UNIVERSITY OF GEORGIA EXTENSION

GREAT SOUTHEAST
Pollinator Census
INSECT COUNTING AND IDENTIFICATION GUIDE



HOW TO COUNT

GREAT SOUTHEAST POLLINATOR CENSUS

THANK YOU FOR BEING PART OF POLLINATOR CONSERVATION BY HELPING US DOCUMENT OUR POLLINATOR POPULATIONS! HERE ARE YOUR COUNTING INSTRUCTIONS.

1. Choose a favorite pollinator plant for counting. This can be any blooming plant that shows insect activity.

2. Count and categorize the insects that land on your plant. Count an insect each time it lands on your plant. Count for 15 minutes. The Insect Categories are:

- Bumble Bees
- Honey Bees
- Small Bees
- Carpenter Bees
- Wasps
- Flies
- Butterflies/Moths
- Other Insects

There is an insect counting sheet at the end of this booklet to make counting easier for you.

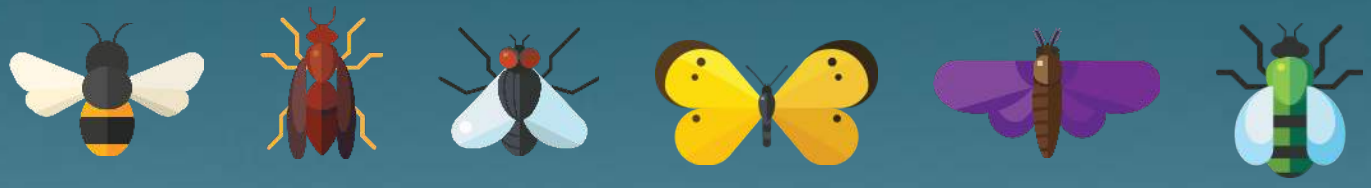
3. Upload your counts to the website (https://GSePC.org). The portal to upload counts will open on the first day of the counts. We do not have the ability to accept mailed paper forms.

Post photos of your counters having fun, photos of your gardens, or anything you think would be of interest to the group on the Southest Pollinator Census Facebook page.

Have questions about counting? Becky Griffin is the project coordinator and is available through email at beckygri@uga.edu.

Counting hint: Your cell phone camera makes a great magnifier.

POLLINATORS YOU MAY SEE



THE NEXT PAGES ARE EXAMPLES OF THE INSECTS THAT YOU MAY SEE (IN THE ORDER BELOW). USE THESE AS YOUR GUIDES.

BEES

WASPS

FLIES

BUTTERFLIES

MOTHS

BEETLES AND OTHER INSECTS

BEES

BUMBLE BEES

Genus: *Bombus*

Bumble bees are large, fuzzy bees commonly seen visiting flowers in gardens, meadows, and landscapes. Their thick hair helps them collect pollen and regulate body temperature while foraging.

Size: 10–19 mm

Quick ID Features

- ✓ **Round, robust body**
- ✓ **Dense yellow and black hair covering the body**
- ✓ **Large thorax and abdomen**
- ✓ **Hairy abdomen (unlike carpenter bees)**
- ✓ **Small head compared to body size**

Bumble Bee

Bumble Bee – Hairy Abdomen

BEES

CARPENTER BEES

Eastern Carpenter Bee (*Xylocopa virginica*)

The carpenter bee included in this census is the common Eastern carpenter bee, the large bee often seen hovering around houses, decks, and garden plants.

Size: 16–22 mm

Eastern Carpenter Bee (*Xylocopa virginica*)

Quick ID Features

- ✓ Large, robust body
- ✓ Dense yellow hair on the head and thorax
- ✓ Shiny, hairless black abdomen
- ✓ Broad head and thick body shape
- ✓ Males: pale yellow or white face
- ✓ Females: entirely black face

Carpenter Bee – Hairless Abdomen

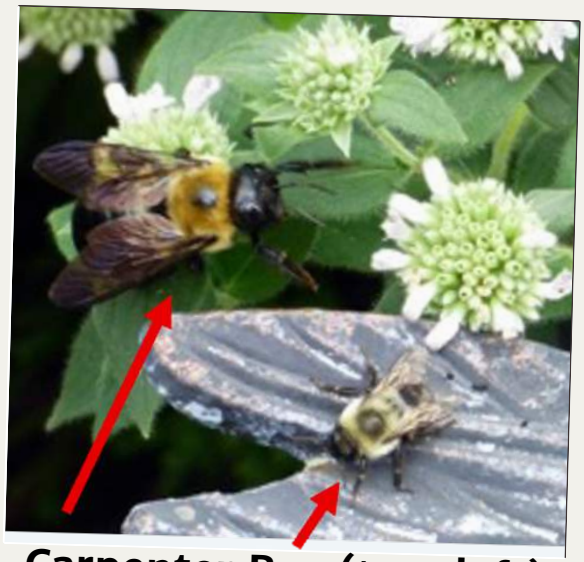
CARPENTER BEE VS. BUMBLE BEE

Look Closely! These Two Bees Are Often Confused

At first glance these bees can look similar, but a quick comparison makes them easy to tell apart.
Think of the carpenter bee as the "mack truck" of bees — big, smooth, and shiny. The bumble bee is more like a "pickup truck" — rounder and covered in fuzzy hair.

The easiest way to tell them apart is the abdomen:

- ✓ Carpenter bee: smooth and shiny
- ✓ Bumble bee: fuzzy and hairy



Carpenter Bee (top, left)
Bumble Bee (bottom, right)
Photo credit: Bodie Pennisi, UGA Extension

BEES

HONEY BEES

Apis mellifera

Honey bees are medium-sized bees commonly seen visiting flowers in gardens, farms, and landscapes. They are well known for producing honey and are frequently managed by beekeepers.

Size: 12–15 mm

<u>Quick ID Features</u>

- ✓ **Brown and black striped abdomen**
- ✓ **Golden-brown hair covering the body**
- ✓ **Slender body compared to bumble bees**
- ✓ **Often seen carrying pollen on their hind legs**

Honey Bee

Bumble Bee (bottom, left)
Honey Bee (top, right)

BEES

SMALL BEES

(Any bee smaller than a honey bee)
This category may include:

- Leafcutter bees
- Sweat bees
- And other small native bees

Many native bees are smaller than honey bees. These bees can vary in color and shape, but they are important pollinators that frequently visit flowers.


Small bee on cosmos flower


Small bee on aster


Metallic Green Bee

Quick ID

- ✓ Smaller than a honey bee
- ✓ Often fast-moving on flowers
- ✓ May be metallic green, black, or striped

Note:

Keep a lookout for the metallic shine of the sweat bees (family Halictidae). Even though these bees can be small, their metallic color makes them easy to spot when the sun is shining on them.


Small bee on mountain mint


Leafcutter Bee
Photo credit: David Cappaert, bugwood.org


Leafcutter Bee

Notice the dark striped abdomen of the leafcutter bee above. If you can get a glimpse of the underside of the abdomen, the bee will carry the pollen there on the hairy scopa.

WASPS

WASPS

This category may include:

- **Potter wasps**
- **Paper wasps**
- **Other flower-visiting wasps**

Wasps are common flower visitors and may appear during your pollinator count. While they are not bees, many species visit flowers to feed on nectar.

Size: 13–25 mm

Potter Wasp

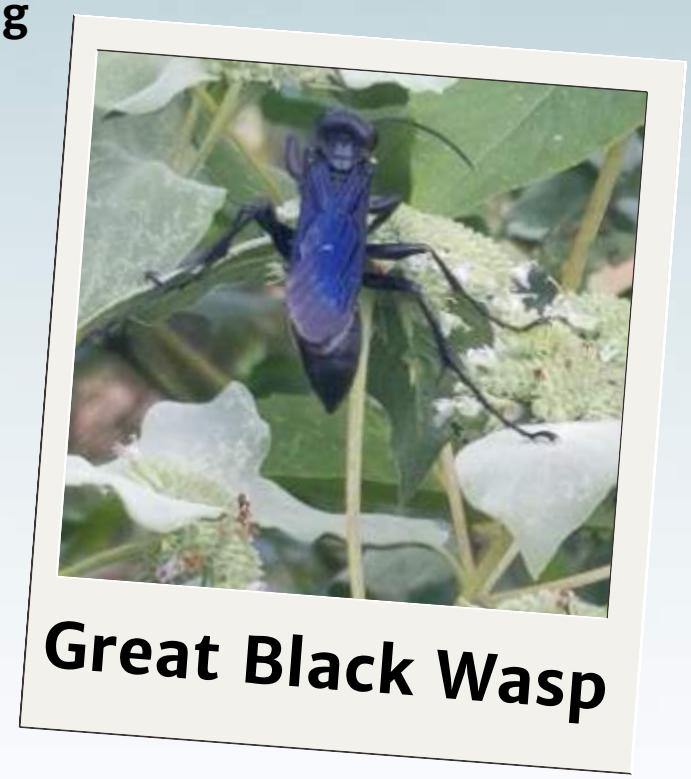
Quick ID

- ✓ **Smooth, mostly hairless body**
- ✓ **Very thin waist**
- ✓ **Long, slender legs**
- ✓ **No pollen-collecting hairs**

Look Closely

Wasps are usually sleek and shiny rather than fuzzy. Their narrow waist and long legs help distinguish them from bees.

Paper Wasp



Great Black Wasp

FLIES

FLIES

Many flies visit flowers and help with pollination. Some species even mimic bees or wasps, making them easy to confuse at first glance.

Size: 6–13 mm

Tachinid Fly

Quick ID

- ✓ Two wings (bees and wasps have four)
- ✓ Large eyes that take up most of the head
- ✓ Short, small antennae
- ✓ Often hover or dart quickly around flowers

Look Closely

Some flies are bee mimics and have yellow and black coloring. These flies may visit flowers just like bees.

A quick way to tell them apart:

- ✓ Flies have two wings
- ✓ Bees and wasps have four wings

Their large eyes and short antennae are also good clues that you are looking at a fly.

Fly (notice location of eyes and lack of large antenna)

Flower Fly (Bee mimic)

BUTTERFLIES AND MOTHS

BUTTERFLIES AND MOTHS

This category may include:

- **Skippers**
- **Gulf fritillaries**
- **Monarchs**
- **Swallowtails**
- **Common spring moth**
- **And other butterfly and moth species**

Skipper Butterfly

Monarch Butterfly

Butterflies and moths are beautiful flower visitors that may appear during your pollinator count. Many species visit flowers to drink nectar and can help move pollen between plants.

<u>Quick ID</u>

- ✓ **Large wings covered with colorful scales**
- ✓ **Often land directly on flowers to feed on nectar**
- ✓ **Butterflies are usually active during the day**
- ✓ **Moths may be seen resting on flowers or flying at dusk**

Eastern Tiger Swallowtail Butterfly

Gulf Fritillary Butterfly

OTHER INSECTS

OTHER INSECTS

This category may include:

- **Beetles**
- **Dragonflies**
- **Lacewings**
- **And other flower-visiting insects**

Many different insects may visit flowers during your pollinator count. If you observe an insect that does not clearly fit into the other categories, record it here.

Ambush bug

<u>When to Use This Category</u>

If you see an insect landing on your plant and you are not sure how to classify it, you can record it as Other Insects.
Every observation still helps researchers learn more about insect activity on flowers.

Dragonfly

Photo credit: Millard Griffin

Lady Beetle

GREAT SOUTHEAST
Pollinator Census

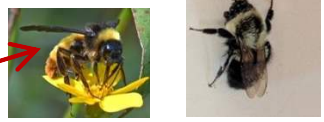
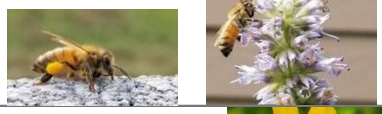
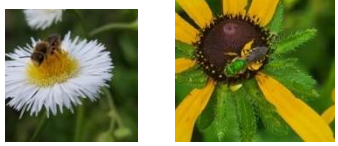
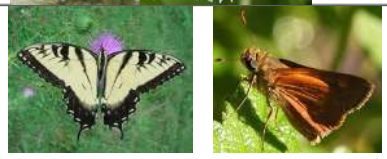
Great Southeast Pollinator Census Website

You can upload counts here (or go to the website on your computer http://GSePC.org)

Name of Plant: _____ Date: _____ Time: _____

Weather Conditions: *Sunny* *Partly Cloudy* *Cloudy* *Rainy* Temperature: _____

Name(s): _____

	Description of Insect	Number of Insect Landings on Your Plant
Carpenter Bee (16-22mm)	Shiney Hiney 	
Bumble Bee (10-19mm)	Fuzzy Rear 	
Honey Bee (12-15mm)		
Small Bees (smaller than ahoney bee)		
Wasps (13-25mm)	Some have a skinny waist 	
Flies (6-13mm)	Antennae very short. Eyes take up most of their head. 	
Butterflies & Moths	Don't overthink it 	
Other insects		

GREAT SOUTHEAST

POLLINATOR CENSUS

UNIVERSITY OF GEORGIA EXTENSION

THANK YOU FOR YOUR PARTICIPATION!

Thank you for being part of the Great Southeast Pollinator Census. Your observations help scientists, educators, and communities better understand pollinator activity across the Southeast.
Every count contributes valuable information that supports pollinator conservation and community science.
Your participation truly makes a difference!

PROGRAM PARTNERS

The Great Southeast Pollinator Census is coordinated by University of Georgia Extension.
Regional participation is coordinated by:

North Carolina A&T State University Extension – North Carolina
Alabama Extension – Alabama A&M and Auburn Universities – Alabama
University of Florida Extension (Marion County) – Florida
Mississippi State University – Mississippi
Clemson University Extension – South Carolina

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