

## Example of a Survey Method (Fixed route for monitoring)

### 1. Pollinator Survey:

Mark the start point, measure a 160-foot line, and mark the end point. Survey a 6-foot width along this transect, walking at an even pace for 15 minutes from beginning to end. ID and count insects foraging on flowers and record observations on data sheets. Then, upload that data to the Pollinator Survey Google form.

### 2. Vegetation Survey:

Return on the same transect. ID plants within the same 160x6-foot area. Count or estimate the inflorescences of the identified plants. Record everything on our data sheets. Then, upload that data to the corresponding fields in the form.

### Survey Materials

Map (USGS, Google)  
Pollinator Guides/Keys  
Plant list/ID key  
Measuring tape  
Wood stakes  
Clipboard  
Data sheets  
Pencil  
Watch



Count as 1  
flower or  
inflorescence

### Suggested Field Guides:

<https://w3.biosci.utexas.edu/jha/landowners-naturalists/texas-pollinator-guides>

<http://www.bugguide.net/node/view/8267>

<https://www.butterfliesandmoths.org/identify>

<http://www.inaturalist.org/projects/bees-and-wasps-of-texas>

[http://tpwd.texas.gov/huntwild/wild/wildlife\\_diversity/nongame/native-pollinators/native-bee-id.phtml](http://tpwd.texas.gov/huntwild/wild/wildlife_diversity/nongame/native-pollinators/native-bee-id.phtml)

Butterflies of Central Texas, Guide to Common & Notable Species, Valerie Bugh

Butterflies & Moths, Familiar North American Species, Pocket Naturalist, Kavanagh/Leung

<http://aggie-horticulture.tamu.edu/texasnativetrees/>

<http://identifythatplant.com/plant-id-resources/plant-id-websites>

<http://www.npot.org/>

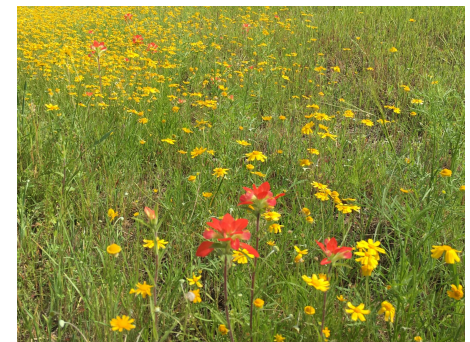
<http://npsot.org/wp/>

<http://www.wildflower.org/plants-main>

photos Laurel Treviño



# Pollinator Surveys



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## How do you assess pollinator habitat quality?

**Survey pollinators and their associated vegetation** twice a year to establish baseline species lists.

Follow your protocol consistently if monitoring. Survey and photograph the habitat before and after enhancement for comparison, if enhancing habitat.

Data obtained from surveys help assess pollinator habitat quality. You can compare habitat at different sites or periods. An improved habitat shows an upward trend in abundance or richness of pollinator and plant groups over time.

Two indices are measured for pollinators & plants:

- **Abundance** (# individuals/species)
- **Richness** (# species/community)

The Jha lab can help analyze survey data to provide landowners with graphic results of habitat health.

Sarah Cusser



## Where to Survey:

A minimum of 1% of pollinator plot or 1 acre;  
Parallel to linear habitats (hedges, streams)

Ideally in a uniform habitat (vegetation class):

- open woodland
- shrub land
- grassland/prairie/meadow
- human altered vegetation: crops, gardens

## When to Survey:

- ideally twice a year
- during bee foraging season, spring through fall
- for at least 3 years if monitoring long-term

Establish a protocol & repeat surveys in the same

- area,
- season,
- date,
- weather

## How to Survey:

Bees don't like cold, windy or overcast weather.

Good survey conditions are:

- 8 a.m. to 3 p.m.
- > 70F (21C), warm to hot
- clear sky, partly cloudy or slightly overcast
- calm wind to light breeze
- Observer-recorder teams help maintain the same effort throughout.
- Choose a pollinator and plant survey method.
- Walk slowly and avoid casting shadows that spook pollinators.
- ID/count insects feeding on flowers; try to photograph bees; return to ID/count plants.
- Record data on data sheets provided on our webpage to standardize your observations.
- For feedback, upload data to [Pollinator Survey](#).
- You can post bee photos to *iNaturalist*: [Texas Native Bees & other Pollinators](#).

## POLLINATOR SURVEYS

(choose a method):

A) **Stationary Count:** For 15 minutes, ID/count pollinators & plant inflorescences in an area with a diameter of your out-stretched arms.



B) **Random Walk:** Walk 15 minutes without crossing your path, ID & count pollinators/plants in an area of your out-stretched arms. Estimate distance.



C) **Fixed Route:** Walk a 160x6-ft transect in 15 minutes; ID & count pollinators/plants in this area.



## VEGETATION SURVEYS

(choose a method & its data sheet):

A) **Simplified:** Choose the vegetation class, list the dominant species, estimate # inflorescences/species (applies to any pollinator survey).

B) **Formal:** Retrace your random walk path or return on the fixed route transect and estimate/count # inflorescences/species in the area.

4 PDFs: Pollinator Habitat Conservation, Surveys, Data sheets, Texas Bee Guide  
<https://w3.biosci.utexas.edu/jha/landowners-naturalists>

Upload data to [Pollinator Survey \(Google Form\)](#)  
<https://goo.gl/forms/1eTnmVzgRiMwK0Kt1>