

Purple Patrol Protocol 2021

The Eastern subspecies of purple martin (*Progne subis subis*) nests almost exclusively in human-constructed bird houses across the United States and Canada. The dependence of purple martins on artificial cavities have made their “landlords” an integral part of conservation efforts, but it wasn’t always this way. Historically, purple martins nested in natural tree holes and cavities excavated by woodpeckers. However, the availability of suitable nesting sites has decreased with time as natural nesting habitats have been removed to make way for urbanization and development, and invasive species like the European starling have displaced native cavity nesters like purple martins. Interestingly, one of the last places where natural cavity-use has been documented is right here in our Central Florida backyard – the Orlando Wetlands Park!

Why are we patrolling the Orlando Wetlands?

To determine if there are still Purple Martins nesting in natural cavities at Orlando Wetlands Park (OWP). The Purple Patrol is a community-based science project launched by the UCF Purple Martin Project, the Purple Martin Conservation Association (PMCA), and the Orlando Wetlands Park.

Goals for Patrol Sessions:

- Document the presence and activities of Purple Martins at OWP using a standardized datasheet, which will be uploaded to a central data repository
- Determine whether or not Purple Martins are nesting in natural cavities in the park
- Document the locations of active cavities and whether martins are engaging in behaviors of interest at these cavities
- If possible, identify the age (SY or ASY) and sex of the Purple Martins
- Determine if the birds are banded and if so, record the band information (e.g., readable number or color combinations)

Getting Started

If you have not done so already, please fill out the questionnaire and download the datasheet from on the Purple Patrol website: <https://sciences.ucf.edu/biology/annaforsman/wetlands/>

✓ Sign up to patrol

There is a Google Calendar that will be used to document when volunteers are patrolling. Once this calendar is shared with you, please add an event for the times you will be patrolling. This calendar will be available for all volunteers to help plan their patrolling trips. More information on scheduling is provided through the website and meetings. If you are unable to access the Google Calendar or if you would like to patrol on a day when someone has already signed up, don’t worry! Please go out and patrol anyway! Just make sure to upload your data afterwards.

✓ Choose a route

We have made suggested, color-coded patrol routes that you can choose from to start your patrolling. If you patrol on a regular basis, you are not required to follow the same route every time. If you prefer to take your own path, please record the path names that you followed on the datasheet. See [Routes](#) for more details.

✓ Choose a time

Try to scout at optimal times when the birds are most likely to be around the nest: 8-10 AM or 4-6 PM. If you can not patrol at these peak activity times, you should feel free to patrol at any time that works for your schedule. Always record the time of your patrol on the datasheet. Please be mindful of OWP hours as gates are locked promptly at closing.

✓ Know likely areas of nesting

If Purple Martins are nesting in the Orlando Wetlands, they will likely be using abandoned woodpecker holes in palm trees. Focus scouting near clusters of palm trees and look for holes in the sides of the trunks. As of now, cell 14 seems to be a likely location for nesting. As we determine more locations, we will share the information with the Purple Patrol volunteers through the [Facebook page](#). Please feel free to share your observations and pictures on the Facebook group! We are hoping to build a well-connected and friendly group of Purple Patrollers.

✓ Check the Weather

WEATHER: Check the weather forecast immediately before patrolling. **If it is raining heavily or there is thunder or lightning in the area, DO NOT GO PATROLLING**

✓ Gather Your Supplies

- Spotting scope / Camera / Binoculars
- Desired sun protection (optional)
- Clipboard, which contains:
 - Patrolling datasheet
 - Patrolling protocol (optional)
 - OWP Map (optional)
 - Writing utensils

✓ Enjoy a day patrolling at the Orlando Wetlands!

While searching for nesting Purple Martins, be sure to move around and observe trees from many different angles. The birds can be on any side of the tree and moving can sometimes make it easier to read a band or determine age/sex. Tips for Purple Martin age and sex is included in the [Identification Guide](#) and AUX band information is included in the [auxiliary band](#) section.

✓ Please record data on the datasheet, and upload data as soon as possible after your patrolling

Once you have completed a patrolling session, please submit your datasheet through the Purple Patrol Datasheet Collection form: <https://forms.gle/gguCVxGGw8EbjsdB8>

The datasheet and submittal instructions can also be found on the website. See the Data Entry Summary for how to fill out the different columns. If you have any questions, please contact us through the [Facebook page](#).

Please share your observations with your fellow Purple Patrollers on Facebook! Everyone will be excited to hear about what you have seen.

If a Purple Martin is found:

- Use the provided datasheet to record as much information as possible. We are interested in any Purple Martin observations, even if they are simply flying overhead on their way through the wetlands.
- Record the Location of the bird(s) according to the [Location](#) information section.
- Record the bird's behavior, including:
 - Whether the bird was flying, perching, or entered/exited a nest cavity.
 - If the bird is carrying nest material or insects or exited a nest carrying a fecal sac.

Note: please record any additional information about behaviors observed in the comments section

- If possible, record the age and sex of the bird using the [Identification Guide](#) below. Record if the bird is a male/female, juvenile, SY, or ASY.
- If you see any predators around the Purple Martins or nesting cavities, please record this information under "Predator Activity." Predator identification photos can be seen in the [Identification Guide](#). Along with predators, competitors such as European Starlings can evict purple martins from nesting sites and in some cases kill nestlings. Please record any activity you see with Starlings in this category.
- If you are certain no band is present or you didn't observe a particular behavior, please still mark that column with a "—". If you are unsure whether a bird has a band, please mark those columns with an "unk" (unknown). Please do not leave any cells blank.

If an Auxiliary (AUX) band is observed:

Purple Martin researchers in Central Florida attach a standard aluminum leg band with a unique identification number (issued by the USGS) to the right leg of the birds they study. These band numbers are difficult to read unless the bird is in hand, so a subset of birds may also be banded on the left leg with a purple Auxiliary Identification Band (AUX) with white lettering that can be read through a spotting scope or binoculars.



AUX band with
ID Number
(on left leg)

These bands begin with FL-D or FL-A followed by a three digit number. These AUX bands allow researchers to identify particular individuals and monitor behaviors. If you can see a band on the Purple Martins, please record the information on the datasheet.

- If you see a bird with such a band, record the AUX band number, which is usually located on the left leg.
- **Be patient** – try to watch the bird until it moves so you can see all the digits. It may take several minutes.
- If you can only read part of the number, record what you can and put a question mark for the number or letter space(s) you can't read.
- If you are not 100% sure that you read the number correctly, please make a comment mentioning so in the “comments” section of the datasheet.

Location

It is important that we accurately document the location of Purple Martins to determine potential or actual sites of natural nesting activities. There are a few different methods for marking the exact locations. For all of the methods, it would be very helpful to include a photo of the tree cluster the birds were found in/near. There will be an opportunity for you to upload any such pictures along with your patrolling data. Following are the methods you can use to record location information.

1. GPS coordinates with mobile phone

Most cell phones have a GPS application such as Apple Maps or Google Maps. If you drop a pin on the location you see the Purple Martin, you can record those exact coordinates on the datasheet. To drop a pin, find your location and long-press the screen until a red pin appears. Once you click on that pin you will see the latitude and longitude coordinates.

2. “What Three Words” mobile application

This application gives much more precise GPS locations than a typical pin on a map and is easily shareable. Every 3m x 3m square is assigned a unique name of 3 words, all you need to do is use the app to see what the 3 words are and record them in the datasheet. In the app, you can see a satellite view of the park. You can mark your location and write the three words in the datasheet's “Location: Self” column. Then you can mark the bird's location in the “Location: Bird” column. (App icon shown on left)



3. Describe the location using trail names and cell numbers

If you are not cell phone savvy, don't fret! You can also describe the location of the Purple Martins using the designated trail names and cell numbers. Each path has a name and the wetlands are divided into cells between 1 and 17. In the comments section of the datasheet, describe any extra details that can help pinpoint the location. A black and white version of the map will be available to print and bring on patrols to read the trails and cell numbers clearly.

Routes

There are suggested color-coded routes that volunteers can take to patrol. They range in distance and volunteers are encouraged to follow the path they are most comfortable with. If you prefer to take a different route, please record the trail names that you followed in the comments section of the datasheet.

These routes will be available on the website for better viewing.

Trail distances account for the entire loop, from parking lot to parking lot.

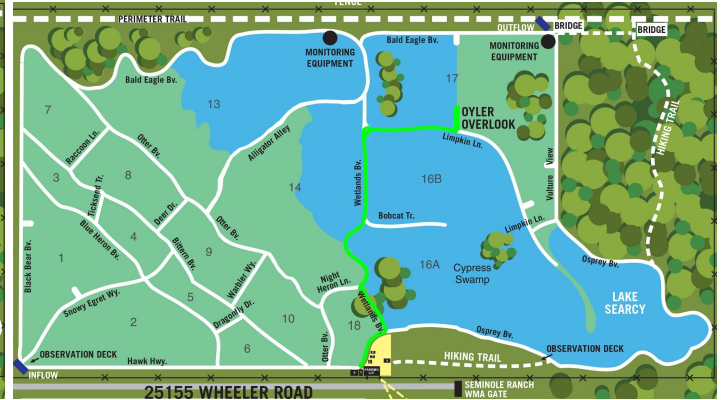
Red Trail - 0.64 Miles

Orange Trail - 1.53 Miles



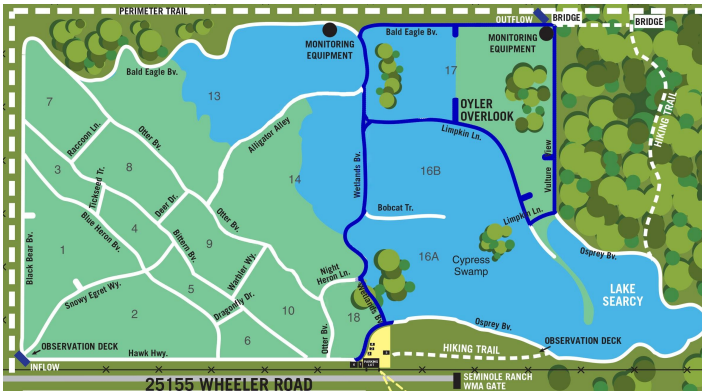
Pink Trail - 2.12 Miles

Green Trail - 2.14 Miles



Blue Trail - 3.54 Miles

Yellow Trail - 1.85 Mi



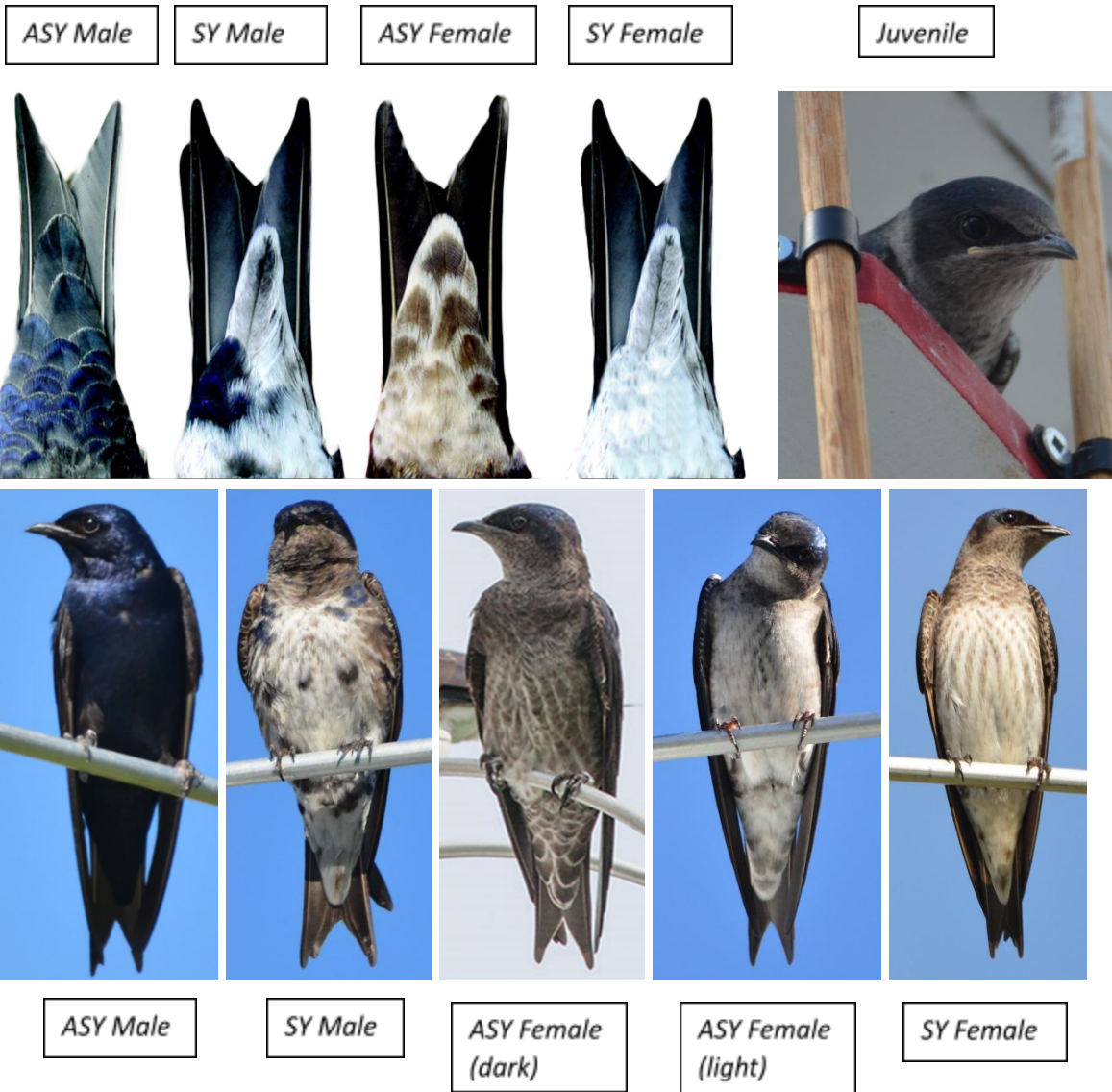
ORLANDO WETLANDS PARK LOCATION MAP

- 1 EDUCATION
- 2 SIGN-IN
- 3 RESTROOMS
- 4 PICNIC AREA
- 5 PICNIC AREA
- 6 WILDLIFE GARDEN

Identification Guide

Age and sex of Purple Martins

Nesting experience can play an important role in how successful parents are at raising their young, so it is useful to know the age of each nesting bird. Males that are two or more years old are referred to as After Second Year (ASY) and are the easiest to identify as the feathers on their bodies are entirely iridescent purple/blue or black. Males that are one year old are Second Year (SY) birds and have a white underside with variable amounts of purple speckling on their throats, chests and at the base of the tail (also called undertail coverts). Female ASY birds have light undersides that range from white to brownish with brown undertail coverts that have a light border. Female SY birds have light undersides, including their undertail coverts. The undertail coverts are often the easiest way to tell the ages and sexes apart. Juveniles often have puffy, yellowish corners on their mouth and fluffy undertails. If you do not feel comfortable designating age and sex of the birds that you observe, that is OK!



Behavior and Predator Clarification

The photos below show purple martin behaviors you might observe. At the beginning of the nesting cycle, males and females bring grasses and leaves to the nest cavity to construct their nest. During this stage, birds are sometimes aggressive with each other as they defend their nest cavity. Once chicks have hatched, adults will begin provisioning their young with insects. Adults do not feed each other insects, so this is a sure sign that nestlings are present. Photos are also included of purple martin predators. Short-tailed hawks and Cooper's hawks are ambush predators that can catch unwary adult birds, but short-tailed hawks and crows typically are only able to catch juvenile birds still learning to fly.



Leaf ("Nest Material")



Dragonfly ("Insect")



Aggression



Fecal Sac (House Martin, a European species)



Short-tailed Hawk dark morph (Purple Martin Predator)



Short-tailed Hawk light morph (Purple Martin Predator)



Cooper's Hawk (Purple Martin Predator)



Swallow-tailed Kite (Purple Martin Predator)



Crow sp. (Purple Martin Predator)