota Writers Group. He lives with his wife Veronica and two Australian terriers named Carly and Ellie in Venice, Florida.



Scott D. Anderson with Tawny Emperor (left) Photo by Delia J. Smith

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4. Sarasota Herald-Tribune, February 9, 2010.
5. Sarasota County Parks, Recreation and Natural Resources Natural Areas Guide, Old Miakka Preserve, page 34.
6. Sarasota County Parks, Recreation and Natural Resources Natural Areas Guide, Red Bug Slough Preserve, page 40.
7. https://selby.org/about/history/.
8. Sarasota County Parks, Recreation and Natural Resources Natural Areas Guide, Scherer Thaxton Preserve, page 44.
9. Sarasota County Parks, Recreation and Natural Resources Natural Areas Guide, Pinelands Preserve, page 36.
10. Sarasota County Parks, Recreation and Natural Resources Natural Areas Guide, Curry Creek Preserve, page 20.
11. Sarasota County Parks, Recreation and Natural Resources Natural Areas Guide, Sleeping Turtles Preserve North, page 48.
12. Sarasota County Parks, Recreation and Natural Resources Natural Areas Guide, Carlton Reserve, page 14.
13. Sarasota County Parks, Recreation and Natural Resources Natural Areas Guide, Sleeping Turtles Preserve South, page 50.
14. Sarasota County Parks, Recreation and Natural Resources Natural Areas Guide, Deer Prairie Creek Preserve, page 22.
15. Sarasota County Parks, Recreation and Natural Resources Natural Areas Guide, Jelks Preserve, page 24.
16. Sarasota County Parks, Recreation and Natural Resources Natural Areas Guide, Myakkahatchee Creek Environmental Park, page 32
17. Sarasota County Parks, Recreation and Natural Resources Natural Areas Guide, Walton Ranch, page 56.
18. Sarasota County Parks, Recreation and Natural Resources Natural Areas Guide, South Venice Lemon Bay Preserve, page 52.
19. Sarasota County Parks, Recreation and Natural Resources Natural Areas Guide, Manasota Scrub Preserve, page 28.
20. Sarasota County Parks, Recreation and Natural Resources Natural Areas Guide, Lemon Bay Park and Environmental Center, page 26.
21. Sarasota County Parks, Recreation and Natural Resources Natural Areas Guide, Myakka Islands Point, page 30.
22. https://www.usclimatedata.com/climate/venice/florida/united-states/usfl0497.
23. https://www.ncdc.noaa.gov/sotc/national/202012#ytd-highlights

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