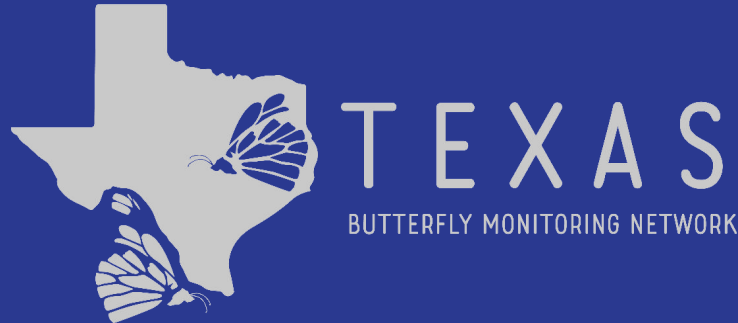


# Butterfly Monitoring Introduction

2021, Irmi Willcockson & Ashley DeLeon



# Presentation Overview

- Program Introduction
- Choosing a Route
- Communicating Your Chosen Route
- How to Survey
- When to Survey
- Identifying Butterflies
- How to Get Support
- Task List for New Monitors



# Note

This presentation uses

- 'walk' to indicate traveling along a route
- 'record' to indicate collecting the data
- 'Warm months' to indicate times when the average daytime temperature is at least 70 F



# Program Overview

- Citizen science project started in cooperation with the North American Butterfly Monitoring Network
- Using long term monitoring, we can determine
  - Changes in abundance of a given species
  - Number of species using a particular habitat
  - Habitat improvements to support butterfly conservation
- Texas has more butterfly species than any other state



# Choosing a Route

An acceptable route:

- Takes 30 min to 2 hrs to walk at a slow pace
- Has well-defined path, mowed grass, gravel, paved, boardwalk, or a combination of these
- Is accessible to the volunteer throughout the warm months
- Has at least one 'natural' habitat
- (Optional but desirable) Can be walked in a circle



# Example Route - Willow Waterhole



- Detention pond with natural edge and habitat island
- Habitats are named by the route founder
  - Roadside
  - Hilltop (near apartments and plant)
  - Hillside
  - Man-made bridge
  - Island

# Questions to Ask Yourself about a Possible Route

- Is it accessible when I want to monitor?
- Does it have multiple habitats?
- Do a lot of people use this area? Am I ok with that?
- Is it safe for me during the day?



# Communicating Your Chosen Route

- Follow the instructions in the [Creating a Route with Google Maps](#) guide to establish your new route.





# When to Survey

Each route should be surveyed

- at least 8 times per year, at least 4 x before July 15th and 4 x after July 15th
- on days when it is at least 70 F
- ideal weather is sunny and little wind
- between 10 am and 4 pm to catch butterflies at peak activity



# How to Survey

- Only 1 person can look for butterflies, a 2nd person can be scribe
- walk at a steady pace
- your survey area is like being in the center of a clear sphere extending 20 ft in all directions
- practically that means I look side to side, forward and above me as I walk along



# Recording Your Data While Walking

- Start, End and Break times are critical
- Record weather
- Note unusual or changed conditions
- Use tally marks to record butterflies in appropriate habitat

**Texas Butterfly Monitoring Network**  
Houston Area Field Form - Modified by Irmis Willcockson

Site: Willow Waterhole      Route: Loop  
 Date: 8/15      Start time: 9:24 am      End time: 10:05  
 Monitor: Irmis Willcockson      Scribe: Hilde Berry

Wind Conditions (start)    calm    relative still    moderately windy    windy  
 Sky Conditions (start)    clear    mostly clear    partly cloudy    mostly cloudy    overcast    hazy

Wind Conditions (end)    calm    relative still    moderately windy    windy  
 Sky Conditions (end)    clear    mostly clear    partly cloudy    mostly cloudy    overcast    hazy

Temperature 87    Breaks (start and end time of break) |||| |

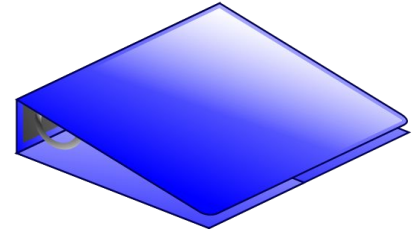
Comments:  
 Hill top + side mowed recent      Peds  
 Tall grass around / between trees      Sulfurs outside  
 Island not mowed      Sunny ||||

Habitats Key: A=Man-made Bridge      B=Roadside      C=Island      D=Hillside      E=Hilltop

Species	A	B	C	D	E
Unknown Sulfur				I	
Unknown Sulfur					
Unknown Sulfur					
Checkered Skipper					
Unknown SKIPPER					
<u>Cerulean blue</u>					
<u>Common Buckeye</u>					I

# Keep Your Data Forms - Please

- Although you will enter data into Pollardbase, it is important to keep your original data forms
  - If your route has not been established in Pollardbase, you can still monitor and record data. Enter it once the route has been established.
  - If there is a question about your entry, you can go back to the form and check



# Pollardbase relies on accuracy not precision

It is better to record a butterfly as an “unknown hairstreak” than to guess and get it wrong. People new to butterfly monitoring will have MANY entries such as “unknown \_\_\_\_\_” , even “unknown butterfly”!

You WILL get more comfortable identifying the most common species you see along your route, and be able to spot field marks that will help you find others in your field guide.

Details on how to enter your data are in a separate presentation.



# Identifying Butterflies

- Size
- Shape
- Flight Habit
- Perch with wings open or closed
- Color of upper wing surface
- Color of wing underside
- Color and markings of wing margin
- Body color (often hard to see)



# Look first, photograph next, look again

- Spend a few moments looking at the butterfly
  - In your head or out loud, check off size, shape, color, any markings
  - Check your guide, compare to butterfly
- Get a few pictures, if possible
- Look again
  - Wing margins
  - Body color
  - Antennae



# Butterflies vs Moths vs Grasshoppers

- Depending on where you are monitoring, day flying moths may be rare, or very common
- In general, moths
  - fly faster, more directly from one place to another
  - are drabber, mostly greys, whites, browns
  - rest with their wings flat
  - don't flap their wings when resting
  - have fuzzy antennae
- Grasshoppers
  - Often make noise when they fly
  - Fly in an arc, from ground, up in the air, back to ground
  - Tend to fly shorter distances





# Taking Pictures of Butterflies for Identification

If possible, get down close to ground/flower/grass where the butterfly is resting. Do NOT let your shadow fall across the butterfly, they tend to leave.

Take LOTS of pictures (as long as the butterfly cooperates), it's often hard to tell in the field which image will show the field markings you can use to identify a butterfly, or to exclude some species.

Amazing pictures are...amazing, but not required for positive ID. Often poorer quality images show the identifying marks and nothing much else.



# Some butterflies don't cooperate with photographers

In the Houston area, sulfurs and swallowtails are very difficult to photograph.

“Unknown sulfur” is a perfectly good entry in that case.

“Unknown swallowtail” unless you are able to see the wing markings.



# Using iNaturalist After Getting Home

- Uploading your observation will produce machine-generated species suggestions
- For uncertain IDs I don't accept an ID unless at least one user agrees with machine/me
- Do check the recent sightings, sometimes it's obvious that the species you thought you saw or iNaturalist thought you saw has not been recorded in your area.
  - If that is the case, feel free to reach out to bugguide or send an email with picture to [butterflymonitorstx@gmail.com](mailto:butterflymonitorstx@gmail.com) and I can provide an opinion



# How to Get Support

First, please review the presentations and materials

If you still have concerns/questions, send an email to

[butterflymonitorstx@gmail.com](mailto:butterflymonitorstx@gmail.com)

with your concern in the subject line. We will do our best to get back to you within 3 days.



# Task List for New Monitors

- Create account on iNaturalist account \* (optional for ID species)
- Acquire a field guide to ID your region's butterflies
- Create a PollardBase account
  - Go to [pollardbase.org](http://pollardbase.org)
  - Ashley M. De Leon
    - Username: "ADeleon" (1st letter of First Name + Last Name), **OR**
    - Username: "AMDeleon" (1st letter of First Name + Middle Initial + Last Name)
- Select & Submit Route - see Creating a A Route with Google Maps for details
- Get outdoors! Observe & enter data to Pollardbase